

ITEM NUMBER	DESCRIPTION	UNIT	ESTIMATED QUANTITY	AS-BUILT QUANTITIES	SPEC SECTION
1.4.1	MOBILIZATION	LUMP SUM	1		1.4
1.4.2	TRAFFIC POLICE	ALLOWANCE	\$50,000		1.4
1.5	DEMOBILIZATION	LUMP SUM	1		1.5
1.6	FIELD OFFICE SETUP	LUMP SUM	1		1.6
1.7	FIELD OFFICE MAINTENANCE	MONTH	25		1.7
1.8	UTILITY SERVICE	ALLOWANCE	\$4,500		1.8
1.9.1	ELECTRICITY	ALLOWANCE	\$4,800		1.9
1.9.1A	ELECTRICITY: STATE AND ENGINEER'S TRAILERS	MONTH	24		1.9
1.9.1B	ELECTRICITY: SOUTH PUMP STATION	MONTH	17		1.9
1.9.2	GAS PIPELINE ENGINEERING & INSPECTION	ALLOWANCE	\$4,000		1.9
1.9.3	TRAILER / PERMIT FEES	ALLOWANCE	\$2,500		1.9
1.10.1	SIEVE ANALYSIS (ASTM D422 / AASHTO T27), IF AND WHERE DIRECTED	EACH	20		1.10
1.10.2	RELATIVE DENSITY (ASTM D1556 OR ASTM D939), IF AND WHERE DIRECTED	EACH	20		1.10
1.10.3	MODIFIED PROCTOR (ASTM D1557), IF AND WHERE DIRECTED	EACH	20		1.10
1.10.4	CONCRETE COMPRESSIVE STRENGTH (ASTM C39), IF AND WHERE DIRECTED	EACH	20		1.10
1.10.5	PERMEABILITY (ASTM D2434 / ASTM D5084), IF AND WHERE DIRECTED	EACH	20		1.10
1.10.6	DIRECT SHEAR TESTING BETWEEN SOILS AND GEOSYNTHETICS (ASTM D5321), IF AND WHERE DIRECTED	EACH	20		1.10
1.10.7	GROUT COMPRESSIVE STRENGTH (ASTM C39), IF AND WHERE DIRECTED	EACH	20		1.10
1.10.8	FIELD SEAM DESTRUCTIVE TESTING, IF AND WHERE DIRECTED	EACH	20		1.10
1.10.9	MOISTURE CONTENT TESTS (ASTM D2930), IF AND WHERE DIRECTED	EACH	20		1.10
1.10.10	DENSITY (ASTM D2937), IF AND WHERE DIRECTED	EACH	20		1.10
1.10.11	ATTERBERG LIMITS (ASTM D4318), IF AND WHERE DIRECTED	EACH	20		1.10
1.10.12	STANDARD PROCTOR COMPACTION (ASTM D698), IF AND WHERE DIRECTED	EACH	20		1.10
1.10.13	TRIAXIAL COMPRESSION (ASTM D4767), IF AND WHERE DIRECTED	EACH	20		1.10
1.10.14	BULK SPECIFIC GRAVITY (ASTM C127), IF AND WHERE DIRECTED	EACH	20		1.10
1.10.15	GEOMEMBRANE TENSILE STRENGTH (ASTM D6693), IF AND WHERE DIRECTED	EACH	20		1.10
1.10.16	GEOMEMBRANE PEEL AND SHEAR STRENGTH (ASTM D6392), IF AND WHERE DIRECTED	EACH	20		1.10
1.11.1	RECORD DRAWINGS	LUMP SUM	\$5,000		1.11
1.11.2	RECORD DRAWINGS (IF NEEDED)	LUMP SUM	1		1.11
2.1.1	SITE CLEARING AND GRUBBING	LUMP SUM	1		2.1
2.1.2	TIRE REMOVAL AND DISPOSAL	EACH	5,000		2.1
2.1.3	WELL ABANDONMENT	LINEAR FOOT	3,500		2.1
2.2.1	EROSION AND SEDIMENTATION CONTROL	MONTH	24		2.2
2.2.2	ADDITIONAL SILT FENCE, IF AND WHERE DIRECTED	LINEAR FOOT	500		2.2
2.2.3	ADDITIONAL STRAW OR HAY BALES, IF AND WHERE DIRECTED	EACH	100		2.2
2.4.1	WASTEFILL AND EARTH EXCAVATION	CUBIC YARD	88,000		2.4
2.4.2	EXCAVATION OF TEST PITS, IF AND WHERE DIRECTED	EACH	20		2.4
2.4.3	WASTEFILL AND EARTH EXCAVATION, IF AND WHERE DIRECTED	CUBIC YARD	15,000		2.4
2.6	SLAG-CB BARRIER WALL	SQUARE FOOT	350,000		2.6
2.7	INSTALLATION OF MONITORING WELL	LINEAR FOOT	420		2.7
2.8.1	MODIFIED FILL, 1-13, 6" THICK	SQUARE YARD	363,500		2.8
2.8.2	MODIFIED FILL, 1-13, IF AND WHERE DIRECTED	TONS	57,750		2.8
2.9	MODIFICATION OF MONITORING WELLS	LINEAR FOOT	8,600		2.9
2.10.1	PERFORATED HDPE LEACHATE PIPE, 8" DIAMETER	LINEAR FOOT	8,600		2.10
2.10.2	LEACHATE CLEAN OUT	EACH	3		2.10
2.10.3	FORCEMAIN HDPE	LINEAR FOOT	3,210		2.10
2.10.4	FORCEMAIN CLEAN OUT	EACH	3		2.10
2.10.5	FORCEMAIN COMBINATION ARV AND FORCEMAIN CLEANOUT	EACH	1		2.10
2.11.1	NORTH PUMP STATION	LUMP SUM	1		2.11
2.11.2	SOUTH PUMP STATION	LUMP SUM	1		2.11
2.11.3	NORTH PUMP STATION - POWER CONNECTION	LUMP SUM	1		2.11
2.11.4	SOUTH PUMP STATION - POWER CONNECTION	LUMP SUM	1		2.11
2.12	GEOMEMBRANE	SQUARE YARD	390,000		2.12
2.13.1	COMPOSITE DRAINAGE NET	SQUARE YARD	350,000		2.13
2.13.2	MODIFIED FILL 1-13, 12" THICK	SQUARE YARD	384,500		2.13

NOTE: LINEAR FOOT, SQUARE YARD, SQUARE FOOT AND CUBIC YARD MEASUREMENTS ARE IN THE HORIZONTAL PLANE. REFER TO SPECIFICATIONS.

