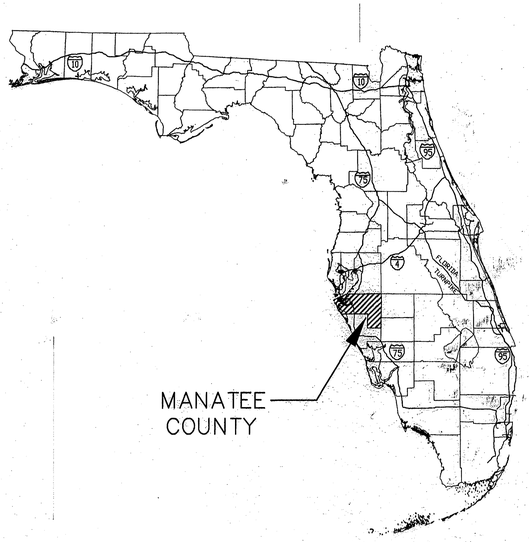
1564173 ①

MANATEE COUNTY
LENA ROAD LANDFILL LEACHATE POND FACILITIES

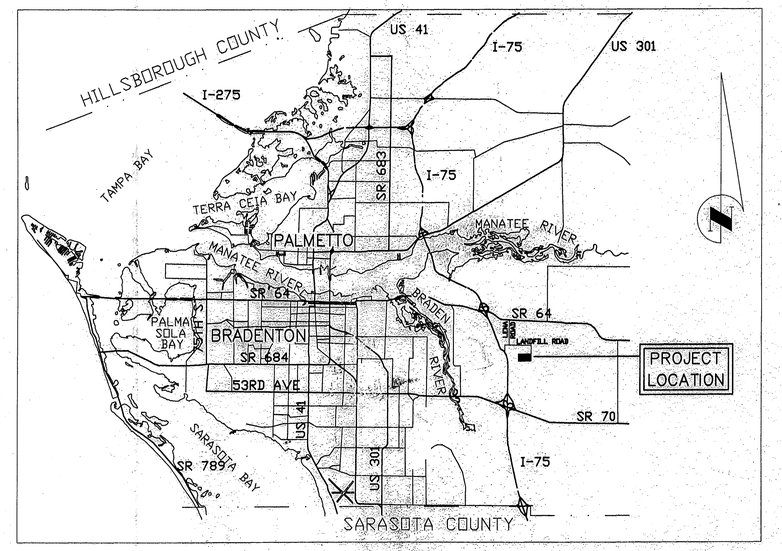


LOCATION MAP

PREPARED FOR

MANATEE COUNTY FLORIDA

MANATEE COUNTY
1026 26th AVENUE EAST
BRADENTON, FLORIDA 34208



VICINITY MAP

INDEX TO DRAWINGS

REC DWG JAN/02

"RECORD DRAWING"
INCORPORATING THOSE CHANGES MADE DURING CONSTRUCTION BASED ON DATA FURNISHED BY THE CONTRACTOR TO THE ENGINEER.

PREPARED BY

PBS&J
330 SOUTH PINEAPPLE AVE.
SUITE 113
SARASOTA, FLORIDA 34236
Ph. (941) 954-4036
POST, BUCKLEY, SCHUH & JERNIGAN, INC. D/B/A/ PBS&J
2001 N.W. 107TH AVENUE, MIAMI, FL. 33172-2507
FBPR CERTIFICATE OF AUTHORIZATION NO.124

DATE: AUG., 2001

GENERAL NOTES

1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MEETING ALL CONDITIONS AND REQUIREMENTS OF ALL PERMITS AND ALL GOVERNING FEDERAL, STATE, AND LOCAL AGENCIES.

2. EXISTING UNDERGROUND FACILITIES, STRUCTURES, AND UTILITIES HAVE BEEN LOCATED FROM THE BEST AVAILABLE SURVEY DATA AND RECORDS AND THEIR LOCATIONS MUST ONLY BE CONSIDERED AS APPROXIMATE. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO VERIFY THE EXACT LOCATION OF ALL EXISTING UTILITIES SHOWN ON THE PLANS AND ANY OTHER UTILITIES WHICH MAY NOT BE SHOWN ON THE PLANS. THE CONTRACTOR SHALL NOTIFY ALL UTILITY COMPANIES IN THE AREA AT LEAST 72 HOURS PRIOR TO BEGINNING CONSTRUCTION. CALL FLORIDA SUNSHINE STATE ONE CALL CENTER AT 1-800-432-4770.

3. A HORIZONTAL SPACING OF 10 FEET OUTSIDE TO OUTSIDE SHALL BE MAINTAINED BETWEEN POTABLE WATER MAINS AND ANY SANITARY SEWER MAINS. IN THE CASE OF A CROSSING, A VERTICAL SEPARATION OF NOT LESS THAN 18" SHALL BE MAINTAINED.

4. THE CONTRACTOR SHALL PROVIDE ALL DEWATER EQUIPMENT NECESSARY TO KEEP ALL EXCAVATIONS DRY AND SHALL PROVIDE ALL NECESSARY SHEETING, SHORING, AND BRACING NECESSARY TO PROTECT ADJACENT STRUCTURES, UTILITIES, AND PAVEMENT, OR TO MINIMIZE TRENCH WIDTH, ALL IN ACCORDANCE WITH THE PLANS AND SPECIFICATIONS.

5. THE CONTRACTOR SHALL PROVIDE HAY BALES AND/OR SILT FENCES AROUND THE CONSTRUCTION ACTIVITY, AS NECESSARY, TO PREVENT THE TRANSPORTATION OF SEDIMENTS DOWNSTREAM INTO STREETS, STORM SEWERS, OPEN DITCHES, LAKES, RETENTION PONDS, PRIVATE PROPERTY, ETC., AND SHALL PERFORM ALL NECESSARY INSPECTIONS AND MAINTENANCE IN ACCORDANCE WITH THE STORMWATER POLLUTION PREVENTION PLAN (SPPP), AND FEDERAL, STATE, AND LOCAL GOVERNING AGENCY REQUIREMENTS.

6. THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE OWNER'S CONSTRUCTION MANAGER REGARDING ANY CONFLICTS OR DISCREPANCIES ARISING DURING CONSTRUCTION.

7. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE TO EXISTING FACILITIES, STRUCTURES, OR UTILITIES CAUSED BY CONSTRUCTION OPERATIONS WHICH HAVE BEEN PREVIOUSLY LOCATED BY THEIR RESPECTIVE OWNERS.

8. CONNECTIONS TO EXISTING FACILITIES SHALL BE DONE IN THE PRESENCE OF THE UTILITY OWNER AND THE ENGINEER. THE CONTRACTOR SHALL GIVE AT LEAST 2 WEEKS NOTICE TO ALL PARTIES CONCERNED PRIOR TO BEGINNING WORK.

9. ALL ADDITIONAL EXCAVATION AND DEMOLITION MATERIAL SHALL BE DISPOSED OF BY THE CONTRACTOR AT NO ADDITIONAL EXPENSE TO THE OWNER.

10. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COMPLIANCE WITH THE FLORIDA TRENCH SAFETY ACT, 90-96, LAWS OF FLORIDA, EFFECTIVE OCTOBER 1, 1990, AND THE OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION EXCAVATION SAFETY STANDARDS, 29 CFR 1926.650, SUBPART P, AS AMENDED. THE CONTRACTOR SHALL INCLUDE IN THE TOTAL BID PRICE, ALL COSTS FOR COMPLIANCE WITH THESE REGULATIONS.

11. ALL DISTURBED AREAS SHALL BE RESTORED TO THEIR ORIGINAL CONDITION OR BETTER UNLESS OTHERWISE NOTED.

12. ALL ELEVATIONS ARE BASED UPON NATIONAL GEODETIC VERTICAL DATUM, 1929.

13. THE CONTRACTOR SHALL BE REQUIRED TO OBTAIN ALL APPLICABLE PERMITS.

14. ALL FITTINGS USED ON THIS PROJECT SHALL BE DUCTILE IRON UNLESS OTHERWISE SHOWN. FITTING LININGS SHALL BE FUSION BONDED EPOXY 20 MILS DFT. ALL MECHANICAL JOINT FITTINGS AND VALVES ARE TO BE RESTRAINED USING THE "MEGA-LUG" SYSTEM OR EQUAL.

15. THE EXHAUST SYSTEM OF ALL GASOLINE AND DIESEL ENGINES SHALL BE EQUIPPED WITH MUFFLERS THAT MEET THE EQUIPMENT MANUFACTURER'S REQUIREMENTS FOR NOISE SUPPRESSION. THE CONTRACTOR SHALL, AT THE DIRECTION OF THE ENGINEER DUE TO RESIDENTIAL COMPLAINTS, INSTALL NOISE ABATEMENT BAFFLES POSITIONED TO BREAK LINE-OF-SITE FROM THE NOISE SOURCE TO AFFECTED RESIDENCES, AS APPROVED BY THE ENGINEER.

16. TEMPORARY PLUGS MUST BE INCLUDED FOR TESTING PURPOSES PRIOR TO FINAL TIE-IN OF NEW FORCE MAINS.

17. SEE STANDARD DETAIL SHEET 8 FOR RESTRAINED JOINT LENGTH TABLE.

18. THE CONTRACTOR SHALL PROVIDE PROPER WARNING SIGNS, BARRICADES, TEMPORARY FENCING AND OTHER APPROPRIATE SAFETY DEVICES DURING THE EXECUTION OF THE WORK TO PROVIDE PUBLIC PROTECTION AND SAFETY.

19. THE CONTRACTOR SHALL COORDINATE ALL TIE-INS, DOWN TIME OF LIFT STATIONS AND FLOW HANDLING WITH MANATEE COUNTY UTILITY OPERATIONS PRIOR TO CONSTRUCTION. CONTRACTOR SHALL PROVIDE FOR STATION DOWN TIMES TO OCCUR AT LOW FLOWS AND MAXIMUM DOWN TIME MUST BE LIMITED TO 2 HOURS. CONTRACTOR SHALL PROVIDE FOR THE PROPER HANDLING AND DISPOSAL OF ALL WASTEWATER FLOWS DURING THE CONNECTION PROCEDURES. CONTRACTOR SHALL NOT OPERATE ANY VALVES OR PUMP CONTROLS.

20. CONTRACTOR SHALL DEFLECT PIPE JOINTS TO OBTAIN MINIMUM CLEARANCE REQUIREMENTS AT ALL PIPE CROSSINGS INSTEAD OF USING VERTICAL FITTINGS.

21. CONTRACTOR SHALL BE RESPONSIBLE FOR RESTORATION OF ALL SLURRY WALLS PENETRATED/DAMAGED DURING CONSTRUCTION.

LEGEND

- *= CONCRETE*
- *= WATER METER*
- *= CONCRETE POST WITH CONTROL PANELS*
- *= SIGN*
- *= POWER POLE*
- *= GUY ANCHOR*
- *= MONITORING WELL*
- *= MISCELLANEOUS MANHOLE*
- *= BLOWOFF VALVE (WATER)*
- *= WATERLINE MARKER (2" PVC PIPE)*
- *= WATER VALVE*
- *= FIRE HYDRANT*
- *OHL = OVERHEAD LINE*
- *= SANITARY MANHOLE*
- *= GATE*
- *= CONTROL PANEL*
- *= LIGHT POLE*
- *= PROPANE TANK*
- *= WIRING PULL BOX (ELECTRIC)*

ABBREVIATIONS

APPROX	APPROXIMATELY
ALUM	ALUMINUM
ARV	AIR RELEASE VALVE
AWWA	AMERICAN WATER WORK ASSOC.
AVG	AVERAGE
℄	BASE LINE
BOC	BACK OF CURB
BWF	BARBED WIRE FENCE
BFV	BUTTERFLY VALVE
CLF	CHAIN LINK FENCE
CF	CUBIC FEET
℄	CENTERLINE
CLR	CLEARANCE
CM	CONCRETE MONUMENT
CMP	CORRUGATED METAL PIPE
CONC	CONCERTE
CONN	CONNECT
CONT	CONTINUOUS
COR	CORNER
DFT	DRY FILM THICKNESS
DIA, d	DIAMETER
DI, DIP	DUCTILE IRON PIPE
D/W	DRIVEWAY
E	EAST
EL, ELEV	ELEVATION
EOP	EDGE OF PAVEMENT
EXIST/EX	EXISTING
FL	FLANGED
FM	FORCE MAIN
FND	FOUND
FPS	FEET PER SECOND
FT	FEET
GAL	GALLONS
GV	GATE VALVE
HDPE	HIGH DENSITY POLYETHYLENE
HR	HOUR
ID	IDENTIFICATION
INV	INVERT
IR	IRON ROD
LB	POUND
LSB	LICENSED SURVEYOR BUSINESS
LF	LINEAL FEET
LT	LEFT
MAX	MAXIMUM
MJ	MECHANICAL JOINT
MISC	MISCELLANEOUS
MIN	MINIMUM
NTS	NOT TO SCALE
OCEW	ON CENTER EACH WAY
OD	OUTSIDE DIAMETER
OH	OVERHEAD
OHL	OVERHEAD LINES
PE	PLAIN END
PRM	PERMANENT REFERENCE MARKER
PVC	POLYVINYL CHLORIDE
PSI	POUNDS PER SQUARE INCH
RCP	REINFORCED CONCRETE PIPE
RDCR	REDUCER
REQ'D	REQUIRED
RJ	RESTRAINED JOINT
R/W	RIGHT-OF-WAY
RWGV	RESILIENT WEDGE GATE VALVE W/ LOW ZINC STEM & NUT
RT	RIGHT
SCHD	SCHEDULE
SHT	SHEET
SQ.FT.	SQUARE FEET
SST, ST/STL	STAINLESS STEEL
STA	STATION
STS	STORM SEWER
TOB	TOP OF BANK
TOS	TOE OF SLOPE
TYP.	TYPICAL
W	WEST
W/	WITH
WM	POTABLE WATER MAIN

FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION
JAN 30 2002
SOUTHWEST DISTRICT TAMPA

"RECORD DRAWING"
INCORPORATING THOSE CHANGES MADE DURING CONSTRUCTION BASED ON DATA FURNISHED BY THE CONTRACTOR TO THE ENGINEER.

PBS&J
330 SOUTH PINEAPPLE AVE.
SUITE 113
SARASOTA, FLORIDA 34236
Ph. (941) 954-4036
FORT MYERS, SOMA & JENSEN, INC. D/B/A/ PBSJ 3201 N.E. 183TH AVENUE, MIAMI, FL 33179-5957 FBPR CERTIFICATE OF AUTHORIZATION NO.34

CLIENT
MANATEE COUNTY
PROJECT MANAGEMENT DEPARTMENT
1023 26TH AVENUE EAST
BRADENTON, FLORIDA 34208
MANATEE COUNTY FLORIDA

PROJECT
LENA ROAD LANDFILL LEACHATE
POND FACILITIES

TASK
GENERAL NOTES, ABBREVIATIONS
AND LEGEND

ORIGINAL:
REVISIONS:
1 REC DWG JAN/02
2
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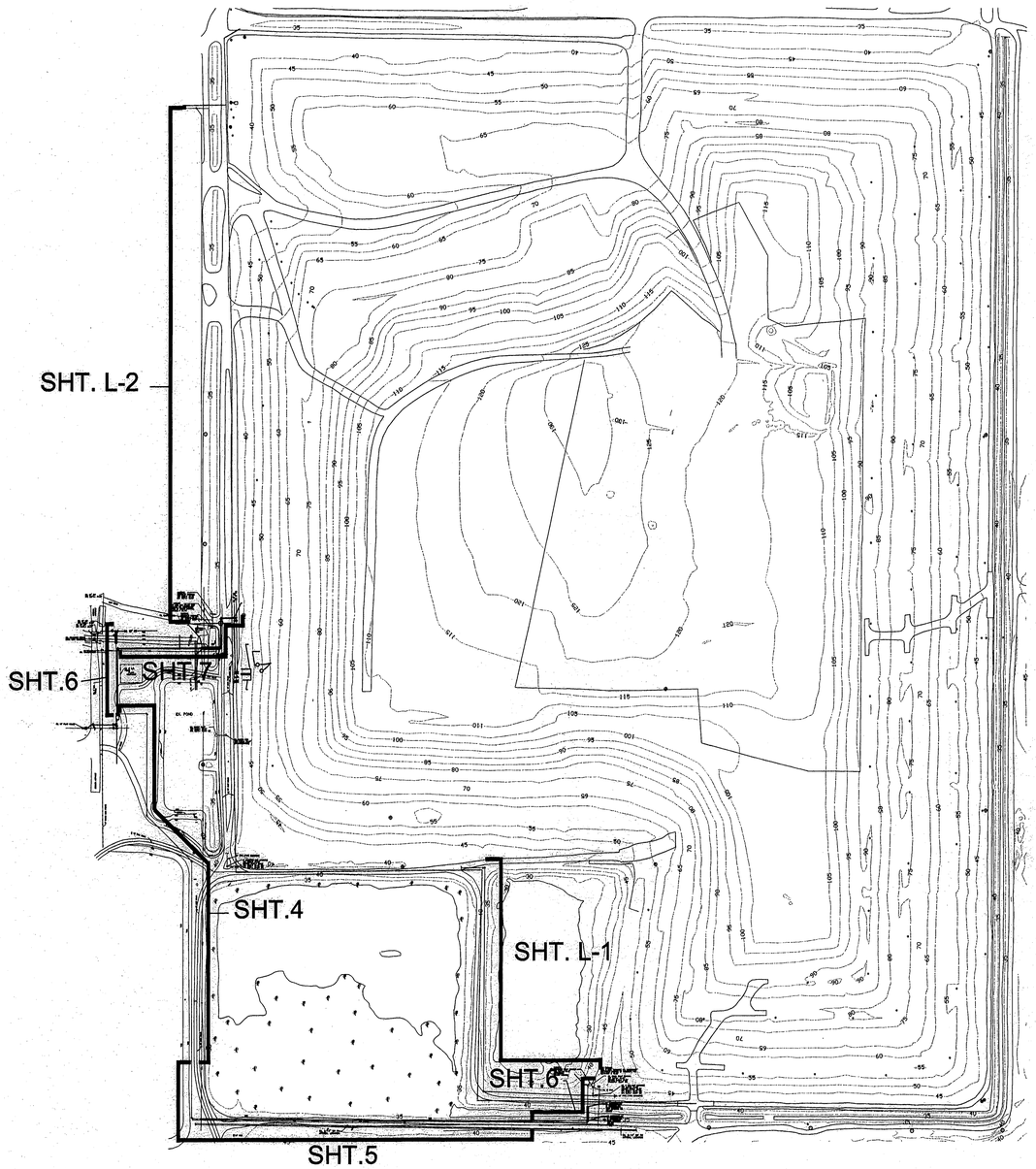
NOT VALID FOR CONSTRUCTION UNLESS SIGNED IN THIS BLOCK

JOB NO. 120498.02
DRAWN MV
DESIGNED JME
CHECKED JME
QC DBR

SHEET 2



NORTH

0 100 200 400

"RECORD DRAWING"
INCORPORATING THOSE CHANGES MADE DURING CONSTRUCTION BASED ON DATA FURNISHED BY THE CONTRACTOR TO THE ENGINEER

PBS&J
330 SOUTH PINEAPPLE AVE.
SUITE 113
SARASOTA, FLORIDA 34236
Ph. (941) 954-4036
FBPE REGISTRY #2439 & #2699(PL, SL & S.V.) FBPA 3201 N.W. 10TH AVENUE, MIAMI, FL 33172-2007
FBPE CERTIFICATE OF AUTHORIZATION NO.24

CLIENT
MANATEE COUNTY
PROJECT MANAGEMENT
DEPARTMENT
1026 26TH AVENUE EAST
BRADENTON, FLORIDA 34208

MANATEE COUNTY FLORIDA

PROJECT
LENA ROAD LANDFILL LEACHATE
POND FACILITIES

TASK
PROJECT KEY

ORIGINAL:
REVISIONS:
1 REC DWG JAN/02
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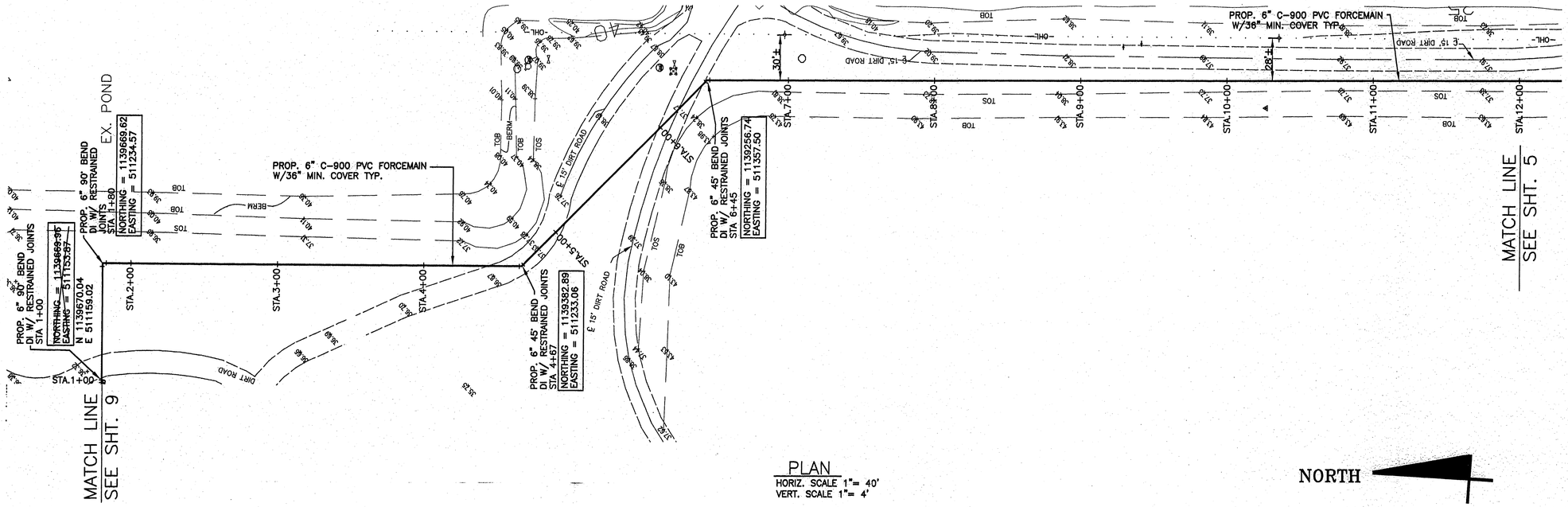
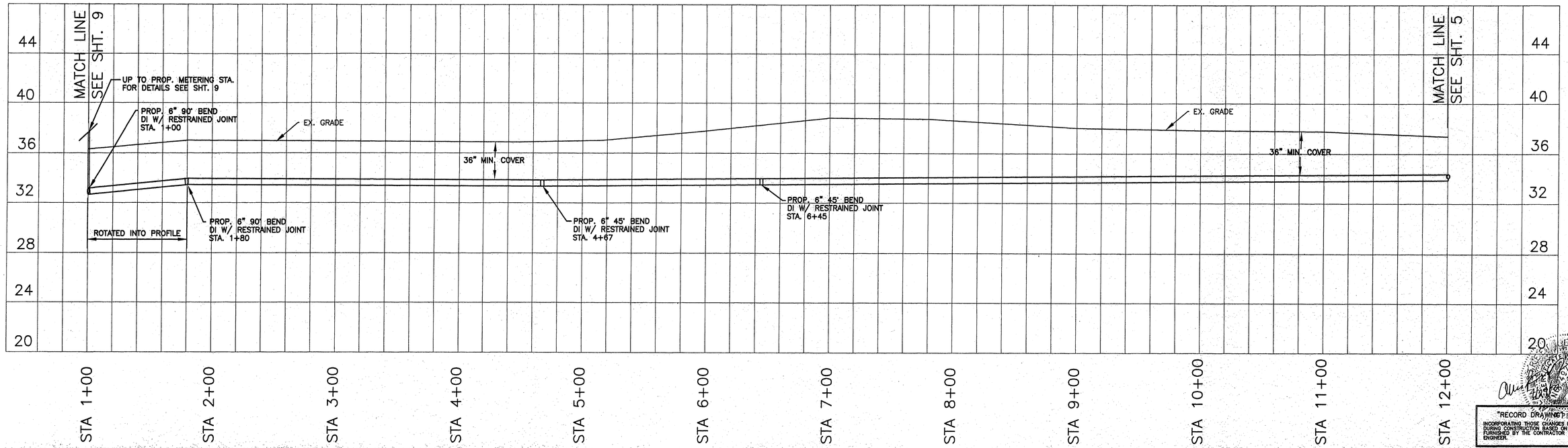
NOT VALID FOR CONSTRUCTION UNLESS SIGNED IN THIS BLOCK

JOB NO. 120498.02
DRAWN MV
DESIGNED JME
CHECKED JME
QC DBR
SHEET 3



PLAN
HORIZ. SCALE 1"= 40'
VERT. SCALE 1"= 4'

NORTH



"RECORD DRAWING PROT."
INCORPORATING THOSE CHANGES MADE DURING CONSTRUCTION BASED ON DATA FURNISHED BY THE CONTRACTOR TO THE ENGINEER.

