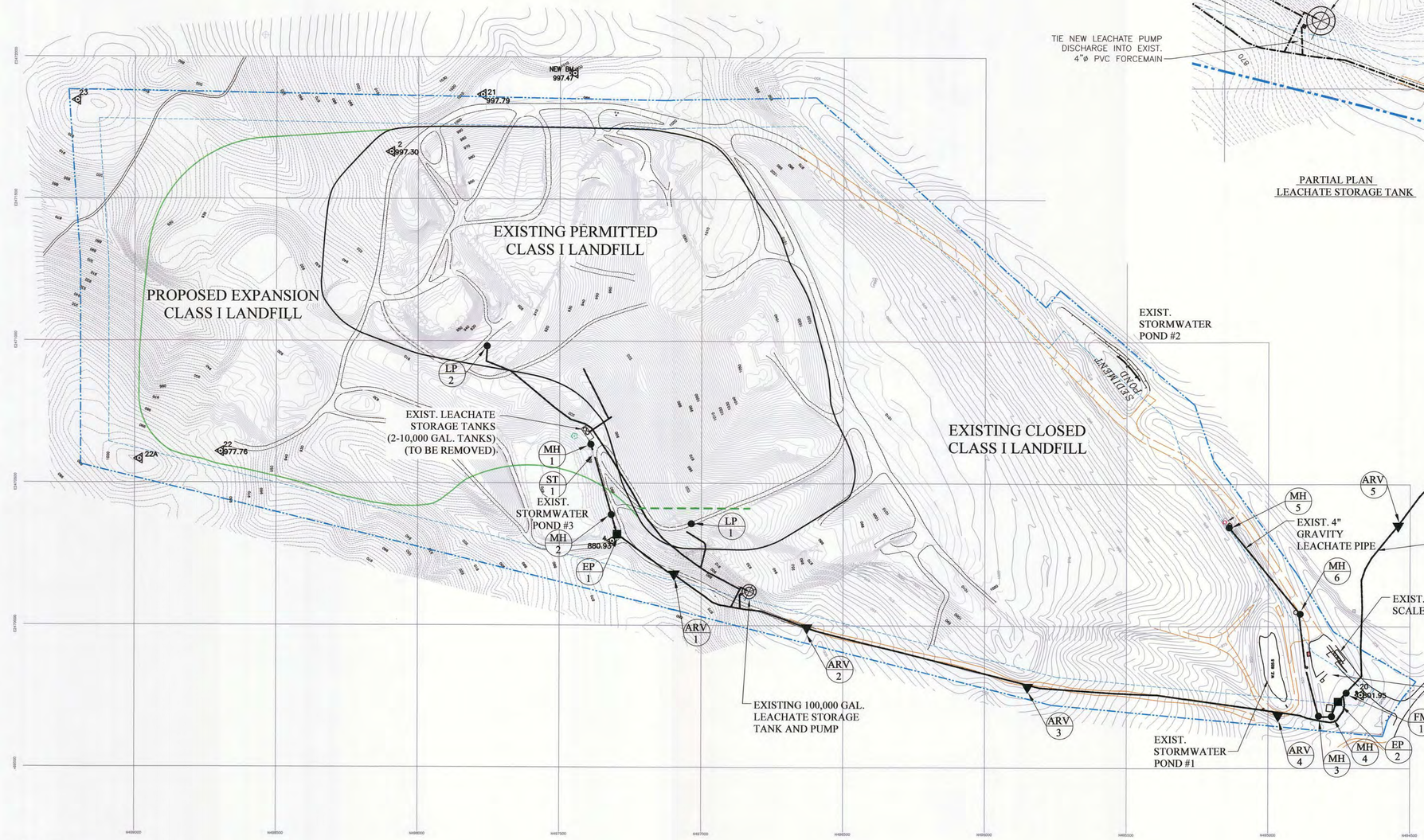
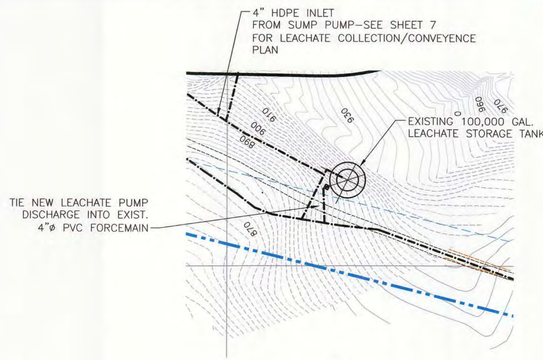
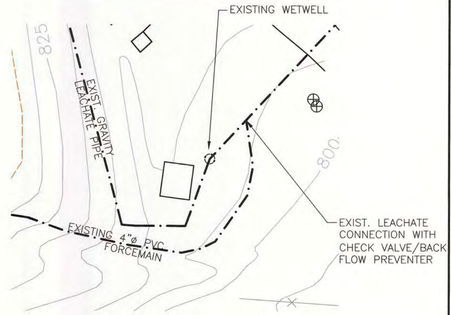




PARTIAL PLAN
LEACHATE STORAGE TANK



PARTIAL PLAN
FORCEMAIN TIE-IN

LEGEND

- PROPERTY OWNED BY LCSWDC
- 100' SET BACK FROM PROPERTY LINE
- TOPOGRAPHY (1042 / 1040)
- PROPOSED LIMITS OF CLASS I WASTE PLACEMENT
- EXISTING LIMITS OF CLASS I WASTE PLACEMENT
- GS — EXISTING GRAVITY LEACHATE PIPE
- FM — EXISTING LEACHATE FORCEMAIN
- EXISTING LEACHATE FORCEMAIN MANHOLE
- TREE LINE
- FENCE LINE
- UNPAVED ROAD
- 861.94 / 22 — BENCHMARK

SITE BENCH MARKS			
BM #	NORTHING	EASTING	ELEVATION
2**	498094.30	2471665.45	997.30
4	497314.07	2470296.78	880.93
21	497772.83	2471868.18	997.79
22**	498696.22	2470609.21	977.76
22A*	498983.01	2470583.01	
23*	499203.42	2471846.30	

* INDICATES BENCH MARKS TO BE INSTALLED IN THE FUTURE
EXACT LOCATE MAY VARY AS FIELD CONDITIONS WARRANTS
** INDICATES BENCH MARKS THAT WILL BE REMOVED DURING
FUTURE MODULE CONSTRUCTION

GENERAL NOTES

1) EXISTING SITE TOPOGRAPHY AND FACILITY ENVIRONS FROM CONTINENTAL AERIAL SURVEYS PREPARED FOR SANTEK ENVIRONMENTAL, MAPPING COMPILED FROM AERIAL PHOTOGRAPHY, DATED 9-29-08, PROJECT #08-1121.
2) BORROW SOILS FOR COVER MATERIAL WILL BE TAKEN FROM WITHIN THE WASTE LIMITS ON AN AS NEEDED/DAILY BASIS

400 200 0 200 400
1"=200'

SANITARY SEWER STRUCTURES	
STRUCTURE CODE	TYPE
MH-1	MANHOLE
ST-1	SAND TRAP
MH-2	MANHOLE
EP-1	LIFTSTATION
ARV-1	AIR RELEASE VALVE
ARV-2	AIR RELEASE VALVE
ARV-3	AIR RELEASE VALVE
ARV-4	AIR RELEASE VALVE
MH-3	MANHOLE
MH-4	MANHOLE
EP-2	LIFT STATION
ARV-5	AIR RELEASE VALVE
LS-1	EXIST. LIFT STATION
MH-5	MANHOLE
MH-6	MANHOLE
FS-3	FLOW MONITORING STATION
LP-1	LEACHATE PUMP
LP-2	LEACHATE PUMP
FM-1	FLOW METER MANHOLE

RON VAIL
STATE OF TENNESSEE
No. 00100716
REGISTERED ENGINEER
AGRICULTURE
ENGINEER

REV.	DATE	DRWN	CHKD	REVISION
2	03/14	JW	RV	REVISED PER TDEC COMMENTS DATED 12/17/13.
1	05/13	JW	RV	REVISED PER TDEC COMMENTS DATED 1/3/12.

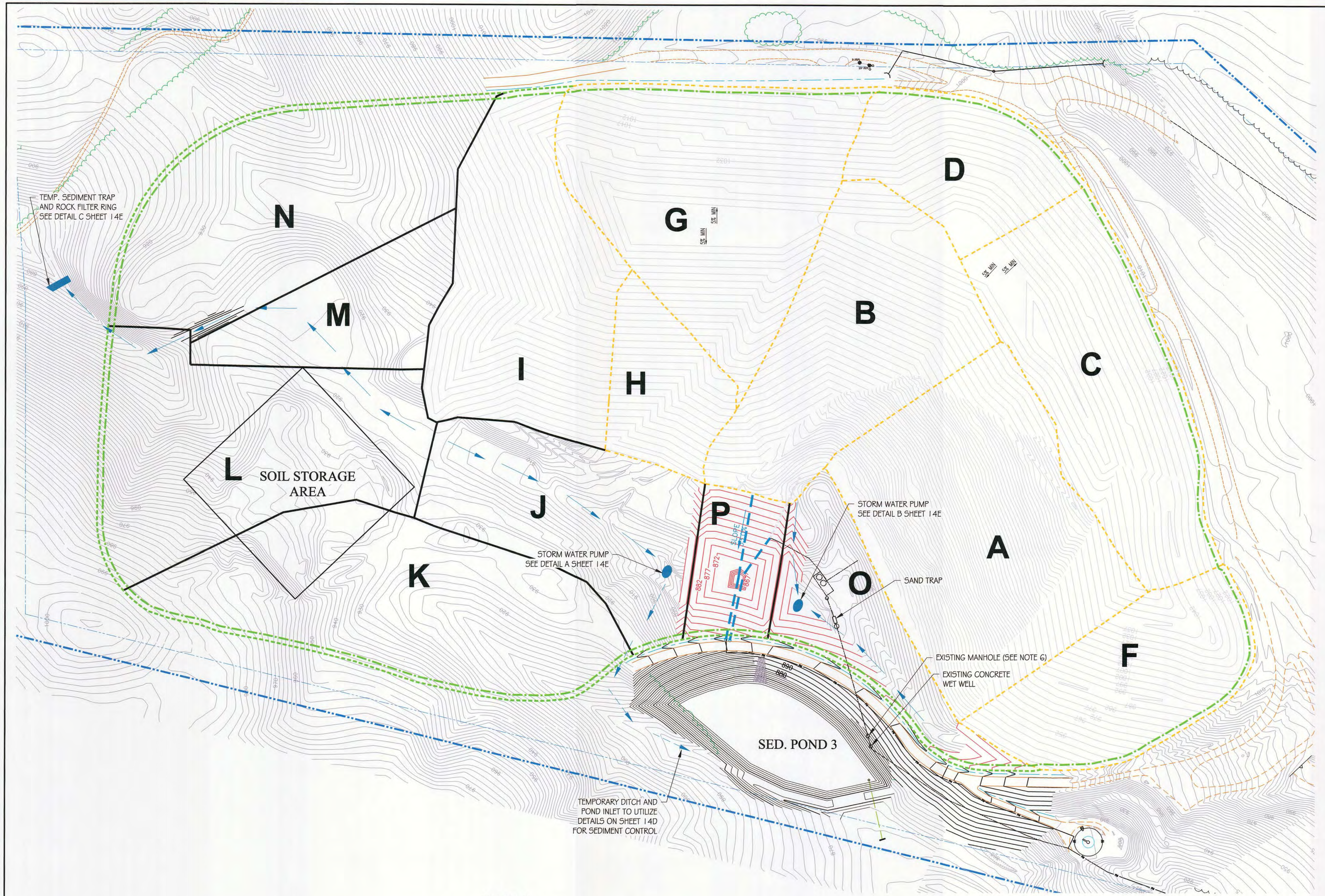
MASTER PLAN

MATLOCK BEND LANDFILL EXPANSION
LOUDON COUNTY, TENNESSEE

SANTEK ENVIRONMENTAL
650 25TH STREET NW
SUITE 100
CLEVELAND, TENNESSEE

SCALE: 1"=200'
DATE: 9/18/09
DRAWN BY: MW
CHECKED BY: RV
APPROVED BY: RB
FILE:0913-02-000
JOB NO: 200-0913

2
sheet number



LEGEND

- PROPERTY BOUNDARY
- 50' SET BACK FROM PROPERTY LINE
- 1042 / 1040 — TOPOGRAPHY
- PROPOSED LIMITS OF CLASS I WASTE PLACEMENT
- WORKING POINT LINE SEE DETAIL C SHEET 14B
- EXISTING LINER CLASS I
- 1060 — PROPOSED TOP OF CLAY CONTOURS (5–FT)
- EXISTING TOP OF CLAY CONTOURS (5–FT)
- 1060 — FUTURE TOP OF CLAY CONTOURS (5–FT)
- LEACHATE LINES
- EXISTING LEACHATE LINES
- EXISTING LEACHATE FORCEMAIN
- FM — PROPOSED LEACHATE FORCEMAIN
- MODULE BOUNDARY
- STORM WATER FLOW ARROWS (SEE NOTE 7)
- PUMPED STORM WATER FLOW ARROWS (SEE NOTE 7)

Module Acreage

Module	Acreage
J	4.2
K	6.5
L	6.3
M	2.4
N	6.2
O	2.6
P	1.4

NOTES FOR ALL MODULES

1) EXISTING SITE TOPOGRAPHY AND FACILITY ENVIRONS FROM CONTINENTAL AERIAL SURVEYS PREPARED FOR SANTEK ENVIRONMENTAL, MAPPING COMPILED FROM AERIAL PHOTOGRAPHY, DATED 9–29–08, PROJECT #08–1121.
2) THIS DRAWING IS FOR THE ILLUSTRATION OF ANTICIPATED MODULE DEVELOPMENT PROGRESSION. THE MODULE CONTOURS ARE NOT TIED TO THE EXISTING GRADE BECAUSE THE EXISTING GRADE IS SUBJECT TO CHANGE PRIOR TO CONSTRUCTION. THE MODULE CONTOURS WILL NEED TO BE TIED TO THE EXISTING GRADE PRIOR TO CONSTRUCTION OF EACH MODULE.
3) THE MODULE LIMITS INDICATED ON THIS PLAN ARE INTENDED TO BE APPROXIMATE. MODIFICATIONS TO THE MODULE LAYOUT AND SEQUENCING MAY BE REQUIRED TO BETTER FACILITATE OPERATIONAL AND CONSTRUCTION NEEDS.
4) MODULES MAY BE CONSTRUCTED IN WHOLE OR IN PART AS REQUIRED BY FUTURE OPERATIONAL AND CONSTRUCTION NEEDS.
5) FUTURE MODULE EXCAVATIONS WILL BE USED FOR INTERIM STORM WATER MANAGEMENT. ADEQUATE SIZED PUMPS WILL BE PROVIDED TO MOVE COLLECTED STORM WATER TO PONDS. PUMPS SHALL BE SIZED TO MINIMIZE STORM WATER CONTACT WITH IN–PLACE MSW.
6) THE GROUNDWATER MONITORING NETWORK MAY BE UPGRADED AT ANY TIME PRIOR TO THE NOTES INDICATED IN THE INDIVIDUAL MODULE PLAN.
7) ALTHOUGH FUTURE MODULE AREAS WILL CHANGE DUE TO BORROWING/STORING OF ONSITE SOIL FOR OPERATION, A GENERAL LAYOUT FOR STORM WATER MANAGEMENT HAS BEEN INCLUDED. ACTUAL STORM WATER MANAGEMENT ISSUES WILL NEED TO BE REVIEWED ON A MODULE SPECIFIC BASES PRIOR TO CONSTRUCTION.
8) THE INTERMEDIATE TOP CONTOURS ARE APPROXIMATE.

RON VAIL
REGISTERED ENGINEER
AGRICULTURE COMMERCE
No. 00109716
STATE OF TENNESSEE
3/10/14

MODULE P

NOTES FOR MODULE P

1) PRIOR TO CONSTRUCTION OF MODULE P, TEMPORARILY RE–ROUTE THE EXISTING LEACHATE FORCEMAIN FROM MODULE H AROUND THE CONSTRUCTION AREA OF MODULE P.
2) MODULE P CONSTRUCTION IS DESIGNED TO BE BUILT SO THAT IT DOES NOT DISTURB THE EXISTING LEACHATE PIPE FROM MODULE A TO EXISTING STORAGE TANKS, THE EXISTING STORAGE TANKS, LEACHATE FORCEMAIN AND PUMP STATION.
3) EXTEND EXISTING LEACHATE LINE & CLEAN–OUT FROM MODULE B THRU MODULE P.
4) INSTALL NEW SUMP #2 WITH RISER PIPE SUMP PUMP, BACK FLOW PREVENTER AND FORCEMAIN TO 100,000 GAL. LEACHATE STORAGE TANK.
5) EXIST. STORMWATER POND #3 TO BE MODIFIED WITH NEW STAND PIPE AND DISCHARGE PIPE – SEE SHEET 14C.
6) THE NEW FILL WILL NEED TO BE SLOPED TO PROMOTE DRAINAGE AROUND THE EXISTING MANHOLE OR THE EXISTING MANHOLE WILL NEED TO BE RAISED.
7) WHEN PUMPS ARE USED TO CONTROL STORM WATER, THE PUMPED WATER MUST BE DISCHARGED INTO AN EXISTING SEDIMENT BASIN PRIOR TO LEAVING THE SITE.

100 0 100
SCALE 1"=100' FEET

REV.	DATE	DRWN	CHKD	REVISION
4	03/14	JW	RV	REVISED PER TDEC COMMENTS DATED 12/17/13.
3	05/13	JW	RV	REVISED PER TDEC COMMENTS DATED 1/3/12.
2	10/12/10	MW	RV	REVISED PER TDEC COMMENTS DATED 9/10/10.
1	6/8/10	JW	RV	REVISED PER TDEC COMMENTS DATED 3/17/10.

