Egg-Shaped Digesters Facility
DCFA #374-WSA

Blue Plains
Advanced Wastewater
Treatment Plant

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D.C. OFFICE OF ZONING
2004 NOV 18 PM 1:58

Architecture

PUD

Architectural Design

November 18, 2004

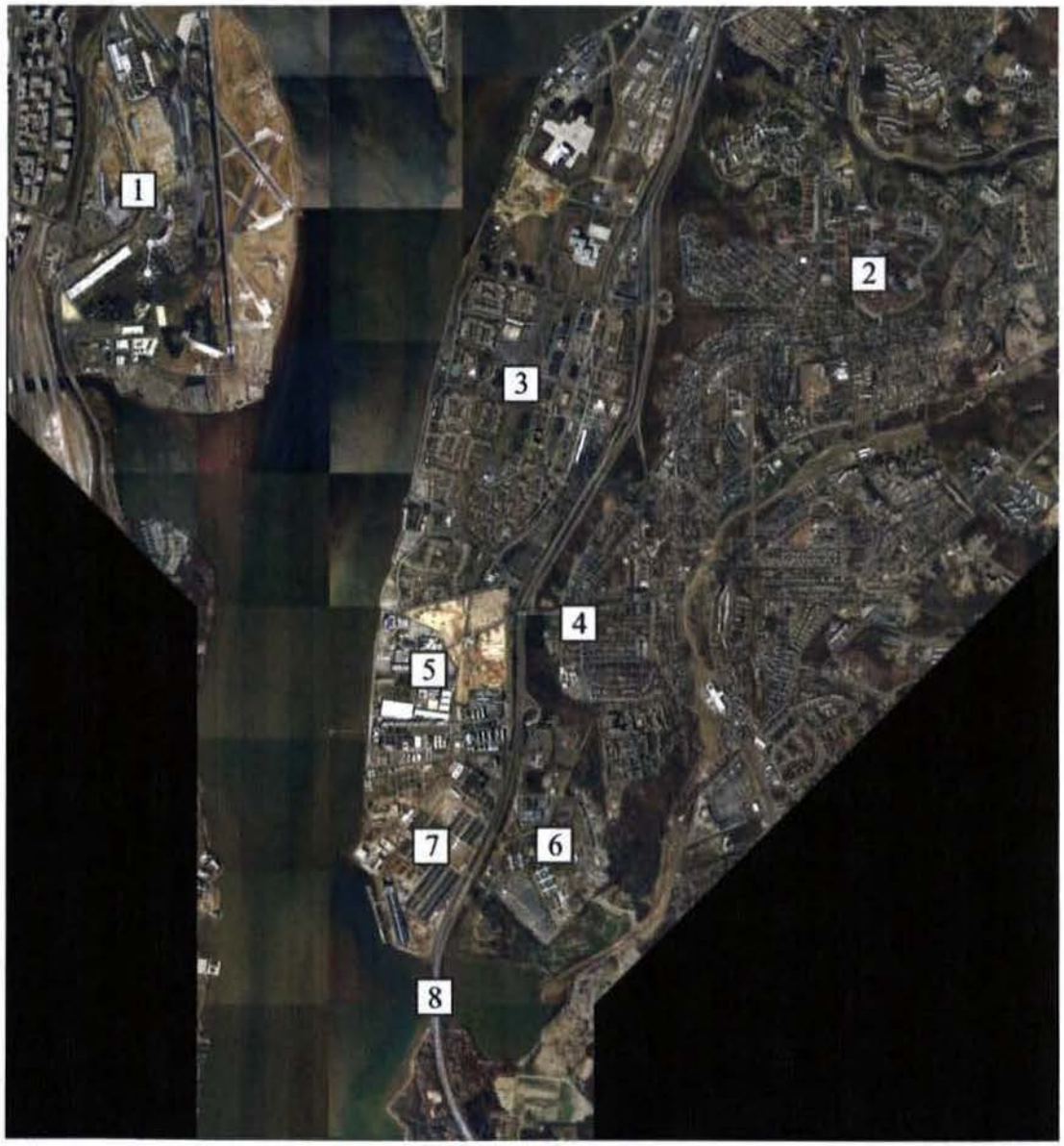
BROWN AND CALDWELL Corporation

SORG ARCHITECTS

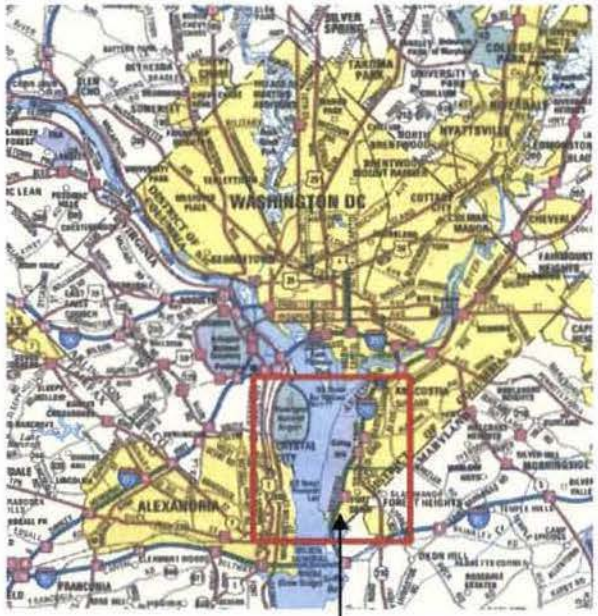
ZONING COMMISSION
District of Columbia
CASE NO.04-19
EXHIBIT NO.26

Background and Existing Conditions

- Located in Ward 8.
- 2 1/2 miles from Reagan National Airport.
- 5 miles from U.S. Capitol.
- Significant addition D.C. skyline.
- Substantial Environmental Benefits to City



1. National Airport
2. St. Elizabeths
3. Bolling AFB
4. Ft. Greble Park
5. Naval Research Lab
6. DC Village
7. Blue Plains
8. Interstate 295



Blue Plains

Site Characteristics

- 8 acres (former sludge processing facility).
- 8 Egg shaped Digesters.
- 4 Sludge Storage Silos.
- 2 Gas Holding/Storage Tanks.
- 3 Excess gas "Flares."
- Future Co Generation Facility



1. Hadley Memorial
2. Naval Research
3. Interstate 295
4. Police Academy
5. Potomac Job Corps
6. DC Impoundment
7. Central Operations
8. Sedimentation Fields
9. Solids Processing Building
10. Egg Digester Site

Zoning Parameters

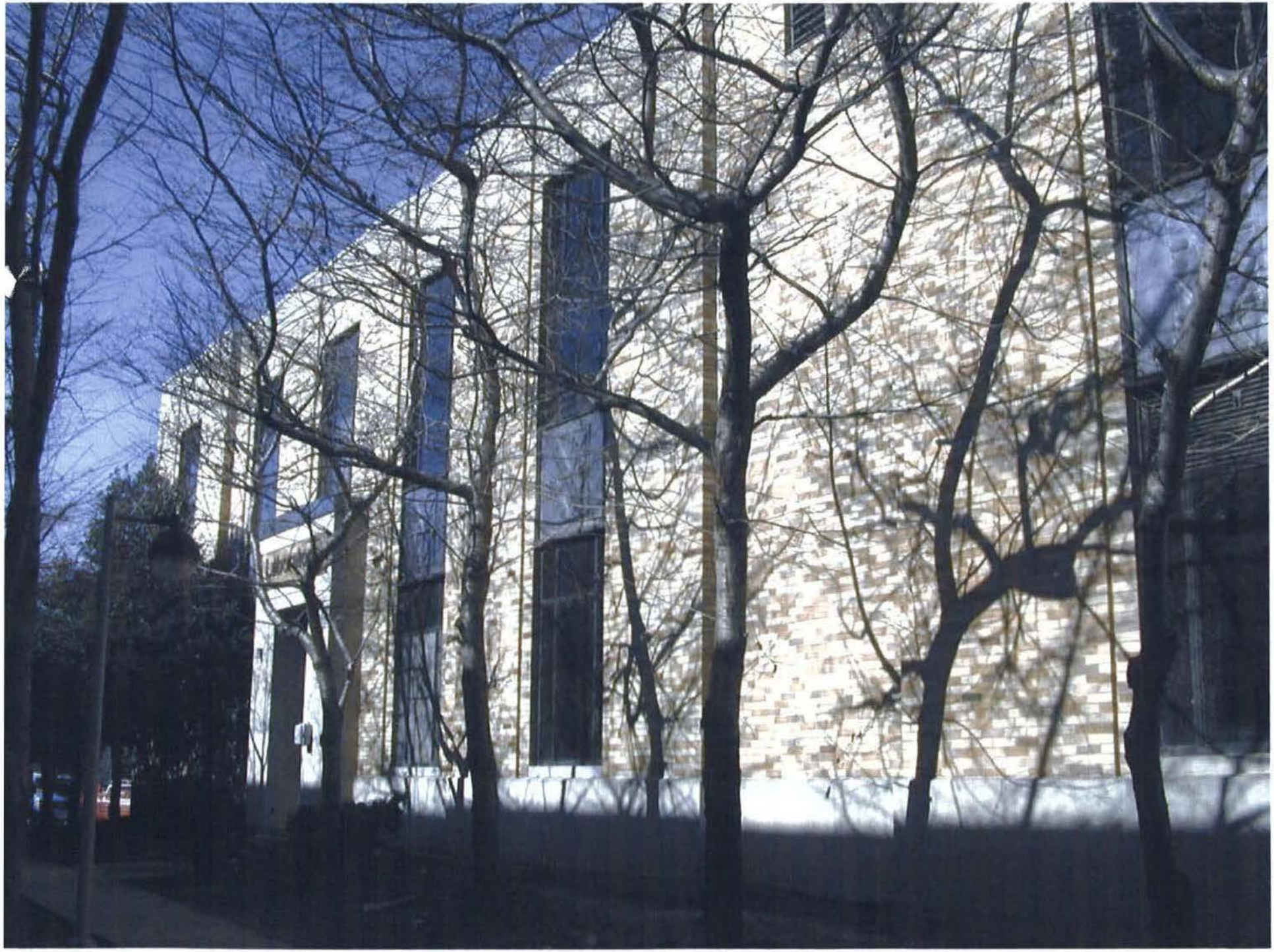
- CM-3 Zone.
- 6.0 FAR
- 90' height limit.
- Industrial Use
- Atypical Structures
- Adjacent to Non-Residential Uses
- Consistent With Comprehensive Plan


