

Madison, Wisconsin

INDEX OF SHEETS

SHEET NO.	TITLE
1	
C2.0	BASIN 4A CROSS SECTION & DETAILS
C2.1	WET POND 4B CROSS SECTION & DETAILS
C2.2	WET POND 4C CROSS SECTION & DETAILS
NO MAINTENANCE PLAN REQUIRED	

CITY OF MADISON

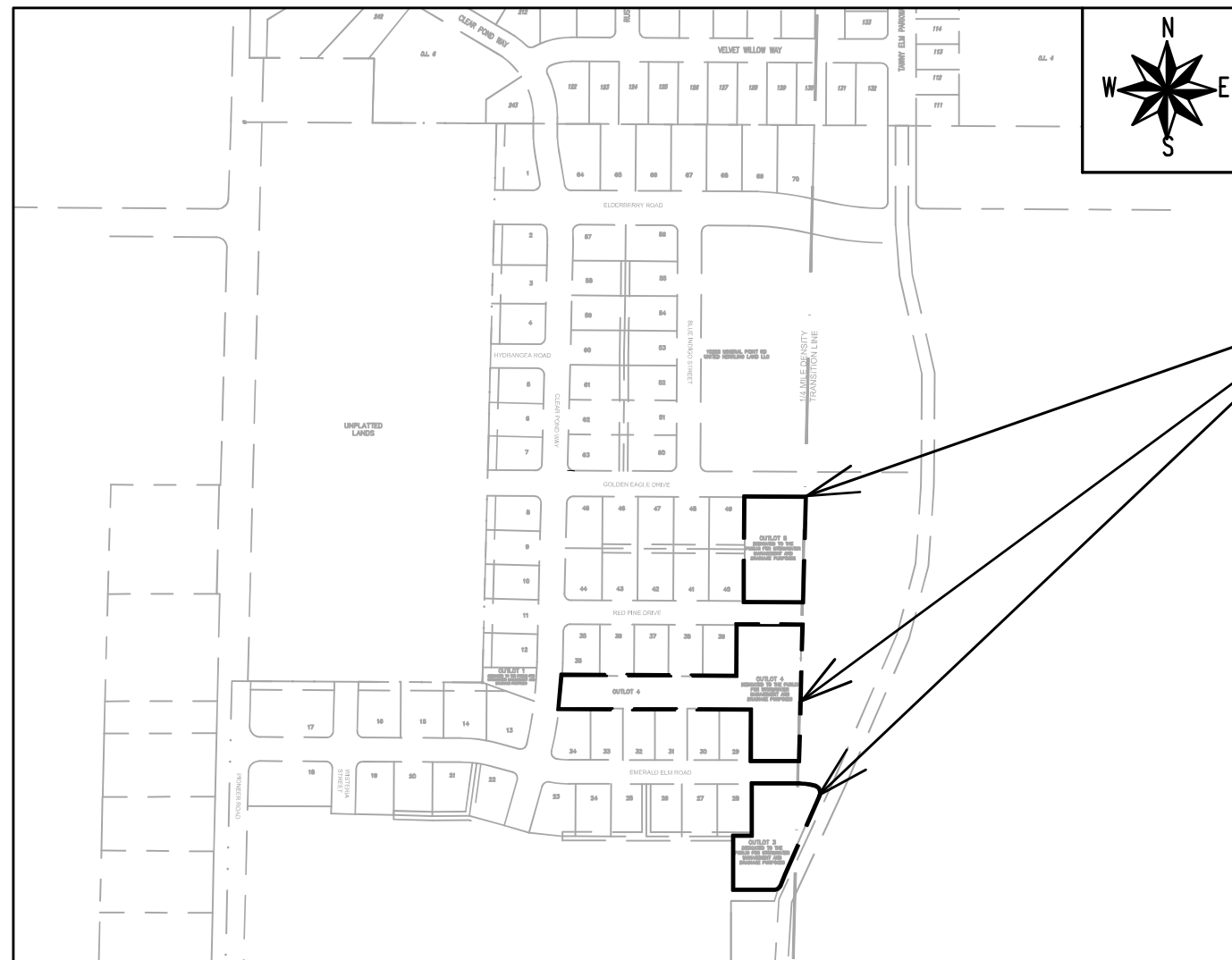
CITY ENGINEERING DIVISION

DEPARTMENT OF PUBLIC WORKS

PLAN OF PROPOSED IMPROVEMENT

WESTWIND STORMWATER MANAGEMENT

CITY PROJECT NO. 13921
CONTRACT NO. 9130



**PROJECT LOCATION
(SEE PROJECT NO. 13910
FOR ROAD CONSTRUCTION
PLANS)**

PUBLIC IMPROVEMENT PROJECT APPROVED

APPROVED DATE: MARCH 1, 2022

BY THE COMMON COUNCIL OF MADISON, WISCONSIN

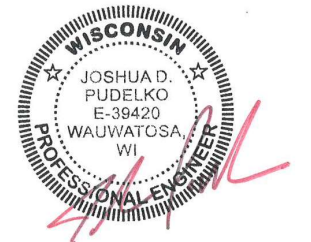
PUBLIC IMPROVEMENT DESIGN APPROVED BY:

May 24, 2023

City Engineer

Date

STORMWATER MANAGEMENT DESIGNED BY:



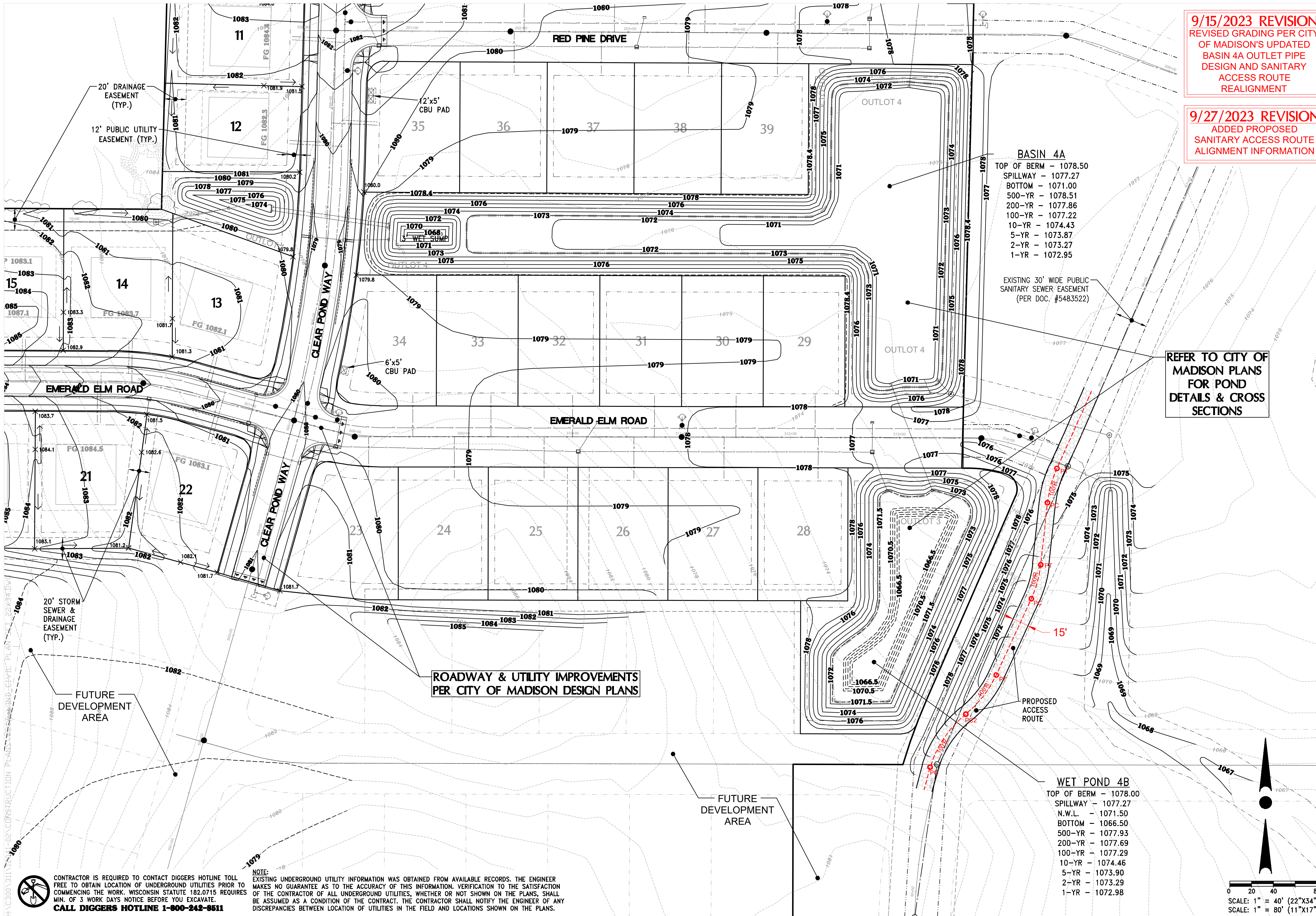
May 24, 2023

PLOT SCALE: 1 IN=1 FT_XREF

PLOT NAME: ---

REV. DATE: 5/18/2023 7:25 AM

ORIGINATOR: CITY_OF_MADISON



9/15/2023 REVISION
 REVISED GRADING PER CITY
 OF MADISON'S UPDATED
 BASIN 4A OUTLET PIPE
 DESIGN AND SANITARY
 ACCESS ROUTE
 REALIGNMENT

9/27/2023 REVISION
 ADDED PROPOSED
 SANITARY ACCESS ROUTE
 ALIGNMENT INFORMATION

BASIN 4A
 TOP OF BERM - 1078.50
 SPILLWAY - 1077.27
 BOTTOM - 1071.00
 500-YR - 1078.51
 200-YR - 1077.86
 100-YR - 1077.22
 10-YR - 1074.43
 5-YR - 1073.87
 2-YR - 1073.27
 1-YR - 1072.95

EXISTING 30' WIDE PUBLIC
 SANITARY SEWER EASEMENT
 (PER DOC. #5483522)

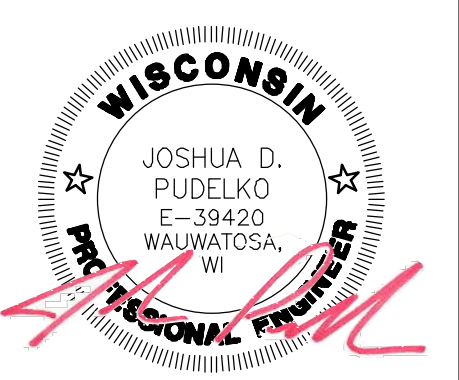
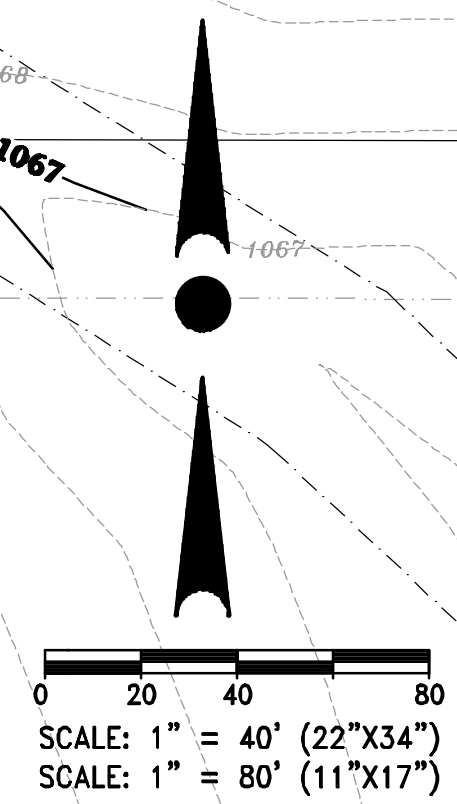
REFER TO CITY OF
 MADISON PLANS
 FOR POND
 DETAILS & CROSS
 SECTIONS

