

GENERAL NOTES

COMPUTED BY: Dgm
CHECKED BY: lam

FHWA REGION	STATE	PROJECT	
5	OHIO		

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LAKE COUNTY
LAK-44-4.14

EROSION CONTROL

AGGREGATE SLOPE PROTECTION REPAIR, AS PER PLAN

BOTH LARGE AND SMALL AREAS OF EXISTING CRUSHED AGGREGATE SLOPE PROTECTION HAVE ERODED AS A RESULT OF BRIDGE DRAINAGE.

THIS WORK SHALL INCLUDE THE PLACEMENT OF NON-POROUS EMBANKMENT MATERIAL AND EITHER CRUSHED AGGREGATE SLOPE PROTECTION, OR ROCK CHANNEL PROTECTION, TYPE D, WITH FILTER

SMALL EROSION AREAS SHALL BE REPAIRED AS FOLLOWS:

- 1) CONSTRUCT EMBANKMENT TO FORM A SHALLOW DITCH (6 INCH DEEP) ALONG THE LINE OF THE SCUPPERS.
- 2) PLACE A CONSTANT WIDTH (AS DETERMINED BY THE ENGINEER) OF ROCK CHANNEL PROTECTION, TYPE D, WITH FILTER
- 3) COVER ALL REMAINING REPAIR AREAS WITH CRUSHED AGGREGATE SLOPE PROTECTION.

ALL COSTS OF FURNISHING AND PLACING THE EMBANKMENT SHALL BE INCLUDED UNDER ITEM 601 - CRUSHED AGGREGATE SLOPE PROTECTION, AS PER PLAN OR ITEM 601 - ROCK CHANNEL PROTECTION, TYPE D, WITH FILTER

THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN INCLUDED IN THE GENERAL SUMMARY TO BE USED AS OUTLINED ABOVE AS DIRECTED BY THE ENGINEER.

ITEM 601 - ROCK CHANNEL PROTECTION, TYPE D, 100 C.Y.
WITH FILTER
ITEM 601 - CRUSHED AGGREGATE SLOPE PROTECTION, AS PER PLAN 3,285 S.Y.

CONCRETE SLOPE PROTECTION REMOVED AS PER PLAN

PRIOR TO PLACING ROCK CHANNEL PROTECTION, THE CONTRACTOR SHALL BREAK THE CONCRETE TROUGH SLOPE PROTECTION SUCH THAT 85 PERCENT OF THE TOTAL MATERIAL BY WEIGHT SHALL BE LARGER THAN A 3-INCH BUT LESS THAN A 12-INCH SQUARE OPENING. AT LEAST 50 PERCENT OF THE TOTAL MATERIAL BY WEIGHT SHALL BE LARGER THAN A 6-INCH SQUARE OPENING.

THE BROKEN CONCRETE SHALL BE SPREAD IN WITH THE ROCK CHANNEL PROTECTION, TYPE D.

PAYMENT SHALL BE MADE AT THE CONTRACT UNIT PRICE BID PER SQUARE YARD, "ITEM 202 - CONCRETE SLOPE PROTECTION REMOVED", WHICH PRICE SHALL CONSTITUTE FULL COMPENSATION FOR ALL LABOR, MATERIALS, TOOLS, AND EQUIPMENT REQUIRED TO COMPLETE THIS ITEM OF WORK.

REPAIR OF EROSION AREAS

THIS ITEM OF WORK SHALL BE USED AT THE LOCATIONS AS SHOWN ON SHEET NO. 3.3A AS WELL AS ANY OTHER LOCATIONS AS DIRECTED BY THE ENGINEER.

BECAUSE OF THE PRESENCE OF SHALE, AND THE RESULTING HIGH ACIDITY OF THE SOIL, VEGETATION HAS FAILED TO EXIST IN THESE AREAS.

THE INTENT OF THIS WORK IS AS FOLLOWS:

- 1) TO LOOSEN UP THE EXISTING SOIL AND PERFORM MINOR REGRADING AS NECESSARY. (INCLUDES EMBANKMENT AND EXCAVATION).
- 2) TO LIME THE PREPARED BASE (INCORPORATION INTO THE SOIL IS NOT REQUIRED IF EVENLY SPREAD).
- 3) PLACE FOUR INCHES OF TOPSOIL OVER THE PREPARED AREAS. INCORPORATE FERTILIZER AS SPECIFIED AND LIME INTO THE TOPSOIL TO ACHIEVE A PH OF BETWEEN 6.5 AND 7.0.
- 4) PLACE 8'-0" MINIMUM WIDTH OF SOD IN ALL DITCHES.
- 5) PLACE SEEDING AND MULCHING AS PER PLAN (CROWN VETCH FORMULA) ON ALL SLOPES 3:1 AND STEEPER.
- 6) PLACE SEEDING AND MULCHING ON ALL REMAINING AREAS.

REPAIR AREA PREPARATION

PRIOR TO PLACING THE TOPSOIL ALL AREAS TO RECEIVE TOPSOIL SHALL BE MACHINE SCARIFIED TO A DEPTH OF 3 INCHES, OR MORE BY DISCS, HARROW, TOOTHED DOZER BLADE OR SIMILAR DEVICE. DURING THIS OPERATION GRADING OPERATIONS SHALL BE PERFORMED AS NECESSARY TO INSURE THAT DRAINAGE FLOW TO THE DITCHES AND ALONG THE DITCHES WILL BE MAINTAINED AFTER THE PLACEMENT OF THE FOUR INCH TOPSOIL LAYER (SEE TOPSOIL NOTE)

PAYMENT FOR THIS OPERATION SHALL BE INCLUDED IN THE COST OF ITEM 653, TOPSOIL FURNISHED AND PLACED, AS PER PLAN.

