

**THE UNITED STATES DISTRICT COURT
FOR THE EASTERN DISTRICT OF TEXAS
MARSHALL DIVISION**

SCOTT ENVIRONMENTAL SERVICES,
INC.,

Plaintiff,

v.

A TO Z MUD CO., INC.,

Defendant.

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CASE NO. 2:13-CV-701-JRG-RSP

MEMORANDUM OPINION AND ORDER

Before the Court is the opening claim construction brief of Plaintiff Scott Environmental Services, Inc. (“Plaintiff”) (Dkt. No. 66, filed on May 27, 2014), the response of Defendant A to Z Mud Co., Inc. (Dkt. No. 74, filed on June 11, 2014) (“Defendant”), and the reply of Plaintiff (Dkt. No. 75, filed on June 17, 2014). The Court held a claim construction hearing on July 8, 2014. Having considered the arguments and evidence presented by the parties at the hearing and in their claim construction briefing, the Court issues this Claim Construction Order.

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I. BACKGROUND

Plaintiff alleges infringement of United States Patent No. 8,007,581 (“the ‘581 patent” or “patent-in-suit”) in this lawsuit. The application leading to the ‘581 patent was filed on October 26, 2009, which is a continuation of an application filed on January 3, 2002 (now abandoned), which was based on a provisional application filed on August 10, 2001. The ‘581 patent issued on August 30, 2011, and is entitled “Incorporation of Drilling Cuttings into Stable Load-Bearing Structures.” In general, the ‘581 patent is directed to incorporating drilling cuttings into load-bearing structures by mixing them with a stabilizer (referred to as group 2.1 suboperations) or with a foamed or emulsified asphalt (referred to as group 2.2 suboperations) in particular ratios such as to form a continuous structure with a specified compressive strength (defined in terms of a rutting resistance). The Abstract of the ‘581 patent states:

Cuttings from drilling through or into natural rock and/or soil can be incorporated into useful, high quality load-bearing structures such as vehicle roads and pads for deep drilling rigs. This process recycles a material previously regarded as valueless at best and often as a pollution hazard. The cuttings, optionally mixed with drilling mud and/or soil, are converted to the useful structures by pozzolanic and/or cementitious reactions after being mixed with suitable other materials and/or are bonded into the useful structures by asphaltic materials.

Claim 1 of the ‘581 patent is shown below:

1. A process for constructing a load-bearing structure incorporating drilling cuttings, said structure having a shape and a size and containing a continuous portion having a cross-sectional area at least as large as the area of a circle having a diameter of 101 millimeters, said process comprising operations of:

(1) forming a particulate mixture comprising drilling cuttings; and

(2) at least one of groups (2.1) and (2.2) of suboperations, said group (2.1) comprising suboperations of:

(2.1.1) mixing said particulate mixture comprising drilling cuttings with at least one stabilizer selected from the group consisting of:

(A) quicklime;

- (B) hydrated lime;
- (C) Portland Cement;
- (D) Class C fly ash;
- (E) cement kiln dust;
- (F) lime kiln dust;
- (G) Class F fly ash; and
- (H) other pozzolans to form a cementitious second mixture,

(2.1.2) forming said cementitious second mixture into the shape and size of the load-bearing structure and developing structural strength within said shaped and sized second mixture by pozzolanic reaction to form said load-bearing structure,

said load-bearing structure having sufficient resistance to rutting that any rut formed in such surface by 10,000 applications of a single axle load of 18,000 pounds will have a depth of rutting that is less than 1 inch;

and said group (2.2) comprising suboperations of: (2.2.1) mixing said particulate mixture comprising drilling cuttings with at least one of foamed asphalt and emulsified asphalt to form an asphaltic second mixture; (2.2.2) forming said asphaltic second mixture into the shape and size of the load-bearing structure; and developing structural strength within the shaped and sized asphaltic second mixture by curing, said load-bearing structure having sufficient resistance to rutting that any rut formed in such surface by 10,000 applications of a single axle load of 18,000 pounds will have a depth of rutting that is less than 1 inch.

II. LEGAL PRINCIPLES

“It is a ‘bedrock principle’ of patent law that ‘the claims of a patent define the invention to which the patentee is entitled the right to exclude.’” *Phillips v. AWH Corp.*, 415 F.3d 1303, 1312 (Fed. Cir. 2005) (en banc) (quoting *Innova/Pure Water Inc. v. Safari Water Filtration Sys., Inc.*, 381 F.3d 1111, 1115 (Fed. Cir. 2004)). To determine the meaning of the claims, courts start by considering the intrinsic evidence. *See id.* at 1313; *C.R. Bard, Inc. v. U.S. Surgical Corp.*, 388 F.3d 858, 861 (Fed. Cir. 2004); *Bell Atl. Network Servs., Inc. v. Covad Commc’ns Group, Inc.*, 262 F.3d 1258, 1267 (Fed. Cir. 2001). The intrinsic evidence includes

the claims themselves, the specification, and the prosecution history. *See Phillips*, 415 F.3d at 1314; *C.R. Bard, Inc.*, 388 F.3d at 861. Courts give claim terms their ordinary and accustomed meaning as understood by one of ordinary skill in the art at the time of the invention in the context of the entire patent. *Phillips*, 415 F.3d at 1312–13; *Alloc, Inc. v. Int’l Trade Comm’n*, 342 F.3d 1361, 1368 (Fed. Cir. 2003).

The claims themselves provide substantial guidance in determining the meaning of particular claim terms. *Phillips*, 415 F.3d at 1314. First, a term’s context in the asserted claim can be very instructive. *Id.* Other asserted or unasserted claims can also aid in determining the claim’s meaning because claim terms are typically used consistently throughout the patent. *Id.* Differences among the claim terms can also assist in understanding a term’s meaning. *Id.* For example, when a dependent claim adds a limitation to an independent claim, it is presumed that the independent claim does not include the limitation. *Id.* at 1314–15.

“[C]laims ‘must be read in view of the specification, of which they are a part.’” *Id.* (quoting *Markman v. Westview Instruments, Inc.*, 52 F.3d 967, 979 (Fed. Cir. 1995) (en banc)). “[T]he specification ‘is always highly relevant to the claim construction analysis. Usually, it is dispositive; it is the single best guide to the meaning of a disputed term.’” *Id.* (quoting *Vitronics Corp. v. Conceptoronic, Inc.*, 90 F.3d 1576, 1582 (Fed. Cir. 1996)); *Teleflex, Inc. v. Ficosa N. Am. Corp.*, 299 F.3d 1313, 1325 (Fed. Cir. 2002). This is true because a patentee may define his own terms, give a claim term a different meaning than the term would otherwise possess, or disclaim or disavow the claim scope. *Phillips*, 415 F.3d at 1316. In these situations, the inventor’s lexicography governs. *Id.* The specification may also resolve ambiguous claim terms “where the ordinary and accustomed meaning of the words used in the claims lack sufficient clarity to permit the scope of the claim to be ascertained from the words alone.” *Teleflex, Inc.*, 299 F.3d at

1325. But, “[a]lthough the specification may aid the court in interpreting the meaning of disputed claim language, particular embodiments and examples appearing in the specification will not generally be read into the claims.” *Comark Commc’ns, Inc. v. Harris Corp.*, 156 F.3d 1182, 1187 (Fed. Cir. 1998) (quoting *Constant v. Advanced Micro-Devices, Inc.*, 848 F.2d 1560, 1571 (Fed. Cir. 1988)); *see also Phillips*, 415 F.3d at 1323. The prosecution history is another tool to supply the proper context for claim construction because a patent applicant may also define a term in prosecuting the patent. *Home Diagnostics, Inc., v. Lifescan, Inc.*, 381 F.3d 1352, 1356 (Fed. Cir. 2004) (“As in the case of the specification, a patent applicant may define a term in prosecuting a patent.”).