ITEM NUMBER	DESCRIPTION	UNIT	ESTIMATED QUANTITY	AS-BUILT QUANTITIES	SPEC SECTION
2.13.3	INFILTRATION STRIP DRAIN, 18" WIDE	LINEAR FOOT	28,000		2.13
2.13.4	COMPOSITE DRAINAGE NET, IF AND WHERE DIRECTED	SQUARE YARD	1,000		2.13
2.14.1	GEOTEXTILES, TYPE A, IF AND WHERE DIRECTED	SQUARE YARD	1,000		2.14
2.14.2	GEOTEXTILES, TYPE B, IF AND WHERE DIRECTED	SQUARE YARD	8,500		2.14
2.16.1	GAS PIPE, 4" DIAMETER	LINEAR FOOT	8,600		2.16
2.16.2	GAS PIPE, 6" DIAMETER	LINEAR FOOT	4,750		2.16
2.16.3	GAS PIPE, 8" DIAMETER	LINEAR FOOT	9,500		2.16
2.16.4	GAS EXTRACTION WELLS	LINEAR FOOT	2,340		2.16
2.16.5	GAS WELL BOREHOLE ABANDONMENT	LINEAR FOOT	240		2.16
2.16.6	CONDENSATE TRAP	EACH	42		2.16
2.16.7	GAS MONITORING PROBES	EACH	17		2.16
2.17	HDPE BUTTERFLY VALVE	EACH	41		2.17
2.18.1	GAS BLOWER AND FLARE SYSTEM	LUMP SUM	1		2.18
2.18.2	GAS BLOWER AND FLARE SYSTEM - POWER CONNECTION	LUMP SUM	1		2.18
2.20	COARSE AGGREGATE, IF AND WHERE DIRECTED	CUBIC YARD	1,000		2.20
2.21.1	4" RIPRAP	TONS	1,200		2.21
2.21.2	7" RIPRAP	TONS	120		2.21
2.22.1	DOWNPIPE, 12" DIAMETER	LINEAR FOOT	800		2.22
2.22.2	DOWNPIPE, 18" DIAMETER	LINEAR FOOT	800		2.22
2.22.3	STORMWATER INLET	EACH	19		2.22
2.22.4	STILLING WELL	EACH	7		2.22
2.22.5	STORMWATER DISCHARGE PIPE	LINEAR FOOT	360		2.22
2.22.6	NORTH BASIN - STORMWATER OVERFLOW STRUCTURE	EACH	1		2.22
2.22.7	SOUTH BASIN - STORMWATER OVERFLOW STRUCTURE	EACH	1		2.22
2.22.8	DRAINAGE CULVERT	LINEAR FOOT	340		2.22
2.22.9	CONCRETE WATER CHANNEL	LINEAR FOOT	750		2.22
2.23	GABIONS	CUBIC YARD	2,350		2.23
2.24.1	REVEGETATION	SQUARE YARD	350,000		2.24
2.24.2	TOPSOIL, 6" THICK	SQUARE YARD	350,000		2.24
2.24.3	EROSION CONTROL MATTING	SQUARE YARD	251,100		2.24
2.24.4	SWALE REINFORCEMENT MATTING	SQUARE YARD	28,500		2.24
2.25	CONCRETE PAD FOR COMBUSTION AIR BLOWER	LUMP SUM	1		2.25
2.26.1	ACCESS ROAD, 8" THICK	SQUARE YARD	13,200		2.26
2.26.2	PERIMETER ACCESS ROAD, 12" THICK	SQUARE YARD	27,000		2.26
2.26.3	GRAVEL PAD, IF AND WHERE DIRECTED	TONS	20,000		2.26
2.27.1	NEW INCLINOMETERS	LINEAR FOOT	240		2.27
2.27.2	EXISTING INCLINOMETERS	EACH	6		2.27
2.28	MICROPILES	LINEAR FOOT	550		2.28
2.29.1	CHAIN LINK FENCE WITH BARBED WIRE, 8' HIGH	LINEAR FOOT	255		2.29
2.29.2	CHAIN LINK GATE WITH BARBED WIRE, 10' WIDE	EACH	1		2.29
3.1.1	HEALTH AND SAFETY PLAN	LUMP SUM	1		3.1
3.1.2	IMPLEMENTATION OF HEALTH AND SAFETY PLAN	MONTH	24		3.1
3.2.1	CONSTRUCTION PLAN	LUMP SUM	1		3.2
3.2.2	ADHERENCE TO CONSTRUCTION PLAN	MONTH	1		3.2
3.3	HAZARDOUS SUBSTANCE CONTAINER REMOVAL AND STAGING	EACH	25		3.3
3.4	HAZARDOUS SUBSTANCE STAGING AREA	MONTH	24		3.4
3.6	CONSTRUCTION EROSION SEDIMENT CONTROL PLAN	LUMP SUM	1		3.6
4.1.1	OPERATION AND MAINTENANCE DURING CONSTRUCTION	MONTH	9		4.1
4.1.2	PVSC AND KMUA DISPOSAL FEES	ALLOWANCE	\$270,000		4.1
4.1.3	PVSC TESTING AND REPORTING	EACH	19		4.1
4.2.1	OPERATION AND MAINTENANCE (YEAR 1)	LUMP SUM	1		4.2
4.2.2	OPERATION AND MAINTENANCE (YEAR 2)	MONTH	12		4.2



NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION
MSLA 1-D LANDFILL KEARNY, NEW JERSEY
LANDFILL CLOSURE PROJECT

ESTIMATE OF QUANTITIES



THE LOUIS BERGER GROUP, INC.
412 MOUNT KEMBLE AVE.
MORRISTOWN, NEW JERSEY 07962

DRAWN BY: JK

CHECKED BY: DM

APPROVED BY: CC

SCALE:
AS SHOWN

DATE:
SEPTEMBER 19, 2013

PROJECT NO.:
KT 323P0

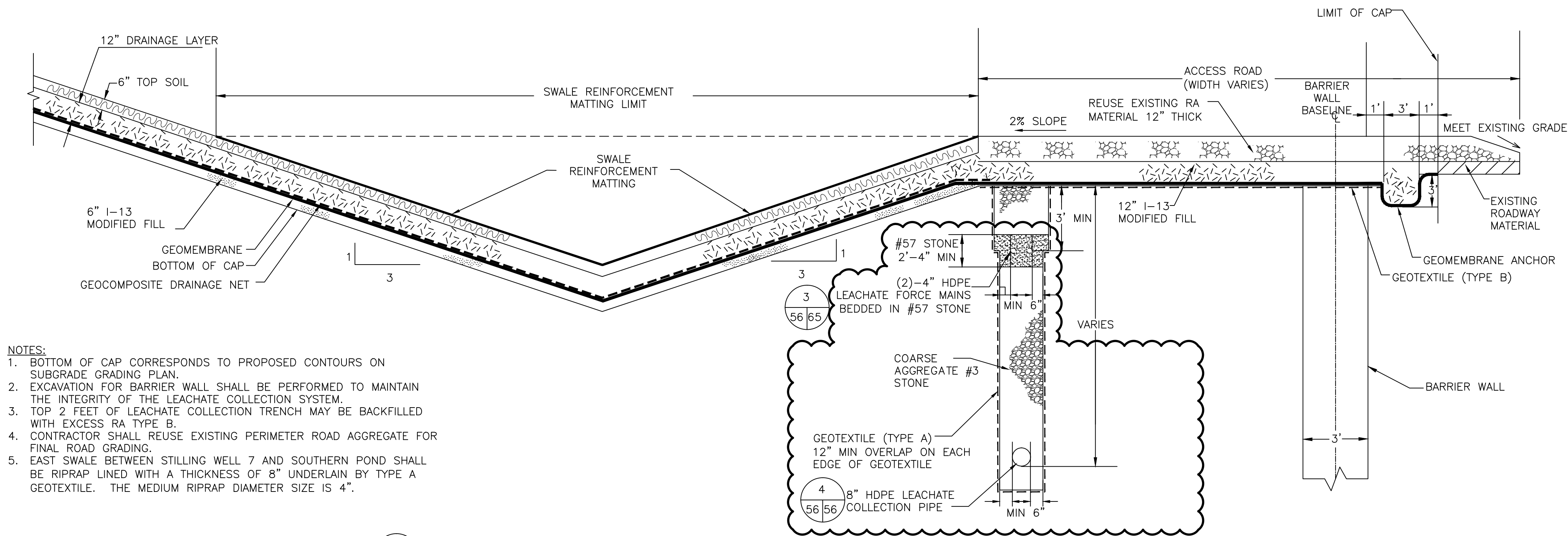
SHEET NO.:
4 OF 78

CHRISTOPHER E. CORLISS

N.J. PROFESSIONAL ENGINEER
LIC. NO. 24GE044822
CERTIFICATE OF AUTHORIZATION
24GA27933700

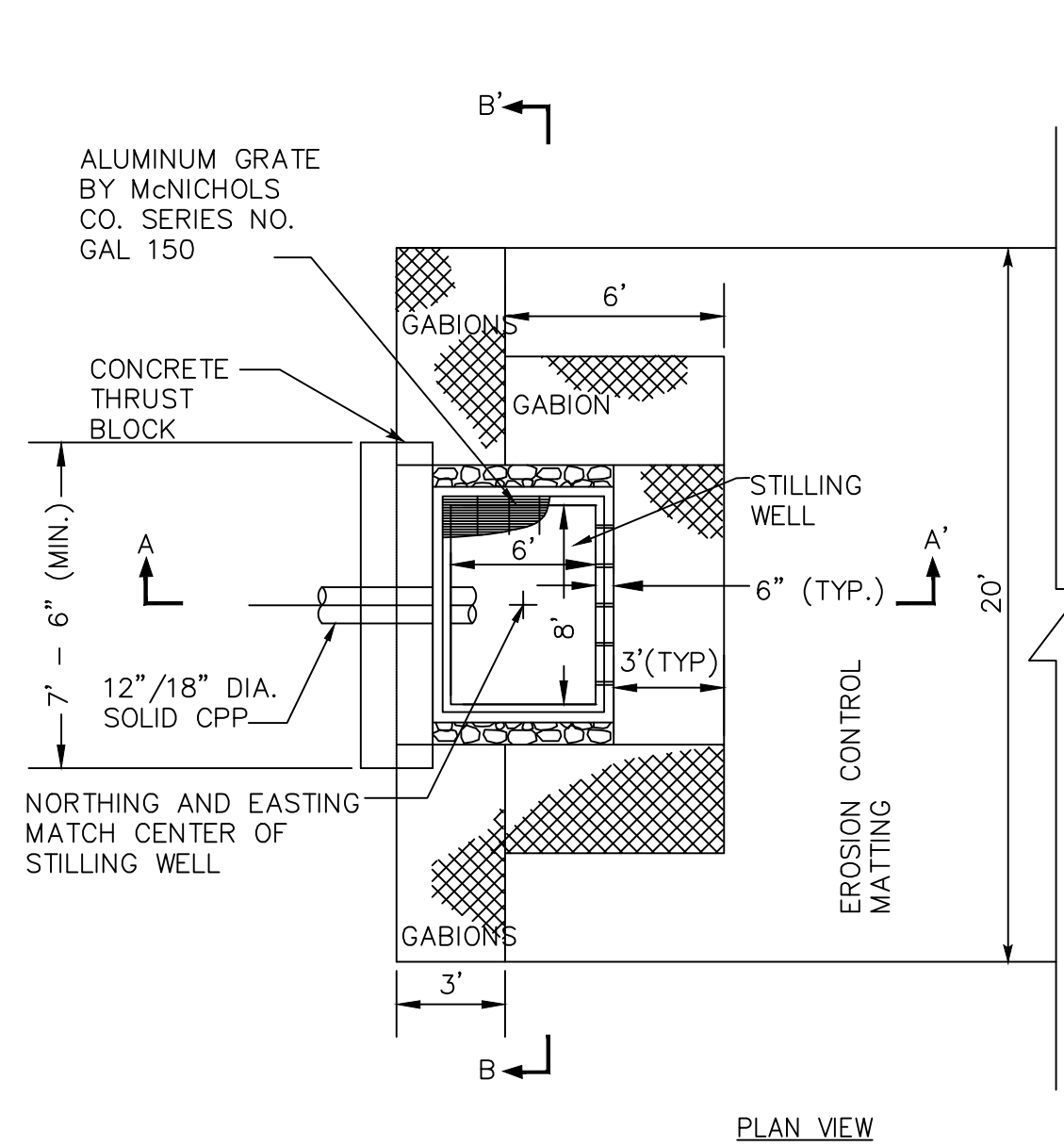
C	10/18/16	REVISED FOR ADDENDUM 5
B	9/09/16	REVISED FOR ADDENDUM 4
A	9/14/12	ISSUED FOR CONSTRUCTION
No.	DATE	REVISION

