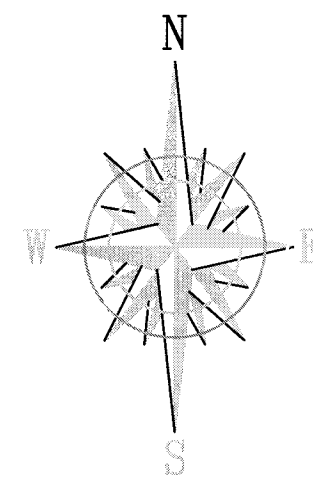
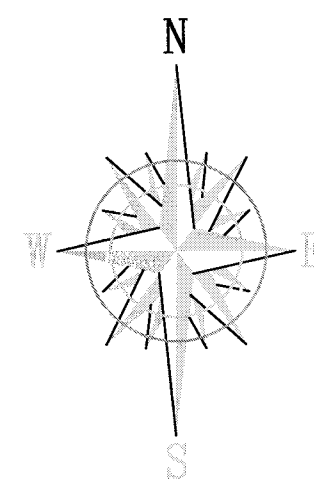
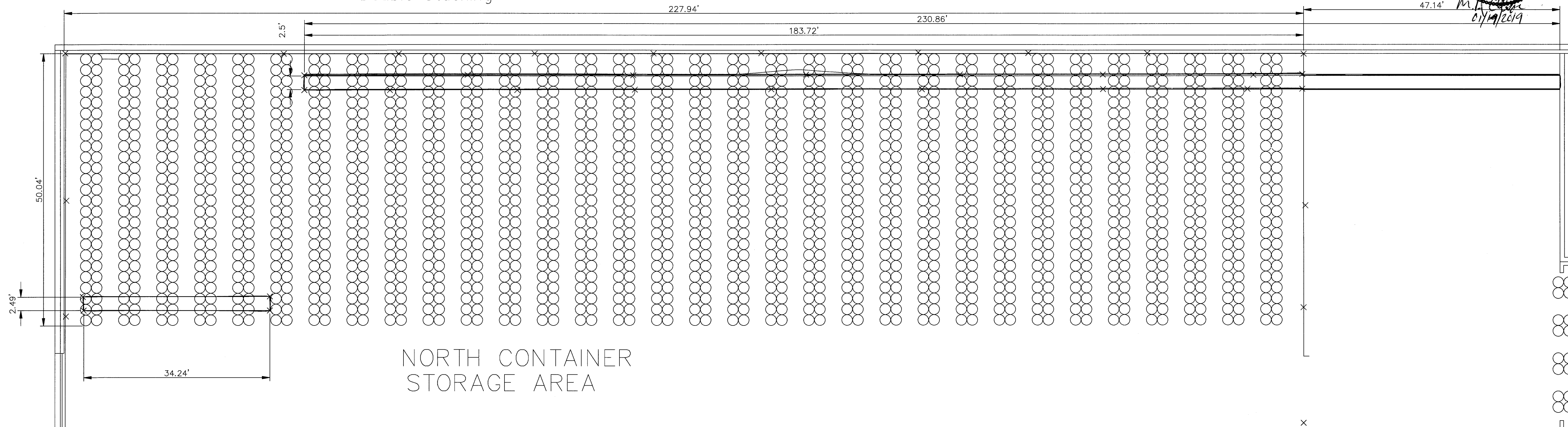
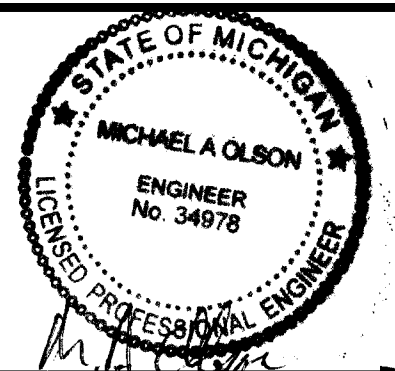
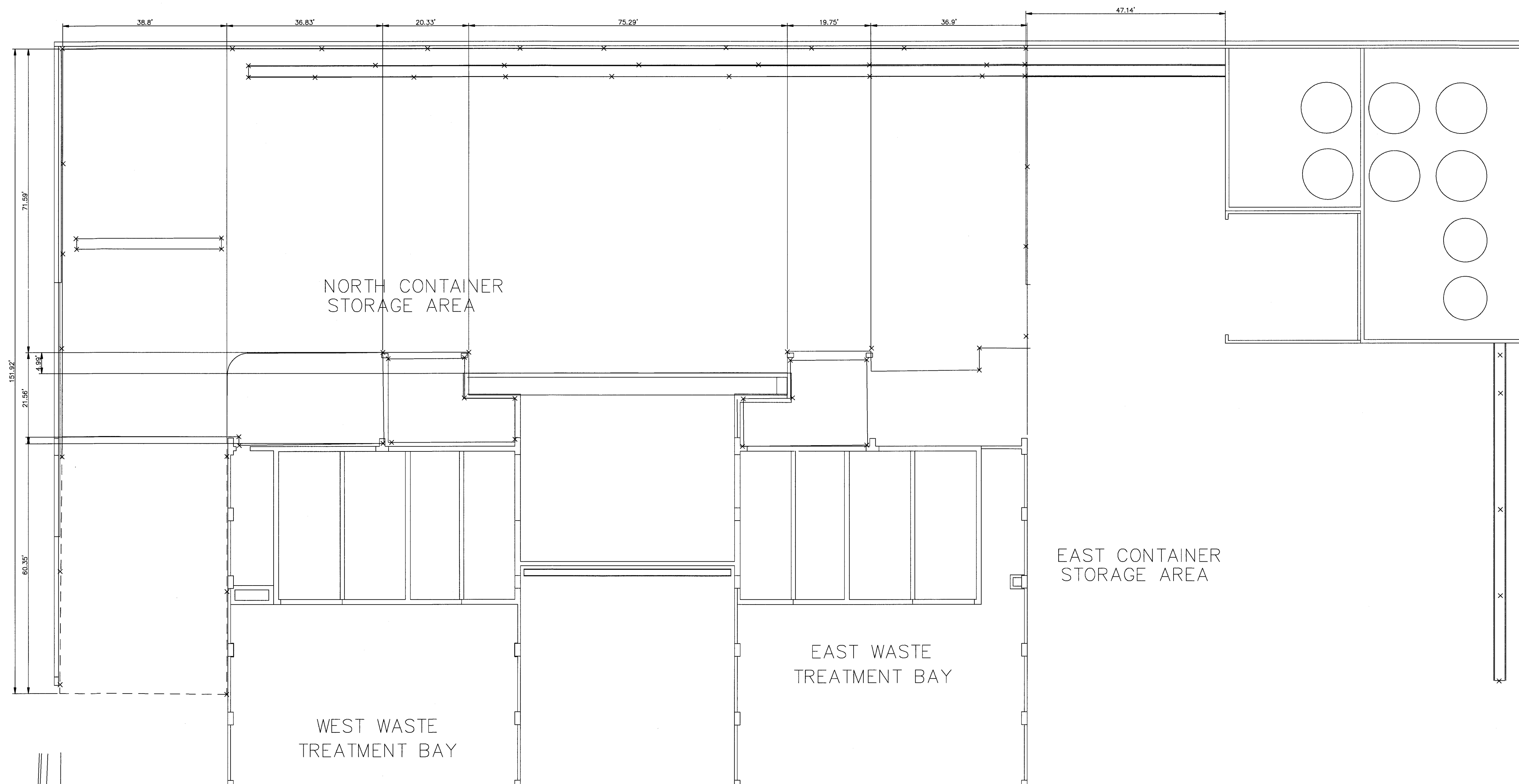