ROADWAY & UTILITY IMPROVEMENTS
 PER CITY OF MADISON DESIGN PLANS

WET POND 4B
 TOP OF BERM - 1078.00
 SPILLWAY - 1077.27
 N.W.L. - 1071.50
 BOTTOM - 1066.50
 500-YR - 1077.93
 200-YR - 1077.69
 100-YR - 1077.29
 10-YR - 1074.46
 5-YR - 1073.90
 2-YR - 1073.29
 1-YR - 1072.98

CONTRACTOR IS REQUIRED TO CONTACT DIGGERS HOTLINE TOLL FREE TO OBTAIN LOCATION OF UNDERGROUND UTILITIES PRIOR TO COMMENCING THE WORK. WISCONSIN STATUTE 182.0715 REQUIRES MIN. OF 3 WORK DAYS NOTICE BEFORE YOU EXCAVATE. **CALL DIGGERS HOTLINE 1-800-242-8511**

NOTE: EXISTING UNDERGROUND UTILITY INFORMATION WAS OBTAINED FROM AVAILABLE RECORDS. THE ENGINEER MAKES NO GUARANTEE AS TO THE ACCURACY OF THIS INFORMATION. VERIFICATION TO THE SATISFACTION OF THE CONTRACTOR OF ALL UNDERGROUND UTILITIES, WHETHER OR NOT SHOWN ON THE PLANS, SHALL BE ASSUMED AS A CONDITION OF THE CONTRACT. THE CONTRACTOR SHALL NOTIFY THE ENGINEER OF ANY DISCREPANCIES BETWEEN LOCATION OF UTILITIES IN THE FIELD AND LOCATIONS SHOWN ON THE PLANS.



4100 N. CALHOUN RD., SUITE 300
 BROOKFIELD, WI 53005
 PHONE: (262) 790-1480
 FAX: (262) 790-1481
 EMAIL: jpuudelko@trioeng.com

PROJECT:
WESTWIND - PHASE 1
 SINGLE FAMILY DEVELOPMENT
 CITY OF MADISON, WI
 BY: McKenzie Construction, LLC

REVISION HISTORY

DATE	DESCRIPTION
06/12/22	INITIAL SUBMITTAL
07/06/22	POND REVISIONS
08/28/22	PER CITY PLANS
10/25/22	PER CITY PLANS
11/23/22	PER CITY PLANS
05/31/23	PER CITY PLANS
07/20/23	GRADING REVISIONS

DATE:
 JULY 20, 2023

JOB NUMBER:
 12041-02

DESCRIPTION:
 PHASE 1
 INTERIM GRADING
 & DRAINAGE PLAN

SHEET
C1.3

INFILTRATION BASIN CONSTRUCTION NOTES

1. THE PERMANENT INFILTRATION BASIN SHALL BE CONSTRUCTED AS PART OF THE INITIAL CONSTRUCTION PROJECT. DURING CONSTRUCTION THE INFILTRATION BASIN BOTTOM SHALL BE CAPPED 1' ABOVE FINISH BOTTOM AND SCRAPED TO FINISH GRADE AFTER UPSLOPE AREAS ARE STABILIZED.
2. ONCE CONSTRUCTION OF A PERMANENT INFILTRATION BASIN BEGINS, THE INFILTRATION BASIN BOTTOM SHALL BE CORDONED OFF OR SOMEHOW DESIGNATED AS BEING PROTECTED FROM COMPACTION FROM HEAVY EQUIPMENT.
3. TOPSOIL & OVERBURDEN SHALL BE OVER-EXCAVATED AS NECESSARY TO EXPOSE SANDY SOILS SUITABLE FOR STORMWATER INFILTRATION, AS VERIFIED BY THE GEOTECHNICAL ENGINEER.
 - 3.1. A POST CONSTRUCTION INFILTRATION TEST IS REQUIRED FOR THE INFILTRATION BASIN.
4. BASIN CONSTRUCTION SHALL BE SUSPENDED IN PERIODS OF RAINFALL AND SNOWMELT AND SHALL REMAIN SUSPENDED IF PONDED WATER IS PRESENT.
5. REFER TO THE LANDSCAPE PLAN FOR FINAL SPECIFICATIONS AND INFORMATION FOR INFILTRATION BASIN PLANTINGS, STABILIZATION, ETC. ANY INFORMATION SHOWN ON THE SITE CIVIL PLANS RELATED TO PLANTINGS/EXPOSED SOILS/INFILTRATION ZONES/ETC. SHALL BE SUPERCEDED BY THE LANDSCAPE PLAN. FINAL LANDSCAPING MAY NOT OCCUR UNTIL THE FOLLOWING CONSTRUCTION SEASON (ONCE THE TRIBUTARY AREA IS STABILIZED).
6. DURING CONSTRUCTION, INFILTRATION BASIN MAY REQUIRE PERIODIC REMOVAL OF SEDIMENT ACCUMULATED IN THE BOTTOM OF THE BASIN. THIS IS NECESSARY TO KEEP THE INFILTRATION BASINS INFILTRATING AT A HIGHER RATE. SEDIMENT REMOVED FROM BASIN BOTTOMS SHALL BE PLACED IN AN AREA UPSLOPE OF A WET FOREBAY.
7. STRAW WATTLE IS PROPOSED TO BE INSTALLED ACROSS THE BASIN BOTTOM TO ISOLATE THE HEAVIEST SEDIMENT ACCUMULATION IN AREAS CLOSEST TO THE INFLOW AREAS, MAKING PERIODIC MAINTENANCE MORE CONVENIENT.
8. REFER TO THE STORM WATER MANAGEMENT PRACTICE MAINTENANCE AGREEMENT FOR POST-CONSTRUCTION MAINTENANCE ACTIVITIES, INCLUDING MAINTENANCE OF THE INFILTRATION BASINS.

