Council Members
District 1: Terry Graham
District 2: Charlene McGriff
District 3: Billy Mosteller, Secretary
District 4: Larry Honeycutt
District 5: Steve Harper, Chair
District 6: Allen Blackmon
District 7: Brian Carnes, Vice-Chair

County Attorney
John K. DuBose III

Clerk to Council
Sherrie Simpson

February 9, 2021 | **4:00 PM** | **101 North Main Street, Lancaster, SC 29720**

LANCASTER COUNTY COUNCIL
COMMITTEE OF THE WHOLE
County Council Chambers, County Administration Building, 101 North Main Street, Lancaster, SC 29720

AGENDA

1. **Call to Order - Chairman Steve Harper**

2. **Welcome and Recognition - Chairman Steve Harper**

3. **Pledge of Allegiance and Invocation - Council Member Charlene McGriff**

4. **Approval of Agenda**

   [deletion and additions of non-substantive matter]

5. **Citizens Comments**

   [While in-person Citizens Comments are not currently suspended, due to public health and safety considerations and the need for continued social distancing, the County is strongly encouraging citizen input and comments be submitted in writing prior to the meeting. Comments may be submitted via mail to ATTN: Sherrie Simpson, Post Office Box 1809, Lancaster, SC, 29721, by email to Sherrie Simpson at ssimpson@lancastersc.net or by online submission by selecting the "Citizens Comments" quick link located on the County website homepage at https://www.mylancastersc.org/ Comments must be no longer than approximately 3 minutes when read aloud. Comments received will be acknowledged during the Citizens Comments portion of the meeting. Comments will need to be received prior to 4:00 p.m. on the day before the meeting. Please use the same link above in order to submit input/comments for Public Hearings.]

6. **Discussion and Action Items**

   a. Discussion of Redwood Development Agreement (DA-020-2650) - Rox Burhans

   b. Discussion of Poovey Development Agreement (DA-2020-2859) - Rox Burhans

   c. Discussion of Bid for Replacement Fire Apparatus - Elgin Engine 601 - Steve Willis/Darren Player

   d. Discussion of Priority Indian Land Development Planning and Economic Development Sites - Rox Burhans/Jamie Gilbert

   e. Discussion of Unopened Portion of Culp Lansford Road - Steve Willis/John DuBose

   f. Continued Discussion of Ordinance 2021-1705 Regarding Adopting Procedures for the Imposition,

Calculation, Collection, Expenditure and Administration of Impact Fees

Ordinance Title: An Ordinance Adopting Procedures For The Imposition, Calculation, Collection, Expenditure And Administration Of Impact Fees To Be Imposed On New Development; Providing A Purpose And Intent; Providing Definitions; Providing General Provisions And Applicability; Providing For The Establishment Of Impact Fee Accounts; Providing For The Appropriation Of Impact Fee Funds; Providing For Refunds; Providing For Appeals; Providing For Conflict; Providing For Severability; And Providing An Effective Date. ***- Steve Willis/John DuBose/Kim Belk***

7. Citizen Comments

[If Council delays until end of meeting]

8. Adjournment

Anyone requiring special services to attend this meeting should contact 285-1565 at least 24 hours in advance of this meeting. Lancaster County Council agendas are posted at the Lancaster County Administration Building and are available on the Website: **www.mylancastersc.org**

Meetings are live streamed and can be found by using the following link: https://www.youtube.com/channel/UCgSlMrcYjcYcu1m-e6TV54w

Agenda Item Summary

Ordinance # / Resolution #: Planning Case Number: DA-020-2650
Contact Person / Sponsor: Robert G. Tefft / Planning
Department: Planning
Date Requested to be on Agenda: 2/9/2021

Issue for Consideration:
The applicant has requested to rezone approximately 37.45 acres from Low Density Residential (LDR) District to Professional Business (PB) District. The intent is to develop a 155-unit three-family and four-family apartment project. Development Agreement to correspond with RZ-2020-2650 for TM #'s 0003-00-040.01, 0003-00-040.07 and 0003-00-040.14.

Points to Consider:
Although not required by the UDO, the applicant has proposed a Development Agreement between themselves and Lancaster County in order to assist in the facilitation of the rezoning.

Funding and Liability Factors:

Council Options:
To approve or disapprove the proposed Development Agreement.

Recommendation:
Staff recommended **Approval** of the Development Agreement.

Planning Commission recommended **Approval** of the Development Agreement.

ATTACHMENTS:

Description	Upload Date	Type
Memo for the Committee of the Whole	2/1/2021	Planning Staff Report
Staff Report	12/2/2020	Planning Staff Report
Ex 1: Proposed Development Agreement	12/4/2020	Exhibit
Ex 3: Traffic Impact Analysis	12/7/2020	Exhibit
Ex 4: Redwood Presentation	12/8/2020	Exhibit

PROPOSAL:	Request to approve a Development Agreement between Redwood USA, LLC, and Lancaster County in accordance with Unified Development Ordinance Section 9.2.18 for a proposed 155-unit (4.14 dwelling units per acre), single-story, three-family (triplex) and four-family (quadraplex) apartment development located on approximately 37.45 acres of land on the east side of Harrisburg Road, approximately 500 feet west of Barberville Road (TM #'s 0003-00-040.01, 0003-00-040.07 and 0003-00-040.14).
COUNCIL DISTRICT:	District 7, Brian Carnes

OVERVIEW:

Although not required by the Unified Development Ordinance (UDO), the applicant is proposing to enter into a Development Agreement with the County in order to facilitate the rezoning of approximately 37.45 acres of land on the east side of Harrisburg Road, approximately 500 feet west of Barberville Road, from Low Density Residential (LDR) District to Professional Business (PB) District. The intent is to develop the land as a multi-family residential apartment project consisting of 155 Three Family (Triplex) and Four Family (Quadraplex) dwelling units, a leasing office/maintenance building and associated amenities.

It should be noted that the southeastern 14.5 acres of parcel 0003-00-040.07 will be subdivided from the parcel and is not proposed to be rezoned and is not a part of the Development Agreement.

The intent of this request is to secure the rezoning of the subject properties to PB District while guaranteeing how the property will ultimately be developed.

The applicant submitted the proposed Development Agreement enclosed with this staff report. The Development Agreement reflects the requirements of UDO Section 9.2.18 including, but not limited to: legal description, description of uses, and traffic impact analysis (TIA).

COMMUNITY FACILITY NEEDS:

As part of the review of this Development Agreement, the various Lancaster County Division Heads identified that there were no community facility needs with regard to this project. This decision was arrived at in light of the recent development of the EMS Station #4 at 9576 Old Bailes Road and the site being within the Pleasant Valley Fire District in near proximity to Station #14 (9370 Possum Hollow Road).

PRIOR ACTIONS:

The Development Agreement was reviewed by the Planning Commission at their meeting of December 15, 2020, where the Commission recommended approval by a vote of 6-1.

PROPOSAL:	Request to approve a Development Agreement between Redwood USA, LLC, and Lancaster County in accordance with Unified Development Ordinance Section 9.2.18 for a proposed 155-unit (4.14 dwelling units per acre), single-story, three-family (triplex) and four-family (quadraplex) apartment development located on approximately 37.45 acres of land on the east side of Harrisburg Road, approximately 500 feet west of Barberville Road (TM #'s 0003-00-040.01, 0003-00-040.07 and 0003-00-040.14).
COUNCIL DISTRICT:	District 7, Brian Carnes

Although not required by the Unified Development Ordinance (UDO), the applicant is proposing to enter into a Development Agreement with the County in order to facilitate the rezoning of approximately 37.45 acres of land on the east side of Harrisburg Road, approximately 500 feet west of Barberville Road, from Low Density Residential (LDR) District to Professional Business (PB) District. The intent is to develop the land as a multi-family residential apartment project consisting of 155 Three Family (Triplex) and Four Family (Quadraplex) dwelling units, a leasing office/maintenance building and associated amenities.

It should be noted that the southeastern 14.5 acres of parcel 0003-00-040.07 will be subdivided from the parcel and is not proposed to be rezoned and is not a part of the Development Agreement.

The intent of this request is to secure the rezoning of the subject properties to PB District while guaranteeing how the property will ultimately be developed.

The applicant submitted the proposed Development Agreement enclosed with this memo. The Development Agreement reflects the requirements of UDO Section 9.2.18 including, but not limited to: legal description, description of uses, and traffic impact analysis (TIA).

The Development Agreement must first be reviewed by the Planning Commission who is required to hold one public hearing. It is anticipated that the Development Agreement will be reviewed by a County Council subcommittee in January 2021. The second and final public hearing is tentatively scheduled to occur before County Council on January 25, 2021 (first reading of the ordinance).

A copy of the Development Agreement template is also enclosed with this memo. It does not include any proposed fees, which will be discussed with a County Council subcommittee and County Council.

----------(Space above this line for recording use)----------

STATE OF SOUTH CAROLINA	**)**	**DEVELOPMENT AGREEMENT**
	)	
COUNTY OF LANCASTER	**)**	_____

This **DEVELOPMENT AGREEMENT** (the "Agreement") is made and entered into as of the _____ day of *_[DATE OF THIRD READING APPROVAL]*____, 2020 ("Agreement Date"), by and among **REDWOOD USA, LLC**, a _____ ("Developer"), and the **COUNTY OF LANCASTER** (the "County"), a body politic and corporate, a political subdivision of the State of South Carolina.

R E C I T A L S

WHEREAS, Developer has obtained the contractual right to acquire certain real property consisting of approximately 37.45 acres, more or less, located in the County and known as Redwood Indian Land development and more fully described in Section 1.04 of this Agreement ("Property") and thus has an equitable interest therein;

WHEREAS, Developer has submitted an application to the County requesting that the Property be rezoned to Professional Business (PB) District;

WHEREAS, Developer and County have determined that it is in the best interests of the County and Developer to enter into this Agreement to set forth the terms and conditions of the development in order to achieve a well-coordinated, master planned development, reasonably mitigate any project impacts to the community and achieve predictability to the County and Developer on the scope and terms of the development;

WHEREAS, the Developer desires to obtain from the County in connection with the development, and the County is willing to provide, assurances: (1) that the Property will be zoned Professional Business (PB) District for the duration of this Agreement; (2) that upon receipt of its development and construction permits it may proceed with the planned development and construction; and (3) that the development rights will be vested for the duration of this Agreement;

WHEREAS, in connection with the proposed development, Developer and County recognize that the scope and term of the planned development under this Agreement accomplish the statutory aims of comprehensive, orderly planning and development within the County, thus providing benefits to the citizens of the County and providing public benefits through, among other things, the donation of funds or financing of those public facilities and services described and identified in this Agreement.

NOW, THEREFORE, in consideration of the foregoing and the terms and conditions set forth in this Agreement, the receipt and sufficiency of such consideration being acknowledged by the parties, and pursuant to the South Carolina Local Government Development Agreement Act, codified as Sections 6-31-10 to -160, Code of Laws of South Carolina 1976, as amended (the "Act") and the Development Agreement Ordinance for Lancaster County, South Carolina ("Ordinance No. 663"), the parties to this Agreement, intending to be legally bound to a development agreement in accordance with the Act and Ordinance No. 663, agree as follows:

ARTICLE I

GENERAL

Section 1.01. **Incorporation.** The above recitals are incorporated in this Agreement as if the recitals were set out in this Agreement in its entirety. The findings contained in the Act are incorporated into this Agreement as if it were set out in this Agreement in its entirety.

Section 1.02. Definitions. (A) As used in this Agreement:

(1) "Act" means the South Carolina Local Government Development Agreement Act, codified as Sections 6-31-10 to -160, Code of Laws of South Carolina 1976, as amended.

(2) "Agreement" means this Development Agreement.

(2A) "Agreement Date" means ___*[DATE OF THIRD READING APPROVAL]*____, 2020.

(3) "Comprehensive Plan" means the master plan for the County and the official map adopted pursuant to S.C: Code §§ 6-29-510 through 6-29-530, inclusive, as amended from time to time, including the [_____ Comprehensive Plan adopted _____ and updated on _____].

(4) "County" means the County of Lancaster, a body politic and corporate, a political subdivision of the State of South Carolina.

(5) "County Council" means the governing body of the County.

(6) "Developer" means the Redwood USA, LLC, and its successors in title to the Property who undertake Development of the Property or who are transferred Development Rights.

(7) "Development Rights" means the right of the Developer to develop all or part of the Property in accordance with this Agreement.

(8) "Laws and Land Development Regulations" means the County's current applicable rules and regulations governing development of real property in force as of the

Agreement Date, including the UDO as amended through the Agreement Date, as evidenced by Exhibits E and E-1 through E-5 attached hereto and incorporated herein by reference.

(9) "Ordinance No. 663" means Ordinance No. 663 of the County which is cited as the Development Agreement Ordinance for Lancaster County, South Carolina.

(10) "Ordinance No. 2020-####" means Ordinance No. 2020-### of the County, zoning the Property PB, Professional Business District, a copy of which is attached hereto as Exhibit E-1.

(11) "Ordinance No. 2020 - _____" means Ordinance No. 2020- _____ of the County approving this Agreement, a copy of which is attached hereto as Exhibit E-2.

(12) "Parties" means County and Developer.

(13) "Property" means the land and any improvements thereon, described in Section 1.04.

(14) "UDO" means the Lancaster County Unified Development Ordinance adopted by the County Council of Lancaster County, as amended through the Agreement Date, a copy of which is attached hereto as Exhibit E-3.

(B) Unless the context clearly indicates otherwise, terms not otherwise defined in this Agreement have the meanings set forth in the Act and Ordinance No. 663 or the UDO.

Section 1.03. Parties. The parties to this Agreement are County and Developer.

Section 1.04. Property. This Agreement applies to 3 parcels of land identified as Tax Map Nos. 003-00-040.07 (portion), 003-00-040.01, and 0003-00-040.14 and is reflected in Exhibits A-1 (legal description) and A-2 (plats) attached hereto and incorporated herein by reference as of the exhibits were set out in this Agreement in their entirety.

Section 1.05. Zoning. The Property was previously zoned Low Density Residential (LDR) but pursuant to Ordinance No. 2020-####, the Property has been rezoned to Professional Business District (PB).

Section 1.06. Development Program.

(A) The UDO provides for the development uses on the Property, including population densities, building intensities and height.

(B) The development of the Property must meet all applicable standards contained in the UDO as of the Agreement Date. In the event of conflict between the standards contained in the UDO as of the Agreement Date and this Agreement, the terms of the UDO control. The Development Program for the Property is set forth in Exhibit B.

Section 1.07 Development Schedule.

(A) The estimated development schedule for the Property is set forth on Exhibit C, attached hereto and incorporated herein by reference as if the exhibit were set out in this Agreement in its entirety.

(B) County and Developer acknowledge that the development schedule is an estimate. The failure of the Developer to meet a commencement or completion date does not, in and of itself, constitute a material breach of this Agreement, but must be judged based on the totality of the circumstances. The development schedule is a planning and forecasting tool only. County and Developer acknowledge that actual development is likely to take place at a different pace than set forth in the development schedule because of future market forces.

(C) County agrees that if Developer requests an adjustment to the development schedule, including commencement dates and interim completion dates, then the dates must be modified if the Developer is able to demonstrate and establish that there is good cause to modify those dates. "Good cause" includes, but is not limited to, changes in market conditions.

(D) Periodic adjustments to the development schedule do not require a formal amendment to this Agreement and are not considered a major modification. To adjust the development schedule, the Developer shall submit a proposed adjustment to the Clerk to Council who shall forward copies of the proposed adjustment to each member of County Council. The proposed adjustment must be accompanied by an explanation and justification. The proposed adjustment is effective sixty (60) days from receipt by the Clerk to Council unless the County Council has disapproved the proposed adjustment by passage of a resolution to that effect within the sixty (60) day period.

Section 1.08. Relationship of Parties. This Agreement creates a contractual relationship among the Parties. This Agreement is not intended to create, and does not create, the relationship of partnership, joint venture, or any other relationship wherein any one of the parties may be held responsible for the acts of any other party. This Agreement is not intended to create, and does not create, a relationship whereby any one of the parties may be rendered liable in any manner for the debts or obligations of any other party, to any person or entity whatsoever, whether the debt or obligation arises under this Agreement or outside of this Agreement.

Section 1.09. Benefits and Burdens.

(A) The Parties agree that the burdens of this Agreement are binding upon, and the benefits of this Agreement shall inure to, all successors in interests to the Parties to this Agreement.

(B) Except for the owners and lessees of completed residences on individual lots who are the end users and not developers thereof and the owners and lessees of individual lots, who are not developers and who intend to build a residence on the lot for the owner or lessee to occupy, any purchaser or other successor in title is responsible for performance of Developer's obligations pursuant to this Agreement as to the portion of the Property so transferred.

Developer must give notice to the County of the transfer of property to a developer in the manner prescribed in Section 3.05.

(C) Developer acknowledges and agrees that it and its successors and assigns (*i*) are responsible for the development of the Property if and when Developer acquires title to or Development Rights for the Property, and (*ii*) if Developer develops the Property, Developer will develop the Property in accordance with the terms and conditions of this Agreement.

Section 1.10. Term. The term of this Agreement commences on the Agreement Date and terminates five (5) years thereafter.

Section 1.11. Required Information. Ordinance No. 663 requires a development agreement to include certain information. Exhibit D contains the required information or identifies where the information may be found in this Agreement. Exhibit D is incorporated herein by reference as if the exhibit were set out in this Agreement in its entirety.

ARTICLE II

REPRESENTATIONS AND WARRANTIES

Section 2.01. Representations and Warranties of County.

(A) The County has found that the development permitted by this Agreement is consistent with the County's Comprehensive Plan and UDO.

(B) The County has approved this Agreement by adoption of Ordinance No. 2020-____ in accordance with the procedural requirements of the Act, Ordinance No. 663, and any other applicable state law.

(C) The County represents that prior to the final reading of Ordinance No. 2020-___ that at least two public hearings were held after publication of the required notice and the publication of a notice of intent to consider a proposed development agreement.

Section 2.02. Representations and Warranties of Developer.

(A) Developer represents that the number of acres of highland contained in the Property is greater than twenty-five and that the highlands equal approximately thirty-five and 71/100 acres (35.71).

(B) Developer represents that, as of the Agreement Date, it has contractual rights to acquire the Property and thus has an equitable interest therein.

(C) Developer represents and warrants that the execution, delivery and performance by the respective individual or entity signing this Agreement on behalf of the party has been duly authorized and approved by all requisite action on the part of Developer.

ARTICLE III

DEVELOPMENT RIGHTS

Section 3.01. **Vested Right to Develop.**

(A) County agrees that the Developer, upon receipt of its development permits as identified in Section 3.04, may proceed to develop the Property according to the terms and conditions of this Agreement, the UDO, and the other Laws and Land Development Regulations. The right of Developer to develop the Property as set forth in this Agreement is deemed vested with Developer for the term of this Agreement when the Developer has complied with all of the requirements of Section 5.19 of this Agreement.

(B) County agrees that the specific Laws and Land Development Regulations in force as of the Agreement Date, including the UDO, as set forth in Exhibits E and E-1 through E-5 to this Agreement, attached hereto and incorporated herein by reference as if the exhibit were set out in this Agreement in its entirety, shall govern all aspects of the development of the Property, according to the terms and standards as stated in this Agreement, for the term of this Agreement.

(C) Developer has a vested right to proceed with the development of the Property in accordance with the zoning classification set forth in Ordinance No. 2020-####, the UDO, the other Laws and Land Development Regulations, and the terms of this Agreement, including without limitation the Development Program set forth on Exhibit B to this Agreement, when the Developer has complied with all of the requirements of Section 5.19 of this Agreement.

(D) The Developer acknowledges that financial guarantees will not be accepted for water, sewer, and storm water infrastructure and the water, sewer, and storm water infrastructure must be installed, tested, and in acceptable condition before final plat approval.

Section 3.02 Effect on Vested Rights Act and County Ordinance No. 673. The Parties agreed the vested rights conferred upon Developer in this Agreement are not affected by the provisions of the Vested Rights Act, codified as Sections S.C. Code §§ 6-29-1510 to -1560, Code of Laws of South Carolina 1976, as amended, or the provisions of Ordinance No. 673, the County's ordinance relating to the Vested Rights Act. In addition, subject to the provisions of Section 3.03(A) of this Agreement, all rights and prerogatives accorded Developer by this Agreement shall immediately also constitute vested rights for the development of the Property including vested rights pursuant to the Vested Rights Act and the provisions of Ordinance No. 673, for the term of this Agreement and the maximum period for vesting rights under the Vesting Rights Act. Section 3.03(A) of this Agreement does not abrogate any rights either preserved by S.C. Code § 6-31-140, Ordinance No. 663, Ordinance No. 673, the UDO, or that may have vested pursuant to common law and otherwise in the absence of a development agreement.

Section 3.03 Applicability of Subsequently Adopted Laws and Land Development Regulations.

(A) It is recognized that laws and regulations will periodically changes. However, the laws applicable to the development of the Property during the Term of this Agreement shall be the Laws and Land Development Regulations in effect on the Agreement Date as set forth on Exhibits E and E1 – E5, except as expressly provided otherwise in this Agreement.

Subject to the provisions of S.C. Code § 6-31-140, the County shall not apply subsequently adopted laws or regulations to the Property or the Project unless the County has held a public hearing and has determined: (1) the proposed subsequent laws or regulations are not in conflict with the Current Regulations governing the Agreement and do not prevent the development of the Property set forth in this Agreement; (2) the proposed subsequent laws or land development regulations are essential to the public health, safety, or welfare and the proposed subsequent laws or land development regulations expressly state that they apply to a development that is subject to a development agreement; (3) the proposed subsequent laws or land development regulations are specifically anticipated and provided for in this Agreement; (4) substantial changes have occurred in pertinent conditions existing at the time of approval of this Agreement which changes, if not addressed by the County, would pose a serious threat to the public health, safety, or welfare; or (5) this Agreement is based on substantially and materially inaccurate information supplied by Developer.

(B) Notwithstanding the provisions of subsection (A) of this section, the County agrees that if County Council imposes a moratorium or other similar restriction that would curtail or hinder the rate at which development can occur, then the moratorium or other similar restriction shall not apply to the Development of the Property.

(C) Developer agrees to comply with any county-wide storm water regulations, building, housing, electrical, plumbing, and gas codes adopted by County Council after the Agreement Date and in force at the time plans for buildings are submitted to the County for review. Nothing in this Agreement is intended to supersede or contravene the requirements of any storm water, building, housing, electrical, plumbing, or gas code adopted by County Council.

Section 3.04. Development Permits.

(A) Developer agrees to obtain all local development permits for the development of the Property. Local development permits, approvals and processes, some of which may have been obtained or complied with as of the Agreement Date include but are not limited to:

(1) Site Plan approval;
(2) Preliminary plan approval;
(3) Final plat approval;
(4) Zoning permits;
(5) Building permits; and
(6) Sign permits.

(B) The failure of this Agreement to address a particular permit, condition, term, or restriction does not relieve the Developer of the necessity of complying with the laws governing the permitting requirements, conditions, terms or restrictions.

Section 3.05. Transfer of Development Rights.

(A) Developer may, at its sole discretion, transfer its Development Rights to other developers. The transferring Developer must give notice to the County of the transfer of any Development Rights. The notice to the County must include the identity and address of the transferring Developer, the identity and address of the acquiring Developer, the acquiring Developer's contact person, the location and number of acres of the Property associated with the transfer and the number of residential units or commercial acreage subject to the transfer. Any Developer acquiring Development Rights is required to file with the County an acknowledgment of this Agreement, and the transfer of Development Rights is effective only when the County receives a commitment from the acquiring Developer to be bound by it. In the event of the sale, transfer, or other conveyance of all or a portion of the Property and compliance with the conditions set forth herein, Developer shall be released from any further obligations with respect to this Agreement as to the portion of the Property so transferred, and the transferee shall be considered as substituted as Developer under the Agreement as to the portion of the Property so transferred.

(B) This provision does not apply: (i) to the purchaser or other successor in title to Developer who is the owner or lessee of a completed residence and is the end user and not the developer thereof or who is the owner or lessee of an individual lot, who is not a developer and who intends to build a residence on the lot for the owner or lessee to occupy; (ii) to any mortgage lender either as the result of foreclosure of any mortgage secured by any portion of the Property or any other transfer in lieu of foreclosure; (iii) to any third party purchaser at such a foreclosure; or (iv) to any third party purchaser of such mortgage lender's interest subsequent to the mortgage lender's acquiring ownership of any portion of the Property as set forth above. Furthermore, nothing contained herein shall prevent, hinder or delay any transfer of any portion of the Property to any such mortgage lender or subsequent purchaser. Except as set forth herein, any such mortgage lender or subsequent purchaser shall be bound by and shall receive the benefits from this Agreement as the successor in title to Developer.

ARTICLE IV

DEDICATIONS AND FEES AND RELATED AGREEMENTS

Section 4.01. Purpose of Article. The Parties understand and agree that Development of the Property imposes certain burdens and costs on the County, including those for certain services and infrastructure improvements. Eventually, ad valorem taxes collected from the property may meet or exceed the burdens and costs placed upon the County, but certain initial costs and capital expenditures are now required that are not to be funded by any increase in taxes paid by existing residents of the County. The purpose of this article is to identify the matters agreed upon to be provided by the Developer to mitigate such burdens and costs.

Section 4.01A. Facilities for Development. Subject to compliance with applicable laws, all provisions of this Agreement and prior approval of construction plans by the County or other applicable governmental entity, Developer, at its cost and expense, shall install the requisite infrastructure, including transportation, water, and sanitary sewer infrastructure, for its Development of the Property, pursuant to Section 4.04 below and the Development Program set forth on Exhibit B as such Development proceeds in phases pursuant to Exhibit C. Notwithstanding any provision herein to the contrary, Developer hereby assures the County that adequate infrastructure shall be available concurrent with the impacts of Development of the Property.

Section 4.02. Payment of Costs. Upon submission of appropriate documentation of the expenditure, Developer agrees to reimburse the County, not later than _____ for the County's reasonable unreimbursed actual costs related to this Agreement. The foregoing cost reimbursement is capped at ten thousand dollars ($10,000.00) and is limited to County payments to third-party vendors and service providers that have not been otherwise reimbursed from the fee paid by Developer pursuant to Section 10 of Ordinance No. 663.

Section 4.03. Other Charges or Fees.

(A) Nothing in this Agreement shall be construed as relieving Developer from the payment of any fees or charges in effect at the time of collection as may be assessed by entities other than the County.

(B) Developer is subject to the payment of any and all present or future fees enacted by the County that are of County-wide application and that relate to the County's costs of processing applications, issuing development permits, reviewing plans, conducting inspections or similar type processing costs.

Section 4.04. Infrastructure and Services.

The Parties recognize that the majority of the direct costs associated with the Development of the Property will be borne by Developer, and many necessary infrastructure improvements and services will be provided by Developer or other governmental or quasi-governmental entities, and not by the County. For clarification, the Parties make specific note of and acknowledge the following:

(A) Roads. (1)(a) Developer is responsible for the construction and costs of all roads, whether for public or private use, within the Property including but not limited to any necessary entrance and intersection improvements as required by the South Carolina Department of Transportation related to the development of the Property. All roads must be constructed in accordance with the County's road standards. The road improvements are expected to be implemented on a schedule consistent with the development of the Property as contained in the development schedule and as necessary to serve the development. Developer is also responsible for maintenance of all roads that are not public roads. Pursuant to Ordinance 2014-1299, Developer acknowledges that County will only accept as public roads those roads constructed in

full compliance with the UDO and providing connectivity to the county road system or serving as a necessary component for the proper development of the county road system. County will not accept the roads within the Property into the County road system for any other purpose, including, but not limited to, maintenance. Developer may transfer the ownership of the roads and its obligations for the roads to a homeowners' or property owners' association or similar organization.

(b) Developer shall cause to be prepared a traffic impact analysis conducted and sealed by a licensed South Carolina professional engineer (if not already prepared at time of Agreement). Any road improvements, which are determined to be necessary, based on the results of the traffic impact analysis, shall be incorporated into the final site plan prior to County approval and the Developer is responsible for all costs of the road improvements. The traffic impact analysis shall be reviewed by the County and in conjunction with the South Carolina Department of Transportation. If a County-level traffic planner is not available to review the traffic impact analysis at the time of submittal, the County may choose to hire a third-party consultant to assist in this review. The cost of the traffic impact analysis, including any additional reviews requested by the County, shall be paid by the Developer. Improvements set forth in the traffic impact analysis may be installed based on a phasing study prepared by a licensed South Carolina professional engineer at the expense of Developer. The installation of new traffic signals or improvements to existing traffic signals shall be based on warrant studies conducted by a licensed South Carolina professional engineer at established specific times and at the expense of Developer.

(B) Potable Water, Sewage Treatment and Disposal. Potable water, sewage treatment and disposal will all be supplied to the Property by the Lancaster County Water and Sewer District. Developer will construct, or cause to be constructed, all necessary water and sewer service infrastructure within the Property and the water and sewer service infrastructure will be maintained by the provider. County is not responsible for any construction, treatment, maintenance, or costs associated with water or sewer service or water and sewer service infrastructure to or within the Property. The water and sewer service infrastructure is expected to be implemented on a schedule consistent with the development of the Property as contained in the development schedule and as necessary to serve the development. Developer acknowledges that County has no authority or responsibility for providing potable water services or sewer services in the County and that the Lancaster County Water and Sewer District is a governmental entity separate and distinct from the County.

(C) Storm Water Management. Developer will construct or cause to be constructed all storm water runoff and drainage improvements within the Property required by the development of the Property and such infrastructure will be maintained by Developer or a homeowners' association. County is not responsible for any construction, maintenance or costs associated with the storm water runoff and drainage for the Property. Storm water management improvements are expected to be implemented on a schedule consistent with the development of the Property as contained in the development schedule and as necessary to serve the development.

(D) Solid Waste Collection. The County shall provide solid waste collection to the Property on the same basis as is provided to other residents and businesses within the County. It is understood and acknowledged that the County does not presently provide solid waste disposal for single, multi-family or commercial developments. Residential units shall be served by a private waste hauling company.

(E) Fire Services. The Property is located in the Pleasant Valley Fire Department service area and fire services will be provided by the Pleasant Valley Fire Department, or its successor entities. Developer acknowledges that the Pleasant Valley Fire Department provides services by the use of volunteers.

(F) School Services. Public school services are now provided by the Lancaster County School District. Developer acknowledges that County has no authority or responsibility for providing public school services in the County.

ARTICLE V

MISCELLANEOUS

Section 5.01. Notices. Any notice, election, demand, request or other communication to be provided under this Agreement shall be in writing and shall be effective (*i*) when delivered to the party named below, (*ii*) when deposited with the United States Postal Service, certified mail, return receipt requested, postage prepaid, or (*iii*) when deposited in Federal Express (or any other reputable national "next day" delivery service) addressed as follows (or addressed to such other address as any party shall have previously furnished in writing to the other party), except where the terms hereof require receipt rather than sending of any notice, in which case such provision shall control:

To the County:
County of Lancaster
Attn: County Administrator
101 N. Main St.
P.O. Box 1809
Lancaster, SC 29721

With a Copy to:
County of Lancaster
Attn: County Attorney
101 N. Main St. (29720)
P.O. Box 1809 (29721)
Lancaster, SC

And to Developer:
[Redwood entity]
c/o Redwood USA LLC
Attn: Bob Dyer
7007 E. Pleasant Valley Road
Independence, OH 44131

Bdyer@byRedwood.com

With a Copy to: Chief Legal Officer
Redwood USA LLC
7007 E. Pleasant Valley Road
Independence, OH 44131
E-mail: legal@byRedwood.com

Section 5.02. Amendments.

(A) This Agreement may be amended or cancelled by mutual consent of the Parties to the Agreement or by their successors in interest. An amendment to this Agreement must be in writing. No statement, action or agreement made after the Agreement Date shall be effective to change, amend, waive, modify, discharge, terminate or effect an abandonment of this Agreement in whole or in part unless such statement, action or agreement is in writing and signed by the party against whom the change, amendment, waiver, modification, discharge, termination or abandonment is sought to be enforced.

(B) An amendment to this Agreement with the exceptions identified on Exhibit B must be processed and considered in the same manner as set forth in Ordinance No. 663 for a proposed development agreement. Any amendment to this Agreement other than as set forth on Exhibit B constitutes a major modification and the major modification may occur only after public notice and a public hearing by the County Council.

(C) This Agreement must be modified or suspended as may be necessary to comply with any state or federal laws or regulations enacted after the Agreement Date which prevents or precludes compliance with one or more of the provisions of this Agreement but only to the extent necessary to effectuate compliance with the state or federal law.

(D) Anything to the contrary contained herein notwithstanding, in the event Developer or its successors or assigns elects not to or otherwise does not acquire the Property at any time, Developer may so notify the County in writing and upon such notification and written request by Developer to terminate this Agreement, this Agreement shall terminate and Developer shall not be considered in breach of this Agreement and the parties shall have no further obligations to one another.

Section 5.03. Periodic Review. At least every twelve (12) months, the Development Services Director for the County or the designee of the Development Services Director for the County must review compliance with this Agreement by the Developer. At the time of review the Developer must demonstrate good faith compliance with the terms of the Agreement.

Section 5.04 Breach of Agreement. (A) If, as a result of the periodic review provided in Section 5.03 of this Agreement or at any other time, the Development Services Director for the County, or their designee, finds and determines that the Developer has committed a material breach of the terms or conditions of this Agreement, the Development Services Director for the County shall serve notice in writing, within a reasonable time after the periodic review, upon the

Developer setting forth with reasonable particularity the nature of the breach and the evidence supporting the finding and determination, and providing the Developer a reasonable time in which to cure the material breach. (B) If the Developer fails to cure the material breach within a reasonable time and is not proceeding expeditiously and with diligence to cure the breach, then the County Council may unilaterally terminate or modify this Agreement. Prior to terminating or modifying this Agreement as provided in this section, the County Council must first give the Developer the opportunity: (*i*) to rebut the finding and determination, or (*ii*) to consent to amend the Agreement to meet the concerns of the County Council with respect to the findings and determinations.

Section 5.05. Enforcement. The Parties shall each have the right to enforce the terms, provisions and conditions of this Agreement, if not cured within the applicable cure period, by any remedy available at law or in equity, including specific performance, and the right to recover attorney's fees and costs associated with enforcement.

Section 5.06. No Third Party Beneficiary. The provisions of this Agreement may be enforced only by the Parties. No other persons shall have any rights hereunder.

Section 5.07. Recording of Agreement. The Parties agree that Developer shall record this Agreement with the County Register of Deeds within fourteen (14) days of the date of execution of this Agreement.

Section 5.08 Administration of Agreement. County is the only local government that is a party to this Agreement and the County is responsible for the Agreement's administration.

Section 5.09. Effect of Annexation and Incorporation. The Parties agree that this Agreement remains in effect if the Property is, in whole or in part, included in a newly-incorporated municipality or is annexed into a municipality. The Parties acknowledge that upon incorporation or annexation the application and duration of this Agreement is controlled by Section 6-31-110 of the Act. County reserves the right to enter into an agreement with the newly-incorporated municipality or the annexing municipality for the administration and enforcement of this Agreement after the date of incorporation or annexation.

Section 5.10. Estoppel Certificate. Any of the Parties may, at any time, and from time to time, deliver written notice to the other party requesting the party to certify in writing (*i)* that this Agreement is in full force and effect, (*ii)* that this Agreement has not been amended or modified, or if so amended, identifying the amendments, and (*iii*) whether, to the knowledge of the party, the requesting party is in default or claimed default in the performance of its obligations under this Agreement and if so, describing the nature and amount, if any, of any such default or claimed default, and (*iv*) whether, to the knowledge of the party, any event has occurred or failed to occur which, with the passage of time or the giving of notice, or both, would constitute a default and, if so, specifying each such event.

Section 5.11. Entire Agreement. This Agreement sets forth, and incorporates by reference all of the agreements, conditions, and understandings among the Parties relative to the Property and its Development and there are no promises, agreements, conditions or understandings, oral or

written, expressed or implied, among the Parties relative to the matters addressed in this Agreement other than as set forth or as referred to in this Agreement.

Section 5.12. Covenant to Sign other Documents. County and Developer acknowledge that consummation of the transactions contemplated by this Agreement may require the execution contemporaneously with the execution of this Agreement and thereafter of certain documents in addition to this Agreement and County and Developer agree to cooperate with the execution thereof.

Section 5.13. Construction of Agreement. The Parties agree that each party and its counsel have reviewed and revised this Agreement and that any rule of construction to the effect that ambiguities are to be resolved against the drafting party shall not apply in the interpretation of this Agreement or any amendments or exhibits to this Agreement.

Section 5.14. Assignment. The rights, obligations, duties and responsibilities devolved by this Agreement on or to the Developer are assignable to any other person, firm, corporation, or entity except that the assignment must conform to the requirements of Section 1.09 and Section 3.05. This Agreement shall also be binding on the County and all future County Councils for the duration of this Agreement, even if the County Council members change.

Section 5.15. Governing Law; Jurisdiction; and Venue.

(A) This Agreement is governed by the laws of the State of South Carolina.

(B) The Parties agree that jurisdiction and venue for disputes relating to this Agreement is the Sixth (6^{th}) Judicial Circuit of the State of South Carolina.

Section 5.16. Counterparts. This Agreement may be executed in several counterparts, each of which shall be deemed an original, and such counterparts shall constitute but one and the same instrument.

Section 5.17. Eminent Domain. Nothing contained in this Agreement shall limit, impair or restrict the County's right and power of eminent domain under the laws of the State of South Carolina.

Section 5.18. Severability. If any provision in this Agreement or the application of any provision of this Agreement is held invalid, the invalidity shall apply only to the invalid provision, and the remaining provisions of this Agreement, and the application of this Agreement or any other provision of this Agreement, shall remain in full force and effect. However, if the invalid provision would prevent or materially impair Developer's right or ability to complete performance of this Agreement, the Parties agree to use their best efforts to renegotiate that provision in order for Developer to complete performance of this Agreement.

Section 5.19 When Agreement takes Effect. This Agreement is dated as of the Agreement Date and takes effect when the County and Developer have each executed the Agreement. The obligation of Developer pursuant to Section 4.02 is effective on the date the last Party to sign this

Agreement executes this Agreement and the obligations imposed on Developer pursuant to Section 4.02 survives the termination of this Agreement pursuant to this Section.

Section 5.20. General Terms and Conditions.

(A) Agreements to Run with the Land. This Agreement shall be recorded against the Property as described in Exhibit A-1 and shown on Exhibit A-2. The agreements contained herein shall be deemed to run with the land.

(B) No Waiver. Failure of a Party hereto to exercise any right hereunder shall not be deemed a waiver of any such right and shall not affect the right of such Party to exercise at some future time said right or any other right it may have hereunder.

(C) Merger. This Agreement, coupled with its Exhibits which are incorporated herein by reference, shall state the final and complete expression of the Parties' intentions with respect to the matters set forth herein. All prior negotiations and representations are superseded and merged herein.

[SIGNATURES FOLLOW ON NEXT PAGE]

IN WITNESS WHEREOF, the parties hereto have executed this Agreement on the date below found.

DEVELOPER:

WITNESSES:

_____

_____

REDWOOD USA, LLC, a _____

By: _____
Name: _____
Title: _____

COUNTY:

WITNESSES:

_____

COUNTY OF LANCASTER,
SOUTH CAROLINA

By: _____
Steve Harper, Chair, County Council

_____ Date: _____

_____ By: _____
Larry Honeycutt, Secretary, County Council

_____ Date: _____

STATE OF _____)
) ACKNOWLEDGMENT
COUNTY OF _____)

I, _____, Notary of the Public of the State of _____, do hereby certify that Redwood USA, LLC, by _____, its _____ personally appeared before me this ____ day of _____, 2020, and acknowledged the execution of the foregoing instrument.

_____
Notary Public for _____
Print Name: _____
My Commission Expires: _____

STATE OF SOUTH CAROLINA)
) ACKNOWLEDGMENT
COUNTY OF LANCASTER)

I, _____, Notary of the Public of the State of South Carolina, do hereby certify that the County of Lancaster, South Carolina, by Steve Harper, Chair, County Council, and Larry Honeycutt, Secretary, County Council, personally appeared before me this ____ day of _____, 2020, and acknowledged the execution of the foregoing instrument.

_____
Notary Public for South Carolina
Print Name: _____
My Commission Expires: _____

Exhibit A-1

Legal Description

TRACT ONE

BEGINNING AT AN EXISTING #5 IRON REBAR FOUND ALONG THE SOUTHWESTERN BOUNDARY OF BOBBY AND KATHERINE FURR AS RECORDED IN DEED BOOK A006, PAGE 971 IN THE LANCASTER COUNTY REGISTER DEEDS, A COMMON CORNER WITH WILLIAM S. PATTERSON AS RECORDED IN DEED BOOK 1013, PAGE 256, SAID REBAR LYING N 35°18’06” W, 126.35' FROM AN EXISTING #5 REBAR, THE SOUTHEEASTERNMOST CORNER OF FURR AND BEING THE **POINT OF BEGINNING** OF THE TRACT HEREIN DESCRIBED; THENCE, ALONG AND WITH THE COMMON BOUNDARIES OF PATERSON THE FOLLOWING THREE (3) COURSES AND DISTANCES; (1) S 49°08’21” W, 399.89' TO A NEW #4 REBAR SET; THENCE, (2) N 35°23’48” W, 330.01' TO A NEW #4 REBAR SET; THENCE, (3) N 49°07’09” E, 400.04' TO AN EXISTING #5 REBAR FOUND ALONG THE SOUTHWESTERN BOUNDARY OF VAN L. STORIE AS RECORDED IN DEED BOOK 810, PAGE 238, THENCE WITH THE SOUTHWESTERN BOUNDARY OF STORIE S 35°27’11” E, 156.06' TO AN EXISTING #5 REBAR, THE SOUTHWESTERN MOST CORNER OF FURR; THENCE, S 35°18’11” E, 174.11' TO THE **POINT OF BEGINNING**, CONTAING IN 3.018 ACRES.

TRACT TWO

BEGINNING AT AN EXISTING REBAR W/ CAP FOUND ALONG THE NORTHEASTERLY MARGIN OF THE 66’ PUBLIC RIGHT-OF-WAY OF HARRISBURG ROAD (S-29-64), A COMMON CORNER WITH CYRYL JOHN ASH AND ELIZABETH K. ASH AS RECORDED IN DEED BOOK J008, PAGE 80 IN THE LANCASTER COUNTY REGISTER DEEDS AND BEING THE **POINT OF BEGINNING** OF THE TRACT HEREIN DESCRIBED; THENCE, ALONG AND WITH THE COMMON BOUNDARY OF ASH; N 46°13’22” E, 328.26' TO AN EXISTING 1” IRON PIPE FOUND, A COMMON CORNER WITH WILLIAM S. PATTERSON AS RECORDED IN DEED BOOK 1013, PAGE 256; THENCE, ALONG AND WITH THE COMMON BOUNDARIES OF PATERSON THE FOLLOWING TWO (2) COURSES AND DISTANCES; (1) S 43°45’18” E, 660.47' TO A REBAR W/ CAP; THENCE, (2) N 46°12’09” E, 327.97' TO AN EXISTING #5 REBAR (BENT) FOUND ALONG THE NORTHEASTERLY MARGIN OF HARRISBURG ROAD; THENCE, ALONG AND WITH HARRISBURG ROAD N 44°18’12” W, 380.62' TO A NEW #4 REBAR SET; THENCE, N 43°04’08” WE, 280.00' TO THE **POINT OF BEGINNING**, CONTAING IN 5.002 ACRES.

Exhibit A-2

Boundary Plats

[Attached]

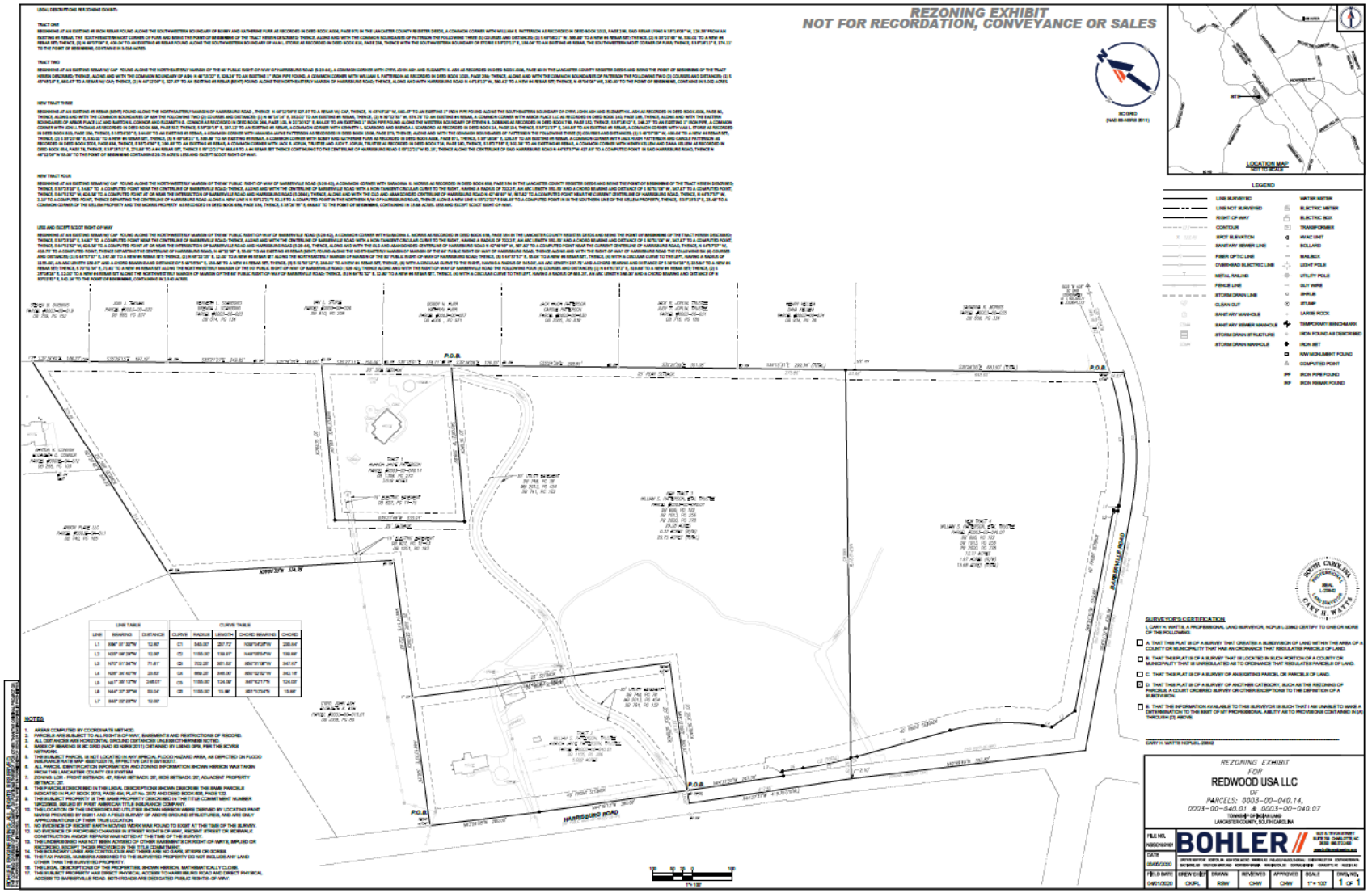

REZONING EXHIBIT
NOT FOR RECORDATION, CONVEYANCE OR SALES
LOCATION MAP
LEGEND
SURVEYOR'S CERTIFICATION
REZONING EXHIBIT
FOR
REDWOOD USA LLC
OF
PARCELS: 0003-00-040.14,
0003-00-040.01 & 0003-00-040.07
LANCASTER COUNTY, SOUTH CAROLINA
BOHLER
HARRISBURG ROAD
BARRINGER ROAD

Exhibit B
Development Program

1. *Conceptual Site Plan:* The Conceptual Site Plan attached hereto as Exhibit B-1 shall serve as the general guide for the location of roads, buildings, and other development features. The Property shall be generally developed consistent with the approved Conceptual Site Plan located on Exhibit B-1 unless otherwise modified consistent with the terms of the Agreement.
2. *Zoning District*: The Property, once rezoned, will be located in the Professional Business (PB) zoning districts and shall be developed consistent with the provisions of the UDO as applicable for this district.
3. *Permitted Uses*: The Property shall be permitted to be developed with all uses permitted within the Professional Business (PB) District as set forth in the UDO and not identified as being prohibited.
4. *Dimensional Requirements:* The Property shall be permitted to be developed in accordance with the criteria with respect to minimum parcel sizes, open space, population densities, building intensities, setbacks, height, parking, buffers, fencing, signage, impervious coverage, and other dimensional requirements or building development standards as applicable to the Professional Business (PB) District as set forth in the UDO.
5. *Design Review and Approval*. Development of the Property shall be subject to review by the County's Zoning Administrator and the Technical Review Committee, as applicable, as set forth in the UDO.
6. *Transportation:*
   a. Offsite Improvements:
      i. Traffic Impact Analysis (TIA): Provided by Developer dated August 2020.
      ii. Developer shall construct a left turn lane on Harrisburg Road at the main entrance to the Property and an emergency access path as a secondary point of entry onto the Property from Harrisburg Road, both as shown on Exhibit B-1.
   b. Onsite Improvements:
      i. *Internal Streets/ROW*: All internal streets shall be privately maintained by Developer or his/her assigns. All streets shall be constructed in accordance with County standards and inspected by the County throughout the development process. Construction testing results and As built surveys of all constructed roads shall also be required.
      ii. *Traffic Calming:* None required
      iii. *Walkway Connections:* Developer shall install a pedestrian walkway along the frontage of the Property and Harrisburg Road as shown on Exhibit B-1.
      iv. *Overflow Neighborhood Parking:* None required.

7. *Sewer*: Developer will bring sanitary sewer lines to the Property through adjacent properties and will install a sanitary sewer trunk line on the Property to connect to serve the Property

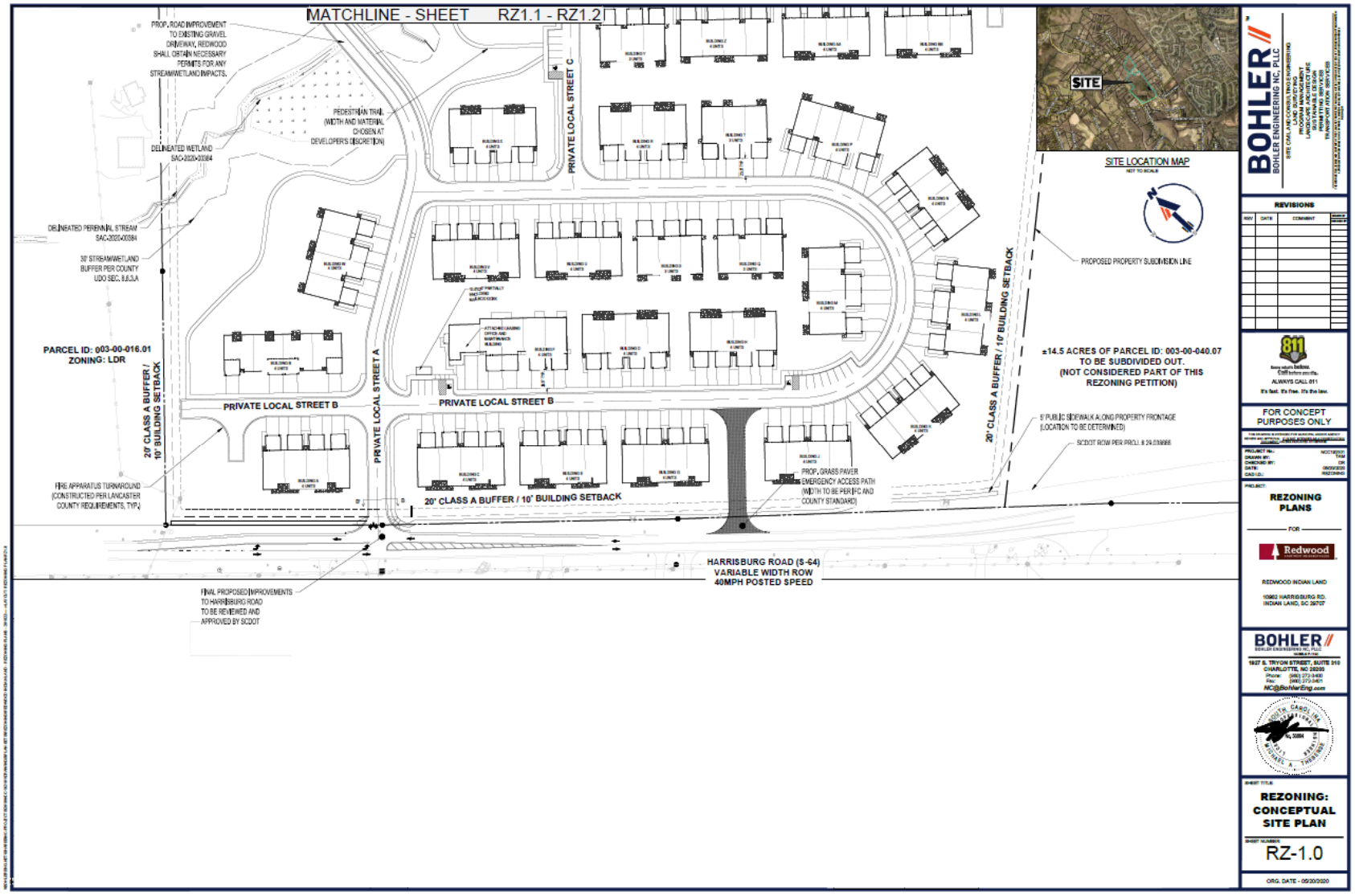
and the adjacent property to the north of the Property, which trunk line will be dedicated to the Lancaster County Water and Sewer District.

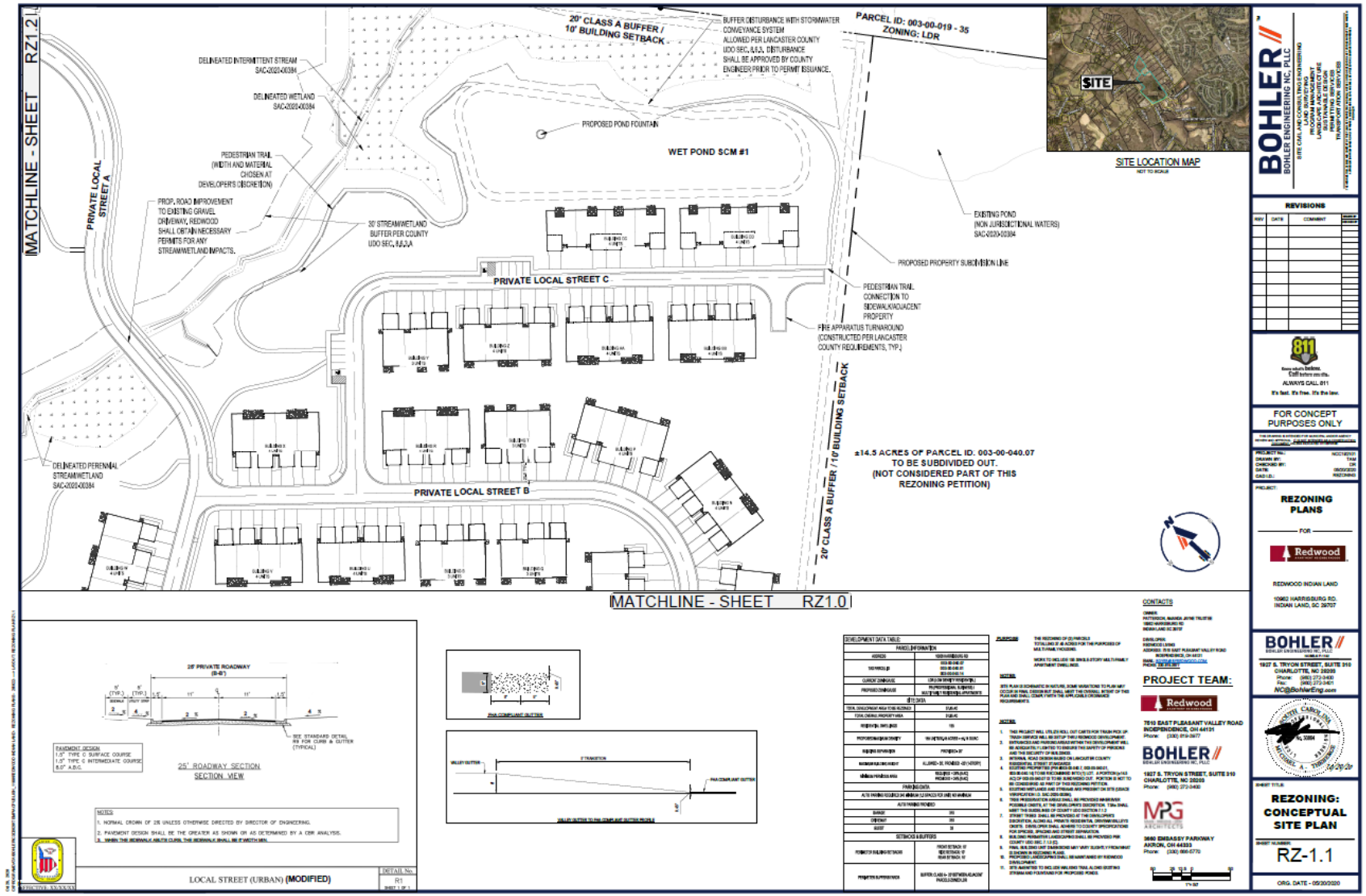
8. *Modification of Development Program*: It is recognized that periodic modifications to the Development Program may be needed to address market conditions, environmental challenges, and other elements. The following will outline the processes for Minor, Moderate, and Major Modifications to Exhibit B. Modifications to other sections of the Agreement will be processed in accordance with those provisions.
    a. Minor Modifications: "Minor Modifications" are defined as those modifications that reflect minor adjustments to the site layout caused by environmental features, adaptations to comply with regulatory requirements, and other changes considered incidental by County staff. Generally, Minor Modifications shall only be to the Conceptual Site Plan and not to a specific development standard set forth within Exhibit B. The Planning Director shall determine what shall constitute a Minor Modification and have the authority to administratively approve such.
    b. Moderate Modifications: "Moderate Modifications" are those modifications to the Conceptual Site Plan that are not caused by environmental features, adaptations to comply with regulatory requirements, and are not considered by County staff to be incidental changes. Moderate Modifications may be approved by the Infrastructure and Regulation Committee after a review and recommendation is provided by County Staff. Approved Moderate Modifications shall be recorded by the Developer and made an amendment to Exhibit B.
    c. Major Modifications: "Major Modifications" are those that do not qualify as either a Minor or Moderate Modification, such as the addition of new external access point to the public road system. Major Modifications must be processed and considered in the same manner as set forth in Ordinance No. 663 for a proposed development agreement.

Exhibit B-1

Conceptual Site Plan

[Attached]


MATCHLINE - SHEET RZ1.1 - RZ1.2
PROP. ROAD IMPROVEMENT TO EXISTING GRAVEL DRIVEWAY, REDWOOD SHALL OBTAIN NECESSARY PERMITS FOR ANY STREAM/WETLAND IMPACTS.
PEDESTRIAN TRAIL (WIDTH AND MATERIAL CHOSEN AT DEVELOPER'S DISCRETION)
DELINEATED WETLAND SAC-2020-00084
DELINEATED PERENNIAL STREAM SAC-2020-00084
30' STREAM/WETLAND BUFFER PER COUNTY UDO SEC. 8.6.3.A
PARCEL ID: 003-00-016.01
ZONING: LDR
20' CLASS A BUFFER / 10' BUILDING SETBACK
PRIVATE LOCAL STREET A
PRIVATE LOCAL STREET B
PRIVATE LOCAL STREET C
FIRE APPARATUS TURNAROUND (CONSTRUCTED PER LANCASTER COUNTY REQUIREMENTS, TYP.)
FINAL PROPOSED IMPROVEMENTS TO HARRISBURG ROAD TO BE REVIEWED AND APPROVED BY SCDOT
HARRISBURG ROAD (S-64)
VARIABLE WIDTH ROW
40MPH POSTED SPEED
PROP. GRASS PAVER EMERGENCY ACCESS PATH (WIDTH TO BE PER IFC AND COUNTY STANDARD)
5' PUBLIC SIDEWALK ALONG PROPERTY FRONTAGE (LOCATION TO BE DETERMINED)
SCDOT ROW PER PROJ. # 29.039666
±14.5 ACRES OF PARCEL ID: 003-00-040.07 TO BE SUBDIVIDED OUT. (NOT CONSIDERED PART OF THIS REZONING PETITION)
PROPOSED PROPERTY SUBDIVISION LINE
SITE
SITE LOCATION MAP
NOT TO SCALE
BOHLER
BOHLER ENGINEERING NC, PLLC
REVISIONS
FOR CONCEPT PURPOSES ONLY
REZONING PLANS
FOR
Redwood
REDWOOD INDIAN LAND
10063 HARRISBURG RD.
INDIAN LAND, SC 29707
1927 S. TRYON STREET, SUITE 310
CHARLOTTE, NC 28203
NC@BohlerEng.com
REZONING: CONCEPTUAL SITE PLAN
RZ-1.0
ORG. DATE - 05/20/2020


MATCHLINE - SHEET RZ1.2
20' CLASS A BUFFER / 10' BUILDING SETBACK
BUFFER DISTURBANCE WITH STORMWATER CONVEYANCE SYSTEM ALLOWED PER LANCASTER COUNTY UDO SEC. 4.6.3. DISTURBANCE SHALL BE APPROVED BY COUNTY ENGINEER PRIOR TO PERMIT ISSUANCE.
PARCEL ID: 003-00-019 - 35
ZONING: LDR
DELINEATED INTERMITTENT STREAM SAC-20200384
DELINEATED WETLAND SAC-20200384
PROPOSED POND FOUNTAIN
WET POND SCM #1
PEDESTRIAN TRAIL (WIDTH AND MATERIAL CHOSEN AT DEVELOPER'S DISCRETION)
PRIVATE LOCAL STREET A
PROP. ROAD IMPROVEMENT TO EXISTING GRAVEL DRIVEWAY, REDWOOD SHALL OBTAIN NECESSARY PERMITS FOR ANY STREAM/WETLAND IMPACTS.
30' STREAM/WETLAND BUFFER PER COUNTY UDO SEC. 8.2.3.A
PRIVATE LOCAL STREET C
EXISTING POND (NON JURISDICTIONAL WATERS) SAC-20200384
PROPOSED PROPERTY SUBDIVISION LINE
PEDESTRIAN TRAIL CONNECTION TO SIDEWALK/ADJACENT PROPERTY
FIRE APPARATUS TURNAROUND (CONSTRUCTED PER LANCASTER COUNTY REQUIREMENTS, TYP.)
DELINEATED PERENNIAL STREAM/WETLAND SAC-20200384
PRIVATE LOCAL STREET B
20' CLASS A BUFFER / 10' BUILDING SETBACK
±14.5 ACRES OF PARCEL ID. 003-00-040.07 TO BE SUBDIVIDED OUT. (NOT CONSIDERED PART OF THIS REZONING PETITION)
SITE
SITE LOCATION MAP
MATCHLINE - SHEET RZ1.0
25' PRIVATE ROADWAY (B-6')
25' ROADWAY SECTION
SECTION VIEW
LOCAL STREET (URBAN) (MODIFIED)
PROJECT TEAM:
Redwood
BOHLER
MPG ARCHITECTS
REVISIONS
FOR CONCEPT PURPOSES ONLY
REZONING PLANS
REDWOOD INDIAN LAND
10963 HARRISBURG RD.
INDIAN LAND, SC 29707
REZONING: CONCEPTUAL SITE PLAN
RZ-1.1

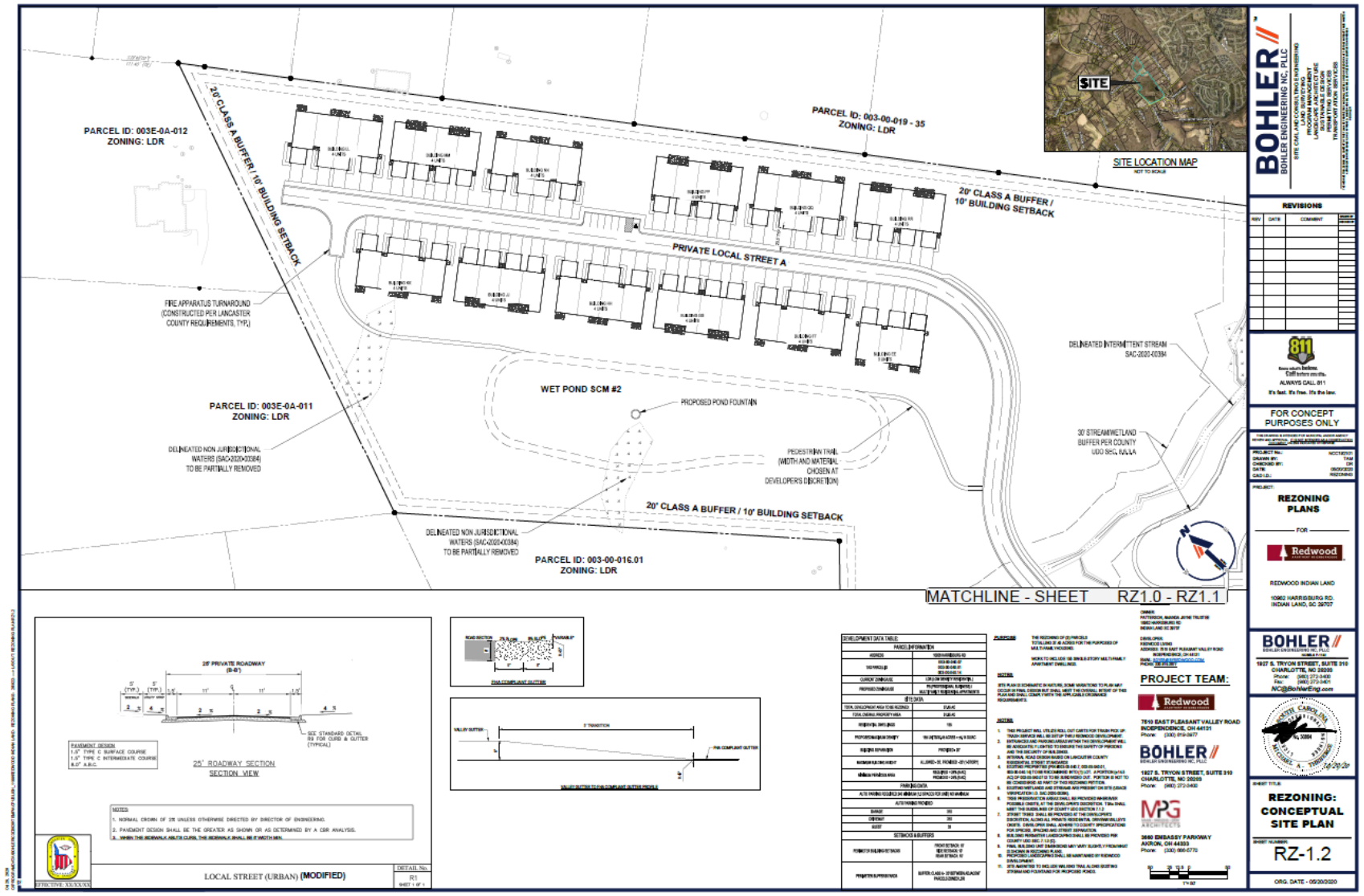

PARCEL ID: 003E-0A-012
ZONING: LDR
20' CLASS A BUFFER / 10' BUILDING SETBACK
PARCEL ID: 003-00-019 - 35
ZONING: LDR
20' CLASS A BUFFER / 10' BUILDING SETBACK
PRIVATE LOCAL STREET A
FIRE APPARATUS TURNAROUND (CONSTRUCTED PER LANCASTER COUNTY REQUIREMENTS, TYP.)
WET POND SCM #2
PROPOSED POND FOUNTAIN
PARCEL ID: 003E-0A-011
ZONING: LDR
DELINEATED NON JURISDICTIONAL WATERS (SAC-2020-00384) TO BE PARTIALLY REMOVED
PEDESTRIAN TRAIL (WIDTH AND MATERIAL CHOSEN AT DEVELOPERS DISCRETION)
DELINEATED INTERMITTENT STREAM SAC-2020-00394
30' STREAM/WETLAND BUFFER PER COUNTY UDO SEC. XX.X.X
20' CLASS A BUFFER / 10' BUILDING SETBACK
DELINEATED NON JURISDICTIONAL WATERS (SAC-2020-00384) TO BE PARTIALLY REMOVED
PARCEL ID: 003-00-016.01
ZONING: LDR
MATCHLINE - SHEET RZ1.0 - RZ1.1
SITE
SITE LOCATION MAP
NOT TO SCALE
20' PRIVATE ROADWAY (5-ST)
25' ROADWAY SECTION
SECTION VIEW
LOCAL STREET (URBAN) (MODIFIED)
PROJECT TEAM:
REVISIONS
FOR CONCEPT PURPOSES ONLY
REZONING PLANS
REDWOOD INDIAN LAND
10962 HARRISBURG RD.
INDIAN LAND, SC 29707
REZONING: CONCEPTUAL SITE PLAN
RZ-1.2
ORG. DATE - 05/20/2020

Exhibit C

Development Schedule

Years	Residential
1	0 units
2	0 units
3	0 units
4	84 units
5	71 units
Total	155 units

This Development Schedule is an estimate. The provisions of Section 1.07 of this Agreement apply to this exhibit.

NOTE: County and Developer acknowledge that development of the Property is limited to 155 residential units.

Exhibit D
Required Information

The Act and the Ordinance No. 663 require a development agreement to include certain information. The following information is provided in conformance with the Act and Ordinance No. 663.

(A) *a legal description of the property subject to the agreement and the names of the property's legal and equitable owners.* The legal description of the Property is set forth in Exhibit A. As of the Agreement Date, _____, _____, is the legal owner of the Property; provided, however, that Developer has contractual rights to acquire the Property and thus has an equitable interest in the Property.

(B) *the duration of the agreement which must comply with Code Section 6-31-40.* See Section 1.10.

(C) *a representation by the developer of the number of acres of highland contained in the property subject to the agreement.* See Section 2.02.

(D) *the then current zoning of the property and a statement, if applicable, of any proposed re-zoning of the property.* See Section 1.05.

(E) *the development uses that would be permitted on the property pursuant to the agreement, including population densities, building intensities and height.* See Section 1.06 and Exhibit B.

(F) *a description of the public facilities that will service the development, including who provides the facilities, the date any new facilities, if needed, will be constructed, and a schedule to assure public facilities are available concurrent with the impacts of the development construction timeline for those facilities. If the agreement provides that the County shall provide certain public facilities, the agreement shall provide that the delivery date of the public facilities will be tied to defined completion percentages or other defined performance standards to be met by the developer.* See Article IV.

(G) *a description, where appropriate, of any reservation or dedication of land for public purposes and any provisions to protect environmentally sensitive property as may be required or permitted pursuant to laws in effect at the time of entering into the agreement.* Developer agrees to comply with all applicable environmental laws, and Developer shall install a sanitary sewer trunk line on the Property, which will serve the Property and adjacent property to the North of the Property and will be dedicated to the Lancaster County Water and Sewer District, as described on Exhibit B.

(H) *a description of all local development permits approved or needed to be approved for the development of the property together with a statement indicating that the failure of the agreement to address a particular permit, condition, term, or restriction does not relieve the developer of the necessity of complying with the law governing the permitting requirements, conditions, terms or restrictions.* See Section 3.04.

(I) *a finding that the development permitted or proposed is consistent, or will be consistent by the time of execution of the agreement, with the County's comprehensive plan and land development regulations.* See Section 2.01(A).

(J) *a description of any conditions, terms, restrictions, or other requirements determined to be necessary by the local government for the public health, safety, or welfare of its citizens*. See Article IV.

(K) *a description, where appropriate, of any provisions for the preservation and restoration of historic structures.* Developer agrees to comply with all laws applicable to the preservation and restoration of historic structures within the Property.

(L) *a development schedule including commencement dates and interim completion dates at no greater than five year intervals.* See Section 1.07 and Exhibit C.