THE LOUIS BERGER GROUP, INC., MORRISTOWN, NJ CAD FILE: \\Operations\032\Landfill Design\MSLA-1D\Construction\Phase II - Landfill Closure\Addendum\Addendum 5\Drawings\MSLA-1D - Details.dwg Oct 14, 2016

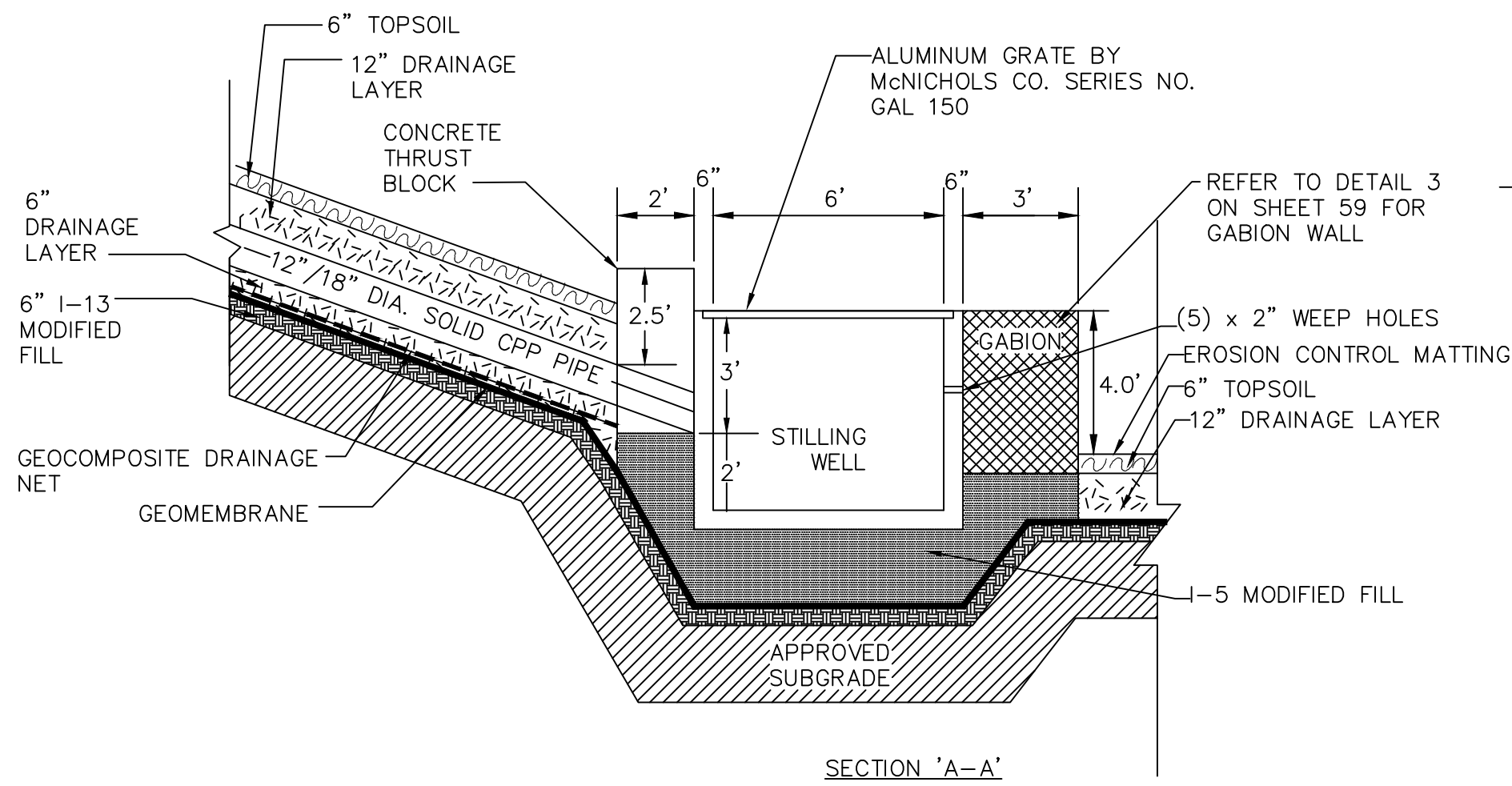


- NOTES:
1. BOTTOM OF CAP CORRESPONDS TO PROPOSED CONTOURS ON SUBGRADE GRADING PLAN.
 2. EXCAVATION FOR BARRIER WALL SHALL BE PERFORMED TO MAINTAIN THE INTEGRITY OF THE LEACHATE COLLECTION SYSTEM.
 3. TOP 2 FEET OF LEACHATE COLLECTION TRENCH MAY BE BACKFILLED WITH EXCESS RA TYPE B.
 4. CONTRACTOR SHALL REUSE EXISTING PERIMETER ROAD AGGREGATE FOR FINAL ROAD GRADING.
 5. EAST SWALE BETWEEN STILLING WELL 7 AND SOUTHERN POND SHALL BE RIPRAP LINED WITH A THICKNESS OF 8" UNDERLAIN BY TYPE A GEOTEXTILE. THE MEDIUM RIPRAP DIAMETER SIZE IS 4".