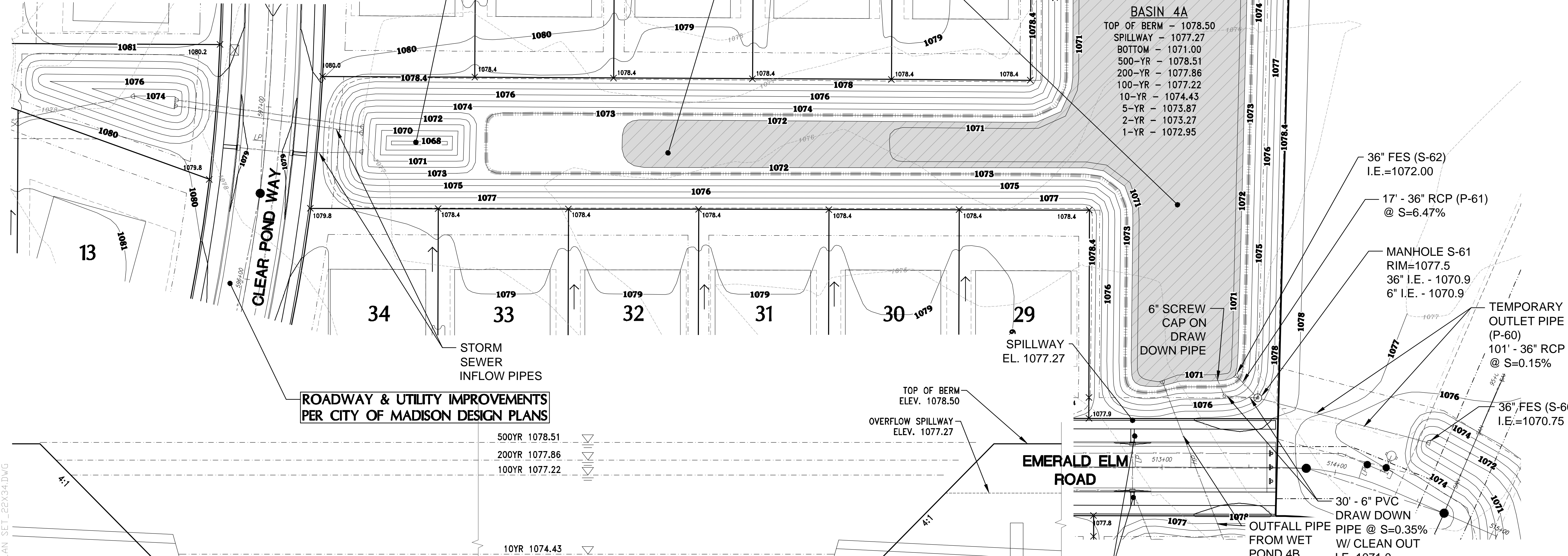
CONSTRUCTION CAPPING NOTE:
 DURING CONSTRUCTION, THE INFILTRATION BASIN BOTTOM SHALL BE CAPPED 1.0' ABOVE THE FINISH BOTTOM ELEVATION (CAPPED AT ELEVATION 1072.0) TO SERVE AS A SEDIMENT TRAP. COMPLETE INFILTRATION BASIN CONSTRUCTION WHEN UPSLOPE AREAS ARE STABILIZED TO MINIMIZE SEDIMENT ACCUMULATION IN FINAL INFILTRATION BASIN.

ROADWAY & UTILITY IMPROVEMENTS PER CITY OF MADISON DESIGN PLANS

AREA TO BE OVEREXCAVATED TO GRANULAR SOILS

WET SUMP
 N.W.L. - 1073.0
 BOTTOM - 1068.0

BASIN 4A
 TOP OF BERM - 1078.50
 SPILLWAY - 1077.27
 BOTTOM - 1071.00
 500-YR - 1078.51
 200-YR - 1077.86
 100-YR - 1077.22
 10-YR - 1074.43
 5-YR - 1073.87
 2-YR - 1073.27
 1-YR - 1072.95



