

Implementation of the Erosion Sediment Pollution Control Plan

The foregoing procedures and all requirements of the specifications are contractual obligations of the CONTRACTOR performing the actual construction work. Soil requirements also apply to any and all subcontractors working on the project. This plan will be implemented throughout the course of construction.

The requirements relative to temporary control measures, early permanent restoration and minimizing work areas, are the most important factors affecting construction practices. In view of those circumstances, it is believed that this particular plan, on this particular project, will be implemented throughout the course of work.

Use of the Erosion Sediment Pollution Control Plan

As previously stated herein, the "Erosion and Sediment Pollution Control Plan" has been prepared in response to and in accordance with certain rules and regulations promulgated by the Pennsylvania Department of Environmental Protection. The handling of storm water, the topographic and geological features described, the types and classifications of soils, the sloping of earthwork, the temporary and permanent control measures, and the requirements are to be used for the purpose of eliminating, minimizing, and/or controlling pollution of the streams and waterways from materials anticipated to be eroded from the earthwork to be disturbed as a result of construction of the work.

Project Description

The Waste Water Treatment Plant (WWTP) Expansion Project required the authority to obtain adjacent property with the demolition of an existing building to allow for the construction of a New WWTP Head Works Building and Secondary Batch Reactor tanks. This project also includes the construction of a new Process Air Building, Digester Air Building, Chlorine Building and UV Disinfection Channel. Also included in this work is interconnection of Process Piping, Utility Piping, New Asphalt Driveway, Stone Driveway and Repairing of Plant Roads.

Wetlands

There are no wetlands within the site construction area.

Sequencing And Staging Of Construction

General

The intent of the sequence of construction is to ensure that adequate control measures are provided for the areas in which construction activities are occurring at all times. Under no circumstances will earth moving activities begin until the erosion control devices (BMP's) for the areas involved are installed.

Sequence Of Construction

Refer to the **Utility Line Trench Excavation Procedures** for limits on trench excavation before following this sequence.

Clear and grub areas shown on the plans where filter fabric is proposed to be installed, install filter fabric fencing, super filter fabric fencing, rock construction entrances, and storm inlet filter bag protection at locations illustrated on the construction drawings. Note placement filter fabric fencing may not be limited to these areas. Filter fabric fencing may be used in combination with seed/mulching to stabilize areas disturbed by unforeseen construction.

Mobilize equipment to site. Delimitate project boundary limits, clearly marking all pertinent features in the field.

After BMP's are installed and functioning properly, topsoil will be stripped from site in areas designated for grading/excavation and hauled offsite. Contractor to ensure the erosion control measures are installed at the approved offsite stockpile. Topsoil shall be temporarily seeded immediately after all topsoil is stripped as per the temporary seeding specifications on the E&S Plan.

Earthwork shall commence after all previously installed BMP's are checked and operational. Earthwork shall consist of cut and fill operations including excavation for tank and building foundations as well as storm water, water, gas, air, sewer, and electrical lines. Excess excavated material shall be hauled off site to the contractor's approved stockpile site. During earthwork activity, interim control measures shall be placed so to limit excessive erosion to work area (i.e. filter fabric fence) as soon as any portion of the site is brought up to final design grade permanent slopes shall be permanently seeded as per seeding applications on this plan.

Contractor's site superintendent will be responsible for the inspection of all erosion and sediment pollution control measures weekly and immediately after any run-off event. Corrective procedures shall be taken within 24 hours in the event an inspection should reveal the need for maintenance of existing measures or the placement of additional control measures to the site prior to any continued earthmoving or site improvement activities.

Upon completion of earth moving activities and the establishment of a uniform 70% perennial vegetative cover, all temporary BMP's may be removed.

General Notes

1. Earthwork for the project shall consist of the necessary excavation and grading for the construction of new tankage as well as the construction of a new driveway, buildings, and the digging of trenches in which the proposed pipelines shall be installed.

2. Natural vegetation shall be preserved whenever possible throughout the project area. Vegetative cover will be established as soon as possible by seeding and mulching all disturbed areas. Disturbed areas will be limited to as small a section as possible at any one time.

3. Silt fence shall be installed prior to any construction activities. Silt fence shall be installed temporarily along top of exposed adjacent to trenches as required to filter run-off from exposed fill slope. Silt fence shall be removed upon establishment of a uniform 70% perennial vegetative cover.

4. Storm Inlet Filter Protection shall be applied where noted, prior to excavation and removed upon site stabilization (uniform 70% perennial vegetative cover).

5. The CONTRACTOR shall inspect and maintain all BMP's on a weekly basis and after every run-off event during construction. Any repairs shall be made within 24 hours.

6. For utility line excavation, spoil piles shall be placed upslope of trench. Filter fabric fence shall be placed across graded trench on steeper slopes to retard run-off. All disturbed paved areas shall be restored in kind unless otherwise noted.

7. All excavation and grading shall be accomplished in a manner that complies with all the requirements and standards set forth in the Soil Erosion and Sedimentation Control Manual, Pennsylvania DEP.

8. The contractor working on site shall be responsible for all items of soil erosion and sedimentation control pertaining to his specific phase of work. Control measures shall be protected and maintained at all times to completion of project.

9. Contractor shall remove all accumulated sediment and dispose of the material at a DEP and Allegheny County Conservation District approved waste site.

10. Contractor will be responsible in submitting an erosion and sediment pollution control plan and obtaining appropriate permits by the DEP for the waste material disposal area. Contractor shall not dispose of any soil to any area until the site is approved.

11. After final site stabilization has been achieved (final stabilization is defined as uniform 70% perennial vegetation), temporary erosion and sedimentation controls must be removed. Areas disturbed during the removal of the controls must be stabilized immediately.

12. Contractor shall be responsible for performing environmental due diligence on all fill material imported to or exported from the site to certify that all fill material is "clean fill".

13. Contractor shall be required to obtain approval from Allegheny County Conservation District for all offsite waste/borrow areas.

Utility Line Trench Excavation Procedure

General:

Exposed trench excavations have high potential for accelerated erosion and sediment pollution. Since these excavations are usually located at lower elevations along or across earth disturbance sites, open trenches serve to concentrate sediment laden runoff and convey it to site boundaries or waterways. The most important erosion and sediment pollution control consideration for trench construction is the timing and specific scheduling of work activities.

Construction Requirements

- a. Limit advance clearing and grubbing operations to a distance equal to two times the length of pipe installation that can be completed in one day.
- b. Work crews and equipment for trenching, placement of pipe, plug construction and backfilling will be self contained and separate from clearing and grubbing and site restoration and stabilization operations.
- c. Limit daily trench excavation to the length of pipe placement, plug installation and backfilling that can be completed the same day.
- d. Water which accumulates in the open trench will be completely removed by pumping as shown by the PUMPED DISCHARGE SEDIMENT TRAP DETAIL before pipe placement and/or backfilling begins.
- e. On the day following pipe placement and trench backfilling, the disturbed area will be graded to final contours and appropriate temporary erosion and sediment pollution control measures/facilities will be installed. Seeding and mulching of all disturbed areas will be done at the end of each week.