Although extrinsic evidence can be useful, it is “less significant than the intrinsic record in determining the legally operative meaning of claim language.” *Phillips*, 415 F.3d at 1317 (quoting *C.R. Bard, Inc.*, 388 F.3d at 862). Technical dictionaries and treatises may help a court understand the underlying technology and the manner in which one skilled in the art might use claim terms, but technical dictionaries and treatises may provide definitions that are too broad or may not be indicative of how the term is used in the patent. *Id.* at 1318. Similarly, expert testimony may aid a court in understanding the underlying technology and determining the particular meaning of a term in the pertinent field, but an expert’s conclusory, unsupported assertions as to a term’s definition are entirely unhelpful to a court. *Id.* Generally, extrinsic evidence is “less reliable than the patent and its prosecution history in determining how to read claim terms.” *Id.*

The “determination of claim indefiniteness is a legal conclusion that is drawn from the court's performance of its duty as the construer of patent claims.” *Exxon Research & Eng'g*

Co. v. United States, 265 F.3d 1371, 1375 (Fed. Cir. 2001). Section 112 entails a “delicate balance” between precision and uncertainty:

On the one hand, the definiteness requirement must take into account the inherent limitations of language. Some modicum of uncertainty, the Court has recognized, is the price of ensuring the appropriate incentives for innovation. ... At the same time, a patent must be precise enough to afford clear notice of what is claimed, thereby apprising the public of what is still open to them. Otherwise there would be a zone of uncertainty which enterprise and experimentation may enter only at the risk of infringement claims. And absent a meaningful definiteness check, we are told, patent applicants face powerful incentives to inject ambiguity into their claims. ... Eliminating that temptation is in order, and the patent drafter is in the best position to resolve the ambiguity in patent claims.

Nautilus Inc. v. Biosig Instruments, Inc., 134 S. Ct. 2120, 2128-29 (2014) (citations omitted). Therefore, in order for a patent to be definite under § 112, ¶2, “a patent's claims, viewed in light of the specification and prosecution history, [are required to] inform those skilled in the art about the scope of the invention with reasonable certainty.” *Id.* at 2129. The determination of “definiteness is measured from the viewpoint of a person skilled in the art *at the time the patent was filed.*” *Id.* at 2128. (emphasis original, citations omitted). “The definiteness requirement . . . mandates clarity, while recognizing that absolute precision is unattainable.” *Id.* This standard reflects rulings that have found that “the certainty which the law requires in patents is not greater than is reasonable, having regard to their subject-matter.” *Id.* at 2129. “Whether a claim reasonably apprises those skilled in the art of its scope is a question of law that [is] review[ed] de novo.” *Microprocessor Enhancement Corp. v. Texas Instruments Inc.*, 520 F.3d 1367, 1374 (Fed. Cir. 2008). As it is a challenge to the validity of a patent, the failure of any claim in suit to comply with § 112 must be shown by clear and convincing evidence. *Nautilus*, 134 S. Ct. at n.10.

III. CONSTRUCTION OF DISPUTED TERMS

The parties' positions and the Court's analysis as to the disputed terms are presented below.

A. "load bearing structure"

<u>Plaintiff's Proposed Construction</u>	<u>Defendant's Proposed Construction</u>
"civil engineering structure that supports a load of wheels passing over it"	"civil engineering structure that is formed in place as a permanent structure"

The disputed term "load bearing structure" appears in claim 1 of the '581 patent.

(1) The Parties' Positions

Plaintiff submits that the "load bearing structure" is a civil engineering structure. (*See, e.g.*, Dkt. No. 66 at 7-8.) Plaintiff argues that the specification refers to roads and drilling pads (structures over which wheels pass), and the claim expressly mentions the rutting resistance property of the load bearing structure. (*Id.* at 8.) Thus, Plaintiff argues that the entire wording of claim 1 itself, by referring to the rutting resistance of the structure, supports Plaintiff's interpretation that the load-bearing structure supports a load of wheels passing over it. (*Id.*) Plaintiff argues that the claimed second mixture (whether stabilizer or asphalt) is formed and shaped while still plastic (not fully hardened) into the desired load-bearing structure, but that the step need not occur in the place where the structure is to be used. (*Id.* at 8.) Plaintiff argues that Defendant's use of "permanent" is vague and not supported in the claims or specification. (*Id.* at 8-9.) Plaintiff argues that the Applicant's comments during prosecution of the patent do not support Defendant's construction and were not directed to whether the prior art reference was "formed in place as a permanent structure." (*Id.* at 9-11.)

Defendant responds that its construction for “load bearing structure” is taken directly from the prosecution history of the patent. (Dkt. No. 74 at 15-18.) Defendant argues that its construction properly limits the claim scope argued to the USPTO during prosecution, *i.e.*, that the claims only cover a site mixing process. (*Id.* at 16.) Defendant argues that Plaintiff’s proposed construction attempts to recapture the plant mixing subject matter disavowed during prosecution. (*Id.*) Defendant argues that the subjective intent of a named inventor in a declaration is not relevant to claim construction and provides only his personal opinion and not one of ordinary skill in the art. (*Id.* at 16-17.) Defendant argues that Plaintiff’s hypothetical example in the briefing of transporting a load-bearing structure from one site to the final installation site is not found in the specification and is contrary to arguments found in the prosecution history. (*Id.* at 17-18.)

Plaintiff replies that Defendant’s focus on “site mix” versus “plant mix” is irrelevant for at least two reasons: 1) such a distinction not made during prosecution and 2) those terms never appear in the intrinsic record. (Dkt. No. 75 at 6.) Plaintiff argues that Defendant’s proposed limitation attempts to read in an improper limitation, while Plaintiff’s construction simply provides meaning to the terms “load bearing” and “structure.” (*Id.*)

(2) Analysis

As an initial matter, both parties agree that the “load-bearing structure” is a “civil engineering structure.” The parties’ dispute is whether the “civil engineering structure” is a structure that merely “supports a load of wheels passing over it” (proposed by Plaintiff) or whether it is “formed in place as a permanent structure” (proposed by Defendant). In particular, the parties dispute the significance of the prosecution history and whether or not the prosecution history disclaimed a mixing (and forming) process other than at the final installation site of the

structure. The claims, prosecution history, and specification are relevant to the parties' dispute as to this term.