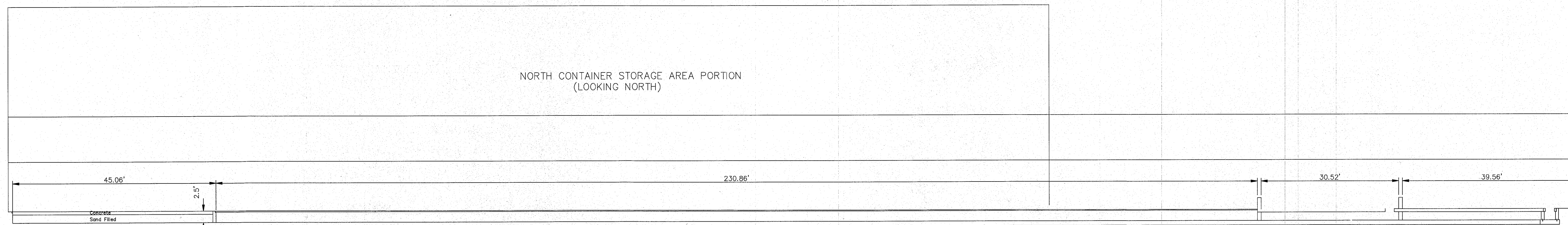
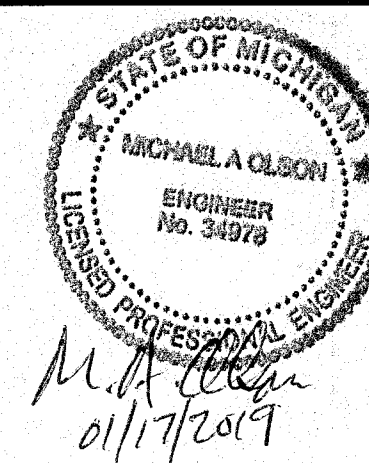


Storage Capacity: 177,320 gallons
Based on: 3 foot aisle spacing
Double Stacking



CONTAINMENT VOLUME
CALCULATION SURFACE
AREA

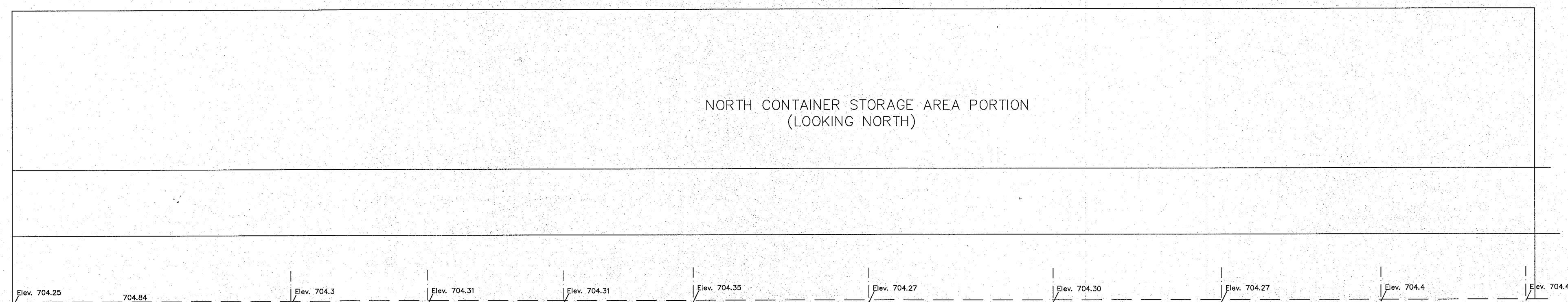




CONTAINMENT VOLUME
CALCULATION DEPTH

F
A-2

SECTION
1"=8'-0"



CONTAINMENT VOLUME
CALCULATION DEPTH

F
A-2

SECTION
1"=8'-0"

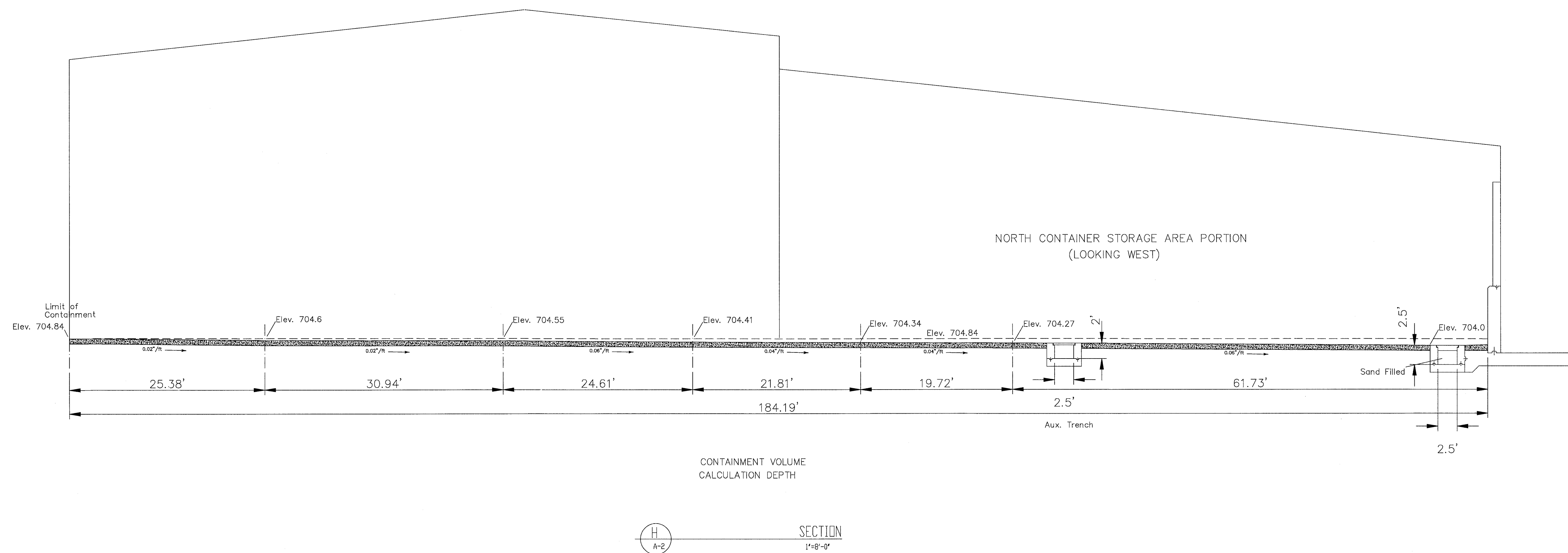
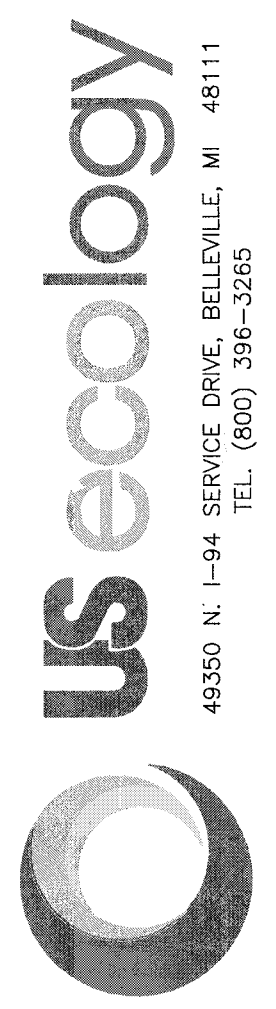
REVISIONS

