ARNOLD & PORTER LLP

Nathan W Gross
Zoning and Land Use Specialist
Nathan_Gross@aporter.com
Not Engaged in the Practice of Law

202.942 5956
202 942 5999 Fax

555 Twelfth Street, NW
Washington, DC 20004-1206

October 28, 2004

Ms Carol Mitten, Chair
District of Columbia Zoning Commission
441 4th Street, N W
Suite 210
Washington, D C 20001

RECEIVED
D C OFFICE OF ZONING
2004 OCT 29 PM 12 29

Re Zoning Commission Case No 04-19 (WASA Digesters PUD)
Pre-Hearing Submission

Dear Ms Mitten

Submitted herewith are materials constituting the Pre-Hearing Submission in Case No 04-19, the WASA Digesters PUD, for construction of a complex of anaerobic sludge digesters at the Blue Plains Advanced Wastewater Treatment Facility, 5000 Overlook Drive, S W The Applicant is the D C Water and Sewer Authority and the land owner is the District of Columbia This application includes

1 Twenty (20) copies of the Pre-Hearing Statement and supporting materials, including twenty (20) copies of the reduced plans and one (1) set of full-size plans

2 A list of the names and addresses of all property within 200 feet of the subject property, on mailing labels

3 The hearing fee is waived for the Applicant because the PUD is for D C property and will be used for a government purpose 11 DCMR § 3043 1(a)

Thank you for your consideration of this application

ZONING COMMISSION
District of Columbia
CASE NO. 04-19
EXHIBIT NO. 16

Sincerely,
ARNOLD & PORTER

Cynthia A Giordano

Nathan W Gross, AICP

Enclosures

ZONING COMMISSION
District of Columbia
CASE NO.04-19
EXHIBIT NO.16

DISTRICT OF COLUMBIA
WATER AND SEWER AUTHORITY
Egg Shaped Digester Facility
Washington, D.C.



RECEIVED
D.C. OFFICE OF ZONING
2004 OCT 29 PM 12: 29

PRE-HEARING SUBMISSION TO THE

DISTRICT OF COLUMBIA
ZONING COMMISSION

FOR A

CONSOLIDATED PLANNED UNIT DEVELOPMENT

Zoning Commission Case No. 04-19

October 28, 2004

PRE-HEARING STATEMENT
THE DISTRICT OF COLUMBIA WATER AND SEWER AUTHORITY

FOR A PLANNED UNIT DEVELOPMENT AT 5000 OVERLOOK AVENUE, S.W.

Zoning Commission Case No. 04-19
October 28, 2004

I. BACKGROUND AND OVERVIEW

This is a Statement in support of the application of the District of Columbia Water and Sewer Authority ("WASA" or the "Authority") to the District of Columbia Zoning Commission for approval of a consolidated Planned Unit Development ("PUD"). WASA seeks approval to construct biosolids reduction and stabilization facilities known as the Egg-Shaped Digesters Facility (the "Digesters" or "Digesters Facility") at the Blue Plains Advanced Wastewater Treatment Plant ("Blue Plains" or "the Plant")

Blue Plains is in the southernmost part of the District of Columbia, situated generally between the Anacostia Freeway and the Potomac River The Plant is located approximately two and one-half miles southeast of Reagan National Airport and just over five miles south of the U S. Capitol. This location is in Ward 8 and within the boundaries of Advisory Neighborhood Commission ("ANC") 8D and has a street address of 5000 Overlook Avenue, S W

The proposed development is a state-of-the-art biosolids treatment facility Anaerobic digesters shaped in the form of large eggs will use microbial action, heat and mixing to process and reduce the volume of biosolids that are produced by wastewater treatment operations This process, also known as "sludge digestion," significantly reduces pathogens in the final product, greatly reduces odors by conducting the digestion process in sealed vessels and greatly reduces transportation costs due to much smaller volumes of end product

The PUD process offers the opportunity for a coordinated and comprehensive public review of this unique and very important public environmental facility Two areas of flexibility are requested in this PUD The first is from the requirement in 11 DCMR § 3202.3 that each building or structure be situated on a lot of record Because the nearest street frontage is approximately 900 feet removed from the PUD site, compliance with this requirement would be very difficult. The second area of requested flexibility relates

to yard and setback requirements for each structure on a lot. The authorization for the Zoning Commission to grant such flexibility in the PUD is set forth in § 2405 5.

Additional Federal Review. The U S Commission of Fine Arts ("CFA") has informed the Applicant that it has authority to review the design of the proposed new facility under the Shipstead-Luce Act, which mandates CFA review for projects adjacent to federal interests -- in this case nearby federal parkland and the Woodrow Wilson Bridge.

II. THE APPLICANT

The Applicant, the District of Columbia Water and Sewer Authority, is an independent authority of the District of Columbia government It has a separate legal existence within the District of Columbia government [1] The Authority began operations on October 1, 1996 and was created to finance, operate and provide essential retail water distribution and wastewater conveyance and treatment services[2] to approximately 570,000 people in the District of Columbia. WASA also provides wholesale wastewater conveyance and treatment services to approximately 1 6 million people in major suburban areas of this region The Blue Plains service area includes the District of Columbia (retail water and wastewater treatment service), parts of Fairfax and Loudoun Counties, the Town of Vienna in Virginia, parts of Prince George's and Montgomery Counties in Maryland, Washington-Dulles International Airport, and various agencies of the U S. Government (wholesale wastewater conveyance and treatment service)

An eleven-member Board of Directors governs the Authority The six District of Columbia members are appointed by the Mayor and confirmed by the City Council, two members are appointed from Prince George's County, Maryland on the recommendation of the Prince Georges County Executive; two members are appointed from Montgomery County, Maryland on the recommendation of the Montgomery County Executive, and one member is appointed from Fairfax County, Virginia on the recommendation of the Fairfax County Board of Supervisors. Each member has an alternate who is selected in the same manner. WASA's General Manager is the chief administrative officer of the Authority and is responsible for all operations [3]

III. THE SITE AND THE SURROUNDING AREA

The plant is located on a large parcel of land having approximately 159 acres of area It is improved with numerous buildings, as well as equipment, tanks and machinery utilized in the wastewater treatment process Buildings and structures at Blue Plains

---

[1] DC Code Ann § 34–220 02(a) (2001)

[2] DC Code Ann § 34-2201 01 (3) (2001)

[3] For details regarding the functions performed at Blue Plains and summary historical background information on wastewater treatment and water distribution in the District of Columbia, see *Exhibit A*

house a broad range of unique uses that are common to wastewater utilities The addition of the Egg-Shaped Digesters Facility is appropriate for this location and is a use that is compatible with the remainder of the Blue Plains treatment campus as well as surrounding uses.

The land uses surrounding Blue Plains are public uses, including D.C. Village, the U.S Naval Research Laboratory, the Potomac Job Corps Center, the D C Police Academy and Fire Testing Facility and the Architect of the Capitol's tree nursery. The nearest residential neighborhood, approximately one-half mile distant, is Belleview, located to the east of the Anacostia Freeway and the Police Academy grounds. Other neighborhoods still farther to the east include Congress Heights and Washington Highlands.

The residential neighborhoods to the east of the Anacostia Freeway are predominantly zoned R-2 (single family, semi-detached homes) and R-5-A (townhouses and garden apartments). Small areas zoned C-1 and C-2-A provide locations for neighborhood shopping and offices on major streets [4]

The federal properties devoted to federal public uses are unzoned, e.g , the Naval Research Laboratory, Bolling Air Force Base and Oxon Run Park. The Department of Labor's Potomac Job Corps Center and D C Village are zoned C-M-1

IV. THE PROJECT

A. The Need for the Proposed Egg-Shaped Digesters Facility

The proposed Egg-Shaped Digesters Facility will add state-of-the-art biosolids treatment technology to current solids processing operations, as part of the Authority's continuing mission to modernize and improve the efficiency of operations at the Blue Plains Advanced Wastewater Treatment Plant

Egg-shaped anaerobic digesters have been used at wastewater treatment plants in Europe for over 30 years and have become much more common in the United States in the past decade There are at least twenty-nine (29) installations throughout the United States. The closest is in Baltimore, Maryland Several hundred similar installations operate thousands of egg-shaped digesters worldwide

The proposed Egg-Shaped Digesters are large, sealed, vessels that use microbial action, heat and internal blending mechanisms (mixers) to reduce the amount of biosolids produced at Blue Plains Plant operations currently produce approximately 1,300 wet tons of biosolids every day Operation of the Egg-Shaped Digester Facility will reduce

---

[4] See the *Aerial Photographs* of Blue Plains and the surrounding area in the plans attached to this Statement. which depict the PUD Site as well as some key functional structures and areas, such as the Central Operations Building, Solids Processing Building, and Sedimentation Tanks Also see the *Zoning Map*, which includes building footprints on Blue Plains and the surrounding areas

the amount of biosolids produced by Plant operations to approximately 650 wet tons per day.

Numerous efficiencies and public benefits will result from the use of egg-shaped digesters, including:

- Greater biosolids treatment capacity using the same amount of land compared to conventional type digesters;
- Reduced odor emissions at Blue Plains and at land application sites;
- Reduced volume of biosolids produced,
- Reduced truck traffic (1.2 million miles annually) as a consequence of reduced volume of biosolids requiring transport,
- Production of recyclable end product, and
- Production of digester gas that can be used for power generation of enough electricity to power approximately 10,000 homes

It is anticipated that the operation of the anaerobic egg- shaped digesters will save the Authority, its wholesale customers and retail rate payers approximately $16 million annually in operating and maintenance costs.

B. The Proposed Development Plan

The ***Egg-Shaped Digesters*** will be built on the site of a now-demolished outdoor sludge composting facility in the south central section of the Blue Plains site.[5] The proposed new Digesters Facility will be located to the east of the existing Solids Processing Building and approximately 900 feet west of the Anacostia Freeway (Interstate 295). The land area to be occupied by the proposed new facility (the "PUD Site") is approximately 351,600 square feet, or 8.07 acres.[6] Thus, the PUD Site clearly meets the minimum area requirement of 15,000 square feet for a PUD in the C-M-3 District

Eight Digesters are proposed to meet WASA's treatment capacity needs. Egg-shaped digesters are tall and tapered containers for mixing, heating and processing thickened sludge. The egg shape is a most efficient shape for mixing and processing the thickened sludge. Each Digester is approximately 95 feet wide at its widest point and has

---

[5] See the General (Site) Plan and the Architectural Plans in the set of plans attached to this Statement.

[6] A metes and bounds drawing of the PUD Site is found in the attached plans

a volume of 4 5 million gallons Basement space will be used for piping, electrical and mechanical equipment, control rooms, storage and other operations [7]

Atop each Digester will be a ***Gas Dome Structure*** to support mechanical equipment and to provide access to the interior of the Digesters for maintenance and inspection.

Three or four ***Access Towers*** provide vertical access from the ground to the walkways. Four ***Silos*** for digested biosolids will be constructed to the west of the Digesters The issue of compliance with height limits for the foregoing structural elements is addressed in the following section, "Zoning and Requested Flexibility Under the PUD "

The proposed development includes several other structures that are all allowed as a matter-of-right in the C-M-3 District, i.e , as to use, height and bulk, as described below The applicant requests that the Zoning Commission allow these auxiliary buildings to proceed as a matter of right while acknowledging their locations and existence in the PUD site plan Applicant notes that the U S Commission of Fine Arts ("CFA") has jurisdiction over the exterior design of the structures Preliminary meetings with CFA staff have been quite positive regarding the proposed design The additional facilities are described in the following paragraphs

The Digester Gas Building will be faced with the same brick that is found on some of the art deco buildings at Blue Plains and in other portions of the new Digesters Facility The metal panels that will be used to face portions of the building will compliment those used on the egg-shaped digester. The Digester Gas Building will be a handsome and compatible addition to the Blue Plains facility

A new ***Digester Control Building*** and two electrical equipment buildings will be located along the centerline of the digester complex over an underground service tunnel Each of these buildings will be one story in height and have a floor area of 4,600 square feet. The Digester Control Building will serve as a welcome area for visitors and provide control and assembly space for plant staff.

Two ***Gas Holders*** will be located to the south of the Digesters and will rise approximately sixty (60) feet above finished grade. The Gas Holders are required to maintain adequate levels of gas pressure in the Digesters Up to three enclosed ***Waste Gas Flares*** will be located south of the Digester Gas Building.

Finally, space has been reserved at the southwest corner of the site for a future ***Power Generation Facility*** that may provide for beneficial use of the gas generated as a byproduct of the digester process This will be a one-story building with compatible architectural treatment.

---

[7] See the photographs, drawings and plans in the plans attached to this Statement

Forty parking spaces will be provided on the PUD site Regarding the auxiliary buildings, the parking requirement for office space in the C-M-3 District is, "In excess of 2,000 square feet, 1 space for each 800 square feet." (§2101 1) Based on this requirement and a gross floor area of 23,654 s.f , 28 parking spaces are required The Digesters site plan provides 40 parking spaces and is therefore in full compliance with zoning requirements The applicant notes that this project will not generate a net increase in employees at Blue Plains (or at most a minor increase), and that many of the employees who will work on the Digesters site already have reserved parking spaces elsewhere at Blue Plains. There will be no adverse effect on other functions at Blue Plains or upon properties surrounding Blue Plains

The site plan for the new Digesters Facility also includes new service roadways to provide access to the facility for staff and visitors and to provide for operating, maintenance and repair functions Areas bordering the site will be landscaped with a patterned hardscape reflecting the patterns achieved by the cladding on the digester eggs and a variety of vegetation in planters Due to below-grade construction and piping runs, only limited areas at grade will accommodate small, permanent flowering trees, shrubs and other vegetation.[8]

V. ZONING AND REQUESTED FLEXIBILITY IN THE PUD

A. Existing Zoning

The entire Blue Plains Advanced Wastewater Treatment Plant is zoned C-M-3 The C-M ("Commercial-Manufacturing") zones are industrial zones designed to provide " . sites for heavy commercial and light manufacturing activities employing large numbers of people and requiring some heavy machinery under controls that would minimize any adverse effect on other nearby, more restrictive districts." (11 DCMR 800.1) C-M-3 allows a maximum height of 90 feet and a maximum Floor Area Ratio ("FAR") of 6 0 No increase in height or FAR is allowed with a planned unit development, other than the minor 5% increase allowed under § 2405.3. The proposed FAR in this PUD project is well below the 6.0 FAR maximum, because the Digesters create very little floor area, and the auxiliary buildings are small However, maximum height is an issue, and a height variance is requested in a separate application as part of this case.

In the early 1970's the Blue Plains site was rezoned from C-M-2 (60-foot height limit, 4 0 FAR) to C-M-3 primarily to accommodate the Solids Processing Building This building is still in operation and a portion of the building has a height of 90 feet Also approved at the time were smokestacks with a height of 110 feet.

---

[8] See the Landscape Plan in the attached set of plans

The District of Columbia owns the property upon which the plant is located Accordingly, pursuant to the Zoning Regulations at 11 DCMR § 106.5, Blue Plains as a whole, i e , a District of Columbia public facility in existence as of May 23, 1990, is not subject to zoning (§ 106 5(a)), but under § 106.5(b), ".. any change or expansion in the use of land or buildings or any new construction or additions to buildings shall be subject to zoning." Hence, this PUD application.

B. Required Lot of Record

Currently there are no record lots at Blue Plains, and the only public street frontage -- which is a requirement for the creation of a record lot -- is I-295, which is located approximately 900 feet from the PUD site. Blue Plains consists of parcels of land that have not been subdivided for many years All of the various structures at Blue Plains comprise a single facility, and the various components share parking facilities and private access roads. To try to unscramble these arrangements for the purpose of creating single buildings on single lots that meet the requirements for street frontage and building setbacks, in particular, would be impractical and would serve no useful purpose As a result, the creation of a record lot for the Digesters complex is impractical.

The Applicant therefore seeks flexibility from the requirement of § 3202 3 that each principal structure be located on a separate lot of record. The Applicant proposes instead to create theoretical lots, with each lot accommodating a single principal structure. Such flexibility appears to be allowed in nonresidential zones by § 2517, which provides matter-of-right standards for multiple buildings on a single lot Also, § 2405 5 of the PUD regulations allows the Zoning Commission as part of a PUD to "approve yards or courts greater or lesser than the normal requirements, depending upon the exact circumstances of the project " Flexibility is therefore requested to allow the proposed Digesters project to exist within It should be noted that the definition of "Lot" in § 199 includes lots other than simply lots of record

C. Required Yards/Setbacks

Subsection 2405 of the Zoning Regulations allows the Zoning Commission, as part of a PUD, to approve deviations from normal yard and court requirements, as noted above In order to address the reasonableness of such flexibility in this case, this PUD Statement reviews the requirements of Section 2517 of the Zoning Regulations ("Exceptions to Building Lot Control), which allows two or more principal buildings or structures to be erected on a single subdivided lot that is not within 25 feet of a residential zone (§ 2517 1). The Applicant proposes to create theoretical lots following the bounds set forth in the metes and bounds drawing in plans attached to this Statement, in such manner that each principal structure is situated on its own lot. Using these boundaries the setback criteria found in §§ 2517 2 and 2517 3 are reviewed below

2517 2 The number of principal buildings permitted by this section shall not be limited, provided, that the applicant for a permit to build submits satisfactory evidence

that of the requirements of this chapter (such as use, height, bulk and open spaces around each building) as provided by §§ 3202 3 and 3202 3 are met

Comments.

Use. The requested uses include office uses and industrial processing uses, both of which are allowed as a matter of right in the existing C-M-3 District applicable to the Property.

Height. Some of the structural elements of the egg digesters exceed the allowed 90-foot height limit in the C-M-3 District The applicant has concurrently applied for a height variance to resolve this issue The remaining buildings and structures on the site comply with the 90-foot height limit of 90 feet in the C-M-3 District

Bulk. The proposed bulk, or FAR, in this application is 23,654 s f. of gross floor area, or 0.067 FAR on the PUD site of 351,600 s f. This is obviously an extremely low density in FAR terms of 0 067 FAR. Given the isolated setting (from any nearby residences, commercial uses or critical vistas), the Applicant believes that the proposed bulk of the structures is completely acceptable and that the architectural design is superior, especially for industrial structures in this setting The bulk of the auxiliary buildings is relatively small, all of them being low in height and gross floor area and designed to be compatible with the design of certain other buildings at Blue Plains. The proposed gross floor area of 23,654 s.f. on such a large site is obviously well within the allowed 6 0 FAR of bulk allowed in the C-M-3 District.

Open Spaces. The required open spaces around each building are discussed below under § 2517.3.

2517 3 If a principal building has no street frontage, as determined by dividing the subdivided lot into theoretical building sites for each principal building

(a) The front of the building shall be the side upon which the principal entrance is located,

(b) Open space in front of the entrance shall be provided that is equivalent to the required rear yard in the [C-M-3] zone district, and

(c) A rear yard shall be required

Comment.

The Applicant would first emphasize that setback requirements exist in substantial part to protect the light, air and privacy of neighboring property. In this case the surrounding property is all part of the Blue Plains plant, and the spacing relationships are functionally designed to carry out the mandate of advanced wastewater treatment for the District of Columbia.

Second, the buildings and structures in the digesters complex were designed to achieve certain functional efficiencies and requirements as a unified concept, and the digesters especially must connect underground with pipes to other parts of Blue Plains Thus, there is a sound basis upon which the Zoning Commission can grant a waiver of the setback requirements, which are discussed below

Regarding all structures, no side yard is required in the CM District However, (b) and (c) above require a rear yard setback and a front yard setback equal to the required rear yard The rear yard requirement in the CM zones is 2 5 inches for each 1 foot in height of the building or structure. This requirement is addressed below for each of the structures on the site Please refer to the drawing of proposed theoretical lots in the plans attached to this Statement

Digesters. The Digesters and two of the auxiliary buildings (the ***Digester Control Building*** and **Digester Electrical Building No. 2**) are interconnected above grade an consequently are considered one structure in zoning. The boundaries of the proposed theoretical lot for this structure immediately surround the Digesters, following these roads Digester Road North, Digester Road South, Nitrification Road and Digester Road West. The maximum height of any component in this structure is 118 feet, therefore, the required rear yard is 24.6 feet, and the required front setback is also 24 6 feet. Clearly, the Digester structure is not setback from any of the four sides of the lot by 24 6 feet, and this structure does not comply with the front or rear yard setback requirements Whichever side is chosen to be the front would result in the opposite lot line being the rear, and in each case there is not 24.6 feet of setback needed to comply with the requirement

Digested Sludge Storage Silos (4) and Digester Electrical Building 1. This complex, again a single structure because of above-grade interconnections, is directly across Digester Road West from the Digesters complex. As with the Digesters, the lot lines surround the structure closely. The silos are 101 feet in height, resulting in a front and rear setback requirement of 21 feet. Again, the proposed theoretical lot boundaries are too close on all sides to this structure to achieve compliance, and the Applicant requests a waiver of the setback requirements

Future Co-Generation (or Other) Building. To the south of the Silos is a lot with a building outline shown for a future building The height of this building cannot be determined because it is not certain that it will be a Co-Generation building If it is, it may also include a drying of biosolids function that would affect the height. The Applicant requests a waiver of the required front and rear setbacks for a structure that could be up to 90 feet in height. This is the matter-of-right height in the C-M-3 District.

Digester Gas Building. To the south of the Digesters and across Digester Road South is the Digester Gas Building, which has a height of 52.5 feet and thus a front and rear setback requirement of 11 feet. With the front of the building on Digester Road

South and the rear yard to the south of the building, this building complies with the required front and rear yard setbacks.

Gas Holders. Gas Holders numbers 1 and 2 are located to the east of the Digester Gas Building. They are 70 feet in height and thus have setback requirement of 14 6 feet Using Digester Road South as the front of the structures, these structures comply with the front and rear setbacks required.

EDF USS. This small structure to the east of the gas holders and to the south of the Digesters is the Unit (Electric) Substation for the EDF (for Egg-Shaped Digesters Facility). The height of this electric substation will be 12-15 feet. Using 15 feet, the required setbacks would be 3 125 feet The USS complies with this front and rear yard setback requirement

The Applicant believes that approval of the requested flexibility regarding setbacks is in keeping with the first PUD purpose clause in § 2400.2 "The overall goal is to permit flexibility of development and other incentives " In the opinion of the Applicant, the proposed layout of buildings and structures achieves necessary functional objectives, internal to the digesters site as well as in relationship to other functions at Blue Plains, while achieving superior architectural design and adequate open spaces in the site plan

VI. PUBLIC BENEFITS OF THE PROPOSED PLANNED UNIT DEVELOPMENT

Section 2403 of the Zoning Regulations sets forth the standards for evaluating and approving a PUD application, generally in three categories The PUD must exhibit public benefits and project amenities for review by the Zoning Commission (§ 2403.9), must have an acceptable level of impacts on the surrounding neighborhood and on public services (§ 2403 3) and must be found to be "not inconsistent" with the *Comprehensive Plan for the National Capitol* (the "Comprehensive Plan") and other public policies. The Applicant believes that the proposed PUD complies with the standards for approval of a PUD, as set forth below

1. Major Public Interest Project. The proposed Egg-shaped Digesters Facility is a major initiative by the Authority to improve wastewater treatment at Blue Plains, the largest advanced wastewater treatment plant in the world This project will add a "state-of-the-art" bio solids management technology to the current advanced processing operations. Public benefits that will result from advanced anaerobic treatment are numerous and substantial, including·

- ⇨ Greater treatment capacity than conventional digesters while using the same amount of land,
- ⇨ Elimination of approximately one half of the volume of biosolids produced,
- ⇨ Reduced odor emissions at Blue Plains and at rural land application sites,
- ⇨ Reduction in truck traffic (1 2 million annually) because of reduced volumes;

- ⇨ Production of a recyclable end product,
- ⇨ Production of digester gas that can be used for power generation, and
- ⇨ Operations and maintenance annual savings to WASA and its regional wholesale customer and local retail customers of approximately $16 million.

The proposed anaerobic digesters facility will enable the Authority to provide the city and the region with advanced wastewater treatment and other services on an economical basis.

2. Consistency with the Comprehensive Plan. The proposed PUD project is fully consistent with policies in several elements of the Comprehensive Plan, as summarized below

A. Public Facilities Element. The Comprehensive Plan includes an element devoted to Public Facilities (10 DCMR 6). Section 600.3 states.

> *Expansion of sewage treatment capacity and construction of related stormwater management projects are essential components of the public facilities program for the next two (2) decades High priority must be given to a solution to the District's solid waste and disposal needs. Regardless of which approach is selected, major Capital investments are anticipated.*

The new Digesters Facility will improve biosolids treatment capacity at Blue Plains while saving space for wastewater or stormwater treatment on-site and is directly in furtherance of this element of the Plan

The Egg-Shaped Digesters Facility is an essential part of WASA's Biosolids Management Program This program, which was developed with local and regional collaboration, focuses on end use options (including recycling) for the biosolids generated at the Plant [9]

---

[9] WASA's biosolids management program was developed using a "decision science" methodology that achieved consensus among several institutional stakeholders and was conducted over several months The stakeholder group established a vision, mission and goals, developed criteria for success, analyzed information and ultimately suggested a solution that met WASA's approval The stakeholder group consisted of representatives from the District of Columbia, Prince Georges County, Maryland, Montgomery County, Maryland, Fairfax County, Virginia, the Washington Suburban Sanitary Commission, the United States Environmental Protection Agency, the State of Maryland Department of Environment, and the Metropolitan Washington Council of Governments Fifteen options for biosolids processing, reuse and management were evaluated The highest ranked option called for 100% biosolids digestion and continued recycling through land application. The final plan calls for improvements to existing solids-processing operations at the Plant (not the subject of this application), construction of the Eggs Shaped Digesters Facility (the subject of this application), and improvements to existing sludge thickening, dewatering and scum handling systems (not the subject of this application) at the Plant

B. ***Environmental Element.*** Section 404 (Solid Waste Management) of the Environmental Element includes the following policies that strongly support approval of the Digesters Facility and this PUD·

404 2(a) Develop and implement a reliable program of solid waste and sludge management that is cost-effective, environmentally sound, and fully coordinated with all responsible and jurisdictions and regulatory bodies

404 2(c) Encourage the recovery and recycling of solid waste and sewage sludge materials, for both the public and private sectors, through appropriate regulatory, management and marketing strategies

404 2(d) promote the development of cost-effective and environmentally sound techniques to extract energy from wastes, including sludge

C. ***Land Use Element.*** The Land Use Element in Chapter 11 of the Comprehensive Plan includes the "Generalized Land Use Map," which indicates the adopted policies for future development throughout the city The Blue Plains facility is designated as a "Local Public Facility " Clearly, the advanced wastewater treatment facilities proposed in this PUD are local public facilities and are part of the larger Blue Plains facility

3. Superior Architectural Design.

The Digesters Facility presents a unique architectural design challenge that has been met with a proposed design that is superior. CFA staff members have been strongly supportive of the architectural treatment that is being proposed.