Exceptions

In certain cases trenches cannot be backfilled until the pipe is hydraulically tested, or anchors and other permanent features are installed. In these cases, ALL of the requirements listed under CONSTRUCTION REQUIREMENTS will remain in effect with the following exceptions:

- (1) Daily backfilling of the trench may be delayed for six (6) days. All pressure testing and the complete backfilling of the open trench must be completed by the seventh (7) working day.
- (2) If daily backfilling is delayed, the disturbed area will be graded to final contours, appropriate temporary erosion and sediment control measures/facilities will be installed, and the area seeded and mulched within the next two (2) calendar days.

Vegetation

General: All grounds disturbed by any of the operations necessary to complete the work for this project are to be permanently seeded, unless occupied by structures or paved. This is to be accomplished as soon as possible after construction and not later than ten (10) days.

If seeding cannot be completed within the ten day period due to weather conditions, the disturbed area shall be mulched with straw at the rate of 3 ton per acre. This straw shall be anchored with mulch netting according to the manufacturer's recommendations or other appropriate means.

Temporary seeding will be used to protect exposed land surfaces which will not be permanently protected for a period more than two months, but less than twelve months. Temporary vegetation will provide short-term rapid cover until permanent vegetation or other protection can be established.

Temporary Seeding Specifications: The purpose of temporary cover is to provide short-term rapid cover for the control of runoff and erosion until vegetation or other stabilization material can be established. Temporary cover shall be applied on all sediment producing areas where the period of exposure will be more than two months, but less than twelve months. Mulch cover shall be provided for less than two month's exposure.

The utility line construction is to be progressive with backfill following immediately. If it is necessary to stockpile soil, temporary grass cover shall be established where soil stockpiles are to be exposed for a period greater than thirty (30) days. When the soil stockpile will be exposed for a period greater than two (2) days, but less than thirty (30) days, the stockpile shall be covered with mulch or protective erosion control fabric.

The site preparation and establishment of temporary cover shall be conducted according to the following guidelines:

- a. Install needed surface water control measures.
- b. Perform all cultural operations at right angles to the slope.
- c. Apply ground limestone according to test or at the rate of 180 lb./1000 sq. ft.
- d. Apply uniformly recommended analysis fertilizer according to soil test or 10-20-20 at the rate of 23 lb./1000 sq. ft.
- e. Work in lime and fertilizer to a depth of 4 in. using any suitable equipment.
- f. Temporary cover seed mixture shall consist of 100% annual ryegrass. Seed shall be applied uniformly at the rate of 1 lb./1000 sq. ft. during the recommended planting dates of March 1 to June 15 and August 15 to October 15.
- g. Cover grass seed with ½ in. of soil with suitable equipment.

Permanent Seeding Specifications

All areas will have permanent vegetation established. Areas along the pipelines shall have permanent vegetation established immediately upon completion of the pipeline. Sediment control devices will be removed only when the final vegetative cover and permanent facilities are completed. Completed areas will be covered with a minimum 4 inches of topsoil.

After the topsoil has been properly distributed, lime in the form of raw ground limestone shall be applied in an amount to be determined from an analysis of the soil by a qualified soil sampling service; then one week after the lime it has been spread, fertilizer shall be added. Fertilizer in the amount of 5-10-5, nitrogen, phosphorus and potash, respectively, shall be spread at the rate of 30 lb. per 1000 sq. ft. after which mulch shall be added. The entire area shall then be properly tilled and hand-raked to a smooth, even grade. All stones shall be removed from the topsoil. Permanent seeding at upland areas (non-wetland) shall consist of a mixture of 88% Kentucky 31 tall fescue and 12% red top, sown at the rate of 2 pounds per 1000 square foot. The area shall then be lightly brushed or raked to provide slight covering over the seed, after which it shall be lightly rolled in two directions. In the absence of a soil test, lime should be applied at a rate of 6 tons per acre, fertilizer should be applied at a rate of 100 lbs. of N, 200 lbs. of P₂O₅ and 200 lbs. K₂O per acre (eg. 1,000 lbs. of 10-20-20 per acre).

Sowing may be done mechanically, by hand, or by an approved method of hydroseeding. In the latter case, alternate means of fertilizing combined with seeding will be permitted upon approval of methods by the OWNER's representative. Mulching material shall be in accordance with the recommendations of a local recognized nurseryman approved by the OWNER's representative.

Mulching

The purpose of mulch is to reduce erosion, prevent surface compaction, crusting, conserve moisture and aid in establishing plant cover and control weeds. Mulch shall be applied on any area subject to erosion, or which has unfavorable conditions for plant establishment and growth. The practice may be used along or in conjunction with other structural and vegetative conservation practices, such as waterways, ponds, sedimentation traps, or critical area planting. On sediment producing areas where the period of exposure is less than two months, mulch materials shall be applied according to the following guidelines:

- a. For area subject to critical erosion, temporary erosion control devices such as furrows, diversions, etc., within or adjacent to area to be mulched shall be installed.
- b. Straw or hay mulch shall be applied at the rate of 3 tons per acre. Chemically treated or salted straw or hay is not acceptable as mulch.
- c. Straw or hay mulch shall be anchored by either peg or twine or mulch netting.
- d. Mulched areas shall be checked periodically and immediately after severe storms for damage until the desired purpose of the mulching is achieved. Damaged portions of the mulch or tie-down material shall be repaired as soon as discovered.

Type of Soil Disturbed by Construction

The soil information for this project was obtained from the Soil Survey Interpretation for Allegheny County as prepared by the U. S. Department of Agriculture Soil Conservation Services. The CONTRACTOR shall make his own interpretation of the information when necessary as to how it may or may not affect any or all work under this project, and shall be responsible for all construction activities relating thereto and resulting therefrom. Soil within construction limits are as follows:

URB - Urban Land-Rainboro complex, gently sloping.

This mapping unit is on terraces. Slopes are 0 to 8 percent.

The composition of this mapping unit is more variable and areas are generally much larger than those of most other mapping units in the county. Mapping is adequate, however, for the anticipated uses of the soils.