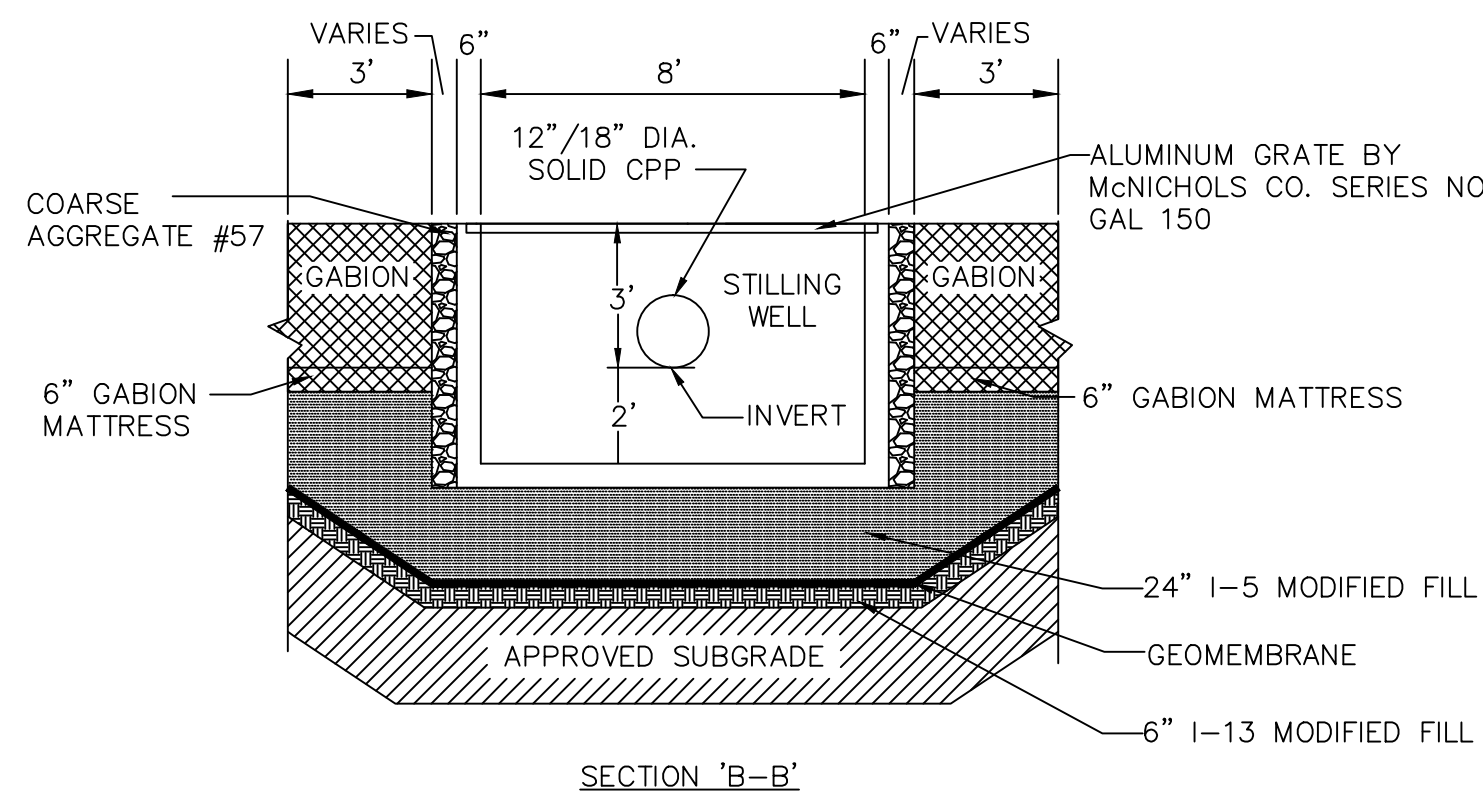
1 PERIMETER STORMWATER COLLECTION TRENCH
NOT TO SCALE



PLAN VIEW

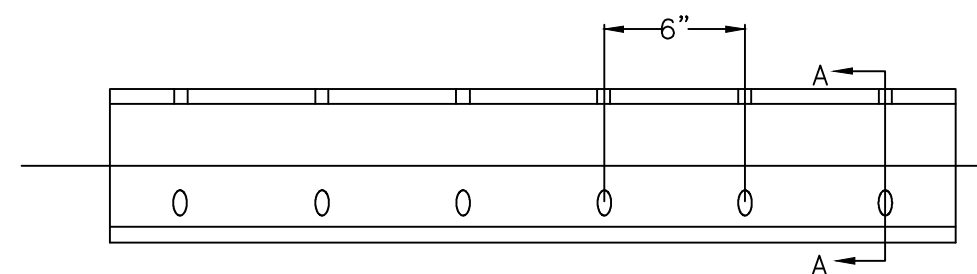


- NOTE:
1. 1-5 MODIFIED FILL SHALL BE USED UNDER THE STILLING WELL AND GABION MATTRESS.
 2. THE STILLING WELLS CAN BE BOOTED TO THE GEOMEMBRANE BUT A SHOP DRAWING SHALL BE REQUIRED FOR APPROVAL BY THE ENGINEER.

