<p><strong>NOAA Office:</strong>NGS </p>   
<p><strong>Duration of Use Case:</strong>Ongoing </p>  
<p><strong>Link to Case:</strong> https://www.ngs.noaa.gov/PUBS\_LIB/NOAA\_TR\_NOS\_NGS\_0067.pdf </p>  
<p><strong>Geographic Location:</strong>United States </p>  
<p><strong>Is the Use Case Published?</strong> Yes </p>  
<p><strong>Primary Use:</strong>This surveying phase starts by establishing geometric and vertical control for the project. Surveying teams will investigate the existing geodetic control in the area of the future-proposed highway project. Once the published passive geodetic control with geometric (NATRF2022 Epoch 2020.00) and vertical (NAPGD2022 Epoch 2020.00) coordinates are identified using the NGS Data Delivery System (DDS), reconnaissance is completed to recover those marks. Existing control will be occupied and assessed for suitability, and it will be augmented with new control marks as necessary. Depending on the size of the proposed highway project and the locations of the recovered geodetic control marks, the locations for future primary and secondary control marks can be identified. Certain distance and inter-visibility criteria are to be followed to maintain proper spacing between the primary (and secondary) control markers. It is important to note that the same survey control will be used throughout all of the phases of the project. That means that the entire project will be referenced to one common epoch of 2020.00 for NATRF2022 and NAPGD2022, and originally CONTROL GNSS Static RTK RTN CLASSICAL Total Station LEVELING Differential Leveling OTHER Terrestrial Laser Scanning Mobile LiDAR Aerial LiDAR/Photogrammetry 79 determined coordinates will be maintained for the duration of the project, if possible. Change of coordinates with respect to the frame is important and will be monitored, and if it occurs, it might affect the project coordinates. </p>  
<p><strong>Which Marine Industries Benefit from the case:</strong>Coastal Infrastructure, Coastal Construction and Restoration </p>  
<p><strong>Case Benefits:</strong>Passive control is the traditional method of referencing positions to physical benchmarks that have known locations. Active control references positions to one or more Continuously Operating Reference Stations (CORS). These stations use continuous contact with global navigation satellite systems (GNSS/GPS) to provide a highly accurate and updated position. </p>  
<p><strong>Description:</strong>Infrastructure projects rely on accurate positioning. The NSRS enables consistent and accurate positioning for infrastructure projects that span distance and time such as roads.</p>