Claim 1 provides, in relevant part, “[a] process for constructing a load-bearing structure incorporating drilling cuttings, said structure having a shape and a size and containing a continuous portion having a cross-sectional area at least as large as the area of a circle having a diameter of 101 millimeters, said process comprising operations of...” The claim further comprises the steps of forming a particulate mixture comprising drilling cuttings, mixing said particulate mixture with either a stabilizer or asphalt, and forming a second cementitious/asphaltic mixture into the shape and size of the load bearing structure and developing structural strength within the shaped and sized second mixture. At no point does the claim require the load bearing structure to be a “permanent structure” as proposed by Defendant. Further, while the second mixture must be formed into the shape and size of the load bearing structure, there is no express requirement in the claim that the structure be “formed in place.” The specification likewise has no express requirement that the load bearing structure is a “permanent structure” or that the structure be “formed in place.” The Court notes that Defendant admitted during the claim construction hearing that its proposed construction was based on the prosecution history and not necessarily the specification or claims.

The prosecution history is relevant for this disputed term. The Applicant filed a provisional application on August 10, 2001, and then filed U.S. application no. 10/037,630 (“the ‘630 application”) on January 3, 2002, claiming priority to the provisional application. In response to various office actions rejecting the pending claims in that application, the Applicant made various arguments and claim amendments, eventually culminating in a decision by the Board of Patent Appeals and Interference (“BPAI”) on August 28, 2009, affirming the

Examiner's rejections and finding the claims invalid over U.S. Patent No. 6,706,108 ("Polston"). (See, e.g., Prosecution History for the '630 patent application, Dkt. No. 76-3.) On October 26, 2009, the Applicant filed a continuation application (12/605,617) claiming priority to the earlier application and provisional application, and this application eventually issued into the '581 patent.

In the application leading to the '581 patent, the Applicant made preliminary amendments to the claims, specifying that the claimed process was directed to "constructing a load-bearing structure incorporating drilling cuttings, said structure having a shape and a size and containing a continuous portion having a cross-sectional area at least as large as the area of a circle having a diameter of 101 millimeters, said process comprising operations of: ..." (See April 22, 2010 Preliminary Amendment). In the remarks section of the preliminary amendments, the Applicant provided the following discussion:

"[A] location, a shape, and a size" in line 2 are inherent properties of a civil engineering structure;

The words "containing a continuous portion having a cross-sectional area at least as large as the area of a circle having a diameter of 101 millimeters" are an inherent property of the disclosure, in paragraph [0058] on page 34 of the specification, that one of the samples made was tested according to ASTM D 698. On a page numbered "84" at its bottom, near the top of the right column on the page, the official description of this ASTM test has a requirement that a test specimen for this test be molded and be at least 4 inches, or 101.6. +/- 0.4 mm, in diameter. A molded object is inherently continuous, and since the mold specified is a cylinder, any cross-section of it perpendicular to its axis will have the geometric properties stated in the language of the new claim; also, a road layer 0.15 meters in depth and from 11 to 14 meters in width was prepared from 573 cubic meters of mud/cuttings (see paragraphs [0074] to the end of the specification.) Calculation shows that this road was over 279 meters long. After mixing with some soil, the mixed layer was compacted by a sheep's foot roller that exerted a pressure of at least 200 psi; this is more than twice as much as the pressure prescribed for the above-noted ASTM test, so that after curing the road will also be continuous, and its cross-section parallel to the ground over which it is built will be 279 meters by at least 11 meters, far above the minimum area

specified by the new claim; the road as built is a civil engineering structure with a location, a shape, and a size; therefore, the applicants clearly possessed the geometric characteristics of the invention as claimed at the time the application was filed;

(*Id.* at 11-12.)

In response to the Examiner's subsequent office action rejecting the claims, the Applicant made various arguments over the Polston reference. (*See, e.g.*, Response and Amendments dated October 5, 2010.) In particular, the Applicant made the following arguments over the cited Polston reference:

Applicants respectfully traverse the above rejection for the following reasons. First of all, the instantly pending claims are different from the claims in the parent application that were finally rejected by the Examiner and by the Board of Patent Appeals and Interferences. The terms "*said structure having a shape and a size and containing a continuous portion having a cross-sectional area at least as large as the area of a circle having a diameter of 101 millimeters*" in the claims now pending render the invention claimed by these claims different from the invention claimed in the parent application. [] In addition, Polston neither teaches nor suggests anything about rutting resistance, another term in the instantly pending claims. The invention as claimed in the instantly pending claims is defined, inter alia, by the combination of the terms which recite that the finished load-bearing structure has sufficient resistance to rutting that any rut formed in such surface by 10,000 applications of a single axle load of 18,000 pounds will have a depth of rutting that is less than 1 inch and that has a shape and a size and containing a continuous portion having a cross-sectional area at least as large as the area of a circle having a diameter of 101 millimeters. Polston contains no teaching or suggestion as to load-bearing structures having this combination of properties. Thus, the invention as a whole as instantly claimed could not be obvious over Polston. ...

Furthermore, the geometrical limitations that a continuous portion of the load-bearing structure formed by the instantly claimed process has a cross-sectional area at least as large as the area of a circle having a diameter of 101 millimeters cannot be inherent properties of the composition used because the compositions taught both by Polston and by the specification here, in their processing before final hardening, can in principle be shaped into almost any desired geometrical form.

Applicants further submit that Polston neither teaches nor suggests an advantage realized from the geometrical form required by the italicized portion of

pending claim 3 above as printed above. In fact, so far as the applicant has been able to determine, Polston has no explicit teaching whatever about an optimum or even suitable size for the road material that its process forms. By implication, however, Polston teaches away from the minimum continuous size now claimed: At column 7 lines 58-65, Polston teaches that the aggregate material for its product preferably is “less than about 1 ½ inch in size” (line 63) and again at column 9 lines 3-5 “optimally sized to ¾ inch to 1 ½ inch diameter pieces but may include a substantial portion smaller than ¾”. Note that there is no mention, even as an option, of larger pieces.

The minimum dimension of continuity required by the pending claims is 101 mm, slightly less than 4 inches in size but, much more than “about 1 ½ inches.”

(*Id.* at 11-12) (emphasis original.) The Applicant also submitted declarations regarding the testing of materials made according to the Polston reference, the testing of materials made according to the claimed invention, and the related compressive strengths of such different materials. (*Id.* at 12-14.)

Again, in response to the Examiner’s subsequent office action rejecting the claims, the Applicant made various arguments over the prior art reference Polston. (*See, e.g.*, Response and Amendments dated February 15, 2011.) In particular, the Applicant made the following arguments over the cited Polston reference:

The Examiner also continued to hold the position that the process as is now claimed would appear essentially no different than that relating to 10/037,630 wherein the same material or components are mixed to form a load bearing structure and any properties resulting from that would have been expected to be the same. Applicants submit that the road base material disclosed and claimed in Polston is different from the claimed load bearing structure in the instantly pending claims. Polston’s road base material is a particulate substance whereas the instantly claimed load bearing structure is or at least includes a continuum of substantial size. The contention that Polston’s road base material is a particulate substance is supported by at least the following pertinent portions of the teachings of Polston. ...

