

WASHINGTON STATE DEPARTMENT OF
TRANSPORTATION
SR 99 BORED TUNNEL PROJECT
CONTRACT No. 007999
SEATTLE TUNNEL PARTNERS

DIFFERING SITE CONDITIONS
TBM OBSTRUCTION
PCO # 0250

DISPUTE REVIEW BOARD
RECOMMENDATION

April 28, 2015

BACKGROUND AND SUMMARY OF EVENTS RELATED TO: DIFFERING SITE CONDITION TBM OBSTRUCTION

This dispute involves the Tunnel Boring Machine (TBM) encountering an eight-inch diameter steel pipe casing in a test hole installed by WSDOT in September of 2002 (TW-2). The subject encounter occurred on December 3, 2013, at approximate tunnel stationing 204 + 80. This location is approximately 870 LF from the entry portal of the tunnel based on (segment ring counting.) This location is at the back end of the TBM shield.

After encountering this obstruction the tunnel was advanced for an additional 70 to 90 LF over a period of three days. At this point tunneling advance was stopped due to lack of adequate tunneling progress.

By letter dated December 12, 2013, STP claimed entitlement to a Change Order under the following possible entitlements: WSDOT-Caused Delay, Differing Site Condition, Defective Specifications and Breach of Implied Warranty.

Following this claimed entitlement notice, STP and WSDOT have exchanged over 40 letters to clarify their various arguments and positions in an effort to both clarify and resolve the dispute that has resulted from this event. This series of letters has been assembled and submitted to the DRB and identified as "Common Reference Documents". The last letter in this series is dated January 21, 2015.

The Parties by letter dated January 8, 2015, requested that the DRB proceed to a Formal Hearing to assist the Parties with a Recommendation based on the terms of the contract and the facts and circumstance of the issues.

The specific question given to the DRB for their consideration has been agreed to by the parties and is stated below:

STATEMENT OF DISPUTE:

" Is the eight-inch diameter steel well casing at TW-2 an actual subsurface or latent physical condition at the Site that is substantially or materially different from the condition identified in the Geotechnical Baseline Report, the Environmental Baseline Report, or the Geotechnical & Environmental Data Report as set forth in Contract Section 5.7.2 and therefore a Differing Site Condition."

The referenced Section 5.7.2 above states as follows:

5.7.2 Geotechnical and Environmental Reports

“The Geotechnical Baseline Report, TR Appendix G-1, and the Environmental Report, TR Appendix E6 contain the narrative description of geotechnical and environmental conditions that Design-Builder should expect to encounter during subsurface construction work. In the event the Geotechnical Baseline Report or Environmental Baseline Report, as applicable, is silent with respect to a particular geotechnical or environmental condition, Design-Builder may rely upon the Geotechnical & Environmental Data Report, TR Appendix G2, as describing such condition. Whenever there is an inconsistency between conditions described in the Geotechnical Baseline Report or Environmental Baseline Report and the conditions described in the Geotechnical & Environmental Data Report, the conditions described in the Geotechnical Baseline Report or Environmental Baseline Report, as applicable, shall take precedence, and shall be the conditions against which actual conditions encountered are compared for the purpose of determining if a Differing Site Condition exists. Design-Builder acknowledges that, in developing its Proposal, Design-Builder gave full consideration to the contents of the Geotechnical Baseline Report, Environmental Baseline Report and the Geotechnical & Environmental Data Report, and further acknowledges that it shall not be entitled to a time extension or increase in its compensation as the result of encountering conditions consistent with those described in the Geotechnical Baseline Report or Environmental Baseline Report, except as otherwise provided in Section 5.7.”

In addition to the “Common Reference Documents” noted above the Parties have submitted individual “Positions Papers” followed by “Rebuttal Papers” prior to the Hearing that was held on March 11 and 12, 2015. At the Hearing additional materials “Hearing Exhibits” were furnished by the Parties to the Board. During the Hearing additional materials were provided to the Board both in response to Board questions and additional supplemental information by the Parties. All of this information has been considered by the Board in the following Recommendation.