Naval Research Laboratory
GOV
R-5-A
R-2
C-1
C-M-1
C-M-3
Blue Plains
Bald Eagle Hill
District of Columbia
Maryland

Zoning Map

Architectural Design Considerations

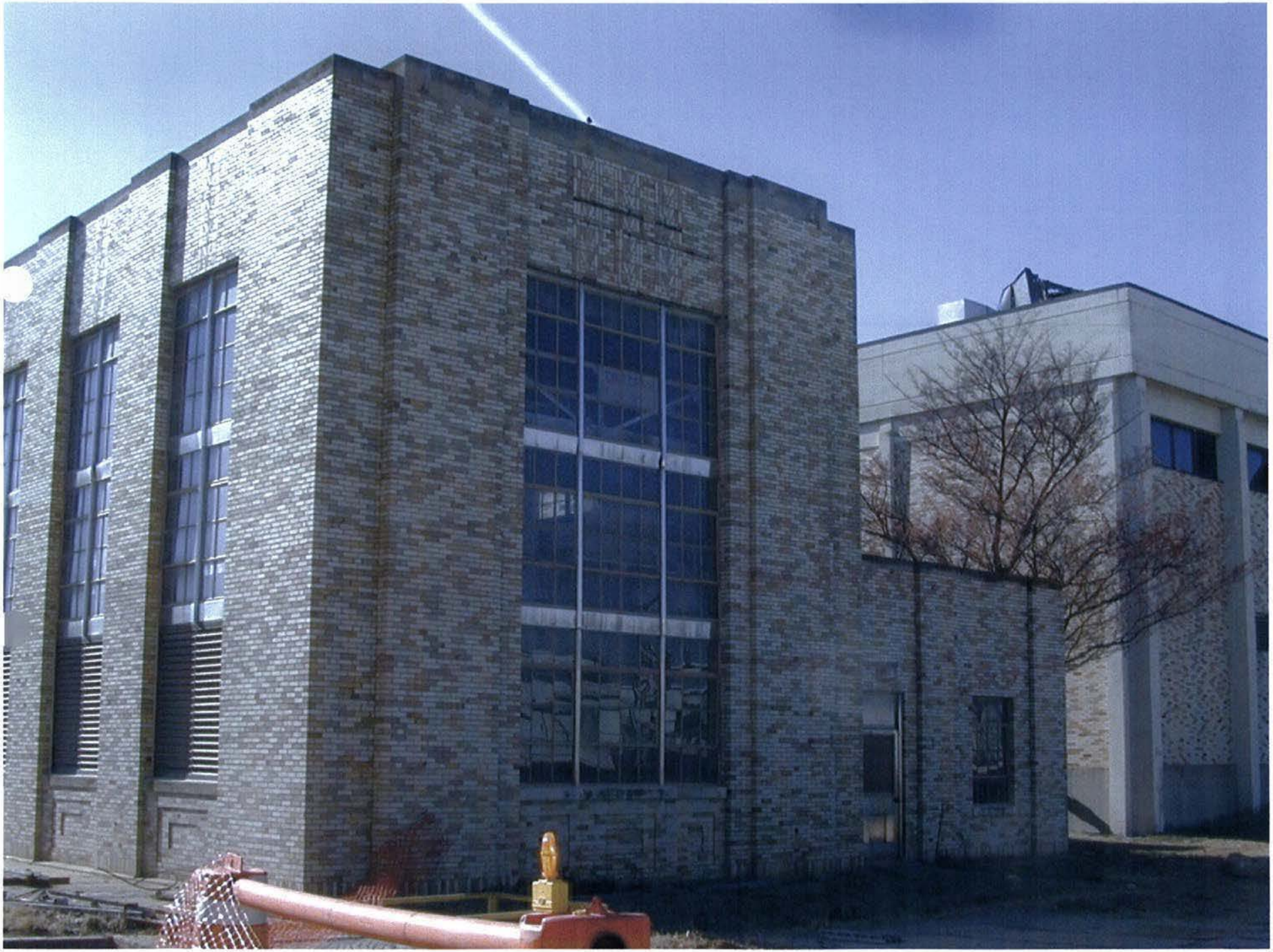
- Older existing structures are simplified "Art-Deco style."
- Prevalent "Buff Brick."
- Bronze storefront windows and decorative brick and metal work.
- Additional "Industrial" structures.
- Structure adjacent to EDF is the 95' high Solids Processing Building.