(L) *if more than one local government is made party to the agreement, a provision stating which local government is responsible for the overall administration of the agreement.* See Section 5.08.

(M) *a listing of the laws and land development regulations that will apply to the development of the property subject to the agreement, including citation to specific ordinance numbers or portions of the County Code of Ordinances or both.* See Sections 3.01, 3.03 and Exhibits E and E-1 – E5.

(N) *a provision, consistent with Code Section 6-31-80, addressing the circumstances under which laws and land development regulations adopted subsequent to the execution of the agreement apply to the property subject to the agreement.* See Section 3.03.

(O) *a provision stating whether the agreement continues to apply to the property or portions of it that are annexed into a municipality or included in a newly-incorporated area and, if so, that the provisions of Code Section 6-31-110 apply.* See Section 5.09.

(P) *a provision that the agreement may be amended or cancelled by mutual consent of the parties to the agreement or their successors in interest.* See Section 5.02.

(Q) *a provision that if the amendment constitutes a major modification of the agreement, the major modification may occur only after public notice and a public hearing by the council, provided that, for purposes of this item, a "major modification" means: (i) significant changes to the development scheduled time-frames set forth in the agreement; (ii) density modifications; (iii) land use changes; (iv) any major miscalculations of infrastructure or facility needs which create demand deficiencies; or (v) any significant deviation from the development as contained in the agreement.* See Section 5.02.

(R) *a provision that if the developer requests an amendment to the development schedule, including commencement dates and interim completion dates, then the dates must be modified by*

the council if the developer is able to demonstrate and establish that there is good cause to modify those dates. See Sections 1.07 and 5.02.

(S) *a provision that the agreement must be modified or suspended as may be necessary to comply with any state or federal laws or regulations enacted after the agreement is entered into which prevents or precludes compliance with one or more of the provisions of the agreement.* See Section 5.02

(T) *a provision for periodic review, consistent with the provisions of Section 8 of Ordinance No. 663.* See Section 5.03.

(U) *a provision addressing the effects of a material breach of the agreement, consistent with the provisions of Section 9 of Ordinance No. 663.* See Section 5.04.

(V) *a provision that the developer, within fourteen days after the County enters into the agreement, will record the agreement with the County Register of Deeds.* See Section 5.07.

(W) *a provision that the burdens of the agreement are binding upon, and the benefits of the agreement shall inure to, all successors in interest to the parties to the agreement.* See Section 1.09.

(X) *a provision addressing the conditions and procedures by which the agreement may be assigned.* See Section 1.09, Section 3.05, and Section 5.14.

(Y) *a traffic impact analysis prepared in accordance with UDO Chapter 6.8 and SCDOT standards.* See Section 4.04.

EXHIBIT E

Laws and Land Development Regulations

1. Ordinance No. 2020- #### zoning the Property Professional Business (PB) District attached hereto as Exhibit E-1.
2. Ordinance No. 2020- _____ approving this Development Agreement attached hereto as Exhibit E-2.
3. The Development Agreement Ordinance for Lancaster County, South Carolina: Ordinance No. 663, a copy of which is attached hereto as Exhibit E-3
4. Unified Development Ordinance of Lancaster County (UDO): Ordinance No. 309, as amended as of the Agreement Date. The UDO includes Ordinance No. 328, as amended, as of the Agreement Date and which is cited as the Land Development Regulations of Lancaster County, a copy of which attached hereto as Exhibit E-4.
5. Land Development Regulations of Lancaster County: See Unified Development Ordinance of Lancaster County.
6. Article V, Chapter 26, Lancaster County Code of Ordinances, Road Construction Standards attached hereto as Exhibit E-5.

EXHIBIT E-1

Ordinance No. 2020- ####

[Attached]

EXHIBIT E-2

Ordinance No. 2020- _____

[Attached]

EXHIBIT E-3

The Development Agreement Ordinance

[Attached]

EXHIBIT E-4

The UDO

EXHIBIT E-5

Article V, Chapter 26, Lancaster County Code of Ordinances, Road Construction Standards

August 2020

Traffic Impact Study

REDWOOD APARTMENT NEIGHBORHOODS

Indian Land, South Carolina

Submitted to:

South Carolina Department of Transportation

Lancaster County

Prepared by:

JMT
952 Houston Northcutt Blvd.
Mount Pleasant, SC 29464

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EXECUTIVE SUMMARY

The purpose of this Traffic Impact Analysis (TIA) is to analyze the traffic impacts from the proposed Redwood Apartment Neighborhoods development. The Redwood Apartment Neighborhoods development is located on the east side of Harrisburg Road just north of Barberville Road in Lancaster County, South Carolina. The development contains 157 two-bedroom apartments (34 buildings) on approximately 39 acres and has an anticipated build-out in the fourth quarter of 2024. The expected trips generated by the proposed development is 73 AM trips and 88 PM trips. Access to the site is proposed as one full access drive. It is also recommended that an emergency access point be established on Harrisburg Road but not used for normal site ingress/egress.

The TIA is necessary according to the standards of the SCDOT and Lancaster County since the development contains over 75 apartments and generates more than 50 trips per hour at full occupancy. To comply with section 6.8.2 of the Lancaster County Unified Development Ordinance adopted November 28, 2016 the traffic impacts were analyzed for 2025 which is one year after the development is expected to be at full occupancy. The primary objectives of this study are:

- To estimate the trip generation and the distribution of the traffic for the development.
- To analyze the impacted intersections within the study area.
- To develop recommendations for potential roadway and operational improvements to mitigate the development's impact to traffic.

Through coordination with Lancaster County Planning Office and the SCDOT District 4 office, the following intersections were analyzed for the AM and PM peak hours for the existing conditions, the 2025 No Build conditions, and the 2025 Build-Out conditions.

1. Harrisburg Road (S-64) and Barberville Road (S-42)
2. Harrisburg Road (S-64) and Caroline Acres Road (S-574)
3. Barberville Road (S-42) and Caroline Acres Road (S-574)
4. SC-160 and Barberville Road (S-42)
5. Harrisburg Road (S-64) and Regent Parkway
6. Harrisburg Road and Redwood Apartment Neighborhoods/Site Access

Each intersection was analyzed under the guidelines/standards contained in the SCDOT Access and Roadside Management Standards manual and the Lancaster County Unified Development Ordinance. The analyses used the methodology from the 2010 Highway Capacity Manual (HCM) and Synchro Version 10 software. A growth rate of 5% was used to determine the growth in the background traffic as directed by South Carolina Department of Transportation. The off-site development traffic for five proposed developments was also considered in the analysis. The off-site development traffic was obtained from previous TIA studies provided by Lancaster County.

The following information was gathered and developed to determine traffic impacts at the site:

- Traffic counts at the intersections listed above

- Roadway geometrics, traffic operations and traffic signal timings
- Background traffic for the major intersections
- Site traffic generated by the new developments and previously planned developments in proximity to the project site
- Capacity analysis for the intersections impacted by the proposed development
- Recommendations for the roadway network.

Based on the capacity analyses, the following is recommended:

Harrisburg Road and Site Access

- Construction of a left turn lane on southbound Harrisburg Road into the site access. The turn lane should provide 150 feet of storage. This access point is east of Caroline Acres Road.
- Construction of an emergency access point on Harrisburg Road for emergency vehicle access only. The emergency access is on Harrisburg Road east of the Site Access drive.

General

- In the future, the signal timings should be adjusted to reflect the changes in traffic flow. Since the SCDOT maintains the signal timings at the signalized study intersections, the timing adjustments would be the responsibility of the SCDOT.

All improvements on the state roadway network system are subject to approval by the SCDOT and Lancaster County. All improvements on the state system should be permitted, designed, and constructed in conformity with the standards of the SCDOT and Lancaster County.

INTRODUCTION

This study was prepared at the request of Redwood Apartment Neighborhoods to determine the traffic impacts associated with a proposed development on Harrisburg Road just north of Barberville Road. The Redwood Apartment Neighborhoods development is located on the east side of Harrisburg Road just north of Barberville Road in Lancaster County, South Carolina. The proposed development consists of 157 two-bedroom apartments (34 buildings) and has an anticipated build-out in the fourth quarter of 2024. The development contains approximately 39 acres. The 2018 AADT for Barberville Road was 7,500 vehicles per day. The 2018 AADT on Harrisburg Road was 6,400 vehicles per day south of Barberville Road and 7,100 vehicles per day north of Barberville Road.

Access to the proposed site is by one full access drive on Harrisburg Road. This TIA will evaluate the traffic conditions under the 2020 existing conditions, the 2025 No Build conditions, the 2025 Build-Out conditions, and the 2025 Build conditions with signal timing and intersection improvements. To comply with section 6.8.2 of the Lancaster County Unified Development Ordinance adopted November 28, 2016 the traffic impacts for the build-out conditions were analyzed for 2025 which is one year after the development is expected to be at full occupancy. The intersections included in the study are:

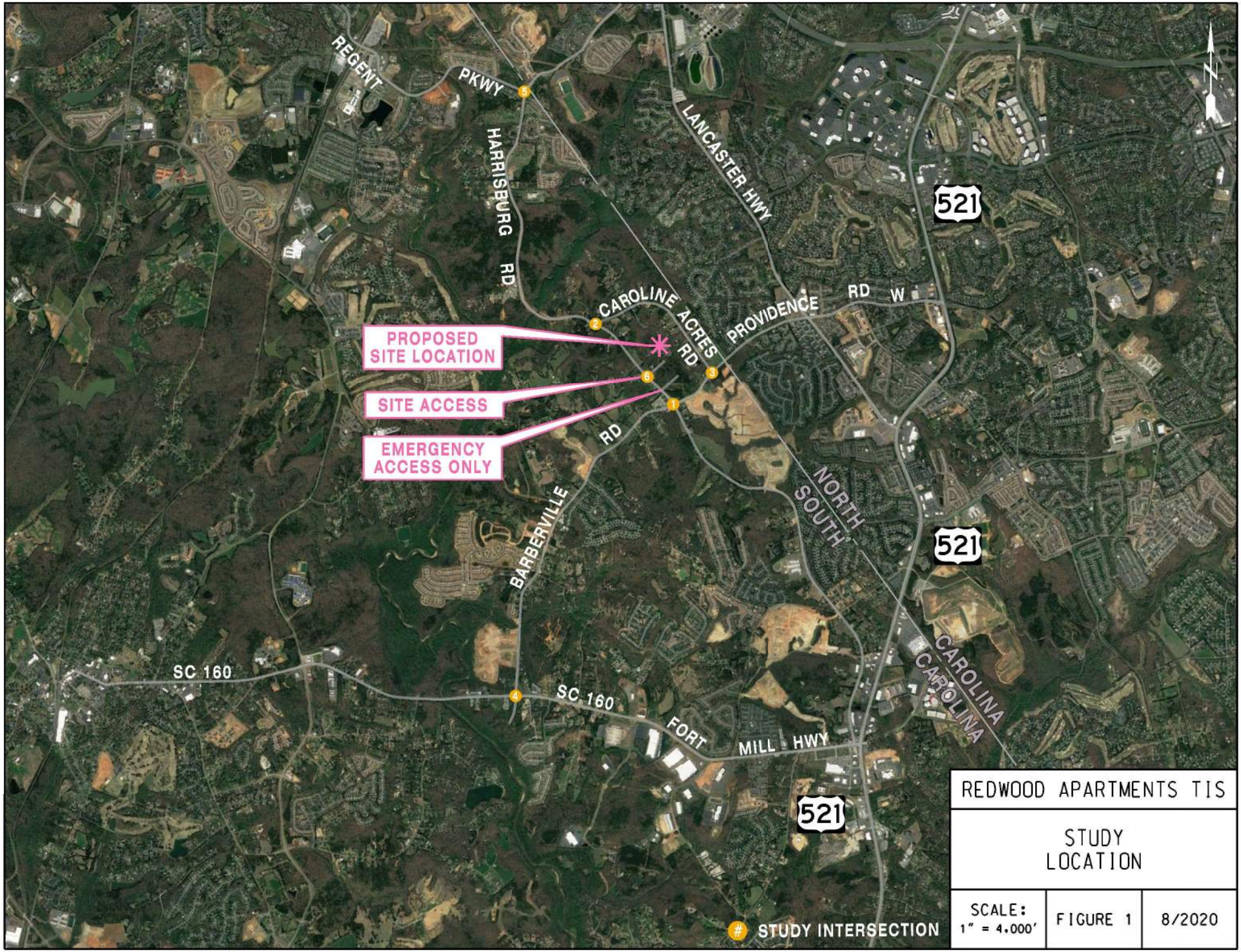
1. Harrisburg Road (S-64) and Barberville Road (S-42)
2. Harrisburg Road (S-64) and Caroline Acres Road (S-574)
3. Barberville Road (S-42) and Caroline Acres Road (S-574)
4. SC-160 and Barberville Road (S-42)
5. Harrisburg Road (S-64) and Regent Parkway
6. Harrisburg Road and Redwood Apartment Neighborhood/Site Access

The guidelines/standards used to prepare this TIA are found in the SCDOT Access and Roadside Management Standards manual and the Lancaster County Unified Development Ordinance.

The following information was gathered for this report and used to determine traffic impacts on the road network created by the proposed development:

- Normal weekday AM and PM peak hour traffic counts,
- Roadway geometrics, traffic operations and traffic signal timings
- Background traffic for the study intersections,
- Site traffic generated using the 10th Edition of the ITE Trip Generation Manual,
- Capacity analysis for the intersections impacted by the proposed development,
- Recommendations for improving the roadway network.

The project study area and site plan are shown in Figure 1 and Figure 2 respectively.



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Friday, August 21, 2020 AT 08:32 AM

SITE DATA

TOTAL ACREAGE:	±53.58 AC
RESIDENTIAL:	±38.99 AC
COMMERCIAL:	±14.59 AC
DWELLING UNITS:	157 UNITS
DENSITY:	±4.02 DU/AC

0 50' 100' 200'
SCALE: 1" = 100'-0"

Redwood APARTMENT NEIGHBORHOODS

Figure 2 **Indian Land, SC** Illustrative Site Plan | 12.04.2019

EXISTING CONDITIONS

STUDY AREA

The following is a description of the study area roadways:

Harrisburg Road (S-64): Harrisburg Road is a two lane, secondary road classified as a major collector with a posted speed limit of 40 mph in the area of the project. The 2018 AADT was 7,100 vehicles per day north of the project area.

Barberville Road (S-42): Barberville Road is a two lane, secondary road classified as a major collector. It starts at SC 160 at the southern end of the study area and continues into North Carolina as Providence Road (SR 3626). It has a posted speed limit of 40 mph near the intersection of Harrisburg Road. The 2018 AADT was 7,500 vehicles per day.

Caroline Acres (S-574): Caroline Acres is a two lane, secondary road which forms a loop between Harrisburg Road north of the project site to Barberville Road east of the project site. The speed limit is posted at 35 mph on this road. There is no proposed connection between Caroline Acres and the development. The AADT for this road was not available online.

SC-160 (Ft. Mill Highway): SC 160 is a classified as a principal arterial highway. It is a two-lane highway with a posted 45 mph speed limit at the intersection of Barberville Road. SC 160 begins at US 521 near Indian Land, SC in Lancaster County and continues through Fort Mill, SC in York County before entering North Carolina. The 2018 AADT of SC 160 was 22,000 vehicles per day just west of Barberville Road.

Regent Parkway: Regent Parkway is a two-lane local road intersecting with Harrisburg Road a few miles north of the development. The AADT of this road was not available online.

Table 1. Roadway Network Average Daily Traffic

Location	2018 ADT
Harrisburg Road	7,100
Barberville Road	7,500
SC 160	22,000

The following is a description of the intersections:

Harrisburg Road and Barberville Road: This is a signalized intersection just south of the development. Each of the four approaches have a left turn lane and a combination through/right turn lane. Each approach has a protected/permissive left turn phase.

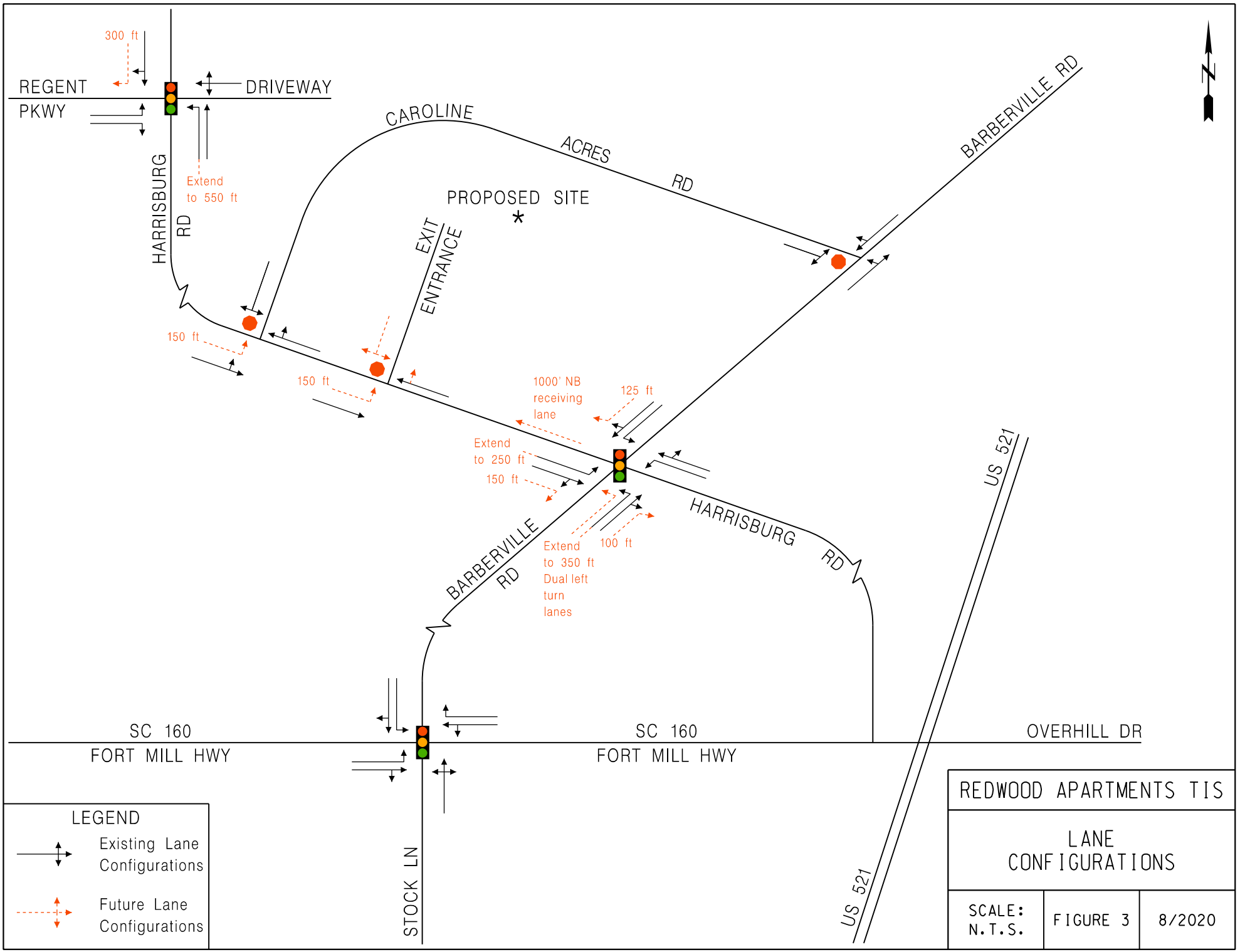
Harrisburg Road and Caroline Acres Road: This is a tee-type intersection just north of the development is formed by Caroline Acres Road intersecting Harrisburg Road from the east. Both roads are two lane roads and the intersection is controlled by a Stop sign on the Caroline Acres Road approach.

Barberville Road and Caroline Acres Road: This is a tee-type intersection just east of the development. It is formed by Caroline Acres Road intersecting Barberville Road from the north. Both roads are two lane roads and the intersection is controlled by a Stop sign on the Caroline Acres Road approach.

SC-160 and Barberville Road: This is a signalized intersection located a few miles west of the development. The eastbound SC 160 approach has a left turn lane and a combination through/right turn lane. The left tune on the eastbound approach is controlled by a protected/permissive left turn phase. SC 160 westbound has a through/left turn lane and an offset right turn lane. The right turn lane has a concurrent right turn phase. The Barberville Road approach has a left turn lane and a right turn lane. The northbound approach is a very minor approach serving basically as a driveway.

Harrisburg Road and Regent Parkway: This a signalized tee- intersection a few miles north of the development. Harrisburg Road northbound has a left turn lane and a through lane. The northbound left turn is controlled by a protected/permissive left turn phase. The Regent Parkway approach has a left turn lane and a right turn lane.

The existing and future lane configurations of the study intersections are shown in Figure 3.


300 ft
REGENT PKWY
DRIVEWAY
HARRISBURG RD
Extend to 550 ft
CAROLINE ACRES RD
BARBERVILLE RD
PROPOSED SITE
*
EXIT
ENTRANCE
150 ft
150 ft
1000' NB receiving lane
125 ft
Extend to 250 ft
150 ft
Extend to 350 ft Dual left turn lanes
100 ft
BARBERVILLE RD
HARRISBURG RD
US 521
SC 160 FORT MILL HWY
SC 160 FORT MILL HWY
OVERHILL DR
STOCK LN
US 521
N
LEGEND
Existing Lane Configurations
Future Lane Configurations
REDWOOD APARTMENTS TIS
LANE CONFIGURATIONS
SCALE: N.T.S.
FIGURE 3
8/2020

TURNING MOVEMENT COUNTS

After consulting with the SCDOT District 4 office and the Lancaster County Planning Department, traffic counts were performed at the following intersections.

1. Harrisburg Road (S-64) and Barberville Road (S-42)
2. Harrisburg Road (S-64) and Caroline Acres Road (S-574)
3. Barberville Road (S-42) and Caroline Acres Road (S-574)
4. SC-160 and Barberville Road (S-42)
5. Harrisburg Road (S-64) and Regent Parkway

Turning movement traffic counts at Harrisburg Road and Barberville Road were conducted on Tuesday, January 14, 2020. The counts at the other intersections were performed on Wednesday, February 12, 2020. The counts included the peak hours from 7:00-9:00 AM and 4:00-6:00 PM.

The turning movement count data for each intersection is shown in the Appendix. From the existing traffic counts the AM and PM peak hour volumes were determined. The AM and PM peak hour volumes are shown in Figure 4.

EXISTING TRAFFIC SIGNAL TIMING and PHASES

The following intersections in the study area are controlled by a traffic signal.

1. Harrisburg Road and Barberville Road
2. SC 160 and Barberville Road
3. Harrisburg Road and Regent Parkway

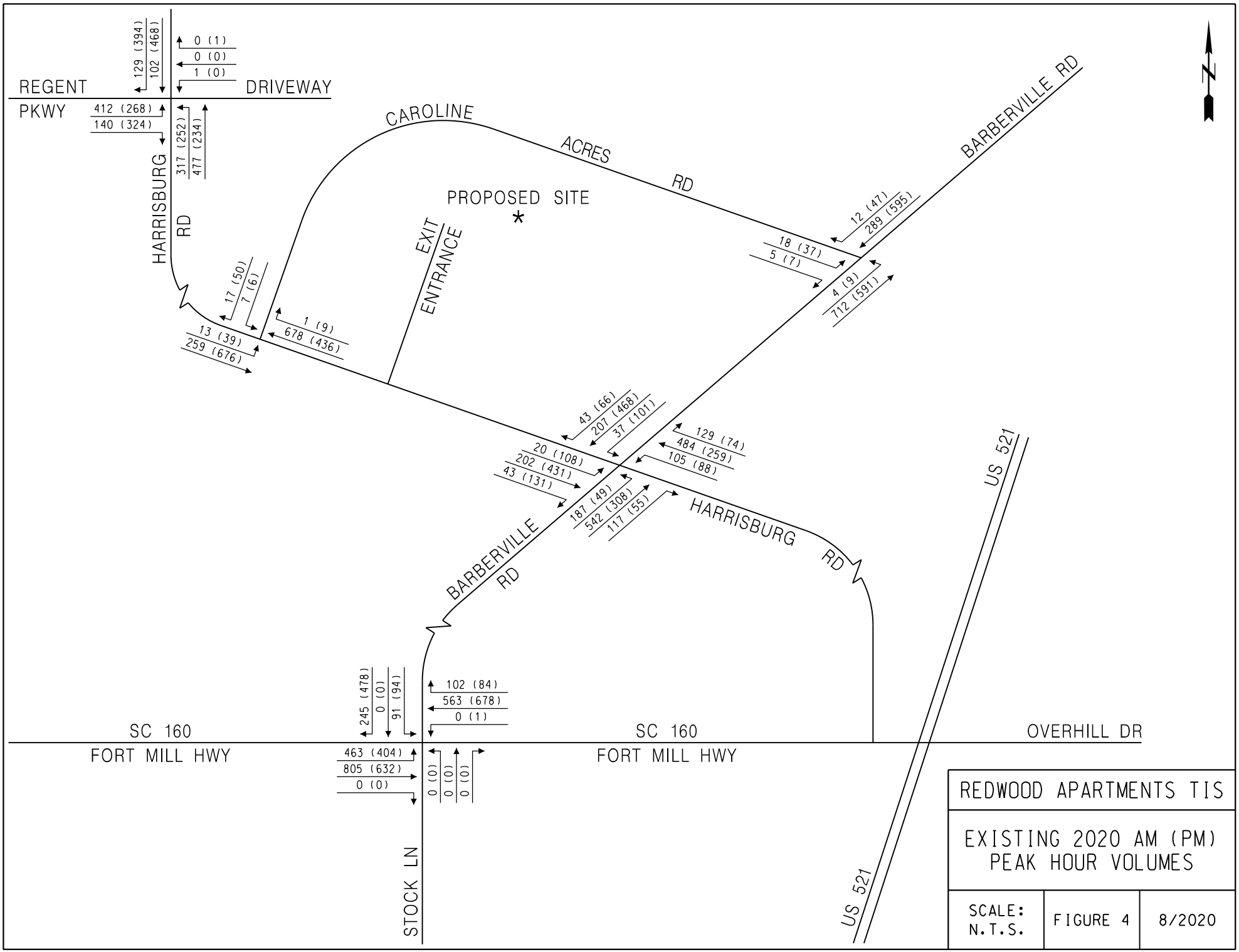
The existing traffic signal plans and signal timings are shown in the Appendix.

PLANNED IMPROVEMENT PROJECTS

There are two projects in the study area either planned or currently under construction.

Project ID 0031125RD01 is a widening project on SC 160 from the York County line to S-157 (Possum Hollow Road). Under this project SC 160 is being widened to three lanes from the York County Line to Rosemont Drive and to five lanes from Rosemont Drive to Possum Hollow Road.

Project ID P034704 is a rehabilitation and resurfacing project on Barberville Road from SC 160 to the North Carolina state line.



REDWOOD APARTMENTS TIS		
EXISTING 2020 AM (PM) PEAK HOUR VOLUMES		
SCALE: N.T.S.	FIGURE 4	8/2020

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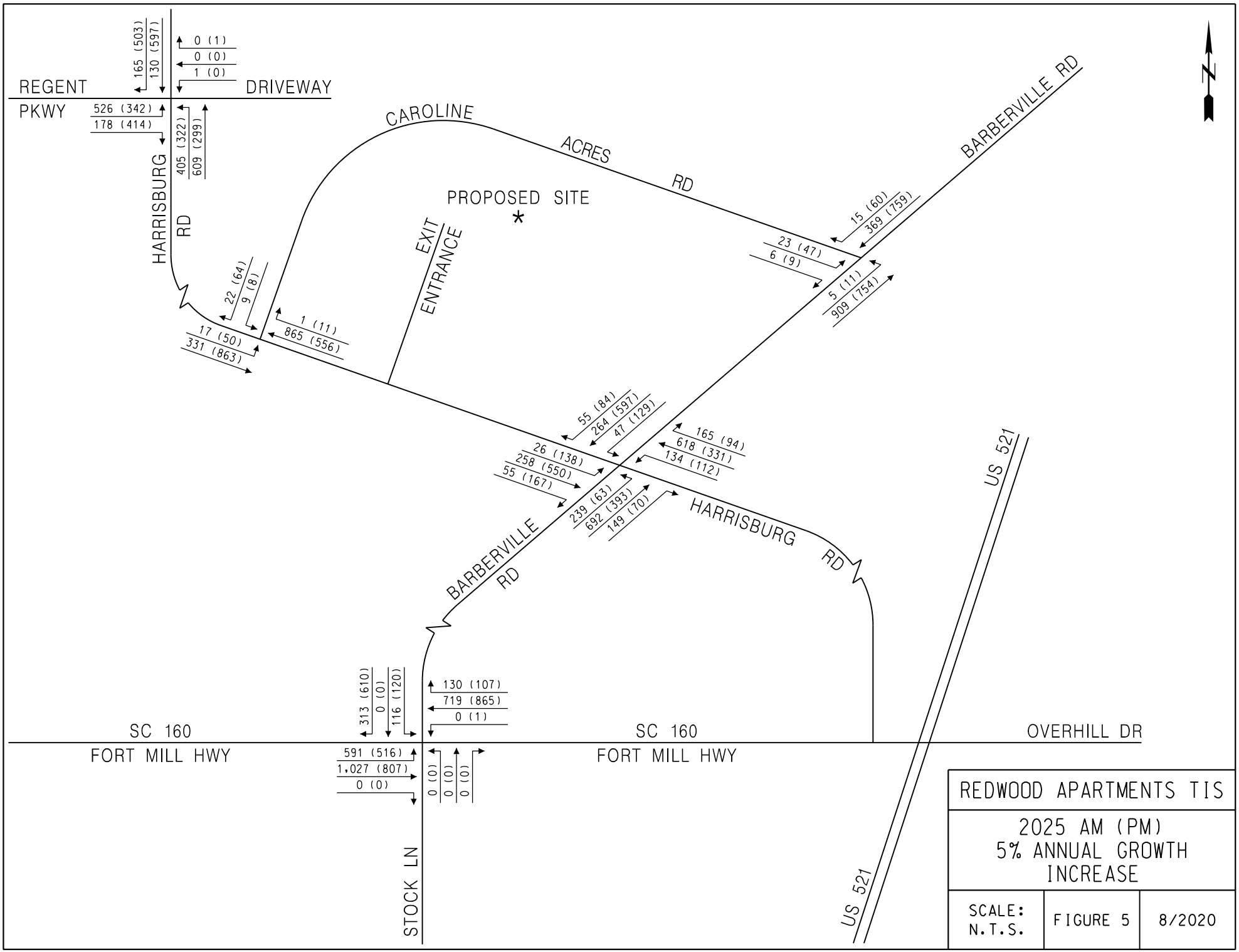
BACKGROUND CONDITIONS

HISTORICAL GROWTH TRAFFIC

The projected build-out year for Redwood Apartment Neighborhoods is the fourth quarter of 2024. This TIA includes the projected background traffic in the area. The projected background traffic is the expected change (historical growth) in the existing traffic volumes in the study area and any traffic generated by off-site developments anticipated between 2020 and the build-out year of the project. The background traffic does not include traffic generated by this project. It includes normal growth in traffic expected from year to year and growth resulting from other developments planned in or near the study area.

The SCDOT District 4 office requested a historical growth rate of 5% be used to determine the future traffic volumes in the build-out year of 2025. The 5% growth rate was applied to the existing volumes to determine the historical background growth from the existing traffic volumes to the traffic volumes in the build-out year of 2025. The 2025 traffic volumes resulting from the 5% historical growth rate used are shown in Figure 5.



REDWOOD APARTMENTS TIS

2025 AM (PM)
5% ANNUAL GROWTH
INCREASE

SCALE: N.T.S.	FIGURE 5	8/2020

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OFF SITE DEVELOPMENT TRAFFIC

Five off-site approved developments were considered as part of this study at the recommendation of the Lancaster County Planning Office. The TIA's for these developments were provided by Lancaster County. These developments are the Patterson Property, Chateau Ridge, Harrisburg Road Residential, Patterson Reserve, and The Lodges.

Based on a TIA performed by Sprague and Sprague in October 2017, the Patterson Property development proposes 53 signal family homes located on the east side of Harrisburg Road ¼ mile south of Barberville Road. The projected build-out year is 2020. It is expected to generate 47 trips in the AM peak hour and 60 trips in the PM peak hour. The traffic generated by this development was taken directly from the Sprague and Sprague TIA and applied to the study area. No improvements to the roadway network were recommended in this study.

The Chateau Ridge development is proposed on Harrisburg Road south of Barberville Road. A TIA was completed by Kimley Horn and Associates in September 2018 It is a 131 single family home development with a build-out in 2023-2024. It is expected to generate 98 AM peak hour trips, 132 PM peak hour trips, and 1,333 weekday trips. Three proposed drives on Harrisburg Road will provide access to the site. One of these drives is a full access drive and the other two are right in/right out drives. The traffic generated by this development was taken directly from the Kimley Horn TIA and applied to the study area. Improvements recommended by this study which will affect traffic in the study area include the construction of an exclusive eastbound (100 feet) right turn lane on Barberville Road at Harrisburg Road.

Based on a TIA performed by Ramey Kemp and Associates in October 2018, the Harrisburg Road Residential development is proposed to consist of 540 single family homes and 235 town houses. The site is to be served by three full access driveways on Harrisburg Road north of the Redwood Apartment Neighborhoods proposed site with full build-out in 2023. It is expected to generate 495 AM peak hour trips, 639 PM peak hour trips, and 6,644 weekday trips. The traffic generated by this development was taken directly from the Ramey Kemp TIA and applied to the study area. Improvements recommended by this study which will affect traffic in the study area include the construction of a southbound right turn lane on Harrisburg Road at Regent Parkway, construction a southbound left turn lane (150 feet) on Harrisburg Road at Caroline Acres, extending the eastbound Barberville Road left turn lane at Harrisburg Road to provide 500 feet of storage, extending the southbound left turn lane on Harrisburg Road at Barberville Road to provide 250 feet of storage, construction of a southbound right turn lane (150 feet) on Harrisburg at Barberville Road, and modifying the southbound left turn phase on Harrisburg Road at Barberville Road from permitted to protected/permitted. However, based on a Technical Traffic Memorandum for the Harrisburg Road Residential TIA prepared in December 2018, additional improvements were recommended which included dual eastbound left turn lanes (350 feet of storage) on Barberville Road at Harrisburg Road and constructing a 1000 foot receiving lane on Harrisburg Road north of Barberville Road. Also, the northbound left turn lane on Harrisburg Road at Barberville Road was to be extended to 300 feet.

Another background development is Patterson Preserve which is a proposed for 180 signal family homes. According to the TIA performed by Kimley Horn in February 2019 a projected build-out is in 2024. It is

located in the northwest quadrant of the intersection of Harrisburg Road and Barberville Road. Two access points are proposed; one on Harrisburg Road north of Barberville Road and one on Barberville Road west of Harrisburg Road. This site is proposed to generate 1,786 weekday trips, 133 trips in the AM peak hour, and 179 PM peak hour trips. The traffic generated by this development was taken directly from the Kimley Horn report and applied to the study area. Improvements recommended by this study which will affect traffic in the study area include the construction of a westbound right turn lane (125 feet) on Barberville Road at Harrisburg Road.

The final TIA for a background development included in this study was performed by Kimley Horn in December 2019. The Lodges development is proposed to consist of 329 apartments and 124 townhomes with a projected build-out in 2022. It is located in the northeast quadrant of the intersection of SC 160 and Rosemont Drive. This site is proposed to generate 2,688 weekday trips, 169 trips in the AM peak hour, and 211 PM peak hour trips. The traffic generated by this development was taken directly from the Kimley Horn report and applied to the study area. No improvements were recommended as part of this study that will affect traffic in our study analysis. The off-site development traffic generated by these five developments can be seen in Figure 6.

2025 BACKGROUND TRAFFIC

The 2025 background traffic consists of the 2020 existing traffic plus the historical growth traffic, plus the traffic from the five approved offsite developments. The total background traffic is shown in Figure 7.

SITE TRAFFIC

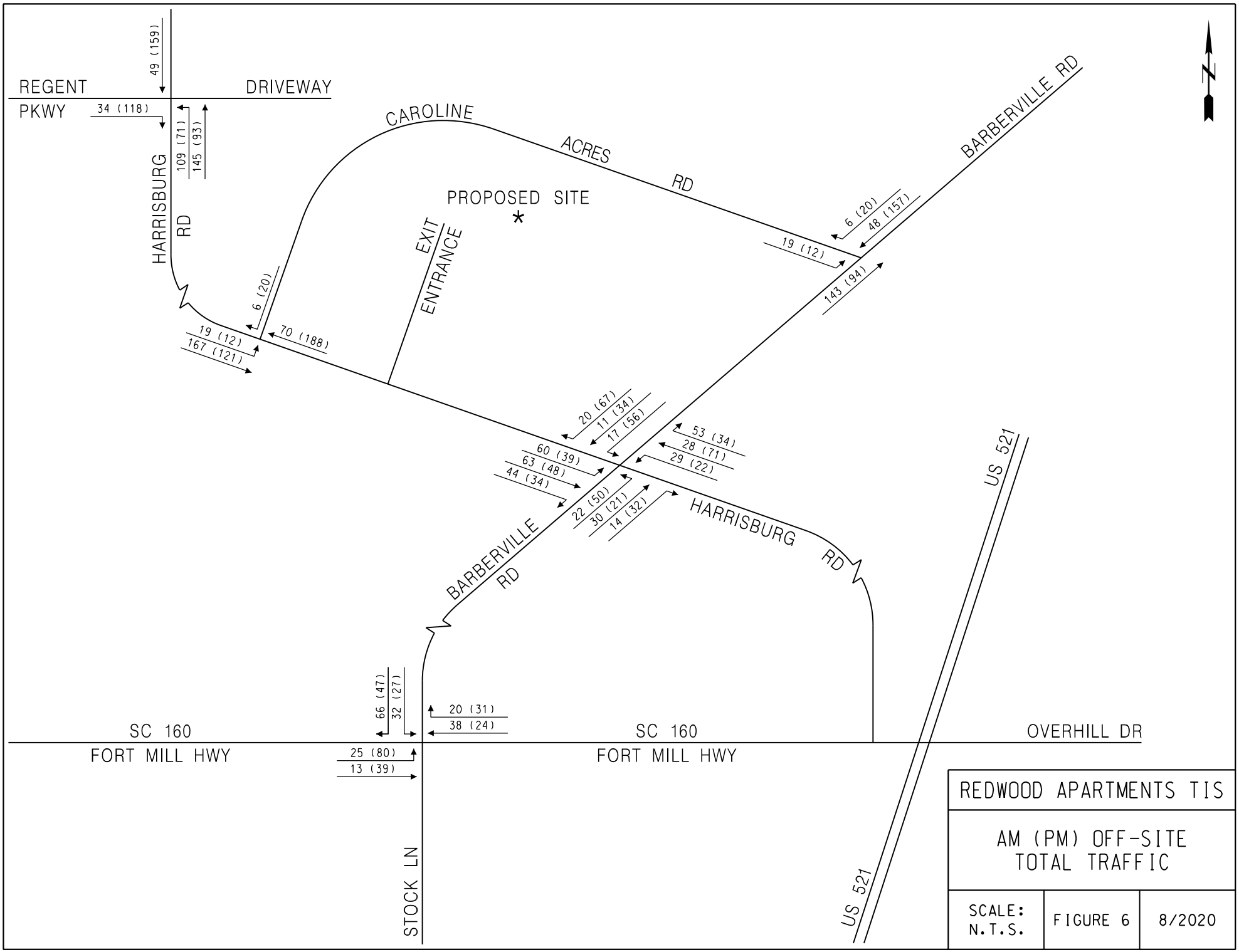
The proposed Redwood Apartment Neighborhoods development will consist of 157 two-bedroom apartments located in 34 buildings. The proposed site is presently an unoccupied wooded area. One full movement and one right-in/right-out access point is proposed on Harrisburg Road. The trips generated by the construction of the proposed development were calculated using the 10th Edition of the ITE Trip Generation Manual and were based on Multifamily Housing – Low Rise (ITE Code 220). The calculations were based on the proposed 157 dwelling units and are shown below. The trips expected to be generated were added to the projected background traffic and distributed throughout the study area.

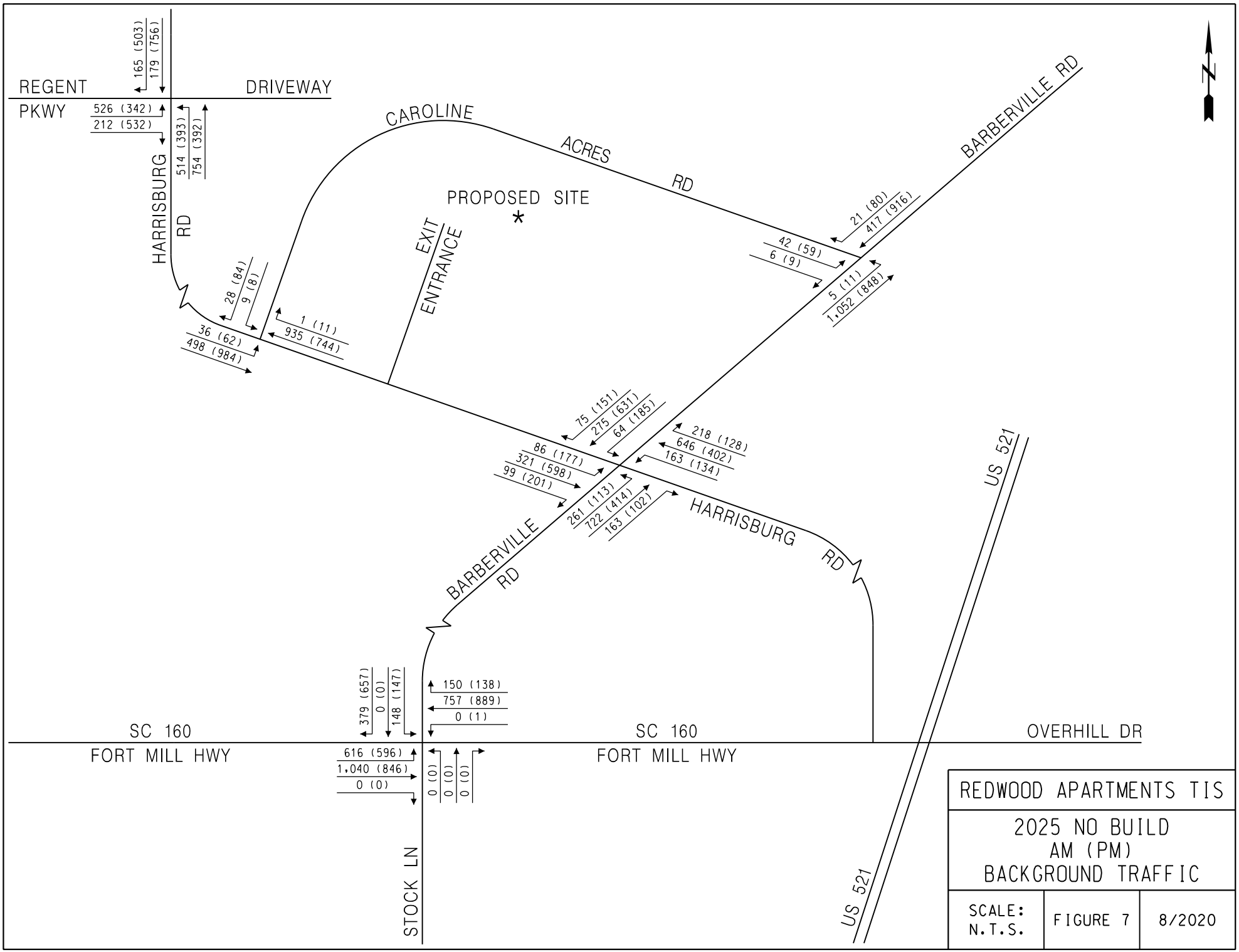
Multifamily Housing Low Rise (ITE Code 220)

AM
Average Rate = 0.46 per dwelling unit
Ln(T) = 0.95Ln(X) - 0.51
T = 73 trips
23% In = 17 trips
77% Out = 56 trips

PM
Average Rate = 0.56 per dwelling unit
Ln(T) = 0.89 Ln(X)-0.02
T = 88 trips
63% In = 55 trips
37% Out = 33 trips

The Site Generation Diagram showing how these trips were distributed is shown in Figure 8. The distribution of the trips generated by the proposed site is shown in Figure 9.


REGENT PKWY
DRIVEWAY
49 (159)
34 (118)
109 (71)
145 (93)
HARRISBURG RD
CAROLINE ACRES RD
BARBERVILLE RD
PROPOSED SITE
*
EXIT
ENTRANCE
6 (20)
19 (12)
167 (121)
70 (188)
19 (12)
6 (20)
48 (157)
143 (94)
20 (67)
11 (34)
17 (56)
53 (34)
28 (71)
29 (22)
60 (39)
63 (48)
44 (34)
22 (50)
30 (21)
14 (32)
BARBERVILLE RD
HARRISBURG RD
US 521
66 (47)
32 (27)
20 (31)
38 (24)
SC 160
FORT MILL HWY
SC 160
FORT MILL HWY
OVERHILL DR
25 (80)
13 (39)
STOCK LN
US 521
REDWOOD APARTMENTS TIS
AM (PM) OFF-SITE
TOTAL TRAFFIC
SCALE: N.T.S.
FIGURE 6
8/2020



REDWOOD APARTMENTS TIS

2025 NO BUILD
AM (PM)
BACKGROUND TRAFFIC

SCALE: N.T.S.	FIGURE 7	8/2020

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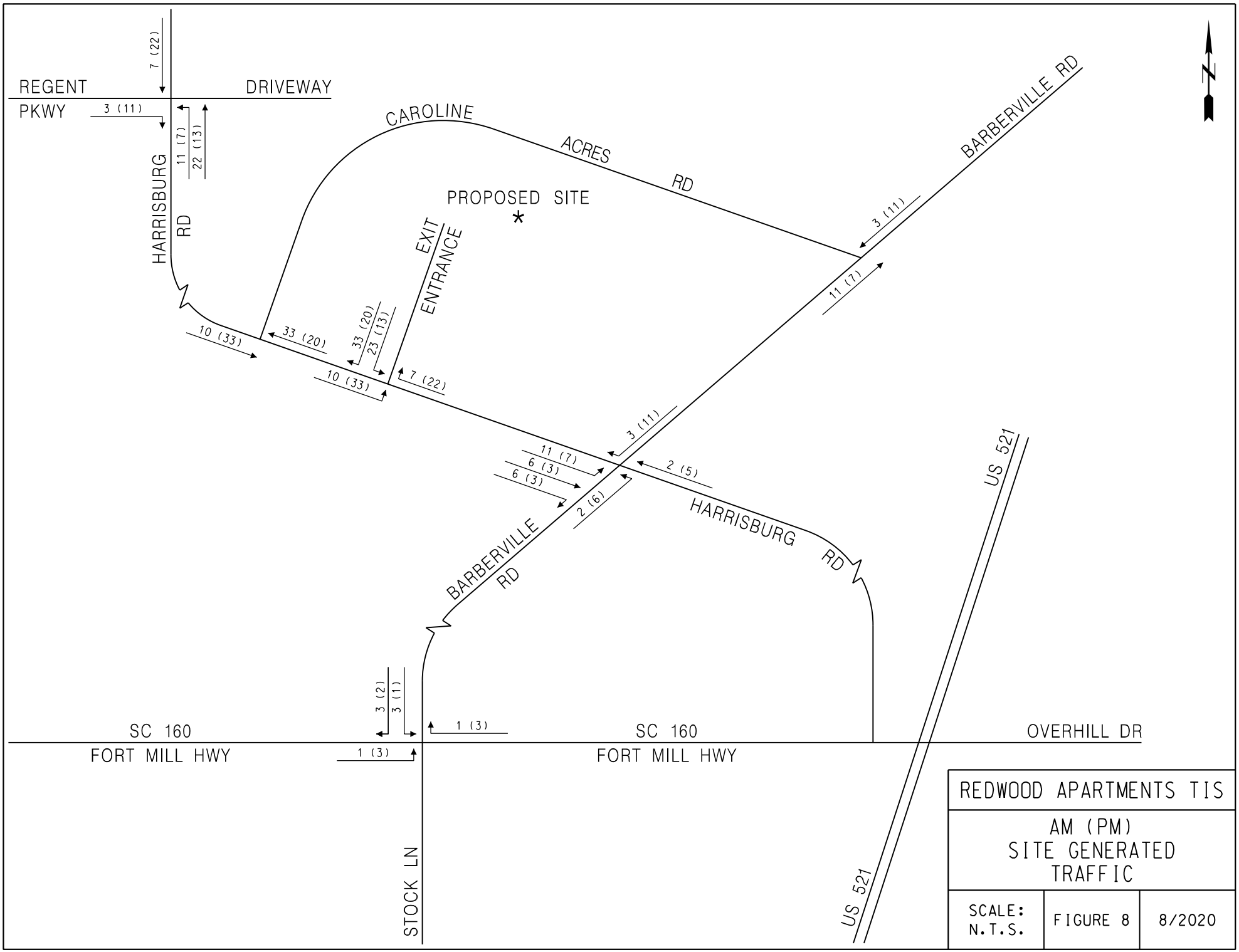

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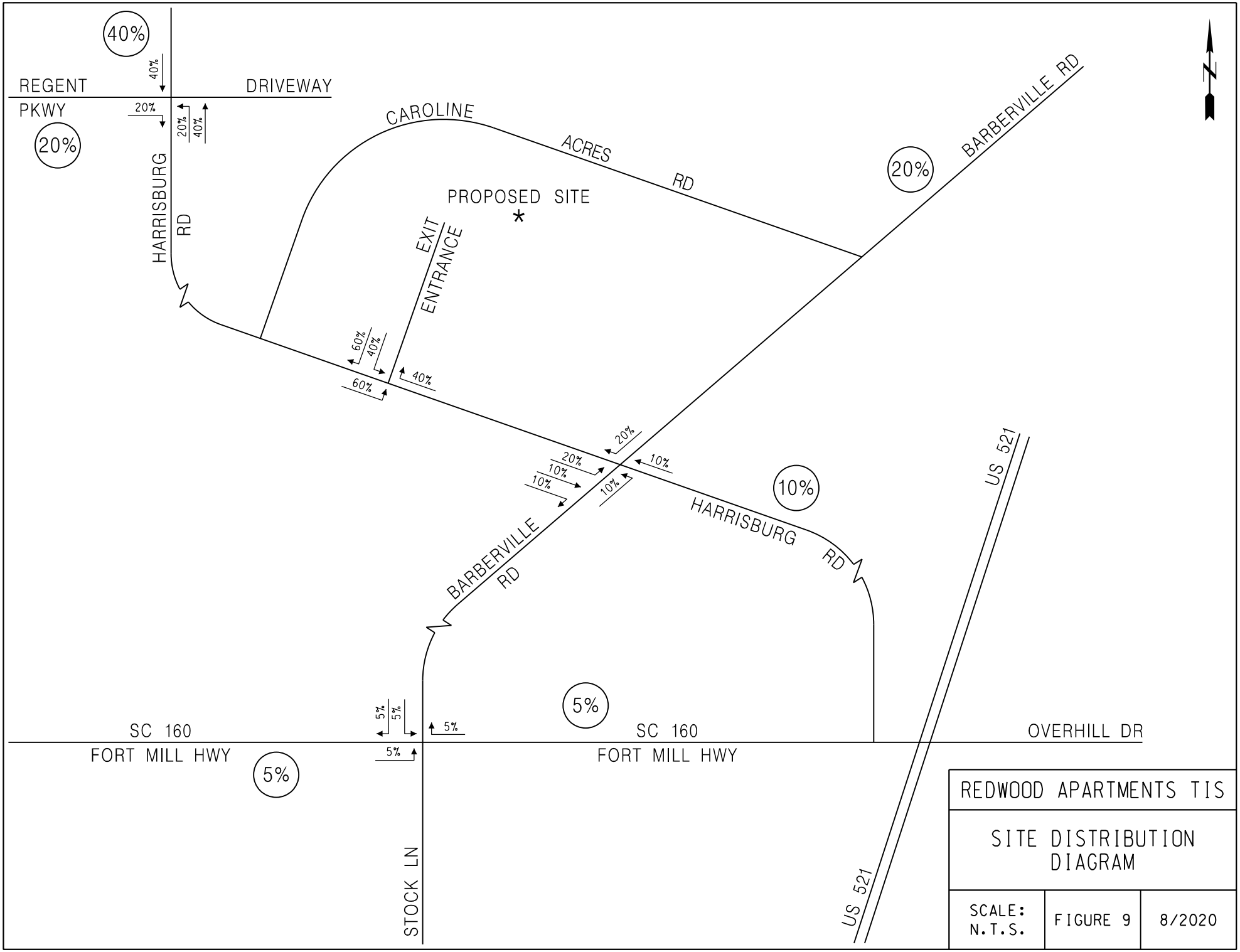

REDWOOD APARTMENTS TIS

SITE DISTRIBUTION DIAGRAM

SCALE: N.T.S.	FIGURE 9	8/2020

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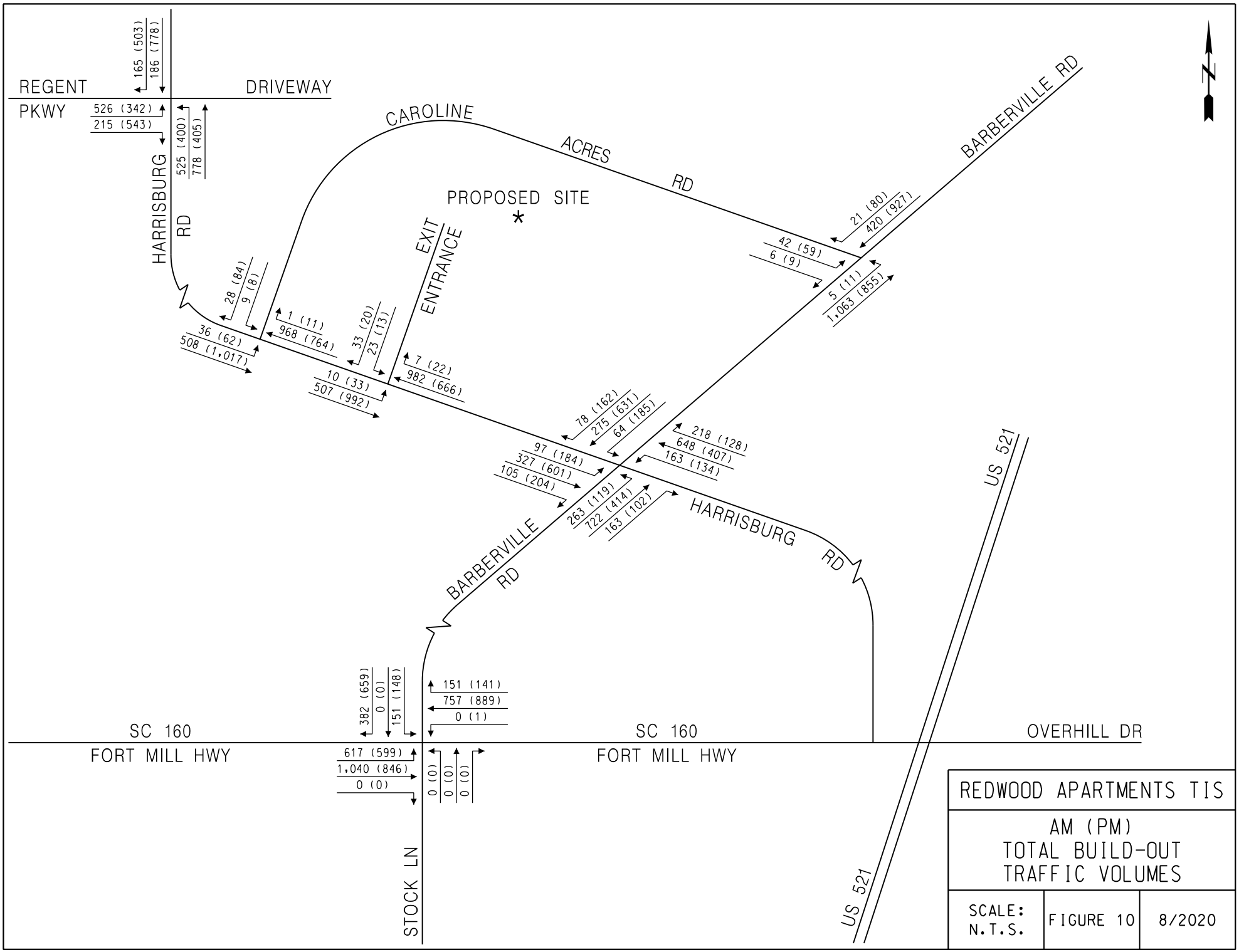
2025 TOTAL BUILD-OUT TRAFFIC

The 2025 total build-out traffic is the 2025 No Build (Background) traffic calculated using a 5% growth rate, plus the traffic generated by the build-out of the five proposed, approved off-site developments in the vicinity of the project, plus the traffic projected to be generated by the proposed Redwood Apartment Neighborhoods site at build-out added together. The total 2025 build-out traffic is shown in Figure 10.



REDWOOD APARTMENTS TIS

AM (PM)
TOTAL BUILD-OUT
TRAFFIC VOLUMES

SCALE: N.T.S.	FIGURE 10	8/2020

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Wednesday, August 19, 2020 AT 01:14 PM

CAPACITY ANALYSIS

Synchro 10 was used to analyze the study intersections during the AM and PM peak hour hours. The intersections were analyzed under the 2020 Existing traffic, the 2025 No Build condition, and the 2025 Build-Out traffic conditions to determine the LOS/delay and queues for each intersection. Synchro 10 determined the capacity analyses for each intersection using the methodology from the Highway Capacity Manual (HCM). The analysis of each intersection was used to quantify the impacts of the proposed development on the roadway network.

The analyses determined the LOS (Level of Service) and the delay for each intersection. LOS is a performance measure outlined in the HCM that is used to translate numerical results into a simple A-F system that is based on the average seconds of delay per vehicle entering the intersection. The HCM defines the LOS A through LOS F through the traveler's perspective with LOS A having the best operating conditions (least delay) and LOS F having the worst (most delay). LOS from A-D are usually considered acceptable with LOS of E-F considered unacceptable.

The LOS for a two way, stop controlled (TWSC) intersection is determined by the delay on the stop-controlled approaches during the peak periods of the day. It is typical for the stop-controlled approaches to experience long delays during peak hours. The long delays are more prevalent for left turn movements from the stop-controlled approaches. The higher volume traffic on the major highways usually experience little or no delay since they are not controlled by a stop sign or signal.

The LOS for signalized intersection is measured as the total delay on all the approaches during the peak traffic hours. One movement can experience high delays while the rest of the movements may have little delay resulting in a good overall LOS.

The standards from the Lancaster County UDO Section 6.8.1A requires that all collector and local streets operate at a LOS of C or above and all arterial or higher order streets operate at a LOS of D or above at the build-out of the new development. If these standards are not met, then mitigation improvements to the roadway network should be identified to improve the LOS.

The existing signal timings obtained from the SCDOT were used for all the signalized intersections for the existing conditions. These can be found in the appendix. The signal timings for the 2025 No Build and 2025 Build conditions were optimized by the Synchro software for the analysis.

2020 Existing Traffic Analysis

Tables 2 and 3 show the overall LOS/delay and approach LOS/delay for the 2020 Existing traffic in the AM and PM peak hour for each of the study intersections. In the AM peak hour, all the intersections operate at a LOS of C or better except the Harrisburg Road/Barberville Road intersection which operates at a LOS of E. Of the three signalized intersections during the PM peak hour, Harrisburg Road/Barberville Road and

Harrisburg Road/Regent Parkway operate at a LOS of D while SC 160/Barberville Road operates at a LOS of C. The stop-controlled intersection of Barberville Road/Caroline Acres Road operates at a LOS of D. The Synchro Version 10 Capacity Analysis reports are shown in the Appendix.

2025 NO BUILD AND 2025 BUILD-OUT TRAFFIC ANALYSIS

Tables 2 and 3 display the 2025 No Build and 2025 Build-Out LOS/delay. The Build-Out condition analysis includes improvements to be made by the developer for Redwood Apartment Neighborhoods, as well as improvements to meet LOS C/D.

For the 2025 No Build and Build-Out condition analyzes the following road improvements committed by others were included:

- An exclusive right turn lane (100 feet) for eastbound Barberville Road at Harrisburg Road
- An exclusive right turn lane (300 feet) for southbound Harrisburg Road at Regent Parkway
- An exclusive left turn lane (150 feet) for southbound Harrisburg Road at Caroline Acres Road
- Constructing dual eastbound lanes on the eastbound approach of Barberville Road to Harrisburg Road with 350 feet of storage
- Adding an additional northbound receiving lane (approximately 1000 feet) on Harrisburg Road north of Barberville Road
- Extending the northbound left turn lane on Harrisburg Road at Barberville Road to 300 feet of storage
- Extending the southbound left turn lane on Harrisburg Road at Barberville Road to provide 250 feet of storage
- An exclusive southbound right turn lane (150 feet) on Harrisburg Road at Barberville Road
- An exclusive westbound right turn lane (125 feet) on Barberville Road at Harrisburg Road
- Extend the northbound left turn lane on Harrisburg Road at Regent Parkway to provide 550 feet of storage

In both the 2025 No Build and the 2025 Build Out models the three signalized intersections were modeled with the signal timings optimized. Table 2 and 3 depicts the overall LOS/delay and approach LOS/delay for the projected 2025 No Build and the 2025 Build-Out conditions in the AM and PM peak hour respectively.

The Capacity Analysis reports generated by Synchro 10 software are shown in the Appendix.

Each intersection is discussed in more detail on the following pages.

Table 2. AM Peak Hour HCM Level of Service

Intersection	2020 Existing		2025 No Build		2025 Build-Out		2025 Build-Out Improved LOS C/D	
	LOS	Delay (sec/veh)	LOS	Delay (sec/veh)	LOS	Delay (sec/veh)	LOS	Delay (sec/veh)
Harrisburg Road and Barberville Road	E	71.4	F	114.9	F	114.9	C	25.7
Harrisburg Road and Caroline Acres Road	C	19.9*	D	28.5*	D	30.5*	C	20.4*
Barberville Road and Caroline Acres Road	C	21.5*	F	58.5*	F	60.9*	A**	3.0**
SC 160 and Barberville Road	C	30.5	D	54.4	D	55.0	C	24.9
Harrisburg Road and Regent Parkway	C	24.1	C	32.4	C	34.0	B	18.6
Harrisburg Road and Site Access	N/A	N/A	N/A	N/A	E	41.5*	E	41.5*

*Worst approach delay reported

** - Traffic signal installed

2025 Build-Out Improved: Includes the proposed mitigation to be made by the developer.

2025 Build-Out Improved LOS C/D: Includes the identified mitigation to meet the LOS requirements.

Table 3. PM Peak Hour HCM Level of Service

Intersection	2020 Existing		2025 No Build		2025 Build-Out		2025 Build-Out Improved LOS C/D	
	LOS	Delay (sec/veh)	LOS	Delay (sec/veh)	LOS	Delay (sec/veh)	LOS	Delay (sec/veh)
Harrisburg Road and Barberville Road	D	51.5	E	67.6	E	68.6	C	32.6
Harrisburg Road and Caoline Acres Road	B	19.5*	D	29.5*	D	32.0*	C	17.2*
Barberville Road and Caroline Acres Road	D	31.5*	F	255.1*	F	271.0*	B**	14.2**
SC 160 and Barberville Road	C	33.1	F	93.2	F	95.2	D	47.1
Harrisburg Road and Regent Parkway	D	54.1	D	50.2	D	54.4	C	22.7
Harrisburg Road and Site Access	N/A	N/A	N/A	N/A	E	39.3*	E	39.3*

***** Worst approach delay reported
**Signal installed

2025 Build-Out Improved: Includes the proposed mitigation to be made by the developer.
2025 Build-Out Improved LOS C/D: Includes the identified mitigation to meet the LOS requirements.

HARRISBURG ROAD AND BARBERVILLE ROAD

As shown in Tables 2 and 3, this intersection currently operates at a LOS of E in the AM peak hour and D in the PM peak hour. Under the 2025 No Build condition the intersection is expected to operate at LOS of F in the AM and a LOS E in the PM peak hours. Under the 2025 Build-Out conditions the intersection is projected to continue to operate at a LOS F in the AM and a LOS E in the PM with only slight increases in the overall delay/queue lengths.

Most of the projected delay in the AM peak hour is on the eastbound through movement of Barberville Road and the northbound through movement of Harrisburg Road with both individual approaches operating as a LOS of F. Significant queues are projected along the eastbound and northbound through lanes.

During the PM peak hour period there are significant backups and delay projected on all approaches during both the 2025 No Build and the 2025 Build-Out conditions. Under both conditions, the intersection is projected to operate at a LOS E. With the 2025 Build-Out condition, there is a slight increase in overall delay of 1.0 sec/veh as compared to the 2025 No Build condition.

The guidelines from the Lancaster County UDO state that a major collector should operate at a LOS of C or better at build-out or improvements should be identified to improve the LOS to the standard LOS of a C.

To improve the overall operation to a LOS C the following improvements were identified:

- The construction of an exclusive right turn-turn lane on northbound Harrisburg Road (150 foot storage/100 foot taper.
- The construction of an additional through lane on the Barberville Road approaches.
- The construction of an additional through lane on the Harrisburg Road approaches.

The analysis of the intersection under these conditions yield a LOS/Delay in the AM and PM peak hours of C/25.7 and C/32.6. The construction of the additional through lanes would necessitate the construction of an additional receiving lane on each departure.

The Redwood Apartment Neighborhoods development is not projected to increase the number of right turn motorists on the northbound Harrisburg Road approach nor significantly increase the delay on the other approaches from the projected 2025 No Build traffic, therefore it is recommended that these improvements not be made by the developer. In the meantime, it is recommended that signal timing adjustments be made as the traffic volumes increase in the future.

The approach LOS, delay and queues for each movement can be found in the appendix.

HARRISBURG ROAD AND CAROLINE ACRES ROAD

This intersection operates as at a LOS C under the existing 2020 AM conditions and PM conditions peak hour conditions. Under the 2025 No Build conditions it is expected to operate at a LOS D under both the

AM and PM peak periods. For the 2025 Build-Out conditions it is expected to continue to operate at a LOS D with a 2.0 second increase in delay in the AM and a 2.5 second increase in the PM. The Redwood Apartment Neighborhoods development is not projected to add any traffic to the Caroline Acres approach and only projected to make up 2.8% of the 2025 AM Build-Out traffic and 2.7% of the 2025 PM Build-Out traffic on Harrisburg Road.

Based on the low projected increase in delay and the low impact the development has on this intersection, no mitigation improvements are recommended at this intersection to be constructed by the development.

To comply with the Lancaster County guidelines, mitigation improvements should be identified to bring this major collector to a LOS C or better. The installation of a right turn lane on northbound Harrisburg Road at this intersection does not improve the LOS since there are few right turn motorists on northbound Harrisburg Road. The installation of a stop and go traffic signal was considered but ultimately vetoed due to the relatively low volume of traffic on Caroline Acres Road. Furthermore, a traffic signal would likely decrease the delay for the Caroline Acres approach but would greatly increase the overall delay at the intersection.

To improve the LOS of the intersection to a C or better the following improvement was identified:

- Construct an additional through lane on both approaches of Harrisburg Road.

The analysis of the intersection under the conditions of adding an additional through lane on Harrisburg Road yielded a LOS/Delay of C/20.4 during the AM Peak Hour and C/17.2 during the PM peak hour. The addition of the through lane would require the addition of a receiving lane at the intersection. The approach LOS, delay and queues for each movement can be found in the appendix.

BARBERSVILLE ROAD AND CAROLINE ACRES ROAD

This intersection operates as at a LOS C under the existing 2020 AM conditions and a LOS D under the PM conditions. Under the 2025 No Build conditions it is expected to operate at a LOS F under both the AM and PM peak periods. The projected delay for the AM and PM periods is 58.5 seconds and 255.1 seconds. Under the 2025 Build-Out conditions the projected LOS remains at F but the increase in the projected delay in the AM and PM periods is only 2.4 seconds and 15.9 seconds respectively. The Redwood Apartment Neighborhoods development is not projected to add any traffic to the Caroline Acres approach and only projected to make up less than 1% of the 2025 AM Build-Out traffic and 2025 PM Build-Out traffic on Harrisburg Road.

Based on the low projected increase in delay and the low impact the development has on this intersection, no mitigation improvements are recommended at this intersection to be constructed by the development.

To comply with the Lancaster County guidelines, mitigation improvements should be identified to bring this major collector to a LOS C or better. The installation of a right turn lane on westbound Barberville Road at this intersection does not improve the LOS since there are few right turn motorists on westbound Barberville Road.

To improve the LOS of the intersection following improvement was identified:

- Construct an additional through lane on both approaches of Barberville Road.
- Construct a left turn lane on the eastbound approach of Barberville Road
- Install a traffic signal at this intersection

The additional through lanes and left turn lane on Barberville Road combined with the installation of a traffic signal improve the LOS/Delay at this intersection to A/3.0 in the AM peak hour and B/14.2 in the PM peak hour. Even though the traffic signal improves the LOS at the intersection, the signal may not be warranted since the volume on the Carolina Acres Road approach is 48 during the AM peak hour and 68 during the PM peak hour and that includes right turn motorists also.

The addition of the through lane would require the addition of a receiving lane at the intersection. The approach LOS, delay and queues for each movement can be found in the appendix.

SC 160 AND BARBERVILLE ROAD

Tables 2 and 3 show the LOS/Delay for the intersection of SC 160 and Barberville Road. As shown in the table, this intersection operates at a LOS C under the 2020 existing AM and PM peak hour conditions.

Under the 2025 No Build and 2025 Build-Out conditions, the intersection is expected to operate overall at LOS D in the AM peak hour and a LOS F in the PM peak hour. During the AM peak hour period the eastbound SC 160 approach lanes are projected to experience the most delay/queues. This is mainly because of the projected heavy volume of left turn motorists from eastbound SC 160 conflicting with the heavy volume of westbound SC 160 motorists. During the PM peak hour, all approaches are expected to experience significant delay/queues. The projected increase in the average delay at this intersection from the 2025 No Build condition to the 2025 Build-Out condition of the Redwood Apartment Neighborhoods during the AM peak hour is from 54.4 seconds to 55.0 second. During the PM period the increase is from 93.2 seconds to 95.2 seconds. Both increases attributed to the Redwood Apartment Neighborhoods site would be considered minimal.

According to the Lancaster County UDO guidelines, a major arterial highway should operate a LOS D or better at build-out of the proposed development or mitigation improvements should be identified to improve the roadway network operation.

To provide a LOS D to comply with the Lancaster County UDO guidelines, the following improvement was identified:

- Provide an additional through lane on the SC 160 approaches.

The construction of the additional through lanes improves the AM LOS/Delay to C/24.9 and in the PM to D/47.1. The additional through lanes would require the construction of additional receiving lanes on SC 160.

To further improve the LOS at this intersection, another additional improvement was identified but not modeled:

- Provide a double left turn from eastbound SC 160 onto Barberville Road.

Since the Redwood Apartment Neighborhood does not change the overall LOS of the intersection and only causes minor increases in the overall delay from the No Build condition, no mitigation improvements to be completed by this development are recommended at this intersection.

The approach LOS, delay and queues for each movement can be found in the appendix.

HARRISBURG ROAD AND REGENT PARKWAY

Table 2 and 3 show the LOS/Delay for the intersection of Harrisburg Road and Regent Parkway. This intersection operates at a LOS C under the 2020 existing AM period and LOS D during the 2020 existing PM period.

Under the 2025 No Build and 2025 Build-Out conditions, the intersection is expected to operate overall at LOS C during the AM peak hour. Under the 2025 No Build PM peak hour, the intersection is projected to operate under a LOS D and a LOS E for the 2025 Build-Out condition. During the PM peak hour for both the 2025 No Build and the 2025 Build-Out conditions, all approaches experience significant delay/queues, however the projected increase in the overall delay between the two conditions is minor. The increase in the projected delay between the 2025 AM No Build and the 2025 AM Build condition is only 1.6 seconds. The increase between the PM peak hour delay is only 4.2 seconds.