This Recommendation is not to be considered as providing any information or merit related to the question of any impacts or cost that might have resulted from this obstruction encounter. This Recommendation only addresses the specific question of whether or not the 8-inch steel casing is a DSC under the Contract.

INTRODUCTION:

This project was bid as a Design-Build (DB) Contract in an effort to save time and money relative to a Design-Bid-Build (DBB) contract. Under a DB contract, the Contractor (STP) is responsible for the final design (subject to acceptance by the Owner (WSDOT) and the project goes out to bid when final design efforts by the Owner have progressed to roughly the 30% level).

DBB projects, where the Owner is responsible for performing the final design, typically go out to bid when the design efforts by the Owner are on the order of 90% complete. The current type of contract (DB) puts both Parties at added risk (based on a completed design level of effort of only 30%) but generally saves in the time and cost for completion of the project.

For the Owner, considerable design time (and associated cost) is saved by overlapping efforts in design and construction. The Contractor, on the other hand, must submit a competitive bid price and time schedule for completion of the entire project and, in order to do so, must select an approach based solely on a preliminary (30%) design level effort accomplished to date.

It is noteworthy, especially on tunnel projects, that considerable effort and dollars are expended on subsurface explorations during this initial 30% phase in an effort to determine factors that might limit the design and construction concepts that are practical and worth pursuing. It is essential that both parties have confidence that sufficient exploration has been completed to determine subsurface conditions that are required to determine the design and construction concepts. The contractor may need to either add monetary and time contingencies to their bid for insufficient exploration or do more exploration at their own expense prior to bidding.

This project's subsurface investigations involved a period of nearly 10 years and involved consideration of numerous different alternatives and alignments including open cuts and both single and twin tunnels of different diameters and depths. This resulted in numerous geotechnical investigation phases and information gathering periods. This geotechnical information was analyzed and a selection process was used by the Owner and their Consultants to determine those portions that would be included in the Contract Documents and their level of precedence to be identified in the Contract Documents.

The Geotechnical Baseline Report (GBR) approach was developed in the late 1980's and early 1990's in an effort to limit or avoid the time and money expended on the resolution of DSC claims that had become commonplace within the tunneling industry.

It is recognized that a reasonable boring program exposes only a small percentage of the subsurface conditions that might be encountered during tunnel construction. Hence, multiple yet reasonable interpretations of the ground conditions that might be encountered during construction, based on such limited subsurface information, was understandable and to be expected. Further, it was recognized that the Owner determined the location and size of the tunnel and therefore "owned the ground" where the project would be constructed.

The GBR approach was developed to enable the Owner to identify a single "baseline" interpretation of the conditions that would be encountered with the understanding that the identification of a Differing Site Condition (DSC) would be based on that single interpretation (right or wrong). This further enabled the Owner to assume conditions in the GBR that were conservative (thereby limiting claims but paying for contingencies in the bid that covered a wide range of "possible" conditions, whether such conditions were encountered or not) or defining conditions in the GBR that were optimistic (with an increased possibility of claims but paying for such worse conditions only if they were actually encountered).

The current claimed DSC does not have a traditional dispute basis since it does not involve a determination of geologic conditions encountered. It is the direct result of early exploration work (2002), the casing material that was used, and the final alignment selected for the tunnel which intersected the TW-2 well.

In this project's DSC situation, the Primary source for a DSC determination, the Geotechnical Baseline Report (GBR), is "silent" relative to the specific tunnel obstruction encountered.

The next document in order of precedence is the Environmental Baseline Report (EBR). This document is also "silent" as to this specific obstruction in dispute. Most of the information in this category is limited to near surface zones that predate the project and involve man made conditions in the waterfront area.

The final document available for a DSC resolution is the project's Geotechnical and Environmental Data Report (GEDR) as noted in Contract Section 5.7.2. This GEDR provides the basis of the majority of the Parties Contract basis for their various positions in this dispute that were presented to the Board.

Contract Section 5.7.2 states:

"In the event the Geotechnical Baseline Report or Environmental Baseline Report as applicable, is silent with respect to particular geotechnical or environmental condition, Design-Builder may rely upon the Geotechnical & Environmental Data Report, TR Appendix G2, as describing such condition."