Laboratory







Digester Eggs Examples







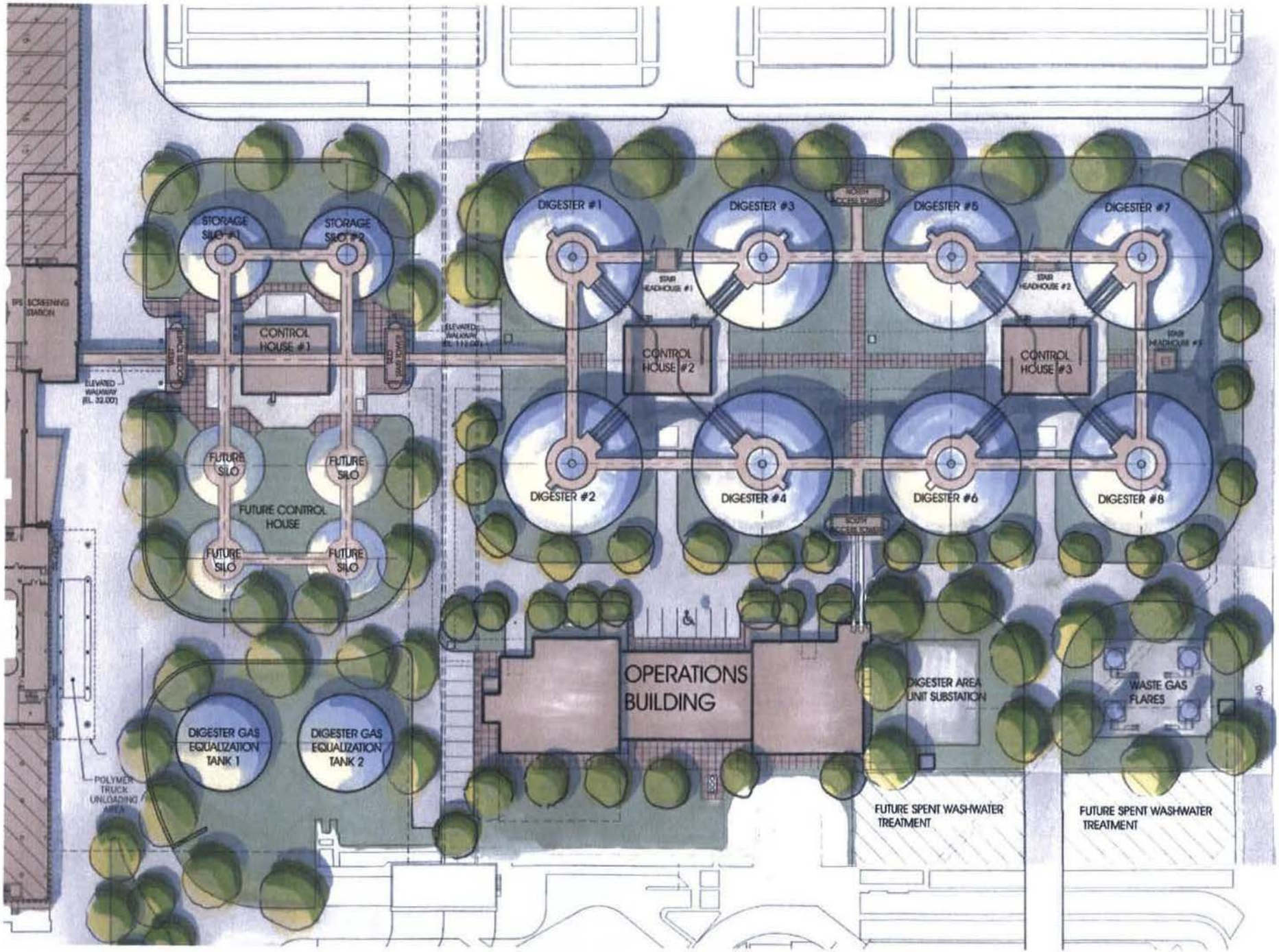


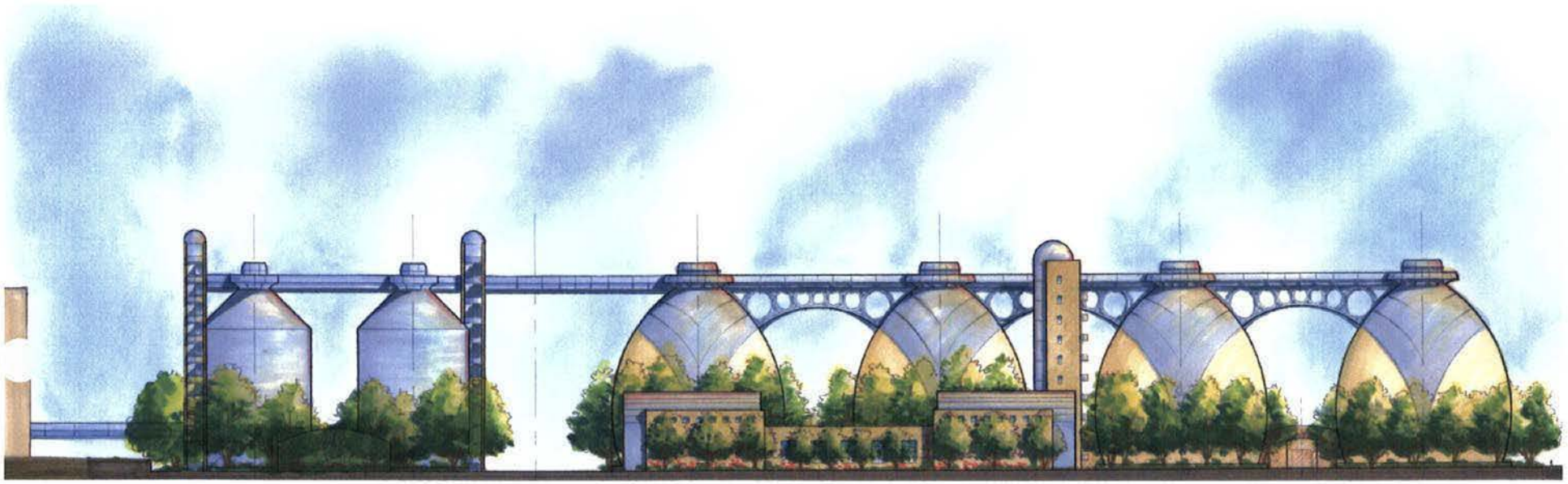
EDF Architectural Design

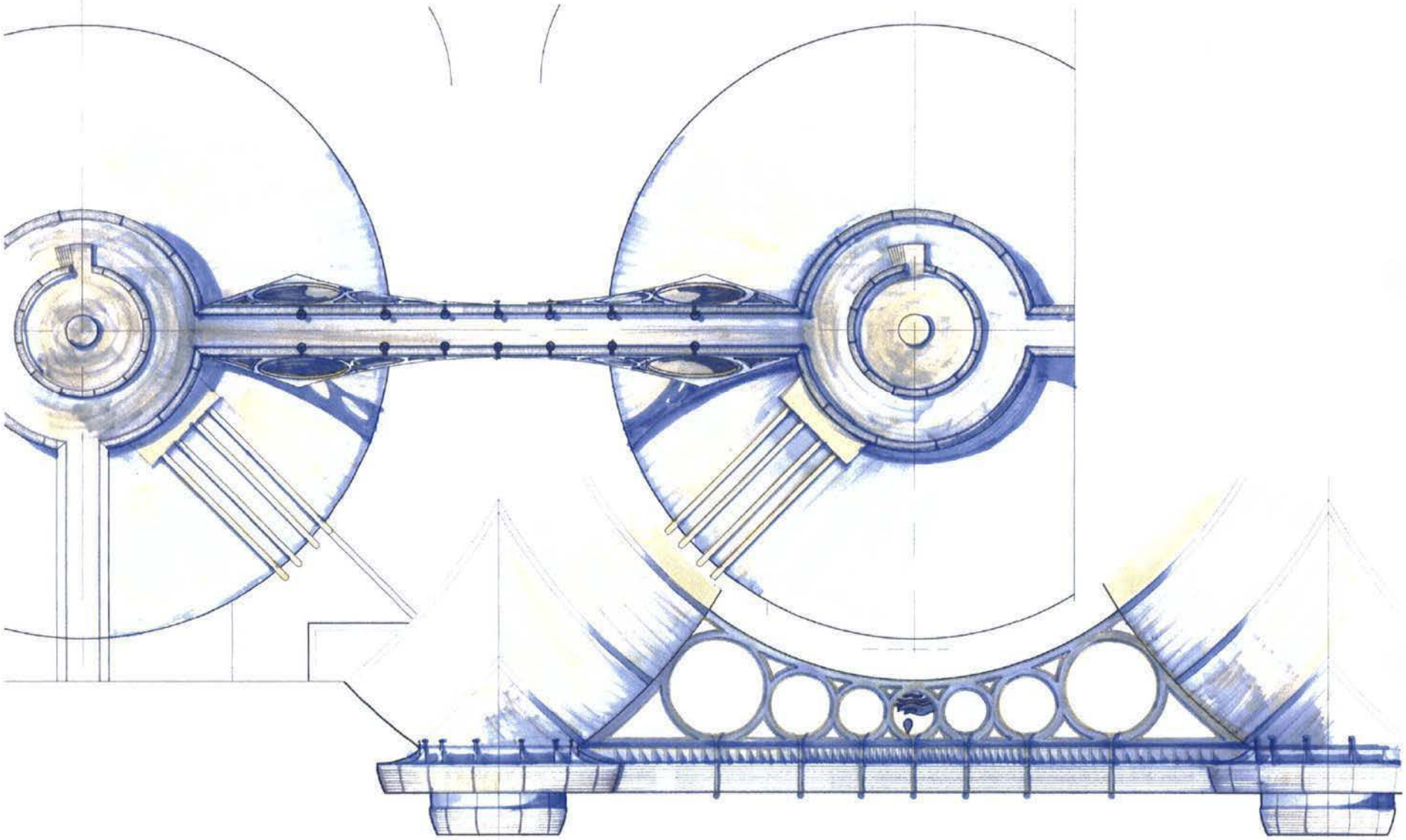
- Walkways located on the perimeter.
- Connecting walkways are open steel structures reminiscent of 19th century bridges.
- Accessed by 2 stair towers at North and South ends of site.
- Stainless Steel Cladding.
- Closed Blossom.