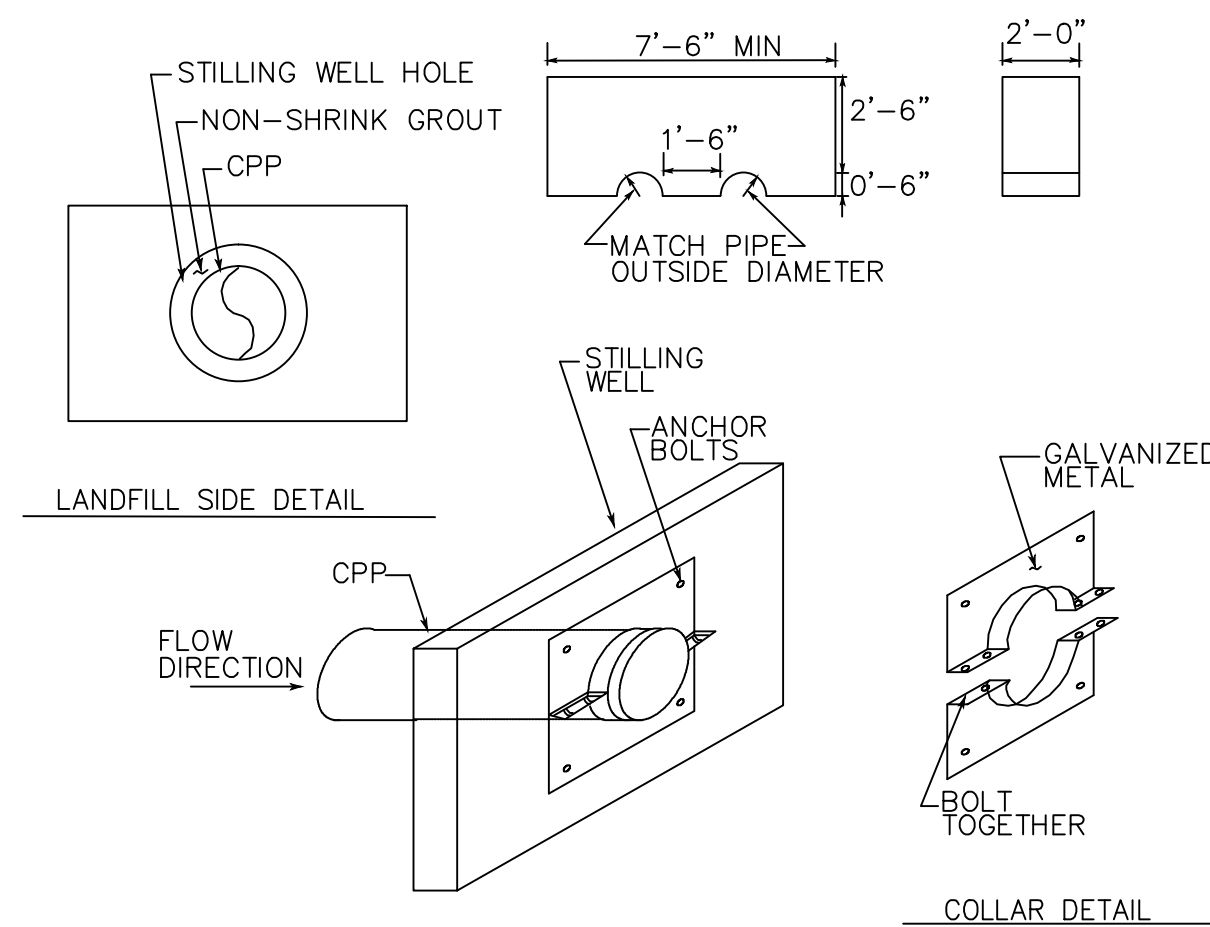


SECTION 'B-B'

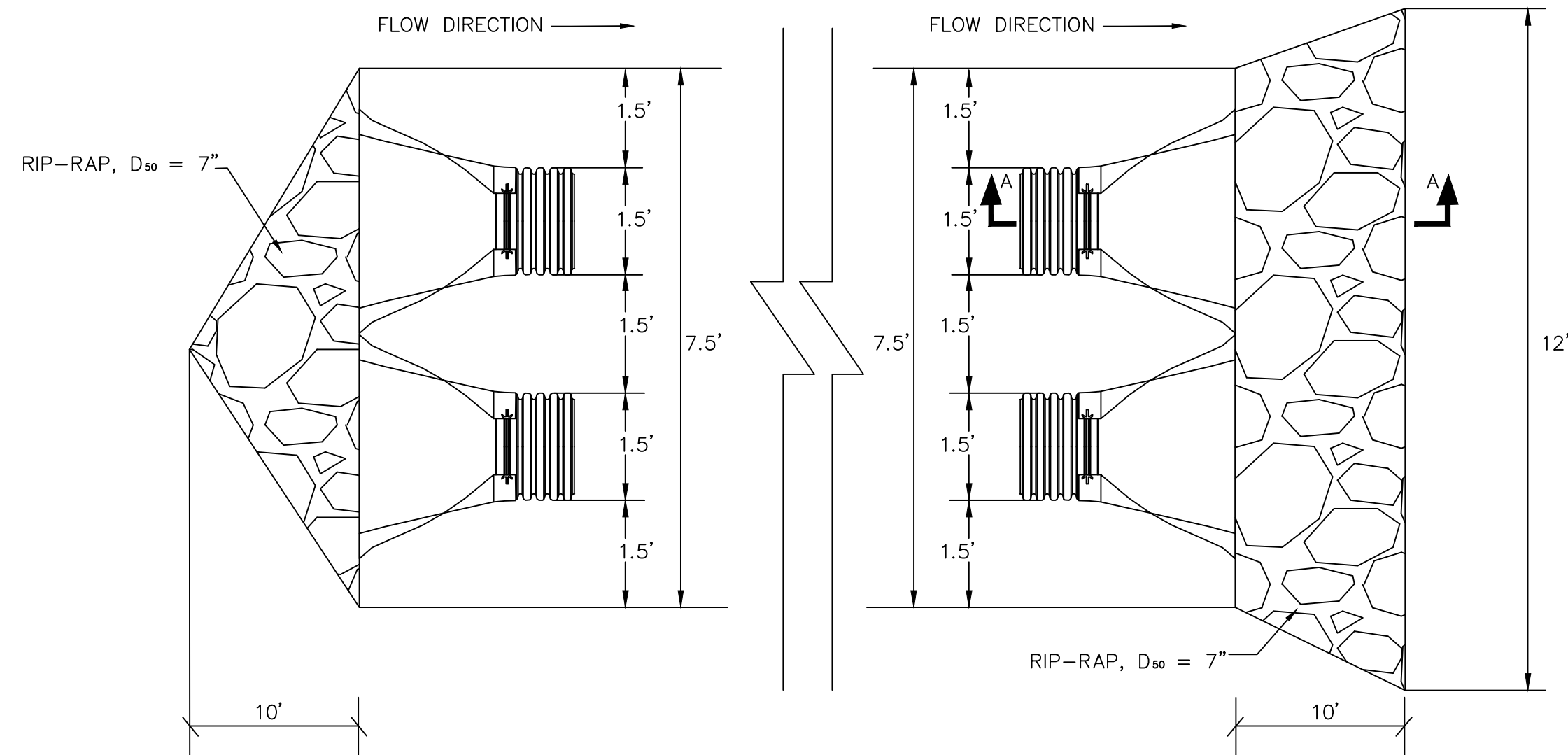
3 STILLING WELL AND DOWNPIPE
NOT TO SCALE



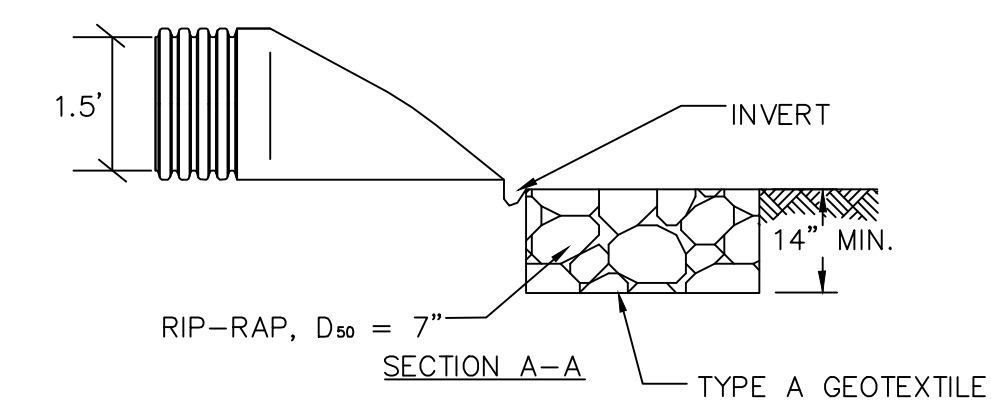
4 HDPE PERFORATED PIPE TYPE DR17
NOT TO SCALE