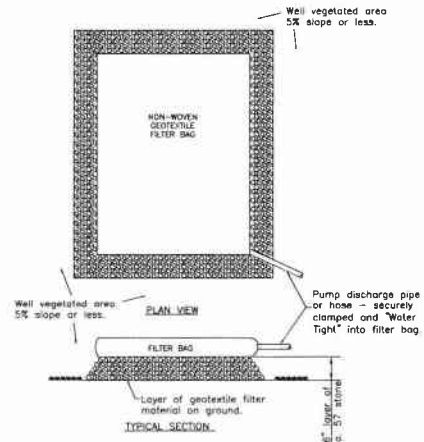
Included in mapping area small areas of Allegheny variant and Ernest soils and small areas of soils that have slopes of more than 8 percent slopes. Also included, mostly in the suburbs, are areas that are mainly Rainboro soils. In other areas, including much of Pittsburgh, the Rainboro soils are minor extent.

Seasonal wetness is generally a limitation.

The intense urban development precludes most other land uses in the undeveloped areas, onsite investigation is required to determine the kind and degree of limitations. Not assigned a capability unit.

According to the Soil Survey of Allegheny County, Pennsylvania conducted by the USDA Soil Conservation Service, Urban Land-Rainboro Complex is considered a hydric soil with seasonal wetness being its only limitation. This limitation will be addressed by using the following BMP's: Filter Fabric Fence, Inlet Filter Bags, Super Filter Fabric Fence and Rock Construction Entrance. A Pump Discharged Sediment Trap will also be used in dewatering all excavations.

		8172 CLAYBURN BLVD PITTSBURGH, PA 15206 PHONE: 412-241-0418 INFO@KLHENGINEERS.COM		Revision Date
Date: 2-1-08 Drawn By: JTB Checked By: JTB Approved By: JTB	Date: 2-1-08 Drawn By: JTB Checked By: JTB Approved By: JTB	Date: 2-1-08 Drawn By: JTB Checked By: JTB Approved By: JTB	Date: 2-1-08 Drawn By: JTB Checked By: JTB Approved By: JTB	Date: 2-1-08 Drawn By: JTB Checked By: JTB Approved By: JTB
MUNICIPAL AUTHORITY OF THE CITY OF MCKEESPORT ALLEGHENY COUNTY, PENNSYLVANIA CONTRACT NUMBER 2010-01 AND 2010-02 WASTEWATER TREATMENT PLANT EXPANSION EROSION AND SEDIMENT POLLUTION CONTROL PLAN SHEET 5 OF 6		Revision Date		
Sheet No. 5		Drawing No. 220-WP5		



- NOTES:**
- The filter bag shall trap particles larger than 130 microns
 - The pumping rate for the filter bag shall not exceed 750 gpm or $\frac{1}{2}$ the maximum specified by the manufacturer, whichever is less. Pump intake shall be flooding or screened.
 - Once half full, the filter bag and trapped sediment shall be disposed by the contractor at the contractors dump site.
 - Pump filter bag shall be inspected regularly and repaired within 24 hours if found defective. Pumping will cease upon any problem with the filter bag and must not be resumed until the problem is corrected.

FILTER BAG SPECIFICATIONS
Typical Properties

Weight	ASTM D3776	8.3 oz./yd.
Thickness	ASTM D1777	120 mils
Grab Tensile	ASTM D4632	240 lbs.
Grab Elongation at Break	ASTM D4632	50%
Puncture Resistance	ASTM D4633	115 lbs.
Trapezoidal Tear	ASTM D4533	100 lbs.
Mullen Burst Water	ASTM D3786	350 lbs.
Flow Rate	ASTM D4491	105 gpm/ft.
Permittivity	ASTM D4491	1.7 sec.-1
UV Resistance	ASTM D4355	85% str. ret.
Bag Dimensions	15ft. x 13.25ft.	

TABLE C Maximum Slope Lengths for Filter Fabric Fences

Slope - Percent	Maximum Slope Length (ft) Above Fences		
	18" High Fence	30" High Fence	Super Silt Fence
2 (or less)	150	200	1,000
5	100	150	500
10	50	75	300
15	35	50	200
20	25	35	150
25	20	25	100
30	15	20	75
35	10	15	50
40	7	10	35
45	5	7	25
50	3	5	15

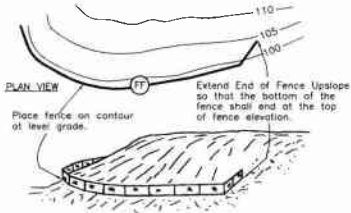


Illustration Filter Fabric Fence Detail
NTA

Pumped Discharge Sediment Trap Detail
NTA

Standard Silt Fence
Design Standards/Restrictions

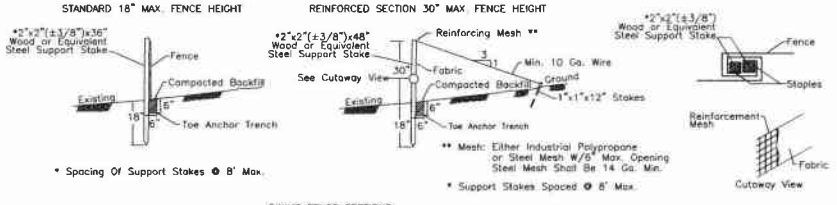
- Silt Fence will be placed at level grade. Both ends of a fence section will be extended up the slope so that the bottom of the fence shall end at the top of the fence elevation.
- Silt fences will be designed to control runoff from drainage areas that do not exceed the maximum slope to slope length relationship as shown in TABLE C.
- 18" high fence shall be installed according to the STANDARD SILT FENCE DETAILS. Any fence greater than 18" high may be installed according to the details shown, as long as the maximum slope lengths for 18" high fence are observed.
- 30" high fence, or any fence installed on uncompacted fills or extremely loose undisturbed soils, will be constructed according to the SILT FENCE DETAILS.
- The formation of concentrated flows on the drainage slope above a silt fence installation is not permitted. If concentrated flows do occur, direct slope stabilization measures must be employed to prevent such conditions.
- Silt fences will not be placed in any area of concentrated flows such as ditches, swales, channels, etc.
- Silt fences will not be used in areas where rock or rocky soils prevent full and uniform anchoring of the fence toe.
- Silt fence material will not be placed across the entrance to pipes or culverts and will not be wrapped around the principal spillway structures of sediment traps or basins.

Installation

- A trench will be plowed or otherwise excavated to the required depth (see STANDARD SILT FENCE DETAILS) with little, if any disturbance to the downslope side of the trench. The bottom of the trench and the fence top will be placed on a level grade. When it is necessary to cross small depressions, the trench bottom and fence top edge may deviate slightly from the level grade. Grades in such sections will not exceed one percent (1%), nor will the deviation extend for more than 25 feet.
- Support stakes will be driven to the required depth below the existing ground at specified intervals.
- Stretch and fasten fabric to the upslope side of the support stakes (if a reinforced section, fasten reinforcement mesh prior to fastening the fabric).
- Where ends of the fabric come together, they will be overlapped, folded and stapled to prevent sediment bypass.
- The toe anchor will be backfilled and compacted to a density equal to the surrounding soils.
- If constructing a reinforced section, attach guy wires to support stakes. Provisions should be made for easy loosening and removal of the guy wires to allow for access to perform maintenance work.