These disclosures make it very clear that the substance made by the Polston process is comprised of particles formed in a mixer of some type (e.g., a pug mill) and are capable of being worked such as being deposited on a road base

location after mixing. These and other similar disclosures in Polston force the common sense conclusion that the material made by the Polston process is not and cannot be a continuum because a continuous material could not be removed from a mixer and applied and worked into a road base after having been formed in the mixer. In other words, Polston's final product cannot be a load bearing continuous substance as instantly claimed.

Applicants further submit that the Walka declaration supports Applicants' contention that the road base material disclosed and claimed in Polston is different from the claimed load bearing structure in the instantly pending claims. In that declaration, Mr. Walka describes the testing of a continuous material made by the instantly claimed process. This continuous material had an unconfined compressive strength and associated rutting resistance that were very different from a material made by the process taught by Polston. The Polston material was made by crushing the continuous material from the test molds (made by the instantly claimed process) and the crushed mixture thus formed was graded by conventional means to form a graded aggregate that would pass a 1 ½ inch opening sieve but was retained on a ¾ inch opening sieve as described in column 9, lines 3-5 of Polston. Mr. Walka further states that the graded aggregate was immediately molded into a cylindrical shape 4.5 inches in diameter and 6 inches high. The resulting molded cylindrical material was removed from the mold and allowed to stand in the laboratory for nine days. During that nine day period, it was observed that one corner of the molded cylinder had begun to spontaneously crumble, and that by the ninth day an estimated minimum of 1/5 of the total volume of the molded cylinder had crumbled into fragments next to the molded cylinder on the laboratory bench. The remaining intact portion of the molded cylinder had an unconfined compressive strength no greater than 28 psi. The Walka declaration shows that material made from exactly the same materials and in the same proportions as the Polston process exhibited different load-bearing properties. The difference between the materials is that the one made according to the instantly claimed process is a continuous material and the other one, which is a particulate material, is made from the materials and in the size taught by Polston.

...

Applicants submit that, first of all, the Examiner has misstated the claims under consideration, which do not anywhere directly prescribe any specific size and shape for their load bearing structure. What the newly added claim limitation does prescribe is the existence within the load bearing structure of a portion with a minimum size. This specified minimum size condition was not met by the test structure made by Mr. Walka that had no more than 28 psi of unconfined compressive strength, even though it was made from the same material as the test structure also made by Mr. Walka that had an unconfined compressive strength of

120 psi and that did meet the newly added limitation. This is a strong indication of actual difference.

(*Id.* at 12-15.)

In response to yet another office action by the Examiner rejecting the claims, the Applicant filed an Appeal Brief repeating many of its previously recited arguments over the prior art reference Polston. (*See, e.g.*, Appeal Brief dated April 26, 2011.) In particular, the Applicant made the following arguments over the cited Polston reference in which it detailed four primary differences between the claimed invention and Polston:

The first major difference is that the Polston reference teaches making a different product from that made by the process covered by the claims on appeal. More specifically, Polston's road base material is a particulate material whereas the instantly claimed load bearing structure is or at least includes a continuum of substantial size. The contention that Polston's road base material is a particulate substance is supported by at least the following pertinent portions of the teachings of Polston: []

A load bearing structure produced as the result of the process claimed in the appealed claims is not "typically ... stored"; it is constructed or erected over the area of its intended use. In other words, the structure is a high-load-bearing civil engineering structure such as a vehicle road or a drilling pad and the like that is formed in place as a permanent structure. []

These disclosures make it very clear that the substance made by the Polston process is comprised of particles formed in a mixer of some type (e.g., a pug mill) and capable of being worked, such as by being deposited on a road base location after mixing. These and other similar disclosures in Polston force the common sense conclusion that the road base material made by the Polston process is not and cannot be a continuum because a continuous material could not be removed from a mixer and applied and worked into a road base after having been formed in the mixer and cured in particulate form. Only after application of this particulate material to a road base location can this material become a load bearing structure within the meaning of the claims on appeal. However, no ordinary "application" technique can cause a load bearing structure formed in this way to be continuous, or to contain continuous portions of larger size than those of the particulate road base material that was cured in particulate form. Polston does not teach or suggest any special technique that could increase the continuity of any load bearing structure formed from Polston's particulate product by application to a road base location.

The second major difference is that there is no teaching or suggestion in Polston corresponding to the following claim limitation on appeal: “*containing a continuous portion having a cross-sectional area at least as large as the area of a circle having a diameter of 101 millimeters*”. This limitation became the basis of a decision by Mr. Gary Jones, TC 1700 Director, to grant Applicants’ petition to find that the finality of the first action of 07/06/2010 was premature. Applicants filed the petition because the Examiner made the first office action final based on the contention that that the invention claimed in pending claims 3-22 is the same as that claimed in the claims of the parent application and that claims 3-22 could have been rejected over Polston if they had been presented in the parent application. In granting the petition, Mr. Jones agreed with Applicants’ position that examination of the claims of the parent application and those in the instantly pending application plainly shows that the words “said structure having a shape and a size and containing a continuous portion having a cross-sectional area at least as large as the area of a circle having a diameter of 101 millimeters” in the claim now pending have no counterpart whatsoever in the claim from the earlier invention. On this basis, Mr. Jones granted the petition to withdraw the finality of the first office action. The Examiner disagreed with Mr. Jones and maintained the position that the invention claimed in the claims on appeal and those in the parent application are for the same invention.

The third major difference is that Polston teaches nothing corresponding to the following excerpt from claim 3 on appeal: “*forming said cementitious second mixture into the shape and size of the load-bearing structure and developing structural strength within said shaped and sized second mixture by pozzolanic reaction to form said load-bearing structure*”. As already noted in the above argument for the first major difference, pozzolanic reaction, also called “curing”, in a process as taught by Polston occurs while the product material is still in particulate form. This particulate form is not the shape and size of the completed load bearing structure, which is only achieved after an additional operation of applying the particulate product to a road base location. Since the curing has been completed and the cured product has been stored before this time, there is no reason to expect further curing after the product has been applied “to a road base location”.

The fourth major difference involves Polston’s failure to teach anything corresponding to the following excerpt from claim 3 on appeal: “said load-bearing structure having sufficient resistance to rutting that any rut formed in such surface by 10,000 applications of a single axle load of 18,000 pounds will have a depth of rutting that is less than 1 inch”. The Examiner has conceded from the start that there is no explicit teaching to this effect in the Polston reference. The Examiner’s contention that such a teaching is implicit because “the same materials are used and mixed in the same proportions” will be rebutted below.