To comply with the Lancaster County UDO guidelines, mitigation improvements must be identified on major collector roads whose LOS is less than a C.

The following mitigation improvements were identified to bring the LOS of the intersection up to a C:

- Provide an additional southbound through lane on Harrisburg Road.
- Provide a double left turn from Regent Parkway onto northbound Harrisburg Road.

The construction of these lanes would require the addition of receiving lanes. These mitigation improvements improved the AM LOS/Delay to B/18.6 and the PM to C/22.7.

Since the Redwood Apartment Neighborhood does not change the overall LOS of the intersection and only causes minor increases in the overall delay from the 2025 No Build condition, no mitigation improvements to be completed by this development are recommended at this intersection.

The approach LOS, delay and queues for each movement can be found in the appendix.

HARRISBURG ROAD AND SITE ACCESS

The analysis of the intersection of Harrisburg Road and the Site Access drive was made assuming the construction of a left turn on southbound Harrisburg Road into the development. The Site Access drive is projected to operate at a LOS/Delay of E/41.5 in the AM Build-Out condition and E/39.3 in the PM Build-Out condition. The approach LOS, delay and queues for each movement can be found in the appendix.

AUXILLARY TURN LANE WARRANTS

To determine if left or right turn lanes were needed at the two site access points, the guidance provided in the SCDOT Access and Roadside Management Standard (ARMS) manual and the March 2017 edition of the SCDOT Roadway Design Manual was used. Chapter 9 of the Roadway Design Manual provides turn lane warrant analysis graphs to aid in the determination. The graphs use the roadway volumes, turn lane volume, and design speed of the roadway in the analysis.

Using these graphs in the warrant analyses, a left turn lane on Harrisburg Road is warranted on southbound Harrisburg Road at the site access point. The right turn lanes at the site access point is not warranted. The warrant analyses graphs and calculations are shown in the Appendix.

RECOMMENDATIONS AND CONCLUSIONS

This report analyzed the potential impacts to the roadway network caused by the traffic generated by the proposed Redwood Apartment Neighborhoods development located on Harrisburg Road just north of Barberville Road. Recommended improvements to be made by the developer are summarized below.

Harrisburg Road and Site Access

- Construct a left turn lane on southbound Harrisburg Road into the site access. The turn lane should provide 150 feet of storage.
- Construction of an emergency access point on Harrisburg Road for emergency vehicle access only. The emergency access would be on Harrisburg Road just east of the Site Access drive.

General

- Since the SCDOT maintains the signal timings at the intersections with traffic signals included in this report, timing adjustments should be considered as conditions change on the roadway network in the future.

All improvements on the state roadway network system are subject to approval by the SCDOT and Lancaster County. All improvements on the state system should be permitted, designed, and constructed in conformity with the standards of the SCDOT and Lancaster County.

Redwood
APARTMENT NEIGHBORHOODS

Indian Land, SC
Lancaster County Planning Department
December 2020

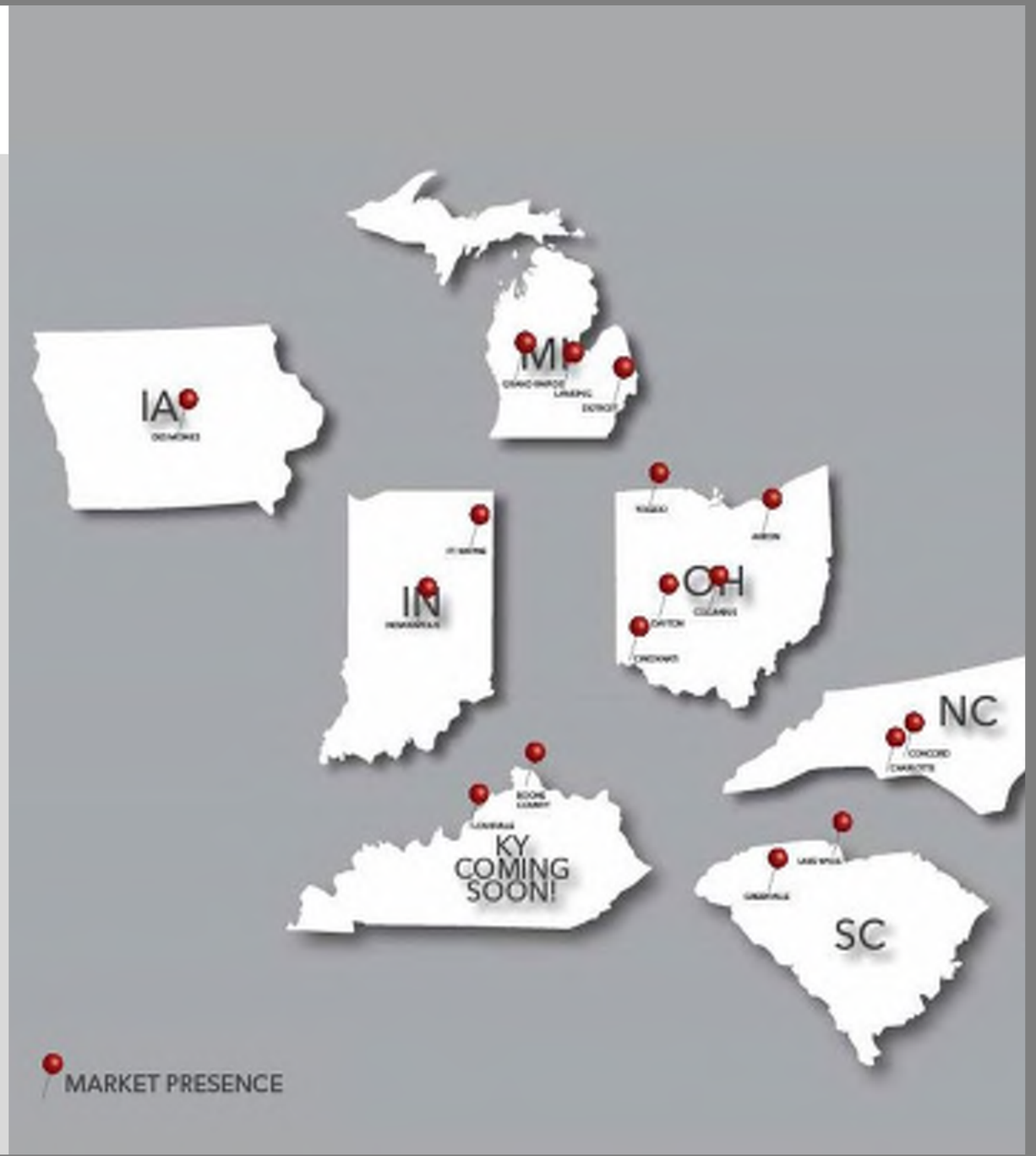
Who is Redwood?

- Single-story, low density apartment neighborhoods
- Over 13,000 dwellings owned & managed across footprint
- 98% leased portfolio
- Based in Independence, OH
- Resident focused
- Community oriented
- 24/7 on-site professional management

Where do we build?

THE CAROLINAS

- Charlotte
- Monroe
- Concord
- Kannapolis
- Lake Wylie
- Greenville \ Spartanburg



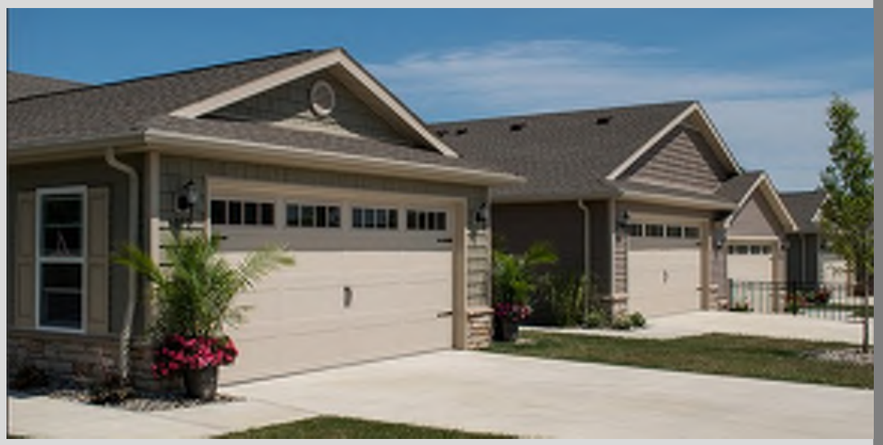
Who lives here?

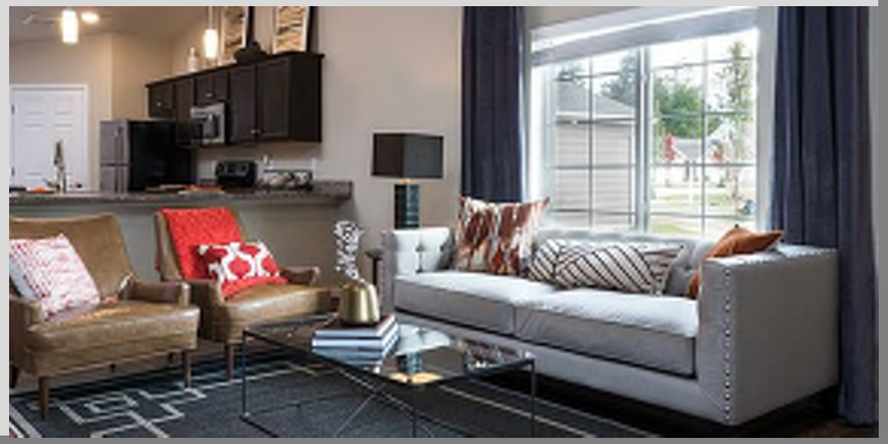
- Empty nesters
- Young professionals
- $1,500 - $2,000 range of rent
- Those desiring a maintenance free lifestyle
- Applicants required to submit credit and background checks

Redwood
APARTMENT NEIGHBORHOODS

What do we build?

- Distinctive, open floor plans: 2 bedroom/2 bath
- Private, attached, 2 car garages with direct entry
- Single story, no one lives above or below
- Extensive landscaping
- Stone & shake siding accents
- Zero clearance thresholds
- Vaulted ceilings
- Personal outdoor patio
- Eat-in kitchens with walk in pantry
- Full size washer and dryer connections
- Private, low-speed streets

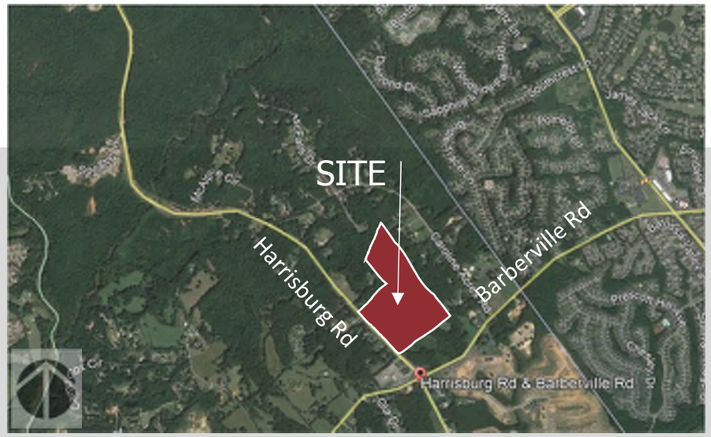




Redwood
APARTMENT NEIGHBORHOODS

The *Site*

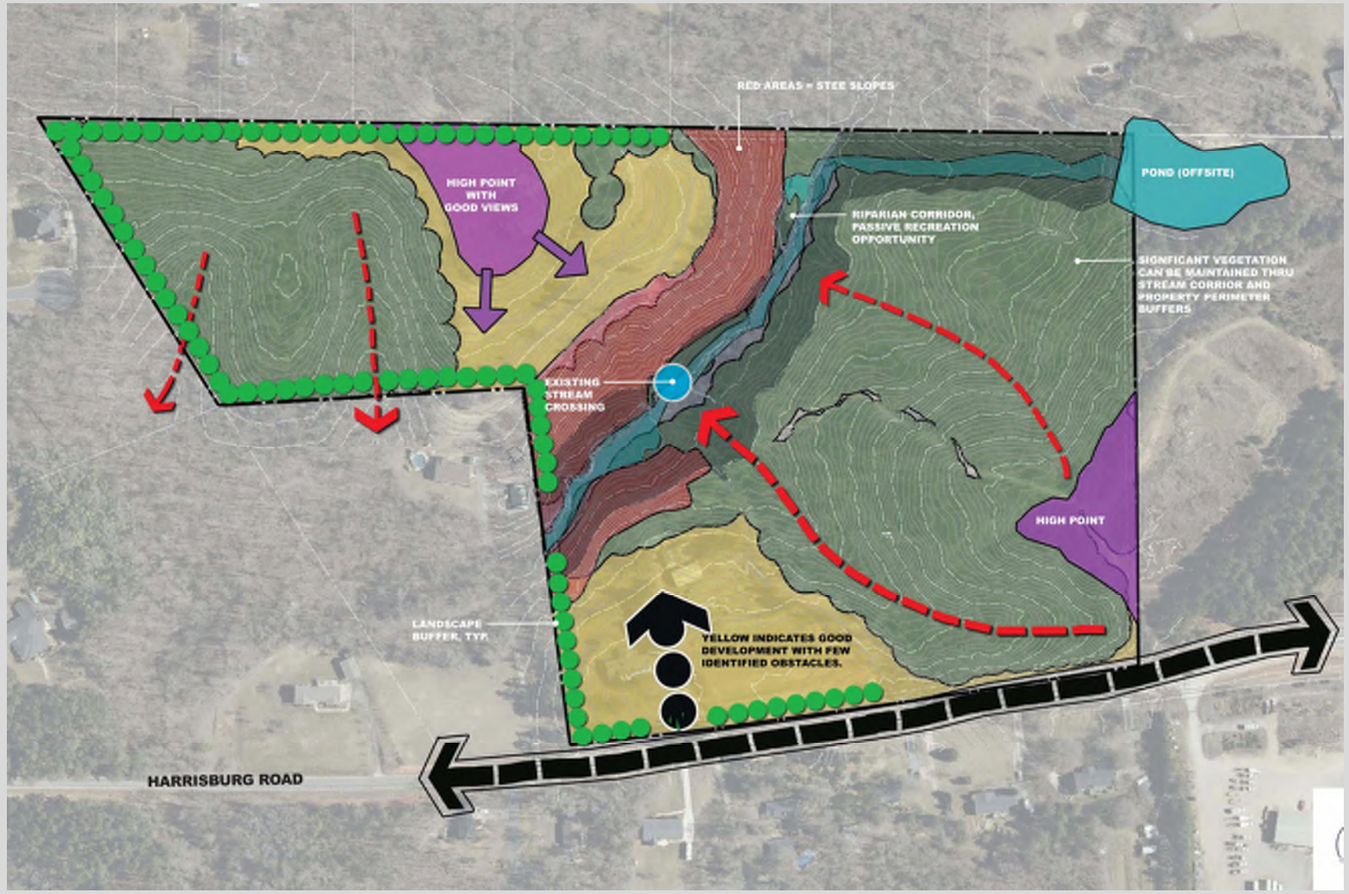
- 37.45 acres site total
- Presently vacant and undeveloped
- Current zoning: LDR
- Convenient access from both Harrisburg and Barberville Roads.



Site *Analysis*

OPPORTUNITIES

- A lot of topography = good drainage
- Stream corridor to provide good natural amenity for passive recreation.
- Existing vegetation to be preserved for site buffering.
- Good visibility and frontage at site access



Proposed *Site Plan*

- Proposed Zone: PB/MF
- 155 dwellings projected
- +\- 4.14 dwelling per acre density
- Multiple dwelling types proposed
- Leasing office | maintenance bldg.
- Generous trail network, trailhead, and overlook.
- Significant tree save

Redwood
APARTMENT NEIGHBORHOODS

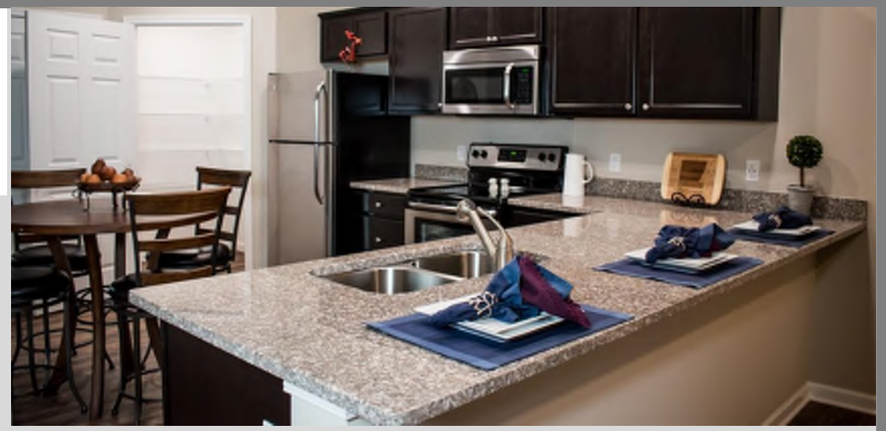
Architecture - *Exterior*

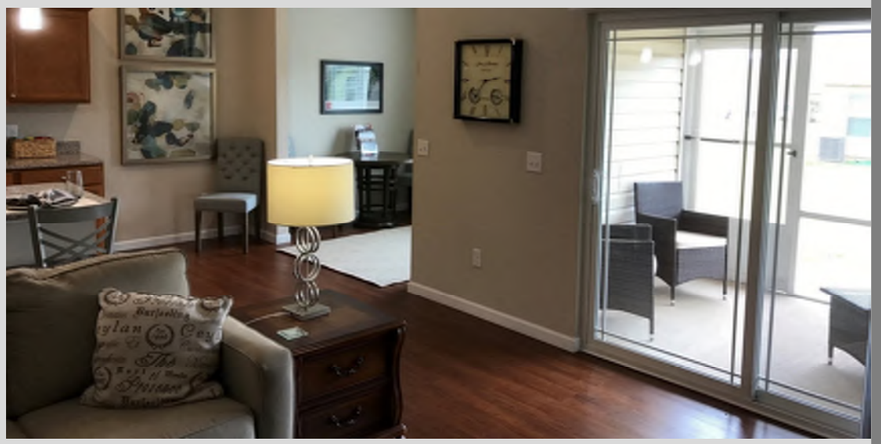
- Stone accents on buildings
- 2x6 exterior walls, filled with R-19 Batt insulation
- Varied color siding and shake accent panels
- Lifetime dimensional shingles
- Energy Star certified windows
- Individual driveway to garages, no ribbon parking lots
- Carriage style garage doors with windowed panels
- Personal outdoor patio spaces

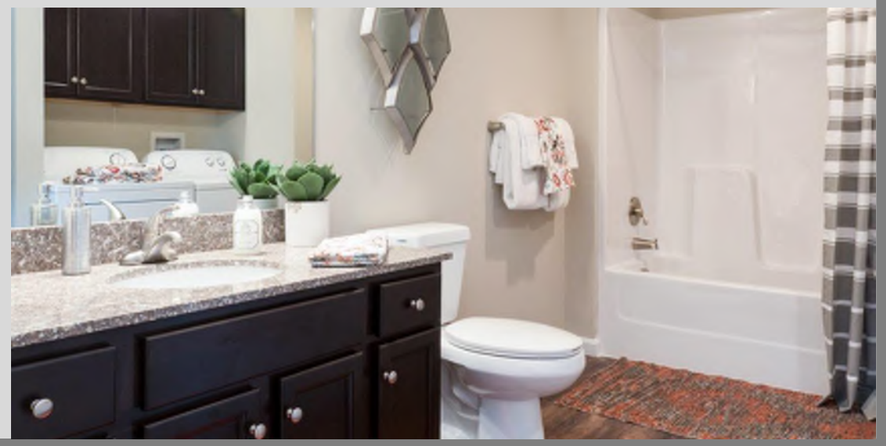
Architecture - *Exterior*

Architecture - *Interior*

- 2 bedroom, 2 full bath, den area
- Vaulted ceilings, quality finishes, open floor plans with waterproof LVT (Luxury Vinyl Tile)
- Energy efficiency certified throughout dwelling including high efficiency furnace
- Walk-in closets and kitchen pantry
- Granite countertops in kitchen and baths
- Large eat-in kitchens with stainless steel appliances
- LED lighting throughout each dwelling
- Full size washer and dryer connections
- Smoke-free apartments

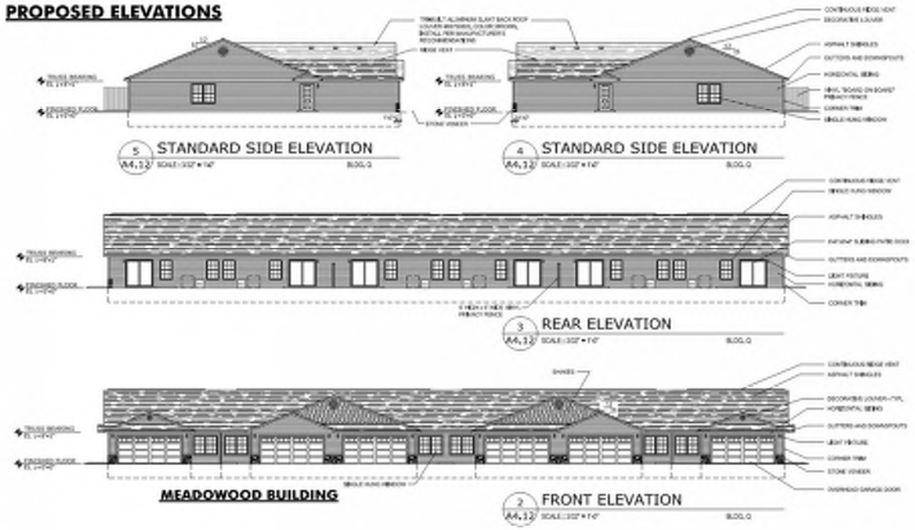






Redwood
APARTMENT NEIGHBORHOODS

PROPOSED ELEVATIONS



EXTERIOR FINISH MATERIAL SELECTIONS			
	ITEM	MATERIAL/STYLE	COLOR
1	DECORATIVE LOUVER	VINYL	WHITE
2	ASPHALT SHINGLES	DIMENSIONAL 30 YEAR LAMINATED	WEATHERED WOOD
3	GUTTERS AND DOWNSPOUTS	PREFINISHED ALUMINUM	WHITE
4	HORIZONTAL SIDING	VINYL	VARIES (SEE PAGE 19)
5	SHAKE SIDING	VINYL	VARIES (SEE PAGE 19)
6	CORNER TRIM	VINYL	WHITE
7	STONE VENEER	PRESTIGE	OHIO WHITE VEIN
8	OVERHEAD GARAGE DOOR	RAISED PANEL PAN STEEL	WHITE
9	SINGLE HUNG WINDOW	VINYL	STANDARD WHITE
10	SLIDING PATIO DOOR	VINYL	WHITE
11	COACH LIGHT	METAL & GLASS	BLACK
12	COLUMN	VINYL	WHITE
13	LOUVER	ALUMINUM	BROWN
14	PRIVACY FENCE	VINYL	WHITE

ARCHITECTURAL MATERIALS

SIDING COLORS - BY NORANDEX

NOTES:
1. BUILDING FRONT SIDING COLORS WILL VARY BETWEEN THE ABOVE 3 OPTIONS
2. SHAKES BY FOUNDRY SPECIALTY SIDING - TO MATCH SIDING COLORS

AS BUILT ARCHITECTURAL EXAMPLES

Redwood APARTMENT NEIGHBORHOODS

Redwood
APARTMENT NEIGHBORHOODS

Peace, Quiet, Comfort

INDIAN LAND, SC | ILLUSTRATIVE SITE PLAN | NOVEMBRER 15

BOHLER

Redwood
APARTMENT NEIGHBORHOODS

Agenda Item Summary

Ordinance # / Resolution #: DA-2020-2859 Poovey Development Agreement
Contact Person / Sponsor: Katie See/Senior Planner
Department: Planning
Date Requested to be on Agenda: 2/9/2021

Issue for Consideration:
The Applicant has requested to rezone approximately 278.9 acres from Low Density Residential (LDR) to Medium Density Residential (MDR) District. The intent is to build an approximately 590 lot single-family residential subdivision.
Development Agreement to correspond with RZ-2020-2859 for 2862 Charlotte Highway (TM # 0044-00-008.00).

Points to Consider:
Section 9.2.18 of the UDO requires Development Agreements (DA) when utilizing the Cluster Subdivision Overlay District.

Funding and Liability Factors:

Council Options:
To recommend approval or disapproval of the Development Agreement

Recommendation:
The Planning Commission recommended **Approval** of the Development Agreement.

Staff recommends **Approval** of the Development Agreement.

ATTACHMENTS:

Description	Upload Date	Type
Summary Memo to the Committee of the Whole	1/30/2021	Backup Material
DA Submittal Letter from Applicant	1/11/2021	Exhibit
DRAFT Development Agreement	1/11/2021	Exhibit
Concept Plan	1/29/2021	Exhibit
Ramey Kemp TIA Recommendations	1/11/2021	Exhibit
KH Review Comments for TIA	1/11/2021	Exhibit
SCDOT Review Comments for TIA	1/11/2021	Exhibit

PROPOSAL: Request to rezone approximately 278.9 acres at 2862 Charlotte Highway (TM # 0044-00-008.00) to Medium Density Residential (MDR) District under the Cluster Subdivision Overlay District provisions for the MDR District

COUNCIL DISTRICT: District 1, Terry Graham

OVERVIEW:

LGI Homes-SC, LLC has requested to rezone approximately 278.9 acres. Application RZ-2020-2859 is a request to rezone the property from the Low Density Residential (LDR) District to the Medium Density Residential (MDR) District. The intent is to build an approximately 590 lot single-family residential subdivision.

The applicant intends on developing the property with the Cluster Subdivision Overlay District provisions associated with the MDR District. Section 9.2.18 of the UDO requires Development Agreements (DA) when utilizing the Cluster Subdivision Overlay District. The applicant submitted the required DA enclosed with this memo as well as a submittal letter. The DA reflects the requirements of Section 9.2.18 including, but not limited to: legal description, description of uses, traffic impact analysis (TIA) and reservation of public land. A TIA dated November 30, 2020 was submitted to the Planning Department. Review comments were provided by SCDOT on January 4, with comments submitted by Kimley-Horn on behalf of Lancaster County on January 5.

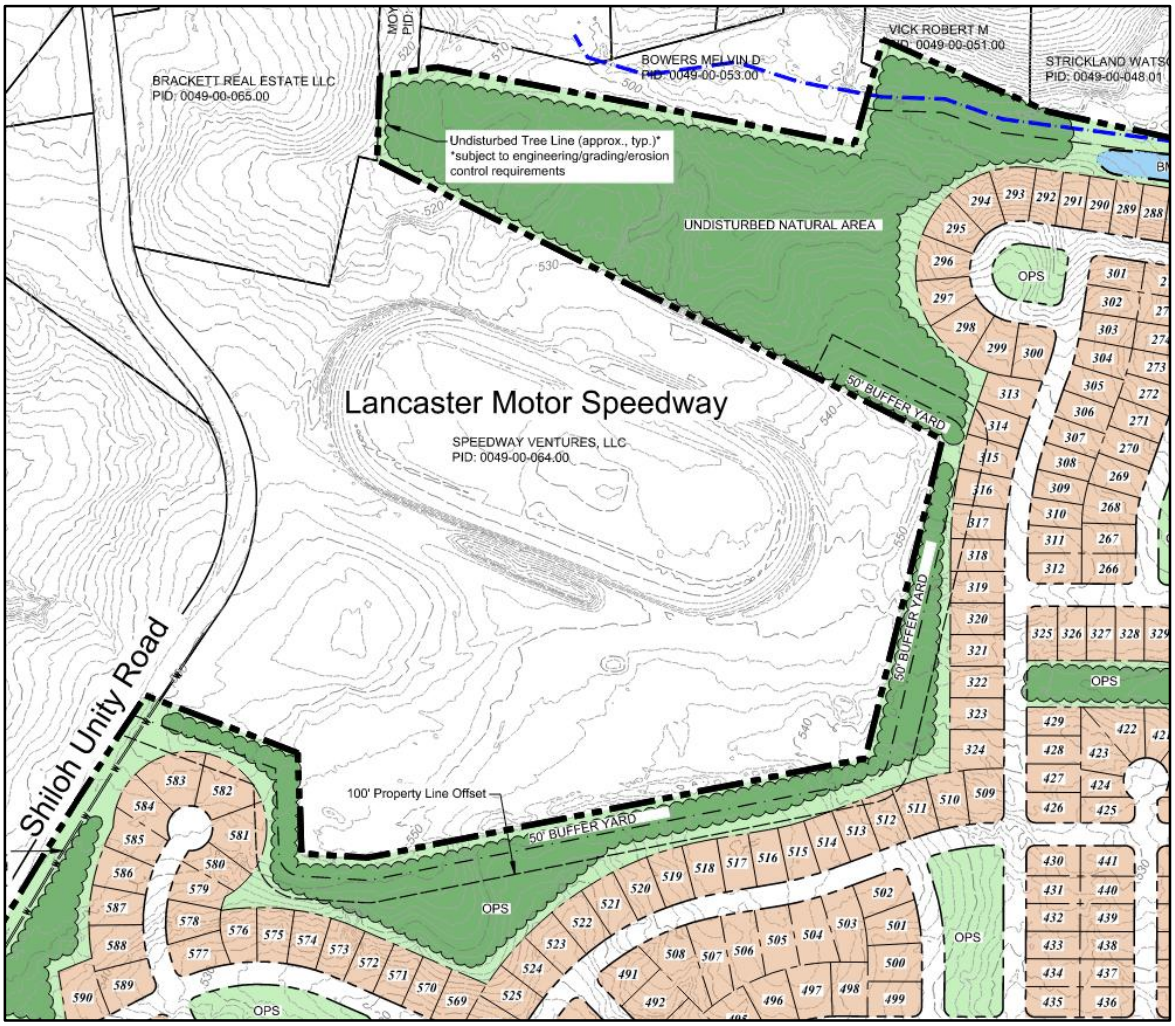
Following the February 9th Committee of the Whole meeting, the project will be scheduled for a public hearing before County Council. A copy of the DA template is enclosed with this memo. It does not include any proposed fees or dedication of land, both of which will be discussed with the Committee of the Whole and County Council.

NEIGHBORHOOD DESIGN:

This subject property is defined by the existing Lancaster Motor Speedway, which is surrounded to its north, east and west by the Poovey property. There is also a Lancaster County Convenience Center site located immediately to the west of the Poovey property. The Speedway was built in 1954 and has been actively used since it opened. Numerous homes are currently located near the racetrack, including the residential subdivision, Shiloh North. The races that take place at the speedway are well known to be loud and dusty during the events, which can start early in the morning and run late into the night. Fortunately, (in the context of having a nuisance created), it has been reported that the races are generally only occurring once per-week.

While the Speedway has been in its current location for over 60 years, Staff believes that additional noise, dust, and lighting abatement should be provided since so many homes will be within close proximity of the track. Such abatement measures should include a combination of greater physical separation between the homes and track property, earthen berms, engineered sound fences/walls, and/or dense landscaping. The recent logging of the Poovey property creates further challenges in establishing buffering since the mature trees and vegetation were removed prior to the rezoning request.

The inset shown below shows the proximity of the Speedway to lots within the proposed development. Lots 314-319, 511-518, and 581-583 are located less than 100' from the Speedway property line, while remaining lots are 100' or more from the property line. A copy of the full concept plan is also attached.



COMMUNITY FACILITY NEEDS:

As part of the review of this Development Agreement, the various Lancaster County Division Heads reviewed the application to identify the need for any community facility improvements beyond conventional infrastructure. This process resulted in the identified need for a larger and more permanent convenience center site for solid waste than what exists at the current race track site. The current site is leased and not available for purchase. Potential service/capacity impacts to the convenience center site were also identified as concerns by neighboring residents during the applicant's community meeting facilitated via Zoom.

PRIOR ACTIONS:

The Planning Commission reviewed the request at their January 19, 2021 meeting and recommended approval of the Development Agreement with the condition that noise and dust abatement measures be

provided. A virtual community meeting was also facilitated by the applicant prior to the Planning Commission meeting.

The Planning Department also recommended approval of the Development Agreement. It is staff's further recommendation that the Development Agreement and associated rezoning application be updated to reflect improved site planning and nuisance abatement improvements conducted under the guidance of a subject matter expert prior to going before the First Reading of the Ordinance by County Council.

ATTACHMENTS:

1. Draft Development Agreement
2. DA Submittal Letter
3. Concept Plan
4. TIA Documents

STAFF CONTACT:

Katie See, AICP, Senior Planner
ksee@lancastersc.net | 803-416-9395

December 18, 2020

Katie See, AICP, Senior Planner
Lancaster County Planning Department
P.O. Box 1809
Lancaster, SC 29720

RE: Poovey Property Development Agreement

Katie,

LGI Homes Group, LLC is requesting a Development Agreement with Lancaster County to develop a single-family, detached residential community located at 2862 Charlotte Hwy, Lancaster, SC 29720. The 274.48-acre project site, referred to as the Poovey Property, is currently zoned LDR and we are requesting the land be rezoned to MDR. Based on our site analysis, we have determined that approximately 224.24 acres can be classified as "highland area" and thus a Development Agreement application fee of $5,606 has been submitted to the County which was calculated at $25 per acre of highland area as required in Section 9.2.18.F of the County's Unified Development Ordinance.

Please feel free to contact us if you have any further questions related to this submittal.

Thank you,

Ian E. Anderson, PLA | LEED AP

Senior Landscape Architect | Merrick & Company

301 S. McDowell Street, Suite 300 | Charlotte, NC 28204
T: (704) 529-6500 | **C:** (720) 935-3169

----------(Space above this line for recording use)----------

STATE OF SOUTH CAROLINA	**)**	**DEVELOPMENT AGREEMENT**
	)	
COUNTY OF LANCASTER	**)**	_____

This **DEVELOPMENT AGREEMENT** (the "Agreement") is made and entered into as of the _____ day of *_[DATE OF THIRD READING APPROVAL]*____, 2020 ("Agreement Date"), by and among **LGI Homes Group, LLC** a **Texas** state of incorporation **limited liability** corporation ("Developer"), and the **COUNTY OF LANCASTER** (the "County"), a body politic and corporate, a political subdivision of the State of South Carolina.

R E C I T A L S

WHEREAS, Developer has obtained the right to acquire certain real property consisting of approximately **274.48 acres**, more or less, located in the County and known as **Poovey Property** development and more fully described in Section 1.04 of this Agreement ("Property").

WHEREAS, Developer has submitted an application to the County requesting that the Property be rezoned to **MDR District.**

WHEREAS, Developer and County have determined that it is in the best interests of the County and Developer to enter into this Agreement to set forth the terms and conditions of the development in order to achieve a well-coordinated, master planned development, reasonably mitigate any project impacts to the community and achieve predictability to the County and the Developer on the scope and terms of the development.

WHEREAS, the Developer desires to obtain from the County in connection with the development, and the County is willing to provide, assurances: (1) that the property will be zoned **MDR** for the duration of this Agreement; (2) that upon receipt of its development and construction permits it may proceed with the planned development and construction; and (3) that the development rights will be vested for the duration of this Agreement.

WHEREAS, in connection with the proposed development, Developer and County recognize that the scope and term of the planned development under this Agreement accomplish the statutory aims of comprehensive, orderly planning and development within the County, thus providing benefits to the citizens of the County and providing public benefits through, among other

things, the donation of funds or financing of those public facilities and services described and identified in this Agreement.

NOW, THEREFORE, in consideration of the foregoing and the terms and conditions set forth in this Agreement, the receipt and sufficiency of such consideration being acknowledged by the parties, and pursuant to the South Carolina Local Government Development Agreement Act, codified as Sections 6-31-10 to -160, Code of Laws of South Carolina 1976, as amended (the "Act") and the Development Agreement Ordinance for Lancaster County, South Carolina ("Ordinance No. 663"), the parties to this Agreement, intending to be legally bound to a development agreement in accordance with the Act and Ordinance No. 663, agree as follows:

ARTICLE I

GENERAL

Section 1.01. Incorporation. The above recitals are incorporated in this Agreement as if the recitals were set out in this Agreement in its entirety. The findings contained in the Act are incorporated into this Agreement as if it were set out in this Agreement in its entirety.

Section 1.02. Definitions. (A) As used in this Agreement:

(1) "Act" means the South Carolina Local Government Development Agreement Act, codified as Sections 6-31-10 to -160, Code of Laws of South Carolina 1976, as amended.

(2) "Agreement" means this Development Agreement.

(2A) "Agreement Date" means ___*[DATE OF THIRD READING APPROVAL]*____, 2020.

(3) "County" means the County of Lancaster, a body politic and corporate, a political subdivision of the State of South Carolina.

(4) "County Council" means the governing body of the County.

(5) "Developer" means **LGI Homes Group, LLC,** a North Carolina corporation, and its successors in title to the Property who undertake Development of the Property or who are transferred Development Rights.

(6) "Development Rights" means the right of the Developer to develop all or part of the Property in accordance with this Agreement.

(7) "Laws and Land Development Regulations" means the County's applicable rules and regulations governing development of real property as set forth on Exhibit E hereto.

(8) "Ordinance No. 663" means Ordinance No. 663 of the County which is cited as the Development Agreement Ordinance for Lancaster County, South Carolina.

(9) "Ordinance No. 2020-####" means Ordinance No. 2020-#### of the County, zoning the Property _____ District.

(10) "Ordinance No. 2020-____" means Ordinance No. 2020-____ of the County approving this Agreement.

(11) "Parties" means County and Developer.

(12) "Property" means the land, and any improvements thereon, described in Section 1.04.

(13) "UDO" means Ordinance No. 309, as amended to be the most current adopted version on file with County.

(B) Unless the context clearly indicates otherwise, terms not otherwise defined in this Agreement have the meanings set forth in the Act and Ordinance No. 663 or the UDO.

Section 1.03. Parties. The parties to this Agreement are County and Developer.

Section 1.04. Property. This Agreement applies to **1** parcel of land identified as Tax Map Nos **0044-00-008.00** and is reflected in Exhibit A, attached hereto and incorporated herein by reference as if the exhibit were set out in this Agreement in its entirety.

Section 1.05. Zoning. The Property is currently zoned Low Density Residential (LDR) and is anticipated to be rezoned **MDR** pursuant to Ordinance No. 2020-xxxx.

Section 1.06. Development Program.

(A) The UDO provides for the development uses on the Property, including population densities, building intensities and height.

(B) All lots for the Development must meet all standards contained in the most current version of the UDO unless otherwise modified by this Agreement. In the event of conflict between the standards contained in the UDO and this Agreement, the terms of this Agreement control. The Development Program for the Property is set forth in Exhibit B.

Section 1.07. Development Schedule. (A) The estimated development schedule for the Property is set forth on Exhibit C, attached hereto and incorporated herein by reference as if the exhibit were set out in this Agreement in its entirety.

(B) County and Developer acknowledge that the development schedule is an estimate. The failure of the Developer to meet a commencement or completion date does not, in and of itself, constitute a material breach of this Agreement, but must be judged based on the totality of the circumstances. The development schedule is a planning and forecasting tool only. County and Developer acknowledge that actual development is likely to take place at a different pace than set forth in the development schedule because of future market forces.

(C) County agrees that if Developer requests an adjustment to the development schedule, including commencement dates and interim completion dates, then the dates must be modified if the Developer is able to demonstrate and establish that there is good cause to modify those dates. "Good cause" includes, but is not limited to, changes in market conditions.

(D) Periodic adjustments to the development schedule do not require a formal amendment to this Agreement and are not considered a major modification. To adjust the development schedule, the Developer shall submit a proposed adjustment to the Clerk to Council who shall forward copies of the proposed adjustment to each member of County Council. The proposed adjustment must be accompanied by an explanation and justification. The proposed adjustment is effective sixty (60) days from receipt by the Clerk to Council unless the County Council has disapproved the proposed adjustment by passage of a resolution to that effect within the sixty (60) day period.

Section 1.08. Relationship of Parties. This Agreement creates a contractual relationship among the Parties. This Agreement is not intended to create, and does not create, the relationship of partnership, joint venture, or any other relationship wherein any one of the parties may be held responsible for the acts of any other party. This Agreement is not intended to create, and does not create, a relationship whereby any one of the parties may be rendered liable in any manner for the debts or obligations of any other party, to any person or entity whatsoever, whether the debt or obligation arises under this Agreement or outside of this Agreement.

Section 1.09. Benefits and Burdens.

(A) The Parties agree that the burdens of this Agreement are binding upon, and the benefits of this Agreement shall inure to, all successors in interests to the Parties to this Agreement.

(B) Except for the owners and lessees of completed residences on individual lots who are the end users and not developers thereof and the owners and lessees of individual lots, who are not developers and who intend to build a residence on the lot for the owner or lessee to occupy, any purchaser or other successor in title is responsible for performance of Developer's obligations pursuant to this Agreement as to the portion of the Property so transferred. Developer must give notice to the County of the transfer of property to a developer in the manner prescribed in Section 3.05.

(C) Developer acknowledges and agrees that it and its successors and assigns (*i*) are responsible for the development of the Property when Developer acquires title to or development rights for the Property, and (*ii*) will develop the Property in accordance with the terms and conditions of this Agreement.

Section 1.10. Term. The term of this Agreement commences on the Agreement Date and terminates ten (10) years thereafter.

Section 1.11. Required Information. Ordinance No. 663 requires a development agreement to include certain information. Exhibit D contains the required information or identifies where the information may be found in this Agreement. Exhibit D is incorporated herein by reference as if the exhibit were set out in this Agreement in it entirety.

ARTICLE II

REPRESENTATIONS AND WARRANTIES

Section 2.01. Representations and Warranties of County.

(A) The County has found that the development permitted by this Agreement is consistent with the County's comprehensive plan and UDO.

(B) The County has approved this Agreement by adoption of Ordinance No. 2020-____ in accordance with the procedural requirements of the Act, Ordinance No. 663 and any other applicable state law.

(C) The County represents that prior to the final reading of Ordinance No. 2020-____ that at least two public hearings were held after publication of the required notice and the publication of a notice of intent to consider a proposed development agreement.

Section 2.02. Representations and Warranties of Developer.

(A) Developer represents that the number of acres of highland contained in the Property is greater than twenty-five and that the highlands equal **224.14 acres.**

(B) Developer represents that, as of the Agreement Date, it has contractual rights to acquire the Property.

(C) Developer represents and warrants that the execution, delivery and performance by the respective individual or entity signing this Agreement on behalf of the party has been duly authorized and approved by all requisite action on the part of Developer.

ARTICLE III

DEVELOPMENT RIGHTS

Section 3.01. Vested Right to Develop.

(A) County agrees that the Developer, upon receipt of its development permits as identified in Section 3.04, may proceed to develop the Property according to the terms and conditions of this Agreement and the UDO. The right of Developer to develop the Property as set forth in this Agreement is deemed vested with Developer for the term of this Agreement when the Developer has complied with all of the requirements of Section 5.19 of this Agreement.

(B) County agrees that the specific Laws and Land Development Regulations in force as of the Agreement Date as set forth in Exhibit E to this Agreement, attached hereto and incorporated herein by reference as if the exhibit were set out in this Agreement in its entirety, shall govern all aspects of the development of the Property, according to the terms and standards as stated in this Agreement, for the term of this Agreement.

(C) The Developer has a vested right to proceed with the development of the Property in accordance with the zoning classification set forth in Ordinance No. 2020-1266, the UDO and the terms of this Agreement when the Developer has complied with all of the requirements of Section 5.19 of this Agreement.

(D) To the extent that this Agreement may contain zoning and development standards which conflict with existing zoning and development standards, including zoning and development standards contained in the UDO, the standards contained in this Agreement supersede all other standards and this Agreement is deemed controlling.

(E) The Developer acknowledges that financial guarantees will not be accepted for water, sewer and storm water infrastructure and the water, sewer and storm water infrastructure must be installed, tested and in acceptable condition before final plat approval.

Section 3.02. Effect on Vested Rights Act and County Ordinance No. 673. The Parties agree that vested rights conferred upon Developer in this Agreement are not affected by the provisions of the Vested Rights Act, codified as Sections 6-29-1510 to -1560, Code of Laws of South Carolina 1976, as amended, or the provisions of Ordinance No. 673, the County's ordinance relating to the Vested Rights Act.

Section 3.03. Applicability of Subsequently Adopted Laws and Land Development Regulations.

(A) It is recognized that laws and regulations will periodically change. County may apply laws adopted after the execution of this Agreement to the development of the Property unless said adopted laws prevent development in the manner set forth in this Agreement.

(B) Notwithstanding the provisions of subsection (A) of this section, the County agrees that if County Council imposes a moratorium or other similar restriction that would curtail or hinder the rate at which development can occur, then the moratorium or other similar restriction shall not apply to the Development of the Property.

(C) Developer agrees to comply with any county-wide storm water regulations, building, housing, electrical, plumbing, and gas codes adopted by County Council after the Agreement Date and in force at the time plans for buildings are submitted to the County for review. Nothing in this Agreement is intended to supersede or contravene the requirements of any storm water, building, housing, electrical, plumbing, or gas code adopted by County Council.

Section 3.04. Development Permits.

(A) Developer agrees to obtain all local development permits for the development of the property. Local development permits, approvals and processes, some of which may have been obtained or complied with as of the Agreement Date, include, but are not limited to:

(1) Site Plan approval;
(2) Preliminary plan approval
(3) Final plat approval;
(4) Zoning permits;
(5) Building permits; and
(6) Sign permits.

(B) The failure of this Agreement to address a particular permit, condition, term, or restriction does not relieve the Developer of the necessity of complying with the law governing the permitting requirements, conditions, terms or restrictions.

Section 3.05. Transfer of Development Rights. Developer may, at its sole discretion, transfer its Development Rights to other developers. The transferring Developer must give notice to the County of the transfer of any Development Rights. The notice to the County must include the identity and address of the transferring Developer, the identity and address of the acquiring Developer, the acquiring Developer's contact person, the location and number of acres of the Property associated with the transfer and the number of residential units or commercial acreage subject to the transfer. Any Developer acquiring Development Rights is required to file with the County an acknowledgment of this Agreement and the transfer of Development Rights is effective only when the County receives a commitment from the acquiring Developer to be bound by it. This provision does not apply to the purchaser or other successor in title to the Developer who is the owner or lessee of a completed residence and is the end user and not the developer thereof or who is the owner or lessee of an individual lot, who is not a developer and who intends to build a residence on the lot for the owner or lessee to occupy.

ARTICLE IV

DEDICATIONS AND FEES AND RELATED AGREEMENTS

Section 4.01. Purpose of Article. The Parties understand and agree that Development of the Property imposes certain burdens and costs on the County, including those for certain services and infrastructure improvements. Eventually, *ad valorem* taxes collected from the property may meet or exceed the burdens and costs placed upon the County, but certain initial costs and capital expenditures are now required that are not to be funded by any increase in taxes paid by existing residents of the County. The purpose of this article is to identify the matters agreed upon to be provided by the Developer to mitigate such burdens and costs.

Section 4.01A. Payment. Developer agrees to pay to the County for the benefit of the Lancaster County School District _____ Hundred and No/100 dollars ($XXX.00) for each lot created from the Property for residential dwelling units (the "School Payment"). Except as otherwise provided in this section, from the Agreement Date until the end of the one hundredth seventeenth (117th) month of the Agreement, the School Payment is due and payable at the same time that the County building permit fees for the lot are due and payable. Payment of the School Payment is a condition for the issuance of a building permit. For the period after the one hundredth seventeenth (117th) month, Developer agrees to pay County by the end of the one hundredth eighteenth (118th) month for the benefit of the Lancaster County School District an amount equal to _____ Hundred and No/100 dollars ($xxx.00) times the number of lots for which a building permit has not been issued. If the Developer sells a portion of the ABC Acres development, whether subdivided or not, the Developer shall pay not later than closing on the sale an amount equal to _____ Hundred and No/100 dollars ($xxx.00) times the number of lots associated with the portion of the ABC Acres development that is sold. The School Payment is separate and distinct from any fees or amounts payable to the County for a building permit. Monies received from the School Payment shall be remitted by the County to the Lancaster County School District by the end of the month following the month in which the School Payment is received by the County. Developer acknowledges and agrees that County is responsible only for the remittance of the School Payment to the Lancaster County School District and that the County has no other obligation or responsibility for the School Payment. As used in this section, "Developer" means XYZ Corporation, a North Carolina corporation, and does not include its successors or assigns.

Section 4.01B. Funds for Public Safety. Developer agrees to pay County the sum of _____hundred thousand dollars ($xxx,000.00) by July 1, 2020 to be used for public safety purposes (the "Public Safety Payment"). Upon receipt of the Public Safety Payment, the monies must be accounted for separate and distinct from other monies of the County. The Public Safety Payment must be used for non-recurring purposes for law enforcement, fire and emergency medical service in the _____ area of the County. The determination of the specific uses for the Public Safety Payment is in the discretion of the County Council.

Section 4.01C Funds for _____.

Section 4.02. Payment of Costs.

Upon submission of appropriate documentation of the expenditure, Developer agrees to reimburse the County, not later than **(date TBD),** for the County's reasonable unreimbursed actual

costs related to this Agreement. The foregoing cost reimbursement is capped at ten thousand dollars ($10,000.00) and is limited to County payments to third-party vendors and service providers that have not been otherwise reimbursed from the fee paid by Developer pursuant to Section 10 of Ordinance No. 663.

Section 4.03. Other Charges or Fees.

(A) Nothing in this Agreement shall be construed as relieving Developer from the payment of any fees or charges in effect at the time of collection as may be assessed by entities other than the County.

(B) Developer is subject to the payment of any and all present or future fees enacted by the County that are of County-wide application and that relate to the County's costs of processing applications, issuing development permits, reviewing plans, conducting inspections or similar type processing costs.

Section 4.04. Infrastructure and Services.

The Parties recognize that the majority of the direct costs associated with the Development of the Property will be borne by Developer, and many necessary infrastructure improvements and services will be provided by Developer or other governmental or quasi-governmental entities, and not by the County. For clarification, the Parties make specific note of and acknowledge the following:

(A) Roads. (1)(a) Developer is responsible for the construction and costs of all roads, whether for public or private use, within the Property including but not limited to any necessary entrance and intersection improvements as required by the South Carolina Department of Transportation related to the development of the Property. All roads must be constructed in accordance with the County's road standards. The road improvements are expected to be implemented on a schedule consistent with the development of the Property as contained in the development schedule and as necessary to serve the development. Developer is also responsible for maintenance of all roads that are not public roads. Pursuant to Ordinance 2014-1299, Developer acknowledges that County will only accept as public roads those roads constructed in full compliance with the UDO and providing connectivity to the county road system or serving as a necessary component for the proper development of the county road system. County will not accept the roads within the Property into the County road system for any other purpose, including, but not limited to, maintenance. Developer may transfer the ownership of the roads and its obligations for the roads to a homeowners' or property owners' association or similar organization.

(b) Developer shall cause to be prepared a traffic impact analysis conducted and sealed by a licensed South Carolina professional engineer (if not already prepared at time of Agreement). Any road improvements, which are determined to be necessary, based on the results of the traffic impact analysis, shall be incorporated into the final site plan prior to County approval and the Developer is responsible for all costs of the road improvements. The traffic impact analysis shall be reviewed by the County and in conjunction with the South Carolina Department of Transportation. If a County-level traffic planner is not available to review the traffic impact analysis at the time of submittal, the County may choose to hire a third-party consultant to assist in this review. The cost of the traffic impact analysis, including any additional reviews requested by the County, shall be paid by the Developer. Improvements set forth in the traffic impact analysis may be installed based on a phasing study prepared by a licensed South Carolina

professional engineer at the expense of Developer. The installation of new traffic signals or improvements to existing traffic signals shall be based on warrant studies conducted by a licensed South Carolina professional engineer at established specific times and at the expense of Developer.

(B) Potable Water, Sewage Treatment and Disposal. Potable water, sewage treatment and disposal will all be supplied to the Property by the Lancaster County Water and Sewer District. Developer will construct, or cause to be constructed, all necessary water and sewer service infrastructure within the Property and the water and sewer service infrastructure will be maintained by the provider. County is not responsible for any construction, treatment, maintenance, or costs associated with water or sewer service or water and sewer service infrastructure to or within the Property. The water and sewer service infrastructure is expected to be implemented on a schedule consistent with the development of the Property as contained in the development schedule and as necessary to serve the development. Developer acknowledges that County has no authority or responsibility for providing potable water services or sewer services in the County and that the Lancaster County Water and Sewer District is a governmental entity separate and distinct from the County.

(C) Storm Water Management. Developer will construct or cause to be constructed all storm water runoff and drainage improvements within the Property required by the development of the Property and such infrastructure will be maintained by Developer or a homeowners' association. County is not responsible for any construction, maintenance or costs associated with the storm water runoff and drainage for the Property. Storm water management improvements are expected to be implemented on a schedule consistent with the development of the Property as contained in the development schedule and as necessary to serve the development.

(D) Solid Waste Collection. The County shall provide solid waste collection to the Property on the same basis as is provided to other residents and businesses within the County. It is understood and acknowledged that the County does not presently provide solid waste disposal for single, multi-family or commercial developments. Residential units shall be served by a private waste hauling company.

(E) Fire Services. The Property is located in the _____ Fire Department service area and fire services will be provided by the _____Fire Department, or its successor entities. Developer acknowledges that the _____ Fire Department provides services by the use of volunteers.

(F) School Services. Public school services are now provided by the Lancaster County School District. Developer acknowledges that County has no authority or responsibility for providing public school services in the County.

ARTICLE V

MISCELLANEOUS

Section 5.01. Notices. Any notice, election, demand, request or other communication to be provided under this Agreement shall be in writing and shall be effective (*i*) when delivered to the party named below, (*ii*) when deposited with the United States Postal Service, certified mail,

return receipt requested, postage prepaid, or (*iii*) when deposited in Federal Express (or any other reputable national "next day" delivery service) addressed as follows (or addressed to such other address as any party shall have previously furnished in writing to the other party), except where the terms hereof require receipt rather than sending of any notice, in which case such provision shall control:

To the County: County of Lancaster
Attn: County Administrator
101 N. Main St.
P.O. Box 1809
Lancaster, SC 29721

With a Copy to: County of Lancaster
Attn: County Attorney
101 N. Main St. (29720)
P.O. Box 1809 (29721)
Lancaster, SC

And to Developer: LGI Homes Group, LLC
Attn: Ian Anderson
301 S. McDowell Street, Ste 300
Charlotte, NC 28204

With a Copy to:

With a Copy to:

Section 5.02. Amendments.

(A) This Agreement may be amended or cancelled by mutual consent of the parties to the Agreement. An amendment to this Agreement must be in writing. No statement, action or agreement made after the Agreement Date shall be effective to change, amend, waive, modify, discharge, terminate or effect an abandonment of this Agreement in whole or in part unless such statement, action or agreement is in writing and signed by the party against whom the change, amendment, waiver, modification, discharge, termination or abandonment is sought to be enforced.

(B) An amendment to this Agreement with the exceptions identified for Exhibit B, must be processed and considered in the same manner as set forth in Ordinance No. 663 for a proposed development agreement. Any amendment to this Agreement constitutes a major modification and the major modification may occur only after public notice and a public hearing by the County Council.

(C) This Agreement must be modified or suspended as may be necessary to comply with any state or federal laws or regulations enacted after the Agreement Date which prevents or precludes compliance with one or more of the provisions of this Agreement but only to the extent necessary to effectuate compliance with the state or federal law.

Section 5.03. Periodic Review. At least every twelve (12) months, the Development Services Director for the County or the designee of the Development Services Director for the County, must review compliance with this Agreement by the Developer. At the time of review the Developer must demonstrate good faith compliance with the terms of the Agreement.

Section 5.04. Breach of Agreement.

(A) If, as a result of the periodic review provided in Section 5.03 of this Agreement or at any other time, the Development Services Director for the County, or their designee, finds and determines that the Developer has committed a material breach of the terms or conditions of this Agreement, the Development Services Director for the County shall serve notice in writing, within a reasonable time after the periodic review, upon the Developer setting forth with reasonable particularity the nature of the breach and the evidence supporting the finding and determination, and providing the Developer a reasonable time in which to cure the material breach.

(B) If the Developer fails to cure the material breach within a reasonable time and is not proceeding expeditiously and with diligence to cure the breach, then the County Council may unilaterally terminate or modify this Agreement. Prior to terminating or modifying this Agreement as provided in this section, the County Council must first give the Developer the opportunity (*i*) to rebut the finding and determination, or (*ii*) to consent to amend the Agreement to meet the concerns of the County Council with respect to the findings and determinations.

Section 5.05. Enforcement. The Parties shall each have the right to enforce the terms, provisions and conditions of this Agreement, if not cured within the applicable cure period, by any remedy available at law or in equity, including specific performance, and the right to recover attorney's fees and costs associated with enforcement.

Section 5.06. No Third Party Beneficiary. The provisions of this Agreement may be enforced only by the Parties. No other persons shall have any rights hereunder.

Section 5.07. Recording of Agreement. The Parties agree that Developer shall record this Agreement with the County Register of Deeds within fourteen (14) days of the date of execution of this Agreement.

Section 5.08. Administration of Agreement. County is the only local government that is a party to this Agreement and the County is responsible for the Agreement's administration.

Section 5.09. Effect of Annexation and Incorporation. The Parties agree that this Agreement remains in effect if the Property is, in whole or in part, included in a newly-incorporated municipality or is annexed into a municipality. The Parties acknowledge that upon incorporation or annexation the application and duration of this Agreement is controlled by Section 6-31-110 of the Act. County reserves the right to enter into an agreement with the newly-incorporated municipality or the annexing municipality for the administration and enforcement of this Agreement after the date of incorporation or annexation.

Section 5.10. Estoppel Certificate. Any of the Parties may, at any time, and from time to time, deliver written notice to the other party requesting the party to certify in writing (*i*) that this Agreement is in full force and effect, (*ii*) that this Agreement has not been amended or modified, or if so amended, identifying the amendments, and (*iii*) whether, to the knowledge of the party, the requesting party is in default or claimed default in the performance of its obligation under this Agreement, and, if so, describing the nature and amount, if any, of any such default or claimed default, and (*iv*) whether, to the knowledge of the party, any event has occurred or failed to occur which, with the passage of time or the giving of notice, or both, would constitute a default and, if so, specifying each such event.

Section 5.11. Entire Agreement. This Agreement sets forth, and incorporates by reference all of the agreements, conditions, and understandings among the Parties relative to the Property and its Development and there are no promises, agreements, conditions or understandings, oral or written, expressed or implied, among the Parties relative to the matters addressed in this Agreement other than as set forth or as referred to in this Agreement.

Section 5.12. Covenant to Sign other Documents. County and Developer acknowledge that consummation of the transactions contemplated by this Agreement may require the execution contemporaneously with the execution of this Agreement and thereafter of certain documents in addition to this Agreement and County and Developer agree to cooperate with the execution thereof.

Section 5.13. Construction of Agreement. The Parties agree that each party and its counsel have reviewed and revised this Agreement and that any rule of construction to the effect that ambiguities are to be resolved against the drafting party shall not apply in the interpretation of this Agreement or any amendments or exhibits to this Agreement.

Section 5.14. Assignment. The rights, obligations, duties and responsibilities devolved by this Agreement on or to the Developer are assignable to any other person, firm, corporation or entity except that the assignment must conform to the requirements of Section 1.09 and Section 3.05. County may assign its rights, obligations, duties and responsibilities devolved by this Agreement on or to the County to any other person, firm, corporation, or entity.

Section 5.15. Governing Law; Jurisdiction; and Venue.

(A) This Agreement is governed by the laws of the State of South Carolina.

(B) The Parties agree that jurisdiction and venue for disputes relating to this Agreement is the Sixth (6^{th}) Judicial Circuit of the State of South Carolina.

Section 5.16. Counterparts. This Agreement may be executed in several counterparts, each of which shall be deemed an original, and such counterparts shall constitute but one and the same instrument.

Section 5.17. Eminent Domain. Nothing contained in this Agreement shall limit, impair or restrict the County's right and power of eminent domain under the laws of the State of South Carolina.

Section 5.18. Severability. If any provision in this Agreement or the application of any provision of this Agreement is held invalid, the invalidity shall apply only to the invalid provision, and the remaining provisions of this Agreement, and the application of this Agreement or any other provision of this Agreement, shall remain in full force and effect. However, if the invalid provision would prevent or materially impair Developer's right or ability to complete performance of this Agreement, the Parties agree to use their best efforts to renegotiate that provision in order for Developer to complete performance of this Agreement.

Section 5.19. When Agreement takes Effect. This Agreement is dated as of the Agreement Date and takes effect when (*i*) the County and Developer have each executed the Agreement, and (*ii*) the Developer has delivered to the County Administrator clocked-in copies, with book and page numbers, of the recorded deeds conveying the Property to Developer. If the County Administrator has not received clocked-in copies of the deeds conveying the Property to Developer by 5:00 p.m., Monday, August 30, 20--, then this Agreement is automatically terminated without further action of either the County or Developer. The obligation of the Developer pursuant to Section 4.02 is effective on the date the last Party to sign this Agreement executes this Agreement and the obligations imposed on Developer pursuant to Section 4.02 survives the termination of this Agreement pursuant to this Section.

SIGNATURES FOLLOW ON NEXT PAGE.

IN WITNESS WHEREOF, the parties hereto have executed this Agreement on the date below found.

WITNESSES:	DEVELOPER:
	LGI Homes Group, LLC, a Texas corporation
_____	By: _____ Name: Title:
_____	Date: _____
_____	By: _____ Name: Title:
_____	Date: _____

WITNESSES:	COUNTY:
	COUNTY OF LANCASTER, SOUTH CAROLINA
_____	By: _____ Steve Harper, Chair, County Council
_____	Date: _____
_____	By: _____ Larry Honeycutt, Secretary, County Council
_____	Date: _____

STATE OF SOUTH CAROLINA)
) PROBATE
COUNTY OF LANCASTER)

PERSONALLY appeared before me the undersigned witness and made oath that (s)he saw the within named **LGI Homes Group, LLC**, by its duly authorized officer/s sign, seal and as its act and deed deliver the within written instrument and that (s)he with the other witness above subscribed, witnessed the execution thereof.

_____
First Witness Signs Again Here

Seal

SWORN to before me this
____ day of _____, 2020

_____
Notary Public Signs AS NOTARY
Notary Public for the State of _____
My Commission Expires:_____

STATE OF SOUTH CAROLINA)
) PROBATE
COUNTY OF LANCASTER)

PERSONALLY appeared before me the undersigned witness and made oath that (s)he saw the within named County of Lancaster by its duly authorized officer/s sign, seal and as its act and deed deliver the within written instrument and that (s)he with the other witness above subscribed, witnessed the execution thereof.

_____
First Witness Signs Again Here

Seal

SWORN to before me this
____ day of _____, 2020.

_____
Notary Public Signs AS NOTARY
Notary Public for the State of South Carolina
My Commission Expires:_____

Exhibit A

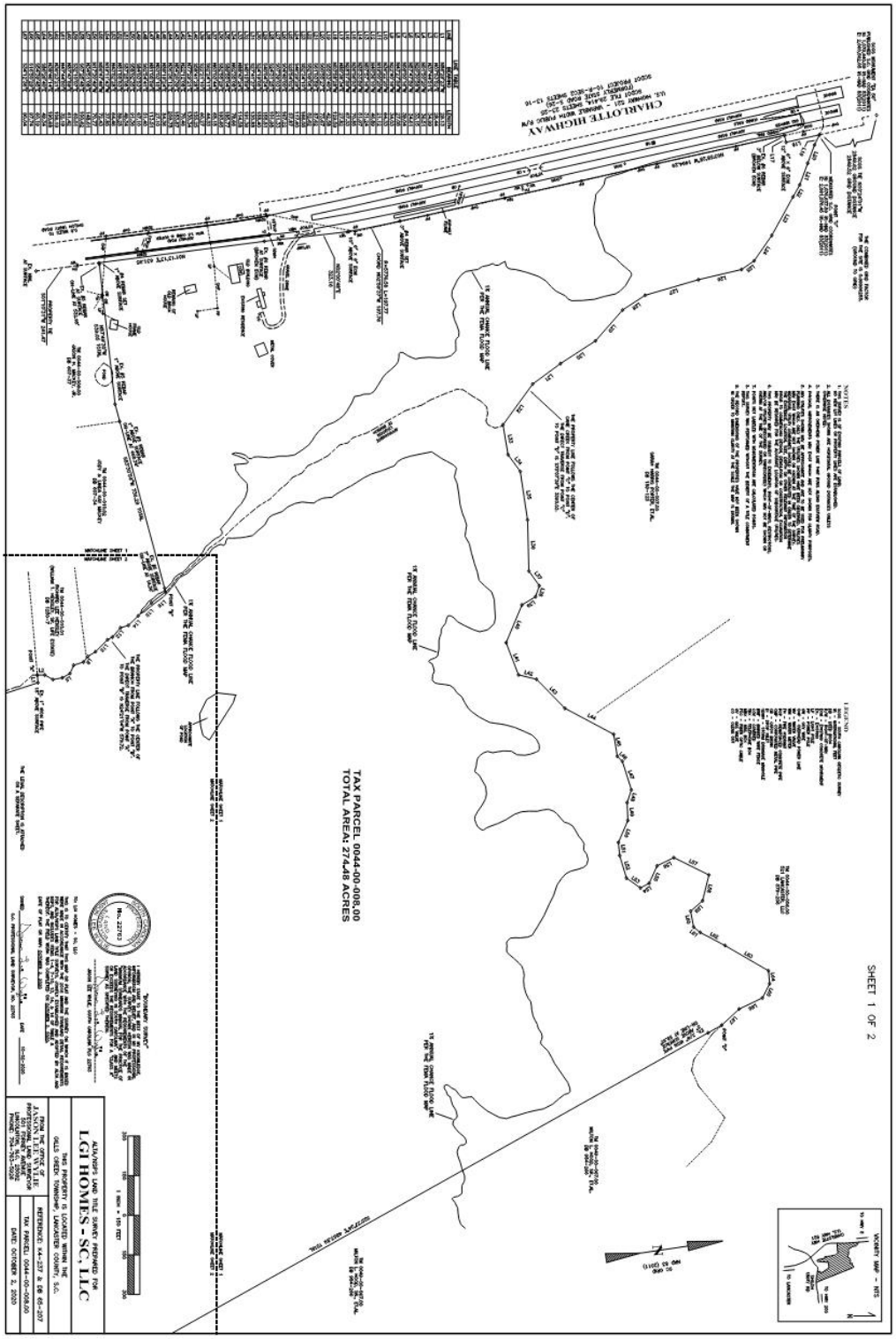

CHARLOTTE HIGHWAY
TAX PARCEL 0044-00-008.00
TOTAL AREA: 274.48 ACRES
SHEET 1 OF 2
ALTA/NSPS LAND TITLE SURVEY PREPARED FOR
LGI HOMES - SC, LLC
GILLS CREEK TOWNSHIP, LANCASTER COUNTY, S.C.
REFERENCE: 444-227 & DB 651-207
TAX PARCEL 0044-00-008.00
DATE: OCTOBER 2, 2020

Exhibit A (cont'd)

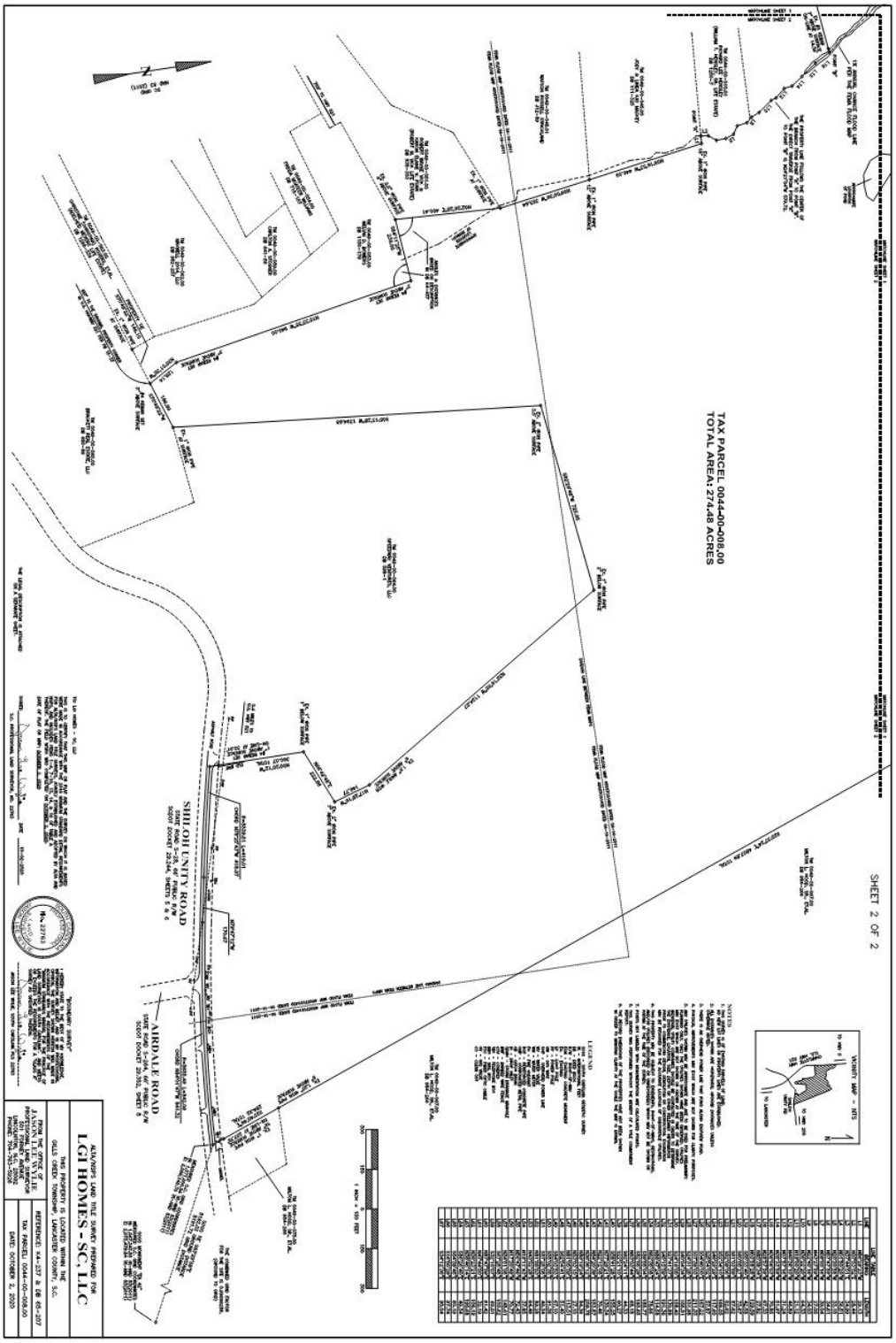


Exhibit B
Development Program

1. *Master Plan*: The Master Plan shall serve as the general guide for the location of roads, buildings and other development features. The Property shall be generally developed consistent with the approved Master Plan and associated exhibits located at the end of Exhibit B unless otherwise modified consistent with the terms of the Agreement.
2. *Zoning District*: The Property, once rezoned, will be located in the **MDR** zoning districts and shall develop consistent with the provisions of these districts unless otherwise specified in the Agreement
3. *Permitted Uses*: The Property shall be permitted to be developed with all uses permitted within the **MDR** Zoning District and not identified as being prohibited. The permitted location of said uses on the Property shall be identified on the approved Master Plan.
4. *Prohibited Uses*: The following uses shall not be permitted on the Property regardless of the provisions contained in the UDO: gas station, vape lounge, and digital gaming.
5. *Cluster Subdivision Overlay Standards*: A third lot type (defined by min. width) shall not be required.
6. *Dimensional Requirements*: The portion of the Property located in the **MDR** District shall comply with the dimensional requirements (i.e. building setbacks, height, and related provisions) specified in the UDO and noted below.

MODIFIED MDR DISTRICT MINIMUM DIMENSIONAL STANDARDS*

Lot Width	Front Setback	Side Setback	Side Setback (Corner)	Rear Setback	Building Height
50-ft, 60-ft, and 70-ft.	20-ft	7.5-ft	15-ft	30-ft	40-ft

7. *Maximum Development Intensity*: The maximum number of residential units within the MDR District on the Property shall be limited as specified below in the table. There shall be no development limitations for the GBD sections of the property beyond those created by compliance with the UDO and other sections of this Agreement.

