Concrete Rubblization

- What is Rubblized Concrete
  
  • Breaking up the concrete pavement into the size pieces that meet the spec. and that also totally de-bonds the reinforcing steel from the concrete
  
  • The spec. called for – At least 75% of the broken particles to be less than 4” in size. At the surface of the rubblized layer all pieces shall be less than 6”. In the lower half or below the reinforcing steel the maximum particle size shall be 12”
Why Rubblize - What’s the advantage you gain?

- Cheaper and faster than removing the existing Concrete
- No need to put in new subbase stone
- Strength of the Rubblized layer is 1.5 to 3 times greater than 21A/21B
- All but eliminates reflective cracking / extending service life
- Rubblization is an environmentally friendly Green process
Equipment used in the Rubblization process
Rubblizer/Concrete breaker
Three different Rollers follow the Rubblizer
Z pattern drum
Full Depth Concrete Removal Areas
Antigo also had one of their guillotine style breakers on site to help out with the full depth Concrete removal areas
Major items/ Project Quantities

- Concrete rubblization – 42,000 SYS
- Concrete removal – 11,200 SYS
- Install new Concrete curb (Our sub was Bay Concrete)
  - CG – 2 - 15,000 LF
  - CG – 6 - 15,000 LF
  - CG – 3 - 4,200 LF @ Guardrail locations
  - CG – 7 - 1,500 LF @ Guardrail locations
Bay Concrete was getting 6,000 + LF a shift, they did a great job for us
Asphalt Quantities

- BM - 25.0D - 2,500 Tons @ 4” (In removal areas)
- IM - 19.0E - 10,000 Tons @ 4” (Two 2” lifts)
- SM - 12.5E - 5,600 Tons @ 2”
- Approximately 5,000’ of Guard rail to take out and put back
- 54 DI’S to raise
- 18,000’ of silt fence
- 2,500 tons of 21-B
East Bound Lanes Complete
Some of the things we had go our way on this Project

- Mother Nature was very kind to us, especially on weekends
- Partnering with VDOT and the working together atmosphere
- The ability to close down one direction of Terminal all weekend. Friday night 8 PM thru Monday morning 5 AM
- VDOT getting us quick answers when we needed it
Some of the Challenges we encountered

- We had 10 Concrete removal areas on the Project
- Anchor Lugs in 3 of the 10 Concrete removal areas
- What in the heck are Anchor Lugs you ask?
Some of the Challenges we encountered

- Less than desirable subgrade in 3 of the removal areas and also at the Meredith Street Intersection and turn lane going into the Navy Base @ Meredith.
Some of the Challenges we encountered

- 10 - Concrete removal areas
- Anchor Lugs in 3 of the 10 Concrete removal areas
- Less than desirable subgrade in 3 of the removal areas and also at the Meredith Street Intersection and turn lane going into the Navy Base @ Meredith.
- Ruthven Street Intersection could not be closed and had to be done in two halves to maintain traffic
Any Questions?

Virginia Paving Company appreciates the opportunity to be part of this Project and share our experience with you. It was a pleasure working and Partnering with VDOT and look forward to Future Projects.

Thank You, I’m Out