(*Id.* at 10-13)(bolded emphasis added.) The Examiner eventually agreed with the Applicant's arguments and issued a Notice of Allowance, in which it provided the following comments:

The prior art Polston reference used in examiner's rejection was withdrawn because applicants declarations under 37 CFR 1.132 showed unexpected results with respect to properties such as compressive strength. Applicants claimed there compressive strength was as high or greater than 100 psi vs prior art Polston which was only as high as 28 psi.

(*See* July 14, 2011 Notice of Allowance.)

During the claim construction hearing, the Court asked Defendant to identify the clear and unambiguous prosecution disclaimer it sought to read into the claim term. Defendant conceded that there was no "billboard" in the prosecution history that supports a prosecution disclaimer, but that rather the disclaimer was based on the "consistency" and "length" of the Applicant's repeated characterizations of its invention and the prior art at different times and in different ways. When asked what the best example for prosecution disclaimer, the Defendant relied on the following phrase, which was the found in Applicant's second argument of its Appeal Brief:

A load bearing structure produced as the result of the process claimed in the appealed claims is not "typically ... stored"; it is constructed or erected over the area of its intended use. In other words, the structure is a high-load-bearing civil engineering structure such as a vehicle road or a drilling pad and the like that is formed in place as a permanent structure.

(*See, e.g.*, Appeal Brief dated April 26, 2011, at 11)(emphasis added.) Contrary to Defendant's assertion, the Court finds that this statement is not an express definition of or disavowal to the "load bearing structure" term, but rather is merely an illustration. Further, at a minimum, there is ambiguity as to whether the "formed in place as a permanent structure" phrase in this prosecution statement modifies the load bearing structure term or is merely a further exemplar of

a vehicle road or drilling pad. During the claim construction hearing the Defendant acknowledged this ambiguity.

Based on the prosecution history as a whole, the Court rejects the Defendant's argument that there was a disclaimer in the prosecution history – particularly any “clear” and “unambiguous” disclaimer – that the load bearing structure must be entirely site mixed as opposed to plant mixed. *See, e.g., Grober v. Mako Prods., Inc.*, 686 F.3d 1335, 1342 (Fed. Cir. 2012) (“However, while the prosecution history can inform whether the inventor limited the claim scope in the course of prosecution, it often produces ambiguities created by ongoing negotiations between the inventor and the PTO. Therefore, the doctrine of prosecution disclaimer only applies to unambiguous disavowals.”) (citations omitted); *see also SanDisk Corp. v. Memorex Prods., Inc.*, 415 F.3d 1278, 1286-87 (Fed. Cir. 2005) (“When the patentee makes clear and unmistakable prosecution arguments limiting the meaning of a claim term in order to overcome a rejection, the courts limit the relevant claim term to exclude the disclaimed matter. ... An ambiguous disclaimer, however, does not advance the patent's notice function or justify public reliance, and the court will not use it to limit a claim term's ordinary meaning.”)

The Court therefore disagrees with the Defendant that the Applicant surrendered any plant mix processes or that its claims only were allowed because they were limited to a site mix method or that they were allowed based on any geographical location. Rather, there is ample support in the prosecution history for Plaintiff's arguments that the claims were allowed because the Polston reference did not provide a continuous material with the required compressive strength. This is confirmed by the Examiner's statements in the Notice of Allowance (above), and is in alignment with the express claim language in claim 1. Thus, the Court rejects Defendant's proposed construction. Still further, when a prosecution argument is subject to

more than one reasonable interpretation, it cannot rise to the level of a clear and unmistakable disclaimer. *See, e.g., SanDisk Corp.*, 415 F.3d at 1287 (“There is no ‘clear and unmistakable’ disclaimer if a prosecution argument is subject to more than one reasonable interpretation, one of which is consistent with a proffered meaning of the disputed term.”) (internal quotation marks omitted); *see also 01 Communique Laboratory, Inc. v. LogMeIn, Inc.*, 687 F.3d 1292, 1297 (Fed. Cir. 2012) (quoting *SanDisk*).

Both parties, however, agree that a construction is needed for this term and both agree that a “load bearing structure” is a civil engineering structure that supports a load. Consistent with the intrinsic record, the Court finds that the exemplary language of “vehicle road” and “drilling pad” is helpful to the jury, but consistent with the rationale above the Court rejects any requirement that it is “formed in place” or is “permanent.”

The Court hereby construes “**load bearing structure**” to mean a “**civil engineering structure that supports a load, such as a vehicle road or drilling pad**”.

B. “mixing said particulate mixture”

<u>Plaintiff’s Proposed Construction</u>	<u>Defendant’s Proposed Construction</u>
Plain meaning	“mixing in the place of the load-bearing structure said particulate mixture”

The disputed term “mixing said particulate matter” appears in claim 1 of the ‘581 patent.

(1) The Parties’ Positions

Plaintiff submits that the term does not require construction and should be afforded its plain and ordinary meaning. (*See, e.g.*, Dkt. No. 66 at 14-16.) Plaintiff argues that the term is simple and straightforward. (*Id.* at 14-15.) Plaintiff argues that an important aspect of the invention described in the patent is that the “second mixture” is formed into the size and shape of

the load-bearing structure while still being in a formable state, which can be accomplished independently of any requirement that the mixing occur “in the place of the load-bearing structure.” (*Id.* at 15.) Plaintiff provides examples where the claimed process could take advantage of the claimed invention at a place separate from the place of forming the final load-bearing structure. (*Id.* at 15-16.) Plaintiff argues that there is nothing in the claims, specification, or prosecution history that warrants Defendant’s proposed construction. (*Id.* at 16.) Plaintiff argues that the Applicant did not limit its invention to mixing the claimed particulate mixture “in the place of the load-bearing structure.” (*Id.*)

Defendant responds that its construction for “mixing said particulate mixture” naturally flows directly from the prosecution history of the patent and the Applicant’s disavowal of plant mixing methods. (Dkt. No. 74 at 18-21.) Defendant argues that its construction properly limits the claim scope argued to the USPTO during prosecution, *i.e.*, that the claims only cover a site mixing process. (*Id.*) Defendant argues that Plaintiff’s proposed construction attempts to recapture the plant mixing subject matter disavowed during prosecution. (*Id.*) Defendant argues that the subjective intent of a named inventor in a declaration is not relevant to claim construction and provides only his personal opinion and not one of ordinary skill in the art. (*Id.*) Defendant argues that Plaintiff’s hypothetical example in the briefing of transporting a load-bearing structure from one site to the final installation site is not found in the specification and is contrary to arguments found in the prosecution history. (*Id.*) Defendant argues that one of ordinary skill in the art would understand the mixing step in the claimed process to be limited to mixing in the place of the load-bearing structure. (*Id.* at 19.)

Plaintiff replies that Defendant’s focus on “site mix” versus “plant mix” is irrelevant, as that is a distinction not made during prosecution and those terms never appear in the intrinsic

record. (Dkt. No. 75 at 6.) Plaintiff argues that Defendant improperly equates mixing in the same place as forming and curing and Defendant's reliance on the prosecution history for these two difference concepts is misplaced. (*Id.*) In other words, Plaintiff argues that forming (shaping) and curing in place does not mean the mixture must also be created in the same place. (*Id.*) Plaintiff argues that Defendant's insertion of "in the place of the load bearing structure" is not necessary and should be rejected. (*Id.* at 7.)