ROADWAY & UTILITY IMPROVEMENTS PER CITY OF MADISON DESIGN PLANS

STORM SEWER INFLOW PIPES

TOP OF BERM ELEV. 1078.50
 OVERFLOW SPILLWAY ELEV. 1077.27

EMERALD ELM ROAD

EMERGENCY OVERLAND FLOW ROUTE
 EL. 1077.10

30' - 6" PVC DRAW DOWN PIPE @ S=0.35%
 W/ CLEAN OUT
 I.E. 1071.0

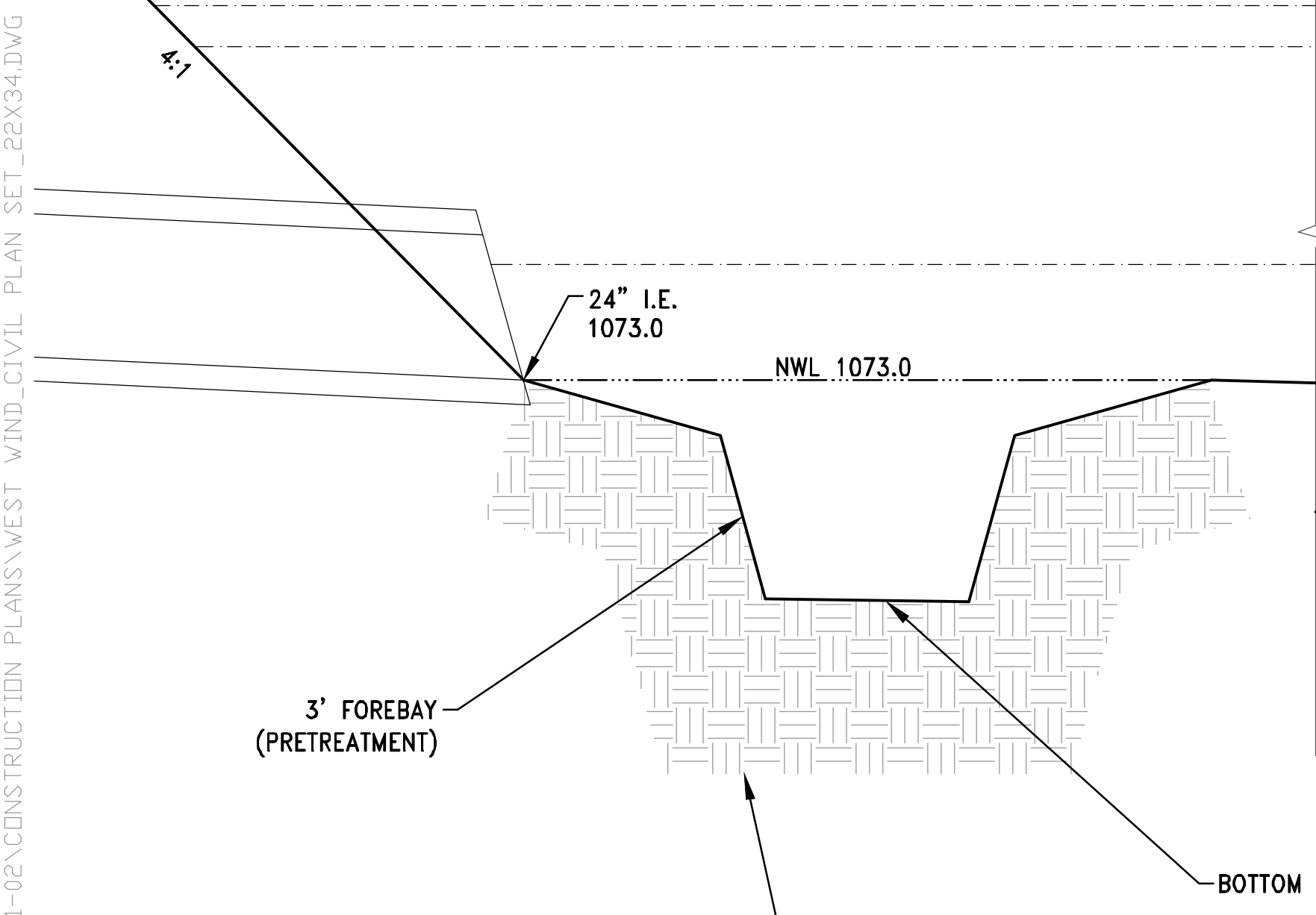
36" FES (S-60)
 I.E.=1070.75

MANHOLE S-61
 RIM=1077.5
 36" I.E. - 1070.9
 6" I.E. - 1070.9

36" FES (S-62)
 I.E.=1072.00

17' - 36" RCP (P-61)
 @ S=6.47%

TEMPORARY OUTLET PIPE (P-60)
 101' - 36" RCP
 @ S=0.15%



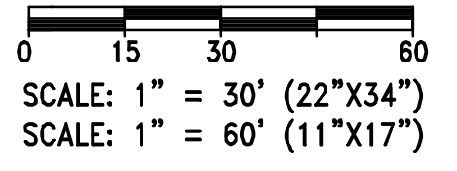
BASIN 4A CROSS SECTION
 NO SCALE

2 FT CLAY LINER REQUIRED. IF IN SITU CLAY SOILS ARE USED, CONTRACTOR SHALL VERIFY THAT CLAY SOILS MEET WDNR TECHNICAL STANDARD 1001, POND LINER SPECIFICATIONS TYPE "B". IF SOILS OTHER THAN CLAY ARE ENCOUNTERED WITHIN FOREBAY, CONTRACTOR SHALL OVEREXCAVATE A MINIMUM OF 2 FT AND REPLACE WITH COMPACTED CLAY LINER IN ACCORDANCE WITH WDNR TECHNICAL STANDARD 1001 TYPE "B" CLAY LINER.

CLAY LINER NOTE:
 -2' THICK CLAY LINER IN ACCORDANCE WITH WDNR TECH. STD. 1001 TYPE B, AND SOILS REPORT.
 -CLAY LINER MATERIALS SHOULD BE COMPACTED TO A MINIMUM OF 90 TO 92% DRY DENSITY AS DETERMINED BY MODIFIED PROCTOR (ASTM D1557)
 -IF PREDOMINANTLY GRANULAR TEXTURE SOILS AND/OR GROUNDWATER INFLOW IS ENCOUNTERED AT OR BELOW THE BOTTOM ELEVATION OF THE POND, A "SACRIFICIAL" LIFT OF CLAYEY FILL MAY BE REQUIRED TO BE PLACED ALONG THE SIDEWALLS AND BASE PRIOR TO COMMENCING WITH ACTUAL LINER PLACEMENT/CONSTRUCTION TO AID IN ATTAINING A SATISFACTORILY COMPACTED LINER SECTION. THE PLACEMENT OF A "SACRIFICIAL" LAYER IS PARTICULARLY BENEFICIAL IN CREATING A STABLE SUBBASE IN THE EVENT SLIGHT GROUNDWATER SEEPAGE OCCURS.
 - GEOTECHNICAL TESTING SHALL BE PERFORMED ON POTENTIAL CLAY LINER MATERIAL TO CONFIRM THAT SPECIFICATIONS ARE MET. ALTERNATE MATERIALS MAY BE ALLOWED IF APPROVED BY CITY AND WITH ACCEPTABLE TEST RESULTS.

STABILIZATION & SEEDING NOTE:
 ALL DISTURBED AREA ABOVE BOTTOM ELEVATION SHALL BE STABILIZED WITH POLYMER, EROSION MATTING CLASS I TYPE B ORGANIC, AND DETENTION BASIN SEEDING PER CITY OF MADISON STANDARD SPECIFICATIONS.