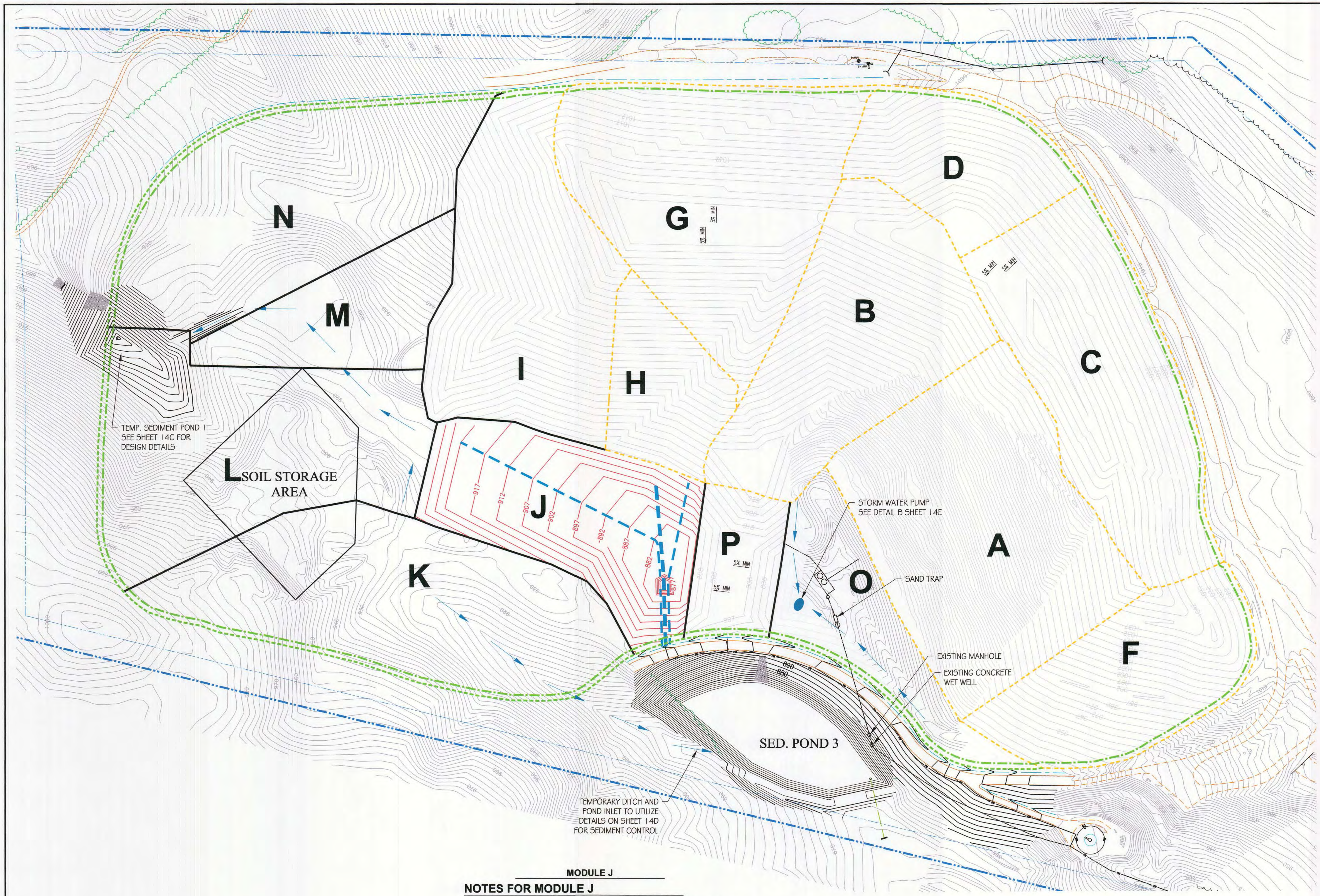
PHASING PLAN
MODULE P

MATLOCK BEND LANDFILL EXPANSION
LOUDON COUNTY, TENNESSEE

SANTEK ENVIRONMENTAL INC.
650 25TH STREET NW
SUITE 100
CLEVELAND, TENNESSEE

SCALE: 1"=100'
DATE: 4/5/10
DRAWN BY: JW
CHECKED BY: RV
APPROVED BY: RB
FILE:0913-08-000
JOB NO:200-1013.4

8A
sheet number



LEGEND

- PROPERTY BOUNDARY
- 50' SET BACK FROM PROPERTY LINE
- TOPOGRAPHY
- PROPOSED LIMITS OF CLASS I WASTE PLACEMENT
- WORKING POINT LINE SEE DETAIL C SHEET 14B
- EXISTING LINER CLASS I
- PROPOSED TOP OF CLAY CONTOURS (5-FT)
- EXISTING TOP OF CLAY CONTOURS (5-FT)
- FUTURE TOP OF CLAY CONTOURS (5-FT)
- LEACHATE LINES
- EXISTING LEACHATE LINES
- EXISTING LEACHATE FORCEMAIN
- PROPOSED LEACHATE FORCEMAIN
- MODULE BOUNDARY
- STORM WATER FLOW ARROWS (SEE NOTE 7)
- PUMPED STORM WATER FLOW ARROWS (SEE NOTE 7)

Module Acreage

Module	Acreage
J	4.2
K	6.5
L	6.3
M	2.4
N	6.2
O	2.6
P	1.4

NOTES FOR ALL MODULES

1) EXISTING SITE TOPOGRAPHY AND FACILITY ENVIRONS FROM CONTINENTAL AERIAL SURVEYS PREPARED FOR SANTEK ENVIRONMENTAL, MAPPING COMPILED FROM AERIAL PHOTOGRAPHY, DATED 9-29-08, PROJECT #08-1121.
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3) THE MODULE LIMITS INDICATED ON THIS PLAN ARE INTENDED TO BE APPROXIMATE. MODIFICATIONS TO THE MODULE LAYOUT AND SEQUENCING MAY BE REQUIRED TO BETTER FACILITATE OPERATIONAL AND CONSTRUCTION NEEDS.
4) MODULES MAY BE CONSTRUCTED IN WHOLE OR IN PART AS REQUIRED BY FUTURE OPERATIONAL AND CONSTRUCTION NEEDS.
5) FUTURE MODULE EXCAVATIONS WILL BE USED FOR INTERIM STORM WATER MANAGEMENT. ADEQUATE SIZED PUMPS WILL BE PROVIDED TO MOVE COLLECTED STORM WATER TO PONDS. PUMPS SHALL BE SIZED TO MINIMIZE STORM WATER CONTACT WITH IN-PLACE MSW.
6) THE GROUNDWATER MONITORING NETWORK MAY BE UPGRADED AT ANY TIME PRIOR TO THE NOTES INDICATED IN THE INDIVIDUAL MODULE PLAN.
7) ALTHOUGH FUTURE MODULE AREAS WILL CHANGE DUE TO BORROWING/STORING OF ONSITE SOIL FOR OPERATION, A GENERAL LAYOUT FOR STORM WATER MANAGEMENT HAS BEEN INCLUDED. ACTUAL STORM WATER MANAGEMENT ISSUES WILL NEED TO BE REVIEWED ON A MODULE SPECIFIC BASES PRIOR TO CONSTRUCTION.
8) THE INTERMEDIATE TOP CONTOURS ARE APPROXIMATE.

MODULE J

NOTES FOR MODULE J

1) PRIOR TO CONSTRUCTION OF MODULE J, TEMPORARILY RE-ROUTE THE EXISTING LEACHATE PIPE FROM MODULE H TO SUMP #2 IN MODULE P.
2) CONVERT PIEZOMETER B-60 INTO MONITORING WELL MW-06 AND COLLECT 4 BACKGROUND SAMPLES PRIOR TO FILLING WASTE IN MODULE K (SEE SHEET 4 FOR LOCATION).
3) INSTALL NEW SUMP #5 WITH RISER PIPE SUMP PUMP, BACK FLOW PREVENTER AND FORCEMAIN TO TIE-IN TO EXISTING FORCEMAIN INSTALLED DURING MODULE P CONSTRUCTION.
4) UPON TDEC'S ACCEPTANCE OF MODULE J CONSTRUCTION CERTIFICATION PERMANENTLY RE-ROUTE THE LEACHATE PIPE FROM MODULE H TO SUMP #5 OF MODULE J.
5) ABANDON GROUNDWATER MONITORING WELLS AND PIEZOMETERS MW-4R, MW-05, PZ-51, & PZ-53 (SEE SHEET 4 FOR LOCATION).
6) WHEN PUMPS ARE USED TO CONTROL STORM WATER, THE PUMPED WATER MUST BE DISCHARGED INTO AN EXISTING SEDIMENT BASIN PRIOR TO LEAVING THE SITE.
7) CONSTRUCT TEMPORARY SEDIMENT POND 1.

REV.	DATE	DRWN	CHKD	REVISION
4	03/14	JW	RV	REVISED PER TDEC COMMENTS DATED 12/17/13.
3	05/13	JW	RV	REVISED PER TDEC COMMENTS DATED 1/3/12.
2	10/12/10	MW	RV	REVISED PER TDEC COMMENTS DATED 9/10/10.
1	6/8/10	JW	RV	REVISED PER TDEC COMMENTS DATED 3/17/10.

PHASING PLAN
MODULE J

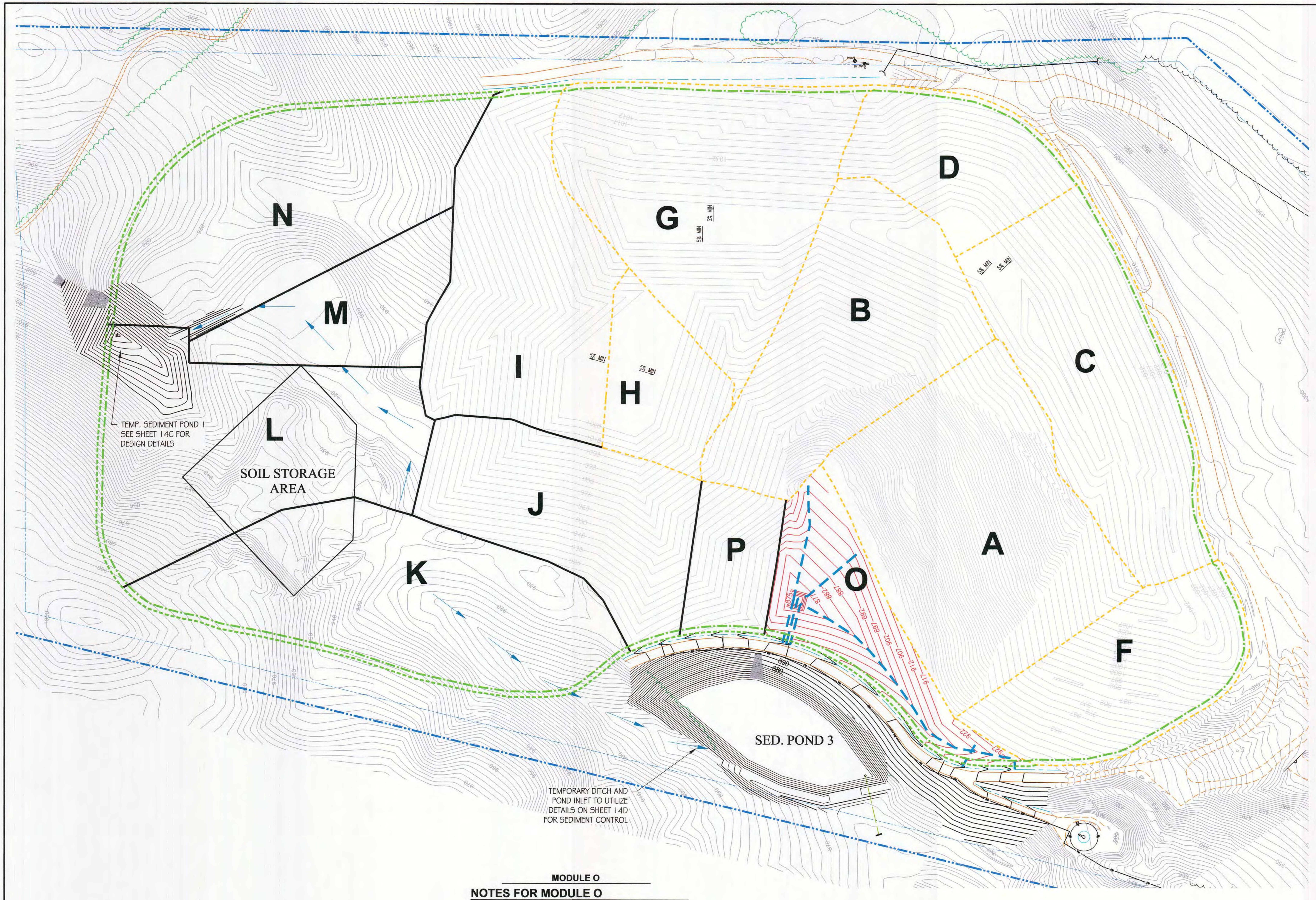
MATLOCK BEND LANDFILL EXPANSION
LOUDON COUNTY, TENNESSEE

SANTEK ENVIRONMENTAL
650 25TH STREET NW
SUITE 100
CLEVELAND, TENNESSEE

SCALE: 1"=100'
DATE: 4/5/10
DRAWN BY: JW
CHECKED BY: RV
APPROVED BY: RB
FILE: 0913-08-000
JOB NO: 200-1013.4

8B
sheet number

RON VAIL
AGRICULTURE
No. 00109718
STATE OF TENNESSEE



LEGEND

- PROPERTY BOUNDARY
- 50' SET BACK FROM PROPERTY LINE
- TOPOGRAPHY
- PROPOSED LIMITS OF CLASS I WASTE PLACEMENT
- WORKING POINT LINE SEE DETAIL C SHEET 14B
- EXISTING LINER CLASS I
- PROPOSED TOP OF CLAY CONTOURS (5–FT)
- EXISTING TOP OF CLAY CONTOURS (5–FT)
- FUTURE TOP OF CLAY CONTOURS (5–FT)
- LEACHATE LINES
- EXISTING LEACHATE LINES
- EXISTING LEACHATE FORCEMAIN
- PROPOSED LEACHATE FORCEMAIN
- MODULE BOUNDARY
- STORM WATER FLOW ARROWS (SEE NOTE 7)
- PUMPED STORM WATER FLOW ARROWS (SEE NOTE 7)

Module Acreage

Module	Acreage
J	4.2
K	6.5
L	6.3
M	2.4
N	6.2
O	2.6
P	1.4

NOTES FOR ALL MODULES

1) EXISTING SITE TOPOGRAPHY AND FACILITY ENVIRONS FROM CONTINENTAL AERIAL SURVEYS PREPARED FOR SANTEK ENVIRONMENTAL, MAPPING COMPILED FROM AERIAL PHOTOGRAPHY, DATED 9–29–08, PROJECT #08–1121.
2) THIS DRAWING IS FOR THE ILLUSTRATION OF ANTICIPATED MODULE DEVELOPMENT PROGRESSION. THE MODULE CONTOURS ARE NOT TIED TO THE EXISTING GRADE BECAUSE THE EXISTING GRADE IS SUBJECT TO CHANGE PRIOR TO CONSTRUCTION. THE MODULE CONTOURS WILL NEED TO BE TIED TO THE EXISTING GRADE PRIOR TO CONSTRUCTION OF EACH MODULE.
3) THE MODULE LIMITS INDICATED ON THIS PLAN ARE INTENDED TO BE APPROXIMATE. MODIFICATIONS TO THE MODULE LAYOUT AND SEQUENCING MAY BE REQUIRED TO BETTER FACILITATE OPERATIONAL AND CONSTRUCTION NEEDS.
4) MODULES MAY BE CONSTRUCTED IN WHOLE OR IN PART AS REQUIRED BY FUTURE OPERATIONAL AND CONSTRUCTION NEEDS.
5) FUTURE MODULE EXCAVATIONS WILL BE USED FOR INTERIM STORM WATER MANAGEMENT. ADEQUATE SIZED PUMPS WILL BE PROVIDED TO MOVE COLLECTED STORM WATER TO PONDS. PUMPS SHALL BE SIZED TO MINIMIZE STORM WATER CONTACT WITH IN–PLACE MSW.
6) THE GROUNDWATER MONITORING NETWORK MAY BE UPGRADED AT ANY TIME PRIOR TO THE NOTES INDICATED IN THE INDIVIDUAL MODULE PLAN.
7) ALTHOUGH FUTURE MODULE AREAS WILL CHANGE DUE TO BORROWING/STORING OF ONSITE SOIL FOR OPERATION, A GENERAL LAYOUT FOR STORM WATER MANAGEMENT HAS BEEN INCLUDED. ACTUAL STORM WATER MANAGEMENT ISSUES WILL NEED TO BE REVIEWED ON A MODULE SPECIFIC BASES PRIOR TO CONSTRUCTION.
8) THE INTERMEDIATE TOP CONTOURS ARE APPROXIMATE.

MODULE O

NOTES FOR MODULE O

1) PRIOR TO CONSTRUCTION OF MODULE O, TEMPORARILY RE–ROUTE THE EXISTING LEACHATE PIPE FROM MODULE A TO SUMP #2 IN MODULE P.
2) AS PART OF CONSTRUCTION OF MODULE O, REMOVE EXISTING LEACHATE PIPES, STORAGE TANKS, SECONDARY CONTAINMENT, PUMP STATION AND PORTIONS OF THE FORCEMAIN THAT LIE WITHIN THE LIMITS OF MODULE O CONSTRUCTION.
3) INSTALL NEW SUMP #1 WITH RISER PIPE SUMP PUMP, BACK FLOW PREVENTER AND FORCEMAIN TO TIE–IN TO EXISTING FORCEMAIN INSTALLED DURING MODULE P CONSTRUCTION.
4) UPON TDEC'S ACCEPTANCE OF MODULE O CONSTRUCTION CERTIFICATION PERMANENTLY RE–ROUTE THE LEACHATE PIPE FROM MODULE A TO SUMP #1 OF MODULE O.
5) WHEN PUMPS ARE USED TO CONTROL STORM WATER, THE PUMPED WATER MUST BE DISCHARGED INTO AN EXISTING SEDIMENT BASIN PRIOR TO LEAVING THE SITE.

REV.	DATE	DRWN	CHKD	REVISION
4	03/14	JW	RV	REVISED PER TDEC COMMENTS DATED 12/17/13.
3	05/13	JW	RV	REVISED PER TDEC COMMENTS DATED 1/3/12.
2	10/12/10	MW	RV	REVISED PER TDEC COMMENTS DATED 9/10/10.
1	6/8/10	JW	RV	REVISED PER TDEC COMMENTS DATED 3/17/10.