(2) Analysis

The parties' arguments as to the "mixing said particulate mixture" term are similar to their arguments made with respect to the "load bearing structure" term. In particular, Defendant relies on a prosecution history disclaimer argument. For the same reasons as described in connection with the "load bearing structure" term, the Court finds that the prosecution history as a whole does not support Defendant's arguments. In particular, the Court rejects Defendant's argument that the Applicant disclaimed any mixing other than at the final site of the load bearing structure. The Court finds that there is no "clear" and "unambiguous" disclaimer to this affect in the prosecution history. Rather, like the "load bearing structure" term, there is ample support in the prosecution history for Plaintiff's arguments that the claims were allowed because the prior art Polston reference did not provide a continuous material with the required compressive strength.

In relevant part, claim 1 simply recites "forming a particulate mixture" and "mixing said particulate mixture" with a stabilizer or asphalt and then "forming said [] second mixture into the shape and size of the load-bearing structure." The claim treats the "mixing" step separately from the "forming" step. While the claim provides that the forming a second mixture step be in the shape and size of the load-bearing structure, there is no similar requirement for the "mixing" step. Further, there is no express limitation in the claims that requires the "mixing" step to take

place at the final site of the load bearing structure. In other words, requiring the load-bearing structure to be formed in the shape and size of the structure (or even formed in place) does not dictate the location where the separately claimed “mixing” step should be performed. Likewise, the fact that the specification discusses a “pre-stabilization agent” that can be added to the mixture, followed by a stabilizer to complete the pozzolanic reaction, supports Plaintiff’s argument that mixing can be performed off site. *See, e.g.*, ‘581 patent, col. 14, l. 52 – col. 15, l. 57. Further, the fact that various dependent claims (such as claims 6 and 11) expressly state that the mixing step can be accomplished in two stages further supports Plaintiff’s argument that the mixing can be performed at a site other than the final site of the load-bearing structure. Still further, generally terms are presumed to possess their ordinary meaning, although this can be overcome by statements of clear disclaimer. *See SciMed Life Sys., Inc. v. Advanced Cardiovascular Sys., Inc.*, 242 F.3d 1337, 1343-44 (Fed. Cir. 2001). Thus, the Court rejects Defendant’s argument that the mixing and forming steps have to be in the same place, much less at the place where the load bearing structure is intended to be used.

The Court finds that the “mixing said particulate mixture” term has no special meaning other than its plain meaning. The Court rejects Defendant’s arguments to the contrary. Because this resolves the dispute between the parties, the Court finds that the term requires no further construction. *See U.S. Surgical Corp. v. Ethicon, Inc.*, 103 F.3d 1554, 1568 (Fed. Cir. 1997) (“Claim construction is a matter of resolution of disputed meanings and technical scope, to clarify and when necessary to explain what the patentee covered by the claims, for use in the determination of infringement. It is not an obligatory exercise in redundancy.”); *see also O2 Micro Int’l Ltd. v. Beyond Innovation Tech. Co.*, 521 F.3d 1351, 1362 (Fed. Cir. 2008)

(“[D]istrict courts are not (and should not be) required to construe every limitation present in a patent’s asserted claims.”) (*citing U.S. Surgical*, 103 F.3d at 1568).

The Court hereby construes “**mixing said particulate matter**” to have its plain meaning.

C. “forming said [cementitious/asphaltic] second mixture...”

<u>Term</u>	<u>Plaintiff’s Proposed Construction</u>	<u>Defendant’s Proposed Construction</u>
“forming said cementitious second mixture into the shape and size of the load-bearing structure and developing structural strength within said shaped and sized second mixture by pozzolanic reaction”	Plain meaning	“ <u>mechanically</u> forming said cementitious second mixture into the shape and size of the load-bearing structure and developing structural strength within said shaped and sized second mixture by pozzolanic reaction”
“forming said asphaltic second mixture into the shape and size of the load-bearing structure; and developing structural strength within the shaped and sized asphaltic second mixture by curing”	Plain meaning	“ <u>mechanically</u> forming said asphaltic second mixture into the shape and size of the load-bearing structure; and developing structural strength within the shaped and sized asphaltic second mixture by curing”

The disputed terms “forming said cementitious second mixture into the shape and size of the load-bearing structure and developing structural strength within said shaped and sized second mixture by pozzolanic reaction” and “forming said asphaltic second mixture into the shape and size of the load-bearing structure; and developing structural strength within the shaped and sized asphaltic second mixture by curing” appear in claim 1 of the ‘581 patent.

(1) The Parties’ Positions

Plaintiff submits that the “forming said cementitious second mixture...” and “forming said asphaltic second mixture...” terms do not require construction. (*See, e.g.*, Dkt. No. 66 at 11-13.) Plaintiff argues that these terms are clear on their face, as confirmed by the fact that Defendant is not attempting to construe any of the words but is instead attempting to insert the

word “mechanical.” (*Id.*) Plaintiff argues that it is unclear what Defendant means as to the mechanical term. (*Id.*) Plaintiff argues that, depending on the size and area of the load-bearing structure, the second mixture can be formed into the desired size and shape by any means, with or without the aid of machines, and without a requirement for any particular type of machine. (*Id.*)

Defendant argues that the “mechanical” formation of the load-bearing structure is a necessary part of the site mixing process that the Applicant limited its claim to through disavowal of claim scope. (*See, e.g.*, Dkt. No. 74 at 22.) The Defendant also argues that the qualifier “mechanical” is needed to clarify what is meant by the word “forming” in light of the various different uses of that term in claim 1. (*Id.*) Defendant argues that, consistent with the specification and prosecution history, a person of ordinary skill in the art would understand the “forming” step in a road mix operation to comprise processes such as grading, compacting, and rolling. (*Id.*) Defendant argues that claim 1 uses the term “forming” in two distinct ways: (i) combining materials for “forming a particulate mixture” and “to form a . . . second mixture”; and (ii) “forming said . . . second mixture into the size and shape of a load bearing structure.” (*Id.* at 23.) These two uses correspond to two distinct definitions of the word “form”: (i) “to serve to make up or constitute” and (ii) “to give a particular shape to.” (*Id.*) Defendant argues that because the single word “forming” is used in two distinct ways in the claim, the construction of the claim should acknowledge and distinguish these two uses in the claim construction to provide clarity to the parties and the jury. (*Id.*)

Plaintiff replies that Defendant’s insertion of the “mechanical” limitation is unjustified and confusing. (Dkt. No. 75 at 7.) Plaintiff argues that one reading the claims would understand the different use of the terms “forming” and that “mechanically” does not serve to distinguish these meanings. (*Id.*) Plaintiff further argues that Defendant’s reliance on the specification’s use of

heavy machinery is an improper limitation to a preferred embodiment. (*Id.*) Plaintiff argues that, when the prosecution history is read in context, the distinguishing feature from the claimed method to the prior art is different than that which Defendant asserts. (*Id.* at 8.)