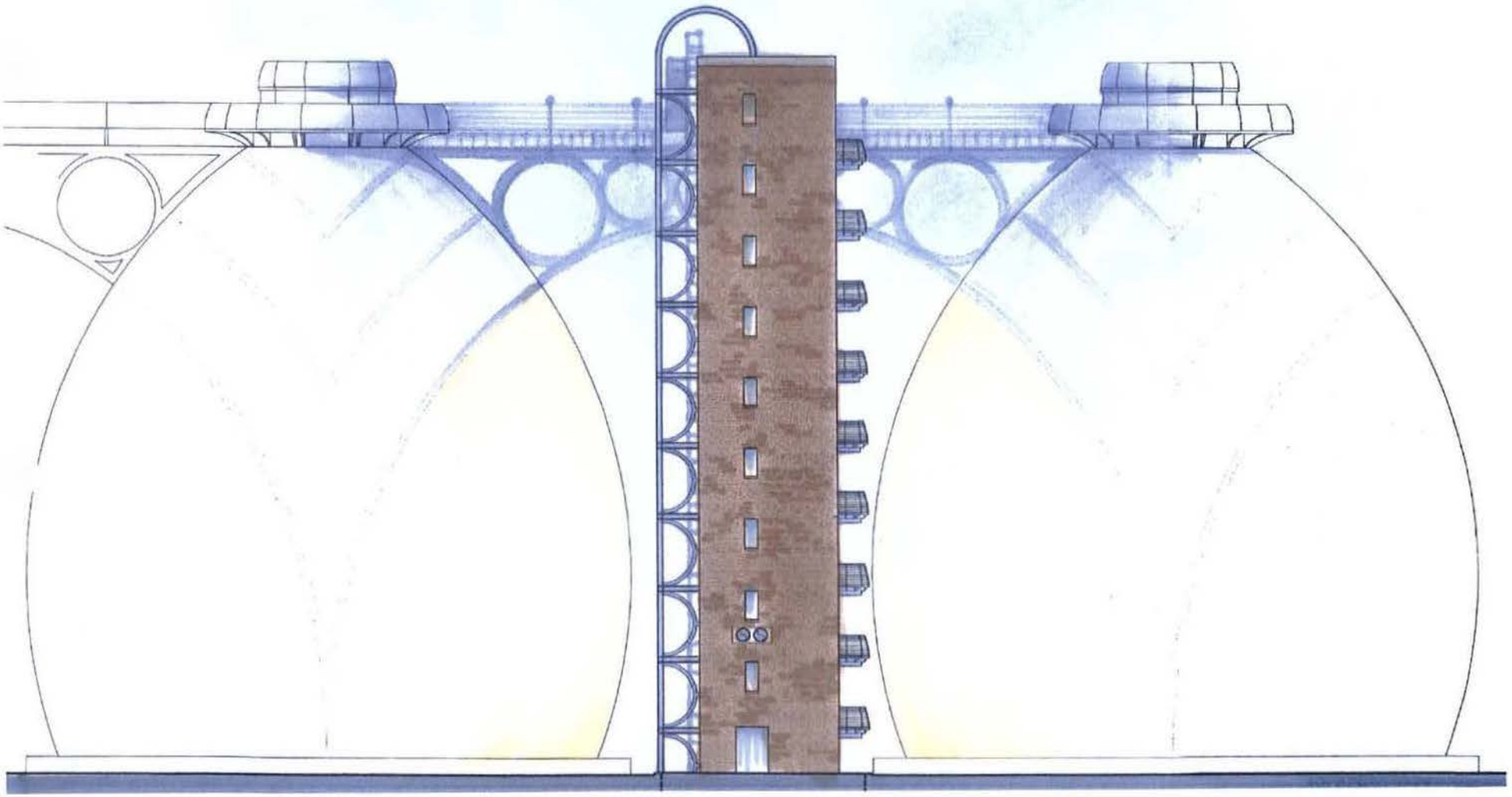





STORAGE SILO #1
STORAGE SILO #2
CONTROL HOUSE #1
FUTURE SILO
FUTURE SILO
FUTURE CONTROL HOUSE
FUTURE SILO
FUTURE SILO
DIGESTER #1
DIGESTER #3
DIGESTER #5
DIGESTER #7
DIGESTER #2
DIGESTER #4
DIGESTER #6
DIGESTER #8
CONTROL HOUSE #2
CONTROL HOUSE #3
OPERATIONS BUILDING
DIGESTER GAS EQUALIZATION TANK 1
DIGESTER GAS EQUALIZATION TANK 2
DIGESTER AREA UNIT SUBSTATION
WASTE GAS FLARES
FUTURE SPENT WASHWATER TREATMENT
FUTURE SPENT WASHWATER TREATMENT





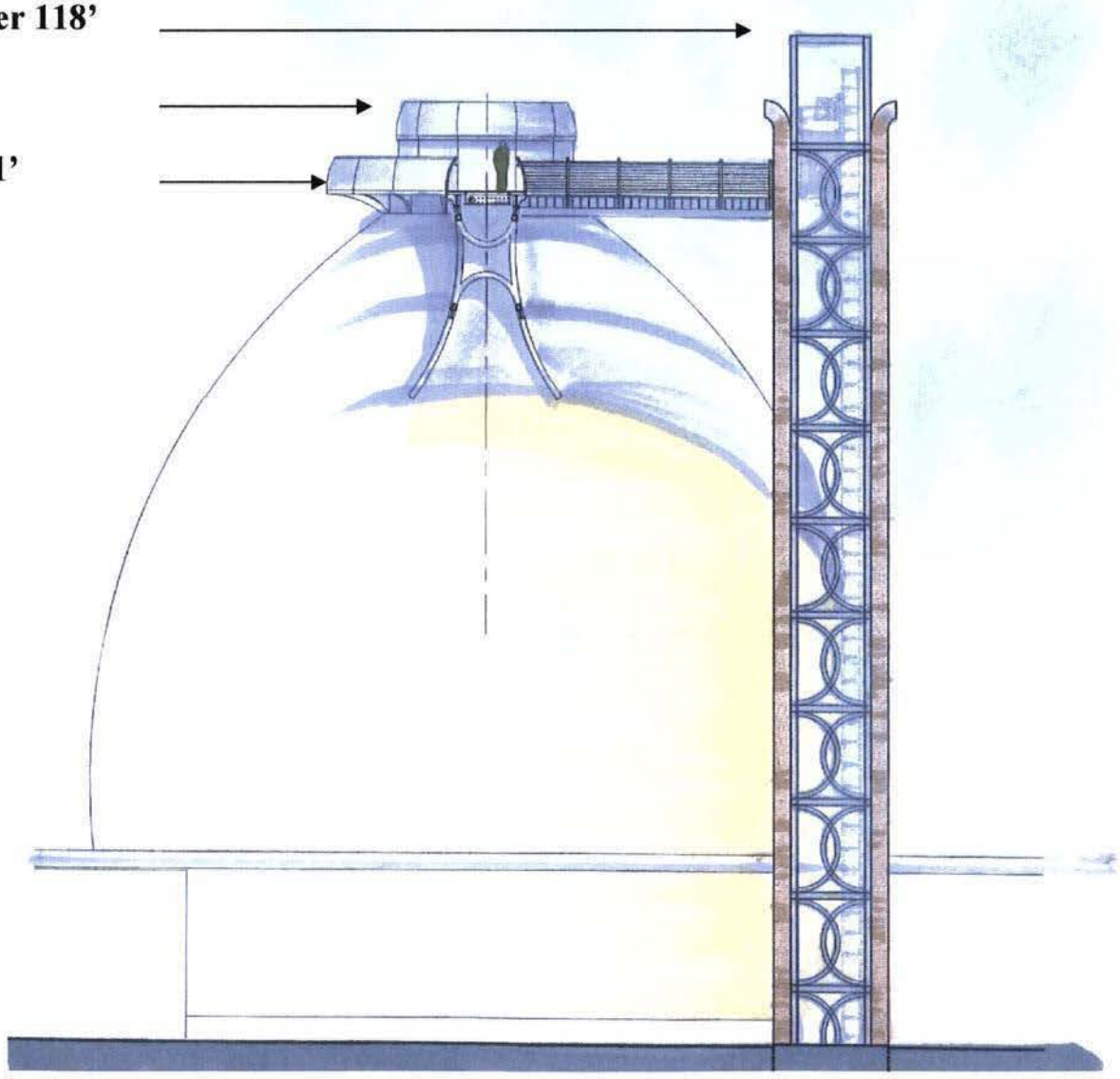


Maximum Heights Above Adjacent Grade

Elevator Access Tower 118'

Digester Cap 107'

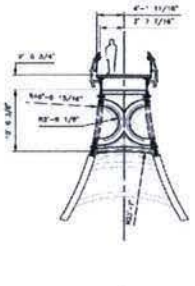
Walkway Surface 101'



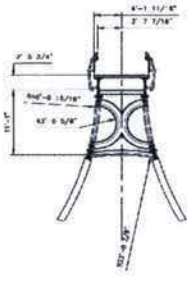
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CONSTRUCTION	CONTRACT NO.		030150
DESIGN	BIDS FILE NO.		374 WSA
DES GN MGR.			EPMC-IV
INDEX NO.	B&E-XAG		