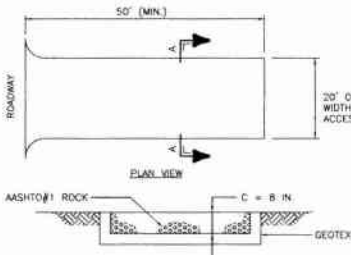
Maintenance

- The contractor shall appoint an inspector who is experienced and qualified in E&S controls to conduct regular inspections of Best Management Practices (BMPs) and perform any required maintenance. Inspector shall maintain weekly inspection records.
- Regular inspection and maintenance of BMPs shall begin immediately upon installation and continue until its removal. Any necessary repairs will be made within 24 hours. The fence installation should be inspected weekly and after every run-off event.
- Accumulated sediments will be removed as required to keep the fence functional. In all cases remove deposits where accumulations reach $\frac{1}{2}$ the above ground height of the fence.
- Any section of Filter fabric fence which has been undermined or topped must be replaced by the end of the workday with a Rock Filter Outlet. See Rock Filter Outlet Detail.
- Adhere to any manufacturer's recommendations for replacing silt fence due to weathering.
- All trapped sediment shall be disposed by the Contractor at a DEP and Allegheny County Conservation District approved waste site.



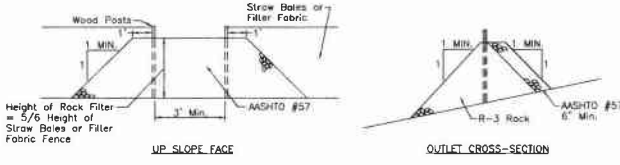
Standard Silt Fence Details
NTA

Standard Silt Fence Details
NTA



Maintenance
Rock construction entrance thickness shall be constantly maintained to the specified dimensions by adding rock. A stockpile shall be maintained on site for this purpose. At the end of each construction day, all sediment deposited on paved roadways shall be removed and returned to the construction site.

Rock Construction Entrance
NTA



Rock Filter Outlet
Maintenance
Sediment must be removed when the accumulations reach $\frac{1}{2}$ height of the outlet and disposed by the Contractor at a DEP and Allegheny County Conservation District approved waste site.

Rock Filter Outlet
NTA

Super Silt Fence
Design Standards/Restrictions

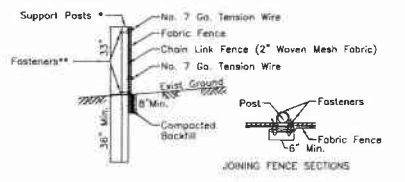
- The maximum slope length above any super silt fence should not exceed that shown in Table C. The slope length shown is the distance from the fence to the drainage divide or the nearest upslope channel.
- Super silt fence should not be used in areas where rock or rocky soils prevent the full and uniform anchoring of the fence or proper installation of the fence posts. It should be used only where access exists or can be made for the construction equipment required to install and remove the chain link fencing.
- Super silt fence should be installed at grade level. Both ends of fence section should be extended at least 8 feet upslope at 45 degrees to the main fence alignment to allow for pooling of water.
- The formation of concentrated flows on the drainage slope above a silt fence installation is not permitted. If concentrated flows do occur, direct slope stabilization measures must be employed to prevent such conditions.
- Silt fences will not be placed in any area of concentrated flows such as ditches, swales, channels, etc.
- Silt fences will not be used in areas where rock or rocky soils prevent full and uniform anchoring of the fence toe.
- Silt fence material will not be placed across the entrance to pipes or culverts and will not be wrapped around the principal spillway structures of sediment traps or basins.

Installation

- An 8" deep trench should be excavated, minimizing the disturbance on the downslope side. The bottom of the trench should be at level grade. Maximum deviation from level grade should be 5%, and not extend for more than 50 ft.
- A chain link fence should be installed in the downslope side of the trench with the fence on the upslope side of the poles. Poles should be 2 1/2" diameter galvanized or aluminum posts set at 10' minimum spacing. Support posts must be installed by a post hole drill a minimum 36" below the ground surface and extend a minimum of 33" above ground surface. Poles do not need to be set in concrete.
- Filter fabric should be stretched and securely fastened to the fence with wire fasteners, staples, or preformed clips. It should extend a minimum 33" above ground surface.
- At fence ends, both ends should be overlapped a minimum 6", folded, and secured to the fence. The fabric toe should be placed in the bottom of the trench, backfilled and compacted.

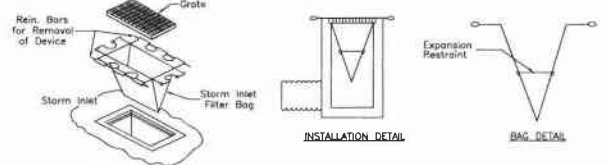
Maintenance

- The contractor shall appoint an inspector who is experienced and qualified in E&S controls to conduct regular inspections of Best Management Practices (BMPs) and perform any required maintenance. Inspector shall maintain weekly inspection records.
- Regular inspection and maintenance of BMPs shall begin immediately upon installation and continue until its removal. Any necessary repairs will be made within 24 hours. The fence installation should be inspected weekly and after every run-off event.
- Accumulated sediments will be removed as required to keep the fence functional. In all cases remove deposits where accumulations reach $\frac{1}{2}$ the above ground height of the fence.
- Any section of Filter fabric fence which has been undermined or topped must be replaced by the end of the workday with a Rock Filter Outlet. See Rock Filter Outlet Detail.
- Adhere to any manufacturer's recommendations for replacing silt fence due to weathering.
- All trapped sediment shall be disposed by the Contractor at a DEP and Allegheny County Conservation District approved waste site.



* Posts spaced @ 10' Max. Use 2 1/2" dia. galvanized or aluminum posts
** Chain Link to Post Fasteners spaced @ 14" max. Use No. 6 Gal aluminum wire or No. 9 galvanized steel pre-formed clips. Chain Link to Tension Wire Fasteners spaced @ 60" max. Use No. 10 galvanized steel wire. Fabric to Chain Fasteners spaced @ 24" max. C to C.

Super Filter Fabric Fence
NTA



Maintenance
Storm Inlet Filter Bags shall be inspected weekly and after every runoff event. Any torn or damaged bag shall be replaced within 24 hours. Filter Bags shall be emptied when $\frac{1}{2}$ full, with the debris properly disposed of.

