

Madison, Wisconsin

INDEX OF SHEETS

SHEET NO.	TITLE
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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

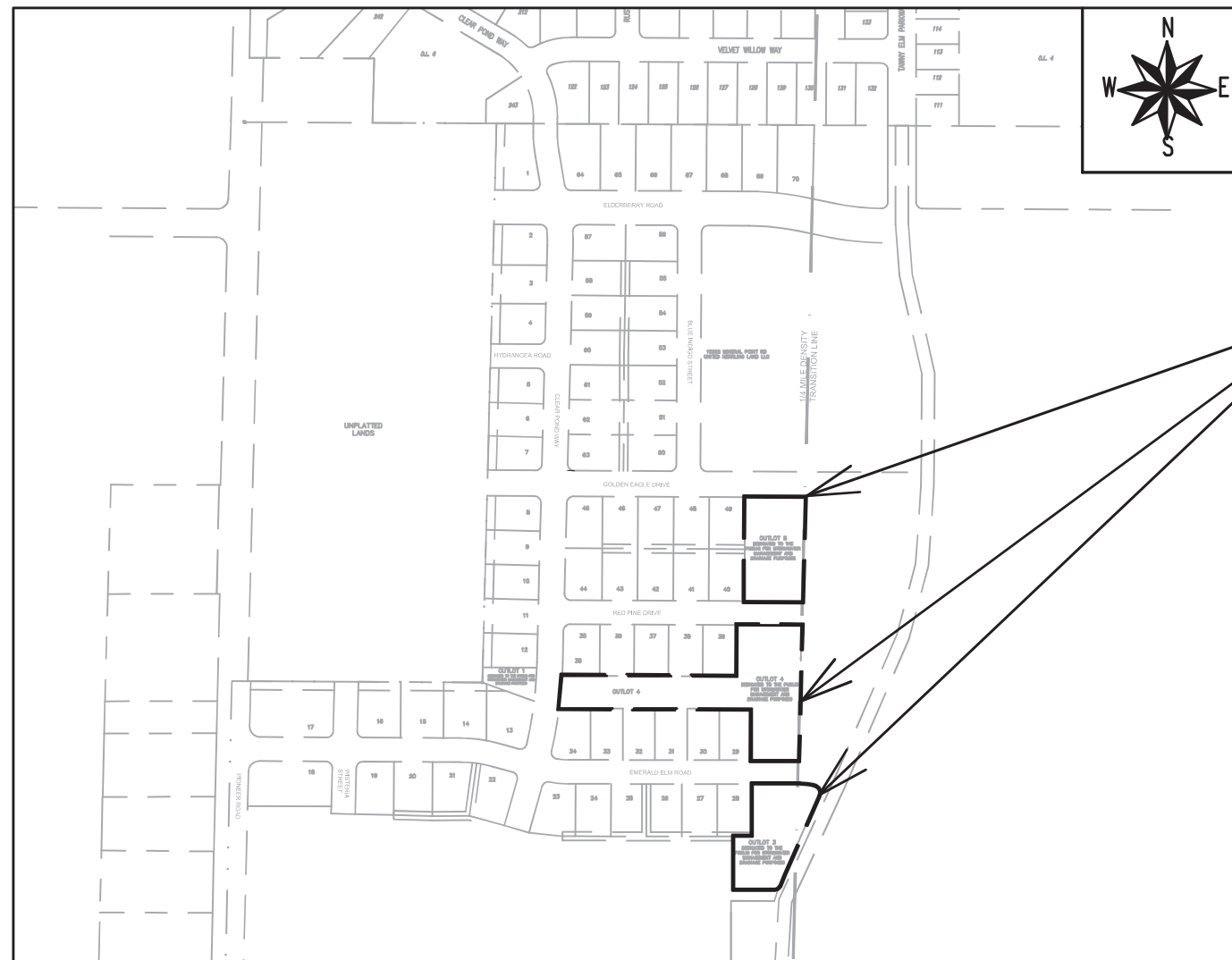
CITY ENGINEERING DIVISION

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

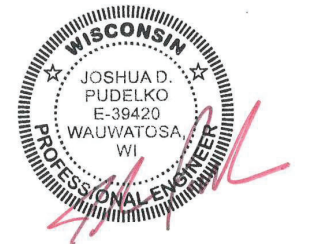
PUBLIC IMPROVEMENT DESIGN APPROVED BY:

May 24, 2023

City Engineer

Date

STORMWATER MANAGEMENT DESIGNED BY:



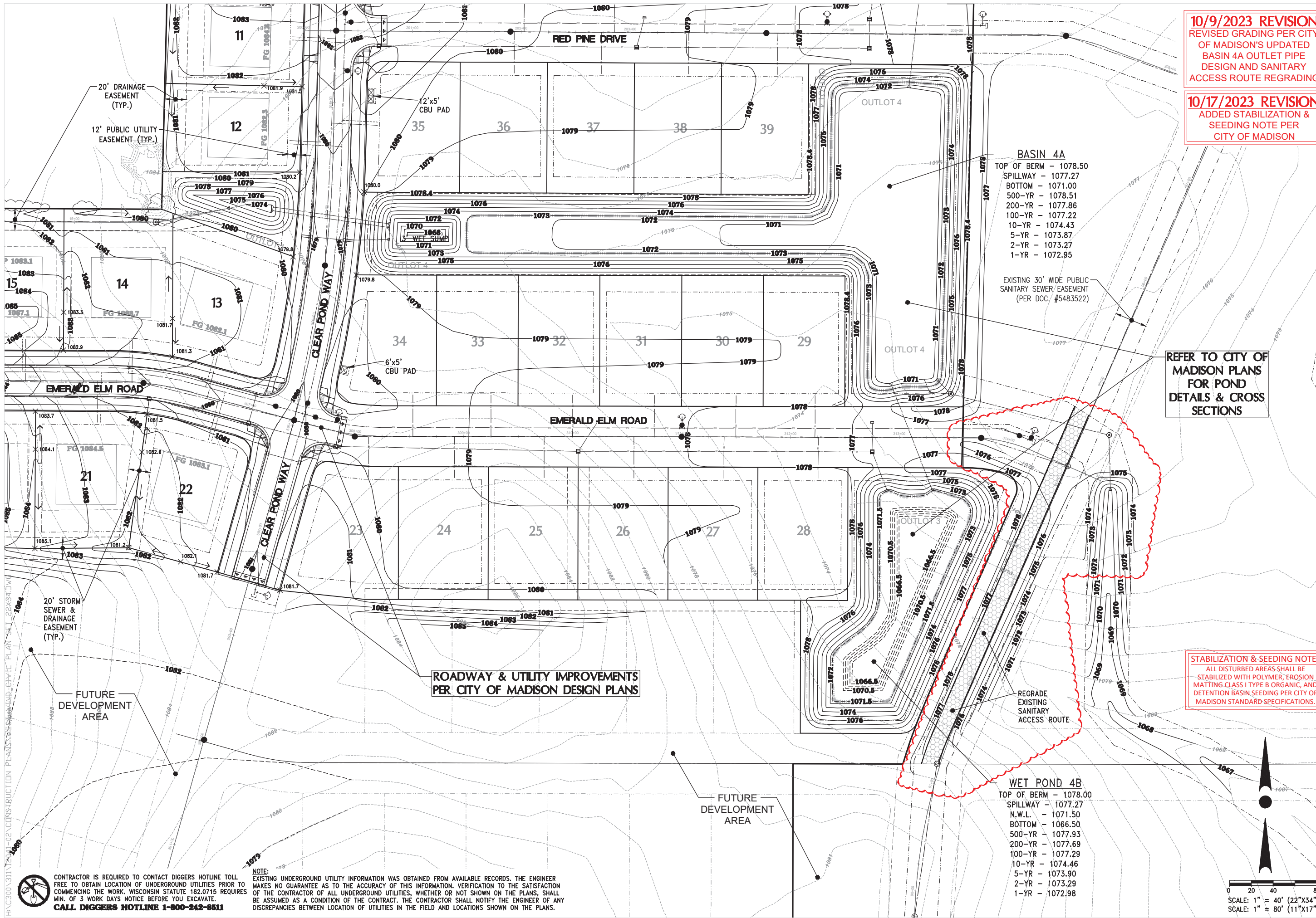
May 24, 2023

PLOT SCALE: 1 IN=1 FT_XREF

PLOT NAME: ---

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

ORIGINATOR: CITY_OF_MADISON



10/9/2023 REVISION
 REVISED GRADING PER CITY
 OF MADISON'S UPDATED
 BASIN 4A OUTLET PIPE
 DESIGN AND SANITARY
 ACCESS ROUTE REGRADING

10/17/2023 REVISION
 ADDED STABILIZATION &
 SEEDING NOTE PER
 CITY OF MADISON

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

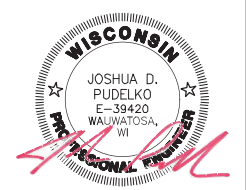
EXISTING 30' WIDE PUBLIC
 SANITARY SEWER EASEMENT
 (PER DOC. #5483522)

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

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

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

ROADWAY & UTILITY IMPROVEMENTS
 PER CITY OF MADISON DESIGN PLANS



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
05/31/23	PER CITY PLANS
07/20/23	GRADING REVISIONS

DATE:
 JULY 20, 2023

JOB NUMBER:
 12041-02

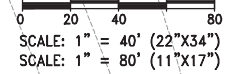
DESCRIPTION:
 PHASE 1
 INTERIM GRADING
 & DRAINAGE PLAN

SHEET

C1.3

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.



H:\AC300\311\12-02\CONSTRUCTION PLANS\WESTWIND-CIVIL\PLAN SET\22X34.DWG

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.