Type of Residential	Proposed # of Units
50’ Wide Lots	194
60’ Wide Lots	197
70’ Wide Lots	199

8. *Residential Section – Site Layout and Architecture*
    a. General Site Layout:
    b. Architecture: Homes shall be constructed with a mix of materials including brick, stone, and/or cementitious siding (i.e. Hardie), and vinyl siding.
9. *Commercial Section-Site Layout and Architecture:*
    a. General Site Layout:
    b. Architectural Design and Materials:

10. *Open Space and Landscaping*
    a. Open Space Quantity and Design:
    b. Open Space Amenity Features (including timing):
    c. Tree Preservation and Protection:
    d. Buffers:
    e. Pump Station Screening:
    f. *Landscaped Medians:*
    g. BMP Design/Landscaping:
11. *Transportation:*
    a. Offsite Improvements:
        i. Traffic Impact Analysis (TIA): All improvements identified in the November 30, 2020 TIA shall be installed by the Developer. Any Right of Way phasing plan for the improvements may be proposed subject to approval by SCDOT and the County Engineer.
        ii. Collector Road:
        iii. *Perimeter Streetscape Improvements*: All streetscape improvements (i.e.: street lights, landscaping street trees, etc.) shall be consistent with the approved Master Plan.

    b. Onsite Improvements:
        i. Internal Streets/ROW: All internal streets shall be privately maintained by the Developer or his/her assigns. All streets shall be constructed in accordance with County standards and inspected by the County throughout the development process. Performance and maintenance bonds shall also be required in accordance with County standards. Construction testing results and Asbuilt surveys of all constructed roads shall also be required.
        ii. *Traffic Calming*: Traffic calming measures such as speed bumps or speed cushions shall be provided along _____ Drive and _____Road, as shown in Exhibit 1, and considered throughout the development subject to approval by the Director of Engineering.
        iii. *Walkway Connections:* The project will be interconnected with a comprehensive pedestrian walkway system providing pedestrian access between individual non-residential buildings, project phases, and the public sidewalk system. An enhanced pedestrian zone (i.e. – large sidewalk, planters, benches, etc.) shall be provided along _____ Drive to create an attractive streetscape in the commercial area.
        iv. *Overflow Neighborhood Parking:* Overflow parking areas shall be constructed as generally represented on the Master Plan.

12. *Modification of Development Program*: It is recognized that periodic modifications to the Development Program may be needed to address market conditions, environmental challenges, and other elements. The following will outline the processes for Minor, Moderate, and Major Modifications to Exhibit B. Modifications to other sections of the Agreement will be processed in accordance with those provisions.

a. Minor Modifications: Minor Modifications are defined as those modifications that reflect minor adjustments to the site layout caused by environmental features, adaptations to comply with regulatory requirements, and other changes considered incidental by County staff. Generally, Minor Modifications shall only be to the Master Plan and not to a specific development standard set forth within Exhibit B. The Planning Director shall determine what shall constitute a Minor Modification and have the authority to administratively approve such.
b. Moderate Modifications: Moderate Modifications are those modification to the Master Plan that are not caused by environmental features, adaptations to comply with regulatory requirements, and are not considered by County staff to be incidental changes, or are modifications to the text of Exhibit B that do not reflect the inclusion of new land use categories, increases to maximum dwelling units or square footage allowances. Moderate Modifications may be approved by the Infrastructure and Regulation Committee after a review and recommendation is provided by County Staff. Approved Moderate Modifications shall be recorded by the Developer and made an amendment to Exhibit B.
c. Major Modifications: Major Modifications are those that do not qualify as either a Minor or Moderate Modification, such as a substantive changes in the location of land uses or the addition of new external access point to the public road system. Major Modifications must be processed and considered in the same manner as set forth in Ordinance No. 663 for a proposed development agreement.

Exhibit C
Development Schedule

Years	Residential
1	100 units
2	100 units
3	100 units
4	100 units
5	100 units
6	90 units
Total	**590 units**

This Development Schedule is an estimate. The provisions of Section 1.07 of this Agreement apply to this exhibit.

NOTE: County and Developer acknowledge that development of the Property is limited to _____ residential units.

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Exhibit D
Required Information

The Act and Ordinance No. 663 require a development agreement to include certain information. The following information is provided in conformance with the Act and Ordinance No. 663.

(A) *a legal description of the property subject to the agreement and the names of the property's legal and equitable owners.* The legal description of the Property is set forth in Exhibit A. As of the Agreement Date, **(date TBD)** , a North Carolina not-for-profit corporation, is the legal and equitable owner of the Property, except to the extent that Developer has contractual rights to acquire the Property.

(B) *the duration of the agreement which must comply with Code Section 6-31-40.* See Section 1.10.

(C) *a representation by the developer of the number of acres of highland contained in the property subject to the agreement.* See Section 2.02.

(D) *the then current zoning of the property and a statement, if applicable, of any proposed re-zoning of the property.* See Section 1.05.

(E) *the development uses that would be permitted on the property pursuant to the agreement, including population densities, building intensities and height.* See Section 1.06.

(F) *a description of the public facilities that will service the development, including who provides the facilities, the date any new facilities, if needed, will be constructed, and a schedule to assure public facilities are available concurrent with the impacts of the development construction timeline for those facilities. If the agreement provides that the County shall provide certain public facilities, the agreement shall provide that the delivery date of the public facilities will be tied to defined completion percentages or other defined performance standards to be met by the developer.* See Article IV.

(G) *a description, where appropriate, of any reservation or dedication of land for public purposes and any provisions to protect environmentally sensitive property as may be required or permitted pursuant to laws in effect at the time of entering into the agreement.* Developer agrees to comply with all applicable environmental laws.

(H) *a description of all local development permits approved or needed to be approved for the development of the property together with a statement indicating that the failure of the agreement to address a particular permit, condition, term, or restriction does not relieve the developer of the necessity of complying with the law governing the permitting requirements, conditions, terms or restrictions.* See Section 3.04.

(I) *a finding that the development permitted or proposed is consistent, or will be consistent by the time of execution of the agreement, with the County's comprehensive plan and land development regulations.* See Section 2.01(A).

(J) *a description, where appropriate, of any provisions for the preservation and restoration of historic structures.* Developer agrees to comply with all laws applicable to the preservation and restoration of historic structures within the Property.

(K) *a development schedule including commencement dates and interim completion dates at no greater than five year intervals.* See Section 1.07 and Exhibit C.

(L) *if more than one local government is made party to the agreement, a provision stating which local government is responsible for the overall administration of the agreement.* See Section 5.08.

(M) *a listing of the laws and land development regulations that will apply to the development of the property subject to the agreement, including citation to specific ordinance numbers or portions of the County Code of Ordinances or both.* See Section 3.01(B) and Exhibit E.

(N) *a provision, consistent with Code Section 6-31-80, addressing the circumstances under which laws and land development regulations adopted subsequent to the execution of the agreement apply to the property subject to the agreement.* See Section 3.03.

(O) *a provision stating whether the agreement continues to apply to the property or portions of it that are annexed into a municipality or included in a newly-incorporated area and, if so, that the provisions of Code Section 6-31-110 apply.* See Section 5.09.

(P) *a provision [relating to the amendment, cancellation, modification or suspension of the agreement]*. See Section 5.02.

(Q) *a provision for periodic review, consistent with the provisions of Section 8 of Ordinance No. 663.* See Section 5.03.

(R) *a provision addressing the effects of a material breach of the agreement, consistent with the provisions of Section 9 of Ordinance No. 663.* See Section 5.04.

(S) *a provision that the developer, within fourteen days after the County enters into the agreement, will record the agreement with the County Register of Deeds.* See Section 5.07.

(T) *a provision that the burdens of the agreement are binding upon, and the benefits of the agreement shall inure to, all successors in interest to the parties to the agreement.* See Section 1.09(A).

(U) *a provision addressing the conditions and procedures by which the agreement may be assigned.* See Section 1.09(B), Section 3.05 and Section 5.14.

Exhibit E
Laws and Land Development Regulations

1. Ordinance No. 2020-xxxx zoning the Property **MDR** District.
2. Ordinance No. 2020-_____, approving this Development Agreement.
3. The Development Agreement Ordinance for Lancaster County, South Carolina: Ordinance No. 663.
4. Unified Development Ordinance of Lancaster County (UDO): Ordinance No. 309, as amended as of the Agreement Date. The UDO includes Ordinance No. 328, as amended, as of the Agreement Date and which is cited as the Land Development Regulations of Lancaster County. A copy of the UDO has been signed by the Parties and is on file in the office of the County Planning Department.
5. Land Development Regulations of Lancaster County: See Unified Development Ordinance of Lancaster County.
6. Article V, Chapter 26, Lancaster County Code of Ordinances, Road Construction Standards.

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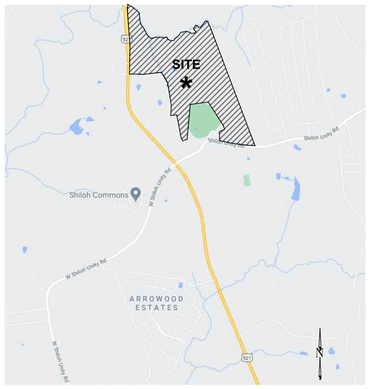


VICINITY MAP

Charlotte Highway (US-521)

Ingress/Egress to align with ex. Adage Rd. per SCDOT comment

Existing 12" LCWSD Public Water Line.
Developer to Connect at Each Proposed Road Connection with an 8" Water Line.

Proposed Sanitary Sewer Force Main.
Force Main to Connect to Future Gravity Sewer Within the Planned Roselyn Development

MACKEY JASON H JR
PID: 0044-00-008.00

MOYERS ADELHEID
PID: 0049-00-063.00

BRACKETT REAL ESTATE LLC
PID: 0049-00-065.00

BOWERS MELVIN D
PID: 0049-00-053.00

VICK ROBERT M
PID: 0049-00-051.00

STRICKLAND WATSON RUSSELL
PID: 0049-00-048.01

MACKEY JODY & LINDA KAY
PID: 0049-00-045.00

HENSLEY WILLIAM THOMAS SR
PID: 0044-00-010.01

MACKEY JODY
PID: 0044-00-010.02

Undisturbed Tree Line (approx., typ.)*
*subject to engineering/grading/erosion control requirements

UNDISTURBED NATURAL AREA

Proposed Pump Station

FEMA 100 Year Flood Zone (outside of buffers), typ.

Water Quality Buffer, typ.

Wetlands, typ.

Cane Creek

PORTER SARAH HARRIS ETAL
PID: 0044-00-007.00

Lancaster Motor Speedway

SPEEDWAY VENTURES, LLC
PID: 0049-00-064.00

50' BUFFER YARD

Shiloh Unity Road

Airdale Rd

Existing 16" and 6" LCWSD Public Water Line.
Developer to Connect at Proposed Road Connection with an 8" Water Line.

HOOD MILTON L SR
PID: 0049-00-075.00

HOOD MILTON L SR
PID: 0049-00-067.00

521 LANCASTER LLC
PID: 0044-00-006.00

ex. Pond

OPS

BMP

DEVELOPMENT SUMMARY

Parcel ID: 0044-00-008.00
DB: Book 0065, Page 0207
Size: 274.48 acres
Address: Shiloh Unity Road and Hwy. 521 north
2862 Charlotte Highway
Lancaster, SC 29720
Owner: John M. Poovey and Jane E Poovey
Lancaster, SC 28720

Current Zoning: LDR (Low Density Residential District) 1.5 DUA
Future Land Use 2024: "Transitional" (from Comprehensive Plan)
Community Type: "Suburban SF/MF Residential & Commercial"
Proposed Zoning: MDR (Medium Density Residential District) 2.5 DUA - Cluster Overlay
Max Lots (MDR): 687 lots
Lots Shown: 590 lots

MDR Cluster Requirements
Cluster Open Space Req.: 25% min. (see calcs below)
Total Open Space = ((Total Parcel - Primary Conservation Areas) * 25%) + Primary Conservation Areas
((TP - PC) OSP) + PC = TO
((274.48 - 49.68) * 0.25) + 49.68 = 105.88
105.88 acres total open space required to be set aside
Min. Park Space: 5% min. (MDR)

Total Open Space Shown: 121.93 acres gross (44%)
39.96 acres (stream/wetland buffers)
\+ 9.72 acres (additional floodplain, not in buffers)
49.68 acres "primary conservation area"

72.25 acres (not in floodplain or buffers or BMPs)
Pocket Parks Shown (x7): 4.99 acres
\+ Other Park Area: 8.75 acres
Total Park Area: 13.74 acres (5%)

Min. Lot Area: 5,000 sf
Min. Lot Width: 50' (w/ water & sewer)

Cluster Setbacks
Front: 20'
Side: 7.5' (15' corner/"secondary front setback")
Rear: 30'

50' x 120' Lots:	194
60' x 120' Lots:	197
70' x 120' Lots:	199
TOTAL LOTS:	590

Lots Legend
- 50' width lots
- 60' width lots
- 70' width lots

Connectivity Index = *Segments / Nodes*
Min. Connectivity Index: 1.3
Segments Shown: 85
Nodes Shown: 58
Connectivity Index Shown: 1.47
LF of undeveloped adj. prop.: +/- 3,560 LF
Required Street Stubs: 3 (1 per 1,000 LF)

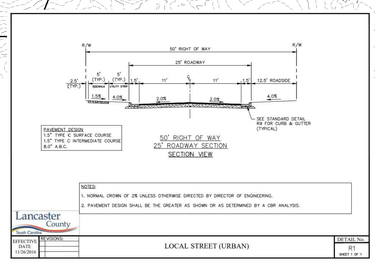
Buffers
Required Buffer Yard per UDO:
- Buffer yard not required for adjacent properties with GB, NB, LDR, or RN land use designations.

Proposed Buffer Yard Around Speedway:
- A 50' buffer yard, including a combination of landform berms and evergreen plant material, to be provided behind lots adjacent to the speedway.

Water Quality Buffers
Linear/Stream Buffer: 30' both sides (1 sq. mi. > watershed > 20 acres)
50' both sides (watershed > 1 sq. mi.)
Water Bodies/Wetlands Buffer: 30' (1 acre > surface area > 0.1 acre)
40' (2.5 acres > surface area > 1 acre)
50' (surface area > 2.5 acres)

Legend
- Potentially 404-Jurisdictional Wetland
- FEMA 100 Year Flood Zone (outside of buffers)
- Water Quality Buffer
- Potentially Jurisdictional Tributary (Perennial)
- Potentially Jurisdictional Tributary (Intermittent)
- Undisturbed Tree Line (approx.)

Scale: 1" = 200'
0 100 200 400 600 800



MERRICK
1600 SENGEL STREET, SUITE 500
CHARLOTTE, NC 28204
PHONE: 704.529.6500
NC ENGINEERING FIRM F-0908

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8. CONCLUSIONS

This Traffic Impact Analysis was conducted to determine the potential traffic impacts of the proposed Poovey Property Residential-Use development to be located east of US 521, and north of Shiloh Unity Road in Lancaster County, South Carolina. The proposed development is anticipated to be built out by 2029 and consist of 550 single family homes.

Site access is proposed via one (1) full movement driveway on Shiloh Unity Road and two (2) full movement driveways on US 521. The full movement site drive on Shiloh Unity Road is proposed to be aligned with Airdale Road at the existing intersection. The southern driveway on US 521 is expected to be located near the existing intersection of the northern leg of Adage Road, while the northern driveway on US 521 is proposed to be located at the existing median break south of Harris Hill Road. Refer to Figure 2 for a copy of the preliminary site plan.

This study analyzes traffic conditions during the weekday AM and PM peak hours for the following scenarios (future analysis year is one year beyond the anticipated build out year, per County guidelines):

- Existing (2020) Traffic Conditions
- No-Build (2030) Traffic Conditions
- Build (2030) Traffic Conditions

Trip Generation

It is estimated that the proposed development will generate approximately 4,990 total site trips on the roadway network during a typical 24-hour weekday period. Of the daily traffic volume, it is anticipated that 395 trips (99 entering and 296 exiting) will occur during the weekday AM peak hour and 522 (329 entering and 193 exiting) will occur during the weekday PM peak hour.

Intersection Capacity Analysis Summary

All the study area intersections (including the proposed site driveways) are expected to operate at acceptable levels-of-service under existing and future year conditions with the

exception of the intersections listed below. A summary of the study area intersections at which improvements should be considered is as follows:

US 521 and Harris Hill Road/Roselyn Access B

This intersection is proposed to be signalized when the Roselyn site is developed and it creates an eastbound approach (Access B) at the intersection. According to the TIA prepared for the Roselyn Development, the traffic signal would operate with permitted left turn phasing for the northbound left turn movement on US 521. Due to the anticipated poor LOS of the northbound left turn movement and the heavy opposing through traffic volumes on US 521, it may be beneficial to consider protected-permitted or protected-only phasing for the movement.

US 521 and Access B

According to the SCDOT guidelines for left turn lanes, a left turn lane would be warranted on the southbound approach of US 521 since it is a divided highway. The SCDOT guidelines for right turn lanes indicate a right turn lane would not be needed based on the anticipated build (2030) traffic volumes.

Shiloh Unity Road and Airdale Road/Access C

According to the SCDOT guidelines for left turn lanes, a left turn lane would be warranted on the eastbound approach of Shiloh Unity Road based on anticipated build (2030) traffic volumes. The SCDOT guidelines for right turn lanes indicate a right turn lane would not be needed.

9. RECOMMENDATIONS

Based on the findings of this study, specific geometric improvements have been identified and are recommended to accommodate future traffic conditions. See a more detailed description of the recommended improvements below. Refer to Figure 11 for an illustration of the recommended lane configuration for the proposed development.

Improvements by Roselyn Development

US 521 and Harris Hill Road/Roselyn Access B

- Construct Roselyn Access B as the eastbound approach and provide site access with one ingress lane and two egress lanes, striped as one left-turn lane and one shared through/right-turn lane.
- Construct northbound left-turn lane with at least 225 feet of full-width storage and appropriate decel and taper.
- Construct southbound right-turn lane with at least 150 feet of full-width storage and appropriate decel and taper.
- Install traffic signal at intersection when warranted.

Recommended Improvements by Developer

US 521 and Access A

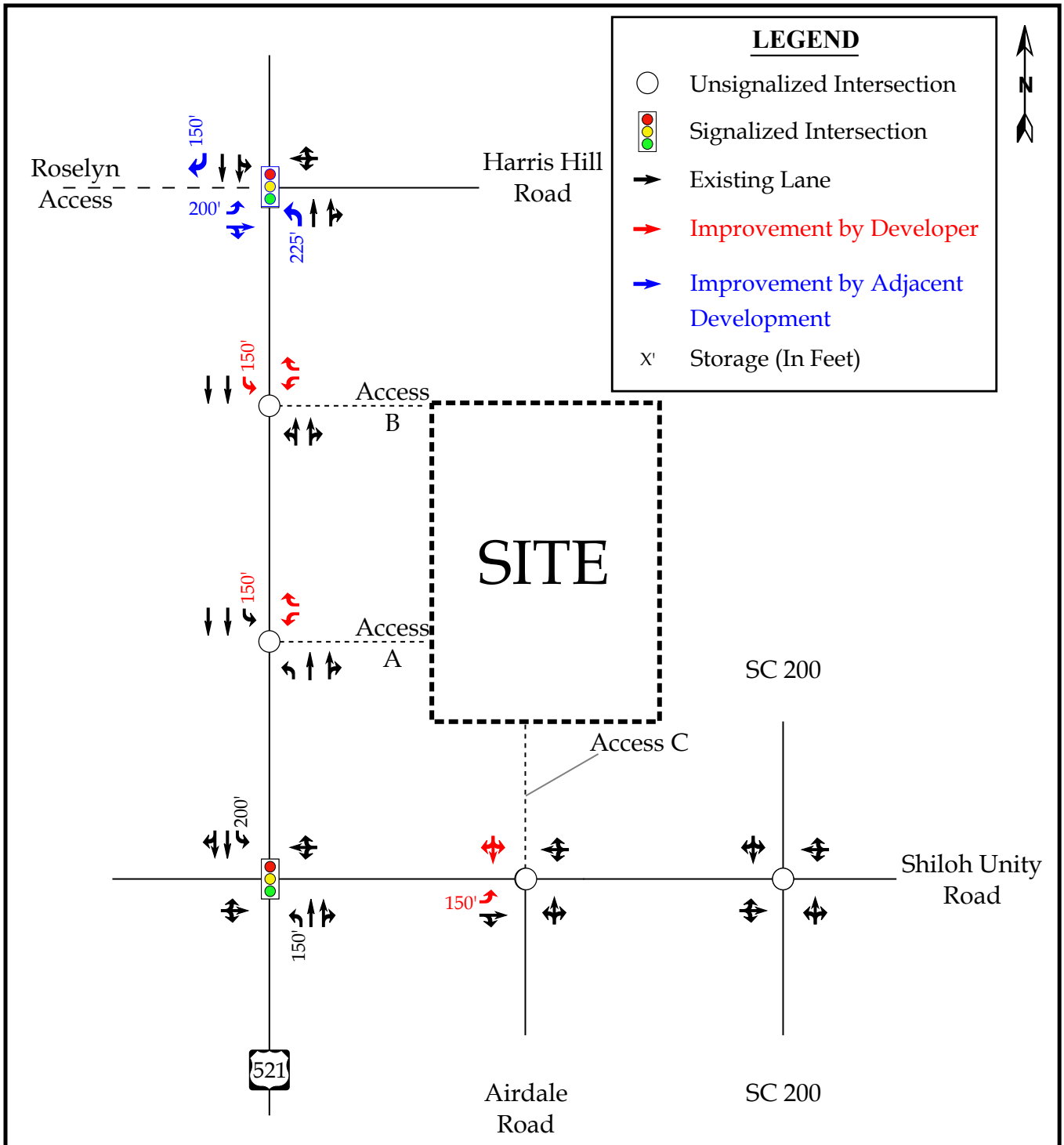
- Construct Access A as the westbound approach with one ingress lane and two egress lanes striped as one left-turn lane and one right-turn lane.
- Restripe existing two-way left-turn lane to create an exclusive southbound left turn lane with at least 150 feet of full-width storage and appropriate decel and taper.

US 521 and Access B

- Construct Access B as the westbound approach with one ingress lane and two egress lanes striped as one left-turn lane and one right-turn lane.
- Construct southbound left turn lane with at least 150 feet of full-width storage and appropriate decel and taper.

Shiloh Unity Road and Airdale Road/Access C

- Construct Access C as the southbound approach with one ingress lane and one egress lane striped as a shared left/through/right lane.
- Construct an eastbound left turn lane with at least 150 feet of full-width storage and appropriate decel and taper.



Moving forward.
RKA
RAMEY KEMP ASSOCIATES

Poover Property
Lancaster County, SC

Recommended Lane Configurations

Scale: Not to Scale | Figure 11

Kimley»Horn

Memorandum

To: Rox Burhans, AICP
Lancaster County Planning Director

From: Amy Massey, PE

Date: January 5, 2021

Subject: Poovey Property
Traffic Impact Analysis (TIA) Review

At the direction of Lancaster County, Kimley-Horn has conducted a limited review of the TIA prepared by Ramey Kemp & Associates for the Poovey Property development in Lancaster County, SC, dated November 30, 2020. The TIA is intended to evaluate the impact of the proposed 550 single family homes located along the east side of US 521 north of Shiloh Unity Road.

The following comments outline Kimley-Horn's review of the TIA with focus on its consistency with South Carolina Department of Transportation's (SCDOT's) *Access and Roadside Management Standards* (*ARMS*) Manual and the Lancaster County Unified Development Ordinance (UDO) Section 6.8. Technical review comments and recommendations are provided below.

Existing Traffic Volumes

1. It is noted in the TIA that 2019 turning movement counts at the intersection of SC 200 and Shiloh Unity Road were obtained from the Dollar General TIA and grown by 3% to 2020 conditions. However, an excerpt from the Dollar General TIA showing 2020 no build volumes is included in Appendix B (Count Data) rather than the 2019 volumes. The 2020 Dollar General TIA volumes included in Appendix B do not match the 2020 volumes shown on Figure 4. Further explanation should be provided as to how the 2020 volumes at SC 200/Shiloh Unity Road were calculated.

No Build Traffic Volumes

2. Allison Love's email included in Appendix A (Scoping Documentation) notes that Option 2 was approved for the Roselyn/Norman development at the US 521/Harris Hill Road/Norman Property Access B intersection. Based on the figure included in Appendix C (Adjacent Development Information), site trip assignment Option 1 appears to be included in the 2030 no build volumes. This results in 457 fewer AM and 285 fewer PM eastbound approach trips exiting Access B and 169 fewer AM and 540 fewer PM trips entering Access B from US 521 at this study intersection. Explanation should be provided, or this should be updated on the figures and in analyses as appropriate.

Site Trip Assignment

3. The site trip distribution figure (Figure 8) shows 90% of the site traffic entering the site rather than 100%. This appears to have been corrected on the site trip assignment figure (Figure 9) and therefore is not expected to have an impact on the analysis results.

Capacity Analysis and Recommendations

US 521 and Shiloh Unity Road

4. The 2020 existing conditions AM and PM results appear to be switched in Table 5.
5. The northbound and southbound through volumes shown on the Synchro reports included in the Appendix do not match the figures included in the TIA in any scenario. However, the provided Synchro

files appear to have the correct volumes. Since the results tables included in the TIA match the Synchro files with the correct volumes, this is not expected to have an impact on the results.

6. Consideration should be given to extending the designated southbound left-turn lane storage to 275 feet based on the PM peak-hour Synchro 95th percentile queue length.

US 521 and Harris Hill Road/Norman Property Access B

7. As noted in bullet 2 above, Allison Love's email included in Appendix A notes that mitigation Option 2 was approved for the Roselyn/Norman development at the US 521/Harris Hill Road/Norman Property Access B intersection. Based on the figure included in Appendix C (Adjacent Development Information), the Option 1 laneage and volumes appear to be included in the 2030 background and build analyses. Explanation should be provided, or the laneage and volumes should be updated in the analyses as appropriate.
8. The site's impact at this intersection should be reviewed with the appropriate Roselyn/Norman development volumes and improvements included.

Shiloh Unity Road and Airdale Road/Access C

9. The northbound left- and eastbound right-turn volumes shown on the Synchro reports included in the Appendix do not match the figures included in the TIA in any scenario. However, the provided Synchro files appear to have the correct volumes. Since the results tables included in the TIA match the Synchro files with the correct volumes, this is not expected to impact the results.
10. The volumes shown on the turn lane warrant graphs included in the Appendix do not match the volumes shown on Figure 10. However, this is not expected to impact the results of the warrants at this intersection.

Shiloh Unity Road and SC 200

11. The stop-controlled eastbound approach of Shiloh Unity Road is expected to drop from LOS D to LOS E during the PM peak hour between 2030 background and build-out conditions. Per Section 6.8 of the Lancaster County UDO, "For collector or local streets, a Level-of-Service (LOS) 'C' or better shall be maintained…Where the existing LOS is below these standards, the traffic impact analysis shall identify those improvements required to ensure that development related traffic demands result in no net reduction in LOS, and identify additional improvements needed to raise the level of service to the standards on the applicable street to the adopted LOS standard." Therefore, mitigation should be identified to improve eastbound approach operations back to LOS D, and additional improvements that would be needed to improve the eastbound approach to LOS C should also be provided in the TIA.

US 521 and Access A

12. Volumes for multiple movements shown on the Synchro reports included in the Appendix do not match the figures included in the TIA. However, the provided Synchro files appear to have the correct volumes. Since the results tables included in the TIA match the Synchro files with the correct volumes, this is not expected to impact the results.
13. The volumes shown on the turn lane warrant graphs included in the Appendix do not match the volumes shown on Figure 10. However, this is not expected to impact the results of the warrants at this intersection.
14. Westbound left- or right-turn storage length recommendations should be provided in the TIA.

US 521 and Access B

15. It is noted that Table 10 shows three 2030 build scenarios. The first two appear to be existing and background conditions; however, Synchro reports are not provided for these scenarios in the Appendix.
16. The northbound and southbound through volumes shown on the AM peak hour Synchro reports included in the Appendix do not match the figures included in the TIA. However, the provided Synchro

files appear to have the correct volumes. Since the results tables included in the TIA match the Synchro files with the correct volumes, this is not expected to impact the results.

17. It is agreed that a southbound left-turn lane should be provided at Access B. Based on review of the SimTraffic reports included in the Appendix, the southbound left-turn maximum queue is expected to be 232' during the PM peak hour with 150' of storage modeled. Based on review of the simulation without southbound left-turn storage modeled, the maximum southbound left-turn queue is expected to be 180'. Therefore, the southbound left-turn lane is recommended to include 200' of storage.
18. Access B is shown to operate at LOS F in both peaks considering a separate left- and right-lane exiting, with 268 seconds of delay in the AM peak and 490 seconds in the PM peak. Additional turn lanes along US 521 are not expected to provide a significant operational benefit. It is noted that the analysis does not consider the potential for a two-stage crossing for westbound left-turning movements and therefore the westbound approach results would likely be better than shown. However, consideration should be given to the location of the proposed residential driveways in relation to the projected westbound approach queues to avoid blocking the driveways.
19. Westbound left- or right-turn storage length recommendations should be provided in the TIA.

We recommend submittal of responses to the technical comments above and submittal of an updated TIA as appropriate.

We appreciate the opportunity to provide these services to you. Should you have any questions concerning this matter please feel free to contact me at 704-954-7470.

cc: Mr. David Gamble, PE, SCDOT
Ms. Allison Love, AICP, SCDOT
Mr. Andrew Eagle, PE, Ramey Kemp & Associates

South Carolina
Department of Transportation

Cherokee County
Chester County
Chesterfield County
Fairfield County
Lancaster County
Union County
York County

January 4, 2021

J. Andrew Eagle, P.E.
Ramey Kemp & Associates, Inc.
8210 University Executive Park Drive
Suite 220
Charlotte, North Carolina 28262

RE: Poovey Property Traffic Impact Analysis
US Highway 521 and Shiloh Unity Road (S-29-28)
Lancaster County

Dear Mr. Eagle:

Thank you for allowing us to review the Traffic Impact Analysis (TIA) regarding the site on US Highway 521 and Shiloh Unity Road (S-29-28). The Department provides the following comments.

TIA Recommendations

- US 521 and Access A
  - Construct Access A as the westbound approach with one ingress lane and two egress lanes striped as one left-turn lane and one right-turn lane.
  - Restripe existing two-way left-turn lane to create an exclusive southbound left-turn lane with at least 150 feet of full-width storage and appropriate taper.
- US 521 and Access B
  - Construct Access B as the westbound approach with one ingress lane and two egress lanes striped as one left-turn lane and one right-turn lane.
  - Construct southbound left turn lane with at least 150 feet of full-width storage and appropriate taper.
- Shiloh Unity Road and Airdale Road/Access C
  - Construct Access C as the southbound approach with one ingress lane and one egress lane striped as a shared left/through/right lane.
  - Construct an eastbound left-turn lane with at least 150 feet of full-width storage and appropriate taper.

SCDOT Comments

- US 521 and Access A
  - Align Access A with Adage Road.
  - The existing two-way left turn lane striping on US 521 shall remain.
- US 521 and Access B
  - Construct the recommended southbound left turn lane as an offset lane.

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- Shiloh Unity Road and Airdale Road/Access C
  - Construct an eastbound and a westbound left-turn lane with at least 150 feet of full-width storage and appropriate taper at this intersection.
- US 521 and Shiloh Unity Road
  - On document page 21, Table 5, what is the reason for the improvement in LOS for eastbound movements from No-Build (2030) Conditions to Build (2030) Conditions?
  - Extend the existing concrete median from the intersection to 200' total length. Restripe the existing southbound left-turn lane storage to 250', then taper to the existing two-way left turn lane width.
- Shiloh Unity Road and SC Highway 200
  - On document page 27, Table 8, the level of service for PM Peak Hour Conditions on the eastbound approach decreases to an unsuitable level from No-Build (2030) Conditions to Build (2030) Conditions. Provide recommendations to mitigate this decrease in level of service.

Once comments from all reviewers have been addressed, please submit a digital copy of the final draft to the Department. We look forward to the project proceeding to the encroachment permit process. At that time, all geometrical features, pavement designs, etc., will be reviewed by the appropriate office. If you have any additional questions or concerns, please contact the District 4 Permit Office at 803-377-4155.

Sincerely,

C. Jason Johnston, P.E.
District 4 Engineering Administrator

CJJ/mrg
ec: Rox Burhans, Lancaster County Planning
Clint Beaver, Lancaster Resident Maintenance Engineer

File: D4/PO/ACL

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Agenda Item Summary

Ordinance # / Resolution #: N/A
Contact Person / Sponsor: Steve Willis/Administration and Darren Player/Fire - Emergency Services
Department: Administration
Date Requested to be on Agenda: 2/9/2021

Issue for Consideration:
Present requested information regarding the replacement of Engine 601.

Points to Consider:
The Fire Commission prepared specifications for the replacement of Engine 601, assigned to the Elgin Fire Rescue Department. The bid package was published and we received one response. Copies of the specifications are attached.

Bidding fire apparatus is unique in that everything is custom built. It may seem strange but if you want a steering wheel on a fire truck it must be in the specifications. The specifications were developed by the Apparatus Committee of the Fire Commission. They have significant experience in this having done two large bids with multiple types of apparatus over the last 13 years.

While the specifications are stringent, our standard bid documents include provisions for any vendor to (A) take exception to the bid package by asserting that the terms are unique to a single vendor (section 1.4); and (B) provide them the opportunity to demonstrate that their proposal is equal to or exceeds the stated specifications (section 1.1 second paragraph).

I would note that the bids are now published electronically and a large vendor list was supplied the bid, in addition to being publicly advertised.

Funding and Liability Factors:
We received one bid which was $617,425. The quote noted a price increase effective January 31st. This is from the factory and not the vendor. Since this was delayed to discuss with the Committee of the Whole the factory has agreed to delay the increase until February 28th.

Please note there is an option to prepay and save $16,445. If we proceed I would recommend this option.

We received $250,000 as insurance proceeds on the wrecked apparatus. It was a 12 year old pumper.

This leaves a balance of $367,425 to pay. I would recommend fund balance for this if we prepay; otherwise we would include this in the FY 21-22 budget.

Council Options:
I know there has been some concern with only getting a single response. I would note this was a bid for a single pumper and not the mass bid that we normally do. The various vendors know that the last two mass bids have been awarded to Pierce and that likely played into any potential decision to pass on this solicitation.

Staff will bring this to the February 22nd meeting and we need guidance if Council desires to proceed and if so, what financial options you may desire to select.

Recommendation:
We need to replace this pumper and I recommend proceeding with ordering the replacement for Engine 601.

ATTACHMENTS:

Description	Upload Date	Type
601 - Specifications	1/29/2021	Exhibit
601 - IFB	1/29/2021	Exhibit
601 - Vendor List	1/29/2021	Exhibit
601 - Spartan Response	1/29/2021	Exhibit

Lancaster County Fire Rescue
Pumper IFB 500210112

	Bidder Complies	
	Yes	No

SPECIFICATIONS FOR A TRIPLE COMBINATION PUMPER

Sealed bids will be received by Lancaster County Fire Rescue for the furnishing of all necessary labor, equipment and material for the Fire Apparatus and other equipment as outlined in the following specifications. Bid prices shall remain good for 90 days from Bid Opening.

INTENT OF SPECIFICATIONS

It shall be the intent of these specifications to cover the furnishing and delivery of a complete fire apparatus. These detailed specifications cover the requirements as to the type of construction, finish, equipment and tests to which the fire apparatus shall conform. Minor details of construction and materials, which are not otherwise specified, are left to the discretion of the contractor.

Images and illustrative material in this specification are as accurate as known at the time of publication, but are subject to change without notice. Images and illustrative material is for reference only, and may include optional equipment and accessories and may not include all standard equipment.

INSTRUCTIONS TO BIDDERS

The purchaser's standards for bidding automotive fire apparatus must be strictly adhered to, and all bid forms and questions must be complete and submitted with the bid. **Omissions and variations shall result in immediate rejection of the bid.**

Bids shall only be considered from companies that have an established reputation in the field of fire apparatus construction and have been in business for a minimum of 20 years. Furthermore, in order to insure fair, ethical, and legal competition, neither the original equipment manufacturer (O.E.M.) nor parent company of the O.E.M. shall have ever been fined or convicted of price fixing, bid rigging, or collusion in any domestic or international fire apparatus market (no exception).

If a bidder represents more than one fire apparatus company or brands of apparatus, they must only bid the top of the line that meets specification.

Each bidder shall furnish satisfactory evidence of their ability to construct the apparatus specified.

Any apparatus manufacturer or their parent company, who has had a performance bond called in the last 10 years, shall not be eligible to bid. Any bids from these manufactures shall be immediately rejected (no exception).

Each bid shall be accompanied by a set of manufacturer's set of specifications consisting of a detailed description of the apparatus, construction methods, and equipment proposed to which the apparatus furnished under contract shall conform. These specifications shall indicate size, type, model and make of all components parts and equipment, providing proof of compliance with each item in the departments advertised specifications. A letter only, even though written on company letterhead, shall not be sufficient. **Any exception to this requirement shall not be acceptable.**

	Bidder Complies	
	Yes	No

In accordance with the current edition of NFPA 1901 standards, the proposal shall specify whether the fire department or apparatus dealership shall provide required loose equipment.

The purchaser will utilize this advertised specification to compare all submitted bid proposals. To facilitate comparison, all bid proposal specifications shall be submitted in the same sequence as the advertised specification. Any bidder who fails to submit a set of bid proposal specifications, or who photo copies and submits these specifications as their own construction details will be considered non responsive. This shall render such proposal ineligible for award.

The purchaser's specification shall, govern the construction of the apparatus in all cases, unless a properly documented exception or deviation was approved. Any bid indicating that the manufacturer's proposal shall supersede the purchaser's specification will be considered a complete substitute and immediately rejected.

In the event the bidder represents more than one manufacturer meeting the manufacturer requirements outline herein, then the bidder shall “only” bid the highest quality vehicle that the bidder represents. Under no circumstances will multiple bids from the same bidder on different manufacturers be accepted. Should a bidder submit two or more bids representing more than one manufacturer, then all bids submitted by that bidder will be rejected as being non-compliant with the requirement of this specification.

THE PURCHASER HAS THE RIGHT TO REJECT ANY BIDS WHICH DO NOT MEET THESE SPECIFICATIONS AND IS THE SOLE DECIDER TO DEEM WHICH BID IS IN THE BEST INTEREST OF THE PURCHASER.

EXCEPTIONS

These specifications are based upon design and performance criteria, which have been developed by the fire department as a result of extensive research and careful analysis. Subsequently, these specifications reflect the only type of fire apparatus that is acceptable at this time and all specifications herein contained are considered as minimum. Therefore, exceptions to the specifications may not be accepted.

Bidders shall indicate in the "yes/no" column if their bid complies on each item (paragraph) specified.

If a product brand name is specified and is commercially available to all bidders, an exception to such items is not acceptable and such bid may be rejected.

Exceptions shall be allowed if they are equal to or superior to that specified and provided they are listed and fully explained on a separate page. All deviations, no matter how slight, shall be clearly explained on a separate sheet in the bid sequence, citing the page and paragraph number(s) of the specifications, how the proposal deviation is different, how the deviation meets or exceeds the specifications and why it is necessary. Separate sheets will be entitled "EXCEPTIONS TO SPECIFICATIONS". **Lancaster County Fire Rescue reserves the right to require a bidder to provide proof in each case that a substituted item is equal to that specified. The buyer shall be the sole judge in determination of acceptable substitutes.**

	Bidder Complies	
	Yes	No

Proposals that are found to have deviations without listing them or bids taking total exceptions to these advertised specifications will be rejected (no exception).

Bids not including all exceptions is a material breach and shall result in the bid being immediately rejected (no exception).

GENERAL DESIGN AND CONSTRUCTION

The cab, chassis, pump module, and body are to be entirely designed, assembled and painted by the prime vehicle manufacturer, which minimizes third party involvement on engineering, design, service and warranty issues.

All bidders shall provide a list of the company, manufacturing location, and engineering source for each individual major component, including but not limited to the welded cab assembly, the pumphouse module assembly, the chassis assembly, body and electrical system. Apparatus using any subcontracted cab, chassis, pump module, electrical system or body will not be acceptable.

The apparatus shall be designed with due consideration to distribution of load between the front and rear axles. Weight balance and distribution shall be in accordance with the recommendations of the National Fire Protection Association.

The bidder shall make accurate statements as to the apparatus weight and dimensions.

QUALITY AND WORKMANSHIP

All steel welding shall follow American welding Society D1.1-2004 recommendations for structural steel welding. All aluminum welding shall follow American welding Society and ANSI D1.2-2003 requirements for structural welding of aluminum. All sheet metal welding shall follow American Welding Society B2.1-2000 requirements for structural welding of sheet metal. Flux core arc welding to use alloy rods, type 7000, American welding Society standards A5.20-E70T1. Employees classified as welders are tested and certified to meet the American Welding Society codes upon hire and every three (3) years thereafter. The manufacturer shall be required to have an American welding Society certified welding inspector in plant during working hours to monitor weld quality.

The manufacturer shall also be certified to operate a Quality Management System under the requirements of ISO 9001. These standards sponsored by the International organization for Standardization (ISO) specify the quality systems that shall be established by the manufacturer for design, manufacture, installation and service. A copy of the certificate of compliance shall be included with the bid.

To demonstrate the quality of the product and service, each bidder shall provide a list of at least fifteen (15) fire departments/municipalities in the region that have bought a second time from the representing dealer. **An exception to this requirement shall not be acceptable.**

	Bidder Complies	
	Yes	No

MANUALS AND SERVICE INFORMATION

The manufacturer shall supply at time of delivery, complete operation and maintenance manuals covering the complete apparatus as delivered. A permanent plate shall be mounted in the drivers compartment which specifies the quantity and type of fluid required including engine oil, engine coolant, transmission, pump transmission lubrication, pump primer and drive axle.

SAFETY VIDEO

Since video is much more effective than written documentation and can be replayed for new personnel and as a refresher for existing personnel, an apparatus safety video, in DVD format shall be provided at time of delivery. This video shall address key safety considerations for personnel to follow when they are driving, operating, and maintaining the apparatus. Safety procedures for the following shall be included on the video: vehicle pre-trip inspection, chassis operation, pump operation and maintenance.

PERFORMANCE TESTS AND REQUIREMENTS

A road test shall be conducted with the apparatus fully loaded and a continuous run of ten (10) miles or more shall be made under all driving conditions, during which time the apparatus shall show no loss of power or overheating. The transmission drive shaft or shafts, and rear axle shall run quietly and be free from abnormal vibration or noise throughout the operating range of the apparatus. Vehicle shall adhere to the following parameters:

A) The apparatus, when fully equipped and loaded, shall have not less than 25 percent nor more than 50 percent of the weight on the front axle, and not less than 50 percent nor more than 75 percent on the rear axle.

B) The apparatus shall be capable of accelerating to 35 mph from a standing start within 25 seconds on a level concrete highway without exceeding the maximum governed rpm of the engine.

C) The service brakes shall be capable of stopping a fully loaded vehicle in 35 feet at 20 mph on a level concrete highway. The air brake system shall conform to Federal Motor vehicle Safety Standards (FMVSS) 121.

D) The apparatus, fully loaded, shall be capable of obtaining a speed of 50 mph on a level concrete highway with the engine not exceeding the governed rpm (full load).

FAILURE TO MEET TEST

In the event the apparatus fails to meet the test requirements of these specifications on the first trial, second trials may be made at the option of the bidder within 30 days of the date of the first trial. Such trials shall be final and conclusive and failure to comply with these requirements shall be cause for rejection. Failure to comply with changes to conform to any clause of the specifications, within 30 days after notice is given to the bidder of such changes, shall also be cause for rejection of the apparatus. Permission to keep or store the apparatus in any building owned or occupied by the purchaser or its use

	Bidder Complies	
	Yes	No

by the purchaser during the above-specified period with the permission of the bidder shall not constitute acceptance.

SERVICE AND WARRANTY SUPPORT (DEALERSHIP)

TO INSURE FULL SERVICE AFTER DELIVERY, THE SELLING BIDDER/DEALERSHIP MUST BE CAPABLE OF PROVIDING SERVICE WHEN REQUIRED.

The bidder/dealership shall show that the company is in position to render prompt service and to furnish replacement parts.

Each bidder/dealership must be able to display that they are actively in the fire apparatus service business by operating a factory authorized service center and parts repository capable of satisfying the warranty service requirements and parts requirements of the vehicle(s) being purchased.

The bidder/dealership must state the location of this authorized service center. This service center must have a staff of factory-trained mechanics, well versed in all aspects of service for all major components of the apparatus. The service center must be within one hundred (100) miles of the Fire Department.

SERVICE AND WARRANTY SUPPORT (MANUFACTURER)

To provide an additional layer of service support, the successful manufacturer must also own a least two separate service facilities, one located in the northern portion of the US to service both Canada and the northern US states and one in the south to service the southern states.

The manufacturer shall stock 1+ million parts equating to $15,000,000 of inventory dedicated to service and replacement parts to ensure quick response and minimize down time. Furthermore, the manufacturer shall house the inventory in a dedicated facility, with a dedicated shipping area that ensures service parts are given priority. The bidder shall provide detailed documentation of service and replacement part resources.

Parts identification shall be provided to both the dealer and the Fire Department through an on line web based application for the specific truck reflected in this specification. Access will be granted using the specific VIN number of the vehicle. The online web application will provide the ability to view complete bills of materials, digital photographs, parts drawings, assembly drawings, and access to all current operation, maintenance and service publications.

The manufacturer must also maintain a 24 hour/ 7 day a week, toll free emergency hot line.

The manufacturer shall employ a staff of adequate size (a minimum of 30 personnel) specifically dedicated to providing customer support and parts for the fielded fleet of vehicles it has produced.

The manufacturer must be capable of providing both in-house and on-site service for the apparatus.

The manufacturer shall offer regional factory hands-on repair and maintenance training classes.

	Bidder Complies Yes	No

The manufacturer shall employ a minimum of four certified EVT technicians on staff, not only providing technical expertise in the repair of fire apparatus, but also demonstrating the commitment to service after the sale.

LIABILITY

The successful bidder shall defend all suits and assume all liability for the use of any patented process including any device or article forming a part of the apparatus or any appliance furnished under the contract.

INSURANCE PROVIDED BY BIDDER

COMMERCIAL GENERAL LIABILITY INSURANCE

The successful bidder shall, during the performance of the contract and for three (3) years following acceptance of the product, keep in force at least the following minimum limits of commercial general liability insurance:

Each Occurrence$1,000,000

Products/Completed Operations Aggregate$1,000,000

Personal and Advertising Injury$1,000,000

General Aggregate$2,000,000

Coverage shall be written on a Commercial General Liability form. The policy shall be written on an occurrence form and shall include Contractual Liability coverage for bodily injury and property damage subject to the terms and conditions of the policy. The policy shall include Owner as an additional insured when required by written contract.

COMMERCIAL AUTOMOBILE LIABILITY INSURANCE

The successful bidder shall keep in force at least the following minimum limits of commercial automobile liability insurance during the course of the contract, and coverage shall be written on a Commercial Automobile liability form:

Each Accident Combined Single Limit:$1,000,000

UMBRELLA/EXCESS LIABILITY INSURANCE

The successful bidder shall, during the performance of the contract and for three (3) years following acceptance of the product, keep in force at least the following minimum limits of umbrella liability insurance:

Aggregate:$3,000,000

Each Occurrence:$3,000,000

	Bidder Complies Yes	No

The umbrella policy shall be written on an occurrence basis and at a minimum provide excess to the bidder's General Liability and Automobile Liability policies.

The required limits can be provided by one (1) or more policies provided all other insurance requirements are met.

Coverage shall be provided by a carrier(s) rated A- or better by A.M. Best.

All policies shall provide a 30-day notice of cancellation to the named insured. The Certificate of Insurance shall provide the following cancellation clause: Should any of the above described polices be cancelled before the expiration date thereof, notice shall be delivered in accordance with the policy provisions.

Bidder agrees to furnish owner with a current Certificate of Insurance with the coverages listed above along with the bid. The certificate shall show the purchaser as certificate holder.

INSURANCE PROVIDED BY MANUFACTURER

PRODUCT LIABILITY INSURANCE

The manufacturer shall, during the performance of the contract and for three (3) years following acceptance of the product, keep in force at least the following minimum limits of Product Liability insurance:

Each Occurrence$1,000,000

Products/Completed Operations Aggregate$1,000,000

Coverage shall be written on a Commercial General Liability form. The policy shall be written on an occurrence form. The manufacturer's policy shall include the owner as additional insured when required by written contract between the Owner and a authorized dealer.

UMBRELLA/EXCESS LIABILITY INSURANCE

The manufacturer shall, during the performance of the contract and for three (3) years following acceptance of the product, keep in force at least the following minimum limits of umbrella liability insurance:

Each Occurrence:$25,000,000

Aggregate:$25,000,000

The umbrella policy shall be written on an occurrence basis and provide excess to the manufacturer's General Liability/Products policies.

	Bidder Complies	
	Yes	No

The required limits can be provided by one (1) or more policies provided all other insurance requirements are met.

Coverage shall be provided by a carrier(s) rated A- or better by A.M. Best.

All policies shall provide a 30-day notice of cancellation to the named insured. The Certificate of Insurance shall provide the following cancellation clause: Should any of the above described polices be cancelled before the expiration date thereof, notice shall be delivered in accordance with the policy provisions.

Manufacturer agrees to furnish owner with a current Certificate of Insurance with the coverages listed above along with the bid. The certificate shall show the purchaser as the certificate holder.

SINGLE SOURCE MANUFACTURER

Bids shall only be accepted from a single source apparatus manufacturer. The definition of single source is a manufacturer that designs and manufactures their products using an integrated approach, including the chassis, cab weldment, cab, pumphouse (including the sheet metal enclosure, valve controls, piping and operator's panel) and body being designed, fabricated and assembled on the bidder's premises. The electrical system (hardwire or multiplex) shall be both designed and integrated by the same apparatus manufacturer. The warranties relative to these major components (excluding component warranties such as engine, transmission, axles, pump, etc.) must be from a single source manufacturer and not split between manufacturers (i.e. body, pumphouse, cab weldment and chassis). The bidder shall provide evidence that they comply with this requirement.

The bidder shall state the location of the factory where the apparatus is to be built.

NFPA 2016 STANDARDS

This unit shall comply with the NFPA standards effective January 1, 2016, except for fire department specifications that differ from NFPA specifications. These exceptions shall be set forth in the Statement of Exceptions.

Certification of slip resistance of all stepping, standing and walking surfaces shall be supplied with delivery of the apparatus.

All horizontal surfaces designated as a standing or walking surface that are greater than 48.00" above the ground must be defined by a 1.00" wide line along its outside perimeter. Perimeter markings and designated access paths to destination points shall be identified on the customer approval print and are shown as approximate. Actual location(s) shall be determined based on materials used and actual conditions at final build. Access paths may pass through hose storage areas and opening or removal of covers or restraints may be required. Access paths may require the operation of devices and equipment such as the aerial device or ladder rack.

	Bidder Complies	
	Yes	No

A plate that is highly visible to the driver while seated shall be provided. This plate shall show the overall height, length, and gross vehicle weight rating.

The manufacturer shall have programs in place for training, proficiency testing and performance for any staff involved with certifications.

An official of the company shall designate, in writing, who is qualified to witness and certify test results.

NFPA COMPLIANCY

Apparatus proposed by the bidder shall meet the applicable requirements of the National Fire Protection Association (NFPA) as stated in the current edition at time of contract execution. Fire Department's specifications that differ from NFPA specifications shall be indicated in the proposal as "non-NFPA."

PUMP TEST

The rated water pump shall be tested, approved, and certified by an ISO certified independent third party testing agency at the manufacturer's expense. The test results, along with the pump manufacturer's certification of hydrostatic test, the engine manufacturer's certified brake horsepower curve, and the manufacturer's record of pump construction details shall be forwarded to the Fire Department.

GENERATOR TEST

If the unit has a generator, the generator shall be tested, approved, and certified by an ISO certified independent third party testing agency at the manufacturer's expense. The test results shall be provided to the Fire Department at the time of delivery.

BID BOND

All bidders shall provide a bid bond as security for the bid in the form of a 10% bid bond to accompany their bid. This bid bond shall be issued by a Surety Company who is listed on the U.S. Treasury Departments list of acceptable sureties as published in Department Circular 570. The bid bond shall be issued by an authorized representative of the Surety Company and shall be accompanied by a certified power of attorney dated on or before the date of bid. The bid bond shall include language, which assures that the bidder/principal shall give a bond or bonds as may be specified in the bidding or contract documents, with good and sufficient surety for the faithful performance of the contract, including the Basic One (1) Year Limited Warranty, and for the prompt payment of labor and material furnished in the prosecution of the contract.

Proposals received from bidders who do not manufacture the chassis shall provide a warranty that shall be issued jointly and severally by, and signed by, both the bidder and the chassis manufacturer.

If the successful bidder does not manufacture the chassis, the bidder shall supply a warranty bond, in addition to their performance bond, along with their signed contract. This warranty bond shall guarantee all terms and conditions of the Basic One (1) Year Limited Warranty and names both the bidder and chassis

	Bidder Complies	
	Yes	No

manufacturer as co-principals. This warranty bond shall be issued for the contract amount and shall remain in force for a term which is consistent with the term of the Basic One (1) Year Limited Warranty.

Notwithstanding any document or assertion to the contrary, any surety bond related to the sale of a vehicle shall apply only to the Basic One (1) Year Limited Warranty for such vehicle. Any surety bond related to the sale of a vehicle shall not apply to any other warranties that are included within this bid (OEM or otherwise) or to the warranties (if any) of any third party of any part, component, attachment or accessory that is incorporated into or attached to the vehicle. In the event of any contradiction or inconsistency between this provision and any other document or assertion, this provision shall prevail.

PERFORMANCE BOND, 1 YEAR

The successful bidder shall furnish a Performance and Payment bond (Bond) equal to 100 percent of the total contract amount within 30 days of the notice of award. Such Bond shall be in a form acceptable to the Owner and issued by a surety company included within the Department of Treasury's Listing of Approved Sureties (Department Circular 570) with a minimum A.M. Best Financial Strength Rating of A and Size Category of XV. In the event of a bond issued by a surety of a lesser Size Category, a minimum Financial Strength rating of A+ is required.

Bidder and Bidder's surety agree that the Bond issued hereunder, whether expressly stated or not, also includes the surety's guarantee of the vehicle manufacturer's Basic One (1) Year Limited Warranty period included within this proposal. Owner agrees that the penal amount of this bond shall be simultaneously amended to 100% percent of the total contract amount upon satisfactory acceptance and delivery of the vehicle(s) included herein. Notwithstanding anything contained within this contract to the contrary, the surety's liability for any warranties of any type shall not exceed one (1) year from the date of such satisfactory acceptance and delivery, or the actual Basic One (1) Year Limited Warranty period, whichever is shorter.

APPROVAL DRAWING

A drawing of the proposed apparatus shall be provided for approval before construction begins. The sales representative shall also have a copy of the same drawing. The finalized and approved drawing shall become part of the contract documents. This drawing shall indicate the chassis make and model, location of the lights, siren, horns, compartments, major components, etc.

A "revised" approval drawing of the apparatus shall be prepared and submitted by the manufacturer to the purchaser showing any changes made to the approval drawing.

CUSTOMER REFERENCE LIST

A customer reference list shall be provided with each bid. The reference list shall include a minimum of twenty five (25) Departments within South Carolina who currently operate the brand of apparatus being bid. Reference information shall include but not limited to Department name, contact information and make/model of apparatus in service.

	Bidder Complies Yes	Bidder Complies No

SOUTH CAROLINA DEALER LICENSE

Each bidder must provide with bid a valid and current copy of their South Carolina Dealer License as issued by the South Carolina Department of Motor Vehicles.

This license requirement is to assure the bidder is legally authorized to engage in the sale of motor vehicles within the State of South Carolina.

LOCAL SERVICE FACILITY

Each bidder must provide with bid proof of dealer owned and operated Service Facility located within the State of South Carolina along with factory trained service personnel. Service personnel shall be factory trained to handle parts and warranty repair for their respective manufacturer.

In addition, local Service Facility must have the capability to dispatch factory trained service technicians with dealer operated mobile service units to Department location for field service repairs.

DEALER GARAGE LIABILITY

Bidder must provide at time of bid proof of dealer garage liability insurance with minimum coverage of $2,000,000.00.

PRE-CONSTRUCTION CONFERENCE

A pre-construction conference shall be held at the manufacturer's facility to review approval drawing package. Motel, meals and travel expenses for four (4) Department personnel shall be the responsibility of the successful bidder. The sales representative for this project shall be present and assist in the conference.

	Bidder Complies	
	Yes	No

FINAL INSPECTION

A final inspection shall be provided at the manufacturer's facility for inspection of the completed unit. Motel, meals and travel expenses for four (4) Department personnel shall be the responsibility of the successful bidder. The sales representative shall be present and assist in the inspection process.

CONSTRUCTION PROGRESS PHOTOS

The successful bidder shall provide weekly photographs of the apparatus or the major components as they are being constructed. The photos shall commence at the beginning of the manufacturing process and shall continue until just prior to the final inspection. There shall be approximately eight (8) weekly reports illustrating the progress of the apparatus through the course of each week. Special attention shall be given to show the unique features and aspects of the apparatus as construction progresses.

DELIVERY

Following final inspection at the manufacturing facility the Apparatus, to insure proper break in of all components while still under warranty, **shall be delivered under its own power to local Dealership**. Dealership shall perform a full Pre-Delivery Inspection of the Apparatus by manufacturer's certified technicians. This shall include an inspection of all components of the Apparatus and if any inoperable components are detected, they shall be repaired before delivery to Department.

DELIVERY PENALTY CLAUSE

The apparatus shall be delivered to Lancaster County Fire Rescue within 300 days from Contract Signing (or issue of a Purchase Order). There shall be a penalty of $100.00 per day applied for each day the apparatus is not delivered.

ORIENTATION TRAINING

There shall be one (1) class held at the Fire Department by a factory certified trainer. The class shall consist of basic orientation of the apparatus and shall last approximately 3 hours. The class shall cover basic operations of cab, chassis, pump and body components that are included on the new apparatus.

This is in addition to factory foam system and/or aerial operation if applicable.

ELECTRICAL WIRING DIAGRAMS

Two (2) electrical wiring diagrams, prepared for the model of chassis and body, shall be provided.

CONTINGENCY FUND

A contingency fund, in the amount of ($5,000.00), shall be included within the proposal.

	Bidder Complies Yes	No

CHASSIS

Chassis provided shall be a new, tilt-type custom fire apparatus. The chassis shall be manufactured in the apparatus body builder's facility eliminating any split responsibility. The chassis shall be designed and manufactured for heavy-duty service, with adequate strength and capacity for the intended load to be sustained and the type of service required.

MAXIMUM OVERALL HEIGHT

The maximum overall height of the apparatus shall be 9' 10".

MAXIMUM OVERALL LENGTH

The maximum overall length of the apparatus shall be 31' 2".

WHEELBASE

The wheelbase of the vehicle shall be no greater than 187.50.

GVW RATING

The gross vehicle weight rating shall be a minimum of 45,000.

FRAME

The chassis frame shall be built with two (2) steel channels bolted to five (5) cross members or more, depending on other options of the apparatus. The side rails shall be heat-treated steel measuring 10.25" x 3.50" x 0.375".

Each rail shall have a section modulus of 16.00 cubic inches, yield strength of 120,000 psi, and a resisting bending moment (rbm) of 1,921,069 inch-pounds.

FRAME REINFORCEMENT

A full-length mainframe "C" liner shall be provided.

The liner shall be an internal "C" design, heat-treated steel measuring 9.38" x 3.13" x 0.25". Each reinforcement member shall have a section modulus of 3.90 cubic inches, yield strength of 120,000 psi and resisting bending moment (rbm) of 938,762 in-lb.

FRONT AXLE

The front axle shall be a reverse "I" beam type with inclined king pins. It shall be a Meritor™ axle, Model FL-941, with a rated capacity of 18,000 lb.

FRONT SUSPENSION

The front springs shall be a Standens, three (3)-leaf, taper leaf design, 54.00" long x 4.00" wide, with a ground rating of 18,000 lb.

	Bidder Complies	
	Yes	No

The two (2) top leaves shall wrap the forward spring hanger pin. The top leaf shall also wrap the rear spring hanger pin. Both the front and rear eyes shall be Berlin style wraps that shall place the eyes in the horizontal plane within the main leaf. This shall reduce bending stress from acceleration and braking.

A steel encased rubber bushing shall be used in the spring eye. The steel encased rubber bushing shall be maintenance free and require no lubrication.

SHOCK ABSORBERS

Heavy-duty telescoping shock absorbers shall be provided on the front axle.

FRONT OIL SEALS

Oil seals with viewing window shall be provided on the front axle.

FRONT TIRES

Front tires shall be Goodyear® 315/80R22.50 radials, 20 ply G291 tread, rated for 18,180 lb maximum axle load and 68 mph maximum speed.

The tires shall be mounted on Alcoa 22.50" x 9.00" polished aluminum disc wheels with a ten (10) stud, 11.25" bolt circle.

REAR AXLE

The rear axle shall be a Meritor™, Model RS-26-185, with a capacity of 27,000 lb.

TOP SPEED OF VEHICLE

A rear axle ratio shall be furnished to allow the vehicle to reach a top speed of 68 mph.

REAR SUSPENSION

The rear suspension shall be Standens, semi-elliptical, 3.00" wide x 53.00" long, 12-leaf pack with a ground rating of 27,000 lb. The spring hangers shall be castings.

The two (2) top leaves shall wrap the forward spring hanger pin, and the rear of the spring shall be a slipper style end that shall ride in a rear slipper hanger. To reduce bending stress due to acceleration and braking, the front eye shall be a berlin eye that shall place the front spring pin in the horizontal plane within the main leaf.

A steel encased rubber bushing shall be used in the spring eye. The steel encased rubber bushing shall be maintenance free and require no lubrication.

REAR OIL SEALS

Oil seals shall be provided on the rear axle(s).

	Bidder Complies Yes	Bidder Complies No

REAR TIRES

Rear tires shall be four (4) Goodyear® 12R22.50 radials, 16 ply all season G622 RSD tread, rated for 27,120 lb maximum axle load and 75 mph maximum speed.

The tires shall be mounted on Alcoa 22.50" x 8.25" polished aluminum disc wheels with a ten (10) stud 11.25" bolt circle.

TIRE BALANCE

All tires shall be balanced with Counteract balancing beads. The beads shall be inserted into the tire and eliminate the need for wheel weights.

TIRE PRESSURE MANAGEMENT

There shall be a RealWheels LED AirSecure™ tire alert pressure management system provided, that shall monitor each tire's pressure. A sensor shall be provided on the valve stem of each tire for a total of six (6) tires.

The sensor shall calibrate to the tire pressure when installed on the valve stem for pressures between 10 and 200 psi. The sensor shall activate an integral battery operated LED when the pressure of that tire drops 5 to 8 psi.

Removing the cap from the sensor shall indicate the functionality of the sensor and battery. If the sensor and battery are in working condition, the LED shall immediately start to flash.

FRONT HUB COVERS

Stainless steel hub covers shall be provided on the front axle. An oil level viewing window shall be provided.

REAR HUB COVERS

A pair of stainless steel high hat hub covers shall be provided on rear axle hubs.

CHROME LUG NUT COVERS

Chrome lug nut covers shall be supplied on front and rear wheels.

MUD FLAPS

Mud flaps shall be installed behind the front and rear wheels of the apparatus.

WHEEL CHOCKS

There shall be one (1) pair of folding Ziamatic, Model SAC-44-E, aluminum alloy, Quick-Choc wheel blocks with easy-grip handle provided.

Wheel Chock Brackets

There shall be one (1) pair of Zico, Model SQCH-44-H, horizontal mounting wheel chock brackets provided for the Ziamatic, Model SAC-44-E, folding wheel chocks. The brackets shall be made of aluminum and

	Bidder Complies	
	Yes	No

consist of a quick release spring loaded rod to hold the wheel chocks in place. The brackets shall be mounted forward of the left side rear tire.

ANTI-LOCK BRAKE SYSTEM

The vehicle shall be equipped with a Meritor WABCO 4S4M, anti-lock braking system. The ABS shall provide a 4-channel anti-lock braking control on both the front and rear wheels. A digitally controlled system that utilizes microprocessor technology shall control the anti-lock braking system. Each wheel shall be monitored by the system. When any particular wheel begins to lockup, a signal shall be sent to the control unit. This control unit shall then reduce the braking of that wheel for a fraction of a second and then reapply the brake. This anti-lock brake system shall eliminate the lockup of any wheel thus helping to prevent the apparatus from skidding out of control.

BRAKES

The service brake system shall be full air type by Meritor™.

Front brakes shall be Model EX225 Disc Plus, disc type with automatic pad wear adjustment and 17.00" ventilated rotors for improved stopping distance.

The rear brakes shall be Meritor™ 16.50" x 7.00" cam operated with automatic slack adjusters. Dust shields shall be provided.

BRAKE SYSTEM AIR COMPRESSOR

The air compressor shall be a Cummins/WABCO with 18.7 cubic feet per minute output.

BRAKE SYSTEM

The brake system shall include:

- Brake treadle valve
- Heated automatic moisture ejector on air dryer
- Total air system minimum capacity of 4,272 cubic inches
- Two (2) air pressure gauges with a red warning light and an audible alarm, that activates when air pressure falls below 60 psi
- Spring set parking brake system
- Parking brake operated by a push-pull style control valve
- A parking "brake on" indicator light on instrument panel
- Park brake relay/inversion and anti-compounding valve, in conjunction with a double check valve system, with an automatic spring brake application at 40 psi
- A pressure protection valve to prevent all air operated accessories from drawing air from the air system when the system pressure drops below 80 psi (550 kPa)
- 1/4 turn drain valves on each air tank

The air tank shall be primed and painted to meet a minimum 750 hour salt spray test.

Bidder Complies
Yes | No

To reduce the effects of corrosion, the air tank shall be mounted with stainless steel brackets (no exception).

BRAKE SYSTEM AIR DRYER

The air dryer shall be a WABCO System Saver 1200 IWT, with internal wet tank, spin-on coalescing filter cartridge and 100 watt heater.

BRAKE LINES

Color-coded nylon brake lines shall be provided. The lines shall be wrapped in a heat protective loom where necessary in the chassis.

AIR INLET/OUTLET

One (1) air inlet/outlet shall be installed with the female coupling located on the driver side pump panel. This system shall tie into the "wet" tank of the brake system and include a check valve in the inlet line and an 85 psi pressure protection valve in the outlet line. The air outlet shall be controlled by a needle valve.

A mating male fitting shall be provided with the loose equipment.

The air inlet shall allow a shoreline air hose to be connected to the vehicle. This shall allow station air to be supplied to the brake system of the vehicle to insure constant air pressure.

ENGINE

The chassis shall be powered by an electronically controlled engine as described below:

Make:	Cummins
Model:	L9
Power:	400 hp at 2100 rpm
Torque:	1250 lb-ft at 1400 rpm
Governed Speed:	2200 rpm
Emissions Level:	EPA 2021
Fuel:	Diesel
Cylinders:	Six (6)
Displacement:	543 cubic inches (8.9L)
Starter:	Delco Remy 39MT™
Fuel Filters:	Spin-on style primary filter with water separator and water-in-fuel sensor. Secondary spin-on style filter.

The engine shall include On-board diagnostics (OBD), which provides self diagnostic and reporting. The system shall give the owner or repair technician access to state of health information for various vehicle

	Bidder Complies	
	Yes	No

sub systems. The system shall monitor vehicle systems, engine and after treatment. The system shall illuminate a malfunction indicator light on the dash console if a problem is detected.

HIGH IDLE

A high idle switch shall be provided, inside the cab, on the instrument panel, that shall automatically maintain a preset engine rpm. A switch shall be installed, at the cab instrument panel, for activation/deactivation.

The high idle shall be operational only when the parking brake is on and the truck transmission is in neutral. A green indicator light shall be provided, adjacent to the switch. The light shall illuminate when the above conditions are met. The light shall be labeled "OK to Engage High Idle."

ENGINE BRAKE

A Jacobs® engine brake is to be installed with the controls located on the instrument panel within easy reach of the driver.

The driver shall be able to turn the engine brake system on/off and have a high, medium and low setting.

The engine brake shall activate when the system is on and the throttle is released.

The high setting of the brake application shall activate and work simultaneously with the variable geometry turbo (VGT) provided on the engine.

The engine brake shall be installed in such a manner that when the engine brake is slowing the vehicle the brake lights are activated.

The ABS system shall automatically disengage the auxiliary braking device, when required.

CLUTCH FAN

A fan clutch shall be provided. The fan clutch shall be automatic when the pump transmission is in "Road" position, and constantly engaged when in "Pump" position.

ENGINE AIR INTAKE

The engine air intake shall be located above the engine-cooling package. It shall draw fresh air from the front of the apparatus through the radiator grille.

A stainless steel metal screen shall be installed at the inlet of the air intake system that shall meet NFPA 1901 requirements.

The air cleaner and stainless steel screen shall be easily accessible by tilting the cab.

EXHAUST SYSTEM

The exhaust system shall be stainless steel from the turbo to the engine's aftertreatment device, and shall be 4.00" in diameter. The exhaust system shall include a single module aftertreatment device to meet

	Bidder Complies	
	Yes	No

current EPA standards. An insulation wrap shall be provided on all exhaust pipes between the turbo and aftertreatment device to minimize the heat loss to the aftertreatment device. The exhaust shall terminate horizontally ahead of the right side rear wheels. A tailpipe diffuser shall be provided to reduce the temperature of the exhaust as it exits. Heat deflector shields shall be provided to isolate chassis and body components from the heat of the tailpipe diffuser.

RADIATOR

The radiator and the complete cooling system shall meet or exceed NFPA and engine manufacturer cooling system standards.

For maximum corrosion resistance and cooling performance, the entire radiator core shall be constructed using long life aluminum alloy. The radiator core shall consist of aluminum fins, having a serpentine design, brazed to aluminum tubes. No solder joints or leaded material of any kind shall be acceptable in the core assembly.

The radiator core shall have a minimum front area of 1060 square inches.

Supply tank shall be made of heavy-duty glass-reinforced nylon and the return tank shall be mode of aluminum. Both tanks shall be crimped onto the core assembly using header tabs and a compression gasket to complete the radiator core assembly. There shall be a full steel frame around the inserts to enhance cooling system durability and reliability.

The radiator shall be compatible with commercial antifreeze solutions.

The radiator assembly shall be isolated from the chassis frame rails with rubber isolators to prevent the development of leaks caused by twisting or straining when the apparatus operates over uneven terrain.

The radiator shall include a de-aeration/expansion tank. For visual coolant level inspection, the radiator shall have a built-in sight glass. The radiator shall be equipped with a 15-psi pressure relief cap.

A drain port shall be located at the lowest point of the cooling system and/or the bottom of the radiator to permit complete flushing of the coolant from the system.

Shields or baffles shall be provided to prevent recirculation of hot air to the inlet side of the radiator.

COOLANT LINES

Gates, or Goodyear, rubber hose shall be used for all engine coolant lines installed by the chassis manufacturer.

Hose clamps shall be stainless steel constant torque type to prevent coolant leakage. They shall react to temperature changes in the cooling system and expand or contract accordingly while maintaining a constant clamping pressure on the hose.

	Bidder Complies Yes	Bidder Complies No

FUEL TANK

A 65-gallon fuel tank shall be provided and mounted at the rear of the chassis. The tank shall be constructed of 12-gauge, hot rolled steel. It shall be equipped with swash partitions and a vent. To eliminate the effects of corrosion, the fuel tank shall be mounted with stainless steel straps (no exception).

A 0.75" drain plug shall be provided in a low point of the tank for drainage.

A fill inlet shall be located on the left hand side of the body and be covered with a hinged, spring loaded, stainless steel door that is marked "Ultra Low Sulfur - Diesel Fuel Only."

A 0.50" diameter vent shall be provided running from top of tank to just below fuel fill inlet.

