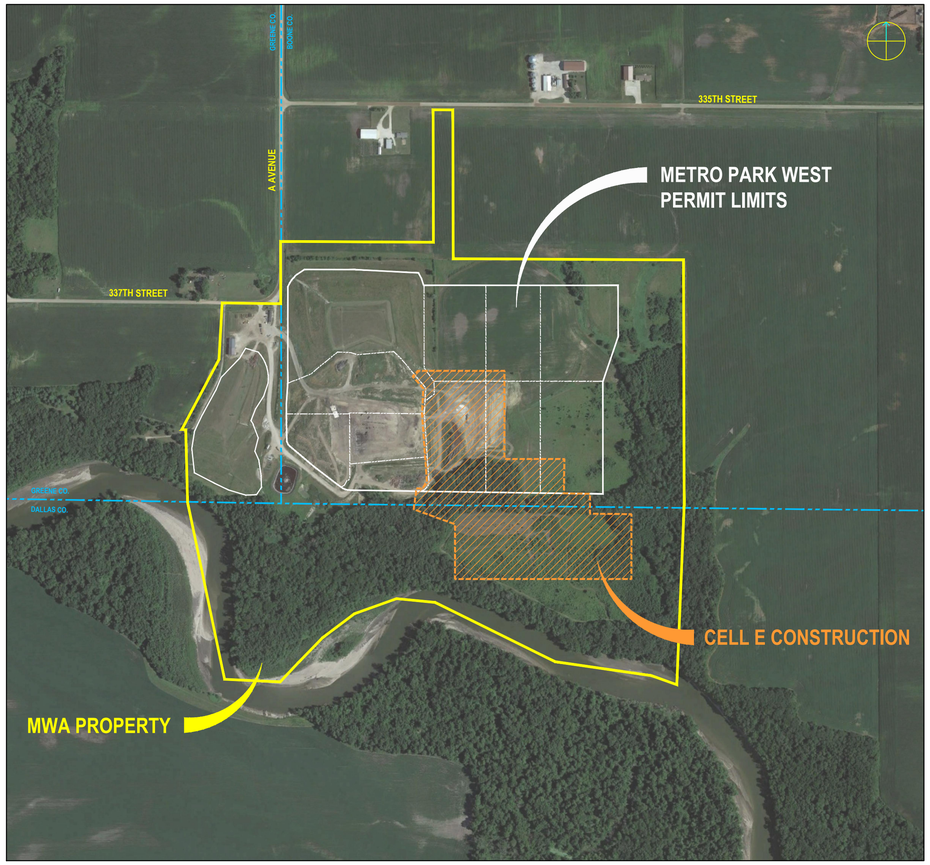
Metro Waste Authority



METRO PARK WEST LANDFILL SITE LOCATION MAP
SCALE: 1" = 500'

Contract Drawings For

Metro Park West MSW Landfill

MWA Project P-67
Cell E Liner Construction

INDEX OF DRAWINGS

GENERAL

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G002	EXISTING CONDITIONS AND REMOVALS PLAN

CIVIL

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C102	CLAY GRADING PLAN
C103	DRAINAGE LAYER GRADING PLAN
C104	LEACHATE POND AND STORMWATER POND GRADING PLAN
C301	CROSS SECTIONS
C501	DETAILS
C502	DETAILS
C503	DETAILS

Project No.
10391837

Perry, Boone County, Iowa
November 2025

Issued for Bid

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GENERAL SYMBOLOGY

SECTION IDENTIFIER
FLAG INDICATIONS DIRECTION OF SECTION CUT
X / XXX
SHEET WHERE SECTION IS LOCATED

SECTION CUT MARKER

SECTION LETTER
SECTION
1" = 5'
SHEET WHERE SECTION VIEW IS FIRST CUT

SECTION TITLE

DETAIL NUMBER
SECTION
1" = 5'
SHEET WHERE DETAIL IS FIRST CALLED OUT

DETAIL TITLE

DETAIL NUMBER
SHEET WHERE DETAIL IS LOCATED

DETAIL CALLOUT

CIVIL MAPPING SYMBOLOGY

Symbol	Description
	SURVEY CONTROL POINT
MW-X	GROUNDWATER MONITORING WELL
GEW-X	GAS EXTRACTION WELL
DEW-X	DUAL EXTRACTION WELL
LEW	LEACHATE EXTRACTION WELL
MMP	METHANE MONITORING PROBE
PZ-X	GROUNDWATER PIEZOMETER
SP-X	GROUNDWATER CONTROL TRENCH STAND PIPE
	ISOLATION VALVE
MH	UTILITY MANHOLE
	LEACHATE COLLECTION PIPE CLEANOUT
Lx	LEACHATE LIFT STATION
	OVERHEAD POWER POLE
	GUY WIRE
	LFG CONDENSATE HIGH POINT
	SURFACE DRAINAGE FLOW DIRECTION

MATERIALS IN PLAN / SECTION

- STRUCTURAL FILL (SECTION)
- PLACED SOIL (SECTION)
- NATIVE SOIL (SECTION)
- DAILY / INTERMEDIATE COVER (SECTION)
- WASTE (SECTION)
- RECOMPACTED CLAY (SECTION)
- VEGETATIVE SOIL LAYER (SECTION)
- PROTECTIVE SOIL COVER (SECTION)
- DRAINAGE LAYER (SECTION)
- RIP-RAP / REVETMENT STONE (PLAN/SECTION)
- SAND (SECTION)
- COARSE AGGREGATE (SECTION)
- LETDOWN (PLAN)
- HAUL ROAD (PLAN)
- RECOMPACTED CLAY LINER (SECTION)
- CAREFULLY COMPACTED BACKFILL (SECTION)

UTILITY/CIVIL LINE SYMBOLOGY

Line	Description
PROP	PROPERTY BOUNDARY
WASTE	LIMITS OF WASTE
	INTERNAL CELL/PHASE BOUNDARY
X	FENCE - BARB WIRE
	FENCE - CHAIN LINK
	FENCE - WOOD
	EXISTING MINOR CONTOUR
25	EXISTING MAJOR CONTOUR
	PROPOSED MINOR CONTOUR
25	PROPOSED MAJOR CONTOUR
	VEGETATION/BRUSH LINE
	TREES / SHRUBBERY
LEA	LEACHATE PIPE - SOLID WALL
LEA	LEACHATE PIPE - PERFORATED
FM	LEACHATE FORCEMAIN
GWT	GROUNDWATER PIPE / TRENCH
	LARGE PIPELINE
SD	STORMWATER PIPING
	STORMWATER CULVERT
>	DRAINAGE TERRACE
>>	DRAINAGE DITCH / SWALE
G	GAS HEADER PIPE
G	GAS COLLECTOR PIPE
UGE	UNDERGROUND POWER
OHE	OVERHEAD POWER LINE
FO	FIBER OPTIC SERVICE
W	WATER MAIN
WTL	WETLANDS DELINEATION

SYMBOLOGY NOTES

1. THIS IS A STANDARD SHEET SHOWING COMMON SYMBOLOGY. ALL SYMBOLS ARE NOT NECESSARILY USED ON THIS PROJECT.
2. SCREENING OR SHADING OF WORK IS USED TO INDICATE EXISTING COMPONENTS OR TO DE-EMPHASIZE PROPOSED IMPROVEMENTS TO HIGHLIGHT SELECTED TRADE WORK. REFER TO CONTEXT OF EACH SHEET FOR USAGE.

ABBREVIATIONS

&	AND
@	AT
ADS	ADVANCED DRAINAGE SYSTEMS, INC.
AISI	AMERICAN IRON & STEEL INSTITUTE
APPROX	APPROXIMATE
℄ or CL	CENTERLINE
CMP	CORRUGATED METAL PIPE
CONC	CONCRETE
CWTS	CONSTRUCTED WETLANDS TREATMENT SYSTEM
CPP	CORRUGATED PLASTIC PIPE
Ø or DIA	DIAMETER
E	EAST or ELECTRICAL
EL or ELEV	ELEVATION
EXST	EXISTING
EXT	EXTENSION
FES	FLARED END SECTION
FL	FLOWLINE
FT	FOOT or FEET
GALV	GALVANIZED
GAL	GALLON
GEW	GAS EXTRACTION WELL
GW	GROUNDWATER
HDPE	HIGH DENSITY POLYETHYLENE
HORIZ	HORIZONTAL
ID	INNER DIAMETER
IE	INVERT ELEVATION
IN	INCH or INCHES
L	ANGLE
LB or LBS	POUND/S
LLDPE	LINEAR LOW DENSITY POLYETHYLENE
MAX	MAXIMUM
MFG'S	MANUFACTURER'S
MH	MANHOLE
MIN	MINIMUM
MPE	METRO PARK EAST
MWA	METRO WASTE AUTHORITY
N	NORTH
NA	NOT APPLICABLE
NO.	NUMBER
OD	OUTER DIAMETER
OZ	OUNCE
PC	POINT OF CURVATURE
PI	POINT OF INTERSECTION
PL	PLATE
POB	POINT OF BEGINNING
POE	POINT OF END
PP	POLYPROPYLENE
PT	POINT OF TANGENCY
PVC	POLYVINYL CHLORIDE
R or RAD	RADIUS
REQ'D	REQUIRED
ROW	RIGHT OF WAY
SEC	SECTION
S	SOUTH
SPA	SPACING
SS	STAINLESS STEEL
STA	STATION
STL	STEEL
TEMP	TEMPORARY
TYP	TYPICAL
UNO	UNLESS NOTED OTHERWISE
VERT	VERTICAL
W	WEST
W/	WITH

GENERAL NOTES

1. SITE TOPOGRAPHY AERIAL SURVEY PROVIDED BY AEROVIEW SERVICES, DATED JULY 2, 2025. SITE LINEWORK IS A COMPILATION OF HISTORIC SITE INFORMATION PROVIDED BY METRO WASTE AUTHORITY AND RECORD DRAWING INFORMATION.
2. SITE COORDINATES ARE BASED UPON IOWA STATE PLANE SOUTH, NAVD88.THIS SYSTEM SHALL BE USED FOR ALL PROJECT SURVEYING AND RECORD DOCUMENT PRODUCTION.
3. DO NOT OBSTRUCT LANDFILL SITE ACCESS ROADS, MAIN ACCESS ROADS, OR PROJECT ACCESS/EGRESS ROUTE. COORDINATE ALL ROADWAY WORK TO ENSURE CONTINUOUS SITE ACCESS. SEE SPECIFICATIONS.
4. OBTAIN ALL REQUIRED BORROW FROM WITHIN APPROVED SOIL BORROW AREA, UNLESS OTHERWISE APPROVED BY OWNER.
5. BULK EXCAVATION AND SOIL PLACEMENT AREAS SHALL BE GRADED AS SHOWN ON PLANS OR AS OTHERWISE APPROVED BY OWNER.
6. CONTRACTOR SHALL PROVIDE AND MAINTAIN THROUGHOUT CONSTRUCTION, TWO DIESEL POWERED PUMPS CAPABLE OF PUMPING 1,200 GPM AT 30' TDH, TO REMOVE ALL ACCUMULATED STORMWATER FROM WITHIN CELL E AND POND COORDINATE BOUNDARY, INCLUDING AT ALL TIMES OUTSIDE OF NORMAL WORK HOURS. STANDING WATER WITHIN THE CELL E LINER AREA IS NOT PERMITTED. NON-COMPLIANCE WITH THIS REQUIREMENT WILL RESULT IN OWNER HIRING A THIRD-PARTY TO COMPLETE CONSTRUCTION DEWATERING AT CONTRACTOR'S SOLE COST. STORMWATER SHALL BE DISCHARGED TO THE PERIMETER DITCH
7. LOCATE AND PROTECT SITE UTILITIES AND STRUCTURES (INCLUDING MONITORING WELLS, PIEZOMETERS, GROUNDWATER CONTROL STANDPIPES, RISERS, TRENCHES, BURIED UTILITIES, LEACHATE MANHOLES, ELECTRICAL, ETC.). ANY STRUCTURES REMOVED OR DAMAGED SHALL BE REPAIRED AND REPLACED AT CONTRACTOR'S EXPENSE.
8. CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING ALL WORK FROM EROSION AND SEDIMENT CAUSED BY THE ADJACENT EXISTING LANDFILL. SEDIMENT AND WASTE ACCUMULATION WITHIN THE LIMITS OF CONSTRUCTION SHALL BE REMOVED AT CONTRACTOR'S EXPENSE. IT IS THE CONTRACTOR'S RESPONSIBILITY TO ENSURE EROSION CONTROL MEASURES MEET MINIMUM FEDERAL, STATE, AND LOCAL REGULATIONS.
9. CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING EXISTING DRAINAGE CHANNELS, CULVERTS, SEDIMENT BASINS, AND TRAPS AFFECTED BY THE WORK. CONTRACTOR SHALL REMOVE ACCUMULATED SEDIMENT AND DEBRIS FROM THE CONTROL MEASURES AND ANY AFFECTED STRUCTURES FOLLOWING COMPLETION OF THE WORK AND PLACE AT LOCATION APPROVED BY OWNER.
10. TERMINATION BERMS SHOWN ON SHEET 01C104 ARE PROVIDED TO BALLAST AND COMPLETE THE LINER SYSTEM. CONTRACTOR WILL PROVIDE ADDITIONAL TEMPORARY AND INTERMEDIATE BALLASTING UNTIL ALL TERMINATION BERMS ARE INSTALLED/COMPLETED. CONTRACTOR SHALL ALSO PROVIDE BALLASTING OF RAIN COVER. SEE PLAN SHEET 01C104, DETAIL 4/01C503 AND SPECIFICATIONS.
11. WHERE DESIGNATED ACCESS ROADS TO SPECIFIC CONSTRUCTION AREAS ARE NOT SHOWN, COORDINATE PLANNED ACCESS ROUTES WITH OWNER AND ENGINEER AT THE PRE-CONSTRUCTION CONFERENCE.
12. IN ALL CASES CONTRACTOR SHALL TAKE CARE TO PREVENT DAMAGE TO ESTABLISHED VEGETATION DUE TO CONTRACTOR VEHICLE TRAFFIC. CONTRACTOR SHALL REPAIR ALL VEGETATION AND SOIL DAMAGE (I.E. RUTTING) CAUSED BY CONSTRUCTION ACTIVITIES IN MANNER SUITABLE TO OWNER PRIOR TO COMPLETION OF PROJECT WORK.
13. CONTRACTOR ACCESS ROAD FROM STAGING/LAYDOWN AREA INTO CELL D AREA TO BE CONSTRUCTED FOLLOWING COORDINATION WITH AND APPROVED BY OWNER IN THE APPROXIMATE ALIGNMENT SHOWN ON SHEET 01C101.

PROJECT SERIES DESCRIPTION

1. CELL E BULK EXCAVATION, INCLUDING:
   a. SITE PREPARATION.
   b. EARTHWORK AND STORMWATER IMPROVEMENTS.
   c. EXCAVATION AND FINE GRADING OF CELL PERIMETER FEATURES AND PERIMETER ACCESS.
   d. PLACEMENT AND STOCKPILE OF EXCAVATED SOIL (IN ORDER OF OWNER'S PREFERENCE) STORMWATER DIVERSION BERMS, OWNER'S OPERATIONS STOCKPILE AT ACTIVE WORK FACE, MISCELLANEOUS AREAS AS APPROVED BY OWNER.
   e. OTHERS - SEE DRAWINGS AND SPECIFICATIONS.
2. CELL E LINER, LEACHATE POND, & LEACHATE COLLECTION SYSTEM, INCLUDING:
   a. EXCAVATION, CUT TO FILL AND FINE GRADING TO BASE GRADE.
   b. RECOMPACTED CLAY LINER.
   c. 60-MIL GEOMEMBRANE.
   d. GEOTEXTILE.
   e. TERMINATION BERMS ON THE NORTH SIDE.
   f. DRAINAGE LAYER AND COARSE AGGREGATE.
   g. SOLID WALL AND PERFORATED PVC LEACHATE COLLECTION PIPES.
   h. 12-MIL SCRIM REINFORCED HDPE RAINCOVER.
   i. LEACHATE LOADOUT, PUMP, PIPING
   j. MISCELLANEOUS STRUCTURES AND APPURTENANCES.
   k. OTHERS - SEE DRAWINGS AND SPECIFICATIONS.
3. PERIMETER ACCESS ROAD SURFACING:
   a. FINE GRADING OF ACCESS ROAD.
   b. ROADWAY GEOTEXTILE.
   c. AGGREGATE SURFACING OF CELL E PERIMETER ACCESS ROAD.
   d. EROSION CONTROLS.
   e. CULVERT INSTALLATION.
4. STORMWATER POND
   a. EXCAVATION AND GRADING
   b. STORMWATER OUTFALL STRUCTURE
   c. CULVERTS, GRAVEL, AND SEEDING
   d. INTERMEDIATE STORMWATER CONTROLS AND EROSION CONTROL FEATURES

ISSUE	DATE	DESCRIPTION
1	10-16-2024	ISSUED FOR 60% REVIEW

PROJECT MANAGER	K. KINLEY
CIVIL	K. KINLEY
CIVIL	M. CORRY
DRAWN BY	M. BICKFORD
QC BY	
PROJECT NUMBER	10408322

PRELIMINARY NOT FOR CONSTRUCTION OR RECORDING

Metro Waste Authority

METRO PARK WEST
MWA PROJECT P-67
CELL E LINER CONSTRUCTION

CIVIL LEGEND AND GENERAL NOTES

0 1" 2"

FILENAME G001.dwg
SCALE

SHEET G001

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NOTES

1. CONTRACTOR TO COORDINATE STOCKPILING LOCATION OF SALVAGED PIPE, FENCE, AND AGGREGATE WITH OWNER / ENGINEER.
2. CONTRACTOR RESPONSIBLE FOR CAPPING / EXTENDING ALL LEACHATE AND GROUNDWATER RISERS ALONG TIE-IN.
3. MONITORING WELLS TO BE MOVED UNDER SEPARATE CONTRACT.

HDR

ISSUE	DATE	DESCRIPTION
1	10-16-2024	ISSUED FOR 60% REVIEW

PROJECT MANAGER	K. KINLEY
CIVIL	K. KINLEY
CIVIL	M. CORRY
DRAWN BY	M. BICKFORD
QC BY	
PROJECT NUMBER	10408322

PRELIMINARY
NOT FOR
CONSTRUCTION OR
RECORDING

Metro Waste Authority

METRO PARK WEST
MWA PROJECT P-67
CELL E LINER CONSTRUCTION

EXISTING CONDITIONS AND OVERALL DEVELOPMENT PLAN

0 1" 2"

FILENAME G002.dwg

SCALE 1" = 100'

SHEET **G002**

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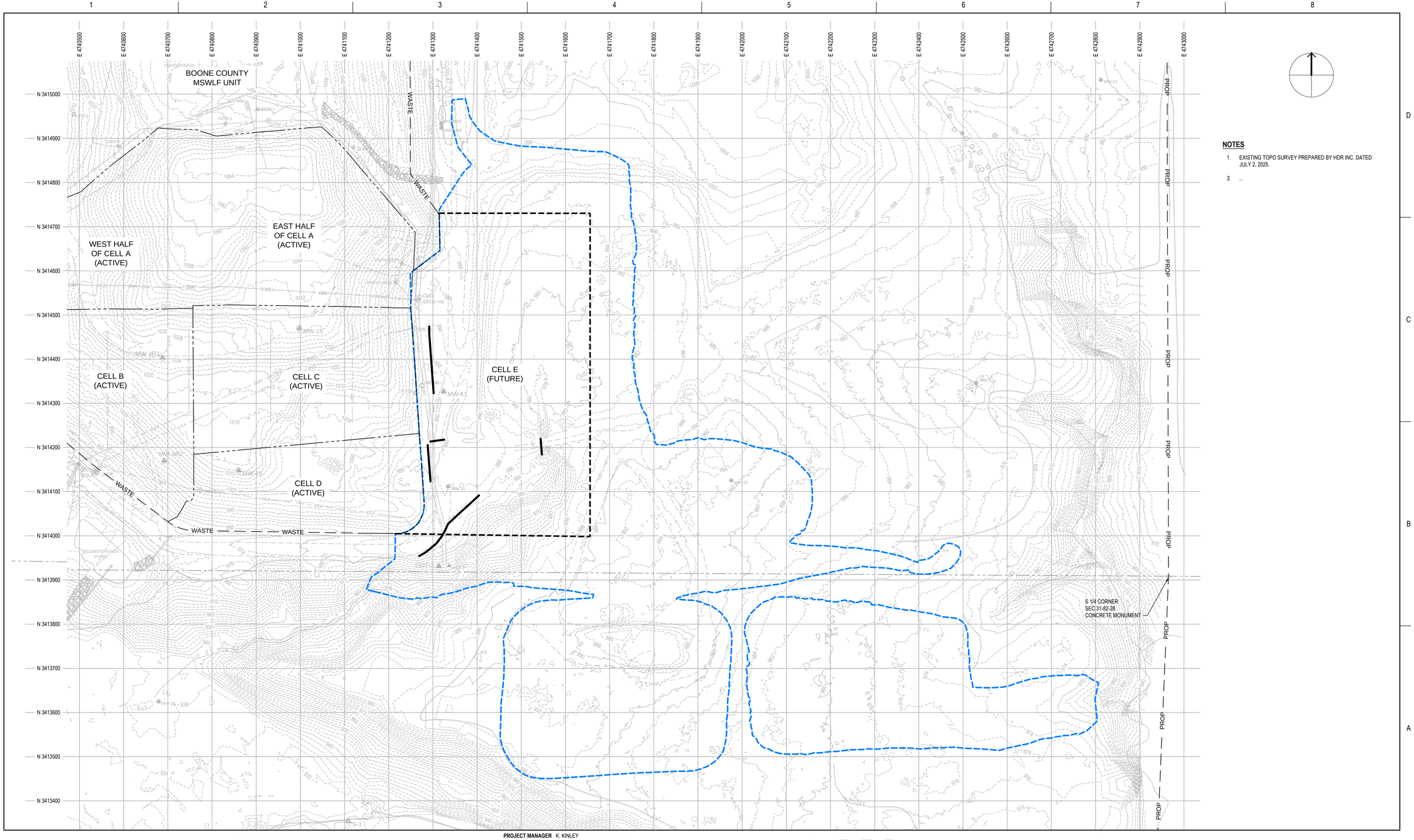

NOTES

1. EXISTING TOPO SURVEY PREPARED BY HDR INC. DATED JULY 2, 2025.
2. ...

ISSUE	DATE	DESCRIPTION
1	10-16-2024	ISSUED FOR 60% REVIEW

PROJECT MANAGER	K. KINLEY
CIVIL	K. KINLEY
CIVIL	M. CORRY
DRAWN BY	M. BICKFORD
QC BY	
PROJECT NUMBER	10408322

PRELIMINARY NOT FOR CONSTRUCTION OR RECORDING

Metro Waste Authority

METRO PARK WEST
MWA PROJECT P-67
CELL E LINER CONSTRUCTION

EXISTING CONDITIONS PLAN

0 1" 2"

FILENAME C100.dwg
SCALE 1" = 100'