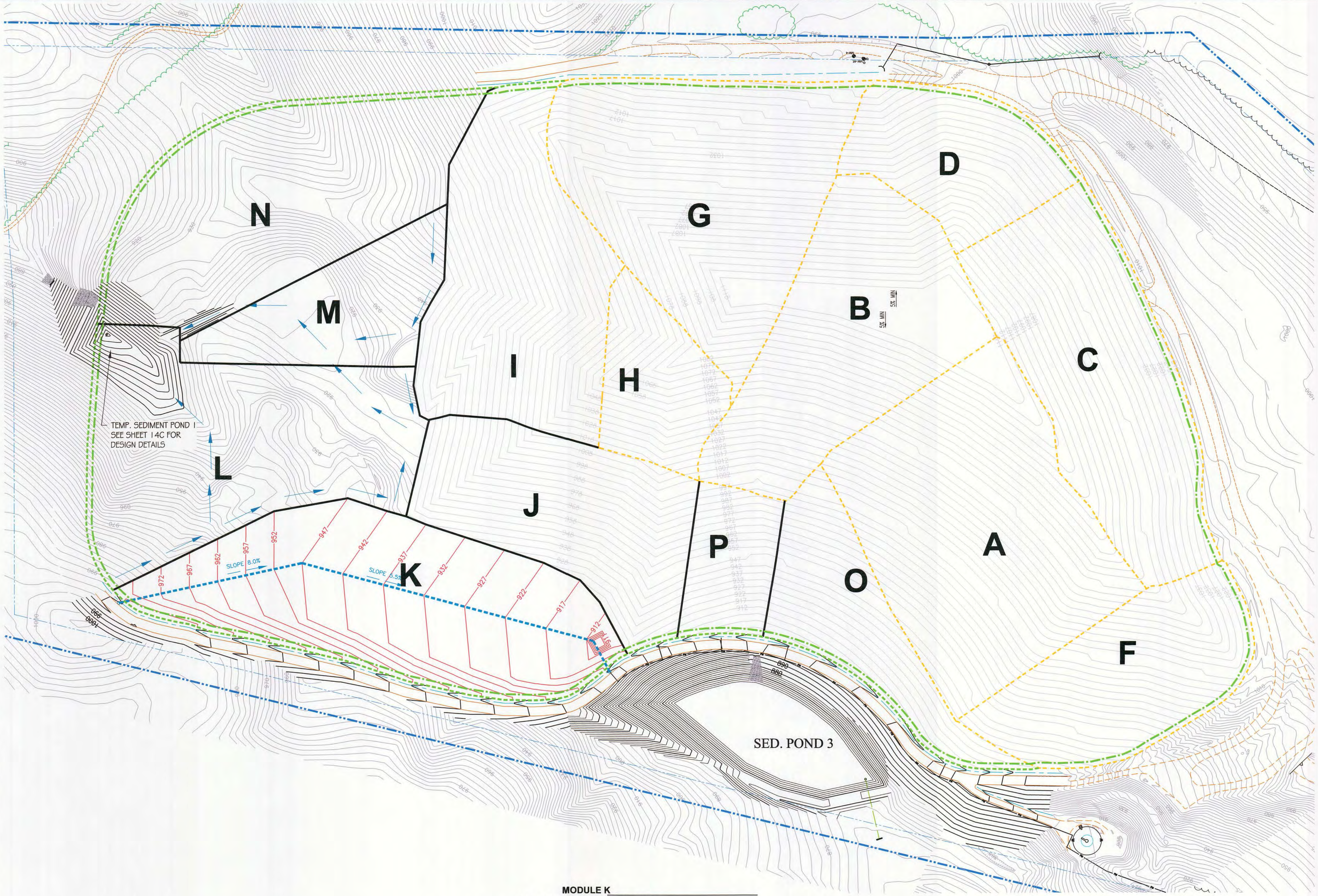
PHASING PLAN
MODULE O

MATLOCK BEND LANDFILL EXPANSION
LOUDON COUNTY, TENNESSEE

SANTEK ENVIRONMENTAL INC
650 25TH STREET NW
SUITE 100
CLEVELAND, TENNESSEE

SCALE: 1"=100'
DATE: 4/5/10
DRAWN BY: JW
CHECKED BY: RV
APPROVED BY: RB
FILE: 0913-08-000
JOB NO: 200-1013.4

8C
sheet number



LEGEND

- PROPERTY BOUNDARY
- 50' SET BACK FROM PROPERTY LINE
- TOPOGRAPHY
- PROPOSED LIMITS OF CLASS I WASTE PLACEMENT
- WORKING POINT LINE SEE DETAIL C SHEET 14B
- EXISTING LINER CLASS I
- PROPOSED TOP OF CLAY CONTOURS (5-FT)
- EXISTING TOP OF CLAY CONTOURS (5-FT)
- FUTURE TOP OF CLAY CONTOURS (5-FT)
- LEACHATE LINES
- EXISTING LEACHATE LINES
- EXISTING LEACHATE FORCEMAIN
- PROPOSED LEACHATE FORCEMAIN
- MODULE BOUNDARY
- STORM WATER FLOW ARROWS (SEE NOTE 7)
- PUMPED STORM WATER FLOW ARROWS (SEE NOTE 7)

Module Acreage

Module	Acreage
J	4.2
K	6.5
L	6.3
M	2.4
N	6.2
O	2.6
P	1.4

NOTES FOR ALL MODULES

1) EXISTING SITE TOPOGRAPHY AND FACILITY ENVIRONS FROM CONTINENTAL AERIAL SURVEYS PREPARED FOR SANTEK ENVIRONMENTAL, MAPPING COMPILED FROM AERIAL PHOTOGRAPHY, DATED 9-29-08, PROJECT #08-1121.
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3) THE MODULE LIMITS INDICATED ON THIS PLAN ARE INTENDED TO BE APPROXIMATE. MODIFICATIONS TO THE MODULE LAYOUT AND SEQUENCING MAY BE REQUIRED TO BETTER FACILITATE OPERATIONAL AND CONSTRUCTION NEEDS.
4) MODULES MAY BE CONSTRUCTED IN WHOLE OR IN PART AS REQUIRED BY FUTURE OPERATIONAL AND CONSTRUCTION NEEDS.
5) FUTURE MODULE EXCAVATIONS WILL BE USED FOR INTERIM STORM WATER MANAGEMENT. ADEQUATE SIZED PUMPS WILL BE PROVIDED TO MOVE COLLECTED STORM WATER TO PONDS. PUMPS SHALL BE SIZED TO MINIMIZE STORM WATER CONTACT WITH IN-PLACE MSW.
6) THE GROUNDWATER MONITORING NETWORK MAY BE UPGRADED AT ANY TIME PRIOR TO THE NOTES INDICATED IN THE INDIVIDUAL MODULE PLAN.
7) ALTHOUGH FUTURE MODULE AREAS WILL CHANGE DUE TO BORROWING/STORING OF ONSITE SOIL FOR OPERATION, A GENERAL LAYOUT FOR STORM WATER MANAGEMENT HAS BEEN INCLUDED. ACTUAL STORM WATER MANAGEMENT ISSUES WILL NEED TO BE REVIEWED ON A MODULE SPECIFIC BASES PRIOR TO CONSTRUCTION.
8) THE INTERMEDIATE TOP CONTOURS ARE APPROXIMATE.

MODULE K

NOTES FOR MODULE K

1) INSTALL NEW SUMP #3 WITH RISER PIPE SUMP PUMP, AND FORCEMAIN TO TIE-IN TO EXISTING FORCEMAIN INSTALLED DURING MODULE I CONSTRUCTION.
2) INSTALL MONITORING WELL MW-07 AND COLLECT 4 BACKGROUND SAMPLES PRIOR TO FILLING WASTE IN MODULE L (SEE SHEET 4 FOR LOCATION).
3) WHEN PUMPS ARE USED TO CONTROL STORM WATER, THE PUMPED WATER MUST BE DISCHARGED INTO AN EXISTING SEDIMENT BASIN PRIOR TO LEAVING THE SITE.

SCALE 1"=100' FEET

REV.	DATE	DRWN	CHKD	REVISION
4	03/14	JW	RV	REVISED PER TDEC COMMENTS DATED 12/17/13.
3	05/13	JW	RV	REVISED PER TDEC COMMENTS DATED 1/3/12.
2	10/12/10	MW	RV	REVISED PER TDEC COMMENTS DATED 9/10/10.
1	6/8/10	JW	RV	REVISED PER TDEC COMMENTS DATED 3/17/10.

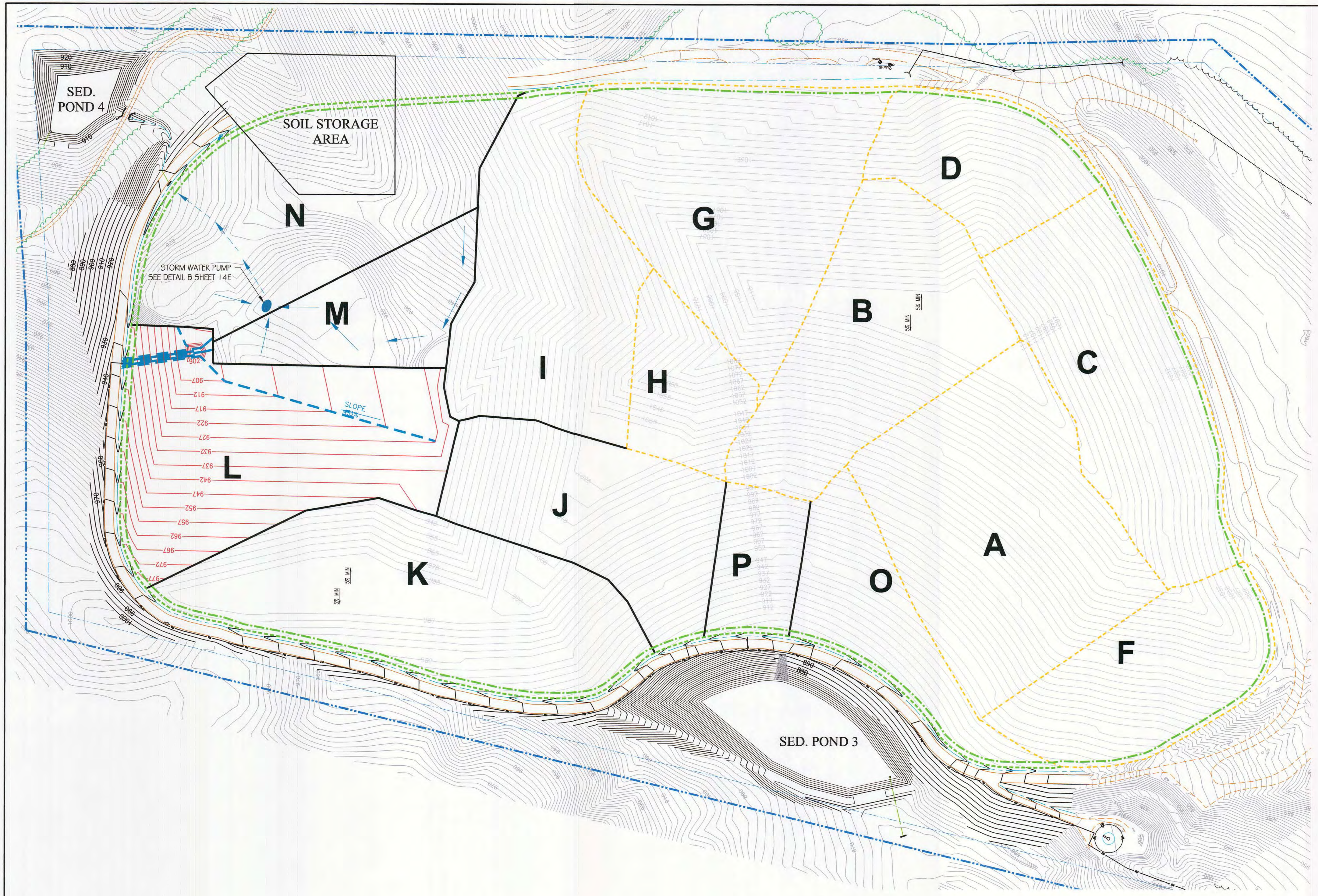
PHASING PLAN
MODULE K

MATLOCK BEND LANDFILL EXPANSION
LOUDON COUNTY, TENNESSEE

SANTEK ENVIRONMENTAL INC
650 25TH STREET NW
SUITE 100
CLEVELAND, TENNESSEE

SCALE: 1"=100'
DATE: 4/5/10
DRAWN BY: JW
CHECKED BY: RV
APPROVED BY: RB
FILE:0913-08-000
JOB NO: 200-1013.4

8D
sheet number



LEGEND

- PROPERTY BOUNDARY
- 50' SET BACK FROM PROPERTY LINE
- TOPOGRAPHY
- PROPOSED LIMITS OF CLASS I WASTE PLACEMENT
- WORKING POINT LINE SEE DETAIL C SHEET 14B
- EXISTING LINER CLASS I
- PROPOSED TOP OF CLAY CONTOURS (5-FT)
- EXISTING TOP OF CLAY CONTOURS (5-FT)
- FUTURE TOP OF CLAY CONTOURS (5-FT)
- LEACHATE LINES
- EXISTING LEACHATE LINES
- EXISTING LEACHATE FORCEMAIN
- PROPOSED LEACHATE FORCEMAIN
- MODULE BOUNDARY
- STORM WATER FLOW ARROWS (SEE NOTE 7)
- PUMPED STORM WATER FLOW ARROWS (SEE NOTE 7)

Module Acreage

Module	Acreage
J	4.2
K	6.5
L	6.3
M	2.4
N	6.2
O	2.6
P	1.4

NOTES FOR ALL MODULES

1) EXISTING SITE TOPOGRAPHY AND FACILITY ENVIRONS FROM CONTINENTAL AERIAL SURVEYS PREPARED FOR SANTEK ENVIRONMENTAL, MAPPING COMPILED FROM AERIAL PHOTOGRAPHY, DATED 9-29-08, PROJECT #08-1121.
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3) THE MODULE LIMITS INDICATED ON THIS PLAN ARE INTENDED TO BE APPROXIMATE. MODIFICATIONS TO THE MODULE LAYOUT AND SEQUENCING MAY BE REQUIRED TO BETTER FACILITATE OPERATIONAL AND CONSTRUCTION NEEDS.
4) MODULES MAY BE CONSTRUCTED IN WHOLE OR IN PART AS REQUIRED BY FUTURE OPERATIONAL AND CONSTRUCTION NEEDS.
5) FUTURE MODULE EXCAVATIONS WILL BE USED FOR INTERIM STORM WATER MANAGEMENT. ADEQUATE SIZED PUMPS WILL BE PROVIDED TO MOVE COLLECTED STORM WATER TO PONDS. PUMPS SHALL BE SIZED TO MINIMIZE STORM WATER CONTACT WITH IN-PLACE MSW.
6) THE GROUNDWATER MONITORING NETWORK MAY BE UPGRADED AT ANY TIME PRIOR TO THE NOTES INDICATED IN THE INDIVIDUAL MODULE PLAN.
7) ALTHOUGH FUTURE MODULE AREAS WILL CHANGE DUE TO BORROWING/STORING OF ONSITE SOIL FOR OPERATION, A GENERAL LAYOUT FOR STORM WATER MANAGEMENT HAS BEEN INCLUDED. ACTUAL STORM WATER MANAGEMENT ISSUES WILL NEED TO BE REVIEWED ON A MODULE SPECIFIC BASES PRIOR TO CONSTRUCTION.
8) THE INTERMEDIATE TOP CONTOURS ARE APPROXIMATE.

RON VAIL
REGISTERED ENGINEER
AGRICULTURE
COMMERCE
No. 00109716
STATE OF TENNESSEE

MODULE L

NOTES FOR MODULE L

1) INSTALL NEW SUMP #4 WITH RISER PIPE SUMP PUMP, BACK FLOW PREVENTER AND FORCEMAIN TO TIE-IN TO EXISTING FORCEMAIN INSTALLED DURING MODULE K CONSTRUCTION.
2) INSTALL NEW STORMWATER POND #4 AND NEW DISCHARGE STRUCTURE - SEE SHEET 14C.
3) EXTEND LEACHATE PIPES INTO FUTURE MODULES M AND N FOR FUTURE TIE-IN SEE DETAIL B SHEET 12A.
4) WHEN PUMPS ARE USED TO CONTROL STORM WATER, THE PUMPED WATER MUST BE DISCHARGED INTO AN EXISTING SEDIMENT BASIN PRIOR TO LEAVING THE SITE.

100 0 100
SCALE 1"=100' FEET

REV.	DATE	DRWN	CHKD	REVISION
4	03/14	JW	RV	REVISED PER TDEC COMMENTS DATED 12/17/13.
3	05/13	JW	RV	REVISED PER TDEC COMMENTS DATED 1/3/12.
2	10/12/10	MW	RV	REVISED PER TDEC COMMENTS DATED 9/10/10.
1	6/8/10	JW	RV	REVISED PER TDEC COMMENTS DATED 3/17/10.

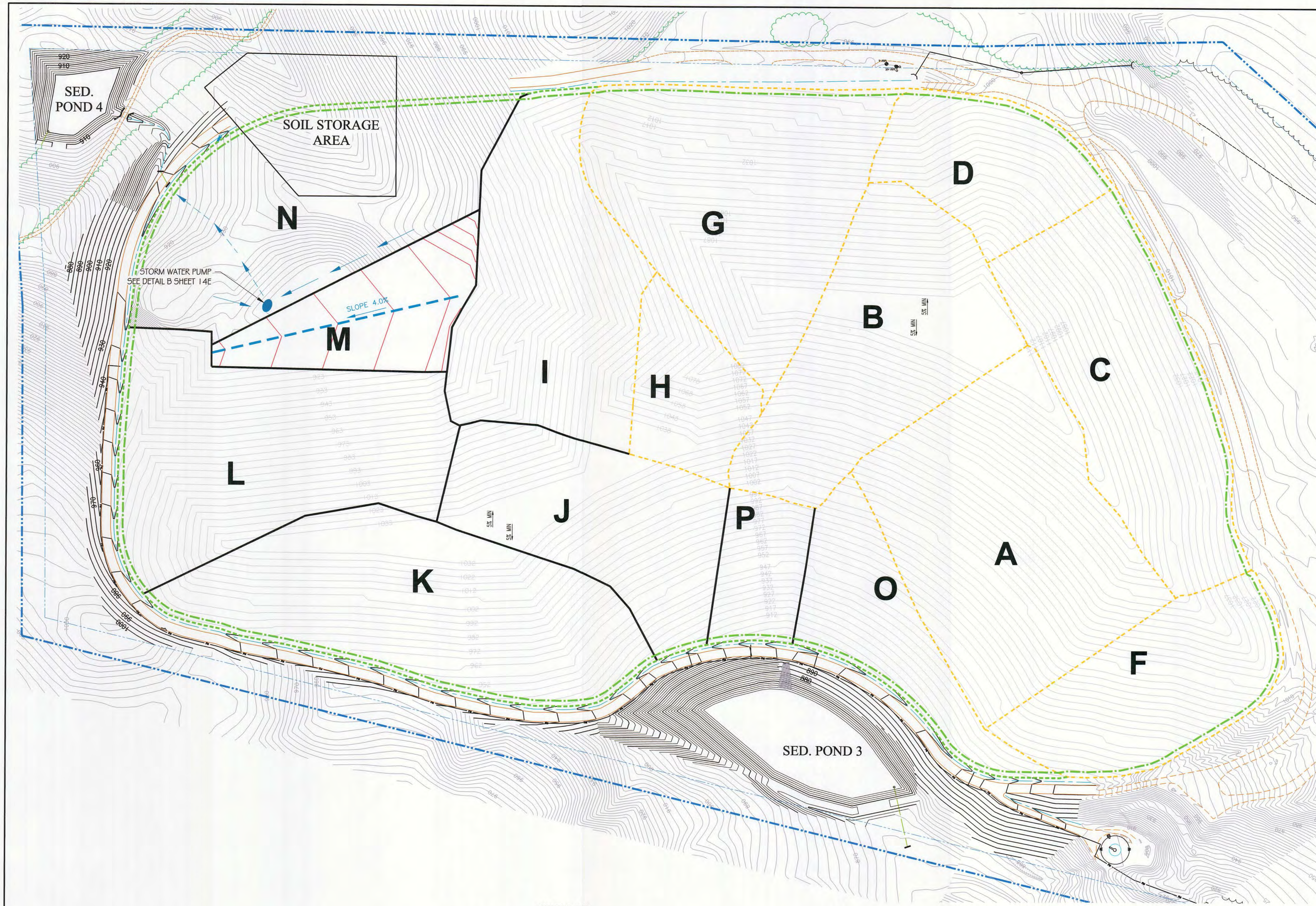
PHASING PLAN
MODULE L

MATLOCK BEND LANDFILL EXPANSION
LOUDON COUNTY, TENNESSEE

SANTEK ENVIRONMENTAL INC
650 25TH STREET NW
SUITE 100
CLEVELAND, TENNESSEE

SCALE: 1"=100'
DATE: 4/5/10
DRAWN BY: JW
CHECKED BY: RV
APPROVED BY: RB
FILE:0913-08-000
JOB NO:200-1013.4

8E
sheet number



LEGEND

- PROPERTY BOUNDARY
- 50' SET BACK FROM PROPERTY LINE
- TOPOGRAPHY
- PROPOSED LIMITS OF CLASS I WASTE PLACEMENT
- WORKING POINT LINE SEE DETAIL C SHEET 14B
- EXISTING LINER CLASS I
- PROPOSED TOP OF CLAY CONTOURS (5–FT)
- EXISTING TOP OF CLAY CONTOURS (5–FT)
- FUTURE TOP OF CLAY CONTOURS (5–FT)
- LEACHATE LINES
- EXISTING LEACHATE LINES
- EXISTING LEACHATE FORCEMAIN
- PROPOSED LEACHATE FORCEMAIN
- MODULE BOUNDARY
- STORM WATER FLOW ARROWS (SEE NOTE 7)
- PUMPED STORM WATER FLOW ARROWS (SEE NOTE 7)

Module Acreage	
Module	Acreage
J	4.2
K	6.5
L	6.3
M	2.4
N	6.2
O	2.6
P	1.4

NOTES FOR ALL MODULES

1) EXISTING SITE TOPOGRAPHY AND FACILITY ENVIRONS FROM CONTINENTAL AERIAL SURVEYS PREPARED FOR SANTEK ENVIRONMENTAL, MAPPING COMPILED FROM AERIAL PHOTOGRAPHY, DATED 9–29–08, PROJECT #08–1121.
2) THIS DRAWING IS FOR THE ILLUSTRATION OF ANTICIPATED MODULE DEVELOPMENT PROGRESSION. THE MODULE CONTOURS ARE NOT TIED TO THE EXISTING GRADE BECAUSE THE EXISTING GRADE IS SUBJECT TO CHANGE PRIOR TO CONSTRUCTION. THE MODULE CONTOURS WILL NEED TO BE TIED TO THE EXISTING GRADE PRIOR TO CONSTRUCTION OF EACH MODULE.
3) THE MODULE LIMITS INDICATED ON THIS PLAN ARE INTENDED TO BE APPROXIMATE. MODIFICATIONS TO THE MODULE LAYOUT AND SEQUENCING MAY BE REQUIRED TO BETTER FACILITATE OPERATIONAL AND CONSTRUCTION NEEDS.
4) MODULES MAY BE CONSTRUCTED IN WHOLE OR IN PART AS REQUIRED BY FUTURE OPERATIONAL AND CONSTRUCTION NEEDS.
5) FUTURE MODULE EXCAVATIONS WILL BE USED FOR INTERIM STORM WATER MANAGEMENT. ADEQUATE SIZED PUMPS WILL BE PROVIDED TO MOVE COLLECTED STORM WATER TO PONDS. PUMPS SHALL BE SIZED TO MINIMIZE STORM WATER CONTACT WITH IN–PLACE MSW.
6) THE GROUNDWATER MONITORING NETWORK MAY BE UPGRADED AT ANY TIME PRIOR TO THE NOTES INDICATED IN THE INDIVIDUAL MODULE PLAN.
7) ALTHOUGH FUTURE MODULE AREAS WILL CHANGE DUE TO BORROWING/STORING OF ONSITE SOIL FOR OPERATION, A GENERAL LAYOUT FOR STORM WATER MANAGEMENT HAS BEEN INCLUDED. ACTUAL STORM WATER MANAGEMENT ISSUES WILL NEED TO BE REVIEWED ON A MODULE SPECIFIC BASES PRIOR TO CONSTRUCTION.
8) THE INTERMEDIATE TOP CONTOURS ARE APPROXIMATE.

