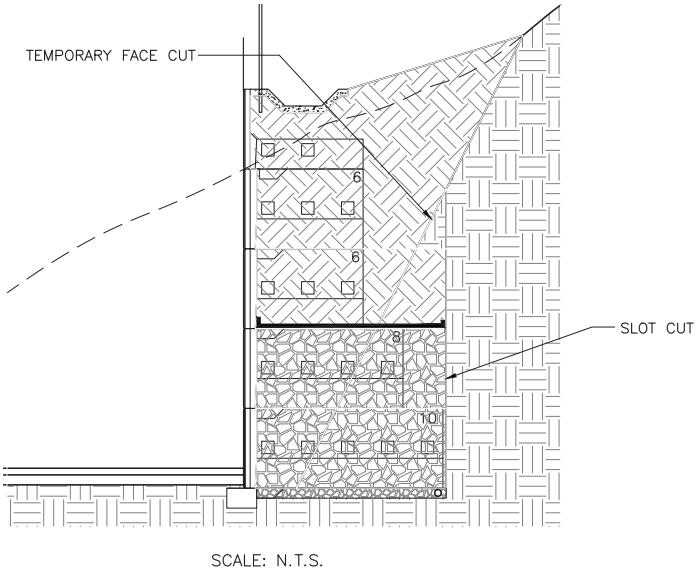
GRAVIX
DOT/Rail Precast Wall System

SLOT CONSTRUCTION TECH NOTE

Technical Note - Slot Construction — January 2020

Gravix stems can be placed into slots excavated into a cut slope that can eliminate temporary shoring. The photos displayed are three projects where soils and geometry conditions allowed the replacement of temporary shoring behind the permanent retaining wall resulting in savings. If you have questions concerning this detail, please contact Earth Wall Products Engineering Department at 678.594.3451.



SCALE: N.T.S.

ACCEPTABLE SOILS FOR SLOT CUT:

OSHA Soil Classification

Type A Soils	Temporary Face Cut - 0.75H:1.00V (53 degrees) Slot Cut - 20' tall max.* and only open for 2 days max.
Type B Soils	Temporary Face Cut - 1H:1V (45 degrees) Slot Cut - 20' tall max.* and only open for 2 days max.
Type C Soils	Do not use slot cut

*Note: All slot cuts greater than 20 feet in height must be approved by project geotechnical engineer.

OSHA SOIL CLASSIFICATION

Type A soil is cohesive and has a high unconfined compressive strength; 3,000 lbs per square soil is cohesive and has a high unconfined compressive strength; 3,000 lbs per square foot or greater. examples of type a soil include clay, silty clay, sandy clay, and clay loam. soil cannot be classified as type A if it is fissured, if it has been previously disturbed, if it has water seeping through it, or if it is subject to vibration from sources such as heavy traffic or pile drivers.

Type B soil is cohesive and has often been cracked or disturbed, with pieces that don't stick soil is cohesive and has often been cracked or disturbed, with pieces that don't stick together as well as type a soil. type b soil has medium unconfined compressive strength; between 1,000 lbs and 3,000 lbs per square foot. examples of type b soil include angular gravel, silt, silt loam, and soils that are fissured or near sources of vibration, but could otherwise be type a.

Type C soil is the least stable type of soil. type c includes granular soils in which particles soil is the least stable type of soil. type c includes granular soils in which particles don't stick together and cohesive soils with a low unconfined compressive strength; 1,000 lbs per square foot or less. examples of type c soil include gravel, and sand. because it is not stable, soil with water seeping through it is also automatically classified as type c soil, regardless of its other characteristics.