The Board considers the GBR the primary document, as defined in the Contract, for determining if a DSC has occurred. While the Parties have agreed to look to the GEDR, as noted above, as the basis for making a determination in this dispute, the Board believes the information, or lack of information, contained in the GBR must be considered in preparing the Board's Recommendation. We believe our varied experience and the industry practice that the entire cloth of a contract and the intentions, understanding, and context of the parties to the contract at bid time require us to consider the GBR significant in this case.

This GBR element of the Board's Findings are discussed in that section of our Recommendation.

The Contract describes what constitutes a Differing Site Condition in Appendix 2 of the Contract and is described as follows:

ABBREVIATIONS AND DEFINITIONS

“**Differing Site Conditions** (except with respect to ATC’s) means (1) actual subsurface or latent physical conditions at the Site that are substantially or materially different from the conditions identified in the Geotechnical Baseline Report, the Environmental Baseline Report, or the Geotechnical & Environmental Data Report as set forth in Section 5.7.2 or a foundation type for a Structure that is substantially different from the foundation type identified in TR Appendix S for said Structure, or (2) unknown physical conditions at the Site that are of an unusual nature, differing materially from those ordinarily encountered and generally recognized as inherent in the type of Work provided for in the Contract and the Work site characteristics and that could not have been reasonably anticipated as potentially present by an experienced civil works contractor. The foregoing definition shall not apply to Utilities”.

The Parties requested the Board to prepare their Recommendation based on a consideration of a Type (1) DSC as identified above.

BOARD’S SUMMARY OF THE PARTIES POSITIONS RELATED TO THE DISPUTE:

WSDOT SUMMARY AS UNDERSTOOD BY DRB:

WSDOT has identified several specific Contract provisions in their “Position Paper” in support of their position that the obstruction event was not a DSC:

The first WSDOT citation is that a Type (1) DSC must be “subsurface or latent”. WSDOT has taken the position that a condition observable at the ground surface is neither subsurface nor latent. WSDOT noted that a surface inspection of the location of TW-2 would have shown a steel cover plate over this installation. Upon removal of the cover plate it would have shown an 8-inch diameter steel pipe casing immediately under this cover plate.

WSDOT’s second citation is described in their Position Paper statement:

“Neither the Geotechnical Baseline Report (GBR) nor the Environmental Baseline Report (EBR) include descriptive information regarding the geotechnical explorations and construction of the wells and instruments that were used to develop the GBR. This information is contained in the Geotechnical and Environmental Data Report (GEDR), which is a Contract Document. Therefore, in accordance with the Contract Section 5.7.2, the rest of this paper focuses on the GEDR”.

“Two figures in the GEDR graphically show the location of TW-2 and indicate that it is within the tunnel alignment. The GEDR identifies TW-2 as a pumping test well with an eight-inch diameter casing. The GEDR does not say what the casing was made of, but it does point to a Reference Document that was included in the Request for Proposals (RFP) provided to the Proposers.”

WSDOT indicates that TW-2 was installed in 2002 for a previous study that was documented in “Shannon & Wilson, 2003”, a Reference Document. GEDR Section 2.5.8.1 identifies three pumping test wells installed for the 2010 study and indicates that TW-2 was used again in 2010 as part of their final pumping test program.

2.5.8.1 Test Locations

“Three wells, designated PW-252, PW-254 and PW-255, were installed and developed for use in the pumping test. Well installation details are described in Section 2.5.1. The locations of the pumping wells are shown in Figure 2.

..... In addition to the newly installed pumping wells, a test well (TW-2) installed in 2002 for a previous AWVRP study (Shannon & Wilson, 2003) was incorporated into the pumping test program.”

WSDOT also stated: “TW-2 had an eight-inch casing. Table 1 in the GEDR Sub-Appendix C.4 indicates that TW-2 was an eight-inch diameter well. In fact all four pumping wells listed in this table were constructed with eight-inch casings.