Elevated connecting walkways and their supporting members are defining elements of the egg-shaped digesters. Supporting members for the elevated walkways have been designed in a fashion similar to the cast iron and wrought iron bridges that were developed by the eminent designers Calvert Vaux and Jacob Wrey Mould. Vaux and Mould were responsible for many elegant bridge designs in the mid-to late 19th Century and are the designers for a series of bridges in New York's Central Park The design of the elevated walkways finds inspiration from visual themes that are familiar to and associated with the Nation's Capitol.

The cladding for the digester eggs is "wrapped" around the form of the eggs, thereby maintaining the integrity of the inner shape of the vessel. The cladding panels will be aluminum or stainless steel with different finishes to achieve the pattern shown in the exhibits that accompany this submission. The addition of an additional cladding finish not only enhances the appearance of the eggs, but the patterned surface this produces also tends to break down their monolithic appearance and somewhat reduce the egg's overall mass.

The use of steel or aluminum and brick as primary materials is in keeping with the industrial nature of the Digesters Facility and the industrial character of Blue Plains. While the bulk and prominence of the egg-shaped digester and their supporting structures are not amenable to disguise, the proposed treatment of the Digesters and support structures is a more refined solution than typically seen in this type of installation

The use of a similar brick to that used in the older buildings at Blue Plains (the Wastewater Pumping Station, the Chemical Building and the Heat Exchanger Building, for example) for the Digester Gas Building and the access towers is appropriate since it provides for visual continuity and picks up on the simplified art deco style of these structures The design treatment could be called the "Washington" solution since it is composed of forms similar in scale and proportion to those commonly found in the national capital and while still an industrial complex exhibits a refinement of style and restrained use of materials that is common to the city's architectural monuments.

4. No Adverse Effects on Surrounding Area. Subsection 2403 3 of the PUD evaluation standards states

> *The impact of the project on the surrounding area and on the operation of city services and facilities shall not be found to be unacceptable, but shall instead be found to be either favorable, capable of being mitigated, or acceptable given the quality of public benefits in the project*

The PUD project will have entirely favorable effects on the surrounding area and on the Authority's services and facilities by enhancing the effectiveness of this critical public facility, for reasons cited previously greater treatment capacity on the available land area; reduced volume of biosolids, reduced odor emissions and odor effects on nearby facilities and neighborhoods; reduced truck traffic and resulting air pollution, production of a recyclable end product; production of digester gas for power generation; and annual operating and maintenance savings. Addition of the Digesters Facility at Blue Plains will in fact lessen the impacts of operations on the community

As to potential visual effects, the views of the proposed egg-shaped digesters will be softened by the large distances from the relevant vantage points over the Potomac River, by the low elevation of the site, and on the landward side by trees that provide screening and large land areas devoted to public, generally institutional uses. Moreover, the Authority believes that the architect has created an exterior design treatment of superior quality that will make the Digesters pleasing and interesting for the public to observe. Accessory structures will fit well within the design character of other structures at Blue Plains

VII. COMMUNITY COMMENT

Over the course of the past year and more, representatives of the Authority have presented the plans for the digester facility to each of the Advisory Neighborhood Commissions in Ward 8 WASA has also shared the plans with the staff members of the

Commission of Fine Arts, the National Capital Planning Commission, the Office of Planning, and various other private and public entities A presentation to the Commission of Fine Arts for concept review is scheduled for the same date as the Zoning Commission hearing on this case. To date the plans have not encountered any opposition and indeed, have been praised regarding the design and the multiple public benefits that the project will deliver to the city and region The Applicant will, of course, return to ANC 8B, in which Blue Plains is located, for an additional meeting or meetings in order to secure a formal position of the ANC for the public hearing.

VIII. CONCLUSION

Based on the facts and analysis presented herein and in the record of the case, the proposed PUD meets the standards for approval under Chapter 24 of the Zoning Regulations The PUD plan provides for major public benefits and amenities, is not inconsistent with the Comprehensive Plan, and will result in no adverse effects on surrounding properties or on public facilities Moreover, construction of the proposed new Digesters Facility will advance important local and regional responsibilities of the District of Columbia Accordingly, the Applicant requests that the Zoning Commission approve the proposed PUD

Respectfully submitted,
ARNOLD & PORTER

Cynthia A. Giordano

Nathan W. Gross, AICP

Attachments

1249263

Exhibit A

Historical Background on Water Distribution and Wastewater Treatment in the District of Columbia

Historical Background - Water Supply The District of Columbia's public water service system began when the first water pipes were buried in 1809 along Pennsylvania Avenue from 9th to 14th Streets, N W The Washington Aqueduct Division (Aqueduct) of the United States Army Corps of Engineers was established in 1852 and awarded the mission of producing drinking water for the District and parts of Virginia. That mission continues today

The Corps of Engineers operates the Washington Aqueduct, two water treatment plants, raw water conduits, reservoirs, pumping stations, and treated water transmission lines The Aqueduct's original facilities were constructed from 1853 to 1864 Between 1901 and 1905 the McMillan Water Treatment Plant was constructed. Between 1925 and 1928 the Dalecarlia Water Treatment Plant was constructed Substantial improvements, additions, renovation and rehabilitation have occurred since that time.

Aqueduct facilities supply treated drinking water to the distribution systems of the WASA, Arlington County, the City of Falls Church, other parts of northern Virginia, and the federal government WASA is responsible for management of the treated drinking water distribution system that serves the District and other small governmental customers outside the District. The Authority's water storage and distribution system has nearly 1,300 miles of water distribution pipes, five pumping stations, five reservoirs, four elevated water storage tanks and 8,700 fire hydrants

Historical Background – Wastewater Treatment. Wastewater drainage of the central part of the District of Columbia was first accomplished through use of the Washington City Canal, which was completed in 1815 This canal ran through the tidal flats and marshes from the Potomac River near the foot of 17th Street SW, along present day Constitution Avenue, then through Canal Street to the Anacostia River at the foot of New Jersey Avenue [1] The District of Columbia's public sewerage system dates its origins from 1819 when culverts were constructed to drain run-off and ground water from public streets In 1822, the Washington Canal was filled in and replaced with the "Old B Street Sewer" (now Constitution Avenue).[2]

---

[1] Samuel A Greeley, Frank A Marston & Gustav J. Requardt, Board of Engineers, REPORT TO DISTRICT OF COLUMBIA DEPARTMENT OF SANITARY ENGINEERING ON IMPROVEMENTS TO SEWERAGE SYSTEM 2 (February 28, 1957)

[2] Id

In 1859 when the public water supply system was introduced, the need for adequate drainage increased rapidly During and after the Civil War the canal was the "source of much objection because of odors and poor drainage".[3] However, it was not until the post-Civil War period following epidemics of smallpox, typhoid and malaria, that a major construction program (1871 – 1874) resulted in what could be termed a "public sewer system". Eighty miles of sewers were constructed but soon proved inadequate

In 1890, a presidentially-appointed Board of Sanitary Engineers recommended extensive changes to the city's sewer system [4] Recommendations included selection of a discharge point farther downstream from the city center so that the discharge would not re-enter the city's groundwater or pollute the city's water supply system The discharge point that was selected by the Board of Engineers was an area known as Blue Plains, the southernmost point in the District of Columbia Eventually, the city's wastewater and storm water was conveyed to Blue Plains and, as was the practice of the time, discharged with only minimal treatment to the Potomac River

In 1933, a successor Board of Engineers recommended construction of a wastewater treatment plant at the Blue Plains location The proposed configuration of the new plant included sludge digestion tanks, a sludge dewatering process, and facilities to handle the gas produced from the sludge digestion process

Operations at the Blue Plains Wastewater Treatment Plant began in 1938 At that time, the treatment works served a population of 650,000 people. The original Plant was constructed at a cost of approximately $8,000,000 [5] Less than 100 million gallons per day were discharged into the Potomac River when the Plant opened The fundamental features of the original plant serve as the basis for current operations.

By the mid-1950's the population of the District of Columbia had grown to more than 800,000. The Federal establishment had grown significantly and the suburbs were rapidly expanding By 1959, Blue Plains had been expanded to a capacity of 240 million gallons per day and secondary treatment facilities were added[6].

By the mid-1960's the Potomac River's water quality had deteriorated to such a degree that President Lyndon Johnson declared the river a "national disgrace" Congress

---

[3] Id.

[4] Samuel M Gray, Rudolf Hering and Frederick P Stearns served on this Board

[5] Id 98-125

[6] Secondary treatment adds processes that supplement primary treatment operations These added processes remove additional biodegradable organic matter and suspended solids from the wastewater also disinfection treatment is employed before the effluent is discharged Source Wastewater Engineering Treatment and Reuse, Metcalf & EDDY, Inc , (revised by George Tchobanoglous, Franklyn L Burton H David Stensel, McGraw Hill, Higher Education 4th ed 2003) at 11

passed the Water Quality Act of 1965 in order to "enhance the quality and value of our water resources and to establish a national policy for the prevention, control and abatement of water pollution "[7] In 1966, Congress passed the Clean Water Restoration Act of 1966, which authorized grants to state planning agencies to assist the development of comprehensive pollution control and abatement plans [8] These laws signaled the national effort to clean up the country's water resources, which continues today

The Federal Water Pollution Control Act amendments of 1972 and regulations promulgated by the newly created (1970) Environmental Protection Agency eventually spurred the construction of new treatment facilities, local legislation to reduce sources of pollution, and development of new technology in the wastewater treatment industry

Between 1970 and the mid-1980's, Blue Plains expanded its capacity to 300 million gallons per day and introduced new treatment technology (tertiary treatment and advanced treatment) and greatly improved the quality of water discharged into the Potomac River [9] In 1997, the treatment capacity of Blue Plains was increased to 370 million gallons per day. A year later, 1998, the Potomac River was designated an American Heritage River Today, the award-winning[10] Blue Plains Advanced Wastewater Treatment Plant is the largest advanced wastewater treatment facility in the world

WASA's wastewater system contains approximately 1,800 miles of sanitary and combined sewer lines, 22 flow metering stations, nine off-site wastewater pumping stations and 16 stormwater pumping stations

The Blue Plains plant treats·

- all of the wastewater generated in the District of Columbia,
- approximately 90% of the wastewater generated in Montgomery County, Maryland,
- approximately 50% of the wastewater generated in Prince Georges County, Maryland, and
- approximately 15% of the wastewater generated in Fairfax County, Virginia

---

[7] Water Quality Act of 1965, Pub L No 89-234 79 Stat 498

[8] The Clean Water Restoration Act of 1966, Pub L No 89-753 80 Stat 1246

[9] Tertiary treatment processes remove the suspended solids that remain after secondary treatment usually by passing the wastewater over granular filtration media or by employing some other screening system Tertiary treatment at Blue Plains also includes processes that remove nutrients (nitrogen) from the wastewater Advanced treatment removes both dissolved and suspended solids from the wastewater

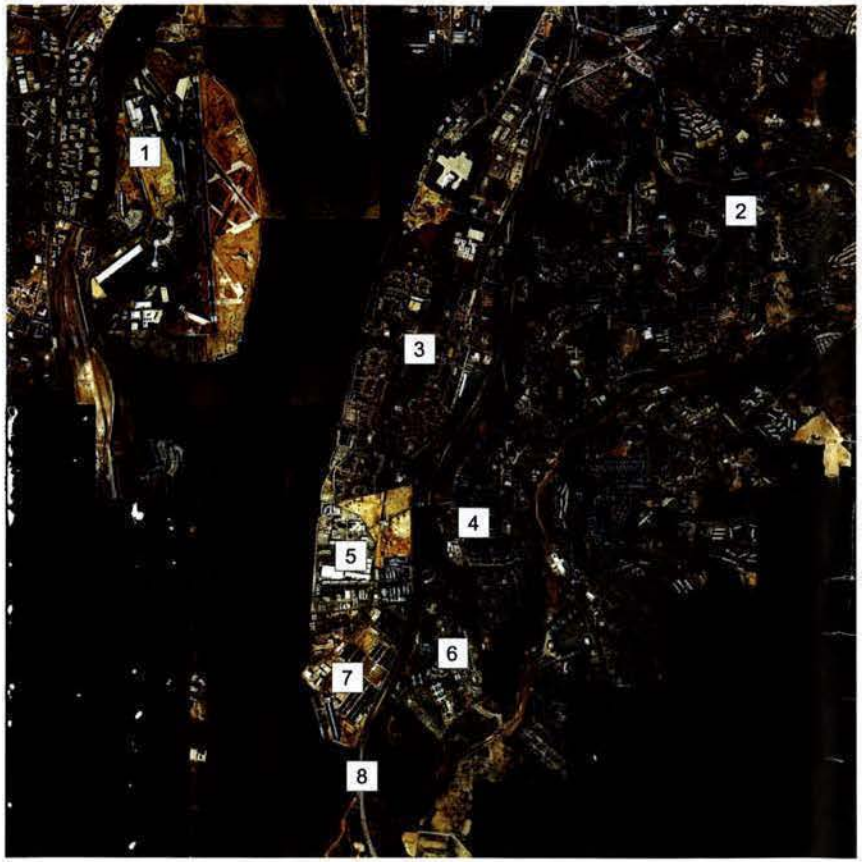
[10] Since 1998, the Authority has annually received the Association of Metropolitan Sewerage Agencies' Gold or Silver Award for plant performance, and has met all of its permit and other regulatory requirements for wastewater

Footnote continued on next page

Since 1996, WASA has expended approximately Three Hundred Seventy Two Million Dollars ($372,000,000) to improve and expand treatment capacity and processes at Blue Plains The Authority's current 10-year Capital Improvement Program includes additional Capital infrastructure investments of $1 6 billion in the water delivery and wastewater treatment systems More than $900 million will be applied to improvements at Blue Plains. At least $220 million of the investments planned for Blue Plains involve the design and construction the new Egg-Shaped Digesters Facility that is the subject of this PUD application

Exhibit B

Project Plans



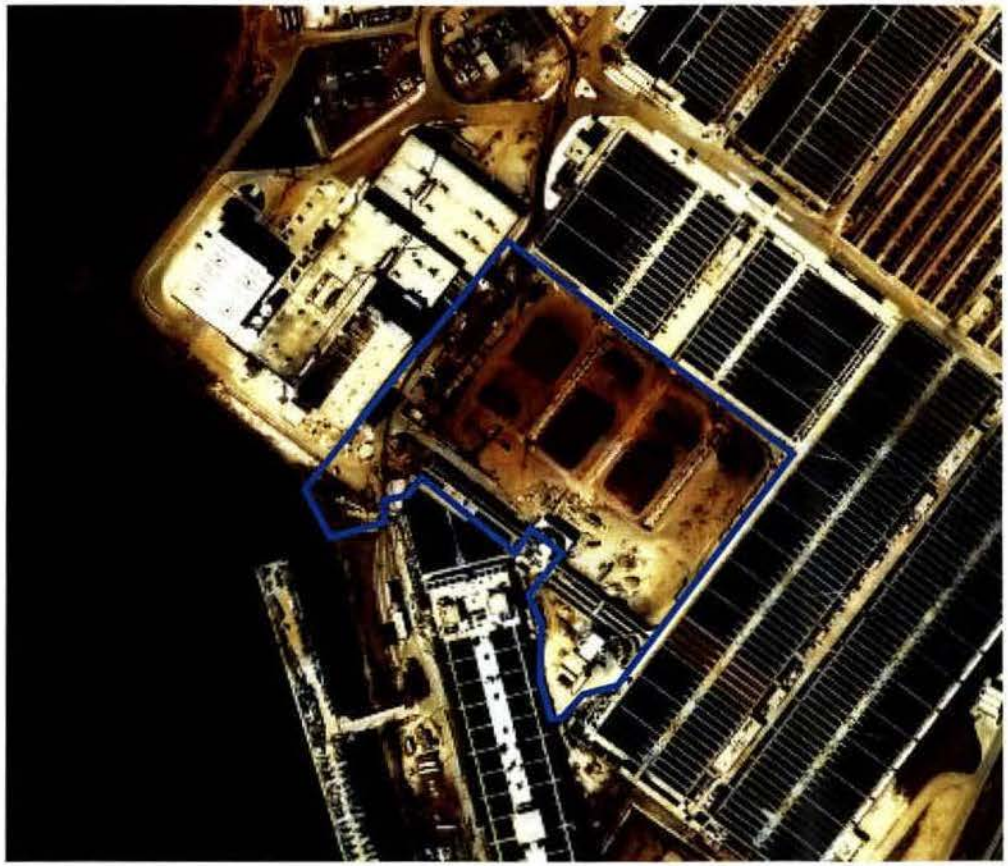
LEGEND:

1. Ronald Reagan National Airport
2. St. Elizabeth's Hospital
3. Bolling Air Force Base
4. Fort Greble Park
5. Naval Research Lab
6. DC Village
7. Blue Plains Advanced Wastewater Treatment Plant
8. Interstate 295

N

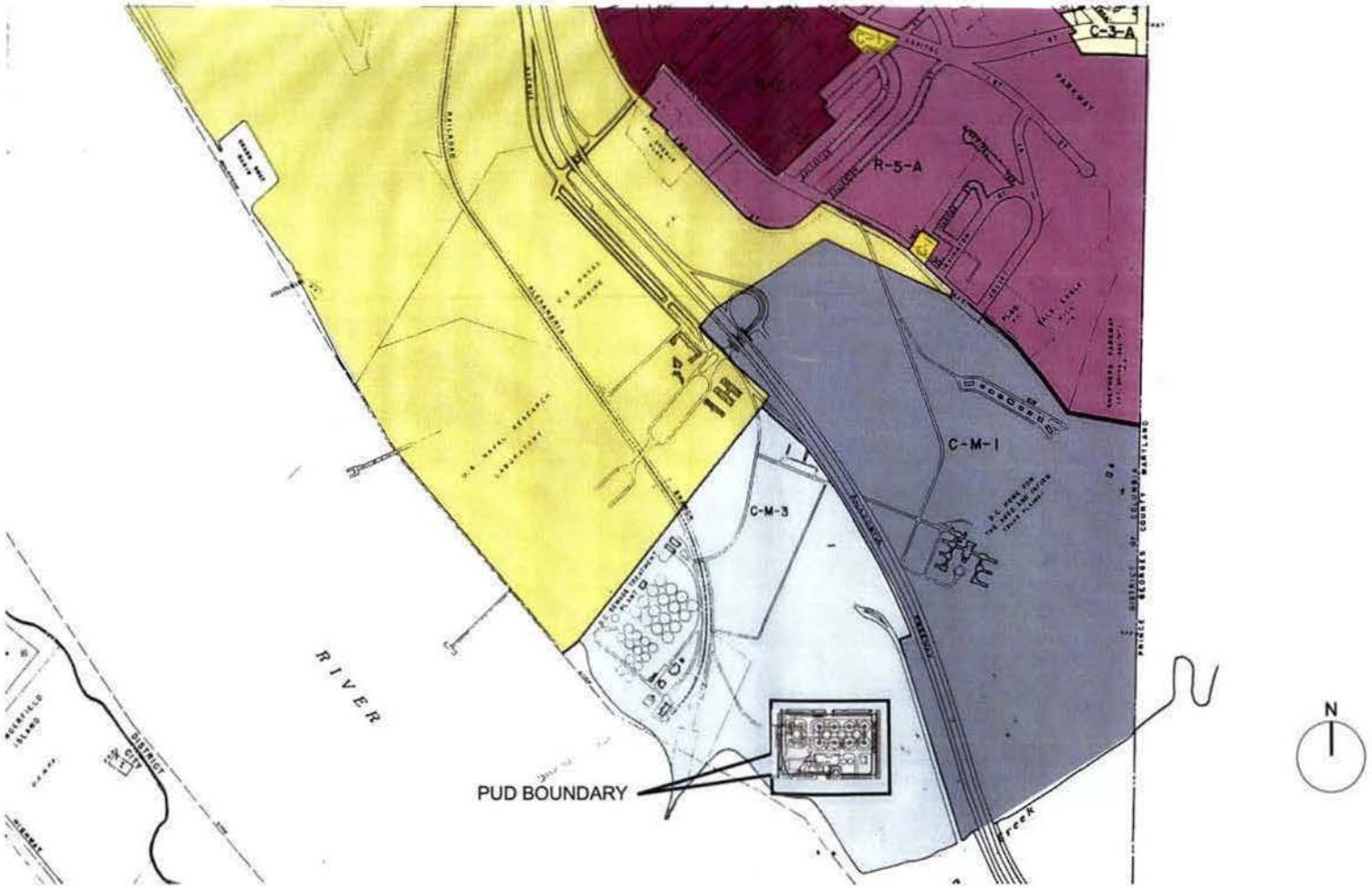


AERIAL PHOTOGRAPH OF BLUE PLAINS AND SURROUNDING AREAS
EXHIBIT B





AERIAL PHOTOGRAPH OF DIGESTER SITE
EXHIBIT C



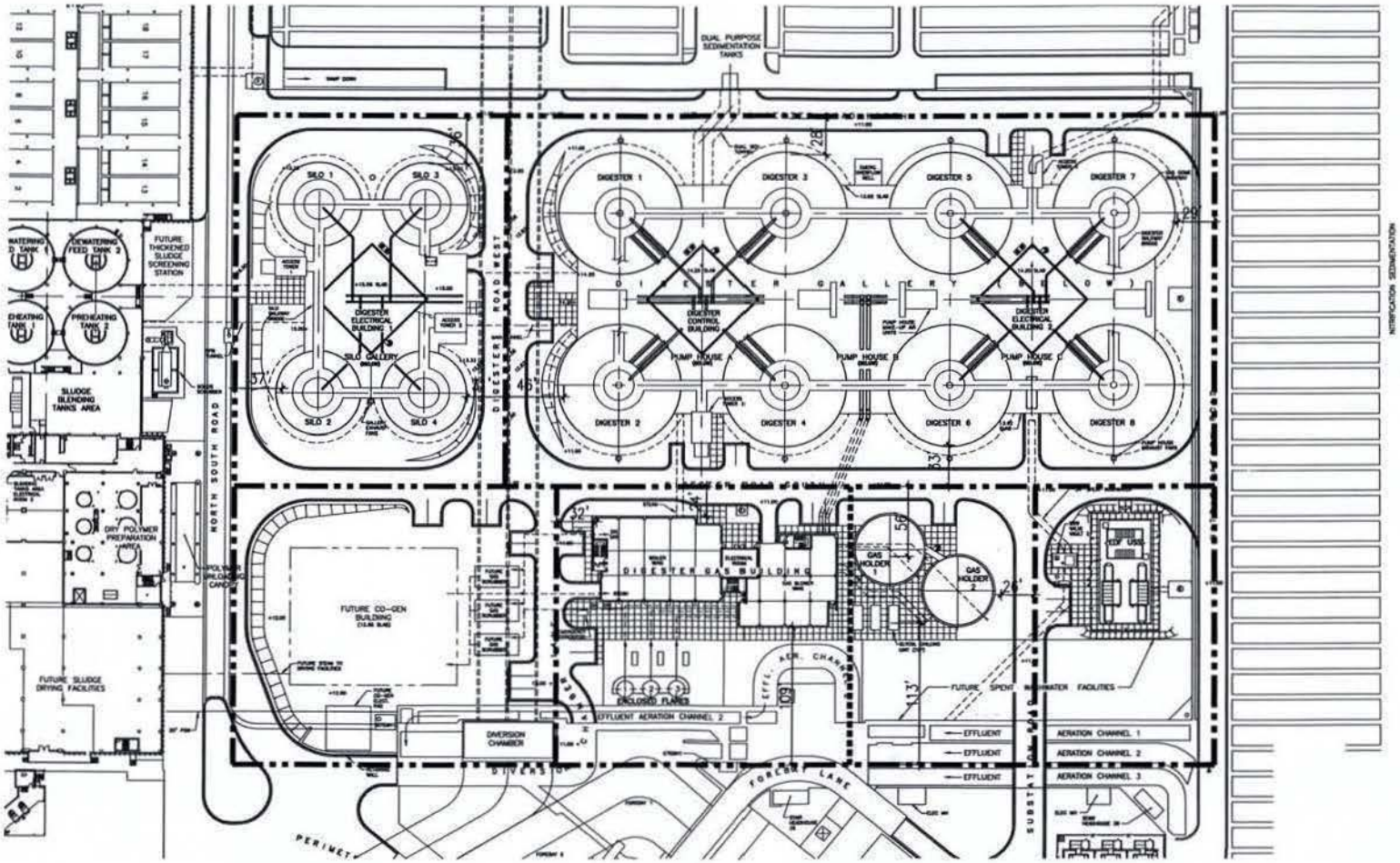
ZONING MAP
EXHIBIT D

REFER TO FOLLOWING SHEET

EGG SHAPED DIGESTER FACILITY

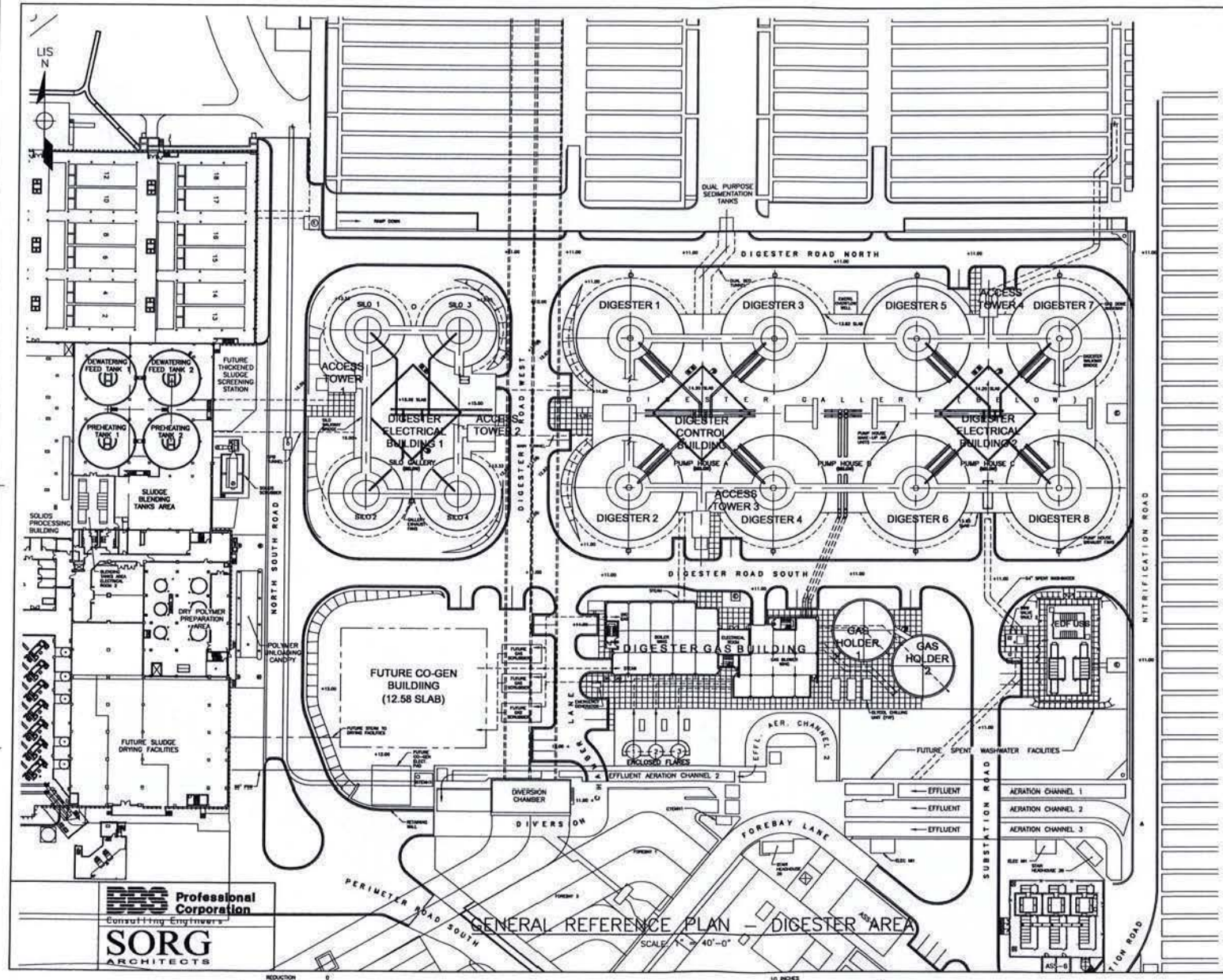
Washington, DC

BLUE PLAINS ADVANCED WASTEWATER TREATMENT PLANT



PUD BOUNDARY PLAN

EXHIBIT F



BBS Professional Corporation
Consulting Engineers
SORG ARCHITECTS

JOB XXXXX		SHEET 3 OF 11	
CONSTRUCTION	IN-HOUSE CONTRACT NO. ☒	030150	
DESIGN	DETS FILE NO. ☐ DCFA NO. ☒	374-WSA	
DESIGN MGR.	IN-HOUSE E.P.M.C. NO. ☒	EPMC-IV	
INDEX NO. XXXXX	FOREMAN-INSPECTOR		