POST-BID REVISION

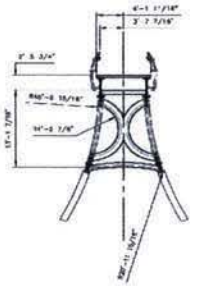
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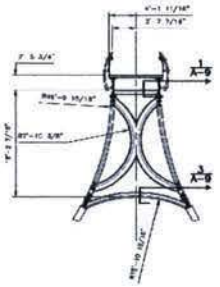
SECTION ⊙ WALKWAY 1 / A-8
SCALE: 1/8"=1'-0"



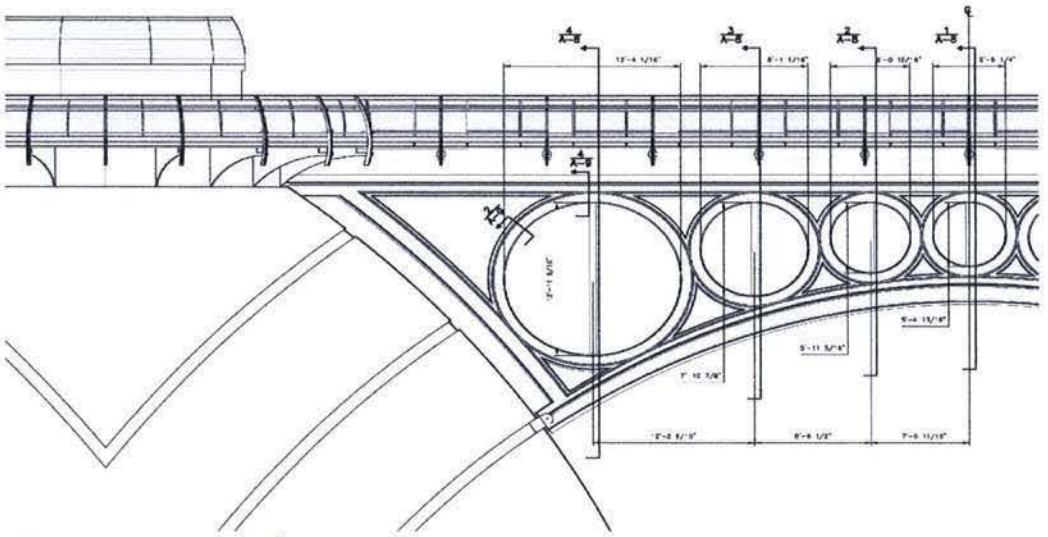
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SCALE: 1/8"=1'-0"



SECTION ⊙ WALKWAY 3 / A-8
SCALE: 1/8"=1'-0"



SECTION ⊙ WALKWAY 4 / A-8
SCALE: 1/8"=1'-0"



WALKWAY ENLARGED ELEVATION 5 / A-8
SCALE: 1/4"=1'-0"

INTERMEDIATE SUBMITTAL

NO.	DESCRIPTION	BY	DATE

PRE-BID REVISION

DISTRICT OF COLUMBIA
WATER AND SEWER AUTHORITY

ADVANCED WASTEWATER TREATMENT PLANT
BIOSOLIDS FACILITY
DBIA CONTRACT - SLUDGE AND DIGESTERS

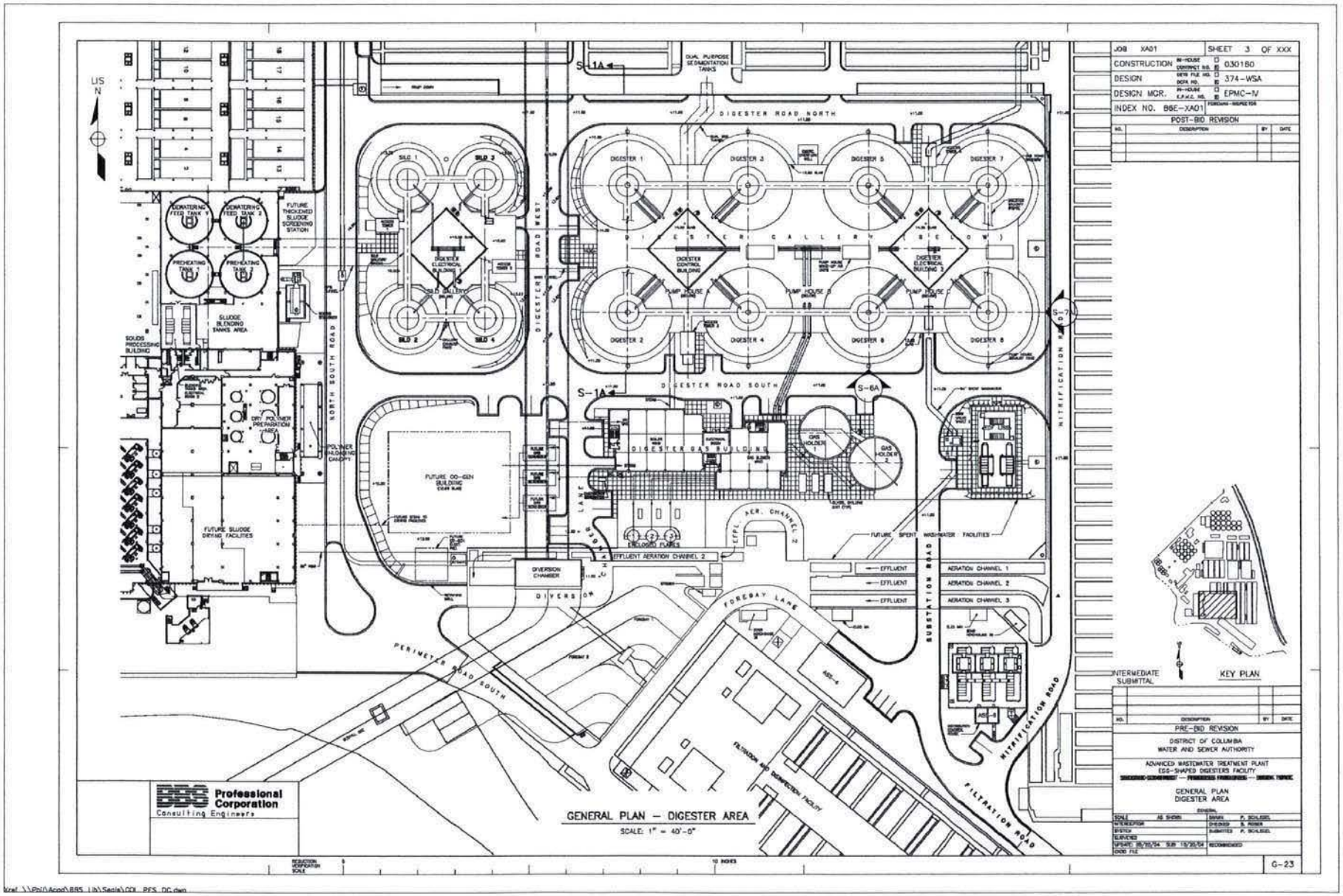
BRIDGE WALKWAYS - ENLARGED ELEVATIONS AND SECTIONS

SCALE	AS SHOWN	DRAWN	K. DION
INSPECTOR		DATE	
SYSTEM		SUBMITTED BY	
SURVEYS			
DATE	AUG. 13/20/04	RECOMMENDED	
CHECKED	22-1-05		

