

Highlander Solar

Project Approach

Highlander Solar – Project Approach

Minimizing environmental impacts, specifically erosion and sedimentation control both during and post construction is a primary goal for the Highlander Solar Project Team. To achieve this goal the Project Team has developed a “Minimal Grading Design” to minimize changes to the natural contours and drainage areas as they currently exist, and a “Segmented Work Flow” to minimize the total acreage disrupted at a single time.

Minimal Grading Design

Utility solar equipment is made up of hundreds of straight flat racking sections more than 300' long, typically requiring the property to be reshaped into flat planes to accommodate installations. Given the rolling nature of the property proposed for Highlander Solar site, a typical grading approach would require moving over 10,000,000 cubic yards of earth, resulting in a complete reshaping of the natural terrain.

Minimal Grading Design

Our Minimal Grading Design has eliminated over 90% of this typical grading volume, designing the solar racking installations to follow the natural terrain as much as possible, thus allowing as much of the natural topography as possible to remain. The following is an illustration of a similar installation.



Minimal Grading Design

The majority of grading in the current design is now primarily made up of temporary sedimentation structures to retain storm water runoff until the property has been revegetated.

Segmented Work Flow

To minimize the total amount of acreage disrupted as the work progresses, the Project Team has developed a Segmented Work Flow for the site clearing activities requiring work crews to move back and forth between water sheds to minimize the total acreage disturbed at a given time.

Segmented Work Flow

Additionally, soil conditioning with fertilizer and planting of grasses will immediately follow initial site clearing, before installation of the solar equipment to accelerate revegetation.

Once installation of the solar equipment is completed, supplementary re-seeding will take place as needed to ensure revegetation of the site as quickly as possible.

Segmented Work Flow

The first activity in any water shed area will be to install engineered erosion and sedimentation controls, and no mass clearing activities will occur until these engineered measures are in place. Once such perimeters are in place, site clearing and interior road construction will take place, immediately followed by grass seeding before moving to the next area.