POST-BID REVISION

NO.	DESCRIPTION	BY	DATE

KEY PLAN

PRELIMINARY SUBMITTAL

NO.	DESCRIPTION	BY	DATE

PRE-BID REVISION

DISTRICT OF COLUMBIA
WATER AND SEWER AUTHORITY

ADVANCED WASTEWATER TREATMENT PLANT
EGG-SHAPED DIGESTERS FACILITY
P.U.D. SUBMISSION

GENERAL REFERENCE PLAN
DIGESTER AREA

GENERAL

SCALE	AS SHOWN	DRAWN	P. SCHLEGEL
INTERCEPTOR		CHECKED	S. ROSER
SYSTEM		SUBMITTED	P. SCHLEGEL
SURVEYED			
DATE	04/30/04	RECOMMENDED	
CADD FILE	234_PUD-GEN_SITE-40		

REDUCTION VERIFICATION SCALE 0 10 INCHES

G-3

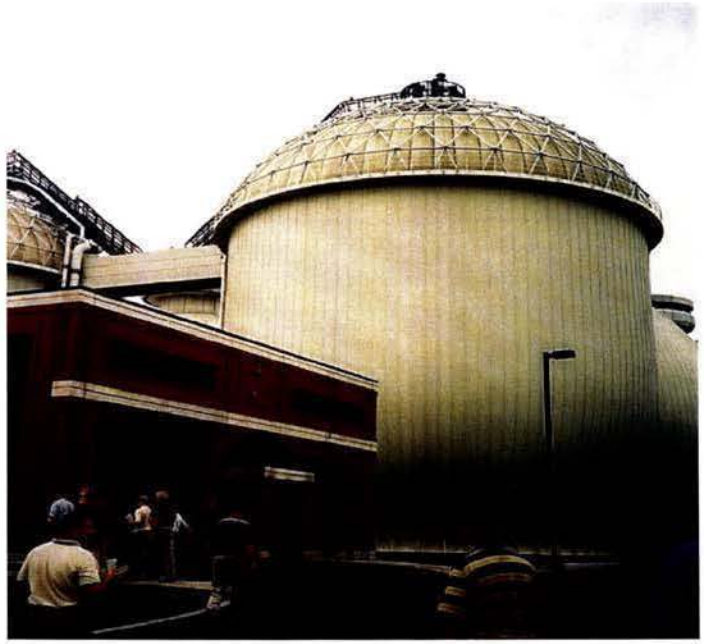




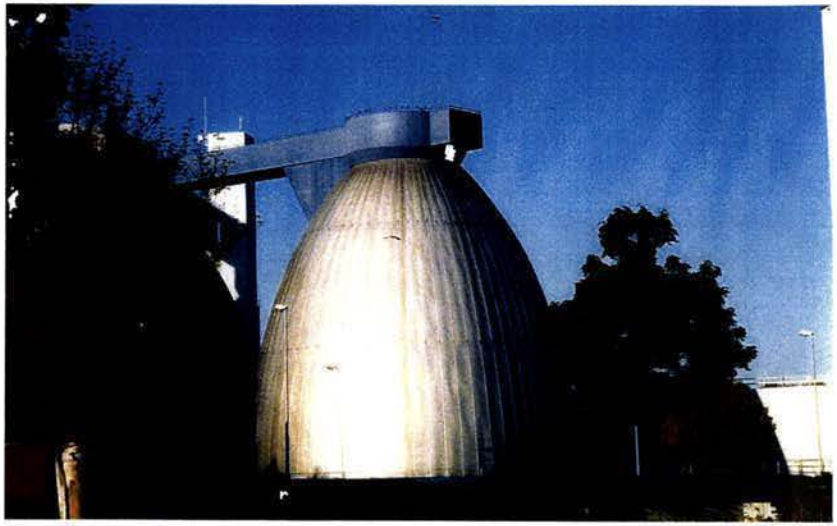
Aerial photographs of an early egg shaped digester prototypical simulation inserted into the Blue Plains site.
(Note: This illustration does not represent the current design of the EDF)



Photograph of Egg Shaped Digesters in Baltimore showing a service walkway tower with a machine room on top.



Photograph of Deer Island Storage Silo Tank in Boston, Massachusetts.







Photograph of Proposed Egg Shaped Digester Model.
(Note: Skirt detail at base of digester has been modified.)



Photo 1



Photo 2

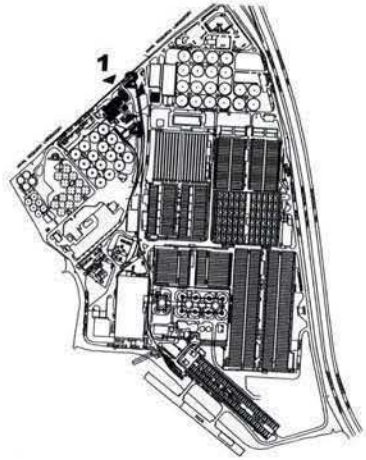
1. GRIT CHAMBER BUILDING
2. GRIT AND SCREENING LOADING STATION
3. RAW WASTEWATER PUMPING STATION
4. LOCKER BUILDING



Photo 3



Photo 4



KEY PLAN

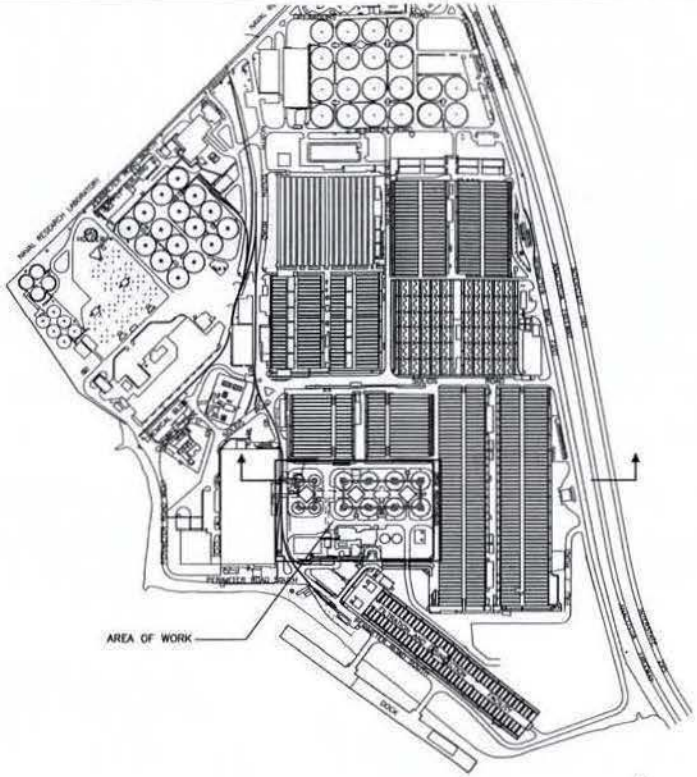
EXISTING CONDITION PHOTOGRAPHS
EXHIBIT K

REFER TO FOLLOWING 31 SHEETS

JOB XXXXX	SHEET XX OF 11
CONSTRUCTION IN-HOUSE CONTRACT NO. ☐ ☒	030150
DESIGN DETS FILE NO. ☐ DCFA NO. ☒	374-WSA
DESIGN MGR. IN-HOUSE E.P.M.C. NO. ☐ ☒	EPMC-IV
INDEX NO. XXXXX	FOREMAN-INSPECTOR

POST-BID REVISION

NO.	DESCRIPTION	BY	DATE

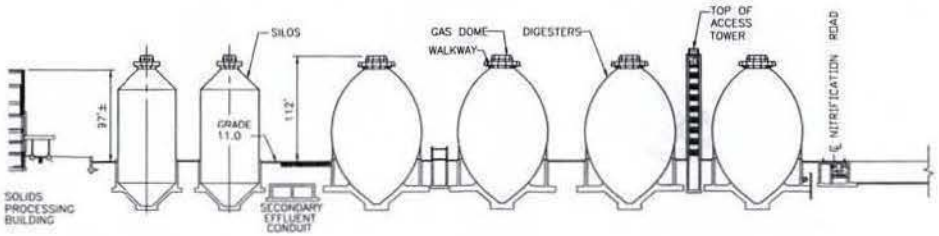


SITE LOCATION PLAN

SCALE: 1"=300'-0"

0 100 300 FEET

N



GENERAL SITE SECTION

SCALE: 1"=60'-0"

0 20 60 FEET

NO.	DESCRIPTION	BY	DATE

PRE-BID REVISION

DISTRICT OF COLUMBIA
WATER AND SEWER AUTHORITY

ADVANCED WASTEWATER TREATMENT PLANT
EGG-SHAPED DIGESTERS FACILITY
P.U.D. SUBMISSION

SITE PLAN AND SECTION

PERMITTING

SCALE	AS SHOWN	DRAWN	P. SCHLEGEL
INTERCEPTOR		CHECKED	K
SYSTEM		SUBMITTED	K
SURVEYED			
DATE	04/30/04	RECOMMENDED	
CADD FILE	374-PUD-A001		

Professional Corporation
Consulting Engineers
SORG ARCHITECTS

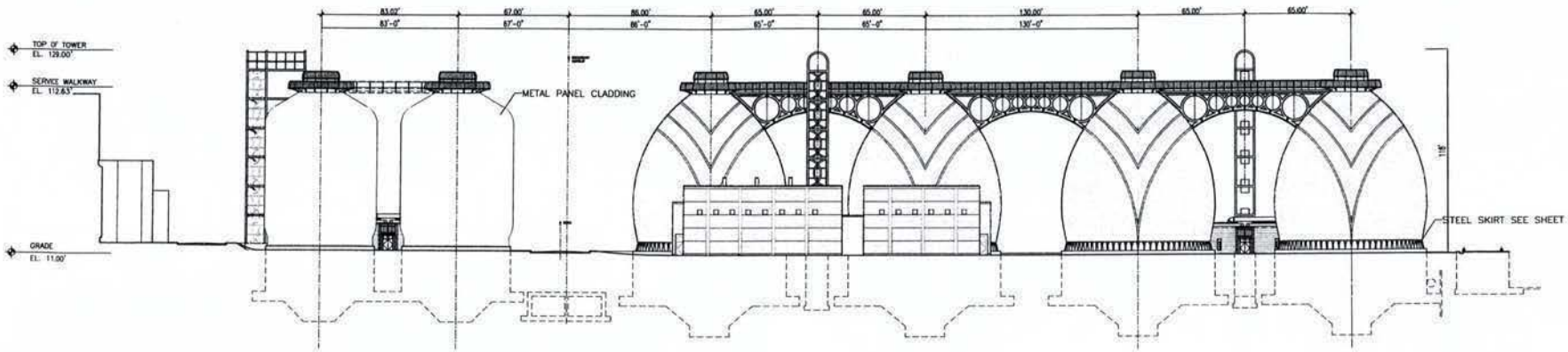
REDUCTION VERIFICATION SCALE 0 10 INCHES

FIG. 1

JOB XA01			SHEET 2 OF XXX
CONSTRUCTION	IN-HOUSE CONTRACT NO.	☐ ☒	030150
DESIGN	DCTS FILE NO. DCYA NO.	☐ ☒	374-WSA
DESIGN MGR.	IN-HOUSE E.P.M.C. NO.	☐ ☒	EPMC-IV
INDEX NO. B6E-XA01	FOREMAN-INSPECTOR		

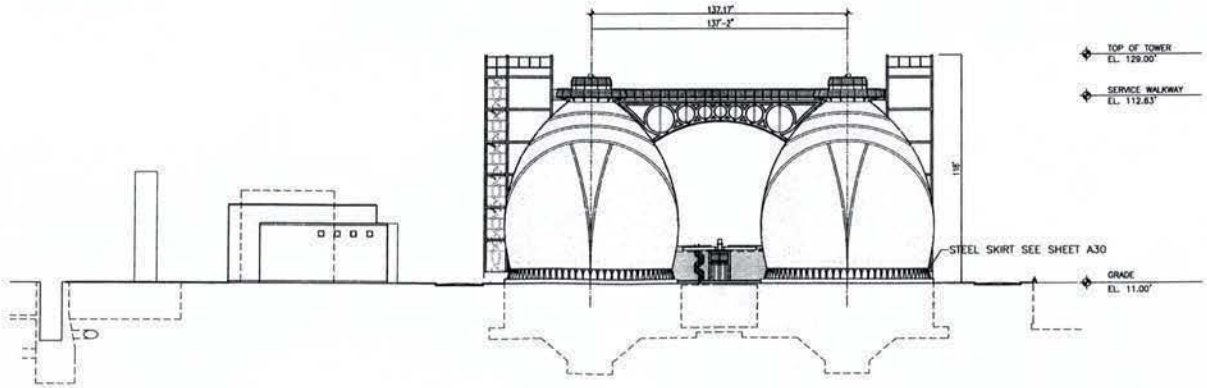
POST-BID REVISION

NO	DESCRIPTION	BY	DATE



EGG DIGESTER FACILITY SOUTH ELEVATION

SCALE: 1"=30'-0"



EGG DIGESTER FACILITY EAST ELEVATION

SCALE: 1"=30'-0"

PRELIMINARY SUBMITTAL

NO	DESCRIPTION	BY	DATE

PRE-BID REVISION

DISTRICT OF COLUMBIA
WATER AND SEWER AUTHORITY

ADVANCED WASTEWATER TREATMENT PLANT
EGG-SHAPED DIGESTERS FACILITY
FIRST CONTRACT - SILOS AND DIGESTERS

DIGESTER ELEVATION 1

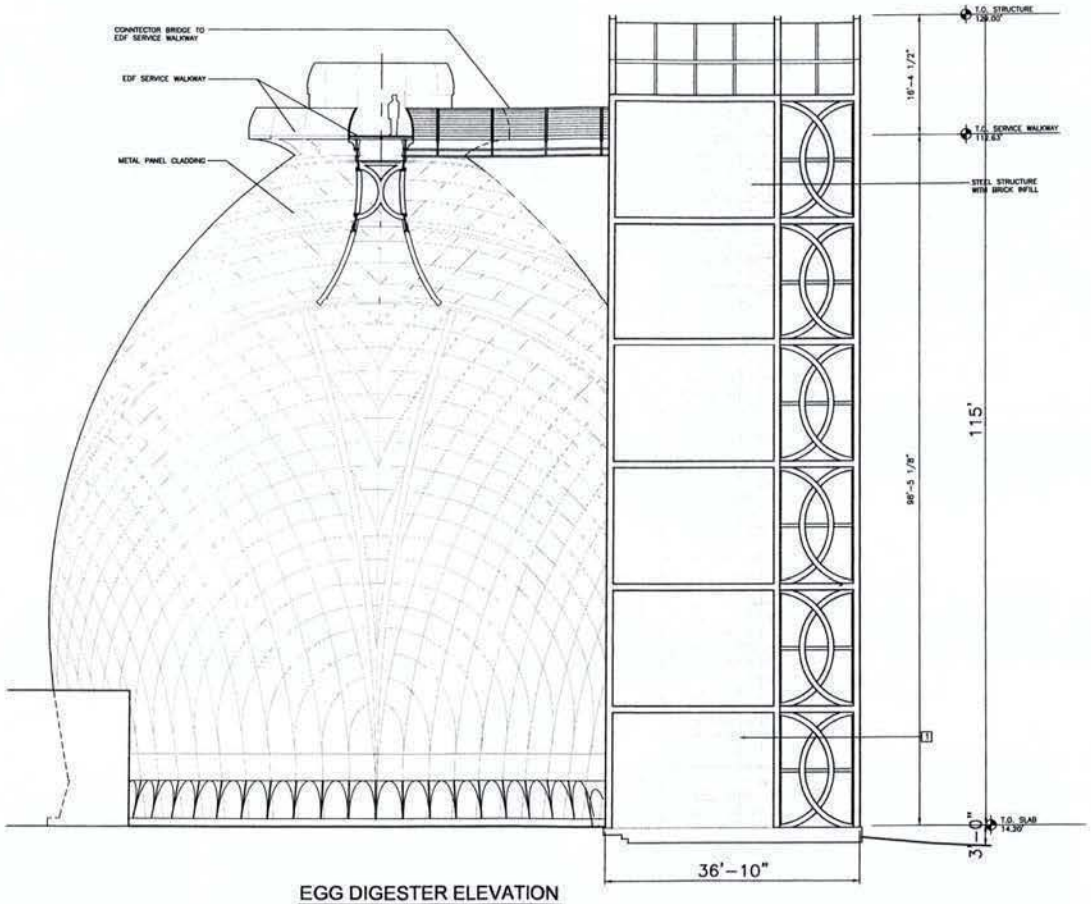
ARCHITECTURAL

SCALE	AS SHOWN	DRAWN	T. HARRIS
INTERCEPTOR		CHECKED	R. ROBINSON
SYSTEM		SUBMITTED	
SURVEYED			XX
UPDATE	SUB. 10/20/04	RECOMMENDED	
CADD FILE	234-PUD-A-75		

A-XX

BBS Professional Corporation
Consulting Engineers
SORG ARCHITECTS

REDUCTION VERIFICATION SCALE 0 10 INCHES



EGG DIGESTER ELEVATION

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

JOB XXXXX	SHEET 5 OF 11
CONSTRUCTION IN-HOUSE ☐ CONTRACT NO. ☒	030150
DESIGN DETS FILE NO. ☐ DCFA NO. ☒	374-WSA
DESIGN MGR. IN-HOUSE ☐ E.P.M.C. NO. ☒	EPMC-IV
INDEX NO. B6E-XA01	FOREMAN-INSPECTOR

POST-BID REVISION

NO.	DESCRIPTION	BY	DATE

PRELIMINARY SUBMITTAL

NO.	DESCRIPTION	BY	DATE

PRE-BID REVISION

DISTRICT OF COLUMBIA
WATER AND SEWER AUTHORITY

ADVANCED WASTEWATER TREATMENT PLANT
EGG-SHAPED DIGESTERS FACILITY
P.U.D. SUBMISSION

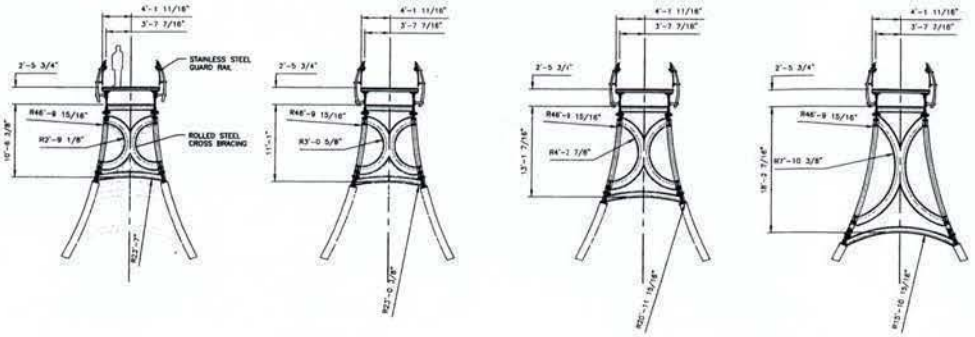
ACCESS TOWER ELEVATIONS

SCALE	AS SHOWN	DRAWN	TH
INTERCEPTION		CHECKED	RR
SYSTEM		SUBMITTED	XX
SURVEYED			
DATE	10/20/04	RECOMMENDED	
CADD FILE	234-PUD-A-65		

BBS Professional Corporation
Consulting Engineers
SORG ARCHITECTS

REDUCTION VERIFICATION SCALE 0 10 INCHES

A-65



SECTION @ WALKWAY 1 / X-XX

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

SECTION @ WALKWAY 2 / X-XX

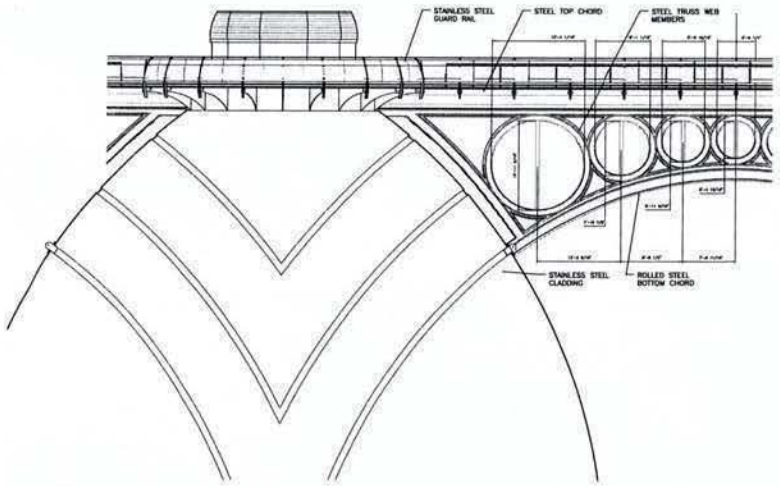
SCALE: 1/8"=1'-0"

SECTION @ WALKWAY 3 / X-XX

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

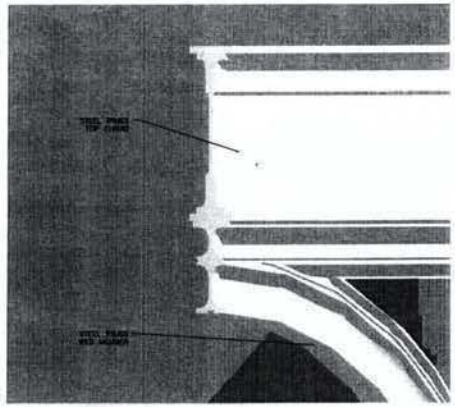
SECTION @ WALKWAY 4 / X-XX

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



WALKWAY ENLARGED ELEVATION 5 / X-XX

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



ISOMETRIC OF RING AND TOP CHORD INTERSECTION 5 / X-XX

SCALE: NOT TO SCALE

BRIDGE DETAIL

Professional Corporation
Consulting Engineers
SORG ARCHITECTS

JOB XA01	SHEET XX OF XXX
CONSTRUCTION IN-HOUSE CONTRACT NO. ☒	030150
DESIGN DCTS FILE NO. ☐ DCFA NO. ☒	374-WSA
DESIGN MGR. IN-HOUSE E.P.M.C. NO. ☐ ☒	EPMC-IV
INDEX NO. B6E-XA01	FOREMAN-INSPECTOR

POST-BID REVISION

NO.	DESCRIPTION	BY	DATE

INTERMEDIATE SUBMITTAL

NO.	DESCRIPTION	BY	DATE

PRE-BID REVISION

DISTRICT OF COLUMBIA
WATER AND SEWER AUTHORITY

ADVANCED WASTEWATER TREATMENT PLANT
EGG-SHAPED DIGESTERS FACILITY
FIRST CONTRACT - SILOS AND DIGESTERS

BRIDGE WALKWAYS - ENLARGED ELEVATIONS AND SECTIONS

ARCHITECTURAL

SCALE	AS SHOWN	DRAWN	K. CHOW
INTERCEPTOR		CHECKED	B. WITKO
SYSTEM		SUBMITTED	XX
SURVEYED			
UPDATE	SUB: 10/20/04	RECOMMENDED	
CADD FILE	234-1-ABA		

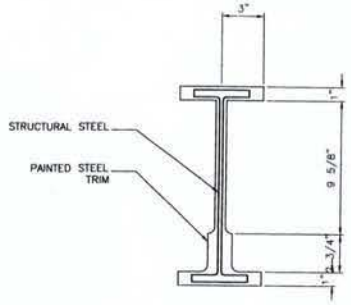
REDUCTION VERIFICATION SCALE 0 10 INCHES

A-8A

JOB XA01			SHEET XX OF XXX
CONSTRUCTION	IN-HOUSE CONTRACT NO. ☐	☒ 030150	
DESIGN	DCTS FILE NO. ☐ DCFA NO. ☒	374-WSA	
DESIGN MGR.	IN-HOUSE E.P.M.C. NO. ☐	☒ EPMC-IV	
INDEX NO. B6E-XA01		FOREMAN-INSPECTOR	