PBS&J
330 SOUTH PINEAPPLE AVE.
SUITE 113
SARASOTA, FLORIDA 34236
Ph. (941) 954-4036
POST, BUCKLEY, SCHUH & JERNIGAN, INC. D/B/A/ PBS&J
5201 N.E. 10TH AVENUE, MIAMI, FL. 33137-3807
FBPE CERTIFICATE OF AUTHORIZATION NO.24

CLIENT
MANATEE COUNTY
PROJECT MANAGEMENT
DEPARTMENT
1026 26tH AVENUE EAST
BRADENTON, FLORIDA 34208
MANATEE COUNTY FLORIDA

PROJECT
LENA ROAD LANDFILL LEACHATE
POND FACILITIES

TASK
PLAN AND PROFILE
STA 1+00 TO 12+00

ORIGINAL:
REVISIONS:
1 REC DWG JAN/02
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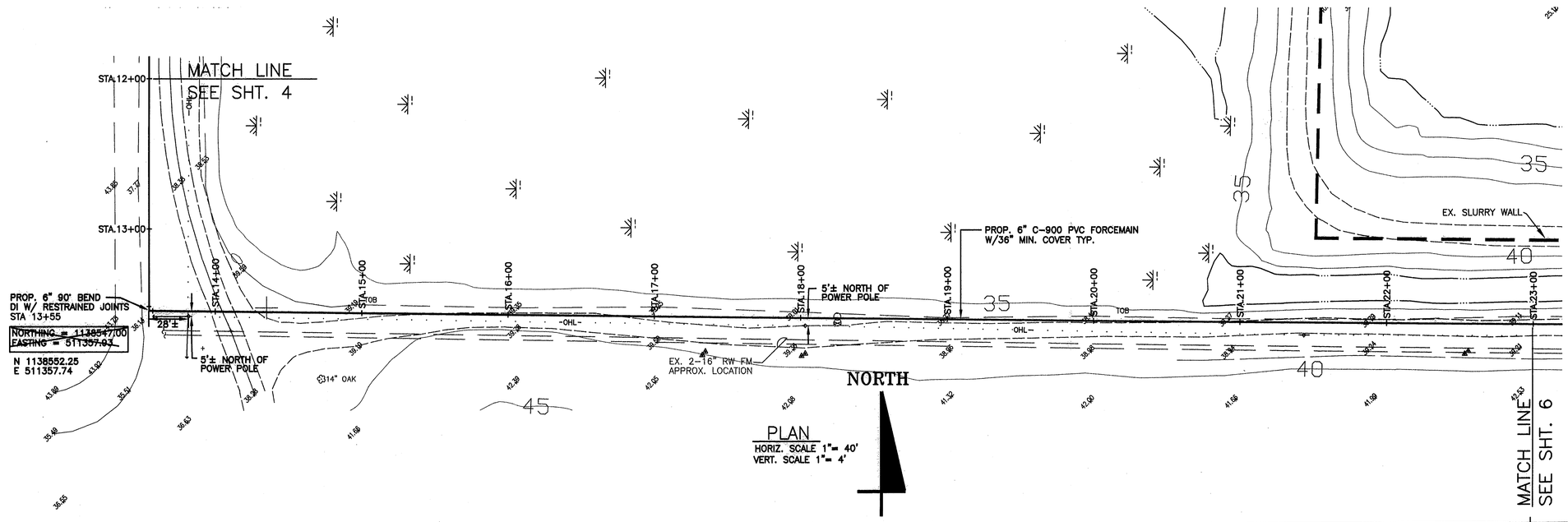
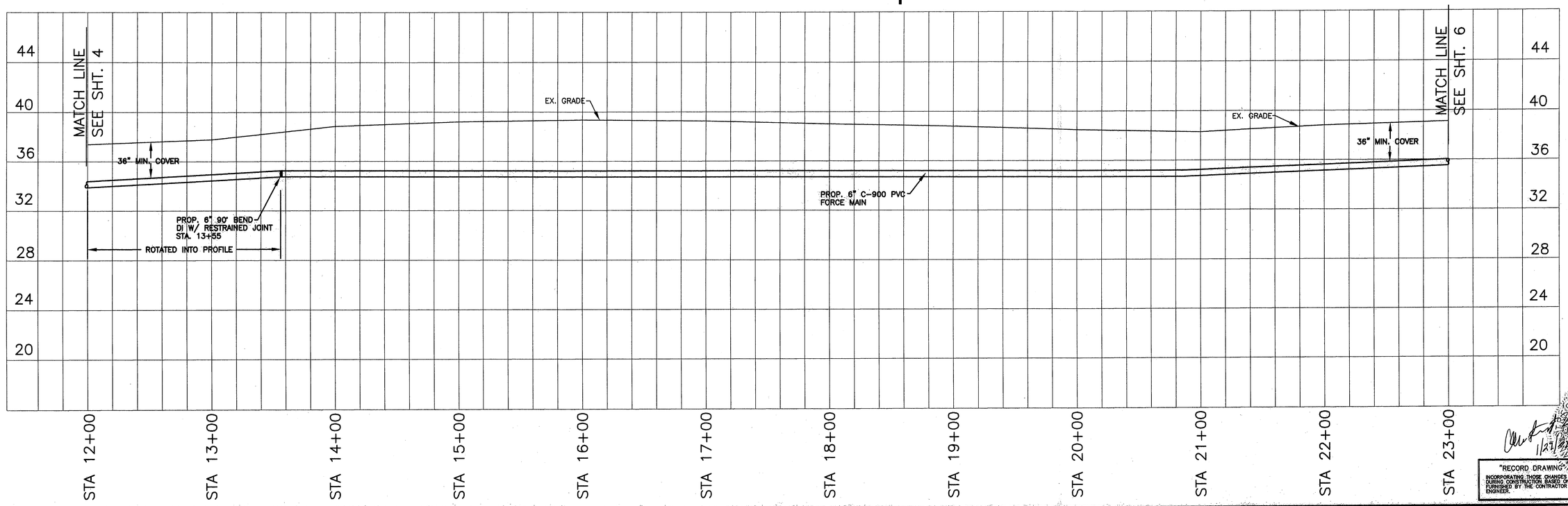
JOB NO. 120498.02
DRAWN MV
DESIGNED JME
CHECKED JME
QC DBR

SHEET 4



PLAN

HORIZ. SCALE 1"= 40'
VERT. SCALE 1"= 4'



"RECORD DRAWING"
INCORPORATING THOSE CHANGES MADE DURING CONSTRUCTION BASED ON DATA FURNISHED BY THE CONTRACTOR TO THE ENGINEER.

PBS&J
330 SOUTH PINEAPPLE AVE.
SUITE 113
SARASOTA, FLORIDA 34236
Ph. (941) 954-4036
FIRM CERTIFICATE OF AUTHORIZATION NO.224

CLIENT
MANATEE COUNTY
PROJECT MANAGEMENT
DEPARTMENT
1026 26TH AVENUE EAST
BRADENTON, FLORIDA 34208

PROJECT
LENA ROAD LANDFILL LEACHATE
POND FACILITIES

TASK
PLAN AND PROFILE
STA 12+00 TO 23+00

ORIGINAL:
REVISIONS:
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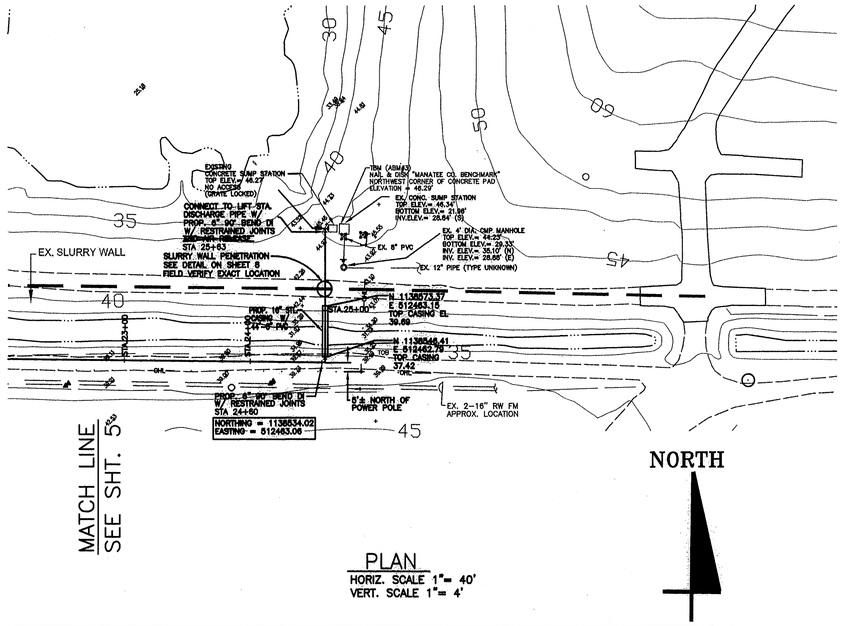
NOT VALID FOR CONSTRUCTION UNLESS SIGNED IN THIS BLOCK

JOB NO. 120498.02
DRAWN MV
DESIGNED JME
CHECKED JME
QC DBR

SHEET 5



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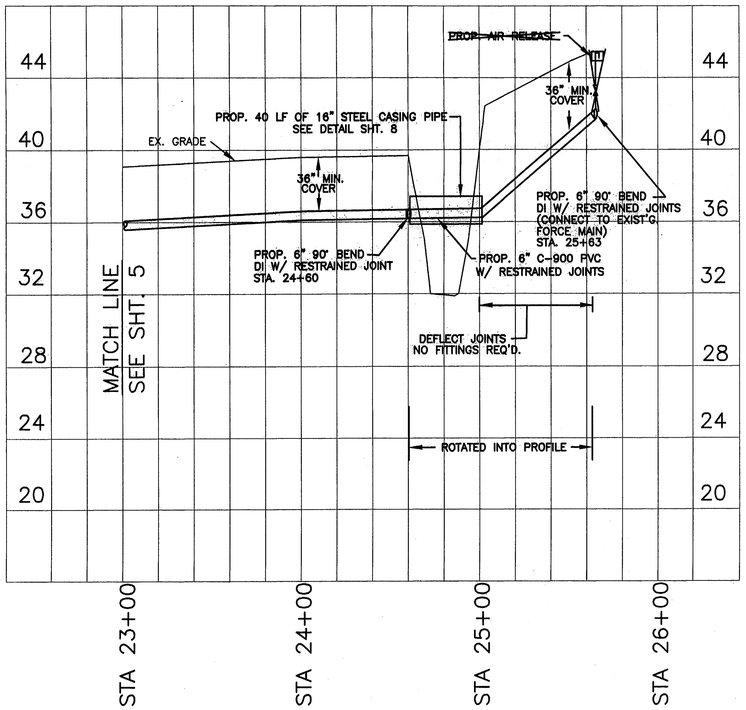
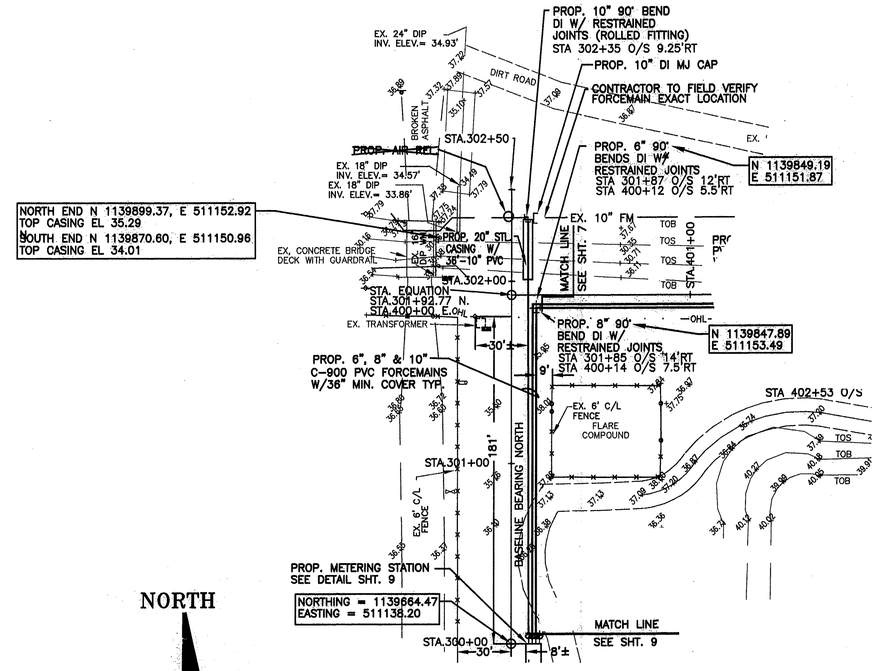
HORIZ. SCALE 1"= 40'
VERT. SCALE 1"= 4'





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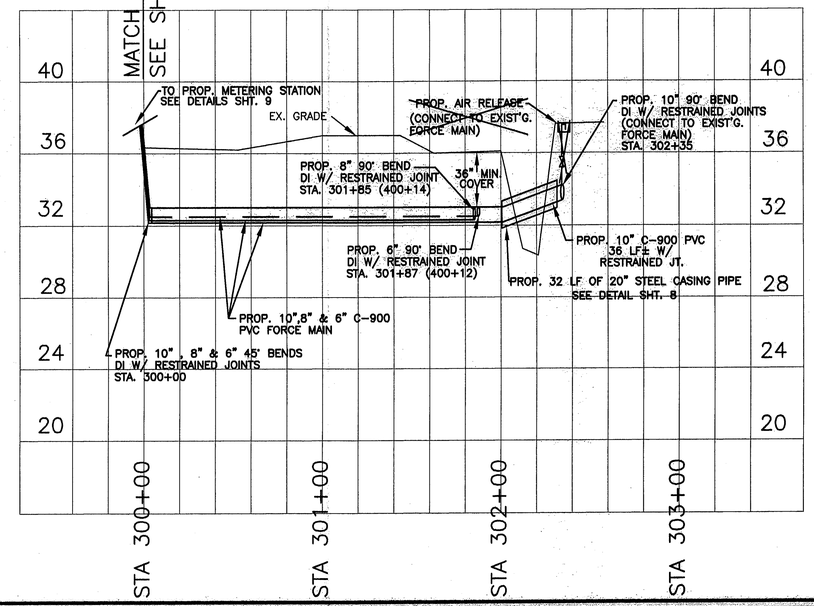
HORIZ. SCALE 1"= 40'
VERT. SCALE 1"= 4'



"RECORD DRAWING" INCORPORATING THOSE CHANGES MADE DURING CONSTRUCTION BASED ON DATA FURNISHED BY THE CONTRACTOR TO THE ENGINEER.

PBS&J
330 SOUTH PINEAPPLE AVE.
SUITE 113
SARASOTA, FLORIDA 34236
Ph. (941) 954-4036
FORD, BURDELL, SCHUTE & ASSOCIATES, INC. D/B/A/ PBS&J 2001 N.W. 107TH AVENUE, MIAMI, FL 33172-2007 FIRM CERTIFICATE OF AUTHORIZATION NO.04

CLIENT
MANATEE COUNTY PROJECT MANAGEMENT DEPARTMENT
1026 26TH AVENUE EAST
BRADENTON, FLORIDA 34208

PROJECT
LENA ROAD LANDFILL LEACHATE
POND FACILITIES

TASK
PLAN AND PROFILES
STA 23+00 TO 25+63
STA 300+00 TO 302+35

ORIGINAL:
REVISIONS:
1 REC DWG JAN/02:
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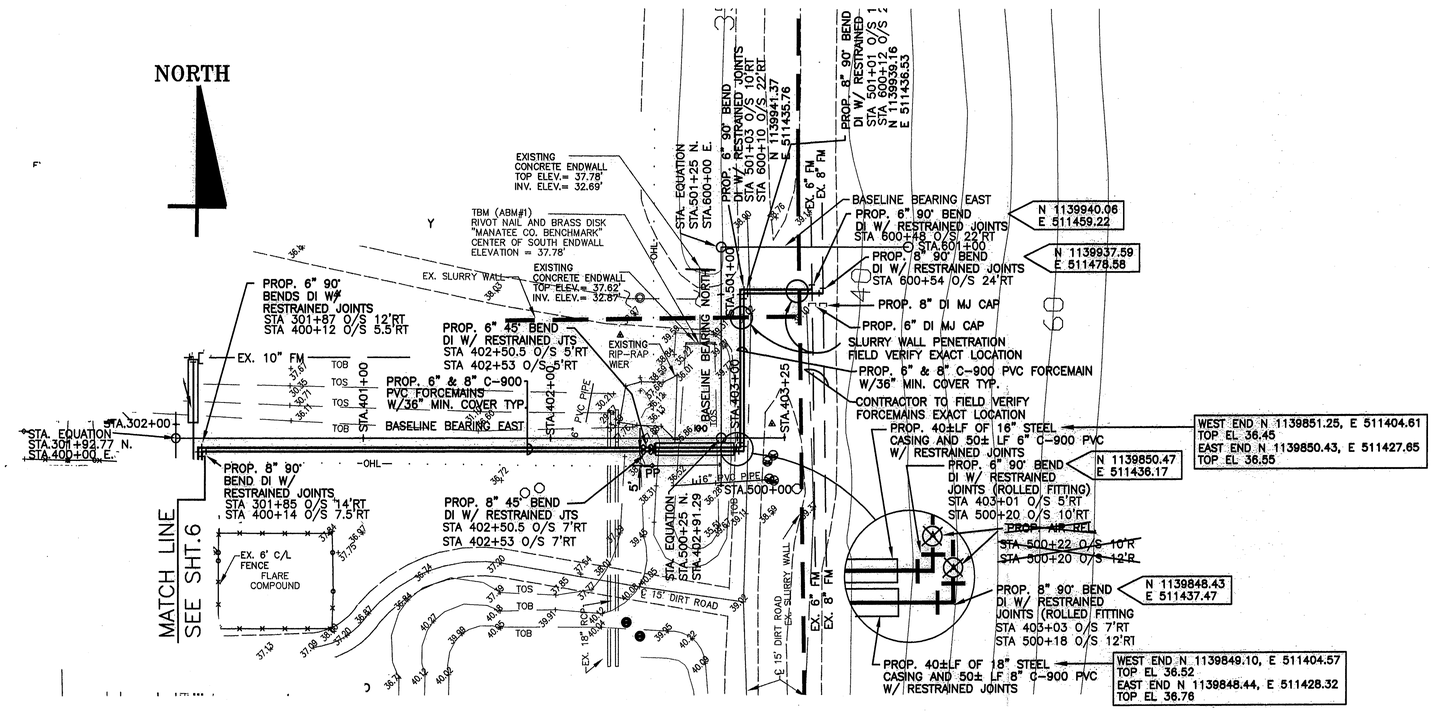
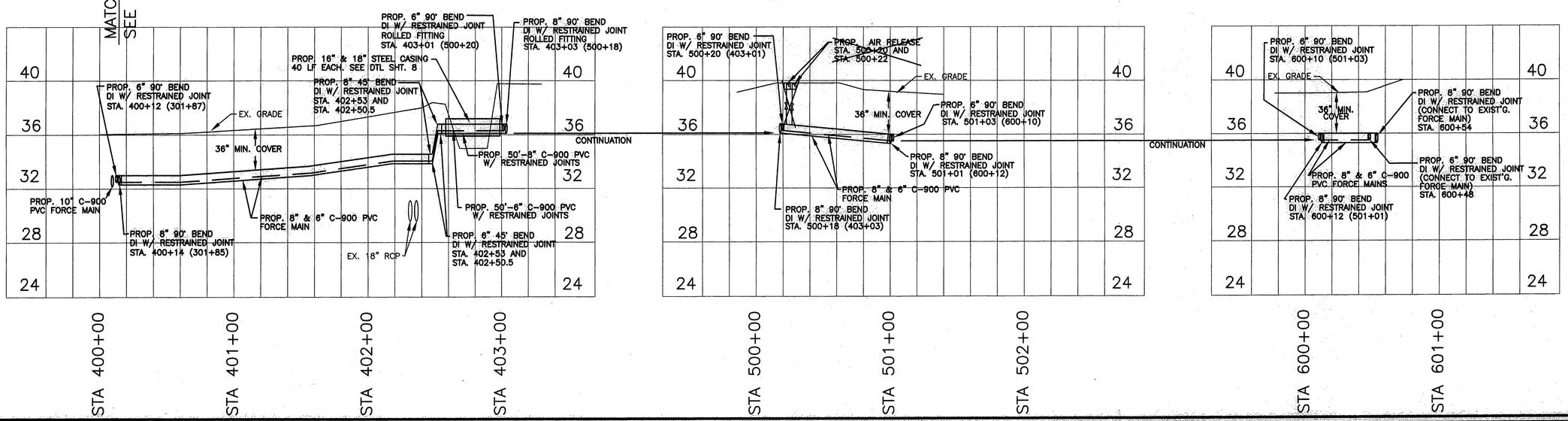
JOB NO. 120498.02
DRAWN MV
DESIGNED JME
CHECKED JME
QC DBR

SHEET 6



PLAN
HORIZ. SCALE 1"= 40'
VERT. SCALE 1"= 4'



"RECORD DRAWING"
INCORPORATING THOSE CHANGES MADE DURING CONSTRUCTION BASED ON DATA FURNISHED BY THE CONTRACTOR TO THE ENGINEER.

PBS&J
330 SOUTH PINEAPPLE AVE.
SUITE 113
SARASOTA, FLORIDA 34236
Ph. (941) 954-4036
FLORIDA BUSINESS LICENSE NO. 6-9614 / STATE OF FLORIDA REGISTRY NO. LC-26000337
FIRM CERTIFICATE OF AUTHORIZATION NO.241

CLIENT
MANATEE COUNTY PROJECT MANAGEMENT DEPARTMENT
1026 26TH AVENUE EAST
BRADENTON, FLORIDA 34210

PROJECT
LENA ROAD LANDFILL LEACHATE
POND FACILITIES

TASK
PLAN AND PROFILES
STA 400+00 TO 600+54

ORIGINAL:
REVISIONS:
1 REC DWG JAN/02
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NOT VALID FOR CONSTRUCTION UNLESS SIGNED IN THIS BLOCK

JOB NO. 120498.02
DRAWN MV
DESIGNED JME
CHECKED JME
QC DBR

SHEET 7

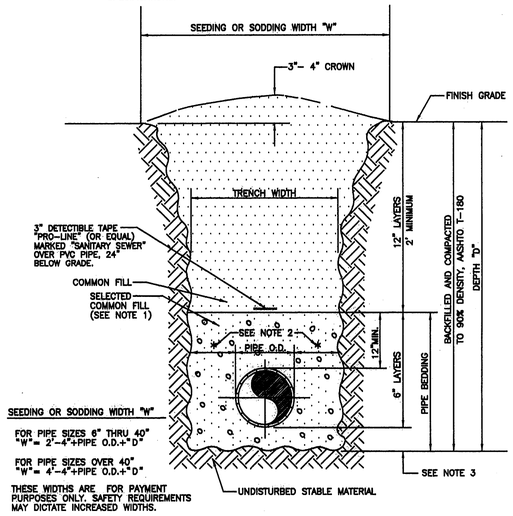
NOTES:

1.) USE OF TYPE A-2 AND A-3 PIPE BEDDING TO BE DETERMINED IN THE FIELD BY THE ENGINEER.

2.) 10" MAX. FOR PIPE DIAMETER LESS THAN 24"; 12" MAX. FOR PIPE DIAMETER 24" AND LESS THAN 42"; 24" MAX. FOR PIPE DIAMETER 42" AND OVER.

3.) 4" MAX. FOR PIPE 16" DIAMETER & LESS; 6" MAX. FOR PIPE 18" TO 36" DIAMETER; AND 9" MAX FOR PIPE 42" DIAMETER AND LARGER.

4.) INSTALLATION SHALL BE IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS.



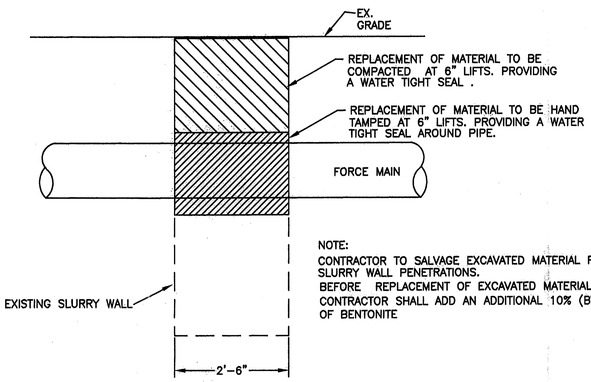
PIPE BEDDING DETAIL

RESTRAINED JOINT FITTING TO PIPE LENGTH TABLE

PIPE SIZE	BENDS				TEES								REDUCERS							PLUG
	11.25	22.5	45	90	6"	8"	10"	12"	16"	18"	20"	24"	6"	8"	10"	12"	16"	18"	20"	
6"	2'	5'	10'	24'	*	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	53'
8"	3'	6'	13'	31'	*	*	N/A	N/A	N/A	N/A	N/A	N/A	29'	N/A	N/A	N/A	N/A	N/A	N/A	69'
10"	4'	7'	15'	37'	*	*	*	N/A	N/A	N/A	N/A	N/A	51'	28'	N/A	N/A	N/A	N/A	N/A	83'
12"	4'	9'	18'	43'	*	*	*	*	N/A	N/A	N/A	N/A	71'	52'	29'	N/A	N/A	N/A	N/A	98'
16"	5'	11'	23'	55'	*	*	*	*	*	N/A	N/A	N/A	106'	92'	75'	54'	N/A	N/A	N/A	126'
18"	6'	12'	25'	60'	*	*	*	*	*	*	N/A	N/A	N/A	122'	94'	75'	28'	N/A	N/A	139'
20"	6'	13'	27'	65'	*	*	*	*	*	*	*	N/A	N/A	N/A	112'	96'	54'	28'	N/A	153'
24"	7'	15'	31'	75'	*	*	*	*	*	*	*	*	N/A	N/A	N/A	132'	97'	76'	53'	178'

NOTES:

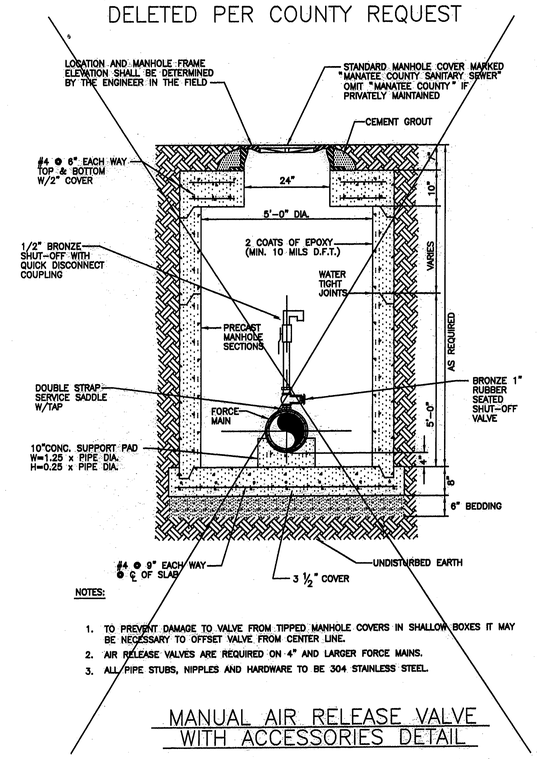
1. RESTRAIN TO NEXT JOINT BEYOND GIVEN LENGTH.
2. * = RESTRAIN AT JOINT ONLY.