The tank shall meet all FHWA 393.67 requirements including a fill capacity of 95 percent of tank volume.

All fuel lines shall be provided as recommended by the engine manufacturer.

DIESEL EXHAUST FLUID TANK

A 4.5-gallon diesel exhaust fluid (DEF) tank shall be provided and mounted in the driver's side body rearward of the rear axle.

A 0.50" drain plug shall be provided in a low point of the tank for drainage.

A fill inlet shall be provided and marked "Diesel Exhaust Fluid Only". The fill inlet shall be located adjacent to the engine fuel inlet behind a common hinged, spring loaded, polished stainless steel door on the driver side of the vehicle.

The tank shall meet the engine manufacturer’s requirement for 10 percent expansion space in the event of tank freezing.

The tank shall include an integrated heater unit that utilizes engine coolant to thaw the DEF in the event of freezing.

The stainless steel flip door for selecting between DEF fill and the diesel fill shall be spring loaded to default to covering the DEF fill.

TRANSMISSION

An Allison 5th generation, Model EVS 3000P, electronic torque converting automatic transmission shall be provided.

The transmission shall be equipped with prognostics to monitor oil life, filter life, and transmission health. A wrench icon on the shift selector's digital display shall indicate when service is due.

Two (2) PTO openings shall be located on both sides of converter housing (positions 4 o'clock and 8 o'clock) as viewed from the rear.

Bidder Complies: Yes | No

A transmission temperature gauge with red light and audible alarm shall be installed on the cab dash.

TRANSMISSION SHIFTER

A five (5)-speed push button shift module shall be mounted to right of driver on console. Shift position indicator shall be indirectly lit for after dark operation.

The transmission ratio shall be:

1st	3.49 to 1.00
2nd	1.86 to 1.00
3rd	1.41 to 1.00
4th	1.00 to 1.00
5th	0.75 to 1.00
R	5.03 to 1.00

TRANSMISSION COOLER

A Modine plate and fin transmission oil cooler shall be provided using engine coolant to control the transmission oil temperature.

DRIVELINE

Drivelines shall be a heavy-duty metal tube and be equipped with Spicer® 1710 universal joints.

The shafts shall be dynamically balanced before installation.

A splined slip joint shall be provided in each driveshaft where the driveline design requires it. The slip joint shall be coated with Glidecoat® or equivalent.

STEERING

Steering gear shall be provided with integral heavy-duty power steering. For reduced system temperatures, the power steering shall incorporate an air to oil cooler and Vickers® V20NF hydraulic pump with integral pressure and flow control. All power steering lines shall have wire braded lines with crimped fittings.

A tilt and telescopic steering column shall be provided to improve fit for a broader range of driver configurations.

STEERING WHEEL

The steering wheel shall be 18.00" in diameter, have tilting and telescoping capabilities, and a 2-spoke design.

	Bidder Complies	
	Yes	No

LOGO AND CUSTOMER DESIGNATION ON DASH

The dash panel shall have an emblem containing the fire apparatus manufacturer's logo and customer name. The emblem shall have three (3) rows of text for the customer's department name. There shall be a maximum of eight (8) characters in the first row, 11 characters in the second row and 11 characters in the third row.

The first row of text shall be: Lancaster

The second row of text shall be: County

The third row of text shall be: Fire

BUMPER

A one (1) piece, ten (10) gauge, 304-2B type polished stainless steel bumper, a minimum of 10.00" high, shall be attached to a bolted modular extension frame constructed of 50,000 psi tensile steel "C" channel mounted directly behind it to provide adequate support strength.

The bumper shall be extended 22.00" from front face of cab.

Gravel Pan

A gravel pan, constructed of bright aluminum treadplate, shall be furnished between the bumper and cab face. The gravel pan shall be properly supported from the underside to prevent flexing and vibration of the aluminum treadplate.

CENTER HOSE TRAY

A hose tray, constructed of aluminum, shall be placed in the center of the bumper extension.

The tray shall have a capacity of 125' of 1.75" double jacket cotton-polyester hose.

Black rubber grating shall be provided at the bottom of the tray. Drain holes are also provided.

Center Tray Cover

A bright aluminum treadplate cover shall be provided over the center tray.

The cover shall be attached with a stainless steel hinge.

The drop down bumper shall secure the cover in the closed position and a pneumatic stay arm on each side shall hold the cover in the open position.

TOW HOOKS

Two (2) chromed steel tow hooks shall be installed under the bumper and attached to the front frame members. The tow hooks shall be designed and positioned to allow up to a 6,000 lb straight horizontal pull in line with the centerline of the vehicle. The tow hooks shall not be used for lifting of the apparatus.

	Bidder Complies	
	Yes	No

HINGED CENTER SECTION

The center section of the bumper shall be hinged at the bottom. Two (2) pawl latches shall hold the section in the closed position.

ADJUSTABLE HOSE TRAY PARTITION

There shall be one (1) adjustable aluminum partition(s) provided in the bumper hose tray located shipped loose (will be mounted from left to right in bumper tray.

CAB

The cab shall be designed specifically for the fire service and manufactured by the chassis builder.

The cab shall be built by the apparatus manufacturer in a facility located on the manufacturer's premises (no exception).

For reasons of structural integrity and enhanced occupant protection, the cab shall be a heavy duty design, constructed to the following minimal standards.

The cab shall have 12 main vertical structural members located in the A-pillar (front cab corner posts), B-pillar (side center posts), C-pillar (rear corner posts), and rear wall areas. The A-pillar shall be constructed of solid A356-T5 aluminum castings. The B-pillar and C-pillar shall be constructed from 0.13" wall extrusions. The rear wall shall be constructed of two (2) 2.00" x 2.00" outer aluminum extrusions and two (2) 2.00" x 1.00" inner aluminum extrusions. All main vertical structural members shall run from the floor to 4.625" x 3.864" x 0.090" thick roof extrusions to provide a cage-like structure with the A-pillar and roof extrusions being welded into a 0.25" thick corner casting at each of the front corners of the roof assembly.

The front of the cab shall be constructed of a 0.13" firewall plate, covered with a 0.090" front skin (for a total thickness of 0.22"), and reinforced with a full width x 0.50" thick cross-cab support located just below the windshield and fully welded to the engine tunnel. The cross-cab support shall run the full width of the cab and weld to each A-pillar, the 0.13" firewall plate, and the front skin.

The cab floors shall be constructed of 0.125" thick aluminum plate and reinforced at the firewall with an additional 0.25" thick cross-floor support providing a total thickness of 0.375" of structural material at the front floor area. The front floor area shall also be supported with two (2) triangular 0.30" wall extrusions that also provides the mounting point for the cab lift. This tubing shall run from the floor wireway of the cab to the engine tunnel side plates, creating the structure to support the forces created when lifting the cab.

The cab shall be 96.00" wide (outside door skin to outside door skin) to maintain maximum maneuverability (no exception).

The forward cab section shall have an overall height (from the cab roof to the ground) of approximately 99.00". The crew cab section shall have a 10.00" raised roof, with an overall cab height of approximately

	Bidder Complies	
	Yes	No

109.00". The overall height listed shall be calculated based on a truck configuration with the lowest suspension weight rating, the smallest diameter tires for the suspension, no water weight, no loose equipment weight, and no personnel weight. Larger tires, wheels, and suspension shall increase the overall height listed.

The floor to ceiling height inside the crew cab shall be 64.50" in the center and outboard positions.

The crew cab floor shall measure 46.00" from the rear wall to the front of the rear facing seat risers.

The engine tunnel, at the rearward highest point (knee level), shall measure 61.50" to the rear wall.

The crew cab shall be a totally enclosed design with the interior area completely open to improve visibility and verbal communication between the occupants.

The cab shall be a full tilt cab style.

A 3-point cab mount system with rubber isolators shall improve ride quality by isolating chassis vibrations from the cab.

CAB ROOF DRIP RAIL

For enhanced protection from inclement weather, a drip rail shall be furnished on the sides of the cab. The drip rail shall be painted to match the cab roof, and bonded to the sides of the cab. The drip rail shall extend the full length of the cab roof.

INTERIOR CAB INSULATION

The cab shall include 1.00" insulation in the ceiling, 1.50" insulation in the side walls, and 2.00" insulation in the rear wall to maximize acoustic absorption and thermal insulation.

FENDER LINERS

Full circular inner fender liners in the wheel wells shall be provided.

PANORAMIC WINDSHIELD

A 1-piece safety glass windshield shall be provided with over 2,775 square inches of clear viewing area. The windshield shall be full width and shall provide the occupants with a panoramic view. The windshield shall consist of three (3) layers: outer light, middle safety laminate, and inner light. The outer light layer shall provide superior chip resistance. The middle safety laminate layer shall prevent the windshield glass pieces from detaching in the event of breakage. The inner light shall provide yet another chip resistant layer. The cab windshield shall be bonded to the aluminum windshield frame using a urethane adhesive. A custom frit pattern shall be applied on the outside perimeter of the windshield for a finished automotive appearance.

	Bidder Complies	
	Yes	No

WINDSHIELD WIPERS

Three (3) electric windshield wipers with washer shall be provided that meet FMVSS and SAE requirements.

The washer reservoir shall be able to be filled without raising the cab.

ENGINE TUNNEL

Engine hood side walls shall be constructed of 0.375" aluminum. The top shall be constructed of 0.125" aluminum and shall be tapered at the top to allow for more driver and passenger elbow room.

The engine hood shall be insulated for protection from heat and sound. The noise insulation keeps the dBA level within the limits stated in the current NFPA 1901 standards.

The engine tunnel shall be no higher than 17.00" off the crew cab floor (no exception).

INTERIOR CREW CAB REAR WALL ADJUSTABLE SEATING (PATENT PENDING)

The interior rear wall of the crew cab shall have mounting holes every 2.75" to allow for adjustability of the forward facing crew cab seating along the rear wall. Seats shall be adjustable with use of simple hand tools allowing departments flexibility of their seating arrangement should their department needs change.

CAB REAR WALL EXTERIOR COVERING

The exterior surface of the rear wall of the cab shall be overlaid with bright aluminum treadplate except for areas that are not typically visible when the cab is lowered.

CAB LIFT

A hydraulic cab lift system shall be provided consisting of an electric powered hydraulic pump, dual lift cylinders, and necessary hoses and valves.

Hydraulic pump shall have a manual override for backup in the event of electrical failure.

Lift controls shall be located on the right side pump panel or front area of the body in a convenient location.

The cab shall be capable of tilting 43 degrees to accommodate engine maintenance and removal.

The cab shall be locked down by a 2-point normally closed spring loaded hook type latch that fully engages after the cab has been lowered. The system shall be hydraulically actuated to release the normally closed locks when the cab lift control is in the raised position and cab lift system is under pressure. When the cab is completely lowered and system pressure has been relieved, the spring loaded latch mechanisms shall return to the normally closed and locked position.

	Bidder Complies	
	Yes	No

The hydraulic cylinders shall be equipped with a velocity fuse that protects the cab from accidentally descending when the control is located in the tilt position.

For increased safety, a redundant mechanical stay arm shall be provided that must be manually put in place on the left side between the chassis and cab frame when the cab is in the raised position. This device shall be manually stowed to its original position before the cab can be lowered.

Cab Lift Interlock

The cab lift system shall be interlocked to the parking brake. The cab tilt mechanism shall be active only when the parking brake is set and the ignition switch is in the on position. If the parking brake is released, the cab tilt mechanism shall be disabled.

GRILLE

A single piece polished stainless steel grille and framework shall be provided on the front center of the cab.

MIRRORS

A Moto Mirror-Plus polished mirror, 7.62" x 13.50" flat glass and a 6.62" x 6.25" convex glass shall be mounted on each side of the front cab doors. Driver and passenger side mirrors shall be heated and adjustable with remote control convenient to the driver.

DOORS

To enhance entry and egress to the cab, the forward cab doors shall be a minimum of 37.50" wide x 75.50" high. The crew cab doors shall be located on the sides of the cab and shall be constructed in the same manner as the forward cab doors. The crew cab door openings shall be a minimum of 34.30" wide x 85.50" high.

The forward cab and crew cab doors shall be constructed of extruded aluminum with a nominal material thickness of 0.093". The exterior door skins shall be constructed from 0.090" aluminum.

A customized, vertical, pull-down type door handle shall be provided on the exterior of each cab door. The exterior handle shall be designed specifically for the fire service to prevent accidental activation, and shall provide 4.00" wide x 2.00" deep hand clearance for ease of use with heavy gloved hands.

Each door shall also be provided with an interior flush, open style paddle handle that shall be readily operable from fore and aft positions, and be designed to prevent accidental activation. The interior handles shall provide 4.00" wide x 1.25" deep hand clearance for ease of use with heavy gloved hands.

The cab doors shall be provided with both interior (rotary knob) and exterior (keyed) locks exceeding FMVSS standards. The keys shall be Model 1041. The locks shall be capable of activating when the doors are open or closed. The doors shall remain locked if locks are activated when the doors are opened, then closed.

	Bidder Complies	
	Yes	No

A full length, heavy duty, stainless steel, piano-type hinge with a 0.38" pin and 11 gauge leaf shall be provided on all cab doors. There shall be double automotive-type rubber seals around the perimeter of the door framing and door edges to ensure a weather-tight fit.

A chrome grab handle shall be provided on the inside of each cab door for ease of entry.

A red webbed grab handle shall be installed on the crew cab door stop strap. The grab handles shall be securely mounted.

The cab steps at each cab door location shall be located inside the cab doors to protect the steps from weather elements.

Door Panels

The inner cab door panels shall be constructed out of brushed stainless steel.

MANUAL CAB DOOR WINDOWS

All cab entry doors shall contain a conventional roll down window.

CAB STEPS

The forward cab and crew cab access steps shall be a full size two (2) step design to provide largest possible stepping surfaces for safe ingress and egress. The bottom steps shall be designed with a grip pattern punched into bright aluminum treadplate material to provide support, slip resistance, and drainage. The bottom steps shall be a bolt-in design to minimize repair costs should they need to be replaced. The forward cab steps shall be a minimum 25.00" wide, and the crew cab steps shall be 21.65" wide with a 10.00" minimum depth. The inside cab steps shall not exceed 16.50" in height.

The vertical surfaces of the step well shall be aluminum treadplate.

CAB EXTERIOR HANDRAILS

A 1.25" diameter slip-resistant, knurled aluminum handrail shall be provided adjacent to each cab and crew cab door opening to assist during cab ingress and egress.

STEP LIGHTS

There shall be six (6) white LED step lights installed for cab and crew cab access steps.

- One (1) light for the driver's access steps.
- Two (2) lights for the driver's side crew cab access steps.
- Two (2) lights for the passenger's side crew cab access steps.
- One (1) light for the passenger's side access step.

In order to ensure exceptional illumination, each light shall provide a minimum of 25 foot-candles (fc) covering an entire 15" x 15" square placed ten (10) inches below the light and a minimum of 1.5 fc covering an entire 30" x 30" square at the same ten (10) inch distance below the light.

	Bidder Complies	
	Yes	No

The lights shall be activated when the battery switch is on and the adjacent door is opened.

FENDER CROWNS

Stainless steel fender crowns shall be installed at the cab wheel openings.

CREW CAB WINDOWS

One (1) fixed window with tinted glass shall be provided on each side of the cab, to the rear of the front cab door. The windows shall be sized to enhance light penetration into the cab interior. The windows shall measure 18.70" wide x 23.75" high.

MOUNTING PLATE ON ENGINE TUNNEL

Equipment installation provisions shall be installed on the engine tunnel.

A .25" smooth aluminum plate shall be bolted to the top surface of the engine tunnel. The plate shall follow the contour of the engine tunnel and shall run the entire length of the engine tunnel. The plate shall be spaced off the engine tunnel .50" to allow for wire routing below the plate.

The mounting surface shall be painted to match the cab interior.

CAB INTERIOR

The cab interior shall be constructed of primarily metal (painted aluminum) to withstand the severe duty cycles of the fire service.

The officer side dash shall be a flat faced design to provide easy maintenance and shall be constructed out of painted aluminum.

The instrument cluster shall be surrounded with a high impact ABS plastic contoured to the same shape of the instrument cluster.

The engine tunnel shall be padded and covered, on the top and sides, with dark silver gray 36-ounce leather grain vinyl resistant to oil, grease, and mildew.

For durability and ease of maintenance, the cab interior sidewalls shall be painted aluminum. The rear wall shall be painted aluminum.

Headliner shall be installed in both forward and rear cab sections. Headliner material shall be vinyl. A sound barrier shall be part of its composition. Material shall be installed on aluminum sheet and securely fastened to interior cab ceiling.

Forward portion of cab headliner shall permit easy access for service of electrical wiring or other maintenance needs.

All wiring shall be placed in metal raceways. Routing through holes in tubing shall not be accepted due to chaffing that installation shall cause.

	Bidder Complies	
	Yes	No

CAB INTERIOR UPHOLSTERY

The cab interior upholstery shall be 36 oz dark silver gray vinyl.

CAB INTERIOR PAINT

The cab interior metal surfaces, excluding the rear heater panels, shall be painted gray, vinyl texture paint.

The rear heater panels shall be painted black, vinyl-textured paint.

CAB FLOOR

The cab and crew cab floor areas shall be covered with Polydamp™ acoustical floor mat consisting of a black pyramid rubber facing and closed cell foam decoupler.

The top surface of the material has a series of raised pyramid shapes evenly spaced, which offer a superior grip surface. Additionally, the material has a 0.25" thick closed cell foam (no water absorption) which offers a sound dampening material for reducing sound levels.

DEFROST/AIR CONDITIONING SYSTEM

A ceiling mounted combination heater, defroster and air conditioning system shall be installed in the cab above the engine tunnel area.

Cab Defroster

A 54,000 BTU heater-defroster unit with 690 SCFM of airflow shall be provided inside the cab. The heater-defrost shall be installed in the forward portion of the cab ceiling. Air outlets shall be strategically located in the cab header extrusion per the following:

- One (1) adjustable shall be directed towards the left side cab window
- One (1) adjustable shall be directed towards the right side cab window
- Six (6) fixed outlets shall be directed at the windshield

The defroster shall be capable of clearing 98 percent of the windshield and side glass when tested under conditions where the cab has been cold soaked at 0 degrees Fahrenheit for 10 hours, and a 2 ounce per square inch layer of frost/ice has been able to build up on the exterior windshield. The defroster system shall meet or exceed SAE J382 requirements.

Cab/Crew Auxiliary Heater

There shall be one (1) 31,000 BTU auxiliary heater with 560 SCFM of air flow provided in each outboard rear facing seat risers with a dual scroll blower. An aluminum plenum incorporated into the cab structure used to transfer heat to the forward positions.

Air Conditioning

A condenser shall be a 59,644 BTU output that meets and exceeds the performance specification shall be mounted on the radiator. Mounting the condenser below the cab or body would reduce the performance of the system and shall not be acceptable.

	Bidder Complies	
	Yes	No

The air conditioning system shall be capable of cooling the average cab temperature from 100 degrees Fahrenheit to 75 degrees Fahrenheit at 50 percent relative humidity within 30 minutes. The cooling performance test shall be run only after the cab has been heat soaked at 100 degrees Fahrenheit for a minimum of 4 hours.

The evaporator unit shall be installed in the rear portion of the cab ceiling over the engine tunnel. The evaporator shall include one (1) high performance heating core, one (1) high performance cooling core with (1) plenum directed to the front and one (1) plenum directed to the rear of the cab.

The evaporator unit shall have a 52,000 BTU at 690 SCFM rating that meets and exceeds the performance specifications.

Adjustable air outlets shall be strategically located on the forward plenum cover per the following:

- Four (4) shall be directed towards the seating position on the left side of the cab
- Four (4) shall be directed towards the seating position on the right side of the cab

Adjustable air outlets shall be strategically located on the evaporator cover per the following:

- Five (5) shall be directed towards crew cab area

A high efficiency particulate air (HEPA) filter shall be included for the system. Access to the filter cover shall be secured with four (4) screws.

The air conditioner refrigerant shall be R-134A and shall be installed by a certified technician.

Climate Control

An automotive style controller shall be provided to control the heat and air conditioning system within the cab. The controller shall have three (3) functional knobs for fan speed, temperature, and airflow distribution (front to rear) control.

The system shall control the temperature of the cab and crew cab automatically by pushing the center of the fan speed control knob. Rotate the center temperature control knob to set the cab and crew cab temperature.

The AC system shall be manually activated by pushing the center of the temperature control knob. Pushing the center of the air flow distribution knob shall engage the AC for max defrost, setting the fan speeds to 100 percent and directing all air flow to the overhead forward position.

The system controller shall be located within panel position #12.

	Bidder Complies	
	Yes	No

Gravity Drain Tubes

Two (2) condensate drain tubes shall be provided for the air conditioning evaporator. The drip pan shall have two (2) drain tubes plumbed separately to allow for the condensate to exit the drip pan. No pumps shall be provided.

SUN VISORS

Two (2) smoked Lexan™ sun visors provided. The sun visors shall be located above the windshield with one (1) mounted on each side of the cab.

There shall be no retention bracket provided to help secure each sun visor in the stowed position.

GRAB HANDLES

A black rubber covered grab handle shall be mounted on the door post of the driver and officer's side cab door to assist in entering the cab. The grab handles shall be securely mounted to the post area between the door and windshield.

ENGINE COMPARTMENT LIGHT

An engine compartment light shall be installed under the engine hood, of which the switch is an integral part. Light shall have a .125" diameter weep hole in its lens to prevent moisture retention.

ACCESS TO ENGINE DIPSTICKS

For access to the engine oil and transmission fluid dipsticks, there shall be a door on the engine tunnel, inside the crew cab. The door shall be on the rear wall of the engine tunnel, on the vertical surface.

The engine oil dipstick shall allow for checking only. The transmission dipstick shall allow for both checking and filling.

The door shall have a rubber seal for thermal and acoustic insulation. One (1) flush latch shall be provided on the access door.

SEATING CAPACITY

The seating capacity in the cab shall be six (6).

DRIVER SEAT

A Seats Incorporated, 911, scissor action, air ride, mid-height with headrest style seat shall be provided in the cab for the driver.

OFFICER SEAT

A Seats Incorporated, 911, SCBA seat shall be provided in the cab for the officer.

The SCBA cavity shall be adjustable front to rear in 0.50" increments to accommodate different size SCBA bottles. Moving the SCBA cavity shall be accomplished by unbolting, relocating and re-bolting in the desired location.

	Bidder Complies	
	Yes	No

RADIO COMPARTMENT

A radio compartment shall be provided under the officer's seat.

The inside compartment dimensions shall be 16.00" wide x 7.50" high x 15.00" deep, with the back of the compartment angled up to match the cab structure.

A drop-down door with a chrome plated lift and turn latch shall be provided for access.

The compartment shall be constructed of smooth aluminum and painted to match the cab interior.

REAR FACING DRIVER SIDE OUTBOARD SEAT

One (1) rear facing, Seats Incorporated 911 SCBA seat shall be provided in the driver side outboard position in crew cab. The SCBA cavity shall be adjustable front to rear in 0.50" increments to accommodate different size SCBA bottles.

Moving the SCBA cavity shall be accomplished by unbolting, relocating, and re-bolting in the desired location.

REAR FACING PASSENGER SIDE OUTBOARD SEAT

There shall be one (1) rear facing, Seats Incorporated 911 SCBA seat provided at the passenger side outboard position in the crew cab.

The SCBA cavity shall be adjustable front to rear in 0.50" increments to accommodate different size SCBA bottles. Moving the SCBA cavity shall be accomplished by unbolting, relocating and re-bolting in the desired location.

The seat shall be furnished with a 3-point, shoulder type seat belt.

FORWARD FACING LEFT SIDE CABINET

A forward facing cabinet shall be provided in the crew cab located at the left side outboard position.

The cabinet shall be 22.00" wide x 50.00" high x 16.25" deep with one (1) Gortite rollup door with satin anodized finish, non-locking. The frame to frame opening of the cabinet shall be 19.50" wide x 44.75" high. The minimum clear door opening will be 16.75" wide x 38.87" high.

The cabinet shall include two (2) infinitely adjustable shelves with a 1.25" up-turned lippainted to match the cab interior.

The cabinet shall include no louvers.

The cabinet shall be constructed of smooth aluminum and painted to match the cab interior.

	Bidder Complies	
	Yes	No

CABINET LIGHT

There shall be one (1) white Amdor LED strip light installed on the left side of the interior cabinet door opening and one (1) white Amdor LED strip light installed on the right side of the interior cabinet door opening. The lighting shall be controlled by an automatic door switch.

FORWARD FACING CENTER SEATS

There shall be two (2) forward facing, Seats Incorporated 911 SCBA seats provided at the center position in the crew cab. The SCBA cavity shall be adjustable front to rear in 0.50" increments to accommodate different size SCBA bottles.

Moving the SCBA cavity shall be accomplished by unbolting, relocating and re-bolting in the desired location.

FORWARD FACING RIGHT SIDE CABINET

A forward facing cabinet shall be provided in the crew cab located at the right side outboard position.

The cabinet shall be 22.00" wide x 50.00" high x 16.25" deep with one (1) Gortite rollup door with satin anodized finish, non-locking. The frame to frame opening of the cabinet shall be 19.50" wide x 44.75" high. The minimum clear door opening of the cabinet shall be 16.75" wide x 38.87" high.

The cabinet shall include two (2) infinitely adjustable shelves with a 1.25" up-turned lippainted to match the cab interior.

The cabinet shall include no louvers.

The cabinet shall be constructed of smooth aluminum, and painted to match the cab interior.

Cabinet Light

There shall be one (1) white Amdor LED strip light installed on the left side of the interior cabinet door opening and one (1) white Amdor LED strip light installed on the right side of the interior cabinet door opening. The lighting shall be controlled by an automatic door switch.

SEAT UPHOLSTERY

All seat upholstery shall be black Turnout Tuff material.

AIR BOTTLE HOLDERS

All SCBA type seats in the cab shall have a "Hands-Free" auto clamp style bracket in its backrest. For efficiency and convenience, the bracket shall include an automatic spring clamp that allows the occupant to store the SCBA bottle by simply pushing it into the seat back. For protection of all occupants in the cab, in the event of an accident, the inertial components within the clamp shall constrain the SCBA bottle in the seat and shall exceed the NFPA standard of 9G. Bracket designs with manual restraints (belts, straps, buckles) that could be inadvertently left unlocked and allow the SCBA to move freely within the cab during an accident, shall not be acceptable.

Bidder Complies: Yes | No

There shall be a quantity of five (5) SCBA brackets.

SEAT BELTS

All cab and tiller cab (if applicable) seating positions shall have red seat belts. The seat belts shall be furnished with a single automatic retractor. To provide quick, easy use for occupants wearing bunker gear, the female buckle and seat belt webbing length shall meet or exceed the current edition of NFPA 1901 and CAN/ULC - S515 standards.

The 3-point shoulder type belts shall also include the ReadyReach D-loop assembly to the shoulder belt system. The ReadyReach feature adds an extender arm to the D-loop location placing the D-loop in a closer, easier to reach location.

Any flip up seats shall include a 3-point shoulder type belts only.

To ensure safe operation, the seat shall be equipped with seat belt sensors in the seat cushion and belt receptacle that shall activate an alarm indicating a seat is occupied but not buckled.

CAB DOME LIGHTS

There shall be four (4) dual LED dome lights with black bezels provided. Two (2) lights shall be mounted above the inside shoulder of the driver and officer and two (2) lights shall be installed and located, one (1) on each side of the crew cab.

The color of the LED's shall be red and white.

The white LED's shall be controlled by the door switches and the lens switch.

The color LED's shall be controlled by the lens switch.

In order to ensure exceptional illumination, each white LED dome light shall provide a minimum of 10.1 foot-candles (fc) covering an entire 20.00" x 20.00" square seating position when mounted 40.00" above the seat.

CAB INSTRUMENTATION

The cab instrument panel shall be a molded ABS panel and include gauges, telltale indicator lamps, control switches, alarms, and a diagnostic panel. The function of the instrument panel controls and switches shall be identified by a label adjacent to each item. Actuation of the headlight switch shall illuminate the labels in low light conditions. Telltale indicator lamps shall not be illuminated unless necessary. The cab instruments and controls shall be conveniently located within the forward cab section, forward of the driver. The gauge assembly and switch panels are designed to be removable for ease of service and low cost of ownership.

	Bidder Complies	
	Yes	No

Gauges

The gauge panel shall include the following ten (10) black faced gauges with black bezels to monitor vehicle performance:

- Voltmeter gauge (volts):
  - Low volts (11.8 VDC)
    - Amber telltale light on indicator light display with steady tone alarm
  - High volts (15.5 VDC)
    - Amber telltale light on indicator light display with steady tone alarm
- Engine Tachometer (RPM)
- Speedometer MPH (Major Scale), KM/H (Minor Scale)
- Fuel level gauge (Empty - Full in fractions):
  - Low fuel (1/8 full)
    - Amber indicator light in gauge dial with steady tone alarm
- Engine Oil pressure Gauge (PSI):
  - Low oil pressure to activate engine warning lights and alarms
    - Red indicator light in gauge dial with steady tone alarm
- Front Air Pressure Gauges (PSI):
  - Low air pressure to activate warning lights and alarm
    - Red indicator light in gauge dial with steady tone alarm
- Rear Air Pressure Gauges (PSI):
  - Low air pressure to activate warning lights and alarm
    - Red indicator light in gauge dial with steady tone alarm
- Transmission Oil Temperature Gauge (Fahrenheit):
  - High transmission oil temperature activates warning lights and alarm
    - Amber indicator light in gauge dial with steady tone alarm
- Engine Coolant Temperature Gauge (Fahrenheit):
  - High engine temperature activates an engine warning light and alarms
    - Red indicator light in gauge dial with steady tone alarm
- Diesel Exhaust Fluid Level Gauge (Empty - Full in fractions):
  - Low fluid (1/8 full)
    - Amber indicator light in gauge dial

Indicator Lamps

To promote safety, the following telltale indicator lamps shall be located on the instrument panel in clear view of the driver. The indicator lamps shall be "dead-front" design that is only visible when active. The colored indicator lights shall have descriptive text or symbols.

The following amber telltale lamps shall be present:

	Bidder Complies	
	Yes	No

- Low coolant
- Trac cntl (traction control) (where applicable)
- Check engine
- Check trans (check transmission)
- Air rest (air restriction)
- DPF (engine diesel particulate filter regeneration)
- HET (engine high exhaust temperature) (where applicable)
- ABS (antilock brake system)
- MIL (engine emissions system malfunction indicator lamp) (where applicable)
- Regen inhibit (engine emissions regeneration inhibit) (where applicable)
- Side roll fault (where applicable)
- Front air bag fault (where applicable)
- Aux brake overheat (auxiliary brake overheat) (where applicable)
- The following red telltale lamps shall be present:
- Ladder rack down
- Parking brake
- Stop engine
- The following green telltale lamps shall be present:
- Left turn
- Right turn
- Battery on
- Ignition
- Aux brake (auxiliary brake engaged) (where applicable)
- The following blue telltale lamps shall be present:
- High beam

Alarms

Audible steady tone warning alarm: A steady audible tone alarm shall be provided whenever a warning condition is active.

Indicator Lamp and Alarm Prove-Out

A system shall be provided which automatically tests telltale indicator lights and alarms located on the cab instrument panel. Telltale indicators and alarms shall perform prove-out for 3 to 5 seconds when the ignition switch is moved to the on position with the battery switch on.

Control Switches

For ease of use, the following controls shall be provided immediately adjacent to the cab instrument panel within easy reach of the driver. All switches shall have backlit labels for low light applications.

	Bidder Complies	
	Yes	No
Headlight/Parking light switch: A three (3)-position maintained rocker switch shall be provided. The first switch position shall deactivate all parking and headlights. The second switch position shall activate the parking lights. The third switch shall activate the headlights. Panel back lighting intensity control switch: A three (3)-position momentary rocker switch shall be provided. Pressing the top half of the switch, "Panel Up" increases the panel back lighting intensity and pressing the bottom half of the switch, "Panel Down" decreases the panel back lighting intensity. Pressing the half or bottom half of the switch several times shall allow back lighting intensity to be gradually varied from minimum to maximum intensity level for ease of use. Ignition switch: A three (3)-position maintained/momentary rocker switch shall be provided. The first switch position shall turn off and deactivate vehicle ignition. The second switch position shall activate vehicle ignition and shall perform prove-out on the telltale indicators and alarms for 3 to 5 seconds after the switch is turned on. A green indicator lamp is activated with vehicle ignition. The third momentary position shall temporarily silence all active cab alarms. An alarm "chirp" may continue as long as alarm condition exists. Switching ignition to off position shall terminate the alarm silence feature and reset function of cab alarm system. Engine start switch: A two (2)-position momentary rocker switch shall be provided. The first switch position is the default switch position. The second switch position shall activate the vehicle's engine. The switch actuator is designed to prevent accidental activation. Hazard switch shall be provided on the instrument panel or on the steering column. Heater and defroster controls. Turn signal arm: A self-canceling turn signal with high beam headlight controls. Windshield wiper control shall have high, low, and intermittent modes. Parking brake control: An air actuated push/pull park brake control. Chassis horn control: Activation of the chassis horn control shall be provided through the center of the steering wheel. High idle engagement switch: A maintained rocker switch with integral indicator lamp shall be provided. The switch shall activate and deactivate the high idle function. The "OK To Engage High Idle" indicator lamp must be active for the high idle function to engage. A green indicator lamp integral to the high idle engagement switch shall indicate when the high idle function is engaged. "OK To Engage High Idle" indicator lamp: A green indicator light shall be provided next to the high idle activation switch to indicate that the interlocks have been met to allow high idle engagement.		

	Bidder Complies	
	Yes	No

Emergency switching shall be controlled by multiple individual warning light switches for various groups or areas of emergency warning lights. An Emergency Master switch provided on the instrument panel that enables or disables all individual warning light switches is included.

An additional "Emergency Master" button shall be provided on the lower left hand corner of the gauge panel to allow convenient control of the "Emergency Master" system from inside the driver's door when standing on the ground.

Custom Switch Panels

The design of cab instrumentation shall allow for emergency lighting and other switches to be placed within easy reach of the operator thus improving safety. There shall be positions for up to four (4) switch panels in the lower instrument console and up to six (6) switch panels in the overhead visor console. All switches have backlit labels for low light conditions.

Diagnostic Panel

A diagnostic panel shall be provided and accessible while standing on the ground. The panel shall be located inside the driver's side door left of the steering column. The diagnostic panel shall allow diagnostic tools such as computers to connect to various vehicle systems for improved troubleshooting providing a lower cost of ownership. Diagnostic switches shall allow ABS systems to provide blink codes should a problem exist.

The diagnostic panel shall include the following:

- ENGINE/TRANSMISSION/ABS J1939 Diagnostic Port
- ABS Diagnostic Switch and Indicator - The switch and amber indicator shall allow access to diagnostic mode and display of standard ABS system fault blink codes that may be generated by the ABS system
- DPF REGEN (Diesel Particulate Filter Regeneration Switch) (where applicable) shall be provided to request regeneration of the engine emission system. An amber indicator shall be provided on top of the switch that shall illuminate in a "CHECK ENGINE" condition
- REGEN INHIBIT (Diesel Particulate Filter Regeneration Inhibit Switch) (where applicable) shall be provided that shall request that regeneration be temporarily prevented. A green indicator shall be provided on top of the Regen Inhibit switch that shall illuminate when the Regen Inhibit feature is active. Regen Inhibit shall be disabled upon cycling of the ignition switch to the off state.

AIR RESTRICTION INDICATOR

A high air restriction warning indicator light (electronic) shall be provided.

"DO NOT MOVE APPARATUS" INDICATOR

A flashing red indicator light, located in the driving compartment, shall be illuminated automatically per the current NFPA requirements. The light shall be labeled "Do Not Move Apparatus If Light Is On."

	Bidder Complies	
	Yes	No

The same circuit that activates the Do Not Move Apparatus indicator shall activate a pulsing alarm when the parking brake is released.

SWITCH PANELS

The built-in switch panels shall be located in the lower console or overhead console of the cab. Switches shall be rocker type with an indicator light, of which is an integral part of the switch.

WIPER CONTROL

Wiper control shall consist of a two (2)-speed windshield wiper control with intermittent feature and windshield washer controls.

The wipers shall be interlocked to the parking brake. The wipers shall terminate operation when the parking brake is set.

SPARE CIRCUIT

There shall be two (2) pair of wires, including a positive and a negative, installed on the apparatus.

The above wires shall have the following features:

- The positive wire shall be connected directly to the battery switched power
- The negative wire shall be connected to ground
- Wires shall be protected to 30 amps at 12 volts DC
- Power and ground shall terminate in the power distribution panel in front of the officer
- Termination shall be with 3/8" studs and plastic covers
- Wires shall be sized to 125% of the protection

This circuit(s) may be load managed when the parking brake is set.

INFORMATION CENTER

There shall be a LCD display integral to the cab gauge panel provided that shall display the following information:

- Total distance
- Trip distance
- Total hours
- Trip hours
- PTO "A" hours
- PTO "B" hours

VEHICLE DATA RECORDER

There shall be a vehicle data recorder (VDR) capable of reading and storing vehicle information provided.

	Bidder Complies	
	Yes	No

The information stored on the VDR can be downloaded through a USB port mounted in a convenient location determined by cab model. A USB cable can be used to connect the VDR to a laptop to retrieve required information. The program to download the information from the VDR will be available to download on-line.

The vehicle data recorder shall be capable of recording the following data via hardwired and/or CAN inputs:

- Vehicle Speed - MPH
- Acceleration - MPH/sec
- Deceleration - MPH/sec
- Engine Speed - RPM
- Engine Throttle Position - % of Full Throttle
- ABS Event - On/Off
- Seat Occupied Status - Yes/No by Position
- Seat Belt Buckled Status - Yes/No by Position
- Master Optical Warning Device Switch - On/Off
- Time - 24 Hour Time
- Date - Year/Month/Day

Seat Belt Monitoring System

A seat belt monitoring system (SBMS) shall be provided. The SBMS shall be capable of monitoring up to 10 seating positions indicating the status of each seat position per the following:

- Seat Occupied & Buckled = Green LED indicator illuminated
- Seat Occupied & Unbuckled = Red LED indicator with audible alarm
- No Occupant & Buckled = Red LED indicator with audible alarm
- No Occupant & Unbuckled = No indicator and no alarm

The SBMS shall include an audible alarm that shall warn that an unbuckled occupant condition exists and the parking brake is released, or the transmission is not in park.

RADIO ANTENNA MOUNT

There shall be two (2) standard 1.125", 18 thread antenna-mounting base(s) installed rearward of the light bar on the cab roof with high efficiency, low loss, coaxial cable(s) routed to behind the officer seat. A weatherproof cap shall be installed on the mount.

FRONT, SIDE, AND REAR VISION SYSTEM WITH DVR

Cameras shall be located as follows:

	Bidder Complies	
	Yes	No

- One (1) color video camera with microphone located at the rear of the vehicle, pointing rearward, automatically displayed when the apparatus is put into reverse
- One (1) color video camera with microphone located at the front of the vehicle, pointing forward, manually displayed only
- One (1) color video camera located on the right side of the cab, pointing rearward, automatically displayed with the right turn signal
- One (1) color video camera located on the left side of the cab, pointing rearward, automatically displayed with the left turn signal

The camera images shall be displayed on a 7.00" LCD display with integrated audio, located in view of the driver.

All cameras shall simultaneously record to a four (4) channel digital video recorder with 32 GB removable memory card whenever the ignition is active.

The following Zone Defense components shall be included:

- Two (2) Zone Defense model CAM-313C color cameras
- Two (2) Zone Defense model CAM-313MS color cameras
- One (1) ZD.M302.22 7" Display with integrated switcher
- One (1) R-400B Mobile Digital Video Recorder
- All necessary cables

RECESS REAR CAMERA

A rear camera recess shall be provided in the center at the rear.

ELECTRICAL POWER CONTROL SYSTEM

A compartment shall be provided in or under the cab to house the vehicle's electrical power and signal circuit protection and control components. The power and signal protection and control compartment shall contain circuit protection devices and power control devices. Power and signal protection and control components shall be protected against corrosion, excessive heat, excessive vibration, physical damage and water spray.

Serviceable components shall be readily accessible.

Circuit protection devices, which conform to SAE standard, shall be utilized to protect each circuit. All circuit protection devices shall be sized to prevent wire and component damage when subjected to extreme current overload. General protection circuit breakers shall be Type-I automatic reset (continuously resetting) and conform to SAE J553 or J258. When required, automotive type fuses conforming to SAE J554, J1284, J1888 or J2077 shall be utilized to protect electronic equipment.

	Bidder Complies	
	Yes	No

Power control relays and solenoids shall have a direct current (dc) rating of 125 percent of the maximum current for which the circuit is protected.

Visual status indicators shall be supplied to identify control safety interlocks and vehicle status. In addition to visual status indicators, audible alarms designed to provide early warning of problems before they become critical shall be used.

VOLTAGE MONITOR SYSTEM

A voltage monitor system shall be provided to indicate the status of each battery system connected to the vehicle's electrical load. The monitor system shall provide visual and audio warning when the system voltage is above or below optimum levels.

POWER AND GROUND STUDS

Spare circuits shall be provided in the primary distribution center for two-way radio equipment.

The spare circuits shall consist of the following:

- One (1) 12-volt DC, 30 amp battery direct spare
- One (1) 12-volt DC ground and un-fused switched battery stud located in or adjacent to the power distribution center

EMI/RFI PROTECTION

The electrical system proposed shall include means to control undesired electromagnetic and radio frequency emissions. State of the art electrical system design and components shall be used to ensure radiated and conducted EMI (electromagnetic interference) and RFI (radio frequency interference) emissions are suppressed at their source.

The apparatus proposed shall have the ability to operate in the electromagnetic environment typically found in fire ground operations. The contractor shall be able to demonstrate the EMI and RFI testing has been done on similar apparatus and certifies that the vehicle proposed meets SAE J551 requirements.

EMI/RFI susceptibility shall be controlled by applying immune circuit designs, shielding, twisted pair wiring and filtering. The electrical system shall be designed for full compatibility with low-level control signals and high-powered two-way radio communication systems. Harness and cable routing shall be given careful attention to minimize the potential for conducting and radiated EMI-RFI susceptibility.

	Bidder Complies	
	Yes	No

ELECTRICAL

All 12-volt electrical equipment installed by the apparatus manufacturer shall conform to modern automotive practices. All wiring shall be high temperature crosslink type. Wiring shall be run, in loom or conduit, where exposed and have grommets where wire passes through sheet metal. Automatic reset circuit breakers shall be provided which conform to SAE Standards. Wiring shall be color, function and number coded. Function and number codes shall be continuously imprinted on all wiring harness conductors at 2.00" intervals. Exterior exposed wire connectors shall be positive locking, and environmentally sealed to withstand elements such as temperature extremes, moisture and automotive fluids.

Electrical wiring and equipment shall be installed utilizing the following guidelines:

1. All holes made in the roof shall be caulked with silicon, rope caulk is not acceptable. Large fender washers, liberally caulked, shall be used when fastening equipment to the underside of the cab roof.
2. Any electrical component that is installed in an exposed area shall be mounted in a manner that shall not allow moisture to accumulate in it. Exposed area shall be defined as any location outside of the cab or body.
3. Electrical components designed to be removed for maintenance shall not be fastened with nuts and bolts. Metal screws shall be used in mounting these devices. Also a coil of wire shall be provided behind the appliance to allow them to be pulled away from mounting area for inspection and service work.
4. Corrosion preventative compound shall be applied to all terminal plugs located outside of the cab or body. All non-waterproof connections shall require this compound in the plug to prevent corrosion and for easy separation (of the plug).
5. All lights that have their sockets in a weather exposed area shall have corrosion preventative compound added to the socket terminal area.
6. All electrical terminals in exposed areas shall have silicon (1890) applied completely over the metal portion of the terminal.

All lights and reflectors, required to comply with Federal Motor Vehicle Safety Standard #108, shall be furnished. Rear identification lights shall be recessed mounted for protection. Lights and wiring mounted in the rear bulkheads shall be protected from damage by installing a false bulkhead inside the rear compartments.

An operational test shall be conducted to ensure that any equipment that is permanently attached to the electrical system is properly connected and in working order.

The results of the tests shall be recorded and provided to the purchaser at time of delivery.

	Bidder Complies	
	Yes	No

BATTERY SYSTEM

There shall be six (6) 12 volt Exide®, Model 31S950X3W, batteries that include the following features shall be provided:

- 950 CCA, cold cranking amps
- 190 amp reserve capacity
- High cycle
- Group 31
- Rating of 5700 CCA at 0 degrees Fahrenheit
- 1140 minutes of reserve capacity
- Threaded stainless steel studs

Each battery case shall be a black polypropylene material with a vertically ribbed container for increased vibration resistance. The cover shall be manifold vented with a central venting location to allow a 45 degree tilt capacity.

The inside of each battery shall consist of a "maintenance free" grid construction with poly wrapped separators and a flooded epoxy bottom anchoring for maximum vibration resistance.

BATTERY SYSTEM

There shall be a single starting system with an ignition switch and starter button provided and located on the cab instrument panel.

MASTER BATTERY SWITCH

There shall be a master battery switch provided within the cab within easy reach of the driver to activate the battery system.

An indicator light shall be provided on the instrument panel to notify the driver of the status of the battery system.

BATTERY COMPARTMENTS

Batteries shall be placed on non-corrosive mats and be stored in well ventilated compartments located under the cab.

Heavy-duty battery cables shall be used to provide maximum power to the electrical system. Cables shall be color coded.

Battery terminal connections shall be coated with anti-corrosion compound. Battery solenoid terminal connections shall be encapsulated with semi-permanent rubberized compound.

JUMPER STUDS

One (1) set of battery jumper studs with plastic color-coded covers shall be included on the battery compartments.

	Bidder Complies	
	Yes	No

BATTERY CHARGER/ AIR COMPRESSOR

There shall be a Kussmaul™ Pump Plus 1200, Model # 52-21-1100, single output battery charger/air compressor system shall be provided. A display bar graph indicating the state of charge shall be included.

The automatic charger shall maintain one (1) set of batteries with a maximum output current of 40 amps.

The 12-volt air compressor shall be installed to maintain the air system pressure when the vehicle is not in use.

There shall be an auto pump timer installed between the pressure switch and the pump that shall allow the pump to run for one hour than shut down for one hour.

The battery charger shall be wired to the AC shoreline inlet through an AC receptacle adjacent to this battery charger.

Battery charger/compressor shall be located in the cab behind the driver's seat.

The battery charger indicator shall be located behind the driver's door on the outside of the cab.

AUTO EJECT FOR SHORELINE

There shall be one (1) Kussmaul™, Model 091-55-20-120, 20 amp 120 volt AC shoreline inlet(s) provided to operate the dedicated 120 volt AC circuits on the apparatus.

The shoreline inlet(s) shall include red weatherproof flip up cover(s).

There shall be a release solenoid wired to the vehicle's starter to eject the AC connector when the engine is starting.

The shoreline(s) shall be connected to the battery charger.

There shall be a mating connector body supplied with the loose equipment.

There shall be a label installed near the inlet(s) that state the following:

- Line Voltage
- Current Ratting (amps)
- Phase
- Frequency

The shoreline receptacle shall be located on the driver side of cab, above wheel.

ALTERNATOR

A Leece-Neville, Model 4962PA, alternator shall be provided. It shall have a rated output current of 320 amps, as measured by SAE method J56. The alternator shall feature an integral, self diagnostic regulator

Bidder Complies: Yes | No

and rectifier. The alternator shall be connected to the power and ground distribution system with heavy-duty cables sized to carry the full rated alternator output.

ELECTRONIC LOAD MANAGEMENT

An electronic load management (ELM) system that monitors the vehicles 12-volt electrical system, and automatically reduces the electrical load in the event of a low voltage condition and by doing so, ensures the integrity of the electrical system.

The ELM shall monitor the vehicle's voltage while at the scene (parking brake applied). It shall sequentially shut down individual electrical loads when the system voltage drops below a preset value. Two (2) separate electrical loads shall be controlled by the load manager. The ELM shall sequentially re-energize electrical loads as the system voltage recovers.

HEADLIGHTS

There shall be a HiViz part number FT-4X6-4KIT, that includes four (4) 4.00" high x 6.00" long rectangular LED lights with parking lamp illumination around the outside of the lamps mounted in the front quad style, chrome housing on each side of the cab grille:

- the outside lamp on each side shall contain a part number FT-4X6-HL with low beam LEDs
- the inside lamp on each side shall contain a part number FT-4X6-H with high beam LEDs
- the lights shall be controlled through the headlight switch

FRONT DIRECTIONALS

The front directional's shall be Whelen, Model M6T, amber LED arrow lights. The directional's shall be housed in the same chrome common bezel as the front warning light and shall be located above the headlights.

INTERMEDIATE LIGHT

There shall be two (2) Weldon, Model 9186-8580-29, amber LED turn signal marker lights furnished, one (1) each side, in the rear fender panel. The light shall double as a turn signal and marker light.

CAB CLEARANCE/MARKER/ID LIGHTS

There shall be five (5) amber LED lights provided to indicate the presence and overall width of the vehicle in the following locations:

- Three (3) amber LED identification lights shall be installed in the center of the cab above the windshield.
- Two (2) amber LED clearance lights shall be installed, one (1) on each outboard side of the cab above the windshield.

	Bidder Complies	
	Yes	No

FRONT CAB SIDE DIRECTIONAL/MARKER LIGHTS

There shall be two (2) Weldon, Model 9186-8580-29, amber LED lights installed front of the cab door, one (1) on each side of the cab.

The lights shall activate as marker lights with the headlight switch and directional lights with the corresponding directional circuit.

REAR CLEARANCE/MARKER/ID LIGHTING

There shall be a three (3) LED light bar used as identification lights located at the rear of the apparatus per the following:

- As close as practical to the vertical centerline
- Centers spaced not less than 6.00" or more than 12.00" apart
- Red in color
- All at the same height

There shall be two (2) LED lights installed at the rear of the apparatus used as clearance lights located at the rear of the apparatus per the following:

- To indicate the overall width of the vehicle
- One (1) each side of the vertical centerline
- As near the top as practical
- Red in color
- To be visible from the rear
- All at the same height

There shall be two (2) LED lights installed on the side of the apparatus used as marker lights as close to the rear as practical per the following:

- To indicate the overall length of the vehicle
- One (1) each side of the vertical centerline
- As near the top as practical
- Red in color
- To be visible from the side
- All at the same height

There shall be two (2) red reflectors located on the rear of the truck facing to the rear. One (1) each side, as far to the outside as practical, at a minimum of 15.00", but no more than 60.00", above the ground.

There shall be two (2) red reflectors located on the side of the truck facing to the side. One (1) each side, as far to the rear as practical, at a minimum of 15.00", but no more than 60.00", above the ground.

	Bidder Complies	
	Yes	No

Per FMVSS 108 and CMVSS 108 requirements.

REAR FMVSS LIGHTING

The rear stop/tail and directional LED lighting shall consist of the following:

- Two (2) Whelen®, Model M6BTT, red LED stop/tail lights
- Two (2) Whelen, Model M6T, amber LED arrow turn lights

The lights shall be provided with color lenses.

The lights shall be mounted in a polished combination housing.

There shall be two (2) Whelen Model M6BUW, LED backup lights provided in the tail light housing.

LICENSE PLATE BRACKET

There shall be one (1) license plate bracket mounted on the rear of the body.

A white LED light shall illuminate the license plate. A stainless steel light shield shall be provided over the light that shall direct illumination downward, preventing white light to the rear.

LIGHTING BEZEL

There shall be two (2) Whelen, Model M6FCV4P, four (4) place chromed ABS housings with logos provided for the rear M6 series stop/tail, directional, back up, scene lights or warning lights.

BACK-UP ALARM

A PRECO, Model 1040, solid-state electronic audible back-up alarm that actuates when the truck is shifted into reverse shall be provided. The device shall sound at 60 pulses per minute and automatically adjust its volume to maintain a minimum ten (10) dBA above surrounding environmental noise levels.

CAB PERIMETER SCENE LIGHTS

There shall be four (4) Amdor, Model AY-LB-12HW012, 190 lumens each, 12.00" white LED strip lights provided.

- One (1) under the driver's side cab access step.
- One (1) under the passenger's side cab access step.
- One (1) under the passenger's side crew cab access step.
- One (1) under the driver's side crew cab access step.

The lights shall be activated when the battery switch is on and the respective door is open and whenever control has been selected for the body perimeter lights.

	Bidder Complies	
	Yes	No

PUMP HOUSE PERIMETER LIGHTS

There shall be two (2) Amdor, Model AY-LB-12HW012, 190 lumens each, 12.00" LED weatherproof strip lights with brackets provided under the pump panel running boards, centered front to rear as much as possible, one (1) each side.

The lights shall be activated when the battery switch is on, and controlled by the same means as the body perimeter lights.

BODY PERIMETER SCENE LIGHTS

There shall be two (2) Amdor, Model AY-LB-12HW012, 190 lumens each, 12.00" 12 volt DC LED strip lights provided at the rear step area of the body, one (1) each side shining to the rear.

The perimeter scene lights shall be activated when the parking brake is applied.

STEP LIGHTS

There shall be four (4) white LED, step lights provided. One (1) step light shall be provided on each side, on the front compartment face and two (2) step lights at the rear to illuminate the tailboard.

In order to ensure exceptional illumination, each light shall provide a minimum of 25 foot-candles (fc) covering an entire 15" x 15" square placed ten (10) inches below the light and a minimum of 1.5 fc covering an entire 30" x 30" square at the same ten (10) inch distance below the light.

These step lights shall be actuated when the ignition switch is on and the parking brake is set.

All other steps on the apparatus shall be illuminated per the current edition of NFPA 1901.

SIDE SCENE LIGHTS

There shall be one (1) Whelen®, Model M6ZC, LED scene light(s) with Model M6FC, chrome flange(s) installed on the side of the apparatus, one (1) high and rearward of driver's side cab door.

A control for the light(s) selected above shall be the following:

- a switch at the driver's side switch panel
- opening the driver's side cab or crew cab doors
- no additional switch location
- no additional switch location

These lights may be load managed when the parking brake is applied.

SIDE SCENE LIGHTS

There shall be one (1) Whelen, Model M6ZC, LED scene light(s) with Model M6FC, chrome flange(s) installed on the side of the apparatus, one (1) high and rearward of passenger's side cab door.

A control for the light(s) selected above shall be the following:

Bidder Complies: Yes | No

- a switch at the driver's side switch panel
- opening the passenger's side cab or crew cab doors
- no additional switch location
- no additional switch location

These lights may be load managed when the parking brake is set.

12 VOLT LIGHTING

There shall be one (1) Whelen® Model P*H2*, 17,750 lumens 12 volt DC light(s) with a combination of flood and spot optics provided on the front visor, centered.

The housing(s) painted parts of this light assembly to be black. The light(s) shall be controlled by a switch at the driver's side switch panel and by a switch at the passenger's side switch panel.

These light(s) may be load managed when the parking brake is applied.

DECK LIGHTS

There shall be two (2) Unity, Model AG-S-P46SLC, LED light installed at the rear of the apparatus, one each side.

Individual switches shall be provided on each light for on/off.

WALKING SURFACE LIGHTS

There shall be One (1) Amdor®, Model AY-LB-12HW0**, white 12 volt DC LED strip light(s) provided in the cargo area to illuminate the interior surface of the cargo area. Light(s) shall be located on the front sheet of the body above the cargo area.

The light shall be activated when the body step lights are on.

SWITCH, MASTER FOR REAR DECK LIGHTS

A master switch shall be provided DS Switch Panel for the rear deck lights.

	Bidder Complies	
	Yes	No

WATER TANK

Booster tank shall have a capacity of 1000 gallons and be constructed of polypropylene plastic by United Plastic Fabricating, Incorporated.

Tank joints and seams shall be nitrogen welded inside and out.

Tank shall be baffled in accordance with NFPA Bulletin 1901 requirements.

Baffles shall have vent openings at both the top and bottom to permit movement of air and water between compartments.

Longitudinal partitions shall be constructed of .38" polypropylene plastic and shall extend from the bottom of the tank through the top cover to allow for positive welding.

Transverse partitions shall extend from 4.00" off the bottom of the tank to the underside of the top cover.

All partitions shall interlock and shall be welded to the tank bottom and sides.

Tank top shall be constructed of .50" polypropylene. It shall be recessed .38" and shall be welded to the tank sides and the longitudinal partitions.

Tank top shall be sufficiently supported to keep it rigid during fast filling conditions.

Construction shall include 2.00" polypropylene dowels spaced no more than 30.00" apart and welded to the transverse partitions. Two (2) of the dowels shall be drilled and tapped (.50" diameter, 13.00" deep) to accommodate lifting eyes.

A sump that will be sized dependent on the tank to pump plumbing shall be provided at the bottom of the water tank.

Sump shall include a drain plug and the tank outlet.

Tank shall be installed in a fabricated cradle assembly constructed of structural steel.

Sufficient crossmembers shall be provided to properly support bottom of tank. Crossmembers shall be constructed of steel bar channel or rectangular tubing.

Tank shall "float" in cradle to avoid torsional stress caused by chassis frame flexing. Rubber cushions, .50" thick x 3.00" wide, shall be placed on all horizontal surfaces that the tank rests on.

Stops or other provision shall be provided to prevent an empty tank from bouncing excessively while moving vehicle.

Mounting system shall be approved by the tank manufacturer.

	Bidder Complies Yes	Bidder Complies No
Fill tower shall be constructed of .50" polypropylene and shall be a minimum of 8.00" wide x 14.00" long. Fill tower shall be furnished with a .25" thick polypropylene screen and a hinged cover. An overflow pipe, constructed of 4.00" schedule 40 polypropylene, shall be installed approximately halfway down the fill tower and extend through the water tank and exit to the rear of the rear axle. **POLY TANK NOTCH** A notch shall be provided at the front of the poly water tank. The notch shall be large enough for hose, hydraulic lines, or electrical wiring at the front of the hose bed. **HOSE BED** The hose bed shall be fabricated of .125"-5052 aluminum with a nominal 38,000 psi tensile strength. Upper and rear edges of side panels shall have a double break for rigidity, a split tube finish shall not be acceptable. The upper inside area of the beavertails shall be covered with brushed stainless steel to prevent damage to painted surface when hose is removed. Flooring of the hose bed shall be removable aluminum grating with the top surface corrugated to aid in hose aeration. The grating slats shall be a minimum of 0.50" x 4.50" with spacing between slats for hose ventilation. The inside of the hose bed shall be painted . The inside of the cargo area shall be painted . Hose bed shall accommodate 250' of 2.5", 500' of 5", 500' of 5", 250' of 5". **HOSE BED DIVIDER** Three (3) adjustable hosebed dividers shall be furnished for separating hose. Each divider shall be constructed of a .25" brushed aluminum sheet. Flat surfaces shall be sanded for uniform appearance, or constructed of brushed aluminum. Divider shall be fully adjustable by sliding in tracks, located at the front and rear of the hose bed. Divider shall be held in place by tightening bolts, at each end. Acorn nuts shall be installed on all bolts in the hose bed which have exposed threads. **HOSE BED HOSE RESTRAINT** The hose in the hose bed shall be restrained by a black nylon Velcro® strap at the top of the hose bed. At the rear of the hose bed, 2.00" black nylon webbing with a 1.50" x 4.00" box pattern shall attach at the top rear outside corners with 2.00" cam buckle fasteners. The webbing shall have straps connected with seat belt buckle fasteners located at the rear body sheet below the hose bed.		

	Bidder Complies Yes	No

A cross-divider shall be provided just behind the fill tower. The divider shall be bolted to the side sheets. A reinforced aluminum treadplate floor shall be provided between the front of the hose bed and the cross-divider. Cross structure shall be provided below the hose bed floor.

COVER, ALUM 4-WAY, CAFS COMPRESSOR, HOSEBED

A bright aluminum treadplate cover shall be provided in the hosebed over the CAFS compressor.

The cover shall be provided with adequate ventilation (louvers or knock outs as required for the specific compressor) and have a hinged lift up access door, with pneumatic springs, for maintenance.

RUNNING BOARDS

Running boards shall be fabricated of .125" bright aluminum treadplate.

Each running board shall be supported by a welded 2.00" square tubing and channel assembly, which shall be bolted to the pump compartment substructure.

Running boards shall be 12.75" deep and spaced .50" away from the pump panel.

A splash guard shall be provided above the running board treadplate.

TAILBOARD

The tailboard shall also be constructed of .125" bright aluminum treadplate and spaced .50" from the body, as well as supported by a structural steel assembly.

The tailboard area shall be 24.00" deep in the center area and 8.00" deep to the rear of the side compartments. The tailboard shall be T-shaped.

The exterior side shall be flanged down and in for increased rigidity of tailboard structure.

REAR WALL, SMOOTH ALUMINUM/BODY MATERIAL, TREADPLATE CENTER

The rear facing surfaces of the center rear wall shall be aluminum treadplate.

The rear facing surfaces of the bulkheads, the surface to the rear of the side body compartments, shall be smooth and the same material as the body.

Any inboard facing surfaces below the height of the hosebed shall be aluminum diamondplate.

TOW BAR

A tow bar shall be installed under the tailboard at center of truck.

Tow bar shall be fabricated of 1.00" CRS bar rolled into a 3.00" radius.

Tow bar assembly shall be constructed of .38" structural angle. When force is applied to the bar, it shall be transmitted to the frame rail.

	Bidder Complies Yes	Bidder Complies No

Tow bar assembly shall be designed and positioned to allow up to a 30-degree upward angled pull of 17,000 lb, or a 20,000 lb straight horizontal pull in line with the centerline of the vehicle.

Tow bar design shall have been fully tested and evaluated using strain gauge testing and finite element analysis techniques.

COMPARTMENTATION

Body and compartments shall be fabricated of .125", 5052-H32 aluminum.

Side compartments shall be an integral assembly with the rear fenders.

Circular fender liners shall be provided for prevention of rust pockets and ease of maintenance.

Side compartment flooring shall be of the sweep out design with the floor higher than the compartment door lip.

The side compartment door opening shall be framed by flanging the edges in 1.75" and bending out again .75" to form an angle.

Drip protection shall be provided above the doors by means of bright aluminum extrusion, formed bright aluminum treadplate or polished stainless steel.

The top of the compartment shall be covered with bright aluminum treadplate rolled over the edges on the front, rear and outward side. These covers shall have the corners welded.

Side compartment covers shall be separate from the compartment tops.

Front facing compartment walls shall be covered with bright aluminum treadplate.

All screws and bolts which protrude into a compartment shall have acorn nuts on the ends to prevent injury.

UNDERBODY SUPPORT SYSTEM

Due to the severe loading requirements of this pumper a method of body and compartment support suitable for the intended load shall be provided.

The backbone of the support system shall be the chassis frame rails which is the strongest component of the chassis and is designed for sustaining maximum loads.

The support system shall include .375" thick steel vertical angle supports bolted to the chassis frame rails with .625" diameter bolts.

Attached to the bottom of the steel vertical angles shall be horizontal angles, with gussets welded to the vertical members, which extend to the outside edge of the body.

	Bidder Complies Yes	Bidder Complies No
A steel frame shall be mounted on the top of these supports to create a floating substructure which shall result in a 500 lb equipment support rating per lower compartment. The floating substructure shall be separated from the horizontal members with neoprene elastomer isolators. These isolators shall reduce the natural flex stress of the chassis from being transmitted to the body. Isolators shall have a broad load range, proven viability in vehicular applications, be of a fail safe design and allow for all necessary movement in three (3) transitional and rotational modes. The neoprene isolators shall be installed in a modified V three (3)-point mounting pattern to reduce the natural flex of the chassis being transmitted to the body. A design with body compartments hanging on the chassis in an unsupported fashion shall not be acceptable. **AGGRESSIVE WALKING SURFACE** All exterior surfaces designated as stepping, standing, and walking areas shall comply with the required average slip resistance of the current NFPA standards. **LOUVERS** Louvers shall be stamped into compartment walls to provide the proper airflow inside the body compartments and to prevent water from dripping into the compartment. Where these louvers are provided, they shall be formed into the metal and not added to the compartment as a separate plate. **TESTING OF BODY DESIGN** Body structural analysis shall be fully tested. Proven engineering and test techniques such as finite element analysis, stress coating and strain gauging shall be performed with special attention given to fatigue, life and structural integrity of the cab, body and substructure. Body shall be tested while loaded to its greatest in-service weight. The criteria used during the testing procedure shall include: • Raising opposite corners of the vehicle tires 9.00" to simulate the twisting a truck may experience when driving over a curb. • Making a 90 degree turn, while driving at 20 mph to simulate aggressive driving conditions. • Driving the vehicle at 35 mph on a washboard road. • Driving the vehicle at 55 mph on a smooth road. • Accelerating the vehicle fully, until reaching the approximate speed of 45 mph on rough pavement. Evidence of actual testing techniques shall be made available upon request.		

	Bidder Complies	
	Yes	No

LEFT SIDE COMPARTMENTATION

A full height, roll-up door compartment ahead of the rear wheels shall be provided. The interior dimensions of this compartment shall be 34.50" wide x 58.25" high x 25.88" deep in the lower 26.00" of the compartment and 12.00" deep in the remaining upper portion. The height of the compartment shall be measured from the compartment floor to the bottom edge of the door roll. The depth of the compartment shall be calculated with the compartment door closed. The compartment interior shall be fully open from the compartment ceiling to the compartment floor and designed so that no permanent dividers are required between the upper and lower sections. The clear door opening of this compartment shall be 28.75" wide x 58.25" high.

Closing of the door shall not require releasing, unlocking, or unlatching any mechanism and shall easily be accomplished with one hand.

A roll-up door compartment over the rear wheels shall be provided. The interior dimensions of this compartment shall be 66.50" wide x 25.38" high x 12.00" deep. The height of the compartment shall be measured from the compartment floor to the bottom edge of the door roll. The depth of the compartment shall be calculated with the compartment door closed. The clear door opening of this compartment shall be 58.25" wide x 25.12" high.

Closing of the door shall not require releasing, unlocking, or unlatching any mechanism and shall easily be accomplished with one hand.

A full height, roll-up door compartment behind the rear wheels shall be provided. The interior dimensions of this compartment shall be 47.50" wide x 66.13" high x 25.75" deep in the lower 58.25" of the compartment and 15.63" deep in the remaining upper portion. The depth of the compartment shall be calculated with the compartment door closed.

The compartment interior shall be fully open from the compartment ceiling to the compartment floor and designed so that no permanent dividers are required between the upper and lower sections. The clear door opening of this compartment shall be 44.75" wide x 58.25" high.

Closing of the door shall not require releasing, unlocking, or unlatching any mechanism and shall easily be accomplished with one hand.

RIGHT SIDE COMPARTMENTATION

The right side compartmentation shall consist of three rollup door compartments.

A full height, rollup door compartment ahead of the rear wheels shall be provided. The interior dimensions of this compartment shall be 34.50" wide x 66.63" high x 25.88" deep in the lower 25.00" of the compartment and 12.00" deep in the remaining upper portion. The clear door opening shall be a minimum of 28.75" wide x 56.88" high.

	Bidder Complies	
	Yes	No

A rollup door compartment over the rear wheels shall be provided. The interior dimensions of this compartment shall be 66.50" wide x 32.88" high x 12.00" deep. The clear door opening shall be a minimum of 58.25" wide x 23.13" high.

A full height, rollup door compartment behind the rear wheels shall be provided. The interior dimensions of this compartment shall be 47.75" wide x 67.63" high x 25.88" deep in the lower 26.00" of height and 12.00" deep in the remaining upper section of the compartment. The clear door opening shall be a minimum of 44.75" wide x 57.88" high.

The interior height of the compartments shall be measured from the compartment floor to the ceiling. The spool of the rollup door at the top of the compartment takes up some usable space. The depth of the compartments shall be measured from the back wall to the inside of the door frame.

Closing of the door shall not require releasing, unlocking, or unlatching any mechanism and shall easily be accomplished with one hand.

SIDE COMPARTMENT ROLLUP DOOR(S)

There shall be six (6) compartment doors installed on the side compartments. The doors shall be double faced aluminum construction, painted one (1) color to match the lower portion of the body and manufactured by Gortite®.

Lath sections shall be an interlocking rib design and shall be individually replaceable without complete disassembly of door.

Between each slat at the pivoting joint shall be a PVC inner seal to prevent metal to metal contact and prevent dirt or moisture from entering the compartments. Seals shall allow door to operate in extreme temperatures ranging from 180 to -40 degrees Fahrenheit. Side, top and bottom seals shall be provided to resist ingress of dirt and weather and be made of Santoprene.

All hinges, barrel clips and end pieces shall be nylon 66. All nylon components shall withstand temperatures from 300 to -40 degrees Fahrenheit. Hardened plastic shall not be acceptable.

A polished stainless steel lift bar to be provided for each roll-up door. Lift bar shall be located at the bottom of door and have latches on the outer extrusion of the doors frame. A ledge shall be supplied over lift bar for additional area to aid in closing the door.

Doors shall be constructed from an aluminum box section. The exterior surface of each slat shall be flat. The interior surfaces shall be concave to provide strength and prevent loose equipment from jamming the door from inside.

To conserve space in the compartments, the spring roller assembly shall not exceed 3.00" in diameter. A garage style roll door shall not be acceptable.

	Bidder Complies	
	Yes	No

The header for the rollup door assembly shall not exceed 4.00".

A heavy-duty magnetic switch shall be used for control of open compartment door warning lights.

REAR COMPARTMENTATION

A roll-up door compartment above the rear tailboard shall be provided**.**

The interior dimensions of this compartment shall be 40.00" wide x 54.13" high x 25.88" deep. The spool of the rollup door at the top of the compartment takes up some usable space. The depth of the compartment shall be calculated with the compartment door closed.

A louvered, removable access panel shall be furnished on the back wall of the compartment.

The rear compartment shall be open into the rear side compartments.

The clear door opening of this compartment shall be a minimum of 33.25" wide x 44.38" high.

Closing of the door shall not require releasing, unlocking, or unlatching any mechanism and shall easily be accomplished with one hand.

ROLLUP REAR COMPARTMENT DOOR

There shall be a rear rollup door. The door shall be double faced aluminum construction, an anodized satin finish and manufactured by Gortite®.

Lath sections shall be an interlocking rib design and shall be individually replaceable without complete disassembly of door.

Between each slat at the pivoting joint shall be a PVC inner seal to prevent metal to metal contact and prevent dirt or moisture from entering the compartments. Seals shall allow door to operate in extreme temperatures ranging from 180 to -40 degrees Fahrenheit. Side, top and bottom seals shall be provided to resist ingress of dirt and weather and be made of Santoprene.

All hinges, barrel clips and end pieces shall be nylon 66. All nylon components shall withstand temperatures from 300 to -40 degrees Fahrenheit. Hardened plastic shall not be acceptable.

A polished stainless steel lift bar to be provided for each roll-up door. Lift bar shall be located at the bottom of door and have latches on the outer extrusion of the doors frame. A ledge shall be supplied over lift bar for additional area to aid in closing the door.

Door shall be constructed from an aluminum box section. The exterior surface of each slat shall be flat. The interior surface shall be concave to provide strength and prevent loose equipment from jamming the door from inside.

	Bidder Complies	
	Yes	No

To conserve space in the compartments, the spring roller assembly shall not exceed 3.00" in diameter. A garage style roll door shall not be acceptable.

The header for the rollup door assembly shall not exceed 4.00".

A heavy-duty magnetic switch shall be used for control of open compartment door warning lights.

DOOR GUARD

There shall be seven (7) compartment doors that shall include a guard/drip pan designed to protect the rollup door from damage when in the retracted position and contain any water spray. The guard shall be fabricated from stainless steel and installed left side rearward compartment, left side over the wheel compartment, left side forward compartment, right side rearward compartment, right side over the wheel compartment, right side forward compartment and rear compartment.

COMPARTMENT LIGHTING

There shall be seven (7) compartments with Amdor, Model AY-9220, white 12 volt DC LED compartment light strips. The lights shall be mounted with mechanical fasteners.

There shall be two (2) strip lights installed vertically in each compartment opening per the latest NFPA requirements.

The lights shall be activated when the battery switch is on and the respective compartment door is opened.

ADDITIONAL COMPARTMENT LIGHT

A total of one (1) additional Whelen, Model 20COCDCR, 4.00" surface mount LED lights with chrome housing shall be provided.

