



American Assets Trust, Inc.  
Mr. Dave Cecil  
Senior Project Manager  
11455 El Camino Real #200  
San Diego, California 92130

August 31, 2015  
Project No. 2012015

Subject: Update Letter and Response to Peer Review Comments  
Solana 101 Mixed-Use Project  
Highway 101 and Dahlia Drive  
Solana Beach, California

References: *Geotechnical Investigation, Solana 101 Mixed-Use Project, Highway 101 and Dahlia Drive, Solana Beach, CA, NOVA Services, Project No. 2012015, dated May 31, 2012.*

*Architectural Plans for Solana 101 Mixed-Use Project, Highway 101 and Dahlia Drive, Solana Beach, CA, HGW Architects, October 6, 2014.*

*Preliminary Grading Plans for Solana 101 Mixed-Use Project, Highway 101 and Dahlia Drive, Solana Beach, CA, Stuart Engineering, July 3, 2013.*

*Peer Review of Geotechnical Investigation Report for Solana 101 Mixed-Use Project, Highway 101 and Dahlia Drive, Solana Beach, CA, Allied Geotechnical Engineers, Inc., AGE Project No. 29C503, June 29, 2015.*

Dear Mr. Cecil,

The intent of this letter is to update our referenced geotechnical report and to provide responses by NOVA Services, Inc. (NOVA) to the above-referenced geotechnical peer review. This letter is forwarded to you for your use in your permitting submittals.

NOVA has reviewed the referenced project plans. NOVA confirms that our findings and recommendations are still considered applicable for the proposed project. NOVA understands that the project structural plans and full shoring design and plans have not been prepared at this time. NOVA will need to review the structural and shoring plans when they become available to confirm that they comply with our geotechnical recommendations.

As part of this update letter, NOVA is addressing the potential need for dewatering during the grading operations and removal and recompaction of any undocumented fill not removed by the planned excavations. NOVA is also providing updated seismic design values for this project in accordance with the 2013 CBC.

### Seismic Design Parameters

From site-specific test boring data, the Site Class was determined from ASCE 7, Table 20.3-1. The site-specific data used to determine the Site Class typically includes borings drilled to refusal materials to determine Standard Penetration resistances (N-values). Based on actual and/or estimated average N-values in the upper 100 feet of the soil/rock profile, we estimated an Nbar value that corresponds to a Site Class C ( $N_{bar} \geq 50$ ).

**Seismic Design Parameters, Site Class C**

Parameter	Value
Site Latitude (decimal degrees)	32.9874
Site Longitude (decimal degrees)	-117.2711
Site Coefficient, $F_a$	1.000
Site Coefficient, $F_v$	1.335
Mapped Short Period Spectral Acceleration, $S_s$	1.200
Mapped One-Second Period Spectral Acceleration, $S_1$	0.465
Short Period Spectral Acceleration Adjusted For Site Class, $S_{MS}$	1.200
One-Second Period Spectral Acceleration Adjusted For Site Class, $S_{M1}$	0.621
Design Short Period Spectral Acceleration, $S_{DS}$	0.800
Design One-Second Period Spectral Acceleration, $S_{D1}$	0.414

### Remedial Grading for Site Improvements

For the exterior site improvements such as sidewalks and exterior staircase that are expected to be located outside the proposed excavations, remedial grading should consist of removing the upper two feet of the existing fill soil and replacing it as structural fill.

NOVA anticipates that the existing fill will be suitable for structural and general fills. The bottom of the removal areas will need to be compacted 90% relative compaction after ASTM D1557. All soils placed as structural fill should be moisture conditioned to at or 2% above the optimum moisture content determined by ASTM Test Method D 1557, then densified to 90% relative compaction.

### Construction Dewatering

Groundwater was not encountered during NOVA 2012 subsurface exploration. Based on review of available historical data, NOVA recommends a design groundwater level at El. 42 (msl) for the project.

Based on review of the referenced project plans, the subterranean parking structure will have finished floor elevations will be about El +39 feet msl. As such, it is anticipated that dewatering will be required during the construction operations. A professional Dewatering Engineer should design the

dewatering system. Planning for construction dewatering should address anticipated drawdown, volume of pumping, potential for settlement, and groundwater discharge. Disposal of groundwater should be performed in accordance with guidelines of the Regional Water Quality Control Board.

### **Response to Peer Review Comments**

Comment 1: *The report was prepared more than 3 years ago. We recommend that NOVA review the final plans, specifications and shoring design for the project, and prepare an addendum report to confirm that their findings and recommendations were properly interpreted and are incorporated in the plans and specifications.*

Response 1: NOVA has reviewed the referenced project plans. NOVA confirms that our findings and recommendations are still applicable for the proposed project. NOVA will need to review the structural and shoring plans when they become available to confirm that they conform with our geotechnical recommendations.

Comment 2: *The report indicates that the project site is underlain by as much as 7 feet of undocumented fill materials (Section 5.2.1). We recommend that NOVA provide recommendations with regards to the removal and recompaction of any undocumented fill materials which remain in areas that are to receive shallow foundations, slabs-on-grade, sidewalks or driveways, and parking facilities.*

Response 2: As noted above, NOVA is providing remedial grading recommendations for exterior site improvements such as sidewalks and exterior staircase that are expected to be located outside the proposed subterranean parking garage excavations.

Comment 3: *The report recommends that a design groundwater level of 42 feet above mean sea level (msl) be used for the project site (Section 5.3). The cross section (Figure 5) indicates that the underground parking structures will have finish floor elevations of 39 and 40 feet msl. We recommend that NOVA provide recommendations with regard to the potential need for dewatering. Furthermore, the old paralitic deposits are known to locally contain shell beds and sandy lenses that generally possess higher groundwater infiltration rates.*

Response 3: As noted above, NOVA is recommending dewatering of the excavations. A professional dewatering engineer will need to design the dewatering system.

Comment 4: *We recommend that NOVA verify with the project Structural Engineer that uplift will not be an issue, and that additional recommendations for uplift resistance will not be required.*

Response 4: It is NOVA's understanding that a Structural Engineer has not yet been chosen for this project. Once a Structural Engineer is appointed, NOVA will correspond in regards to the issue of uplift. NOVA will review the project structural plans for conformance with the geotechnical recommendations.

Comment 5: *In the event that the same building is supported on combination foundations which are partially supported on properly compacted fill and old paralic deposits, we recommend that NOVA specify the use of seismic joints to reduce the potential for differential settlement.*

Response 5: Based on our review of the referenced project plans, all of the proposed above grade buildings will be underlain by the subterranean parking garage levels. Based on the indications of the subsurface explorations, the proposed excavations for the subterranean levels will remove the existing fill and expose competent Old Paralic deposits. NOVA considers this unit suitable to support the foundations of the proposed buildings. Therefore, NOVA does not anticipate a differential settlement issue since all of the foundations will be supported on Old Paralic deposits.

## CLOSURE

NOVA hopes these responses address the comments that the Geotechnical Review. In the meantime, should you have any questions regarding this report or other matters please do not hesitate to contact the undersigned.

Sincerely,  
**NOVA Services, Inc.**



Wail Mokhtar  
Senior Project Engineer



John F. O'Brien, P.E., G.E.  
Principal Engineer