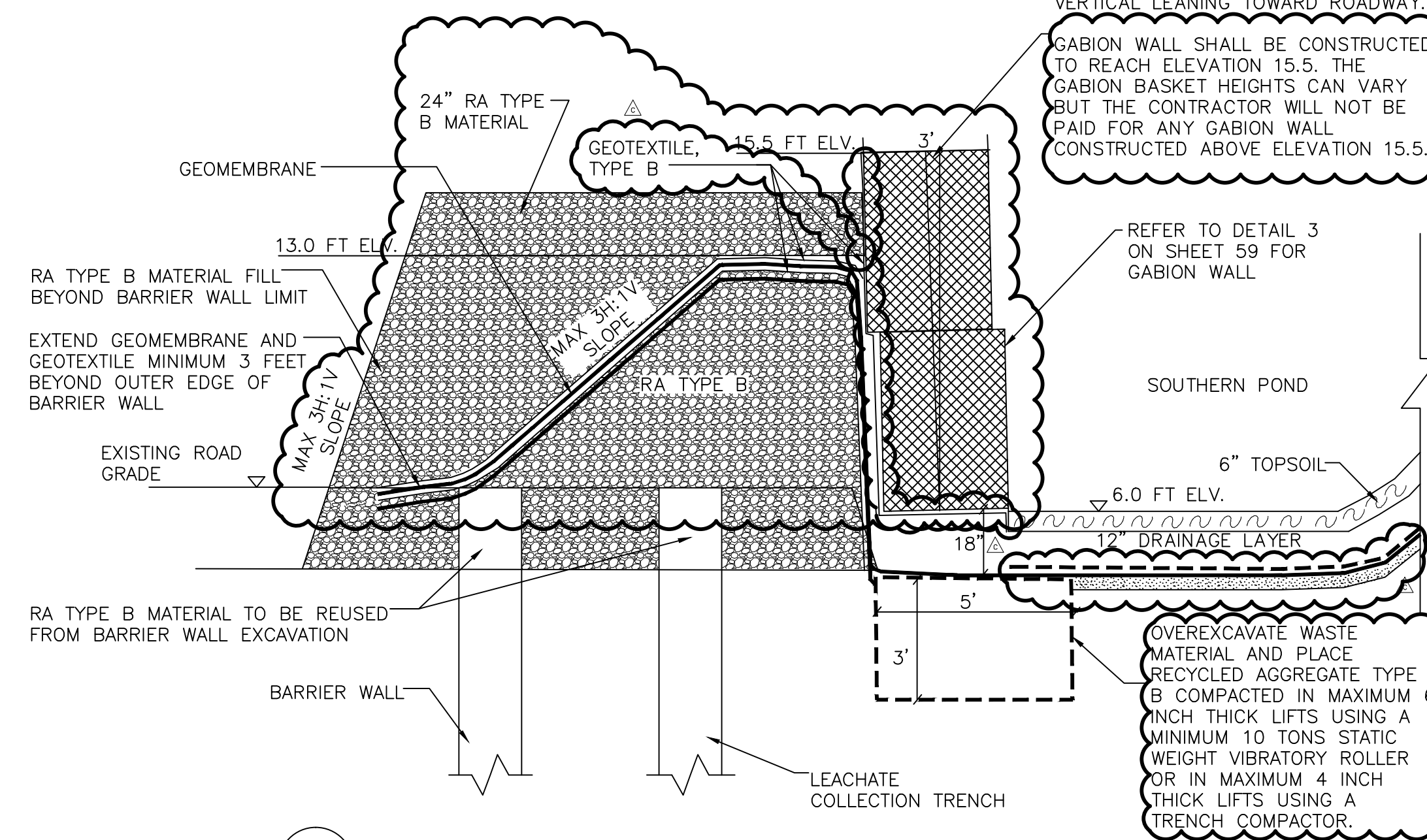
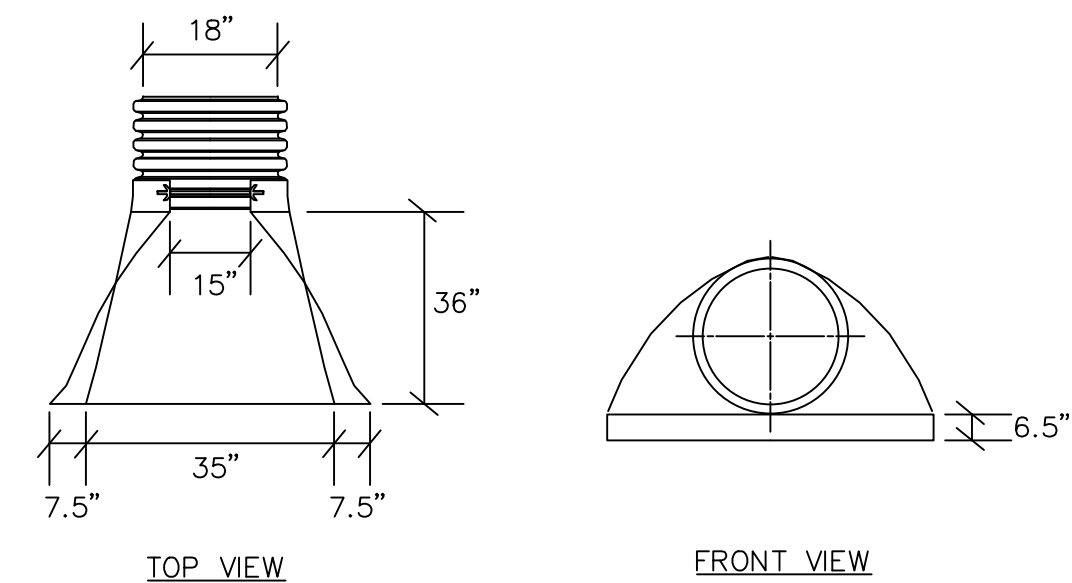
5 CONCRETE THRUST BLOCK
NOT TO SCALE