RON VAIL
REGISTERED ENGINEER
AGRICULTURE
COMMERCE
3/10/14
No. 00109716
STATE OF TENNESSEE

MODULE M

NOTES FOR MODULE M

1) TIE MODULE M LEACHATE COLLECTION PIPE INTO LEACHATE PIPE FROM MODULE L SEE DETAIL D SHEET 12A.
2) WHEN PUMPS ARE USED TO CONTROL STORM WATER, THE PUMPED WATER MUST BE DISCHARGED INTO AN EXISTING SEDIMENT BASIN PRIOR TO LEAVING THE SITE.

100 0 100
SCALE 1"=100' FEET

REV.	DATE	DRWN	CHKD	REVISION
4	03/14	JW	RV	REVISED PER TDEC COMMENTS DATED 12/17/13.
3	05/13	JW	RV	REVISED PER TDEC COMMENTS DATED 1/3/12.
2	10/12/10	MW	RV	REVISED PER TDEC COMMENTS DATED 9/10/10.
1	6/8/10	JW	RV	REVISED PER TDEC COMMENTS DATED 3/17/10.

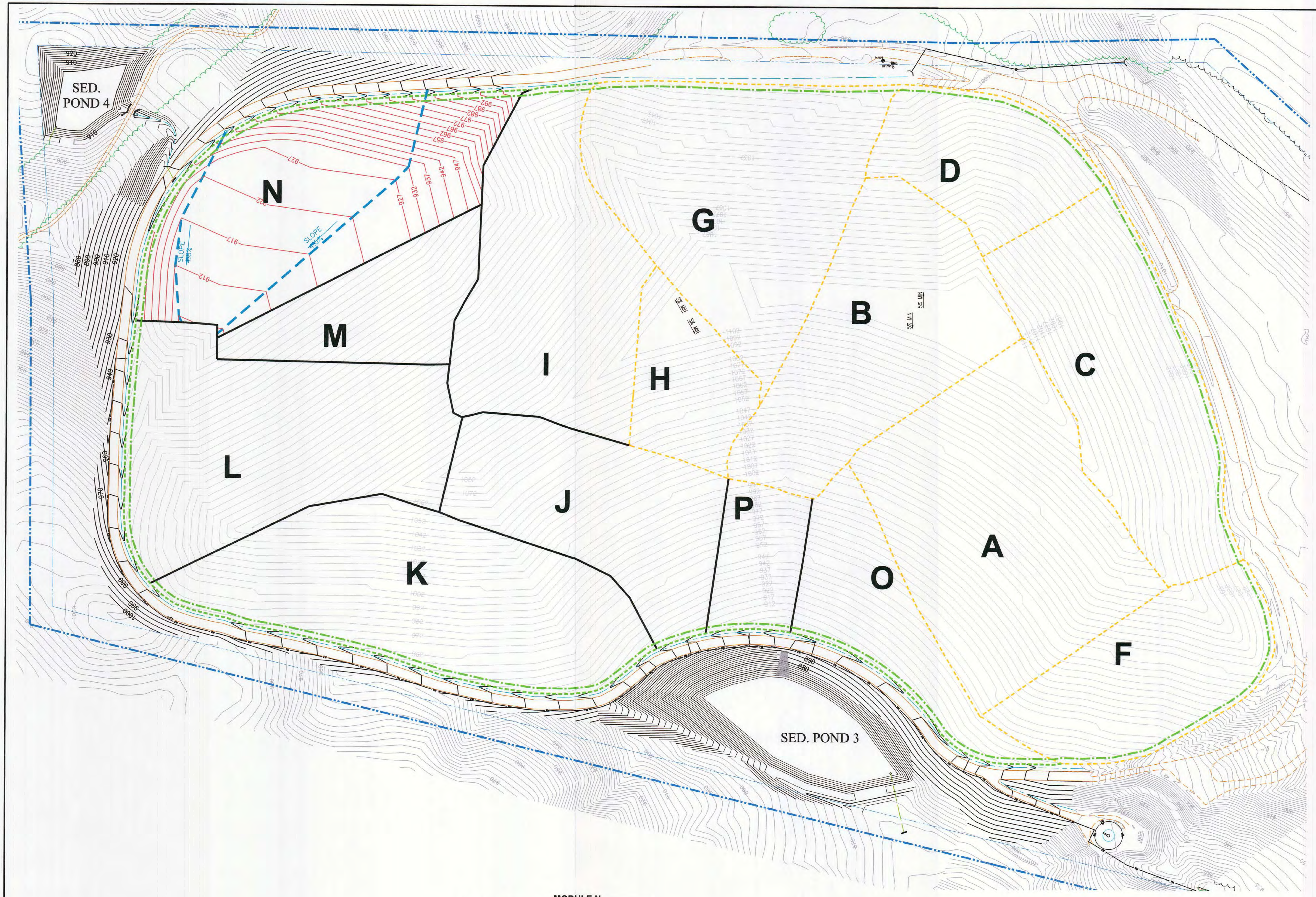
PHASING PLAN
MODULE M

MATLOCK BEND LANDFILL EXPANSION
LOUDON COUNTY, TENNESSEE

SANTEK ENVIRONMENTAL INC
650 25TH STREET NW
SUITE 100
CLEVELAND, TENNESSEE

SCALE: 1"=100'
DATE: 4/5/10
DRAWN BY: JW
CHECKED BY: RV
APPROVED BY: RB
FILE:0913-08-000
JOB NO:200-1013.4

8F
sheet number



LEGEND

- PROPERTY BOUNDARY
- 50' SET BACK FROM PROPERTY LINE
- TOPOGRAPHY
- PROPOSED LIMITS OF CLASS I WASTE PLACEMENT
- WORKING POINT LINE SEE DETAIL C SHEET 14B
- EXISTING LINER CLASS I
- PROPOSED TOP OF CLAY CONTOURS (5–FT)
- EXISTING TOP OF CLAY CONTOURS (5–FT)
- FUTURE TOP OF CLAY CONTOURS (5–FT)
- LEACHATE LINES
- EXISTING LEACHATE LINES
- EXISTING LEACHATE FORCEMAIN
- PROPOSED LEACHATE FORCEMAIN
- MODULE BOUNDARY
- STORM WATER FLOW ARROWS (SEE NOTE 7)
- PUMPED STORM WATER FLOW ARROWS (SEE NOTE 7)

Module Acreage

Module	Acreage
J	4.2
K	6.5
L	6.3
M	2.4
N	6.2
O	2.6
P	1.4

NOTES FOR ALL MODULES

1) EXISTING SITE TOPOGRAPHY AND FACILITY ENVIRONS FROM CONTINENTAL AERIAL SURVEYS PREPARED FOR SANTEK ENVIRONMENTAL, MAPPING COMPILED FROM AERIAL PHOTOGRAPHY, DATED 9–29–08, PROJECT #08–1121.
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8) THE INTERMEDIATE TOP CONTOURS ARE APPROXIMATE.

MODULE N

NOTES FOR MODULE N

1) TIE MODULE N LEACHATE COLLECTION PIPE INTO LEACHATE PIPE FROM MODULE L SEE DETAIL D SHEET 12A.
2) WHEN PUMPS ARE USED TO CONTROL STORM WATER, THE PUMPED WATER MUST BE DISCHARGED INTO AN EXISTING SEDIMENT BASIN PRIOR TO LEAVING THE SITE.

100 0 100
SCALE 1"=100' FEET

RON VAIL REGISTERED ENGINEER AGRICULTURE COMMERCE No. 00109716 STATE OF TENNESSEE 3/10/14

REV.	DATE	DRWN	CHKD	REVISION
4	03/14	JW	RV	REVISED PER TDEC COMMENTS DATED 12/17/13.
3	05/13	JW	RV	REVISED PER TDEC COMMENTS DATED 1/3/12.
2	10/12/10	MW	RV	REVISED PER TDEC COMMENTS DATED 9/10/10.
1	6/8/10	JW	RV	REVISED PER TDEC COMMENTS DATED 3/17/10.

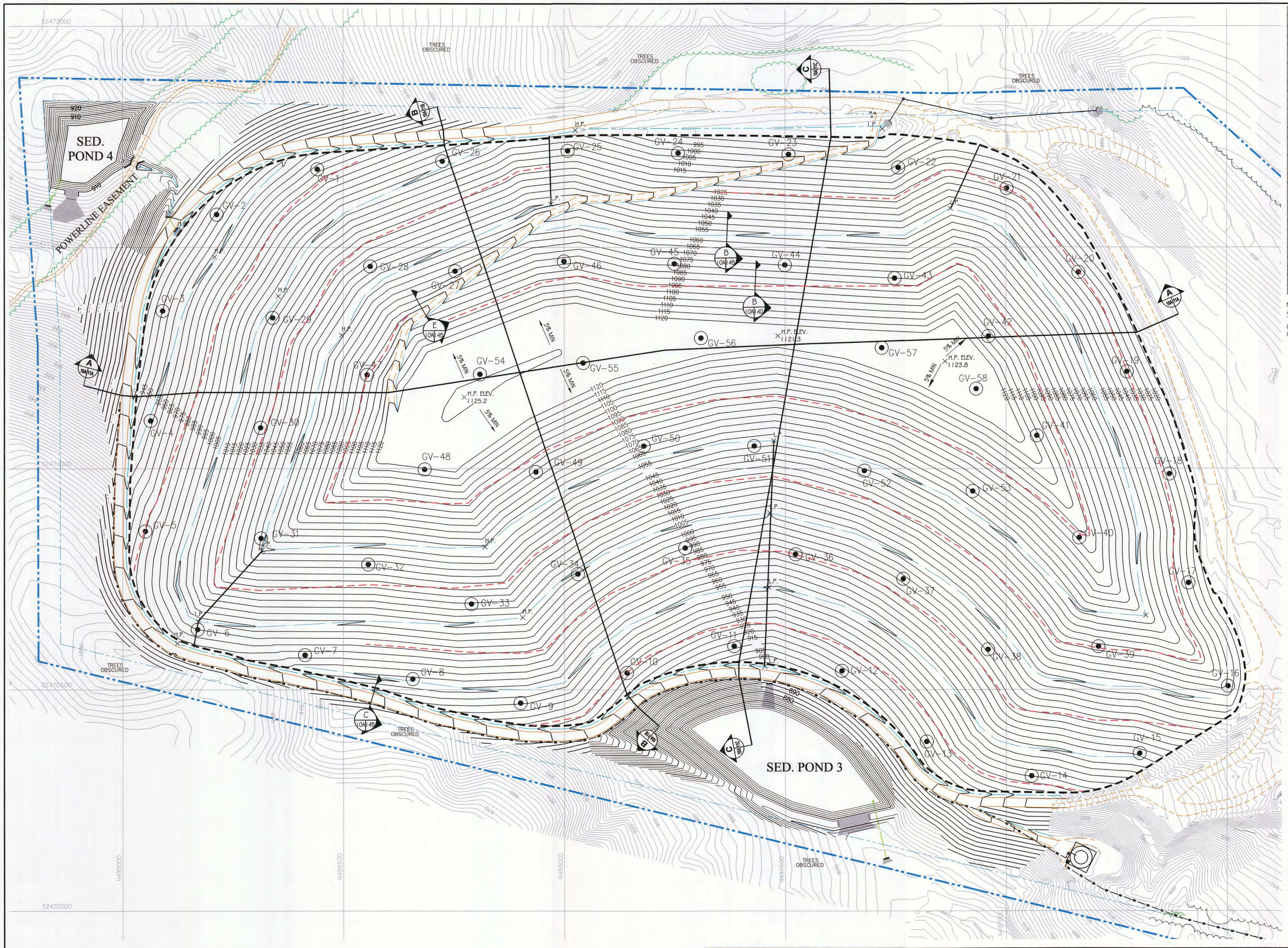
PHASING PLAN
MODULE N

MATLOCK BEND LANDFILL EXPANSION
LOUDON COUNTY, TENNESSEE

SANTEK ENVIRONMENTAL INC
650 25TH STREET NW
SUITE 100
CLEVELAND, TENNESSEE

SCALE: 1"=100'
DATE: 1/7/13
DRAWN BY: JW
CHECKED BY: RV
APPROVED BY: RB
FILE:0913-08-000
JOB NO:200-1213.2

8G
sheet number



GAS VENT SCHEDULE					
VENT #	NORTHING	EASTING	VENT #	NORTHING	EASTING
GV-1	498,558.36	2,471,676.69	GV-30	498,687.26	2,471,092.31
GV-2	498,786.39	2,471,574.22	GV-31	498,686.34	2,470,842.32
GV-3	498,909.47	2,471,356.61	GV-32	498,443.43	2,470,783.20
GV-4	498,936.76	2,471,108.11	GV-33	498,209.83	2,470,694.14
GV-5	498,948.57	2,470,858.39	GV-34	497,969.12	2,470,761.67
GV-6	498,830.11	2,470,636.26	GV-35	497,726.24	2,470,820.89
GV-7	498,586.88	2,470,578.46	GV-36	497,476.65	2,470,806.50
GV-8	498,342.81	2,470,524.32	GV-37	497,232.91	2,470,750.92
GV-9	498,098.75	2,470,470.18	GV-38	497,040.89	2,470,590.83
GV-10	497,858.23	2,470,538.38	GV-39	496,790.97	2,470,597.12
GV-11	497,615.61	2,470,598.67	GV-40	496,834.18	2,470,843.36
GV-12	497,371.86	2,470,543.09	GV-41	496,930.25	2,471,074.17
GV-13	497,179.84	2,470,383.01	GV-42	497,039.67	2,471,298.95
GV-14	496,942.41	2,470,304.74	GV-43	497,252.26	2,471,430.49
GV-15	496,697.68	2,470,355.80	GV-44	497,500.46	2,471,460.47
GV-16	496,497.76	2,470,508.12	GV-45	497,750.44	2,471,463.34
GV-17	496,586.99	2,470,741.66	GV-46	498,000.39	2,471,468.43
GV-18	496,630.20	2,470,987.90	GV-47	498,445.92	2,471,211.66
GV-19	496,726.26	2,471,218.70	GV-48	498,315.82	2,470,998.18
GV-20	496,835.69	2,471,443.48	GV-49	498,063.79	2,470,992.49
GV-21	496,998.11	2,471,633.54	GV-50	497,820.09	2,471,051.05
GV-22	497,243.68	2,471,680.35	GV-51	497,570.09	2,471,051.05
GV-23	497,491.88	2,471,710.32	GV-52	497,320.82	2,470,995.58
GV-24	497,741.86	2,471,713.20	GV-53	497,075.51	2,470,948.83
GV-25	497,991.81	2,471,718.28	GV-54	498,190.46	2,471,213.28
GV-26	498,275.42	2,471,694.68	GV-55	497,957.12	2,471,238.81
GV-27	498,246.43	2,471,446.37	GV-56	497,690.50	2,471,295.10
GV-28	498,438.70	2,471,457.19	GV-57	497,281.37	2,471,273.27
GV-29	498,659.97	2,471,340.82	GV-58	497,067.62	2,471,180.23

NOTE:
ACTUAL LOCATION OF GAS VENTS MAY VARY FROM THE LOCATIONS IN THIS CHART WHEN INSTALLED DUE TO DRAINAGE STRUCTURES AND OPERATIONAL NEEDS THAT MAY OCCUR AT THE TIME OF INSTALLATION OR IN THE FUTURE.

LEGEND

- PROPERTY BOUNDARY
- 50' SET BACK FROM PROPERTY LINE
- TOPOGRAPHY
- WORKING POINT LINE SEE DETAIL C SHEET 14B
- 11' TERRACE
- PROPOSED LEACHATE FORCEMAIN
- DOWNCOMER (SEE SHEET 14B)
- 21 GAS VENT
- DRAINAGE DITCH
- TACK-ON DITCH

GENERAL NOTES

1) EXISTING SITE TOPOGRAPHY AND FACILITY ENVIRONS FROM CONTINENTAL AERIAL SURVEYS PREPARED FOR SANTEK ENVIRONMENTAL, MAPPING COMPILED FROM AERIAL PHOTOGRAPHY, DATED 9-29-08, PROJECT #08-1121.
2) LOCATION OF GAS VENTS MAY VARY DUE TO ONSITE CONDITIONS AND CONSTRUCTION CONSIDERATIONS.
3) FINAL CONTOURS INDICATED ON THIS PLAN ILLUSTRATE TOP OF COMPOSITE CLOSURE SYSTEM PROFILE. ACTUAL ELEVATIONS ARE INTENDED TO BE THREE FEET HIGHER THAN THE TOP OF INTERMEDIATE COVER ELEVATIONS AND MAY VARY FROM THIS DRAWING.
4) FOR THE STORMWATER CONTROL SYSTEM, SEE SHEET 10B.
5) SEE SHEET 15 FOR GAS VENT INSTALLATION DETAILS.

100 0 100
SCALE 1"=100' FEET

RON VAIL
REGISTERED ENGINEER
AGRICULTURE COMMERCE
No. 00109716
STATE OF TENNESSEE
3/10/14

REV.	DATE	DRWN	CHKD	REVISION
4	03/14	JW	RV	REVISED PER TDEC COMMENTS DATED 12/17/13.
3	05/13	JW	RV	REVISED PER TDEC COMMENTS DATED 1/3/12.
2	10/12/10	MW	RV	REVISED PER TDEC COMMENTS DATED 9/10/10.
1	6/8/10	JW	RV	REVISED PER TDEC COMMENTS DATED 3/17/10.