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

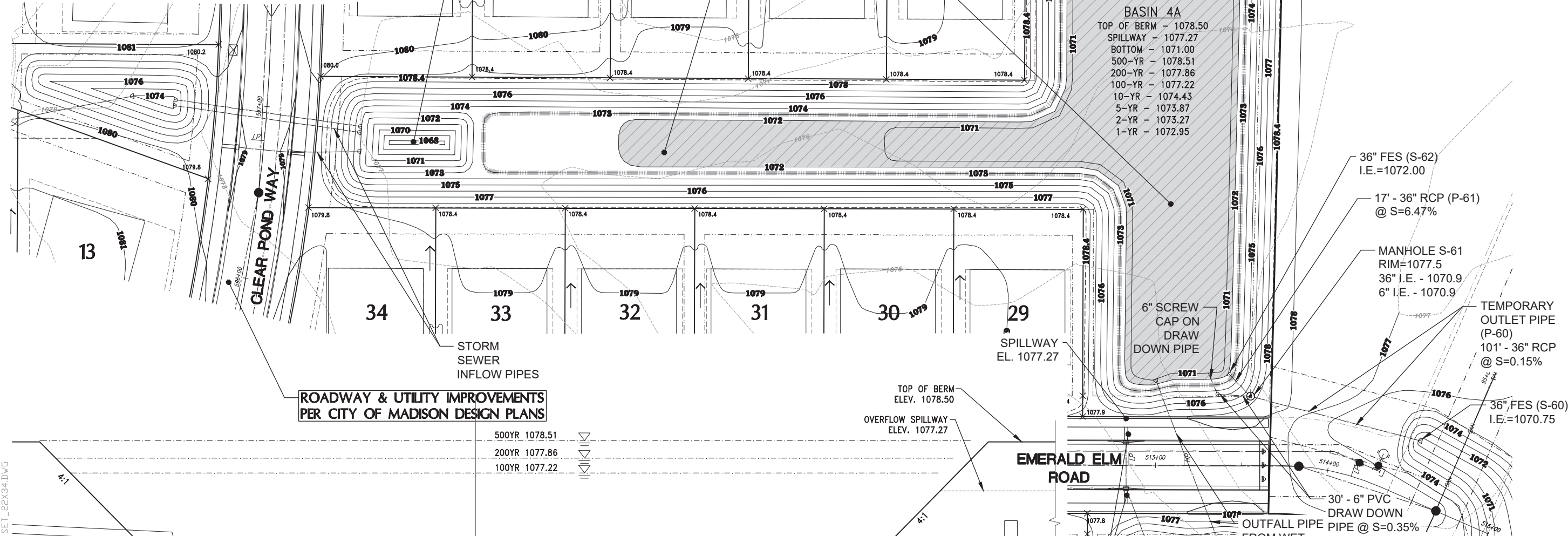
ROADWAY & UTILITY IMPROVEMENTS PER CITY OF MADISON DESIGN PLANS

AREA TO BE OVEREXCAVATED TO GRANULAR SOILS

RED PINE DRIVE

OUTFALL PIPE FROM WET POND 4C

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

TOP OF BERM ELEV. 1078.50
 OVERFLOW SPILLWAY ELEV. 1077.27

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

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

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

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

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

6" SCREW CAP ON DRAW DOWN PIPE

SPILLWAY EL. 1077.27

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

EMERALD ELM ROAD

EMERGENCY OVERLAND FLOW ROUTE EL. 1077.10

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.

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.

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.

BASIN 4A CROSS SECTION
 NO SCALE

500YR	1078.51
200YR	1077.86
100YR	1077.22
10YR	1074.43
2YR	1073.27

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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
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11/23/22	PER CITY PLANS

