

**SOLICITATION # VA786-17-Q-0684 – CITY POINT NATIONAL CEMETERY –  
DEMOLITION AND REPLACEMENT SERVICES PROJECT – QUESTIONS AND  
ANSWERS:**

1. Concrete for the walkways- Air entrainment for the concrete mix is an option in the specs. I may have missed it but I could not find a requirement in the VA statement of work (SOW) for air entrainment. I am expecting you all to say YES to air entrainment should be added to the concrete. Just want to check to make sure, since I did not see a direct SOW requirement.

**ANSWER:** *Air entrainment shall be between 4.5-7.5% and air content must conform with ACI 318 Table 4.4.1.*

2. Seal Coating- Just to confirm that there is no requirement for Seal Coating on top of the finished Asphalt Pavement.

**ANSWER:** *Install per specifications.*

3. Water for Concrete – the specs say the VA will provide Water for the project. Is the VA water, city water, or well water?

**ANSWER:** *Assume for bidding purposes that no water will be provided.*

4. Crew Certifications – The VA specs require 2 crewmembers for the concrete team to be NRMCA or ACI certified. The State of Virginia does not require concrete contractors to have this certification. Virginia has their own Concrete Exams for Contractors applying for a license to be a concrete contractor. See attached State Exam Specialty for CEM. Would it be acceptable to substitute the Virginia Concrete Contractors license for the NRMCA or ACI? This item could significantly affect the cost of the project. Probably only national concrete companies have these certifications.

**ANSWER:** *Yes. The Virginia license would be an acceptable substitute.*

5. Surveying – The VA SOW requires a surveyor for the project for layout, QA and As-Built drawings. Does the VA have any local or property survey information to create the site survey for pavement? It would save some time at the Courthouse pulling survey data.

**ANSWER:** *VA does not have.*

6. Pavement Markings – The VA specs reference another VA spec that appears to be excluded from the SOW package. Paint Color: Section 09 06 00, SCHEDULE FOR FINISHES. I will pull this spec from another VA paving project on FBO.

**ANSWER:** Specification section 32 17 23, paragraph 1.2 should be deleted as it does not apply. There is no paint color schedule that would apply. The project has line striping. Pavement markings should be white. This can be confirmed with the submittals. Contractor shall use Sherwin Williams SETFAST LATEX TRAFFIC MARKING PAINTS or approved equal.

7. The specs call for geogrid and geofabric under the asphalt and the concrete, respectively. Based on the information at the on-site inspection, some VA paving projects have required these materials and some have not. This is a money question. Is the geogrid and geofabric required for this project?

**ANSWER:**

*Geogrid (to be used under asphalt in all locations):*

**2.3.1 TRIAXLE GEOGRID REINFORCING POLYPROPYLENE SHEET**

- A. Sheet shall be manufactured from a punched polypropylene sheet, oriented in three substantially equilateral directions. Shall be in accordance with ASTM D4759-02. Sheet shall meet the following properties at a minimum:
1. Junction efficiency (%) (ASTM D6637-10 and D7737-11): 93
  2. Radial stiffness at low strain (kN/m @ 0.5% strain) (ASTM D6637-10): 225
  3. Resistance to chemical degradation (%) (EPA 9090): 100
  4. UV and weather resistance (%) (subjected to 500 hours per ASTM D4355-05): 70

*Geofabric (to be used under concrete sidewalk, slab, and all locations to get new concrete):*

**2.3 NON-WOVEN GEOTEXTILE FABRIC**

- A. Fabric shall consist of needled nonwoven polypropylene fibers and meet the following properties at a minimum:
1. Grab Tensile Strength (ASTM-D4632)  $\geq$  120 lbs.
  2. Mullen Burst Strength (ASTM-D3786)  $\geq$  225 psi
  3. Flow Rate (ASTM-D4491)  $\geq$  95 gal/min/ft<sup>2</sup>
  4. UV Resistance after 500 hours (ASTM-D4355)  $\geq$  70%
  5. Heat-set or heat-calendared fabrics are not permitted.
  6. Mirafi 140N, Amoco 4547, Geotex 451, or approved equal.