The lights shall be located in ladder storage.

The light shall be controlled by the automatic door switch.

MOUNTING TRACKS

There shall be six (6) sets of tracks for mounting shelf(s) in LS1, LS3, RS1, RS2, RS3 and B1. These tracks shall be installed vertically to support the adjustable shelf(s), and shall be full height of the compartment. The tracks shall be painted to match the compartment interior.

ADJUSTABLE SHELVES

There shall be nine (9) shelves with a capacity of 500 lb provided.

The shelf construction shall consist of .188" aluminum painted spatter gray with 2.00" sides.

Each shelf shall be infinitely adjustable by means of a threaded fastener, which slides in a track.

	Bidder Complies	
	Yes	No

The shelves shall be held in place by .12" thick stamped plated brackets and bolts.

The location(s) shall be in RS1 at the transition point, in RS2 centered between the floor and the ceiling, in LS3 in the upper third, in LS1 in the upper third, in LS1 in the upper third to the left of the partition, in LS1 in the upper third to the left of the partition and in LS3 at the depth transition point.

FLOOR MOUNT TRAY SLIDES ONLY

There shall be one (1) set of slides provided for a floor mounted slide-out tray provided and installedD3.

The slide set shall be two undermount-roller bearing type slides rated at 250lb each. The pair of slides shall have a safety factor rating of 2.

To ensure years of dependable service, the slides shall be coated with a finish that is tested to withstand a minimum of 1,000 hours of salt spray per ASTM B117.

To ensure years of easy operation, the slides shall require no more than a 50lb force for push-in or pull-out movement when fully loaded after having been subjected to a 40 hour vibration (shaker) test under full load. The vibration drive file shall have been generated from accelerometer data collected from a heavy truck chassis driven over rough gravel roads in an unloaded condition. Proof of compliance shall be provided upon request.

Automatic locks shall be provided for both the "in" and "out" positions. The trip mechanism for the locks shall be located at the front of the tray for ease of use with a gloved hand.

SLIDE-OUT FLOOR MOUNTED TRAY

There shall be three (3) floor mounted slide-out tray(s) provided.

Each tray shall have 2.00" high sides and a minimum capacity rating of 500 lb in the extended position.

Each tray shall be constructed of aluminum painted spatter gray

There shall be two undermount-roller bearing type slides rated at 250lb each provided. The pair of slides shall have a safety factor rating of 2.

To ensure years of dependable service, the slides shall be coated with a finish that is tested to withstand a minimum of 1,000 hours of salt spray per ASTM B117.

To ensure years of easy operation, the slides shall require no more than a 50lb force for push-in or pull-out movement when fully loaded after having been subjected to a 40 hour vibration (shaker) test under full load. The vibration drive file shall have been generated from accelerometer data collected from a heavy truck chassis driven over rough gravel roads in an unloaded condition. Proof of compliance shall be provided upon request.

	Bidder Complies Yes	Bidder Complies No

Automatic locks shall be provided for both the "in" and "out" positions. The trip mechanism for the locks shall be located at the front of the tray for ease of use with a gloved hand.

The location(s) shall be RS1, B1 and LS3.

SLIDE-OUT TOOLBOARD

There shall be one (1) slide-out toolboard(s) provided.

The toolboard shall be a minimum of 0.188" thick with .281" diameter holes in a pegboard pattern with 1.00" centers between holes.

A 1.00" x 1.00" aluminum tube frame shall be welded to the edge of the pegboard.

The board shall be mounted on an under-mount roller bearing type slide rated at 250 lb with a factor of safety of 2.

To ensure years of dependable service the slides shall be coated with a finish that is tested to withstand a minimum of 1,000 hours of salt spray per ASTM B117.

To ensure years of easy operation, the slides shall require no more than a 50 pound force for push-in or pull-out movement when fully loaded after having been subjected to a 40 hour vibration (shaker) test under full load. The vibration drive file shall have been generated from accelerometer data collected from a heavy truck chassis driven over rough gravel roads in an unloaded condition. Proof of compliance shall be provided upon request.

The slide shall be mounted on adjustable tracks side to side within the compartment.

The board shall have positive lock in the stowed and extended position.

The toolboard(s) shall be spatter gray painted and installed in LS1, 30.00" from the forward door frame.

SWING OUT TOOLBOARD

A swing out aluminum toolboard shall be provided.

It shall be a minimum of .188" thick with .281" diameter holes in a pegboard pattern with 1.00" centers between holes.

A 1.00" x 1.00" aluminum tube frame shall be welded to the edge of the pegboard.

The board shall be mounted on a pivoting device at the front of the compartment on the top and bottom to allow easy movement in and out of the compartment. The maximum tool load shall be 400 pounds.

The board shall have positive lock in the stowed and extended position.

The board shall be mounted on adjustable tracks from front to back within the compartment.

	Bidder Complies	
	Yes	No

There shall be One (1) toolboard(s) provided. The toolboard(s) shall be spatter gray painted and installed LS2.

MATTING, COMPARTMENT FLOOR

Turtle Tile compartment matting shall be provided in three (3) compartments on the compartment floor. The locations are, LS1 forward of partition, RS2, and RS3.

The Turtle Tile shall be black and the leading edge of the matting shall include the beveled edge. The beveled edge shall be black .

MATTING, COMPARTMENT SHELVING

Turtle Tile compartment matting shall be provided in 12 shelves. The locations are, each shelf and slide out tray.

The color of Turtle Tile shall be black.

PARTITION, TRANSVERSE REAR COMPARTMENT

Two (2) partitions shall be bolted in place to separate left and right side rear compartments from the rear tailboard compartment.

VERTICAL COMPARTMENT PARTITION

One (1) partition shall be provided.

The partition construction shall consist of body material painted spatter gray. Each partition shall be the full vertical height of the compartment.

The location(s) shall be in LS1, 12.00" from the forward door frame.

RUB RAIL

Bottom edge of the side compartments shall be trimmed with a bright aluminum extruded rub rail.

Trim shall be 2.12" high with 1.38" flanges turned outward for rigidity.

The rub rails shall not be an integral part of the body construction, which allows replacement in the event of damage.

BODY FENDER CROWNS

Polished stainless steel fender crowns shall be provided around the rear wheel openings with a dielectric barrier shall be provided between the fender crown and the fender sheet metal to prevent corrosion.

The fender crowns shall be held in place with stainless steel screws that thread directly into a composite nut and not directly into the parent body sheet metal to eliminate dissimilar metals contact and greatly reduce the chance for corrosion. Rubber welting shall be provided between the body and crown.

	Bidder Complies	
	Yes	No

BODY FENDER LINER

A painted fender liner shall be provided. The liners shall be removable to aid in the maintenance of rear suspension components.

HARD SUCTION HOSE

Two (2) lengths of 6.00" clear corrugated PVC hard suction hose, 10' in length, shall be provided. The hose shall be equipped with a long handle female coupling on one (1) end and a rocker lug male coupling on the other end. Couplings shall be hard coated aluminum.

HOSE TROUGHS

Hard suction hose shall be carried in two (2) V-shaped troughs, one (1) each side, and held in place by chrome plated, quarter turn, spring loaded clamps.

Troughs shall be constructed of aluminum and painted job color.

HANDRAILS

The handrails shall be 1.25" diameter anodized aluminum extrusion, with a ribbed design, to provide a positive gripping surface.

Chrome plated end stanchions shall support the handrail. Plastic gaskets shall be used between end stanchions and any painted surfaces.

Drain holes shall be provided in the bottom of all vertically mounted handrails.

Handrails shall be provided to meet NFPA 1901 section 15.8 requirements. The handrails shall be installed as noted on the sales drawing.

HANDRAILS

One (1) vertical handrail shall be located on each rear beavertail.

HANDRAIL

One (1) full width horizontal handrail shall be provided below the hose bed at the rear of the apparatus.

ADDITIONAL HANDRAIL

Two (2) handrails, 10.00" long, shall be mounted one each side of the pump house near the crosslays to aid in access to the crosslays.

EXTINGUISHER/AIR BOTTLE/ STORAGE (TRIANGULAR)

A total of one (1) extinguisher/air bottle/storage compartments shall be provided RS rearward of rear wheels. The triangular shaped compartment shall be sized to fit a 8.00" diameter extinguisher in the lower area and a 8.00" diameter extinguisher in the upper area. The compartment shall be approximately 25.50" deep. A partition shall be provided to separate the compartment. Also inside the compartment, black rubber matting shall be provided. The compartment shall be furnished with a drain hole. A polished

	Bidder Complies	
	Yes	No

stainless steel, triangular shaped door with a chrome plated flush lift & turn latch shall be provided to contain the air bottles. A dielectric barrier shall be provided between the door hinge, hinge fasteners and the body sheet metal.

AIR BOTTLE COMPARTMENT STRAP

A strap shall be provided in the air bottle compartment(s) to help contain the bottles when the vehicle is parked on an incline. The strap shall wrap around the neck and attach to the wall of the compartment.

AIR BOTTLE STORAGE (TRIPLE)

A quantity of two (2) air bottle compartments designed to hold (3) air bottles up to 7.25" in diameter x 26.00" deep shall be provided on the left side forward of the rear wheels and on the right side forward of the rear wheels. A polished stainless steel door with a chrome plated flush lift & turn latch shall be provided to contain the air bottle. A dielectric barrier shall be provided between the door hinge, hinge fasteners and the body sheet metal.

Inside the compartment, black rubber matting shall be provided.

AIR BOTTLE COMPARTMENT STRAP

A strap shall be provided in the air bottle compartment(s) to help contain the air bottles when the vehicle is parked on an incline. The strap shall wrap around the neck and attach to the wall of the compartment.

EXTENSION LADDER

There shall be a 24', two (2) section, Alco-Lite, Series PEL-24 extension ladder provided.

ROOF LADDER

There shall be a 14' aluminum, Alco-Lite, Series PRL-14 roof ladder provided.

LADDER STORAGE

The ladders shall be stored between the water tank and the right side compartments.

The ladders shall extend into the pump compartment just to the rear of the water pump discharges.

The ladder storage area shall be enclosed as practical by means of sheet metal to protect the ladders from road dirt. The ladders that extend into the pump house shall also be enclosed. A black rubber boot shall be provided to enclose the ladders in the gap between the pump house and the body.

Each ladder shall be stored vertically in a separate stainless steel storage trough. Each stainless steel trough shall be lined with Dura-Surf nylon slides.

An aluminum enclosure shall be provided at the rear of the body to properly contain the ladders. This enclosure shall extend to the rear of the side body compartments.

	Bidder Complies	
	Yes	No

The enclosure shall also include a vertically hinged smooth aluminum door with a D-handle latch to access the ladders. The door shall be hinged on the left side.

FOLDING LADDER

One (1) 10' aluminum Alco-Lite, Series FL-10 folding ladder shall be installed in a U-shaped trough inside the ladder storage compartment .

PIKE POLE STORAGE

Aluminum tubing shall be used for the storage of two (2) pike poles and shall be located in ladder storage compartment. If the head of a pike pole can come in contact with a painted surface, a stainless steel scuffplate shall be provided.

STEPS

A folding step shall be provided on the front of each fender compartment. The step shall be bright finished, non-skid with a luminescent coating that is rechargeable from any light source and can hold a charge for up to 24 hours. Each step shall incorporate an LED light to illuminate the stepping surface. The step can be used as a hand hold with two openings wide enough for a gloved hand.

REAR FOLDING STEPS

Bright finished, non-skid folding steps with a luminescent coating that is rechargeable from any light source and can hold a charge for up to 24 hours shall be provided at the rear. Each step shall incorporate an LED light to illuminate the stepping surface. The steps can be used as a hand hold with two openings wide enough for a gloved hand.

SLIDE-OUT/FOLD-OUT PLATFORM

Two (2) slideout platforms shall be provided on the left and right side. The platform shall have a pull out, flip down design. The front edge and top surface of the platform shall be made of DA finished aluminum. There shall be a aluminum treadplate insert provided on the stepping surface.

The platform shall be approximately 13.75" deep when in the stowed position and approximately 21.75" deep when extended. The capacity rating shall be 500 lb in the extended position. The platform shall be for a 48.00" wide pump house providing a 41.00" wide step assembly with a 40.38" wide stepping surface. The platform shall lock in the retracted and extended position.

There shall be an Amdor Model AY-LB-12HW0** white 12 volt DC LED light provided to illuminate the ground area.

	Bidder Complies Yes	Bidder Complies No

PUMP

Pump shall be a Waterous CSU, 1500 gpm single (1) stage midship mounted centrifugal type.

Pump shall be the class "A" type.

Pump shall deliver the percentage of rated discharge at pressures indicated below:

- 100% of rated capacity at 150 psi net pump pressure.

-70% of rated capacity at 200 psi net pump pressure.

-50% of rated capacity at 250 psi net pump pressure.

Pump body shall be close-grained gray iron, bronze fitted, and horizontally split in two (2) sections for easy removal of the entire impeller shaft assembly (including wear rings).

Pump shall be designed for complete servicing from the bottom of the truck, without disturbing the pump setting or apparatus piping.

Pump case halves shall be bolted together on a single horizontal face to minimize chance of leakage and facilitate ease of reassembly. No end flanges shall be used.

Discharge manifold of the pump shall be cast as an integral part of the pump body assembly and shall provide a minimum of three (3) 3.50" openings for flexibility in providing various discharge outlets for maximum efficiency.

The three (3) 3.50" openings shall be located as follows: one (1) outlet to the right of the pump, one (1) outlet to the left of the pump, and one (1) outlet directly on top of the discharge manifold.

Impeller shaft shall be stainless steel, accurately ground to size. It shall be supported at each end by sealed, anti-friction ball bearings for rigid precise support. Impeller shall have flame plated hubs assuring maximum pump life and efficiency despite any presence of abrasive matter in the water supply.

Bearings shall be protected from water and sediment by suitable stuffing boxes, flinger rings, and oil seals. No special or sleeve type bearings shall be used.

PUMP PACKING

Stuffing boxes shall be of the conventional two (2) piece, split-gland type, to permit adjustment or replacement of Grafoil packing without disturbing the pump. Water shall be fed into stuffing box lantern rings for proper lubrication and cooling when the pump is operating.

Lantern rings shall be located at the inner ends of the stuffing boxes, to avoid having to remove them when replacing pump packing.

	Bidder Complies	
	Yes	No

Wear rings shall be bronze and easily replaceable to restore original pump efficiency and eliminate the need to replace the entire pump casing due to wear.

PUMP TRANSMISSION

The pump transmission shall be made of a three (3) piece, aluminum, horizontally split casing. Power transfer to pump shall be through a high strength Morse HY-VO silent drive chain. By the use of a chain rather than gears, 50% of the sprocket shall be accepting or transmitting torque, compared to two (2) or three (3) teeth doing all the work.

Drive shafts shall be 2.35" diameter hardened and ground alloy steel and supported by ball bearings. The case shall be designed to eliminate the need for water cooling.

PUMPING MODE

An interlock system shall be provided to ensure that the pump drive system components are properly engaged so that the apparatus can be safely operated. The interlock system shall be designed to allow stationary pumping only.

AIR PUMP SHIFT

Pump shift engagement shall be made by a two (2) position sliding collar, actuated pneumatically (by air pressure), with a three (3) position air control switch located to the left side of the steering column in the lower cab instrument panel. A manual back-up shift control shall also be located on the left side pump panel.

Two (2) indicator lights shall be provided adjacent to the pump shift inside the cab. One (1) green light shall indicate the pump shift has been completed and be labeled "pump engaged". The second green light shall indicate when the pump has been engaged, and that the chassis transmission is in pump gear. This indicator light shall be labeled "OK to pump".

The pump shift shall be interlocked to prevent the pump from being shifted out of gear when the chassis transmission is in gear to meet NFPA requirements.

The pump shift control in the cab shall be illuminated to meet NFPA requirements.

TRANSMISSION LOCK-UP

The direct gear transmission lock-up for the fire pump operation shall engage automatically when the pump shift control in the cab is activated.

AUXILIARY COOLING SYSTEM

A supplementary heat exchange cooling system shall be provided to allow the use of water from the discharge side of the pump for cooling the engine water. Heat exchanger shall be cylindrical type and shall be a separate unit. It shall be installed in the pump or engine compartment with the control located on the pump operator's control panel. Exchanger shall be plumbed to the master drain valve.

	Bidder Complies	
	Yes	No

INTAKE RELIEF VALVE - PUMP

An Akron Style 53 relief valve shall be installed on the suction side of the pump preset at 125 psig.

The relief valve shall have a working range of 50 psi to 250 psi.

The outlet shall terminate below the frame rails with a 2.50" National Standard hose thread adapter and shall have a "do not cap" warning tag.

The relief valve pressure control shall be located behind behind the right side pump panel with a stainless steel access door .

PRESSURE GOVERNOR

This apparatus shall be equipped with a Class1 "Total Pressure Governor" engine/pump governor/throttle system that is connected directly to the Electronic Control Module (ECM) mounted on the engine. The "Total Pressure Governor" is to operate as a pressure sensor (regulating) governor (PSG).

A special preset feature shall permit a predetermined pressure of RPM to be set. The preset pressure or RPM will be displayed on the message display of the "Total Pressure Governor". The preset shall be easily adjustable by the operator

The pressure sensor governor system shall be operable only after the vehicle parking brake has been set, the transmission is the pumping mode, and the fire pump has been engaged.

The pressure sensor governor system shall have two (2) modes of operation: pressure mode or rpm mode.

When in the pressure mode, the PSG system shall automatically maintain the discharge pressure set by the operator regardless of flow (within engine/pump operating capabilities).

In the rpm mode, the PSG system shall automatically maintain a set engine speed, regardless of engine load (within engine operation capabilities).

A pump cavitation protection feature shall be provided which shall return the engine to idle should the pump cavitate.

The pressure controller shall incorporate monitoring for engine coolant temperature, oil pressure, and battery voltage.

PRIMING PUMP

The priming pump shall be a Trident Emergency Products compressed air powered, high efficiency, multistage venturi based AirPrime System, conforming to standards outlined in the current edition of NFPA 1901.

All wetted metallic parts of the priming system are to be of brass and stainless steel construction.

	Bidder Complies	
	Yes	No

One (1) priming control shall open the priming valve and start the pump primer.

PUMP MANUALS

There shall be a total of two (2) pump manuals provided by the pump manufacturer and furnished with the apparatus. The manuals shall be provided by the pump manufacturer in the form of two (2) electronic copies. Each manual shall cover pump operation, maintenance, and parts.

PLUMBING, STAINLESS STEEL AND HOSE

All inlet and outlet lines shall be plumbed with either stainless steel pipe, flexible polypropylene tubing or synthetic rubber hose reinforced with hi-tensile polyester braid. All hose's shall be equipped with brass or stainless steel couplings. All stainless steel hard plumbing shall be a minimum of a schedule 10 wall thickness.

Where vibration or chassis flexing may damage or loosen piping or where a coupling is required for servicing, the piping shall be equipped with victaulic or rubber couplings.

Plumbing manifold bodies shall be ductile cast iron or stainless steel.

All piping lines are to be drained through a master drain valve or shall be equipped with individual drain valves. All drain lines shall be extended with a hose to drain below the chassis frame.

All water carrying gauge lines shall be of flexible polypropylene tubing.

All piping, hose and fittings shall have a minimum of a 500 PSI hydrodynamic pressure rating.

FOAM SYSTEM PLUMBING

All piping that is in contact with the foam concentrate or foam/water solution shall be stainless steel. The fittings shall be stainless steel or brass. Cast iron pump manifolds will be allowed.

MAIN PUMP INLETS

A 6.00" pump manifold inlet shall be provided on each side of the vehicle. The suction inlets shall include removable die cast zinc screens that are designed to provide cathodic protection for the pump, thus reducing corrosion in the pump.

MAIN PUMP INLET CAP

The main pump inlets shall have National Standard Threads with a long handle chrome cap.

The cap shall incorporate a thread design to automatically relieve stored pressure in the line when disconnected (no exception).

SHORT SUCTION TUBE(S)

The suction tube(s) on the water pump shall have short suction tube(s) installed to allow for installation of adapters, elbows or intake valves without excessive overhang.

	Bidder Complies	
	Yes	No

VALVES

All ball valves shall be Akron® Brass in-line valves. The Akron valves shall be the 8000 series heavy-duty style with a stainless steel ball and a simple two-seat design. No lubrication or regular maintenance is required on the valve.

Valves shall have a **ten (10) year** warranty.

LEFT SIDE INLET

There shall be one (1) auxiliary inlet with a 2.50" valve at the left side pump panel, terminating with a 2.50" (F) National Standard hose thread adapter.

The auxiliary inlet shall be provided with a strainer, chrome swivel and plug.

RIGHT SIDE INLET

There shall be one (1) auxiliary inlet with a 2.50" valve at the right side pump panel, terminating with a 2.50" (F) National Standard hose thread adapter.

The auxiliary inlet shall be provided with a strainer, chrome swivel and plug.

The location of the valve for the two (2) inlets shall be recessed behind the pump panel.

INLET CONTROL

The side auxiliary inlet(s) shall incorporate a quarter-turn ball valve with the control located at the inlet valve. The valve operating mechanism shall indicate the position of the valve.

FRONT INLET

A 6.00" inlet front inlet with die cast zinc screens shall be provided using 5.00" welded black iron pipe and a 5.00" butterfly valve. Only radiused elbows shall be used in the piping, no mitered joints.

Drains are furnished in all the low points of piping and have .75" valves with push pull controls.

A bleeder valve shall be located at the threaded connection.

The front suction shall be located on the right side of the bumper extension.

FRONT INLET CONTROL

The front inlet shall be gated with the control located at the pump operator's panel. The valve operating mechanism shall indicate the position of the valve or an indicator shall be provided to show when the valve is closed.

There shall be an electric valve controller provided. The control shall be momentary to allow the valve to be gated for ease of operation. Indicator lights shall be provided to show if the valve is open or closed.

	Bidder Complies	
	Yes	No

FRONT INLET INTAKE RELIEF VALVE

An Akron Brass Style 53 intake pressure relief valve shall be provided on the inlet side of the valve preset at 125 psig .

The pressure relief valve shall be adjustable from 50 to 250 psi.

The outlet shall be 2.50" National Standard hose thread and terminate below the frame rails and shall have a "do not cap" warning tag near the discharge outlet.

FRONT INLET CAP

The front inlet shall have National Standard hose threads with a long handle cap.

The cap shall incorporate a thread design to automatically relieve stored pressure in the line when disconnected (no exception).

The cap shall be fabricated from brass material.

FRONT INLET

The front inlet shall have a 90 degree elbow facing forward and terminate with National Standard hose threads.

INLET BLEEDER VALVE

A 0.75" bleeder valve shall be provided for each side gated inlet. The valves shall be located behind the panel with a swing style handle control extended to the outside of the panel. The handles shall be chrome plated and provide a visual indication of valve position. The swing handle shall provide an ergonomic position for operating the valve without twisting the wrist and provides excellent leverage. The water discharged by the bleeders shall be routed below the chassis frame rails.

TANK TO PUMP

The booster tank shall be connected to the intake side of the pump with stainless steel piping and a quarter turn 3.00" full flow line valve with the control remotely located at the operator's panel. Tank to pump line shall run straight (no elbows) from the pump into the front face of the water tank and angle down into the tank sump. A rubber coupling shall be included in this line to prevent damage from vibration or chassis flexing.

A check valve shall be provided in the tank to pump supply line to prevent the possibility of "back filling" the water tank.

TANK REFILL

A 1.50" combination tank refill and pump re-circulation line shall be provided, using a quarter-turn full flow ball valve controlled from the pump operator's panel.

	Bidder Complies Yes	Bidder Complies No

LEFT SIDE DISCHARGE OUTLETS

There shall be Two (2) discharge outlets with a 2.50" valve on the left side of the apparatus, terminating with a 2.50" (M) National Standard hose thread adapter.

RIGHT SIDE DISCHARGE OUTLETS

There shall be One (1) discharge outlet with a 2.50" valve on the right side of the apparatus, terminating with a 2.50" (M) National Standard hose thread adapter.

There shall be One (1) discharge outlet with a 3.00" valve on the right side of the apparatus, terminating with a 3.00" (M) National Standard hose thread adapter.

The outlet shall be controlled by a handwheel control located at the pump operator's panel. An indicator shall be provided to show the position of the valve.

FRONT DISCHARGE OUTLET

There shall be one (1) 1.50" discharge outlet piped to the front of the apparatus and located on the top of the left side of the front bumper.

Plumbing shall consist of 2.00" piping and flexible hose with a 2.00" ball valve with control at the pump operator's panel. A fabricated weldment made of stainless steel pipe shall be used in the plumbing where appropriate. The piping shall terminate with a 1.50" NST with 90 degree stainless steel swivel.

There shall be automatic drains provided at all low points of the piping.

FRONT OF HOSE BED DISCHARGE OUTLET

There shall be Two (2) discharge outlets discharge(s) piped to the front of the hose bed and located (1) each side. Plumbing shall consist of 2.50" piping with a 2.50" full-flow ball valve controlled at the pump operator's panel. The discharge(s) shall terminate with a 2.50" (M) National Standard hose thread adapter.

DISCHARGE CAPS/ INLET PLUGS

Chrome plated, rocker lug, caps with chain shall be furnished for all discharge outlets 1.00" thru 3.00" in size, besides the pre-connected hose outlets.

Chrome plated, rocker lug, plugs with chain shall be furnished for all auxiliary inlets 1.00" thru 3.00" in size.

The caps and plugs shall incorporate a thread design to automatically relieve stored pressure in the line when disconnected (no exception).

OUTLET BLEEDER VALVE

A 0.75" bleeder valve shall be provided for each outlet 1.50" or larger. Automatic drain valves are acceptable with some outlets if deemed appropriate with the application.

	Bidder Complies	
	Yes	No

The valves shall be located behind the panel with a swing style handle control extended to the outside of the side pump panel. The handles shall be chrome plated and provide a visual indication of valve position. The swing handle shall provide an ergonomic position for operating the valve without twisting the wrist and provides excellent leverage. Bleeders shall be located at the bottom of the pump panel. They shall be properly labeled identifying the discharge they are plumbed in to. The water discharged by the bleeders shall be routed below the chassis frame rails.

LEFT SIDE OUTLET ELBOWS

The 2.50" discharge outlets located on the left side pump panel shall be furnished with a 2.50" (F) National Standard hose thread x 2.50" (M) National Standard hose thread, chrome plated, 45 degree elbow.

The elbow shall incorporate a thread design to automatically relieve stored pressure in the line when disconnected (no exception).

RIGHT SIDE OUTLET ELBOWS

The 2.50" discharge outlets located on the right side pump panel shall be furnished with a 2.50" (F) National Standard hose thread x 2.50" (M) National Standard hose thread, chrome plated, 45 degree elbow.

The elbow shall incorporate a thread design to automatically relieve stored pressure in the line when disconnected (no exception).

ADDITIONAL RIGHT SIDE OUTLET ELBOWS

The 3.00" outlet shall be furnished with a 30 degree, 3.00" (F) National Standard hose thread x 5.00" Storz elbow adapter with Storz cap.

REDUCER

There shall be five (5) adapters with 2.50" FNST x 1.50" MNST threads and a 1.50" chrome plated cap installed on (1) for each of the supplied 2.5" discharges.

DISCHARGE OUTLET CONTROLS

The discharge outlets shall incorporate a quarter-turn ball valve with the control located at the pump operator's panel. The valve operating mechanism shall indicate the position of the valve.

If a handwheel control valve is used, the control shall be a minimum of a 3.9" diameter stainless steel handwheel with a dial position indicator built in to the center of the handwheel.

Any 3.00 inch or larger discharge valve shall be a slow-operating valve in accordance with NFPA 16.7.5.3.

DELUGE RISER

A 3.00" deluge riser shall be installed above the pump in such a manner that a monitor can be mounted and used effectively. Piping shall be installed securely so no movement develops when the line is charged. The riser shall be gated and controlled at the pump operator's panel with a handwheel control.

	Bidder Complies	
	Yes	No

TELESCOPIC PIPING

The deluge riser piping shall include a 18.00" Task Force Model XG18 Extend-A-Gun extension.

This extension shall be telescopic to allow the deluge gun to be raised 18.00" increasing the range of operation.

A position sensor shall be provided on the telescopic piping that shall activate the "do not move vehicle" light inside the cab when the monitor is in the raised position.

The deluge riser shall have male National Pipe Threads for mounting the monitor.

CROSSLAY HOSE BEDS

Two (2) crosslays with 1.50" outlets shall be provided. Each bed to be capable of carrying 200' of 1.75" double jacketed hose and shall be plumbed with 2.00" i.d. pipe and gated with a 2.00" quarter turn ball valve.

Outlets to be equipped with a 1.50" National Standard hose thread 90 degree swivel located in the hose bed so that hose may be removed from either side of apparatus.

The crosslay controls shall be at the pump operator's panel.

The center crosslay dividers shall be fabricated of 0.25" aluminum and shall provide adjustment from side to side. The divider shall be unpainted with a brushed finish.

Vertical scuffplates,constructed of stainless steel shall be provided at the front and rear ends of the bed on each side of vehicle.

Crosslay bed flooring shall consist of removable perforated brushed aluminum.

CROSSLAY HOSE RESTRAINT

A 1.00" black nylon webbing design restraint shall be provided across the ends of two (2) crosslay(s) to secure the hose during travel. The webbing assembly is to be attached at the bottom of the crosslays with footman loops with a permanent attachment and is to loop through the upper footman loops at the top of the crosslays. The 1.00" web straps shall come down outboard and lock into a cam lock style buckle.

CROSSLAY 8.00" LOWER THAN STANDARD

The crosslays shall be lowered 8.00" from standard.

BOOSTER HOSE REEL

A Hannay electric rewind booster hose reel shall be installed over the pump in a recessed open compartment on the right side of the apparatus.

The exterior finish of the reel shall be painted job color matching the body exterior.

	Bidder Complies	
	Yes	No

A polished stainless steel roller and guide assembly shall be mounted on the reel side of the apparatus.

Discharge control shall be provided at the pump operator's panel. Plumbing to the reel shall consist of 1.50" Aeroquip hose and a 1.50" valve.

Reel motor shall be protected from overload with a circuit breaker rated to match the motor.

Two (2) electric rewind control switches shall be provided, one (1) installed on each pump panel.

Booster hose, 1.00" diameter and 150 feet, with chrome plated Barway, or equal couplings shall be provided.

Working pressure of the booster hose shall be a minimum of 800 psi.

Capacity of the hose reel shall be 150 feet of 1.00" booster hose.

There shall be two (2) additional polished stainless steel roller and guide assembly mounted (1) on the LS of the dunnage area and (1) on the edge of the hydraulic generator.

FOAM PROPORTIONER

A foam proportioning system shall be provided that is an on demand, automatic proportioning, single point, direct injection system suitable for all types of Class A and B foam concentrates, including the high viscosity (6000 cps), alcohol resistant Class B foams. Operation shall be based on direct measurement of water flow, and remain consistent within the specified flows and pressures. The system shall automatically balance and proportion foam solution at rates from .1 percent to 9.9 percent regardless of variations in water pressure and flow, up to the maximum rated capacity of the foam concentrate pump.

The design of the system shall allow operation from draft, hydrant, or relay operation. This shall provide a versatile system to meet the demands at a fire scene.

SYSTEM CAPACITY

The system shall have the ability to deliver the following minimum foam solution flow rates that meet or exceed NFPA requirements at a pump rating of 250 psi.

200 gpm @ 6 percent

400 gpm @ 3 percent

1200 gpm @ 1 percent

The foam concentrate setting may be adjusted in .1 percent increments from .1 percent to 9.9 percent. Typical settings are .3 percent, .5 percent and 1.0 percent (The maximum capacity shall be limited to the plumbing and water pump capacity).

	Bidder Complies	
	Yes	No

CONTROL SYSTEM

The system shall be equipped with a digital electronic control display located on the pump operator's panel. Push button controls shall be integrated into the panel to turn the system on/off, control the foam percentage, direct which foam to use on a multi-tank system, and to set the operation modes (automatic, manual, draft, calibration, or flush).

The percent of injection shall have presets for Class A and Class B foam. These presets can be changed at the fire department as desired. The percent of injection shall be able to be easily changed at the scene to adjust to changing demands.

In order to minimize the use of abbreviations and interpretations, system information shall be displayed on the panel by way of .50 tall LEDs that total 14 characters (two (2) lines of seven (7) each). System on and foam pump on indicator lights shall also be included. Information displayed shall include mode of operation (automatic, manual, draft, calibration, or flush), foam supply selected (Class A or Class B), water total, foam total, foam percentage, remaining gallons, and time remaining.

The control display shall direct a microprocessor, which receives input from the systems water flow meter while also monitoring the position of the foam concentrate pump. The microprocessor shall compare the values of the water flow versus the position/rate of the foam pump, to ensure the proportion rate is accurate. One (1) check valve shall be installed in the plumbing to prevent foam from contaminating the water pump.

LOW LEVEL, FOAM TANK

The control head shall display a warning message when the foam tank in use is below a quarter tank.

HYDRAULIC DRIVE SYSTEM

The foam concentrate pump shall be powered by a hydraulic drive system, which is automatically activated, whenever the vehicle water pump is engaged. A system that drives the foam pump via an electric motor shall not be acceptable. A large parasitic electric load used to power the foam pump can cause an overload of the chassis electrical system.

Hydraulic oil cooler shall be provided to automatically prevent overheating of the hydraulic oil, which is detrimental to system components. The oil/water cooler shall be designed to allow continuous system operation without allowing hydraulic oil temperature to exceed the oil specifications.

The hydraulic oil reservoir shall be of four (4) gallons minimum capacity and shall also be of sufficient size to minimize foaming and be located to facilitate checking oil level or adding oil without spillage or the need to remove access panels.

FOAM CONCENTRATE PUMP

The foam concentrate pump shall be of positive displacement, self-priming; linear actuated design, driven by the hydraulic motor. The pump shall be constructed of brass body; chrome plated stainless steel shaft,

	Bidder Complies	
	Yes	No

with a stainless steel piston. In order to increase longevity of the pump, no aluminum shall be present in its construction.

A relief system shall be provided which is designed to protect the drive system components and prevent over pressuring the foam concentrate pump

The foam concentrate pump shall have minimum capacity for 12 gpm with all types of foam concentrates with a viscosity at or below 6000 cps including protein, fluoroprotein, AFFF, FFFP, or AR-AFFF. The system shall deliver only the amount of foam concentrate flow required, without recirculating foam back to the storage tank. Recirculating foam concentrate back to the storage tank can cause agitation and premature foaming of the concentrate, which can result in system failure. The foam concentrate pump shall be self-priming and have the ability to draw foam concentrate from external supplies such as drums or pails.

EXTERNAL FOAM CONCENTRATE CONNECTION

An external foam pick-up shall be provided to enable use of a foam agent that is not stored on the vehicle. The external foam pick-up shall be designed to allow continued operation after the on-board foam tank is empty. The external foam pick-up shall be designed to allow use with training foam or colored water for training purposes.

PANEL MOUNTED STRAINER/EXTERNAL PICK-UP CONNECTION

A bronze body strainer/connector unit shall be provided. The unit shall be mounted to the pump panel. The external foam pick-up shall be one (1) 1.00" male connection with chrome-plated cap integrated to a 2.00" strainer cleanout cap. A check valve shall be installed in the pick-up portion of the cleanout cap. A basket style stainless steel screen shall be installed in the body of the strainer/connector unit. Removal of the 2.00" cleanout cap shall be all that is required to gain access to and remove the stainless steel basket screen. The strainer/connector unit shall be ahead of the foam concentrate pump inlet port to insure that all agent reaching the foam pump has been strained.

PICK-UP HOSE

A 1.00" flexible hose with an end for insertion into foam containers shall be provided. The hose shall be supplied with a 1.00" female swivel NST thread swivel connector. The hose shall be shipped loose.

DISCHARGES

The foam system shall be plumbed to five (5) discharges. The discharges capable of dispensing foam shall be (2) crosslays, LS front hosebed discharge, booster reel, and front bumper discharge.

SYSTEM ELECTRICAL LOAD

The foam proportioning shall not impose an electrical load on the vehicle electrical system any greater than five (5) amps at 12VDC.

	Bidder Complies	
	Yes	No

FOAM SUPPLY VALVE

Electric valves shall be used for the foam supply. The foam supply valves shall be controlled at the foam system control head for ease of operation. The supply valves shall be electric, remote controlled, to eliminate air pockets in the foam tank supply hose.

MAINTENANCE MESSAGE

A message shall be displayed on the control head to advise when system maintenance needs to be performed. The message shall display interval for cleaning the foam strainer, cleaning for the water strainers, and changing the hydraulic oil.

FLUSH SYSTEM

The system shall be designed such that a flush mode shall be provided to allow the system to flush all foam concentrate with clear water. The flush circuit control logic shall ensure the foam tank supply valve is closed prior to opening the flush valve. The flush valve shall be operated at the foam system control head for ease of operation. The valve shall be electrically controlled and located as close to the foam tank supply valve as possible. A manual flush drain valve shall be labeled and located under the left side running board.

FOAM GENERATING SYSTEM, CAF

A 160 cfm capacity compressed air foam system compressor shall be provided. The system shall supply five (5) discharges with compressed air foam. It shall be capable of providing foam solution or compressed air foam from any of the specified CAFS discharges simultaneously. In addition, the consistency of the compressed air foam from each discharge shall be adjustable. All CAF capable discharges shall have the discharge valve control, air injection control, and discharge pressure gauge mounted in a group on the operator's panel. Each CAF capable discharge shall feature a check valve to prevent reverse flows of compressed air foam. The check valve shall be integrated into the discharge valve. The check valve shall be a type and design approved by the manufacturer of the discharge valve.

Electric valves and panel mounted switches shall be provided as the air injection controls for the discharges.

DISCHARGES TO CAF CAPABLE

The center of front bumper, front of hose bed left side, hose reel in right side of dunnage area, front crosslay and rear crosslay discharges shall be capable of discharging compressed air foam.

AIR COMPESSOR

An oil flooded rotary screw compressor rated at 160 cfm up to pressures of 150 psi shall be provided. The compressor shall be mounted between the chassis frame rails. The compressor shall be driven by the vehicle transmission through a clutch type PTO. All components of the system shall be sized and rated for the system to deliver compressed air, uninterrupted, for up to six (6) hours at a time without undue

	Bidder Complies	
	Yes	No

stresses, vibrations, or overheating. The air compressor shall be capable of delivering the rated capacity of the compressor when the fire pump is delivering 320 gpm @ 125 psi from tank or draft.

AIR OIL SEPARATION (IN TANK)

The air/oil separation system for the compressor system shall be easily serviced. The separation system shall be inside the air/oil receiver tank. The separation system shall consist of two stages. The first stage shall be mechanical and engineered into the tank. The second stage shall be a removable element arrangement. The allowable oil carry over shall be no more than 10 parts per million oil in air.

RECEIVER TANK

A steel air/oil receiver tank shall be provided. The receiver shall be ASME code approved rated at a minimum of 200 psig working pressure. It shall be equipped with an ASME air pressure relief valve. The receiver shall be equipped with a fill cap and easily readable sight glass. The tank shall be mounted in a manner that allows easy access to the fill opening and the level sight glass. Either a vertical or horizontal type is acceptable. The tank shall be equipped with a minimum pressure valve that prevents the tank pressure from falling below 70 psi during running conditions. The minimum pressure valve shall be rotatable to facilitate different discharge arrangements from the tank.

OIL FILTER / THERMOSTAT

The compressor lubricant shall be filtered by spin on type filter. The filter shall have a 25 micron rating and a safety bypass valve. The filter assembly shall be mounted and located in a manner that allows easy service. A thermostat valve shall be integrated into the oil filter assembly's housing. The thermostat shall route lubricant to the oil cooler to maintain the compressor's temperature between minimum and maximum limits.

OIL COOLER

A brazed plate stainless steel water/oil cooler shall be provided to cool the compressor oil. The cooler shall be sized to meet the duty cycle requirements as specified. The oil cooler shall use water from the vehicle fire pump as the cooling medium and shall be protected from freezing by adequate drains and other means.

WATER STRAINER

The feed water to the water/oil cooler shall be filtered by a basket type bronze and stainless steel strainer. The strainer shall be mounted in an area that is readily accessible. If required the strainer shall be a shared strainer with a foam proportioning system.

AIR CLEANER

A heavy duty, automotive type, dry element air cleaner shall be provided. The air cleaner shall be mounted in such a manner as to be easily serviced. The air cleaner shall be mounted, or the inlet of the filter routed, in such a manner that the air cleaner intakes fresh air from outside the vehicle body.

	Bidder Complies	
	Yes	No

OIL HOSES

The compressor lube / cooling oil, wet air discharge to the receiver tank, and the dry discharge air to the system air manifold shall be carried in wire braided hydraulic hose. The hose shall be SAE 100R1 specification single braid hose.

CONTROL TUBING

The compressor controls shall be plumbed with color coded, high temperature, push to connect, flexible tubing. The tubing color code shall be:

- Red - Air pressure (to gauges and to pressure controllers
- Blue - Modulated air (from controllers to compressor inlet valve)
- Green - Pilot pressure (pressure to activate receiver vent valve)
- White / Translucent (oil scavenge from separator back to compressor)
- Black - Water pilot pressure (water pressure to balance valve)

COMPRESSOR SYSTEM CONTROLS:

The compressor system shall have operators controls at the pump panel for the following functions:

- AUTO (Automatic pressure regulation, to match the compressor discharge pressure to the pump discharge pressure.)
- MANUAL (Fixed pressure regulation, to set the air pressure at on pressure for the use of air tools, etc.)
- Air flow meter display
- PTO engagement switch
- PTO engaged indicator light
- Compressor temperature gauge
- Compressor over temperature light

The air compressor's PTO engagement shall be prevented at compressor pressures above 30 psi at compressor re-start. The air compressor shall be controlled by a modulating inlet valve mounted on the air compressors inlet port. A controller shall be provided that senses air pressure and controls the delivery volume of the air compressor while maintaining a constant pressure. The controller shall feature an automatic pressure balancing system to maintain the air pressure within 0 percent to +10 percent of the discharge pressure of the fire pump, throughout a pressure range of 60 psi to 175 psi.

AIR OUTLET

A 1.00" air outlet supplied by the CAFS compressor shall be provided on the pump operators panel for a side mount pumphouse and on the left pump panel for a top mount pumphouse. This outlet shall have a chrome plated 1.0" FNST swivel fitting at the panel and a valve behind the pump panel. The outlet shall be capable of supplying the capacity of the compressor. A mating 1.0" MNST x 1.0" NPT fitting shall be supplied with loose equipment.

	Bidder Complies	
	Yes	No

AUXILIARY AIR OUTLET

One (1) additional air outlet shall be supplied at the PS pump panel to power air tools. This outlet shall have quick disconnects and a be used in the fixed position for the auto-sync compressor control. The outlet shall be supplied by the compressor for the CAFS. When the compressed air foam system is used the performance shall be reduced if the air outlets are in use at the same time.

REFILL, FOAM TANKS

The foam system's proportioning pump shall be used to fill the Class A foam tank. This shall allow use of the auxiliary foam pick-up to pump the foam from pails or a drum on the ground into the foam tank. A foam shut-off switch shall be installed in the fill dome of the tank to shut the system down when the tank is full. The fill operation shall be controlled by a mode in the foam system controller stating TANK A FILL. While the proportioner pump is filling the tank, the controller shall display FILL TANK A. When the tank is full, as determined by the float switch in the tank dome, the pump shall stop and the controller shall display TANK A FULL.

A separate air operated fill pump, controlled by the foam system controller, shall be provided for filling the Class B foam tank. A separate inlet connection, mounted on the pump panel shall be provided for this fill system. A foam shut-off switch shall be installed in the fill dome of the tank to shut the system down when the tank is full. The connection shall be the same as the foam intake connection, in order to allow the use of the foam pick-up hose as the fill hose. The fill operation shall be controlled by a mode in the foam system controller stating TANK B FILL. To fill the tank, the controller shall start and run the air operated pump. While the pump runs, the controller shall display FILL TANK B. When the tank is full, as determined by the float switch in the tank dome, the pump shall stop and the controller shall display TANK B FULL.

FOAM SYSTEM AND CAFS TRAINING

The fire department shall order one (1) vehicle with this foam system and CAFS. A demonstration shall be provided at the fire department on the operation of these systems.

This demonstration shall include:

- Review of the foam system and CAFS manuals, highlighting key areas.

- A walk around review of the system components, on the finished truck.

- A hands on start-up and foam and CAFS discharge session.

- Instructions on the use of the manual overrides.

- The proper way to shut down and flush the system.

	Bidder Complies	
	Yes	No

FOAM TANK

The foam tank shall be an integral portion of the polypropylene water tank. The cell shall have a capacity of 30 gallons of foam with the intended use of Class A foam. The brand of foam stored in this tank shall be TBD. The foam cell shall reduce the capacity of the water tank. The foam cell shall have a screen in the fill dome and a breather in the lid.

FOAM TANK DRAIN

A system of 1.00" foam tank drains shall be provided, integrated into the foam systems strainer and tank to foam pump valve management system.The tank to pump hoses running from the tank(s) to the panel mounted strainer shall 1.00" diameter.The foam system controller shall have a mode that allows for a given foam valve to be opened at will. Flow of foam from the tank valve to the strainer shall be usable as a tank drain mode.

An adaptor shall be supplied, that allows the 1.00" foam intake screen to assembly to be used as a drain outlet. The standard supplied 1.00" foam pick up hose shall be attached to the screen assembly by way of the adapter. The drain mode shall allow the operator to open and close the tank valve as required from the control head, to drain foam and re-fill foam containers through the connected hose, without foam spillage beneath the vehicle.

FOAM CELL

The cell shall be an integral portion of the polypropylene water tank. The cell shall have a capacity of 20 gallons of foam with the intended use of Class B foam. The brand of foam stored in this cell shall be TBD. The foam cell shall not reduce the capacity of the water tank. The foam cell shall have a screen in the fill dome and a breather in the lid.

FOAM TANK DRAIN

A system of 1.00" foam tank drains shall be provided, integrated into the foam systems strainer and tank to foam pump valve management system.The tank to pump hoses running from the tank(s) to the panel mounted strainer shall 1.00" diameter.The foam system controller shall have a mode that allows for a given foam valve to be opened at will. Flow of foam from the tank valve to the strainer shall be usable as a tank drain mode.

An adaptor shall be supplied, that allows the 1.00" foam intake screen to assembly to be used as a drain outlet. The standard supplied, 1.00" foam pick up hose shall be attached to the screen assembly by way of the adapter. The drain mode shall allow the operator to open and close the tank valve as required from the control head, to drain foam and re-fill foam containers through the connected hose, without foam spillage beneath the vehicle.

	Bidder Complies	
	Yes	No

PUMP COMPARTMENT

The pump compartment shall be separate from the hose body and compartments so that each may flex independently of the other. The pump compartment shall be constructed of the same material as the body compartmentation.

The pump compartment substructure shall be a fabricated assembly of steel tubing, angles and channels which supports both the fire pump and the side running boards.

The pump compartment shall be mounted on the chassis frame rails with rubber biscuits in a four point pattern to allow for chassis frame twist.

Pump compartment, pump, plumbing and gauge panels shall be removable from the chassis in a single assembly.

PUMP MOUNTING

Pump shall be mounted to a substructure which shall be mounted to the chassis frame rail using rubber isolators. The mounting shall allow chassis frame rails to flex independently without damage to the fire pump.

LEFT SIDE PUMP CONTROL PANEL

All pump controls and gauges shall be located at the left (driver's) side of the apparatus and properly identified.

Layout of the pump control panel shall be ergonomically efficient and systematically organized.

The pump operator's control panel shall be removable in two (2) main sections for ease of maintenance:

The upper section shall contain sub panels for the mounting of the pump pressure control device, engine monitoring gauges, electrical switches, and foam controls (if applicable). Sub panels shall be removable from the face of the pump panel for ease of maintenance. Below the sub panels shall be located all valve controls and line pressure gauges.

The lower section of the panel shall contain all inlets, outlets, and drains.

All push/pull valve controls shall have 1/4 turn locking control rods with polished chrome plated zinc tee handles. Guides for the push/pull control rods shall be chrome plated zinc castings securely mounted to the pump panel. Push/pull valve controls shall be capable of locking in any position. The control rods shall pull straight out of the panel and shall be equipped with universal joints to eliminate binding.

	Bidder Complies	
	Yes	No

IDENTIFICATION TAGS

The identification tag for each valve control shall be recessed in the face of the tee handle.

All discharge outlets shall have color coded identification tags, with each discharge having its own unique color. Color coding shall include the labeling of the outlet and the drain for each corresponding discharge.

All line pressure gauges shall be mounted directly above the corresponding discharge control tee handles and recessed within the same chrome plated casting as the rod guide for quick identification. The gauge and rod guide casting shall be removable from the face of the pump panel for ease of maintenance. The casting shall be color coded to correspond with the discharge identification tag.

All remaining identification tags shall be mounted on the pump panel in chrome plated bezels.

The pump panel on the right (passenger's) side shall be removable with lift and turn type fasteners.

Trim rings shall be installed around all inlets and outlets.

PUMP PANEL CONFIGURATION - SIMILAR LAYOUT TO PREVIOUS TRUCK

The pump panel configuration shall be laid out in a similar manner to a previous recently built truck with the same option content.

The major functional components on the pump panels on both sides shall be in the same relative location as the previous unit. This shall include inlets and outlets, gauges, control handles, switches, drains and access doors and/or panels.

Minor details may change as needed due to product and process evolution.

PUMP AND GAUGE PANEL

The pump and gauge panels shall be constructed of aluminum with a black vinyl finish. A polished aluminum trim molding shall be provided around each panel.

The right side pump panel shall be removable and fastened with swell type fasteners.

PUMP COMPARTMENT LIGHT

A pump compartment light shall be provided inside the right side pump enclosure and accessible through a door on the pump panel.

A .125" weep hole shall be provided in each light lens, preventing moisture retention.

Engine monitoring graduated LED indicators shall be incorporated with the pressure controller.

Also provided at the pump panel shall be the following:

- Master Pump Drain Control

	Bidder Complies	
	Yes	No

THROTTLE READY GREEN INDICATOR LIGHT

There shall be a green indicator light integrated with the pressure governor and/or engine throttle installed on the pump operators panel that is activated when the pump is in throttle ready mode.

OK TO PUMP INDICATOR LIGHT

There shall be a green indicator light installed on the pump operators panel that is activated when the pump is in Ok To Pump mode.

- Pump Hourmeter

AIR HORN SWITCH

An air horn control switch shall be provided at the pump operator's control panel. This switch shall be red and properly labeled.The switch shall be located within easy reach of the operator in the electrical switch panel.

VACUUM AND PRESSURE GAUGES

The pump vacuum and pressure gauges shall be liquid filled and manufactured by Class 1 Incorporated ©.

The gauges shall be a minimum of 4.00" in diameter and shall have white faces with black lettering, with a pressure range of 30.00"-0-600#.

Gauge construction shall include a Zytel nylon case with adhesive mounting gasket and threaded retaining nut.

The pump pressure and vacuum gauges shall be installed adjacent to each other at the pump operator's control panel.

Test port connections shall be provided at the pump operator's panel. One (1) shall be connected to the intake side of the pump, and the other to the discharge manifold of the pump. They shall have 0.25 in. standard pipe thread connections and non-corrosive polished stainless steel or brass plugs. They shall be marked with a label.

This gauge shall include a 10 year warranty against leakage, pointer defect, and defective bourdon tube.

PRESSURE GAUGES

The individual "line" pressure gauges for the discharges shall be interlube filled and manufactured by Class 1©.

They shall be a minimum of 2.00" in diameter and shall have white faces with black lettering.

Gauge construction shall include a Zytel nylon case with adhesive mounting gasket and threaded retaining nut.

Gauges shall have a pressure range of 30"-0-400#.

	Bidder Complies	
	Yes	No

The individual pressure gauge shall be installed as close to the outlet control as practical.

This gauge shall include a 10 year warranty against leakage, pointer defect, and defective bourdon tube.

WATER LEVEL GAUGE

A Fire Research TankVision Pro model WLA300-A00 water tank indicator gauge shall be installed on the pump operators panel. The gauge kit shall include an electronic indicator module, a pressure sensor, and a 10' sensor cable. The gauge shall show the volume of water in the tank on nine (9) easy to see super bright RGB LEDs. A wide view lens over the LEDs shall provide for a viewing angle of 180 degrees. The gauge case shall be waterproof, manufactured of Polycarbonate/Nylon material, and have a distinctive blue label.

The program features shall be accessed from the front of the indicator module. The program shall support self-diagnostics capabilities, self-calibration, six (6) programmable colored light patterns to display tank volume, adjustable brightness control levels and a data link to connect remote indicators. Low water warnings shall include flashing LEDs at 1/4 tank and down chasing LEDs when the tank is almost empty.

The gauge shall receive an input signal from an electronic pressure sensor. The sensor shall be mounted from the outside of the water tank near the bottom. No probe shall be placed on the interior of the tank. Wiring shall be weather resistant and have automotive type plug-in connectors.

WATER LEVEL GAUGE

There shall be three (3) additional water level indicator, Whelen®, Model PSTANK2, LED module with chrome flange, installed one (1) each side rearward of crew cab doors and one (1) on rear body bulkhead.

This light module shall include four (4) colored levels, and function similar to the water level indicator located at the operators panel:

- First green module indicates a full water level
- Second blue module indicates a water level above 3/4 full
- Third amber module indicates a water level above 1/2 full
- Last red module indicates a water level above 1/4 full and empty
    - Above 1/4 this light shall be steady burning
    - At empty this light shall be flashing

This module shall be activated when the parking brake is applied.

CLASS "A" & "B" FOAM LEVEL GAUGES

A Fire Research TankVision Pro model WLA360-A00 & WLA370-A00 cell/tank level indicator kits shall be installed on the pump operators panel. The kits shall include an electronic indicator module, a pressure sensor, a 10' sensor cable and tank vents. The indicators shall show the volume of Class "A" & Class "B" foam concentrate in the cell/tanks on nine (9) easy to see super bright RGB LEDs. A wide view lens over

	Bidder Complies	
	Yes	No

the LEDs shall provide for a viewing angle of 180 degrees. The indicator case shall be waterproof, manufactured of Polycarbonate/Nylon material and have a distinctive green and yellow labels.

The program features shall be accessed from the front of the indicator module. The program shall support self-diagnostics capabilities, self-calibration, six (6) programmable colored light patterns to display cell/tank volume, adjustable brightness control levels and a data link to connect remote indicators. Low foam level warnings shall include flashing LEDs at 1/4 cell/tank and down chasing LEDs when the cell/tanks are almost empty.

The indicators shall receive an input signal from an electronic pressure sensor. The sensor shall be mounted from the outside of the foam cell/tanks near the bottom. No probe shall be placed on the interior of the cell/tanks. Wiring shall be weather resistant and have automotive type plug-in connectors.

STEP/LIGHT SHIELD

There shall be an aluminum treadplate stepping surface no less than 8.00" deep and properly reinforced to support a man's weight, installed over the pump operators panel.

- There shall be 12 volt DC white LED lights installed under the step to illuminate the controls, switches, essential instructions, gauges, and instruments necessary for the operation of the apparatus. These lights shall be activated by the pump panel light switch. Additional lights shall be included every 18.00" depending on the size of the pump house.
- One (1) pump panel light shall come on when the pump is in ok to pump mode.

There shall be a light activated above the pump panel light switch when the parking brake is applied. This is to afford the operator some illumination when first approaching the control panel.

There shall be one (1) white LED, step light provided above this step. In order to ensure exceptional illumination, each step light shall provide a minimum of 25 foot-candles (fc) covering an entire 15.00" x 15.00" square placed 10.00" below the light and a minimum of 1.5 fc covering an entire 30.00" x 30.00" square at the same 10.00" distance below the light. The step light shall be activated by the pump panel light switch.

	Bidder Complies Yes	Bidder Complies No

ADDITIONAL STEP/LIGHT SHIELD

There shall be an additional aluminum treadplate stepping surface no less than 8.00" deep and properly reinforced to support a man's weight, installed over the passenger's side pump panel.

- There shall be 12 volt DC white LED lights installed under the step to illuminate the controls, switches, essential instructions, gauges, and instruments necessary for the operation of the apparatus. These lights shall be activated by the pump panel light switch. Additional lights shall be included every 18.00" depending on the size of the pump house.

There shall be one (1) white LED, step light provided above the step. In order to ensure exceptional illumination, each step light shall provide a minimum of 25 foot-candles (fc) covering an entire 15.00" x 15.00" square placed 10.00" below the light and a minimum of 1.5 fc covering an entire 30.00" x 30.00" square at the same 10.00" distance below the light. The step light shall be activated by the pump panel light switch.

AIR HORN SYSTEM

There shall be two (2) Grover air horns recessed in the front bumper. The horn system shall be piped to the air brake system wet tank utilizing 0.38" tubing. A pressure protection valve shall be installed in-line to prevent loss of air in the air brake system.

Air Horn Location

The air horns shall be located on each side of the bumper, just outside of the frame rails.

AIR HORN CONTROL

The air horn shall be actuated by a chrome push button switch located on the officer side of the engine tunnel and by a foot switch on the driver's side.

ELECTRONIC SIREN

A Code 3®, Model 3692, electronic siren with noise canceling microphone shall be provided.

This siren to be active when the battery switch is on and the emergency master switch is on.

Electronic siren head shall be recessed in the driver side center switch panel.

The electronic siren shall be controlled on the siren head only. No horn button or foot switches shall be required.

SPEAKER

There shall be one (1) Code 3®, Model PB100C, speaker with chrome finish provided. The speaker shall be connected to the siren amplifier.

The speaker shall be recessed in the left side of the front bumper, towards the outside.

Bidder Complies: Yes | No

AUXILIARY MECHANICAL SIREN

A Federal Q2B® siren shall be furnished.

The control solenoid shall be powered up after the emergency master switch is activated.

The mechanical siren shall be mounted on the bumper deck plate. It shall be mounted on the left side. The siren mounting shall include a reinforcement plate.

MECHANICAL SIREN CONTROL

The mechanical siren shall be actuated by a push button located on the officer's side instrument panel and by a foot switch on the driver's side.

A momentary red switch shall be included in the left side overhead switch panel to activate the siren brake.

FRONT ZONE UPPER WARNING LIGHTS

There shall be one (1) 72.00" Whelen Freedom IV LED lightbar mounted on the cab roof.

The lightbar shall include the following:

- One (1) red flashing LED module in the driver's side end position.
- One (1) red flashing LED module in the driver's side front corner position.
- One (1) red flashing LED module in the driver's side first front position.
- One (1) red flashing LED module in the driver's side second front position.
- One (1) red flashing LED module in the driver's side third front position.
- One (1) red flashing LED module in the driver's side fourth front position.
- One (1) white flashing LED module in the driver's side fifth front position.
- Open in the driver's side sixth front position.
- Open in the passenger's side sixth front position.
- One (1) white flashing LED module in the passenger's side fifth front position.
- One (1) red flashing LED module in the passenger's side fourth front position.
- One (1) red flashing LED module in the passenger's side third front position.
- One (1) red flashing LED module in the passenger's side second front position.
- One (1) red flashing LED module in the passenger's side first front position.
- One (1) red flashing LED module in the passenger's side front corner position.
- One (1) red flashing LED module in the passenger's side end position.

There shall be clear lenses included on the lightbar.

There shall be a switch in the cab on the switch panel to control this lightbar.

The white LEDs shall be disabled when the parking brake is applied.

	Bidder Complies	
	Yes	No

Any of the eight (8) red flashing LED modules in the front positions may be load managed when the parking brake is applied.

FRONT ZONE LOWER LIGHTS

There shall be two (2) Whelen, Model M6*, LED flashing warning lights installed on the cab face above the headlights, in a common bezel with the directional lights.

- The driver's side front warning light to be red.
- The passenger's side front warning light to be red.

Both lights shall include a lens that is the same color as the LED's.

There shall be a switch located in the cab on the switch panel to control the lights.

SIDE ZONE LOWER LIGHTING

There shall be six (6) Whelen®, Model M6**, 4.31" high x 6.75" long x 1.37" deep flashing LED warning lights with chrome trim installed per the following:

- Two (2) lights located, one (1) each side on the bumper extension. The driver's side, side front light to include red warning LEDs and the passenger's side, side front light to include red warning LEDs.
- Two (2) lights located, one (1) each side of cab rearward of crew cab doors. The driver's side, side middle light to include red warning LEDs and the passenger's side, side middle light to include red warning LEDs.
- Two (2) lights located, one (1) each side above rear wheels. The driver's side, side rear light to include red warning LEDs and the passenger's side, side rear light to include red warning LEDs.
- The warning light lens colors to be the same as the LEDs.

There shall be a switch in the cab on the switch panel to control the lights.

REAR ZONE LOWER LIGHTING

There shall be two (2) Whelen®, Model M6*, LED flashing warning lights shall be located at the rear of the apparatus.

- The driver's side rear light to be red
- The passenger's side rear light to be red

Both lights shall include a lens that is the same color as the LED's.

There shall be a switch located in the cab on the switch panel to control the lights.

Bidder Complies: Yes | No

REAR OF HOSEBED WARNING LIGHTS

There shall be two (2) Whelen, Model B63M7**, LED Rota-Beam, beacons with Model M7**, lower LED flashing lights provided in a single polished aluminum housing at the rear of the truck.

There shall be one (1) installed on the driver's side with the lower light to the rear:

- The driver's side beacon to include red LED's.
- The rear lower light on the driver's side to be red.

There shall be one (1) installed on the passenger's side with the lower light to the rear:

- The passenger's side beacon to include red LED's.
- The rear lower light on the passenger' side to be red.

The warning light lens colors to be the same as the LEDs.

There shall be a switch located in the cab on the switch panel to control the lights.

The lower light may be load managed when the parking brake is applied.

The rear warning lights shall be mounted on top of the compartmentation with all wiring totally enclosed. The rear deck lights shall be mounted on the beavertails as high as possible.

ELECTRICAL SYSTEM GENERAL DESIGN FOR ALTERNATING CURRENT

The following guidelines shall apply to the 120/240 VAC system installation:

General

Any fixed line voltage power source producing alternating current (ac) line voltage shall produce electric power at 60 cycles plus or minus 3 cycles.

Except where superseded by the requirements of NFPA 1901, all components, equipment and installation procedures shall conform to NFPA 70, National Electrical Code (herein referred to as the NEC).

Line voltage electrical system equipment and materials included on the apparatus shall be listed and installed in accordance with the manufacturer's instructions. All products shall be used only in the manner for which they have been listed.

Grounding

Grounding shall be in accordance with Section 250-6 "Portable and Vehicle Mounted Generators" of the NEC. Ungrounded systems shall not be used. Only stranded or braided copper conductors shall be used for grounding and bonding.

An equipment grounding means shall be provided in accordance with Section 250-91 (Grounding Conductor Material) of the NEC.

	Bidder Complies	
	Yes	No

The grounded current carrying conductor (neutral) shall be insulated from the equipment grounding conductors and from the equipment enclosures and other grounded parts. The neutral conductor shall be colored white or gray in accordance with Section 200-6 (Means of Identifying Grounding Conductors) of the NEC.

In addition to the bonding required for the low voltage return current, each body and driving or crew compartment enclosure shall be bonded to the vehicle frame by a copper conductor. This conductor shall have a minimum amperage rating of 115 percent of the nameplate current rating of the power source specification label as defined in Section 310-15 (amp capacities) of the NEC. A single conductor properly sized to meet the low voltage and line voltage requirements shall be permitted to be used.

All power source system mechanical and electrical components shall be sized to support the continuous duty nameplate rating of the power source.

Operation

Instructions that provide the operator with the essential power source operating instructions, including the power-up and power-down sequence, shall be permanently attached to the apparatus at any point where such operations can take place.

Provisions shall be made for quickly and easily placing the power source into operation. The control shall be marked to indicate when it is correctly positioned for power source operation. Any control device used in the drive train shall be equipped with a means to prevent the unintentional movement of the control device from its set position.

A power source specification label shall be permanently attached to the apparatus near the operator's control station. The label shall provide the operator with the following information:

- Rated voltage(s) and type (ac or dc)
- Phase
- Rated frequency
- Rated amperage
- Continuous rated watts
- Power source engine speed

Direct drive (PTO) and portable generator installations shall comply with Article 445 (Generators) of the NEC.

Overcurrent protection

The conductors used in the power supply assembly between the output terminals of the power source and the main over current protection device shall not exceed 144.00" (3658 mm) in length.

	Bidder Complies	
	Yes	No

For fixed power supplies, all conductors in the power supply assembly shall be type THHW, THW, or use stranded conductors enclosed in nonmetallic liquid tight flexible conduit rated for a minimum of 194 degree Fahrenheit (90 degrees Celsius).

For portable power supplies, conductors located between the power source and the line side of the main overcurrent protection device shall be type SO or type SEO with suffix WA flexible cord rated for 600-volts at 194 degrees Fahrenheit (90 degrees Celsius).

Wiring Methods

Fixed wiring systems shall be limited to the following:

- Metallic or nonmetallic liquid tight flexible conduit rated at not less than 194 degrees Fahrenheit (90 degrees Celsius)
- or
- Type SO or Type SEO cord with a WA suffix, rated at 600 volts at not less than 194 degrees Fahrenheit (90 degrees Celsius)

Electrical cord or conduit shall not be attached to chassis suspension components, water or fuel lines, air or air brake lines, fire pump piping, hydraulic lines, exhaust system components, or low voltage wiring. In addition the wiring shall be run as follows.

- Separated by a minimum of 12.00" (305 mm), or properly shielded, from exhaust piping
- Separated from fuel lines by a minimum of 6.00" (152 mm) distance

Electrical cord or conduit shall be supported within 6.00" (152 mm) of any junction box and at a minimum of every 24.00" (610 mm) of continuous run. Supports shall be made of nonmetallic materials or corrosion protected metal. All supports shall be of a design that does not cut or abrade the conduit or cable and shall be mechanically fastened to the vehicle.

Wiring Identification

All line voltage conductors located in the main panel board shall be individually and permanently identified. The identification shall reference the wiring schematic or indicate the final termination point. When prewiring for future power sources or devices, the unterminated ends shall be labeled showing function and wire size.

Wet Locations

All wet location receptacle outlets and inlet devices, including those on hardwired remote power distribution boxes, shall be of the grounding type provided with a wet location cover and installed in accordance with Section 210-7 "Receptacles and Cord Connections" of the NEC.

All receptacles located in a wet location shall be not less than 24.00" (610 mm) from the ground. Receptacles on off-road vehicles shall be a minimum of 30.00" (762 mm) from the ground.

	Bidder Complies	
	Yes	No

The face of any wet location receptacle shall be installed in a plane from vertical to not more than 45 degrees off vertical. No receptacle shall be installed in a face up position.

Dry Locations

All receptacles located in a dry location shall be of the grounding type. Receptacles shall be not less than 30.00" (762 mm) above the interior floor height.

All receptacles shall be marked with the type of line voltage (120-volts or 240-volts) and the current rating in amps. If the receptacles are direct current, or other than single phase, they shall be so marked.

Listing

All receptacles and electrical inlet devices shall be listed to UL 498, Standard for Safety Attachment Plugs and Receptacles, or other appropriate performance standards. Receptacles used for direct current voltages shall be rated for the appropriate service.

Electrical System Testing

The wiring and associated equipment shall be tested by the apparatus manufacturer or the installer of the line voltage system.

The wiring and permanently connected devices and equipment shall be subjected to a dielectric voltage withstand test of 900-volts for one (1) minute. The test shall be conducted between live parts and the neutral conductor, and between live parts and the vehicle frame with any switches in the circuit(s) closed. This test shall be conducted after all body work has been completed.

Electrical polarity verification shall be made of all permanently wired equipment and receptacles to determine that connections have been properly made.

Operational Test per Current NFPA 1901 Standard

The apparatus manufacturer shall perform the following operation test and ensure that the power source and any devices that are attached to the line voltage electrical system are properly connected and in working order. The test shall be witnessed and the results certified by an independent third-party certification organization.

The prime mover shall be started from a cold start condition and the line voltage electrical system loaded to 100 percent of the nameplate rating.

The power source shall be operated at 100 percent of its nameplate voltage for a minimum of two (2) hours unless the system meets category certification as defined in the current NFPA 1901 standard.

Where the line voltage power is derived from the vehicle's low voltage system, the minimum continuous electrical load as defined in the current NFPA 1901 standard shall be applied to the low voltage electrical system during the operational test.

	Bidder Complies	
	Yes	No

GENERATOR

The apparatus shall be equipped with a complete electrical power system. The generator shall be a Harrison Model MCR Stealth 10.0 kW Hydraulic unit. The wiring and generator installation shall conform to the present National Electrical Codes Standards of the National Fire Protection Association. The installation shall be designed for continuous operation without overheating and undue stress on components.

Generator Performance

- Continuous Duty Rating: 10,000 watts

- Nominal Volts: 120/240

- Amperage: 80 @ 120 volts, 40 @ 240 volts

- Phase: Single

- Cycles: 60 hertz

- Engine Speed at Engagement: Idle

- RPM range: 900 to 3,000 (hydraulic pump)

The output of the generator shall be controlled by an internal hydraulic system. An electrical instrument gauge panel shall be provided for the operator to monitor and control all electrical operations and output.

The generator shall be driven by a transmission power take off unit, through a hydraulic pump and motor.

The generator shall include an electrical control inside the cab. The hydraulic engagement supply shall be operational only after the chassis parking brake is applied.

An electric/hydraulic valve shall supply hydraulic fluid to the clutch engagement unit provided on the chassis PTO drive.

Generator Instruments and Controls

To properly monitor the generator performance a digital meter panel shall be furnished and mounted next to the circuit breaker panel. The meter shall indicate the following items:

- Voltage

- Amperage for both lines

- Frequency

- Generator run hours

Bidder Complies: Yes | No

- Over current indication

- Over temperature indication

- "Power On" indication

- Two (2) fuse holders with two (2) amp fuses (for indicator light protection)

The meter and indicators shall be installed near eye level in the compartment. Instruments shall be flush mounted in an appropriate sized weatherproof electrical enclosure. All instruments used shall be accurate within +/- two (2) percent.

Generator Wiring:

The system shall be installed by highly qualified electrical technicians to assure the required level of safety and protection to the fire apparatus operators. The wiring, electrical fixtures and components shall be to the highest industry quality standards available on the domestic market. The equipment shall be the type as designed for mobile type installations subject to vibration, moisture and severe continuous usage. The following electrical components shall be the minimum acceptable quality standards for this apparatus:

Wiring:

All electrical wiring shall be fine stranded copper type. The wire shall be sized to the load and circuit breaker rating; ten (10) gauge on 30 amp circuits, 12 gauge on 20 amp circuits and 14 gauge on 15 amp circuits. The cable shall be run in corner areas and extruded aluminum pathways built into the body for easy access.

Load Center:

The main load center shall be a Cutler Hammer with circuit breakers rated to load demand.

Circuit Breakers:

Individual breakers shall be provided for all on-line equipment to isolate a tripped breaker from affecting any other on-line equipment.

GENERATOR LOCATION

The generator shall be mounted in the in the area over the pump on the left side. The flooring in this area shall be either reinforced or constructed in such a manner that it shall handle the additional weight of the generator.

GENERATOR START

There shall be a switch provided on the cab instrument panel to engage the generator.

	Bidder Complies	
	Yes	No

GENERATOR REMOTE START

There shall be one (1) remote start switch provided on the pump panel to engage the hydraulic generator PTO and field. A light at each switch location shall be provided to indicate that the generator is running.

CIRCUIT BREAKER PANEL

The circuit breaker panel shall be located high left on the back wall of compartment LS3.

120 VOLT LIGHTING

A Fire Research Model #FC530-M10 bottom raise quartz tube flood light shall be provided.

The light shall be bottom raising with a telescoping pole. The telescoping pole shall be as long as is practical to fit in the location it is mounted.

The light shall be installed with offset side mount brackets.

The light fixture shall be a single 1,000 watt, 120 volt Focus lamphead that draws 8.3 amps.

The lamp head shall swivel 360 degrees left or right and tilt up and down. All wiring used up to the junction box shall be a minimum of 14 gauge 3 wire cable that is properly supported and protected from damage.

A total of Two (2) shall be provided (1) mounted each side on the front bulkhead of the body.