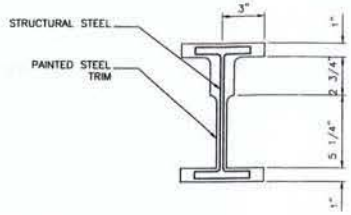
POST-BID REVISION

NO.	DESCRIPTION	BY	DATE



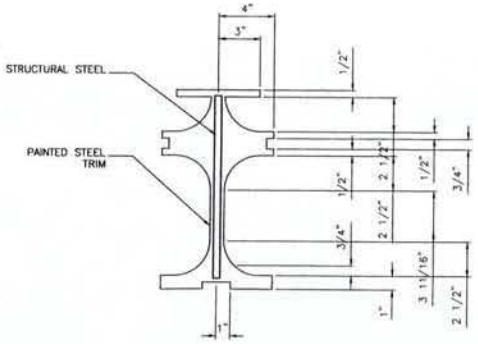
SECTION ⊕ TOP LATERAL BRACING 1/X-XX

SCALE: 3"=1'-0"



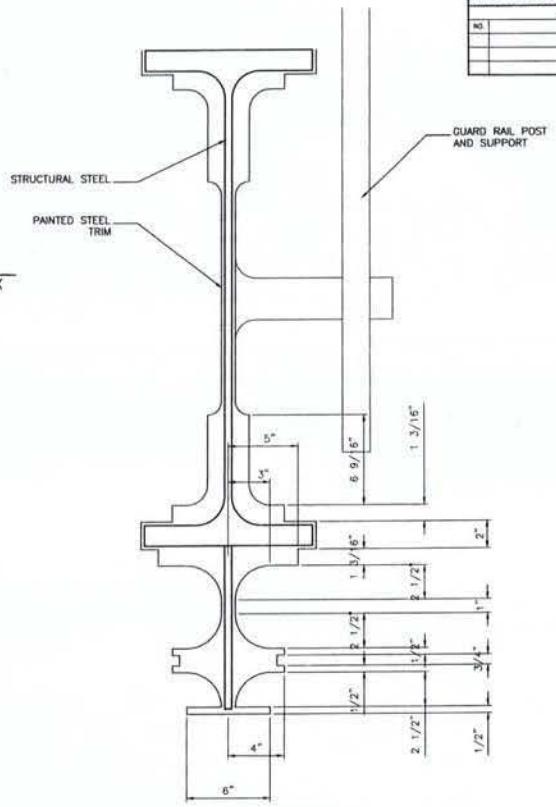
SECTION ⊕ BOTTOM LATERAL BRACING 3/X-XX

SCALE: 3"=1'-0"



SECTION ⊕ RINGS 2/X-XX

SCALE: 3"=1'-0"



SECTION ⊕ RING AND TOP CHORD INTERSECTION 4/X-XX

SCALE: 3"=1'-0"

INTERMEDIATE SUBMITTAL

NO.	DESCRIPTION	BY	DATE

PRE-BID REVISION

DISTRICT OF COLUMBIA
WATER AND SEWER AUTHORITY

ADVANCED WASTEWATER TREATMENT PLANT
EGG-SHAPED DIGESTERS FACILITY
FIRST CONTRACT – SILOS AND DIGESTERS

SERVICE WALKWAY SECTION DETAILS

ARCHITECTURAL

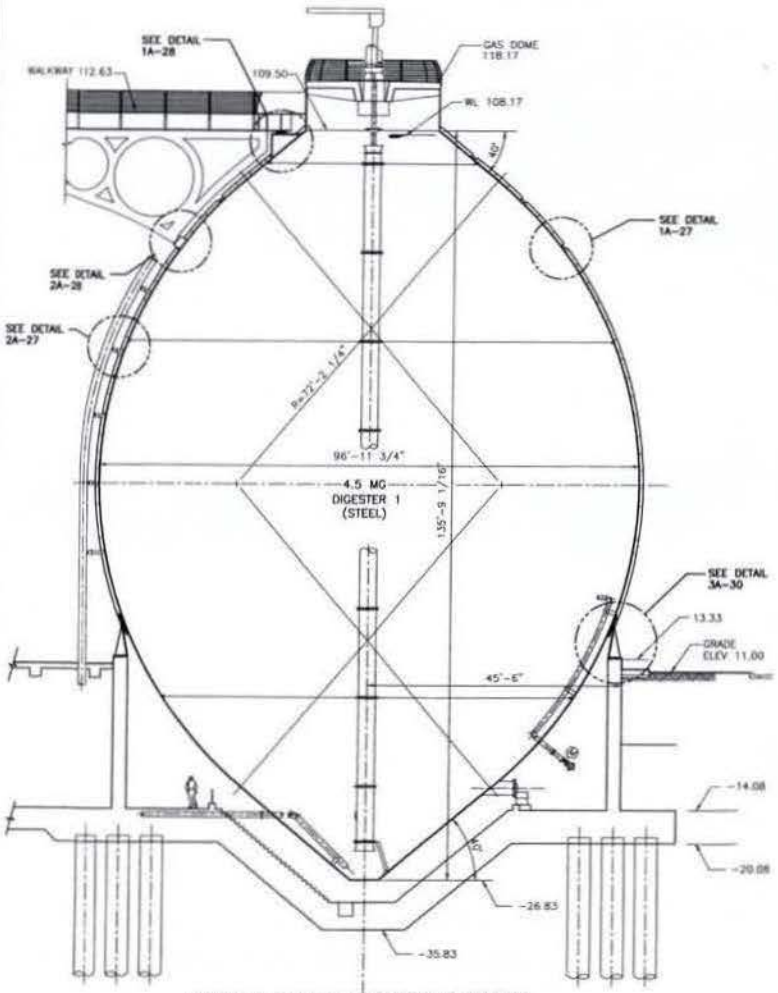
SCALE	AS SHOWN	DRAWN	R. CHOW
INTERCEPTOR		CHECKED	B. MITKO
SYSTEM		SUBMITTED	XX
SURVEYED			
UPDATE	SUB 10/20/04	RECOMMENDED	
CADD FILE	234-1-A8		

BBS Professional Corporation
Consulting Engineers
SORG ARCHITECTS

BRIDGE DETAIL

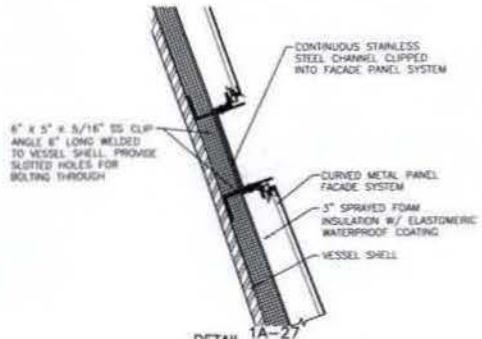
REDUCTION VERIFICATOR SCALE 0 10 INCHES

A-X



DIGESTER SECTION W/ CLADDING (STEEL)

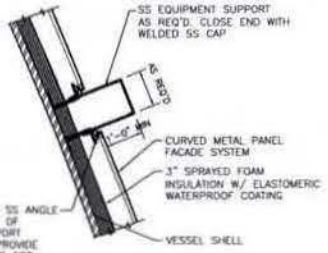
SCALE: 1"=10'



DETAIL 1A-27 / A-27

TYPICAL LIGHT TROUGH AND FACADE PANEL INTERSECTION

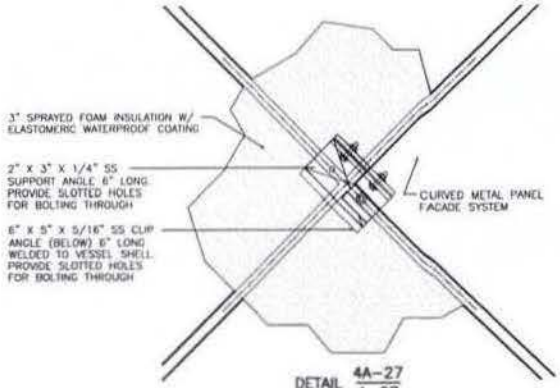
SCALE: 1"=1'-0"



DETAIL 2A-27 / A-27

TYPICAL CLADDING PENETRATION FOR EQUIPMENT SUPPORTS

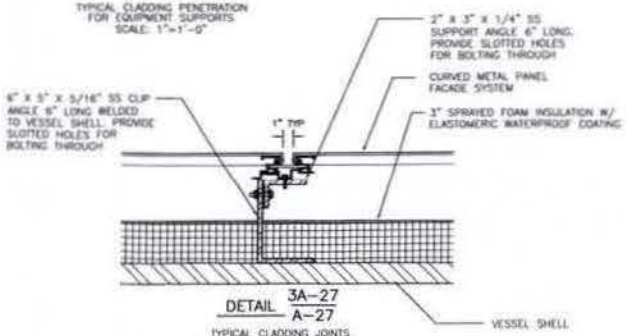
SCALE: 1"=1'-0"



DETAIL 4A-27 / A-27

TYPICAL PLAN DETAIL AT CLADDING SUPPORTS

SCALE: 3"=1'-0"



DETAIL 3A-27 / A-27

TYPICAL CLADDING JOINTS BETWEEN PANELS

SCALE: 3"=1'-0"

CODED NOTES:

JOB	XA01
SHEET	XX OF XXX
CONSTRUCTION	030150
DESIGN	374-WSA
DESIGN MGR.	EPMC-IV
INDEX NO.	B6C-XA01

POST-BID REVISION

NO.	DESCRIPTION	BY	DATE

INTERMEDIATE SUBMITTAL

PRE-BID REVISION

DISTRICT OF COLUMBIA
WATER AND SEWER AUTHORITY

ADVANCED WASTEWATER TREATMENT PLANT
EGG-SHAPED DIGESTERS FACILITY
FIRST CONTRACT - SLGS AND DIGESTERS

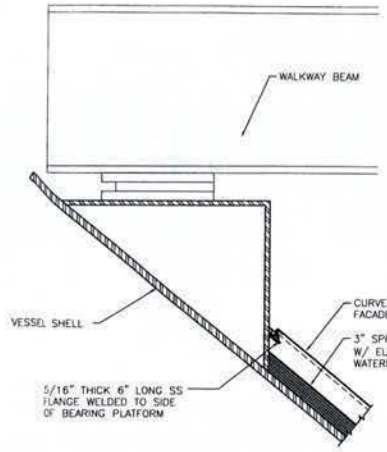
DIGESTERS (STEEL)
CLADDING DETAILS 1

ARCHITECTURAL

SCALE	AS SHOWN
INTERCEPTOR	
SYSTEM	
SURVEYED	
UPDATE	SVB 10/30/04
CADD FILE	33A-1-XX
DRAWN	T. HANKS
CHECKED	B. BETKO
SUBMITTED	XXX
RECOMMENDED	

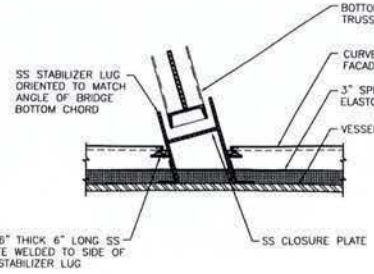
BBS Professional Corporation
Consulting Engineers
SORG ARCHITECTS

A-27



CLADDING @ WALKWAY BEARING PLATES

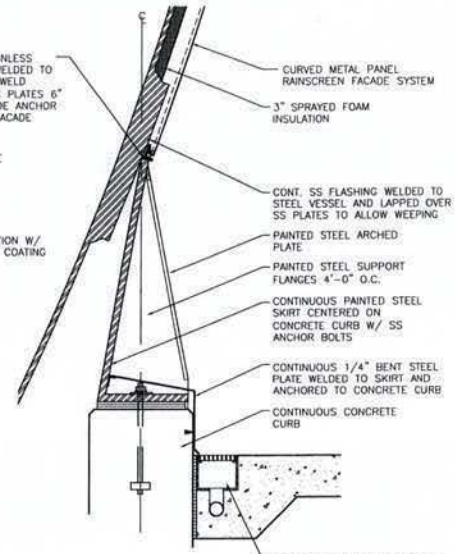
SCALE: 1"=1'-0"



PLAN DETAIL

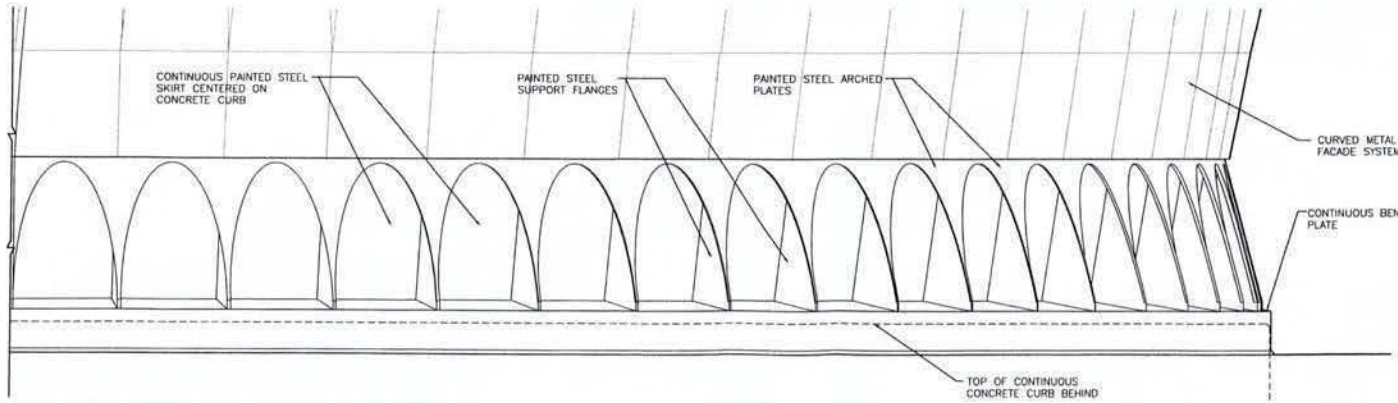
CLADDING @ WALKWAY STABILIZER BRACKETS

SCALE: 1"=1'-0"



STEEL SKIRT

SCALE: 3/4"=1'-0"



PARTIAL ELEVATION

ELEVATION @ EGG DIGESTER STEEL SKIRT

SCALE: 1/2"=1'-0"

JOB XA01		SHEET XX OF XXX
CONSTRUCTION	IN-HOUSE CONTRACT NO.	☐ ☒ 030150
DESIGN	DETS FILE NO. DCFA NO.	☐ ☒ 374-WSA
DESIGN MGR.	IN-HOUSE E.P.M.C. NO.	☐ ☒ EPMC-IV
INDEX NO. B6E-XA01	FOREMAN-INSPECTOR	

POST-BID REVISION

NO.	DESCRIPTION	BY	DATE

CODED NOTES:

INTERMEDIATE SUBMITTAL

NO	DESCRIPTION	BY	DATE

PRE-BID REVISION

DISTRICT OF COLUMBIA
WATER AND SEWER AUTHORITY

ADVANCED WASTEWATER TREATMENT PLANT
EGG-SHAPED DIGESTERS FACILITY
FIRST CONTRACT - SILOS AND DIGESTERS

DIGESTERS (STEEL) CLADDING DETAILS

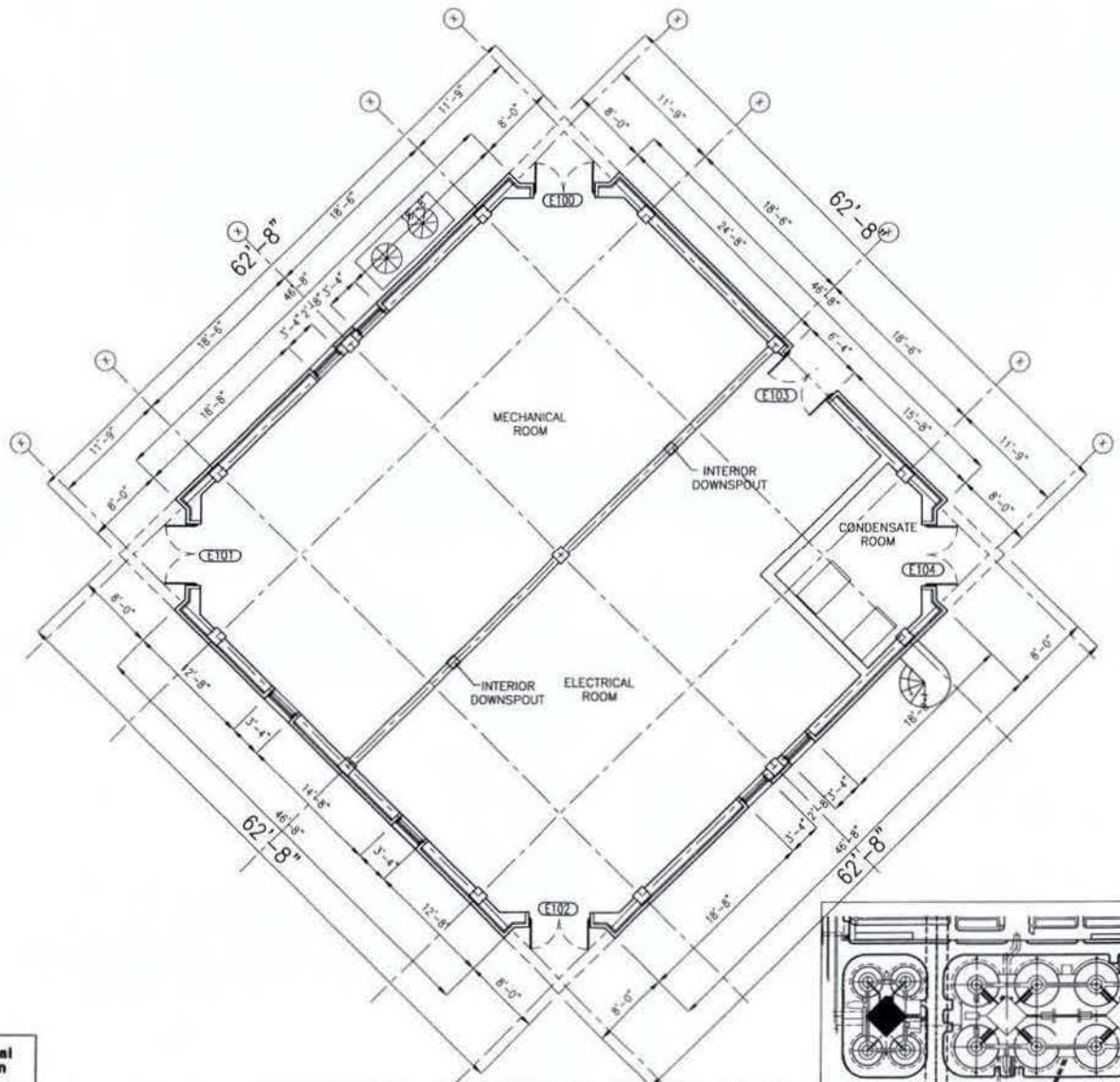
ARCHITECTURAL

SCALE	AS SHOWN	DRAWN	T. HANKS
INTERCEPTOR		CHECKED	B. WITKO
SYSTEM		SUBMITTED	XXX
SURVEYED			
UPDATE	SUB. 10/20/04	RECOMMENDED	
CADD FILE	234-1-48		

DBS Professional Corporation
Consulting Engineers
SORG ARCHITECTS

REDUCTION VERIFICATION SCALE 0 10 INCHES

A-30



ELECTRICAL BUILDING 1 FLOOR PLAN

SCALE: 3/16"=1'-0"

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

POST-BID REVISION

NO.	DESCRIPTION	BY	DATE

INTERMEDIATE SUBMITTAL

PRE-BID REVISION

DISTRICT OF COLUMBIA
WATER AND SEWER AUTHORITY

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

ELECTRICAL BUILDING 1
FLOOR PLAN

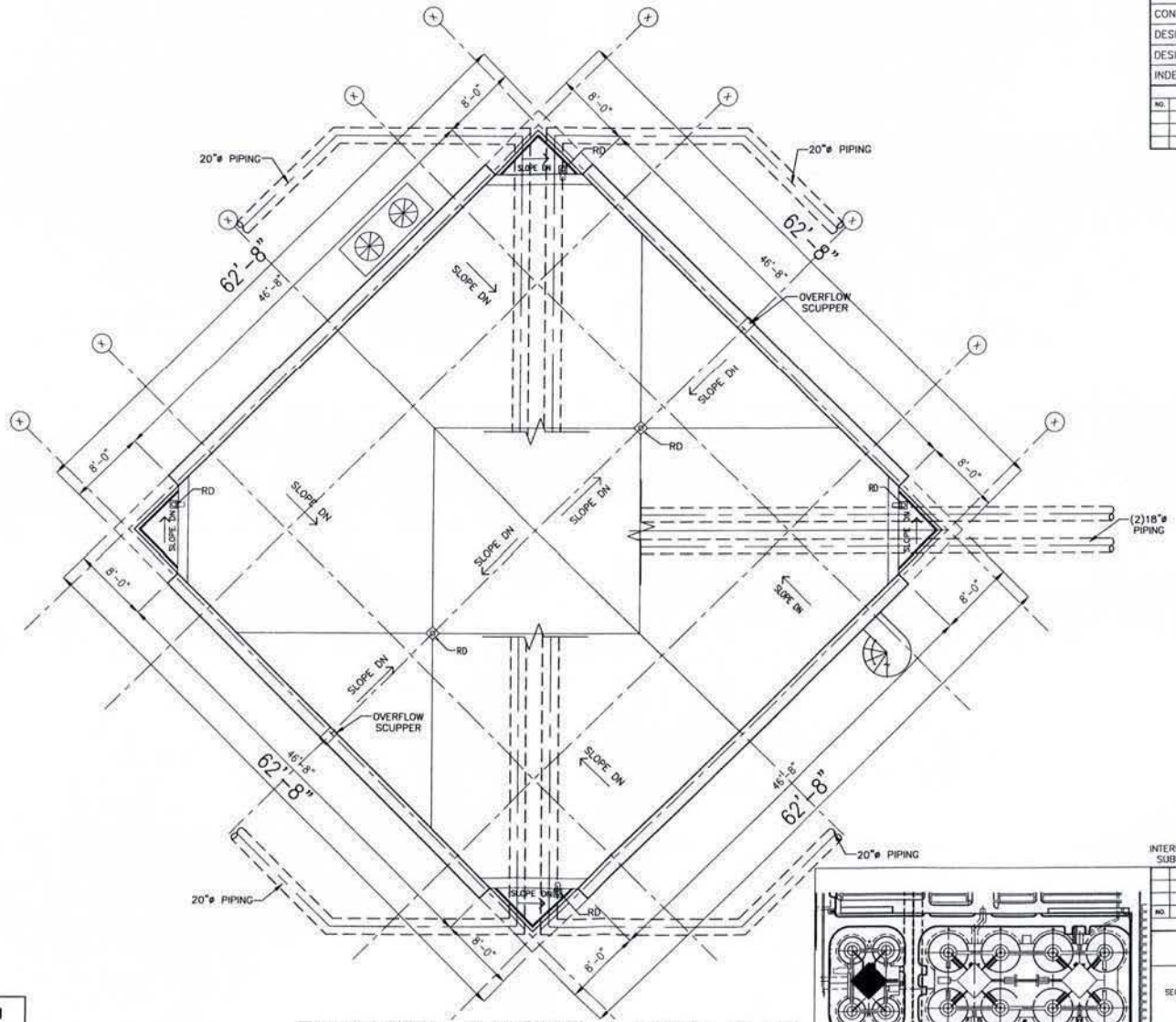
ARCHITECTURAL

SCALE	AS SHOWN	DRAWN	M. MA
INTERCEPTOR		CHECKED	B. MING
SYSTEM		SUBMITTED	XX
SURVEYED			
UPDATE	SUB 10/20/04	RECOMMENDED	
CADD FILE	374-2-XA		

BBS Professional Corporation
Consulting Engineers
SORG ARCHITECTS

REDUCTION VERIFICATION SCALE: 0 10 INCHES

A-X



ELECTRICAL BUILDING 1 ROOF PLAN

SCALE: 3/16"=1'-0"

LIS
N

JOB XA01		SHEET XX OF XXX
CONSTRUCTION	IN-HOUSE CONTRACT NO. ☐ ☒	030160
DESIGN	DETS FILE NO. ☐ DCFA NO. ☒	374-WSA
DESIGN MGR.	IN-HOUSE E.P.M.C. NO. ☐ ☒	EPMC-IV
INDEX NO. B6E-XA01		FOREMAN-INSPECTOR

POST-BID REVISION

NO.	DESCRIPTION	BY	DATE

INTERMEDIATE SUBMITTAL

PRE-BID REVISION

DISTRICT OF COLUMBIA
WATER AND SEWER AUTHORITY

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

DIGESTER ELECTRICAL BUILDING 1
ROOF PLAN

ARCHITECTURAL

SCALE	AS SHOWN	DRAWN	W. MA
INTERCEPTOR		CHECKED	D. WITKO
SYSTEM		SUBMITTED	KX
SURVEYED			
UPDATE	SUB: 10/20/04	RECOMMENDED	
CADD FILE	234-2-A-22		

Professional Corporation
Consulting Engineers
SORG ARCHITECTS

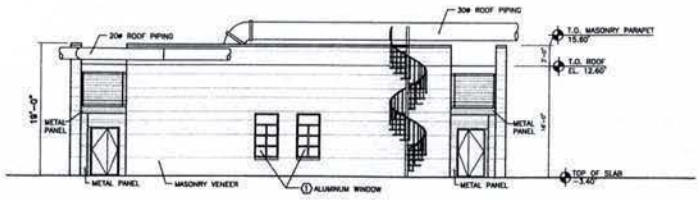
REDUCTION VERIFICATION SCALE 0 10 INCHES

A-22

JOB XA01			SHEET XX OF XXX
CONSTRUCTION	IN-HOUSE CONTRACT NO. ☐	☒	030160
DESIGN	DETS FILE NO. ☐ DCFA NO. ☒		374-WSA
DESIGN MGR.	IN-HOUSE E.P.M.C. NO. ☐	☒	EPMC-IV
INDEX NO. B6E-XA01	FOREMAN-INSPECTOR		

POST-BID REVISION

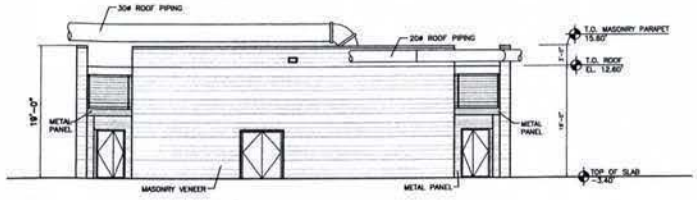
NO.	DESCRIPTION	BY	DATE



ELECTRICAL BUILDING 1 ELEVATION

(SOUTHEAST FACADE)