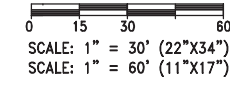
DATE:
 NOVEMBER 23, 2022

JOB NUMBER:
 12041-02

DESCRIPTION:
BASIN 4A
CROSS SECTION
& DETAILS

SHEET

C2.0



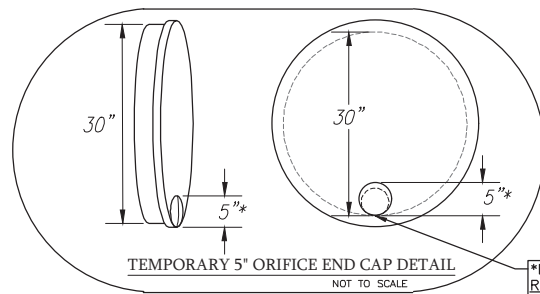


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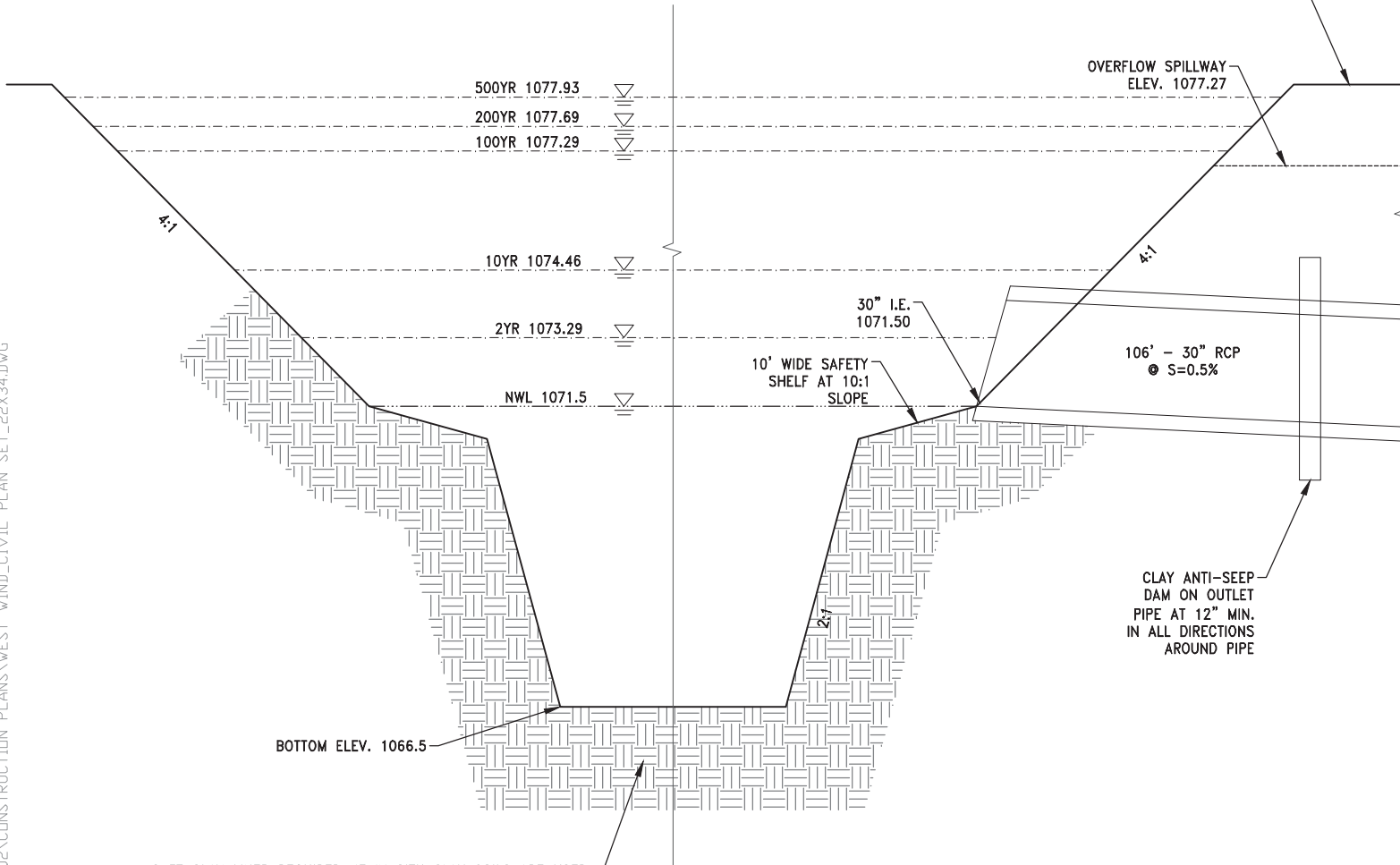