SHEET **C100**

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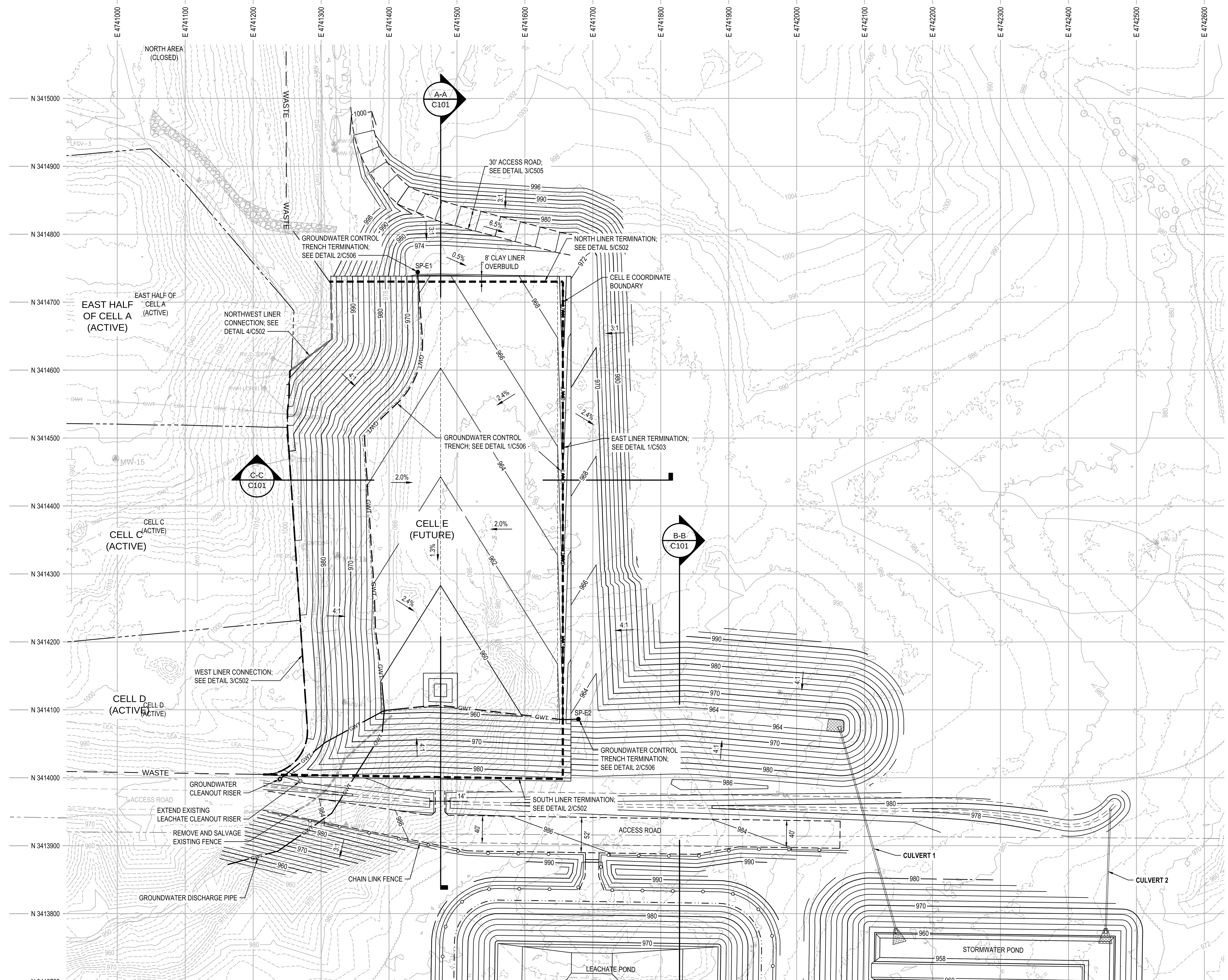
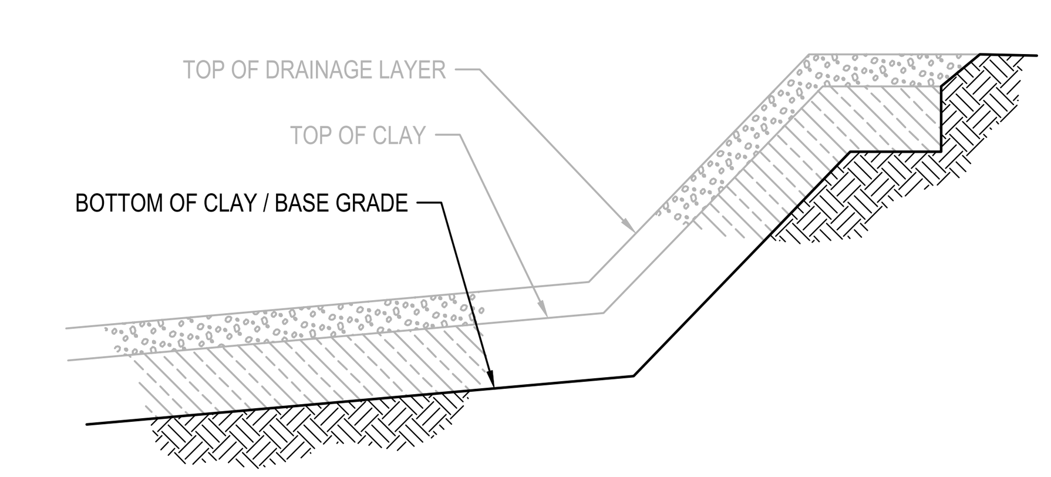


NOTES

1. PROPOSED CONTOURS REPRESENT BOTTOM OF CLAY / BASE GRADE ELEVATIONS.
2. SEE SHEET C104 FOR LEACHATE POND, STORMWATER POND GRADING INFORMATION.
3. SEE SHEET C104 FOR CULVERT 1 AND 2 DESIGN INFORMATION.



LINER LAYER KEY
NOT TO SCALE

HDR

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1	10-16-2024	ISSUED FOR 60% REVIEW

PROJECT MANAGER	K. KINLEY
CIVIL	K. KINLEY
CIVIL	M. CORRY
DRAWN BY	M. BICKFORD
QC BY	
PROJECT NUMBER	10408322

PRELIMINARY NOT FOR CONSTRUCTION OR RECORDING

Metro Waste Authority

METRO PARK WEST
MWA PROJECT P-67
CELL E LINER CONSTRUCTION

BASE GRADING PLAN

0 1" 2"

FILENAME C101.dwg
SCALE 1" = 80'

SHEET C101

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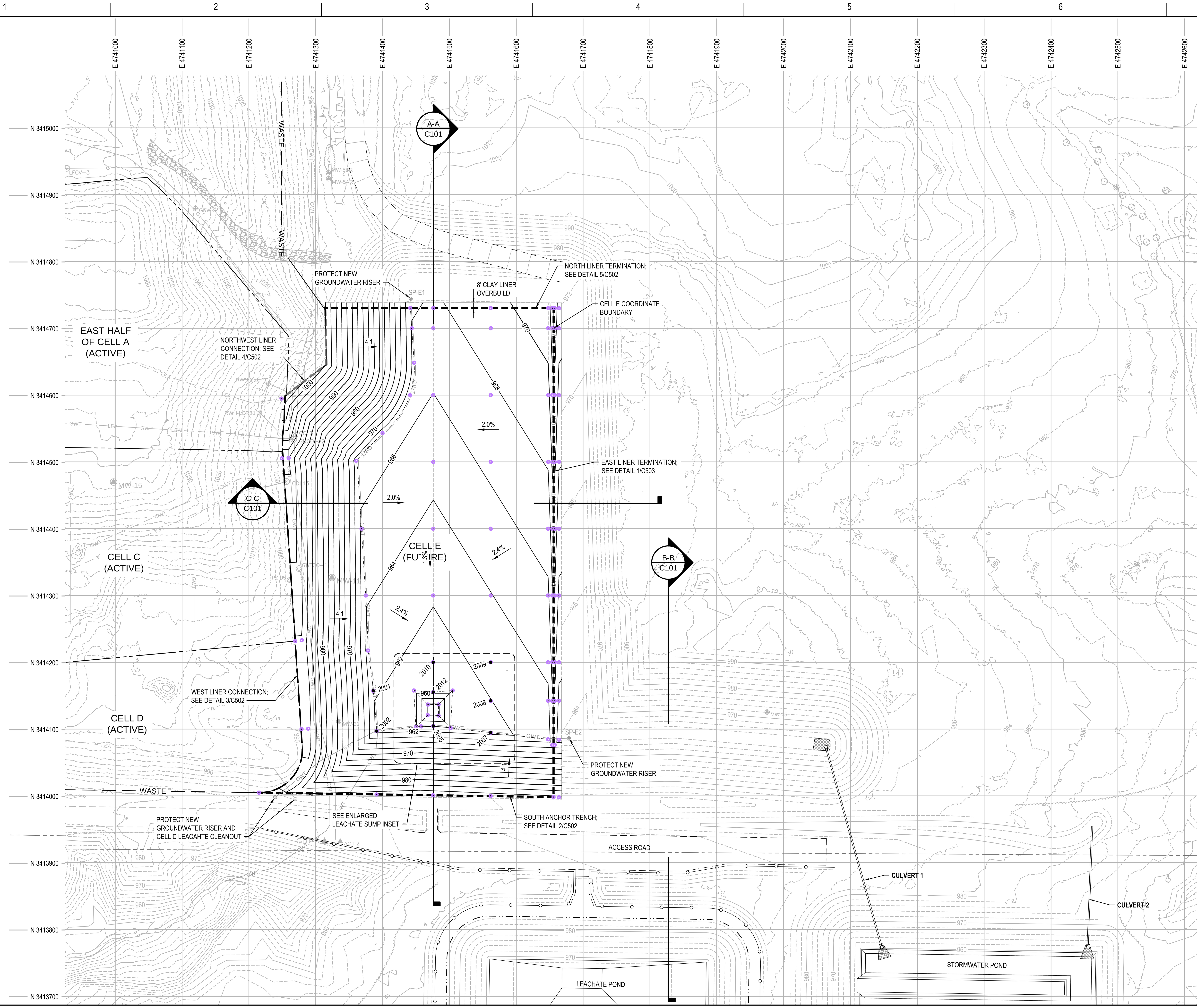
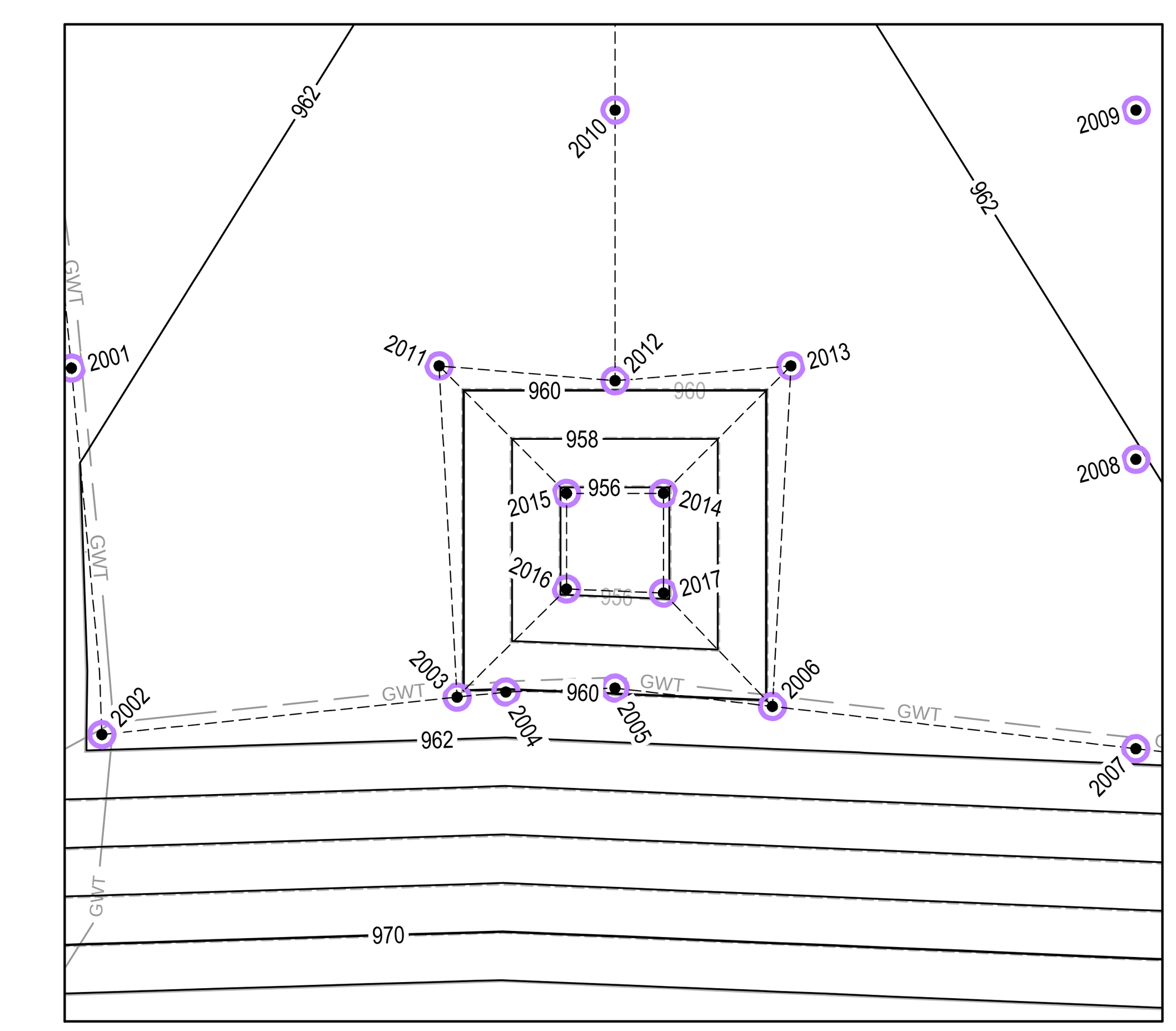
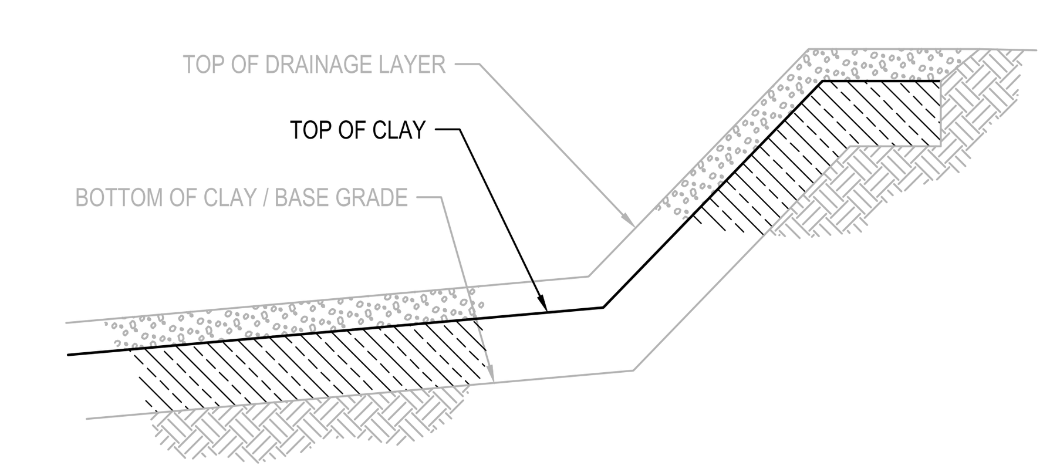


NOTES

1. PROPOSED CONTOURS REPRESENT TOP OF CLAY ELEVATIONS.
2. SEE SHEET C105 FOR CERTIFICATION POINT TABLES.



ENLARGED LEACHATE SUMP
SCALE: 1" = 30'



LINER LAYER KEY
NOT TO SCALE

HDR

ISSUE	DATE	DESCRIPTION
1	10-16-2024	ISSUED FOR 60% REVIEW

PROJECT MANAGER	K. KINLEY
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CIVIL	M. CORRY
DRAWN BY	M. BICKFORD
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PROJECT NUMBER	10408322

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Metro Waste Authority

METRO PARK WEST
MWA PROJECT P-67
CELL E LINER CONSTRUCTION

TOP OF CLAY GRADING PLAN

0 1" 2"

FILENAME C102.dwg
SCALE 1" = 80'

SHEET **C102**

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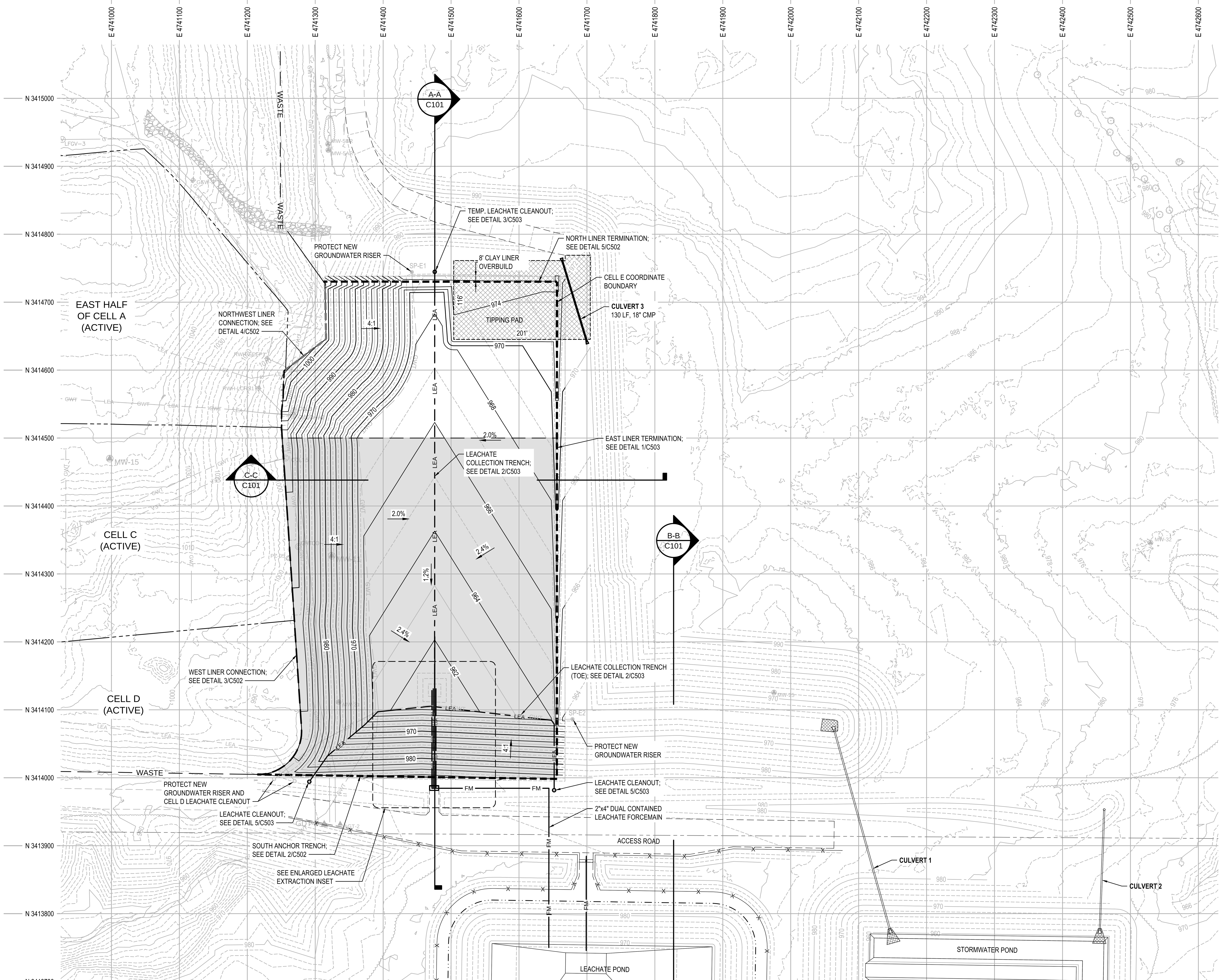
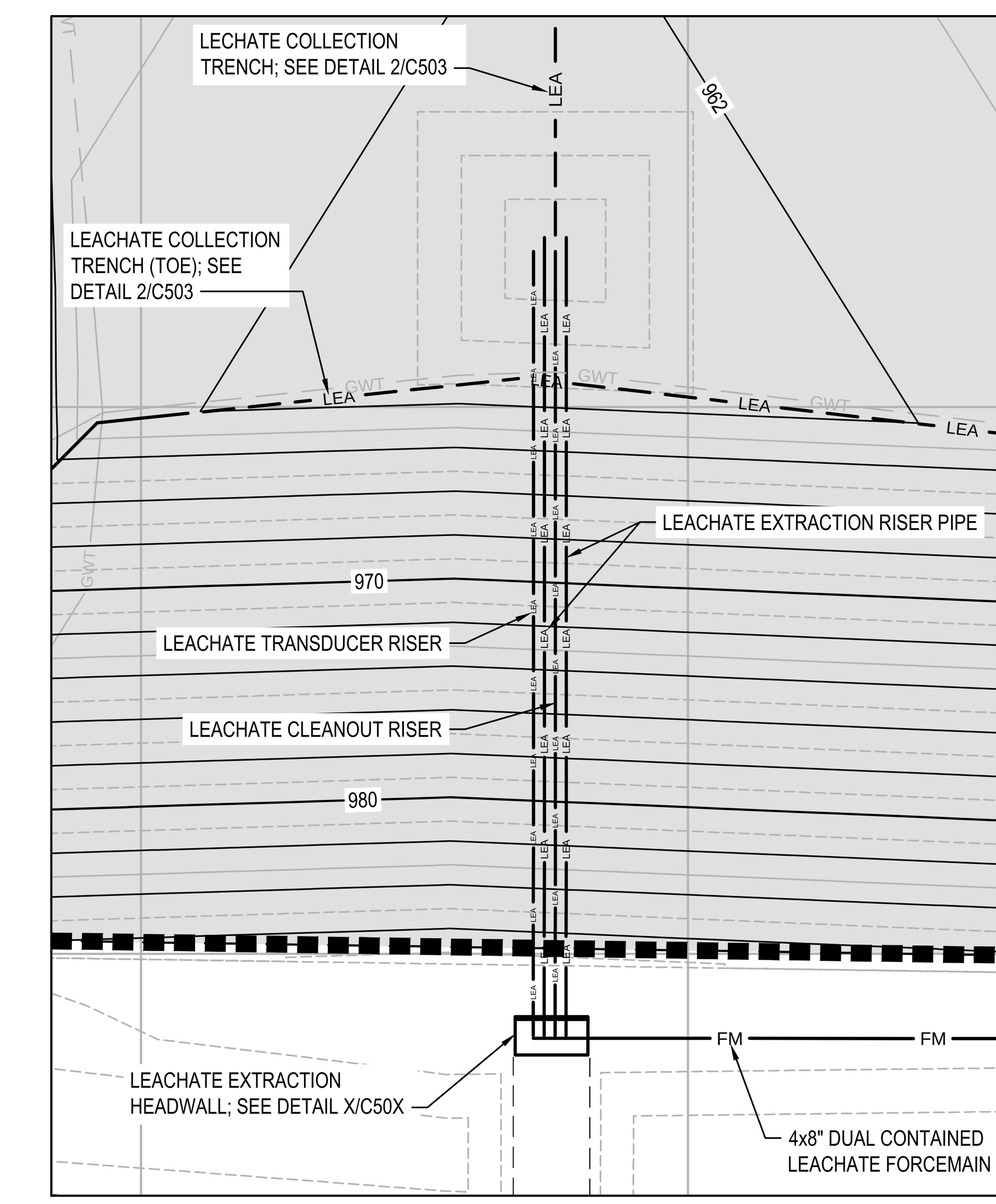


NOTES

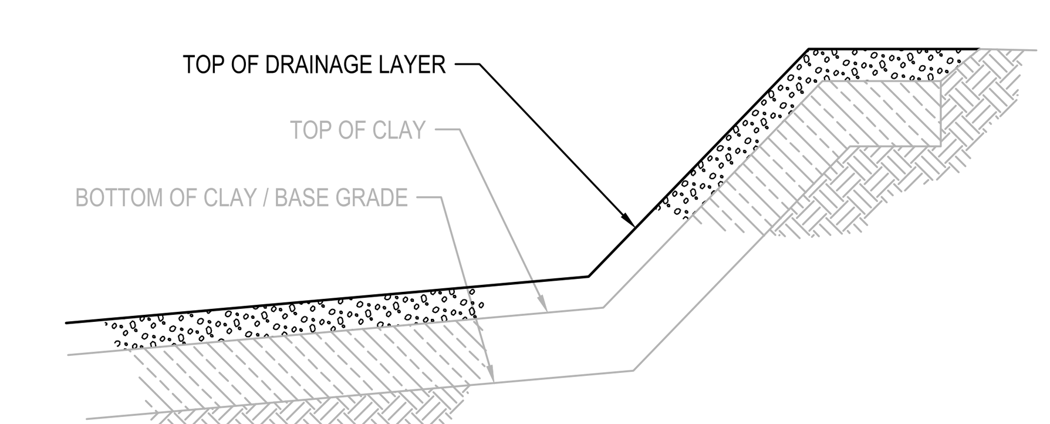
1. PROPOSED CONTOURS REPRESENT TOP OF DRAINAGE LAYER ELEVATIONS.
2. SEE DETAILS ON SHEET C50X FOR ADDITIONAL LEACHATE SUMP PIPING DETAILS.