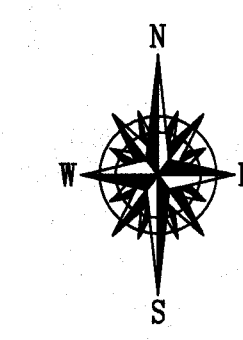
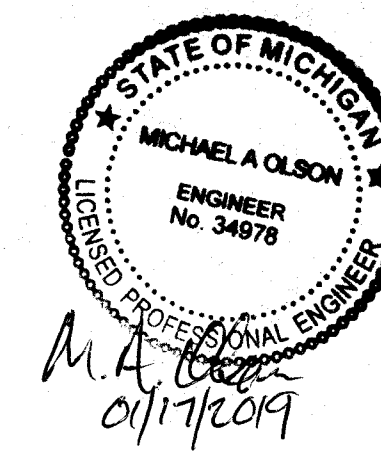
A	B	C	D	E

FILENAME: _____
SCALE: 1" = 12'
DRN BY: CAG

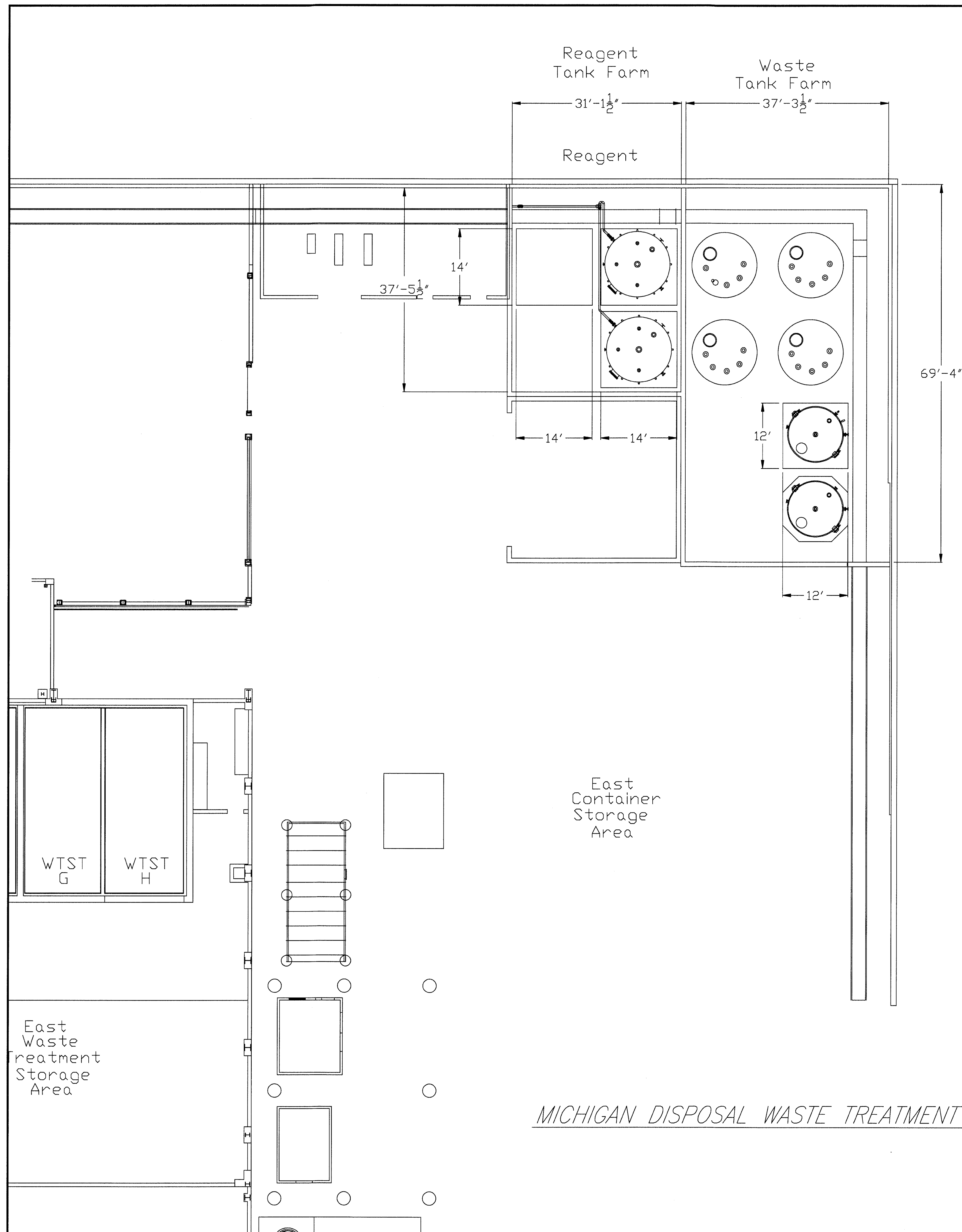
PROJ. FILE _____
DATE: 12/20/18
SHEET ____ OF ____