ELECTRIC CORD REEL

Furnished with the 120 volt AC electrical system shall be a Hannay, Series 1600, cord reel. The reel shall be provided with a 12 volt electric rewind switch that is guarded to prevent accidental operation and labeled for its intended use. The switch shall be protected with a fuse and installed at a height not to exceed 72.00" above the operators standing position.

The exterior finish of the reel(s) shall be painted #269 gray from the reel manufacturer.

A Nylatron guide to be provided to aid in the payout and loading of the reel. A ball stop shall be provided to prevent the cord from being wound on the reel.

A label shall be provided in a readily visible location adjacent to the reel. The label shall indicate current rating, current type, phase, voltage and total cable length.

A total of one (1) cord reel shall be provided one (1) in compartment B1 high and to the right.

The cord reel should be configured with three (3) conductors.

CORD

Provided for electric distribution shall be one (1) length installed on the reel of 200 feet of black 10/3 electrical cord. A Hubbell L5-20, 20 amp, 120 volt, twist lock connector body shall be installed on the end of the cord.

	Bidder Complies	
	Yes	No

PORTABLE JUNCTION BOX

There shall be one (1) Akron EJBX electric junction box(es) provided.

There shall be a cable strain relief and a 1.00' pigtail with black plastic ribbed grip, NEMA L5-20, 20 amp, 120 volt twist lock plug provided for each box.

Each box shall be provided with the following:

- two (2) 15/20 amp 120 volt AC duplex straight blade receptacle with flip up covers
- two (2) 20 amp 120 volt AC twist lock single receptacles with flip up covers
- a 120 volt AC light inside the box

120 VOLT RECEPTACLE

There shall be two (2), 20 amp 120 volt AC three (3) wire twist lock receptacle(s) with waterproof flip up cover(s) installed on the left rear fender panel and on the right rear fender panel. The NEMA configuration for the receptacles shall be L5-20R.

The receptacle(s) shall be powered from the on board generator.

There shall be a label installed near the receptacle(s) that state the following:

- Line Voltage
- Current Ratting (amps)
- Phase
- Frequency

	Bidder Complies	
	Yes	No

LOOSE EQUIPMENT

The following equipment shall be furnished with the completed unit:

- One (1) bag of chrome, stainless steel, or cadmium plated screws, nuts, bolts and washers, as used in the construction of the unit

	Bidder Complies	
	Yes	No

PAINT PROCESS

The exterior custom cab and/or body painting procedure shall consist of a seven (7) step finishing process. A commercial chassis paint process shall follow similar processes as determined by the chassis manufacturer. The following procedure shall be used by the apparatus manufacturer:

1. Manual Surface Preparation - All exposed metal surfaces on the custom cab and body shall be thoroughly cleaned and prepared for painting. Imperfections on the exterior surfaces shall be removed and sanded to a smooth finish. Exterior seams shall be sealed before painting. Exterior surfaces that shall not be painted include; chrome plating, polished stainless steel, anodized aluminum and bright aluminum treadplate.
2. Chemical Cleaning and Pretreatment - All surfaces shall be chemically cleaned to remove dirt, oil, grease, and metal oxides to ensure the subsequent coatings bond well. The aluminum surfaces shall be properly cleaned and treated using a high pressure, high temperature 4 step Acid Etch process. The steel and stainless surfaces shall be properly cleaned and treated using a high temperature 3 step process specifically designed for steel or stainless. The chemical treatment converts the metal surface to a passive condition to help prevent corrosion. A final pure water rinse shall be applied to all metal surfaces.
3. Surfacer Primer - The Surfacer Primer shall be applied to a chemically treated metal surface to provide a strong corrosion protective base coat. A minimum thickness of 2 mils of Surfacer Primer is applied to surfaces that require a critical aesthetic finish. The surfacer primer shall be a two-component high solids urethane that has excellent sanding properties and an extra smooth finish when sanded.
4. Finish Sanding - The surfacer primer shall be sanded with a fine grit abrasive to achieve an ultra-smooth finish. This sanding process is critical to produce the smooth mirror like finish in the topcoat.
5. Sealer Primer - The sealer primer is applied prior to the base coat in all areas that have not been previously primed with the surfacer primer. The sealer primer is a two-component high solids urethane that goes on smooth and provides excellent gloss hold out when top coated.
6. Base coat Paint - Two coats of a high performance, two component high solids polyurethane base coat shall be applied. The Base coat shall be applied to a thickness that shall achieve the proper color match. The Base coat shall be used in conjunction with a urethane clear coat to provide protection from the environment.
7. Clear Coat - Two (2) coats of clear coat shall be applied over the base coat color. The clear coat is a two-component high solids urethane that provides superior gloss and durability to the exterior surfaces. Lap style doors shall be clear coated to match the body. Paint warranty for the roll-up doors shall be provided by the roll-up door manufacturer.

Specifications are written to define cyclic corrosion testing, physical strengths, durability and minimum appearance requirements must be met in order for an exterior paint finish to be considered acceptable as a quality finish.

	Bidder Complies	
	Yes	No

Each batch of base coat color shall be checked for a proper match before painting of the cab and the body. After the cab and body are painted, the color is verified again to make sure that it matches the color standard. Electronic color measuring equipment shall be used to compare the color sample to the color standard entered into the computer. Color specifications are used to determine the color match. A Delta E reading shall be used to determine a good color match within each family color.

All removable items such as brackets, compartment doors, door hinges, and trim shall be removed and separately if required, to ensure paint behind all mounted items. Body assemblies that cannot be finish painted after assembly shall be finish painted before assembly.

Environmental Impact

Contractor shall meet or exceed all current State regulations concerning paint operations. Pollution control shall include measures to protect the atmosphere, water and soil. Controls shall include the following conditions:

- Topcoats and primers shall be chrome and lead free.
- Metal treatment chemicals shall be chrome free. The wastewater generated in the metal treatment process shall be treated on-site to remove any other heavy metals.
- Particulate emission collection from sanding operations shall have a 99.99 percent efficiency factor.
- Particulate emissions from painting operations shall be collected by a dry filter or water wash process. If the dry filter is used, it shall have an efficiency rating of 98 percent. Water wash systems shall be 99.97 percent efficient.
- Water from water wash booths shall be reused. Solids shall be removed on a continual basis to keep the water clean.
- Paint wastes shall be disposed of in an environmentally safe manner.
- Empty metal paint containers shall be recycled to recover the metal.
- Solvents used in clean-up operations shall be recycled on-site or sent off-site for distillation and returned for reuse.

Additionally, the finished apparatus shall not be manufactured with or contain products that have ozone depleting substances. Contractor shall, upon demand, present evidence that the manufacturing facility meets the above conditions and that it is in compliance with the state EPA rules and regulations.

PAINT

The cab shall be two-tone, with the upper section painted white and lower section of the cab and body painted red.

	Bidder Complies	
	Yes	No

PAINT CHASSIS FRAME ASSEMBLY

The chassis frame assembly shall be finished with a single system black top coat before the installation of the cab and body, and before installation of the engine and transmission assembly, air brake lines, electrical wire harnesses, etc.

Components that are included with the chassis frame assembly that shall be painted are:

- Frame rails
- Frame liners
- Cross members
- Axles
- Suspensions
- Steering gear
- Battery boxes
- Bumper extension weldment
- Frame extensions
- Body mounting angles
- Rear Body support substructure (front and rear)
- Pump house substructure
- Air tanks
- Steel fuel tank
- Castings
- Individual piece parts used in chassis and body assembly

Components treated with epoxy E-coat protection prior to paint:

- Two (2) C-channel frame rails
- Two (2) frame liners

The E-coat process shall meet the technical properties shown.

AXLE HUB PAINT

All axle hubs shall be painted to match primary job color.

COMPARTMENT INTERIOR PAINT

The interior of all compartments shall be painted with a gray spatter type paint.

REFLECTIVE STRIPES

Three (3) reflective stripes shall be provided across the front of the vehicle and along the sides of the body. The reflective band shall consist of a 1.00" black stripe at the top with a 1.00" gap then a 6.00" black stripe with a 1.00" gap and a 1.00" black stripe on the bottom.

	Bidder Complies Yes	Bidder Complies No

The reflective band provided on the cab face shall be at the headlight level.

REAR CHEVRON STRIPING

There shall be alternating chevron striping located on the rear-facing vertical surface of the apparatus. The rear surface, excluding the rear compartment door, shall be covered.

The colors shall be red and yellow diamond grade.

Each stripe shall be 6.00" in width.

This shall meet the requirements of the current edition of NFPA 1901, which states that 50% of the rear surface shall be covered with chevron striping.

JOG(S) IN REFLECTIVE BAND

The reflective band located on each side of the apparatus body shall contain one (1) jog(s) and shall be angled at approximately a 45 degrees when installed.

CAB DOOR REFLECTIVE STRIPE

A 6.00" x 16.00" black reflective stripe shall be provided across the interior of each cab door. The stripe shall be located approximately 1.00" up from the bottom, on the door panel.

This stripe shall meet the NFPA 1901 requirement.

CAB FACE STRIPE

There shall be a genuine gold leaf stripe across the face of the cab.

CAB STRIPE

There shall be a genuine gold leaf stripe located just below the window line on each side of the cab.

LETTERING

The lettering shall be totally encapsulated between two (2) layers of clear vinyl.

LETTERING

Eighty-one (81) to one hundred (100) genuine gold leaf lettering, 3.00" high, with outline and shade shall be provided.

LETTERING

There shall be reflective lettering, 18.00" high, with outline and shade provided. There shall be two (2) letters provided.

LETTERING

There shall be reflective lettering, 24.00" high, with outline and shade provided. There shall be four (4) letters provided.

	Bidder Complies	
	Yes	No

LETTERING

There shall be reflective lettering, 5.00" high, with outline and shade provided. There shall be 12 letters provided.

MALTESE CROSS INSTALLATION

There shall be one (1) pair of maltese crosses, comprised of genuine gold leaf material, provided and installed on cab doors.

FIRE APPARATUS PARTS MANUAL

There shall be one (1) custom parts manual(s) in USB flash drive format for the complete fire apparatus provided.

The manual(s) shall contain the following:

- Job number
- Part numbers with full descriptions
- Table of contents
- Parts section sorted in functional groups reflecting a major system, component, or assembly
- Parts section sorted in alphabetical order
- Instructions on how to locate parts

Each manual shall be specifically written for the chassis and body model being purchased. It shall not be a generic manual for a multitude of different chassis and bodies.

Service Parts Internet Site

The service parts information included in these manuals are also available on the factory website. The website offers additional functions and features not contained in this manual, such as digital photographs and line drawings of select items. The website also features electronic search tools to assist in locating parts quickly.

CHASSIS SERVICE MANUALS

There shall be one (1) chassis service manuals on USB flash drives containing parts and service information on major components provided with the completed unit.

The manual shall contain the following sections:

- Job number
- Table of contents
- Troubleshooting
- Front Axle/Suspension
- Brakes
- Engine

	Bidder Complies	
	Yes	No

- Tires
- Wheels
- Cab
- Electrical, DC
- Air Systems
- Plumbing
- Appendix

The manual shall be specifically written for the chassis model being purchased. It shall not be a generic manual for a multitude of different chassis and bodies.

CHASSIS OPERATION MANUAL

The chassis operation manual shall be provided on one (1) USB flash drive.

ONE (1) YEAR MATERIAL AND WORKMANSHIP

Each new piece of apparatus shall be provided with a minimum **one (1) year** basic apparatus material and workmanship limited warranty. The warranty shall cover such portions of the apparatus built by the manufacturer as being free from defects in material and workmanship that would arise under normal use and service.

A copy of the warranty certificate shall be submitted with the bid package (no exception).

ENGINE WARRANTY

A Cummins **five (5) year** limited engine warranty shall be provided. A copy of the warranty certificate shall be submitted with the bid package.

STEERING GEAR WARRANTY

A TRW **one (1) year** limited steering gear warranty shall be provided. A copy of the warranty certificate shall be submitted with the bid package.

FIFTY (50) YEAR STRUCTURAL INTEGRITY

The chassis frame shall be provided with a **fifty (50) year** material and workmanship limited warranty. The warranty shall cover the chassis frame as being free from defects in material and workmanship that would arise under normal use and service.

A copy of the warranty certificate shall be submitted with the bid package (no exception).

FRONT AXLE FIVE (5) YEAR MATERIAL AND WORKMANSHIP WARRANTY

A Meritor™ Axle 5 year limited warranty shall be provided.

SINGLE REAR AXLE FIVE (5) YEAR MATERIAL AND WORKMANSHIP WARRANTY

A Meritor™ Axle 5 year limited warranty shall be provided.

	Bidder Complies	
	Yes	No

ABS BRAKE SYSTEM THREE (3) YEAR MATERIAL AND WORKMANSHIP WARRANTY

A Meritor Wabco™ ABS brake system **three (3) year** limited warranty shall be provided.

TEN (10) YEAR STRUCTURAL INTEGRITY

The new cab shall be provided with a **ten (10) year** material and workmanship limited warranty. The warranty shall cover such portions of the cab built by the manufacturer as being free from structural failures caused by defects in material and workmanship that would arise under normal use and service.

A copy of the warranty certificate shall be submitted with the bid package (no exception).

TEN (10) YEAR PRO-RATED PAINT AND CORROSION

Each new piece of apparatus shall be provided with a **ten (10) year** pro-rated paint and corrosion limited warranty on the apparatus cab. The warranty shall cover painted exterior surfaces of the body to be free from blistering, peeling, corrosion, or any other adhesion defect caused by defective manufacturing methods or paint material selection that would arise under normal use and service.

A copy of the warranty certificate shall be submitted with the bid package (no exception).

COMPARTMENT LIGHT WARRANTY

The compartment lights shall not offer an extended warranty.

TRANSMISSION WARRANTY

The transmission shall have a **five (5) year/unlimited mileage** warranty covering 100 percent parts and labor. The warranty is to be provided by Allison Transmission and not the apparatus builder.

TRANSMISSION COOLER WARRANTY

The transmission cooler shall carry a five (5) year parts and labor warranty (exclusive to the transmission cooler). In addition, a collateral damage warranty shall also be in effect for the first three (3) years of the warranty coverage and shall not exceed $10,000 per occurrence. A copy of the warranty certificate shall be submitted with the bid package.

WATER TANK WARRANTY

The UPF poly water tank shall be provided with a lifetime material and workmanship limited warranty.

A copy of the warranty certificate shall be submitted with the bid package (no exception).

TEN (10) YEAR STRUCTURAL INTEGRITY

Each new piece of apparatus shall be provided with a **ten (10) year** material and workmanship limited warranty on the apparatus body. The warranty shall cover such portions of the apparatus built by the manufacturer as being free from defects in material and workmanship that would arise under normal use and service.

A copy of the warranty certificate shall be submitted with the bid package (no exception).

	Bidder Complies	
	Yes	No

ROLL UP DOOR MATERIAL AND WORKMANSHIP WARRANTY

A Gortite roll-up door limited warranty shall be provided. The mechanical components of the roll-up door shall be warranted against defects in material and workmanship for the lifetime of the vehicle. A **six (6) year** limited warranty shall be provided on painted and satin roll up doors.

A copy of the warranty certificate shall be submitted with the bid package.

PUMP WARRANTY

The Waterous pump shall be provided with a Seven (7) year material and workmanship limited warranty.

A copy of the warranty certificate shall be submitted with the bid package (no exception).

TEN (10) YEAR PUMP PLUMBING WARRANTY

The stainless steel plumbing components and ancillary brass fittings used in the construction of the water/foam plumbing system shall be warranted for a period of **ten (10) years or 100,000 miles**. This covers structural failures caused by defective design or workmanship, or perforation caused by corrosion, provided the apparatus is used in a normal and reasonable manner. This warranty is extended only to the original purchaser for a period of ten years from the date of delivery.

A copy of the warranty certificate shall be submitted with the bid package (no exception).

FOAM SYSTEM WARRANTY

A **one (1) year** material and workmanship limited warranty shall be provided on the foam system. A **five (5) year** material and workmanship limited warranty shall be provided on the foam system control head.

A copy of the warranty certificate shall be submitted with the bid package (no exception).

SIX (6) YEAR GENERATOR MATERIAL AND WORKMANSHIP WARRANTY

A Harrison Hydra-Gen generator **six (6) year** limited warranty shall be provided.

TEN (10) YEAR PRO-RATED PAINT AND CORROSION

Each new piece of apparatus shall be provided with a **ten (10) year** pro-rated paint and corrosion limited warranty on the apparatus body. The warranty shall cover painted exterior surfaces of the body to be free from blistering, peeling, corrosion, or any other adhesion defect caused by defective manufacturing methods or paint material selection that would arise under normal use and service.

A copy of the warranty certificate shall be submitted with the bid package (no exception).

THREE (3) YEAR MATERIAL AND WORKMANSHIP

The gold leaf lamination shall be provided with a **three (3) year** material and workmanship limited warranty. The warranty shall cover the gold leaf lamination as being free from defects in material and workmanship that would arise under normal use and service.

	Bidder Complies	
	Yes	No

A copy of the warranty certificate shall be submitted with the bid package (no exception).

VEHICLE STABILITY CERTIFICATION

The fire apparatus manufacturer shall provide a certification stating the apparatus complies with NFPA 1901, current edition, section 4.13, Vehicle Stability. The certification shall be provided at the time of bid.

ENGINE INSTALLATION CERTIFICATION

The fire apparatus manufacturer shall provide a certification, along with a letter from the engine manufacturer stating they approve of the engine installation in the bidder's chassis. The certification shall be provided at the time of delivery.

POWER STEERING CERTIFICATION

The fire apparatus manufacturer shall provide a certification stating the power steering system as installed meets the requirements of the component supplier. The certification shall be provided at the time of bid.

CAB INTEGRITY CERTIFICATION

The fire apparatus manufacturer shall provide a cab crash test certification with this proposal. The certification shall state that a specimen representing the substantial structural configuration of the cab has been tested and certified by an independent third party test facility. Testing events shall be documented with photographs, real-time and high-speed video, vehicle accelerometers, cart accelerometers, and a laser speed trap. The fire apparatus manufacturer shall provide a state licensed professional engineer to witness and certify all testing events. Testing shall meet or exceed the requirements below:

- European Occupant Protection Standard ECE Regulation No.29.
- SAE J2422 Cab Roof Strength Evaluation - Quasi-Static Loading Heavy Trucks.
- SAE J2420 COE Frontal Strength Evaluation - Dynamic Loading Heavy Trucks.

Roof Crush

The cab shall be subjected to a roof crush force of 22,500 lb. This value meets the ECE 29 criteria, and is equivalent to the front axle rating up to a maximum of ten (10) metric tons.

Side Impact

The same cab shall be subjected to dynamic preload where a 13,275-lb moving barrier is slammed into the side of the cab at 5.50 mph, striking with an impact of 13,000 ft-lb of force. This test is part of the SAE J2422 test procedure and more closely represents the forces a cab shall see in a rollover incident.

Frontal Impact

The same cab shall withstand a frontal impact of 32,600 ft-lb of force using a moving barrier in accordance with SAE J2420.

	Bidder Complies	
	Yes	No

Additional Frontal Impact

The same cab shall withstand a frontal impact of 65,200 ft-lb of force using a moving barrier. (Twice the force required by SAE J2420)

The same cab shall withstand all tests without any measurable intrusion into the survival space of the occupant area.

There shall be no exception to any portion of the cab integrity certification. Nonconformance shall lead to immediate rejection of bid.

CAB DOOR DURABILITY CERTIFICATION

Robust cab doors help protect occupants. Cab doors shall survive a 200,000 cycle door slam test where the slamming force exceeds 20 G's of deceleration. The bidder shall certify that the sample doors similar to those provided on the apparatus have been tested and have met these criteria without structural damage, latch malfunction, or significant component wear.

WINDSHIELD WIPER DURABILITY CERTIFICATION

Visibility during inclement weather is essential to safe apparatus performance. Windshield wipers shall survive a 3 million cycle durability test in accordance with section 6.2 of SAE J198 *Windshield Wiper Systems - Trucks, Buses and Multipurpose Vehicles.* The bidder shall certify that the wiper system design has been tested and that the wiper system has met these criteria.

SEAT BELT ANCHOR STRENGTH

Seat belt attachment strength is regulated by Federal Motor Vehicle Safety Standards and should be validated through testing. Each seat belt anchor design shall withstand 3000 lb of pull on both the lap and shoulder belt in accordance with FMVSS 571.210 Seat Belt Assembly Anchorages. The bidder shall certify that each anchor design was pull tested to the required force and met the appropriate criteria.

SEAT MOUNTING STRENGTH

Seat attachment strength is regulated by Federal Motor Vehicle Safety Standards and should be validated through testing. Each seat mounting design shall be tested to withstand 20 G's of force in accordance with FMVSS 571.207 Seating Systems. The bidder shall certify, at time of delivery, that each seat mount and cab structure design was pull tested to the required force and met the appropriate criteria.

PERFORMANCE CERTIFICATIONS

Cab Air Conditioning

Good cab air conditioning temperature and air flow performance keeps occupants comfortable, reduces humidity, and provides a climate for recuperation while at the scene. The cab air conditioning system shall cool the cab from a heat-soaked condition at 100 degrees Fahrenheit to an average of 78 degrees Fahrenheit in 30 minutes. The bidder shall certify that a substantially similar cab has been tested and has met these criteria.

	Bidder Complies	
	Yes	No

Cab Defroster

Visibility during inclement weather is essential to safe apparatus performance. The defroster system shall clear the required windshield zones in accordance with SAE J381 Windshield Defrosting Systems Test Procedure And Performance Requirements - Trucks, Buses, And Multipurpose Vehicles. The bidder shall certify that the defrost system design has been tested in a cold chamber and passes the SAE J381 criteria.

Cab Auxiliary Heater

Good cab heat performance and regulation provides a more effective working environment for personnel, whether in-transit, or at a scene. An auxiliary cab heater shall warm the cab 77 degrees Fahrenheit from a cold-soak, within 30 minutes when tested using the coolant supply methods found in SAE J381. The bidder shall certify, at time of delivery, that a substantially similar cab has been tested and has met these criteria.

AMP DRAW REPORT

The bidder shall provide, at the time of bid and delivery, an itemized print out of the expected amp draw of the entire vehicle's electrical system.

The manufacturer of the apparatus shall provide the following:

- Documentation of the electrical system performance tests.
- A written load analysis, which shall include the following:
  - The nameplate rating of the alternator.
  - The alternator rating under the conditions specified per:
    - Applicable NFPA 1901 or 1906 (Current Edition).
  - The minimum continuous load of each component that is specified per:
    - Applicable NFPA 1901 or 1906 (Current Edition).
  - Additional loads that, when added to the minimum continuous load, determine the total connected load.
  - Each individual intermittent load.

All of the above listed items shall be provided by the bidder per the applicable NFPA 1901 or 1906 (Current Edition).

Lancaster County Procurement
PO Box 1809, 101 N. Main St.
Lancaster, SC 29721

INVITATION FOR BID

Solicitation No:	500210112-1
Date Issued:	December 15, 2020
By:	Cathy McDaniel
Phone:	803-416-9963
E-Mail:	cdmcdaniel@lancastersc.net

LANCASTER COUNTY FIRE RESCUE PUMPER BID

Set forth the term "Offer" shall also mean "Bid" or "Proposal" or "Qualifications". All sealed Offers from responding participants are subject to all conditions and provisions herein. Offers will only be received by Lancaster County Procurement, located at 101 N. Main St., Lancaster, SC 29720. All submitted Offers will be publicly acknowledged by the Procurement Director or an approved designee.

LANCASTER COUNTY, SC

Cathy McDaniel
Director, Procurement

PRE-BID:		
INQUIRIES DUE BY:	Tuesday, January 5, 2020	12:00 AM
SUBMIT OFFER BY:	Thursday, January 12, 2020	2:30 PM

CONTRACT AWARD: LOWEST, RESPONSIVE / RESPONSIBLE OFFER

Notifications for this solicitation, including addenda and awards, can be found via the Lancaster County website at Open Solicitations/Vendor Registration .

ATTENTION: DUE TO COVID-19, PROVISIONS ARE BEING MADE TO COMPLY WITH SOCIAL DISTANCING MEASURES. ALL SOLICITATIONS ARE REQUIRED TO BE SUBMITTED ONLINE AND ALL OPENINGS AND EVALUATIONS WILL TAKE PLACE THROUGH ONLINE MEETINGS VIA ZOOM. ALL BID TABS AND AWARDS WILL CONTINUE TO BE POSTED ONLINE.

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1.0 OVERVIEW.

1.1 INTENT

The County of Lancaster, South Carolina ("County") is requesting sealed Offers from qualified firms ("Vendor") for **Lancaster County Fire Rescue Pumper**; Solicitation No. **500210112-1**. Lancaster County Procurement, located at 101 N. Main St., Lancaster, South Carolina 29720, shall receive offers until the date and time listed on the cover page of this solicitation. A public announcement of all offers to this solicitation shall follow by reading thereafter. Responses to this solicitation will be used to determine which Vendor is capable of performing this solicitation's scope of work in a manner determined that best meets the needs of the County for this individual solicitation.

Each Offer must meet all terms, conditions, and specifications of this solicitation in order to obtain contract award. By virtue of submission, Vendor acknowledges agreement and acceptance of all provisions except as those expressly consented in this solicitation. Non-substantial deviations may be considered, provided Vendor submits a full explanation and justification of proposed deviations. Whether any such proposed deviation is deemed non-substantial will be determined by the County in its sole discretion.

1.2 AWARD OF CONTRACT

All submitted Offers are to be opened on the designated date and time listed on the front page. All Offers will be publicly acknowledged, recorded, and thereafter evaluated for appropriate levels of responsiveness and responsibility. The contract shall be awarded to the lowest responsible bidder whose bid meets the requirements and criteria set forth in the request for bids. For requests for proposals, and request for statement of qualifications cost proposal may or may not be a factor in selection, based on the selection criteria. Lancaster County shall make award determination to the Offer deemed most advantageous to the County. Upon determination of a winning Offer, a Notice of Award shall be issued and the successful Offer will be publicly posted on the County website and the successful Vendor will receive a contract.

1.3 RIGHT TO DECLINE

Lancaster County reserves the right to reject any or all Offers, to cancel a solicitation, to negotiate specific terms, conditions, and/or provisions on any contract that may arise from this solicitation or, to waive any informalities or irregularities therein as in the best interest of Lancaster County. No contractual obligation or liability on the part of the County shall exist unless and until a final contract is executed.

Ambiguous bids, which are uncertain as to terms, delivery quantity or compliance with specifications may be rejected or disregarded if such action is in the best interest of the county.

1.4 COMPETITION

This solicitation is intended to promote competition. If any language, specifications, terms and conditions, or any combination thereof restricts or limits the requirements in this solicitation to a single source, it shall be the responsibility of the interested vendor to notify the purchasing department in writing within ten (10) days prior to the opening date. The solicitation may or may not be changed but a review of such notification will be made.

1.5 PRICING

When price is a determining factor, unit prices will govern over extended prices unless otherwise stated in this solicitation.

2.0 GENERAL CONDITIONS AND PROVISIONS.

2.1 CERTIFICATE(S) OF INSURANCE

Once awarded, the successful Vendor(s) may be required to provide valid proof of insurance within ten (10) days from Notice of Award and prior to commencing any work, including the following: Worker's Compensation, General Liability and Auto Liability.

2.2 IRS FORM W-9 AND MBE/WBE AFFIDAVIT

If selected for award, the successful Vendor(s) will be required to submit a completed IRS Form W-9, or to resubmit IRS Form W-9 if form on file is not current with the County. If applicable, a Lancaster County MBE/WBE Affidavit should be completed (see Section 6.0, Forms).

2.3 PRIME CONTRACTOR RESPONSIBILITIES

The successful Vendor(s) will be required to assume sole responsibility for the complete efforts as they pertain to this solicitation. The County will consider the Respondent to be the sole point of contact concerning all contractual matters as they pertain to this solicitation.

2.4 SUBCONTRACTING

If any part of the scope of work for this solicitation is to be subcontracted, the prime contractor shall identify the subcontracting organization and any contractual agreements made with the same. All subcontractors must be approved, in writing, by the County. The County reserves the right to reject any or all subcontractors and to require substitution of a qualified replacement to participate in the scope of work as specified herein.

2.5 HOLD HARMLESS AGREEMENT

The selected Vendor shall hold County harmless for any loss, damage, claims arising from, or related to the performance of the awarded contract. The selected Vendor(s) must exercise all reasonable and customary precautions to prevent any harm or loss to all persons and property related to awarded contract. The selected Vendor(s) agree to indemnify and hold the County and County employees harmless from all claims, demands, causes of action or suits of whatever nature arising out of the goods, services, labor, or materials furnished by contractors or subcontractors alike under the provisions of the solicitation documents.

2.6 NON-COLLUSIVE AGREEMENT

By submitting an Offer, any Vendor(s) or any authorized agent(s) of any Vendor(s), certifies under penalty of perjury that, to their best knowledge and belief, the validity of statements within their submission have been arrived at independently without collusion, consultation, communication, or pre-arranged agreement for the purposes of restricting solicitation competition. Further, no attempt has been made nor will be made by any Vendor(s) to induce any other Vendor(s) to submit or not submit Offers based on the purpose of restricting solicitation competition.

2.7 NON-DISCRIMINATION

For the duration of the eventual contract, the successful Vendor(s) shall not discriminate against any employee or program applicant because of age, race, creed, color, nationality, ancestry, marital status, sexual orientation, gender identity or expression, disability, or sex. In addition, accordant to equal employment opportunities, the successful bidder shall also consider all qualified applicants for employment without regard to age, race, creed, color, nationality, ancestry, marital status, sexual orientation, gender identity or expression, disability, or sex. Such equal employment opportunities include, but are not limited to employment, promotion, demotion, transfer, recruitment, layoff, termination, rate of pay, selection for training, or apprenticeship.

2.8 DRUG FREE WORKPLACE

During the performance of the scope of work covered within this solicitation, the successful Vendor(s) agrees to provide a drug-free workplace for employees. Vendor will post in conspicuous places (available to employees and applicants alike) a statement notifying the unlawful nature of the manufacture, sale, distribution, dispensation, possession, or use of any controlled substances as prohibited in the workplace, and to specify the actions to be taken against employees for the violations of such prohibited actions.

2.9 LAWFUL COMPLIANCE

The successful Vendor(s) shall comply with all laws relating to practice as they pertain to the state of South Carolina as well as federal regulations. Upon award of contract under this solicitation, any Vendor(s) to whom award is made must be authorized and/or licensed to do business within the state of South Carolina.

2.10 DELAY

The Vendor(s) responsible for contractual services shall not be liable for any excess cost(s) if the failure to perform the contract arises out of any cause beyond control and without fault or negligence of the responsible party. Such causes may include, but are not limited to, acts of God or public enemy, acts of Government in either its sovereign or contractual capacity, fires, floods, epidemics, quarantine restrictions, strikes, or embargoes; but in every case, the failure to perform must be beyond the control and without fault of the Vendor(s) responsible for any aforementioned contractual services. Written notice must be made to Lancaster County immediately upon any unforeseen delay, whether excusable or not. Notice must include reason for delay and additional time and/or compensation requested.

In the case of default by the contractor, the county reserves the right to purchase any or all items in default in the open market, charging the contractor with any excessive costs. Should such charge be assessed, no subsequent bids of the defaulting contractor will be considered until the assessed charge has been satisfied.

2.11 OWNERSHIP OF MATERIAL

Ownership of all data, material, and documentation originated and prepared for the County pursuant to this solicitation shall belong exclusively to Lancaster County.

2.12 LOCAL VENDOR

The lowest local responsible and responsive Vendor who is within three (3) percent, with a cap of six thousand dollars ($6,000.00), of the lowest non-local responsible and responsive Vendor, may match the Offer submitted by the non-local responsible and responsive Vendor and thereby be awarded the contract. The local preference as set forth in this section shall only be applied to responses to solicitations of written quotes and invitations to bid in excess of ten thousand dollars ($10,000.00). The local preference, as set forth in this section, shall only be given to local responsible and responsive Vendors who have a physical business address located and operating within Lancaster County for a minimum of six (6) months prior to the solicitation of quotes and/or Offer. Vendor shall also have met all other requirements of the solicitations, including, without limitation, payment of all duly assessed state and local taxes. If state or federal guidelines prohibit or otherwise limit local preference, then the County shall not use local preference in awarding the contract. If there are multiple responsible and responsive Vendors who meet the local preference guidelines as set forth in the section, the County shall use standard procurement practice and procedure as set forth in the article to determine the priority of selection. The local preference as set forth in this section does not waive or otherwise abrogate the County's unqualified right to reject any and all bids or proposals or accept such Offers, as appears in the County's best interest.

2.13 TERMINATION

The Contract for this solicitation must be valid from date of signature or initial Purchase Order issuance and must remain valid until all services are rendered complete. Breach or non-performance of any Contract term will constitute cause upon which the County may immediately terminate the contract by written notice. Termination states that shall a dispute arise, and if, after good faith effort at resolution the dispute is not resolved, either party may terminate the contract by providing thirty (30) days written notice to the other party. Termination may include:

- Convenience: In the event that this contract is terminated upon request, and for the convenience of the County without the required thirty (30) days advance written notice, then the County must negotiate reasonable termination costs, if applicable.

- Cause: Termination by the County for cause, default, or negligence on the part of the Vendor(s) responsible for the scope of work must be excluded from the foregoing provisions, and termination costs, if any, must not apply. The thirty (30) days advance written notice requirement is waived and the default provisions listed herein must apply.

- Default: In the case of default by the Vendor(s) responsible for the scope of work, the County reserves the right to purchase/lease all items/services in default in the open market, charging default Vendor(s) with any excessive costs.

2.14 CHOICE OF LAW

All agreements shall be governed by and construed in accordance with Laws of the State of South Carolina and parties irrevocably submit to the nonexclusive jurisdiction of the courts of, or the federal courts in, South Carolina.

2.15 SOUTH CAROLINA FREEDOM OF INFORMATION ACT

All submissions of responding Vendors are subject to the South Carolina Freedom of Information Act, S.C. Code Annotated Sections, 3-4-10, et seq. Any commercial or financial information that is deemed as privileged and confidential must be visibly and clearly marked as "CONFIDENTIAL" by Vendor and must be applied to each specific part of an Offer deemed as such. Failure to do so may result in disclosure of submitted information as a determinant to uphold compliance to Federal and State information laws as they pertain to the access of public procurement information. The county reserves the right to determine whether this information should be exempt from disclosure and no legal action may be brought against the county or its agents for its determination in this regard.

2.16 NO CONTACT

Vendors are prohibited from contacting any appointed official, elected official, or employee of Lancaster County concerning any active or future solicitations. Any communication concerning solicitations are to be through the Procurement Office. Any vendor found in violation of this clause shall be suspended or debarred from participating in this or future Lancaster County solicitations.

2.17 CONTRACT ADMINISTRATION AND ASSIGNMENT

Questions or problems arising after award of this contract shall be directed to the Purchasing Director, located at 101 N. Main St., Lancaster, SC 29720, or by calling (803) 416-9963. The County Administrator or authorized designee must approve all change orders in writing. No contract or its provisions may be assigned, sublet, or transferred without the written consent of the County. Lancaster County shall not be bound to any change in the original contract unless approved by the County Administrator or authorized designee.

2.18 IMMIGRATION REFORM AND CONTROL

By submitting an Offer, any Vendor or any authorized agent of any Vendor, is expected to comply with the Immigration and Reform Control Act of 1986 (IRCA). This act, with certain limitations, requires the verification of

the employment status of all individuals who were hired on or after November 6, 1986 by the Vendor, as well as any subcontractors. The usual method of verification for this information would be through the Employment Verification (I-9) Form. With any submitted Offer, Vendor hereby certifies without exception that they have complied with all federal and state laws relating to immigration and reform and will continue to comply throughout the duration of any awarded contract(s). Any misrepresentation in this regard or any employment of persons not authorized to work in the United States constitutes a material breach and, in Lancaster County's discretion, may subject any contract to termination and applicable damages. At the County's request, Vendor may be requested to produce any documentation or other such evidence to verify the Vendor's compliance with any provision, duty, certification, or like while under contract.

2.19. **PROHIBITION OF GRATUITIES**

Section 8-13-705 of the Code of Laws of South Carolina states: offering, giving, soliciting, or receiving anything of value to influence action of public employee, member or official, or to influence testimony of witness; exceptions; penalty for violation; shall be subject to punishment provided by section 16-9-210 and section 16-9-220.

2.20 WAIVER

The county reserves the right to waive any instruction to bidders, general or special provisions, general or special conditions or specifications deviation if deemed in the best interest of the county.

2.21 PUBLICITY RELEASES

Contractor agrees not to refer to award of this contract in commercial advertising in such a manner as to state or imply that the products or services provided are endorsed or preferred.

3.0 SCOPE OF WORK

3.1 SCOPE AND SPECIFICATIONS

Please see attached document for specifications.

3.2 Bidders Responsibility

Each bidder shall fully acquaint himself with conditions relating to the scope and restrictions attending the execution of work under the conditions of this bid. It is expected that this will sometimes require on-site observation. The failure or omission of a bidder to acquaint himself with existing conditions shall in no way relieve him of any obligation with respect to this bid or to the contract.

4.0 OFFER SUBMITTAL

4.1 SUBMITTAL INSTRUCTIONS

- Please submit **one (1) signed (complete) copy** of Offer.
- Offers shall be delivered online, prior to deadline, and ONLY to Lancaster County Procurement Online Bid Portal located on the Procurement Open Solicitations page of the Lancaster County Website at: Open Solicitations Link
- A signed copy of the General Provisions and General Conditions must also be included in order for any Offer to gain consideration.
- Late or improperly formatted submissions will not be considered.
- Any vendor who wishes to participate in the online bid opening should contact the Procurement Director through the email address provided in this solicitation no later than 48 hours before the bid opening. A Zoom invitation will be sent out prior to the deadline for bids.
- Only one (1) Offer may be submitted by each Vendor or Vendor representative.
- The County accepts no responsibility for any expense incurred by Vendors to this solicitation.

4.2 INQUIRIES

All questions regarding this solicitation are to be submitted in writing and addressed ONLY to Lancaster County Procurement via the designated email on the front page of this solicitation. The date and time listed on the cover page of the solicitation will be the deadline for inquiries. All responses will be publicly available following the inquiry period via the solicitation listing on the Lancaster County website as an addendum. The County reserves the right to decline to respond to any questions if, in the County's assessment, the information cannot be obtained and shared with all Vendors in a timely manner.

4.3 TOTAL BID

Having carefully examined the instructions, terms, conditions, specifications, addenda, and scope, as well as all provisions of proper compliance, included with this solicitation the Vendor proposes to furnish all necessary labor and/or materials as called for by said documentation listed within this solicitation. For this solicitation, the Vendor acknowledges and agrees to all aspects of the work required to complete this solicitation's scope of work for an agreed contract sum not to exceed the total amount listed in Total Base Bid.

Base Bid: _$_____ (Numeric)

_____ (Written)

ESTIMATED TIME TO COMPLETE: _____

DATE AVAILABLE TO START: _____

4.4 ACKNOWLEDGEMENT OF ADDENDA

Notifications for this solicitation, including addenda, can be found via the Lancaster County website at **www.mylancastersc.org** (Departments, Procurement, Open Solicitations).

Vendor hereby acknowledges all addenda, up through and including number _____.

INITIALS_____

4.5 BID GUARANTY

If indicated below, each Vendor will be asked to submit guaranty by means of certified check, cashier's check, or bid bond equal to at least five percent (10%) of Offer, payable to Lancaster County. If indicated, Vendor will supply a payment and performance bond equal to one hundred percent (100%) of contract sum, as required, within ten (10) days of notice of award and before contract execution:

BID BOND REQUIRED:	YES __x__	NO _____
PAYMENT & PERFORMANCE BOND REQUIRED:	YES __x__	NO _____

5.0 Vendor Information/Acknowledgement

THIS PAGE MUST BE COMPLETED AND RETURNED WITH YOUR OFFER

PLEASE SUBMIT A SIGNED COPY OF THIS FORM WITH YOUR OFFER. BY SUBMITTING AN OFFER, YOU ARE AGREEING TO ALL CONDITIONS AND PROVISIONS OF THIS SOLICITATION AND YOU AGREE TO HOLD OFFER OPEN FOR A MINIMUM OF NINETY (90) CALENDAR DAYS AFTER OFFER'S OPENING DATE.

(Please print legibly or type in spaces below)

COMPANY NAME: _____

COMPANY ADDRESS: _____

CITY, STATE, ZIP: _____

PHONE NUMBER: _____EMAIL: _____

TAXPAYER IDENTIFICATION #: _____

STATE OF INCORPORATION (If applicable): _____

PLEASE CHECK ALL THAT APPLY (As defined via MBE/WBE affidavit, see section 7.0):

- ☐ MINORITY OWNED (If checked, must submit MBE/WBE affidavit: Section 7.0)
- ☐ WOMAN OWNED (If checked, must submit MBE/WBE affidavit: Section 7.0)
- ☐ NOT MINORITY OR WOMAN OWNED

COMPANY OFFICER'S NAME (Please print): _____

AUTHORIZED SIGNATURE: _____DATE SIGNED: _____

6.0 Additional Forms (If Applicable)

COUNTY OF LANCASTER, SOUTH CAROLINA AFFIDAVIT OF CERTIFICATION:

Small and Disadvantaged Business Enterprises

Lancaster County requires vendors that claim SBE/MBE/WBE status to provide either proof of current SBE/MBE/WBE certification or to attest that they meet the qualifications for MBE/WBE certification. Vendors are to complete this form to attest that their company is certified as a MBE/WBE, and it meets the qualifications for SBE/MBE/WBE certification as defined by Lancaster County Procurement Code, Sec. 2-301:

LANCASTER COUNTY QUALIFICATIONS FOR SBE/MBE/WBE CERTIFICATION:

Certified classification – A Certified firm is a firm that has been accepted by Lancaster County as certified. The business or business owner must be able to show evidence of:

(1) Existence as a "for profit" business;
(2) Operations for at least one (1) year;
(3) U.S. citizenship or legal resident alien status; and either:
   a. Be determined as an eligible SBE/MBE/WBE in accordance with this subchapter, subject to the provisions of "small business enterprise (SBE), minority business enterprise (MBE)" and "woman-owned business enterprise (WBE)" as defined in this subsection; or
   b. The business holds current registration of SBE/MBE/WBE status with a reciprocal agency deemed acceptable to the county.

Small business enterprise (SBE) classification is a business:

(1) Which is at least fifty-one (51) percent owned by a US Citizen.
(2) Qualifying individual(s) must unconditionally and directly own and control at least 51% of the business. Control means that both the long-term decision making and the day-to-day management of the business are controlled by qualifying individual(s).
(3) The 51% ownership may not be through another business entity.
(4) Which is a for-profit entity which performs a commercially useful function; and
(5) Which is a certified firm through a State or Federal program.

Minority business enterprise (MBE) classification is a business:

(1) Which is at least fifty-one (51) percent owned by one (1) or more minority individuals, or in the case of a publicly owned business, at least fifty-one (51) percent of all classes of the stock of which is owned by one (1) or more such minority individuals;
(2) Whose management, policies, major decisions, and daily business operations are independently managed and controlled by one (1) or more minority individuals;
(3) Which performs a commercially useful function; and
(4) Which is a certified firm through a State or Federal program.

Minority individual is classified as a natural person of at least twenty-five (25) percent minimum (documentation may be required) in one (1) of the following groups:

(1) African-Americans/Black;
(2) Hispanic-Americans, which includes persons who are Mexican, Puerto Rican, Cuban, Caribbean, Dominican, Central or South American, regardless of race;
(3) Native-Americans, which includes persons who are American-Indians, Eskimos, Aleuts, or Native-Hawaiians;
(4) Asian-Americans, which includes persons who are individuals of Far East Asia, Southeast Asia, the islands of the Pacific, or the Indian subcontinent;
(5) Arab-Americans.

Woman-owned business enterprise (WBE) classification is a business:

Which is at least fifty-one (51) percent owned by one (1) or more women, or in the case of a publicly owned business, at least fifty-one (51) percent of all classes of the stock of which is owned by one (1) or more such women;

(1) Whose management, policies, major decisions, and daily business operations are independently managed and controlled by one (1) or more such women;
(2) Which performs a commercially useful function; and
(3) Which is a certified firm through a Federal or State program.

COMPANY INFO (Required):

Legal Name of Company:_____
Tax ID (EIN):_____
Company Address:_____
Company Phone Number:_____
Company Email Address:_____

Enterprise Status: (check all that apply): a. MBE____ b. WBE____

STATE OF SOUTH CAROLINA)
County of Lancaster)

I CERTIFY THAT I AM A MINORITY OR A WOMAN WHO IS AN OWNER OF THE ABOVE- REFERENCED FIRM CLAIMING STATUS AS A SMALL BUSINESS ENTERPRISE, MINORITY-OWNED BUSINESS ENTERPRISE (MBE), OR WOMAN-OWNED BUSINESS ENTERPRISE (WBE). I DECLARE, UNDER PENALTY OF PERJURY, THAT THE INFORMATION PROVIDED IN THIS SUBMISSION AND ALL SUPPORTING DOCUMENTS IS TRUE AND CORRECT AND I UNDERSTAND THAT IT IS MATERIAL TO THE PROCEEDINGS OF LANCASTER COUNTY.

Signature:_____ Dated:_____

Printed Name:_____ Title:_____

Certification must be documented. Please either attach a copy of your firm's certification or have this document notarized. You are not required to do both.

SUBSCRIBED AND SWORN TO before me this_____day of_____, 20_____, by

_____.

_____
NOTARY PUBLIC (seal)
Commission expires:

VendorRegistry
powered by mdf commerce

Company	Contact	Email	Times Notified	Last Notified
A P Fire Protection	Julie Pyne	julie@apfirepro.com	0	NO
A P Fire Protection	Todd Pyne	support@apfirepro.com	0	NO
ALAN JAY AUTOMOTIVE NETWORK	MATT FORTE	matt.forte@alanjay.com	1	12/15/2020 11:15:43 PM
All Fire Service , LLC	Jamie Setzer	jamie.setzer@allfireservice.com	0	NO
All Fire Service , LLC	Paul Odell	paul.odell@allfireservice.com	0	NO
Amick Equipment Co., Inc.	Ryan Amick	sales@amickequipment.com	1	12/15/2020 11:15:36 PM
Amick Equipment Co., Inc.	Ryan Amick	ryan@amickequipment.com	1	12/15/2020 11:14:12 PM
Benson Ford/Nissan	Lauren Stowers	benson.fleet@gmail.com	0	NO
Bruckner Truck Sales	Dan Southall	dsouthall@brucknertruck.com	0	NO
C W Williams Fire Equipment	Mike White	cwwilliamsfire@comcast.net	0	NO
C W Williams Fire Equipment	Mike White	cwwilliamsfire@comcast.net	0	NO
Carolina Fire Equipment, LLC	Rollin Reynolds	carolinafireequipment@gmail.com	1	12/15/2020 11:14:12 PM
Carolina International Trucks and Idealease, Inc.	Dale Barksdale	dbarksdale@carolinainternational.com	1	12/15/2020 11:15:43 PM
Carolina International Trucks and Idealease, Inc.	Jason Hanson	jhanson@carolinainternational.com	1	12/15/2020 11:14:14 PM
Custom Truck and Body Works Inc	Cody Crooks	cody@customtruckandbodyworks.com	1	12/15/2020 11:14:13 PM
Dan Enterprises Team, LLC	Teddy Castellanos	purchases@danenterprisesteam.com	1	12/15/2020 11:14:14 PM

Company	Contact	Email	Times Notified	Last Notified
Emergency Transportation Associates, LLC	Eric Vogl II	evogl2@joineta.com	1	12/15/2020 11:14:13 PM
EXCEL TRUCK GROUP	ARIC FINNEY	afinney@exceltg.com	0	NO
Lynn Cooper, Inc. /dba: Cooper Motor Company	Dwight Lippy	dlippy@coopertrades.com	1	12/15/2020 11:14:11 PM
Lynn Cooper, Inc. /dba: Cooper Motor Company	Lynn (Chip) Cooper	chipcooper@lynncooper.com	1	12/15/2020 11:14:12 PM
Newton's Fire & Safety	Seth Newton	seth@newtonsfire.com	1	12/15/2020 11:14:11 PM
North America Fire Equipment Co., Inc. (NAFECO)	Jessica Franks	jessica.franks@nafeco.com	1	12/15/2020 11:14:11 PM
North America Fire Equipment Co., Inc. (NAFECO)	Jessica Franks	jessica.franks@nafeco.com	1	12/15/2020 11:14:11 PM
Office Interiors Greenville	Anna Mangione	amangione@oigreenville.com	1	12/15/2020 11:15:36 PM
Safe Industries	Meredith Martin	mmartin@safeindustries.com	1	12/15/2020 11:15:36 PM
SPARTAN FIRE & EMERGENCY	Priscilla Vann	pvann@spartanfire.com	1	12/15/2020 11:14:16 PM
Wally's Fire & Safety Equipment, Inc.	Wally Elliott	wally@wallysfire.com	1	12/15/2020 11:15:36 PM
WORLDWIDE EQUIPMENT INC	ADAM GAFFNEY	adam.gaffney@thetruckpeople.com	1	12/15/2020 11:14:11 PM

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SPARTAN FIRE and Emergency Apparatus
Since 1973

319 Southport Road • Roebuck, S.C. 29376
Office: 864-582-2376 • Fax: 864-582-2377 • Email: spartanfire@spartanfire.com

QUOTATION [X]

ESTIMATE [ ]

Customer: Lancaster County Fire Rescue
111 Covenant Place
Lancaster, SC 29720

Date of Proposal: January 12, 2021
F.O.B.: Lancaster, SC
Estimated Delivery: 10.5-12.5 Months
Payment Terms: Net Pymt/Final Insp.
Salesman: *Jared Phillips*

Item	Qty.	Description	Price	Amount
1	1	**Pierce Pumper Built on a Saber Cab and**		
		Chassis with a Cummins L9 400HP Diesel Engine,		
		3000EVS Allison Automatic Transmission,		
		Waterous CSU 1500 GPM Pump, UPF 1000 Gallon Water		
		Tank, Husky 12 Foam System, Hercules CAFS System		
		System, Whelen LED Warning Lights, Whelen Scene		
		Lights, Shelving, Trays, Built In Accordance to NFPA and		
		The Enclosed Proposal Dated January 12, 2021		**$616,925.00**
2	1	**SC State Sales Tax**		**$500.00**
*	*	**Optional 100% Prepayment Discount is Available in the**		
		Amount of ($16,445.00)		
*	*	**Prepayment is Due 30 Days from Contract Signing**		
*	*	**If Apparatus is Purchased After January 31, 2021**		
		The Apparatus Will Increase $16,650.00		

TOTAL COST **$617,425.00**

THIS QUOTATION EXPIRES AFTER JANUARY 31, 2021

Spartan Fire and Emergency Apparatus is pleased to submit a proposal to Lancaster County Fire Rescue for a **Pierce® Saber Pumper** per your request for quotation. The following paragraphs will describe in detail the apparatus, construction methods, and equipment proposed. This proposal will indicate size, type, model and make of components parts and equipment, providing proof of compliance with each and every item (except where noted) in the departments advertised specifications.

PIERCE MANUFACTURING was founded in 1913. Since then we have been building bodies with one philosophy, "BUILD THE FINEST". Our skilled craftsmen take pride in their work, which is reflected, in the final product. We have been building fire apparatus since the early "forties" giving Pierce Manufacturing over 75 years of experience in the fire apparatus market. Pierce Manufacturing has built and put into service more than 62,500 apparatus, including more than 33,900 on Pierce custom chassis designed and built specifically for fire and emergency applications. Our Appleton, Wisconsin facility has over 870,000 total square feet of floor space situated on approximately 105 acres of land. Our Bradenton, Florida facility has 300,000 square feet of floor space situated on approximately 38 acres of land.

Our beliefs in high ethical standards are carried through in all of our commitments and to everyone with whom we do business. Honesty, Integrity, Accountability and Citizenship are global tenets by which we all live and work. Consequently, we neither engage in, nor have we ever been convicted of price fixing, bid rigging, or collusion in any domestic or international fire apparatus market.

Pierce has only one brand of fire apparatus "Pierce", ensuring you are receiving top of the line product that meets your specification.

In accordance with the current edition of NFPA 1901 standards, this proposal will specify whether the fire department, manufacturer, or apparatus dealership will provide required loose equipment.

Images and illustrative material in this proposal are as accurate as known at the time of publication, but are subject to change without notice. Images and illustrative material is for reference only, and may include optional equipment and accessories and may not include all standard equipment.

GENERAL DESIGN AND CONSTRUCTION

To control quality, ensure compatibility, and provide a single source for service and warranty, the custom cab, chassis, pump module and body will be entirely designed, assembled/welded and painted in Pierce owned manufacturing facilities. This includes, but not limited to the cab weldment, the pumphouse module assembly, the chassis assembly, the body and the electrical system.

QUALITY AND WORKMANSHIP

Pierce has set the pace for quality and workmanship in the fire apparatus field. Our tradition of building the highest quality units with craftsmen second to none has been the rule right from the beginning and we demonstrate that ongoing commitment by: Ensuring all steel welding follows American Welding Society D1.1-2004 recommendations for structural steel welding. All aluminum welding follows American Welding society and ANSI D1.2-2003 requirements for structural welding of aluminum. All sheet metal welding follows American welding Society B2.1-2000 requirements for structural welding of sheet metal. Our flux core arc welding uses alloy rods, type 7000 and is performed to American Welding Society standards A5.20-E70T1. Furthermore, all employees classified as welders are tested

and certified to meet the American welding Society codes upon hire and every three (3) years thereafter. Pierce also employs and American Welding Society certified welding inspector in plant during working hours to monitor weld quality.

Pierce Manufacturing operates a Quality Management System under the requirements of ISO 9001. These standards sponsored by the International Organization for Standardization (ISO) specify the quality systems that are established by the manufacturer for design, manufacture, installation and service. A copy of the certificate of compliance is included with this proposal.

In addition to the Quality Management system, we also employ a Quality Achievement Supplier program to insure the vendors and suppliers that we utilize meet the high standards we demand. That is just part of our overall "Quality at the Source" program at Pierce.

To demonstrate the quality of our products and services, a list of at least fifteen (15) fire departments/municipalities that have purchased vehicles for a second time is provided.

MANUAL AND SERVICE INFORMATION

At time of delivery, complete operation and maintenance manuals covering the apparatus will be provided. A permanent plate will be mounted in the driver's compartment specifying the quantity and type of fluids required including engine oil, engine coolant, transmission, pump transmission lubrication, pump primer and drive axle.

SAFETY VIDEO

At the time of delivery Pierce will also provide one (1) 39-minute, professionally produced apparatus safety video, in DVD format. This video will address key safety considerations for personnel to follow when they are driving, operating, and maintaining the apparatus, including the following: vehicle pre-trip inspection, chassis operation, pump operation, aerial operation, and safety during maintenance.

PERFORMANCE TESTS

A road test will be conducted with the apparatus fully loaded and a continuous run of no less than ten (10) miles. During that time the apparatus will show no loss of power nor will it overheat. The transmission drive shaft or shafts and the axles will run quietly and be free of abnormal vibration or noise. The apparatus when fully loaded will not have less than 25 percent nor more than 50 percent on the front axle, and not less than 50 percent nor more than 75 percent on the rear axle. The apparatus will meet NFPA 1901 acceleration and braking requirements.

SERVICE AND WARRANTY SUPPORT

Pierce dealership support will be provided by Spartan Fire and Emergency Apparatus by operating a Pierce authorized service center. The service center will have factory-trained mechanics on staff versed in Pierce fire apparatus. The service facility will be located within one hundred (100) miles of the fire department.

In addition to the dealership, Pierce has service facilities located in both, Weyauwega, Wisconsin and Bradenton, Florida. Pierce also maintains a dedicated parts facility of over 100,000 square feet in Appleton, Wisconsin. The parts facility stocks in excess of $5,000,000 in parts dedicated to service and replacement parts. The parts facility employs a staff dedicated solely for the distribution and shipment of service and replacement parts.

Service parts for the apparatus being proposed can be found via Pierceparts.com which, is an interactive online tool that delivers information regarding your specific apparatus as well as the opportunity to register for training classes.

As a Pierce customer you have the ability to view the complete bill of materials for your specific apparatus, including assembly drawings, piece part drawings, and beneficial parts notations. You will also have the ability to search the complete Pierce item master through a parts search function which offers all Pierce SKU's and descriptions offered on all Pierce apparatus. Published component catalogs, which include proprietary systems along with an extensive operators manual library is available for easy reference.

Pierce Manufacturing maintains a dedicated service and warranty staff of over 35 personnel, dedicated to customer support, which also maintains a 24 hour 7 day a week toll free hot line, four (4) on staff EVTs, and offers hands-on repair and maintenance training classes multiple times a year.

LIABILITY

The successful bidder will defend any and all suits and assume all liability for the use of any patented process including any device or article forming a part of the apparatus or any appliance furnished under the contract.

INSURANCE PROVIDED BY BIDDER

COMMERCIAL GENERAL LIABILITY INSURANCE

The successful bidder will, during the performance of the contract and for three (3) years following acceptance of the product, keep in force at least the following minimum limits of commercial general liability insurance:

Each Occurrence$1,000,000

Products/Completed Operations Aggregate$1,000,000

Personal and Advertising Injury$1,000,000

General Aggregate$2,000,000

Coverage will be written on a Commercial General Liability form. The policy will be written on an occurrence form and will include Contractual Liability coverage for bodily injury and property damage subject to the terms and conditions of the policy. The policy will include Owner as an additional insured when required by written contract.

COMMERCIAL AUTOMOBILE LIABILITY INSURANCE

The successful bidder will, during the performance of the contract, keep in force at least the following minimum limits of commercial automobile liability insurance and coverage will be written on a Commercial Automobile liability form:

Each Accident Combined Single Limit:$1,000,000

UMBRELLA/EXCESS LIABILITY INSURANCE

The successful bidder will, during the performance of the contract and for three (3) years following acceptance of the product, keep in force at least the following minimum limits of umbrella liability insurance:

Aggregate:$3,000,000

Each Occurrence:$3,000,000

The umbrella policy will be written on an occurrence basis and at a minimum provide excess to the bidder's General Liability and Automobile Liability policies.

The required limits can be provided by one (1) or more policies provided all other insurance requirements are met.

Coverage will be provided by a carrier(s) rated A- or better by A.M. Best.

All policies will provide a 30-day notice of cancellation to the named insured. The Certificate of Insurance will provide the following cancellation clause: Should any of the above described polices be cancelled before the expiration date thereof, notice will be delivered in accordance with the policy provisions.

Bidder agrees to furnish owner with a current Certificate of Insurance with the coverages listed above along with the bid. The certificate will show the purchaser as certificate holder.

INSURANCE PROVIDED BY MANUFACTURER

PRODUCT LIABILITY INSURANCE

The manufacturer will, during the performance of the contract and for three (3) years following acceptance of the product, keep in force at least the following minimum limits of Product Liability insurance:

Each Occurrence$1,000,000

Products/Completed Operations Aggregate$1,000,000

Coverage will be written on a Commercial General Liability form. The policy will be written on an occurrence form. The manufacturer's policy will include the owner as additional insured when required by written contract between the Owner and a Pierce authorized dealer.

UMBRELLA/EXCESS LIABILITY INSURANCE

The manufacturer will, during the performance of the contract and for three (3) years following acceptance of the product, keep in force at least the following minimum limits of umbrella liability insurance:

Each Occurrence:$25,000,000

Aggregate:$25,000,000

The umbrella policy will be written on an occurrence basis and provide excess to the manufacturer's General Liability/Products policies.

The required limits can be provided by one (1) or more policies provided all other insurance requirements are met.

Coverage will be provided by a carrier(s) rated A- or better by A.M. Best.

All policies will provide a 30-day notice of cancellation to the named insured. The Certificate of Insurance will provide the following cancellation clause: Should any of the above described polices be cancelled before the expiration date thereof, notice will be delivered in accordance with the policy provisions.

Manufacturer agrees to furnish owner with a current Certificate of Insurance with the coverages listed above along with the bid. The certificate will show the purchaser as the certificate holder.

SINGLE SOURCE MANUFACTURER

Pierce Manufacturing, Inc. provides an integrated approach to the design and manufacture of our products that delivers superior apparatus and a dedicated support team. From our facilities, the chassis, cab weldment, cab, pumphouse (including the sheet metal enclosure, valve controls, piping and operators panel) and body will be entirely designed, tested, and hand assembled to the customer's exact specifications. The electrical system either hardwired or multiplexed, will be both designed and integrated by Pierce Manufacturing. The warranties relative to these major components (excluding component warranties such as engine, transmission, axles, pump, etc.) will be provided by Pierce as a single source manufacturer. Pierce's single source solution adds value by providing a fully engineered product that offers durability, reliability, maintainability, performance, and a high level of quality.

Your apparatus will be manufactured in Bradenton, Florida.

NFPA 2016 STANDARDS

This unit will comply with the NFPA standards effective January 1, 2016, except for fire department directed exceptions. These exceptions will be set forth in the Statement of Exceptions.

Certification of slip resistance of all stepping, standing and walking surfaces will be supplied with delivery of the apparatus.

All horizontal surfaces designated as a standing or walking surface that are greater than 48.00" above the ground must be defined by a 1.00" wide line along its outside perimeter. Perimeter markings and designated access paths to destination points will be identified on the customer approval print and are shown as approximate. Actual location(s) will be determined based on materials used and actual conditions at final build. Access paths may pass through hose storage areas and opening or removal of covers or restraints may be required. Access paths may require the operation of devices and equipment such as the aerial device or ladder rack.

A plate that is highly visible to the driver while seated will be provided. This plate will show the overall height, length, and gross vehicle weight rating.

The manufacturer will have programs in place for training, proficiency testing and performance for any staff involved with certifications.

An official of the company will designate, in writing, who is qualified to witness and certify test results.

NFPA COMPLIANCY

Apparatus proposed by the bidder will meet the applicable requirements of the National Fire Protection Association (NFPA) as stated in the current edition at time of contract execution. Fire Department's specifications that differ from NFPA specifications will be indicated in the proposal as "non-NFPA."

PUMP TEST

The rated water pump will be tested, approved, and certified by an ISO certified independent third party testing agency at the manufacturer's expense. The test results, along with the pump manufacturer's certification of hydrostatic test, the engine manufacturer's certified brake horsepower curve, and the manufacturer's record of pump construction details will be forwarded to the Fire Department.

GENERATOR TEST

If the unit has a generator, the generator will be tested, approved, and certified by an ISO certified independent third party testing agency at the manufacturer's expense. The test results will be provided to the Fire Department at the time of delivery.

BID BOND

A bid bond as security for the bid in the form of a 10% bid bond will be provided with the proposal. This bid bond will be issued by a Surety Company who is listed on the U.S. Treasury Departments list of acceptable sureties as published in Department Circular 570. The bid bond will be issued by an authorized representative of the Surety Company and will be accompanied by a certified power of attorney dated on or before the date of bid. The bid bond will include language which assures that the bidder/principal will give a bond or bonds, as may be specified in the bidding or contract documents, with good and sufficient surety for the faithful performance of the contract, including the Basic One (1) Year Limited Warranty, and for the prompt payment of labor and material furnished in the prosecution of the contract.

Notwithstanding any document or assertion to the contrary, any surety bond related to the sale of a vehicle will apply only to the Basic One (1) Year Limited Warranty for such vehicle. Any surety bond related to the sale of a vehicle will not apply to any other warranties that are included within this bid (OEM or otherwise) or to the warranties (if any) of any third party of any part, component, attachment or accessory that is incorporated into or attached to the vehicle. In the event of any contradiction or inconsistency between this provision and any other document or assertion, this provision will prevail.

PERFORMANCE BOND, 1 YEAR

The successful bidder will furnish a Performance and Payment bond (Bond) equal to 100 percent of the total contract amount within 30 days of the notice of award. Such Bond will be in a form acceptable to the Owner and issued by a surety company included within the Department of Treasury's Listing of Approved Sureties (Department Circular 570) with a minimum A.M. Best Financial Strength Rating of A and Size Category of XV. In the event of a bond issued by a surety of a lesser Size Category, a minimum Financial Strength rating of A+ is required.

Bidder and Bidder's surety agree that the Bond issued hereunder, whether expressly stated or not, also includes the surety's guarantee of the vehicle manufacturer's Basic One (1) Year Limited Warranty period included within this proposal. Owner agrees that the penal amount of this bond will be simultaneously amended to 100% percent of the total contract amount upon satisfactory acceptance and delivery of the vehicle(s) included herein. Notwithstanding anything contained within this contract to the contrary, the surety's liability for any warranties of any type will not exceed one (1) year from the date of such satisfactory acceptance and delivery, or the actual Basic One (1) Year Limited Warranty period, whichever is shorter.

APPROVAL DRAWING

A drawing of the proposed apparatus will be prepared and provided to the purchaser for approval before construction begins. The Pierce sales representative will also be provided with a copy of the same drawing. The finalized and approved drawing will become part of the contract documents. This drawing will indicate the chassis make and model, location of the lights, siren, horns, compartments, major components, etc.

A "revised" approval drawing of the apparatus will be prepared and submitted by Pierce to the purchaser showing any changes made to the approval drawing.

PRE-CONSTRUCTION CONFERENCE

A pre-construction conference will be held at the manufacturer's facility to review approval drawing package. Motel, meals and travel expenses for four (4) Department personnel will be the responsibility of the successful bidder. The sales representative for this project will be present and assist in the conference.

FINAL INSPECTION

A final inspection will be provided at the manufacturer's facility for inspection of the completed unit. Motel, meals and travel expenses for four (4) Department personnel will be the responsibility of the successful bidder. The sales representative will be present and assist in the inspection process.

CONSTRUCTION PROGRESS PHOTOS

The successful bidder will provide weekly photographs of the apparatus or the major components as they are being constructed. The photos shall commence at the beginning of the manufacturing process and will continue until just prior to the final inspection. There will be approximately eight (8) weekly reports illustrating the progress of the apparatus through the course of each week. Special attention will be given to show the unique features and aspects of the apparatus as construction progresses.

DELIVERY

Following final inspection at the manufacturing facility the Apparatus, to insure proper break in of all components while still under warranty, **will be delivered under its own power to local Dealership**. Dealership will perform a full Pre-Delivery Inspection of the Apparatus by manufacturer's certified technicians. This will include an inspection of all components of the Apparatus and if any inoperable components are detected they will be repaired before delivery to Department.

ORIENTATION TRAINING

There will be one (1) class held at the Fire Department by a factory certified trainer. The class will consist of basic orientation of the apparatus and will last approximately 3 hours. The class will cover basic operations of cab, chassis, pump and body components that are included on the new apparatus.

This is in addition to factory foam system and/or aerial operation if applicable.

ELECTRICAL WIRING DIAGRAMS

Two (2) electrical wiring diagrams, prepared for the model of chassis and body, will be provided.

CONTINGENCY FUND

A contingency fund, in the amount of ($5,000.00), will be included within the proposal.

CLARIFICATIONS

Delivery Penalty Clause- Pierce's lead time is ranging from 10.5-12.5 months from day of contract signing. This is due to the COVID pandemic with supplier component availability. Pierce will accept the penalty clause for $100 dollars a day after 400 days. We can not guarantee the 300 day request that you have asked for in the specifications.

Trips- A preconstruction and final inspection will be completed at the factory with four personnel from Lancaster County. This includes flying commercially for both trips.

Liberty Mutual.

Interchange Corporate Center
450 Plymouth Road, Suite 400
Plymouth Meeting, PA. 19462-1644
Ph. (610) 832-8240

BID BOND

Bond No. Bid Bond

KNOW ALL MEN BY THESE PRESENTS:

That we Spartan Fire & Emergency Apparatus, as Principal, (hereinafter called the "Principal"), and Liberty Mutual Insurance Company, a corporation duly organized under the laws of the State of Massachusetts, as Surety, (hereinafter called the "Surety") are held and firmly bound unto
County of Lancaster
SC
as Obligee, (hereinafter called the "Obligee"), in the sum of Ten Percent of Amount Bid
Dollars ($ 10%)
for the payment of which sum well and truly to be made, the said Principal and the said Surety, bind ourselves, our heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these presents.

WHEREAS, the Principal has submitted a bid for One (1) Pierce Saber FR Pumper

NOW, THEREFORE, if the Obligee shall accept the bid of the Principal and the Principal shall enter into a contract with the Obligee in accordance with the terms of such bid and give such bond or bonds as may be specified in the bidding or contract documents with good and sufficient surety for the faithful performance of such contract, including the attached warranty of Pierce Manufacturing, Inc. or McNeilus Companies Inc., as applicable herein, and for the prompt payment of labor and material furnished in the prosecution thereof, or in the event of the failure of the Principal to enter into such contract and give such bond or bonds, if the Principal shall pay to the Obligee the difference not to exceed the penalty hereof between the amount specified in said bid and such larger amount for which the Obligee may in good faith contract with another party to perform the work covered by said bid, then this obligation shall be null and void, otherwise to remain in full force and effect.

Signed and sealed this 16th day of December, 2020.

Sharon Walt
Witness:

Cathy Hutson
Witness: Cathy Hutson

Spartan Fire & Emergency Apparatus
Principal

By: Priscilla Vann, Office Manager
Name and Title

Liberty Mutual Insurance Company
Surety

By: Sarah E. DeYoung
Sarah E. DeYoung
Attorney-In-Fact

Surety Phone No.

LIBERTY MUTUAL INSURANCE COMPANY INCORPORATED MASSACHUSETTS 1912

LMIC-5050 Rev. 01-08

This Power of Attorney limits the acts of those named herein, and they have no authority to bind the Company except in the manner and to the extent herein stated.

Liberty Mutual Insurance Company
The Ohio Casualty Insurance Company
West American Insurance Company

Certificate No: **8202852-972339**

POWER OF ATTORNEY

KNOWN ALL PERSONS BY THESE PRESENTS: That The Ohio Casualty Insurance Company is a corporation duly organized under the laws of the State of New Hampshire, that Liberty Mutual Insurance Company is a corporation duly organized under the laws of the State of Massachusetts, and West American Insurance Company is a corporation duly organized under the laws of the State of Indiana (herein collectively called the "Companies"), pursuant to and by authority herein set forth, does hereby name, constitute and appoint, Kathleen A. Crary; Sarah E. DeYoung; Lucy A. Hantzsch; Cathy Hutson; Daniel J. Kwiencisnki; Wendy S. Miller; Daniel J. Sapiro; Lisa M. Slakes

all of the city of Milwaukee state of WI each individually if there be more than one named, its true and lawful attorney-in-fact to make, execute, seal, acknowledge and deliver, for and on its behalf as surety and as its act and deed, any and all undertakings, bonds, recognizances and other surety obligations, in pursuance of these presents and shall be as binding upon the Companies as if they have been duly signed by the president and attested by the secretary of the Companies in their own proper persons.

IN WITNESS WHEREOF, this Power of Attorney has been subscribed by an authorized officer or official of the Companies and the corporate seals of the Companies have been affixed thereto this 9th day of January, 2020.

Liberty Mutual Insurance Company
The Ohio Casualty Insurance Company
West American Insurance Company

By: _____
David M. Carey, Assistant Secretary

State of PENNSYLVANIA
County of MONTGOMERY ss

On this 9th day of January, 2020 before me personally appeared David M. Carey, who acknowledged himself to be the Assistant Secretary of Liberty Mutual Insurance Company, The Ohio Casualty Company, and West American Insurance Company, and that he, as such, being authorized so to do, execute the foregoing instrument for the purposes therein contained by signing on behalf of the corporations by himself as a duly authorized officer.

IN WITNESS WHEREOF, I have hereunto subscribed my name and affixed my notarial seal at King of Prussia, Pennsylvania, on the day and year first above written.