NOTE:
CONTRACTOR TO SALVAGE EXCAVATED MATERIAL FROM SLURRY WALL PENETRATIONS.
BEFORE REPLACEMENT OF EXCAVATED MATERIAL CONTRACTOR SHALL ADD AN ADDITIONAL 10% (BY VOLUME) OF BENTONITE

SLURRY WALL PENETRATION DETAIL

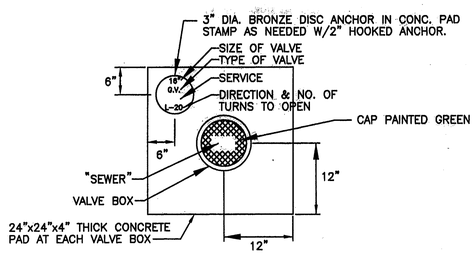
DELETED PER COUNTY REQUEST



NOTES:

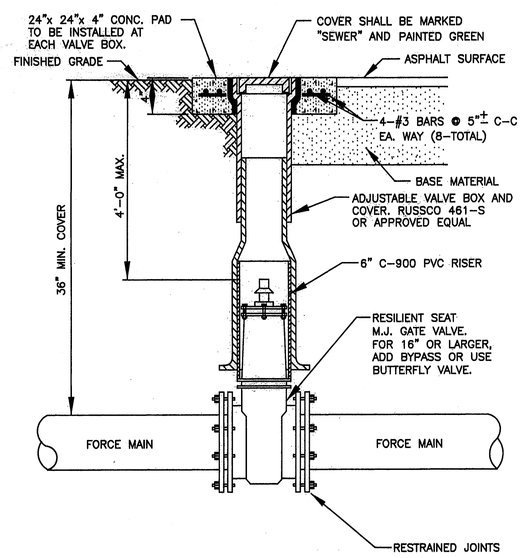
1. TO PREVENT DAMAGE TO VALVE FROM TIPPED MANHOLE COVERS IN SHALLOW BOXES IT MAY BE NECESSARY TO OFFSET VALVE FROM CENTER LINE.
2. AIR RELEASE VALVES ARE REQUIRED ON 4" AND LARGER FORCE MAINS.
3. ALL PIPE STUBS, NIPPLES AND HARDWARE TO BE 304 STAINLESS STEEL.

MANUAL AIR RELEASE VALVE WITH ACCESSORIES DETAIL

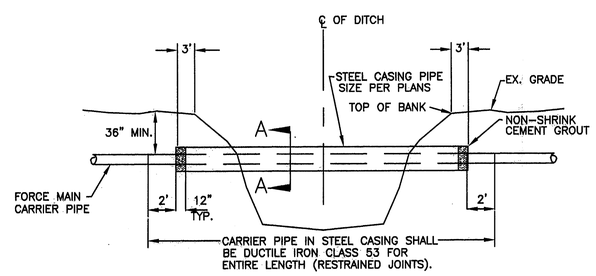


NOTES:

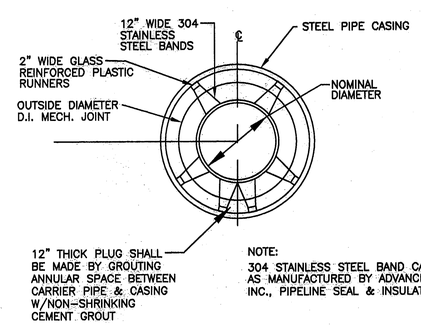
1. GATE VALVE TO BE MARKED IN CURB WITH A " SV " WITH A FOOTAGE FROM THE BACK OF CURB TO THE VALVE OR IF NO CURB, A GREEN DISC WITH " SV " IN THE EDGE OF PAVEMENT WITH THE FOOTAGE FROM THE DISC TO THE VALVE.
2. ALL EXISTING AND PROPOSED VALVE BOXES SHALL BE ADJUSTED TO FINISHED GRADES AS ESTABLISHED IN THE FIELD.
3. SEWER VALVES SHALL NOT BE PLACED IN HANDICAPPED RAMPS.
4. ALL EXPOSED EDGES OF CONCRETE SHALL BE CHAMFERED 1/2".



VALVE AND COVER DETAIL



DITCH CROSSING CARRIER & CASING DETAIL



NOTE:
304 STAINLESS STEEL BAND CASING INSULATORS AS MANUFACTURED BY ADVANCE PRODUCTS & SYSTEMS INC., PIPELINE SEAL & INSULATORS OR APPROVED EQUAL.

SECTION A-A

"RECORD DRAWING" INCORPORATING THOSE CHANGES MADE DURING CONSTRUCTION BASED ON DATA FURNISHED BY THE CONTRACTOR TO THE ENGINEER.

STATE OF FLORIDA PROFESSIONAL ENGINEER

PBSJ
330 SOUTH PINEAPPLE AVE.
SUITE 113
SARASOTA, FLORIDA 34236
Ph. (941) 954-4036
POST, BUCKLEY, SCHUH & JERNIGAN, INC. D/B/A/ PBSJ
3001 N.W. 107TH AVENUE, MIAMI, FL 33172-2017
FIRM CERTIFICATE OF AUTHORIZATION NO.24

CLIENT
MANATEE COUNTY PROJECT MANAGEMENT DEPARTMENT
1026 26TH AVENUE EAST
BRADENTON, FLORIDA 34208

PROJECT
LENA ROAD LANDFILL LEACHATE
POND FACILITIES

TASK
DETAILS

ORIGINAL:
REVISIONS:
1 REC DWG JAN/02
2
3
4
5
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7
8
9
10
11
12

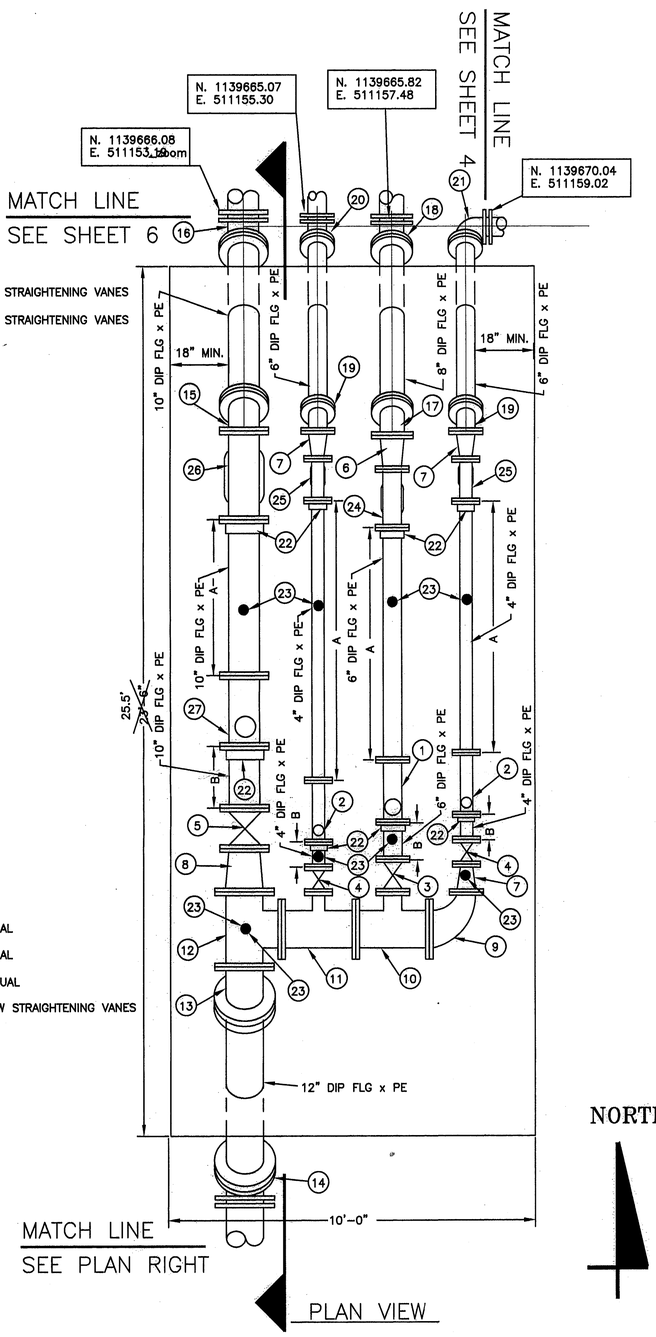
NOT VALID FOR CONSTRUCTION UNLESS SIGNED IN THIS BLOCK

JOB NO. 120498.02
DRAWN MV
DESIGNED JME
CHECKED JME
QC TXFF

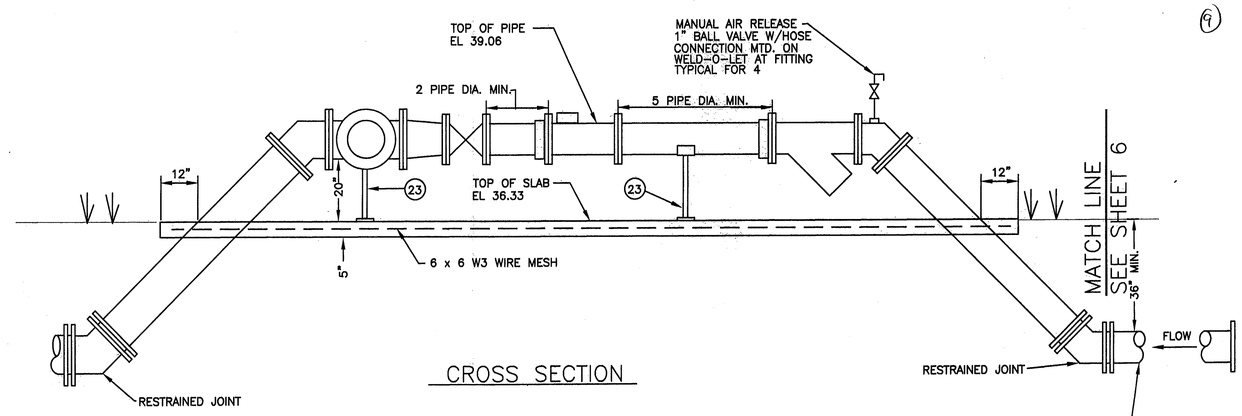
SHEET 8

LEGEND

A	MINIMUM DISTANCE SHALL BE 5 PIPE DIA.'S
B	MINIMUM DISTANCE SHALL BE 2 PIPE DIA.'S
1	6" McCROMETER MODEL NO. MF100 W/ FLOW STRAIGHTENING VANES
2	4" McCROMETER MODEL NO. MF100 W/ FLOW STRAIGHTENING VANES
3	6" OS & Y RESILIENT SEAT GATE VALVE
4	4" OS & Y RESILIENT SEAT GATE VALVE
5	10" OS & Y RESILIENT SEAT GATE VALVE
6	8"x 6" DI FLANGE REDUCER
7	6"x 4" DI FLANGE REDUCER
8	12"x 10" DI FLANGE REDUCER
9	12"x 6" DI FLANGE REDUCING ELBOW
10	12"x 6" DI FLANGE REDUCING TEE
11	12"x 4" DI FLANGE REDUCING TEE
12	12" DI FLANGE TEE
13	12" DI FLANGE 45° BEND
14	12" DI MJ 45° BEND W/ RETAINING GLANDS
15	10" DI FLANGE 45° BEND
16	10" DI MJ 45° BEND W/ RETAINING GLANDS
17	8" DI FLANGE 45° BEND
18	8" DI MJ 45° BEND W/ RETAINING GLANDS
19	6" DI FLANGE 45° BEND
20	6" DI MJ 45° BEND W/ RETAINING GLANDS
21	6" DI MJ 90° BEND W/ RETAINING GLANDS
22	UNI-FLANGE
23	PIPE SUPPORT
24	6" WYE STRAINER FEBCO MODEL 758 OR EQUAL
25	4" WYE STRAINER FEBCO MODEL 758 OR EQUAL
26	10" WYE STRAINER FEBCO MODEL 758 OR EQUAL
27	10" McCROMETER MODEL NO. MF100 W/ FLOW STRAIGHTENING VANES



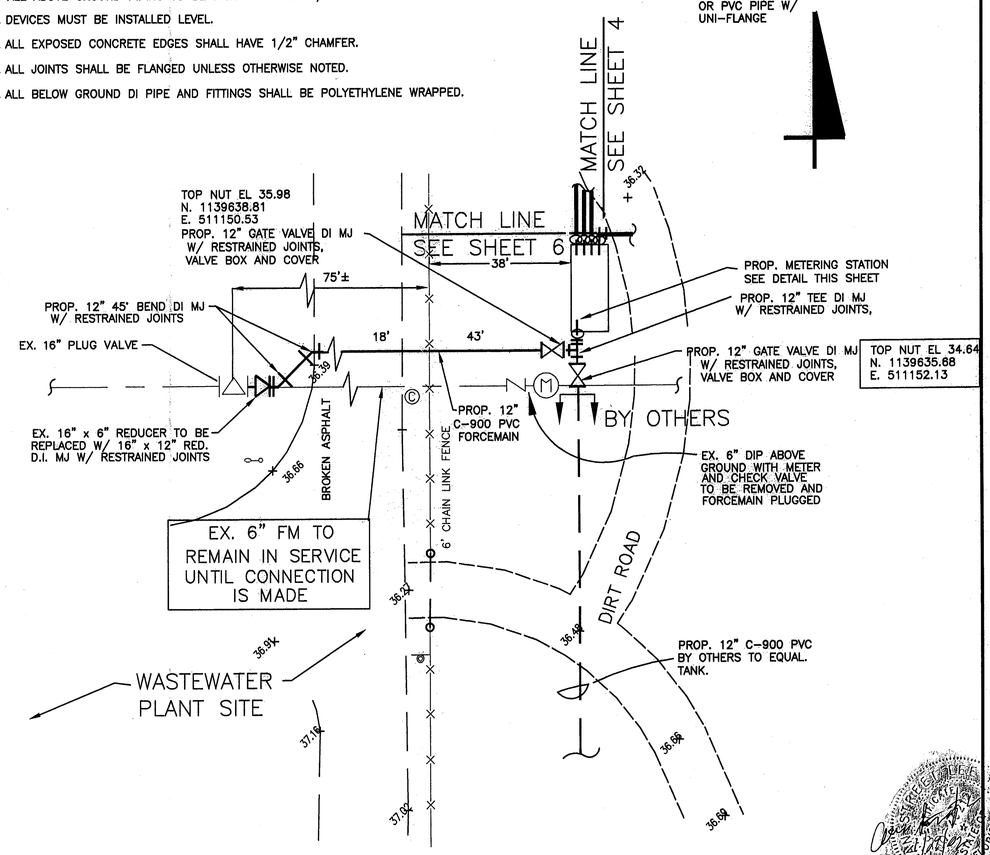
METERING STATION DETAILS



CROSS SECTION

NOTES:

1. ALL ABOVE GROUND PIPING TO BE PAINTED GREEN W/ NON- POTABLE MARKINGS.
2. DEVICES MUST BE INSTALLED LEVEL.
3. ALL EXPOSED CONCRETE EDGES SHALL HAVE 1/2" CHAMFER.
4. ALL JOINTS SHALL BE FLANGED UNLESS OTHERWISE NOTED.
5. ALL BELOW GROUND DI PIPE AND FITTINGS SHALL BE POLYETHYLENE WRAPPED.



METERING STATION PLAN

SCALE: 1"=20'

NOTE:
CONTRACTOR TO VERIFY EXACT LOCATION OF 6" FORCEMAIN AND MAKE ANY REQUIRED ADJUSTMENTS.

"RECORD DRAWING"
INCORPORATING THOSE CHANGES MADE DURING CONSTRUCTION BASED ON DATA FURNISHED BY THE CONTRACTOR TO THE ENGINEER.

PBSJ
330 SOUTH PINEAPPLE AVE.
SUITE 113
SARASOTA, FLORIDA 34236
Ph: (941) 954-4036

CLIENT
MANATEE COUNTY
PROJECT MANAGEMENT
DEPARTMENT
1026 26TH AVENUE EAST
BRADENTON, FLORIDA 34210

PROJECT
LENA ROAD LANDFILL LEACHATE
POND FACILITIES

TASK
METERING STATION DETAILS

ORIGINAL:
REVISIONS:
1 REC DWG JAN/02
2
3
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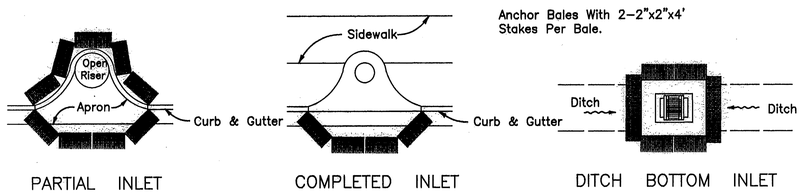
11
12

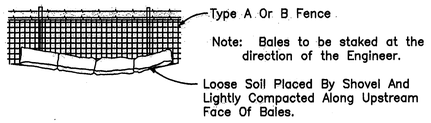
NOT VALID FOR CONSTRUCTION UNLESS SIGNED IN THIS BLOCK

JOB NO.	120498.02
DRAWN	MV
DESIGNED	JME
CHECKED	JME
QC	DBR

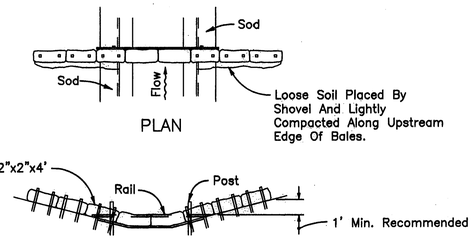
SHEET 9



PROTECTION AROUND INLETS OR SIMILAR STRUCTURES

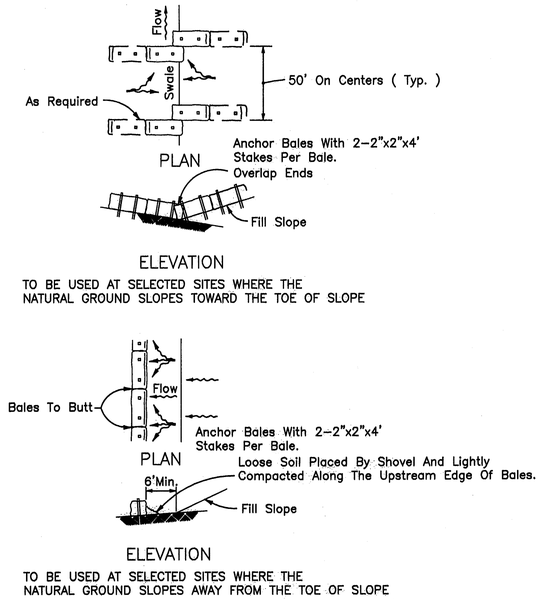


BALES BACKED BY FENCE



Spacing: Bale barriers for paved ditches should be spaced in accordance with Chart I

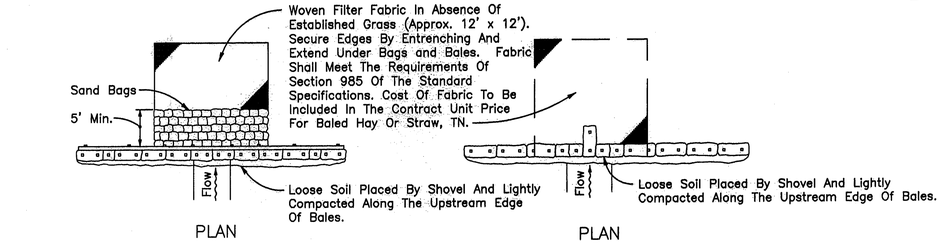
BARRIER FOR PAVED DITCH

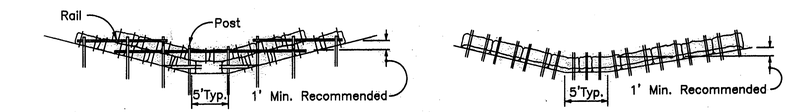


TO BE USED AT SELECTED SITES WHERE THE NATURAL GROUND SLOPES TOWARD THE TOE OF SLOPE

TO BE USED AT SELECTED SITES WHERE THE NATURAL GROUND SLOPES AWAY FROM THE TOE OF SLOPE

BARRIERS FOR FILL SLOPES





Anchor Lower Bales With 2–2"x2"x4' Stakes Per Bale.
Anchor Top Bales To Lower Bales With 2–2"x2"x4' Stakes Per Bale.

ELEVATION

Anchor Bales With 2–2"x2"x4' Stakes Per Bale

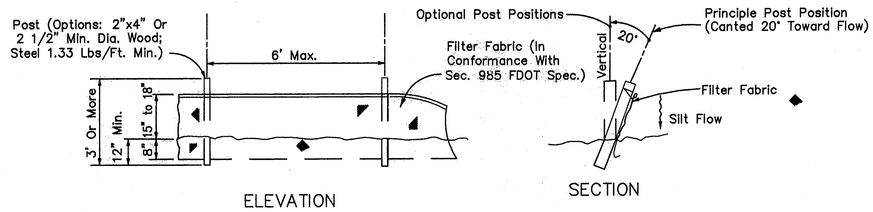
ELEVATION

Application and Spacing: The use of Types I & II bale barriers should be limited to the conditions outlined in Chart I

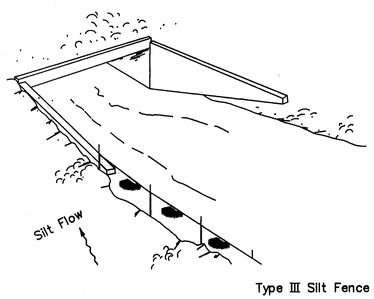
TYPE II

TYPE I

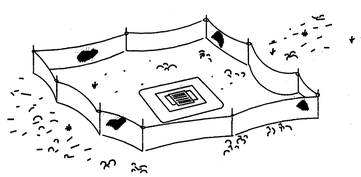
BARRIER FOR UNPAVED DITCHES



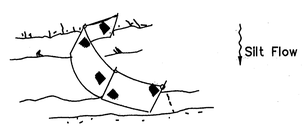
TYPE III SILT FENCE



Type III Silt Fence



Type III Silt Fence Protection Around Ditch Bottom Inlets.



Note: Spacing for Type III Fence to be in accordance with Chart I.

Type III Silt Fence

Do not deploy in a manner that silt fences will act as a dam across permanent flowing watercourses. Silt fences are to be used at upland locations and turbidity barriers used at permanent bodies of water.

SILT FENCE APPLICATIONS

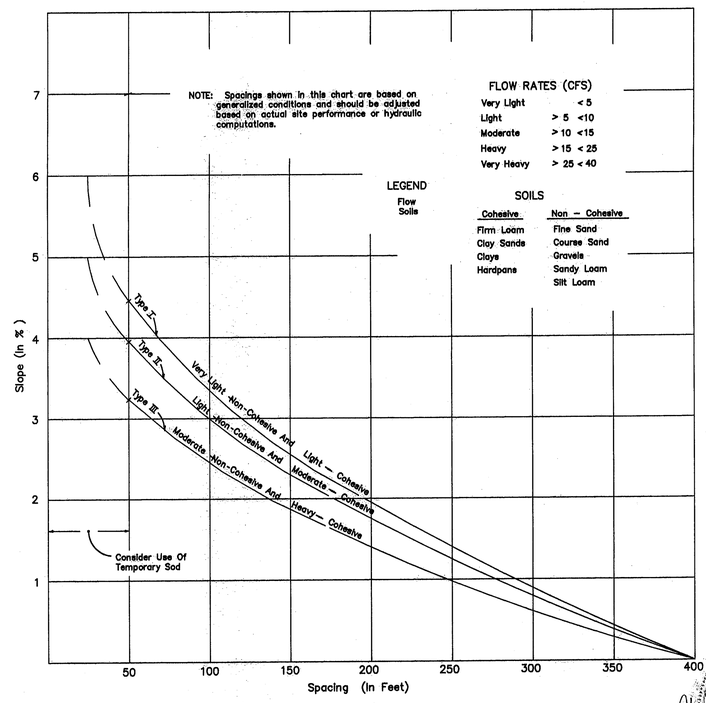


CHART I

RECOMMENDED SPACING FOR TYPE I AND TYPE II HAY BALE BARRIERS, AND TYPE III SILT FENCES

"RECORD DRAWING"
INCORPORATING THOSE CHANGES MADE DURING CONSTRUCTION BASED ON DATA FURNISHED BY THE CONTRACTOR TO THE ENGINEER.