MICHIGAN DISPOSAL INC.
NORTH CONTAINER STORAGE AREA
SECONDARY CONTAINMENT DETAILS





PROJ. FILE	FILENAME:	A	9/28/02	Updated
DATE: 2/28/05	SCALE: 1"=10'	B	10/24/16	License Update
		C		
		D		
		E		
SHEET OF	DRAWING NO.	REVISIONS		



REAGENT TANK FARM AREA

BASIS OF DESIGN

CONTAINMENT VOLUME

NUMBER OF CONTAINERS: 2

TOTAL STORAGE VOLUME = 40,000 gallons

10% OF STORAGE VOLUME = 4,000 gallons/20,943 gallons (largest tank)

PRECIPITATION VOLUME

24 hr, 25 year STORM EVENT = 3.6 inches/SFT

AREA = 1,159 SFT

PRECIPITATION VOLUME = 2,601 gallons

CONTAINMENT DESIGN

CONTAINMENT LENGTH = 37' - 5"

CONTAINMENT WIDTH = 31' - 0"

CONTAINMENT DEPTH = 3' - 5"

CONTAINMENT CAPACITY = 29,647 gallons

NET CONTAINMENT VOLUME = 25,249 gallons

EXCESS SECONDARY CONTAINMENT VOLUME = 1,705 gallons

NUMBER OF TANK PADS = 3

WIDTH OF TANK PADS = 14 feet

LENGTH OF TANK PADS = 14 feet

HEIGHT OF TANK PADS = 1 foot avg

VOLUME OF TANK PADS = 4,398 gallons

WASTE TANK FARM AREA

BASIS OF DESIGN

CONTAINMENT VOLUME

NUMBER OF CONTAINERS: 6

TOTAL STORAGE VOLUME = 114,300 gallons

10% OF STORAGE VOLUME = 11,500 gallons/20,700 gallons (largest tank)

PRECIPITATION VOLUME

24 hr, 25 year STORM EVENT = 3.6 inches/SFT

AREA = 2,587 SFT

PRECIPITATION VOLUME = 5,805 gallons

CONTAINMENT DESIGN

CONTAINMENT LENGTH = 68' - 8"

CONTAINMENT WIDTH = 37' - 8"

CONTAINMENT DEPTH = 2' - 6"