FINAL COVER PLAN

MATLOCK BEND LANDFILL EXPANSION
LOUDON COUNTY, TENNESSEE

SANTEK ENVIRONMENTAL INC
650 25TH STREET NW
SUITE 100
CLEVELAND, TENNESSEE

SCALE: 1"=100'
DATE: 1/7/13
DRAWN BY: JW
CHECKED BY: RV
APPROVED BY: RB
FILE:0913-10A-000
JOB NO:200-1213.2

10A
sheet number

LEGEND

— · · — · · —	PROPERTY LINE
— · — · —	50' SET BACK FROM PROPERTY LINE
1040	TOPOGRAPHY
— — — —	PROPOSED SOLID WASTE BOUNDARY
1060	PROPOSED FINAL COVER CONTOURS
HW5	HEADWALL
DS6	DRAINAGE STRUCTURE
	RIP-RAP
D10	DITCH SECTION
	DRAINAGE PIPE/ CULVERT
	TACK-ON DITCH

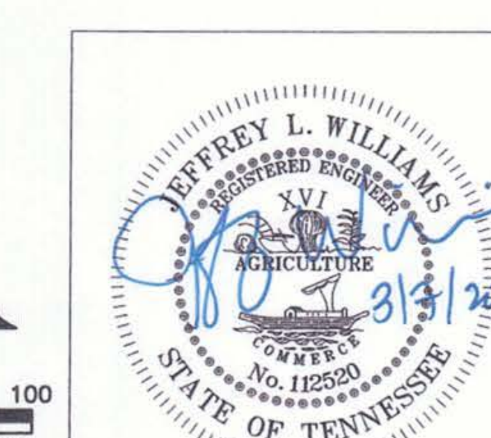
GENERAL NOTES

1) EXISTING SITE TOPOGRAPHY AND FACILITY ENVIRONS FROM CONTINENTAL AERIAL SURVEYS PREPARED FOR SANTEK ENVIRONMENTAL, MAPPING COMPILED FROM AERIAL PHOTOGRAPHY, DATED 9–29–08, PROJECT #08–1121.

2) FOR STORMWATER SCHEDULES, SEE SHEETS 14B, 14C, AND 14D.

3) TEMPORARY ROCK CHECK DAMS SHALL BE PLACED IN DITCHES LACKING ADEQUATE VEGETATIVE STABILIZATION, AS PER DETAIL ON SHEET 14D.

4) TEMPORARY SILT FENCE SHALL BE INSTALLED DOWNGRADIENT OF SLOPES LACKING ADEQUATE VEGETATIVE STABILIZATION, INCLUDING SOIL STOCKPILES, AS PER DETAIL ON SHEET 14A.



REV.	DATE	DRWN	CHKD	REVISION
3	05/13	JW	RV	REVISED PER TDEC COMMENTS DATED 1/3/12.
2	10/12/10	MW	RV	REVISED PER TDEC COMMENTS DATED 9/15/10.
1	6/8/10	JW	RV	REVISED PER TDEC COMMENTS DATED 3/17/10.

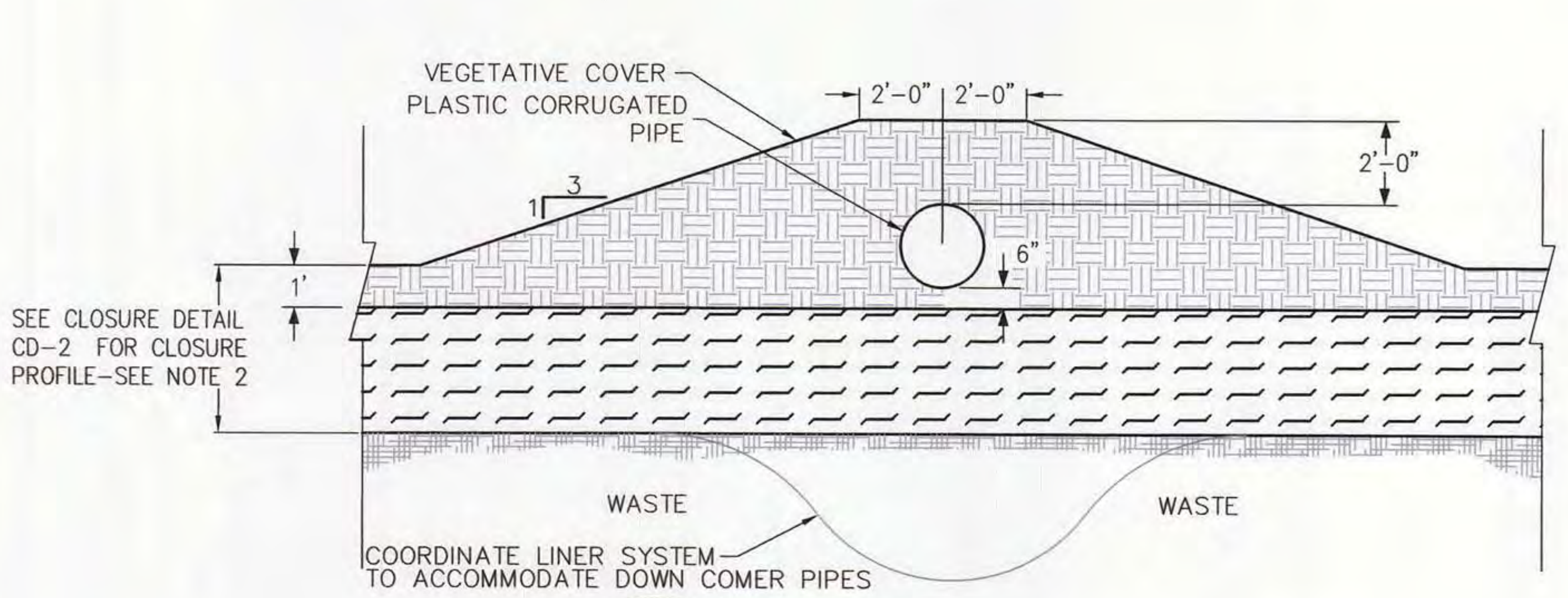
STORMWATER PLAN

MATLOCK BEND LANDFILL
LOUDON COUNTY, TENNESSEE

SANTEK ENVIRONMENTAL INC.
650 25TH STREET NW
SUITE 100
CLEVELAND, TENNESSEE

SCALE: 1"=100'
DATE: 8/18/09
DRAWN BY: CEC
CHECKED BY: CEC
APPROVED BY:
FILE: 0913-10B-000
JOB NO: 200-0913.2

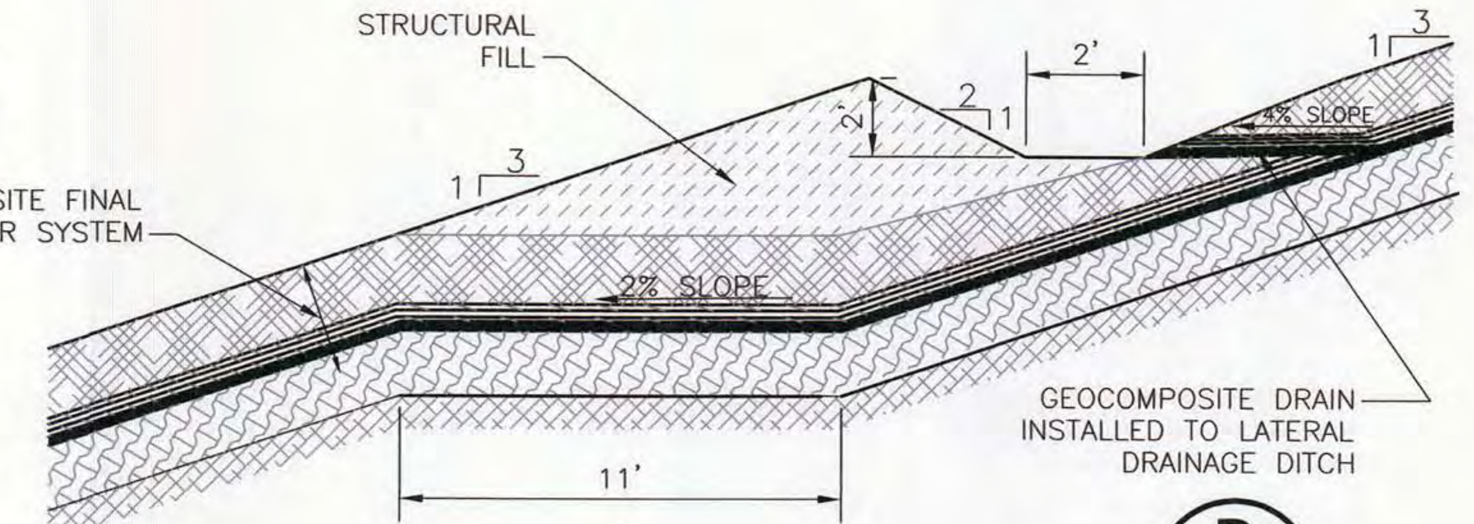
10B
sheet number



A 10A|14B **DOWNSLOPE CHUTE/PIPE COVERAGE**

NOT TO SCALE

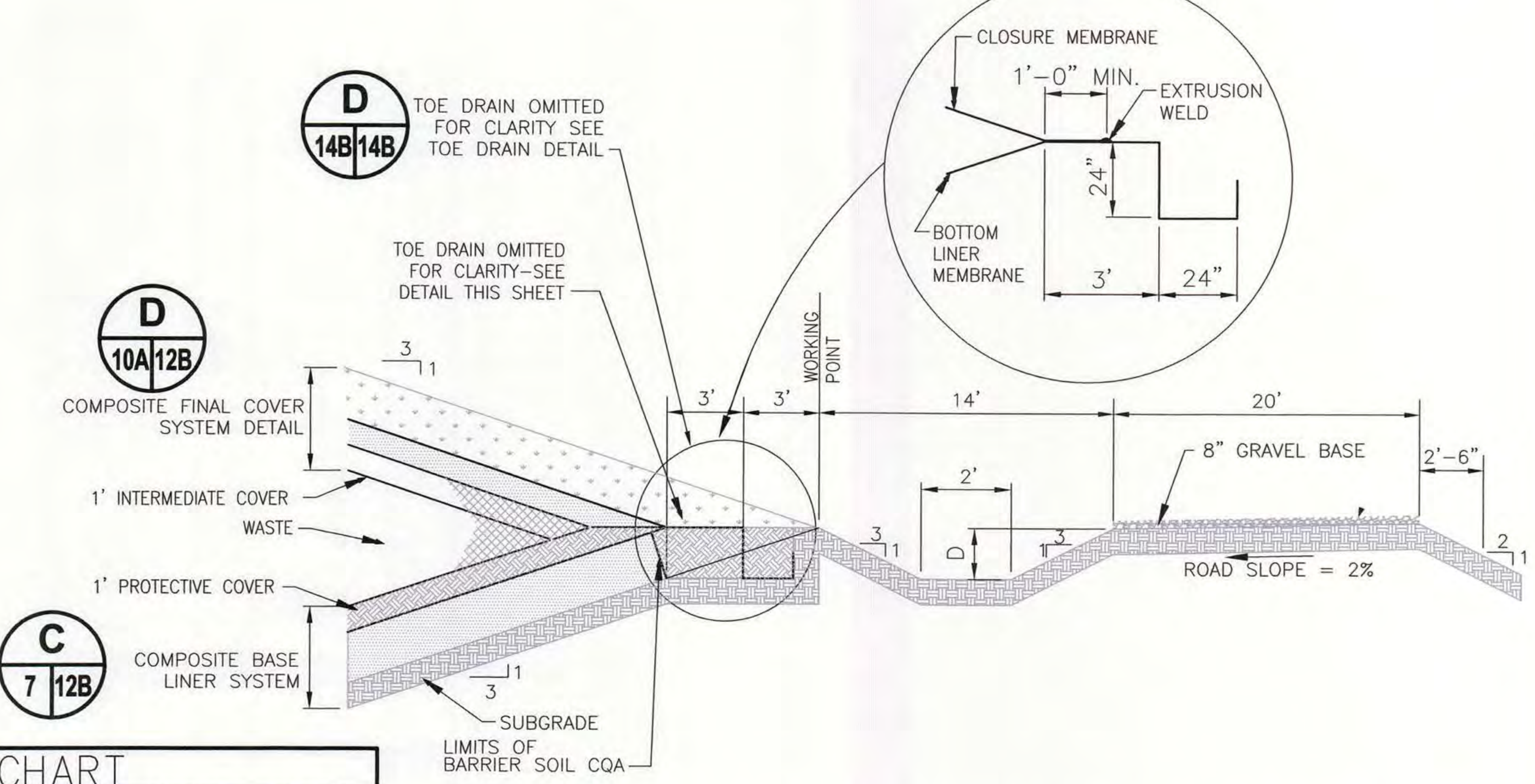
D 10A|12B



D 14B|14B

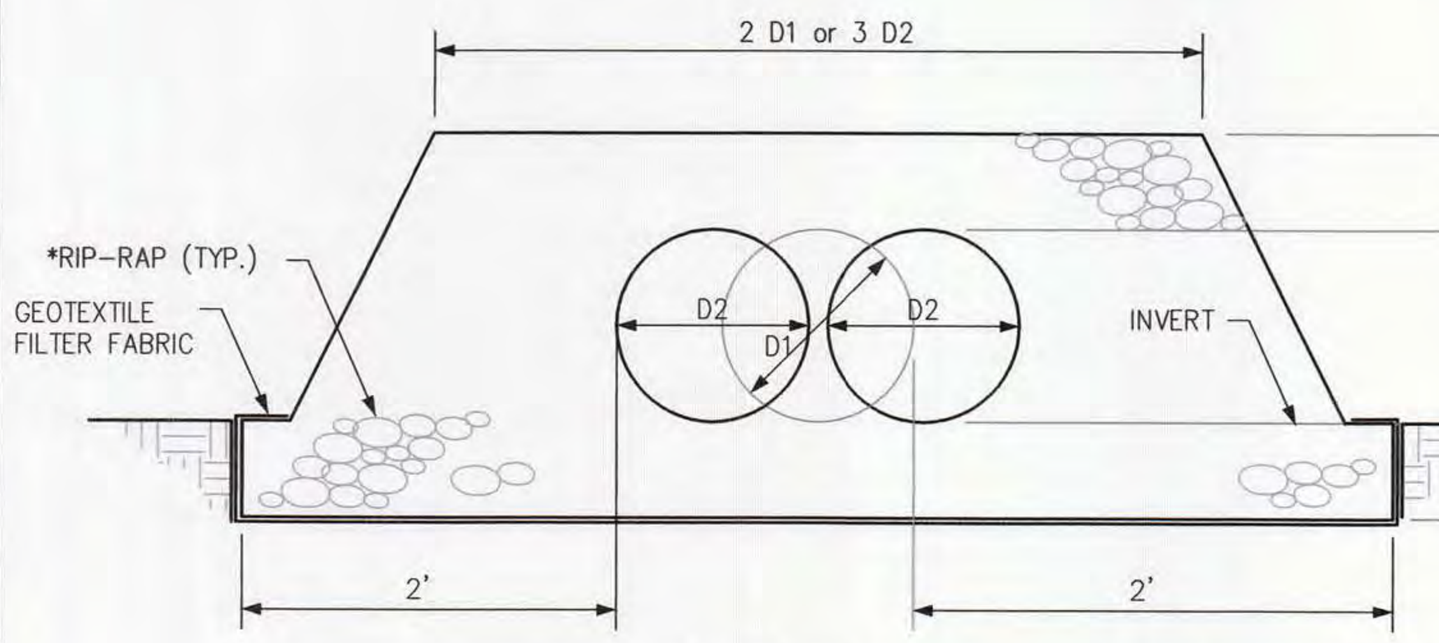
B 10A|14B **FINAL COVER SYSTEM AND LATERAL DRAINAGE DITCH DETAIL**

NOT TO SCALE

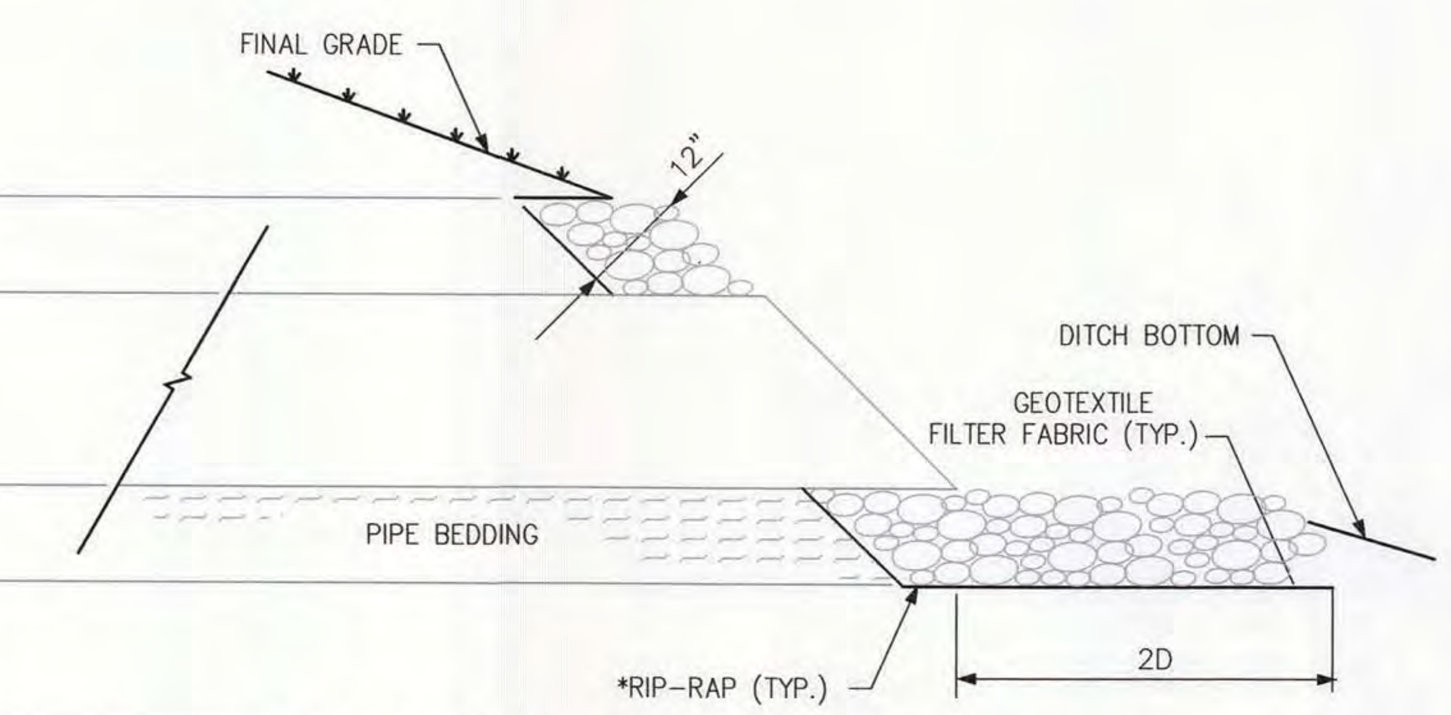


C 10A|14B **FINAL CLOSURE CROSS-SECTION DETAIL WITH SINGLE LANE PERIMETER ROAD AND BERM CROSS SECTION**

NOT TO SCALE



ELEVATION



SECTION

NOTE:
PIPE BEDDING FOR SINGLE AND DOUBLE PIPES UNDER ROAD CROSSINGS TO BE PLACED AND COMPACTED IN LIFTS EQUALLY ON SIDES OF PIPE UP TO MID DIAMETER.