PBSJ
330 SOUTH PINEAPPLE AVE.
SUITE 113
SARASOTA, FLORIDA 34236
Ph. (941) 954-4036
POST, BUCKLEY, SCHUH & JERNIGAN, INC. (LB-1) FBPA 2001 N.W. 107TH AVENUE, MIAMI, FL 33172-2007 FBPE CERTIFICATE OF AUTHORIZATION NO.24

CLIENT
MANATEE COUNTY PROJECT MANAGEMENT DEPARTMENT
1026 26TH AVENUE EAST
BRADENTON, FLORIDA 34210

PROJECT
LENA ROAD LANDFILL LEACHATE POND FACILITIES

TASK
EROSION CONTROL DETAILS

ORIGINAL:
REVISIONS:
1 REC DWG JAN/02
2
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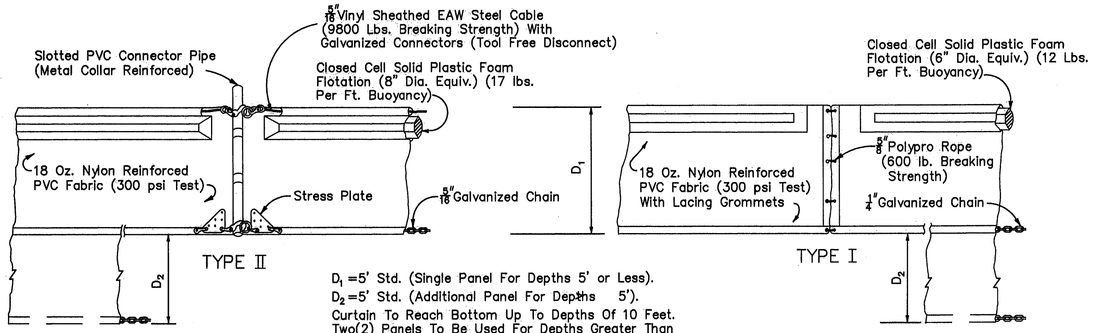
NOT VALID FOR CONSTRUCTION UNLESS SIGNED IN THIS BLOCK

JOB NO. 120498.02
DRAWN MV
DESIGNED JME
CHECKED JME
QC DBR

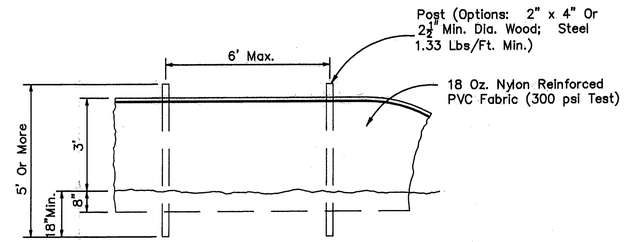
SHEET 10



D_1 =5' Std. (Single Panel For Depths 5' or Less).
D_2 =5' Std. (Additional Panel For Depths 5').
Curtain To Reach Bottom Up To Depths Of 10 Feet. Two(2) Panels To Be Used For Depths Greater Than 10 Feet Unless Special Depth Curtains Specifically Called For In The Plans Or As Determined By The Engineer.

NOTICE: COMPONENTS OF TYPES I AND II MAY BE SIMILAR OR IDENTICAL TO PROPRIETARY DESIGNS. ANY INFRINGEMENT ON THE PROPRIETARY RIGHTS OF THE DESIGNER SHALL BE THE SOLE RESPONSIBILITY OF THE USER. SUBSTITUTIONS FOR TYPES I AND II SHALL BE AS APPROVED BY THE ENGINEER.

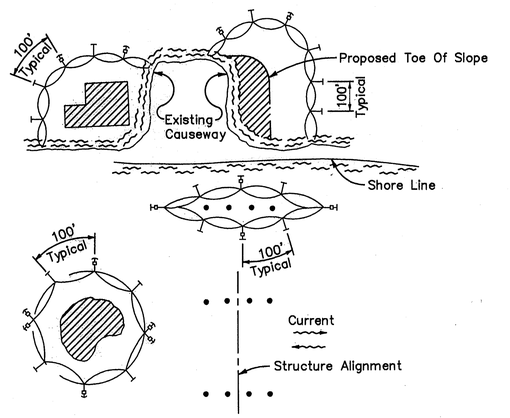
FLOATING TURBIDITY BARRIERS

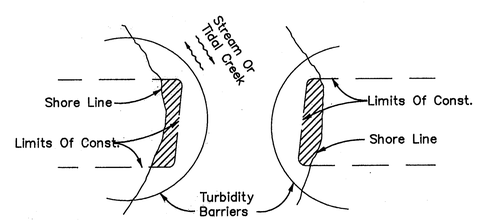


STAKED TURBIDITY BARRIER

LEGEND

- Pile Locations
- Dredge Or Fill Area
- Mooring Buoy w/Anchor
- Anchor
- Barrier Movement Due To Current Action





Note:
Turbidity barriers for flowing streams and tidal creeks may be either floating, or staked types or any combinations of types that will suit site conditions and meet erosion control and water quality requirements. The barrier type(s) will be at the Contractors option unless otherwise specified in the plans, however payment will be under the pay item(s) established in the plans for Floating Turbidity Barrier and/or Staked Turbidity Barrier. Posts in staked turbidity barriers to be installed in vertical position unless otherwise directed by the Engineer.

NOTES:

1. Turbidity barriers are to be used in all permanent bodies of water regardless of water depth.
2. Number and spacing of anchors dependent on current velocities.
3. Deployment of barrier around pile locations may vary to accommodate construction operations.
4. Navigation may require segmenting barrier during construction operations.
5. For additional information see Section 104 of the Standard Specifications.

TURBIDITY BARRIER APPLICATIONS

1/29/02

"RECORD DRAWING". INCORPORATING THOSE CHANGES MADE DURING CONSTRUCTION BASED ON DATA FURNISHED BY THE CONTRACTOR TO THE ENGINEER.

PBS&J
330 SOUTH PINEAPPLE AVE.
SUITE 113
SARASOTA, FLORIDA 34236
Ph. (941) 954-4036
PGP, BENDER, SCHAD & STRAHM, INC. D.B.A. PBS&J FIRM 2001 N.W. 107TH AVENUE, MIAMI, FL 33172-2007 FIRM CERTIFICATE OF AUTHORIZATION NO.24

CLIENT
MANATEE COUNTY PROJECT MANAGEMENT DEPARTMENT
1026 26TH AVENUE EAST
BRADENTON, FLORIDA 34210

PROJECT
LENA ROAD LANDFILL LEACHATE POND FACILITIES

TASK
EROSION CONTROL DETAILS

ORIGINAL:
REVISIONS:
1 REC DWG JAN/02
2
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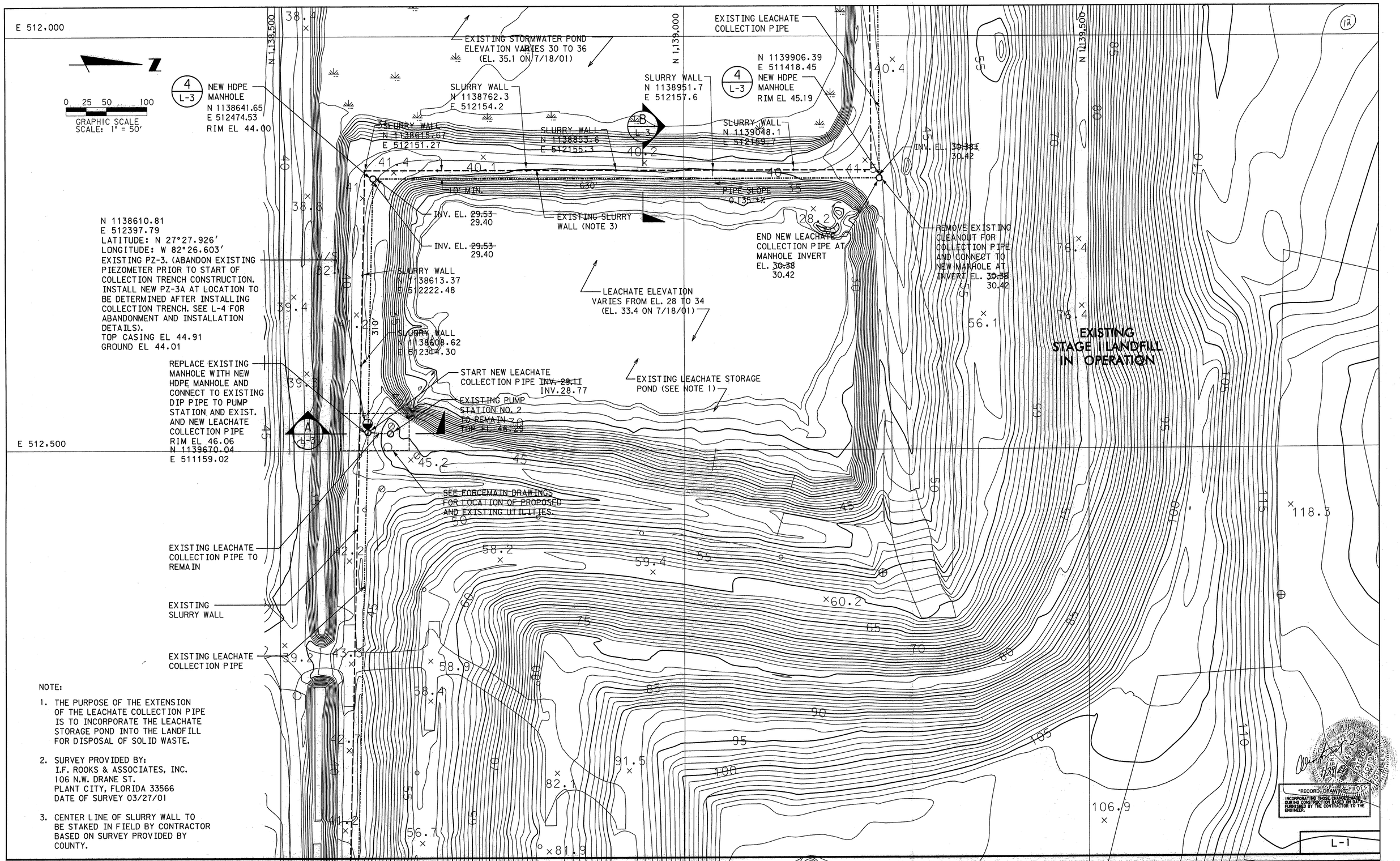
NOT VALID FOR CONSTRUCTION UNLESS SIGNED IN THIS BLOCK

JOB NO. 120498.02
DRAWN MV
DESIGNED JME
CHECKED JME
QC DBR

SHEET 11



NOTE:

1. THE PURPOSE OF THE EXTENSION OF THE LEACHATE COLLECTION PIPE IS TO INCORPORATE THE LEACHATE STORAGE POND INTO THE LANDFILL FOR DISPOSAL OF SOLID WASTE.
2. SURVEY PROVIDED BY:
   I.F. ROOKS & ASSOCIATES, INC.
   106 N.W. DRANE ST.
   PLANT CITY, FLORIDA 33566
   DATE OF SURVEY 03/27/01
3. CENTER LINE OF SLURRY WALL TO BE STAKED IN FIELD BY CONTRACTOR BASED ON SURVEY PROVIDED BY COUNTY.

PBS&J
330 SOUTH PINEAPPLE AVE.
SUITE 113
SARASOTA, FLORIDA 34236
Ph. (941) 954-4036

CLIENT
MANATEE COUNTY PROJECT MANAGEMENT DEPARTMENT
1026 26th AVENUE EAST
BRADENTON, FLORIDA 34208

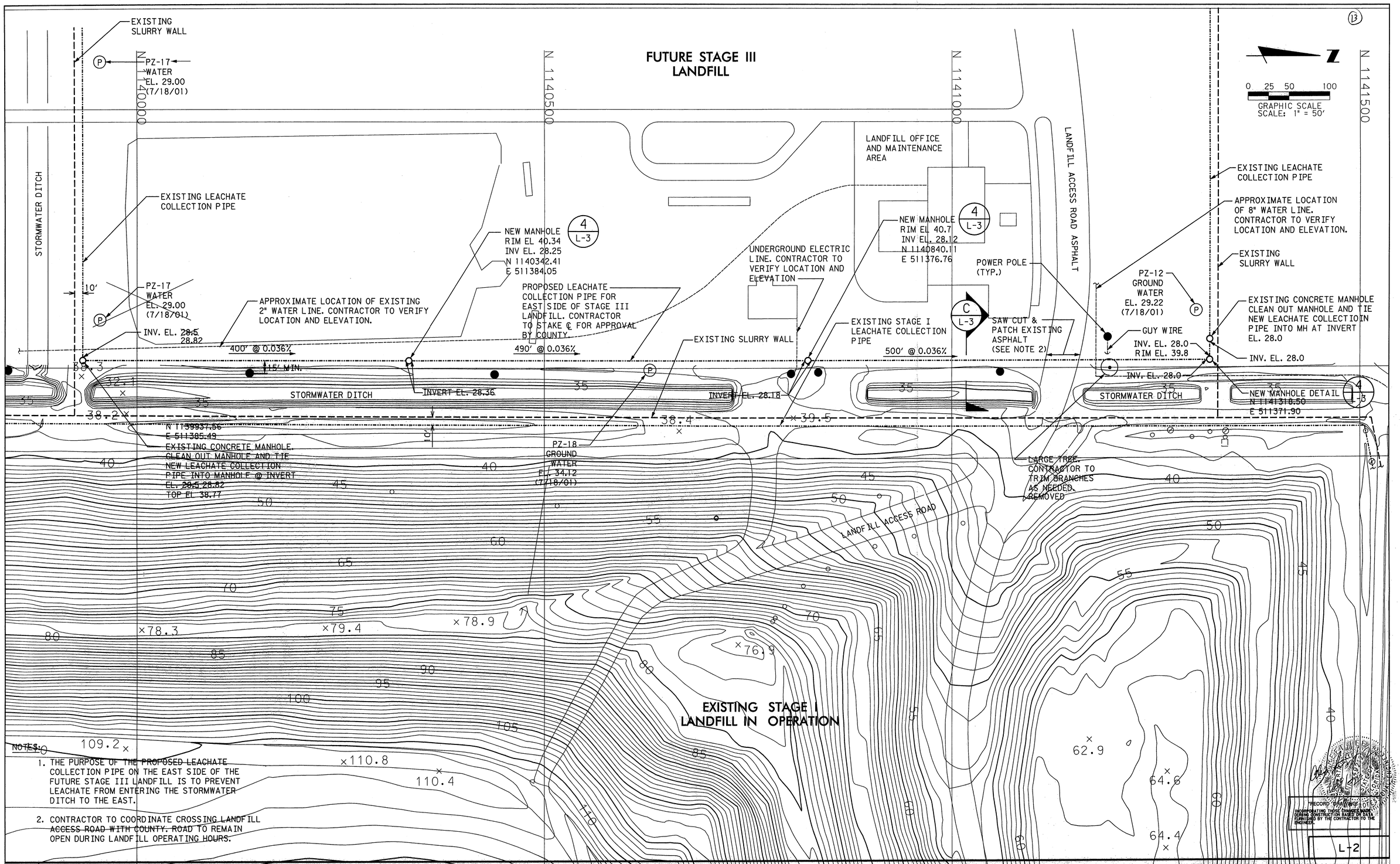
PROJECT	TASK
LENA ROAD LANDFILL	LEACHATE COLLECTION SYSTEM
CONSTRUCTION PERMIT	EXTENSION AT LEACHATE
MODIFICATIONS	STORAGE POND PLAN

ORIGINAL: AUG. 2001
REVISIONS:
1 ADDED PZ-3 (9/10/01)
2 REC DWG JAN/02
3
4
5
6
7
8
9
10
11
12

Name: JOSEPH L. MILLER
Florida P.E. No.: 39177
Address: PBS&J
452 S. Keller Road
Orlando, FL 32810-6101
Signature Date
NOT VALID FOR CONSTRUCTION UNLESS SIGNED IN THIS BLOCK

JOB NO. 00-000.00
DRAWN RGC
DESIGNED JLM/RGC
CHECKED JLM
QC DED
SHEET 1

...\LANDFILL\mlr_grdplan.dgn 01/11/02 11:01:42 AM



NOTES:

1. THE PURPOSE OF THE PROPOSED LEACHATE COLLECTION PIPE ON THE EAST SIDE OF THE FUTURE STAGE III LANDFILL IS TO PREVENT LEACHATE FROM ENTERING THE STORMWATER DITCH TO THE EAST.
2. CONTRACTOR TO COORDINATE CROSSING LANDFILL ACCESS ROAD WITH COUNTY. ROAD TO REMAIN OPEN DURING LANDFILL OPERATING HOURS.

"RECORD DRAWING" INCORPORATING THOSE CHANGES MADE DURING CONSTRUCTION BASED ON DATA FURNISHED BY THE CONTRACTOR TO THE ENGINEER.

L-2

PBS&J
330 SOUTH PINEAPPLE AVE.
SUITE 113
SARASOTA, FLORIDA 34236
Ph. (941) 954-4036

CLIENT
MANATEE COUNTY
PROJECT MANAGEMENT DEPARTMENT
1026 26th AVENUE EAST
BRADENTON, FLORIDA 34208

PROJECT	TASK
LENA ROAD LANDFILL	LEACHATE COLLECTION SYSTEM
CONSTRUCTION PERMIT	EXTENSION IN STAGE III
MODIFICATIONS	LANDFILL

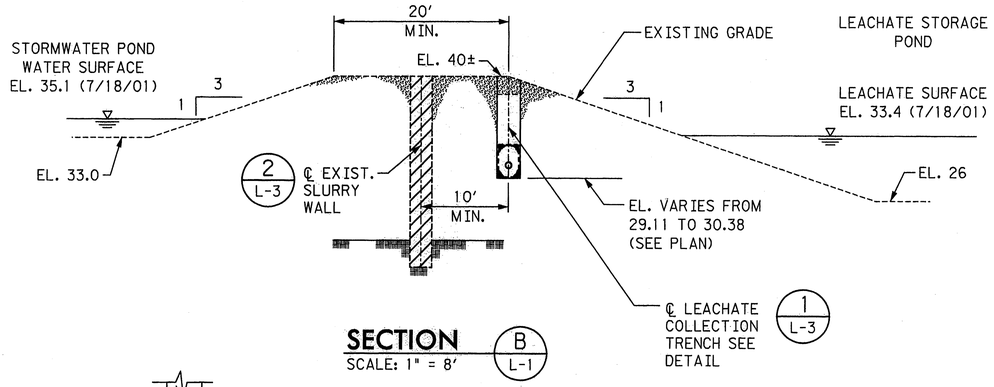
ORIGINAL: AUG. 2001
REVISIONS:
1 9/5/01 ADDED 2 MANHOLES
2 REC DWG JAN/02
3
4
5
6
7
8
9
10
11
12

Name: JOSEPH L. MILLER
Florida P.E. No.: 39177
Address: PBS&J
462 S. Keller Road
Orlando, FL 32810-6101

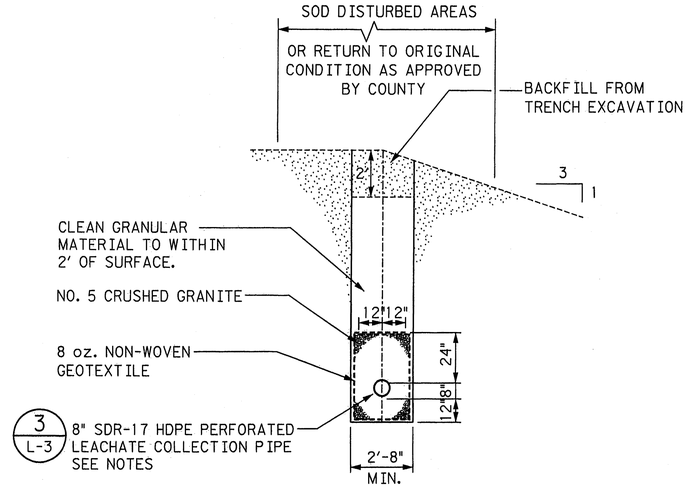
Signature Date
NOT VALID FOR CONSTRUCTION UNLESS SIGNED IN THIS BLOCK

JOB NO. 00-000.00
DRAWN RGC
DESIGNED JLM/RGC
CHECKED JLM
QC DED
SHEET 1

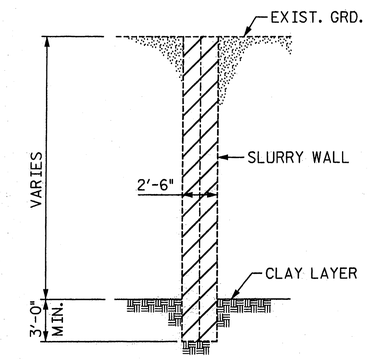
...\LANDFILL\mlr_leachatepipe.dgn 01/11/02 11:06:54 AM



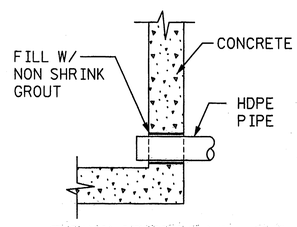
SECTION B/L-1
SCALE: 1" = 8'



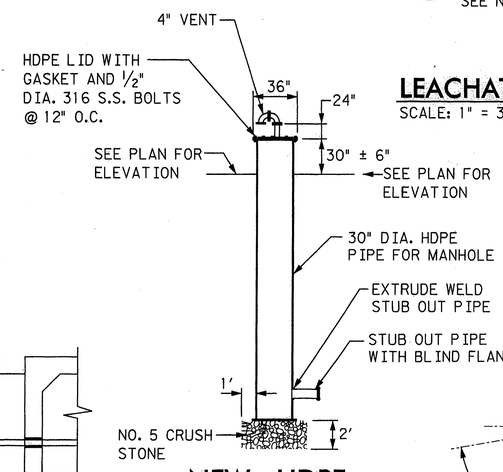
LEACHATE COLLECTION PIPE DETAIL 1/L-3
SCALE: 1" = 3'



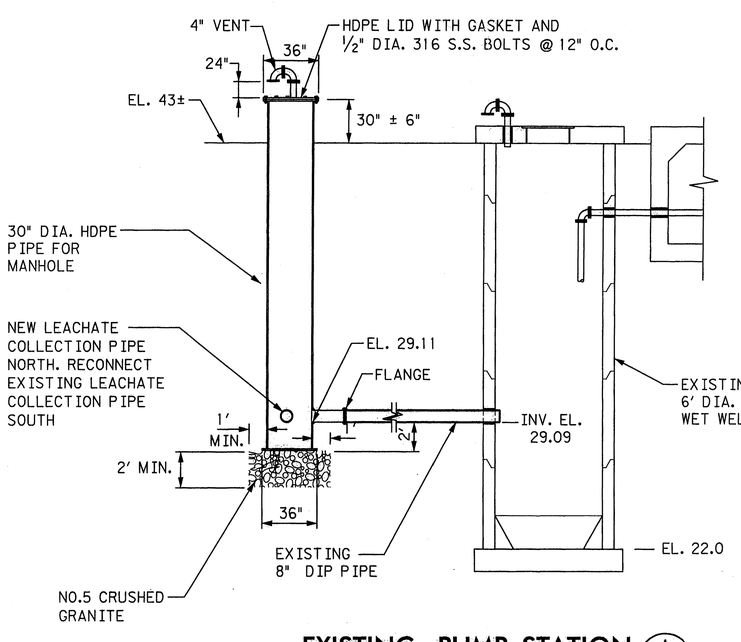
EXISTING SLURRY WALL DETAIL 2/L-3
SCALE: 1" = 5'
(FOR INFORMATION ONLY)



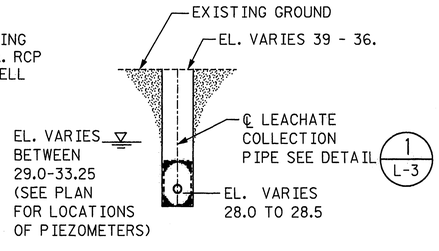
CONNECTION OF PIPE TO EXISTING MANHOLE -/-
N.T.S.



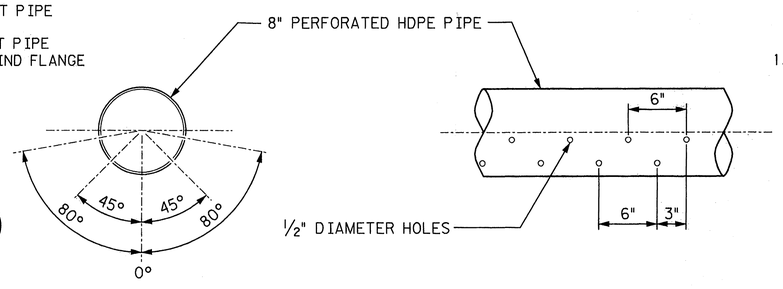
NEW HDPE MANHOLE 4/L-1 4/L-2
SCALE: N.T.S.



EXISTING PUMP STATION A/L-1
SCALE: 1" = 4'



SECTION C/L-2
SCALE: N.T.S.



NOTES:

1. 0° CORRESPONDS TO PIPE INVERT.
2. PROVIDE FOUR 1/2" DIAMETER PERFORATIONS AS SHOWN; 6" O.C.

PIPE PERFORATION PATTERN 3/L-3
SCALE: N.T.S.