For additional information refer to osha "soil classification" and "sloping and benching"

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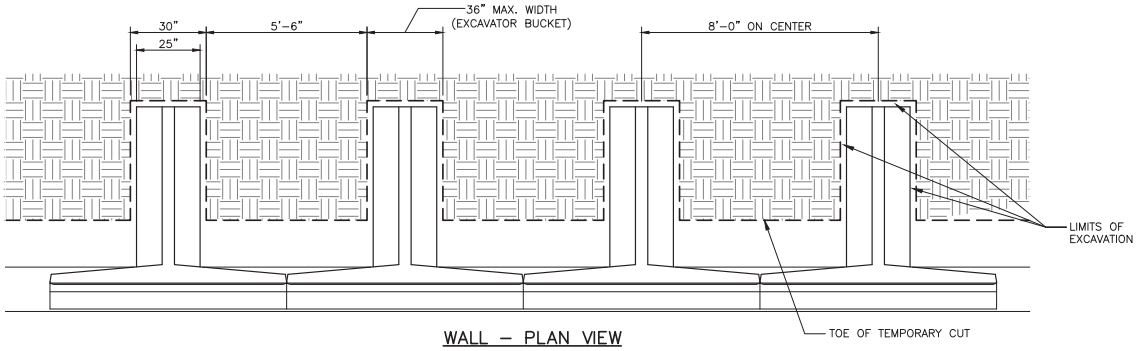
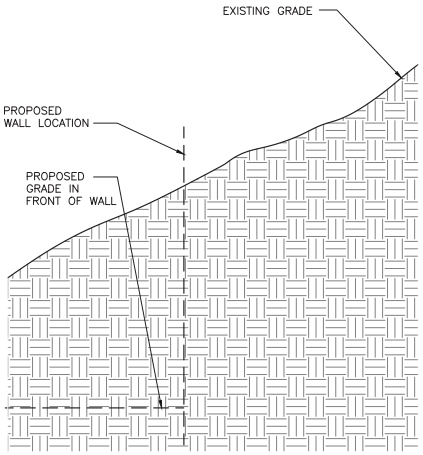
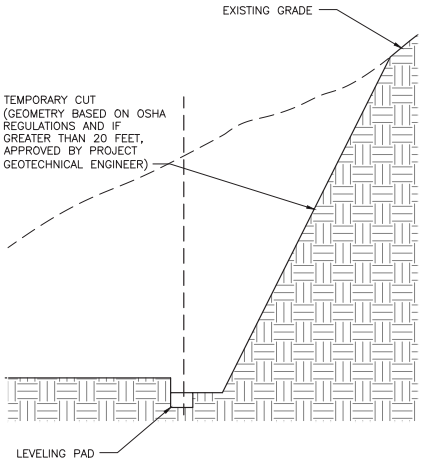


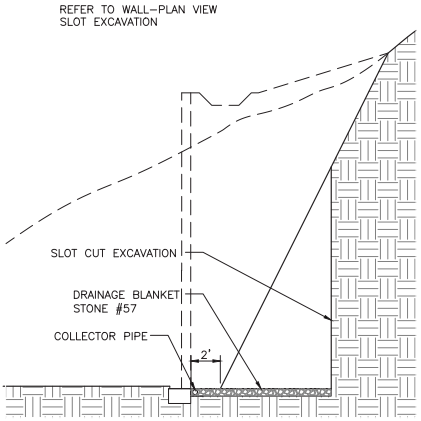
WALL – PLAN VIEW
SCALE: 1/2" = 1'-0"



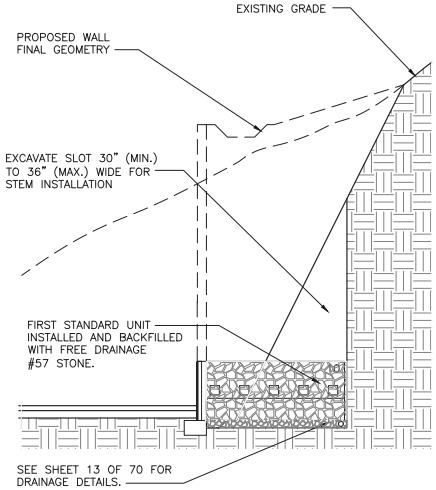
STEP 1 – EXISTING CONDITIONS
SCALE: 1/4" = 1'-0"



