Design Phase Checklist

1. Site Planning

- ❑ Are contour lines clearly shown on the construction drawings and do contour lines close?
- ❑ Water management
  - ❑ Have potential surface water sources been identified?
  - ❑ Is site drainage adjacent to the walls accounted for?
  - ❑ Does surface water drain away from wall face (except for water applications)?
  - ❑ For water applications, is toe erosion protection provided?
  - ❑ For water applications, are normal and high water levels identified?
- ❑ Have the location of utilities (storm sewer, irrigation, water lines, etc.) been identified and accounted for?
- ❑ Are catch basins, utilities and similar structures in the vicinity of the retaining walls clearly shown?
- ❑ Are the locations where handrails or fences required shown on the plans?
- ❑ Does the SRW, including the reinforced zone, necessary cuts, and non-disturb buffers fit within the project boundaries?
- ❑ Have access routes and storage areas been identified?

2. Geotechnical Report

- ❑ Does the geotechnical evaluation include the area where the retaining walls are located?
- ❑ Have effective stress soil parameters been determined for:
  - ❑ The foundation soils
  - ❑ The reinforced zone soils
  - ❑ The retained soil zone (general fill)
- ❑ Have the foundation soils been evaluated for bearing and settlement for the expected loads from the retaining walls?
- ❑ Have locations of expected high groundwater been identified?
- ❑ Have seismic accelerations been provided, as applicable?
- ❑ Has global stability been evaluated?

3. SRW Design Plans

- ❑ Have Quality Assurance provisions been defined?
- ❑ Have required soil parameters been determined and accounted for?
  - ❑ Retained soil friction angle
  - ❑ Reinforced soil friction angle

- ❑ Foundation soil friction angle and cohesion, if any

❑ Are the retaining wall plan layout, elevations, and station points clearly shown on the plans?

❑ Is the required information conveyed in typical cross-sections?

- ❑ Geogrid strength, length, and elevation shown by station
- ❑ Embedment shown by station
- ❑ Applied bearing pressure provided by station
- ❑ Utilities, if any, shown
- ❑ Drainage details, including toe drain and possible heal drain
- ❑ Top of wall detailing, including swales, fences, guiderails, etc. as applicable

❑ Have construction notes and specifications been provided and reviewed?

❑ Have all design variables been accounted for?

- ❑ Compliance with design requirements (NCMA or other) as well as any governing regulations or local ordinances.
- ❑ Design loads, including:
  - ❑ Surcharge loads, including magnitudes and locations
  - ❑ Loads from handrails, fences, barriers, etc.
  - ❑ Temporary or construction loads
  - ❑ Snow or storage loads
  - ❑ Seismic loads, if applicable
- ❑ Internal Compound Stability
- ❑ Verify global stability has been evaluated
- ❑ Design strengths including sliding, overturning (including top-of-wall), bearing, geogrid overstress, and geogrid pullout (block and soil)
- ❑ Water management:
  - ❑ Location and venting of toe and heel drains
  - ❑ Details for low permeability soils
  - ❑ Surface and subsurface water sources accounted for
- ❑ Do material submittals comply with project specifications?
- ❑ Does the project require any special considerations or construction details?