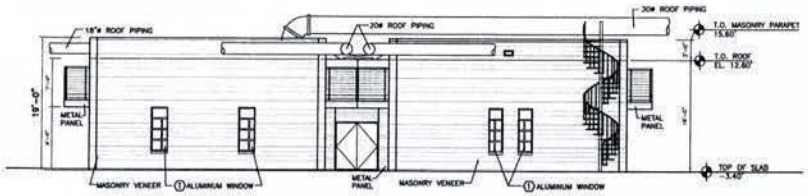
SCALE: 1/8"=1'-0"



ELECTRICAL BUILDING 1 ELEVATION

(NORTHEAST FACADE)

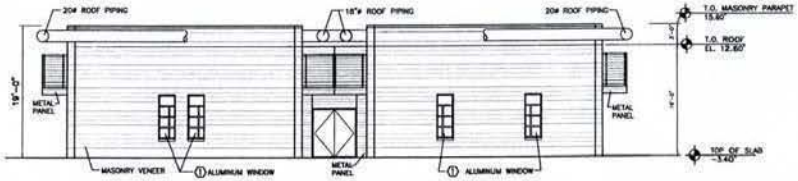
SCALE: 1/8"=1'-0"



ELECTRICAL BUILDING 1 ELEVATION

(SOUTH FACADE)

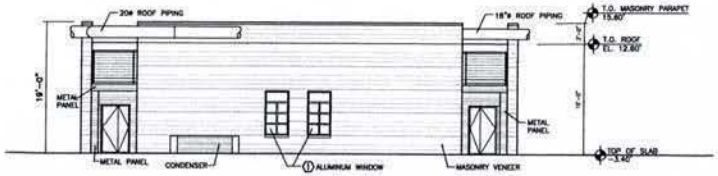
SCALE: 1/8"=1'-0"



ELECTRICAL BUILDING 1 ELEVATION

(WEST FACADE)

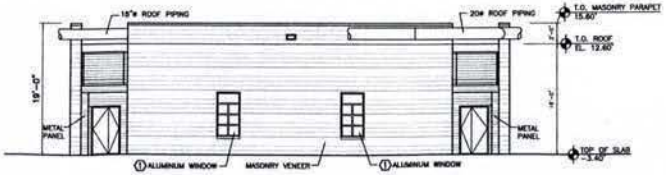
SCALE: 1/8"=1'-0"



ELECTRICAL BUILDING 1 ELEVATION

(NORTHWEST FACADE)

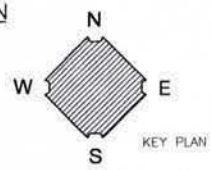
SCALE: 1/8"=1'-0"



ELECTRICAL BUILDING 1 ELEVATION

(SOUTHWEST FACADE)

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



KEY PLAN

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 - PROCESS FACILITIES - BOOK ONE

ELECTRICAL BUILDING 1 ELEVATIONS

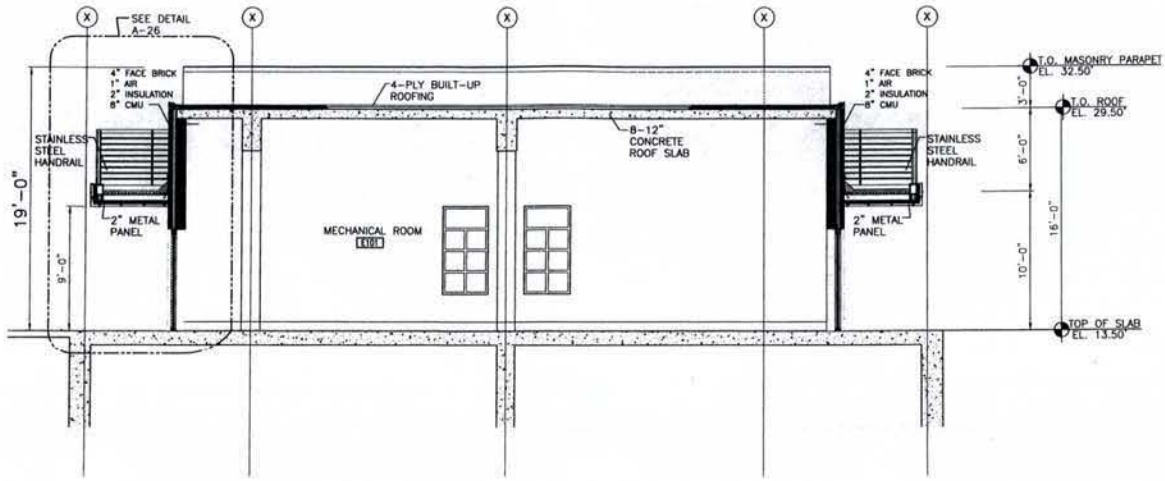
ARCHITECTURAL

SCALE	AS SHOWN	DRAWN	W. MA
INTERCEPTOR		CHECKED	B. MITKU
SYSTEM		SUBMITTED	XX
SURVEYED			
UPDATE	SUB: 10/20/04	RECOMMENDED	
CADD FILE	234-3-AX		

BBS Professional Corporation
Consulting Engineers
SORG ARCHITECTS

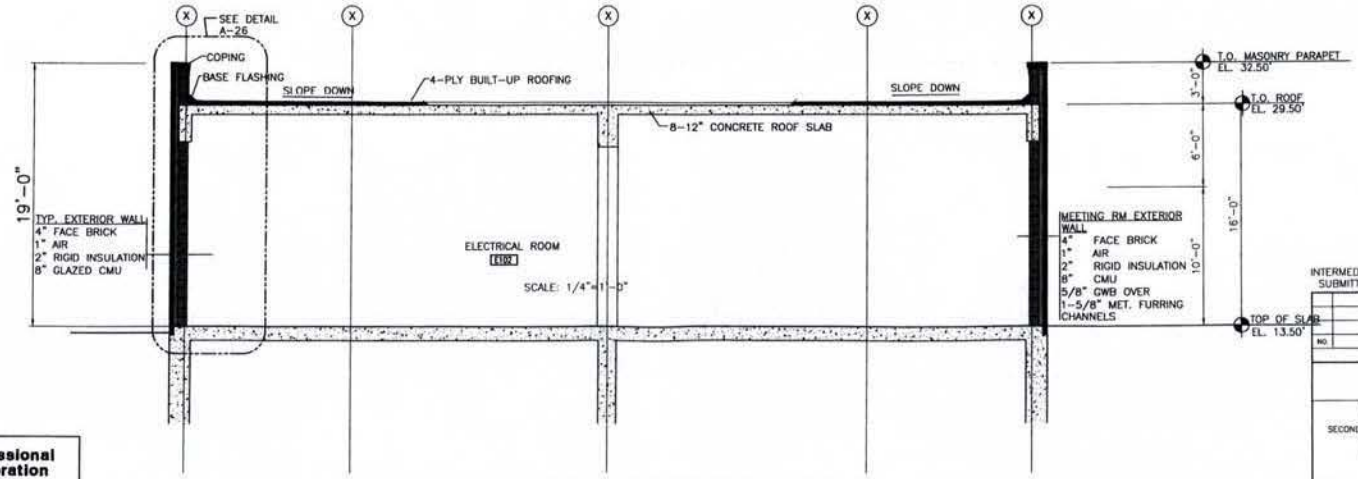
REDUCTION VERIFICATION SCALE 0 10 INCHES

A-X



ELECTRICAL BUILDING 1 BUILDING SECTION

SCALE: 1/4"=1'-0"



ELECTRICAL BUILDING 1 BUILDING SECTION

SCALE: 1/4"=1'-0"

JOB XA01		SHEET XX OF XXX
CONSTRUCTION	IN-HOUSE CONTRACT NO. ☐ / ☒	030160
DESIGN	DETS FILE NO. ☐ / DCFA NO. ☒	374-WSA
DESIGN MGR.	IN-HOUSE E.P.M.C. NO. ☐ / ☒	EPMC-IV
INDEX NO. B6E-XA01	FOREMAN-INSPECTOR	

POST-BID REVISION

NO.	DESCRIPTION	BY	DATE

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 - PROCESS FACILITIES - BOOK ONE

DIGESTER ELECTRICAL BUILDING 1 BUILDING SECTIONS

ARCHITECTURAL

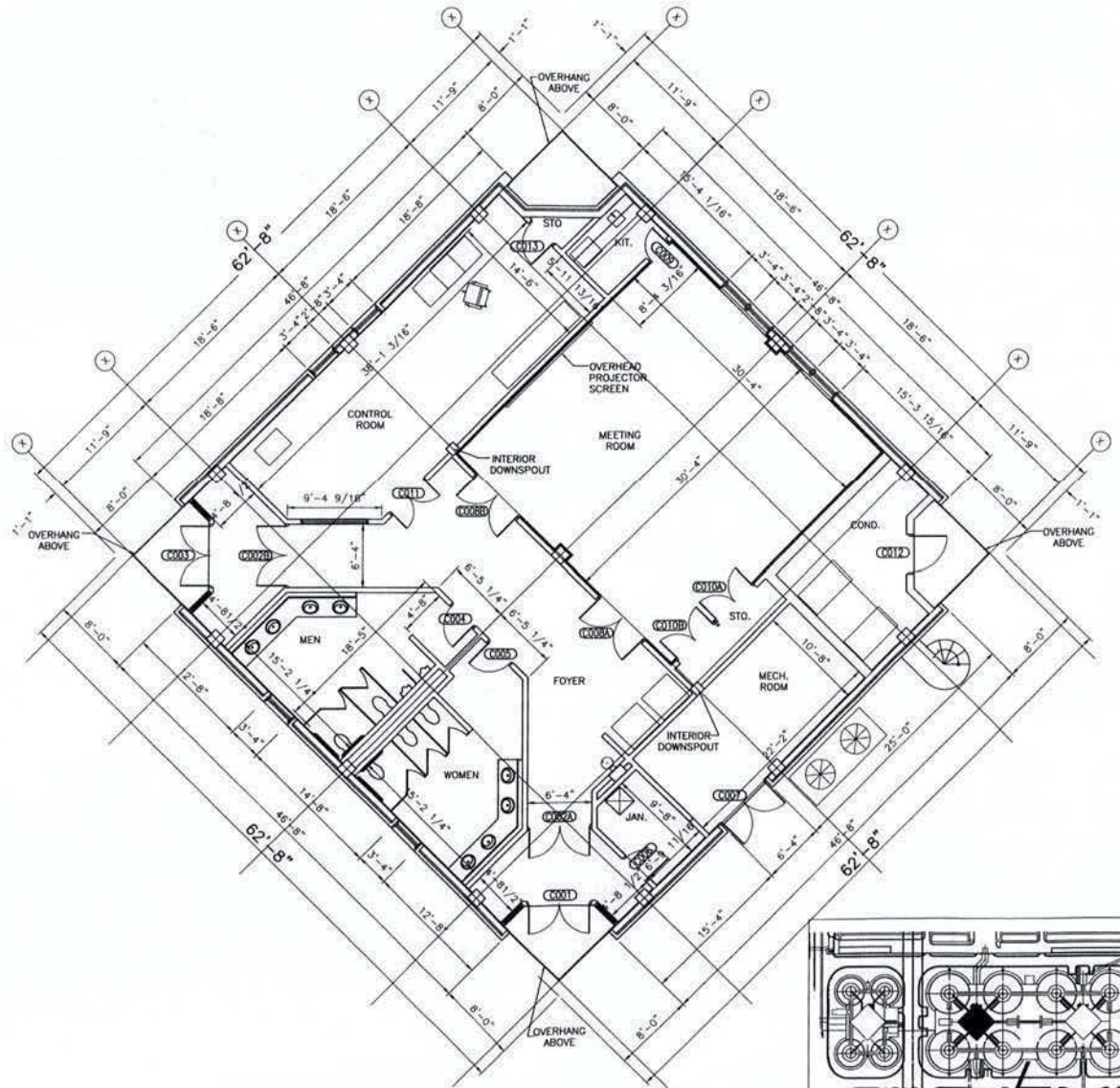
SCALE	AS SHOWN	DRAWN	W. MA
INTERCEPTOR		CHECKED	D. MITKO
SYSTEM		SUBMITTED	KX
SURVEYED			
UPDATE	SUB. 10/20/04	RECOMMENDED	
CADD FILE	234-2-A-25		

BBS Professional Corporation
Consulting Engineers

SORG ARCHITECTS

REDUCTION VERIFICATION SCALE 0 10 INCHES

A-25



CONTROL BUILDING FLOOR PLAN

SCALE: 3/16"=1'-0"

JOB XA01			SHEET XX OF XXX
CONSTRUCTION	IN-HOUSE CONTRACT NO.	☐ ☒	030160
DESIGN	DETS FILE NO. DCFA NO.	☐ ☒	374-WSA
DESIGN MGR.	IN-HOUSE E.P.M.C. NO.	☐ ☒	EPMC-IV
INDEX NO. B6E--XA01			FOREMAN--INSPECTOR

POST-BID REVISION

NO.	DESCRIPTION	BY	DATE

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 - PROCESS FACILITIES - BOOK ONE

CONTROL BUILDING FLOOR PLAN

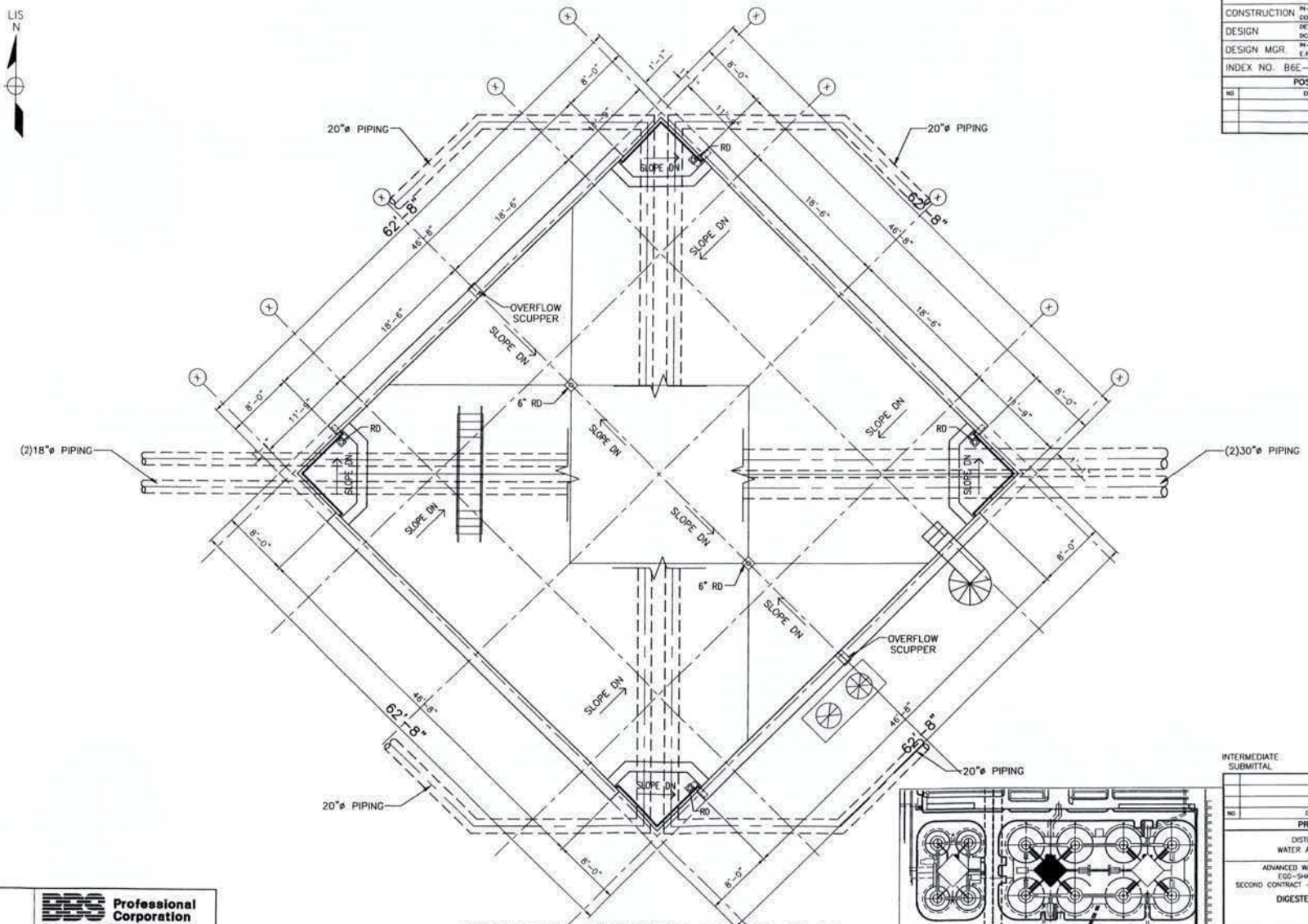
ARCHITECTURAL

SCALE	AS SHOWN	DRAWN	W MA
INTERCEPTOR		CHECKED	M MIYKO
SYSTEM		SUBMITTED	XX
SURVEYED			
UPDATE	SUB 10/20/04	RECOMMENDED	
CADD FILE	234-2-A1		

BBS Professional Corporation
Consulting Engineers
SORG ARCHITECTS

REDUCTION VERIFICATION SCALE 0 10 INCHES

A-X



CONTROL BUILDING ROOF PLAN

SCALE: 3/16"=1'-0"

JOB XA01	SHEET XX OF XXX
CONSTRUCTION IN-HOUSE CONTRACT NO. ☐ ☒	030160
DESIGN DCTS FILE NO. ☐ DCFA NO. ☒	374-WSA
DESIGN MGR. IN-HOUSE E.P.M.C. NO. ☐ ☒	EPMC-IV
INDEX NO. B6E-XA01	FOREMAN-INSPECTOR

POST-BID REVISION

NO.	DESCRIPTION	BY	DATE

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 - PROCESS FACILITIES - BOOK ONE

DIGESTER CONTROL BUILDING
ROOF PLAN

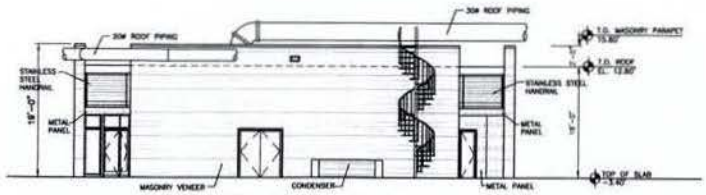
ARCHITECTURAL

SCALE	AS SHOWN	DRAWN	IP MA
INTERCEPTOR		CHECKED	EI MEDICI
SYSTEM		SUBMITTED	XX
SURVEYED			
UPDATE	SUB 10/20/04	RECOMMENDED	
CADD FILE	234-2-A-30		

Professional Corporation
Consulting Engineers
SORG ARCHITECTS

REDUCTION VERIFICATION SCALE 0 10 INCHES

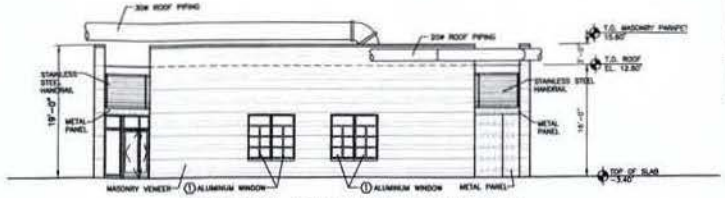
A-30



CONTROL BUILDING ELEVATION

(SOUTHEAST FACADE)

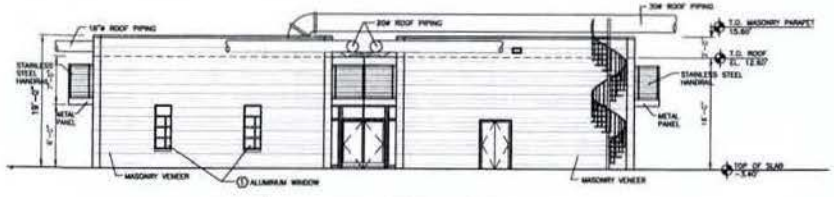
SCALE: 1/8"=1'-0"



CONTROL BUILDING ELEVATION

(NORTHEAST FACADE)

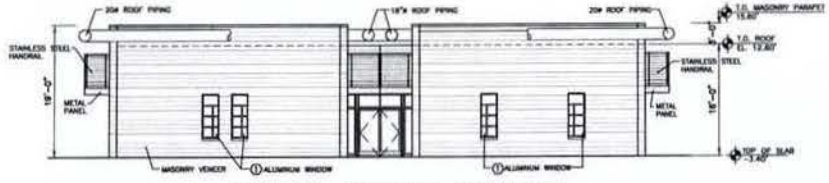
SCALE: 1/8"=1'-0"



CONTROL BUILDING ELEVATION

(SOUTH FACADE)

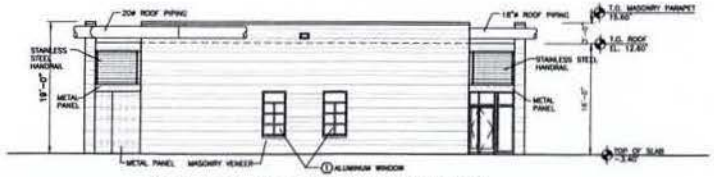
SCALE: 1/8"=1'-0"



CONTROL BUILDING ELEVATION

(WEST FACADE)

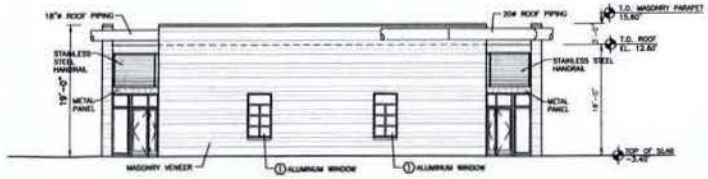
SCALE: 1/8"=1'-0"



CONTROL BUILDING ELEVATION

(NORTHWEST FACADE)

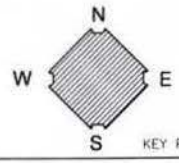
SCALE: 1/8"=1'-0"



CONTROL BUILDING ELEVATION

(SOUTHWEST FACADE)

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



KEY PLAN

JOB XA01			SHEET XX OF XXX
CONSTRUCTION	IN-HOUSE CONTRACT NO.	☐	030160
DESIGN	DCTS FILE NO. DCFA NO.	☐	374-WSA
DESIGN MGR.	IN-HOUSE E.P.M.C. NO.	☐	EPMC-IV
INDEX NO. B6E-XA01			FOREMAN-INSPECTOR

POST-BID REVISION

NO.	DESCRIPTION	BY	DATE

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 - PROCESS FACILITIES - BOOK ONE

CONTROL BUILDING ELEVATIONS

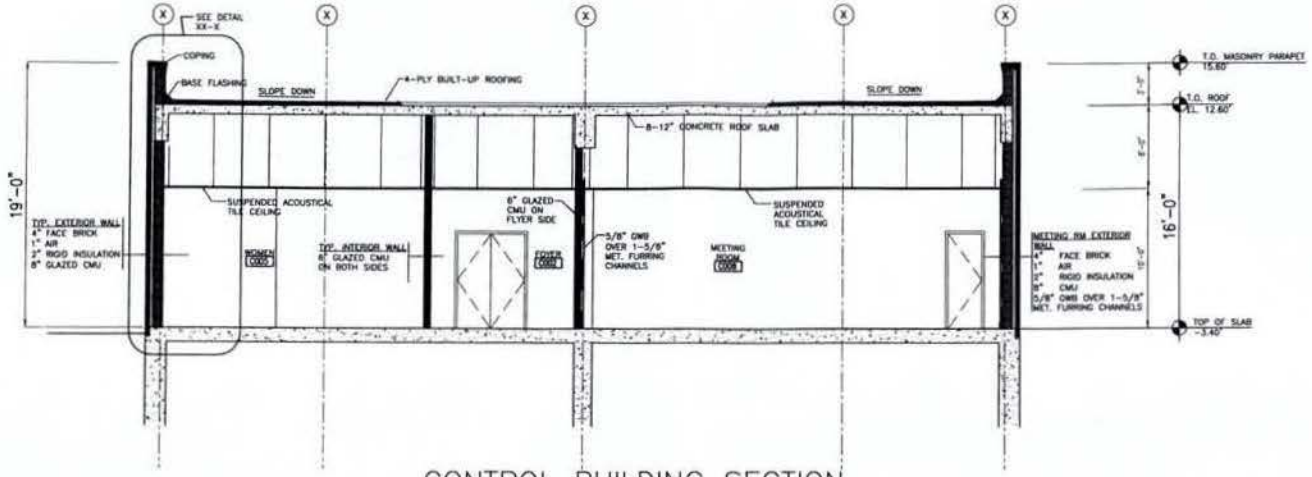
ARCHITECTURAL

SCALE	AS SHOWN	DRAWN	M. MA
INTERCEPTOR		CHECKED	B. MITKO
SYSTEM		SUBMITTED	XX
SURVEYED			
UPDATE	SUB. 15/20/04	RECOMMENDED	
CADD FILE	334-2-AA		

BBS Professional Corporation
Consulting Engineers
SORG ARCHITECTS

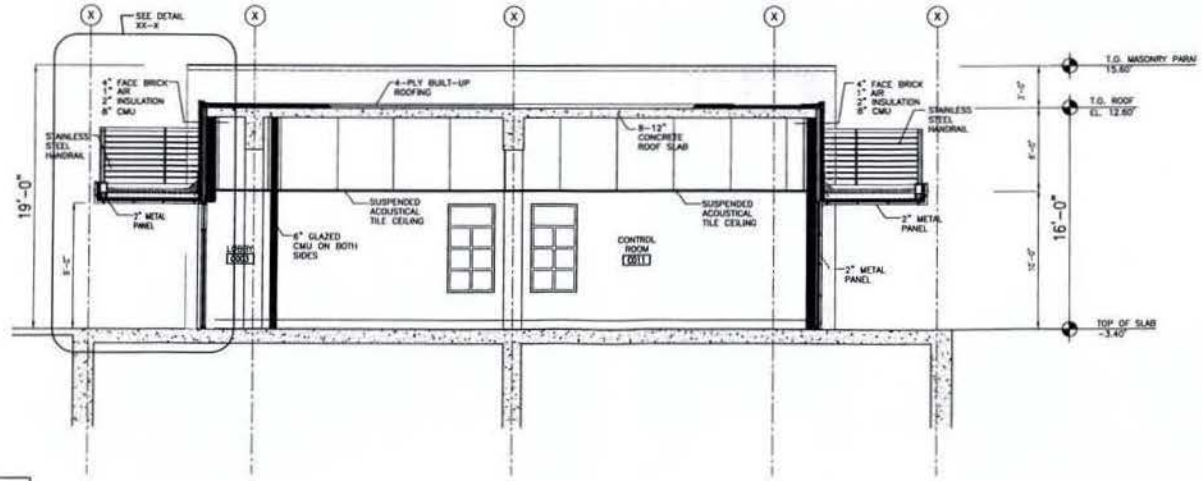
REDUCTION VERIFICATION SCALE 0 1/2 INCHES