BBS Professional Corporation
Consulting Engineers
SORG ARCHITECTS

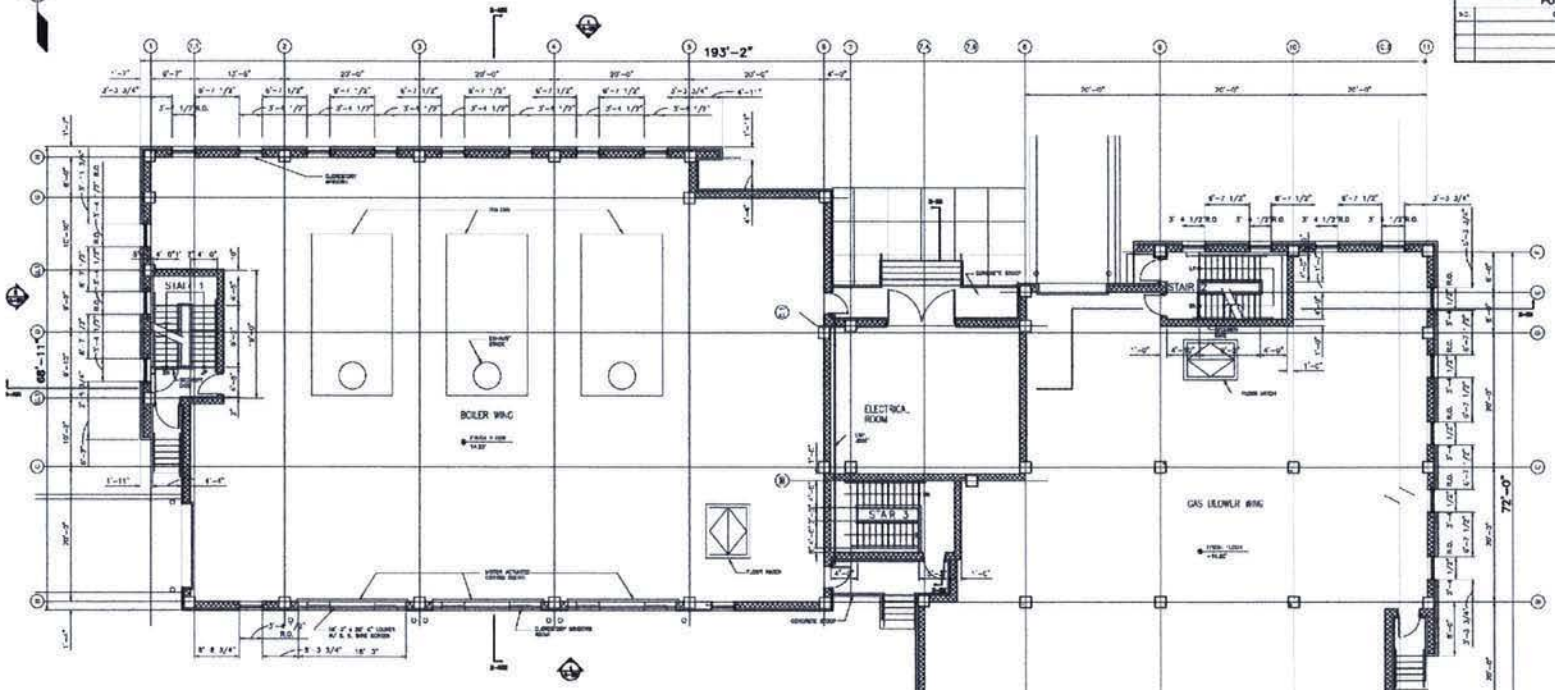
A-8

Site Plan


GENERAL PLAN – DIGESTER AREA
SCALE: 1" = 40'-0"
DIGESTER ROAD NORTH
DIGESTER ROAD SOUTH
DIGESTER ROAD WEST
NORTH SOUTH ROAD
PERIMETER ROAD SOUTH
FOREBAY LANE
SUBSTATION ROAD
NITRIFICATION ROAD
FILTRATION ROAD
DIGESTER 1
DIGESTER 2
DIGESTER 3
DIGESTER 4
DIGESTER 5
DIGESTER 6
DIGESTER 7
DIGESTER 8
DIGESTER GALLERY (BELOW)
DIGESTER CONTROL BUILDING
DIGESTER ELECTRICAL BUILDING 1
DIGESTER ELECTRICAL BUILDING 2
PUMP HOUSE A
PUMP HOUSE B
PUMP HOUSE C
SLUDGE BLENDING TANKS AREA
SOLIDS PROCESSING BUILDING
DRY POLYMER PREPARATION AREA
POLYMER BUILDING CANOPY
FUTURE SLUDGE DRYING FACILITIES
FUTURE THICKENED SLUDGE SCREENING STATION
FUTURE OD-GEN BUILDING
DIGESTER GAS BUILDING
GAS HOLDER 1
GAS HOLDER 2
ENCLOSED FLARES
EFFL AER. CHANNEL 2
EFFLUENT AERATION CHANNEL 2
DIVERSION CHAMBER
DIVERSION
FUTURE SPENT WASHWATER FACILITIES
EFFLUENT
AERATION CHANNEL 1
AERATION CHANNEL 2
AERATION CHANNEL 3
FILTRATION AND DISINFECTION FACILITY
ABS-4
ABS-5
S-1A
S-6A
S-7
US
N
JOB XA01
SHEET 3 OF XXX
CONSTRUCTION
030180
DESIGN
374-WSA
DESIGN MGR.
EPMC-IV
INDEX NO. B&E-XA01
POST-BID REVISION
INTERMEDIATE SUBMITTAL
KEY PLAN
PRE-BID REVISION
DISTRICT OF COLUMBIA
WATER AND SEWER AUTHORITY
ADVANCED WASTEWATER TREATMENT PLANT
EGG-SHAPED DIGESTERS FACILITY
GENERAL PLAN
DIGESTER AREA
Professional Corporation
Consulting Engineers
G-23

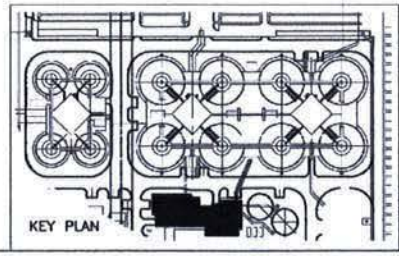
New Digester Gas Building

- 34,000 sq. ft., 1story + basement building, approximately 36' in height.
- Buff Brick and metal panels.
- Storefront Windows.
- Glass canopy covered entrance.
- Semi-public assembly area.



FLOOR PLAN

SCALE: 1/8"=1'-0"



JOB XA01	SHEET XX OF XXX
CONSTRUCTION	030160
DESIGN	374 WSA
DESIGN MGR.	CPMC-IV
INDEX NO. B6E-XA01	

POST-BID REVISION

INTERMEDIATE SUBMITTAL

PRE-BID REVISION

DISTRICT OF COLUMBIA
WATER AND SEWER AUTHORITY

ADVANCED WASTEWATER TREATMENT PLANT
EDG-BIOGAS DIGESTERS FACILITY
SECOND CONTRACT - PROCESS FACILITIES - BOOK ONE

DIGESTER GAS BUILDING
FLOOR PLAN

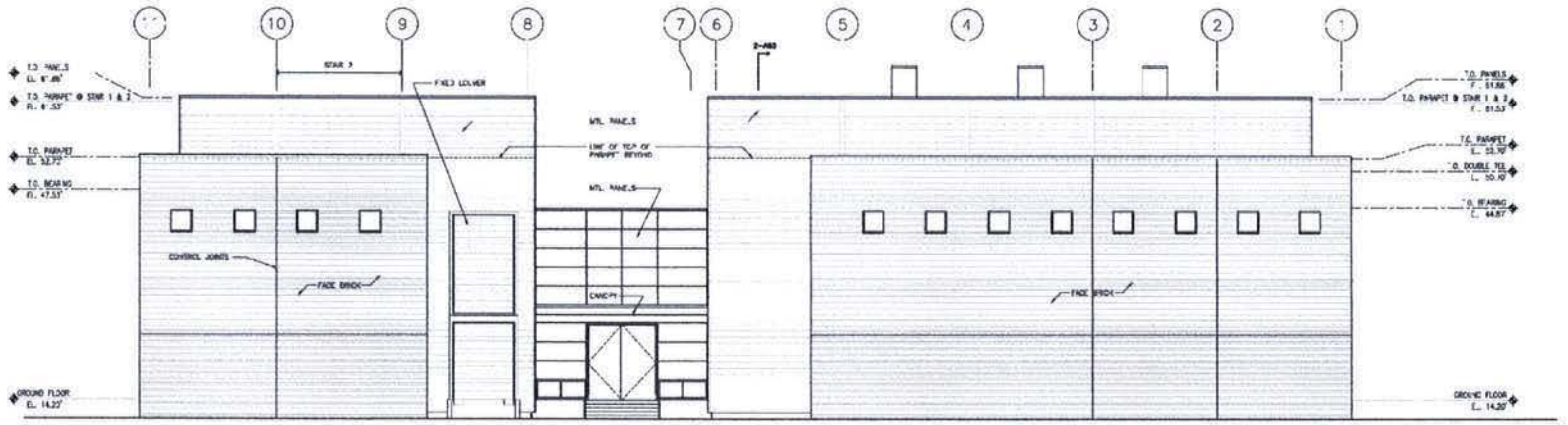
BBS Professional Corporation
Consulting Engineers
SORG ARCHITECTS

A-52

JOB XA01	SHEET XX OF XXX
CONSTRUCTION	CONTRACT NO. C30160
DESIGN	DATA FILE NO. 374-WSA
DESIGN MGR.	IN HOUSE F.P.M.O. NO. EPMC-IV
INDEX NO. 86E XA01	FOREMAN-INSPECTOR