HEADWALL SCHEDULE			
STRUCTURE	INVERT	PIPE SIZE(D) & MAT'L	DISCHARGES
HW1	862.5	24" CMP	SED. POND 3
HW2	889.9	2 @ 24" CMP	SLOPE DOWNCHUTE
HW3	981.2	24" CMP	SLOPE DOWNCHUTE
HW4	929.1	30" CMP	DITCHES 9 & 11 (INLET)
HW5	927.3	30" CMP	DITCHES 9 & 11
HW6	907.34	30" CMP	DITCH 15 (INLET)
HW7	907.27	30" CMP	DITCH 15
HW8	901.7	24" CMP	SED. POND 4
HW9	999.8	24" CPP	SLOPE DOWNCHUTE
HW10	998.8	24" CPP	SLOPE DOWNCHUTE

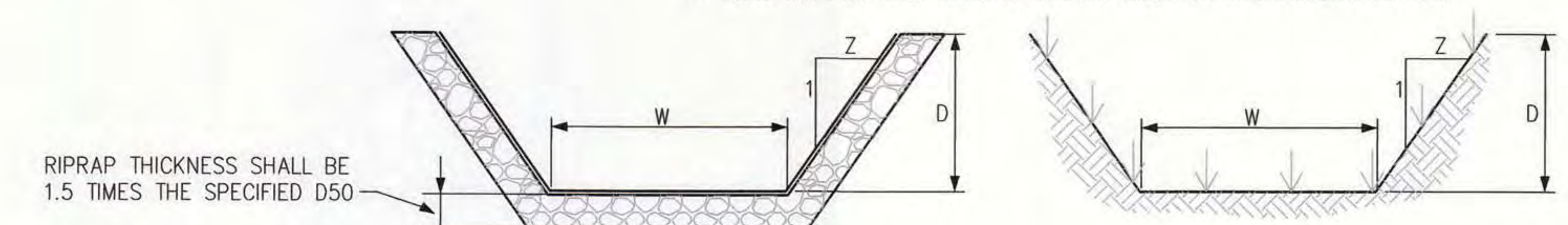
* ALL HEADWALLS SHALL BE CONSTRUCTED OF HAND PLACED RIP-RAP. (D50 = 8", TDOT CLASS A1)

HEADWALL SCHEDULE AND TYPICAL DETAILS

NOT TO SCALE

DRAINAGE DITCH CHART								
DITCH	W	Z L*	Z R*	S**	D	LINING MATERIAL	ALTERNATE LINING MATERIAL***	Q 25 (CFS)
D1 (EXISTING)	2	3	3	2.5	2	GRASS		1.9
D2 (EXISTING)	0	2	2	21.2	2	RIPRAP, D50=1.5'	SC250	0.2
D3 (EXISTING)	2	3	3	20.0	2	RIPRAP, D50=1.0'	SC250	5.7
*D4 INTENTIONALLY OMITTED								
D5	2	3	3	3.0	2	GRASS		8.3
D6	0	3.2	3.2	18.0	2	RIPRAP, D50=2.0'	P550	17.7
D7	2	3	3	6.0	2	RIPRAP, D50=0.75'	SC250	31.8
D8	0	2.5	7	19.6	2	RIPRAP, D50=0.5'	SC250	1.4
D9	2	3	3	7.0	2	GRASS		6.5
D10	0	4.5	2	19.0	2	RIPRAP, D50=1.0'	SC250	3.0
D11	2	3	3	8.3	2	GRASS		7.6
D12	0	2	7.5	17.6	2	RIPRAP, D50=0.75'	SC250	1.6
D13	2	3	3	13.0	2	GRASS		2.4
D14	2	3	3	2.5	2	GRASS		3.8
D15	4	3	3	28.0	2	RIPRAP, D50=1.5'	P550	14.0
D16	2	3	3	3.0	2	GRASS		7.8
UPPER ACCESS ROAD DITCH	0	3	3	10.0	2	RIPRAP, D50=1.0'	SC250	13.4
MAXIMUM SLOPE DRAINAGE DITCH	2	3	2	2.0	2	GRASS		17.0

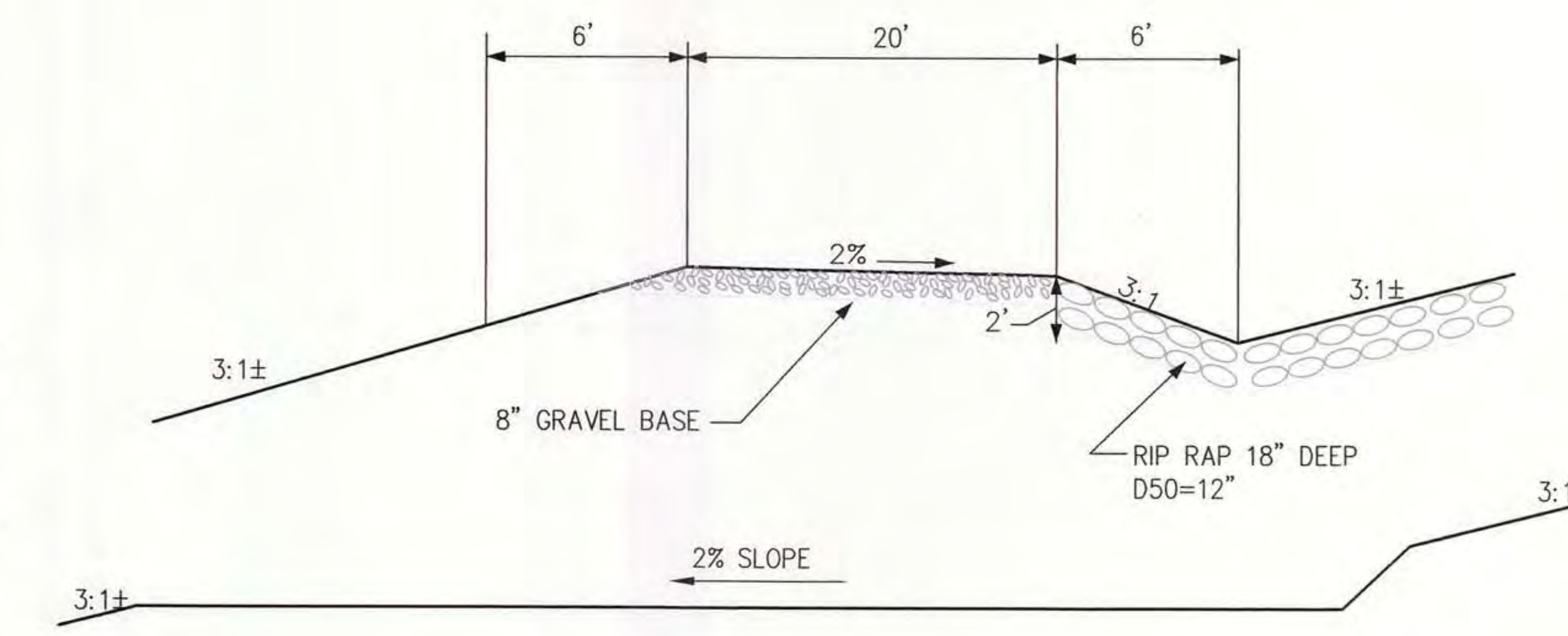
* LEFT(L) & RIGHT(R) DETERMINED LOOKING DOWN FLOW
** S = MAXIMUM SLOPE %.
*** SC250 AND P550 REFER TO NORTH AMERICAN GREEN TURF REINFORCEMENT MATTINGS



RIPRAP-LINED GRASS-LINED

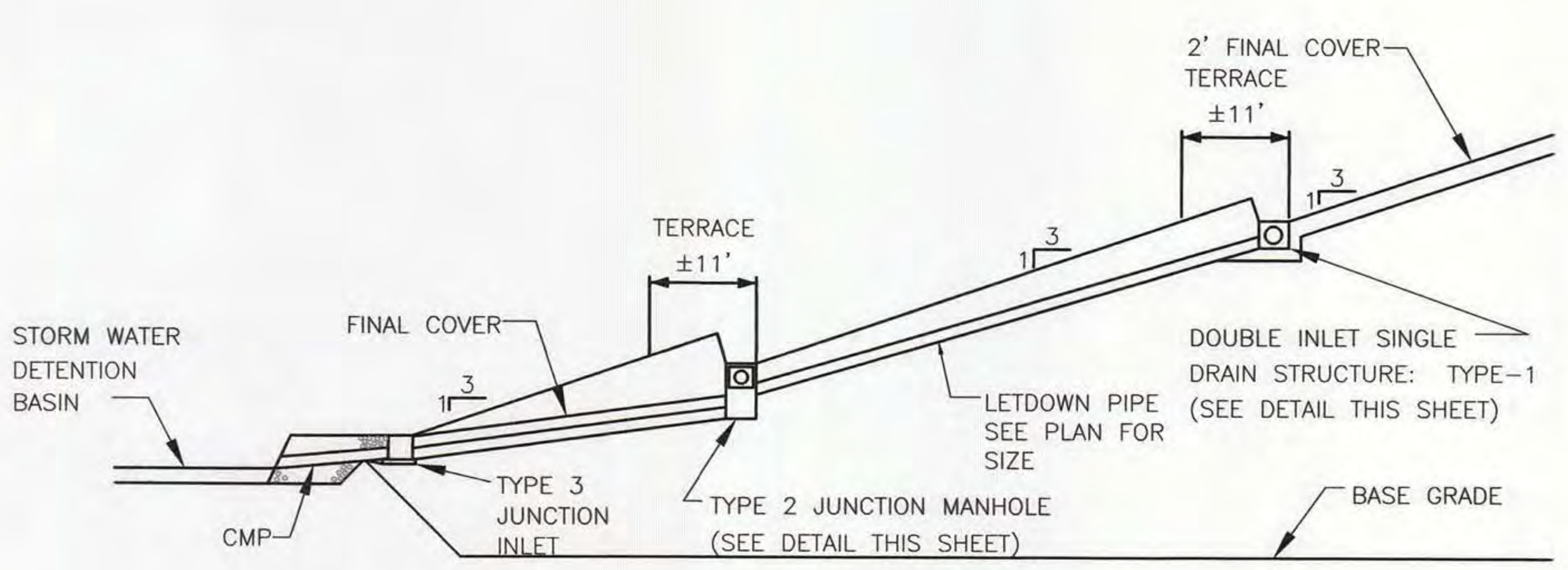
DRAINAGE DITCH CHART AND TYPICAL SECTION

NOT TO SCALE



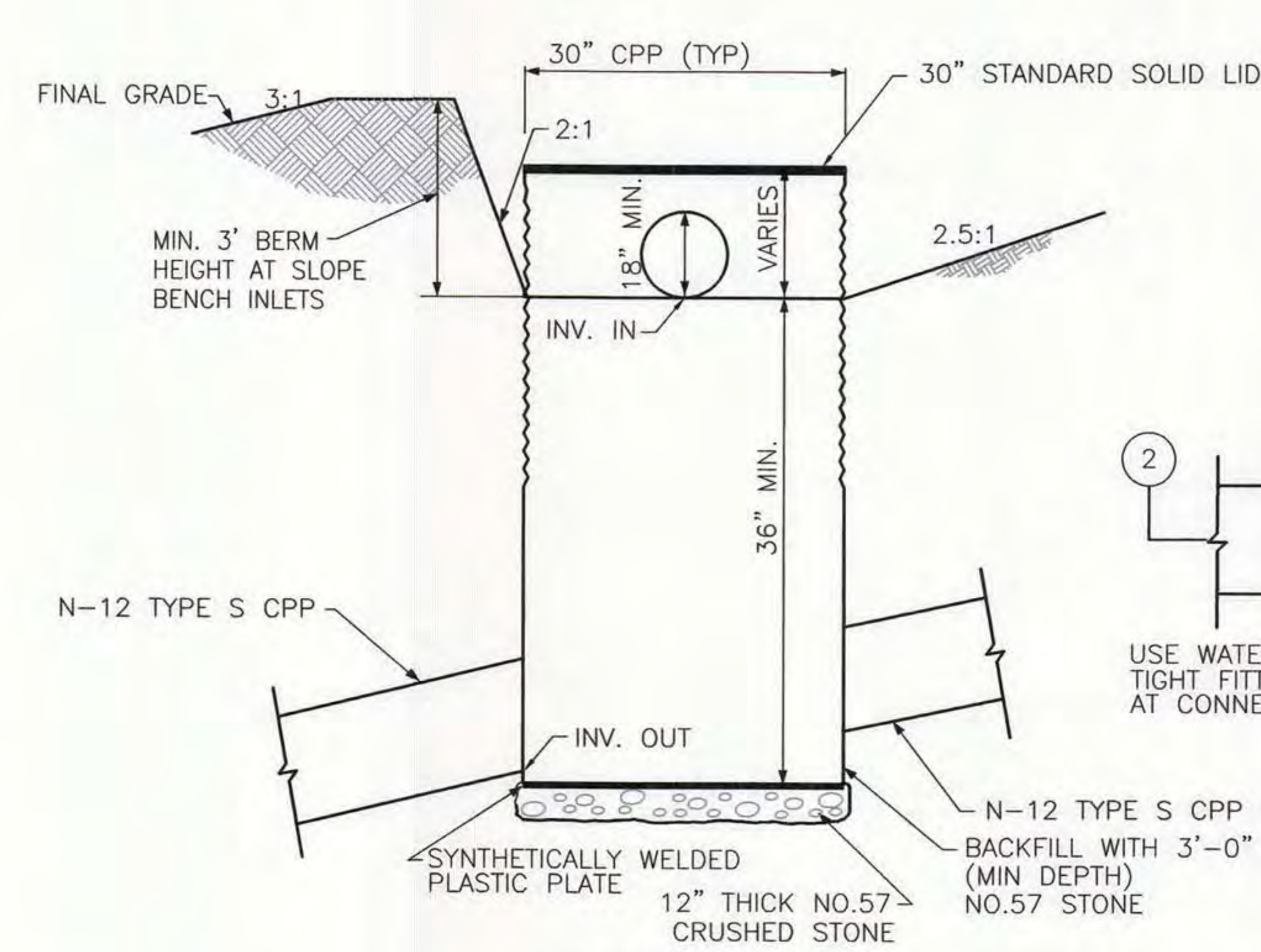
UPPER ACCESS ROAD DETAIL

NOT TO SCALE

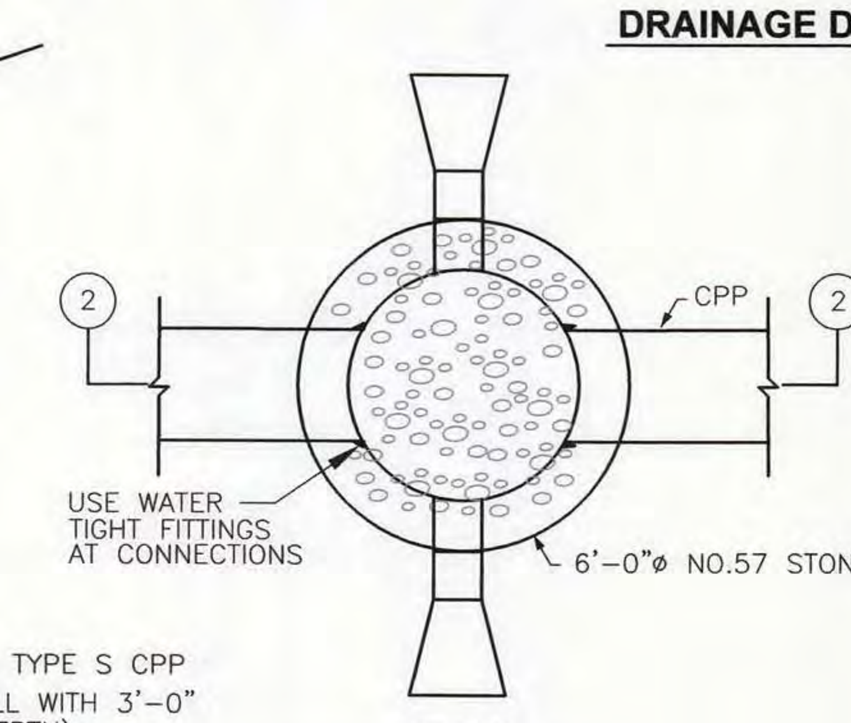


TYPICAL TERRACE DRAIN SCHEMATIC

NOT TO SCALE



SECTION 2-2



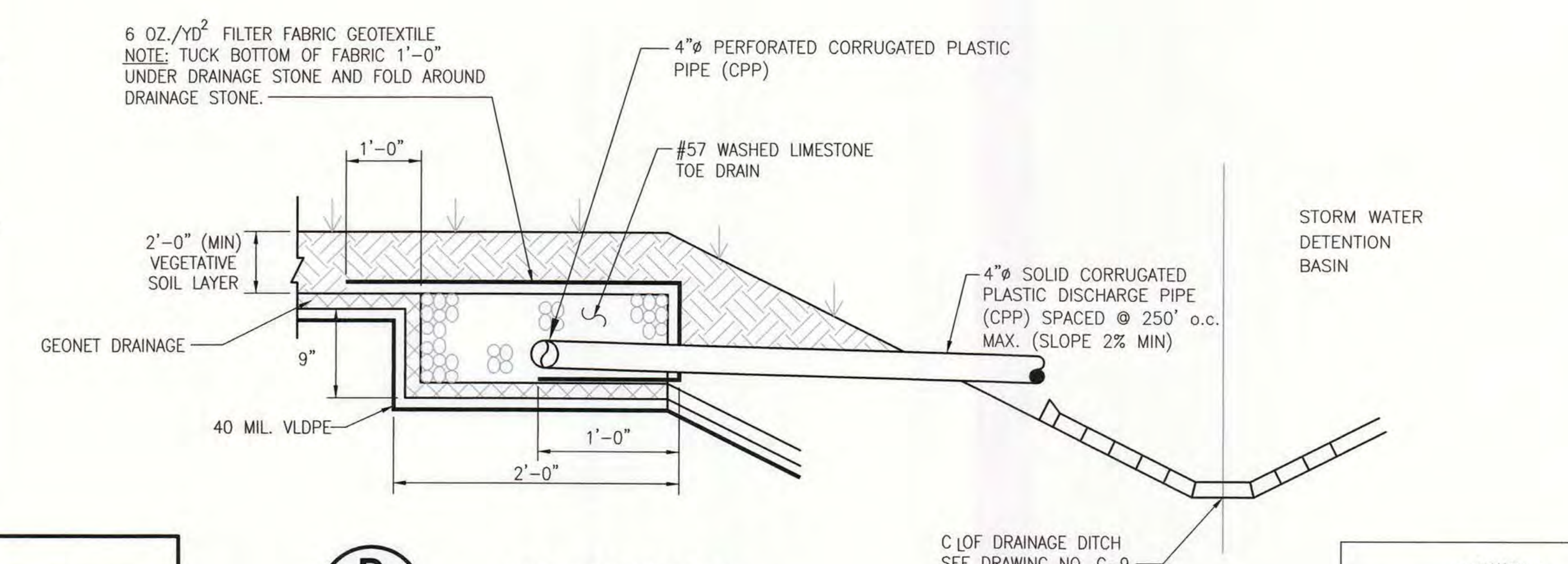
PLAN

TYPE 2

JUNCTION MANHOLE

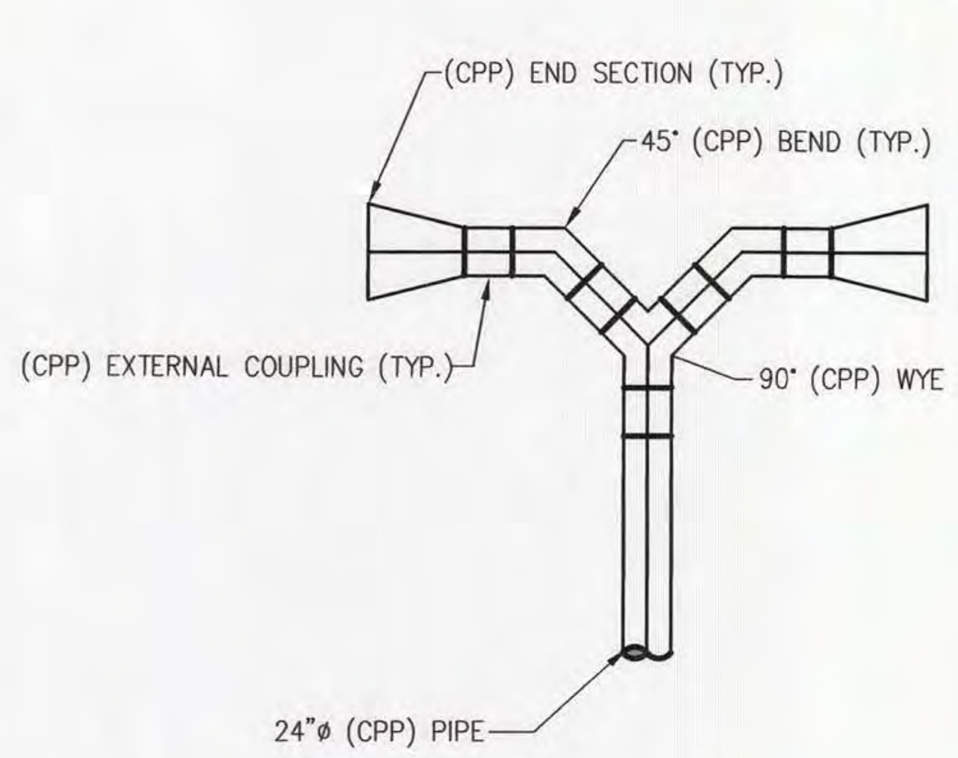
NOT TO SCALE

DRAINAGE STRUCTURE CHART							
STRUCTURE	INVERT OUT	TYPE	OUTLET PIPE SIZE	STRUCTURE	INVERT OUT	TYPE	OUTLET PIPE SIZE
DS1	1049.1	2	24"	DS11	972.56	2	24"
DS2	998.4	2	24"	DS12	922.36	2	24"
DS3	946.5	2	24"	DS13	1086.44	1	24"
DS4	891.3	3	2-24"	DS14	1021.72	2	24"
DS5	1052.0	2	24"	DS15	1024.10	2	24"
DS6	995.8	2	24"	DS16	1081.10	1	24"
DS7	1055.3	1	24"	DS17	1016.54	2	24"
DS8	1044.4	2	24"				
DS9	1080.38	1	24"				
DS10	1024.16	2	24"				