LEGEND

12-MIL SCRIM REINFORCED RAIN COVER; SEE DETAIL X/C50X FOR BALLASTING REQUIREMENTS



ENLARGED LEACHATE EXTRACTION PLAN
SCALE: 1" = 30'



LINER LAYER KEY
NOT TO SCALE

PROJECT MANAGER	K. KINLEY
CIVIL	K. KINLEY
CIVIL	M. CORRY
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ISSUE	DATE	DESCRIPTION
1	10-16-2024	ISSUED FOR 60% REVIEW

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Metro Waste Authority

METRO PARK WEST
MWA PROJECT P-67
CELL E LINER CONSTRUCTION

DRAINAGE LAYER GRADING PLAN

0 1" 2"

FILENAME C103.dwg
SCALE 1" = 80'

SHEET **C103**

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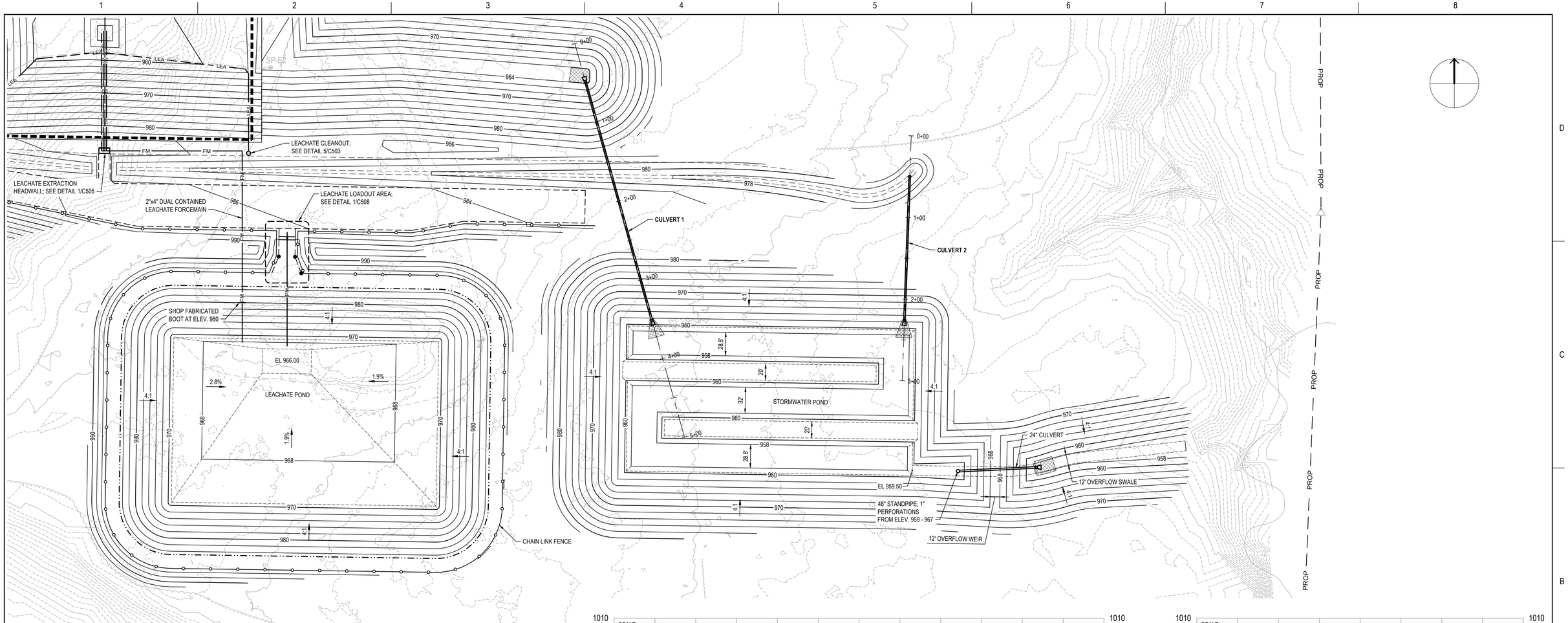

ISSUE	DATE	DESCRIPTION
1	10-16-2024	ISSUED FOR 60% REVIEW

PROJECT MANAGER	K. KINLEY
CIVIL	K. KINLEY
CIVIL	M. CORRY
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QC BY	
PROJECT NUMBER	10408322

PRELIMINARY NOT FOR CONSTRUCTION OR RECORDING

Metro Waste Authority

METRO PARK WEST
MWA PROJECT P-67
CELL E LINER CONSTRUCTION

LEACHATE POND AND STORMWATER POND GRADING PLAN

0 1" 2"

FILENAME C104.dwg
SCALE 1" = 60'

SHEET **C104**

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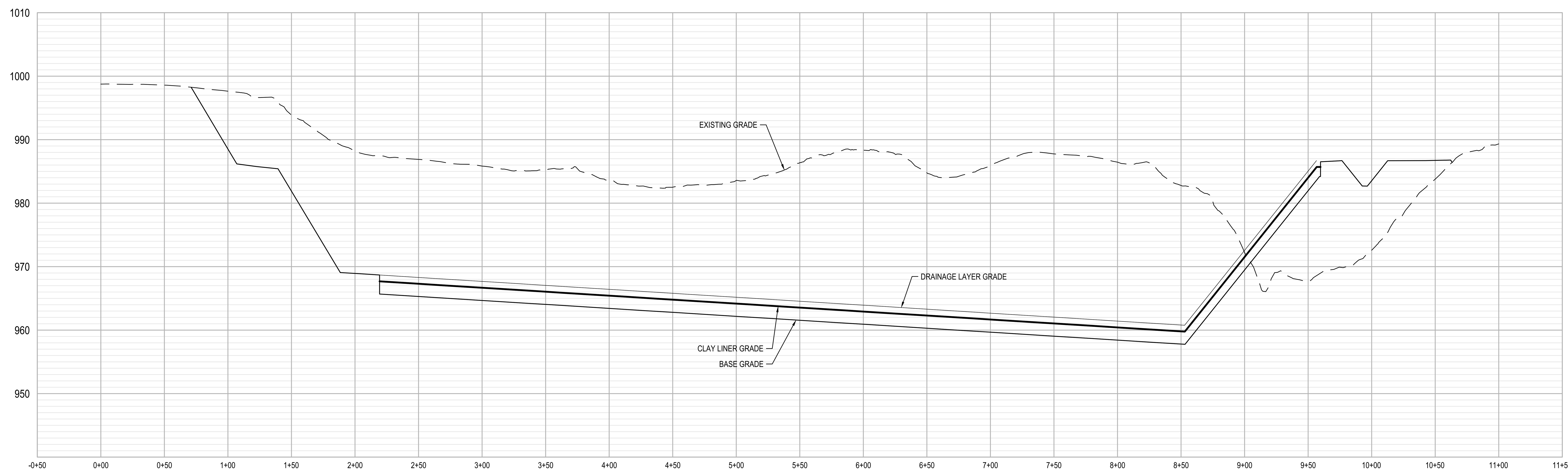
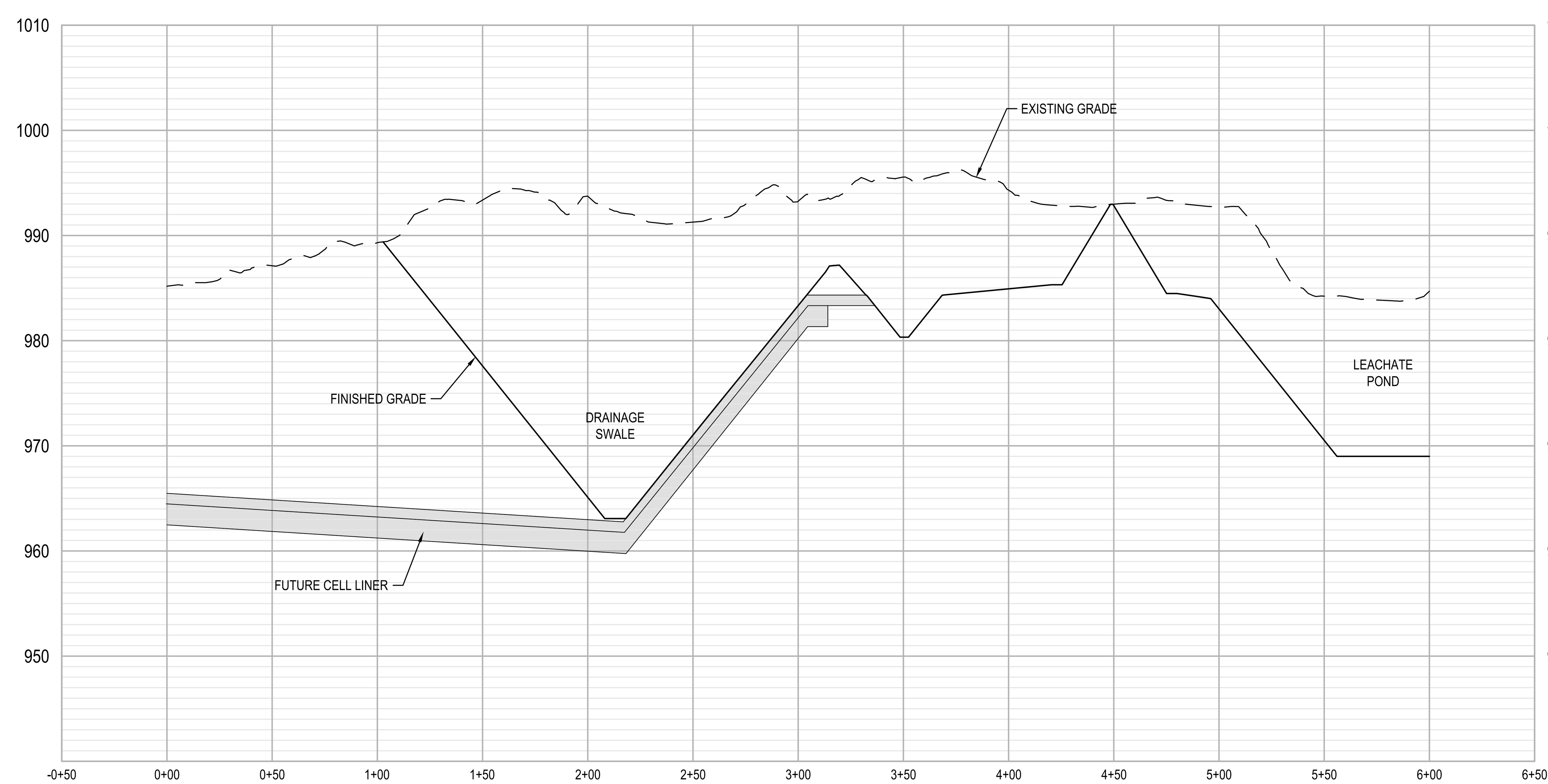
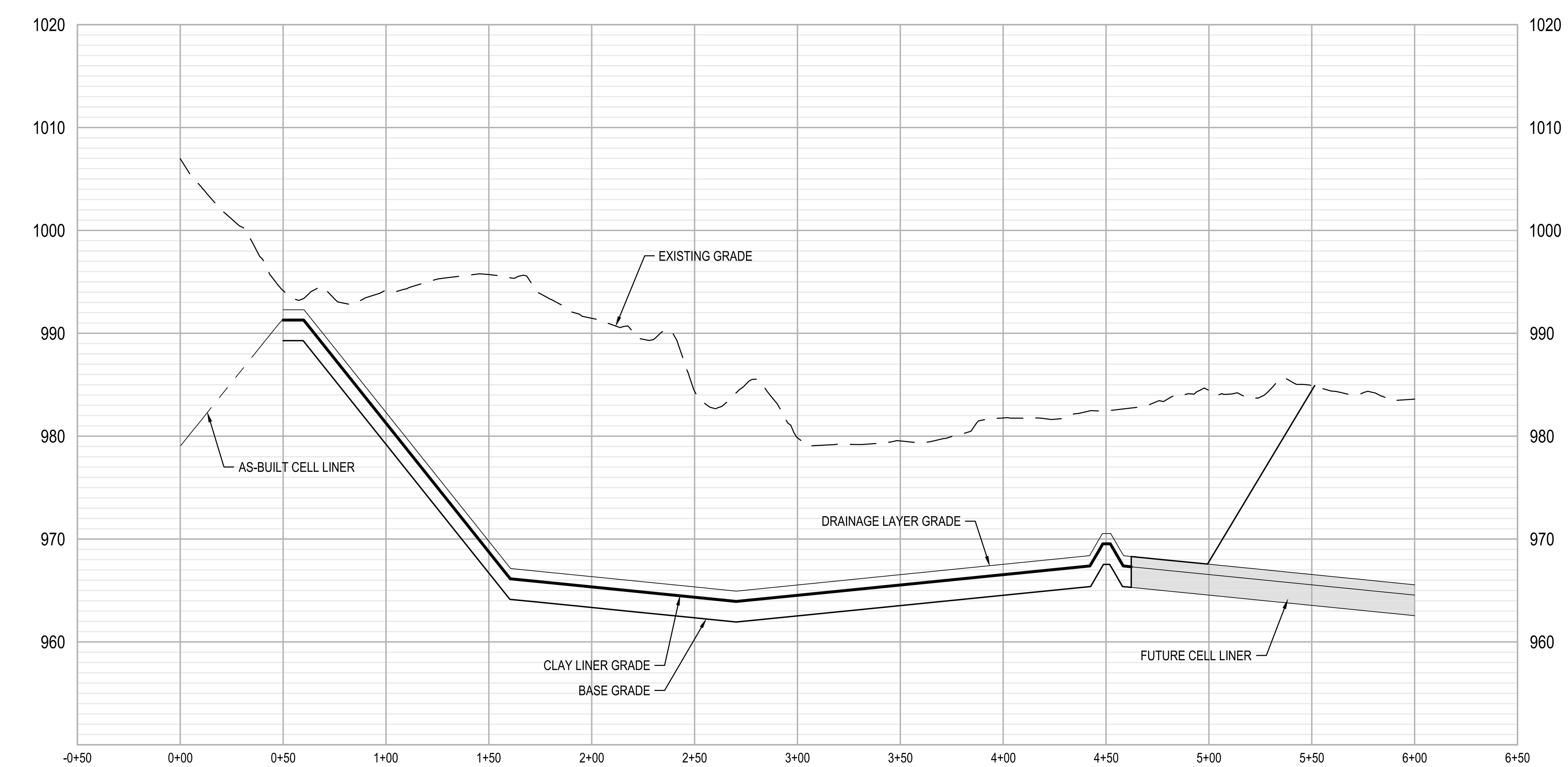
1	2	3	4	5	6	7	8



A-A
C101
SECTION A-A
H: 1" = 50' | V: 1"=10'



B-B
C101
SECTION B-B
H: 1" = 50' | V: 1"=10'



C-C
C101
SECTION C-C
H: 1" = 50' | V: 1"=10'

D
C
B
A

ISSUE	DATE	DESCRIPTION
1	10-16-2024	ISSUED FOR 60% REVIEW

PROJECT MANAGER	K. KINLEY
CIVIL	K. KINLEY
CIVIL	M. CORRY
DRAWN BY	M. BICKFORD
QC BY	
PROJECT NUMBER	10408322

PRELIMINARY
NOT FOR
CONSTRUCTION OR
RECORDING

Metro Waste Authority

METRO PARK WEST
MWA PROJECT P-67
CELL E LINER CONSTRUCTION

CROSS SECTIONS

0 1" 2"

FILENAME C301.dwg
SCALE 1" = 80'

SHEET
C301

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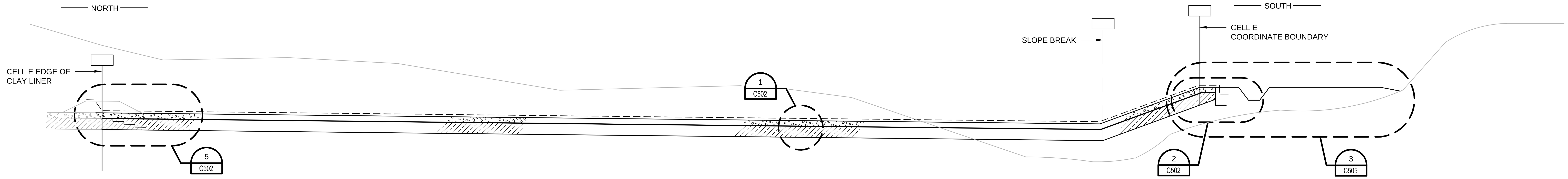
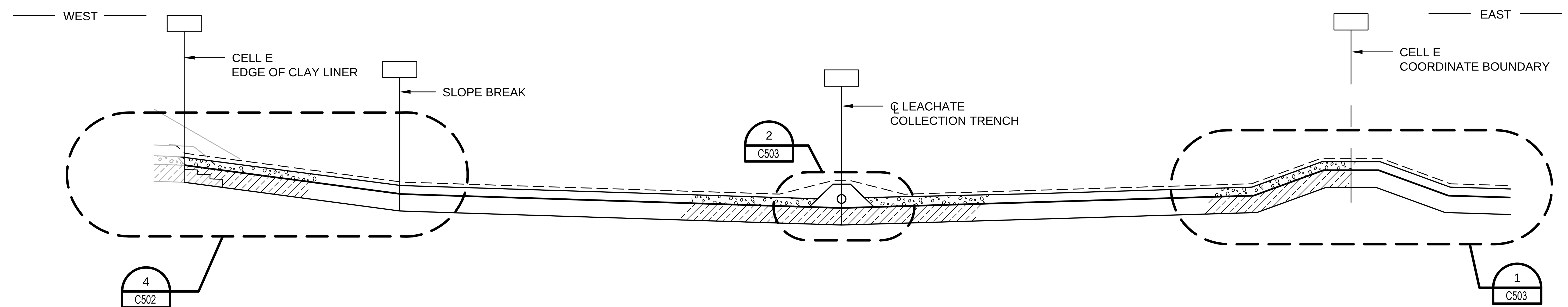


A - NORTH-SOUTH LINER CROSS SECTION

NO SCALE



B - WEST-EAST LINER CROSS SECTION

NO SCALE

CONSTRUCTION SEQUENCE FOR LINER TO LINER TRANSITION

1. REMOVE TERMINATION BERM/PROTECTIVE COVER, SAND, PLYWOOD, AND TOP SEPARATION GEOTEXTILE TO EXPOSE EXISTING DRAINAGE LAYER, 12 OZ CUSHION GEOTEXTILE, AND 60-MIL HDPE GEOMEMBRANE. AT ALL TIMES CONTRACTOR WILL TAKE NECESSARY MEASURES TO PROTECT EXISTING DRAINAGE LAYER FROM FINE SOIL INTRUSION AND STORM WATER INFILTRATION.
2. IMMEDIATELY FOLLOWING EXPOSURE OF EXISTING DRAINAGE LAYER, REMOVE SOLID WALL LEACHATE CLEANOUT RISER PIPE AND EXPOSE END OF PERFORATED LEACHATE COLLECTION PIPE AT EDGE OF EXISTING DRAINAGE LAYER.
3. IMMEDIATELY ROLL BACK EXISTING 12 OZ CUSHION GEOTEXTILE TO EXPOSE EXISTING 60-MIL HDPE GEOMEMBRANE. EXTRUSION WELD SACRIFICIAL 40-MIL HDPE RAIN FLAP TO EXPOSED 60-MIL HDPE GEOMEMBRANE ALONG ENTIRE LENGTH OF LINER TRANSITION. EXTEND HDPE RAIN FLAP A MINIMUM OF 12-FT UP EXISTING SIDESLOPE AND ANCHOR IN PLACE SO AS TO COMPLETELY COVER AND PROTECT EXISTING DRAINAGE LAYER AND LEACHATE TRENCH.
4. INSTALL NEW RECOMPACTED CLAY LINER USING STEP TRANSITION TO EXISTING CLAY LINER. SEE SPECIFICATIONS.
5. INSTALL NEW 60-MIL HDPE GEOMEMBRANE AND CONTINUOUSLY WELD TO EXISTING GEOMEMBRANE.
6. INSTALL NEW 12 OZ GEOTEXTILE TO CELL C COORDINATE BOUNDARY AND LEAVE END LOOSE UNTIL FINAL REMOVAL OF HDPE RAIN FLAP. WHERE NO RAIN FLAP IS USED, SEW NEW GEOTEXTILE TO EXISTING GEOTEXTILE.
7. INSTALL 8" SCH 80 PVC PERFORATED LEACHATE COLLECTION PIPE. LEAVE APPROX 2' GAP BETWEEN NEW AND EXISTING LEACHATE PIPES.
8. FOLLOWING SATISFACTORY COMPLETION OF LINER ELECTROSTATIC LEAK TESTING, REMOVE SACRIFICIAL HDPE RAIN FLAP.
9. IMMEDIATELY AFTER REMOVING SACRIFICIAL RAIN FLAP, REDEPLOY EXISTING GEOTEXTILE AND SEW TO NEW GEOTEXTILE LAYER; CONNECT EXISTING AND NEW LEACHATE PIPE ENDS WITH FERNCO SHEAR RING COUPLING; INSTALL COARSE AGGREGATE, DRAINAGE LAYER AND GEOTEXTILE, WHERE REQUIRED.
10. INSTALL 12-MIL SCRIM REINFORCED HDPE RAIN COVER AND ANCHOR RAIN COVER INTO EXISTING SOIL COVER APPROXIMATELY 12 FEET UP THE SLOPE.