NOTES:

SPECIFICATIONS FOR PIPE:
HIGH DENSITY POLYETHYLENE PIPE

1. THE POLYETHYLENE PIPE SHALL BE HIGH PERFORMANCE, HIGH MOLECULAR WEIGHT, HIGH DENSITY POLYETHYLENE PIPE, CONFORMING TO ASTM D 1248 (TYPE III, CLASS C, CATEGORY 5, GRADE P34). MINIMUM CELL CLASSIFICATION VALUE SHALL BE 345434C AS REFERENCED IN ASTM D 3350. THE MATERIAL DESIGNATION IS PE 3408. THE PIPE SHALL CONTAIN 2 PERCENT CARBON BLACK.THE PIPE SHALL BE DRISCOPIPE 1000 (PE 3404) POLYETHYLENE PIPE RESIN AS MANUFACTURED BY PHILLIPS DRISCOPIPE, INC., RICHARDSON, TEXAS; PLEXICO, FRANKLIN PARK, ILL.; POLY PIPE INDUSTRIES, INC., GAINSVILLE, TEXAS; OR EQUAL.
2. FITTINGS SHALL BE BUTT FUSION TYPE OR APPROVED EQUAL, MEETING THE REQUIREMENTS OF ASTM D-3261. ALL FITTINGS SHALL BE PRESSURE RATED TO MATCH THE SYSTEM PIPING TO WHICH THEY ARE FUSED. AT THE POINT OF FUSION, THE OUTSIDE DIAMETER AND MINIMUM WALL THICKNESS SHALL MEET THE OUTSIDE DIAMETER AND MINIMUM WALL THICKNESS SPECIFICATIONS OF ASTM F-714 FOR THE SAME SIZE OF PIPE. PIPE CONNECTIONS BETWEEN DISSIMILAR MATERIALS SHALL BE JOINED BY STUD END AND BACKING FLANGE.
3. CONTRACTOR SHALL TV ALL PIPES AND PROVIDE VIDEO AND REPORT TO COUNTY AS PROOF OF PROPER INSTALLATION.

"RECORD DRAWING"
INCORPORATING THOSE CHANGES MADE DURING CONSTRUCTION BASED ON DATA FURNISHED BY THE CONTRACTOR TO THE ENGINEER.

L-3

PBS&J
330 SOUTH PINEAPPLE AVE.
SUITE 113
SARASOTA, FLORIDA 34236
Ph. (941) 954-4036

CLIENT
MANATEE COUNTY
PROJECT MANAGEMENT
DEPARTMENT
1026 26th AVENUE EAST
BRADENTON, FLORIDA 34208

MANATEE COUNTY FLORIDA

PROJECT	TASK
LENA ROAD LANDFILL	LEACHATE COLLECTION SYSTEM
CONSTRUCTION PERMIT	SECTIONS AND DETAILS
MODIFICATIONS	

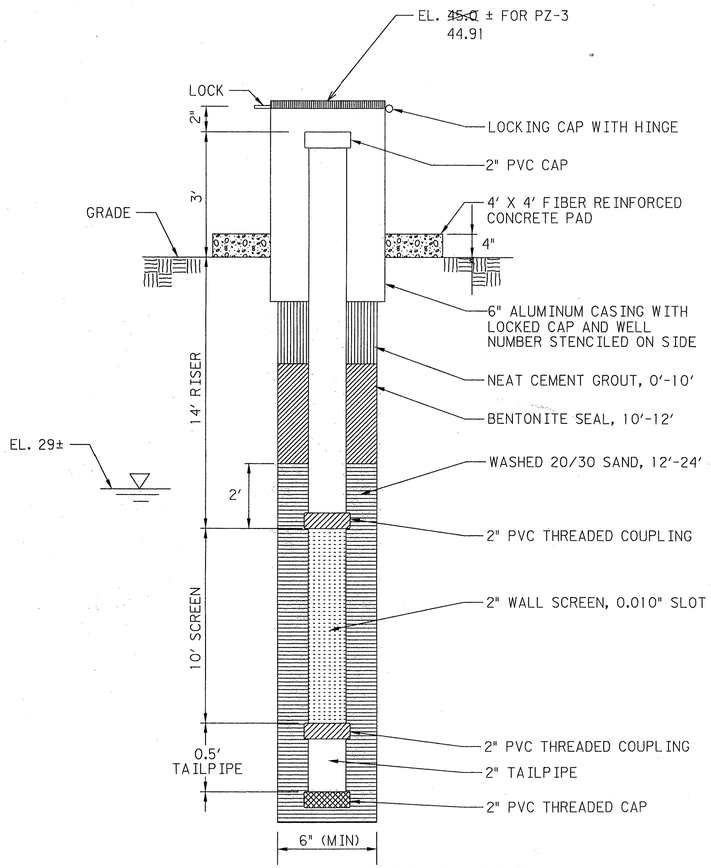
ORIGINAL: AUG. 2001
REVISIONS:
1 REC DWG JAN/02
2
3
4
5
6
7
8
9
10
11
12

Name: JOSEPH L. MILLER
Florida P.E. No.: 39177
Address: PBS&J
482 S. Keller Road
Orlando, FL 32810-6101
Signature Date
NOT VALID FOR CONSTRUCTION UNLESS SIGNED IN THIS BLOCK

JOB NO. 00-000.00
DRAWN RGC
DESIGNED JLM/RGC
CHECKED JLM
QC DED

SHEET /

...\LANDFILL\mlr_details.dgn 01/11/02 10:38:05 AM



GROUNDWATER MONITORING WELL DETAIL

NTS

LATITUDE: N27°27.926'
LONGITUDE: W 82°26.603'

N 1138610.81
E 512397.79

CONSTRUCTION NOTES FOR MONITORING WELLS.

1. ALL WORK RELATED TO ABANDONMENT OR INSTALLATION OF MONITORING WELLS SHALL BE DONE BY A FLORIDA CERTIFIED WATER WELL DRILLER. GENERAL CONTRACTOR SHALL SUBMIT QUALIFICATIONS AND COPY OF DRILLER'S LICENSE FO R OWNER APPROVAL.

2. ALL MONITORING WELLS AS INDICATED ON THE DRAWINGS SHALL BE PLUGGED AND ABANDONED IN ACCORDANCE WITH F.A.C. RULE 62-532.440, AND THE SOUTHWEST FLORIDA WATER MANAGEMENT DISTRICT (SWFWMD). THE DRILLER SHALL SUBMIT A WRITTEN REPOR T TO THE FLORIDA DEPARTMENT OF ENVIRONMNETAL PROTECTION, WITH COPIES TO THE OWNER AND ENGINEER, DOCUMENTING VERIFICATION OF THE WELL ABANDONMENT WITHIN 90 DAYS OF ABANDONMENT. DOCUMENTATION OF ABANDONMENT SHALL INCLUDE A MAP SHOWING LOCATIONS AND SWFWMD ABANDONMENT RECORDS. MONITORING WELLS SHALL BE ABANDONED BY REMOVING THE ENTIRE WELL AND BACKFILLING THE HOLE WITH CLEAN SAND.

3. NEW MONITORING WELLS SHALL BE INSTALLED PER ASTM D-5092 (1995) E1-STANDARD PRACTICE FOR DESIGN AND INSTALLATION OF GROUND WATER MONITORING WELLS IN GRANULAR AQUIFERS, AND THE FOLLOWING DOCUMENTATION SUBMITTED TO FDEP WITH COPIES TO THE OWNER AND ENGINEER.

A. DOCUMENTATION OF THE FOLLOWING FOR GROUND WATER MONITORING WELL INSTALLED:

- WELL INDENTIFICATION
- AQUIFER MONITORED
- SCREEN TYPE AND SLOT SIZE
- SCREEN LENGTH
- SCREEN DIAMETER
- ELEVATION AT TOP OF CASING
- ELEVATION AT GROUND SURFACE
- WELL DEVELOPMENT METHOD AND DURATION
- BORING (LITHOLOGY) LOG
- TOTAL DEPTH OF WELL
- CASING DIAMETER
- CASING TYPE AND LENGTH
- SWFWMD WELL CONSTRUCTION PERMIT NOS.
- WELL SEAL FILTER PACK TYPE AND THICKNESS

B. WITHIN ONE WEEK OF WELL COMPLETION AND DEVELOPMENT, EACH NEW GROUND WATER MONITORING WELL SHALL BE SAMPLED FOR THE PARAMETERS LISTED IN F.A.C. RULES 62-701.510 (3) (D) (1), TO STABLISH INITIAL GROUNDWATER QUALITY FOR EACH NEW WELL.

C. A SURVEY DRAWING SHALL BE SUBMITTED IN ACCORDANCE WITH F.A.C. RULE 62-701.510(3) (D) (1), SHOWING THE LOCATION OF ALL MONITORING WELLS (ACTIVE AND ABANDONED) HORIZONTALLY LOCATED IN DEGREES, MINUTES AND SECONDS OF LATITUDE AND LONGITUDE, THE UNIVERSAL TRANSVERSE MERCATOR COODINATES, AND THE ELEVATION OF THE TOP OF THE WELL CASING TO THE NEAREST 0.01 FOOT, NATIONAL GEODETIC VERTICAL DATUM. THE SURVEYED DRAWING SHALL INCLUDE THE MONITOR WELL IDENTIFICATION NUMBERS, LOCATIONS AND ELEVATIONS OF ALL PERMANENT BENCHMARKS AND /OR CORNER MONUMENT MARKER AT THE SITE. THE SURVEY SHALL BE CONDUCTED BY A FLORIDA REGISTERED SURVEYOR. THE OWNER WILL PROVIDE THE CONTRACTOR WITH THE PRESENT SURVEY DRAWING FOR REVISION BY THE CONTRACTOR, AS APPLICABLE.

4. ALL REPORTS SHALL BE SENT TO: SOLID WASTE SECTION, DEPARTMENT OF ENVIRONMENTAL PROTECTION, SOUTHWEST DISTRICT OFFICE, 3804 COCONUT PALM DRIVE, TAMPA, FLORIDA 33619-8313; AND ALSO TO: SOLID WASTE SECTION, DEPARTMENT OF ENVIRONMENTAL PROTECTION, 3900 COMMONWEALTH BOULEVARD, M.S. 4565, TALLAHASSEE, FL 32399-3000.

"RECORD DRAWINGS"
INCORPORATING THOSE CHANGES MADE DURING CONSTRUCTION BASED ON DATA FURNISHED BY THE CONTRACTOR TO THE ENGINEER.

L-4

PBS&J
330 SOUTH PINEAPPLE AVE.
SUITE 113
SARASOTA, FLORIDA 34236
Ph. (941) 954-4036

CLIENT
MANATEE COUNTY
PROJECT MANAGEMENT DEPARTMENT
1026 26th AVENUE EAST
BRADENTON, FLORIDA 34208

MANATEE COUNTY FLORIDA

PROJECT	TASK
LENA ROAD LANDFILL	PIEZOMETER AND MONITORING WELL
CONSTRUCTION PERMIT	INSTALLATION DETAILS
MODIFICATIONS	

ORIGINAL: AUG. 2001
REVISIONS:
1 9/5/01
2 REC DWG JAN 02
3
4
5
6
7
8
9
10
11
12

Name: JOSEPH L. MILLER
Florida P.E. No.: 39177
Address: PBS&J
462 S. Keller Road
Orlando, FL 32810-6101

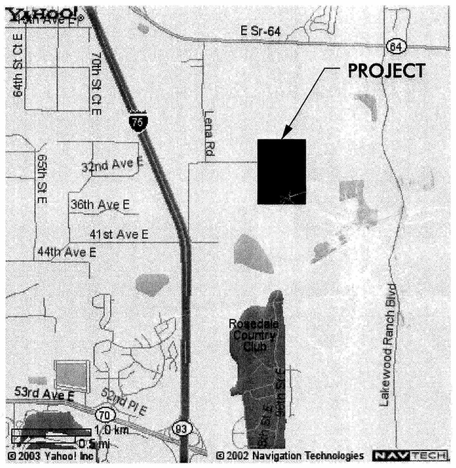
Signature Date
NOT VALID FOR CONSTRUCTION UNLESS SIGNED IN THIS BLOCK

JOB NO. 00-000.00
DRAWN RGC
DESIGNED JLM/RGC
CHECKED JLM
QC DED

SHEET /

PERMIT RENEWAL DRAWINGS FOR

MANATEE COUNTY – LENA ROAD LANDFILL
FILL SEQUENCE PLAN
STAGE III LANDFILL
FROM 2004 TO 2014



LENA ROAD LANDFILL
3333 LENA ROAD
BRADENTON, FLORIDA 34202

MANATEE COUNTY

MANATEE COUNTY
UTILITY OPERATIONS
DEPARTMENT

4410 66th STREET WEST
BRADENTON, FLORIDA 34210

SEPTEMBER 2004

LIST OF DRAWINGS

PBS&J
An Employee – Owned Company
Consulting Engineers and Planners
432 South Keller Road
Orlando, Florida 32810
POST BUCKLEY, SCHUH & JERNIGAN, Inc.
d/b/a PBS&J
2001 N.W. 107th Ave., Miami, FL 33172-2507
FBPE Certificate of Authorization No.: 24

Name: JOSEPH L. MILLER
Florida P.E. No.: 38771
Signature Date

ENGINEER'S PROJECT NO. 120498

MANATEE COUNTY – LENA ROAD LANDFILL– STAGE III LANDFILL SEQUENCE PLAN (SEPT 2004)

applied for renewal draw set size need 4/19/06

FILE ONLY

C-2

PBS&J

482 South Keller Road
Orlando, FL 32810-6101
Tel. (407) 647-7275
Fax. (407) 647-0624
www.pbsj.com

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d/b/a PBS&J
2001 N.W. 107th Ave., Miami, FL 33172-2507
FBPR Certificate of Authorization No.: 24

CLIENT	PROJECT	TASK
MANATEE COUNTY	LENA ROAD LANDFILL	GENERAL SITE PLAN
BOARD OF COUNTY COMMISSIONERS	FILL SEQUENCE PLAN	
	STAGE III LANDFILL	

ORIGINAL MAY 2004
REVISIONS:
1.
2.
3.
4.
5.

Name: JOSEPH L. MILLER
Florida P.E. No.: 39177
Address: PBS&J
482 S. Keller Road
Orlando, FL 32810-6101

Signature Date

FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION
OCT 07 2004
SOUTHWEST DISTRICT TAMPA

JOB NO. 00-000.00
DRAWN RGC
DESIGN JLM/RGC
CHECKED JLM
Q.C. DED

SHEET 2/13

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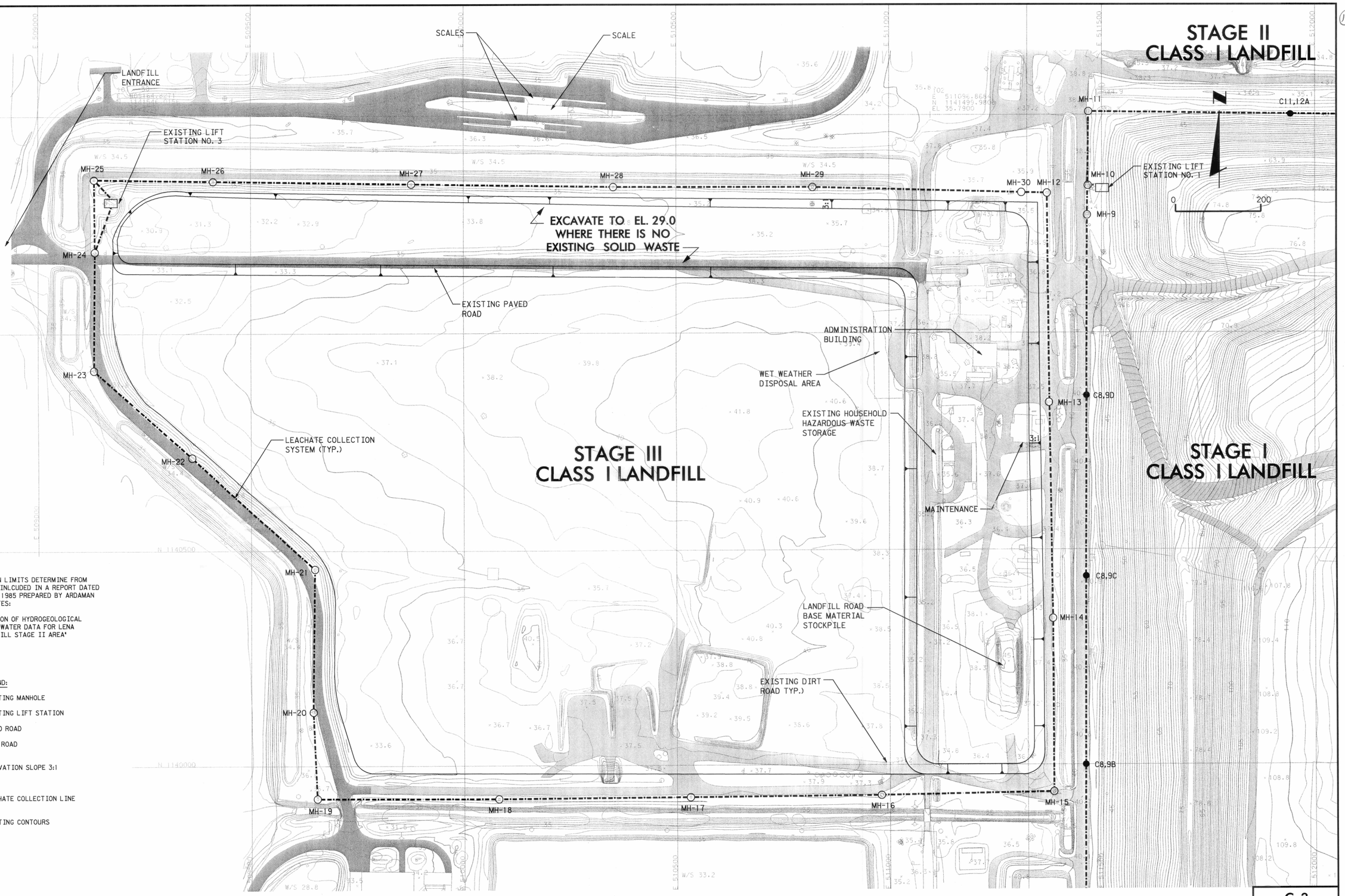

NOTE:

EXCAVATION LIMITS DETERMINE FROM A DRAWING INLCUDED IN A REPORT DATED AUGUST 29, 1985 PREPARED BY ARDAMAN & ASSOCIATES:

"COMPILATION OF HYDROGEOLOGICAL AND GROUNDWATER DATA FOR LENA ROAD LANDFILL STAGE II AREA"

LEGEND:

- EXISTING MANHOLE
- EXISTING LIFT STATION
- PAVED ROAD
- DIRT ROAD
- EXCAVATION SLOPE 3:1
- LEACHATE COLLECTION LINE
- EXISTING CONTOURS

C-3

PBS&J

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Orlando, FL 32810-6101
Tel. (407) 647-7275
Fax. (407) 647-0624
www.pbsj.com

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d/b/a PBS&J
2001 N.W. 107th Ave., Miami, FL 33172-2507
FBPR Certificate of Authorization No.: 24

CLIENT	PROJECT	TASK
MANATEE COUNTY	LENA ROAD LANDFILL	STAGE III LANDFILL
BOARD OF COUNTY COMMISSIONERS	FILL SEQUENCE PLAN	EXCAVATION PLAN
	STAGE III LANDFILL	

ORIGINAL MAY 2004
REVISIONS:
1.
2.
3.
4.
5.

Name: JOSEPH L. MILLER
Florida P.E. No.: 39177
Address: PBS&J
482 S. Keller Road
Orlando, FL 32810-6101

Signature Date

FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION
OCT 07 2004
SOUTHWEST DISTRICT TAMPA

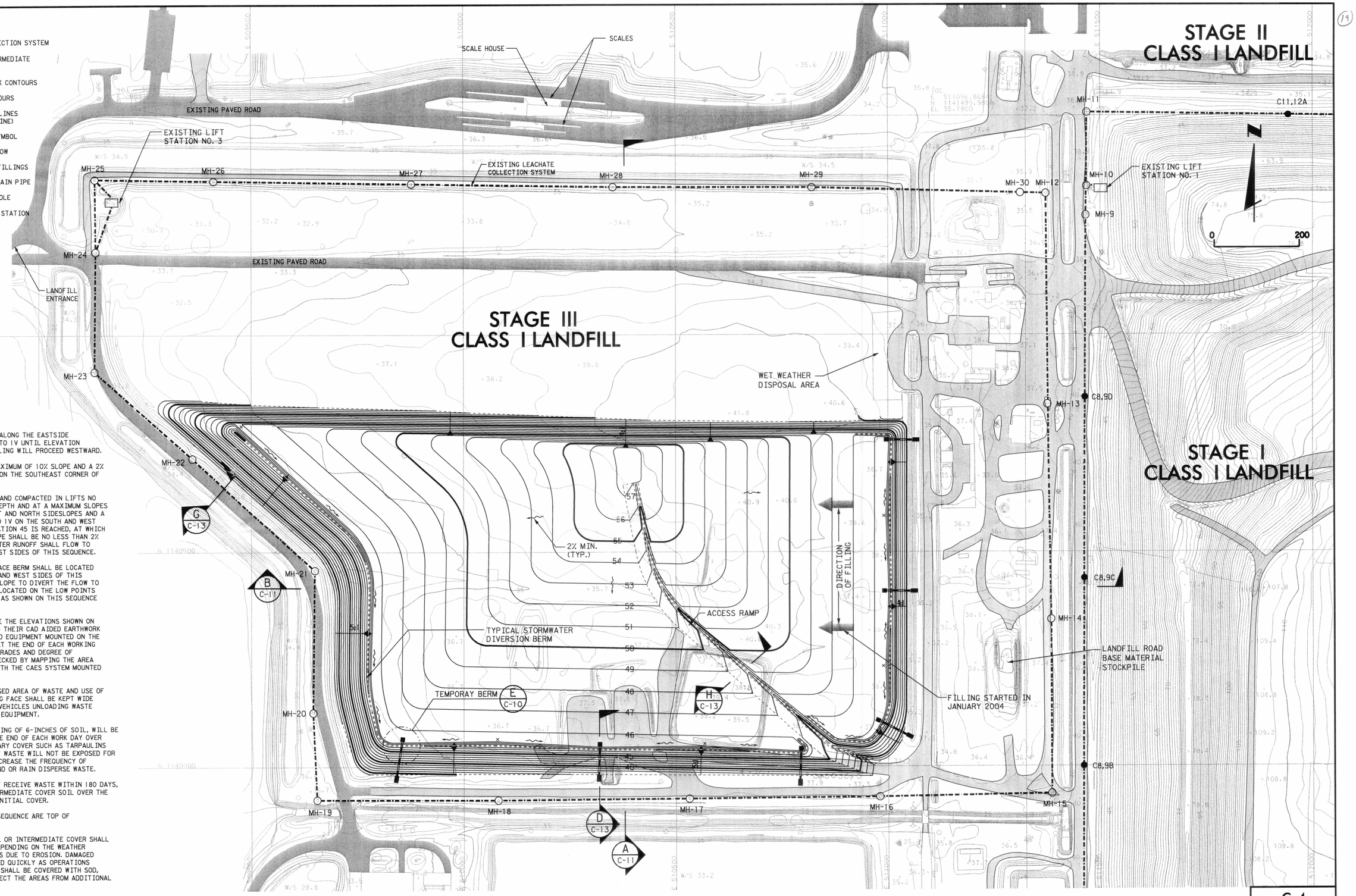
JOB NO. 00-000.00
DRAWN RGC
DESIGN JLM/RGC
CHECKED JLM
Q.C. DED

SHEET 3/13

06-OCT-2004 17:07 --- EMP. NO: 9327

LEGEND:

- LEACHATE COLLECTION SYSTEM
- PROPOSED INTERMEDIATE CONTOURS
- PROPOSED INDEX CONTOURS
- EXISTING CONTOURS
- CONSTRUCTION LINES (SLOPE BREAK LINE)
- SLOPE BREAK SYMBOL
- STORMWATER FLOW
- DIRECTION OF FILLINGS
- STORMWATER DRAIN PIPE
- EXISTING MANHOLE
- EXISTING LIFT STATION
- PAVED ROAD
- DIRT ROAD



GENERAL NOTES:

1. FILLING WILL START ON ALONG THE EASTSIDE WITH SIDESLOPES OF 4H TO 1V UNTIL ELEVATION SHOWN ARE REACHED. FILLING WILL PROCEED WESTWARD.
2. AN ACCESS RAMP AT A MAXIMUM OF 10% SLOPE AND A 2% CROSS SLOPE IS PLACED ON THE SOUTHEAST CORNER OF THIS SEQUENCE.
3. WASTE SHALL BE PLACED AND COMPACTED IN LIFTS NO MORE THAN 10 FEET IN DEPTH AND AT A MAXIMUM SLOPES OF 4H TO 1V ON THE EAST AND NORTH SIDESLOPES AND A MAXIMUM SLOPE OF 5H TO 1V ON THE SOUTH AND WEST SIDESLOPES UNTIL ELEVATION 45 IS REACHED, AT WHICH THE TOP TEMPORARY SLOPE SHALL BE NO LESS THAN 2% SUCH THAT THE STORMWATER RUNOFF SHALL FLOW TO THE EAST, SOUTH AND WEST SIDES OF THIS SEQUENCE.
4. A TEMPORARY WORKING FACE BERM SHALL BE LOCATED ALONG THE EAST, SOUTH AND WEST SIDES OF THIS SEQUENCE AT A SLIGHT SLOPE TO DIVERT THE FLOW TO 18" STORM DRAIN PIPES LOCATED ON THE LOW POINTS OF THE TEMPORARY BERM AS SHOWN ON THIS SEQUENCE PLAN.
5. OPERATORS WILL ACHIEVE THE ELEVATIONS SHOWN ON THIS SEQUENCE BY USING THEIR CAD AIDED EARTHWORK SYSTEM (CAES) GIS BASED EQUIPMENT MOUNTED ON THE LANDFILL COMPACTORS. AT THE END OF EACH WORKING DAY THE WORKING FACE GRADES AND DEGREE OF COMPACTION WILL BE CHECKED BY MAPPING THE AREA OF THE WORKING FACE WITH THE CAES SYSTEM MOUNTED ON THE COMPACTORS.
6. TO MINIMIZED THE EXPOSED AREA OF WASTE AND USE OF COVER SOIL, THE WORKING FACE SHALL BE KEPT WIDE ENOUGH TO ACCOMODATE VEHICLES UNLOADING WASTE MATERIAL AND LANDFILL EQUIPMENT.
7. INITIAL COVER, CONSISTING OF 6-INCHES OF SOIL, WILL BE SHALL BE APPLIED AT THE END OF EACH WORK DAY OVER EXPOSED WASTE. TEMPORARY COVER SUCH AS TARPAULINS MAYBE USED IF WASTE IF WASTE WILL NOT BE EXPOSED FOR MORE THAN 18 HOURS. INCREASE THE FREQUENCY OF APPLICATION IF WIND AND OR RAIN DISPERSE WASTE.
8. IN AREAS THAT WILL NOT RECEIVE WASTE WITHIN 180 DAYS, APPLY A 12-INCHES INTERMEDIATE COVER SOIL OVER THE EXISTING 6-INCHES OF INITIAL COVER.
9. GRADES SHOWN ON THIS SEQUENCE ARE TOP OF INTERMEDIATE COVER
10. ALL AREAS WITH INITIAL OR INTERMEDIATE COVER SHALL BE INSPECTED WEEKLY DEPENDING ON THE WEATHER CONDITIONS FOR DAMAGES DUE TO EROSION. DAMAGED AREAS SHALL BE REPAIRED QUICKLY AS OPERATIONS PERMIT. DAMAGED AREAS SHALL BE COVERED WITH SOD, SEED, OR MULCH TO PROTECT THE AREAS FROM ADDITIONAL DAMAGED.