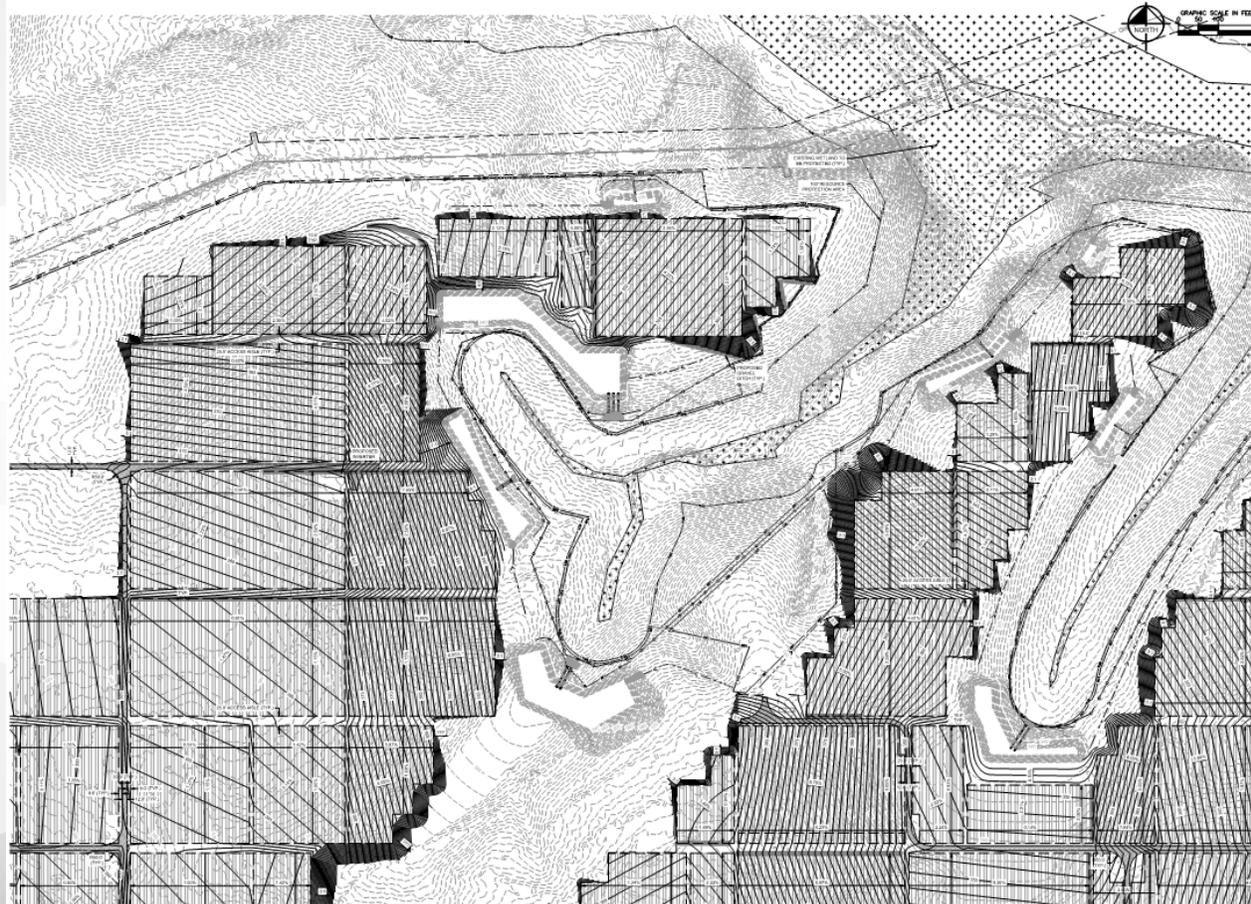
Segmented Work Flow

The following graphic illustrates how movement of these activities will progress from water shed to water shed, as well as how the construction of site E&S controls and grading activities will progress within a drainage area.