ISSUE	DATE	DESCRIPTION
1	10-16-2024	ISSUED FOR 60% REVIEW

PROJECT MANAGER	K. KINLEY
CIVIL	K. KINLEY
CIVIL	M. CORRY
DRAWN BY	M. BICKFORD
QC BY	
PROJECT NUMBER	10408322

PRELIMINARY NOT FOR CONSTRUCTION OR RECORDING

Metro Waste Authority

METRO PARK WEST
MWA PROJECT P-67
CELL E LINER CONSTRUCTION

DETAILS

0 1" 2"

FILENAME C501.DWG

SCALE AS NOTED

SHEET C501

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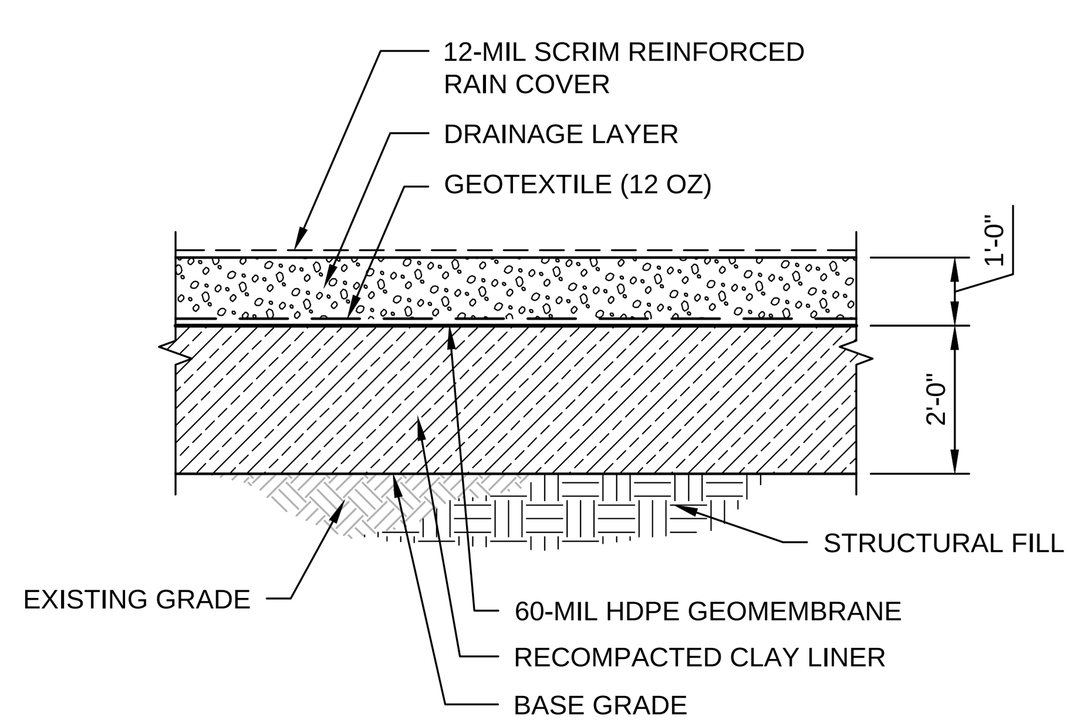
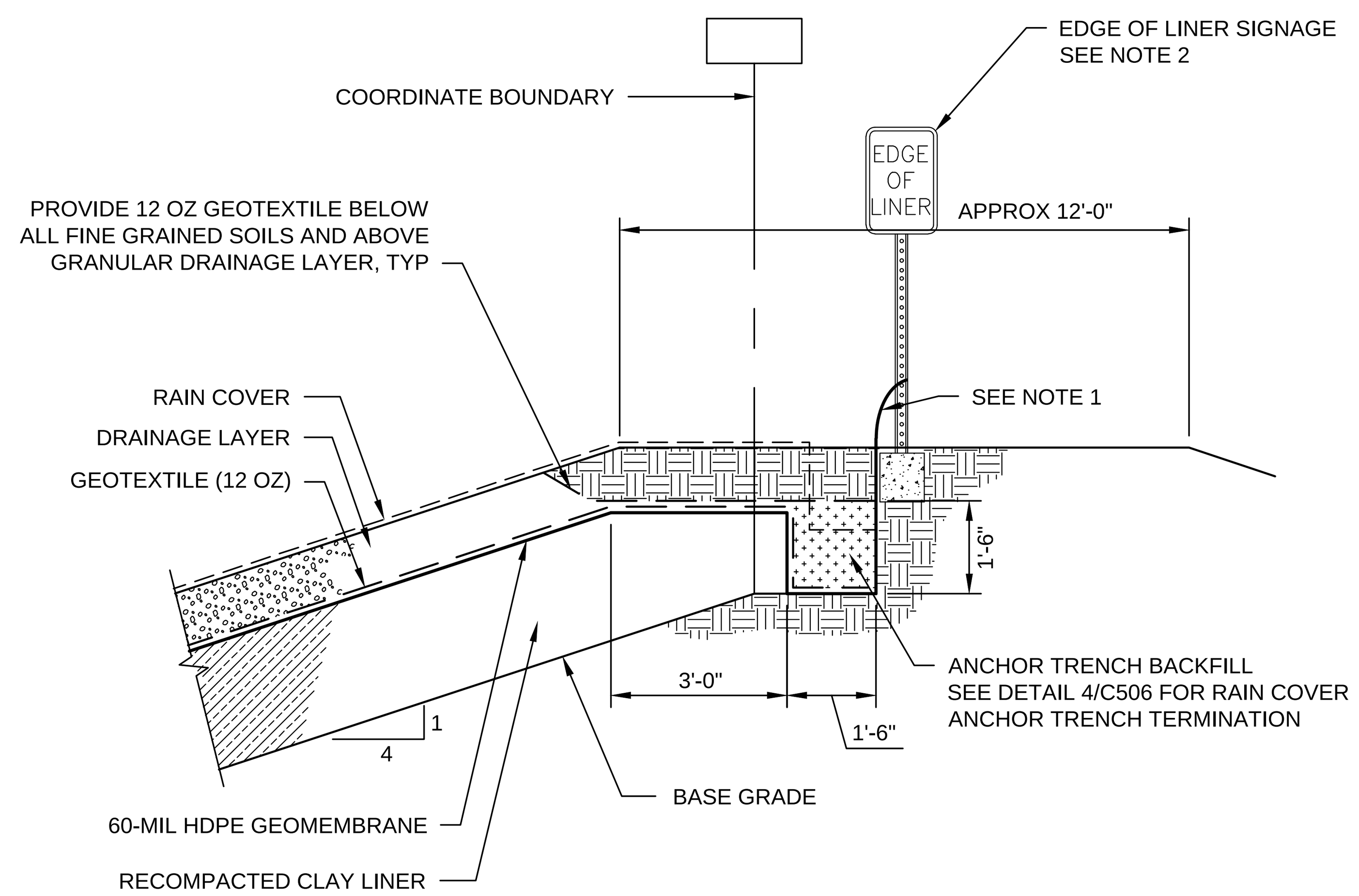


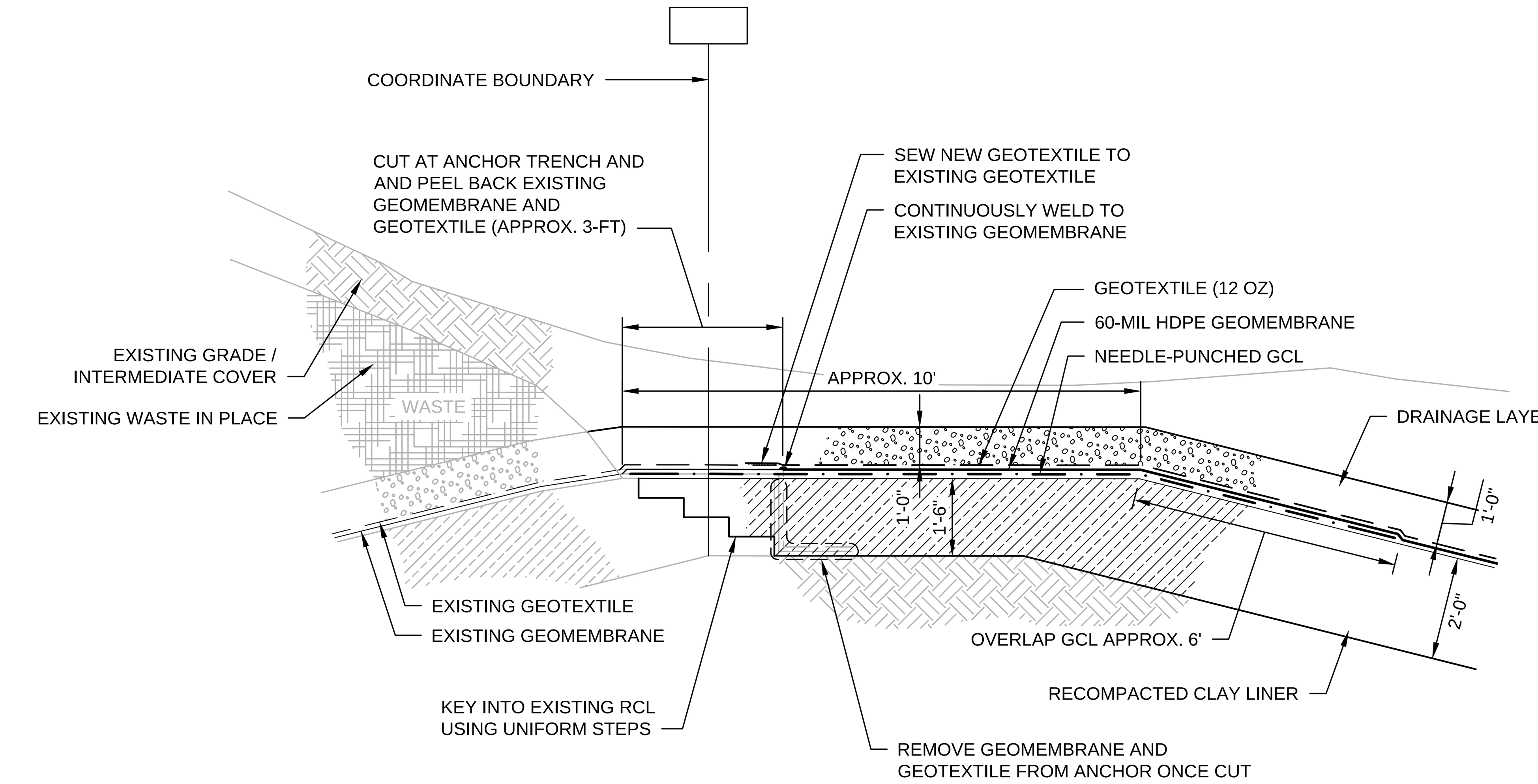
1 C101 **BOTTOM LINER**
NO SCALE



NOTES

1. PROVIDE 1'-0" MINIMUM OF HDPE GEOMEMBRANE ABOVE GRADE FOR ELECTRICAL LEAK LOCATION SURVEY. SEE SPECIFICATIONS. TERMINATE HDPE GEOMEMBRANE AT GROUND SURFACE FOLLOWING COMPLETION OF ALL TESTING.
2. SIGN MOUNTED WITH SS BOLTS ON 8' GALV STEEL "U" SIGN POST SET IN 5-GAL. BUCKET FILLED WITH CONCRETE FILL. SET TOP OF BUCKET BELOW GRADE. PLACE SIGNS ALONG EAST AND SOUTH HDPE LINER TERMINATIONS EVERY 100' AND AT SOUTHEAST, SOUTHWEST, AND NORTHEAST CORNERS.

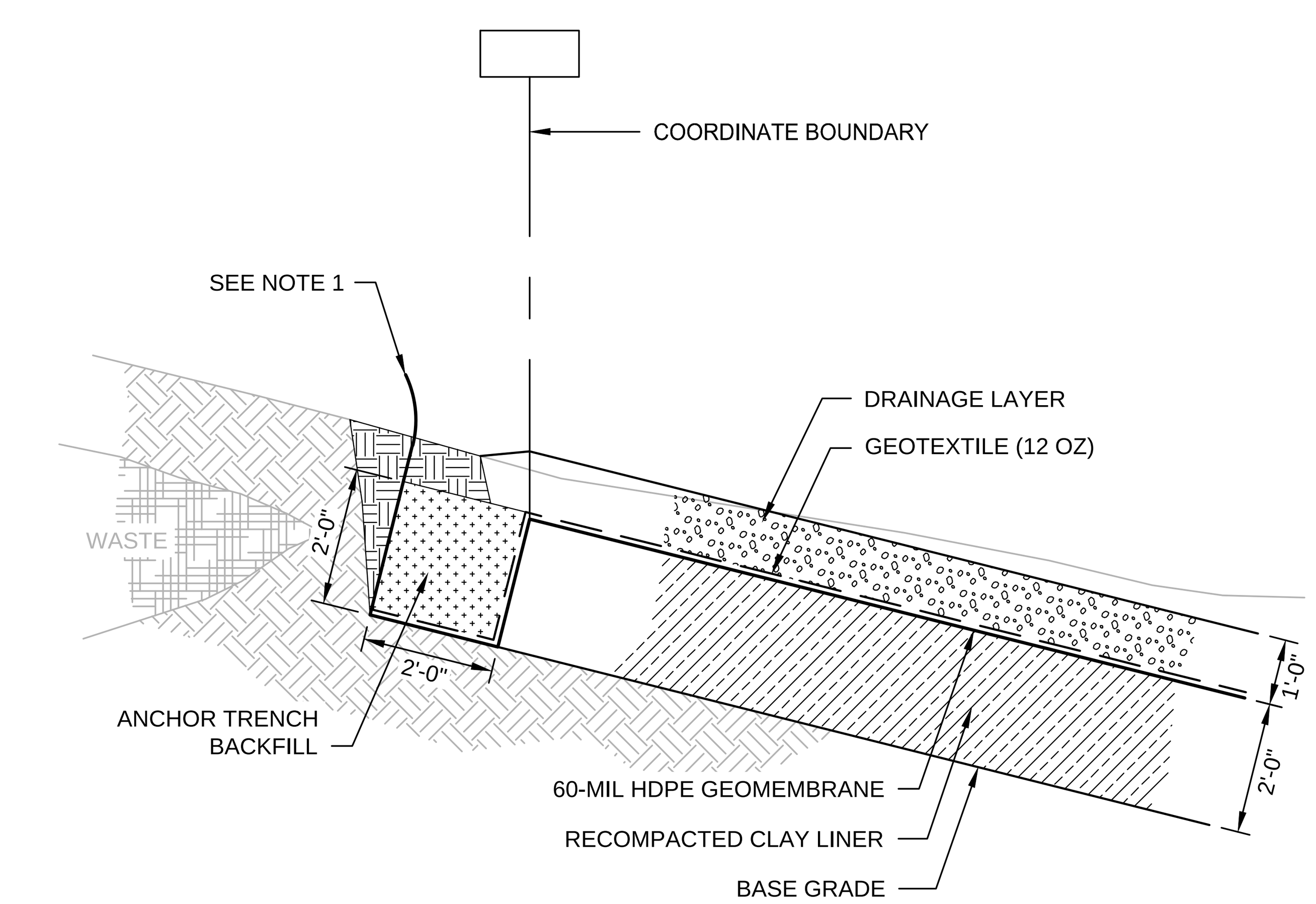
2 C101 **SOUTH LINER TERMINATION**
NO SCALE



NOTES

1. GCL TO UTILIZE ONE FULL 16-FOOT PANEL.

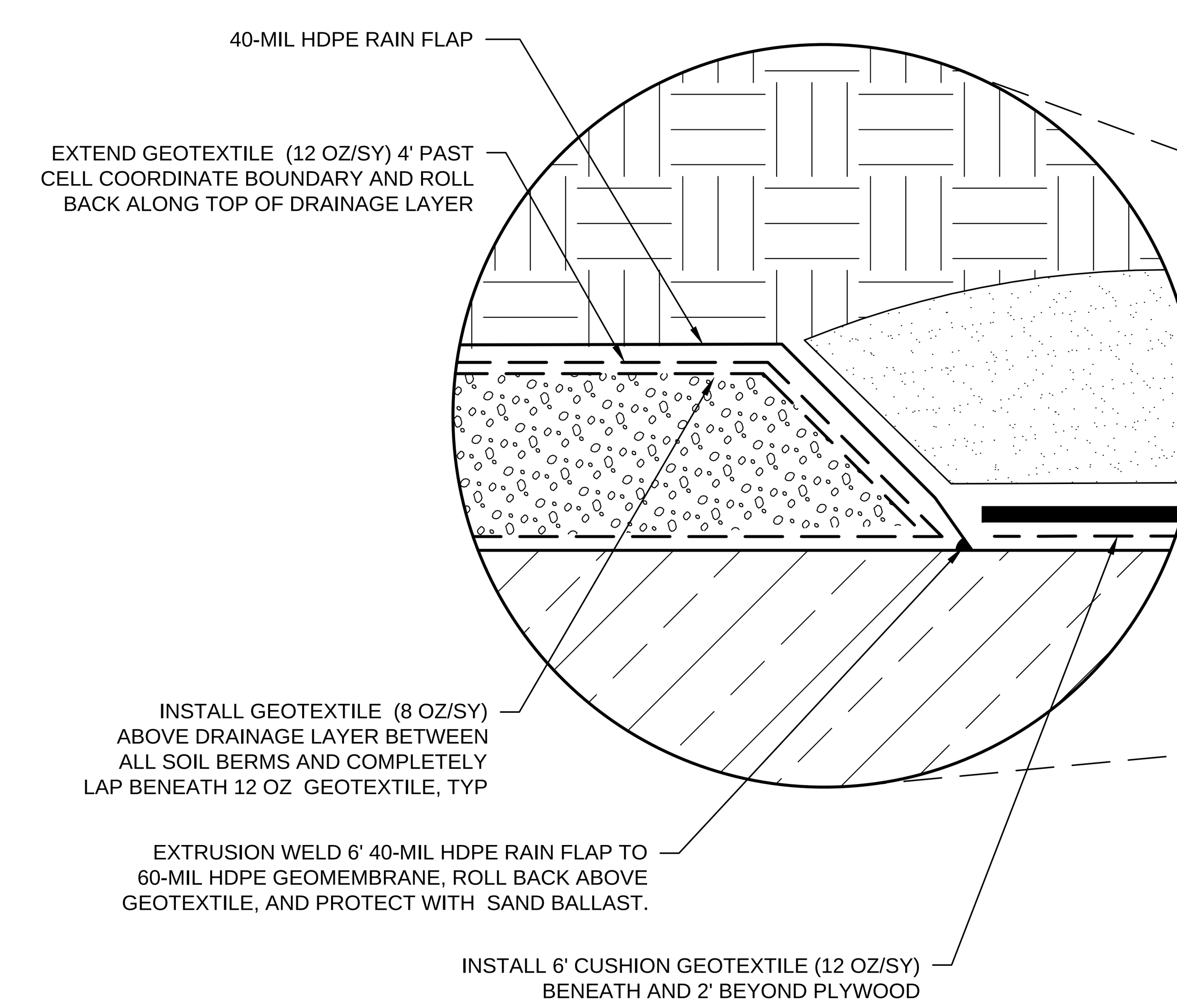
3 C101 **WEST LINER CONNECTION**
NO SCALE



NOTES

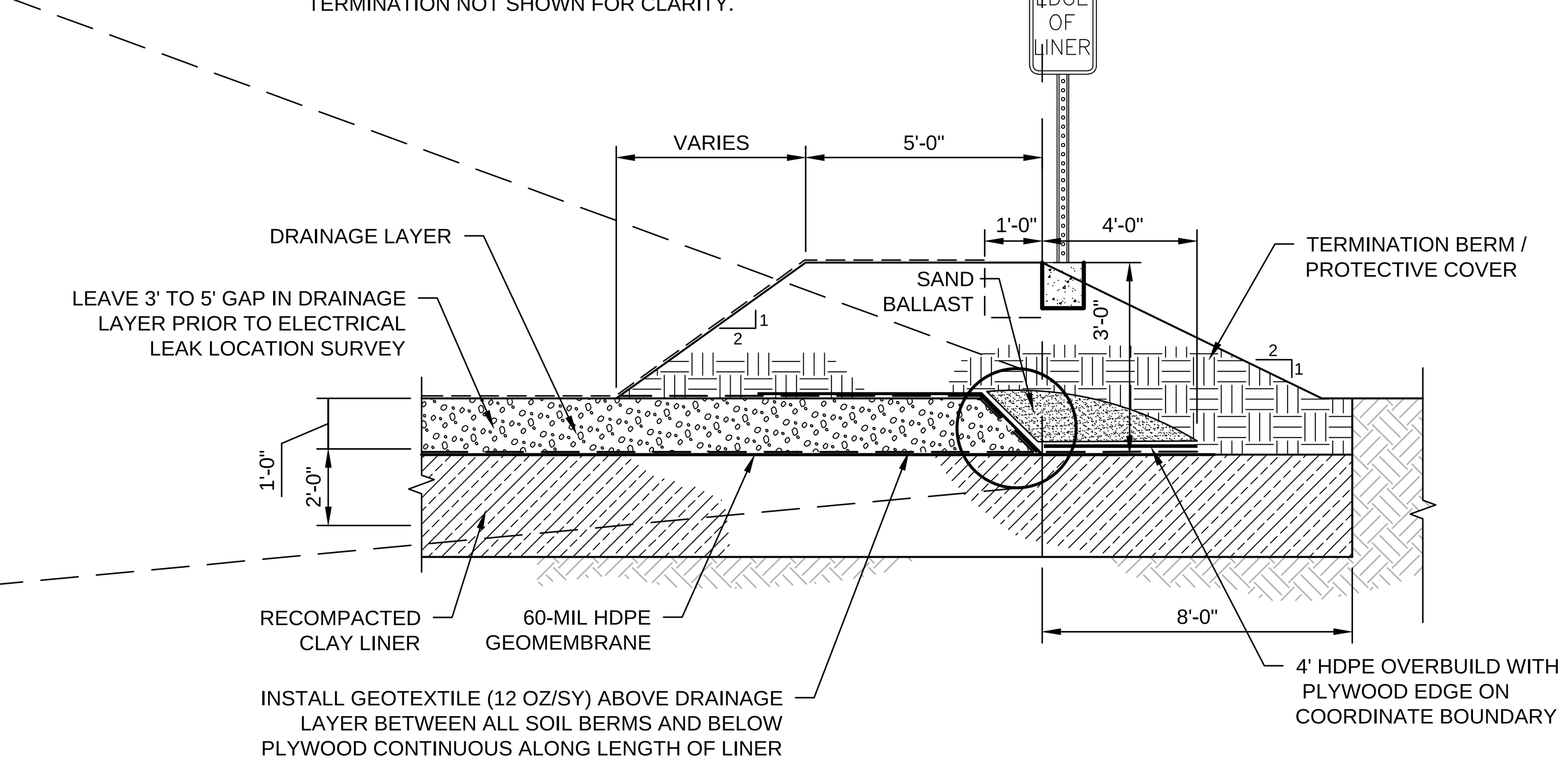
1. PROVIDE 1'-0" MINIMUM OF HDPE GEOMEMBRANE ABOVE GRADE FOR ELECTRICAL LEAK LOCATION SURVEY. SEE SPECIFICATIONS. TERMINATE HDPE GEOMEMBRANE AT GROUND SURFACE FOLLOWING COMPLETION OF ALL TESTING.
2. IF WASTE IS ENCOUNTERED DURING EXCAVATION FOR CLAY PLACEMENT, CONTRACTOR TO HAUL TO ACTIVE FACE OF LANDFILL.