**8. Air entrainment for the concrete?**

**ANSWER:** Yes, see above for more information.

**9. Geogrid under the asphalt and Geofabric under the concrete**

**ANSWER:** Yes.

a) Note to VA: do not have a VA spec for Geogrid or Geofabric.

Geogrid:

**2.3.1 TRIAXLE GEOGRID REINFORCING POLYPROPYLENE SHEET**

A. Sheet shall be manufactured from a punched polypropylene sheet, oriented in three substantially equilateral directions. Shall be in accordance with ASTM D4759-02. Sheet shall meet the following properties at a minimum:

1. Junction efficiency (%) (ASTM D6637-10 and D7737-11): 93
2. Radial stiffness at low strain (kN/m @ 0.5% strain) (ASTM D6637-10): 225
3. Resistance to chemical degradation (%) (EPA 9090): 100
4. UV and weather resistance (%) (subjected to 500 hours per ASTM D4355-05): 70

Geofabric:

**2.3 NON-WOVEN GEOTEXTILE FABRIC**

A. Fabric shall consist of needled nonwoven polypropylene fibers and meet the following properties at a minimum:

1. Grab Tensile Strength (ASTM-D4632)  $\geq$  120 lbs.
2. Mullen Burst Strength (ASTM-D3786)  $\geq$  225 psi
3. Flow Rate (ASTM-D4491)  $\geq$  95 gal/min/ft<sup>2</sup>
4. UV Resistance after 500 hours (ASTM-D4355)  $\geq$  70%
5. Heat-set or heat-calendared fabrics are not permitted.
6. Mirafi 140N, Amoco 4547, Geotex 451, or approved equal.

**10. Would like to use Tensar TriAx TX140 or TX160 typically spec'd for Asphalt pavement.**

**ANSWER:** Both meet the specifications above.

**11. Would like to use ACF NO40, 4 oz. non-woven geotextile.**

**ANSWER:** See specifications above. Do not believe this product meets. The intent of the geofabric is to prevent dirt from seeping up into the stone.

12. Geofabric is not shown under Slab detail on NRM17-12-02. We assume this is a typo and geo-fabric is intended.

**ANSWER:** *Correct, it is intended and to be installed. Geogrid belongs in the asphalt detail, geofabric in the concrete detail.*

13. New Asphalt Base course is 8 inches thick – Could not find a stone size specified. We hope to use VDOT 21A crushed stone which is a max 1-inch stone.

**ANSWER:** *Contractor shall use VDOT 21A crushed stone, compacted per specifications. Install asphalt courses in accordance with the drawing details.*

14. Asphalt Base – Liquid Asphalt Prime Coat on stone. Would like to remove this requirement since Virginia has not been requiring Paving Companies to install a Prime Coat, only a Tack Coat. VA-NCA has not required Prime Coat on some paving jobs. Virginia Pavers will add cost for Prime coat.

**ANSWER:** *Tack coat only; no prime coat.*

15. Just to confirm for concrete and asphalt pavement. The specs call for a **full time on-site geotechnical technician** during all subgrade compaction, aggregate base installation, asphalt installation, concrete installation. This is an expensive item want to make sure.

**ANSWER:** *Contractor shall submit and meet all requirements of the testing laboratory specifications.*

16. Registered Surveyor- Provide drawings for existing grades, sub-base grades, base grades, binder course grades, top course grades, finished concrete grades, as-built final. Specs call for submitting a **detailed design layout drawing prior to starting work**. Section 32 12 16 -1, Par. 1.

**ANSWER:** *Yes.*

17. Asphalt Paving – Oak Tree Adjustment for Paving Alignment for Garage Driveway. – Group visit discussed the slightly altered paving alignment; we will realign the pavement slightly.

**ANSWER:** *Route road around tree and its roots. Coordinate with field conditions and with COR.*