NOTE:
 CONTRACTOR IS REQUIRED TO CONTACT DIGGERS HOTLINE TOLL FREE TO OBTAIN LOCATION OF UNDERGROUND UTILITIES PRIOR TO COMMENCING THE WORK. WISCONSIN STATUTE 182.0715 REQUIRES MIN. OF 3 WORK DAYS NOTICE BEFORE YOU EXCAVATE.
CALL DIGGERS HOTLINE 1-800-242-8511



4100 N. CALHOUN RD., SUITE 300
 BROOKFIELD, WI 53005
 PHONE: (262) 790-1480
 FAX: (262) 790-1481
 EMAIL: jpudelko@trioeng.com

PROJECT:
WESTWIND - PHASE 1
 SINGLE FAMILY DEVELOPMENT
 CITY OF MADISON, WI
 BY: McKenzie Construction, LLC

REVISION HISTORY	
DATE	DESCRIPTION
05/12/22	INITIAL SUBMITTAL
07/06/22	POND REVISIONS
08/28/22	PER CITY PLANS
10/25/22	PER CITY PLANS
11/23/22	PER CITY PLANS

DATE:
 NOVEMBER 23, 2022

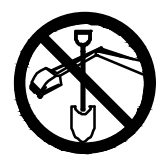
JOB NUMBER:
 12041-02

DESCRIPTION:
BASIN 4A
CROSS SECTION
& DETAILS

SHEET

C2.0

H:\C300\311\12041-02\CONSTRUCTION PLANS\WEST WIND_CIVIL_PLAN_SET_22X34.DWG

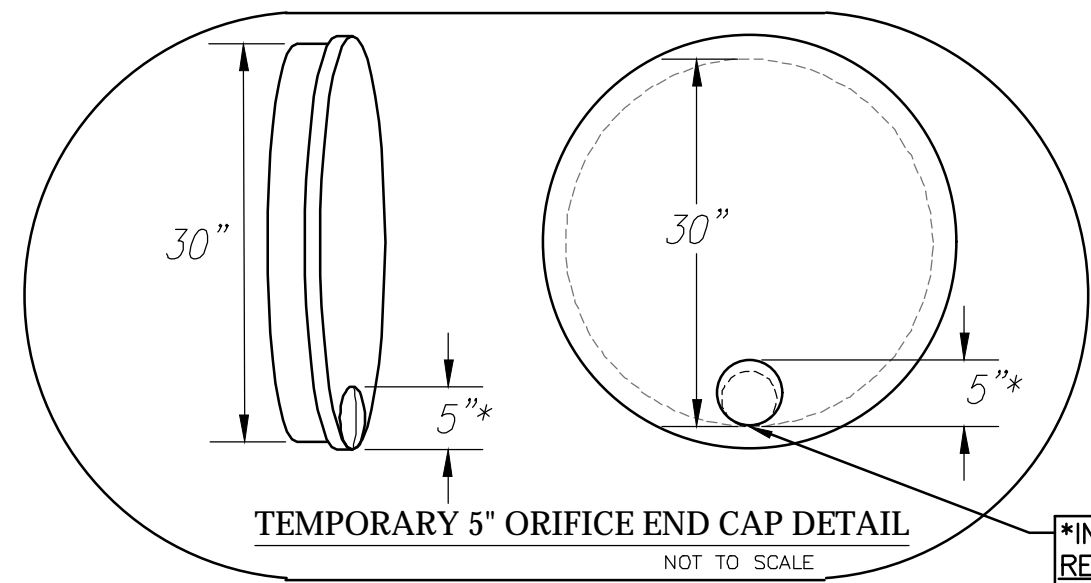


CONTRACTOR IS REQUIRED TO CONTACT DIGGERS HOTLINE TOLL FREE TO OBTAIN LOCATION OF UNDERGROUND UTILITIES PRIOR TO COMMENCING THE WORK. WISCONSIN STATUTE 182.0715 REQUIRES MIN. OF 3 WORK DAYS NOTICE BEFORE YOU EXCAVATE.
CALL DIGGERS HOTLINE 1-800-242-8511