Storm Inlet Filter Bag Protection Detail
NTA

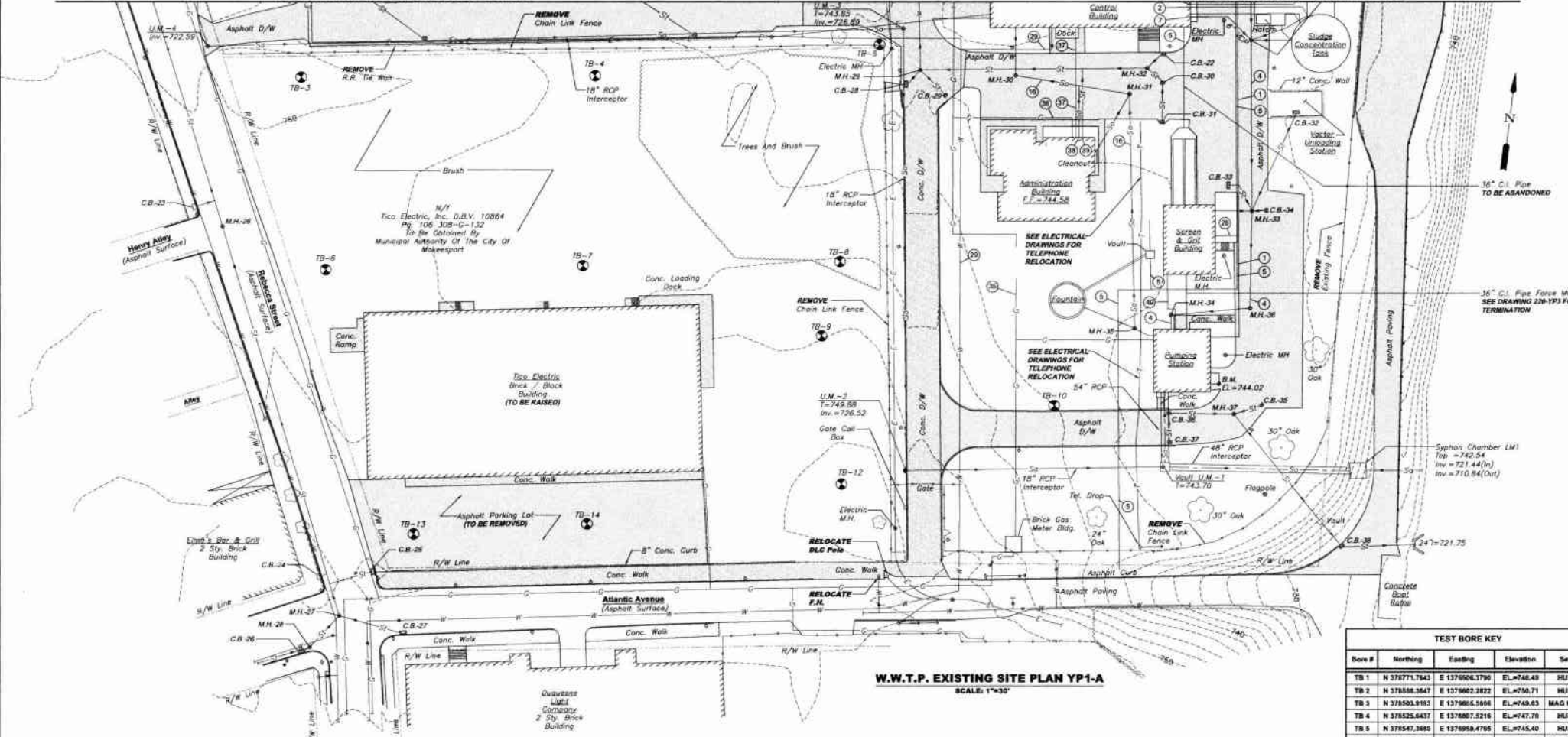
Scale:	No Scale	Date:	February 2009
Drawn By:	DRG	Checked By:	HOF
Approved By:	ME		
Sheet No.:	6		
Drawing No.:	220-WP6		

KLH ENGINEERS, INC.

MUNICIPAL AUTHORITY OF THE CITY OF MCKEESPORT
ALLEGHENY COUNTY, PENNSYLVANIA
CONTRACT NUMBER 2010-01 AND 2010-02
WASTEWATER TREATMENT PLANT EXPANSION
EROSION AND SEDIMENT POLLUTION CONTROL PLAN SHEET 6 OF 6

FOR CONTINUATION SEE DWG. 220-YP2

FOR CONTINUATION SEE DWG. 220-YP2



W.W.T.P. EXISTING SITE PLAN YP1-A
SCALE: 1"=30'

Existing Piping Key	
1	(PW) 1 1/4" Potable Water
2	(TS) 6" C.I. Thickened Sludge & EL. 730.50
3	(TS) 6" C.I. Thickened Sludge & EL. 730.50
4	12" VCP Sewer To Pump Station
5	(EW) 2" Effluent Water
6	36" C.I. From Grit Chamber & EL. 734.00
7	(RD) 6" C.I. Recycle / Drain & EL. 737.54
8	(FV) 3" Final Water To Concentration Tanks & EL. 737.54
9	8" C.I. Primary & Waste Secondary Sludge & EL. 737.54
10	(Pn) 12" Galvanized Steel Air To Flocculation Tanks & EL. 738.50
11	(SD) 8" C.I. Scum Drain & EL. 733.00
12	(S) 8" C.I. Sludge From Settling Tanks & EL. 730.87
13	(SD) 6" C.I. Scum Drain & EL. 733.50
14	(CS) 3" Steel Chlorine Solution & EL. 739.00
15	(CS) 3" Steel Chlorine Solution & EL. 739.00
16	(RD) 12" C.I. Recycle / Drain
17	(SS) 6" C.I. Sludge Suction & EL. 730.87
18	(SS) 6" C.I. Sludge Suction & EL. 730.87
19	(SS) 6" C.I. Sludge Suction & EL. 730.87
20	(ScDr) 8" C.I. Scrubber Drain
21	8" Supernatant
22	8" Supernatant
23	Drain
24	Drain
25	8" Tank Drain
26	12" C.I. Plant Water
27	18" RCP Plant Outfall
28	1 1/4" Effluent Water
29	Potable Water
30	36" C.I. Final Tank Effluent
31	36" C.I. Final Tank Influent
32	24" C.I. Return Sludge
33	12" Waste Activated Sludge
34	8" Tank Drain
35	8" Natural Gas
36	8" Natural Gas
37	1 1/2" Potable Water
38	8" Sanitary
39	8" Roof Drain
40	1 1/2" Natural Gas