C-4

PBS&J
482 South Keller Road
Orlando, FL 32810-6101
Tel. (407) 647-7275
Fax. (407) 647-0624
www.pbsj.com
POST BUCKLEY, SCHUH & JERNIGAN, Inc. d/b/a PBS&J
2001 N.W. 107th Ave., Miami, FL 33172-2507
FBPR Certificate of Authorization No.: 24

CLIENT	PROJECT	TASK
MANATEE COUNTY	LENA ROAD LANDFILL	SEQUENCE 1
BOARD OF COUNTY COMMISSIONERS	FILL SEQUENCE PLAN	(JAN. 2004 – JAN. 2005)
	STAGE III LANDFILL	

ORIGINAL MAY 2004
REVISIONS:
1.
2.
3.
4.
5.

Name: JOSEPH L. MILLER
Florida P.E. No.: 39177
Address: PBS&J
482 S. Keller Road
Orlando, FL 32810-6101
Signature Date

FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION
OCT 07 2004
SOUTHWEST DISTRICT TAMPA

JOB NO. 00-000.00
DRAWN RGC
DESIGN JLM/RGC
CHECKED JLM
Q.C. DED

SHEET 4/13

U:\OLDH_S\ENVCADD\MASTERMAN\MANATEE\LENARD\SEQUENCE\STAGE111\NLR_C-4_S3-SEQ-1.DGN

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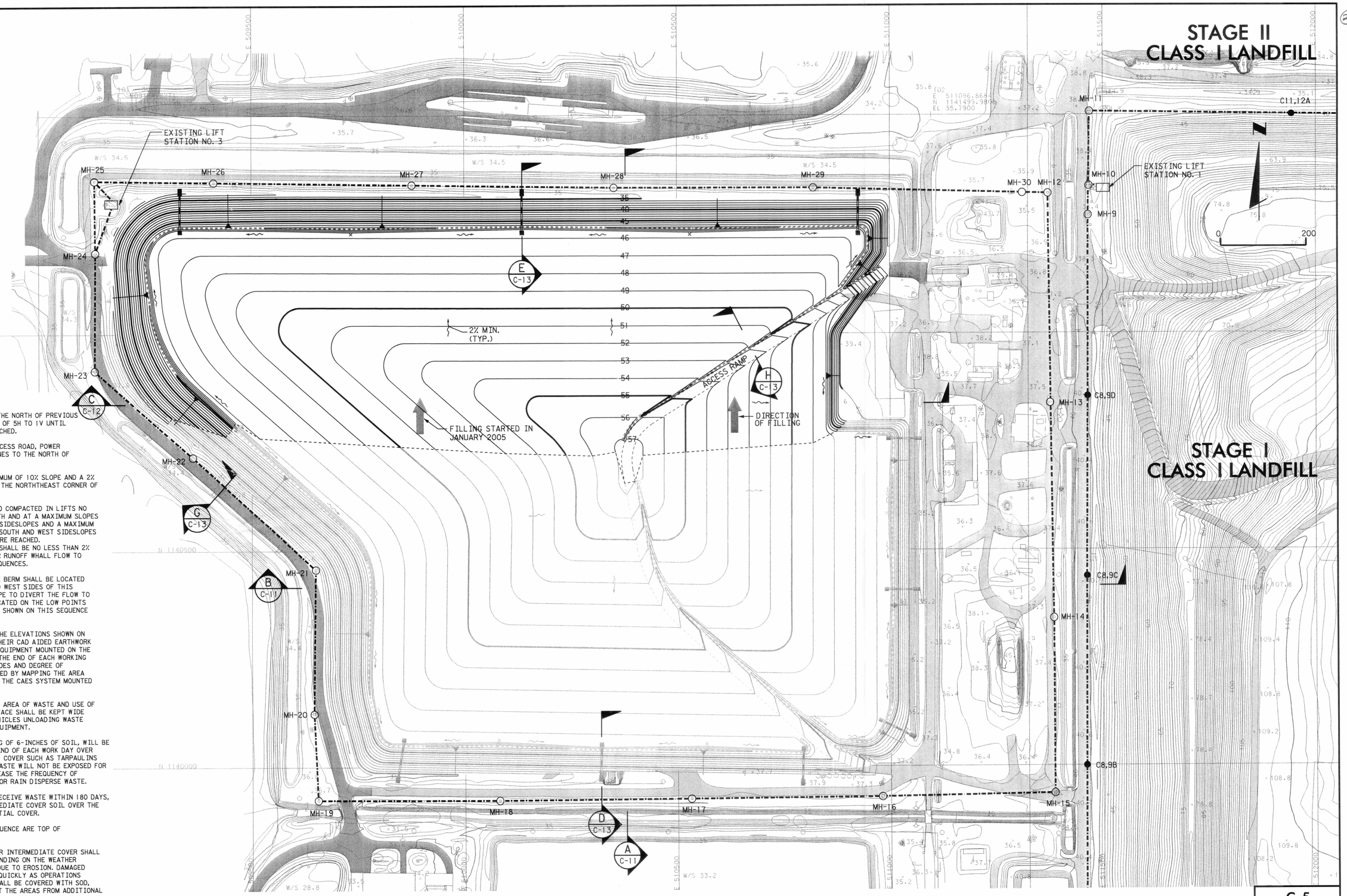

GENERAL NOTES:

1. FILLING WILL PROCEED TO THE NORTH OF PREVIOUS SEQUENCE WITH SIDESLOPES OF 5H TO 1V UNTIL ELEVATIONS SHOWN ARE REACHED.
2. REMOVE EXISTING PAVED ACCESS ROAD, POWER LINES AND ANY UTILITY LINES TO THE NORTH OF SEQUENCE 1.
3. AN ACCESS RAMP AT A MAXIMUM OF 10% SLOPE AND A 2% CROSS SLOPE IS PLACED ON THE NORTHTHEAST CORNER OF THIS SEQUENCE.
4. WASTE SHALL BE PLACED AND COMPACTED IN LIFTS NO MORE THAN 10 FEET IN DEPTH AND AT A MAXIMUM SLOPES OF 5H TO 1V ON THE NORTH SIDESLOPES AND A MAXIMUM SLOPE OF 5H TO 1V ON THE SOUTH AND WEST SIDESLOPES UNTIL ELEVATIONS SHOWN ARE REACHED. THE TOP TEMPORARY SLOPE SHALL BE NO LESS THAN 2% SUCH THAT THE STORMWATER RUNOFF WHALL FLOW TO THE PERIMETER OF BOTH SEQUENCES.
5. A TEMPORARY WORKING FACE BERM SHALL BE LOCATED ALONG THE EAST, NORTH AND WEST SIDES OF THIS SEQUENCE AT A SLIGHT SLOPE TO DIVERT THE FLOW TO 18" STORM DRAIN PIPES LOCATED ON THE LOW POINTS OF THE TEMPORARY BERM AS SHOWN ON THIS SEQUENCE PLAN.
6. OPERATORS WILL ACHIEVE THE ELEVATIONS SHOWN ON THIS SEQUENCE BY USING THEIR CAD AIDED EARTHWORK SYSTEM (CAES) GIS BASED EQUIPMENT MOUNTED ON THE LANDFILL COMPACTORS. AT THE END OF EACH WORKING DAY THE WORKING FACE GRADES AND DEGREE OF COMPACTION WILL BE CHECKED BY MAPPING THE AREA OF THE WORKING FACE WITH THE CAES SYSTEM MOUNTED ON THE COMPACTORS.
7. TO MINIMIZED THE EXPOSED AREA OF WASTE AND USE OF COVER SOIL, THE WORKING FACE SHALL BE KEPT WIDE ENOUGH TO ACCOMODATE VEHICLES UNLOADING WASTE MATERIAL AND LANDFILL EQUIPMENT.
8. INITIAL COVER, CONSISTING OF 6-INCHES OF SOIL, WILL BE SHALL BE APPLIED AT THE END OF EACH WORK DAY OVER EXPOSED WASTE. TEMPORARY COVER SUCH AS TARPAULINS MAYBE USED IF WASTE IF WASTE WILL NOT BE EXPOSED FOR MORE THAN 18 HOURS. INCREASE THE FREQUENCY OF APPLICATION IF WIND AND OR RAIN DISPERSE WASTE.
9. IN AREAS THAT WILL NOT RECEIVE WASTE WITHIN 180 DAYS, APPLY A 12-INCHES INTERMEDIATE COVER SOIL OVER THE EXISTING 6-INCHES OF INITIAL COVER.
10. GRADES SHOWN ON THIS SEQUENCE ARE TOP OF INTERMEDIATE COVER
11. ALL AREAS WITH INITIAL OR INTERMEDIATE COVER SHALL BE INSPECTED WEEKLY DEPENDING ON THE WEATHER CONDITIONS FOR DAMAGES DUE TO EROSION. DAMAGED AREAS SHALL BE REPAIRED QUICKLY AS OPERATIONS PERMIT. DAMAGED AREAS SHALL BE COVERED WITH SOD, SEED, OR MULCH TO PROTECT THE AREAS FROM ADDITIONAL DAMAGED.

C-5

PBS&J
482 South Keller Road
Orlando, FL 32810-6101
Tel. (407) 647-7275
Fax. (407) 647-0624
www.pbsj.com
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d/b/a PBS&J
2001 N.W. 107th Ave., Miami, FL 33172-2507
FBPR Certificate of Authorization No.: 24

CLIENT	PROJECT	TASK
MANATEE COUNTY	LENA ROAD LANDFILL	SEQUENCE 2
BOARD OF COUNTY COMMISSIONERS	FILL SEQUENCE PLAN	(JAN. 2005 – OCT. 2005)
	STAGE III LANDFILL	

ORIGINAL MAY 2004
REVISIONS:
1.
2.
3.
4.
5.

Name: JOSEPH L. MILLER
Florida P.E. No.: 39177
Address: PBS&J
482 S. Keller Road
Orlando, FL 32810-6101
Signature Date

FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION
OCT 07 2004
SOUTHWEST DISTRICT TAMPA

JOB NO. 00-000.00
DRAWN RGC
DESIGN JLM/RGC
CHECKED JLM
Q.C. DED
SHEET 5/13

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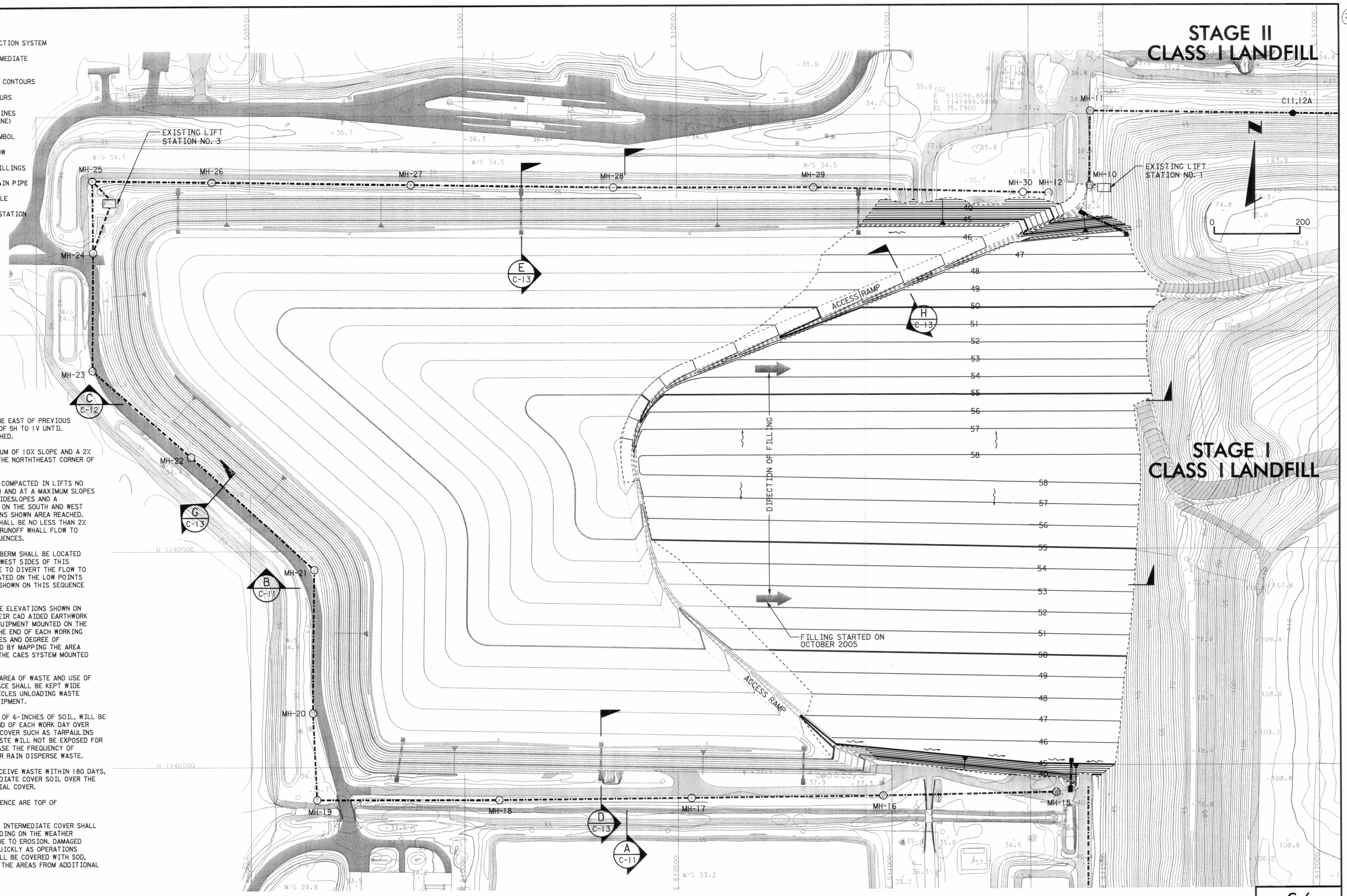
06-OCT-2004 17:06 --- EMP. NO: 9327

LEGEND:

- LEACHATE COLLECTION SYSTEM
- PROPOSED INTERMEDIATE CONTOURS
- PROPOSED INDEX CONTOURS
- EXISTING CONTOURS
- CONSTRUCTION LINES (SLOPE BREAK LINE)
- SLOPE BREAK SYMBOL
- STORMWATER FLOW
- DIRECTION OF FILLINGS
- STORMWATER DRAIN PIPE
- EXISTING MANHOLE
- EXISTING LIFT STATION
- PAVED ROAD
- DIRT ROAD



GENERAL NOTES:

1. FILLING WILL PROCEED TO THE EAST OF PREVIOUS SEQUENCE WITH SIDESLOPES OF 5H TO 1V UNTIL ELEVATIONS SHOWN ARE REACHED.
2. AN ACCESS RAMP AT A MAXIMUM OF 10% SLOPE AND A 2% CROSS SLOPE IS PLACED ON THE NORTHTHEAST CORNER OF THIS SEQUENCE.
3. WASTE SHALL BE PLACED AND COMPACTED IN LIFTS NO MORE THAN 10 FEET IN DEPTH AND AT A MAXIMUM SLOPES OF 5H TO 1V ON THE NORTH SIDESLOPES AND A MAXIMUM SLOPE OF 5H TO 1V ON THE SOUTH AND WEST SIDESLOPES UNTIL ELEVATIONS SHOWN AREA REACHED. THE TOP TEMPORARY SLOPE SHALL BE NO LESS THAN 2% SUCH THAT THE STORMWATER RUNOFF WHALL FLOW TO THE PERIMETER OF BOTH SEQUENCES.
4. A TEMPORARY WORKING FACE BERM SHALL BE LOCATED ALONG THE EAST, NORTH AND WEST SIDES OF THIS SEQUENCE AT A SLIGHT SLOPE TO DIVERT THE FLOW TO 18" STORM DRAIN PIPES LOCATED ON THE LOW POINTS OF THE TEMPORARY BERM AS SHOWN ON THIS SEQUENCE PLAN.
5. OPERATORS WILL ACHIEVE THE ELEVATIONS SHOWN ON THIS SEQUENCE BY USING THEIR CAD AIDED EARTHWORK SYSTEM (CAES) GIS BASED EQUIPMENT MOUNTED ON THE LANDFILL COMPACTORS. AT THE END OF EACH WORKING DAY THE WORKING FACE GRADES AND DEGREE OF COMPACTION WILL BE CHECKED BY MAPPING THE AREA OF THE WORKING FACE WITH THE CAES SYSTEM MOUNTED ON THE COMPACTORS.
6. TO MINIMIZED THE EXPOSED AREA OF WASTE AND USE OF COVER SOIL, THE WORKING FACE SHALL BE KEPT WIDE ENOUGH TO ACCOMODATE VEHICLES UNLOADING WASTE MATERIAL AND LANDFILL EQUIPMENT.
7. INITIAL COVER, CONSISTING OF 6-INCHES OF SOIL, WILL BE SHALL BE APPLIED AT THE END OF EACH WORK DAY OVER EXPOSED WASTE. TEMPORARY COVER SUCH AS TARPAULINS MAYBE USED IF WASTE IF WASTE WILL NOT BE EXPOSED FOR MORE THAN 18 HOURS. INCREASE THE FREQUENCY OF APPLICATION IF WIND AND OR RAIN DISPERSE WASTE.
8. IN AREAS THAT WILL NOT RECEIVE WASTE WITHIN 180 DAYS, APPLY A 12-INCHES INTERMEDIATE COVER SOIL OVER THE EXISTING 6-INCHES OF INITIAL COVER.
9. GRADES SHOWN ON THIS SEQUENCE ARE TOP OF INTERMEDIATE COVER
10. ALL AREAS WITH INITIAL OR INTERMEDIATE COVER SHALL BE INSPECTED WEEKLY DEPENDING ON THE WEATHER CONDITIONS FOR DAMAGES DUE TO EROSION. DAMAGED AREAS SHALL BE REPAIRED QUICKLY AS OPERATIONS PERMIT. DAMAGED AREAS SHALL BE COVERED WITH SOD, SEED, OR MULCH TO PROTECT THE AREAS FROM ADDITIONAL DAMAGED.

C-6

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Orlando, FL 32810-6101
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Fax. (407) 647-0624
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FBPR Certificate of Authorization No.: 24

CLIENT	PROJECT	TASK
MANATEE COUNTY	LENA ROAD LANDFILL	SEQUENCE 3
BOARD OF COUNTY COMMISSIONERS	FILL SEQUENCE PLAN	(OCT. 2005 – AUG. 2006)
	STAGE III LANDFILL	

ORIGINAL MAY 2004
REVISIONS:
1.
2.
3.
4.
5.

Name: JOSEPH L. MILLER
Florida P.E. No.: 39177
Address: PBS&J
482 S. Keller Road
Orlando, FL 32810-6101

Signature Date

FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION
OCT 07 2004
SOUTHWEST DISTRICT TAMPA

JOB NO. 00-000.00
DRAWN RGC
DESIGN JLM/RGC
CHECKED JLM
Q.C. DED

SHEET 6/13

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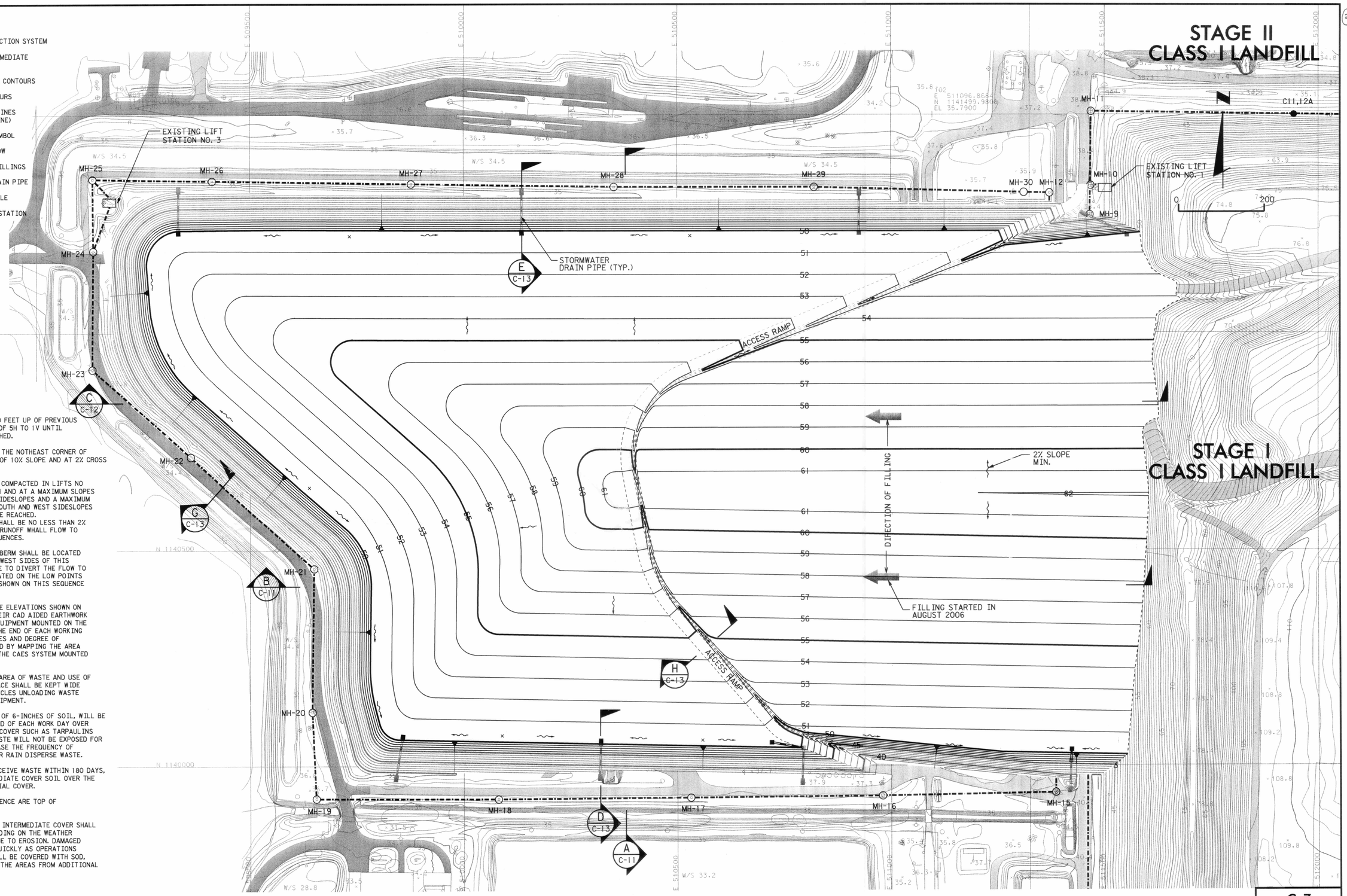
06-OCT-2004 17:05 --- EMP. NO: 9327

LEGEND:

- LEACHATE COLLECTION SYSTEM
- PROPOSED INTERMEDIATE CONTOURS
- PROPOSED INDEX CONTOURS
- EXISTING CONTOURS
- CONSTRUCTION LINES (SLOPE BREAK LINE)
- SLOPE BREAK SYMBOL
- STORMWATER FLOW
- DIRECTION OF FILLINGS
- STORMWATER DRAIN PIPE
- EXISTING MANHOLE
- EXISTING LIFT STATION
- PAVED ROAD
- DIRT ROAD



GENERAL NOTES:

1. FILLING WILL PROCEED TO 10 FEET UP OF PREVIOUS SEQUENCE WITH SIDESLOPES OF 5H TO 1V UNTIL ELEVATIONS SHOWN ARE REACHED.
2. EXTEND THE ACCESS RAMP ON THE NOTHEAST CORNER OF THIS SEQUENCE AT MAXIMUM OF 10% SLOPE AND AT 2% CROSS SLOPE
3. WASTE SHALL BE PLACED AND COMPACTED IN LIFTS NO MORE THAN 10 FEET IN DEPTH AND AT A MAXIMUM SLOPES OF 5H TO 1V ON THE NORTH SIDESLOPES AND A MAXIMUM SLOPE OF 5H TO 1V ON THE SOUTH AND WEST SIDESLOPES UNTIL ELEVATIONS SHOWN ARE REACHED. THE TOP TEMPORARY SLOPE SHALL BE NO LESS THAN 2% SUCH THAT THE STORMWATER RUNOFF WHALL FLOW TO THE PERIMETER OF BOTH SEQUENCES.
4. A TEMPORARY WORKING FACE BERM SHALL BE LOCATED ALONG THE EAST, NORTH AND WEST SIDES OF THIS SEQUENCE AT A SLIGHT SLOPE TO DIVERT THE FLOW TO 18" STORM DRAIN PIPES LOCATED ON THE LOW POINTS OF THE TEMPORARY BERM AS SHOWN ON THIS SEQUENCE PLAN.
5. OPERATORS WILL ACHIEVE THE ELEVATIONS SHOWN ON THIS SEQUENCE BY USING THEIR CAD AIDED EARTHWORK SYSTEM (CAES) GIS BASED EQUIPMENT MOUNTED ON THE LANDFILL COMPACTORS. AT THE END OF EACH WORKING DAY THE WORKING FACE GRADES AND DEGREE OF COMPACTION WILL BE CHECKED BY MAPPING THE AREA OF THE WORKING FACE WITH THE CAES SYSTEM MOUNTED ON THE COMPACTORS.
6. TO MINIMIZED THE EXPOSED AREA OF WASTE AND USE OF COVER SOIL, THE WORKING FACE SHALL BE KEPT WIDE ENOUGH TO ACCOMODATE VEHICLES UNLOADING WASTE MATERIAL AND LANDFILL EQUIPMENT.
7. INITIAL COVER, CONSISTING OF 6-INCHES OF SOIL, WILL BE SHALL BE APPLIED AT THE END OF EACH WORK DAY OVER EXPOSED WASTE. TEMPORARY COVER SUCH AS TARPAULINS MAYBE USED IF WASTE IF WASTE WILL NOT BE EXPOSED FOR MORE THAN 18 HOURS. INCREASE THE FREQUENCY OF APPLICATION IF WIND AND OR RAIN DISPERSE WASTE.
8. IN AREAS THAT WILL NOT RECEIVE WASTE WITHIN 180 DAYS, APPLY A 12-INCHES INTERMEDIATE COVER SOIL OVER THE EXISTING 6-INCHES OF INITIAL COVER.
9. GRADES SHOWN ON THIS SEQUENCE ARE TOP OF INTERMEDIATE COVER
10. ALL AREAS WITH INITIAL OR INTERMEDIATE COVER SHALL BE INSPECTED WEEKLY DEPENDING ON THE WEATHER CONDITIONS FOR DAMAGES DUE TO EROSION. DAMAGED AREAS SHALL BE REPAIRED QUICKLY AS OPERATIONS PERMIT. DAMAGED AREAS SHALL BE COVERED WITH SOD, SEED, OR MULCH TO PROTECT THE AREAS FROM ADDITIONAL DAMAGED.