Section 2.5.1 of the GEDR discusses the new pumping wells, and states: “The pumping test wells PW-252 through PW-255 were constructed of 8-inch diameter steel casing” “

WSDOT stated: “To summarize, the GEDR said the following about TW-2:

- a. It was located within the planned tunnel alignment
- b. It was a well, which is a groundwater monitoring device.
- c. It was installed in 2002 for a previous study that was documented in “Shannon & Wilson, 2003,” a Reference Document provided as an appendix to the GEDR.
- d. It was used as a pumping test well in 2010.
- e. It was 110 feet deep.
- f. It had an eight-inch casing.”

WSDOT further stated:

“The fact that TW-2 had a steel casing was indicated in GEDR Appendix F, a Reference Document attached to the RFP. Reference Documents provide important information for review and consideration by the Proposers at the proposal stage and by the Design-Builder during performance of the work. The importance of such information was emphasized by the Ninth Circuit Court of Appeals.....”

WSDOT cited two court cases as Attachments “A” and “B” to their “Position Paper”, published by LexisNexis which they claim support their position.

In addition, WSDOT addressed STP’s responsibility under the Contract for deactivation of wells on the project as an additional element of consideration regarding project wells.

STP SUMMARY AS UNDERSTOOD BY DRB:

The question and argument raised by WSDOT related to a Type (1) DSC that it must be “subsurface or latent” was not addressed in STP’s Position Paper but was responded to in their “Rebuttal Paper” after this question was raised by WSDOT.

STP has stated the following position:

“Differing Site Conditions are defined as a matter of contract. They exist when the contractor encounters conditions that differ significantly or materially from those indicated in three specific Contract Documents, i.e., the Geotechnical Baseline Report (“GBR”), the Environmental Baseline Report (“EBR”) and the Geotechnical and Environmental Data Report (“GEDR”), which were prepared by Shannon & Wilson, a WSDOT consultant, in 2010. When drafting the Design-Build Contract, WSDOT chose to determine the existence of a Differing Site Condition based on these three Contract Documents, rather than the whole universe of known or disclosed Request for Proposal (“RFP”) documents, following the most recent trend for Design-Build contracts, in an attempt to avoid disputes.”

STP has also stated: “WSDOT is expected to argue that STP could have inferred the true nature of the TW-2 well casing by researching a non-contractual Reference Document , which was also prepared by Shannon & Wilson, a WSDOT consultant, in 2002 that is not:

1. “Contractual”, per Section 1.5.2, Conceptual Design and Reference Documents, of the Instructions to Proposers; nor
2. “Part of the Contract Documents” per Section 1.2 Order of Precedence, of the Contract” “

“Therefore, the non-contractual Reference Document cited by WSDOT cannot be used in determining Differing Site Conditions.”

“Furthermore, the Reference Documents are disclaimed by WSDOT as to their “accuracy, adequacy, applicability or completeness” in Section 1.5.2 of The Instruction to Proposers, and it is therefore unfair for WSDOT to assert that this non-contractual Reference Document should trump the specified Contract Documents in determining whether a Differing Site Condition exists.”

“The specific issue is that STP encountered what was indicated to be a 2-inch observation well (TW-2) in the GEDR, a Contract Document. The GEDR, prepared by WSDOT in 2010, indicated that observation wells had two-inch diameter polyvinyl chloride (PVC) casings, a plastic material that would pose no substantial problem for the Tunnel Boring Machine (TBM). As it turned out, however, TW-2 had an 8-inch diameter steel casing, which caused a significant problem for the TBM”

DRB FINDINGS AND CONCLUSIONS:

The question before the DRB was agreed to by both Parties and stated as:

"Is the 8-inch diameter steel well casing at TW-2 an actual subsurface or latent physical condition at the Site that is substantially or materially different from the condition identified in the Geotechnical Baseline Report, the Environmental Baseline Report, or the Geotechnical & Environmental Data Report as set forth in Contract Section 5.7.2 and therefore a Differing Site Condition?"