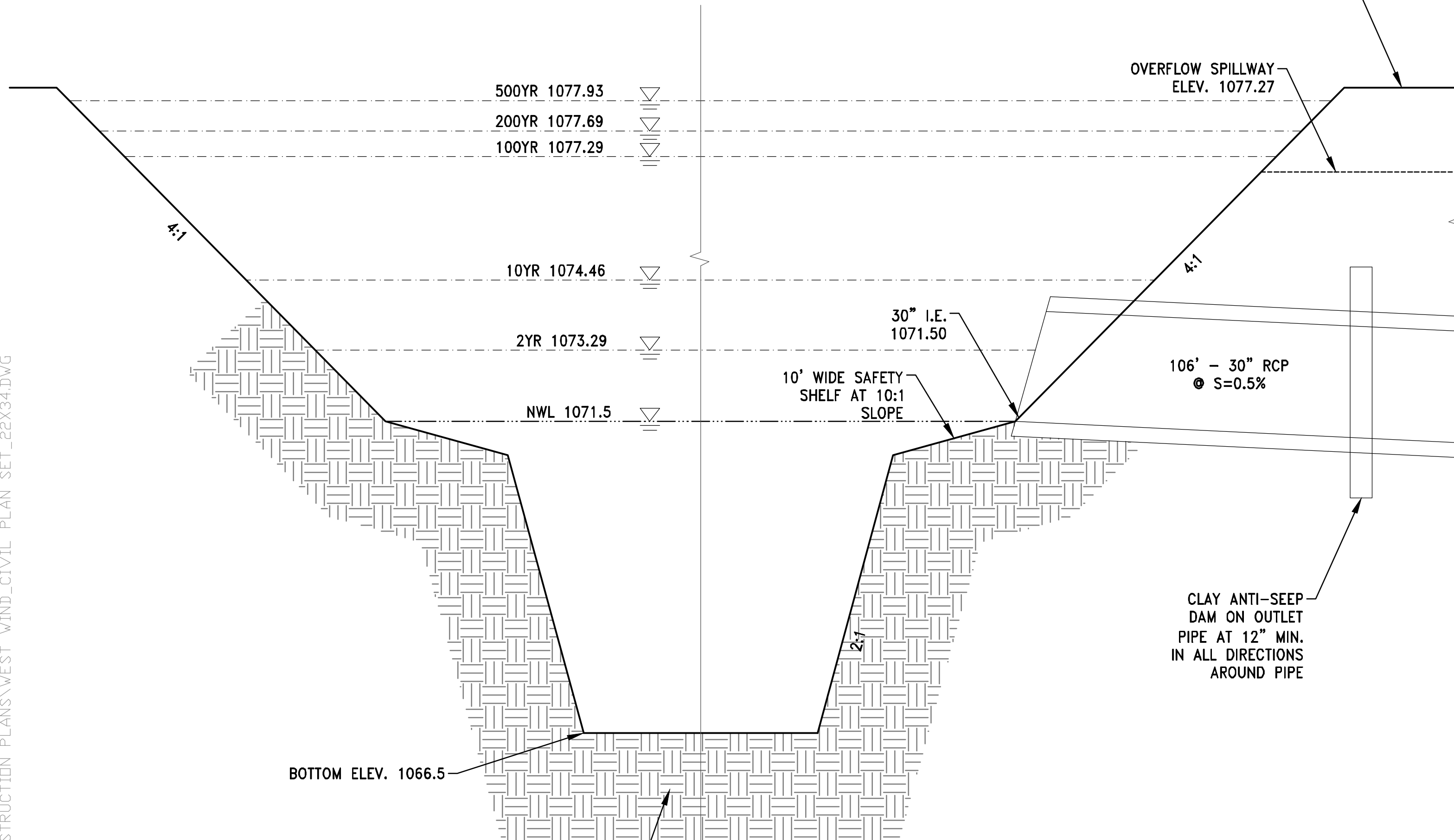
NOTE: EXISTING UNDERGROUND UTILITY INFORMATION WAS OBTAINED FROM AVAILABLE RECORDS. THE ENGINEER MAKES NO GUARANTEE AS TO THE ACCURACY OF THIS INFORMATION. VERIFICATION TO THE SATISFACTION OF THE CONTRACTOR OF ALL UNDERGROUND UTILITIES, WHETHER OR NOT SHOWN ON THE PLANS, SHALL BE ASSUMED AS A CONDITION OF THE CONTRACT. THE CONTRACTOR SHALL NOTIFY THE ENGINEER OF ANY DISCREPANCIES BETWEEN LOCATION OF UTILITIES IN THE FIELD AND LOCATIONS SHOWN ON THE PLANS.

STABILIZATION & SEEDING NOTE:
ALL DISTURBED AREA ABOVE PERMANENT WATER SURFACE ELEVATION SHALL BE STABILIZED WITH POLYMER, EROSION MATTING CLASS I TYPE B ORGANIC, AND DETENTION BASIN SEEDING PER CITY OF MADISON STANDARD SPECIFICATIONS.

CLAY LINER NOTE:
-2" THICK CLAY LINER IN ACCORDANCE WITH WDNR TECH. STD. 1001 TYPE B, AND SOILS REPORT.
-CLAY LINER MATERIALS SHOULD BE COMPACTED TO A MINIMUM OF 90 TO 92% DRY DENSITY AS DETERMINED BY MODIFIED PROCTOR (ASTM D1557)
-IF PREDOMINANTLY GRANULAR TEXTURE SOILS AND/OR GROUNDWATER INFLOW IS ENCOUNTERED AT OR BELOW THE BOTTOM ELEVATION OF THE POND, A "SACRIFICIAL" LIFT OF CLAYEY FILL MAY BE REQUIRED TO BE PLACED ALONG THE SIDEWALLS AND BASE PRIOR TO COMMENCING WITH ACTUAL LINER PLACEMENT/CONSTRUCTION TO AID IN ATTAINING A SATISFACTORILY COMPACTED LINER SECTION. THE PLACEMENT OF A "SACRIFICIAL" LAYER IS PARTICULARLY BENEFICIAL IN CREATING A STABLE SUBBASE IN THE EVENT SLIGHT GROUNDWATER SEEPAGE OCCURS.
-GEOTECHNICAL TESTING SHALL BE PERFORMED ON POTENTIAL CLAY LINER MATERIAL TO CONFIRM THAT SPECIFICATIONS ARE MET.