(2) Analysis

The parties dispute whether the term “mechanical” should be included for the meaning of these disputed terms. The specification does not use the term “mechanical.” Neither do the claims. There is no express requirement in claim 1 that the “forming” step be formed by a mechanical means. Further, neither the specification nor the prosecution history contains a requirement that the “forming” step be by mechanical means. At best, Defendant points to an embodiment in the specification using a “sheep’s foot roller” that applies a pressure of 200 to 300 psi as support that the forming step must be “mechanical.” *See, e.g.*, ‘581 patent, col. 26, l. 59 – col. 27, l. 8.

The Court rejects Defendant’s argument that “mechanical” formation of the load-bearing structure is a necessary part of the site mixing process. Likewise, the Court rejects Defendant’s argument that the “mechanical” qualifier is needed to clarify what is meant by the word “forming” or to avoid confusion between the different uses of the term “forming.” The Court finds no support in the claims, specification, or prosecution history for the Defendant’s constructions. While the specification provides an example of a machine (such as a sheep’s foot roller) being used to perform some of the “forming” steps, it is merely that, an example. The Court finds that the examples in the specification are non-limiting embodiments that should not be imported into the claims. The Federal Circuit has consistently held that “particular embodiments appearing in the written description will not be used to limit claim language that has broader effect.” *Innova/Pure Water*, 381 F.3d at 1117. Even where a patent describes only a

single embodiment, absent a “clear intention to limit the claim scope,” it is improper to limit the scope of otherwise broad claim language by resorting to a patent’s specification. *Id.* The Court is not convinced that the broadly used “forming” should be limited to one of the disclosed embodiments, particularly when there is no intent by the patentee to do such. *See Liebel-Flarsheim Co. v. Medrad, Inc.*, 358 F.3d 898, 906 (Fed. Cir. 2004) (citing numerous cases rejecting the contention that the claims of the patent must be construed as being limited to the single embodiment disclosed and stating that claims are to be given their broadest meaning unless there is a clear disclaimer or disavowal); *see also Comark Commc’ns, Inc. v. Harris Corp.*, 156 F.3d 1182, 1187 (Fed. Cir. 1988) (“Although the specification may aid the court in interpreting the meaning of disputed claim language, particular embodiments and examples appearing in the specification will not generally be read into the claims.”); *see also Phillips*, 415 F.3d at 1323. Further, generally terms are presumed to possess their ordinary meaning, although this can be overcome by statements of clear disclaimer. *See SciMed Life Sys., Inc. v. Advanced Cardiovascular Sys., Inc.*, 242 F.3d 1337, 1343-44 (Fed. Cir. 2001). Still further, the Court notes that during the claim construction hearing, Defendant withdrew its proposals/disputes as to these terms in favor of their plain meaning.

The Court hereby construes **“forming said cementitious second mixture into the shape and size of the load-bearing structure and developing structural strength within said shaped and sized second mixture by pozzolanic reaction”** to have its plain meaning.

The Court hereby construes **“forming said asphaltic second mixture into the shape and size of the load-bearing structure; and developing structural strength within the shaped and sized asphaltic second mixture by curing”** to have its plain meaning.

D. “sufficient resistance to rutting that any rut formed in such surface by 10,000 applications of a single axle load of 18,000 pounds will have a depth of rutting that is less than 1 inch”

<u>Plaintiff’s Proposed Construction</u>	<u>Defendant’s Proposed Construction</u>
Plain meaning	Indefinite

The disputed term “sufficient resistance to rutting that any rut formed in such surface by 10,000 applications of a single axle load of 18,000 pounds will have a depth of rutting that is less than 1 inch” appears in claim 1 of the ‘581 patent.

(1) The Parties’ Positions

Plaintiff submits that the term does not require construction and should be afforded its plain and ordinary meaning. (*See, e.g.*, Dkt. No. 66 at 13-14.) Plaintiff argues that the patent describes the strength properties of the load-bearing structures that are formed by the claimed process primarily in terms of their resistance to rutting. (*Id.* at 13.) A person of ordinary skill in the art would understand the plain meaning of the phrase to mean exactly what it states, as the terms used in this phrase would be familiar to a person having ordinary skill in the art. (*Id.*) Plaintiff argues that such a person would recognize that the use of 18,000 pound single loads to assess traffic loads is common in the art, and relies upon a declaration by one of the named inventors in support thereof. (*Id.*) Plaintiff argues that Defendant has not shown why the term is “insolubly ambiguous.” (*Id.* at 14.)

Defendant argues that this term is indefinite. (Dkt. No. 74 at 25-30.) In particular, Defendant argues that while one of ordinary skill in the art would understand (i) the concept of assessing the effect of traffic loads on an engineered road surface using 18,000-pound equivalent single-axle loads, and (ii) that one familiar technique to assess traffic loads is to convert damage from wheel loads of various magnitudes and repetitions to damage from an equivalent number of

standard or equivalent loads, that one of ordinary skill in the art would not understand the meaning of the claimed rutting requirement. (*Id.* at 25-26.) Defendant argues, supported by expert declarations, that “[t]he entire concept of rutting resistance of a load-bearing structure of the type described in the ‘581 Patent is meaningless.” (*Id.* at 26.) Defendant argues that one of ordinary skill in the art would not be able to apply (i) common loaded wheel tests, (ii) standard industry models, or (iii) the specification of the ‘581 patent to determine if the rutting requirement is met by a load-bearing structure built according to the claimed method. (*Id.* at 26-28.)

Plaintiff replies that the term is not indefinite and should be afforded its plain meaning. (Dkt. No. 75 at 8.) Plaintiff argues that Defendant’s arguments – that there are no known techniques to determine the rutting resistance of pozzolanic structures – are wrong. (*Id.* at 9.) Plaintiff argues that test methods were well known in the art that can provide information needed to reliably estimate the rutting resistance of a pozzolanic structure. (*Id.*) Plaintiff also argues that Defendant’s argument is misplaced because it confuses infringement with indefiniteness and claim construction. (*Id.* at 10.)

(2) Analysis

Neither party appears to dispute that a person of ordinary skill in the art would understand the rutting resistance disputed term:

There is no dispute that a person of ordinary skill in the art would understand, in the abstract, the concept of assessing the effect of traffic loads on an engineered road surface using 18,000-pound equivalent single-axle loads (“ESALS”). Little Dec. at ¶25; Akeman Dec. at ¶31; Patton Dec. at ¶37. There is also no dispute that a person of ordinary skill in the art would understand that one familiar technique to assess traffic loads is to convert damage from wheel loads of various magnitudes and repetitions to damage from an equivalent number of standard or equivalent loads. Little Dec. at ¶25; Akeman Dec. at ¶31. However, even with these understandings, a person of ordinary skill in the art would be unable to

ascertain the meaning of the Rutting Requirement as it would be applied to a load-bearing structure built in accordance with the '581 Patent process. Akeman Dec. at ¶21; Patton Dec. at ¶37.