The contract specifies that the order of precedence in the relative importance of these documents shall be in the same order as listed above. The Contract further specifies that only contractual documents can be used to identify a Differing Site Condition (DSC) and that other non-contractual "reference documents", although available for review, should not be relied upon.

The Geotechnical Baseline Report (GBR) is first in the order of precedence, but it is silent with respect to the specific boring TW-2, which is the issue before the DRB. In a Design-Bid-Build (DBB) contract (where roughly 90% of the design level of effort has been accomplished prior to Bid) the GBR would typically set the **baseline** for all subsurface conditions and the contract would advise all bidders that these are the conditions that should be **assumed** (right or wrong) in preparing their bid and performing the work under the contract. The objective herein is to avoid multiple and diverse interpretations of the limited data available from the subsurface investigations and the GBR would provide the only baseline for identifying a DSC.

Under a Design-Build (DB) contract, which was employed on this project, the Request for Proposals (RFP) goes out for bids when the design level of effort is at roughly 30% and substantial work remains to be accomplished. As a result, the GBR cannot realistically define a single **baseline** that can be used to define all conditions that may eventually be used in the identification of a DSC and, hence, the Contract allows for the use of the EBR and GEDR in evaluating a possible DSC. The DB Contract further specifies that the successful Contractor is responsible for additional site investigations deemed necessary in the performance of the remaining design and construction work under the Contract.

For the issue before the DRB regarding the steel casing in TW-2 (a boring that was drilled in 2002, roughly 8 years before the RFP), the GBR is silent, to the extent that boring TW-2 (now located within the final tunnel bore alignment) is not even shown on the subsurface profile along the alignment. It was explained at the DRB hearing that TW-2 was drilled to investigate a different construction alternative for replacement of the Alaskan Way Viaduct. Further, at the time the TW-2 boring was accomplished, the large diameter tunnel alternative had not yet been selected for construction and the final tunnel alignment was unknown.

The GBR did, indicate that a number of potential subsurface obstacles should be expected within the tunnel horizon that included naturally occurring boulders and timbers as well as man-made piling, concrete and debris. Certainly an 8-inch diameter steel casing within the tunnel excavation would be expected to qualify as a potential obstacle.

The EBR would not be expected to address the steel casing in TW-2 as this is not likely to be an environmental concern so it too is silent on this issue. The next contract document in the contractual order of precedence for assessing a DSC is the GEDR and both Parties agree that this is where the answer to the question must lie.

Section 1.1 of the GEDR (Purpose and Scope) says, "The GEDR describes the procedures and presents the results of field explorations and field and laboratory testing completed during 2009 and 2010 for the purpose of collecting subsurface information along the project alignment (Figure 1)".

This explains why there are no boring logs or much other information in the GEDR for these two borings as these investigations were performed in 2002. Appendix A (Exploration Logs and Photographs) does, however, contain a CD prepared by Shannon and Wilson, Inc. that immediately precedes the Boring Logs (A.1) which is entitled "Field Inspector's Guidelines (2002) and Drilling and Sampling Plan (2009)". The DRB was provided a hard copy of the Field Inspector's Guidelines at the hearing and will refer to this document later in this report.

GEDR Figure 2, sheet 3 of 12, shows the location of TW-2 in plan view, and labels it identical to TW-21 located approximately 35 ft. to the North. Both borings are within the limits of the "proposed bored tunnel alignment" and have exactly the same designation with a superscript "w" and a dot surrounded by an open circle shown in blue. The legend notes "Explorations Shown in Blue Have Groundwater Monitoring Devices (Wells or Vibrating Wire Piezometers)" and that superscripts "w" indicate "Well Installed". Further investigation into Appendix C (Hydrogeologic Testing Results) provides additional information that shows that "Well Installed" refers to both observation wells and pumping wells.