C-7

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Orlando, FL 32810-6101
Tel. (407) 647-7275
Fax. (407) 647-0624
www.pbsj.com
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CLIENT	PROJECT	TASK
MANATEE COUNTY	LENA ROAD LANDFILL	SEQUENCE 4
BOARD OF COUNTY COMMISSIONERS	FILL SEQUENCE PLAN	(AUG. 2006 – MAY 2007)
	STAGE III LANDFILL	

ORIGINAL MAY 2004
REVISIONS:
1.
2.
3.
4.
5.

Name: JOSEPH L. MILLER
Florida P.E. No.: 39177
Address: PBS&J
482 S. Keller Road
Orlando, FL 32810-6101
Signature Date

FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION
OCT 07 2004
SOUTHWEST DISTRICT TAMPA

JOB NO. 00-000.00
DRAWN RGC
DESIGN JLM/RGC
CHECKED JLM
Q.C. DED

SHEET 7/13

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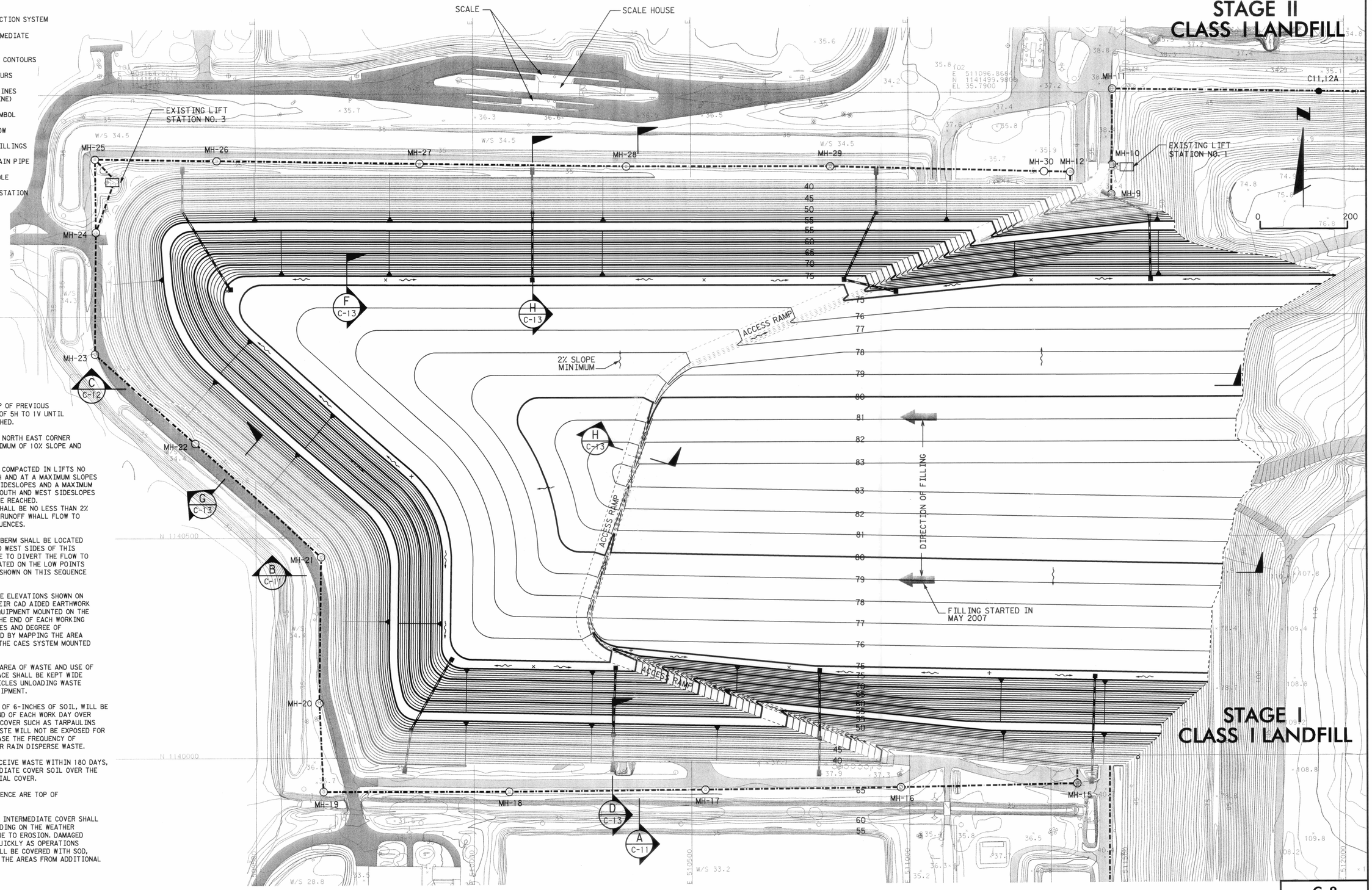
06-OCT-2004 17:04 --- EMP. NO: 9327

LEGEND:

- LEACHATE COLLECTION SYSTEM
- PROPOSED INTERMEDIATE CONTOURS
- PROPOSED INDEX CONTOURS
- EXISTING CONTOURS
- CONSTRUCTION LINES (SLOPE BREAK LINE)
- SLOPE BREAK SYMBOL
- STORMWATER FLOW
- DIRECTION OF FILLINGS
- STORMWATER DRAIN PIPE
- EXISTING MANHOLE
- EXISTING LIFT STATION
- PAVED ROAD
- DIRT ROAD



GENERAL NOTES:

1. FILLING WILL PROCEED TO UP OF PREVIOUS SEQUENCE WITH SIDESLOPES OF 5H TO 1V UNTIL ELEVATIONS SHOWN ARE REACHED.

2. EXTEND ACCESS RAMP ON THE NORTH EAST CORNER OF THIS SEQUENCE AT A MAXIMUM OF 10% SLOPE AND A 2% CROSS SLOPE.

3. WASTE SHALL BE PLACED AND COMPACTED IN LIFTS NO MORE THAN 10 FEET IN DEPTH AND AT A MAXIMUM SLOPES OF 5H TO 1V ON THE NORTH SIDESLOPES AND A MAXIMUM SLOPE OF 5H TO 1V ON THE SOUTH AND WEST SIDESLOPES UNTIL ELEVATIONS SHOWN ARE REACHED. THE TOP TEMPORARY SLOPE SHALL BE NO LESS THAN 2% SUCH THAT THE STORMWATER RUNOFF WHALL FLOW TO THE PERIMETER OF BOTH SEQUENCES.

4 A TEMPORARY WORKING FACE BERM SHALL BE LOCATED ALONG THE SOUTH, NORTH AND WEST SIDES OF THIS SEQUENCE AT A SLIGHT SLOPE TO DIVERT THE FLOW TO 18" STORM DRAIN PIPES LOCATED ON THE LOW POINTS OF THE TEMPORARY BERM AS SHOWN ON THIS SEQUENCE PLAN.

5 OPERATORS WILL ACHIEVE THE ELEVATIONS SHOWN ON THIS SEQUENCE BY USING THEIR CAD AIDED EARTHWORK SYSTEM (CAES) GIS BASED EQUIPMENT MOUNTED ON THE LANDFILL COMPACTORS. AT THE END OF EACH WORKING DAY THE WORKING FACE GRADES AND DEGREE OF COMPACTION WILL BE CHECKED BY MAPPING THE AREA OF THE WORKING FACE WITH THE CAES SYSTEM MOUNTED ON THE COMPACTORS.

6 TO MINIMIZED THE EXPOSED AREA OF WASTE AND USE OF COVER SOIL, THE WORKING FACE SHALL BE KEPT WIDE ENOUGH TO ACCOMODATE VEHICLES UNLOADING WASTE MATERIAL AND LANDFILL EQUIPMENT.

7 INITIAL COVER, CONSISTING OF 6-INCHES OF SOIL, WILL BE SHALL BE APPLIED AT THE END OF EACH WORK DAY OVER EXPOSED WASTE. TEMPORARY COVER SUCH AS TARPAULINS MAYBE USED IF WASTE IF WASTE WILL NOT BE EXPOSED FOR MORE THAN 18 HOURS. INCREASE THE FREQUENCY OF APPLICATION IF WIND AND OR RAIN DISPERSE WASTE.

8. IN AREAS THAT WILL NOT RECEIVE WASTE WITHIN 180 DAYS, APPLY A 12-INCHES INTERMEDIATE COVER SOIL OVER THE EXISTING 6-INCHES OF INITIAL COVER.

9. GRADES SHOWN ON THIS SEQUENCE ARE TOP OF INTERMEDIATE COVER

10. ALL AREAS WITH INITIAL OR INTERMEDIATE COVER SHALL BE INSPECTED WEEKLY DEPENDING ON THE WEATHER CONDITIONS FOR DAMAGES DUE TO EROSION. DAMAGED AREAS SHALL BE REPAIRED QUICKLY AS OPERATIONS PERMIT. DAMAGED AREAS SHALL BE COVERED WITH SOD, SEED, OR MULCH TO PROTECT THE AREAS FROM ADDITIONAL DAMAGED.

C-8

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Orlando, FL 32810-6101
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Fax. (407) 647-0624
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FBPE Certificate of Authorization No.: 24

CLIENT	PROJECT	TASK
MANATEE COUNTY	LENA ROAD LANDFILL	SEQUENCE 5
BOARD OF COUNTY COMMISSIONERS	FILL SEQUENCE PLAN	(MAY 2007 – FEB 2009)
	STAGE III LANDFILL	

ORIGINAL MAY 2004
REVISIONS:
1.
2.
3.
4.
5.

Name: JOSEPH L. MILLER
Florida P.E. No.: 39177
Address: PBS&J
482 S. Keller Road
Orlando, FL 32810-6101

Signature Date

FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION
OCT 07 2004
SOUTHWEST DISTRICT TAMPA

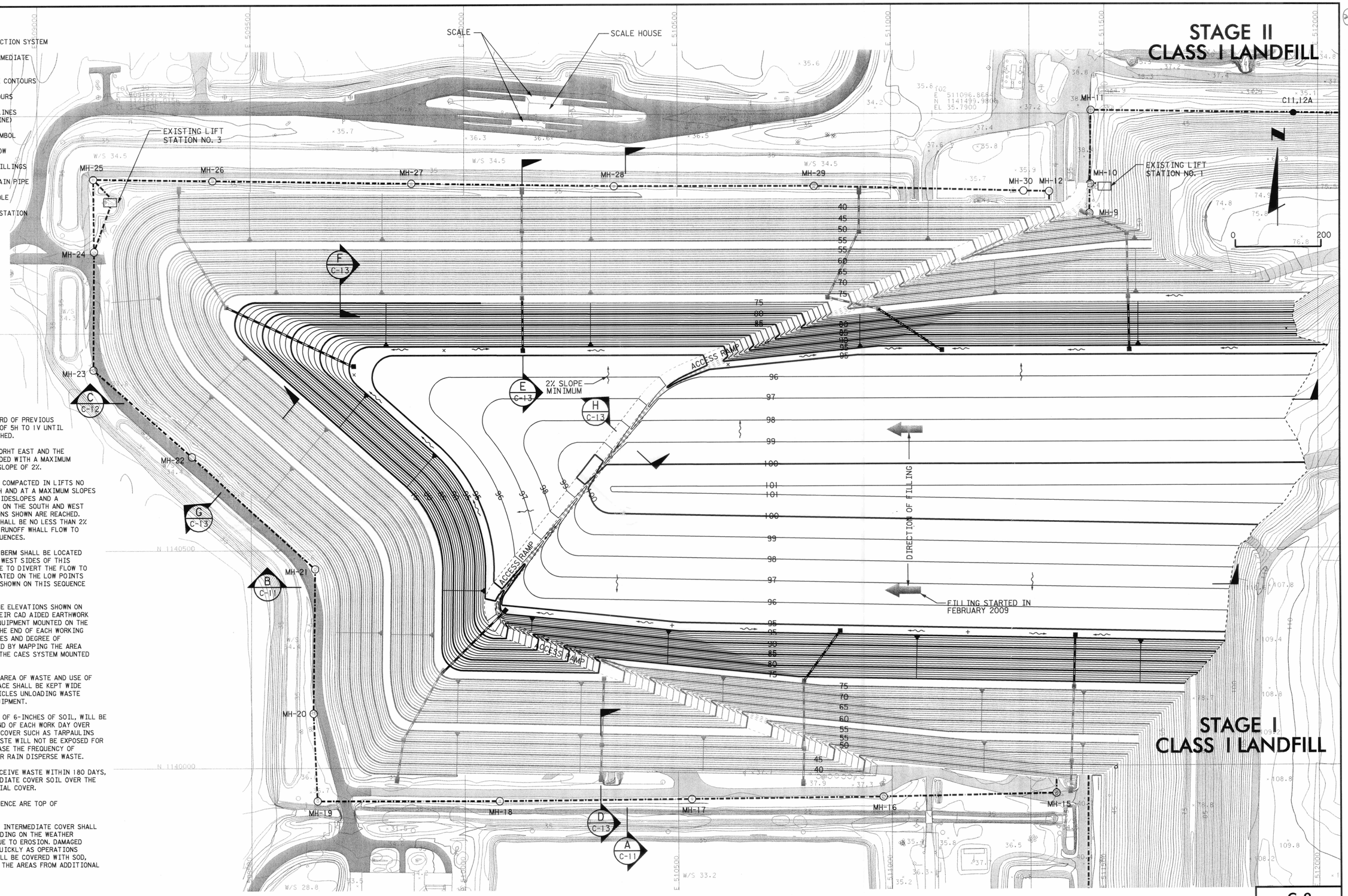
JOB NO. 00-000.00
DRAWN RGC
DESIGN JLM/RGC
CHECKED JLM
Q.C. DED

SHEET 8/13

U:\OLDH-SVENVCADD\WASTEMAN\MANATEE\LENARD\SEQUENCE\STAGE III\MLR_LC-8.S3-SED-5.DGN
06-OCT-2004 17:04 --- EMP. NO: 9327

LEGEND:

- LEACHATE COLLECTION SYSTEM
- PROPOSED INTERMEDIATE CONTOURS
- PROPOSED INDEX CONTOURS
- EXISTING CONTOURS
- CONSTRUCTION LINES (SLOPE BREAK LINE)
- SLOPE BREAK SYMBOL
- STORMWATER FLOW
- DIRECTION OF FILLINGS
- STORMWATER DRAIN PIPE
- EXISTING MANHOLE
- EXISTING LIFT STATION
- PAVED ROAD
- DIRT ROAD



GENERAL NOTES:

1. FILLING WILL PROCEED UPWARD OF PREVIOUS SEQUENCE WITH SIDESLOPES OF 5H TO 1V UNTIL ELEVATIONS SHOWN ARE REACHED.

2. THE ACCESS RAMPS AT THE NORHT EAST AND THE SOUTH WEST SHALL BE EXTENDED WITH A MAXIMUM SLOPE OF 10% AND A CROSS SLOPE OF 2%.

3. WASTE SHALL BE PLACED AND COMPACTED IN LIFTS NO MORE THAN 10 FEET IN DEPTH AND AT A MAXIMUM SLOPES OF 5H TO 1V ON THE NORTH SIDESLOPES AND A MAXIMUM SLOPE OF 5H TO 1V ON THE SOUTH AND WEST SIDESLOPES UNTIL ELEVATIONS SHOWN ARE REACHED. THE TOP TEMPORARY SLOPE SHALL BE NO LESS THAN 2% SUCH THAT THE STORMWATER RUNOFF WHALL FLOW TO THE PERIMETER OF BOTH SEQUENCES.

4 A TEMPORARY WORKING FACE BERM SHALL BE LOCATED ALONG THE EAST, NORTH AND WEST SIDES OF THIS SEQUENCE AT A SLIGHT SLOPE TO DIVERT THE FLOW TO 18" STORM DRAIN PIPES LOCATED ON THE LOW POINTS OF THE TEMPORARY BERM AS SHOWN ON THIS SEQUENCE PLAN.

5 OPERATORS WILL ACHIEVE THE ELEVATIONS SHOWN ON THIS SEQUENCE BY USING THEIR CAD AIDED EARTHWORK SYSTEM (CAES) GIS BASED EQUIPMENT MOUNTED ON THE LANDFILL COMPACTORS. AT THE END OF EACH WORKING DAY THE WORKING FACE GRADES AND DEGREE OF COMPACTION WILL BE CHECKED BY MAPPING THE AREA OF THE WORKING FACE WITH THE CAES SYSTEM MOUNTED ON THE COMPACTORS.

6 TO MINIMIZED THE EXPOSED AREA OF WASTE AND USE OF COVER SOIL, THE WORKING FACE SHALL BE KEPT WIDE ENOUGH TO ACCOMODATE VEHICLES UNLOADING WASTE MATERIAL AND LANDFILL EQUIPMENT.

7 INITIAL COVER, CONSISTING OF 6-INCHES OF SOIL, WILL BE SHALL BE APPLIED AT THE END OF EACH WORK DAY OVER EXPOSED WASTE. TEMPORARY COVER SUCH AS TARPAULINS MAYBE USED IF WASTE IF WASTE WILL NOT BE EXPOSED FOR MORE THAN 18 HOURS. INCREASE THE FREQUENCY OF APPLICATION IF WIND AND OR RAIN DISPERSE WASTE.

8. IN AREAS THAT WILL NOT RECEIVE WASTE WITHIN 180 DAYS, APPLY A 12-INCHES INTERMEDIATE COVER SOIL OVER THE EXISTING 6-INCHES OF INITIAL COVER.

9. GRADES SHOWN ON THIS SEQUENCE ARE TOP OF INTERMEDIATE COVER

10.ALL AREAS WITH INITIAL OR INTERMEDIATE COVER SHALL BE INSPECTED WEEKLY DEPENDING ON THE WEATHER CONDITIONS FOR DAMAGES DUE TO EROSION. DAMAGED AREAS SHALL BE REPAIRED QUICKLY AS OPERATIONS PERMIT. DAMAGED AREAS SHALL BE COVERED WITH SOD, SEED, OR MULCH TO PROTECT THE AREAS FROM ADDITIONAL DAMAGED.

C-9

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FBPE Certificate of Authorization No.: 24

CLIENT	PROJECT	TASK
MANATEE COUNTY	LENA ROAD LANDFILL	SEQUENCE 6
BOARD OF COUNTY COMMISSIONERS	FILL SEQUENCE PLAN	(FEB 2009 – FEB 2013)
	STAGE III LANDFILL	

ORIGINAL MAY 2004
REVISIONS:
1.
2.
3.
4.
5.

Name: JOSEPH L. MILLER
Florida P.E. No.: 39177
Address: PBS&J
482 S. Keller Road
Orlando, FL 32810-6101

Signature Date

FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION
OCT 07 2004
SOUTHWEST DISTRICT TAMPA

JOB NO. 00-000.00
DRAWN RGC
DESIGN JLM/RGC
CHECKED JLM
Q.C. DED

SHEET 9/13

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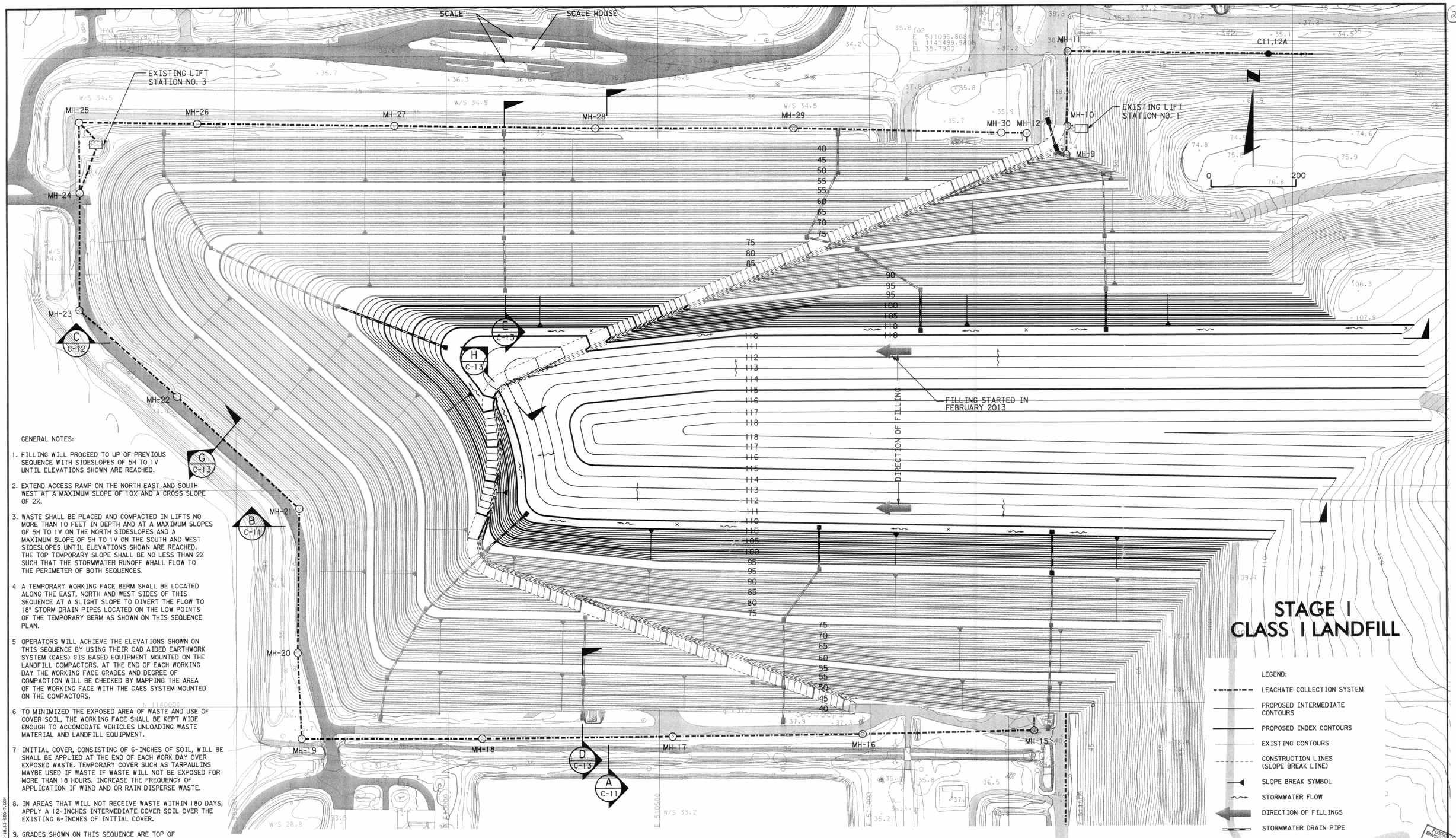

GENERAL NOTES:

1. FILLING WILL PROCEED TO UP OF PREVIOUS SEQUENCE WITH SIDESLOPES OF 5H TO 1V UNTIL ELEVATIONS SHOWN ARE REACHED.
2. EXTEND ACCESS RAMP ON THE NORTH EAST AND SOUTH WEST AT A MAXIMUM SLOPE OF 10% AND A CROSS SLOPE OF 2%.
3. WASTE SHALL BE PLACED AND COMPACTED IN LIFTS NO MORE THAN 10 FEET IN DEPTH AND AT A MAXIMUM SLOPES OF 5H TO 1V ON THE NORTH SIDESLOPES AND A MAXIMUM SLOPE OF 5H TO 1V ON THE SOUTH AND WEST SIDESLOPES UNTIL ELEVATIONS SHOWN ARE REACHED. THE TOP TEMPORARY SLOPE SHALL BE NO LESS THAN 2% SUCH THAT THE STORMWATER RUNOFF WHALL FLOW TO THE PERIMETER OF BOTH SEQUENCES.
4. A TEMPORARY WORKING FACE BERM SHALL BE LOCATED ALONG THE EAST, NORTH AND WEST SIDES OF THIS SEQUENCE AT A SLIGHT SLOPE TO DIVERT THE FLOW TO 18" STORM DRAIN PIPES LOCATED ON THE LOW POINTS OF THE TEMPORARY BERM AS SHOWN ON THIS SEQUENCE PLAN.
5. OPERATORS WILL ACHIEVE THE ELEVATIONS SHOWN ON THIS SEQUENCE BY USING THEIR CAD AIDED EARTHWORK SYSTEM (CAES) GIS BASED EQUIPMENT MOUNTED ON THE LANDFILL COMPACTORS. AT THE END OF EACH WORKING DAY THE WORKING FACE GRADES AND DEGREE OF COMPACTION WILL BE CHECKED BY MAPPING THE AREA OF THE WORKING FACE WITH THE CAES SYSTEM MOUNTED ON THE COMPACTORS.
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7. INITIAL COVER, CONSISTING OF 6-INCHES OF SOIL, WILL BE SHALL BE APPLIED AT THE END OF EACH WORK DAY OVER EXPOSED WASTE. TEMPORARY COVER SUCH AS TARPAULINS MAYBE USED IF WASTE IF WASTE WILL NOT BE EXPOSED FOR MORE THAN 18 HOURS. INCREASE THE FREQUENCY OF APPLICATION IF WIND AND OR RAIN DISPERSE WASTE.
8. IN AREAS THAT WILL NOT RECEIVE WASTE WITHIN 180 DAYS, APPLY A 12-INCHES INTERMEDIATE COVER SOIL OVER THE EXISTING 6-INCHES OF INITIAL COVER.
9. GRADES SHOWN ON THIS SEQUENCE ARE TOP OF INTERMEDIATE COVER
10. ALL AREAS WITH INITIAL OR INTERMEDIATE COVER SHALL BE INSPECTED WEEKLY DEPENDING ON THE WEATHER CONDITIONS FOR DAMAGES DUE TO EROSION. DAMAGED AREAS SHALL BE REPAIRED QUICKLY AS OPERATIONS PERMIT. DAMAGED AREAS SHALL BE COVERED WITH SOD, SEED, OR MULCH TO PROTECT THE AREAS FROM ADDITIONAL DAMAGED.