Existing Catch Basins		
C.B. No.	Top EL.	Inv. EL. (In / Out)
C.B.-1	741.97	739.37
C.B.-2	742.70	733.16
C.B.-3	742.87	732.77
C.B.-4	741.99	738.59
C.B.-5	744.89	740.59
C.B.-6	742.93	738.13
C.B.-7	742.81	738.18
C.B.-8	742.88	738.88
C.B.-9	743.87	738.67
C.B.-10	743.37	739.07
C.B.-11	743.04	741.04
C.B.-12	743.14	738.34
C.B.-13	742.90	740.40
C.B.-14	743.06	740.88
C.B.-15	743.10	740.10(8")
C.B.-16	741.88	737.25
C.B.-17	740.13	737.03
C.B.-18	739.83	736.32
C.B.-19	740.44	737.94
C.B.-20	742.62	740.12
		739.82

Existing Catch Basins		
C.B. No.	Top EL.	Inv. EL. (In / Out)
C.B.-21	742.61	740.21
C.B.-22	742.87	739.87
C.B.-23	748.92	742.92
C.B.-24	749.79	745.92
C.B.-25	748.95	744.85
C.B.-26	749.03	745.83
C.B.-27	748.58	748.58
C.B.-28	743.27	739.47
C.B.-29	743.31	738.81
C.B.-30	742.67	-
C.B.-31	742.28	738.72
C.B.-32	742.28	738.48
C.B.-33	743.03	738.73
C.B.-34	743.02	740.32
C.B.-35	742.48	737.74
C.B.-36	742.23	738.23
C.B.-37	742.12	738.41
C.B.-38	737.59	724.09

* Filled with Debris

Existing Manholes				
M.H. No.	Top EL.	Inv. EL. (In)	Inv. EL. (Out)	Inv. EL. (In / Out)
M.H.-1	742.23	726.16	725.72	
M.H.-2	742.34	729.29 (38")	729.06 (38")	
M.H.-3	743.47			733.80
M.H.-4	BURIED			735.45a
M.H.-5	743.34			734.52
M.H.-6	750.99			734.67
M.H.-7	746.23			735.07
M.H.-8	742.58			
M.H.-9	743.04			
M.H.-10	746.72			
M.H.-11	740.56	735.92(8")	729.64	
M.H.-12	743.71	740.25(6") (North West)	735.85	
M.H.-13	743.35		736.01	
M.H.-14	743.89	737.90(6") (West)	736.60(8")	
		734.89(6") (South West)		
M.H.-15	743.30	740.25(6") (North West)	739.55(4") (South East)	
		737.91(6") (South)	736.80(8")	
			736.60(12")	
M.H.-16	741.84			734.53
M.H.-17	740.26			725.11
M.H.-18	741.16			725.11
M.H.-19	741.87			723.82
M.H.-20	743.84			724.74

Existing Manholes				
M.H. No.	Top EL.	Inv. EL. (In)	Inv. EL. (Out)	Inv. EL. (In / Out)
M.H.-21	742.87			737.72
M.H.-22	743.10	738.80 (South West)	736.27 (South)	737.54 (North East)
M.H.-23	743.70	724.82	724.48	
M.H.-24	743.11	724.32(10") (East)	724.31	
M.H.-25	743.06	728.54(8") (North West)	724.11	
		724.35(8") (North East)		
		724.26(10") (East)		
M.H.-26	748.90			738.84
M.H.-27	750.01	741.89 (12")		716.41
M.H.-28	749.83	745.76 (South East)	740.83	
M.H.-29	743.51			738.23
M.H.-30	743.50			718.41
M.H.-31	743.11	738.08 (8")		717.68 (12")
M.H.-32	743.10			736.84
M.H.-33	743.30	739.52 (East)	723.86	
		739.41 (West)		
		738.13 (North West)		
		736.76 (Vector D.S.)		
M.H.-34	743.91		722.86	
M.H.-35	743.13	738.38 (4")		715.42
M.H.-36	743.64		723.59	
M.H.-37	743.20	737.19 (East)	736.82	
		737.67 (West)		

TEST BORE KEY				
Bore #	Northing	Easting	Elevation	Set
TB 1	N 378771.7643	E 1376806.3790	EL=748.48	HUB
TB 2	N 378888.3547	E 1376802.2822	EL=750.71	HUB
TB 3	N 378903.9193	E 1376805.5698	EL=748.83	MAG HUB
TB 4	N 378925.8437	E 1376807.5216	EL=747.78	HUB
TB 5	N 378947.3680	E 1376809.4765	EL=745.40	HUB
TB 6	N 378991.2429	E 1376817.8753	EL=748.76	MAG HUB
TB 7	N 379413.9746	E 1376833.8294	EL=747.48	MAG HUB
TB 8	N 379434.8916	E 1376875.8854	EL=747.71	HUB
TB 9	N 379356.9189	E 1376862.2685	EL=750.88	HUB
TB 10	N 379365.3599	E 1377113.2174	EL=745.79	HUB
TB 11	N 379259.4403	E 1376845.8795	EL=751.26	MAG NAIL
TB 12	N 379311.2983	E 1376893.2243	EL=752.26	MAG HUB
TB 13	N 379247.0480	E 1376748.1669	EL=750.88	MAG NAIL



NOTE:
ITEMS IDENTIFIED WITH UPPER CASE TEXT ARE PROPOSED.
ITEMS IDENTIFIED WITH MIXED CASE TEXT ARE EXISTING.