Figure C.1-148 includes a graphic "Well Log" for "PUMPING WELL TW-2" and Figure C.1-149 includes a graphic "Well Log" for "BORING TW-21". Although no Legend is provided on these figures, the graphic symbols legend is provided on the other boring logs presented in Appendix A.1. The graphic symbols legend indicates that the "Well Log" shows the position of Vibrating Wire Piezometers (VWP) and the position of the "piezometer screen and sand filter" installed near the bottom of the well, as well as the extent of the different backfill materials placed in the well. It does not identify any casing placed (nor left in place) in the boring, but it does indicate the zones open to contact with the surrounding ground (to enable groundwater to enter the well) and the location and nature of sealing backfill materials placed in the boring to prevent communication between upper and lower aquifer zones encountered by the boring.

For the well installed in boring TW-2, the well log indicates that the boring extends to a depth of 119 feet and the bottom 30 feet is backfilled with sand filter material encompassing a piezometer screen that extends to a depth of 108.2 feet (the surface elevation is noted as 15.9 feet). Although boring TW-2 is not shown on the GBR subsurface profile, TW-21 is on the profile and located roughly 35 feet

north of TW-2. Hence, the DRB was able to insert the well log from TW-2 into the approximate location on the GBR profile and found that the piezometer and sand backfill zone was located within the ESU 5 sand and gravel soils. A bentonite chips/pellets seal was located at the top of the sand filter material and then bentonite-cement grout had been placed to the ground surface in order to isolate the piezometer zone from any overlying aquifers. In the DRB's opinion, continuous steel casing would not have been left in place extending through this piezometer interval without seriously impairing the objective to monitor water levels in the surrounding ESU 5 soils within TW-2 (Figure C.1-148 shows a plot of actual water level measurements made in TW-2 both prior to and after the pump tests using this well were accomplished.)

Although the foregoing paragraph strongly supports that steel well casing was not left in place the full depth of boring TW-2, the casing could have been partially withdrawn to say a depth of 85 feet without affecting the water level monitoring. This would have left such casing extending roughly 35 feet into the tunnel horizon. However, review of Shannon & Wilson's Field Inspector's Guidelines (dated February 2002 and on a CD immediately preceding Appendix A.1 in the GEDR) could have reduced or removed the Contractor's concern as it states the borehole should be cased off to a depth of about 5 feet into the native soils, which for TW-2 would set the bottom of the casing about 10 feet above the tunnel excavation zone.

The Contractor did pursue additional information directly with Shannon & Wilson (S&W) who was responsible for the borings and well installations for the project. On February 21, 2012 Mr. Justin McCain with STP received an e-mail from Monique Anderson (Associate - S&W) that included a computer listing of the wells installed on the project and various supporting data for each. This listing included TW-2 and the 4th column heading was "Depth_Bottom_PVC" and for TW-2 this column read 107.9 which agreed with the depth shown on the Well Log mentioned above. This may well have satisfied STP that the casing left in TW-2 was, in fact, PVC casing.

Ms. Anderson attended the second day of this DRB hearing and explained that the listing provided to STP was from the "Gint" computerized system for keeping records on all of S&W's well installations and, under this system, the headings

remain the same for all wells (observation wells and pumping wells.) Upon further questioning by the DRB, she stated that (S&W) did not maintain a written record of the casing (depth or material type) placed or left in place in the borings.

The above e-mail attachment also included another list of the wells showing dates they were drilled, the drilling equipment used (method), the name of the driller, the hole depth and survey information. Upon review of this list, the DRB discovered that TW-1 and TW-2 were drilled with a Cable Tool (CT) drill rig and that these were the only two holes on the entire list of 589 borings that used this drilling method. Hence, the statement that TW-2 was constructed "like" TW-1 may simply be a referral to the drilling equipment that was used.

The Cable Tool drilling method is a slow and expensive drilling method that drives casing into the ground as the boring is advanced. Hence, it is necessary that the casing be strong and steel casing is commonly used for this reason. A Cable Tool drill is also equipped with jacking equipment that is capable of retracting the heavy but expensive steel casing following completion of the boring and this is frequently done. TW-1 and TW-2 were drilled to investigate a cut and cover construction alternative along the existing Alaska Way highway and steel casing left in the ground along that alignment presents no serious obstacle for this type of construction.