4 C101 **NORTHWEST LINER CONNECTION**
NO SCALE



NOTES

1. PROVIDE 1'-0" MINIMUM OF 60-MIL HDPE GEOMEMBRANE ABOVE GRADE FOR ELECTRICAL LEAK LOCATION (SEE SPECIFICATIONS). TERMINATE HDPE GEOMEMBRANE AT GROUND SURFACE FOLLOWING COMPLETION OF ALL TESTING.
2. GROUNDWATER CONTROL TRENCH AT SOUTH LINER TERMINATION NOT SHOWN FOR CLARITY.



5 C101 **NORTH LINER TERMINATION**
NO SCALE

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1	10-16-2024	ISSUED FOR 60% REVIEW

PROJECT MANAGER	K. KINLEY
CIVIL	K. KINLEY
CIVIL	M. CORRY
DRAWN BY	M. BICKFORD
QC BY	
PROJECT NUMBER	10408322

PRELIMINARY NOT FOR CONSTRUCTION OR RECORDING

Metro Waste Authority

METRO PARK WEST
MWA PROJECT P-67
CELL E LINER CONSTRUCTION

DETAILS

0 1" 2"

FILENAME C502.DWG
SCALE AS NOTED

SHEET C502

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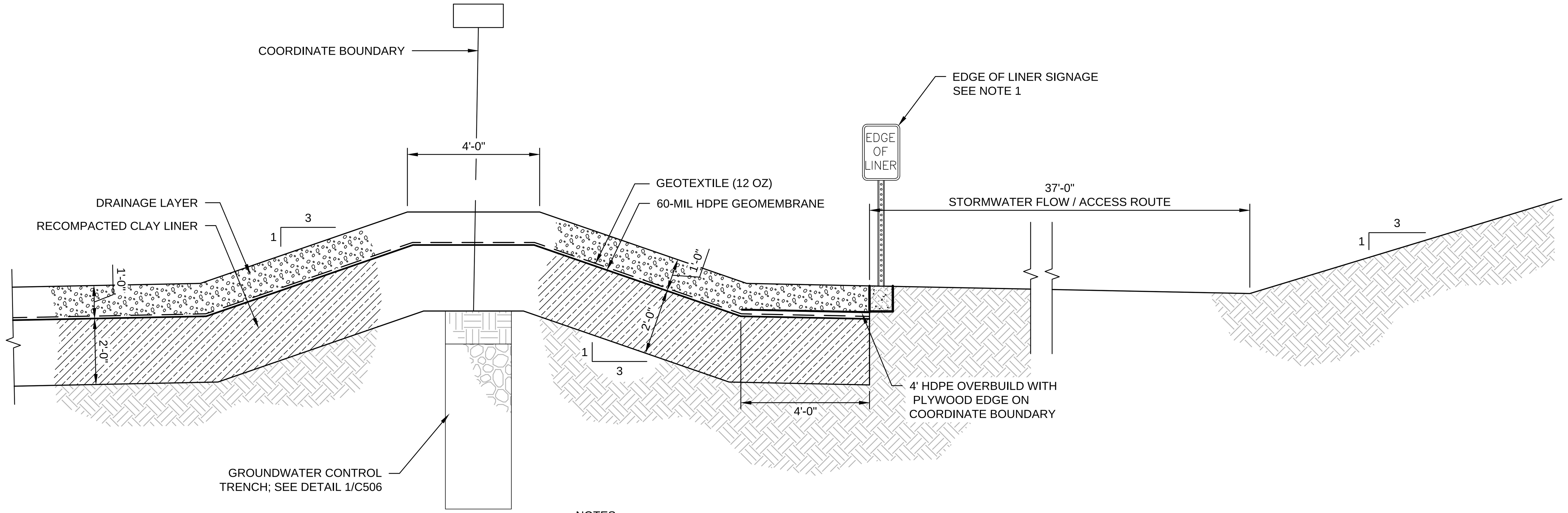
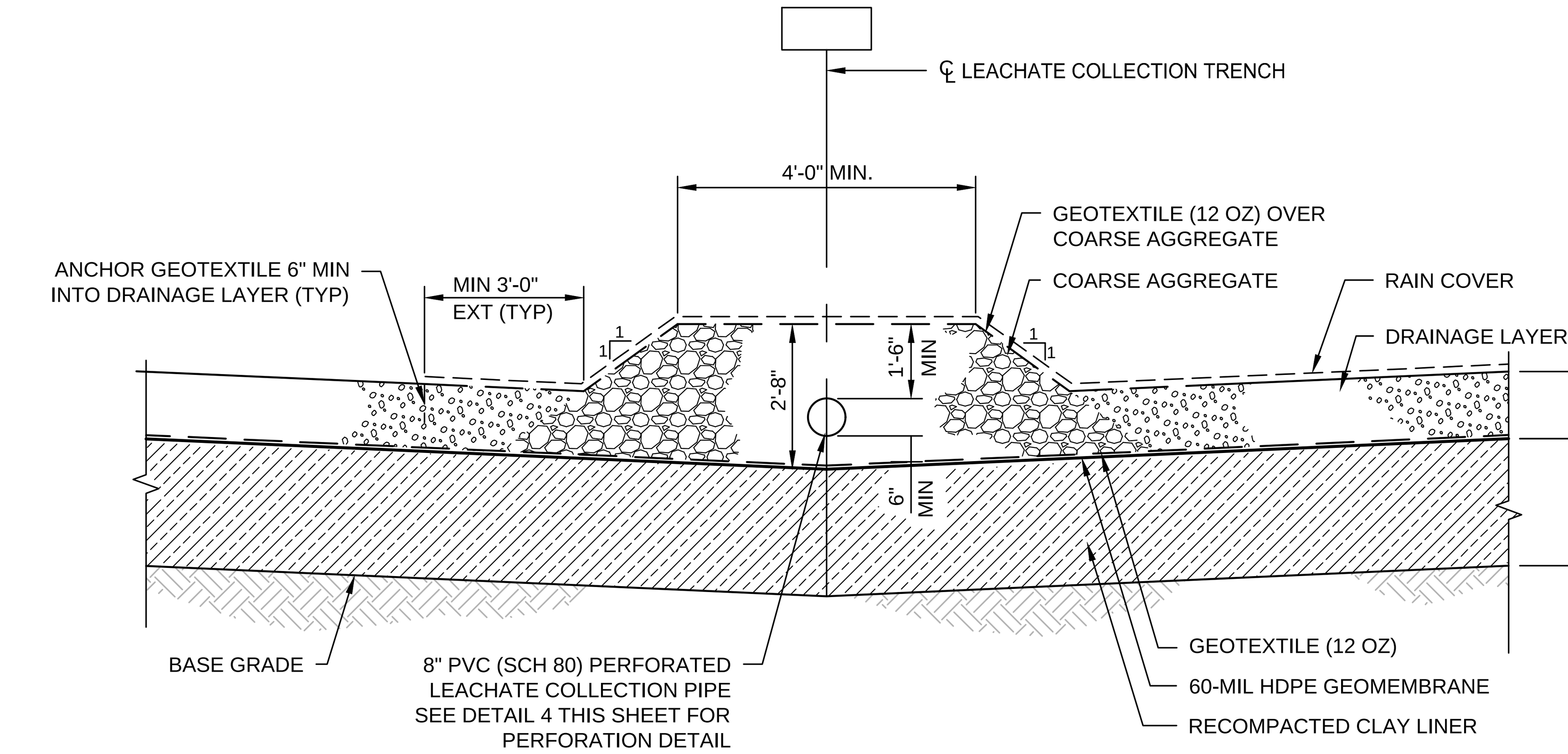


NOTES

1. SIGN MOUNTED WITH SS BOLTS ON 8' GALV STEEL. "U" SIGN POST SET IN 5-GAL. BUCKET FILLED WITH CONCRETE FILL. SET TOP OF BUCKET BELOW GRADE. PLACE SIGNS ALONG EAST AND SOUTH HDPE LINER TERMINATIONS EVERY 100' AND AT SOUTHEAST, SOUTHWEST, AND NORTHEAST CORNERS.

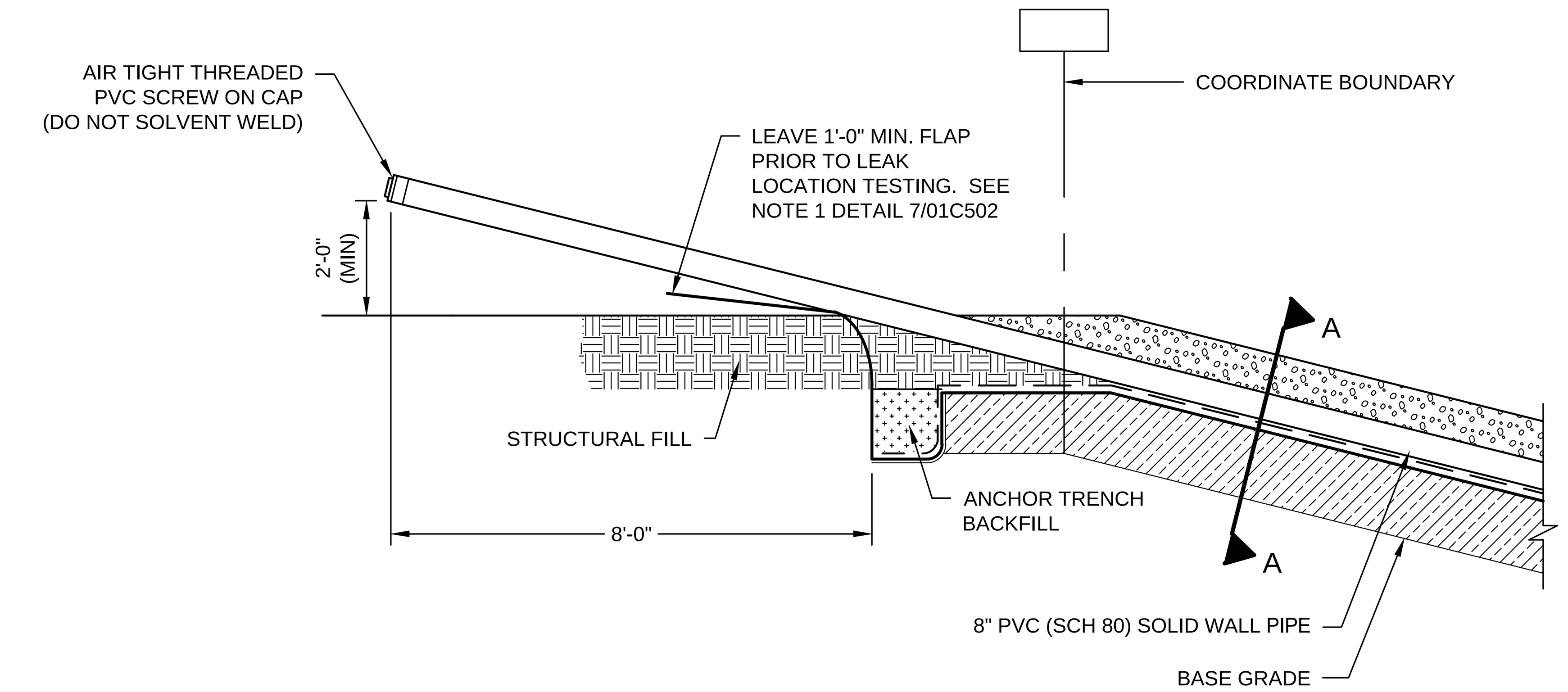
1 / C101 EAST LINER / INTERCELL BERM TERMINATION

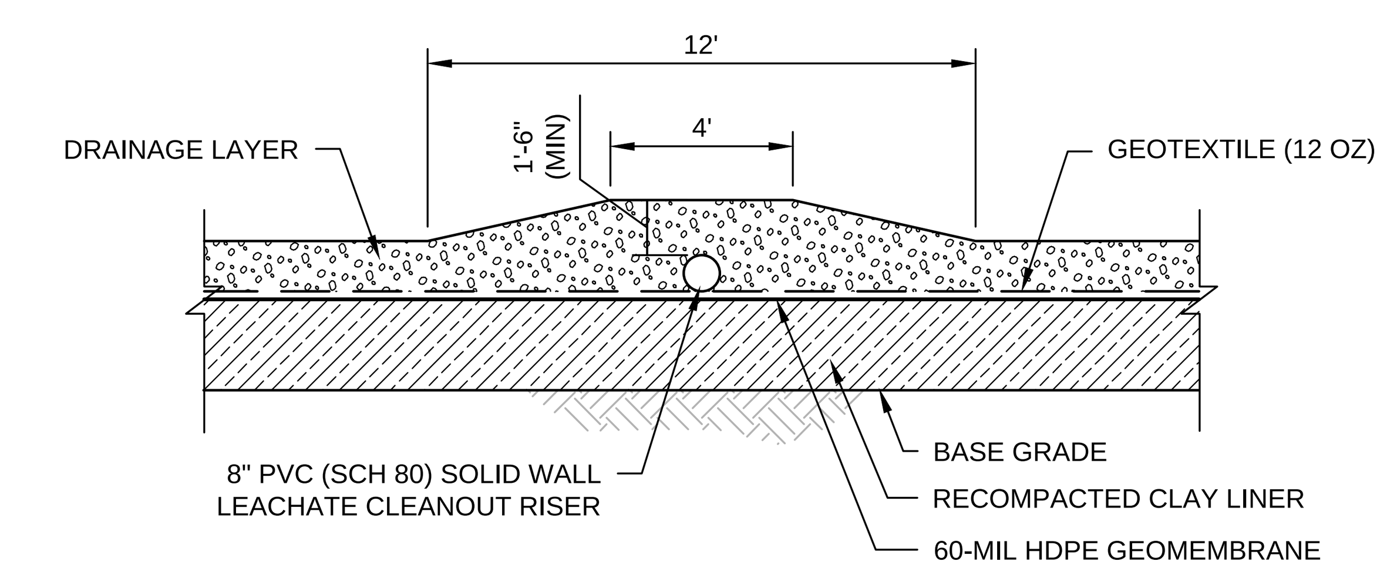
NO SCALE



2 / C101 LEACHATE COLLECTION TRENCH

NO SCALE





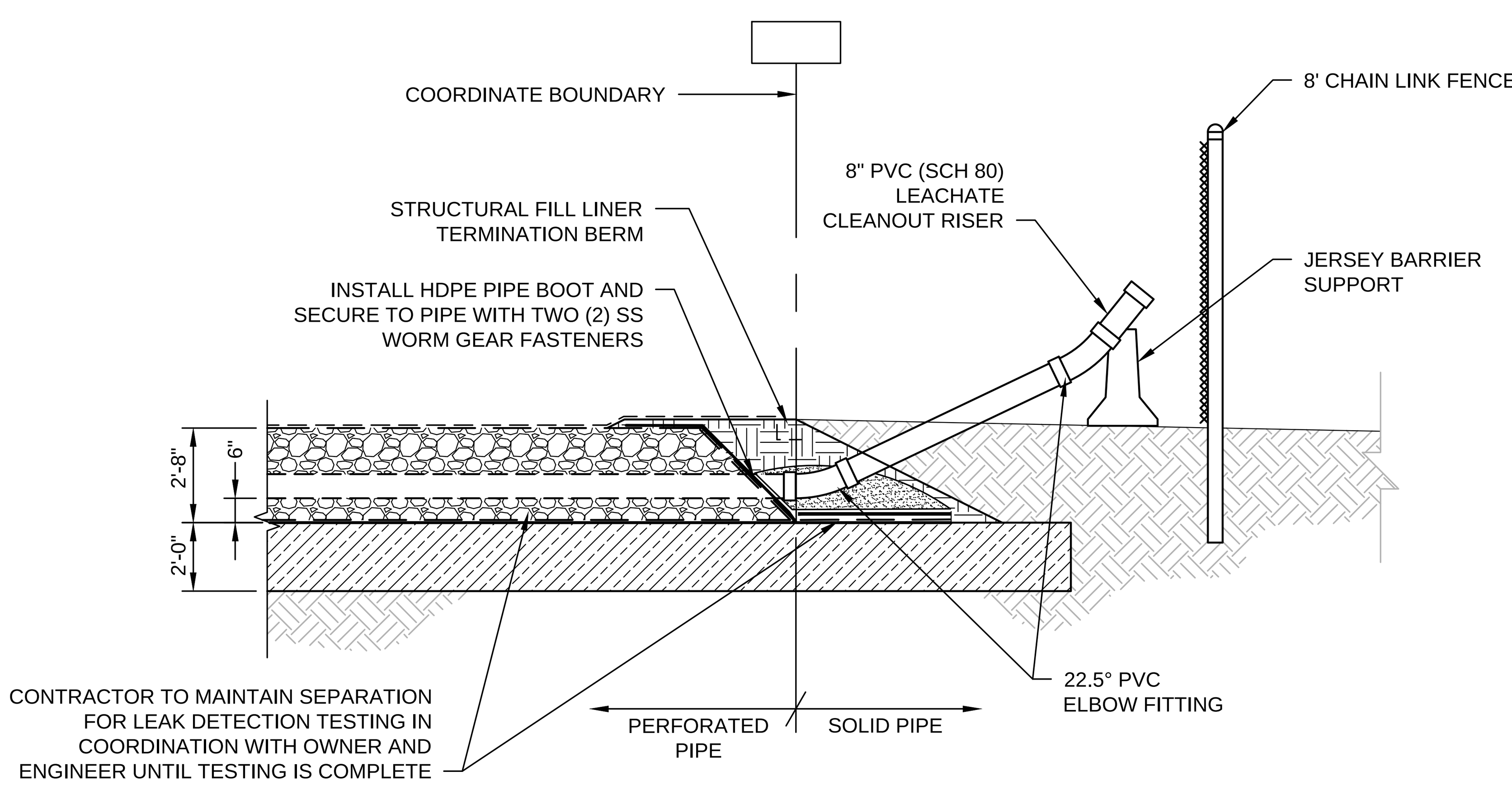
SECTION A-A

NOTES

1. EDGE OF LINER SIGNAGE AND RAIN COVER NOT SHOWN FOR CLARITY.
2. ENSURE A MINIMUM 1'-6" DRAINAGE LAYER ABOVE LEACHATE CLEANOUT RISER ALONG ENTIRE LENGTH OF SIDESLOPE.
3. CONTRACTOR TO AVOID VEHICLE TRAFFIC ABOVE LEACHATE CLEANOUT RISER AT ALL TIMES, INCLUDING DURING PLACEMENT OF DRAINAGE LAYER.

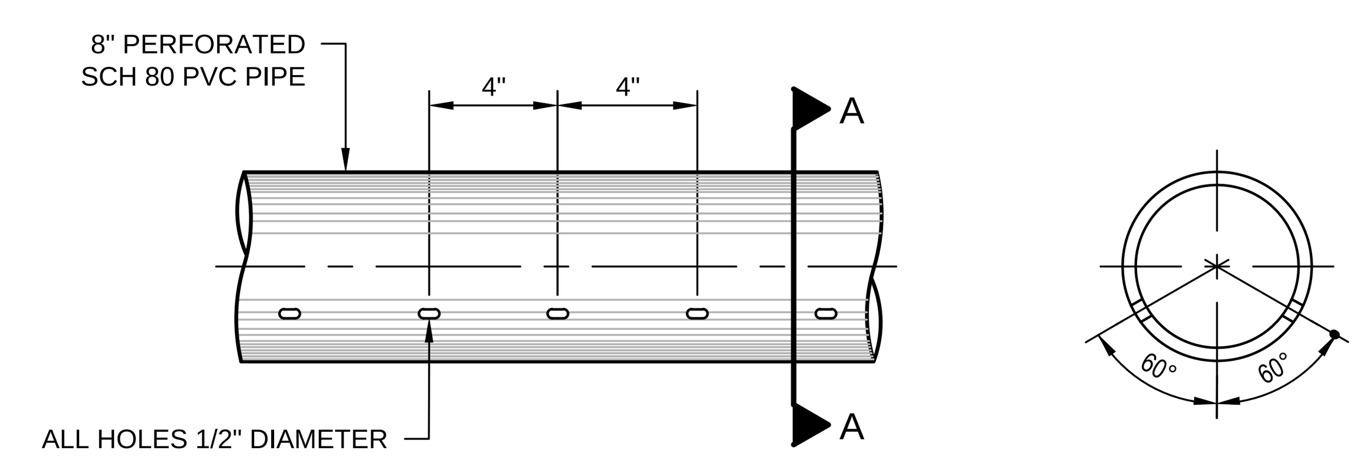
5 / C101 LEACHATE CLEANOUT SIDESLOPE RISER

NO SCALE



3 / C103 TEMPORARY LEACHATE CLEANOUT

NO SCALE



NOTES

1. PROVIDE TWO (2) ROWS 0.5" DIAMETER HOLES SPACED 4" ON CENTER ALIGNED 60 DEG FROM BOTTOM-CENTER OF PIPE.

4 / - PERFORATED LEACHATE COLLECTION PIPE

NO SCALE

HDR

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CIVIL	M. CORRY
DRAWN BY	M. BICKFORD
QC BY	
PROJECT NUMBER	10408322

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Metro Waste Authority

METRO PARK WEST
MWA PROJECT P-67
CELL E LINER CONSTRUCTION

DETAILS

0 1" 2"