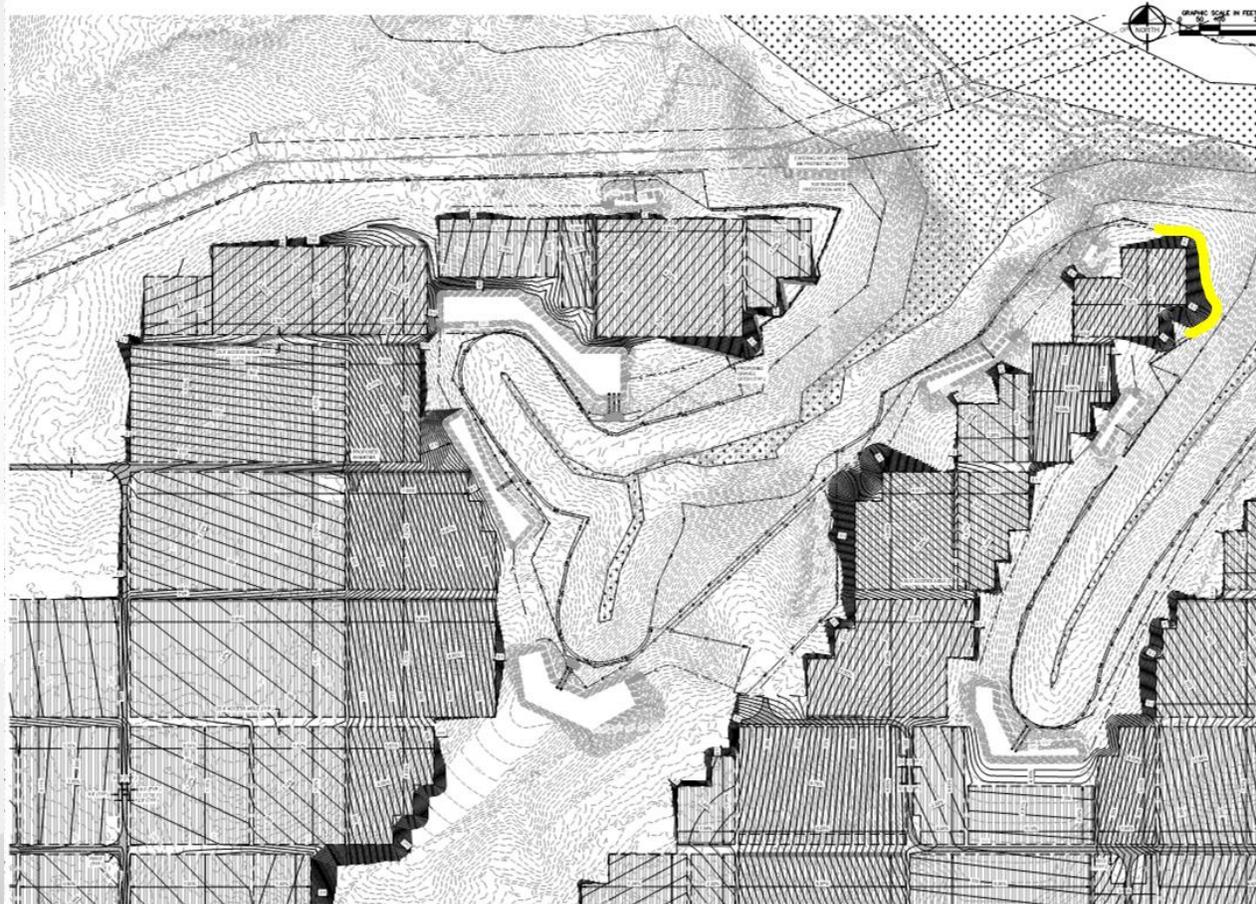
Highlander Solar

Erosion & Sediment Control
Construction Sequence

Conceptual E&S Design



Begin silt fence construction Drainage Area #1



Silt fence construction – Continued Drainage Area #1