Although a tunneling contractor might not be expected to be familiar with the above information on the Cable Tool drilling method, the Owner's geotechnical consultant who did the work would. As such, the Owner's team would be in the best position to be aware of the potential that steel casing still remained in the ground at TW-2. Further, the Owner selected the large diameter tunnel construction approach and the final alignment for replacement of the AWV that put TW-2 within the tunnel excavation limits.

At the DRB hearing WSDOT told the DRB that none of the WSDOT personnel present at the hearing were aware that steel casing existed in boring TW-2 prior to the TBM encountering it. WSDOT, however, has taken the position that had STP removed the existing cover plate at the TW-2 location during its site investigation responsibilities under the contract, they would have observed the steel casing in the ground. Hence, the presence of the steel casing in TW-2 is not, in WSDOT's opinion, a "latent" condition as is required for the determination of a

Type 1 DSC. Interestingly, WSDOT conducted a pump test in TW-2 in March of 2010 that would have required not only removal of this cover plate, but actual downhole operations shortly before the RFP went out in June of 2010.

Hence, WSDOT and its consultants were in an excellent position to identify the existence and depth of the steel casing in TW-2. Furthermore, the timing was such that this potential obstacle could have been noted in the GBR before the project went out to bid in June 2010. Yet, WSDOT has declined any knowledge that steel casing existed within TW-2 prior to being encountered by the TBM.

In the DRB's opinion, removal of the cover plate by STP would have disclosed the steel casing at the surface but provided no indication of how deep the casing extended. Hence, the steel casing would meet the requirements of a "latent" condition as required under the terms of a Type 1 DSC.

WSDOT also stated that the Contract requirement for well deactivation by STP should have led to further consideration of the conditions regarding TW-2. This question was raised at the DRB hearing and, in response, STP provided the DRB with copies of the Technical Requirement, Section 2.6.2.2. pertaining to this requirement, which says in part: ".....When the Design Builder determines that the subsurface construction is complete and that dewatering is no longer required, and the boring can be closed, the Design Builder shall give notice to WSDOT in accordance with the Geotechnical Design Manual....." STP further stated that a plastic casing would not be an obstruction to the TBM and any remaining portion of TW-2 above the completed tunnel would have been deactivated later as required by the specification.

The DRB thus concludes that the steel casing in TW-2 meets the requirements of a Type 1 Differing Site Condition. Further that the contract requirements to investigate site conditions during STP's design and construction efforts were satisfied by the efforts expended in pursuing information through WSDOT and S&W, Inc. which seemed to support numerous referrals in the contract to plastic PVC casing within the "wells".

DRB RECOMMENDATION

The Board's Recommendation to the Dispute Positions identified as PCO # 0250, TBM Obstruction, is based on the Contract Documents and the facts and circumstances involved in the dispute.

In support of their positions the Parties provided to the Board; Common Reference Documents, Position Papers, Rebuttal Papers, Hearing Exhibits and additional materials provided at the Oral portion of the Hearing.

This Recommendation is not to be considered as providing any information or merit related to the question of any impacts or cost that might have resulted from this obstruction encounter. This Recommendation only addresses the specific question of whether or not the 8-inch steel casing is a DSC under the Contract.

The Board as identified in its DRB Findings and Conclusions is that the TBM's encounter with the eight-inch steel casing at TW-2 is a Type 1 Differing Site Condition.

DRB RECOMMENDATION

Board Recommendation to the Dispute identified as:

PCO # 0250: TBM Obstruction

The Parties agreed to the following statement of the Dispute:

STATEMENT OF DISPUTE:

“Is the eight-inch diameter steel well casing at TW-2 an actual subsurface or latent physical condition at the Site that is substantially or materially different from the condition identified in the Geotechnical Baseline Report, the Environmental Baseline Report, or the Geotechnical & Environmental Date Report as set forth in Contract Section 5.7.2 and therefore a Differing Site Condition.”

The Board’s Recommendation to this Dispute is located in the preceding sections of this document.

Joseph Keating, DRB Chairman

Joseph Keating

Russell Clough, Member

Russell G. Clough

Pete Douglass, Member

Peter M. Douglass

Date:

5/03/2015