D 14B|14B **TOE DRAIN DETAIL**

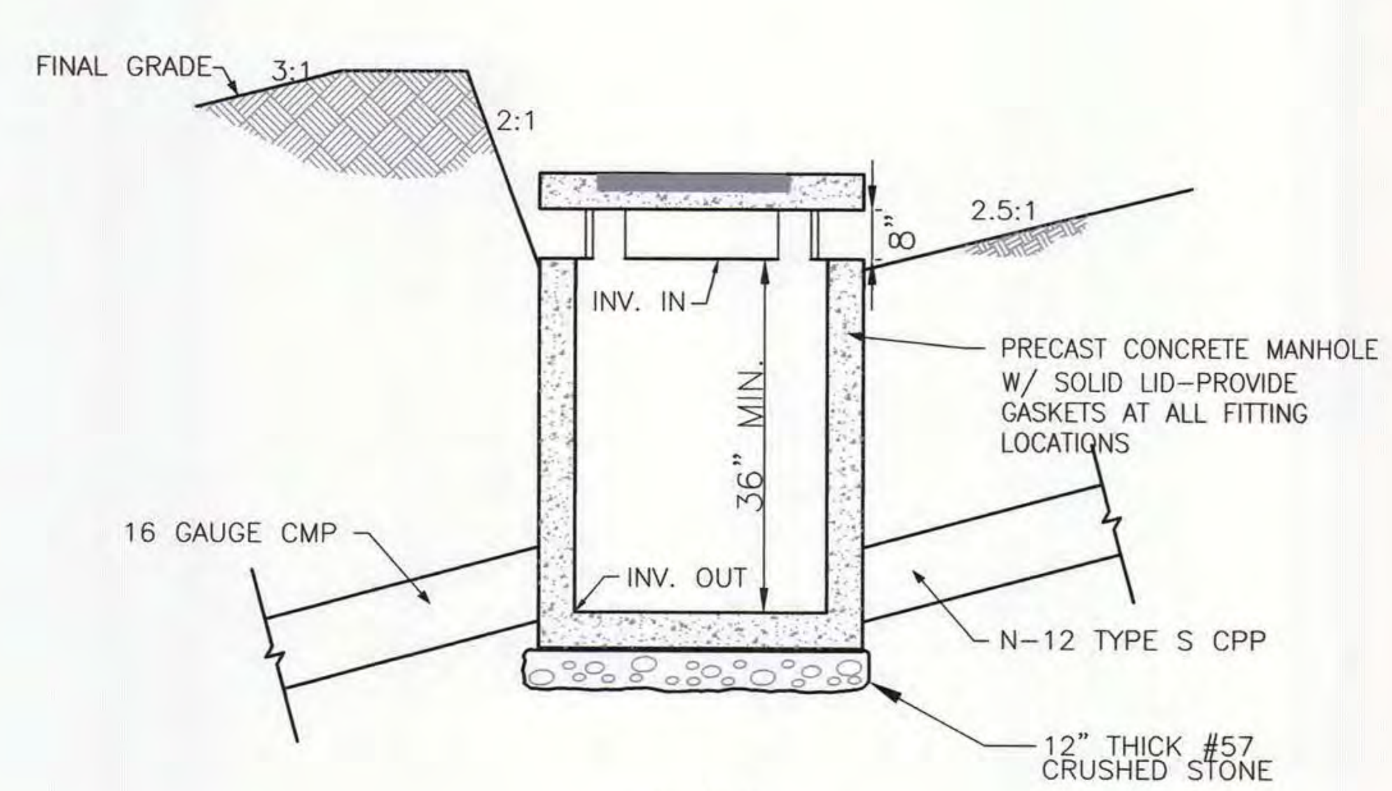
NOT TO SCALE



TYPE 1

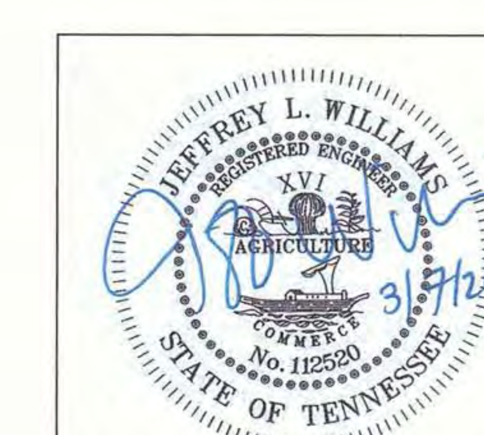
DOUBLE INLET SINGLE DRAIN SCHEMATIC (CPP)

NOT TO SCALE



TYPE 3

JUNCTION INLET



REV.	DATE	DRWN	CHKD	REVISION
4	02/14	JW	RV	REVISED PER TDEC COMMENTS DATED 12/17/13.
3	05/13	JW	RV	REVISED PER TDEC COMMENTS DATED 1/3/12.
2	10/12/10	MW	RV	REVISED PER TDEC COMMENTS DATED 9/15/10.
1	6/8/10	JW	RV	REVISED PER TDEC COMMENTS DATED 3/17/10.

STORMWATER CONTROL DETAILS

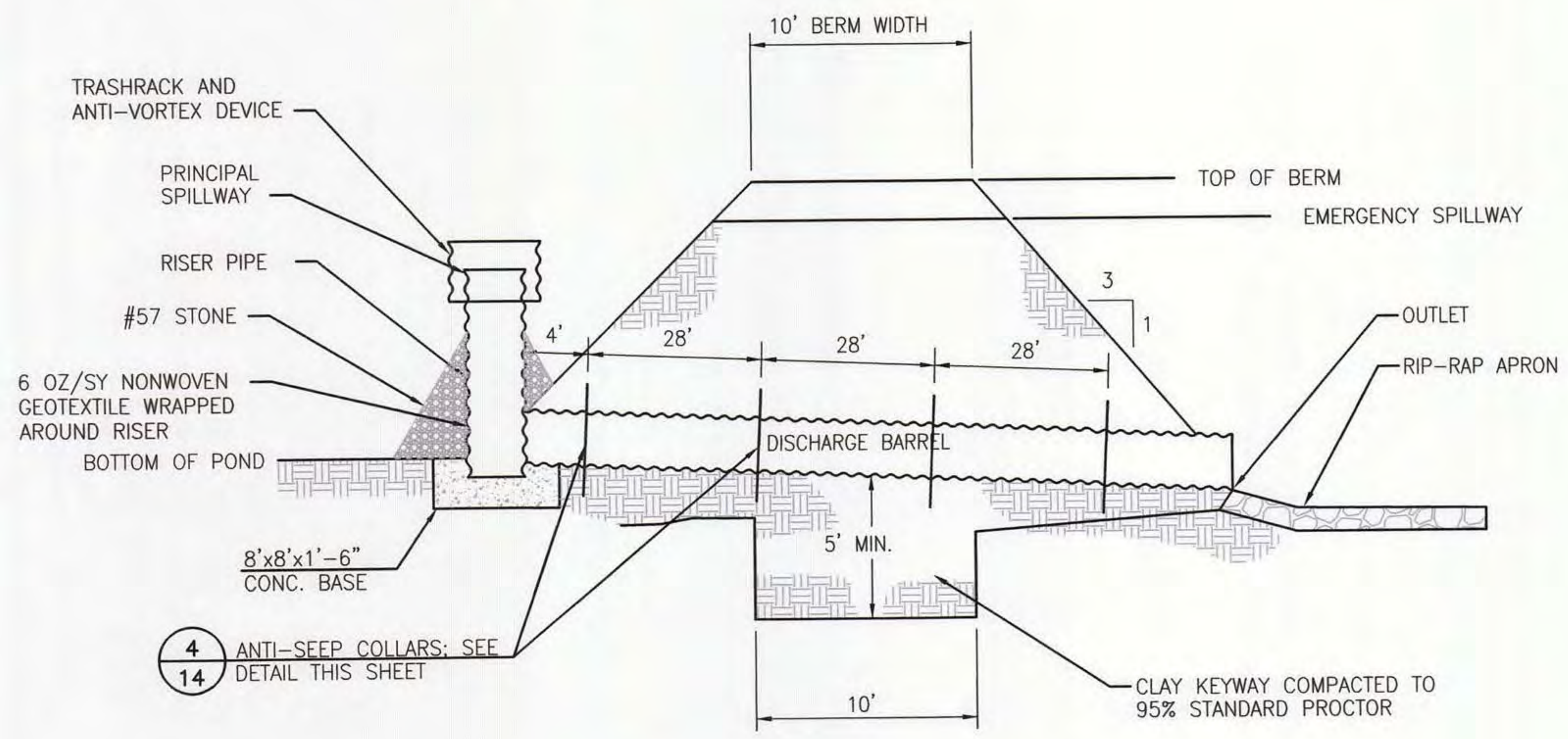
MATLOCK BEND LANDFILL
LOUDON COUNTY, TENNESSEE

SANTEK ENVIRONMENTAL INC
650 25TH STREET NW
SUITE 100
CLEVELAND, TENNESSEE

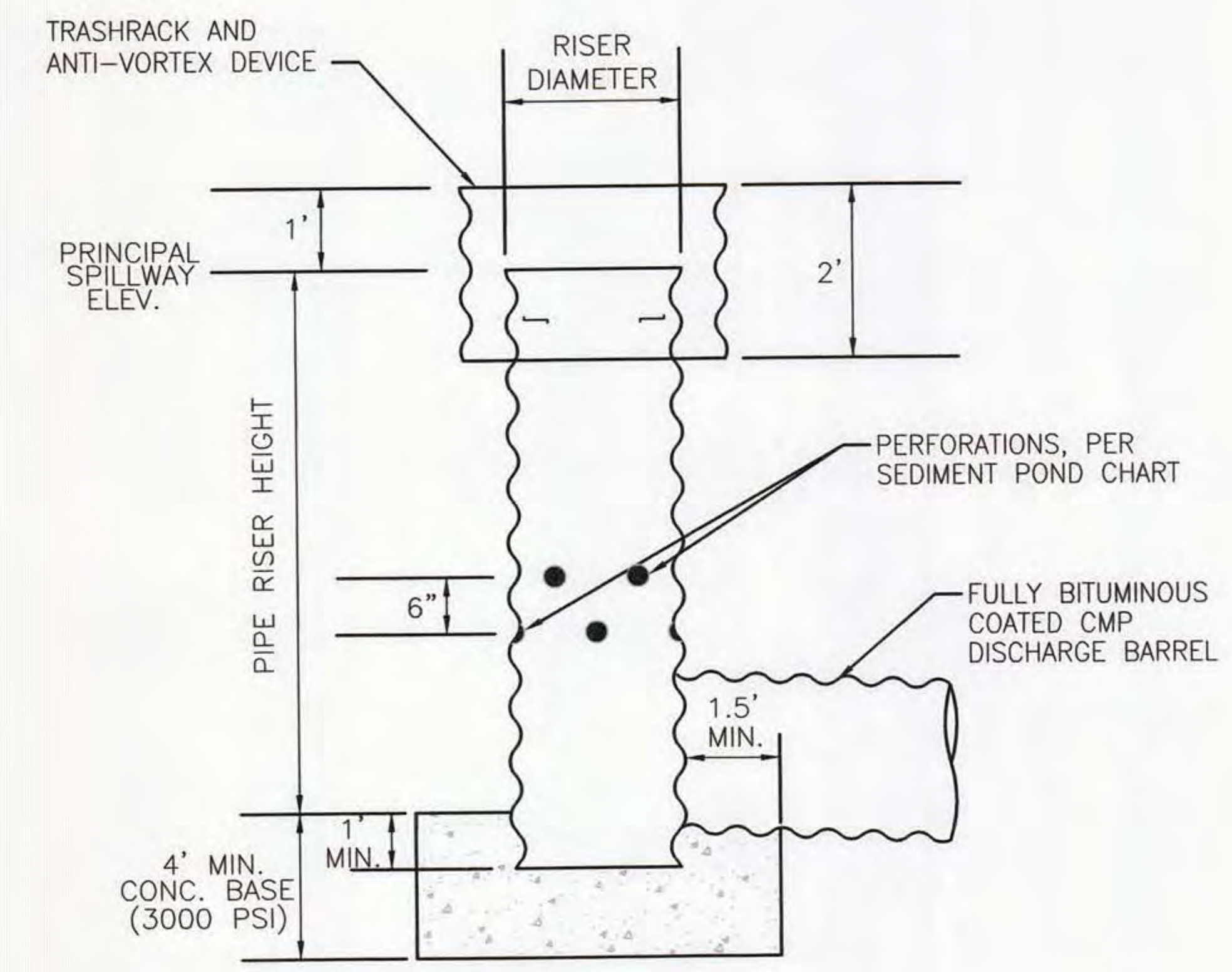
SCALE: NTS
DATE: 5/10/10
DRAWN BY: CEC
CHECKED BY: CEC
APPROVED BY: RB
FILE: 0913-14B-000
JOB NO: 200-1213.4

14B
sheet number

NOTES:
1. RISER PIPE SHALL BE MARKED AT THE CLEAN-OUT ELEVATION. POND SHALL BE CLEANED AS DEEMED NECESSARY BY ON-SITE INSPECTIONS.
2. ALL FILL MATERIAL SHALL BE COMPACTED TO 95%



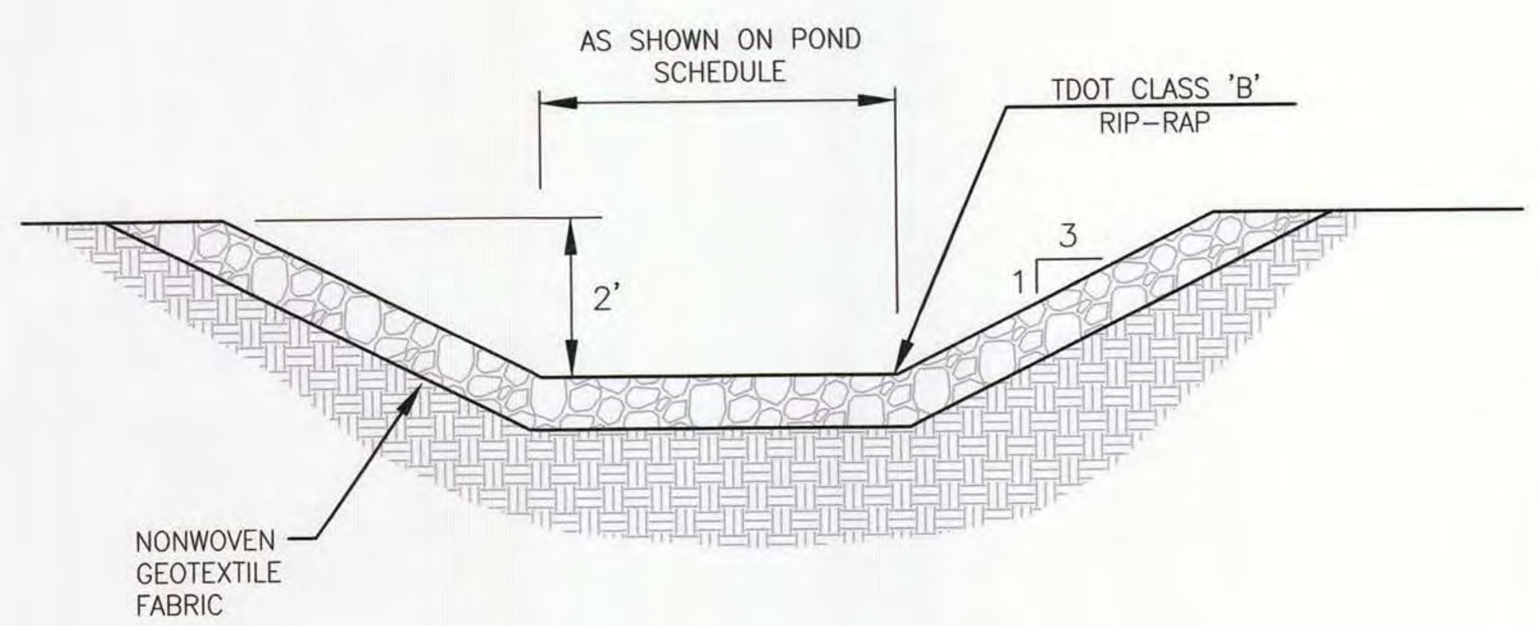
A (10A | 14C) **TYPICAL SEDIMENT POND DISCHARGE STRUCTURE**
NOT TO SCALE



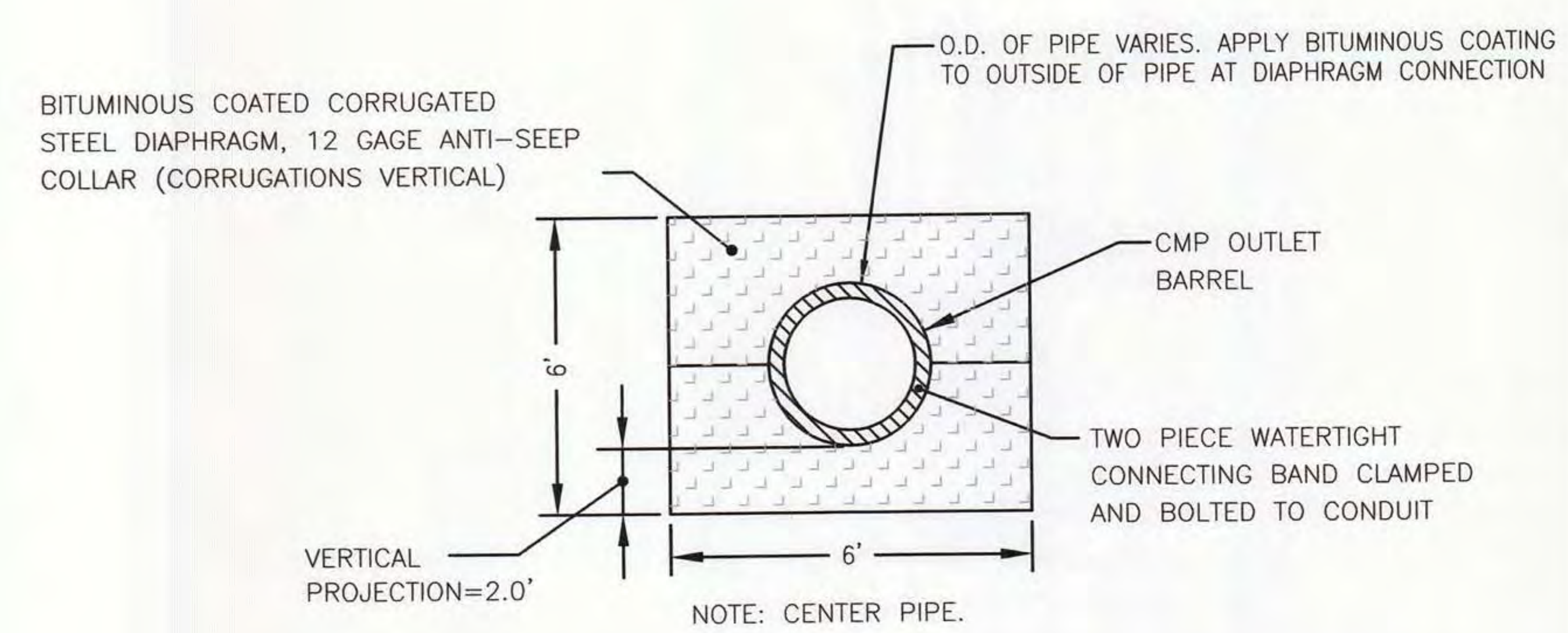
B (14B | 14C) **TYPICAL SEDIMENT POND RISER**
NOT TO SCALE