Silt fence construction – Continued Drainage Area #1



Begin pond construction Drainage Area #1



Pond construction – Continued Drainage Area #1



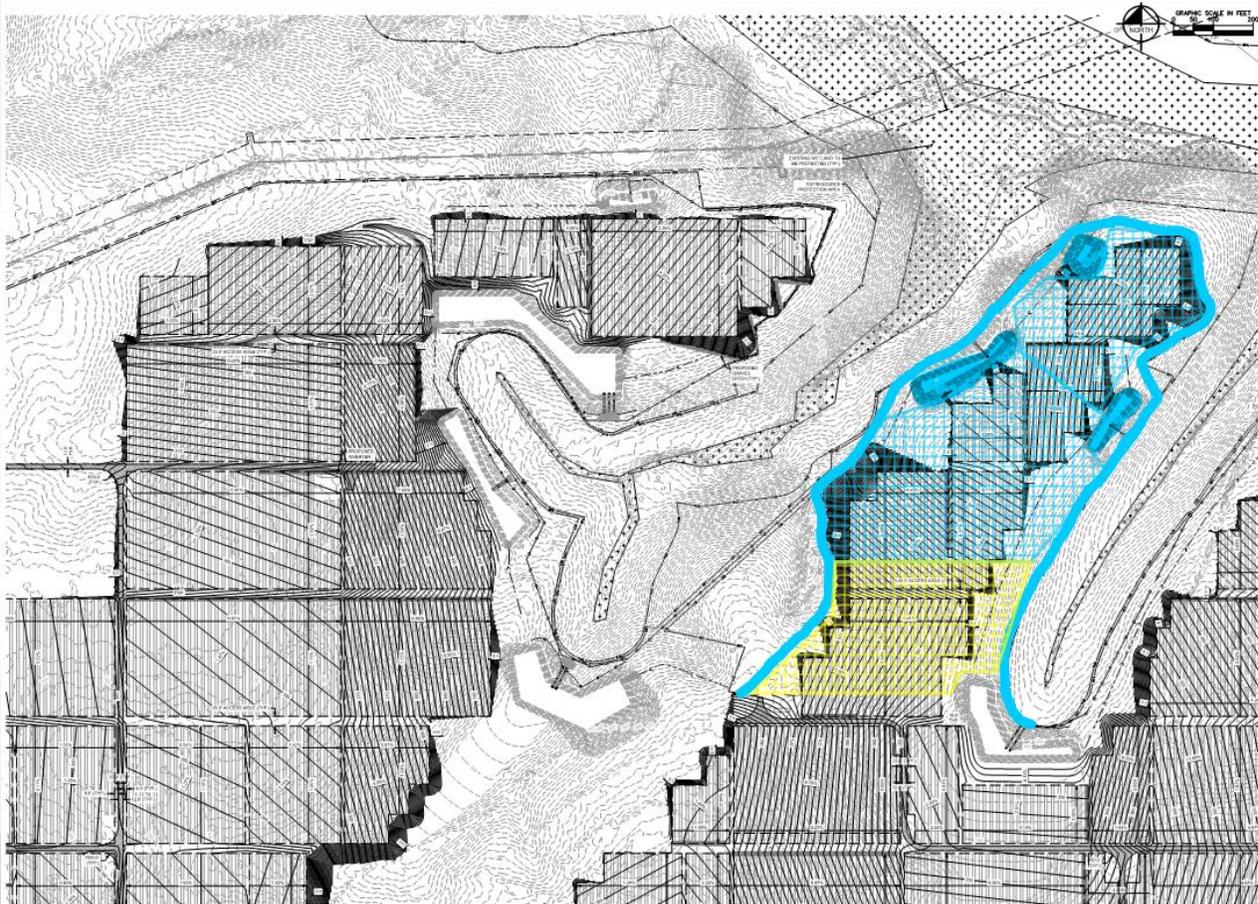
Begin grading Drainage Area #1