POST-BID REVISION

NO.	DESCRIPTION	BY	DATE



EXTERIOR ELEVATION 1
SCALE: 1/8"=1'-0" A-58

INTERMEDIATE SUBMITTAL

NO.	DESCRIPTION	BY	DATE

PRE-BID REVISION

DISTRICT OF COLUMBIA
WATER AND SEWER AUTHORITY

ADVANCED WASTEWATER TREATMENT PLANT
EGG-SHAPED DIGESTERS FACILITY
SECOND CONTRACT - "MODELS FACILITIES - BOOK ONE

DIGESTER GAS BUILDING
EXTERIOR ELEVATION

ARCHITECTURAL

SCALE	AS SHOWN	DRAWN	T.S.
ARCHITECT		ENGINEER	G. BRAID
DATE		SUBMITTED	KB
SUBMITTED			
UPDATED	SUB: 10/25/04	RECOMMENDED	
CONTRACT	339-3-42		

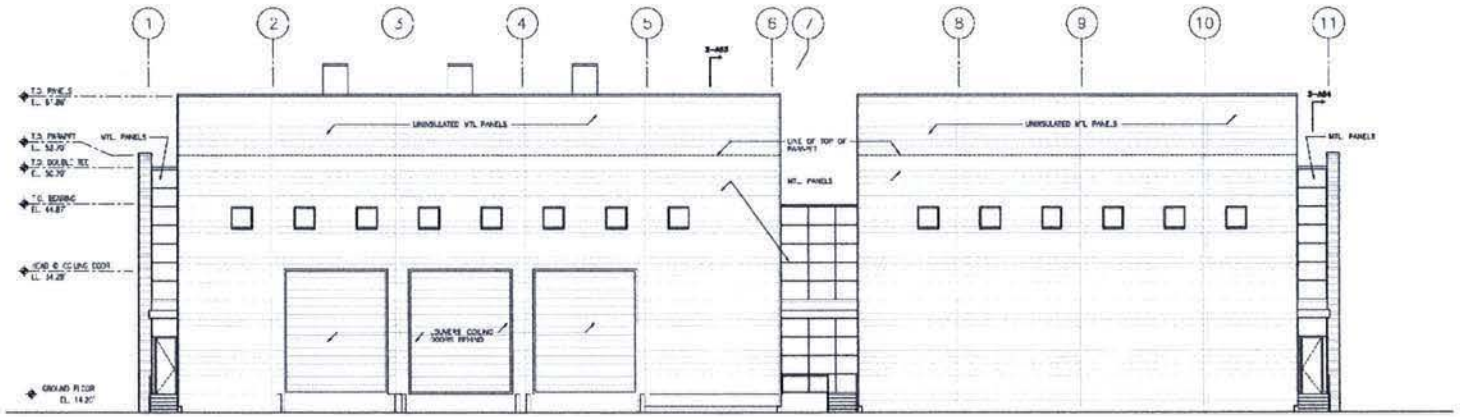
BDS Professional Corporation
Consulting Engineers
SORG ARCHITECTS

A-58

JOB XA01		SHEET XX OF XXX
CONSTRUCTION	IN-HOUSE CONTRACT NO.	030180
DESIGN	DFB, F F NO. / DSH NO.	374 WSA
DESIGN MGR.	IN HOUSE E.P.M.C. NO.	FPMC-V
INDEX NO. 38C-XA01	FIRE/EMB. RED-SEC DR.	

POST-BID REVISION

NO.	DESCRIPTION	BY	DATE



EXTERIOR ELEVATION 2
SCALE: 1/8"=1'-0" A-59

INTERMEDIATE SUBMITTAL

NO.	DESCRIPTION	BY	DATE

PRE-BID REVISION

DISTRICT OF COLUMBIA
WATER AND SEWER AUTHORITY

ADVANCED WASTEWATER TREATMENT PLANT
1000 SLOWPEN DIGESTERS FACILITY
SECOND CONTRACT - PROCESS FACILITIES - BOOK ONE

DIGESTER GAS BUILDING
EXTERIOR ELEVATION

DESIGNED	AS BUILT	DRAWN	T.L.
INVESTIGATED		C-CHECK	R. WONG
REVIEWED		SUBMITTED	XX
SURVEYED			
PROJECT	DATE	RECOMMENDED	
QUAD FILE	224-2-48		

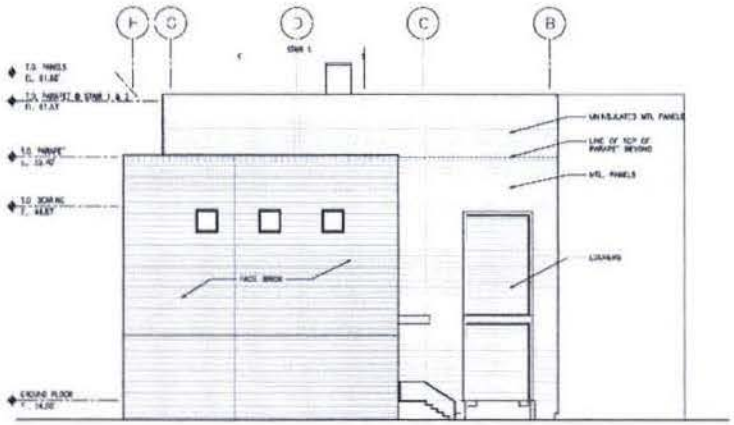
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BBS Professional Corporation
Consulting Engineers
SORG ARCHITECTS

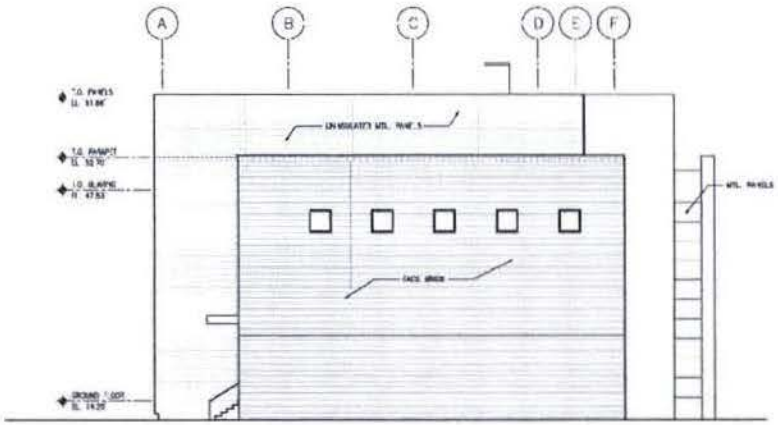
AUX XAO1	SHEET XX OF XXX
CONSTRUCTION	030160
DESIGN	371-WSA
DESIGN MGR.	LJMC-IV
INDEX NO. 36E XAO1	

POST-BID REVISION

NO.	DESCRIPTION	BY	DATE



WEST ELEVATION 2



EAST ELEVATION 1

INTERMEDIATE SUBMITTAL

NO.	DESCRIPTION	BY	DATE

PRE-BID REVISION

DISTRICT OF CO LIMRA
WATER AND SEWER AUTHORITY

ADVANCED WASTEWATER TREATMENT PLANT
EGG-SHAPED DIGESTERS FACILITY
GROUND IMPROVEMENT - PROCESS FACILITIES - WORK ONE

DIGESTER GAS BUILDING
EXTERIOR ELEVATIONS

ARCHITECT'S No.

AUTHORIZED		DRAWN	T.S.
DESIGN		CHECKED	C. BRAND
SURVEYED		SUBMITTED	XX
UPDATED	DATE 10/22/04	RECOMMENDED	
DRAW. FILE	324-2-01		