(Defendant's Responsive Claim Construction Brief, Dkt. No. 74 at 25-26.) Both of Defendant's experts do not dispute the meaning of the disputed phrase or the scope of the claims; rather, they dispute whether the disputed phrase applies to the claimed load-bearing structure:

31. As Dr. Little states in paragraph 25 of his declaration, a "person of ordinary skill in the art would recognize the use of 18,000 pound single axle loads to assess traffic loads." I agree with this statement. I also agree with Dr. Little's statement that "[o]ne familiar technique is to convert damage from wheel loads of various magnitudes and repetitions ('mixed traffic') to damage from an equivalent number of 'standard' or 'equivalent' loads." The most common method used in the industry to assess damage to a layered road from traffic is through the application of the 1993 AASHTO Flexible Pavement Structural Design Model. The AASHTO Design Model is the culmination of decades of empirical research compiled by AASHTO from test roads and would be known to a person of ordinary skill in the art.

32. In addition to the subgrade resilient modulus (a measure of subgrade material stiffness), variables of the AASHTO Design Model include the predicted loading (the number of 18,000-lb equivalent single axle loads (EASL)), the intended reliability (the probability that the pavement will perform reliably), the pavement number (the "structural number," expressing structural strength of a pavement in terms of soil support, total traffic, terminal serviceability, and environment), and serviceable life (the difference in present serviceability index between construction and end-of-life), the layer depths, and the number of base layers. The model would be used, for example, to determine the necessary thickness of layers in a road design to meet a likelihood of failure of the road given various loads and environmental conditions. However, the AASHTO Design Model does not provide an estimate of depth of rutting or rutting resistance, and could not be used to determine if the '581 patent rutting requirement were met. A person of ordinary skill in the art would not be able to use the AASHTO Design Model or any other commercially available design models to assess the rutting resistance of a load bearing structure made using the '581 patent process.

...

37. It is my opinion that a person of ordinary skill in the art would understand, in the abstract, the concept of 10,000 applications of a 18,000 pound single axle load. Such a person would also understand the relationship of this concept to rutting and resistance to rutting of a layered road surface. However, I do not think that a person of ordinary skill in the art, based on the '581 Patent specification and

prosecution history, at the time the ‘581 Patent was filed (or today) could determine if the load bearing structure made, using the process taught by the SESI patent, could meet the rutting requirement of <1”.”

(*See, e.g.*, Akeman Dec. at ¶¶31-32 (Dkt. No. 74-4); Patton Dec. at ¶37 (Dkt. No. 74-5).)

The patent specification teaches that a layered elastic model (“LEM”) is the preferred structural technique to estimate the required engineering properties and thickness requirements of the claimed mixture. (*See, e.g.*, ‘581 patent, col. 17, l. 37 – col. 19, l. 9.) The LEM calculates stresses and strains within the pavement system. (*Id.* at col. 17, ll. 46-48.) There seems to be no dispute between the parties, and the Court finds that the specification teaches a connection and relationship between the number of load applications, subgrade strength, structural layer thickness, and structural layer strength and modulus. (*Id.* at col. 17, ll. 54-57.) Table 2 of the ‘581 patent and the related disclosure illustrates some results of the factorial LEM analysis. (*Id.* at col. 17, l. 54 – col. 19, l. 9.) In particular, the ‘581 patent specification expressly provides that “[t]he thickness values recommended in Table 2 can accommodate at least 10,000 applications of the design load with less than 1 inch depth of rutting.” (*Id.* at col. 18, ll. 64-66.) The specification then provides that the “thicknesses in Table 2 are exact only for the specified purposes and conditions.” (‘581 patent, col. 19, ll. 3-4.) The Defendant argues that because many variables to the LEM testing were not provided, that the Table 2 values are meaningless and that the disputed phrase is indefinite. The Court disagrees. While each and every possible parameter (e.g. tire width/pressure or the environmental temperature) related to the LEM analysis may not have been provided in the ‘581 patent, the lack of absolute precision¹ does not make the disputed term – which the parties agree is definite on its face – indefinite, unclear, or ambiguous.

¹ In addition to tire width/pressure or the environmental temperature, one imagines—as an increasingly difficult physics professor might—how the requirements for precision continue to spiral out nearly indefinitely (e.g. tire material, tire tread pattern, tire wear).

See *Nautilus*, 134 S. Ct. at 2129 (describing that “[t]he definiteness requirement . . . mandates clarity, while recognizing that absolute precision is unattainable”)

Indeed, the Court finds that the parties do not dispute the meaning of the disputed term itself. Rather, the parties, through their experts, dispute how one of ordinary skill in the art would assess whether an accused process meets the disputed claim limitation and how to measure the claimed rutting resistance. In other words, the Parties dispute the proper specific test a person of ordinary skill would use to determine whether a particular embodiment meets the limitation.² From a review of the briefing, the Parties’ arguments as to this limitation appear to be infringement or enablement arguments—not indefiniteness arguments. See *Exxon Research and Engineering Co. v. US*, 265 F. 3d 1371, 1382 (Fed. Cir. 2001) (the invention’s operability may say nothing about a skilled artisan’s understanding of the bounds of the claims); see also *Personalized Media Communications, L.L.C. v. Int’l Trade Comm’n*, 161 F.3d 696, 706-07 (Fed. Cir. 1998) (a claim of clear scope that is not adequately supported by an enabling disclosure commensurate with that scope is objectionable under the enablement requirement of § 112, ¶ 1, not the indefiniteness requirement of § 112, ¶ 2). The Court finds that there is no dispute that one of ordinary skill in the art would understand the meaning of the phrase “sufficient resistance to rutting that any rut formed in such surface by 10,000 applications of a single axle load of 18,000 pounds will have a depth of rutting that is less than 1 inch.” Likewise, the Court finds that there is no dispute that one of ordinary skill in the art would understand with “reasonable certainty” the scope of the invention and the bounds of the claims. Accordingly, pursuant to the Supreme Court’s holding in *Nautilus*, the Court rejects Defendant’s arguments that the claim

² This is as one would imagine for any claim limitation having a specified performance requirement.

when “read in light of the specification delineating the patent, and the prosecution history, fail[s] to inform, with reasonable certainty, those skilled in the art about the scope of the invention.”

The Court hereby construes **“sufficient resistance to rutting that any rut formed in such surface by 10,000 applications of a single axle load of 18,000 pounds will have a depth of rutting that is less than 1 inch”** to have its plain meaning.

IV. CONCLUSION

The Court adopts the above constructions set forth in this opinion for the disputed terms of the patent-in-suit. The parties are ordered that they may not refer, directly or indirectly, to each other’s claim construction positions in the presence of the jury. Likewise, the parties are ordered to refrain from mentioning any portion of this opinion, other than the actual definitions adopted by the Court, in the presence of the jury. Any reference to claim construction proceedings is limited to informing the jury of the definitions adopted by the Court.

SIGNED this 26th day of August, 2014.


ROY S. PAYNE
UNITED STATES MAGISTRATE JUDGE