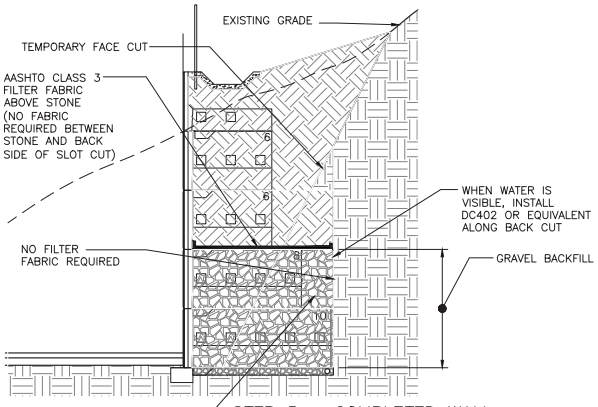
STEP 2 – TEMPORARY FACE CUT SLOPE
SCALE: 1/4" = 1'-0"



STEP 3 – SLOT CUT
SCALE: 1/4" = 1'-0"



STEP 4 – INITIAL WALL INSTALLATION
SCALE: 1/4" = 1'-0"



STEP 5 – COMPLETED WALL
SCALE: 1/4" = 1'-0"

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PH 678.594.3451

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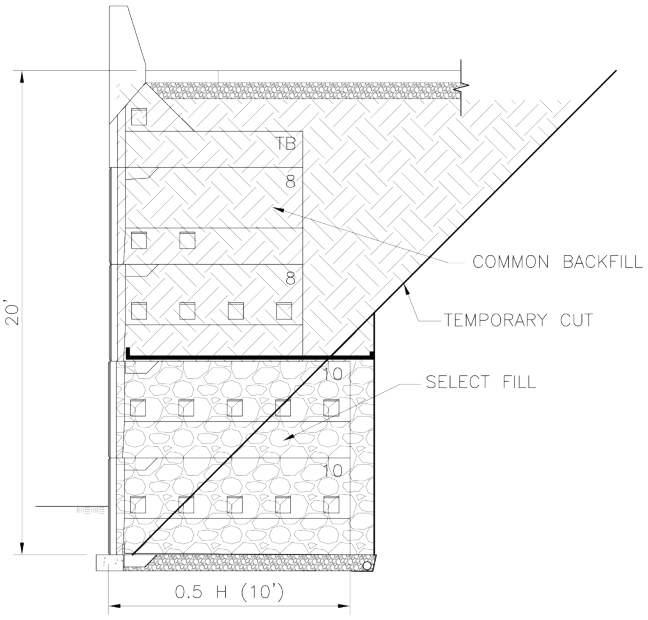
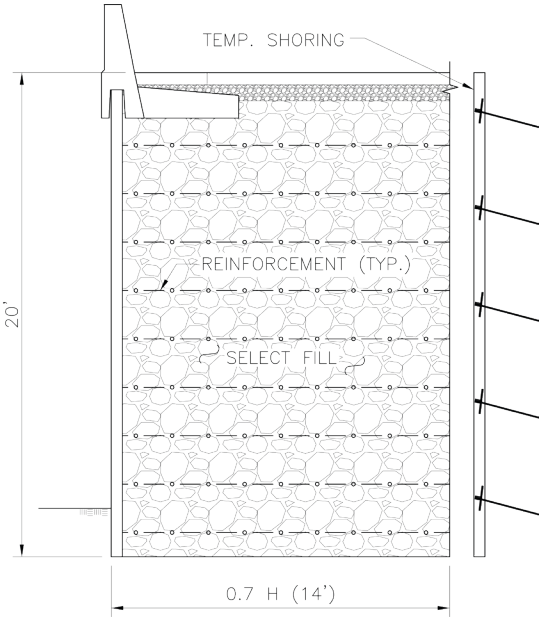
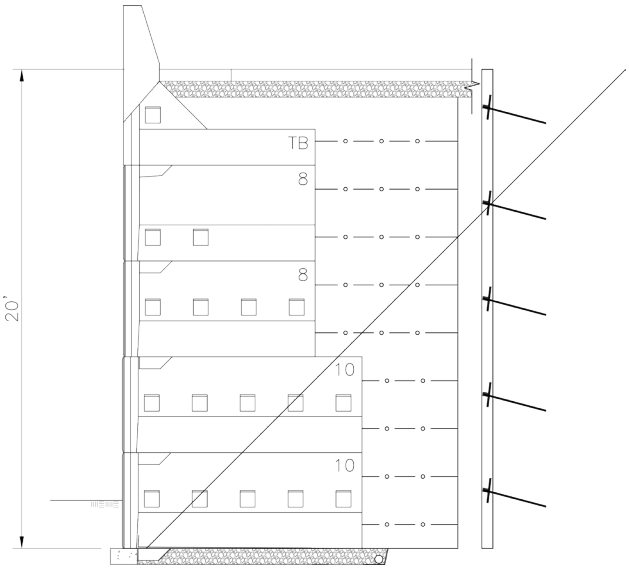


GRAVIX 20' TYPICAL SECTION
N.T.S.