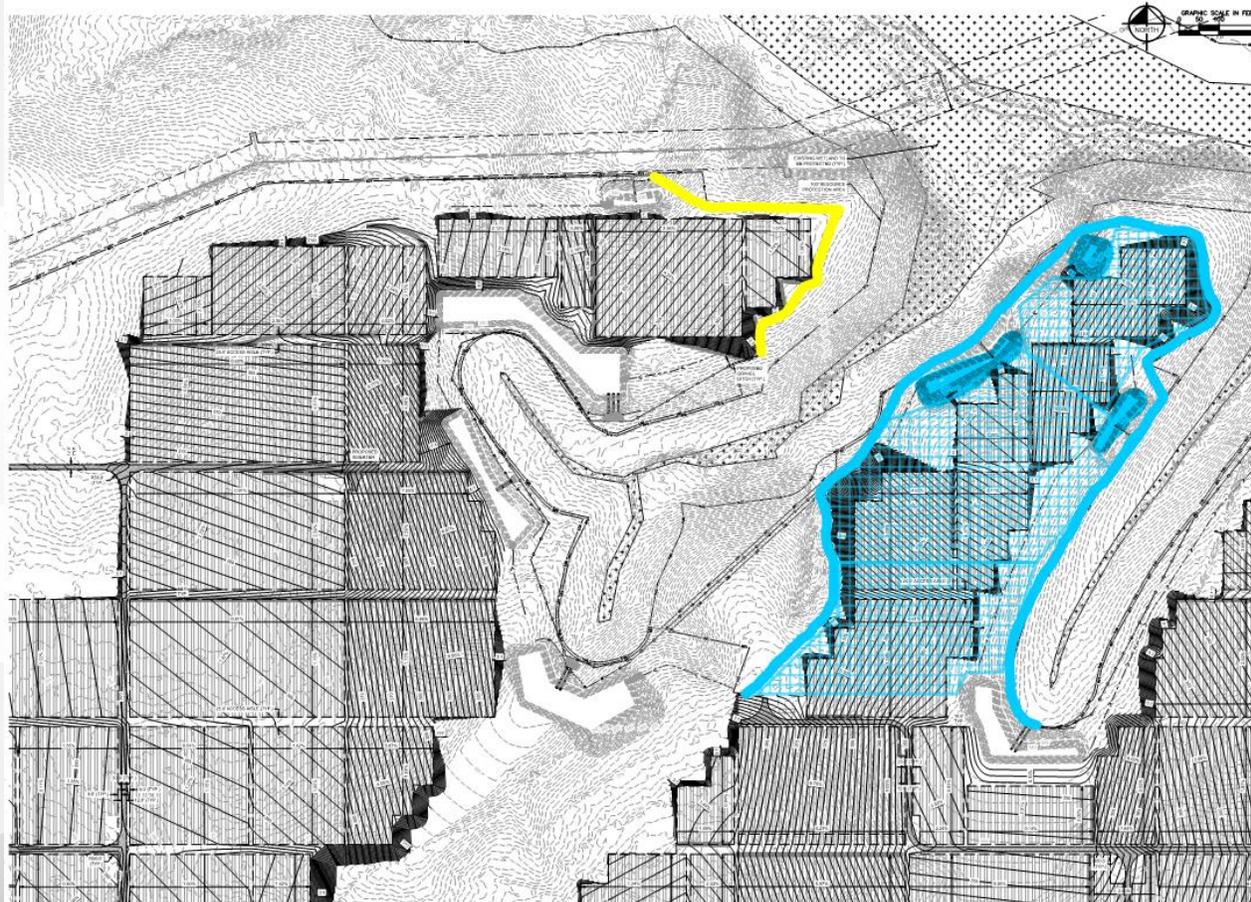
Grading – Continued Drainage Area #1



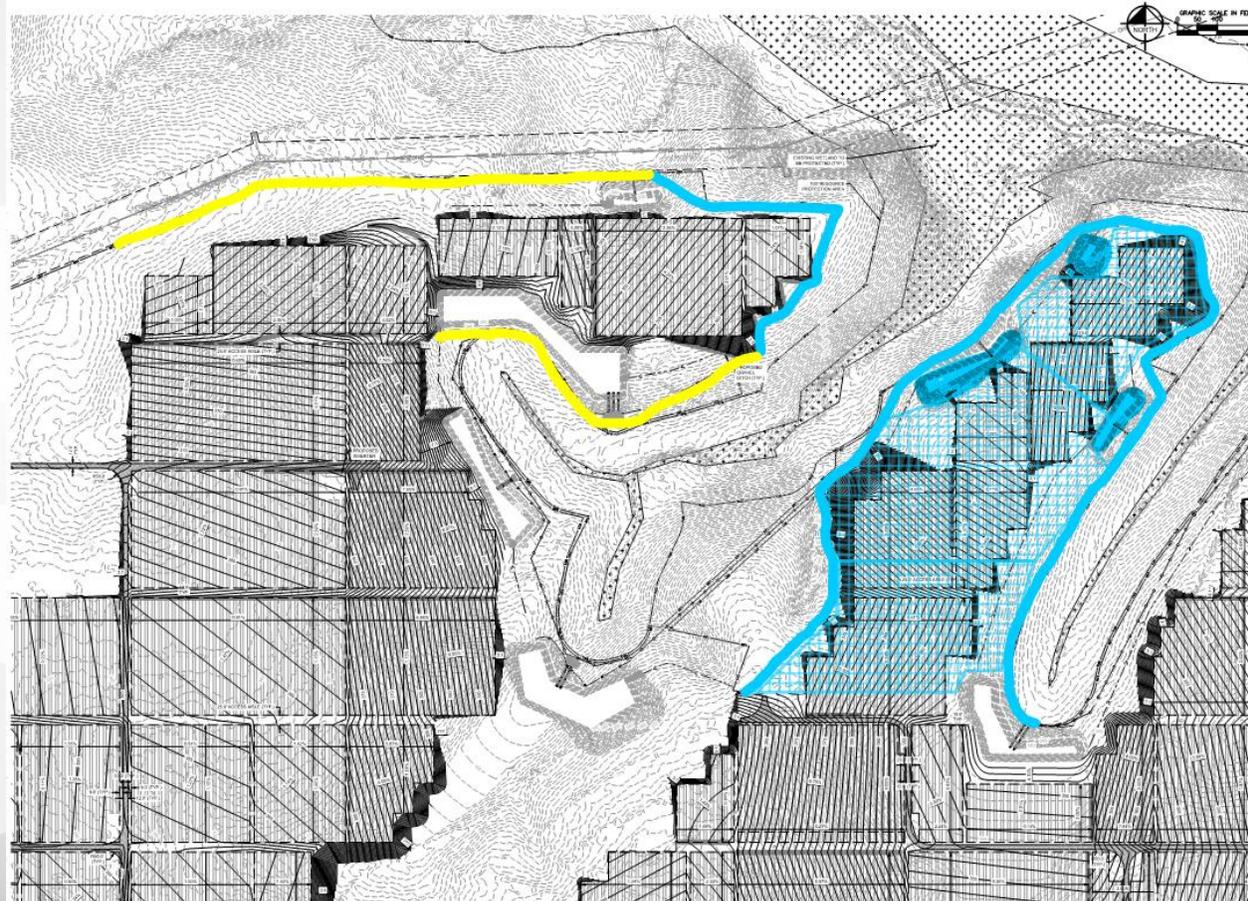
Grading – Continued Drainage Area #1



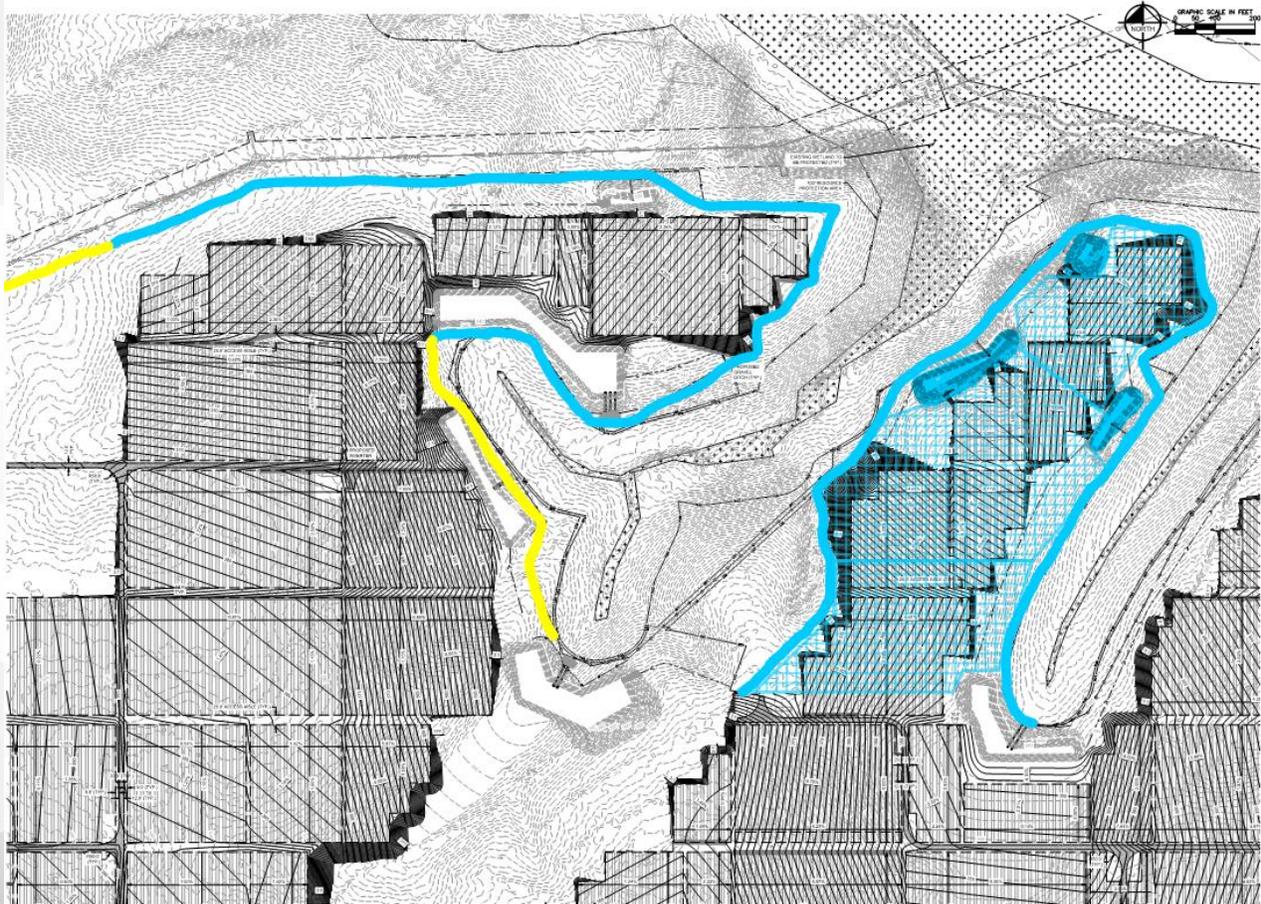
Begin silt fence construction Drainage Area #2