PLAN VIEW



2 HDPE FLARED END SECTION AT EACH CULVERT END
NOT TO SCALE



6 SOUTHERN PERIMETER ROAD TYPICAL CROSS-SECTION
NOT TO SCALE

C	10/14/16	REVISED FOR ADDENDUM 5
B	9/09/16	REVISED FOR ADDENDUM 4
A	9/14/12	ISSUED FOR CONSTRUCTION
No.	DATE	REVISION

CHRISTOPHER E. CORLISS

N.J. PROFESSIONAL ENGINEER
LIC. NO. 24GE044822
CERTIFICATE OF AUTHORIZATION
24GA27933700

**NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION**

MSLA 1-D LANDFILL KEARNY, NEW JERSEY

LANDFILL CLOSURE PROJECT

CIVIL DETAILS SHEET 2 OF 7

**THE LOUIS BERGER GROUP, INC.**
412 MOUNT KEMBLE AVE.
MORRISTOWN, NEW JERSEY 07962

DRAWN BY: JK

CHECKED BY: DM

APPROVED BY: CC

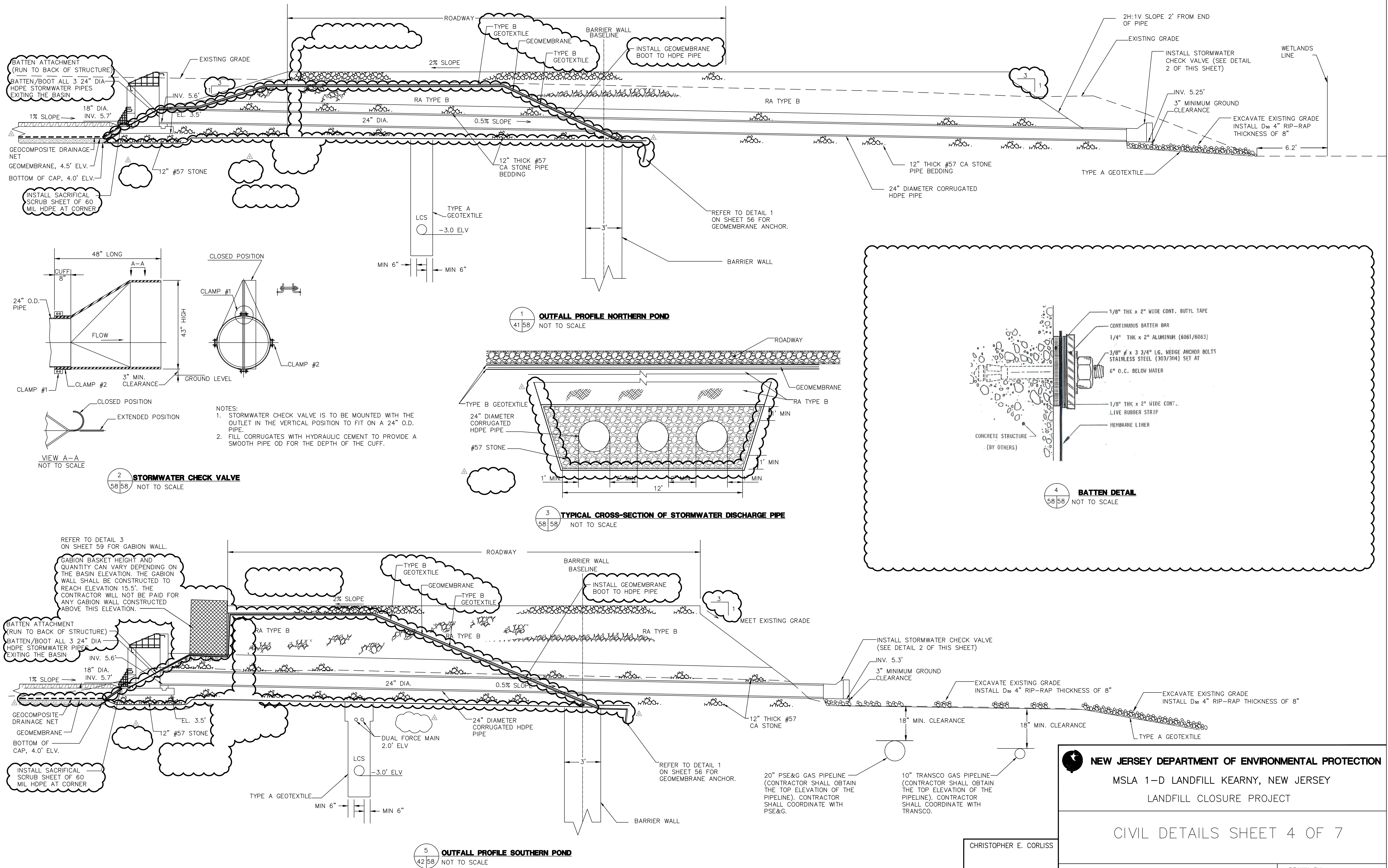
SCALE: AS SHOWN

DATE: SEPTEMBER 19, 2013

PROJECT NO.: KT 323P0

SHEET NO.: 56 OF 78

THE LOUIS BERGER GROUP, INC., MORRISTOWN, NJ CAD FILE: \\Operations\032\Landfill Design\MSLA-1D\Construction\Phase II - Landfill Closure\Addendum\Addendum 5\Drawings\MSLA 1D - Details.dwg Oct 18, 2016



**NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION**

MSLA 1-D LANDFILL KEARNY, NEW JERSEY
LANDFILL CLOSURE PROJECT

CIVIL DETAILS SHEET 4 OF 7

**THE LOUIS BERGER GROUP, INC.**
412 MOUNT KEMBLE AVE.
MORRISTOWN, NEW JERSEY 07962

DRAWN BY: JK
CHECKED BY: DM
APPROVED BY: CC

SCALE: AS SHOWN
DATE: SEPTEMBER 19, 2013
PROJECT NO.: KT 323PO
SHEET NO.: 58 OF 78

CHRISTOPHER E. CORLISS
N.J. PROFESSIONAL ENGINEER
LIC. NO. 24GE044822
CERTIFICATE OF AUTHORIZATION
24GA27933700

No.	DATE	REVISION
C	10/14/16	REVISED FOR ADDENDUM 5
B	9/09/16	REVISED FOR ADDENDUM 4
A	9/14/12	ISSUED FOR CONSTRUCTION