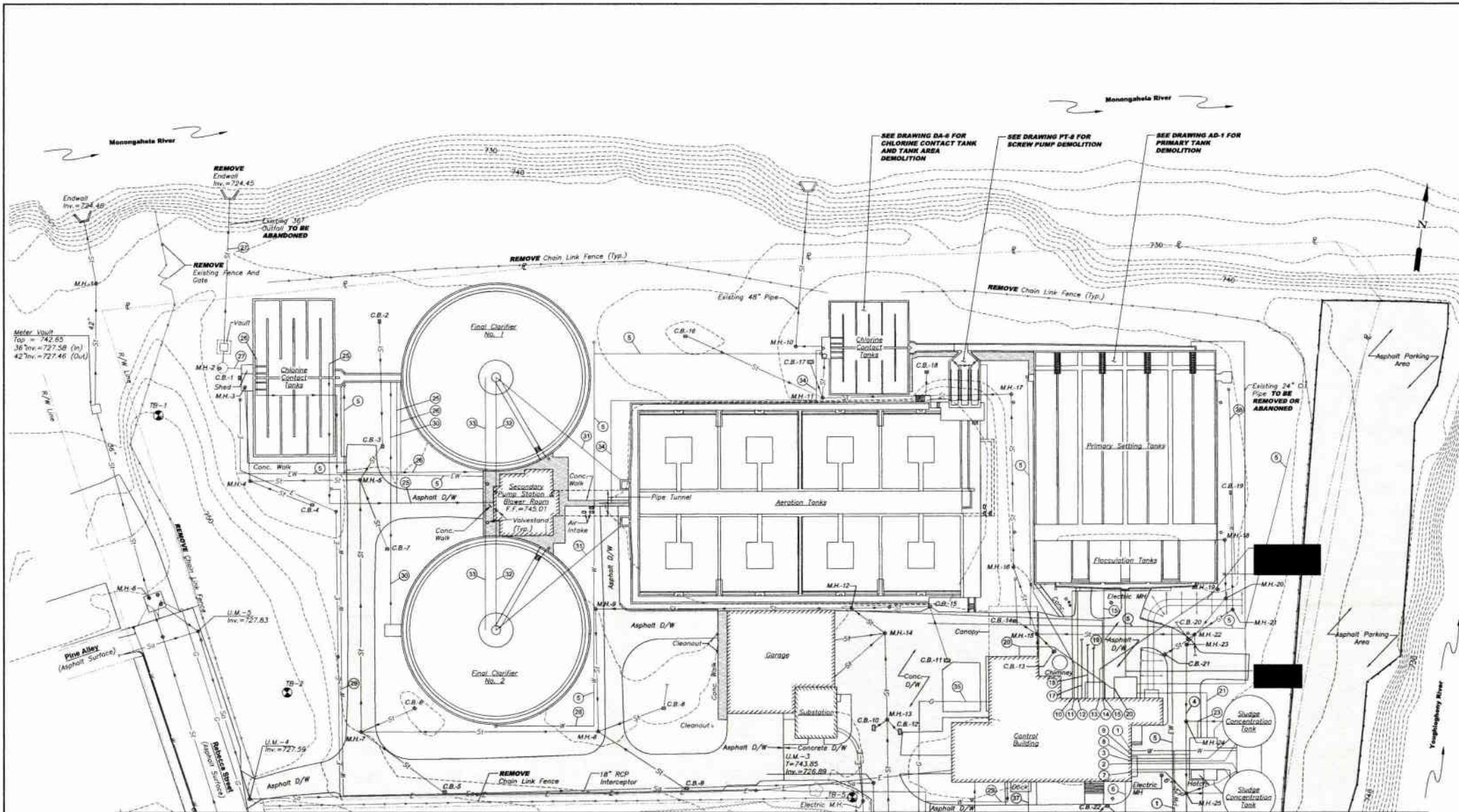
KLH ENGINEERS, INC.

MUNICIPAL AUTHORITY OF THE CITY OF MCKEESPORT
ALLEGHENY COUNTY, PENNSYLVANIA
CONTRACT NUMBER 2010-01 AND 2010-02
WASTEWATER TREATMENT PLANT EXPANSION
EXISTING YARD PIPE PLAN SHEET 1 OF 2

Scale:	All Shown:	Date:	Drawn By:	Checked By:	Approved By:
AS SHOWN	AS SHOWN	JULY 2009	END	RF	END

Revision	Date	Description
01	07/09	FOR SUBMITTAL
02	07/09	REVISED
03	07/09	REVISED
04	07/09	REVISED
05	07/09	RELEASE FOR BID

Drawing No. **220-YP1**



FOR CONTINUATION SEE DWG. 220-YP1

FOR CONTINUATION SEE DWG. 220-YP1

W.W.T.P. EXISTING SITE PLAN YP2-A
SCALE: 1" = 30'

Revisions	Date	Revisions	Date
1		1	
2		2	
3		3	
4		4	
5		5	
6		6	
7		7	
8		8	
9		9	
10		10	
11		11	
12		12	
13		13	
14		14	
15		15	
16		16	
17		17	
18		18	
19		19	
20		20	
21		21	
22		22	
23		23	
24		24	
25		25	
26		26	
27		27	
28		28	
29		29	
30		30	
31		31	
32		32	
33		33	
34		34	
35		35	
36		36	
37		37	
38		38	
39		39	
40		40	
41		41	
42		42	
43		43	
44		44	
45		45	
46		46	
47		47	
48		48	
49		49	
50		50	

8173 CAMPBELL BLVD. ROAD
PITTSBURGH, PA 15205
PHONE: 412-992-0220
FAX: 412-992-0220
WWW.KLHENGINEERS.COM

KLH ENGINEERS, INC.

MUNICIPAL AUTHORITY OF THE CITY OF MCKEESPORT
ALLEGHENY COUNTY, PENNSYLVANIA
CONTRACT NUMBER 2010-01 AND 2010-02
WASTEWATER TREATMENT PLANT EXPANSION
EXISTING YARD PIPE PLAN SHEET 2 OF 2

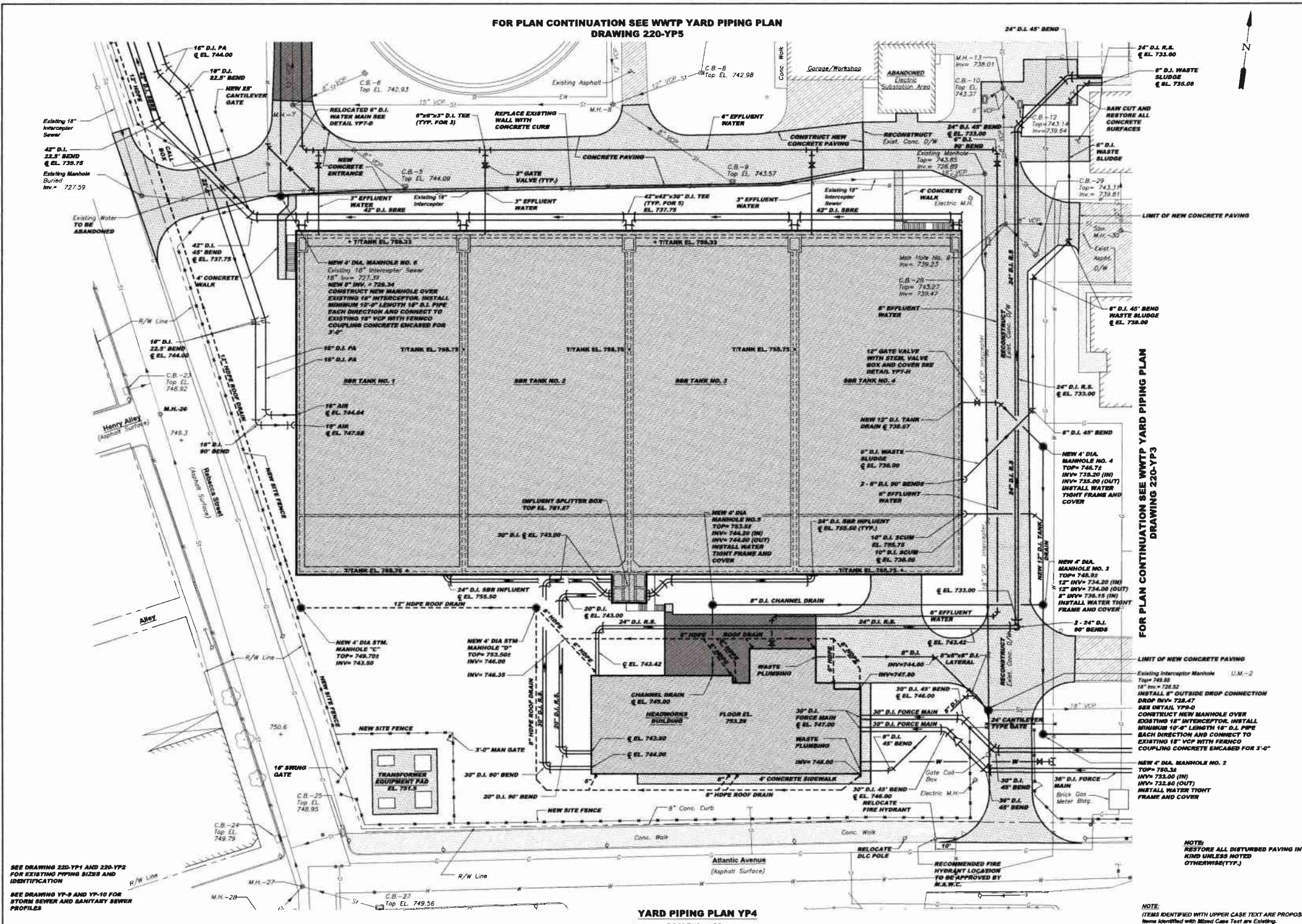
Scale:	As Shown
Date:	July 2008
Drawn By:	EJD
Checked By:	HGP
Approved By:	SHG