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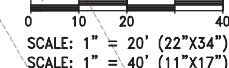
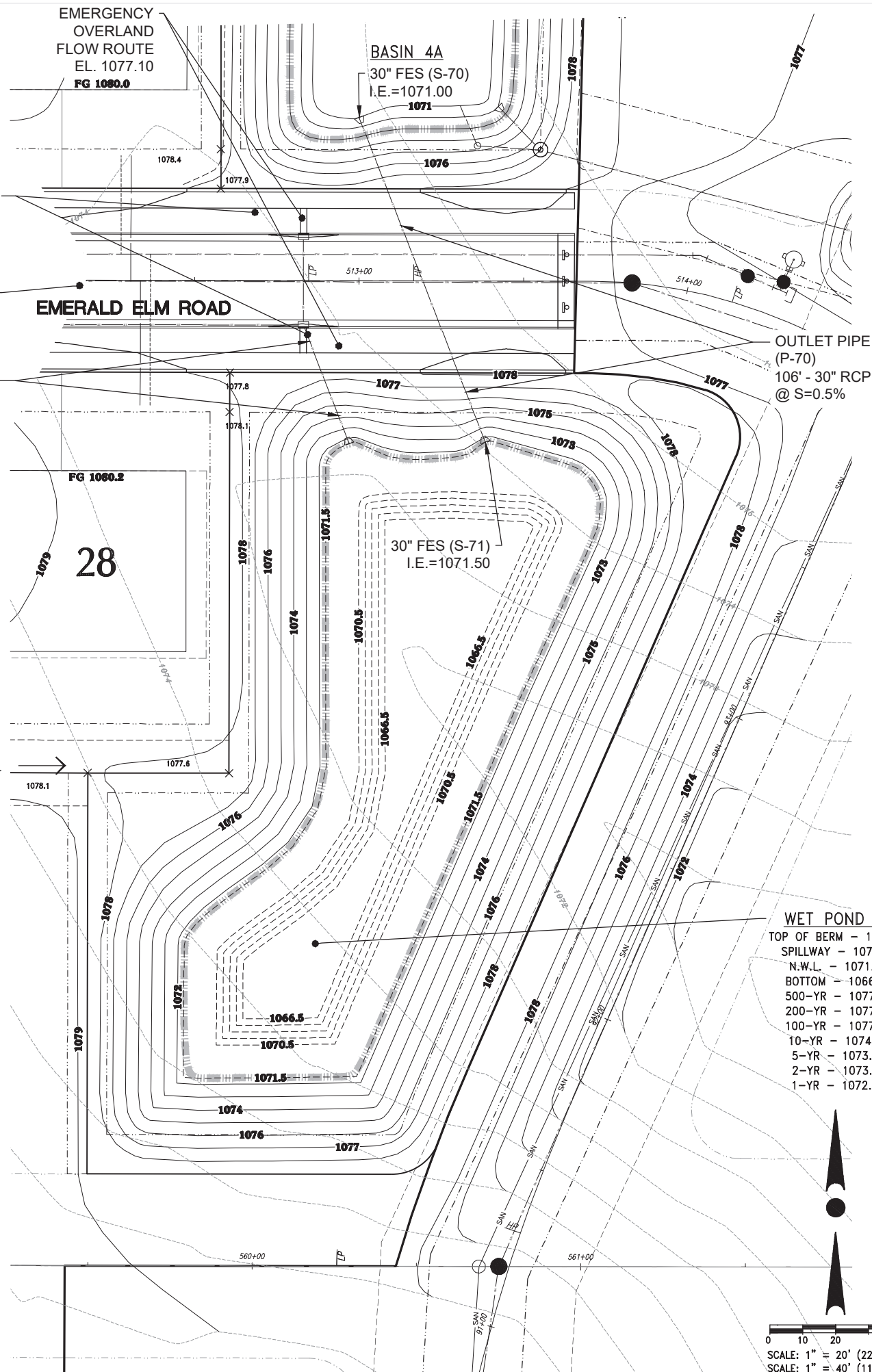
*INITIAL CONSTRUCTION REQUIRES:
5" ORIFICE END CAP ON THE 30" OUTLET PIPE AT I.E. 1071.50