CONTAINMENT CAPACITY = 48,380 gallons

NET CONTAINMENT VOLUME = 46,225 gallons

EXCESS SECONDARY CONTAINMENT VOLUME = 19,720 gallons

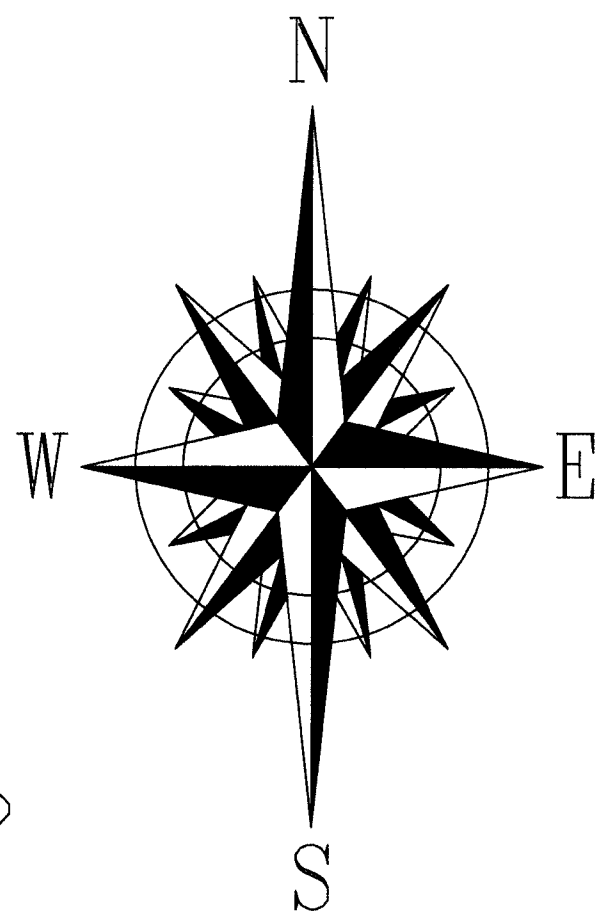
NUMBER OF TANK PADS = 2

WIDTH OF TANK PADS = 12 feet

LENGTH OF TANK PADS = 12 feet

HEIGHT OF TANK PADS = 1 foot avg

VOLUME OF TANK PADS = 2,155 gallons



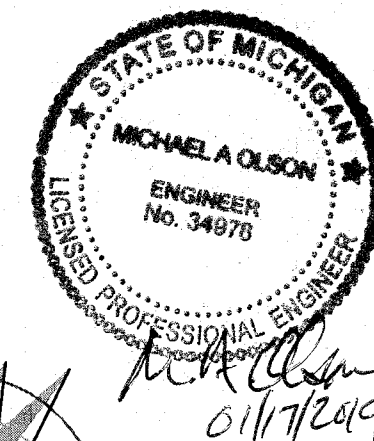
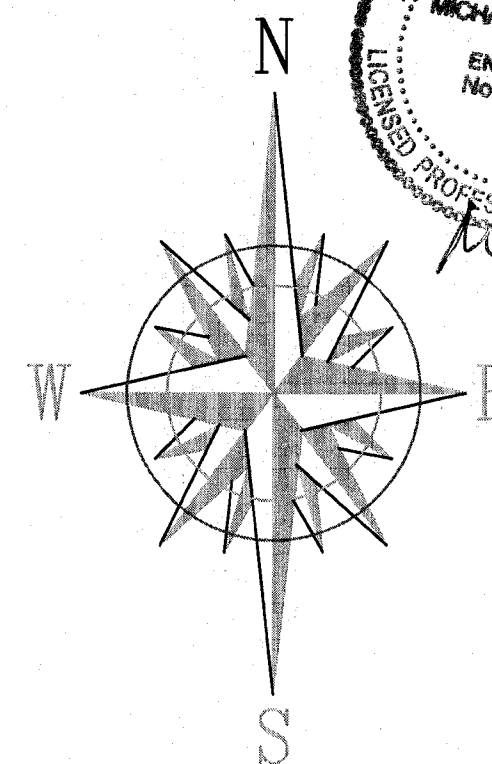
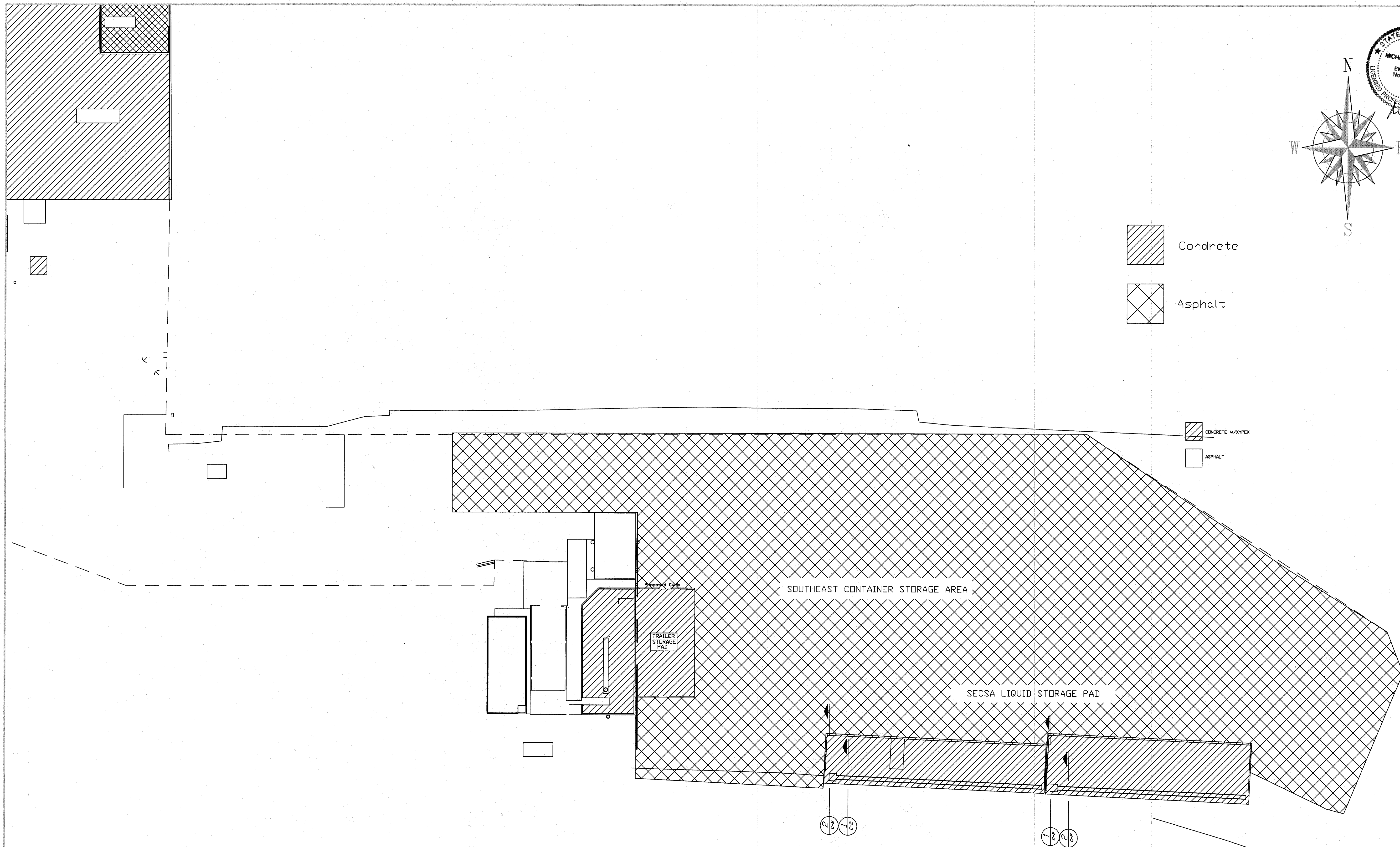
A	B	C	D	E
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FILENAME:	SCALE: 1"=15'-0"	DRN BY: CAG
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PROJ. FILE	DATE: 12/4/04	SHEET	OF
Ltc			

MICHIGAN DISPOSAL WASTE TREATMENT PLANT	TANK FARM
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SECONDARY CONTAINMENT SPECIFICATIONS	LOCATIONS
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Concrete

Asphalt

CONCRETE W/XYTEX

ASPHALT

SOUTHEAST CONTAINER STORAGE AREA

SECSA LIQUID STORAGE PAD

TRAILER STORAGE PAD

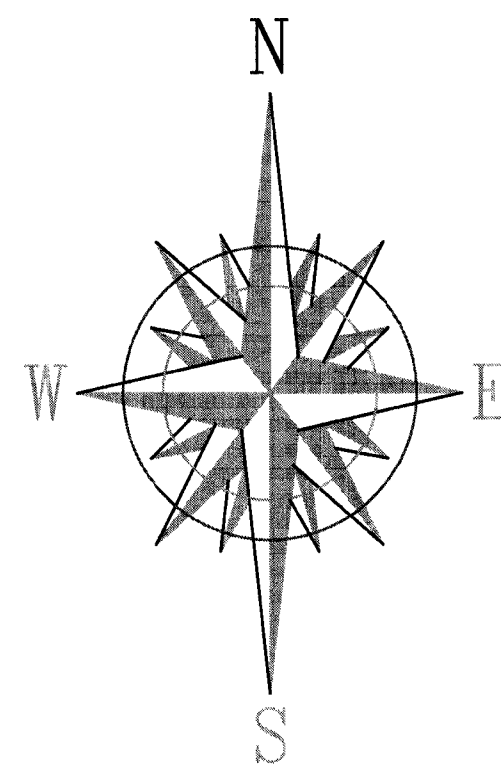
Proposed Dike

REVISION	A	B	C	D	E

PROJECT FILE	FILENAME: MDWTP
DATE: 9/8/16	SCALE: 1"=25'
SHEET OF	DRAWN BY: CAG

MICHIGAN DISPOSAL WASTE TREATMENT PLANT
SOUTHEAST CONTAINER STORAGE AREA

GROUND FLOOR DRAWING



LIQUIDS STORAGE BUILDING

BASIS OF DESIGN

CONTAINMENT VOLUME

NUMBER OF CONTAINERS: 44 double stacked 330 gal totes
TOTAL STORAGE VOLUME = 14,520 gallons
10% OF STORAGE VOLUME = 1,452 gallons

PRECIPITATION VOLUME

24 hr, 25 year STORM EVENT = 3.6 inches/SFT
AREA = 0 SFT
PRECIPITATION VOLUME = 0 gallons

CONTAINMENT DESIGN

CONTAINMENT LENGTH = 18' - 11"
CONTAINMENT WIDTH = 11' - 11"
CONTAINMENT DEPTH = 8' - 2"
GROSS CONTAINMENT CAPACITY = 13,797 gallons

CONTAINER FOOTPRINT = 13 sq. feet
NUMBER OF CONTAINERS = 22
AVERAGE CONTAINER DEPTH IN CONTAINMENT = 0 inches
CONTAINER VOLUME DISPLACED IN CONTAINMENT = 0 gallons