MSE 20' TYPICAL SECTION
N.T.S.



OVERLAY OF GRAVIX/MSE
N.T.S.

MATERIALS COMPARISON PER LF

	GRAVIX	MSE
Temp Shoring	0	20 SF
Select Fill (36" Bucket Slot)	1.9 CY	10.1 CY
Cut Volume	8.7 CY	10.3 CY
Haul Off	3.1 CY	10.3 CY

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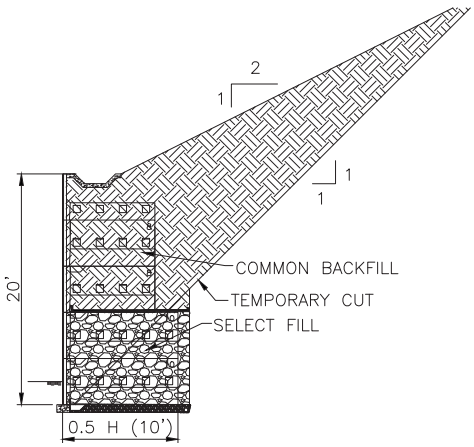
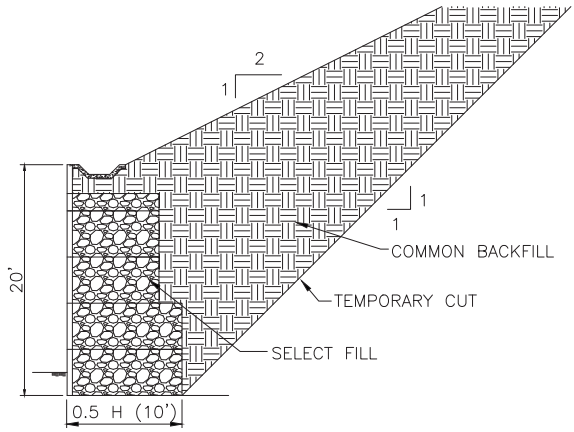
SLOT CUT COMPARISON



GRAVIX TYPICAL SECTION

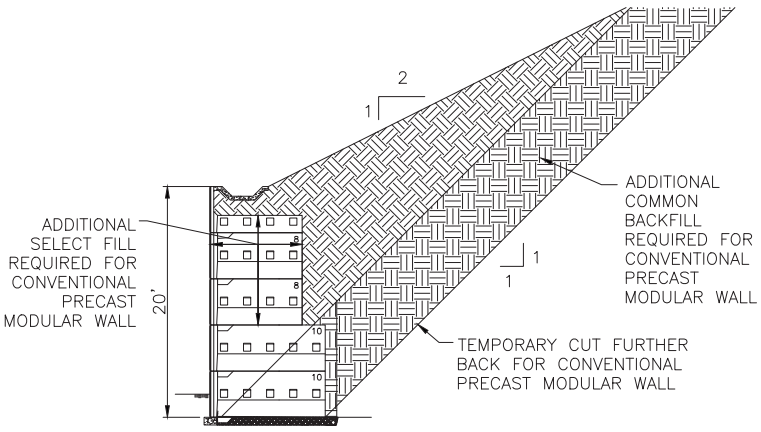
N.T.S.

VS.



CONVENTIONAL PRECAST MODULAR TYPICAL SECTION

N.T.S.



OVERLAY OF GRAVIX/CONVENTIONAL PRECAST MODULAR

N.T.S.

MATERIALS COMPARISON PER LF

	GRAVIX	CONVENTIONAL PRECAST MODULAR
Excavation	13.3 CY	28.0 CY
Select Fill	1.9 CY	5.1 CY
Common Backfill	11.4 CY	22.9 CY

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