FILENAME C503.DWG
SCALE AS NOTED
SHEET C503

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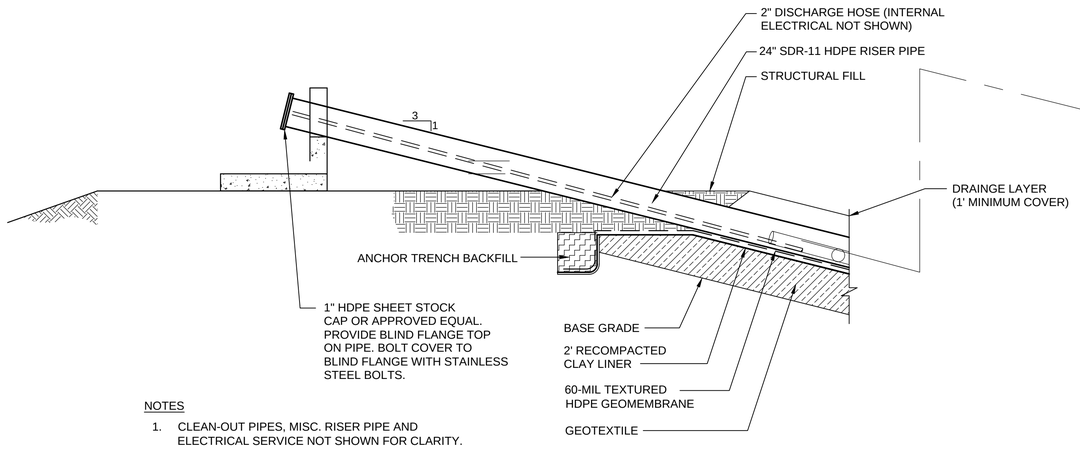
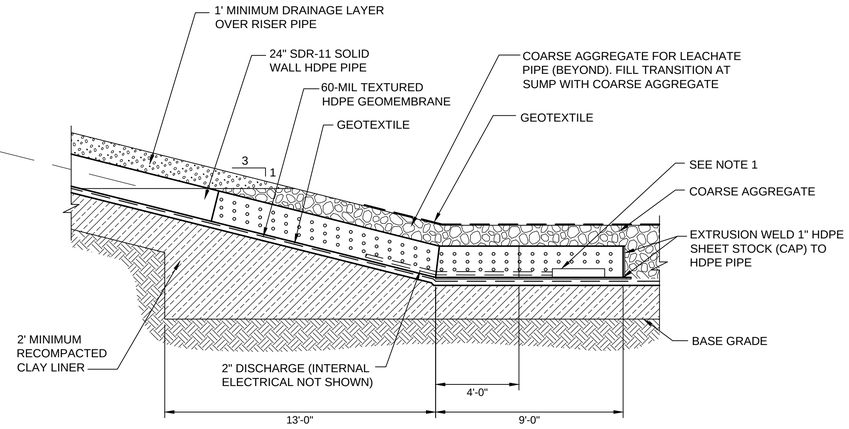


NOTES

1. CLEAN-OUT PIPES, MISC. RISER PIPE AND ELECTRICAL SERVICE NOT SHOWN FOR CLARITY.

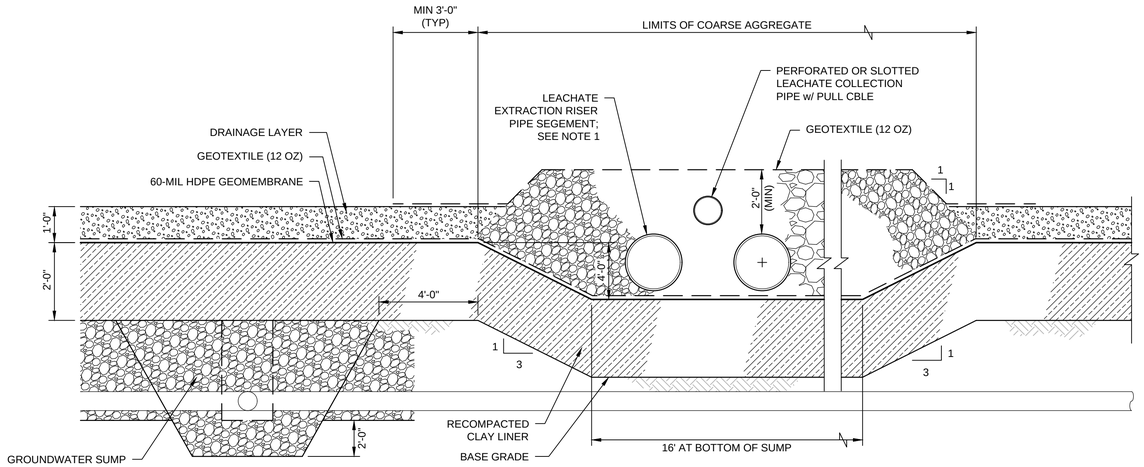
1 / C103 LEACHATE EXTRACTION RISER
NO SCALE



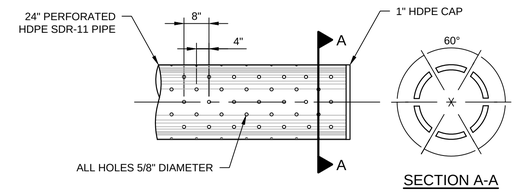
NOTES

1. PUMP, ELECTRICAL AND LEVEL TRANSDUCER DETAILS NOT SHOWN FOR CLARITY.

2 / C103 LEACHATE COLLECTION SUMP
NO SCALE



3 / C103 LEACHATE COLLECTION SUMP
NO SCALE



SECTION A-A

4 / - PERFORATED LEACHATE EXTRACTION PIPE
NO SCALE

NOTES:

1. 0.5" DIAMETER HOLES, 6 ROWS EVENLY SPACED AROUND PERIMETER (60 DEGREES APART), 8" CENTER-TO-CENTER STAGGARED 4" BETWEEN ROWS.
2. SEE SPECIFICATIONS ON PIPE JOINTING, REMOVING BEADS AND CLEANING INSIDE OF ALL PIPES. FOR 24" LEACHATE EXTRACTION RISERS AND LEACHATE COLLECTION LINES (INCLUDING SLOPE RISERS) PROVIDE BEVELED EDGE ON INSIDE OF JOINT SUCH THAT JOINT HAS MINIMAL TO NO BEAD PROJECTION ON INSIDE OF PIPE. PIPE TO BE REAMED TO REMOVED EXCESS BEADS.

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DRAWN BY	M. BICKFORD
QC BY	
PROJECT NUMBER	10408322

PRELIMINARY
NOT FOR
CONSTRUCTION OR
RECORDING

Metro Waste Authority

METRO PARK WEST
MWA PROJECT P-67
CELL E LINER CONSTRUCTION

DETAILS

0 1" 2"

FILENAME	C504.DWG
SCALE	AS NOTED

SHEET C504

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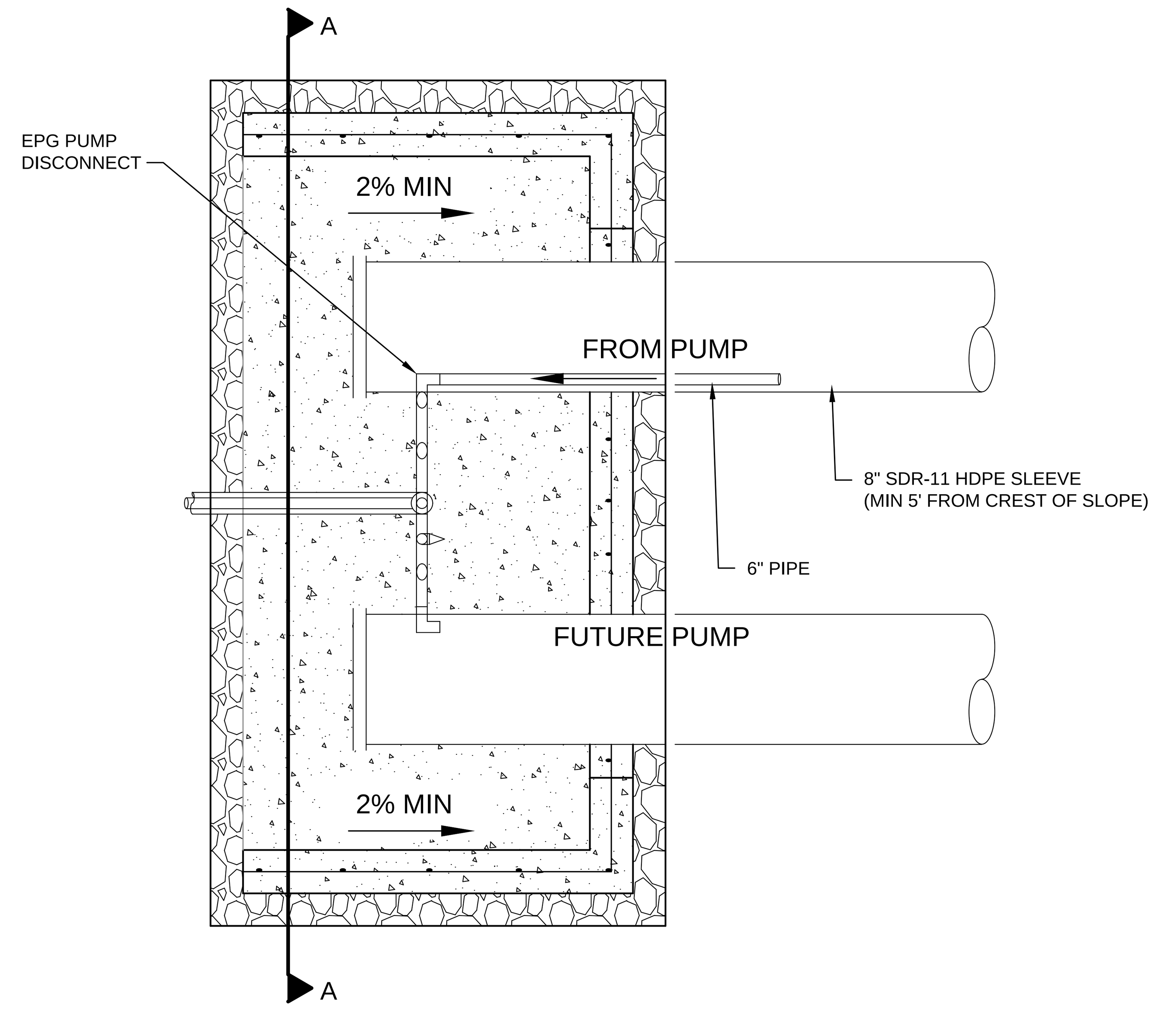
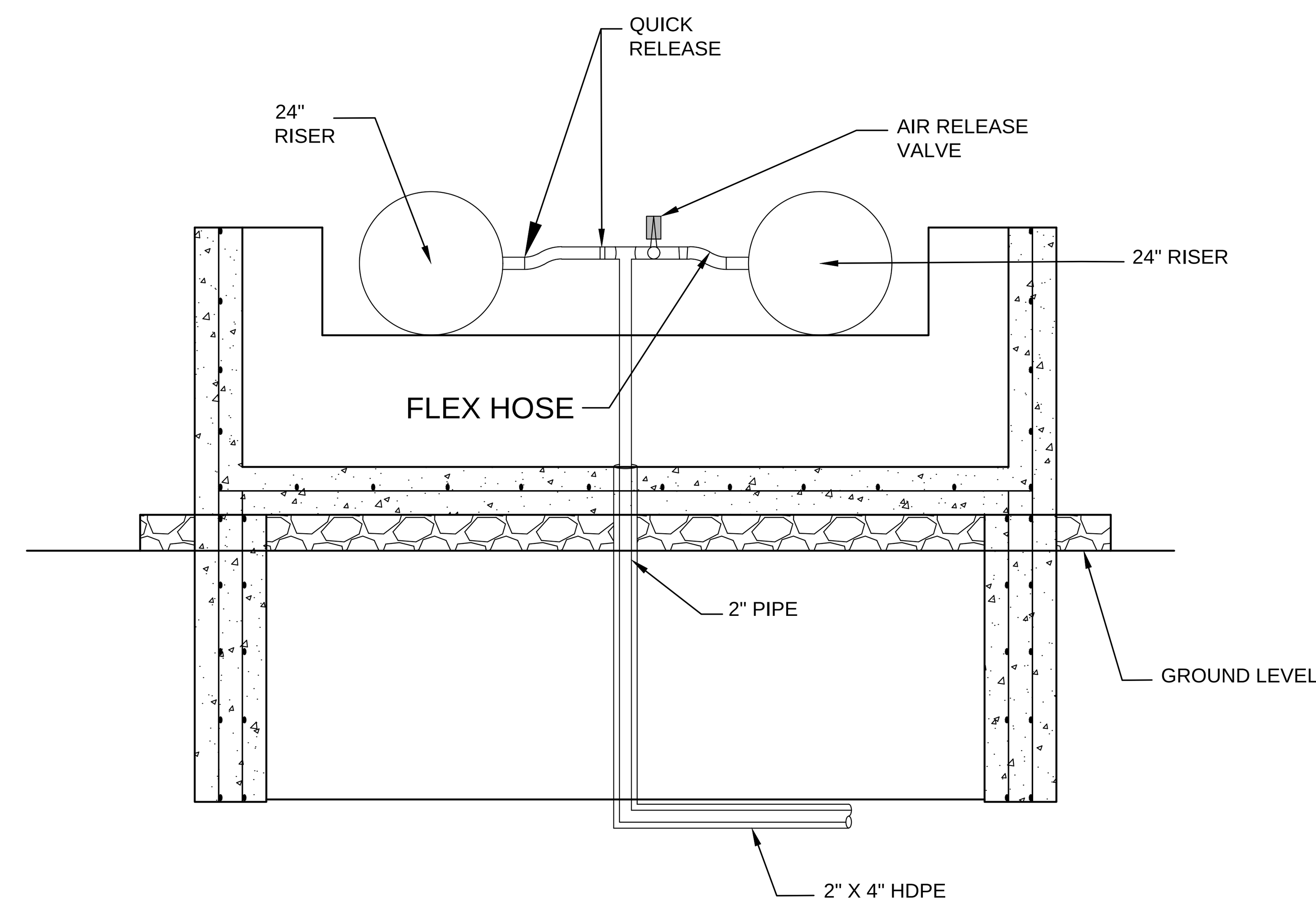


PLAN VIEW



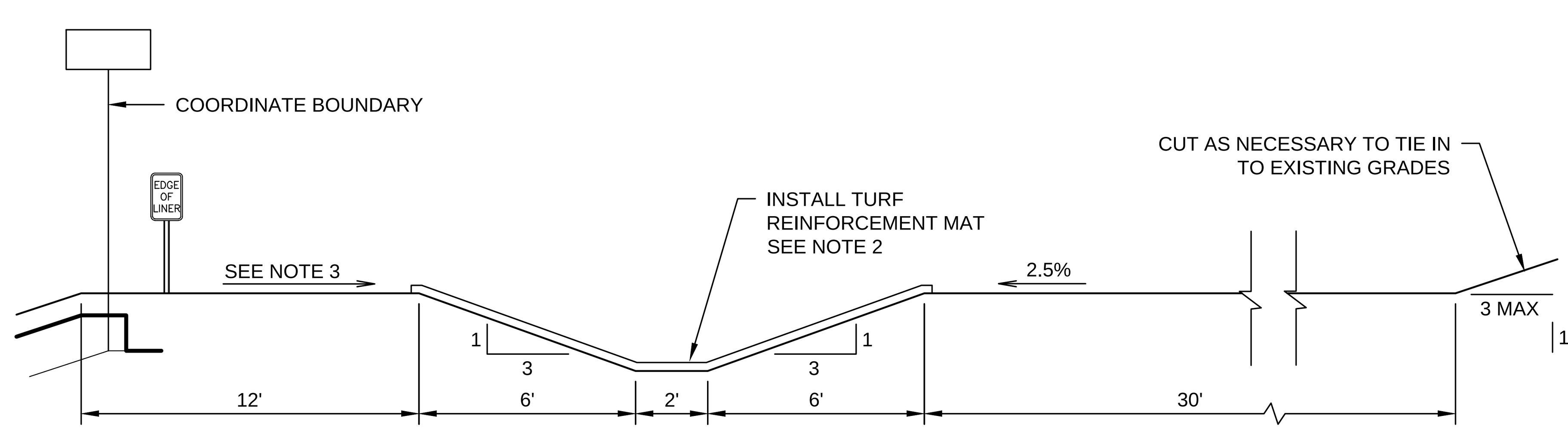
SECTION A-A

NOTES

1. PUMP TO BE AN EPG 5-3, 0.75-HP OR APPROVED EQUIVALENT CAPABLE OF DELIVERING 25-GPM AT 5-FT TDH.

1 C103 HEADWALL DETAIL

NO SCALE

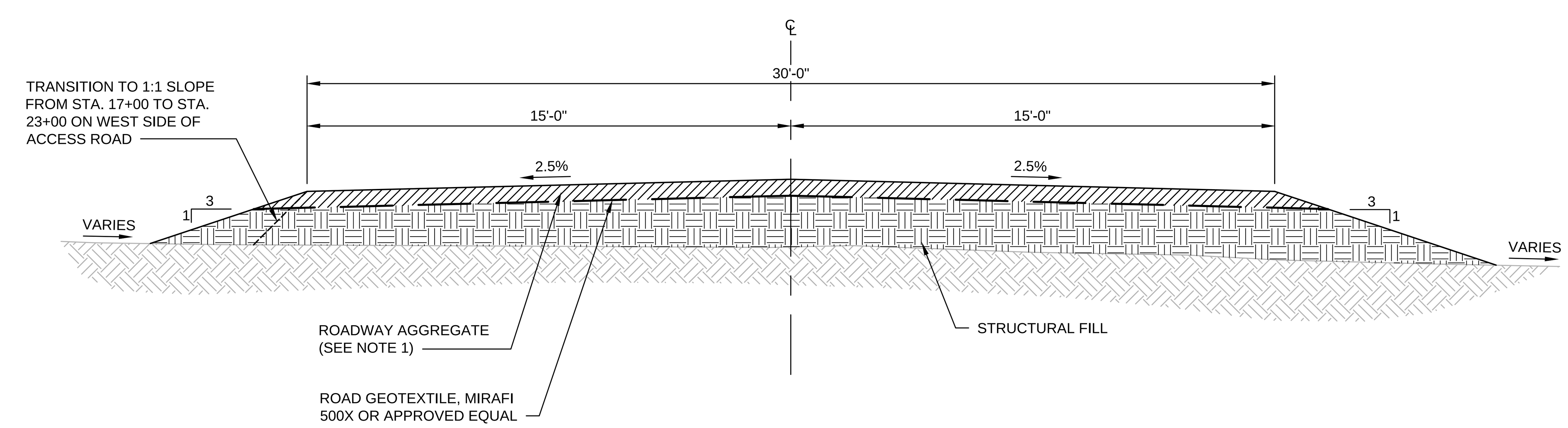


NOTES

1. TO REACH GRADES ALONG PERMANENT PERIMETER DRAINAGE CHANNEL, BOTH EXCAVATION AND PLACEMENT OF STRUCTURAL FILL WILL BE REQUIRED. REFER TO SHEET 01C102 FOR FINAL CONTOURS.
2. CHANNEL SHALL HAVE TURF REINFORCEMENT MAT (NORTH AMERICAN GREEN VMAX C350 OR APPROVED EQUAL). TOPSOIL SHALL BE PLACED ALONG ENTIRE BOTTOM AND SIDESLOPES OF CHANNEL. CHANNEL SHALL BE SEEDED AND FERTILIZED. INSTALL ALL EROSION CONTROL ELEMENTS PER MANUFACTURER'S SPECIFICATIONS.
3. GRADE TO DRAIN TO PERIMETER DRAINAGE CHANNEL AT SLOPES NOT GREATER THAN 2% AND NO LESS THAN 0.5% UNLESS APPROVED BY ENGINEER.

2 C101 PERMANENT PERIMETER DRAINAGE CHANNEL

NO SCALE



NOTES

1. ROADWAY AGGREGATE TO BE COMPRISED OF TWO COURSES, BASE AND SURFACE. BASE COURSE SHALL BE 6-INCHES THICK OF GRADATION NO. 13A. SURFACE COURSE SHALL BE 3-INCHES THICK OF GRADATION NO. 11. SEE SPECIFICATIONS.

3 C101 ACCESS ROAD SECTION

NO SCALE

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1	10-16-2024	ISSUED FOR 60% REVIEW

PROJECT MANAGER	K. KINLEY
CIVIL	K. KINLEY
CIVIL	M. CORRY
DRAWN BY	M. BICKFORD
QC BY	
PROJECT NUMBER	10408322

PRELIMINARY NOT FOR CONSTRUCTION OR RECORDING

Metro Waste Authority

METRO PARK WEST
MWA PROJECT P-67
CELL E LINER CONSTRUCTION

DETAILS

0 1" 2"

FILENAME C505.DWG
SCALE AS NOTED
SHEET C505

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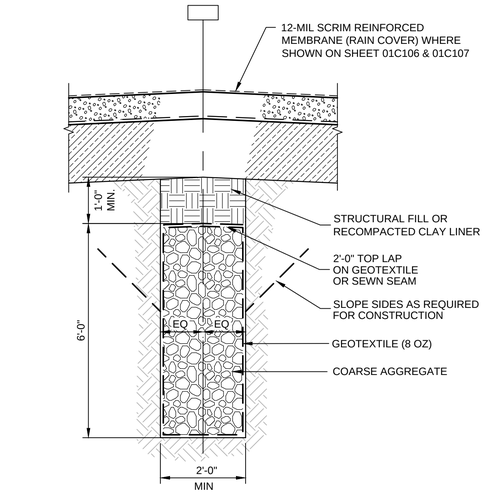
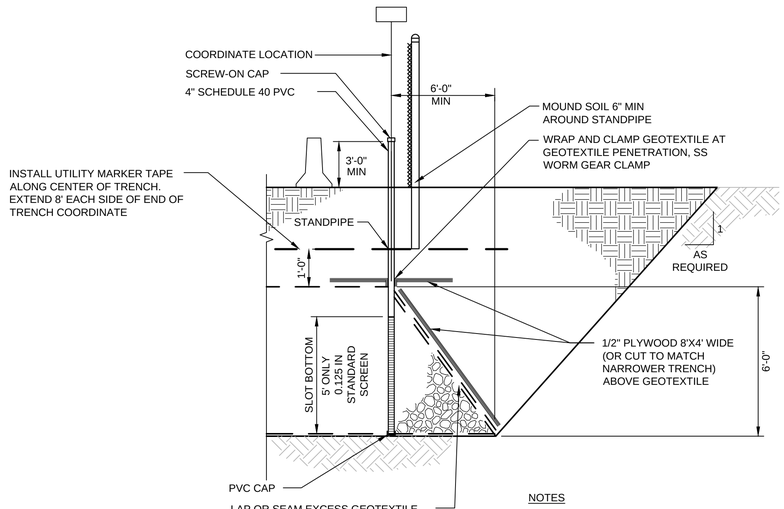


1 C101 GROUNDWATER CONTROL TRENCH LATERAL

NO SCALE

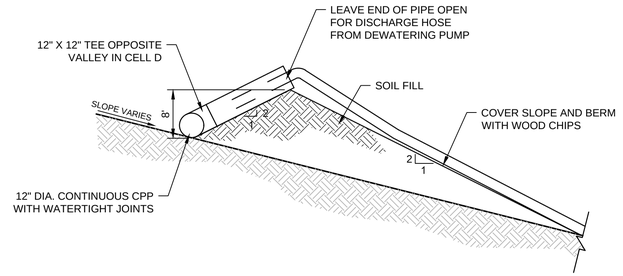


NOTES

1. COMPLETELY WRAP GEOTEXTILE AROUND COARSE AGGREGATE IN TRENCH.
2. CONTRACTOR TO SURVEY LOCATION OF END OF TRENCH PRIOR TO BACKFILLING.