NET CONTAINMENT CAPACITY = 13,797 gallons
EXCESS SECONDARY CONTAINMENT CAPACITY = 12,345 gallons

TRAILER STORAGE PAD

BASIS OF DESIGN

CONTAINMENT VOLUME

NUMBER OF CONTAINERS: 100 double stacked 330 gal totes in van trailers
TOTAL STORAGE VOLUME = 33,000 gallons
10% OF STORAGE VOLUME = 3,300 gallons

PRECIPITATION VOLUME

24 hr, 25 year STORM EVENT = 3.6 inches/SFT
AREA = 3,850 SFT
PRECIPITATION VOLUME = 8,640 gallons

CONTAINMENT DESIGN

TRENCH LENGTH = 30' - 0" CURBED AREA LENGTH = 67' - 6"
TRENCH WIDTH = 2' - 0" CURBED AREA WIDTH = 27' - 6"
TRENCH DEPTH = 4' - 0" CURBED AREA DEPTH = 0' - 6"
TRENCH CAPACITY = 1,795 gallons CURBED AREA CAPACITY = 6,946 gallons

TRAILER STORAGE PAD LENGTH = 59' - 3"
TRAILER STORAGE PAD WIDTH = 33' - 0"
TRAILER STORAGE PAD DEPTH = 3' (6" CURB)
TRAILER STORAGE PAD CAPACITY = 3,657 gallons

CONTAINER FOOTPRINT = 0 sq. feet
NUMBER OF CONTAINERS = 50 (single stacked)
AVERAGE CONTAINER DEPTH IN CONTAINMENT = 0 inches (inside storage)
CONTAINER VOLUME DISPLACED IN CONTAINMENT = 0 gallons
NET CONTAINMENT VOLUME = 12,398 gallons
EXCESS SECONDARY CONTAINMENT VOLUME = 458 gallons

LIQUID STORAGE PAD

BASIS OF DESIGN

CONTAINMENT VOLUME

NUMBER OF CONTAINERS: 584 double stacked 330 gal totes
TOTAL STORAGE VOLUME = 192,720 gallons
10% OF STORAGE VOLUME = 19,272 gallons
LARGEST CONTAINER = 6,060 gallons (30 cubic yard roll-off)

PRECIPITATION VOLUME

24 hr, 25 year STORM EVENT = 3.60 inches/SFT
AREA = 6,960 SFT
PRECIPITATION VOLUME = 15,620 gallons

CONTAINMENT DESIGN

WEST TRENCH LENGTH = 112 FEET
WEST TRENCH WIDTH = 2'
WEST TRENCH DEPTH = 4'-6"
WEST TRENCH CAPACITY = 8,214 gallons
WEST CONTAINMENT AREA = 560 SFT
WEST CONTAINMENT AREA SLOPE = 0.0%
WEST AVERAGE CONTAINMENT AREA DEPTH = 8 inches
WEST CONTAINMENT AREA SLOPE VOLUME = 2,792 gallons

EAST TRENCH LENGTH = 112 FEET
EAST TRENCH WIDTH = 2'
EAST TRENCH DEPTH = 4'-6"
EAST TRENCH CAPACITY = 7,541 gallons

WEST CONTAINMENT AREA = 2,435 SFT
WEST CONTAINMENT AREA SLOPE = 2.3%
WEST AVERAGE CONTAINMENT AREA DEPTH = 5 inches
WEST CONTAINMENT AREA SLOPE VOLUME = 7,590 gallons

EAST CONTAINMENT AREA = 560 SFT
EAST CONTAINMENT AREA SLOPE = 0.0%
EAST AVERAGE CONTAINMENT AREA DEPTH = 8 inches
EAST CONTAINMENT AREA SLOPE VOLUME = 2,792 gallons

EAST CONTAINMENT AREA = 3,192 SFT
EAST CONTAINMENT AREA SLOPE = 2.3%
EAST AVERAGE CONTAINMENT AREA DEPTH = 5 inches
EAST CONTAINMENT AREA SLOPE VOLUME = 9,950 gallons

GROSS TOTAL CONTAINMENT VOLUME = 38,879 gallons

CONTAINER FOOTPRINT = 0 feet
NUMBER OF CONTAINERS = 292 (Single Stacked)
AVERAGE CONTAINER DEPTH IN CONTAINMENT = 0 inches
CONTAINER VOLUME DISPLACED IN CONTAINMENT = 0 gallons
NET CONTAINMENT VOLUME = 38,879 gallons
EXCESS SECONDARY CONTAINMENT = 3,987 gallons

SOLID WASTE STORAGE AREA

Design Capacity: 1,212,000 gal

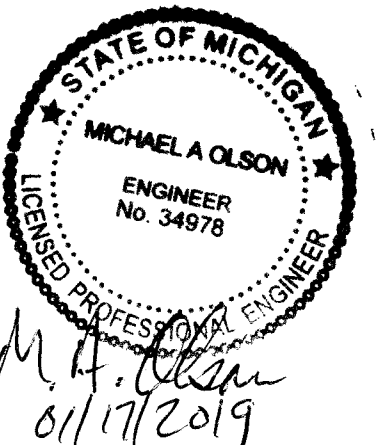
SOLID WASTE STORAGE AREA

BASIS OF DESIGN

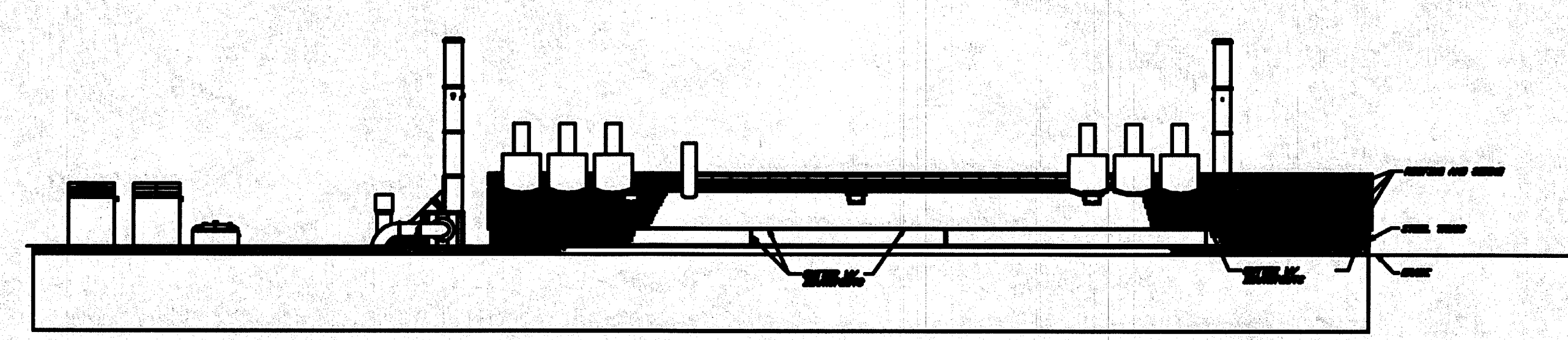
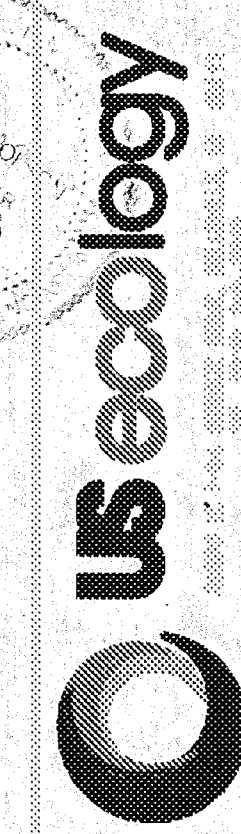
NUMBER OF CONTAINERS: 148 - 30 cubic yard roll-offs
TOTAL STORAGE VOLUME = 896,822 gallons