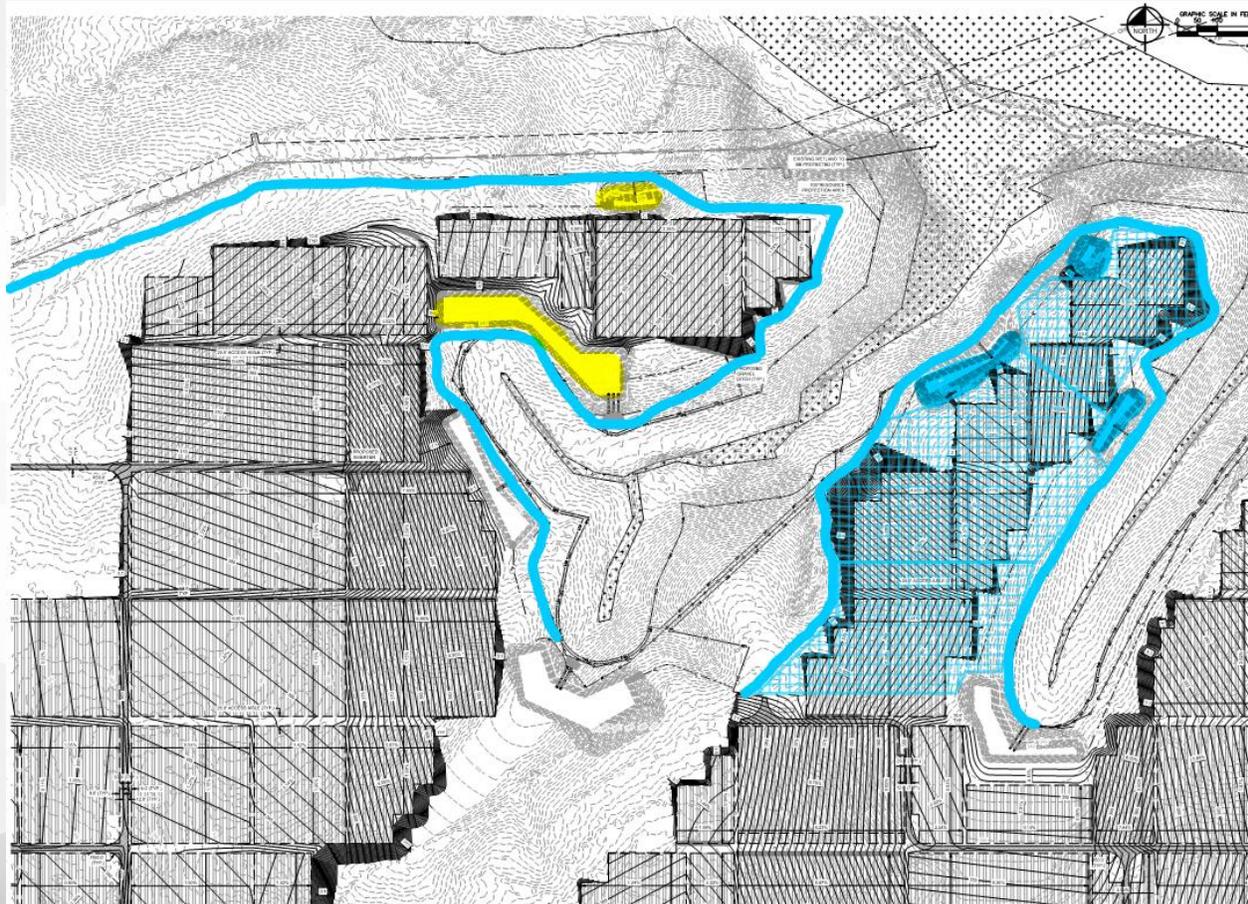
Silt fence construction – Continued Drainage Area #2