A-X



CONTROL BUILDING SECTION

SCALE: 1/4"=1'-0"



CONTROL BUILDING SECTION

SCALE: 1/4"=1'-0"

JOB XA01	SHEET XX OF XXX
CONSTRUCTION	IN-HOUSE CONTRACT NO. 030160
DESIGN	DISTS FILE NO. DCWA NO. 374-WSA
DESIGN MGR.	IN-HOUSE E.P.M.C. NO. EPMC-IV
INDEX NO. B6E-XA01	FOREMAN-INSPECTOR

POST-BID REVISION

NO.	DESCRIPTION	BY	DATE

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 - PROCESS FACILITIES - BOOK ONE

CONTROL BUILDING SECTIONS

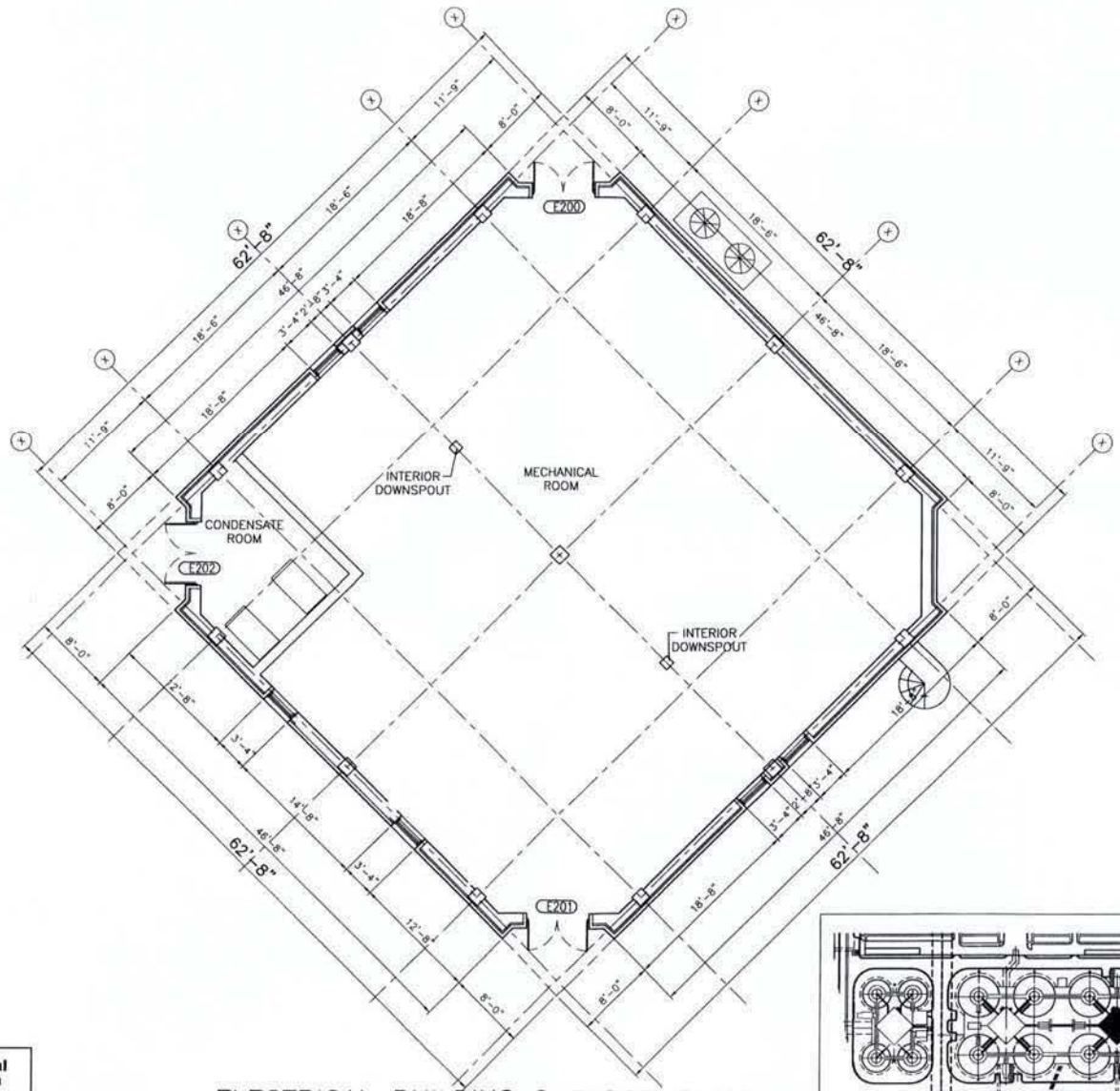
ARCHITECTURAL

SCALE AS SHOWN	DRAWN W. MX
INTERCEPTOR	CHECKED D. MITKO
SYSTEM	SUBMITTED XX
SURVEYED	
UPDATE SUB 10/20/04	RECOMMENDED
DCWA 192 224-2-AA	

Professional Corporation
Consulting Engineers
SORG ARCHITECTS

REDUCTION VERIFICATION SCALE 0 10 INCHES

A-X



ELECTRICAL BUILDING 2 FLOOR PLAN

SCALE: 3/16"=1'-0"

JOB XA01	SHEET XX OF XXX
CONSTRUCTION IN-HOUSE CONTRACT NO. ☐ ☒	030160
DESIGN DETS FILE NO. ☐ DCFA NO. ☒	374-WSA
DESIGN MGR. IN-HOUSE E.P.M.C. NO. ☐ ☒	EPMC-IV
INDEX NO. B6E-XA01	FOREMAN-INSPECTOR

POST-BID REVISION

NO.	DESCRIPTION	BY	DATE

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 - PROCESS FACILITIES - BOOK ONE

ELECTRICAL BUILDING 2
FLOOR PLAN

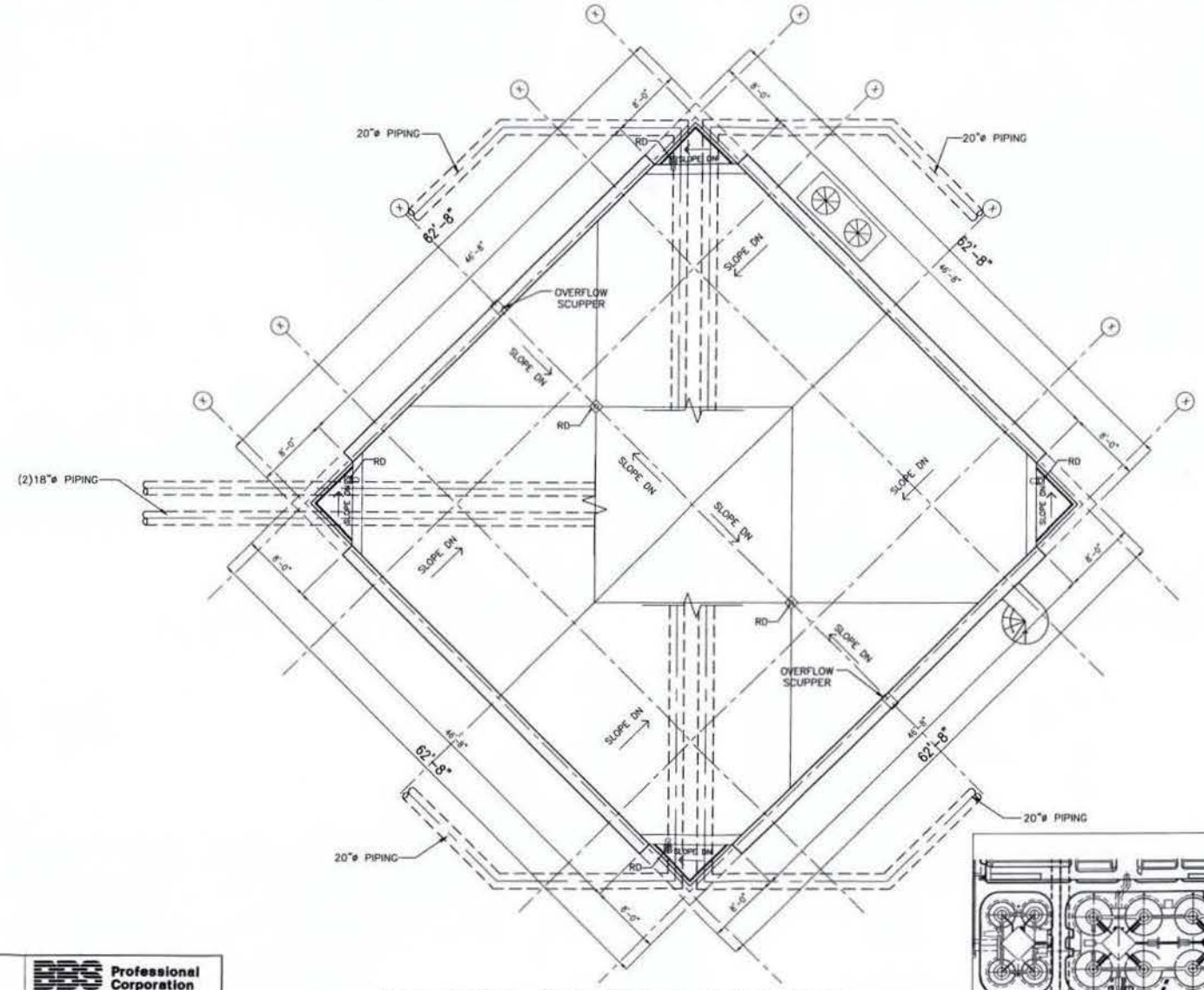
ARCHITECTURAL

SCALE	AS SHOWN	DRAWN	W. MA
INTERCEPTOR		CHECKED	D. MITKO
SYSTEM		SUBMITTED	XX
SURVEYED			
UPDATE	SUB 10/20/04	RECOMMENDED	
CADD FILE	234-2-AX		

Professional Corporation
Consulting Engineers
SORG
ARCHITECTS

REDUCTION VERIFICATION SCALE 0 10 INCHES

A-X



ELECTRICAL BUILDING 2 ROOF PLAN

SCALE: 3/16"=1'-0"

JOB XA01	SHEET XX OF XXX
CONSTRUCTION	030160
DESIGN	374-WSA
DESIGN MGR.	EPMC-IV
INDEX NO. 86E-XA01	

POST-BID REVISION

NO.	DESCRIPTION	BY	DATE

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 - PROCESS FACILITIES - BOOK ONE

DIGESTER ELECTRICAL BUILDING 2
ROOF PLAN

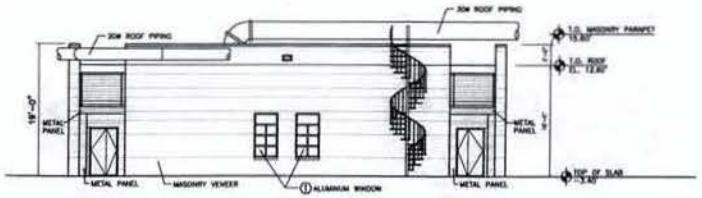
ARCHITECTURAL

SCALE	AS SHOWN
INTERCEPTOR	
SYSTEM	
SURVEYED	
UPDATE	SUB. 10/30/04
CADD FILE	234-7-A-43
DRAWN	M. MH
CHECKED	E. MITKO
SUBMITTED	XX
RECOMMENDED	

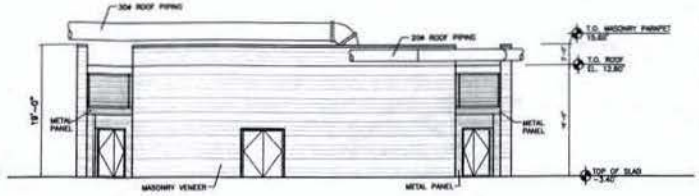
Professional Corporation
Consulting Engineers
SORG
ARCHITECTS

REDUCTION VERIFICATION SCALE 0 10 INCHES

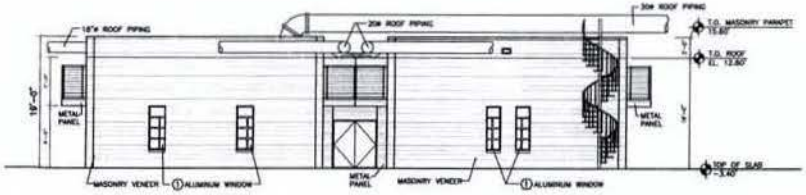
A-43



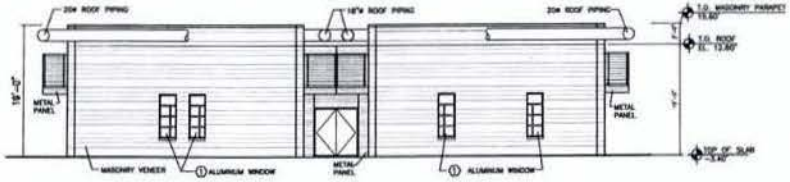
ELECTRICAL BUILDING 2 ELEVATION
(SOUTHEAST FACADE)
SCALE: 1/8"=1'-0"



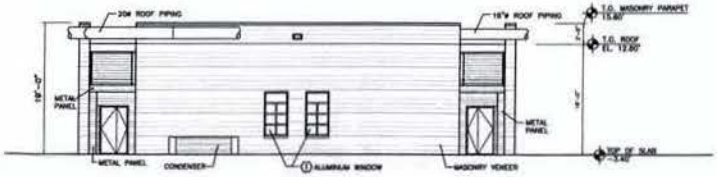
ELECTRICAL BUILDING 2 ELEVATION
(NORTHEAST FACADE)
SCALE: 1/8"=1'-0"



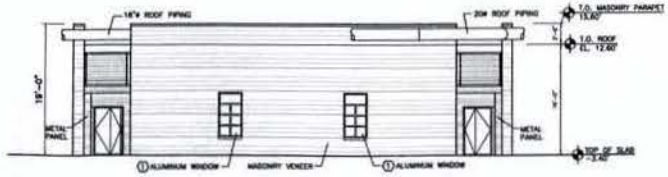
ELECTRICAL BUILDING 2 ELEVATION
(SOUTH FACADE)
SCALE: 1/8"=1'-0"



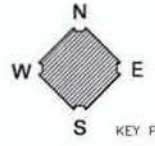
ELECTRICAL BUILDING 2 ELEVATION
(WEST FACADE)
SCALE: 1/8"=1'-0"



ELECTRICAL BUILDING 2 ELEVATION
(NORTHWEST FACADE)
SCALE: 1/8"=1'-0"



ELECTRICAL BUILDING 2 ELEVATION
(SOUTHWEST FACADE)
SCALE: 1/8"=1'-0"



KEY PLAN

JOB XA01			SHEET XX OF XXX
CONSTRUCTION	IN-HOUSE CONTRACT NO.	☐ ☒	030160
DESIGN	DETS FILE NO. DCFX NO.	☐ ☒	374-WSA
DESIGN MGR.	IN-HOUSE E.P.M.C. NO.	☐ ☒	EPMC-IV
INDEX NO. B6E-XA01			FOREMAN-INSPECTOR

POST-BID REVISION

NO.	DESCRIPTION	BY	DATE

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 - PROCESS FACILITIES - BOOK ONE

ELECTRICAL BUILDING 2 ELEVATIONS

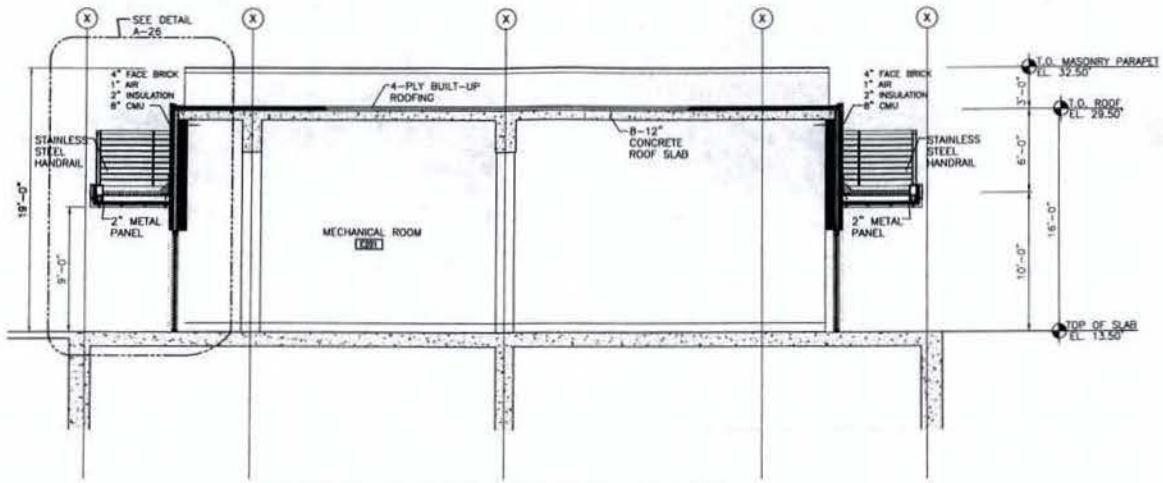
ARCHITECTURAL

SCALE	AS SHOWN	DRAWN	W. MA
WATERCOPTER		CHECKED	S. WONG
SYSTEM		SUBMITTED	XX
SURVEYED			
UPDATE	SUB 10/20/04	RECOMMENDED	
CADD FILE	234-1*.M		

DBS Professional Corporation
Consulting Engineers
SORG ARCHITECTS

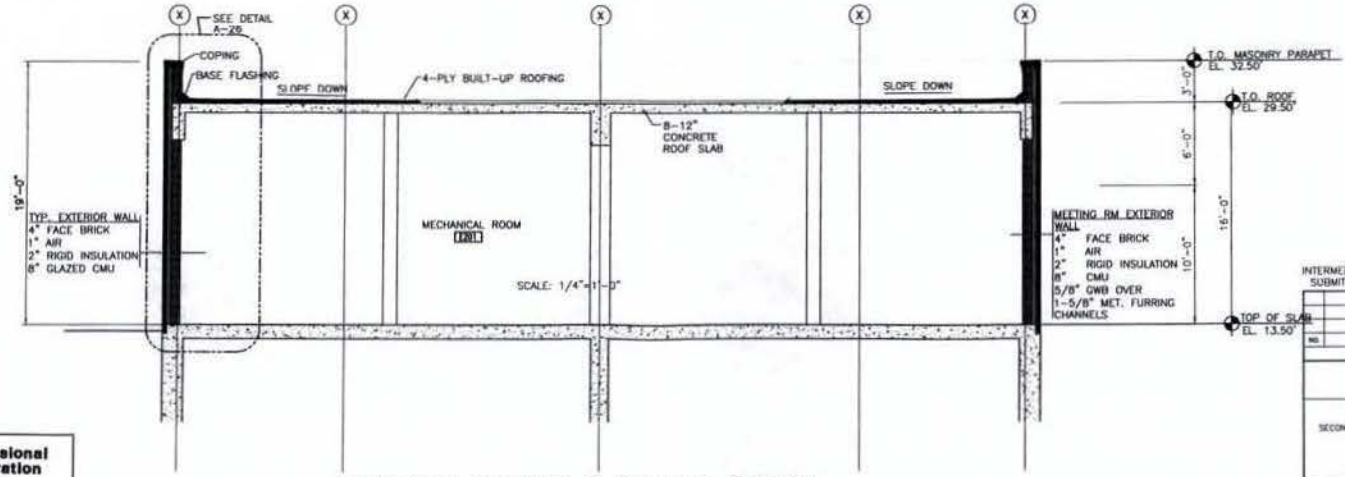
REDUCTION VERIFICATION SCALE 0 10 INCHES

A-X



ELECTRICAL BUILDING 2 BUILDING SECTION

SCALE: 1/4"=1'-0"



ELECTRICAL BUILDING 2 BUILDING SECTION

SCALE: 1/4"=1'-0"

JOB	XA01
SHEET	XX OF XXX
CONSTRUCTION	IN-HOUSE CONTRACT NO. 030160
DESIGN	DEV'S FILE NO. 374-WSA
DESIGN MGR.	IN-HOUSE E.P.M.C. NO. EPMC-IV
INDEX NO.	B6E--XA01

POST-BID REVISION

NO.	DESCRIPTION	BY	DATE

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 - PROCESS FACILITIES - BOOK ONE

DIGESTER ELECTRICAL BUILDING 2
BUILDING SECTIONS

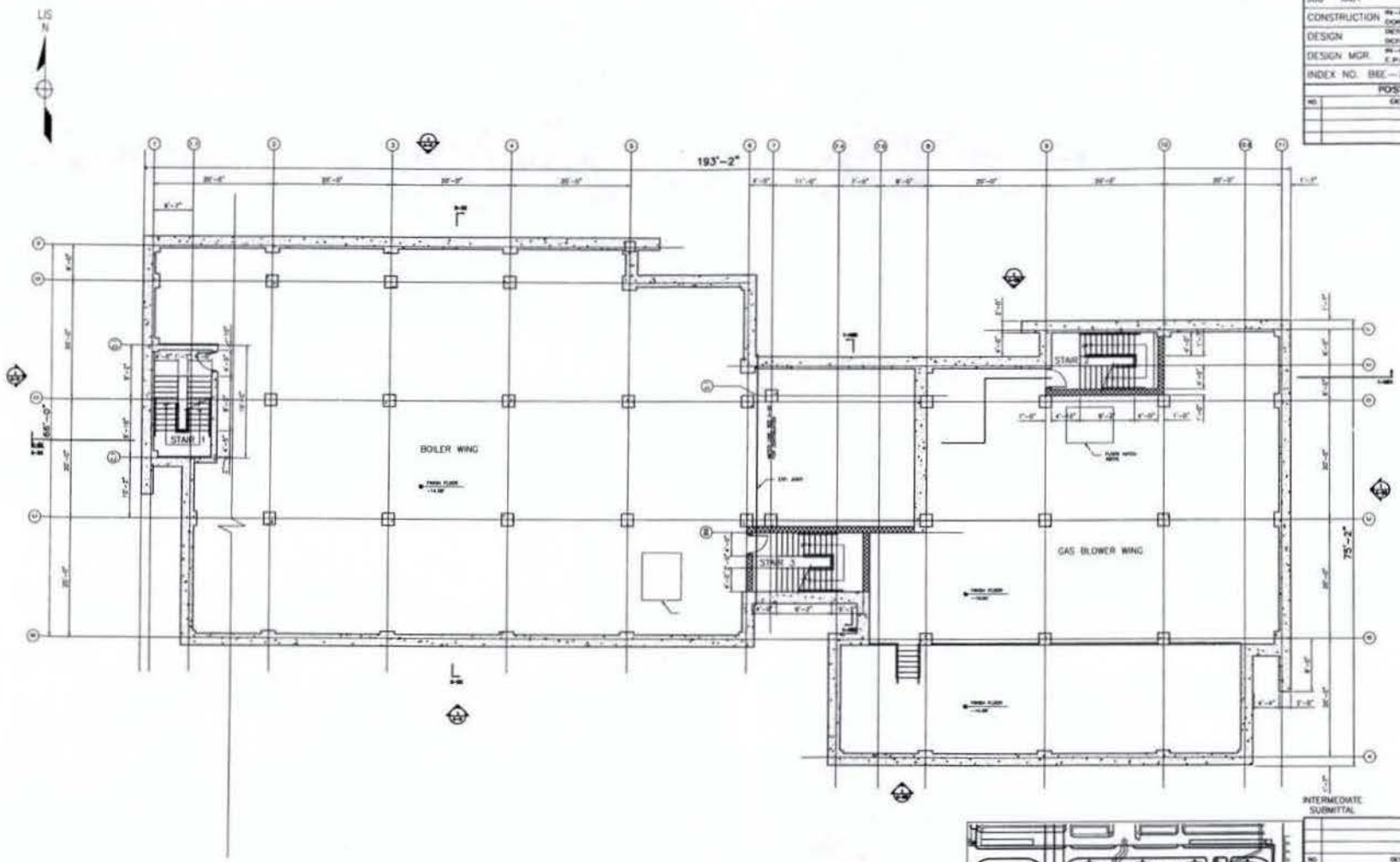
ARCHITECTURAL

SCALE	AS SHOWN	DRAWN	R. MA
INTERCEPTOR		CHECKED	S. MITRO
SYSTEM		SUBMITTED	XX
SURVEYED			
UPDATE	SUBS 10/20/04	RECOMMENDED	
CADD FILE	334-2-A-46		

BBS Professional Corporation
Consulting Engineers
SORG ARCHITECTS

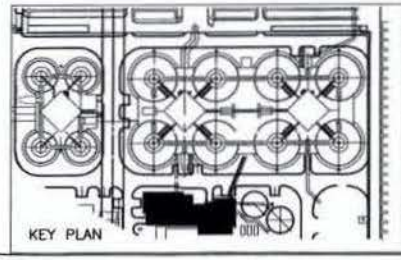
REDUCTION VERIFICATION SCALE 0 10 INCHES

A-46



BASEMENT FLOOR PLAN

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



JOB	XA01
SHEET	XX OF XXX
CONSTRUCTION CONTRACT NO.	030160
DESIGN DCPA NO.	374-WSA
DESIGN MGR. E.P.M.C. NO.	EPMC-IV
INDEX NO.	BBE-XA01