— Current Permitted Area Boundary

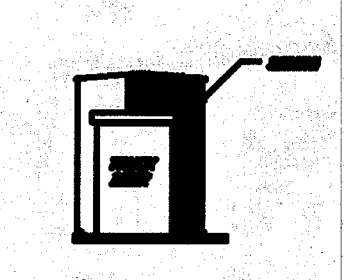
- - - Proposed New Permitted Area Boundary



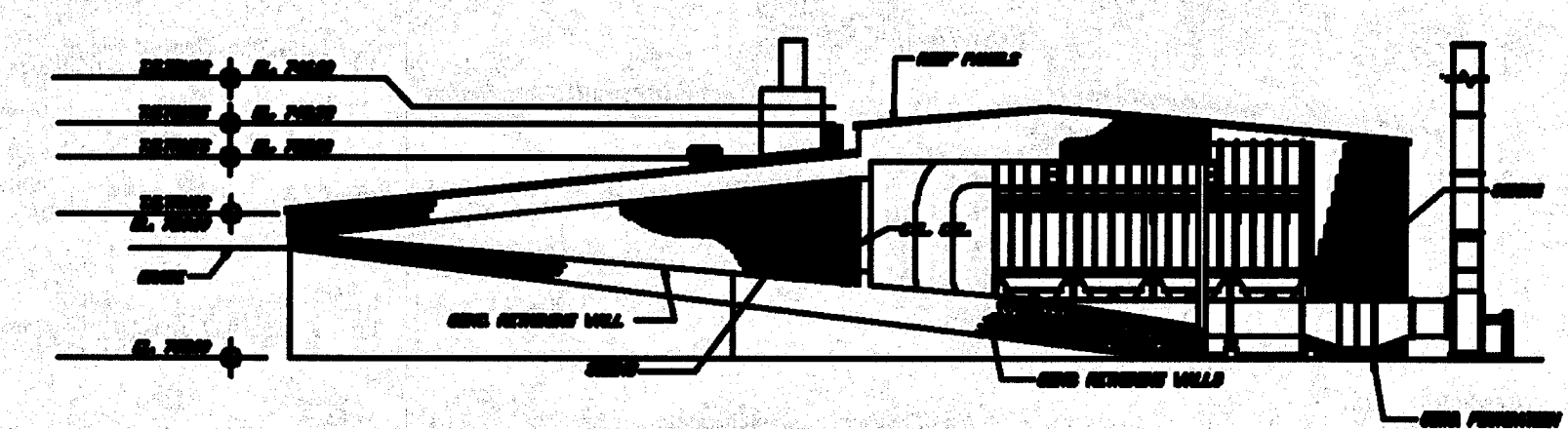
STATE OF MICHIGAN
MICHAEL A. OLSON
ENGINEER
No. 34970
LICENSED PROFESSIONAL ENGINEER
M.A. Olson
01/17/2019



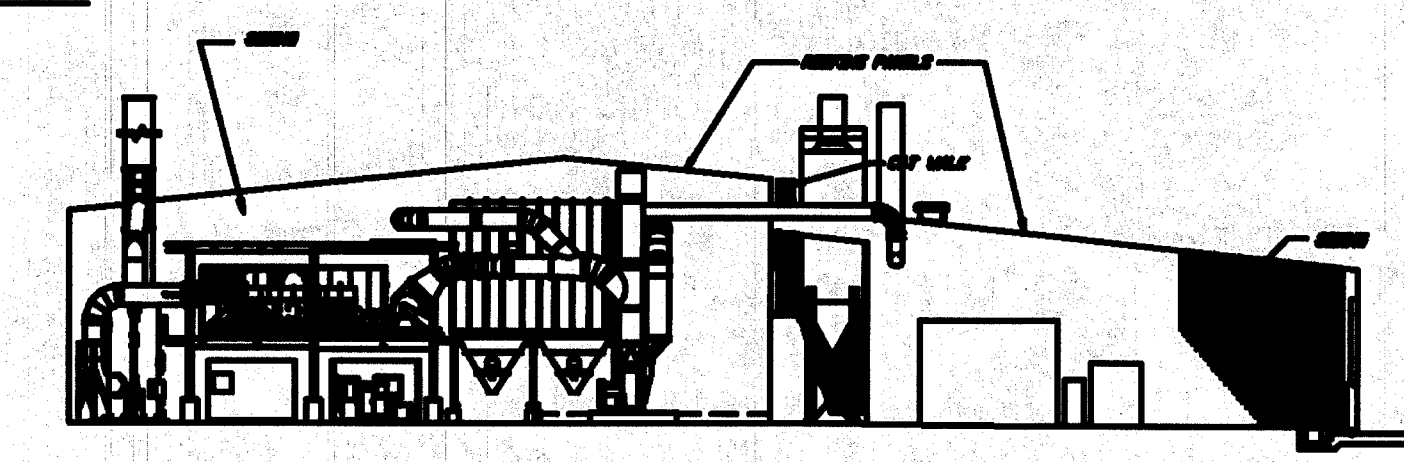
NORTH ELEVATION - NDI
SOLID 3/8" = 1'-0"



NORTH ELEVATION - SESC BLDG
SOLID 3/8" = 1'-0"



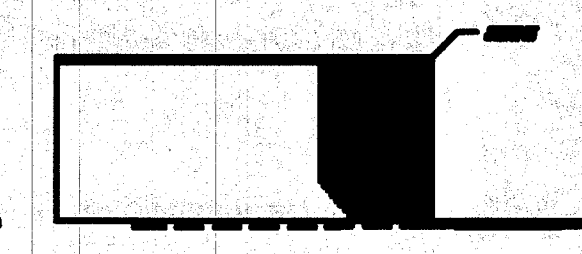
WEST ELEVATION - NDI
SOLID 3/8" = 1'-0"