VOLUME AVAILABLE: 870,000 CY

FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION
OCT 07 2004
SOUTHWEST DISTRICT

C-10

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Orlando, FL 32810-6101
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FBPE Certificate of Authorization No.: 24

CLIENT: MANATEE COUNTY BOARD OF COUNTY COMMISSIONERS

PROJECT: LENA ROAD LANDFILL FILL SEQUENCE PLAN STAGE III LANDFILL

TASK: SEQUENCE 7 (FEB 2013 – MAR 2014)

ORIGINAL MAY 2004
REVISIONS:
1.
2.
3.
4.
5.

Name: JOSEPH L. MILLER
Florida P.E. No.: 39177
Address: PBS&J 482 S. Keller Road Orlando, FL 32810-6101
Signature Date

JOB NO. 00-000.00
DRAWN RGC
DESIGN JLM/RGC
CHECKED JLM
Q.C. DED

SHEET 10/13

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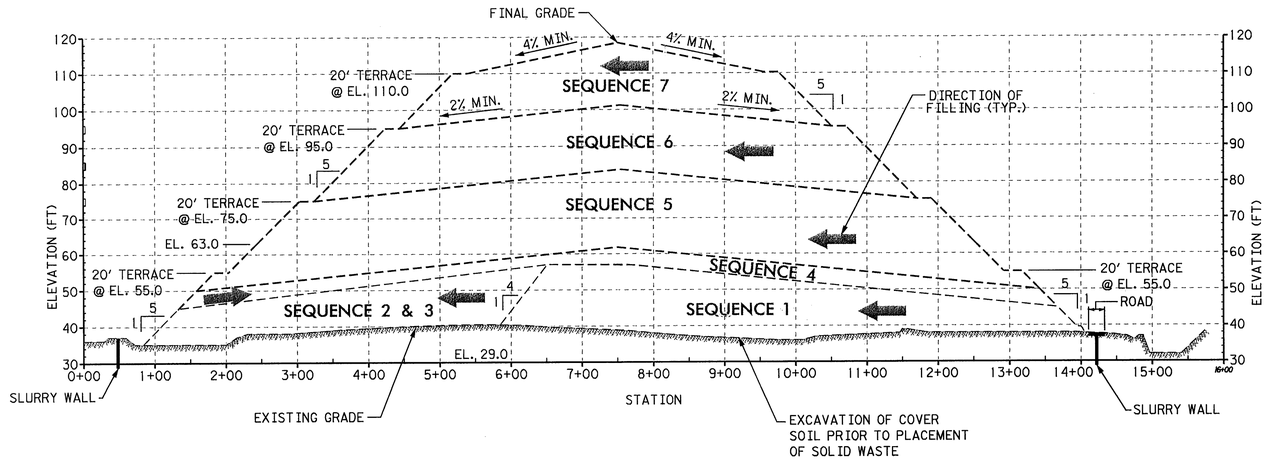
06-OCT-2004 17:02 --- EMP. NO: 9327



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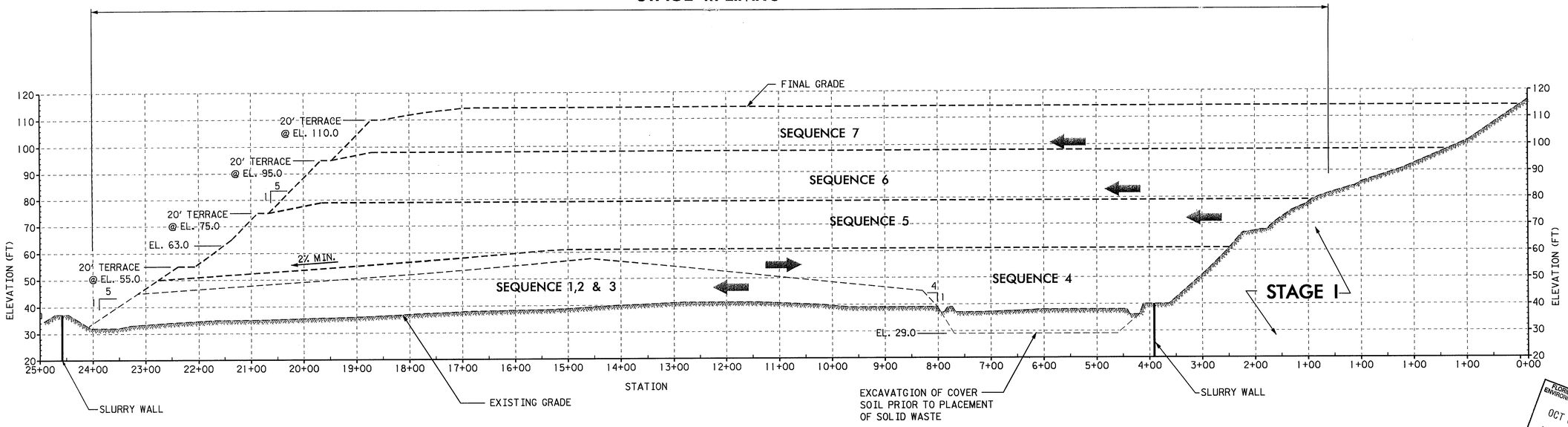
SCALE: N.T.S.

STAGE III LIMITS



SECTION B C-4 B C-5 B C-6 B C-7 B C-8 B C-9 B C-10
SCALE: N.T.S.

C-11

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Orlando, FL 32810-6101
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Fax. (407) 647-0624
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d/b/a PBS&J
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FBPR Certificate of Authorization No.: 24

CLIENT	PROJECT	TASK
MANATEE COUNTY	LENA ROAD LANDFILL	CROSS SECTIONS
BOARD OF COUNTY COMMISSIONERS	FILL SEQUENCE PLAN	
	STAGE III LANDFILL	

ORIGINAL MAY 2004
REVISIONS:
1.
2.
3.
4.
5.

Name: JOSEPH L. MILLER
Florida P.E. No.: 39177
Address: PBS&J 482 S. Keller Road Orlando, FL 32810-6101
Signature Date

JOB NO. 00-000.00
DRAWN RGC
DESIGN JLM/RGC
CHECKED JLM
Q.C. DED

SHEET 11/11

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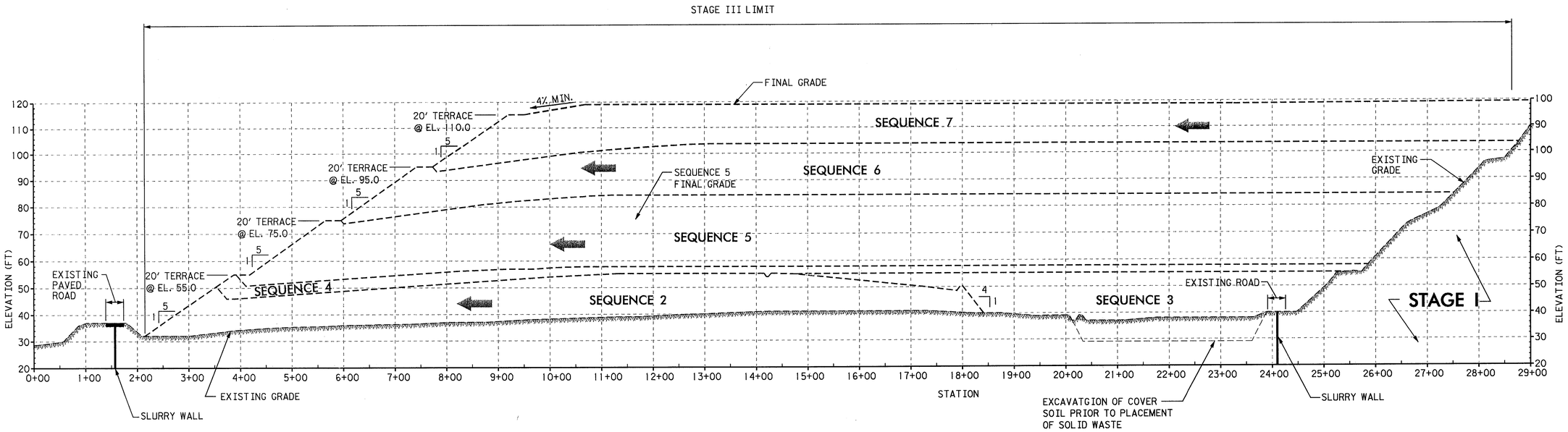
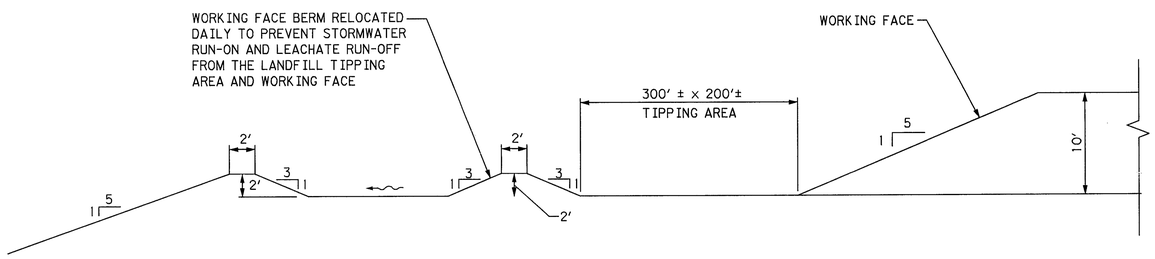
06-OCT-2004 17:01 --- EMP. NO: 9327



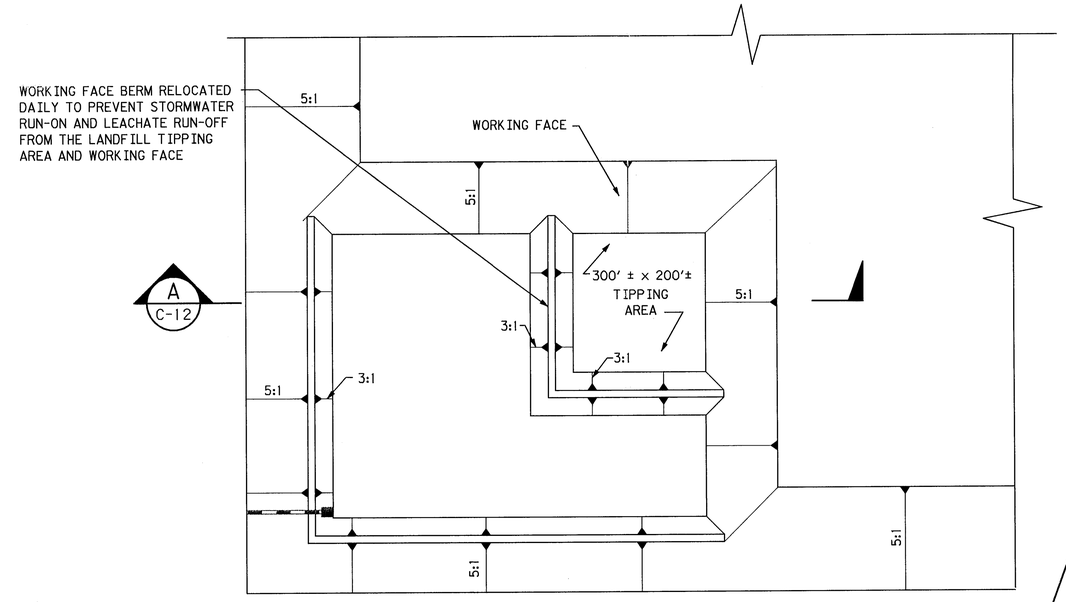
SECTION C C-5 C C-6 C C-7 C C-8 C C-9 C C-10
SCALE: N.T.S.



SECTION A C-12

TYPICAL WORKING FACE DETAIL

SCALE: N.T.S.



PLAN

FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION
OCT 07 2004
SOUTHWEST DISTRICT TAMPA

C-12

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Tel. (407) 647-7275
Fax. (407) 647-0624
www.pbsj.com
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2001 N.W. 107th Ave., Miami, FL 33172-2507
FBPR Certificate of Authorization No.: 24

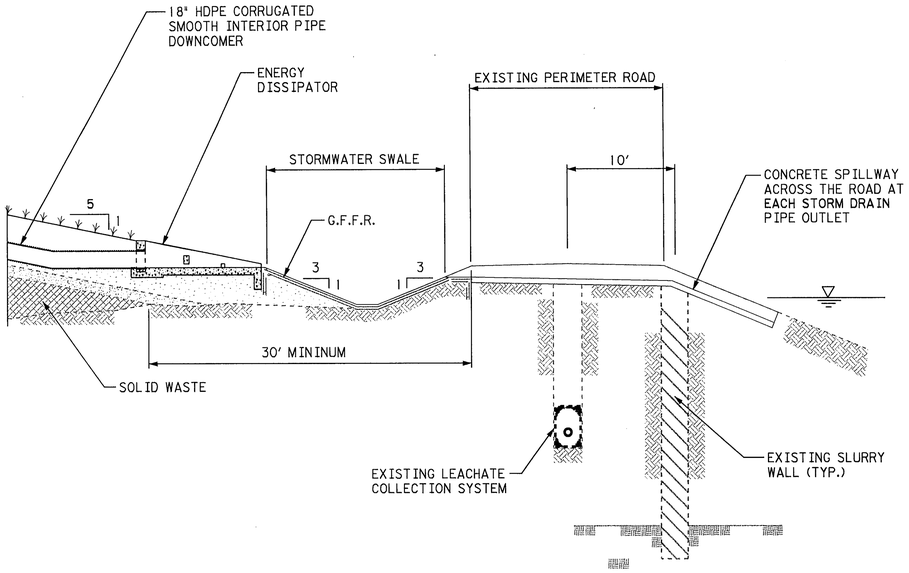
CLIENT	PROJECT	TASK
MANATEE COUNTY	LENA ROAD LANDFILL	CROSS SECTION
BOARD OF COUNTY COMMISSIONERS	FILL SEQUENCE PLAN	
	STAGE III LANDFILL	

ORIGINAL MAY 2004
REVISIONS:
1.
2.
3.
4.
5.

Name: JOSEPH L. MILLER
Florida P.E. No.: 39177
Address: PBS&J 482 S. Keller Road Orlando, FL 32810-6101
Signature Date

JOB NO. 00-000.00
DRAWN RGC
DESIGN JLM/RGC
CHECKED JLM
Q.C. DED
SHEET 12/13

G:\OLDFLSYSENVCADD\WASTEMAN\WASTEENG\SEQUENCES\STAGE111\MLR_C-13_CROSSECTION.DGN
06-OCT-2004 17:01 --- EMP. NO: 9327



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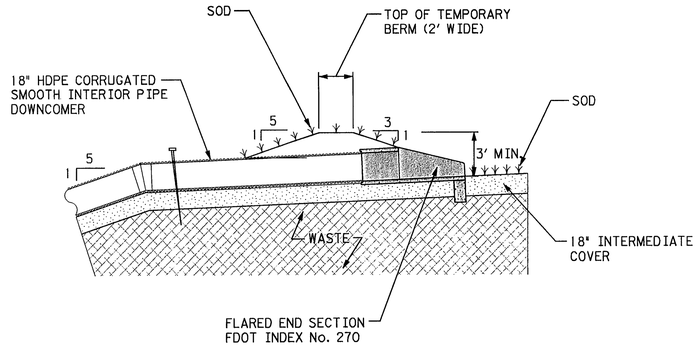

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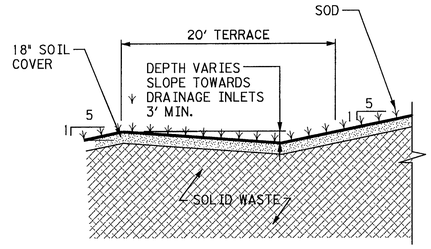

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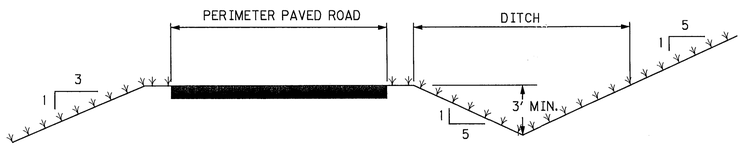

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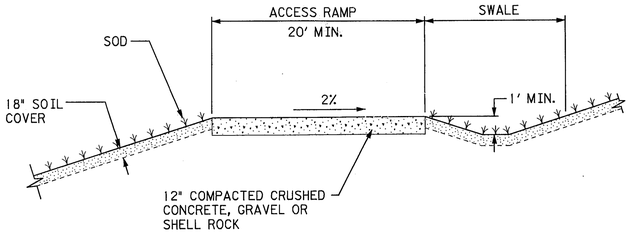
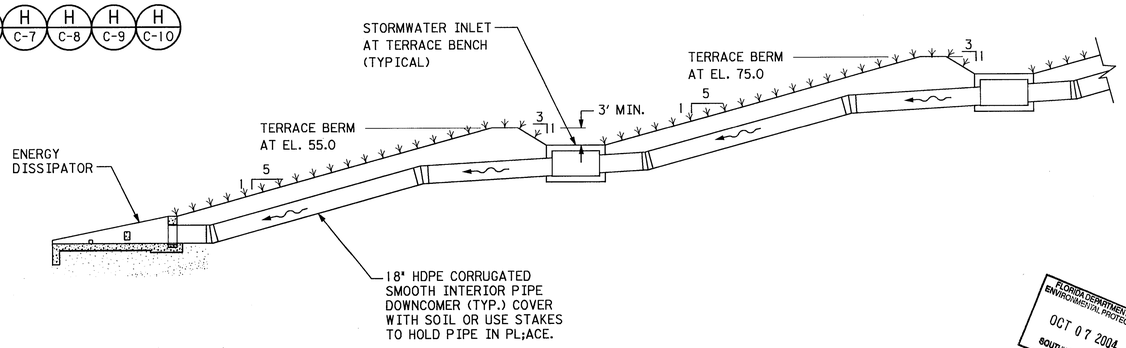


ACCESS RAMP H (C-4, C-5, C-6, C-7, C-8, C-9, C-10)
SCALE: N.T.S.



SECTION I (C-5)
SCALE: N.T.S.

FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION
OCT 07 2004
SOUTHWEST DISTRICT TAMPA

C-13

PBS&J
482 South Keller Road
Orlando, FL 32810-6101
Tel. (407) 647-7275
Fax. (407) 647-0624
www.pbsj.com
POST BUCKLEY, SCHUH & JERNIGAN, Inc. d/b/a PBS&J
2001 N.W. 107th Ave., Miami, FL 33172-2507
FBPR Certificate of Authorization No.: 24

CLIENT	PROJECT	TASK
MANATEE COUNTY	LENA ROAD LANDFILL	DETAILS
BOARD OF COUNTY COMMISSIONERS	FILL SEQUENCE PLAN	
	STAGE III LANDFILL	

ORIGINAL MAY 2004
REVISIONS:
1.
2.
3.
4.
5.

Name: JOSEPH L. MILLER
Florida P.E. No.: 39177
Address: PBS&J
482 S. Keller Road
Orlando, FL 32810-6101
Signature Date

JOB NO. 00-000.00
DRAWN RGC
DESIGN JLM/RGC
CHECKED JLM
Q.C. DED
SHEET 13/13

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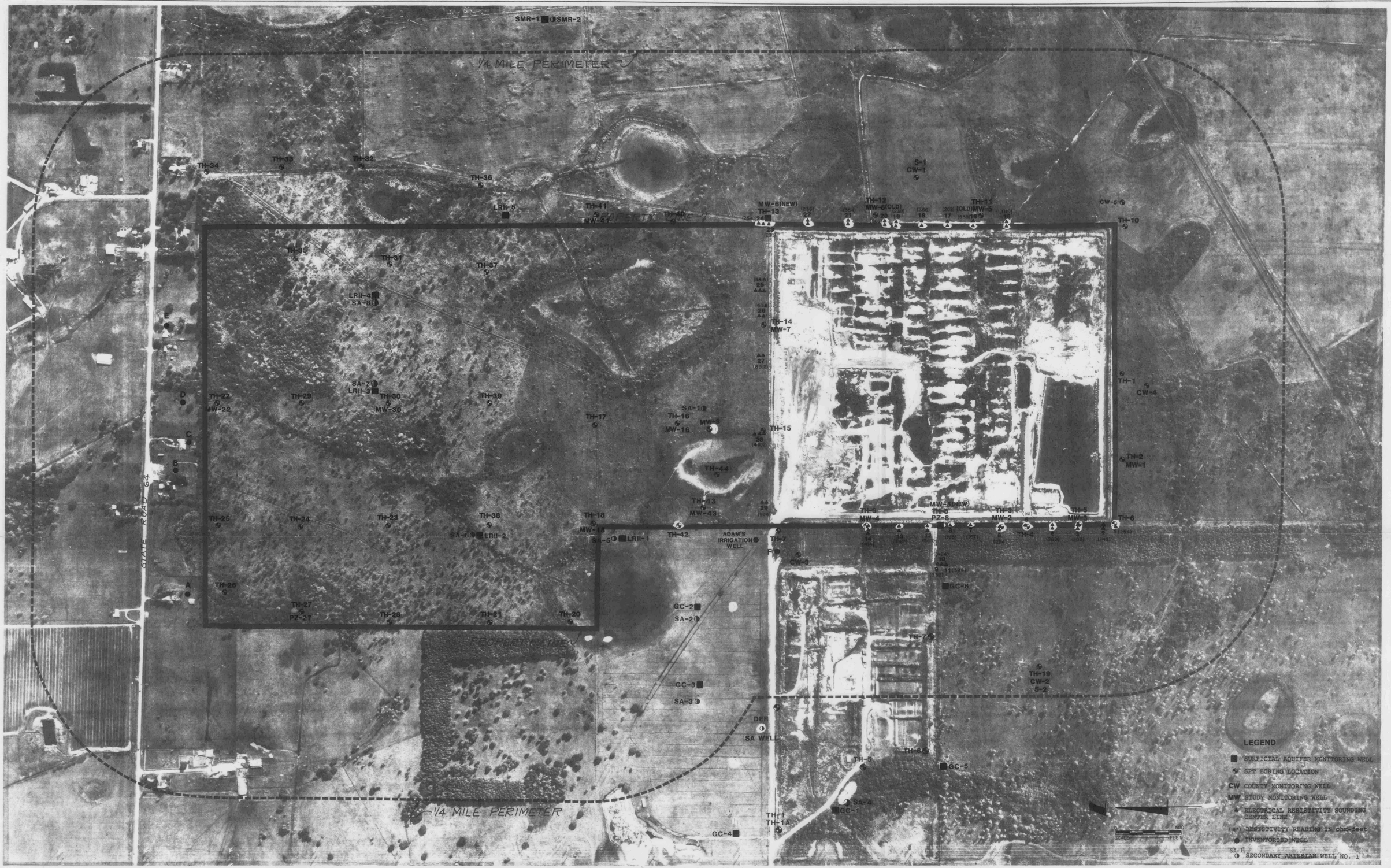
06-OCT-2004 17:00 --- EMP. NO: 9327



REV. NO.	DATE	REVISION	BY	DESIGNED / DRAWN / CHECKED

SUBMITTED: BRILEY, WILD & ASSOCIATES
PRINCIPAL
PROJECT ENGINEER
APPROVED:

BWA — Briley, Wild & Associates, Inc.
CONSULTING ENGINEERS & PLANNERS
BRADENTON-CLEARWATER-ORMOND BEACH-RIVIERA BEACH, FLORIDA

Prepared By: ARDAMAN & ASSOCIATES, INC.

DATE:
SCALE:
SHEET NO. 1 OF

PROJ. NO.
FILE NO.

86-115B

FIGURE 1