SEDIMENT POND CHART												
POND	BOTTOM OF POND ELEVATION (FT MSL)	TOP OF BERM ELEVATION (FT MSL)	BERM WIDTH (FT)	EMER. SW ELEVATION (FT MSL)	EMER. SW WIDTH (FT)	PRINCIPAL SW ELEV. (FT MSL)	RISER PIPE	DISCHARGE BARREL	DISCHARGE BARREL SLOPE	NUMBER AND SIZE OF PERFORATIONS (NUMBER OF ROWS)	ELEVATION OF LOWEST PERFORATION (FT MSL)	25 YR REQUIRED VOLUME (AC-FT)	VOLUME AT PRIMARY SW ELEV. (AC-FT)
2 (EXISTING)	846.0	862.5	18	861.0	40	860.0	48" CMP	36" CMP	1.7%	4 @ 3" (1 ROW)	851.00	7.13	7.84
3	861.0	873.0	10	871.0	65	869.0	48" CMP	24" CMP	0.5%	168 @ 1.5" (14 ROWS)	863.00	10.59	10.91
4	900.0	910.0	10	908.0	20	907.1	48" CMP	24" CMP	0.5%	72 @ 1" (9 ROWS)	902.75	3.08	3.13
TEMP. SED. POND 1	892.0	910.0	10	908.0	15	907.25	36" CMP	24" CMP	0.5%	8" SKIMMER *	900.00 *	2.60	3.11

* TEMPORARY SEDIMENT POND 1 IS DESIGNED WITH A SURFACE SKIMMER DEVICE INSTEAD OF PERFORATIONS. THE VALUE IN THE COLUMN FOR THE ELEVATION OF THE LOWEST PERFORATION REPRESENTS THE INVERT ELEVATION OF THE SKIMMER DEVICE.

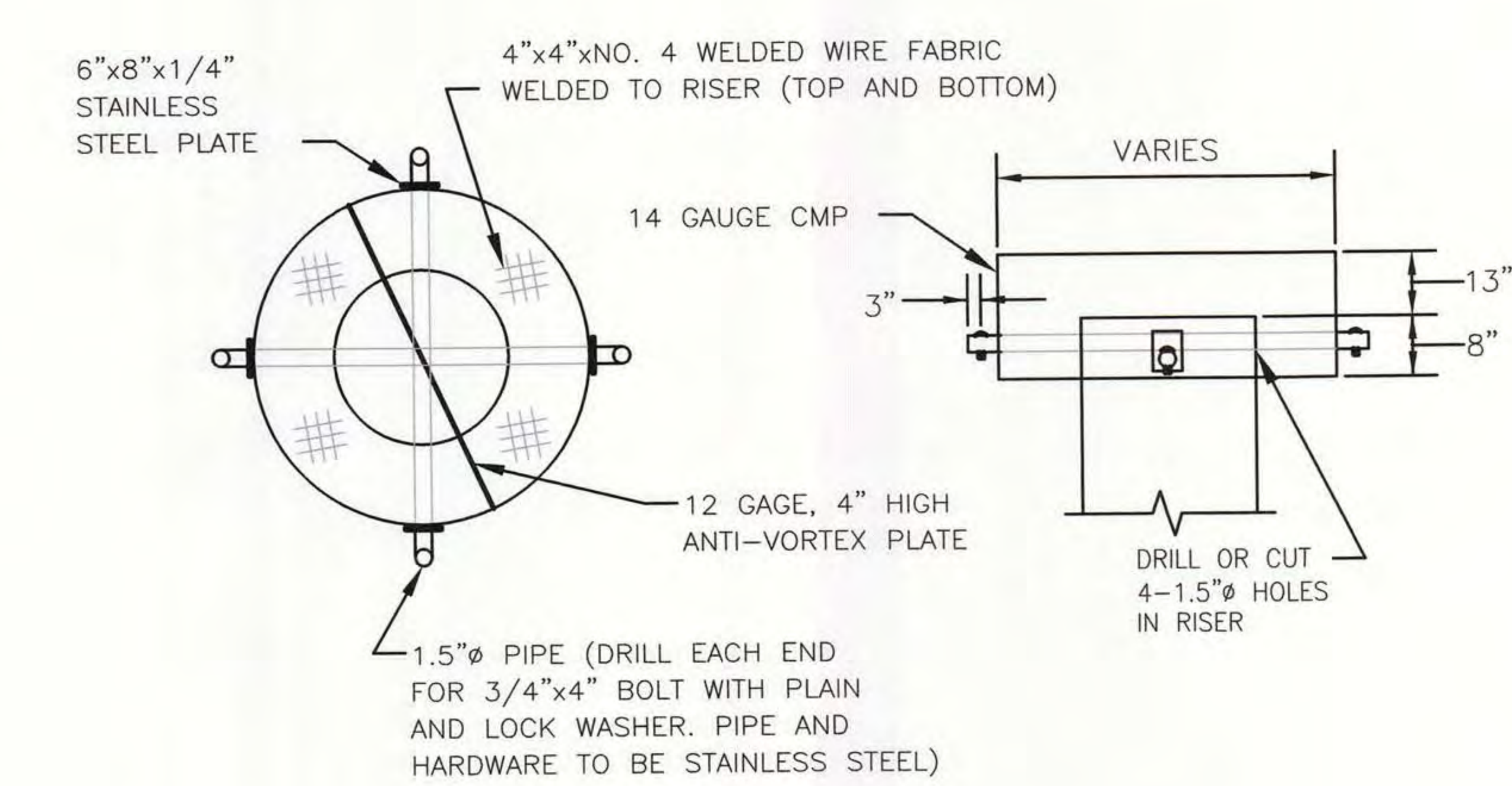


C (10A | 14C) **TYPICAL SEDIMENT POND EMERGENCY SPILLWAY**
NOT TO SCALE

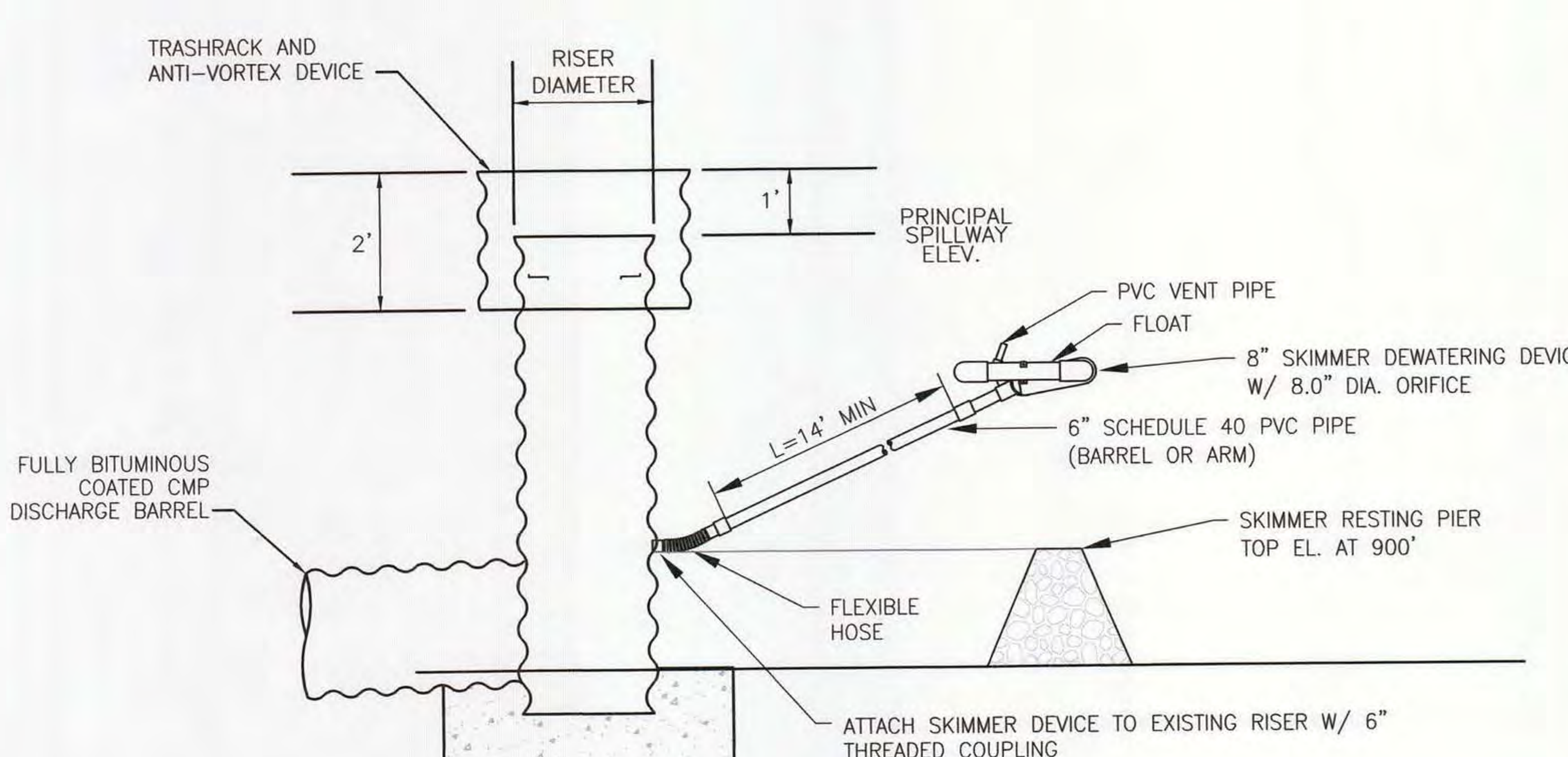


DETAIL NOTES:
1. ADJACENT COLLARS SHALL BE SPACED A MAXIMUM OF 14 P APART, WHERE P IS THE PROJECTION DISTANCE OF THE COLLAR ABOVE THE PIPE CROWN.
2. COLLARS MAY NOT BE PLACED WITHIN 2-FEET OF A PIPE JOINT.

D (14B | 14C) **ANTI-SEEP COLLAR**
NOT TO SCALE



E (14B | 14C) **ANTI-VORTEX DEVICE**
NOT TO SCALE



F (14B | 14C) **TEMPORARY SEDIMENT POND 1 RISER**
NOT TO SCALE

REV.	DATE	DRWN	CHKD	REVISION
2	10/12/10	MW	RV	REVISED PER TDEC COMMENTS DATED 9/15/10.
1	6/8/10	JW	RV	REVISED PER TDEC COMMENTS DATED 3/17/10.

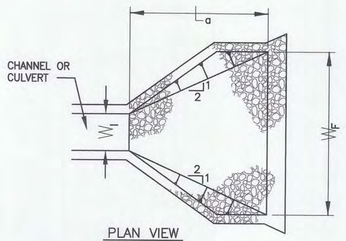
STORMWATER CONTROL DETAILS

MATLOCK BEND LANDFILL
LOUDON COUNTY, TENNESSEE

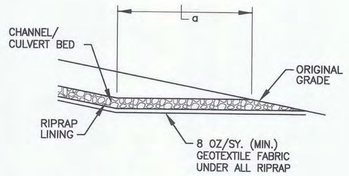
SANTEK ENVIRONMENTAL
650 25TH STREET NW
SUITE 100
CLEVELAND, TENNESSEE

SCALE: NTS
DATE: 5/10/10
DRAWN BY: CEC
CHECKED BY: CEC
APPROVED BY: RB
FILE: 0913-148-000
JOB NO: 200-1013.4

14C
sheet number



PLAN VIEW



CROSS SECTION

APRON SCHEDULE

APRON	INITIAL WIDTH (W_I) (FT)	FINAL WIDTH (W_F) (FT)	LENGTH (La) (FT)	TDOT RIP-RAP CLASS
CULVERT C1	2.5	18.5	16	A-1
CULVERT C2	2.5	18.5	16	A-1
SED. POND 3	2	12	10	A-1
SED. POND 4	2	12	10	A-1

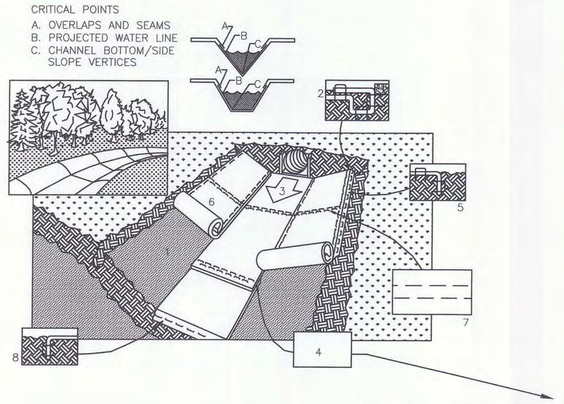
A 14B|14B **OUTLET PROTECTION APRON**

1. PREPARE SOIL BEFORE INSTALLING BLANKETS, INCLUDING APPLICATION OF LIME, FERTILIZER, AND SEED.
2. BEGIN AT THE TOP OF THE CHANNEL BY ANCHORING THE BLANKET IN A 6" DEEP x6" WIDE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING.
3. ROLL CENTER BLANKET IN DIRECTION OF WATER FLOW ON BOTTOM OF CHANNEL.
4. PLACE BLANKETS END OVER END (SHINGLE STYLE) WITH A 6" OVERLAP. USE A DOUBLE ROW OF STAGGERED STAPLES 4" APART TO SECURE BLANKETS.
5. FULL LENGTH EDGE OF BLANKETS AT TOP OF SIDE SLOPES MUST BE ANCHORED IN 6" DEEP x6" WIDE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING.
6. BLANKETS ON SIDE SLOPES MUST BE OVERLAPPED 4" OVER THE CENTER BLANKET AND STAPLED (2" FOR C350 MATTING).
7. IN HIGH FLOW CHANNEL APPLICATIONS, A STAPLE CHECK SLOT IS RECOMMENDED AT 30 TO 40 FEET INTERVALS. USE A ROW OF STAPLES 4" APART OVER ENTIRE WIDTH OF THE CHANNEL. PLACE A SECOND ROW 4" BELOW THE FIRST ROW IN A STAGGERED PATTERN.
8. THE TERMINAL END OF THE BLANKETS MUST BE ANCHORED IN A 6" DEEP x6" WIDE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING.

NOTE:

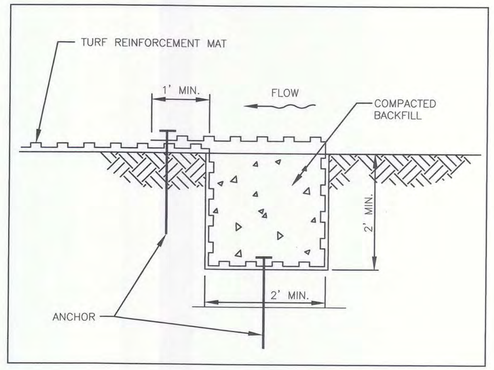
HORIZONTAL STAPLE SPACING SHOULD BE ALTERED IF NECESSARY TO ALLOW STAPLES TO SECURE THE CRITICAL POINTS ALONG THE CHANNEL SURFACE.

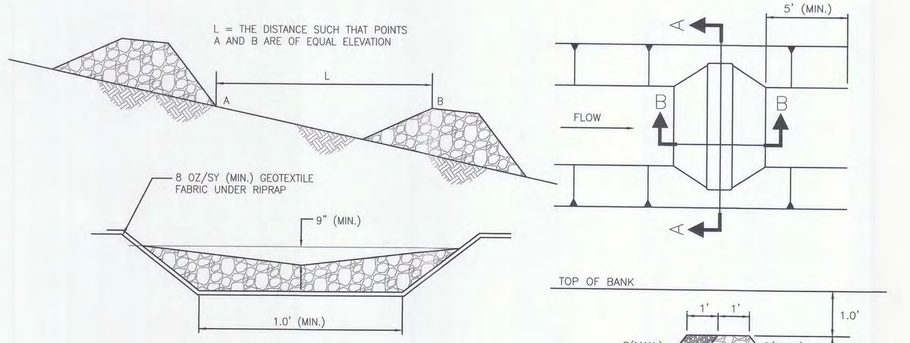
REFER TO GENERAL STAPLE PATTERN GUIDE FOR CORRECT STAPLE RECOMMENDATIONS FOR CHANNELS.



B 10A|14B **TURF REINFORCEMENT MATTING - CHANNEL INSTALLATION**

NOT TO SCALE



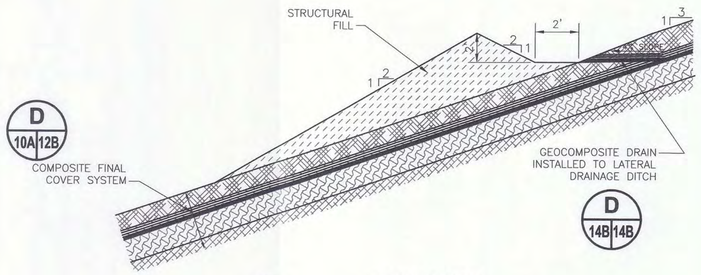


SECTION A-A

SECTION B-B

C 14B|14B **TEMPORARY ROCK CHECK DAM**

NOT TO SCALE



B 10B|14D **TACK-ON BERM DRAINAGE DITCH DETAIL**

NOT TO SCALE

JEFFREY L. WILLIAMS
REGISTERED ENGINEER
XVI
STATE OF TENNESSEE
DEPARTMENT OF AGRICULTURE
REGISTERED
No. 112520
STATE OF TENNESSEE
3/17/2010

REV.	DATE	DRWN	CHKD	REVISION
1	6/8/10	JW	RV	REVISED PER TDEC COMMENTS DATED 3/17/10.

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14D
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