AGRICULTURAL LIMING

PRIOR TO PLACING THE TOPSOIL ALL PREPARED AREAS AS OUTLINED ABOVE SHALL BE TREATED WITH AGRICULTURAL LIMING AT THE RATE OF 100 POUNDS PER 1000 SQUARE FEET. LIMING BY HYDRO PROCESS SHALL NOT BE PERMITTED. THIS LIMING APPLICATION NEED NOT BE RAKED INTO THE SOIL PROVIDING THAT IT IS UNIFORMLY APPLIED.

TOPSOIL FURNISHED AND PLACED, AS PER PLAN

GENERALLY FOUR INCHES OF TOPSOIL SHALL BE PLACED OVER ALL PREPARED AREAS. THE BOUNDARY OF THE TOPSOIL PLACEMENT SHALL BE FEATHERED BEYOND THE PREPARED AREAS TO ACHIEVE A GRADUAL TRANSITION AND INSURE DRAINAGE FLOW. REGRADING AND EXCAVATION OF THE EXISTING DITCHES IS NECESSARY SO THAT THE DITCH FLOW LINE MATCHES THE CORRECT ELEVATION AT THE DRAINAGE STRUCTURE AND ALSO TO MAINTAIN A MINIMUM 18 INCH DROP FROM THE EDGE OF PAVEMENT TO THE DITCH FLOW LINE. ADDITIONAL EXCAVATION AND REGRADING TO INSURE FLOW SHALL ALSO BE REQUIRED WHEN THE REPAIR AREA IS ADJACENT TO PAVED SHOULDERS. PAYMENT SHALL BE BASED ON WEIGHT CONVERSION OF 2400 LBS/CY IN LIEU OF 653.06, THE ORGANIC MATTER REQUIREMENT OF 653.02 IS HEREBY WAIVED FOR THIS ITEM OF WORK.

SEEDING AREAS (REGRADING AREAS)

QUANTITIES FOR SEEDING ARE CALCULATED FROM THE PAVED SHOULDER TO TWO (2) FEET BEYOND THE CONSTRUCTION LIMIT SHOWN ON THE CROSS SECTIONS.

FERTILIZING AND AGRICULTURAL LIMING, AS PER PLAN

COMMERCIAL FERTILIZER SHALL BE PLACED ON ALL AREAS COVERED WITH TOPSOIL AS PER 659.08.

QUANTITIES FOR AGRICULTURAL LIMING OF THE TOPSOIL ARE INCLUDED TO BE USED TO ACHIEVE A PH OF BETWEEN 6.5 AND 7.0. QUANTITIES ARE SUFFICIENT FOR THE ENTIRE PROJECT, BUT WILL BE NON-PERFORMED WHERE TESTS SHOW THAT LIMING IS NOT REQUIRED.

SODDING

ALL DITCHES SHALL BE SOD LINED 8'-0" WIDE. THIS APPLIES IN GENERAL UNLESS THE REPAIR AREA CONSISTS OF AN ERODED DITCH LESS THAN 8'-0" WIDE, WHICH SHALL BE LINED FOR THE REPAIR WIDTH ONLY.

SEEDING AND MULCHING, AS PER PLAN

THIS ITEM SHALL BE APPLIED ON ALL REPAIR AREAS WITH SLOPES 3:1 OR STEEPER. THE SEED MIX SHALL CONSIST OF 1 POUND OF CROWN VETCH ADDED TO EACH 5 POUNDS OF THE STANDARD SEEDING MIXTURE. THE APPLICATION RATE OF THE RESULTING MIXTURE SHALL BE 3 POUNDS PER 1000 SQUARE FEET. THE PROVISIONS OF 659.07 SPECIFICALLY APPLIES TO THIS CROWN VETCH SEEDING MIXTURE.

SEEDING AND MULCHING

THIS ITEM SHALL BE APPLIED ON ALL REMAINING REPAIR AREAS.

QUANTITY SUMMARY

THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN INCLUDED IN THE GENERAL SUMMARY TO BE USED AS OUTLINED ABOVE:

ITEM 653 - TOPSOIL FURNISHED AND PLACED, AS PER PLAN	<u>719</u> C.Y.
ITEM 659 - SEEDING AND MULCHING	<u>4,052</u> S.Y.
ITEM 659 - SEEDING AND MULCHING, AS PER PLAN	<u>2,420</u> S.Y.
ITEM 659 - AGRICULTURAL LIMING	<u>3.6</u> TONS
ITEM 659 - COMMERCIAL FERTILIZER	<u>0.6</u> TONS
ITEM 660 - SODDING	<u>133</u> S.Y.

ITEM SPECIAL - HERBICIDES FOR WEED CONTROL

PRIOR TO PLACING THE ITEM 301 - BITUMINOUS AGGREGATE, AN APPLICATION OF PRINCEP 80W, OR AMISINE, OR AN APPROVED EQUAL SHALL BE APPLIED TO THE SHOULDER BED. THE RATE AND METHOD OF APPLICATION FOR AMISINE OR OF AN APPROVED EQUAL SHALL BE IN STRICT CONFORMANCE WITH THE MANUFACTURER'S INSTRUCTIONS.

PAYMENT SHALL BE MADE AT THE CONTRACT UNIT PRICE BID PER SQUARE YARD, "ITEM SPECIAL - HERBICIDES FOR WEED CONTROL", WHICH PRICE SHALL CONSTITUTE FULL COMPENSATION FOR ALL LABOR, MATERIALS, TOOLS, EQUIPMENT, AND WATER REQUIRED TO COMPLETE THIS ITEM OF WORK.