2 C101 GROUNDWATER CONTROL TRENCH LATERAL TERMINATION

NO SCALE

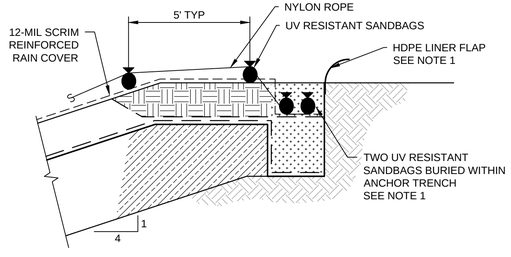


NOTES

1. SLOPE BERM AND PIPE AT 2% MIN. TO DISCHARGE AT EXISTING DRAINAGE CHANNEL AS SHOW ON SHEET C101.

3 C101 STORM WATER DIVERSION BERM

NO SCALE

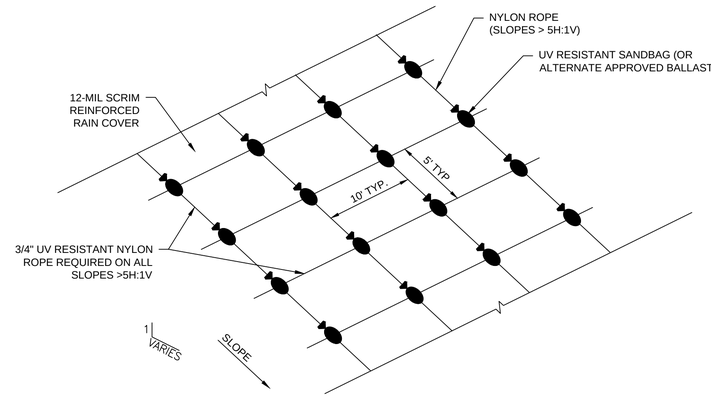


NOTES

1. NYLON ROPE TIED TO 4"x4"x4' TREATED LUMBER BURIED IN THE ANCHOR TRENCH CONTINUOUS ALONG LINER EDGE MAY BE USED IN LIEU OF SAND BAGS.

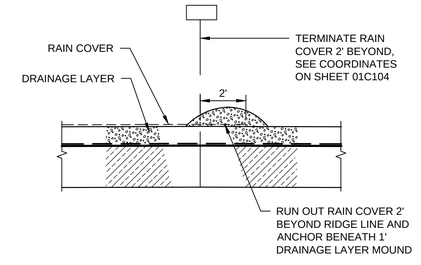
4 C103 RAIN COVER ANCHOR TRENCH TERMINATION

NO SCALE



5 C103 BALLASTING FOR 12-MIL SCRIM REINFORCED RAIN COVER

NO SCALE



6 C103 RAIN COVER TERMINATION

NO SCALE

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1	10-16-2024	ISSUED FOR 60% REVIEW

PROJECT MANAGER	K. KINLEY
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QC BY	
PROJECT NUMBER	10408322

PRELIMINARY
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Metro Waste Authority

METRO PARK WEST
MWA PROJECT P-67
CELL E LINER CONSTRUCTION

DETAILS

0 1" 2"

FILENAME C506.DWG
SCALE AS NOTED

SHEET C506

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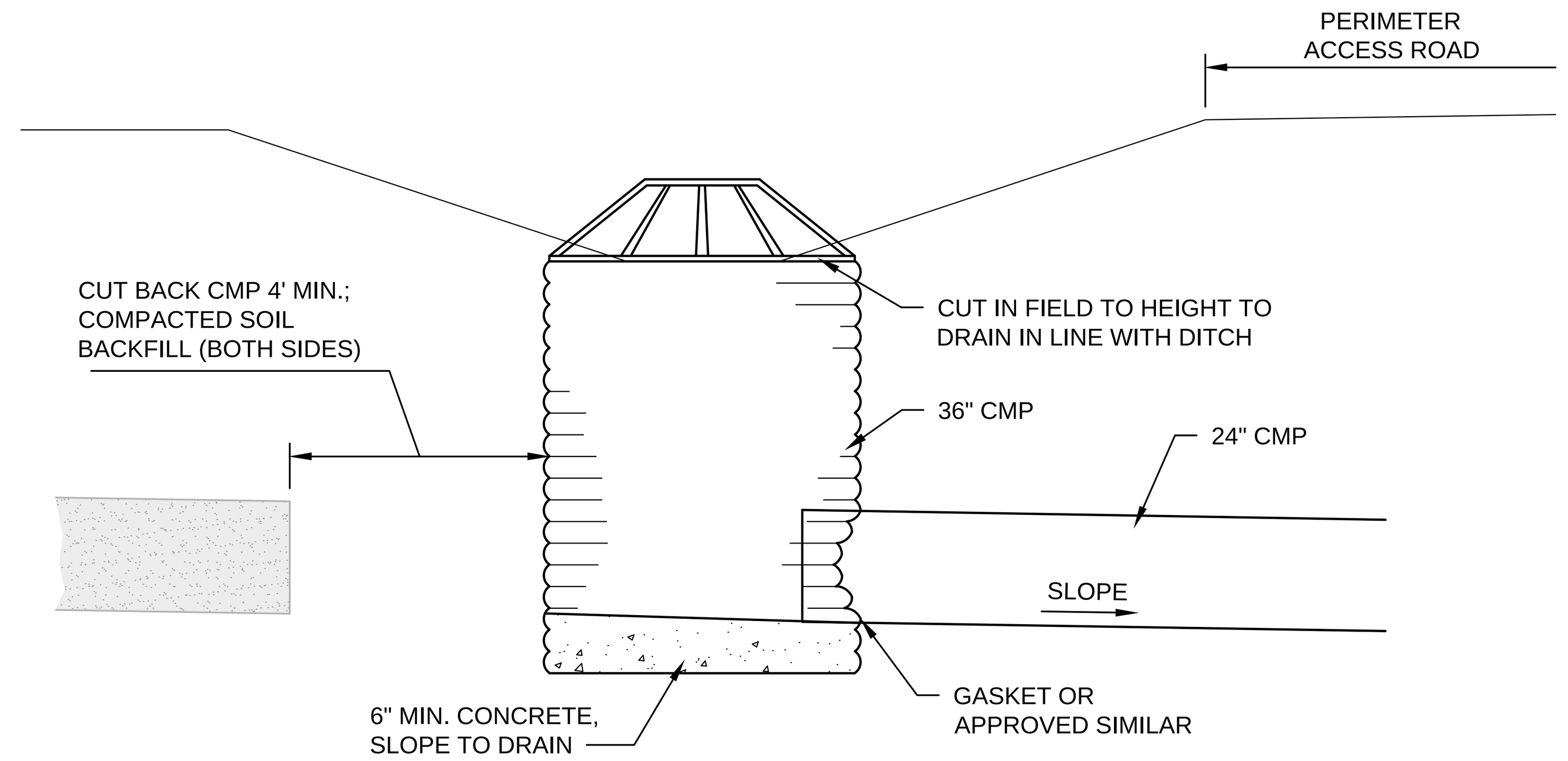
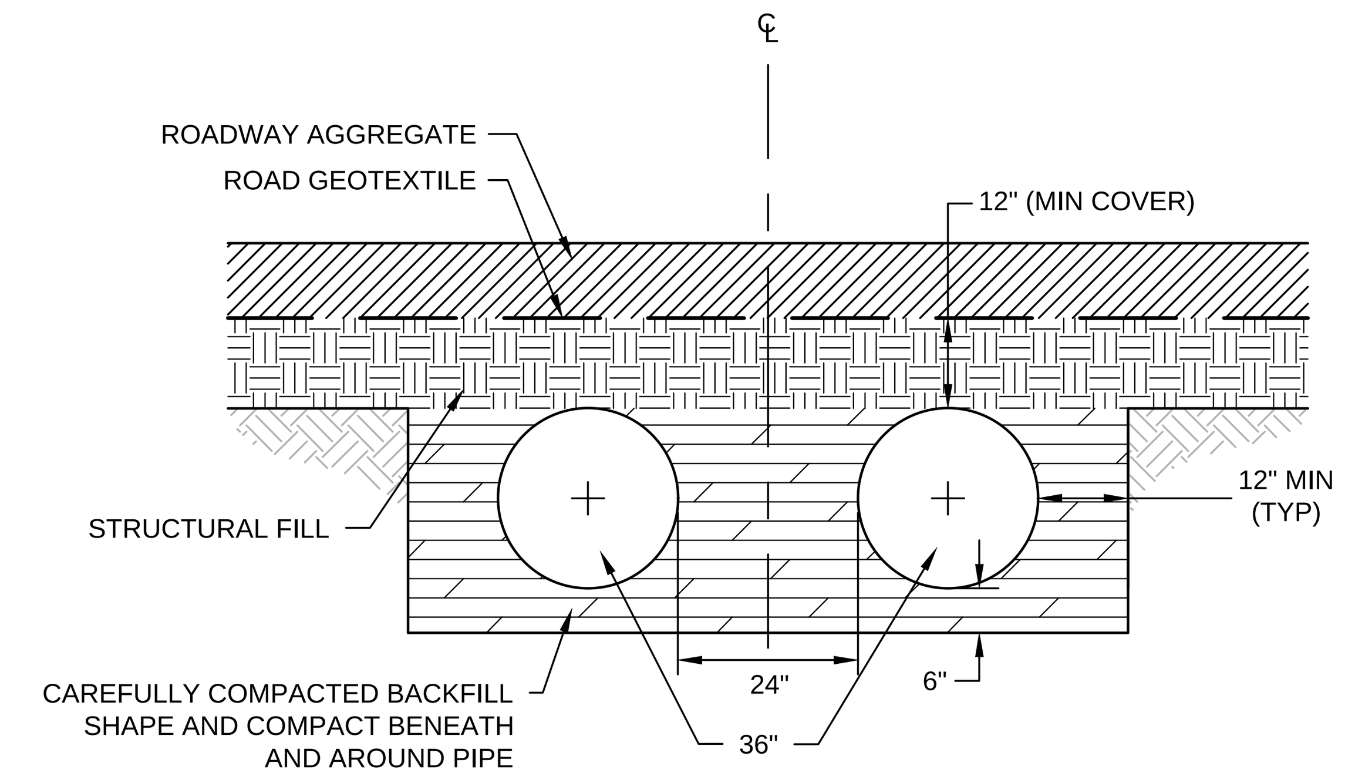


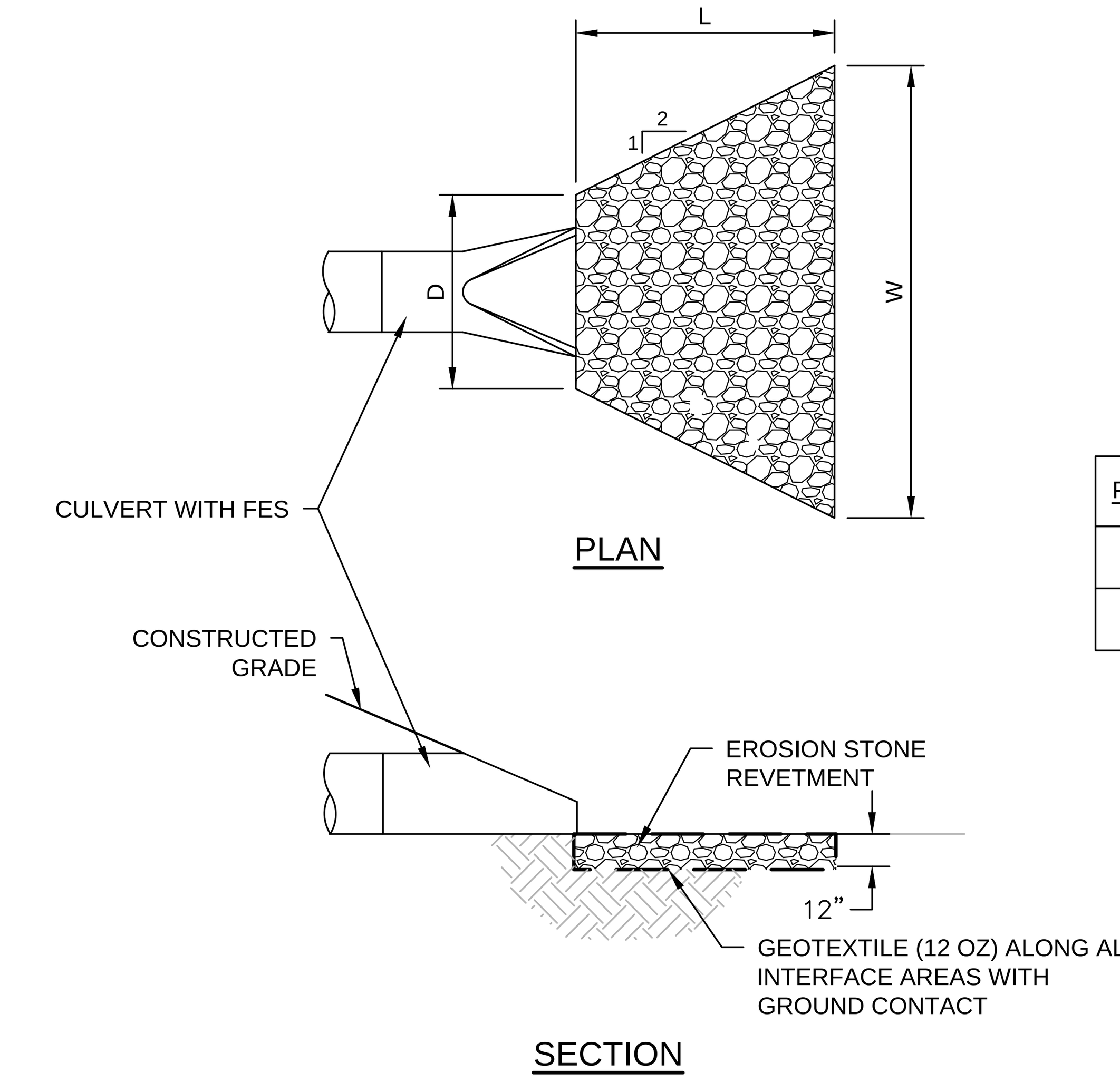
1 / C101 DROP STRUCTURE

NO SCALE



2 / C101 CULVERT ROAD CROSSING

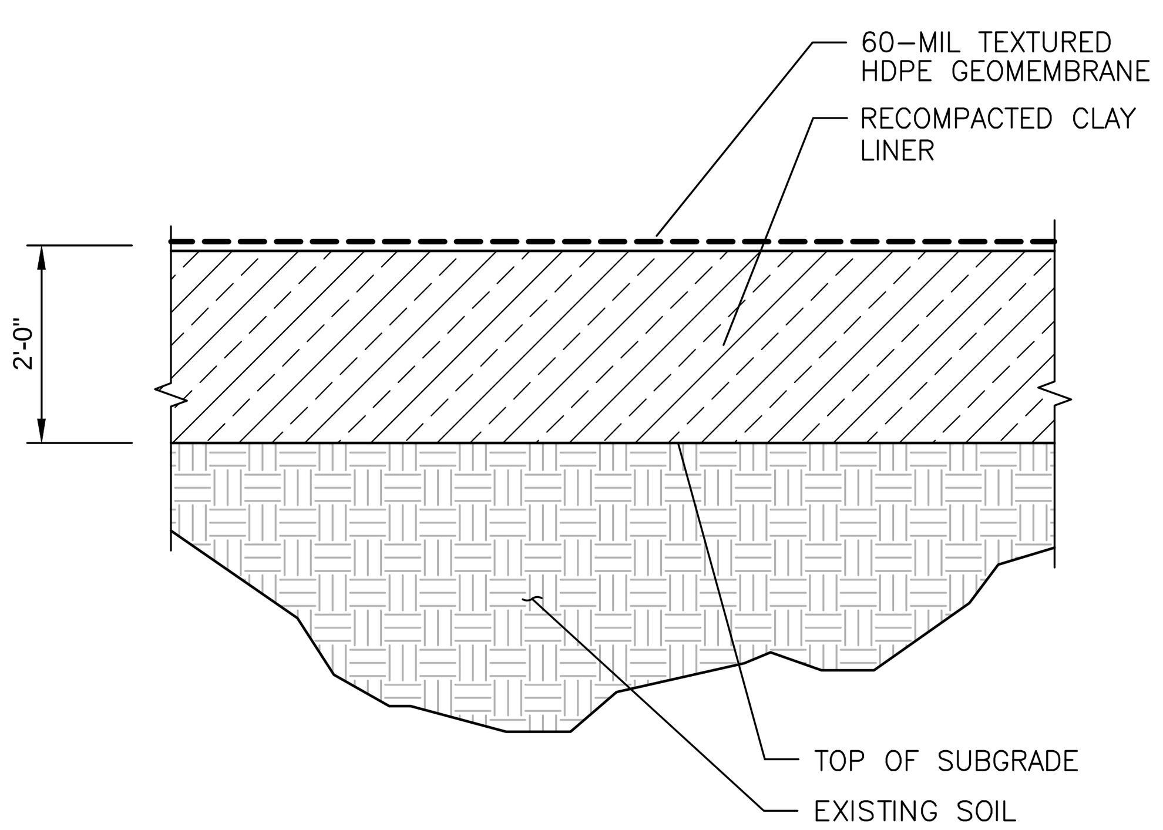
NO SCALE



PIPE DIA.	D	W	L
2-24"	14'	14'	10'
12"	5'	5'	5'

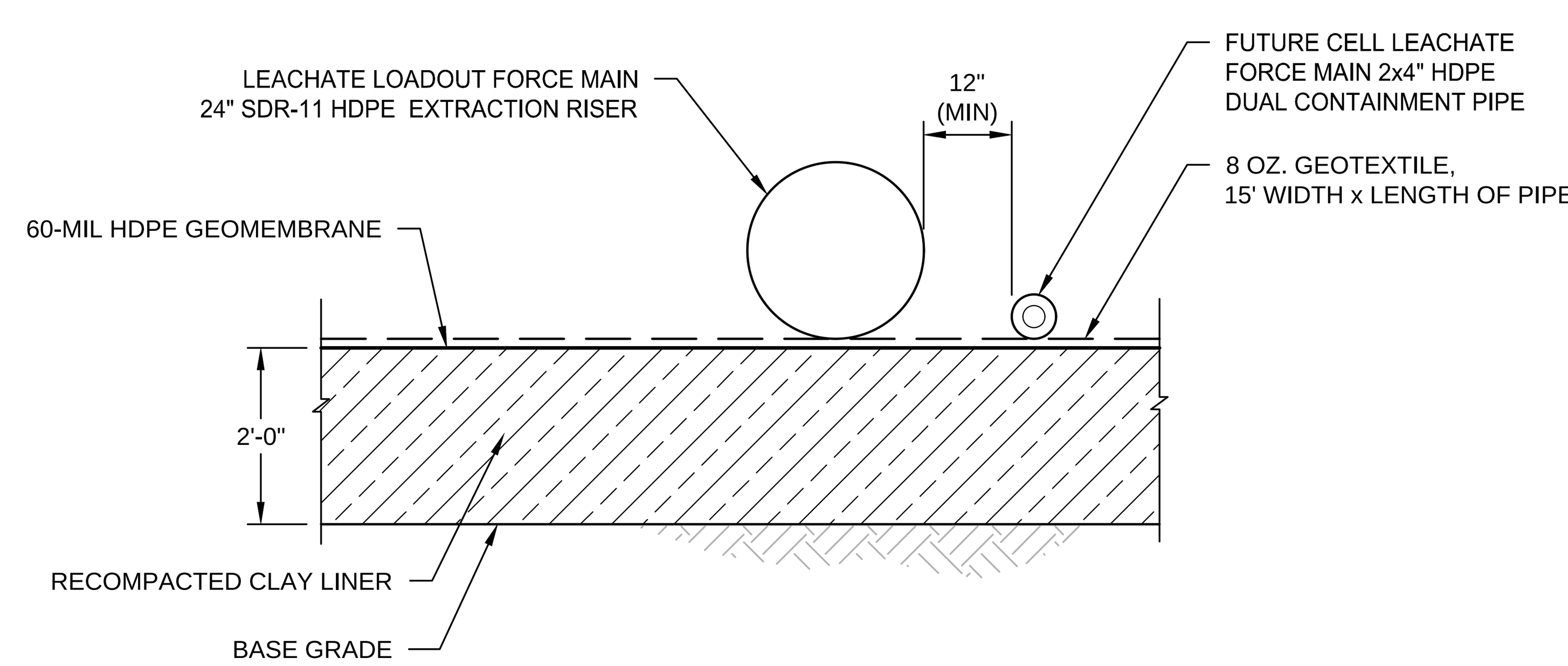
3 / - RIP-RAP APRON

NO SCALE



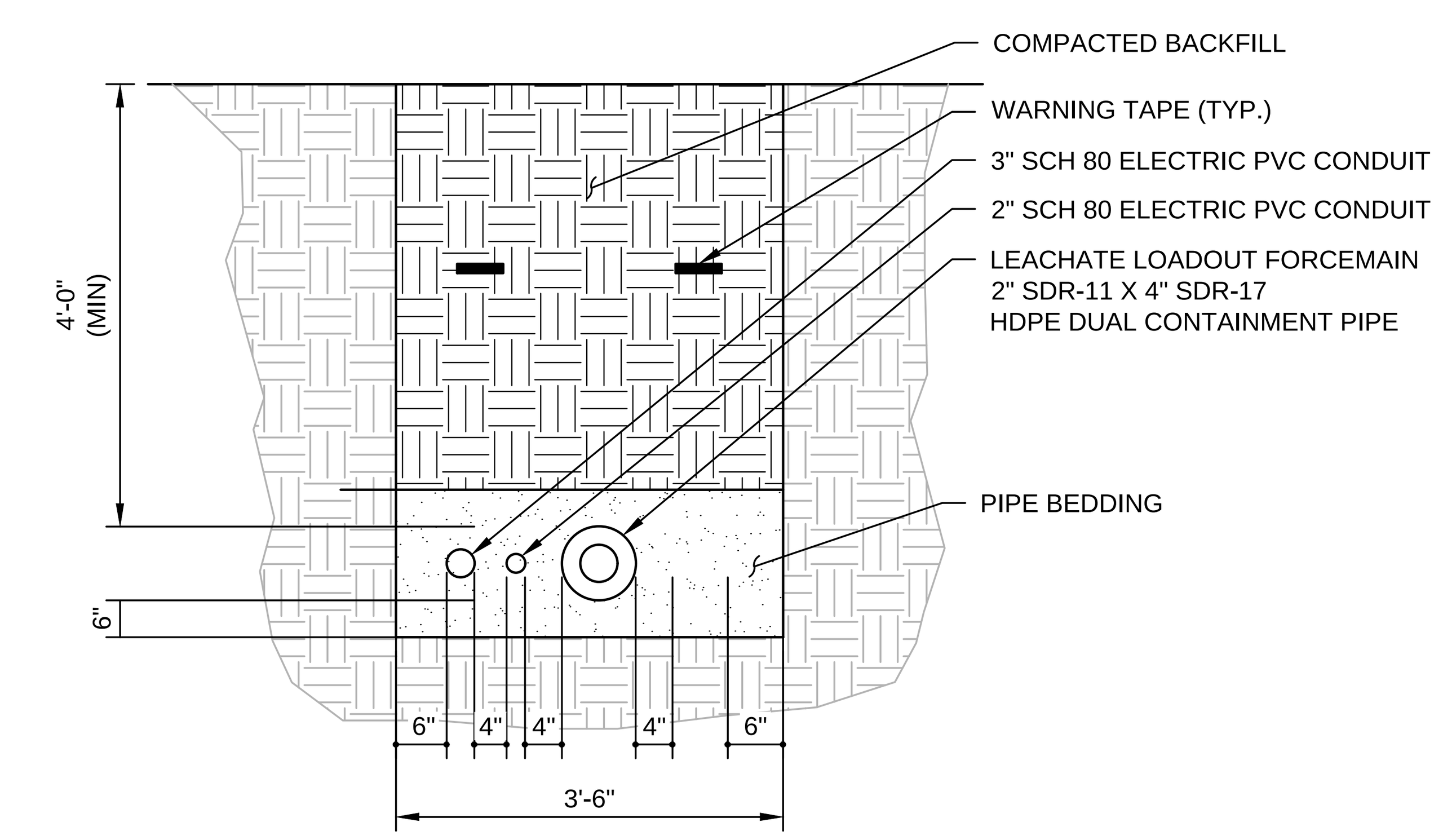
4 / C104 LEACHATE POND LINER

NO SCALE



5 / C104 LEACHATE RISER AND DISCHARGE SLOPE SECTION

NO SCALE



6 / C104 LEACHATE CONVEYANCE TRENCH OUTSIDE OF SOLID WASTE BOUNDARY

NO SCALE

HDR

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1	10-16-2024	ISSUED FOR 60% REVIEW