POST-BID REVISION

NO.	DESCRIPTION	BY	DATE

INTERMEDIATE SUBMITTAL

PRE-BID REVISION

DISTRICT OF COLUMBIA
WATER AND SEWER AUTHORITY

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

DIGESTER GAS BUILDING
BASEMENT FLOOR PLAN

ARCHITECTURAL

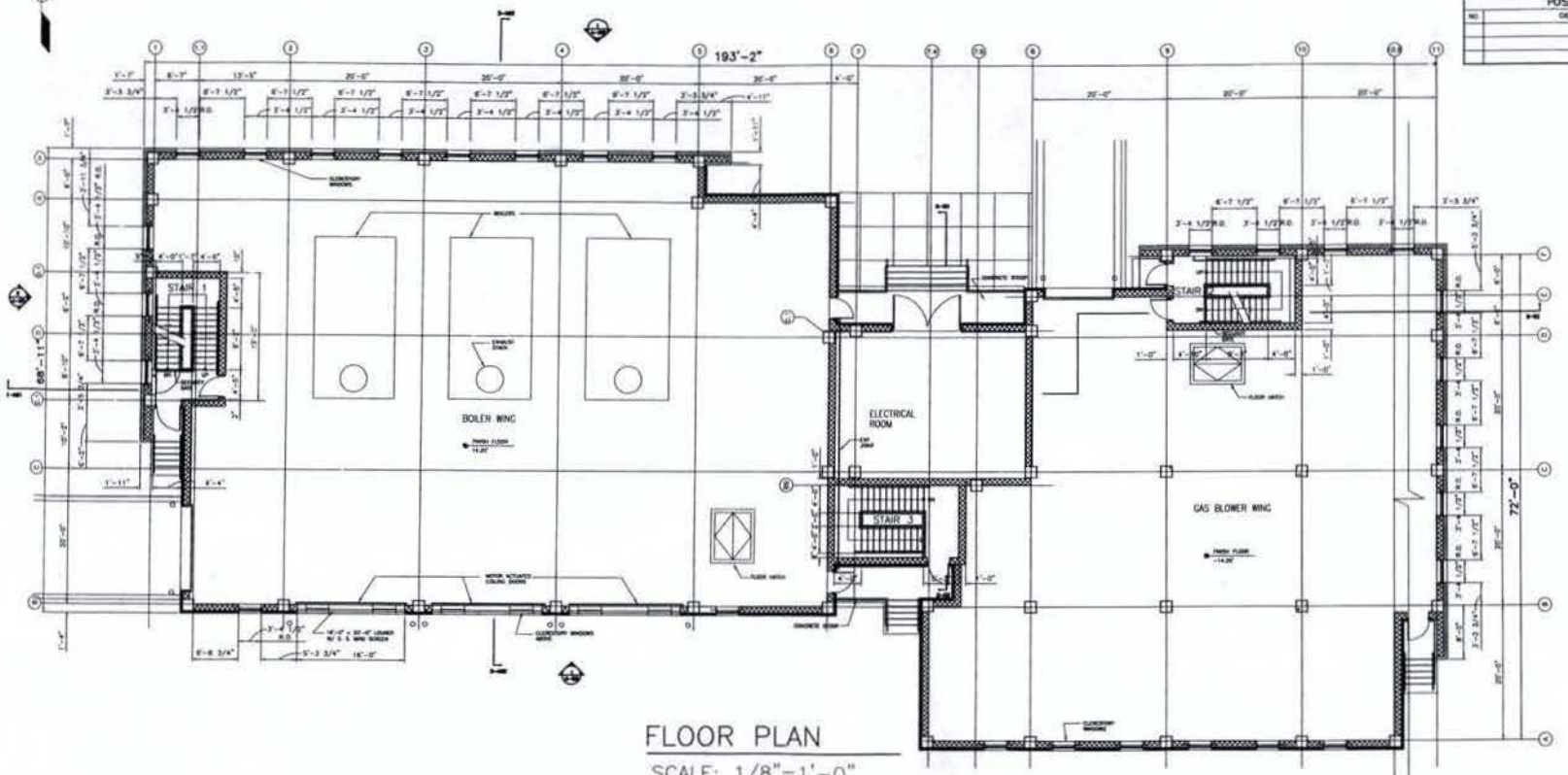
SCALE	AS SHOWN
DRAWN	T.S.
CHECKED	R. BERKO
SUBMITTED	XX
RECOMMENDED	
APPROVED	SUB. 10/31/94
CADD FILE	33A-2-48

BBS Professional Corporation
Consulting Engineers
SORG ARCHITECTS

REDUCTION VERIFICATION SCALE

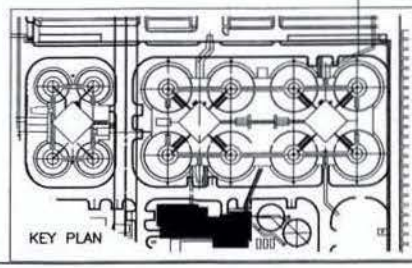
10 INCHES

A-51



FLOOR PLAN

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



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

POST-BID REVISION

NO.	DESCRIPTION	BY	DATE

INTERMEDIATE SUBMITTAL

PRE-BID REVISION

DISTRICT OF COLUMBIA
WATER AND SEWER AUTHORITY

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

DIGESTER GAS BUILDING
FLOOR PLAN

ARCHITECTURAL

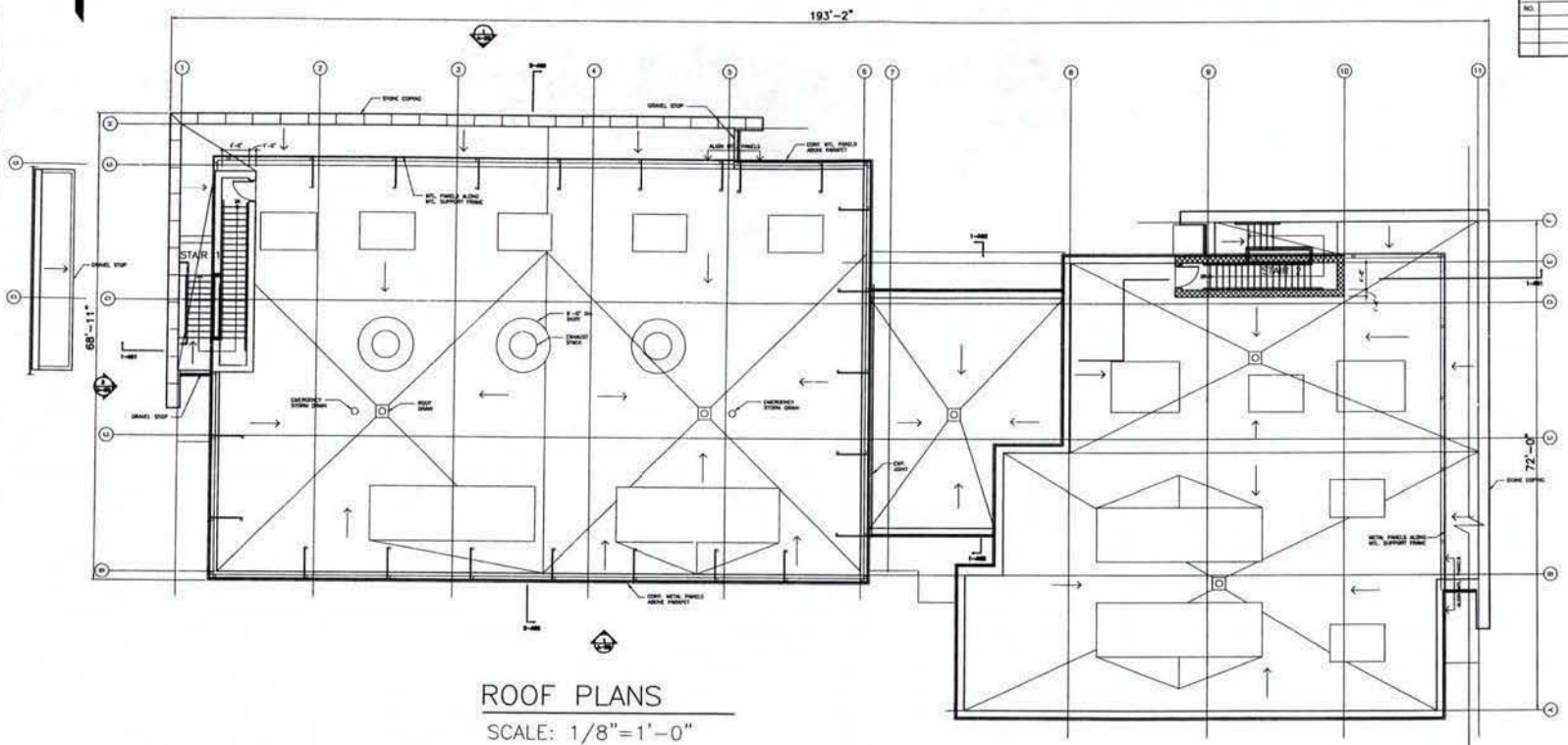
SCALE	AS SHOWN	DRAWN	T.S.
INTERCEPTOR		CHECKED	D. MITKO
SYSTEM		SUBMITTED	RX
SURVEYED			
UPDATE	SUB: 10/20/04	RECOMMENDED	
CADD FILE	234-2-44		

BBS Professional Corporation
Consulting Engineers

SORG
ARCHITECTS

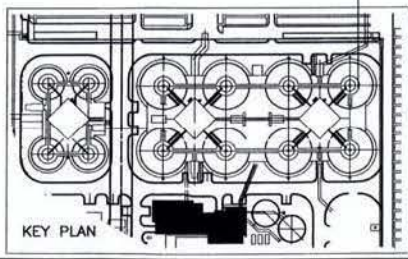
REDUCTION VERIFICATION SCALE 0 10 INCHES

A-52



ROOF PLANS

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



JOB XA01		SHEET XX OF XXX
CONSTRUCTION	IN-HOUSE CONTRACT NO.	030160
DESIGN	DETS FILE NO. / DCFA NO.	374-WSA
DESIGN MGR.	IN-HOUSE E.P.M.C. NO.	EPMC-IV
INDEX NO. B6E-XA01	FOREMAN-INSPECTOR	

POST-BID REVISION

NO.	DESCRIPTION	BY	DATE

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 - PROCESS FACILITIES - BOOK ONE

DIGESTER GAS BUILDING
ROOF PLANS

ARCHITECTURAL

SCALE	AS SHOWN	DRAWN	T.S.
INTERCEPTOR		CHECKED	B. MIYO
SYSTEM		SUBMITTED	XX
SURVEYED			
UPDATE	SUB 10/20/04	RECOMMENDED	
CADD FILE	234-3-44		

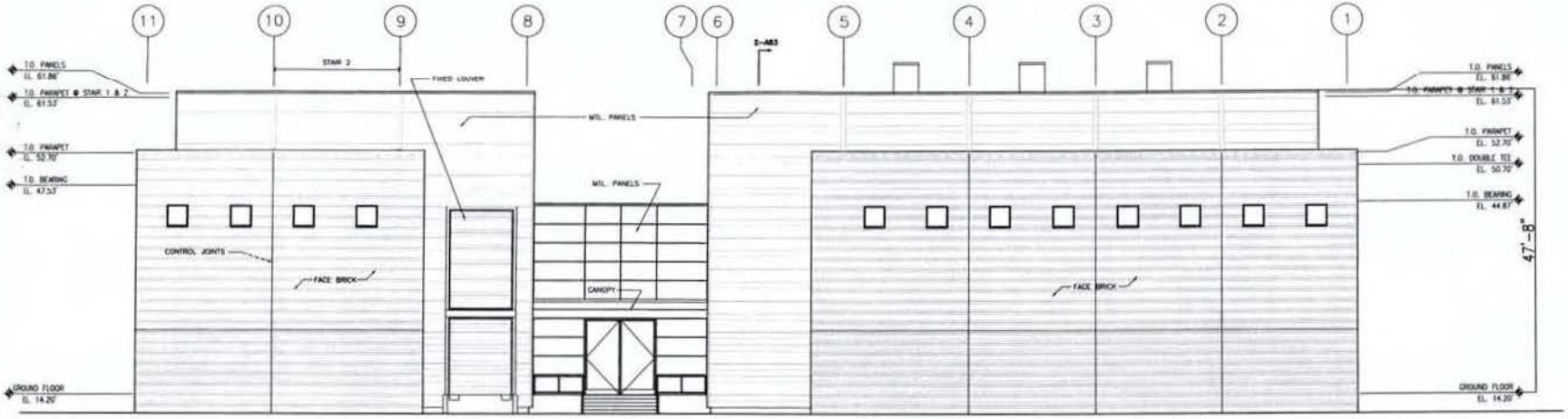
BBS Professional Corporation
Consulting Engineers
SORG ARCHITECTS

REDUCTION VERIFICATION SCALE 0 10 INCHES

JOB XA01		SHEET XX OF XXX	
CONSTRUCTION	IN-HOUSE CONTRACT NO.	☐ ☒	030160
DESIGN	DETS FILE NO. / DCFA NO.	☐ ☒	374-WSA
DESIGN MGR.	IN-HOUSE E.P.M.C. NO.	☐ ☒	EPMC-IV
INDEX NO. B6C-XA01		FOREMAN-INSPECTOR	

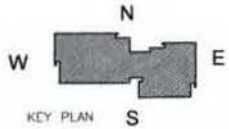
POST-BID REVISION

NO.	DESCRIPTION	BY	DATE



NORTH EXTERIOR ELEVATION

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



KEY PLAN

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 - PROCESS FACILITIES - BOOK ONE

DIGESTER GAS BUILDING
EXTERIOR ELEVATION

ARCHITECTURAL

SCALE	AS SHOWN	DRAWN	T.S.
INTERCEPTOR		CHECKED	B. MITKO
SYSTEM		SUBMITTED	XX
SURVEYED			
UPDATE	SUB 10/20/04	RECOMMENDED	
CADD FILE	234-2-44		

Professional Corporation
Consulting Engineers
SORG ARCHITECTS

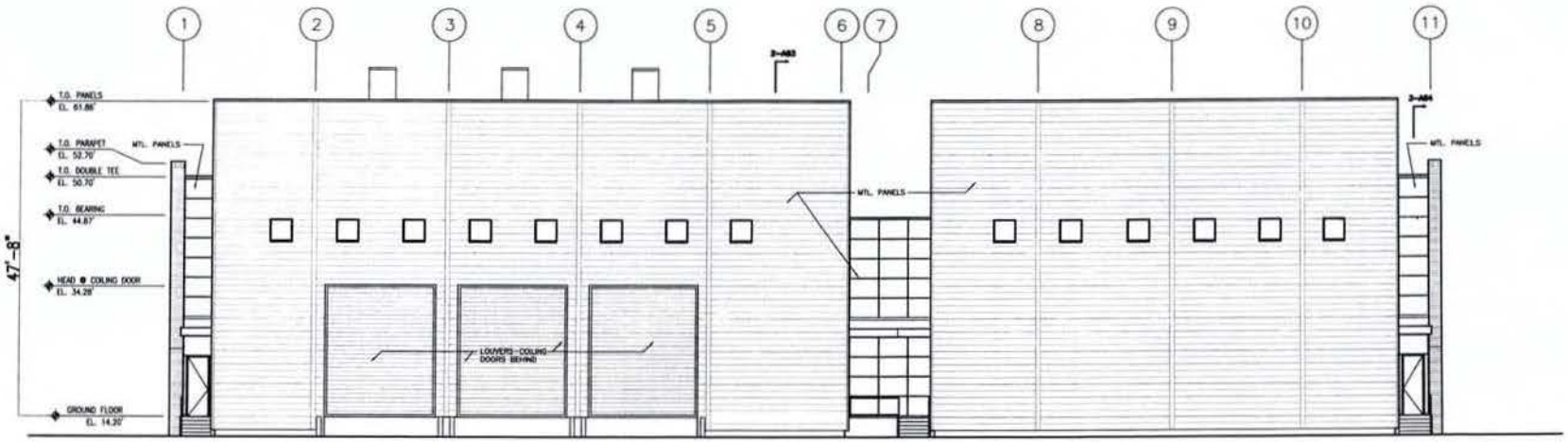
REDUCTION VERIFICATION SCALE: 0 10 INCHES

A-58

JOB	XA01	SHEET	XX OF XXX
CONSTRUCTION	IN-HOUSE CONTRACT NO.	☐	030160
DESIGN	DIETS FILE NO. / DCFA NO.	☐ / ☒	374-WSA
DESIGN MGR.	IN-HOUSE C.P.M.C. NO.	☐ / ☒	EPMC-IV
INDEX NO.	B6E-XA01	FOREMAN-INSPECTOR	

POST-BID REVISION

NO.	DESCRIPTION	BY	DATE



SOUTH EXTERIOR ELEVATION

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

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 - PROCESS FACILITIES - BOOK ONE

DIGESTER GAS BUILDING
EXTERIOR ELEVATION

ARCHITECTURAL

SCALE	AS SHOWN	DRAWN	T.S.
INTERCEPTOR		CHECKED	B. MITKO
SYSTEM		SUBMITTED	XX
SURVEYED			
UPDATE	SUB. 10/20/04	RECOMMENDED	
CADD FILE	334-2-44		

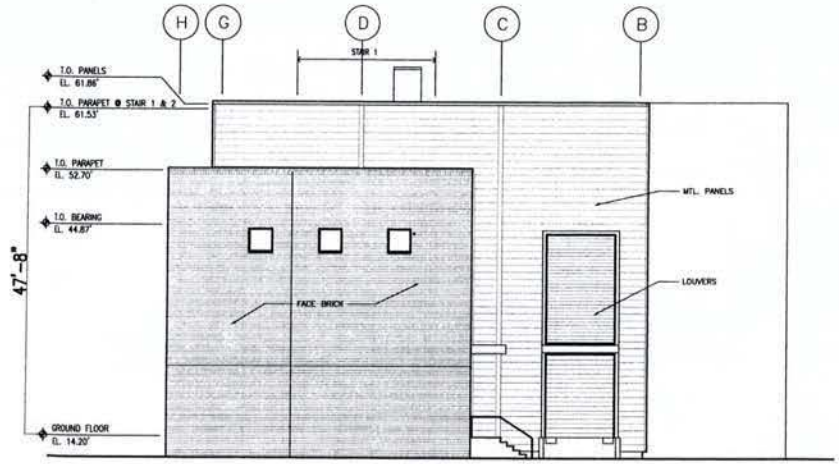
BBS Professional Corporation
Consulting Engineers
SORG
ARCHITECTS

REDUCTION VERIFICATION SCALE 0 10 INCHES

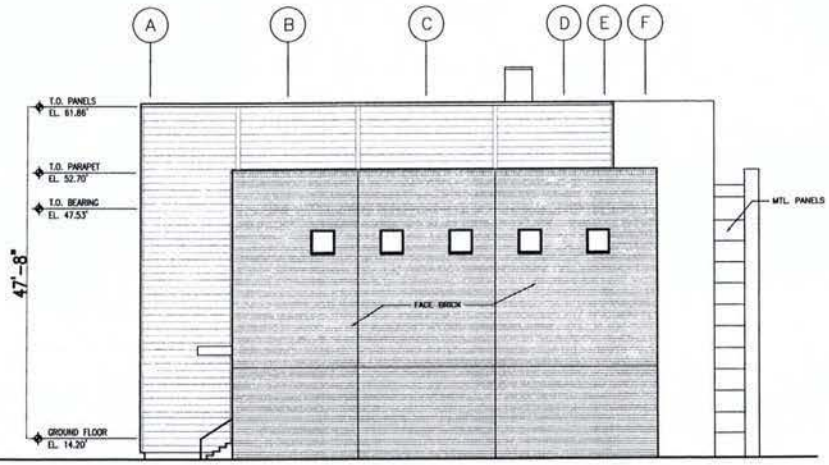
JOB XA01			SHEET XX OF XXX
CONSTRUCTION	IN-HOUSE CONTRACT NO.	☐	030160
	DETS FILE NO.	☐	
DESIGN	DCFA NO.	☒	374-WSA
DESIGN MGR.	IN-HOUSE E.P.M.C. NO.	☐ ☒	EPMC-IV
INDEX NO. B6E-XA01			FOREMAN-INSPECTOR

POST-BID REVISION

NO.	DESCRIPTION	BY	DATE



WEST ELEVATION



EAST ELEVATION

EAST AND WEST EXTERIOR ELEVATIONS

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

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 – PROCESS FACILITIES – BOOK ONE

DIGESTER GAS BUILDING EXTERIOR ELEVATIONS

ARCHITECTURAL

SCALE	AS SHOWN	DRAWN	T.S.
INTERCEPTOR		CHECKED	B. MITKO
SYSTEM		SUBMITTED	XX
SURVEYED			
UPDATE	SUB: 10/20/04	RECOMMENDED	
CADD FILE	234-2-4X		

BBS Professional Corporation
Consulting Engineers
SORG ARCHITECTS

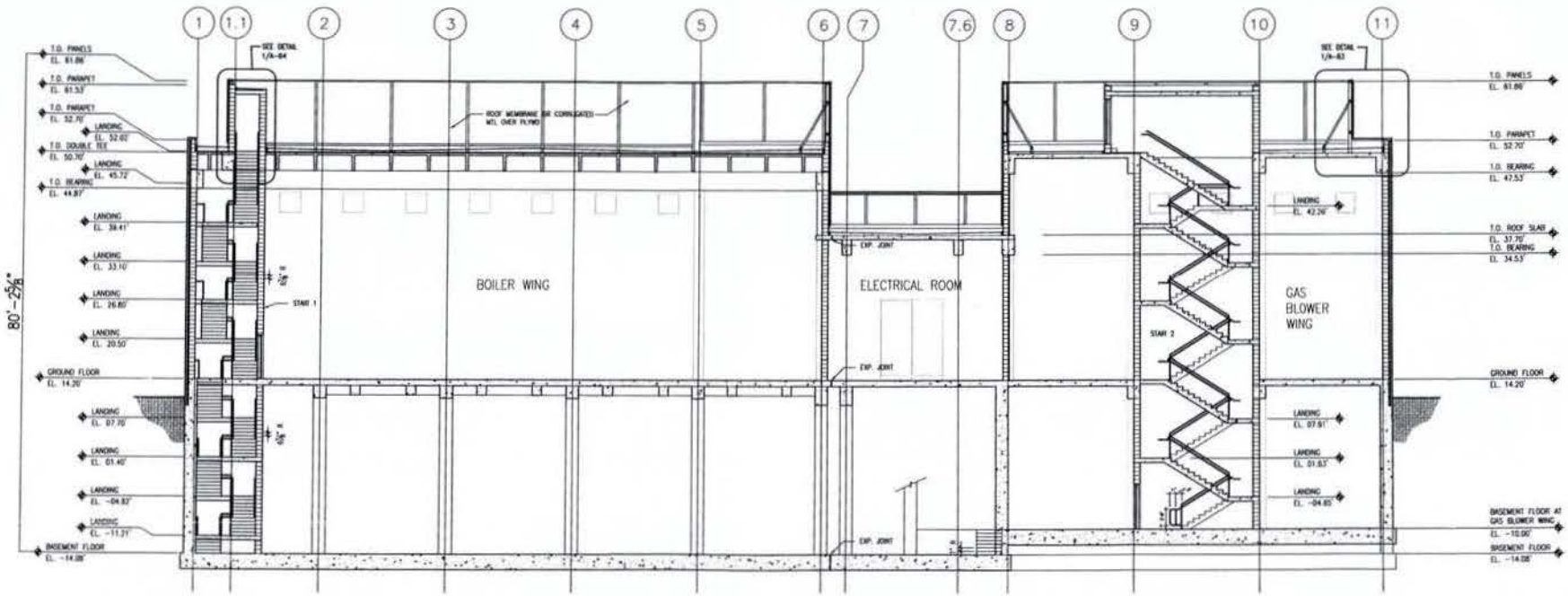
REDUCTION VERIFICATION SCALE 0 10 INCHES

A-60

JOB XA01			SHEET XX OF XXX
CONSTRUCTION	IN-HOUSE CONTRACT NO.	☐ ☒	030160
DESIGN	SHEETS FILE NO. DCFA NO.	☐ ☒	374-WSA
DESIGN MGR.	IN-HOUSE E.P.M.C. NO.	☐ ☒	EPMC-IV
INDEX NO. B6E-XA01			FOREMAN-INSPECTOR

POST-BID REVISION

NO.	DESCRIPTION	BY	DATE



BUILDING SECTION

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

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 - PROCESS FACILITIES - BOOK ONE

DIGESTER GAS BUILDING
BUILDING SECTION 1

ARCHITECTURAL

SCALE	AS SHOWN	DRAWN	T.S.
INTERCEPTOR		CHECKED	D. BITKO
SYSTEM		SUBMITTED	XX
SURVEYED			
UPDATE	SUB 10/20/04	RECOMMENDED	
CADD FILE	374-2-4X		

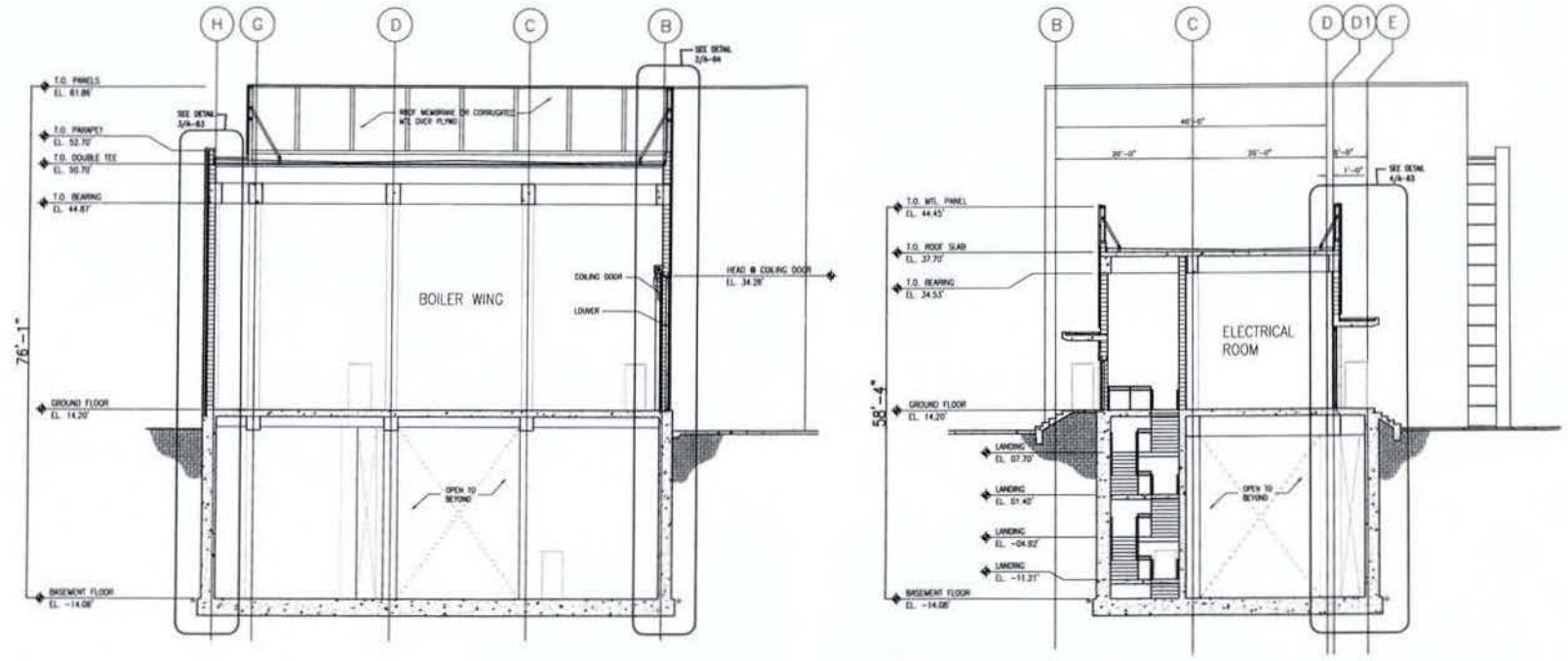
BBS Professional Corporation
Consulting Engineers
SORG ARCHITECTS