WET POND 4B CROSS SECTION
NO SCALE

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ROADWAY & UTILITY IMPROVEMENTS
PER CITY OF MADISON DESIGN PLANS



WISCONSIN
JOSHUA D. PUDELKO
E-39420
WAUWATOSA, WI
PROFESSIONAL ENGINEER

TRIO
DESIGN & LAND SURVEYING
CIVIL ENGINEERING

4100 N. CALHOUN RD., SUITE 300
BROOKFIELD, WI 53005
PHONE: (262) 790-1480
FAX: (262) 790-1481
EMAIL: jpuddico@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
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11/23/22	PER CITY PLANS

DATE:
NOVEMBER 23, 2022

JOB NUMBER:
12041-02

DESCRIPTION:
WET POND 4B
CROSS SECTION
& DETAILS

SHEET
C2.1

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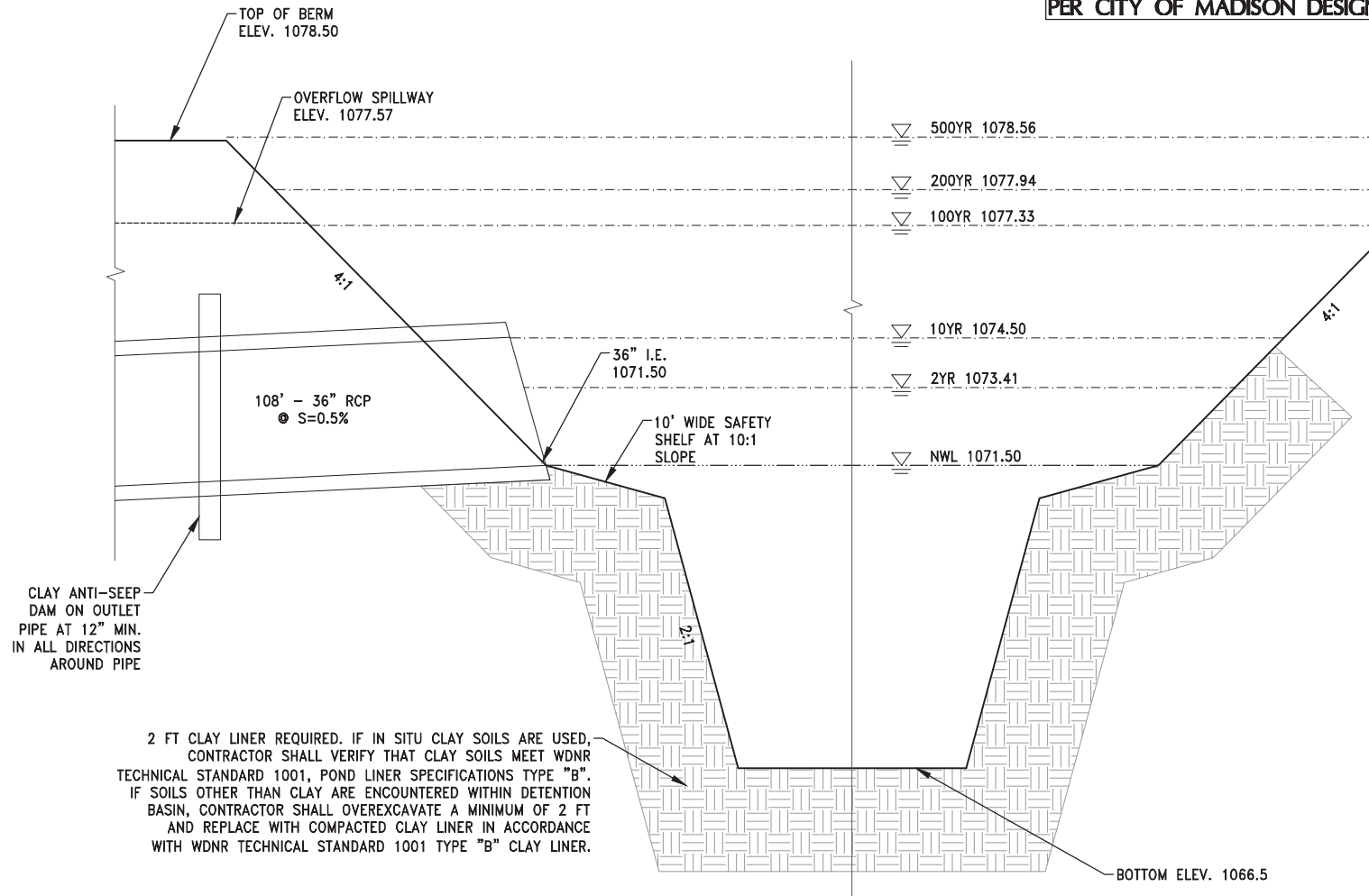
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DESCRIPTION:
WET POND 4C
CROSS SECTION
& DETAILS