COMMONWEALTH OF PENNSYLVANIA
Notarial Seal
Teresa Pastella, Notary Public
Upper Merion Twp., Montgomery County
My Commission Expires March 28, 2021
Member, Pennsylvania Association of Notaries

By: _____
Teresa Pastella, Notary Public

This Power of Attorney is made and executed pursuant to and by authority of the following By-laws and Authorizations of The Ohio Casualty Insurance Company, Liberty Mutual Insurance Company, and West American Insurance Company which resolutions are now in full force and effect reading as follows:

ARTICLE IV – OFFICERS: Section 12. Power of Attorney.
Any officer or other official of the Corporation authorized for that purpose in writing by the Chairman or the President, and subject to such limitation as the Chairman or the President may prescribe, shall appoint such attorneys-in-fact, as may be necessary to act in behalf of the Corporation to make, execute, seal, acknowledge and deliver as surety any and all undertakings, bonds, recognizances and other surety obligations. Such attorneys-in-fact, subject to the limitations set forth in their respective powers of attorney, shall have full power to bind the Corporation by their signature and execution of any such instruments and to attach thereto the seal of the Corporation. When so executed, such instruments shall be as binding as if signed by the President and attested to by the Secretary. Any power or authority granted to any representative or attorney-in-fact under the provisions of this article may be revoked at any time by the Board, the Chairman, the President or by the officer or officers granting such power or authority.

ARTICLE XIII – Execution of Contracts: Section 5. Surety Bonds and Undertakings.
Any officer of the Company authorized for that purpose in writing by the chairman or the president, and subject to such limitations as the chairman or the president may prescribe, shall appoint such attorneys-in-fact, as may be necessary to act in behalf of the Company to make, execute, seal, acknowledge and deliver as surety any and all undertakings, bonds, recognizances and other surety obligations. Such attorneys-in-fact subject to the limitations set forth in their respective powers of attorney, shall have full power to bind the Company by their signature and execution of any such instruments and to attach thereto the seal of the Company. When so executed such instruments shall be as binding as if signed by the president and attested by the secretary.

Certificate of Designation – The President of the Company, acting pursuant to the Bylaws of the Company, authorizes David M. Carey, Assistant Secretary to appoint such attorneys-in-fact as may be necessary to act on behalf of the Company to make, execute, seal, acknowledge and deliver as surety any and all undertakings, bonds, recognizances and other surety obligations.

Authorization – By unanimous consent of the Company's Board of Directors, the Company consents that facsimile or mechanically reproduced signature of any assistant secretary of the Company, wherever appearing upon a certified copy of any power of attorney issued by the Company in connection with surety bonds, shall be valid and binding upon the Company with the same force and effect as though manually affixed.

I, Renee C. Llewellyn, the undersigned, Assistant Secretary, The Ohio Casualty Insurance Company, Liberty Mutual Insurance Company, and West American Insurance Company do hereby certify that the original power of attorney of which the foregoing is a full, true and correct copy of the Power of Attorney executed by said Companies, is in full force and effect and has not been revoked.

IN TESTIMONY WHEREOF, I have hereunto set my hand and affixed the seals of said Companies this 11th day of December 2020

By: _____
Renee C. Llewellyn, Assistant Secretary

Not valid for mortgage, note, loan, letter of credit, currency rate, interest rate or residual value guarantees.

To confirm the validity of this Power of Attorney call 1-610-832-8240 between 9:00 am and 4:30 pm EST on any business day.

CONSENT OF SURETY

In consideration of the premises and of One Dollar ($1.00), lawful money of the United States, it is in hand paid by the CONTRACTOR, the receipt whereof is hereby acknowledged, the undersigned surety consents and agrees that if the contract, for which the preceding estimate and proposal is made, be awarded to the person or persons submitting the same as contracted, it will become bound as surety and guarantor for its faithful performance, in an amount equal to one hundred percent (100%) of the contract price, and will execute it as party of the third part thereto when required to do so by OWNER, and if said CONTRACTOR shall omit or refuse to execute such contract, it will pay without proof of notice and on demand to the OWNER any increase between the sum to which the said CONTRACTOR would have been entitled upon the completion of said contract and the sum which the said OWNER may be obligated to pay to another contractor to whom the contract may be afterwards awarded, the amount in such case to be determined by the bids plus the cost, if any, of re-advertising for bids for this work, less the amount of any certified check or bid bond payable and received.

In witness whereof, said surety has caused these presents to be signed and attested by a duly authorized officer and its corporate seal to be hereto affixed this

10th day of December, 2020.

(A corporate acknowledgment and statement of authority to be here attached by the surety company)

Liberty Mutual Insurance Company
(Surety Company)

BY Sarah E. DeYoung
Sarah E. DeYoung - Attorney-in-Fact

Attest:
Cathy Hutson

ACKNOWLEDGEMENT BY SURETY

STATE OF WISCONSIN)
) ss
COUNTY OF MILWAUKEE)

On this 11th day of December, 2020 before me personally appeared Sarah E. DeYoung, known to me to be the Attorney-in-Fact of Liberty Mutual Insurance Company, the corporation that executed the within instrument and acknowledged to me that such corporation executed the same.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my official seal, at my office in the aforesaid County, the day and year in this certificate first above written.

My Commission Expires August 23, 2020

Kathleen Burgoyne Notary Public State of Wisconsin

(SEAL)

Kathleen Burgoyne
Notary Public in the State of Wisconsin
County of Milwaukee

This Power of Attorney limits the acts of those named herein, and they have no authority to bind the Company except in the manner and to the extent herein stated.

Liberty Mutual Insurance Company
The Ohio Casualty Insurance Company
West American Insurance Company

Certificate No: **8202852-972339**

POWER OF ATTORNEY

KNOWN ALL PERSONS BY THESE PRESENTS: That The Ohio Casualty Insurance Company is a corporation duly organized under the laws of the State of New Hampshire, that Liberty Mutual Insurance Company is a corporation duly organized under the laws of the State of Massachusetts, and West American Insurance Company is a corporation duly organized under the laws of the State of Indiana (herein collectively called the "Companies"), pursuant to and by authority herein set forth, does hereby name, constitute and appoint, Kathleen A. Crary; Sarah E. DeYoung; Lucy A. Hantzsch; Cathy Hutson; Daniel J. Kwiencisnki; Wendy S. Miller; Daniel J. Sapiro; Lisa M. Slakes

all of the city of Milwaukee state of WI each individually if there be more than one named, its true and lawful attorney-in-fact to make, execute, seal, acknowledge and deliver, for and on its behalf as surety and as its act and deed, any and all undertakings, bonds, recognizances and other surety obligations, in pursuance of these presents and shall be as binding upon the Companies as if they have been duly signed by the president and attested by the secretary of the Companies in their own proper persons.

IN WITNESS WHEREOF, this Power of Attorney has been subscribed by an authorized officer or official of the Companies and the corporate seals of the Companies have been affixed thereto this 9th day of January, 2020.

Liberty Mutual Insurance Company
The Ohio Casualty Insurance Company
West American Insurance Company

By: _____
David M. Carey, Assistant Secretary

State of PENNSYLVANIA
County of MONTGOMERY ss

On this 9th day of January, 2020 before me personally appeared David M. Carey, who acknowledged himself to be the Assistant Secretary of Liberty Mutual Insurance Company, The Ohio Casualty Company, and West American Insurance Company, and that he, as such, being authorized so to do, execute the foregoing instrument for the purposes therein contained by signing on behalf of the corporations by himself as a duly authorized officer.

IN WITNESS WHEREOF, I have hereunto subscribed my name and affixed my notarial seal at King of Prussia, Pennsylvania, on the day and year first above written.

COMMONWEALTH OF PENNSYLVANIA
Notarial Seal
Teresa Pastella, Notary Public
Upper Merion Twp., Montgomery County
My Commission Expires March 28, 2021
Member, Pennsylvania Association of Notaries

By: _____
Teresa Pastella, Notary Public

This Power of Attorney is made and executed pursuant to and by authority of the following By-laws and Authorizations of The Ohio Casualty Insurance Company, Liberty Mutual Insurance Company, and West American Insurance Company which resolutions are now in full force and effect reading as follows:

ARTICLE IV – OFFICERS: Section 12. Power of Attorney.
Any officer or other official of the Corporation authorized for that purpose in writing by the Chairman or the President, and subject to such limitation as the Chairman or the President may prescribe, shall appoint such attorneys-in-fact, as may be necessary to act in behalf of the Corporation to make, execute, seal, acknowledge and deliver as surety any and all undertakings, bonds, recognizances and other surety obligations. Such attorneys-in-fact, subject to the limitations set forth in their respective powers of attorney, shall have full power to bind the Corporation by their signature and execution of any such instruments and to attach thereto the seal of the Corporation. When so executed, such instruments shall be as binding as if signed by the President and attested to by the Secretary. Any power or authority granted to any representative or attorney-in-fact under the provisions of this article may be revoked at any time by the Board, the Chairman, the President or by the officer or officers granting such power or authority.

ARTICLE XIII – Execution of Contracts: Section 5. Surety Bonds and Undertakings.
Any officer of the Company authorized for that purpose in writing by the chairman or the president, and subject to such limitations as the chairman or the president may prescribe, shall appoint such attorneys-in-fact, as may be necessary to act in behalf of the Company to make, execute, seal, acknowledge and deliver as surety any and all undertakings, bonds, recognizances and other surety obligations. Such attorneys-in-fact subject to the limitations set forth in their respective powers of attorney, shall have full power to bind the Company by their signature and execution of any such instruments and to attach thereto the seal of the Company. When so executed such instruments shall be as binding as if signed by the president and attested by the secretary.

Certificate of Designation – The President of the Company, acting pursuant to the Bylaws of the Company, authorizes David M. Carey, Assistant Secretary to appoint such attorneys-in-fact as may be necessary to act on behalf of the Company to make, execute, seal, acknowledge and deliver as surety any and all undertakings, bonds, recognizances and other surety obligations.

Authorization – By unanimous consent of the Company's Board of Directors, the Company consents that facsimile or mechanically reproduced signature of any assistant secretary of the Company, wherever appearing upon a certified copy of any power of attorney issued by the Company in connection with surety bonds, shall be valid and binding upon the Company with the same force and effect as though manually affixed.

I, Renee C. Llewellyn, the undersigned, Assistant Secretary, The Ohio Casualty Insurance Company, Liberty Mutual Insurance Company, and West American Insurance Company do hereby certify that the original power of attorney of which the foregoing is a full, true and correct copy of the Power of Attorney executed by said Companies, is in full force and effect and has not been revoked.

IN TESTIMONY WHEREOF, I have hereunto set my hand and affixed the seals of said Companies this 10th day of December 2020

By: _____
Renee C. Llewellyn, Assistant Secretary

Not valid for mortgage, note, loan, letter of credit, currency rate, interest rate or residual value guarantees.

To confirm the validity of this Power of Attorney call 1-610-832-8240 between 9:00 am and 4:30 pm EST on any business day.

CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY): 12/16/2020

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must have ADDITIONAL INSURED provisions or be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

PRODUCER 1-414-443-0000 Hays Companies 1200 North Mayfair Road, Suite 100 Milwaukee, WI 53226	CONTACT NAME: PHONE (A/C, No, Ext): FAX (A/C, No): E-MAIL ADDRESS:
INSURED Pierce Manufacturing Inc. P.O. Box 2017 Appleton, WI 54912-2017	INSURER(S) AFFORDING COVERAGE / NAIC # INSURER A: NATIONAL FIRE & MARINE INS CO 20079 INSURER B: BERKLEY NATL INS CO 38911 INSURER C: INSURER D: INSURER E: INSURER F:

COVERAGES **CERTIFICATE NUMBER:** 60892715 **REVISION NUMBER:**

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	TYPE OF INSURANCE	ADDL INSD	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS	
A	X COMMERCIAL GENERAL LIABILITY	X		42-GLO-100190-06	04/01/20	04/01/21	EACH OCCURRENCE	$ 1,000,000
	CLAIMS-MADE [X] OCCUR						DAMAGE TO RENTED PREMISES (Ea occurrence)	$
							MED EXP (Any one person)	$
							PERSONAL & ADV INJURY	$
	GEN'L AGGREGATE LIMIT APPLIES PER:						GENERAL AGGREGATE	$
	POLICY [ ] PRO-JECT [ ] LOC						PRODUCTS - COMP/OP AGG	$ 1,000,000
	OTHER:							$
	AUTOMOBILE LIABILITY						COMBINED SINGLE LIMIT (Ea accident)	$
	ANY AUTO						BODILY INJURY (Per person)	$
	OWNED AUTOS ONLY / SCHEDULED AUTOS						BODILY INJURY (Per accident)	$
	HIRED AUTOS ONLY / NON-OWNED AUTOS ONLY						PROPERTY DAMAGE (Per accident)	$
								$
A	X UMBRELLA LIAB X OCCUR			42-UMO-100191-06	04/01/20	04/01/21	EACH OCCURRENCE	$ 15,000,000
	EXCESS LIAB CLAIMS-MADE						AGGREGATE	$ 15,000,000
	DED RETENTION $							$
	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY Y/N						PER STATUTE / OTH-ER	
	ANYPROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? [ ] N/A (Mandatory in NH)						E.L. EACH ACCIDENT	$
	If yes, describe under DESCRIPTION OF OPERATIONS below						E.L. DISEASE - EA EMPLOYEE	$
							E.L. DISEASE - POLICY LIMIT	$
B	Excess Liability			CEX09600174-07	04/01/20	04/01/21	Ea Occ/Agg	10,000,000

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)

Additional Insured when required by written contract between the owner and a Pierce Dealer.

One (1) Pierce Saber FR Pumper

CERTIFICATE HOLDER

County of Lancaster

101 North Main Street

Lancaster, SC 29720 USA

CANCELLATION

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.

AUTHORIZED REPRESENTATIVE

© 1988-2015 ACORD CORPORATION. All rights reserved.

CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY): 04/02/2020

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must have ADDITIONAL INSURED provisions or be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

PRODUCER CWS Insurance P.O.Box 1988 Spartanburg SC 29304	**CONTACT NAME:** Julie Mitchem **PHONE (A/C, No, Ext):** (864) 583-1451 **FAX (A/C, No):** (864) 585-6450 **E-MAIL ADDRESS:** julie@cwsinsurance.com
INSURED Spartan Fire & Emergency Apparatus, Inc. 319 Southport Road Roebuck SC 29376	**INSURER(S) AFFORDING COVERAGE** — **NAIC #** **INSURER A :** Arch Insurance Company **INSURER B :** Accident Fund Ins Co of Am — 10166 **INSURER C :** **INSURER D :** **INSURER E :** **INSURER F :**

COVERAGES **CERTIFICATE NUMBER:** 19/20 Master WC 20/21 **REVISION NUMBER:**

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	TYPE OF INSURANCE	ADDL INSD	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS	
A	[X] COMMERCIAL GENERAL LIABILITY [ ] CLAIMS-MADE [X] OCCUR GEN'L AGGREGATE LIMIT APPLIES PER: [X] POLICY [ ] PRO-JECT [ ] LOC [ ] OTHER:			MFPK07329507	09/08/2019	09/08/2020	EACH OCCURRENCE DAMAGE TO RENTED PREMISES (Ea occurrence) MED EXP (Any one person) PERSONAL & ADV INJURY GENERAL AGGREGATE PRODUCTS - COMP/OP AGG [ ]	$ 1,000,000 $ 100,000 $ 5,000 $ 1,000,000 $ 2,000,000 $ 2,000,000 $
A	AUTOMOBILE LIABILITY [ ] ANY AUTO [X] OWNED AUTOS ONLY [X] SCHEDULED AUTOS [X] HIRED AUTOS ONLY [X] NON-OWNED AUTOS ONLY [X]			MFCA06033306	09/08/2019	09/08/2020	COMBINED SINGLE LIMIT (Ea accident) BODILY INJURY (Per person) BODILY INJURY (Per accident) PROPERTY DAMAGE (Per accident) Uninsured motorist	$ 1,000,000 $ $ $ $ 1,000,000
A	[X] UMBRELLA LIAB [X] OCCUR EXCESS LIAB [ ] CLAIMS-MADE [ ] DED [ ] RETENTION $			MFUM07981606	09/08/2019	09/08/2020	EACH OCCURRENCE AGGREGATE [ ]	$ 3,000,000 $ 3,000,000 $
B	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? (Mandatory in NH) Y/N [N] If yes, describe under DESCRIPTION OF OPERATIONS below	N / A		WCV6139985	04/01/2020	04/01/2021	[X] PER STATUTE [ ] OTH-ER E.L. EACH ACCIDENT E.L. DISEASE - EA EMPLOYEE E.L. DISEASE - POLICY LIMIT	 $ 500,000 $ 500,000 $ 500,000
A	Garage Keepers (Customer's Vehicles)			MFCA06033306	09/08/2019	09/08/2020	Limit	$5,000,000

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)

CERTIFICATE HOLDER

For Informational Purposes Only

CANCELLATION

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.

AUTHORIZED REPRESENTATIVE

Julie Mitchem

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South Carolina Department of Motor Vehicles

LICENSE TO SELL VEHICLES

IN ACCORDANCE WITH SOUTH CAROLINA CODE OF LAWS

LICENSE NUMBER 2224

TYPE LICENSE DEALER

DATE April 17, 2020

FRANCHISED VEHICLE MAKE(S) NEW

NAME SPARTAN FIRE & EMER APARATUS INC

STREET 319 SOUTHPORT RD

CITY ROEBUCK COUNTY SPARTANBURG

KEVIN A. SHWEDO
EXECUTIVE DIRECTOR

THIS LICENSE EXPIRES
LAST DAY OF April 2021

Under the South Carolina Illegal Immigration Reform Act, the SCDMV must certify the lawful presence in the U.S. of all individuals listed on applications for professional licenses submitted to the Department on or after July 1, 2008. If the Department cannot verify the applicant's lawful presence, then the Department may revoke the license.

PIERCE CUSTOM PUMPER
CUSTOMER LIST FOR SOUTH CAROLINA

DEPARTMENT	TYPE/YEAR	CHIEF	PHONE #
Aiken	Contender (2) '01, (1) '05 Saber 2017	Brian Brazier	803-642-7620
Beech Island	Saber (1) '18	Leon Henderson	803-827-1773
Berea	Impel (1) '14 (1) 20'	Gary Brock	864-294-4848
Boiling Springs F.D.-Spartanburg	Arrow (1) '86, (1) '94, Impel (1) '10 Saber (1) '13 Saber (1) '19	Scott Miller	864-578-6200
Boiling Springs F.D.-Greenville	Arrow (1) '89, (1) '96 Enforcer (3) 2018	Steve Graham	864-288-5037
Charleston	Dash (2) '84, (1) '89, (1) '98, (1) '99 (1) '00, (1) '01, (1) '05, (1) '07, (1) '08 Arrow (1) '83, (1) '86, (1) '88, (1) '89, (1) '90, (1) '93, Arrow XT (2) '10 (2) '12, (3)'14, (2)'19 Saber (1) '16 (2) '17 (2) '18	Daniel Curia	843-720-1981
Clover	Contender (1) '01, (1) '17	Charlie Love	803-222-9495
Columbia	Contender (4) '01, (1) '02, (5) '03 (2) '05, (6) '07, (5) '09, (2) '10 Velocity (1) '13, (2) '15 Saber (1) '17 Enforcer (1)'18, (1) '20	Aubrey Jenkins	803-545-3704
Converse	Saber (1) '04 Enforcer (1) '19	Tim Jones	864-579-2616
Lancaster City	Impel (1) '15	Justin McLellan	803-320-0191
Macedonia	Contender (1) '06, (1)'09 Saber (1) 2019	Dennis Gardner	864-487-2747
Pacolet F.D.	Saber (1) '94, (1) 2017 Mini Pumper (1)'20 Contender (1) '05	Dale Worthy	864-474-3054
Westview-Fairforest	Dash (2) '88 Saber (1) '02 Impel (1) '13, (1) '14 (1) 20'	Scott Garrett	864-576-2529

SPARTAN FIRE
and Emergency Apparatus
Since 1973

SERVICE DIVISION

Pierce

PERFORM. LIKE NO OTHER.

UPSTATE LOCATION

LOWCOUNTRY LOCATION

319 Southport Road, Roebuck, SC 29376 // 866-582-2376 // 217 Cember Way, Summerville, SC 29483 // www.spartanfire.com

LOWCOUNTRY FACILITY

Spring of 2013 Spartan Fire and Emergency Apparatus opened their first service facility in Summerville, SC. The transition to this new location proved rewarding for both Spartan Apparatus and our Customers. This success allowed us to build a bigger facility to better serve our customers' needs. The new facility opened its doors in the Fall of 2018. Our Service Manager and four (4) Service Technicians are equipped with three (3) mobile service units and are excited to serve you from our new Lowcountry facility!

LOWCOUNTRY SERVICE TEAM

BRYAN RAMEY, Manager of Aftermarket Sales and Training
bramey@spartanfire.com

JAMES ROMER, Master Technician

CHRIS SMITH, Shop Forman
csmith@spartanfire.com

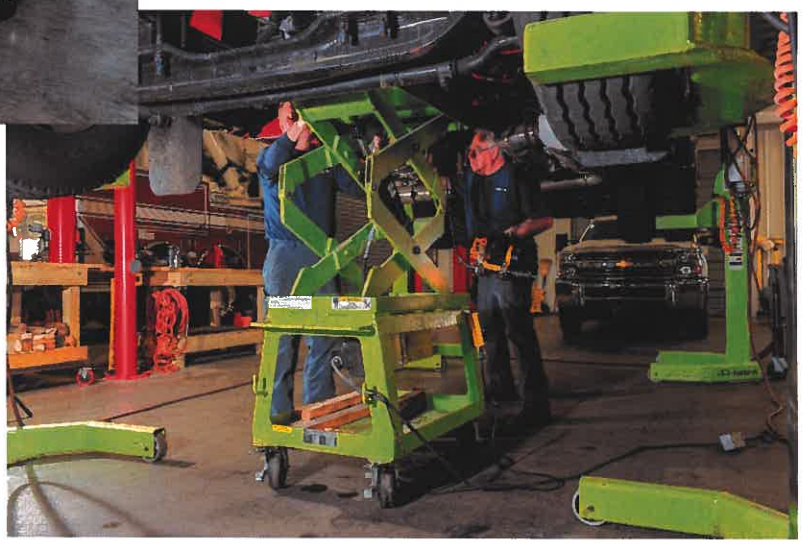
JONATHAN MARTIN, Master Technician

JIMMY LAIL, Certified Technician

Pierce
PLATINUM
CERTIFIED DEALER

UPSTATE FACILITY

Spartan Fire and Emergency Apparatus headquarters are located in Roebuck, SC (Spartanburg). Staffed with a Parts & Service Manager and a Service Administrator with five (5) Service Technicians. We have four (4) mobile service vehicles dispatched from this location to serve the Upstate of South Carolina.

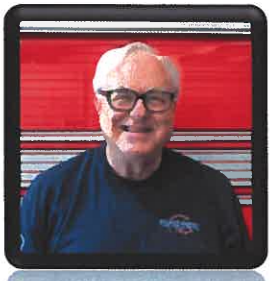


UPSTATE SERVICE TEAM

JIM WOODS, Parts and Service Manager
jwoods@spartanfire.com

CLAY LAWSON, Service Administrator
clawson@spartanfire.com

DYLAN STYLES, Shop Foreman
dstyles@spartanfire.com



KEN DITTEMORE, Master Technician

JEFF THREATT, Master Technician

JAY HAMMETT, Service Technician

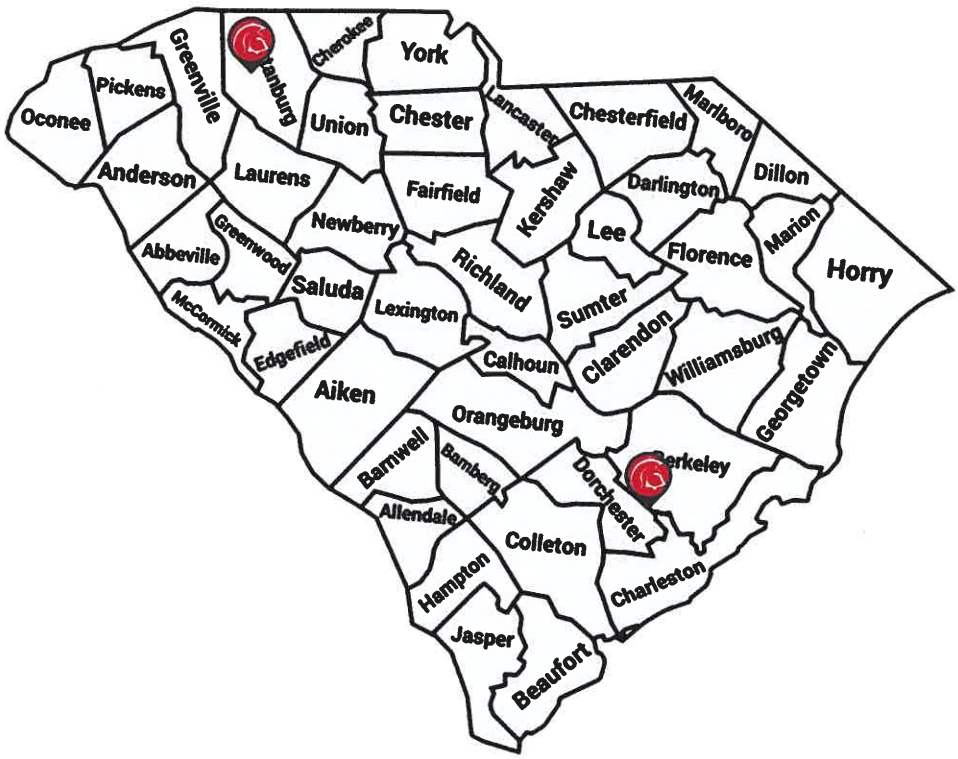
JUSTIN LOWE, Service Technician

Pierce
PLATINUM
CERTIFIED DEALER

SERVICE & PARTS

PARTS LINE SHEET

CAB & CHASISS	*PUMPS, VALVES, GAUGES*	*GENERATORS*	*12V &120/240V LIGHTING & WARNING DEVICES*	*MISCELLANEOUS*
Pierce Customs	Pierce PUC	Harrison	Whelen	Hanson International
Freightliner	Waterous	Honda	HiViz-Fire Tech	Hannay Reels
Kenworth	Hale	Onan	Fire Research	On Spot Chains
International	Darley	Westerbeke	Extenda Lite	Alco-Lite Ladders
Detroit	Elkhart Valves	Smart Power	Weldon	Kussmaul
Cummins	Akron Valves		Amdor	Ziamatic
Allison	Class 1		Will-Burt Light Towers	Real Wheels
Meritor	Fire Research		Command Light Towers	Extend-o-bed
Seats Inc.			Federal	Holmatro
Oshkosh ARFF			Roto Ray	Gortite
TAK-4				Fleet Guard Filters
				Donaldson Filters
				HYDAC Filters



FIRE APPARATUS SALES STAFF

ROBBY FORE, President
rfore@spartanfire.com

Robby began his career at Spartan Apparatus in 1991 as a Sales Representative. In 2001 he became Vice President. In 2004 he was appointed President of Spartan Apparatus and was assigned Principal Dealer for Pierce Manufacturing. Robby oversees the day-to-day operations of the Company.

CHRIS HARRIS, Sales Manager
charris@spartanfire.com

Chris Joined Spartan Apparatus in 2003 as a Sales Representative for the Upstate of South Carolina. He has an extensive fire service background. He has 23+ years of experience in the fire service, retiring as a Battalion Chief. Chris continues to serve as a volunteer for Pacolet Fire Department.

ALAN AXSON, Sales Representative
aaxson@spartanfire.com

Alan joined Spartan Apparatus in 2008 as a Sales Representative for the Lower State of South Carolina. He has an extensive fire service background. He served for the City of Columbia Fire Department for 28 years, retiring as Special Operations Chief.

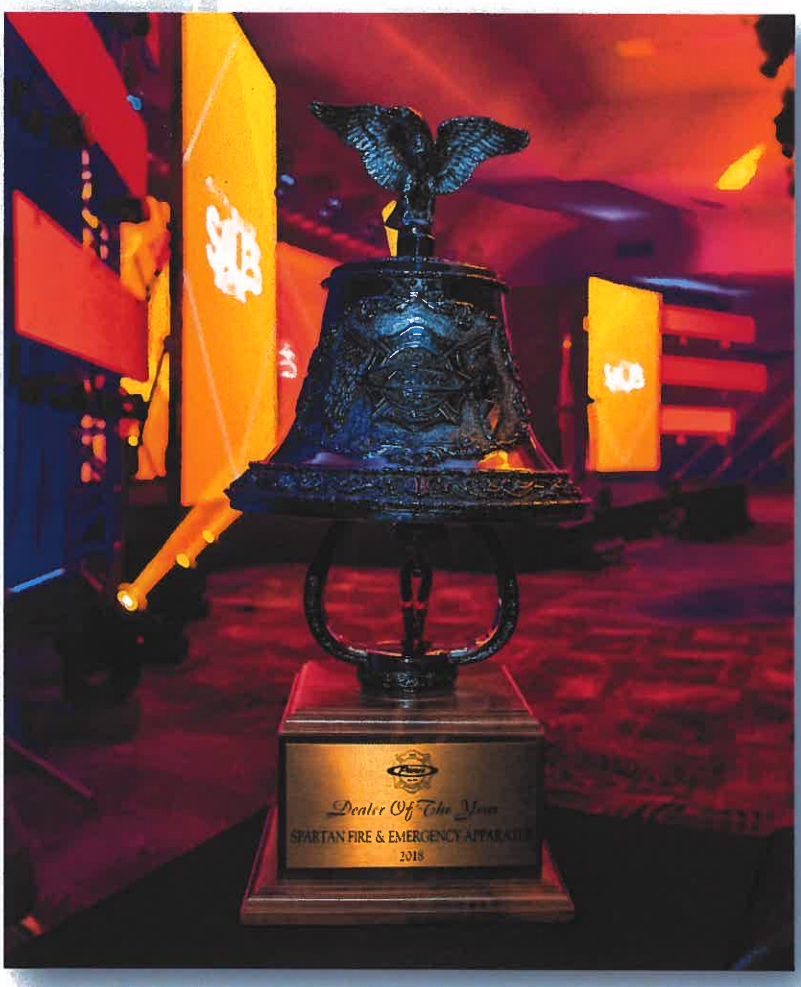
FIRE APPARATUS SALES STAFF

JARED PHILLIPS, Sales Representative
jphillips@spartanfire.com

Jared joined Spartan Apparatus in 2017 as a Sales Administrator in the Upstate of South Carolina. Jared started his fire service career as a Firefighter/EMT in 2009 at North Spartanburg Fire Department. He currently received a degree in Fire Science in 2012. He ended his career at NSFD as an Engineer on Ladder 3.

TREY COKER, Associate Sales Representative
tcoker@spartanfire.com

Trey joined Spartan Apparatus in 2019 as an Associate Sales Representative for the Lower State of South Carolina. He has an extensive fire service background. He served for the North Charleston Fire Department for 25 years, retiring as Special Operations Chief.



"All of us at Spartan Fire and Emergency Apparatus are grateful for the relationships we have developed through the years with our customers. The confidence and trust customers place on our performance is critical to our success. We strive to continue strengthening our relationships and our performance by providing unmatched customer service, for years to come."

-Robby Fore, President

Agenda Item Summary

Ordinance # / Resolution #: N/A
Contact Person / Sponsor: Rox Burhans/Development Services Division
Department: Planning
Date Requested to be on Agenda: 2/9/2021

Issue for Consideration:
Planning and Economic Development staff would like to discuss two priority future rezoning and development sites within the Indian Land area. Please see attached memo for more information.

Points to Consider:
Whether or not the Council agrees with staff that the two sites are unique and should be given priority consideration.

Funding and Liability Factors:
N/A

Council Options:
Staff is requesting informal feedback from Council on the two potential future rezoning and development sites.

Recommendation:
Discussion only.

ATTACHMENTS:

Description	Upload Date	Type
Priority Indian Land Sites Memo	1/29/2021	Backup Material

February 1, 2021

TO: County Council Committee of the Whole

FROM: Rox Burhans, Development Services Director
Jamie Gilbert, Economic Development Director

RE: PRIORITY INDIAN LAND PLANNING AND ECONOMIC DEVELOPMENT SITES

Two sites within the Indian Land area of Lancaster County are being assembled for potential future rezoning and development activity. In light of the importance of these locations, the Development Services Division and Economic Development Department would like to brief the Committee of the Whole and share some potential concerns. The following will provide a brief overview of each site.

SITE 1: ELMSBROOK NEIGHBORHOOD REDEVELOPMENT

The Elmsbrook neighborhood is an older Indian Land community that is located between US-521 and Harrisburg Road, directly across from the Walmart Shopping Center. It consists of approximately 40-single family lots zoned LDR and total approximately 60-acres (w/ roads). Staff has been informed by a real estate broker that most of the owners within the community are interested in selling their property in light of its changing character and the opportunity to realize a profit. If commercially rezoned and master planned, staff believes this could be the most valuable commercial real estate in Lancaster County. The site is located within the northern Indian Land retail corridor and is in very close proximity to Ballantyne area of Charlotte. It also represents a highly-visible gateway into South Carolina and Lancaster County.

Staff has been informed that a commercial rezoning application is likely to be forthcoming to support development of a Circle K gas station and a fast food establishment. Staff has concerns if Elmsbrook is developed on a parcel-by-parcel basis it will not realize its highest and best use for the community, which may include corporate office space and similar uses. Attached is a copy of concept plan submitted for the gas station.

SITE 2: POSSUM HOLLOW AND OLD BAILES ROAD INTERSECTION

As the County Council is aware, there is a dwindling supply of light industrial land available in Indian Land to support future employment growth. This site is zoned LDR, is approximately 135-acres in size, and is located in a transitional area that straddles the Meadowridge neighborhood to the southwest and the Old Bailes Business Park to the north. Staff has received a rezoning

inquiry to rezone the site to MDR to facilitate a cluster subdivision. While Staff respects the owner's right to develop the property under the existing zoning, Staff is concerned if the property were to be upzoned to MDR, there would be fewer opportunities to plan for future light industrial job growth within the Indian Land area. Attached is a copy of the proposed cluster subdivision plan.

Please feel free to contact Rox Burhans, Development Services Director or Jamie Gilbert, Economic Development Director if you have any questions prior to the February 9, 2021 Committee of the Whole meeting.

Enc: Circle K Concept Plan
Cluster Subdivision Concept Plan

SITE DATA TABLE

SITE NAME:	CIRCLE K
ADDRESS:	9939 SANDRA LN, INDIAN LAND, SC
PARCEL NUMBER:	PARCEL 1: 0005-00-036-00 PARCEL 2: 0005-00-039-00
JURISDICTION:	LANCASTER COUNTY
ZONING DESIGNATION:	LDR (LOW DENSITY RESIDENTAL (WILL NEED TO BE RE-ZONED TO GB)
PARCEL SIZE:	TOTAL PROPERTY AC = ±4.18 PROPOSED CIRCLE K AC = ±3.12 EXCESS LAND = ±1.06

PARKING:

REQUIRED:	1 SPACE FOR EVERY 400 SF FLOOR AREA = 13 SPACES (MIN.) OR DOUBLE (MAX.)
PROPOSED:	37
	STANDARD (9.5'X19') = 35
	ADA SPACE (8'X19') = 2
	TOTAL = 37

SETBACKS:	BUILDING	BUFFER
ROW (HWY 521 CORRIDOR)	25'	25'
ROW (SANDRA LN)	15'	8' (CORNER LOT)
(STREET SIDE/SECONDARY FRONT), (8' PERIMETER LANDSCAPE BUFFER)		
SIDE	50'	10'/20'
REAR	50'	10'/20"

NOTE: TYPE 'B' LANDSCAPE BUFFERS HAVE 2 CHOICES OF WIDTH DEPENDING ON VEGATATION USED IN THAT AREA)

CONCEPTUAL PLAN NOTES:

CONDITIONS MAY EXIST THAT COULD RESTRICT THE DEVELOPMENT OF THIS SITE AS SHOWN. THIS DRAWING IS INTENDED TO BE CONCEPTUAL ONLY AND ADDITIONAL RESEARCH AND DESIGN WOULD BE REQUIRED FOR THE PREPARATION OF A SITE PLAN THAT MEETS LOCAL JURISDICTIONAL CODES.

BCG DOES NOT PURPORT THAT THIS SITE CAN BE DEVELOPED AS SHOWN. THE PURCHASE OF THIS SITE SHALL BE AT THE OWNER/DEVELOPER'S SOLE EXPENSE.

NO SITE VISITS HAVE BEEN PERFORMED TO ENSURE THE ACCURACY OF THE AERIAL IMAGE SHOWN HEREON.

THIS EXHIBIT IS NOT INTENDED TO BE USED AS A CONSTRUCTION DOCUMENT, AND SHOULD NOT BE CONSTRUED IN ANYWAY TO BE USED FOR CONSTRUCTION PURPOSES.

PROPERTY LINES SHOWN ARE FROM COUNTY GIS AND ARE FOR CONCEPTUAL PURPOSES ONLY.

PROPOSED LEGEND

- PROPERTY LINE
- BUILDING SETBACK LINE
- BUFFER
- 1 PARKING COUNT
- PROPOSED BUILDING
- PROPOSED SIDEWALK
- HEAVY DUTY CONCRETE
- PATIO

CONCEPTUAL EXHIBIT

CIRCLE K STORES INC.

Bowman Consulting Group, Ltd.
4350 Main Street
Suite 219
Harrisburg, NC 28075
Phone: (704)412-7424
www.bowmanconsulting.com
© Bowman Consulting Group, Ltd.

CONCEPTUAL DESIGN
INDIAN LAND (HWY 521), SC
GAS STATION
NW CORNER OF HWY 521 (CHARLOTTE HWY)
AND SANDRA LANE

Bowman CONSULTING
Certificate of Authorization License No. 4523

DW	DW	PL
DSGN	DRAWN	CHKD

SCALE 1" = **'

VERSION 1.0

CAD file name: S:\Planar_Concepts\Circle K Indian Land (Hwy 521 & Sandra Ln) SC\Concepts\Indian Land (Hwy 521 & Sandra Ln) SC – Concept 2.dwg 11/18/2020

Site Data		
Lancaster County, South Carolina		
Parcel Numbers: 0007-00-015.00, 0007-00-022.00, 0007-00-022.01, 0007-00-022.02, 0007-00-022.03, 0007-00-022.04, 0007-00-023.06		
Project Area	**Ac.**	**Density**
Gross Ac.	137.17 Ac.	2.22 DU/Ac.
Zoning		
Current Zoning	LDR (Low Density Residential)	
Proposed Zoning	MDR-(CSO) (Medium Desnisty Residential - Cluster Overlay)	
Open Space Required	34.29 Ac.	25.00%
Unit Type	**Qty**	**Mix**
Unit Type (50' x 120')	99	32.6%
Unit Type (60' x 120')	103	33.9%
Unit Type (70' x 120')	102	33.6%
Total	**304**	**100.0%**

NORTH

OLIN YARBOROUGH ROAD

OFFSITE ROW TO BE DEDICATED

YARBOROUGH ROAD

EXISTING POND / WETLAND

50.00' ROW (TYP.)

BMP

50.00' STREAM BUFFER

EXISTING FLOODPLAIN

LADSON ROAD

30.00' STREAM BUFFER

50.00' ROW (TYP.)

BMP

BMP

BMP

BMP

NOT A PART

50.00' EXISTING ROW BUFFER

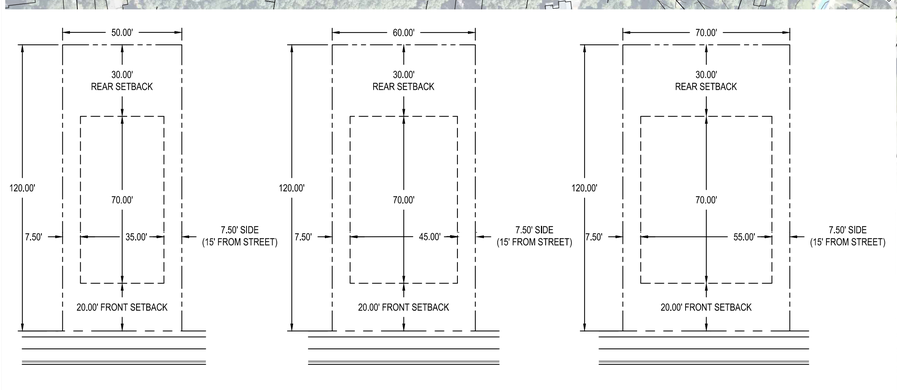
OLD BAILES ROAD

50.00' ROW BUFFER

50.00' ROW (TYP)

WILLOW RIDGE LANE

POSSUM HOLLOW RD



TYPICAL LOT LAYOUTS

SCALE: 1" = 30'

BGE

1111 METROPOLITAN AVE, SUITE 250
CHARLOTTE, NC 28204
www.bgeinc.com
NC LICENSE #C-4397

ASBURY LANE

DATE: 1/8/2021

0 150' 300' 450'

SCALE: 1" = 150'

THIS DOCUMENT, TOGETHER WITH THE CONCEPTS AND DESIGNS PRESENTED HEREIN, AS AN INSTRUMENT OF SERVICE, IS INTENDED ONLY FOR THE SPECIFIC PURPOSE AND CLIENT FOR WHICH IT WAS PREPARED. REUSE OF AND IMPROPER RELIANCE ON THIS DOCUMENT WITHOUT WRITTEN AUTHORIZATION AND ADAPTATION BY BGE INC. SHALL BE WITHOUT LIABILITY TO BGE INC.

G:\NCA\Projects\DR Horton\7734-05 - DR Horton - Asbury Lane\03 - DWG\Concept\2021-0106 - Asbury Lane Concept 1\2021-0106 Asbury Lane Concept 1.dwg

Agenda Item Summary

Ordinance # / Resolution #: Ordinance TBD
Contact Person / Sponsor: Steve Willis/Administration and John Dubose/County Attorney
Department: Administration
Date Requested to be on Agenda: 2/9/2021

Issue for Consideration:
Potential Quit Claim for unopened portion of Culp Lansford Road.

Points to Consider:
Attached is the tax map showing this area. Culp Lansford Road is a residential street that branches off Culp Street. Culp Street branches off Lansford Road near its intersection with Memorial Park Road.

The westerly segment of Culp Lansford was never opened and never used. The easterly segment is a paved county road.

The owners for the westerly segment have inquired as to having the platted but never opened segment transferred to them by Quit Claim deed. If this finds favor John DuBose would handle the ordinance.

Jeff Catoe and I concur this road segment has no value to Lancaster County and a Quit Claim to the adjacent property owners would be appropriate.

Funding and Liability Factors:
N/A

Council Options:
If this finds favor then an Ordinance would be prepared which Council could approve or reject.

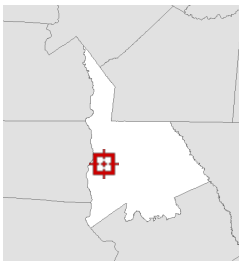
Recommendation:
Approve the concept of a Quit Claim Deed for this road segment.

ATTACHMENTS:

Description	Upload Date	Type
Tax Map of Culp Lansford Rd	1/21/2021	Exhibit

qPublic.net™ Lancaster County, SC

Overview



Legend

- Parcels
- Roads
- Railroad

Date created: 1/21/2021
Last Data Uploaded: 1/21/2021 1:08:09 AM

Developed by Schneider GEOSPATIAL

Agenda Item Summary

Ordinance # / Resolution #: Ordinance 2021-1705
Contact Person / Sponsor: Steve Willis/ John DuBose
Department: Administration
Date Requested to be on Agenda: 2/9/2021

Issue for Consideration:
Consideration of amendments to the Impact Fee Study.

Points to Consider:
This matter is presented for First Reading but staff fully understands that Council may not be ready to have First Reading approval.

This is an opportunity for Council to propose potential amendments to the Impact Fee Study so that staff can make the necessary changes. Changes to one part of the study will likely affect other parts as well.

For example, staff understands there is likely some sentiment to remove the Camp Creek Fire Department area from the study. That is certainly a policy decision for Council to make. If we remove it from the study we will need to recalculate the financial portion and remove that area from receiving any direct benefit.

Council may also decide to restrict one or more service areas to the original study area. Again, we will need direction from Council and this is the opportunity to propose an amendment and see if it passes.

I would note that this is NOT the time to determine if Council desires to charge a reduced percentage of any fee; for example only charging 75% of the EMS fee or 50% of the Fire fee, That comes later in the process.

At this point we are requesting Council to propose amendments to the study for areas where you would like to see changes. You can vote on amendments to an Ordinance in a regular Council meeting while you may not at Committee of the Whole.

Once Council has voted on whatever amendments you choose to approve, we plan to return to the consultant to make those changes to the study. Council could certainly approve First Reading and we would have the changes at Second Reading but I suspect Council would be more comfortable with us bringing you an amended study for First Reading consideration at a future Council meeting.

Funding and Liability Factors:
Unknown at this point. This will depend on what changes Council may choose to make.

Council Options:
To make such amendments regarding the size of the study area and what services you would like to see in specific areas. Also, if Council were to decide it no longer wished to pursue a particular service this would be the time to make that decision.

Recommendation:
N/A - this is for Council to make policy decisions on geographic and service areas.

ATTACHMENTS:

Description	Upload Date	Type

LANCASTER COUNTY ORDINANCE 2021-1705

AN ORDINANCE ADOPTING PROCEDURES FOR THE IMPOSITION, CALCULATION, COLLECTION, EXPENDITURE AND ADMINISTRATION OF IMPACT FEES TO BE IMPOSED ON NEW DEVELOPMENT; PROVIDING A PURPOSE AND INTENT; PROVIDING DEFINITIONS; PROVIDING GENERAL PROVISIONS AND APPLICABILITY; PROVIDING FOR THE ESTABLISHMENT OF IMPACT FEE ACCOUNTS; PROVIDING FOR THE APPROPRIATION OF IMPACT FEE FUNDS; PROVIDING FOR REFUNDS; PROVIDING FOR APPEALS; PROVIDING FOR CONFLICT; PROVIDING FOR SEVERABILITY; AND PROVIDING AN EFFECTIVE DATE.

WHEREAS, the County is authorized to establish and impose impact fees on new development to finance public facilities necessitated by such development; and

WHEREAS, the County has studied the necessity for and implications of the adoption of impact fees for various public facilities; and

WHEREAS, the County Council has found and determined that most impact fees will have certain common characteristics and, therefore, will benefit from the adoption and use of a uniform procedure for the imposition, calculation, collection, expenditure, and administration of impact fees; and

WHEREAS, the use of uniform procedures, to the extent possible, will be more efficient and expedient for both the County and development applicants than separate procedures for each impact fee; and

WHEREAS, the use of uniform procedures will simplify the implementation and administration of impact fees; and

WHEREAS, the use of uniform procedures will best ensure that impact fees are expended for the public facilities for which they are imposed and collected; and

WHEREAS, all monies collected from impact fees shall be deposited in interest-bearing accounts which clearly identify the category, account, fund, and public facility for which such fee was imposed; and

WHEREAS, each such category, fund, or account shall be accounted for separately; and

WHEREAS, any interest or other income earned on monies deposited in the interest-bearing accounts shall be credited to the account; and

WHEREAS, the County Council has determined that impact fees are appropriate for funding public facilities; and

WHEREAS, the Planning Commission has considered and reviewed the Impact Fee Procedures at a public meeting and has recommended their adoption;

NOW, THEREFORE, BE IT ORDAINED that the following impact fee procedures and requirements are set forth and are applicable to new development, as set forth herein:

SECTION I. PURPOSE AND INTENT

The purposes and intent of the Impact Fee Procedures are to:

A. Establish uniform procedures for the imposition, calculation, collection, expenditure, and administration of impact fees imposed on new development;

B. Implement the goals, objectives, and policies of the Lancaster County Comprehensive Plan relating to assuring that new development contributes towards the costs of public facilities reasonably necessitated by such new development;

C. Ensure that new development is benefitted by the provision of the public facilities funded, in whole or in part by the impact fees;

D. Ensure that all applicable legal standards and criteria are incorporated in these procedures.

SECTION II. DEFINITIONS.

The words or phrases used in this Ordinance shall have the meaning prescribed in the current Lancaster County Code except as otherwise indicated in this section. To the extent that the definitions of words, terms or phrases as prescribed in S.C. Code Ann. §6-1-920, as amended, conflict with the definition of words, terms or phrases as defined in this Ordinance or other County ordinances, the former shall control:

A. **Appropriation or to Appropriate:** An action by the County Council or the applicable service provider to identify specific public facilities for which impact fee funds may be utilized. Appropriation shall include, but shall not necessarily be limited to: inclusion of a public facility in the capital improvements plan for the particular impact fee prepared in accordance with S.C. Code Ann. § 6-1-910, *et seq*., as amended, the South Carolina Development Impact Fee Act; execution of a contract or other legal encumbrance for construction of a public facility using impact fee funds in whole or in part; and actual expenditure of impact fee funds through payments made from an impact fee account for public facilities in the capital improvements plan

B. **Capital Improvements:** Has the meaning established in S.C. Code Ann. § 6-1-920(2), as amended

C. **Capital Improvements Plan:** Has the meaning established in S.C. Code Ann. § 6-1-920(3), as amended

D. **Developer:** Has the meaning established in S.C. Code Ann. § 6-1-920(5), as amended

E. **Development:** Has the meaning established in S.C. Code Ann. § 6-1-920(6), as amended

F. **Development Impact Fee or Impact Fee:** Has the meaning established in S.C. Code Ann. § 6-1-920(8), as amended.

G. **Director:** The Development Services Director or a designee.

H. **District or Impact Fee District:** A defined geographic area or subarea of the County which serves as the service area within which particular impact fees are collected, appropriated, and expended for public facility system improvements that are identified in the Capital Improvement Plan for the public facility.

I. **Fee payor:** Has the meaning established in S.C. Code Ann. § 6-1-920(10), as amended

J. **Governmental Entity:** Has the meaning established in S.C. Code Ann. § 6-1-920(11), as amended.

K. **Impact Fee District Map:** The map(s) defining the geographical extent of the impact fee districts and subdistricts for each adopted impact fee, as may be necessary.

L. **Level of Service:** Has the meaning established in S.C. Code Ann. § 6-1-920(14), as amended

M. **Multiple Uses:** A new development consisting of both residential and non-residential uses or one (1) or more different types of non-residential uses on the same site or part of the same new development.

N. **Proportionate Share:** Has the meaning established in S.C. Code Ann. §§ 6-1-920(17) and -990, as amended

O. **Public Facilities:** Has the meaning established in S.C. Code Ann. § 6-1-920(18), as amended.

P. **Service Area:** Has the meaning established in S.C. Code Ann. § 6-1-920(19), as amended

Q. **Service Unit:** Has the meaning established in S.C. Code Ann. § 6-1-920(20), as amended

R. **Successor in Interest**: A person who gains a fee simple interest in land for which an impact fee is paid, or an offset is approved, pursuant to the terms of this Ordinance.

S. **System Improvements:** Has the meaning established in S.C. Code Ann. § 6-1-920(21), as amended

T. **System Improvements Costs:** Has the meaning established in S.C. Code Ann.§ 6-1-920(22), as amended,

SECTION III. DEVELOPMENT IMPACT FEE SCHEDULE

A. Residential Development Impact Fee Schedule.

1. Residential Development Impact Fee Schedule Table

Development Type	Parks & Recreation	Sheriff	EMS	Fire	Total Fee
Residential (per housing unit)					
Single Family Detached	$731	$126	$166	$1,184	**$2,207**
Single Family Attached	$621	$107	$141	$1,006	**$1,875**
Multifamily	$519	$90	$118	$841	**$1,568**

2. Residential Development Impact Fee Schedule Table – Pleasant Valley Fire District

Development Type	Parks & Recreation	Sheriff	EMS	Fire	Total Fee
Residential (per housing unit)					
Single Family Detached	$731	$126	$166	$1,018	**$2,041**
Single Family Attached	$621	$107	$141	$865	**$1,734**
Multifamily	$519	$90	$118	$723	**$1,450**

B. Non-residential Development Impact Fee Schedule.

1. Non-residential Development Impact Fee Schedule Table

Development Type	Parks & Recreation	Sheriff	EMS	Fire	Total Fee
Nonresidential (per 1,000 square feet)					
Retail	$0	$158	$144	$1,478	**$1,780**
Office	$0	$54	$49	$502	**$605**
Industrial	$0	$27	$25	$255	**$307**
Warehouse	$0	$10	$9	$90	**$109**
Healthcare	$0	$59	$54	$552	**$665**
Institutional	$0	$107	$98	$1,005	**$1,210**

2. Non-residential Development Impact Fee Schedule Table – Pleasant Valley Fire District

Development Type	Parks & Recreation	Sheriff	EMS	Fire	Total Fee
Nonresidential (per 1,000 square feet)					
Retail	$0	$158	$144	$1,363	**$1,665**
Office	$0	$54	$49	$463	**$566**
Industrial	$0	$27	$25	$236	**$288**
Warehouse	$0	$10	$9	$83	**$102**
Healthcare	$0	$59	$54	$509	**$622**
Institutional	$0	$107	$98	$927	**$1,132**

C. Development Impact Fee Schedule Annual Update. The development impact fees shall be adjusted annually to reflect the effects of inflation on the costs for facilities set forth in the Development Impact Fee Study and CIP dated January, 2021. The fee schedule shall be adjusted using the Construction Cost Index calculated by the Engineering New Record (ENR). For each such adjustment, the development impact fees shall be multiplied by a fraction, the numerator of which is the ENR Construction Cost Index for the most recent month for which figures are available, and the denominator of which is the ENR Construction Cost Index for the period one year prior to the period reflected in the numerator.

SECTION IV. GENERAL PROVISIONS; APPLICABILITY

A. **Term.** These Procedures shall remain in effect unless and until repealed, amended or modified by the County Council in accordance with applicable State law and County ordinances and resolutions.

B. Annual Review.

1. At least once every year, but not later than January 1st, and prior to County Council adoption of the Annual Budget and Capital Improvements Program, the County Manager or a designee shall coordinate the preparation and submission of a report on the subject of impact fees.

2. The report shall include the following:

   a. recommendations on amendments, if appropriate, to these procedures or to specific ordinances adopting impact fees for particular public facilities;

b. proposed changes to the Lancaster County Comprehensive Plan and/or an applicable Capital Improvements Program, or the capital improvement plan for the particular public facility, including the identification of public facility system improvements anticipated to be funded wholly or partially with impact fees;

c. proposed changes to the boundaries of impact fee districts or subdistricts, as appropriate;

d. proposed changes to impact fee schedules as set forth in the ordinances imposing and setting specific impact fees;

e. proposed changes to level of service standards;

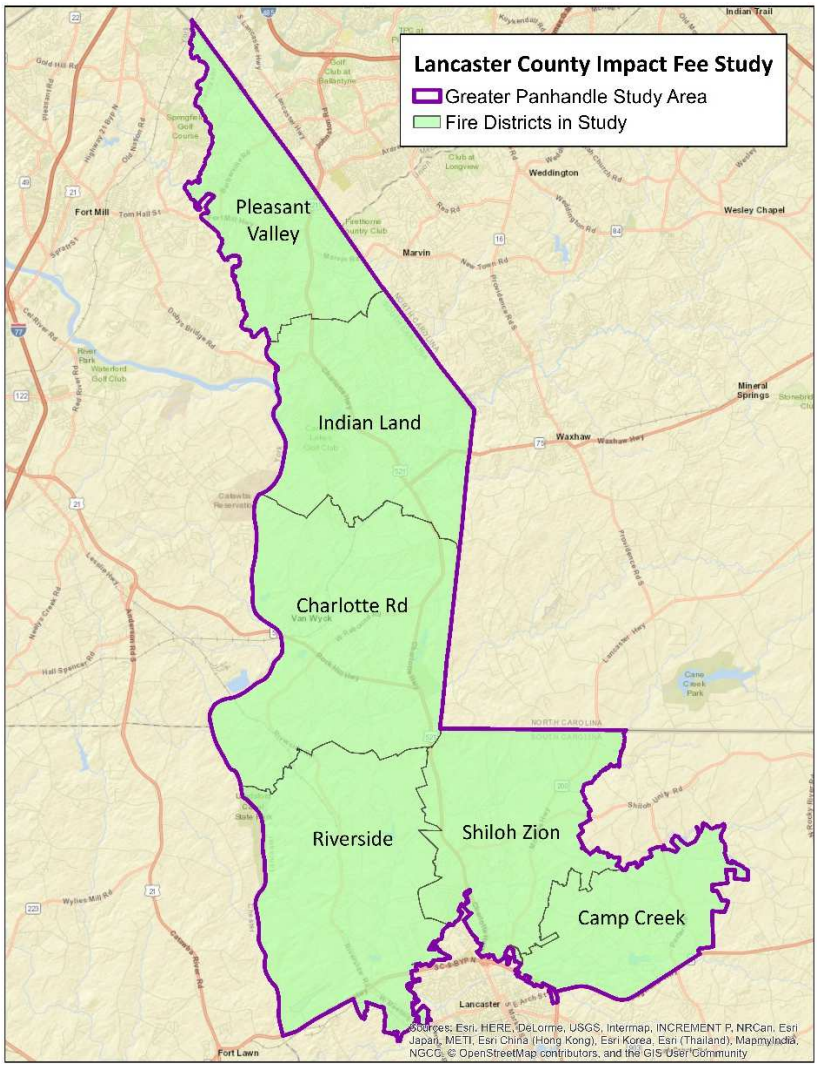
f. proposed changes in the impact fee calculation methodology;

g. other data, analysis, or recommendations as the County Manager or a designee may deem appropriate, or as may be requested by the County Council.

3. **Submission of Impact Fee Annual Report and County Council Action.** The County Manager or a designee shall submit the Impact Fee Annual Report to the County Council, which shall receive the Report and take such actions as it deems appropriate, including but not limited to requesting additional data or analyses and holding public workshops and/or public hearings.

C. Impact Fee Districts .

1. **Impact Fee Districts.** Impact fees may be imposed on new development in Lancaster County for particular public facilities authorized by state law. The particular impact fees may be divided into Impact Fee Districts (and subdistricts) by the County Council for purposes of expenditure of impact fee funds.



2. **Municipalities.** Impact fees adopted by the County shall, if necessary and appropriate, be collected by the municipalities on new development within the municipality pursuant to an intergovernmental agreement with the County which provides that the impact fees collected by the municipality be transferred to the County for expenditure in accordance with the terms of these Procedures.

3. **Identification.** Impact Fee Districts, or subdistricts if applicable, and the participating municipalities who will be responsible for collecting the fees, shall be described and/or listed in the applicable Fee-Setting Ordinances.

D. **Type of Development Affected.** These Procedures shall apply to all new development as defined in this Ordinance and as defined in the applicable Fee-Setting Ordinances.

E. **Type of Development Not Affected.** The requirements of this Ordinance and the applicable Fee-Setting Ordinances shall not apply to those structures and activities listed in S.C. Code Ann. § 6-1-970, as amended:

1. rebuilding the same amount of floor space of a structure that was destroyed by fire or other catastrophe;

2. remodeling or repairing a structure that does not result in an increase in the number of service units;

3. replacing a residential unit, including a manufactured home, with another residential unit on the same lot, if the number of service units does not increase;

4. placing a construction trailer or office on a lot during the period of construction on the lot;

5. constructing an addition on a residential structure that does not increase the number of service units;

6. adding uses that are typically accessory to residential uses, such as a tennis court or a clubhouse, unless it is demonstrated clearly that the use creates a significant impact on the system's capacity;

7. all or part of a particular development project if:

(a) the project is determined to create affordable housing; and

(b) the exempt development's proportionate share of system improvements is funded through a revenue source other than development impact fees;

8. constructing a new elementary, middle, or secondary school;

9. constructing a new volunteer fire department; and

10. The development of public facilities by the State of South Carolina, Lancaster County, Special Purpose District, or the Federal government.

F. Effect of Payment of Impact Fees on Other Applicable County Land Development Regulations

1. The payment of impact fees shall not entitle the applicant to a development permit unless all other applicable requirements, standards, and conditions of approval have been met. Such other requirements, standards, and conditions of approval are independent of the requirement for payment of impact fees.

2. Neither these Procedures or the applicable Fee-Setting Ordinances shall affect, in any manner, the use of property, density/intensity of development, design and improvement standards or other applicable standards or requirements of the Lancaster County Land Development Regulations.

G. **Amendments.** This Ordinance, and any applicable Fee-Setting Ordinances for any particular public facilities may be amended from time to time by the County Council,

SECTION V. PROCEDURES FOR IMPOSITION, CALCULATION AND COLLECTION OF IMPACT FEES

A. **In General.** An applicant shall be notified by the County of the applicable impact fee requirements at the time of application for a building permit, and the impact fee shall be calculated and paid prior to issuance of a building permit.

B. Calculation.

1. Upon receipt of an application for a building permit, the Director shall determine (a) whether it is a residential or non-residential use; (b) the specific category (type) of residential or non-residential development, if applicable; (c) if residential, the number of new dwelling units; (d) if non-residential, the number of new or additional square feet of floor area and the proposed use; and (e) the Impact Fee District(s) in which the new development is located. After making these determinations, the Director shall calculate the impact fees due. If the applicant has entered into an agreement with County, including an agreement entered into pursuant to the South Carolina Local Government Development Agreement Act, providing for payments instead of impact fees for facilities or services then calculation of fees owed, if any, will be governed by S.C Code § 6-1-1050, as amended..

2. If the type of land use proposed for new development is not expressly listed in the specific Fee Setting Impact Fee Ordinance, the Director shall (a) identify the most similar land use type listed and calculate the impact fees based on the fees for that land use, or (b) identify the broader land use category within which the specific land use would apply and calculate the impact fees based on the impact fees for that land use category.

3. An applicant may request a non-binding estimate of impact fees due from the Director for a particular new development at any time. The estimate may change depending on the time a formal application for a building permit is submitted.

4. The calculation of impact fees due from a multiple-use new development shall be based upon the fees due for each use upon application for the building permit for that use.

5. The calculation of impact fees due from phased development shall be based upon the demand generated by each specific use of the phase of the development upon application for the bulding permit for that use.

C. Offsets.

1. Pursuant to S.C. Code § 6-1-1050, as amended, a fee payor and developer may enter into an agreement with County, including an agreement entered into pursuant to the South Carolina Local Government Development Agreement Act, providing for payments instead of impact fees for facilities or services. That agreement may provide for the construction or installation of system improvements by the fee payor or developer and for credits or reimbursements for costs incurred by a fee payor or developer including interproject transfers of credits or reimbursement for project improvements which are used or shared by more than one development project. An impact fee may not be imposed on a fee payor or developer who has entered into an agreement as described in S.C. Code § 6-1-1050, as amended.

D. Collection

1. The Director shall collect all applicable impact fees prior to the issuance of a building permit unless:

a. the applicant has entered an agreement with County pursuant to S.C. Code 6-1-1050, as amended. or

b. the applicant has been determined to be not subject to the payment of impact fees; or

c. the applicant has taken an appeal pursuant to Section VI, and a bond or other surety in the amount of the impact fee, as calculated by the Director, has been posted with the County.

SECTION VI. ESTABLISHMENT OF IMPACT FEE ACCOUNTS; APPROPRIATION OF IMPACT FEE FUNDS; AND REFUNDS

A. **Impact Fee Accounts.** An Impact Fee Account is established by the County for each public facility for which impact fees are imposed. Such accounts shall clearly identify the category, account, or fund for which the impact fees are imposed. Subaccounts may be established for individual Impact Fee Districts and subdistricts. All impact fees collected by the County shall be deposited into the appropriate Impact Fee Account or subaccount, which shall be interest bearing. All interest earned or monies deposited to the accounts or subaccounts shall be credited to and be considered funds of the account. The funds of each account shall not be commingled with other funds or revenues of the County. The County shall establish and implement necessary accounting controls to ensure that the impact fee funds are properly deposited, accounted for, and appropriated in accordance with these Procedures, and any other applicable legal requirements.

B. Appropriation of Impact Fee Funds

1. **In General.** Impact fee funds may be appropriated for public facilities identified in the capital improvement plan of the public facility and for the payment of principal, bonds, contracts, and other obligations issued by or on behalf of the County or other applicable service providers to finance such public facilities.

2. **Restrictions on Appropriations.** Impact fees shall be appropriated only (a) for the public facility for which they were imposed, calculated, and collected and (b) within the Impact Fee District or subdistrict where collected. They shall be appropriated and expended within three (3) years of the date they were scheduled to be expended in the capital improvements plan or any applicable amendment to the capital improvements plan. Impact fees shall not be appropriated or expended for funding maintenance or repair of public facilities nor for operational or personnel expenses associated with the provision of the public facility.

C. Procedure for Appropriation of Impact Fee Funds.

D. Refunds

1. Eligibility for Refund.

a. **Expiration or Revocation of Permit or Approval, or Demolition.** An applicant or a successor-in-interest who paid impact fees for new development for which an approval or permit has expired or been revoked, or which is demolished with five years of payment of the fee, is and be eligible to apply for a refund of impact fees paid.

b. **Failure of County to Appropriate Impact Fee Funds Within Time Limit.** The County shall notify the owner of record of any property for which an impact fee has been previously paid if the County has failed to appropriate and expend the impact fees attributable to that

property within the time limits established in Section 5.B.2. In such a case,the owner of record is eligible to apply for a refund of impact fees paid. The accounting shall be based on a first-in, first out basis.

c. **Reduction in Density or Intensity of New Development.** An applicant or a successor- in-interest who paid impact fees is eligible for a partial refund if the density or intensity of the development for which the impact fees are paid is reduced after payment of the fees, and the fees have not been appropriated and expended.

2. **Refund Application for Expiration or Revocation of Permit or Approval, or Demolition.** Applications for a refund due to expiration or revocation of a permit or approval, or demolition of the development shall include: (a) evidence that the applicant is the property owner or the duly designated agent of the property owner, (b) the amount of the impact fees paid and receipts evidencing such payments, and (c) documentation evidencing the expiration or revocation of the permit or approval, or demolition of the structure pursuant to a valid County issued demolition permit. Failure to apply for the refund within sixty (60) days following expiration or revocation of the permit or approval, or demolition of the building or structure shall constitute a waiver of entitlement to a refund. No interest shall be paid by the County in calculating the amount of the refunds.

3. **Refund Application for Failure of County to Appropriate and Expend Funds.** Applications for refunds due to County failure to appropriate and expend fees collected from an applicant within the time limits established in Sections 5.B.2. shall be initiated by the owner-of-record within one hundred and twenty (120) days after the County has notified the owner of a right to a refund. To receive the refund, the owner-of- record shall submit (a) evidence that the applicant is the property owner or the duly designated agent of the property owner, and (b) the amount of the impact fees paid and receipts evidencing the payments. Refunds shall include any interest earned on the impact fees being refunded.

4. **Refund Application Due to Reduction in Density or Intensity.** Applications for refunds due to a reduction in density or intensity of development shall include (a) evidence that the applicant is the property owner or developer who paid the impact fees or, if the applicant is the current owner, evidence that the developer has waived rights to a refund, (b) the amount of the impact fees paid and receipts evidencing payments, and (c) documentation evidencing a reduction in density or intensity of the new development. No refund shall be approved until a revised new development plan is approved by the County. The refund shall be paid to the current property owner or developer, as appropriate. The refund shall be calculated in accordance with the following formula:

(SUl x F) - (SU2 x FI) where

SUl = public facility demand generated originally by the new development

SU2 = public facility demand currently generated by the new development

F = the impact fee in effect at the time of original approval of the new development

Fl = the impact fee currently in effect at the time of approval of the new development

5. The County may, at its option, make refunds of impact fees by direct payment, by offsetting such refunds against other impact fees due for the same public facility for new development on the same property, or by other means subject to agreement with the person receiving the refund.

SECTION VII. APPEALS AND MEDIATION

A. A feepayor may pay an impact fee under protest. A feepayor making the payment of impact fees is not estopped from exercising the right of appeal under this Ordinance, or estopped from receiving a refund for any overpayment of the fees, if that is determined to be the case on appeal.

B. An appeal from any decision of the Director pursuant to these Procedures shall be made to the Lancaster County Board of Zoning Appeals . If the notice of appeal is accompanied by a letter of credit in a form satisfactory to the County Attorney in an amount equal to the impact fees due, the development may be approved. The filing of an appeal shall not stay the imposition or the collection of impact fees unless a bond or other sufficient surety is provided.

C. If there is a dispute between a feepayor and the County about an impact fee amount due, an offset, or a waiver, the County Council and the feepayor may agree to resolve the dispute through mediation, by using a qualified independent mediator, by mutual agreement. Participation in mediation does not preclude the feepayor from pursuing other remedies provided by law.

D. The burden of proof shall be on the appellant to demonstrate that the decision of the Director is erroneous.

SECTION VIII. EXEMPTIONS/WAIVERS

A. **Filing of Application.** Petitions for exemptions to the application of these Procedures or waivers from specific impact fees shall be filed with the County Council.

B. **Effect of Grant of Exemption/Waiver.** If the County Council grants an exemption or waiver, the amount of the impact fees exempted or waived shall be provided by the County or other appropriate service provider for the particular public facilities, from non-impact fee funds. The funds shall be deposited in the appropriate Impact Fee Account.

C. **Timing of Provision of Waived/Exempted Impact Fees.** The provision of the amount of exempted or waived impact fees by the County or other appropriate service provider shall be made within a reasonable period of time, consistent with the applicable capital improvements program and the capital improvement plan for the public facility.

D. **Development Agreements.** Nothing herein shall be deemed to limit the County's authority and ability to enter into development agreements with applicants for new development which provide for payments in-lieu of impact fees pursuant to S.C. Code § 6-1-1050, as amended.

E. **Statutory Exemptions.** S.C. Code Ann. §6-1-970 exempts the following structures and activities from impact fees:

1. Rebuilding the same amount of floor space of a structure that was destroyed by fire or other catastrophe:

2. Remodeling or replacing a structure that does not increase the number of service units;

3. Replacing a residential unit, including a manufactured home, with another residential unit on the same lot, if that number of service units does not increase;

4. Placing a construction trailer or office on a lot during the period of construction of the lot;

5. Constructing and addition on a residential structure which does not increase the number of service units;

6. Adding uses that are typical accessory to residential uses, such as a tennis court of a clubhouse, unless it is demonstrated clearly that the use creates a significant impact on the system's capacity;

7. All or part of a particular development project if:

   a. The project is determined to create affordable housing, and

   b. The exempt development's proportionate share of system improvements is funded by a revenue source other that development impact fees;

8. Constructing a new elementary, middle, or secondary school; and

9. Constructing a new volunteer fire department.

SECTION IX. MEDIATION

SECTION X. CONFLICT

To the extent of any conflict between other County ordinances and these Procedures, these Procedures shall be deemed to be controlling; provided, however, that these Procedures are not intended to amend or repeal any existing County ordinance, resolution, or regulation.

SECTION XI. SEVERABILITY

A. If any section, subsection, sentence, clause, phrase, or portion of these Procedures is, for any reason, held invalid or unconstitutional by any court of competent jurisdiction, such section, subsection, sentence, clause, phrase, or portion of these Procedures shall be deemed to be a separate, distinct and independent provision and such holding shall not affect the validity of the remaining provisions of these Procedures nor impair or nullify the remainder of such Procedures which shall continue in full force and effect.

B. If the application of any provision of these Procedures to any new development is declared to be invalid by a decision of any court of competent jurisdiction, the intent of the County Council is that such decision shall be limited to the specific new development immediately involved in the controversy, action, or proceeding in which such decision of invalidity was rendered. Such decision shall not affect, impair, or nullify these Procedures as a whole or the application of any provision of these Procedures to any other new development.

SECTION XII. EFFECTS OF ANNEXATION

A. County Development Impact Fee Ordinance imposed in an unincorporated area which is subsequently annexed by a municipality shall remain in full force and effect pursuant to this article and the State Development Impact Fee Act, S.C. Code 1976, §§ 6-1-910-6-1-2010, until the development impact fee terminates, unless the annexing municipality:

1. Assumes responsibility for the provision of system improvements included in the capital improvements plan that are to be provided, in whole or in part, via payment of development impact fees from developers in the annexed area; and

2. Assumes any liability which is to be paid with the impact fee revenue.

If the annexing municipality agrees to assume responsibility and liability as set forth in this section, it shall enter into an intergovernmental agreement to such effect with the County.

ADOPTED this __day of _____, 2021

COUNTY COUNCIL OF LANCASTER COUNTY
By:_____
Steve Harper, Chairman

By:_____
Billy Mosteller , Secretary

ATTEST:

_____
John K. DuBose, III, Lancaster County Attorney

First Reading: February 8, 2021
Second Reading _____
Third and Final Reading _____
Public Hearing _____