REDUCTION VERIFICATION SCALE 0 10 INCHES

JOB XA01			SHEET XX OF XXX
CONSTRUCTION	IN-HOUSE CONTRACT NO.	☐ ☒	030160
DESIGN	DIETS FILE NO. DCFA NO.	☐ ☒	374-WSA
DESIGN MGR.	IN-HOUSE E.P.M.C. NO.	☐ ☒	EPMC-IV
INDEX NO. 86E-XA01	FOREMAN-INSPECTOR		

POST-BID REVISION

NO.	DESCRIPTION	BY	DATE



BUILDING SECTIONS

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

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 – PROCESS FACILITIES – BOOK ONE

DIGESTER GAS BUILDING
BUILDING SECTIONS 2

ARCHITECTURAL

SCALE	AS SHOWN	DRAWN	T.S.
INVESTIGATOR		CHECKED	B. MITHO
SYSTEM		SUBMITTED	XX
SURVEYED			
UPDATE	SUB. 10/20/04	RECOMMENDED	
CADD FILE	374-J-44		

Professional Corporation
Consulting Engineers
SORG ARCHITECTS

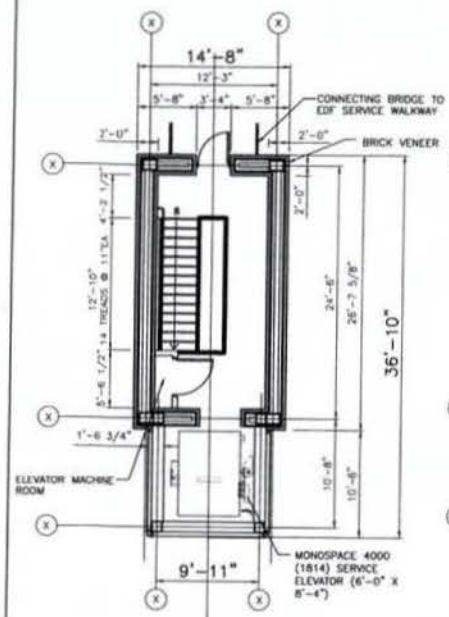
REDUCTION VERIFICATION SCALE 0 10 INCHES

A-62

JOB	XA01	SHEET	XXX
CONSTRUCTION	PM – HOUSE CONTRACT NO.		030160
DESIGN	DRCTS FILE NO. DCWA NO.		374–WSA
DESIGN MGR.	PM – HOUSE E. P.M.C. NO.		EPMC–IV
INDEX NO.	B6E–XA01	FOREMAN–INSPECTOR	

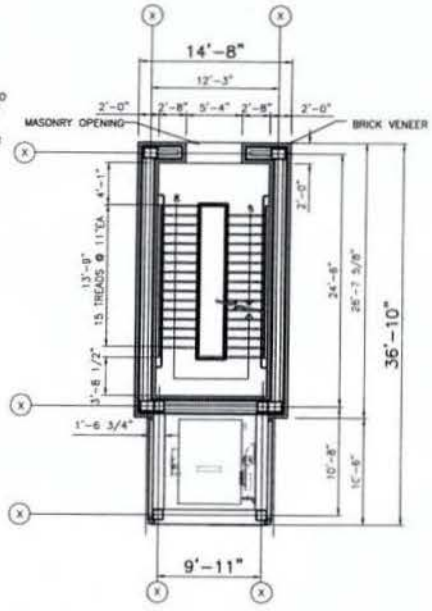
POST–BID REVISION

NO.	DESCRIPTION	BY	DATE



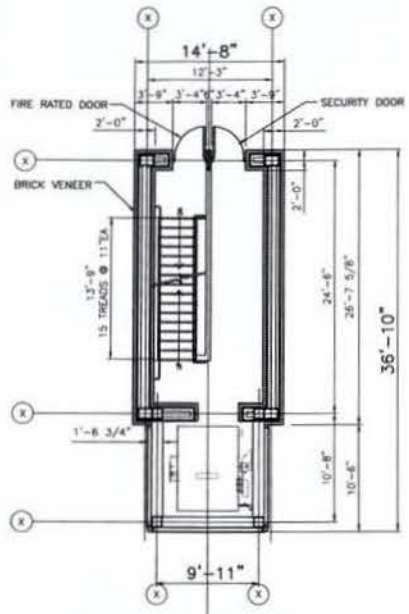
ACCESS TOWER 1 & 3 PLAN @ WALKWAY — 1 / A–68

SCALE: 3/16"=1'-0"



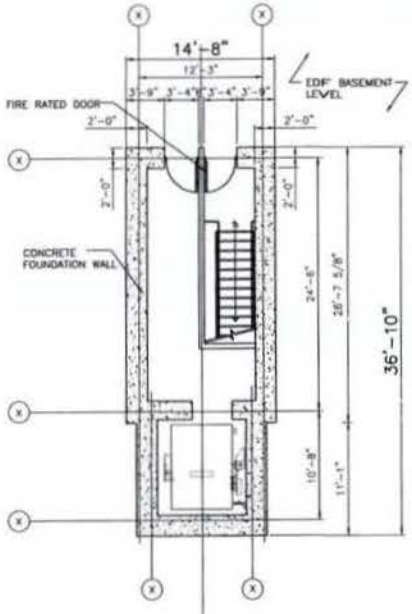
ACCESS TOWER 1 & 3 PLAN TYPICAL — 2 / A–68

SCALE: 3/16"=1'-0"



ACCESS TOWER 1 & 3 PLAN @ GRADE — 3 / A–68

SCALE: 3/16"=1'-0"



ACCESS TOWER 1 & 3 PLAN @ BASEMENT — 4 / A–68

SCALE: 3/16"=1'-0"

INTERMEDIATE SUBMITTAL

NO.	DESCRIPTION	BY	DATE

PRE–BID REVISION

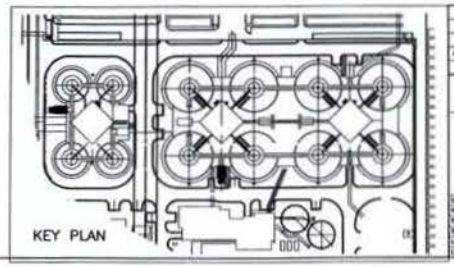
DISTRICT OF COLUMBIA
WATER AND SEWER AUTHORITY

ADVANCED WASTEWATER TREATMENT PLANT
EGG–SHAPED DIGESTERS FACILITY
SECOND CONTRACT – PROCESS FACILITIES – BOOK ONE

ACCESS TOWER 1 & 3 PLANS

ARCHITECTURAL

SCALE	AS SHOWN	DRAWN	W.MA / K. CHOW
RECEPTION		CHECKED	B. MYHO
SYSTEM		SUBMITTED	KA
SURVEYED			
UPDATE	SUB. 10/20/04	RECOMMENDED	
CADD FILE	374-2-4-68		



BBS Professional Corporation
Consulting Engineers
SORG
ARCHITECTS

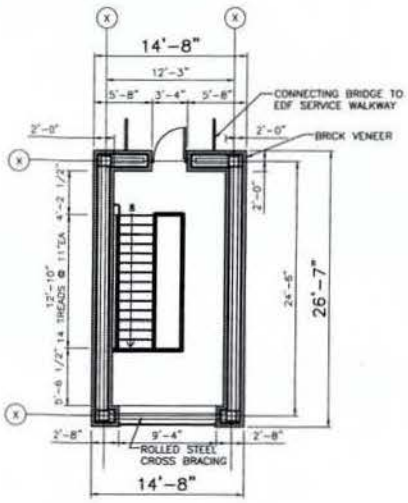
REDUCTION VERIFICATION SCALE 0 10 INCHES

A–68

JOB XA01		SHEET	OF XXX
CONSTRUCTION	IN-HOUSE CONTRACT NO.	☐ ☒	030160
DESIGN	DETS FILE NO. DCPS NO.	☐ ☒	374-WSA
DESIGN MGR.	IN-HOUSE E.P.M.C. NO.	☐ ☒	EPMC-IV
INDEX NO. B6E-XA01	FOREMAN-INSPECTOR		

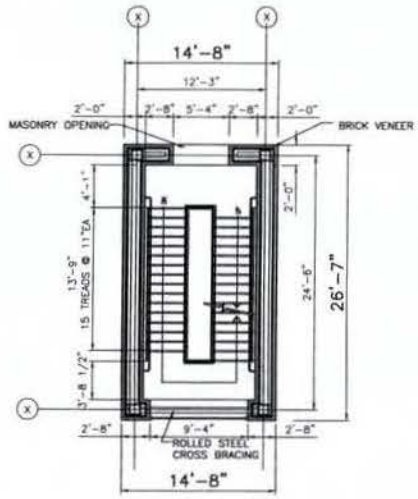
POST-BID REVISION

NO.	DESCRIPTION	BY	DATE



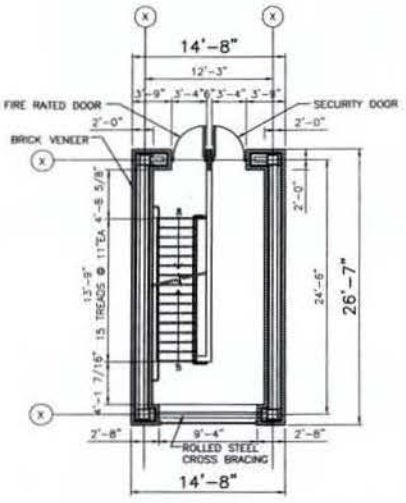
ACCESS TOWER 2 & 4 PLAN @ WALKWAY — 1 / A-69

SCALE: 3/16"=1'-0"



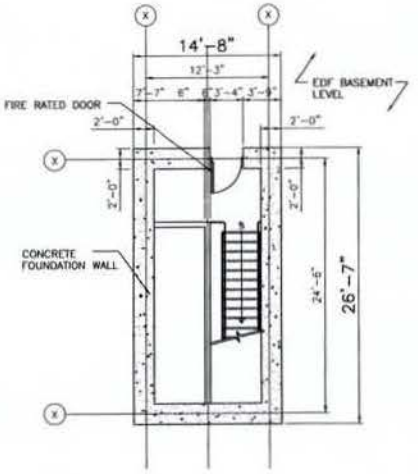
ACCESS TOWER 2 & 4 PLAN TYPICAL — 2 / A-69

SCALE: 3/16"=1'-0"



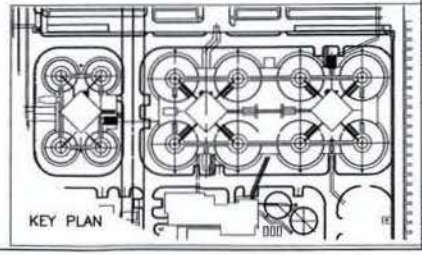
ACCESS TOWER 2 & 4 PLAN @ GRADE — 3 / A-69

SCALE: 3/16"=1'-0"



ACCESS TOWER 2 & 4 PLAN @ BASEMENT — 4 / A-69

SCALE: 3/16"=1'-0"



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 - PROCESS FACILITIES - BOOK ONE

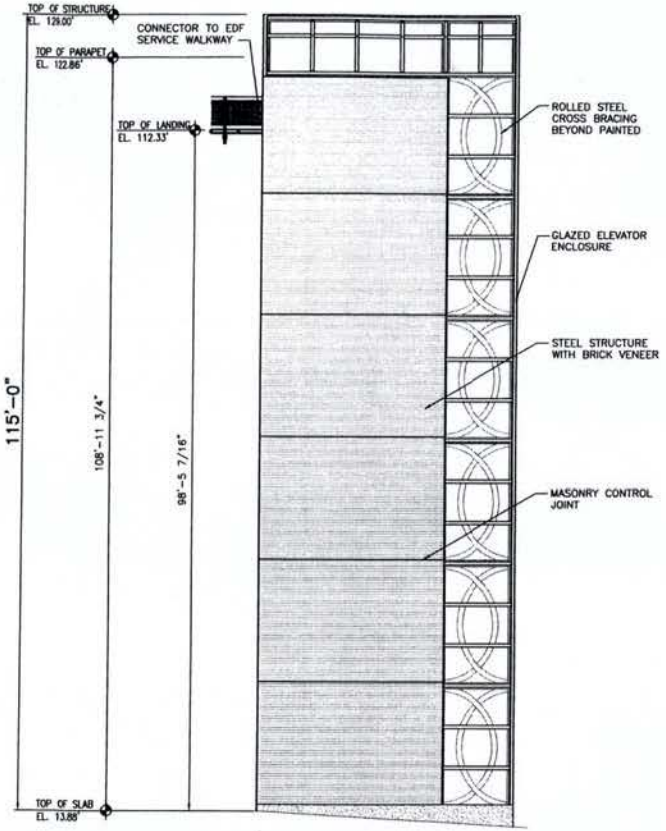
ACCESS TOWER 2 & 4 PLANS

ARCHITECTURAL

SCALE	AS SHOWN	DRAWN	W.SM / K. CHOW
INFO/RECEIPT		CHECKED	D. MITHO
SYSTEM		SUBMITTED	XX
SURVEYED			
UPDATE	SUB: 10/20/04	RECOMMENDED	
CADD FILE	234-2-A-69		

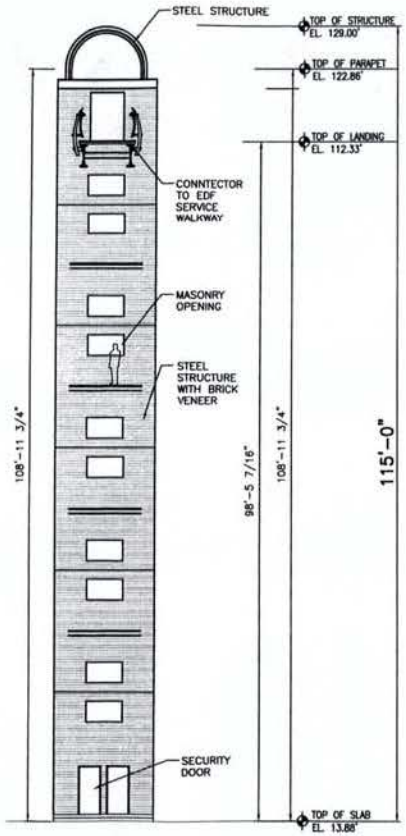
BBS Professional Corporation
Consulting Engineers
SORG ARCHITECTS

REDUCTION VERIFICATION SCALE 0 10 INCHES



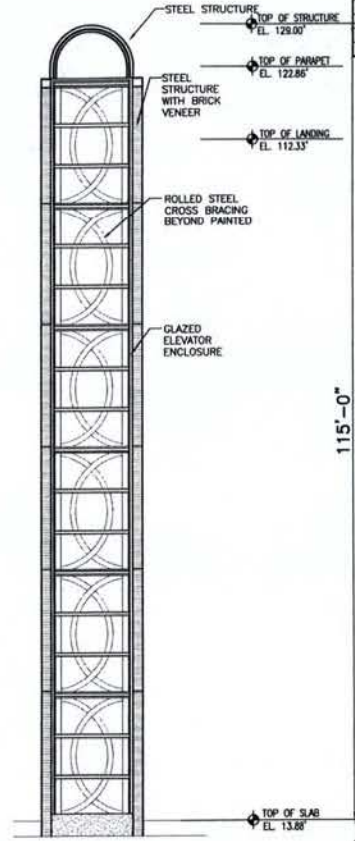
ACCESS TOWER 1 & 3 ELEVATION 1/A-71

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



ACCESS TOWER 1 & 3 ELEVATION 2/A-71

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



ACCESS TOWER 1 & 3 ELEVATION 3/A-71

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

JOB XA01	SHEET XXOF XXX
CONSTRUCTION IN-HOUSE CONTRACT NO.	☐ 030160
DESIGN DETS FILE NO. DCFA NO.	☐ 374-WSA
DESIGN MGR. IN-HOUSE E.P.M.C. NO.	☐ EPMC-IV
INDEX NO. B6E-XA01	FOREMAN-INSPECTOR

POST-BID REVISION

NO.	DESCRIPTION	BY	DATE

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 – PROCESS FACILITIES – BOOK ONE

ACCESS TOWER 1 & 3 ELEVATIONS

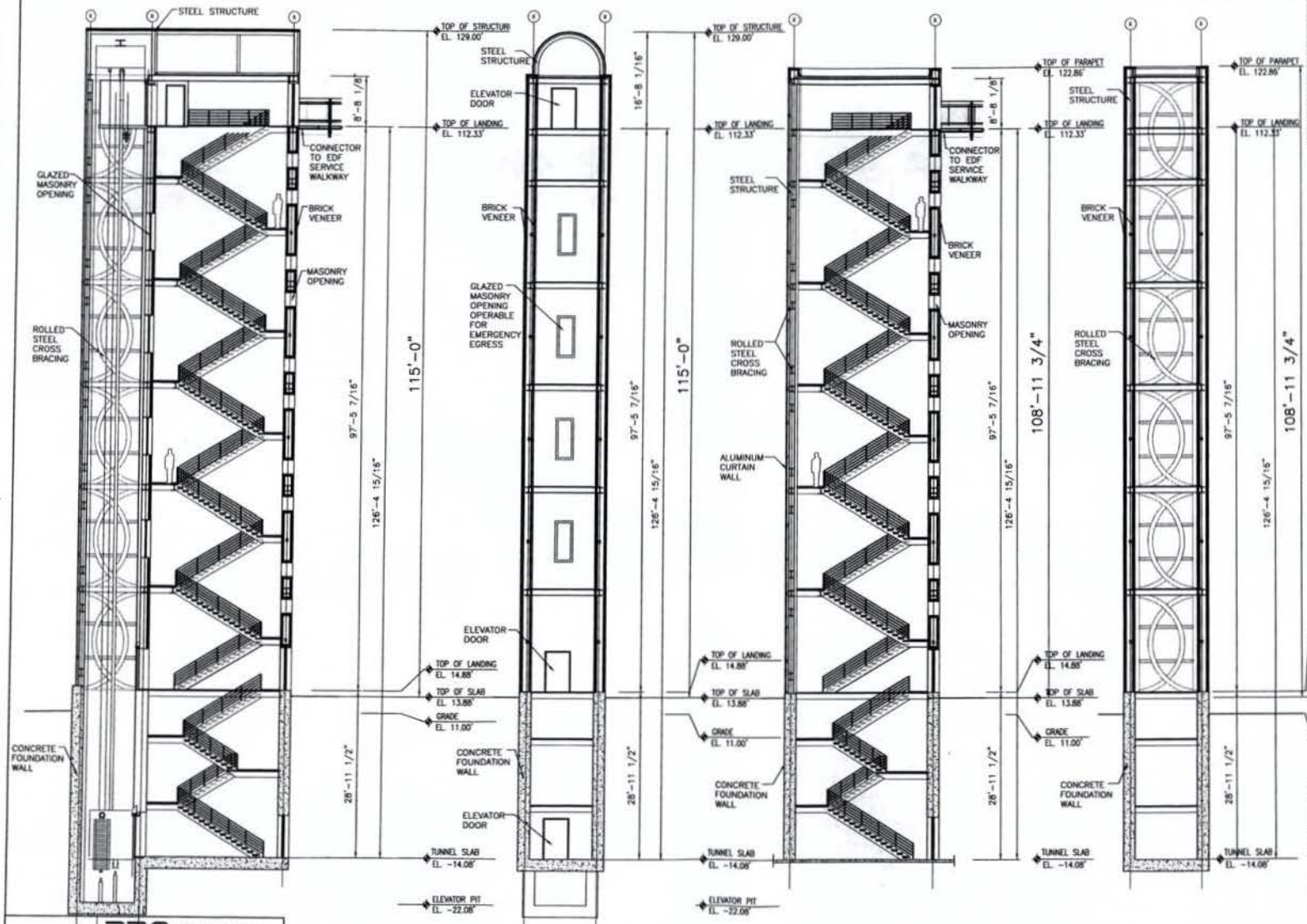
ARCHITECTURAL

SCALE	AS SHOWN	DRAWN W.MA / K. CHOW	
INTERCEPTOR		CHECKED	B. MITRO
SYSTEM		SUBMITTED	XX
SURVEYED			
UPDATE	SUB. 10/20/04	RECOMMENDED	
CADD FILE	334-2-A-71		

DBS Professional Corporation
Consulting Engineers
SORG ARCHITECTS

REDUCTION VERIFICATION SCALE 0 10 INCHES

A-71



ACCESS TOWER 1 & 3 SECTION 1 / A-73
SCALE: 1/8"=1'-0"

ACCESS TOWER 1 & 3 SECTION 2 / A-73
SCALE: 1/8"=1'-0"

ACCESS TOWER 2 & 4 SECTION 3 / A-73
SCALE: 1/8"=1'-0"

ACCESS TOWER 2 & 4 SECTION 4 / A-73
SCALE: 1/8"=1'-0"

BBS Professional Corporation
Consulting Engineers
SORG ARCHITECTS

JOB	XA01
SHEET	XXOF XXX
CONSTRUCTION	IN-HOUSE ☐ CONTRACT NO. ☒ 030160
DESIGN	DIETS FILE NO. ☐ DIDFA NO. ☒ 374-WSA
DESIGN MGR.	IN-HOUSE ☐ E.P.M.C. NO. ☒ EPMC-IV
INDEX NO.	B6E-XA01 FOREMAN-INSPECTOR

POST-BID REVISION

NO.	DESCRIPTION	BY	DATE

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 - PROCESS FACILITIES - BOOK ONE

ACCESS TOWER 1 & 3 SECTIONS
ACCESS TOWER 2 & 4 SECTIONS

ARCHITECTURAL

SCALE	AS SHOWN	DRAWN	W.MA /K. CHOW
INTERCEPTOR		CHECKED	B. MITKO
SYSTEM		SUBMITTED	XX
SURVEYED			
UPDATE	SUB: 10/20/04	RECOMMENDED	
CADD FILE	234-2-A-73		

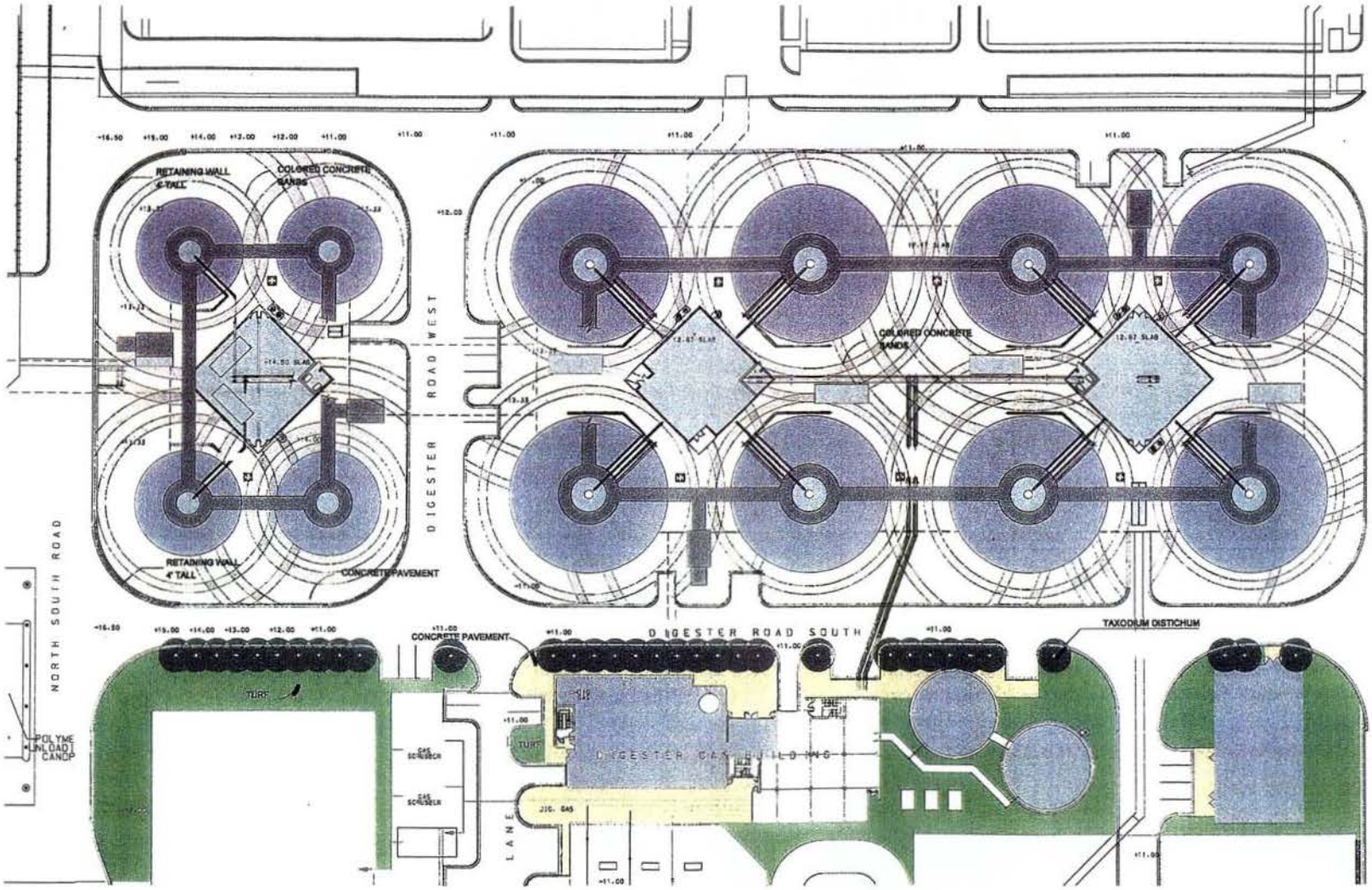
REDUCTION VERIFICATION SCALE 0 10 INCHES

A-73



PLANT LIST:

TAXODIUM DISTICHUM (BALD CYPRESS)
3”-3 ½” CALIPER



JOB XXXXX	SHEET OF XXX
CONSTRUCTION	030150
DESIGN	374-WSA
DESIGN MGR	EPMC-IV
INDEX NO. XXXXX	

POST-BID REVISION

NO.	DESCRIPTION	BY	DATE

INTERMEDIATE SUBMITTAL

NO.	DESCRIPTION	BY	DATE
			04.30.04

PRE-BID REVISION
DISTRICT OF COLUMBIA
WATER AND SEWER AUTHORITY

ADVANCED WASTEWATER TREATMENT PLANT
EGG-SHAPED DIGESTERS FACILITY
P.I.D. SUBMISSION

LANDSCAPE PLAN

SCALE 1"=30'	AS SHOWN	DRAWN	
INTERCEPTOR		CHECKED	
SYSTEM		SUBMITTED	
SURVEYED			
UPDATE/ CADD FILE	DUE XX/XX/XX	RECOMMENDED	

BBS Professional Corporation
Consulting Engineers

SORG
ARCHITECTS