A-60

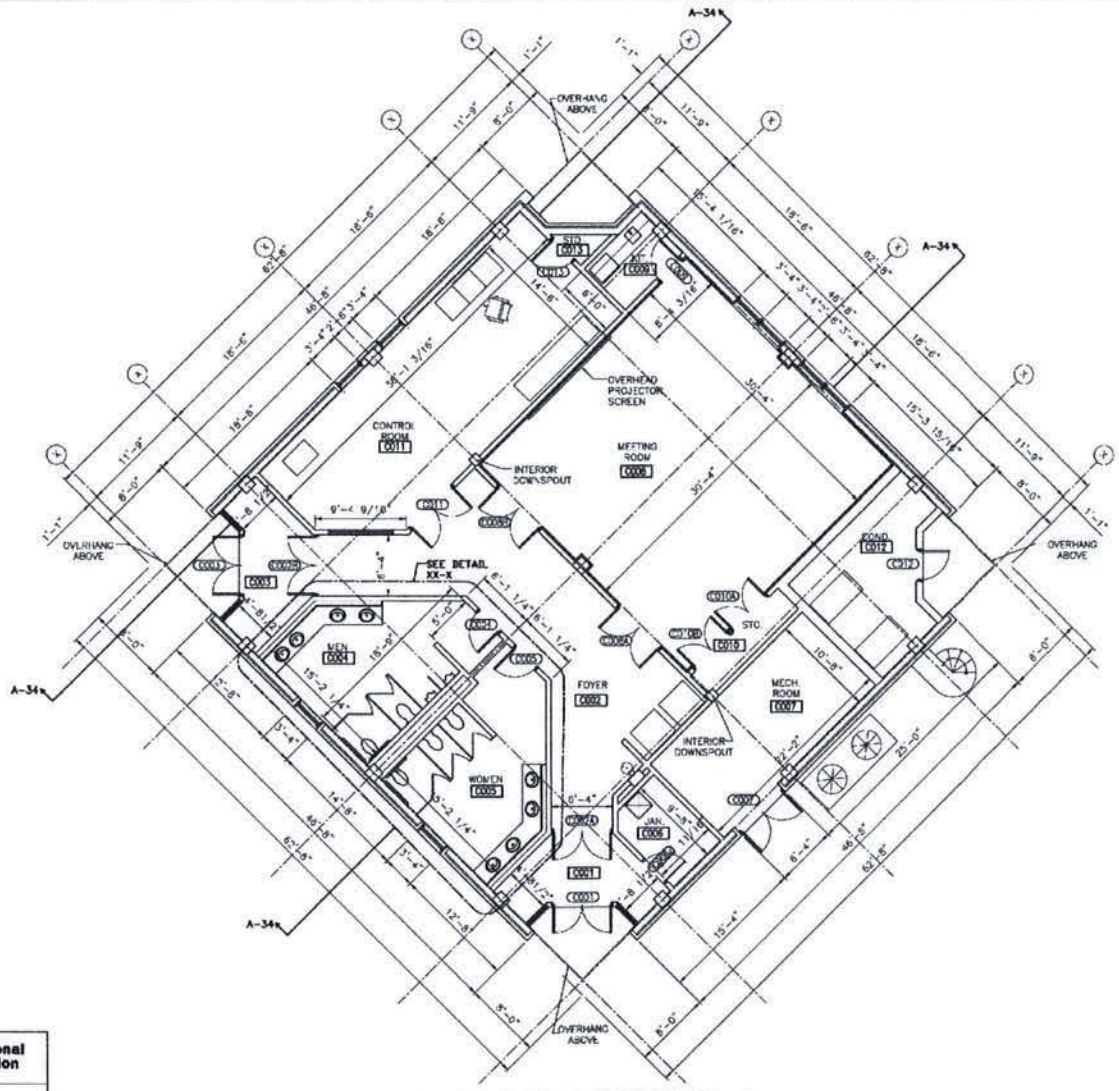
BBS Professional Corporation
Consulting Engineers

SORG ARCHITECTS

EXTERIOR ELEVATIONS 3
SCALE: 1/8"=1'-0" A-60

REDUCTION GENERATION SCALE

IF NOT 1" ON THIS



DIGESTER CONTROL BUILDING FLOOR PLAN 1
SCALE: 3/16"=1'-0" A-29

JOB XA01	SHEET XX OF XXX
CONSTRUCTION	C3C160
DESIGN	374 WSA
DESIGN MGR.	EPMC IV
INDEX NO. B6E-XA01	

POST-BID REVISION

INTERMEDIATE SUBMITTAL

PRE-BID REVISION

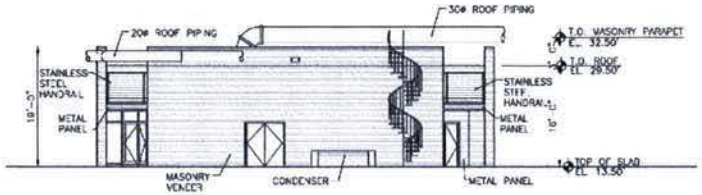
DISTRICT OF COLUMBIA
WATER AND SEWER AUTHORITY

ADVANCED WASTEWATER TREATMENT PLANT
TOG-N APFO EXTENTIONS FACILITY
SECOND CONTRACT - PROCESS FACILITIES - BOOK ONE

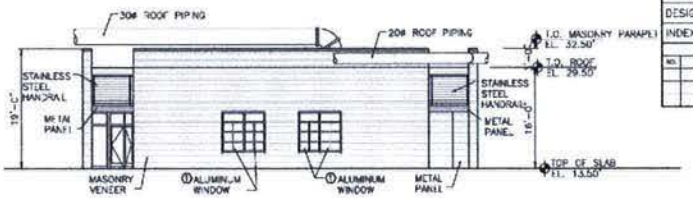
DIGESTER CONTROL BUILDING
FLOOR PLAN

Professional Corporation
Consulting Engineers
SORG
ARCHITECTS

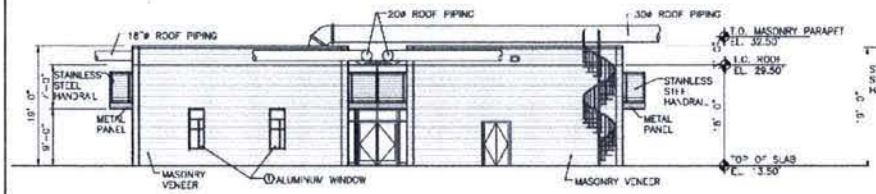
A-29



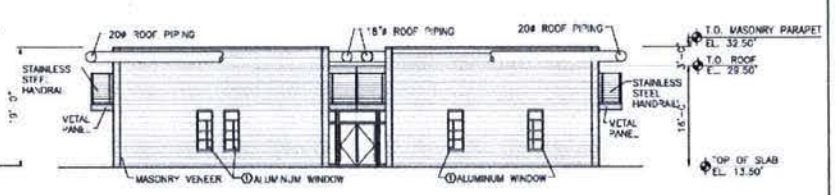
CONTROL BUILDING ELEVATION 1 (SOUTHEAST FACADE) A-33
SCALE: 1/8"=1'-0"



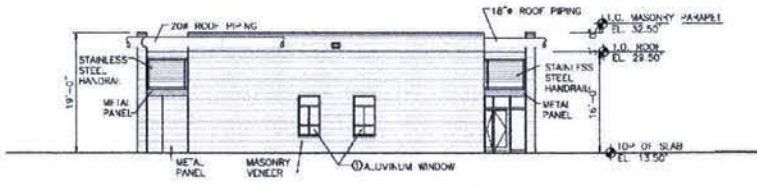
CONTROL BUILDING ELEVATION 2 (NORTHEAST FACADE) A-33
SCALE: 1/8"=1'-0"



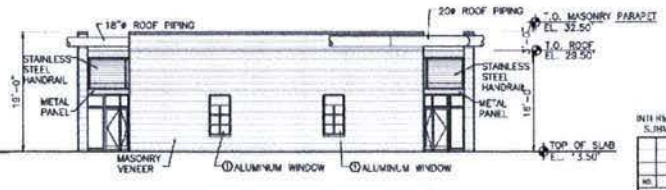
CONTROL BUILDING ELEVATION 3 (SOUTH FACADE) A-33
SCALE: 1/8"=1'-0"



CONTROL BUILDING ELEVATION 4 (WEST FACADE) A-33
SCALE: 1/8"=1'-0"



CONTROL BUILDING ELEVATION 5 (NORTH-WEST FACADE) A-33
SCALE: 1/8"=1'-0"



CONTROL BUILDING ELEVATION 6 (SOUTHWEST FACADE) A-33
SCALE: 1/8"=1'-0"

JOB XA01	SHEET XX OF XXX
CONSTRUCTION	CONTRACT NO. 030160
DESIGN	374-WSA
DESIGN MGR.	EPMC-IV
INDEX NO. 36E-XA01	FOREMAN-INSPECTOR

POST-BID REVISION

NO.	DESCRIPTION	BY	DATE

INTERIM DATA SUBMITTAL

NO.	DESCRIPTION	BY	DATE

PRE-BID REVISION

DISTRICT OF COLUMBIA
WATER AND SEWER AUTHORITY

ADVANCED WASTEWATER TREATMENT PLANT
EGG SHAPED DIGESTERS FACILITY
SECOND CONTRACT - EGG SHAPED DIGESTERS FACILITIES - BOOK ONE
DIGESTER CONTROL BUILDING ELEVATIONS

ARCHITECTURAL

SCALE AS SHOWN	DRAWN K. WA
CHECKED	CHECKED S. YANG
DESIGN	DESIGNED AS XA
SUBMITTED	
APPROVED Sub. 10/05/04	APPROVED/AS-BUILT
CONT. NO. 224 2 A 33	

A-33

BBS Professional Corporation
Consulting Engineers
SORG ARCHITECTS

View Montage

West From Fort Greble & Congress Heights

Northwest From Reagan National Airport

Northwest From Alexandria Waterfront







