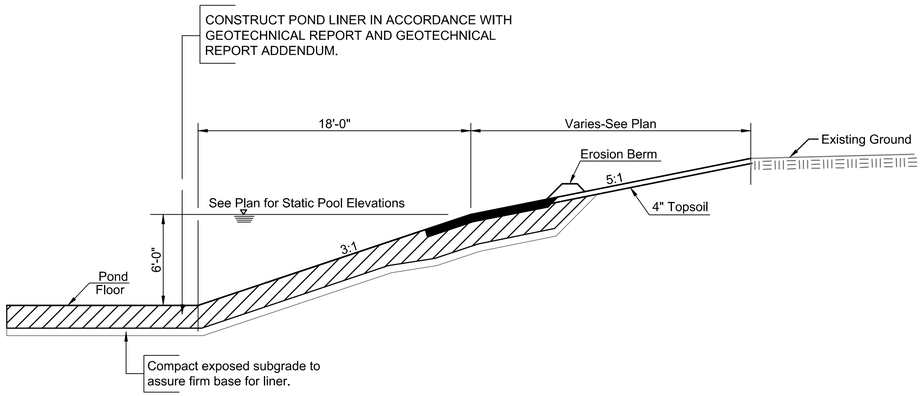
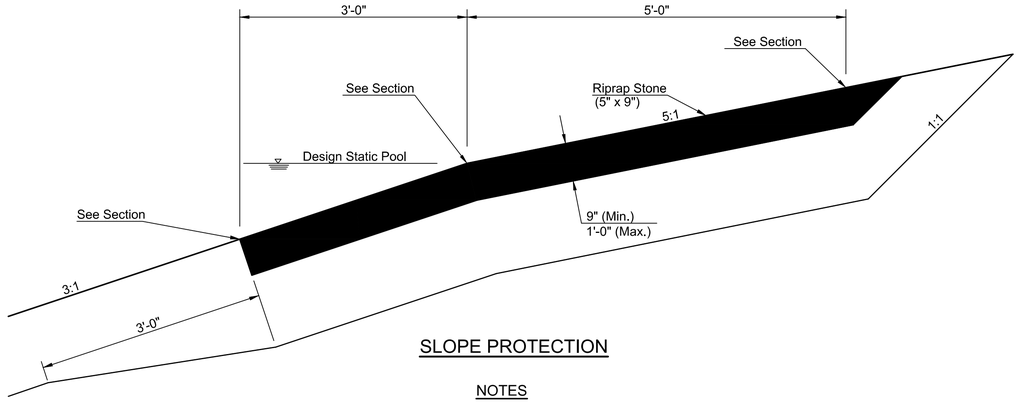


POND LINER CONSTRUCTION PROCEDURE FOR POND SEALING



SLOPE PROTECTION

NOTES

CRUSHED STONE FOR THE SLOPE PROTECTION SHALL BE COMMERCIALLY AVAILABLE 5" x 9" CRUSHED STONE FOR RIPRAP. MATERIALS SHALL MEET THE REQUIREMENTS FOR QUALITY AND DELETERIOUS SUBSTANCES AS SET FORTH IN SUBSECTION 1114 OF STANDARD SPECIFICATIONS FOR STATE ROAD AND BRIDGE CONSTRUCTION, KANSAS DEPARTMENT OF TRANSPORTATION, 2015 EDITION.

SHALL BE PAID FOR AS THE LUMP SUM BID ITEM "SLOPE PROTECTION".

POND SEALING NOTES:

POND SEALING ALTERNATE 1: SHALL BE WEATHERED SHALE, 18" IN DEPTH AS INDICATED BY THE GEOTECHNICAL REPORT ADDENDUM ATTACHED.

POND SEALING ALTERNATE 2: SHALL BE BENTONITE TREATED SOIL LINER, 12" IN DEPTH AS INDICATED BY THE GEOTECHNICAL REPORT ADDENDUM ATTACHED.

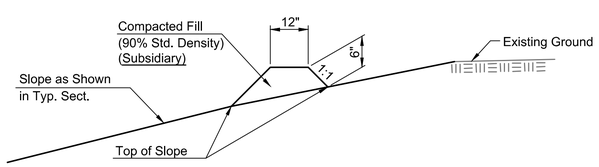
THE POND AREAS INDICATED FOR POND LINER SHALL BE OVEREXCAVATED TO A DEPTH AS INDICATED IN THE ATTACHED GEOTECHNICAL REPORT BELOW THE FINAL POND SURFACE. THE OVEREXCAVATED MATERIAL SHALL BE STOCKPILED FOR RE-USE, UTILIZED FOR THE POND LINER, UTILIZED IN PROJECT EMBANKMENTS, OR STOCKPILED ON SITE. BACKFILL OVEREXCAVATED AREA WITH PROJECT AREA MATERIAL AND COMPACTED TO PROVIDE AN IMPERIVIOUS SURFACE. PROVIDE QUALITY CONTROL TESTING AS OUTLINED BELOW:

1. CONSTRUCT POND LINER IN LIFTS SPECIFIED IN ATTACHED GEOTECHNICAL REPORT AND GEOTECHNICAL REPORT ADDENDUM.
2. MATERIAL INTENDED FOR POND LINER CONSTRUCTION SHOULD BE SUBMITTED TO THE CITY OF WICHITA (OR THEIR 3RD PARTY TESTING AGENCY) FOR LABORATORY TESTING PRIOR TO THE START OF CONSTRUCTION.
3. LIFTS SHOULD BE COMPACTED TO THE MAXIMUM DRY DENSITY REQUIRED TO ACHIEVE A MINIMUM HYDRAULIC CONDUCTIVITY AS SPECIFIED IN ATTACHED GEOTECHNICAL REPORT.
4. MAXIMUM DRY DENSITY SHOULD BE DETERMINED BY THE CITY OF WICHITA (OR THEIR THIRD PARTY GEOTECHNICAL TESTING LABORATORY.)
5. MOISTURE CONTENT SHOULD BE DETERMINED BY THE CITY OF WICHITA (OR THEIR THIRD PARTY GEOTECHNICAL TESTING LABORATORY.)
6. POND LINER DENSITY TESTING FREQUENCY SHALL BE EVERY 400' ALONG POND SIDES PER LIFT AND AT 2 LOCATIONS ALONG THE POND BOTTOM IN EACH POND (4 TOTAL ALONG POND BOTTOM).
7. AFTER CONSTRUCTION OF THE POND LINER, CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING MOISTURE CONTENT OF THE LINER AT OR ABOVE OPTIMUM TO PREVENT SHRINKAGE CRACKING UNTIL THE POND IS FILLED.

POND SEALING, AS DESCRIBED HEREIN, SHALL BE MEASURED AND PAID FOR AS FOLLOWS: THE OVEREXCAVATION WILL BE PAID FOR UNDER THE LUMP SUM BID ITEM "POND SEALING". THIS SHALL BE CONSIDERED FULL COMPENSATION FOR ALL OVEREXCAVATION, STOCKPILING, AND DOUBLE HANDLING OF EARTHWORK (IF NECESSARY).

POND GRADING NOTES:

CONTRACTOR SHALL PERFORM GRADING AS SHOWN BY CONTOURS AND COORDINATES ON SHEET NOS. CP101 AND CG101.



TEMPORARY EROSION CONTROL DETAIL (EROSION BERM)

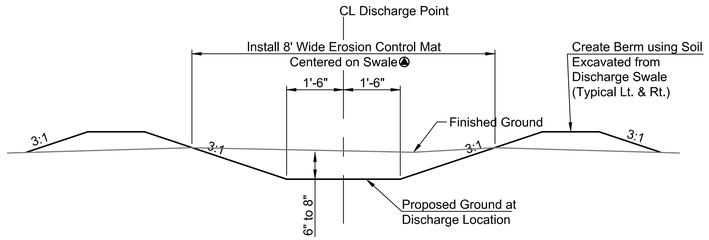
THE ENGINEER MAY DETERMINE THAT THE HEIGHT OF BERM SHOULD BE INCREASED OVER THAT SHOWN IF DRAINAGE CONDITIONS ARE PRODUCING SLOPE EROSION.

TEMPORARY EROSION CONTROL BERMS SHALL BE CONSTRUCTED AT LOCATIONS SHOWN ON THE PLANS OR AS DIRECTED BY THE ENGINEER.

AT REGULAR INTERVALS OF NO GREATER THAN 250 FT, AND WHERE FLOW IS CONCENTRATED, SUCH AS THE CORNERS OF THE POND, OR AS DIRECTED BY THE ENGINEER, AND AS PER PLANS DEPICT PROVIDE BREAKS IN THE BERM TO ALLOW CONTROLLED DISCHARGE OF TRAPPED WATER. DISCHARGE LOCATIONS SHALL BE PROTECTED AS NECESSARY TO PREVENT SLOPE EROSION. SEE TYPICAL SECTION.

ALL AREAS WHERE FLOW IS CONCENTRATED SHALL BE PROTECTED BY SILTATION BARRIERS PRIOR TO DISCHARGING INTO ANY DITCH, STORM SEWER, OR WATERCOURSE, AS APPROVED BY THE ENGINEER.

MEASUREMENT AND PAYMENT: THIS WORK SHALL NOT BE PAID FOR DIRECTLY BUT SHALL BE CONSIDERED SUBSIDIARY TO "EXCAVATION".



TYPICAL SECTION

(Erosion Berm Discharge Point)

EROSION CONTROL MAT SHALL BE NORTH AMERICAN GREEN P300 OR APPROVED EQUIVALENT. INSTALLED PER MANUFACTURER'S RECOMMENDATIONS.

PAID FOR AS S.Y. "EROSION CONTROL MAT" AS INDICATED ON PLANS. THE BID PRICE SHALL BE CONSIDERED FULL COMPENSATION FOR ALL MATERIALS, LABOR, EQUIPMENT, TOOLS, AND INCIDENTS NECESSARY TO COMPLETE WORK.

APPROXIMATE LOCATIONS ARE SHOWN ON THE POND GRADING PLAN.

PEC
PROFESSIONAL ENGINEERING CONSULTANTS
303 SOUTH TOPEKA
WICHITA, KS 67202
316-262-2691 www.pec1.com

CITY OF WICHITA

KRISTY SKAGGS
LICENSED
29955
01/09/2024
KANSAS
PROFESSIONAL ENGINEER

STORM WATER DRAIN #15 IMPROVEMENTS

CYPRESS GLEN ADDITION

PAUL GUNZELMAN, P.E.-CITY ENGINEER
CITY OF WICHITA PROJECT NO.
458-2023-085548

Issue:		

JOB NO.	210975-003
DATE	DECEMBER 2023
PM	RMM
DESIGNED BY	KMS
DRAWN BY	BJS
CHECKED BY	BMM

TYPICAL SECTIONS

C007
07 OF 21

SAVED 1/9/2024 7:37:36 AM BY BILL.SEXSON
PLOTTED 1/9/2024 12:34:53 PM BY BILL SEXSON
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