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PROJECT NUMBER	10408322

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METRO PARK WEST
MWA PROJECT P-67
CELL E LINER CONSTRUCTION

DETAILS

0 1" 2"

FILENAME C507.DWG

SCALE AS NOTED

SHEET C507

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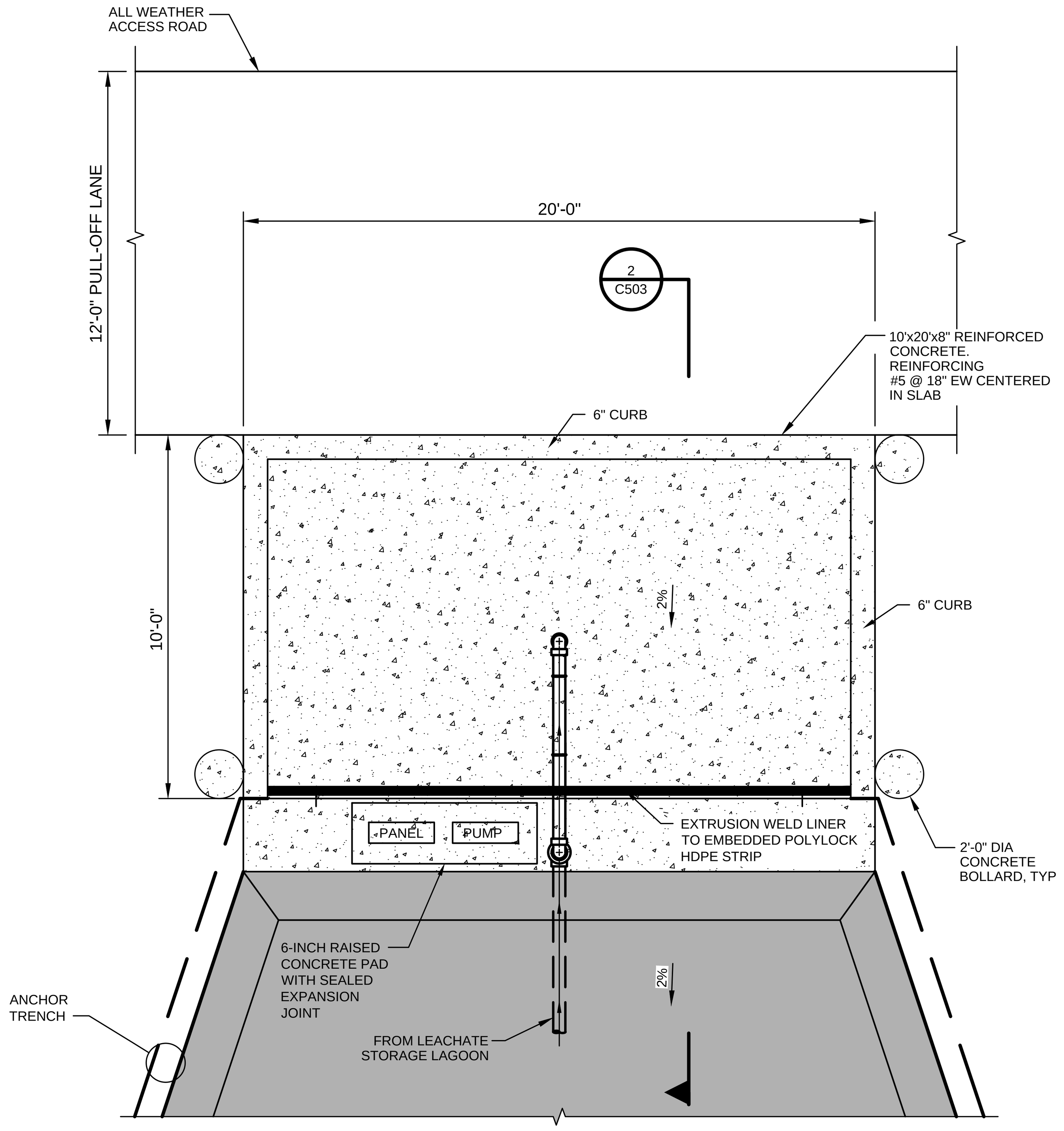
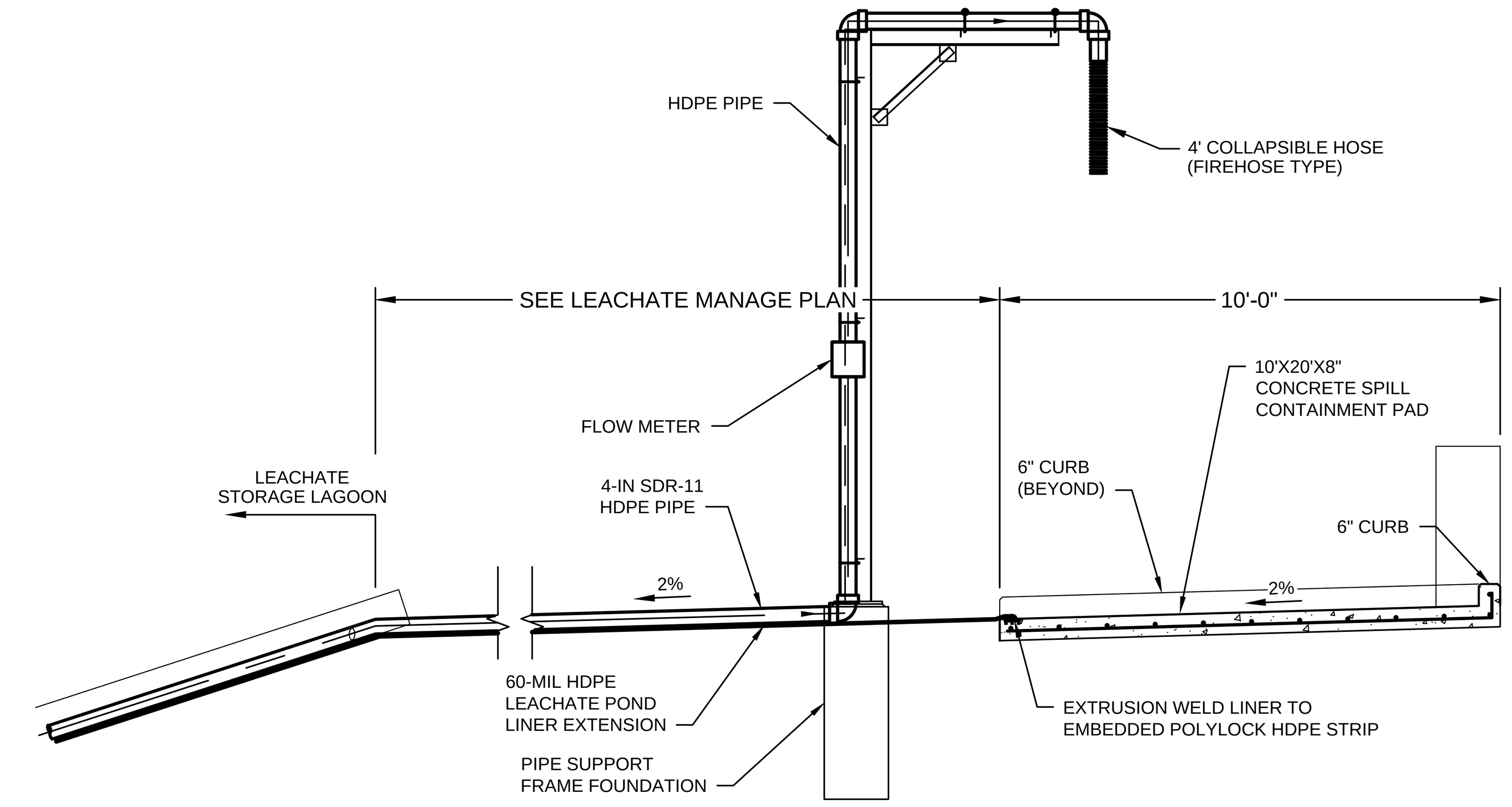


NOTES

1. ALL PIPING CONNECTIONS SHALL BE LEAKPROOF.
2. SLOPE/GRADE ALL SURFACES SURROUNDING CONCRETE TO SLOPE AWAY FROM CONCRETE PAVING.
3. CONCRETE JOINTED TO BE SEALED WITH WATERPROOF SEALANT.

1 C104 LEACHATE LOAD-OUT AREA PLAN

NO SCALE

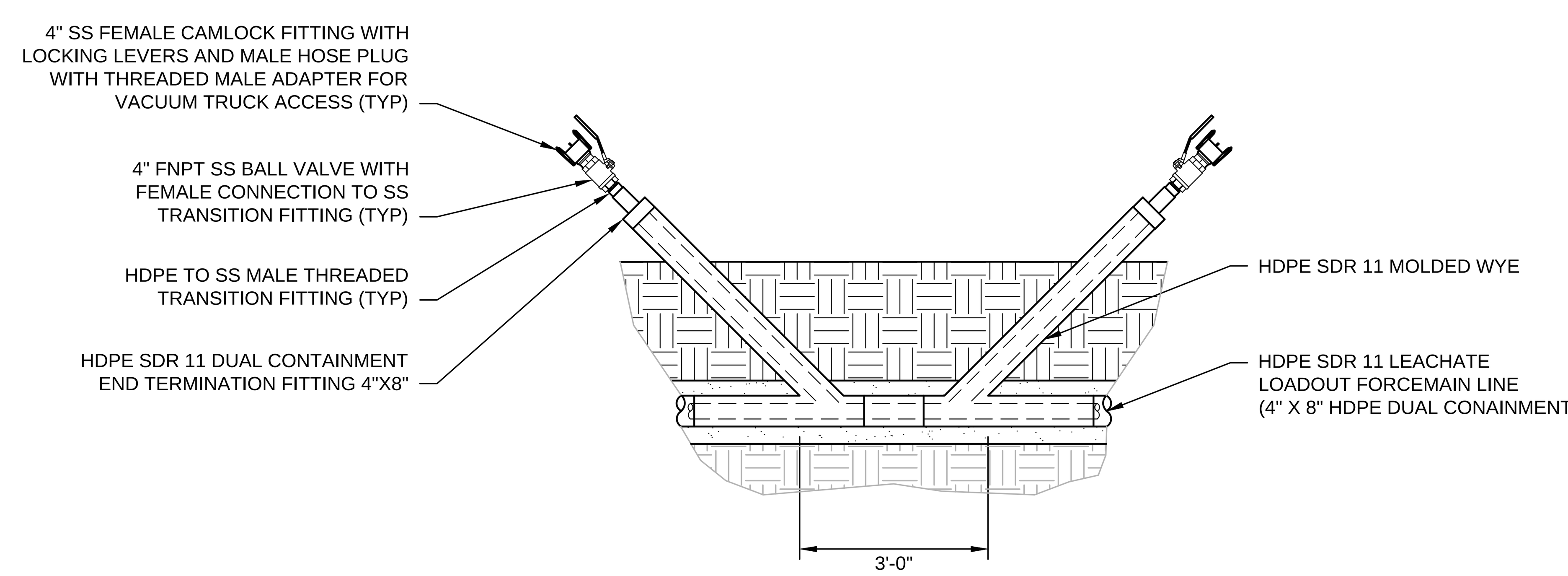


NOTES

1. PUMP TO BE AN EPG 77-1, 7.5-HP OR APPROVED EQUIVALENT CAPABLE OF DELIVERING APPROX. 250-GPM AT 60-FT TDH. DRILL OUT ABOVE PUMP.
2. INSTALL EPG QUICK DISCONNECT TO MAINTAIN DRAINAGE BACK INTO POND.
3. ANCHOR SUMP RISER AT POND SUMP WITH 6-BLACK HDPE CONCRETE FILLED BUCKETS, CONNECT WITH STAINLESS STEEL CABLE OR APPROVED SIMILAR.

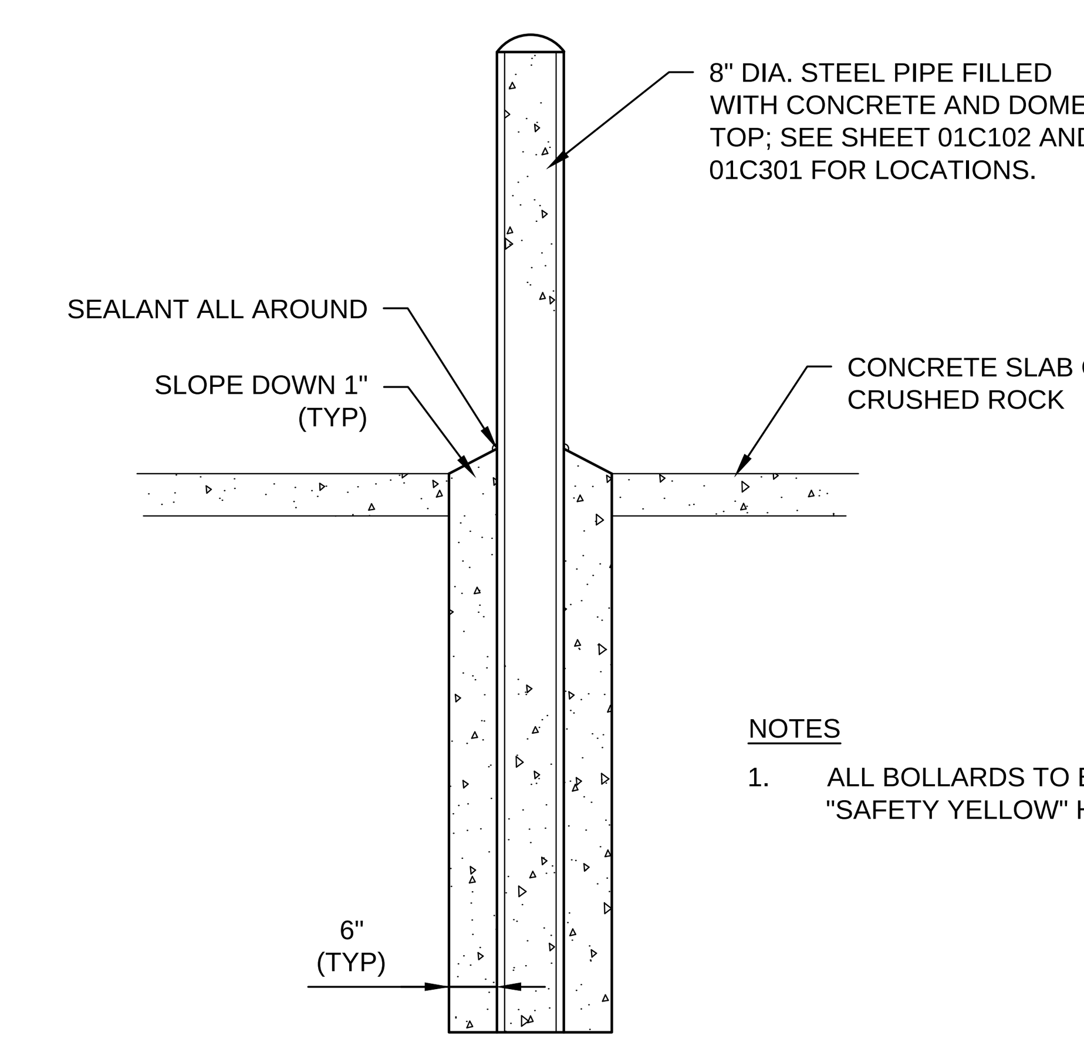
2 C104 LEACHATE LOAD-OUT AREA SECTION

NO SCALE



3 - LEACHATE FORCEMAIN CLEANOUT

NO SCALE



NOTES

1. ALL BOLLARDS TO BE INSTALLED WITH "SAFETY YELLOW" HDPE SLIP COVERS.

4 - BOLLARD

NO SCALE

ISSUE	DATE	DESCRIPTION
1	10-16-2024	ISSUED FOR 60% REVIEW

PROJECT MANAGER	K. KINLEY
CIVIL	K. KINLEY
CIVIL	M. CORRY
DRAWN BY	M. BICKFORD
QC BY	
PROJECT NUMBER	10408322

PRELIMINARY NOT FOR CONSTRUCTION OR RECORDING

Metro Waste Authority

METRO PARK WEST
MWA PROJECT P-67
CELL E LINER CONSTRUCTION

DETAILS

FILENAME C508.DWG
SCALE AS NOTED
SHEET C508

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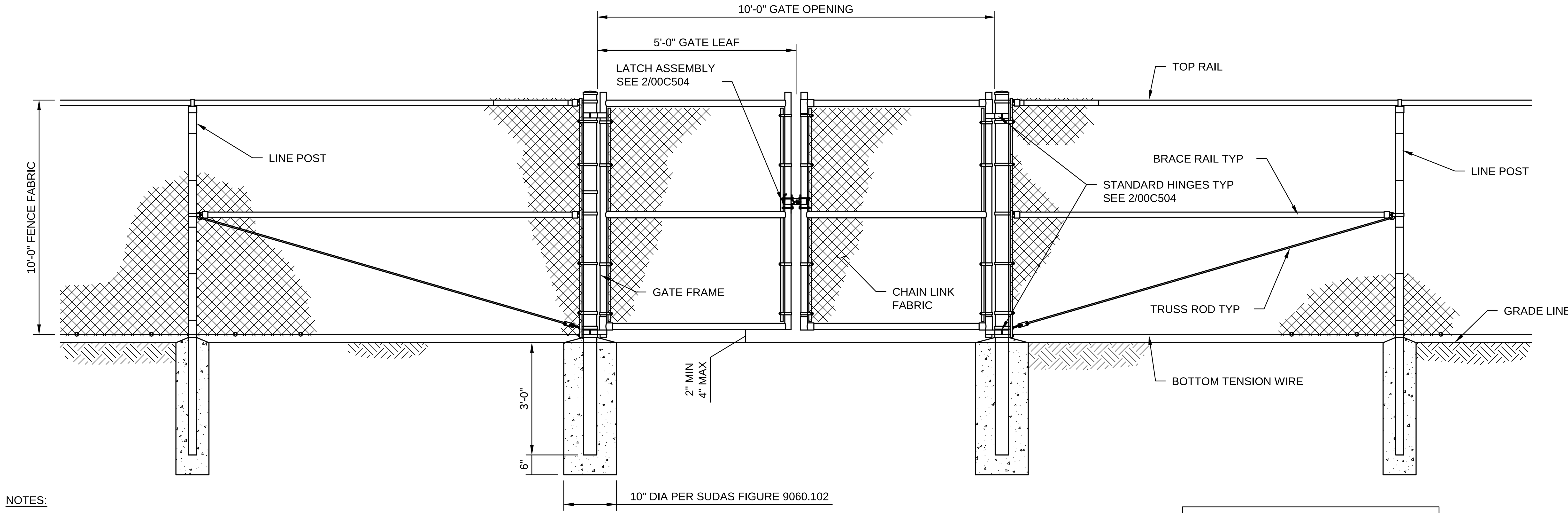
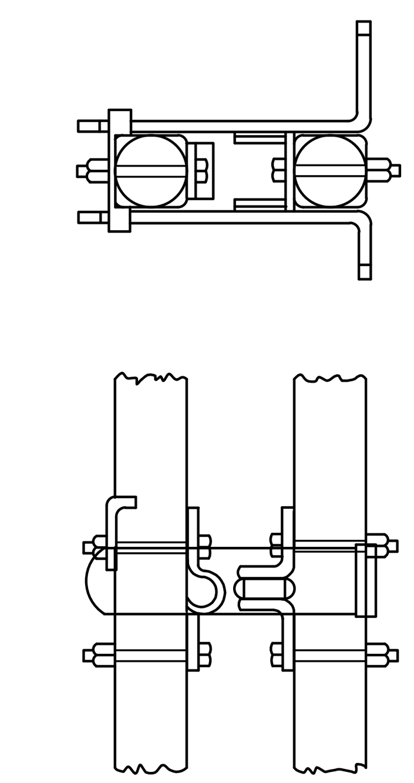


NOTES:

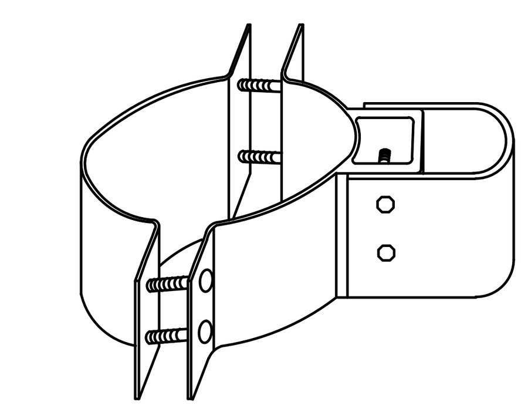
1. DETAILS SHOWN ARE TO CLARIFY REQUIREMENTS AND ARE NOT INTENDED TO LIMIT OTHER TYPES OF FENCE SECTIONS AND METHODS OF INSTALLATION.
2. SWING GATES SHALL BE CONSTRUCTED WITH PADLOCKS, AND LATCH ASSEMBLY.
3. ALL GATE FRAMES SHALL BE A MINIMUM 1.90" NOMINAL (ROUND) OR 2.00" NOMINAL (SQUARE). GATE FRAMES SHALL BE OF WELDED CONSTRUCTION OR ASSEMBLED USING HEAVY FITTINGS.

1 / - DOUBLE SWING GATE
NO SCALE

GATE POST SCHEDULE	
GATE LEAF WIDTH (NOMINAL)	OUTSIDE DIMENSION (NOMINAL)
5'	2.875" OD 2.5" SQ



LATCH ASSEMBLY



STANDARD HINGE

2 / - FENCE DETAILS
NO SCALE

ISSUE	DATE	DESCRIPTION
1	10-16-2024	ISSUED FOR 60% REVIEW

PROJECT MANAGER K. KINLEY
CIVIL K. KINLEY
CIVIL M. CORRY
DRAWN BY M. BICKFORD
QC BY
PROJECT NUMBER 10408322

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Metro Waste Authority

METRO PARK WEST
MWA PROJECT P-67
CELL E LINER CONSTRUCTION

DETAILS

0 1" 2"

FILENAME C509.DWG
SCALE AS NOTED
SHEET C509

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