Project Name__________________________________________

Engineering Firm________________________________________ Date Submitted______________

____ Vicinity Map ______ Pond Summary Sheet (MD-ENG-14) ______ Pond Class

REVIEW INDEX
R (required, not submitted)
NA (not applicable)
X (submitted)

I. PLAN REVIEW OF POND AT SCALE OF 1” = 50’ OR LESS

_____ A. Existing and final contours (2’ interval maximum)
_____ B. Locations of test borings and benchmark
_____ C. Inflow channels slope over fall protection (detail required)
_____ D. Outflow pipe, outlet protection, outfall channel
_____ E. Property lines and names of adjacent owners
_____ F. Low flow channel (detail required)
_____ G. Emergency spillway and outlet channel
_____ H. Stationing
_____ I. Easements
_____ J. Scale and north arrow
_____ K. Legend
_____ L. Sediment control (current Standards and Specs)

II. SOILS INVESTIGATION

_____ A. Borings along centerline of dam and in the borrow area
_____ B. Use of Unified Soil Classification System
_____ C. Log on dam profile and plan view

III. HYDROLOGY

_____ A. Drainage area map (1” = 200’ scale or less)
    _____ 1. Existing and ultimate D. A. limits delineated
    _____ 2. Existing and ultimate time of concentration paths shown
    _____ 3. Existing and ultimate land uses delineated

_____ B. Soils map (site delineated on Soil Survey)
IV. CROSS-SECTION OF DAM THROUGH PRINCIPAL SPILLWAY

_____ A. Existing ground

_____ B. Proposed ground surface

       1. Slopes of dam sides ($S_1 + S_2 = 5:1$ minimum)
       2. Top width

_____ C. Cutoff trench

       1. Bottom width (4’ minimum)
       2. Side slopes (1:1 maximum steepness)
       3. Depth (4’ minimum)
       4. Type of Soil to be used (GC, CL, CH, SC)

_____ D. Impervious Core (if dam is impervious)

       1. Top width
       2. Side slopes
       3. Height
       4. Type of Soil to be used (GC, CL, CH, SC)

_____ E. Riser or similar structure

       1. Inside diameter
       2. Gage (or thickness if concrete)
       3. Depth of embedding in base (if base is concrete)
       4. Trash rack (detail needed)
       5. Antivortex device (in trash rack detail)
       6. Riser Base

       a. Length, width thickness
       b. Gage (if metal)

_____ F. Weir

       1. Base Dimensions
       2. Crest Lengths
       3. Thickness
       4. Depth of embedding in earth (4’ min. vert.; 5’ min. horiz.)
       5. Materials (Conc. Mix no. 3; Reinforcement)

_____ G. Orifice or similar structure

       1. Diameter
       2. Anti-clogging device or trash rack
H. Pipe (round)
   1. Inside diameter
   2. Material
   3. Length
   4. Slope
   5. Saturated length

I. Phreatic line (4:1 slope)

J. Antiseep collars (size and location of pipe) (detail required)

K. Bedding (if pipe is concrete) (detail required)

L. Emergency spillway (dotted line at crest elevation)

M. Outlet protection

N. Elevations:
   1. Top of dam (includes required freeboard)
   2. Crest of emergency spillway
   3. Crest of riser or weir(s) and other openings
   4. Design storm – 100 year and permanent pool elevations
   5. Top of impervious core
   6. Bottom of cutoff trench
   7. Bottom of pond
   8. Bottom of weir
   9. Inlet and outlet inverts of pipe and/or low orifice
   10. Specification of construction height and settled height for dam construction

V. EMERGENCY SPILLWAY (IF APPLICABLE)

A. Located on natural ground or cut or protection provided

B. Existing ground

C. Profile of spillway
   1. Inlet, control and outlet sections
   2. Slopes
   3. Design Discharge and velocity

D. Cross-section of spillway
VI. PROFILE ALONG CENTERLINE OF DAM

_____A. Top of dam (constructed and settled)
_____B. Location of emergency and principal spillways
_____C. Existing ground
_____D. Proposed ground
_____E. Top of core
_____F. Cutoff trench
_____G. Horizontal control

VII. DESIGN

_____A. Runoff computations
   ______1. Soils Hydrologic Groups
   ______2. Existing RCN
   ______3. Proposed RCN
   ______4. Time of concentration (existing and proposed)
   ______5. Allowable discharge

_____B. Routings (TR-20 or TR-55)
   ______1. Required volume of storage computations
   ______2. Stage vs. storage curve and table for facility
   ______3. Stage vs. discharge curve and table
   ______4. Routings
      ______ a. 2-year storm
      ______ b. 10-year storm
      ______ c. 100-year storm

_____C. Outlet protection computations

_____D. Antiflotation comps (factor of safety = 1.2)

_____E. Stability computations for weirs (bearing, sliding, overturning)

_____F. Antiseep collar sizing

VIII. CONSTRUCTION SPECIFICATIONS (per MD-378, January 2000)

_____A. Site preparation
_____B. Earthfill
_____C. Structural backfill
_____D. Pipe conduit
_____E. Concrete
_____F. Stabilization
IX. NOTES

_____A. Structure classification
_____B. Hydrologic criteria
_____C. Drainage area to facility stated in acres

X. CERTIFICATION

_____A. Engineer’s (signed and sealed)
_____B. Developer’s (signed)
_____C. As-built

GENERAL COMMENTS:
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Marked Plans_____yes _____no

(Additional comments provided on a marked set of plans also need to be addressed. Plans must be returned with next submittal.)

Plans reviewed by _________________________________ Date__________

Last updated: 12-28-17