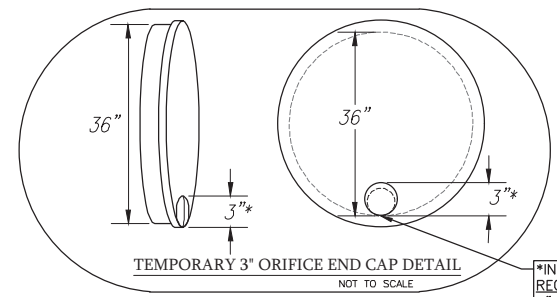
SHEET

C2.2

**ROADWAY & UTILITY IMPROVEMENTS
PER CITY OF MADISON DESIGN PLANS**



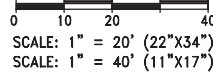
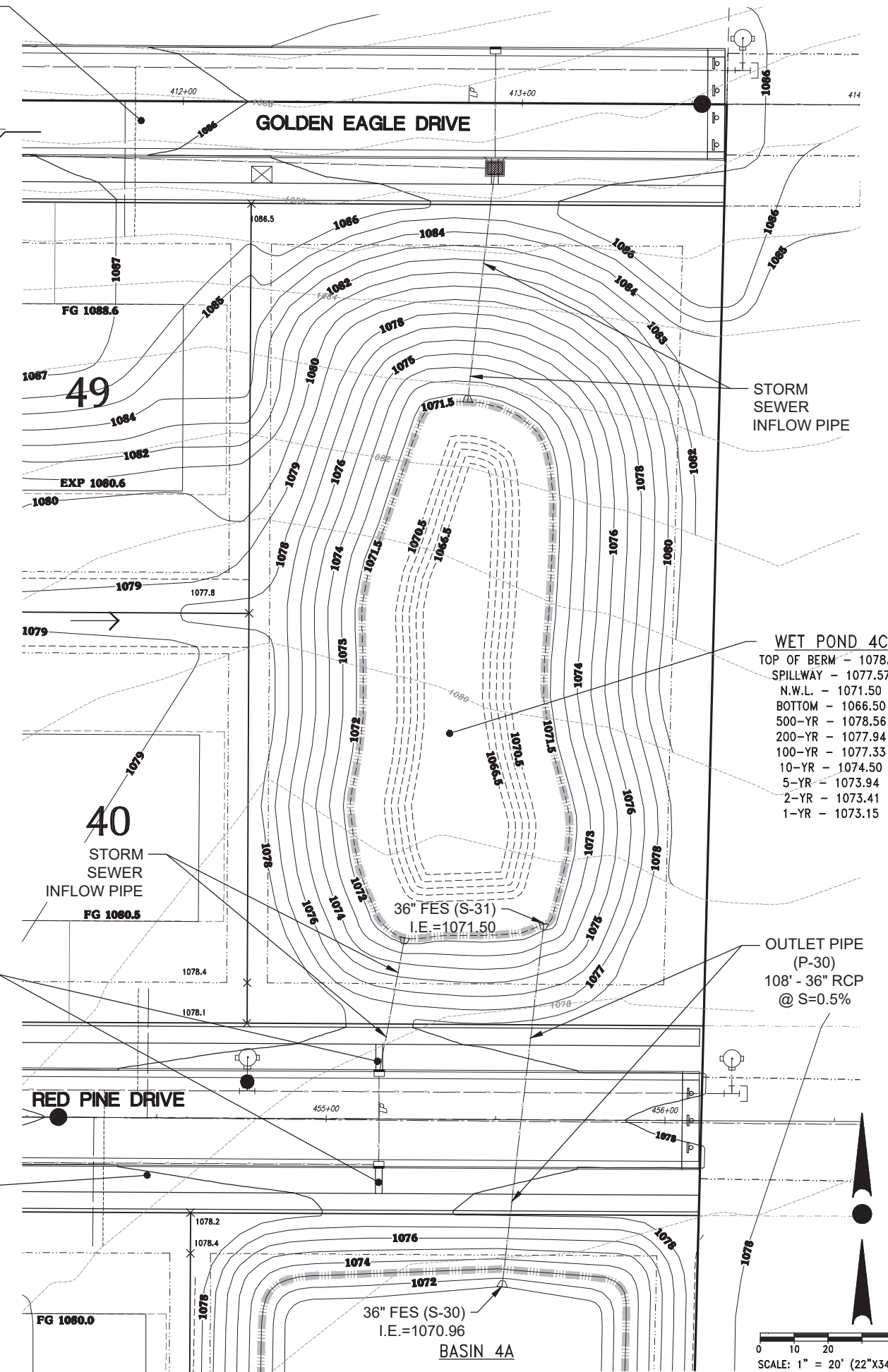
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