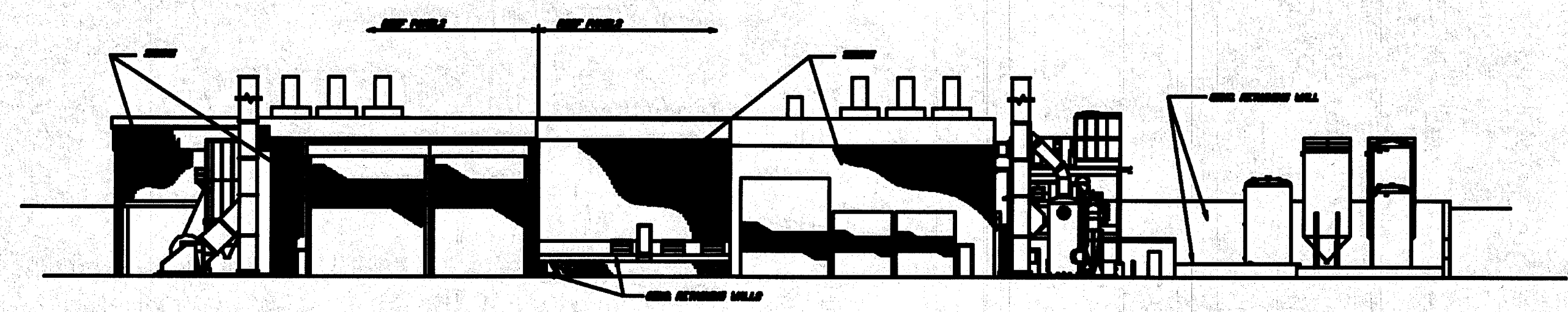
EAST ELEVATION - NDI
SOLID 3/8" = 1'-0"



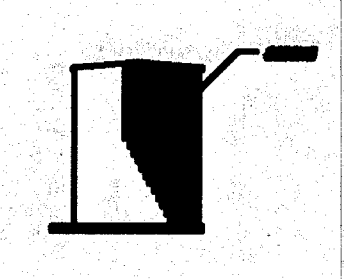
WEST ELEVATION - SESC BLDG
SOLID 3/8" = 1'-0"



EAST ELEVATION - SESC BLDG
SOLID 3/8" = 1'-0"



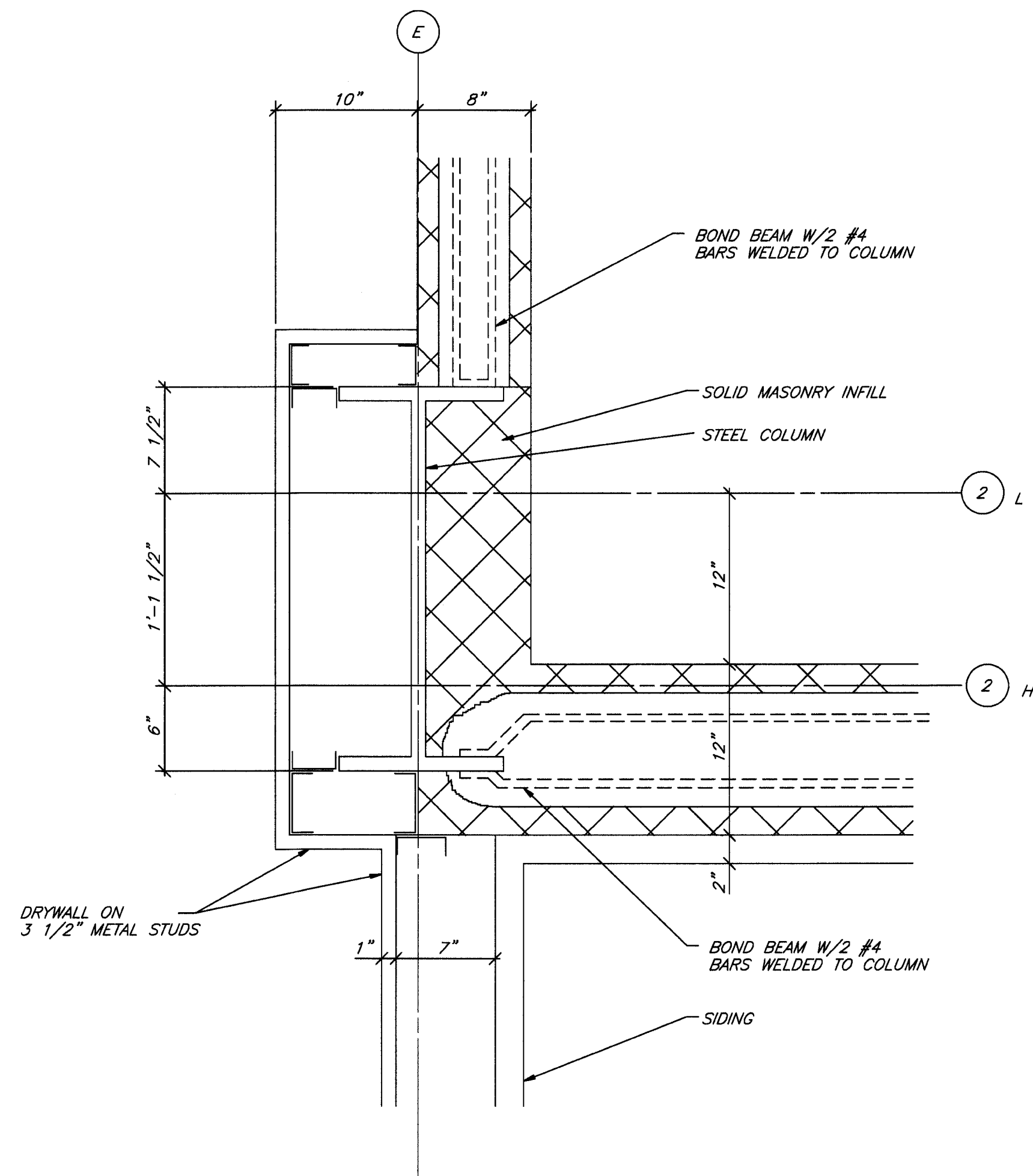
SOUTH ELEVATION - NDI
SOLID 3/8" = 1'-0"



SOUTH ELEVATION - SESC BLDG
SOLID 3/8" = 1'-0"

NOTES:
1) Bollards, handrails, piping, etc have been omitted for clarity.

MICHIGAN DISPOSAL WASTE TREATMENT PLANT
ARCHITECTURAL ELEVATIONS



PLAN VIEW "C" OF INTERSECTION OF
BOND BEAM W/ STEEL COLUMN 2E