Silt fence construction – Continued Drainage Area #2



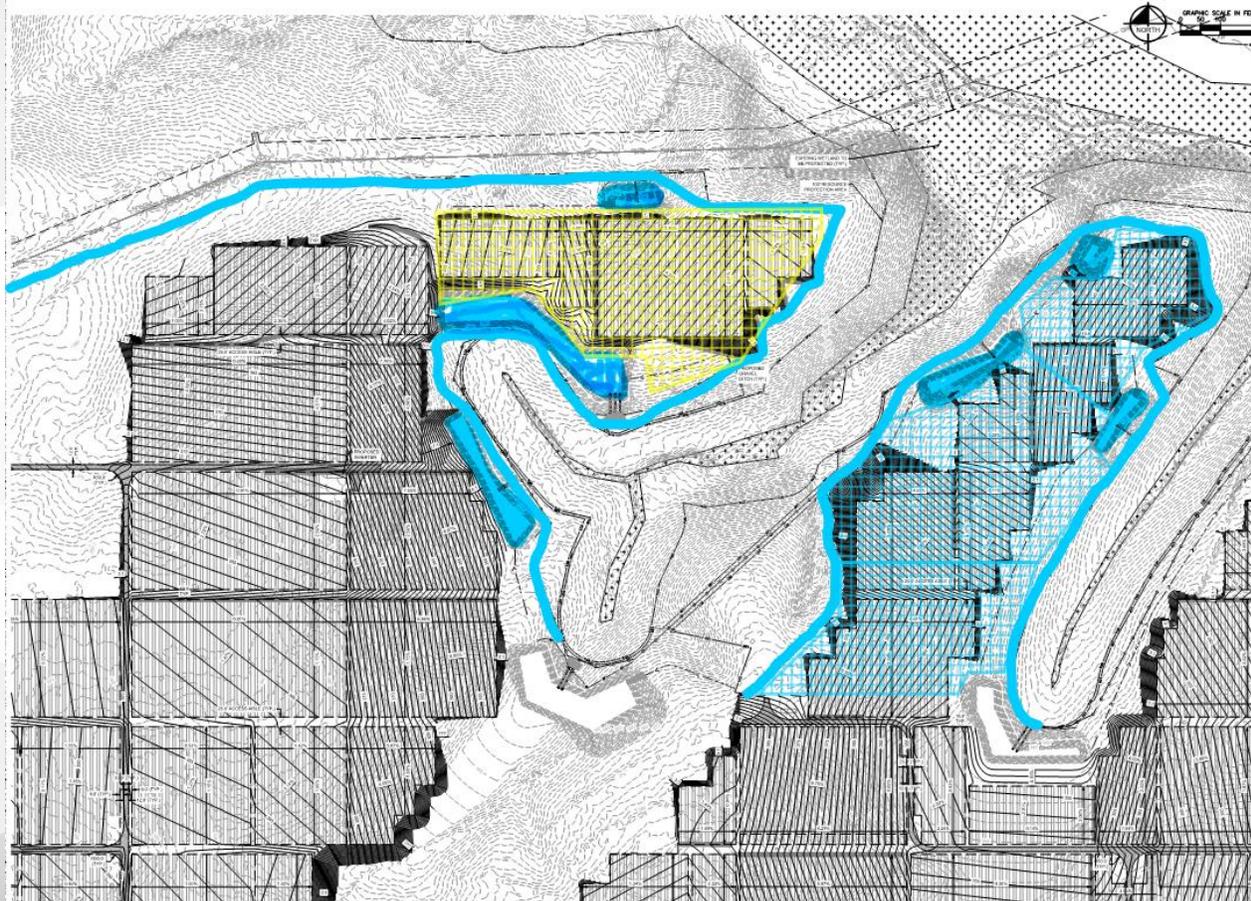
Pond construction Drainage Area #2



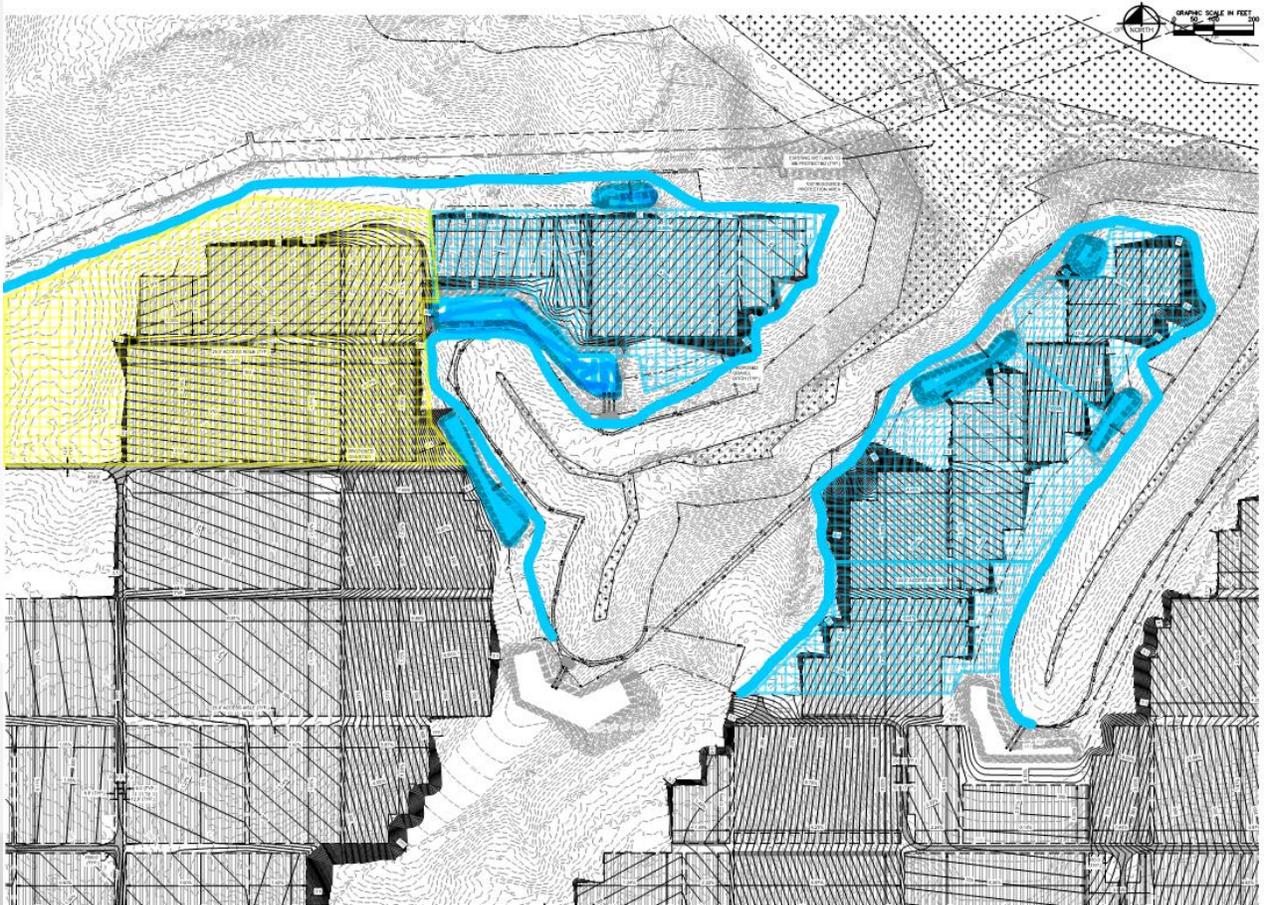
Pond construction – Continued Drainage Area #2