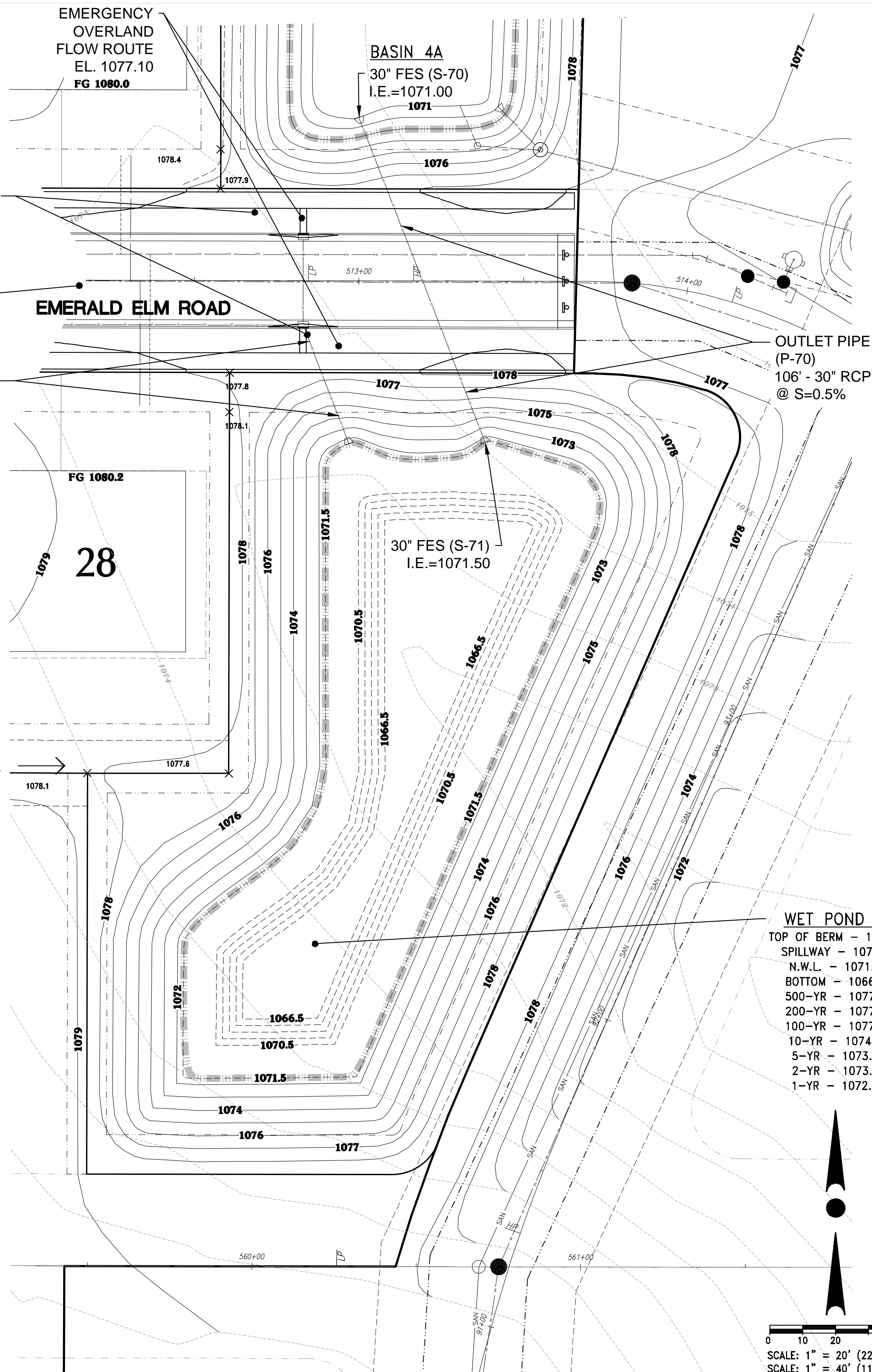
*INITIAL CONSTRUCTION REQUIRES:
5" ORIFICE END CAP ON THE 30" OUTLET PIPE AT I.E. 1071.50



2 FT CLAY LINER REQUIRED. IF IN SITU CLAY SOILS ARE USED, CONTRACTOR SHALL VERIFY THAT CLAY SOILS MEET WDNR TECHNICAL STANDARD 1001, POND LINER SPECIFICATIONS TYPE "B". IF SOILS OTHER THAN CLAY ARE ENCOUNTERED WITHIN DETENTION BASIN, CONTRACTOR SHALL OVEREXCAVATE A MINIMUM OF 2 FT AND REPLACE WITH COMPACTED CLAY LINER IN ACCORDANCE WITH WDNR TECHNICAL STANDARD 1001 TYPE "B" CLAY LINER.

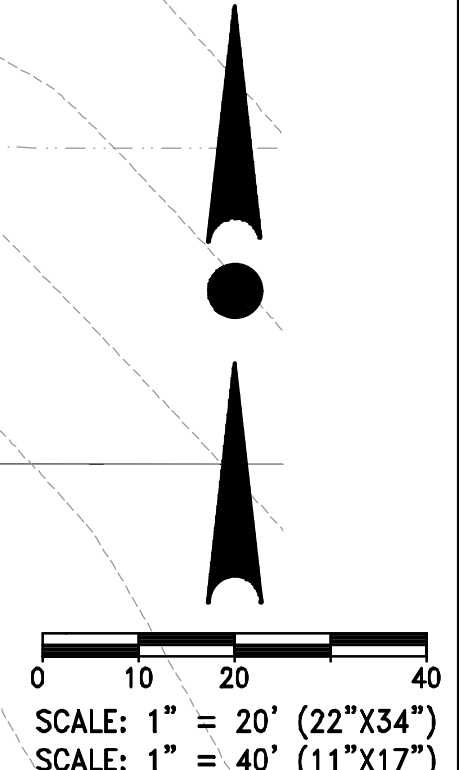
WET POND 4B CROSS SECTION
NO SCALE

ROADWAY & UTILITY IMPROVEMENTS PER CITY OF MADISON DESIGN PLANS



WET POND 4B

TOP OF BERM	- 1078.00
SPILLWAY	- 1077.27
N.W.L.	- 1071.50
BOTTOM	- 1066.50
500-YR	- 1077.93
200-YR	- 1077.69
100-YR	- 1077.29
10-YR	- 1074.46
5-YR	- 1073.90
2-YR	- 1073.29
1-YR	- 1072.98



4100 N. CALHOUN RD., SUITE 300
BROOKFIELD, WI 53005
PHONE: (262) 790-1480
FAX: (262) 790-1481
EMAIL: jpuudelko@trioeng.com

PROJECT:
WESTWIND - PHASE 1
SINGLE FAMILY DEVELOPMENT
CITY OF MADISON, WI
BY: McKenzie Construction, LLC

REVISION HISTORY

DATE	DESCRIPTION
06/12/22	INITIAL SUBMITTAL
07/06/22	POND REVISIONS
08/28/22	PER CITY PLANS
10/25/22	PER CITY PLANS
11/23/22	PER CITY PLANS

DATE:
NOVEMBER 23, 2022

JOB NUMBER:
12041-02

DESCRIPTION:
WET POND 4B
CROSS SECTION
& DETAILS

SHEET
C2.1

H:\C300\311\12041-02\CONSTRUCTION PLANS\WEST_WIND_CIVIL_PLAN_SET_22X34.DWG