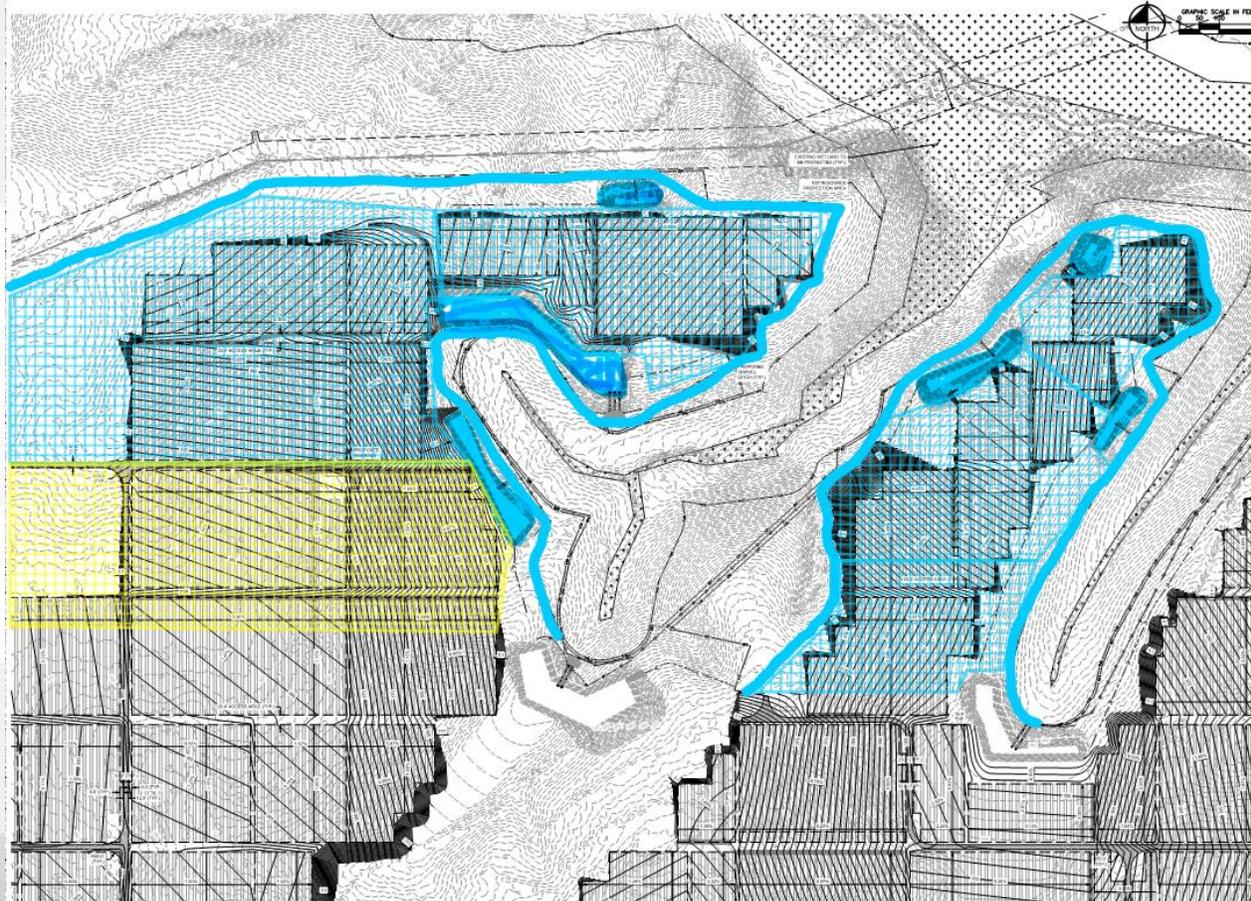
Grading Drainage Area #2



Grading – Continued Drainage Area #2



Grading – Continued Drainage Area #2



E&S Complete Drainage Areas #1 & #2