Sheet No. 2

Drawing No. 220-YP2

NOTE:
ITEMS IDENTIFIED WITH UPPER CASE TEXT ARE PROPOSED.
Items Identified with Mixed Case Text are Existing.

FOR PLAN CONTINUATION SEE WWTP YARD PIPING PLAN
DRAWING 220-YP5



YARD PIPING PLAN YP4
SCALE: 1" = 20'

NOTE:
ITEMS IDENTIFIED WITH UPPER CASE TEXT ARE PROPOSED.
Items Identified with Mixed Case Text are Existing.

Scale:	Date:	Drawn By:	Checked By:	Approved By:
1" = 20'	July 2009	DRG	DRG	SHG
Sheet No.:	4			
Drawing No.:	220 - YP4			

Revision	Date	By	Reason
1	07/20/09	DRG	ISSUED FOR PERMIT
2	07/20/09	DRG	REVISED
3	07/20/09	DRG	REVISED
4	07/20/09	DRG	REVISED
5	07/20/09	DRG	REVISED
6	07/20/09	DRG	REVISED
7	07/20/09	DRG	REVISED
8	07/20/09	DRG	REVISED
9	07/20/09	DRG	REVISED
10	07/20/09	DRG	REVISED
11	07/20/09	DRG	REVISED
12	07/20/09	DRG	REVISED
13	07/20/09	DRG	REVISED
14	07/20/09	DRG	REVISED
15	07/20/09	DRG	REVISED
16	07/20/09	DRG	REVISED
17	07/20/09	DRG	REVISED
18	07/20/09	DRG	REVISED
19	07/20/09	DRG	REVISED
20	07/20/09	DRG	REVISED
21	07/20/09	DRG	REVISED
22	07/20/09	DRG	REVISED
23	07/20/09	DRG	REVISED
24	07/20/09	DRG	REVISED
25	07/20/09	DRG	REVISED
26	07/20/09	DRG	REVISED
27	07/20/09	DRG	REVISED
28	07/20/09	DRG	REVISED
29	07/20/09	DRG	REVISED
30	07/20/09	DRG	REVISED
31	07/20/09	DRG	REVISED
32	07/20/09	DRG	REVISED
33	07/20/09	DRG	REVISED
34	07/20/09	DRG	REVISED
35	07/20/09	DRG	REVISED
36	07/20/09	DRG	REVISED
37	07/20/09	DRG	REVISED
38	07/20/09	DRG	REVISED
39	07/20/09	DRG	REVISED
40	07/20/09	DRG	REVISED
41	07/20/09	DRG	REVISED
42	07/20/09	DRG	REVISED
43	07/20/09	DRG	REVISED
44	07/20/09	DRG	REVISED
45	07/20/09	DRG	REVISED
46	07/20/09	DRG	REVISED
47	07/20/09	DRG	REVISED
48	07/20/09	DRG	REVISED
49	07/20/09	DRG	REVISED
50	07/20/09	DRG	REVISED
51	07/20/09	DRG	REVISED
52	07/20/09	DRG	REVISED
53	07/20/09	DRG	REVISED
54	07/20/09	DRG	REVISED
55	07/20/09	DRG	REVISED
56	07/20/09	DRG	REVISED
57	07/20/09	DRG	REVISED
58	07/20/09	DRG	REVISED
59	07/20/09	DRG	REVISED
60	07/20/09	DRG	REVISED
61	07/20/09	DRG	REVISED
62	07/20/09	DRG	REVISED
63	07/20/09	DRG	REVISED
64	07/20/09	DRG	REVISED
65	07/20/09	DRG	REVISED
66	07/20/09	DRG	REVISED
67	07/20/09	DRG	REVISED
68	07/20/09	DRG	REVISED
69	07/20/09	DRG	REVISED
70	07/20/09	DRG	REVISED
71	07/20/09	DRG	REVISED
72	07/20/09	DRG	REVISED
73	07/20/09	DRG	REVISED
74	07/20/09	DRG	REVISED
75	07/20/09	DRG	REVISED
76	07/20/09	DRG	REVISED
77	07/20/09	DRG	REVISED
78	07/20/09	DRG	REVISED
79	07/20/09	DRG	REVISED
80	07/20/09	DRG	REVISED
81	07/20/09	DRG	REVISED
82	07/20/09	DRG	REVISED
83	07/20/09	DRG	REVISED
84	07/20/09	DRG	REVISED
85	07/20/09	DRG	REVISED
86	07/20/09	DRG	REVISED
87	07/20/09	DRG	REVISED
88	07/20/09	DRG	REVISED
89	07/20/09	DRG	REVISED
90	07/20/09	DRG	REVISED
91	07/20/09	DRG	REVISED
92	07/20/09	DRG	REVISED
93	07/20/09	DRG	REVISED
94	07/20/09	DRG	REVISED
95	07/20/09	DRG	REVISED
96	07/20/09	DRG	REVISED
97	07/20/09	DRG	REVISED
98	07/20/09	DRG	REVISED
99	07/20/09	DRG	REVISED
100	07/20/09	DRG	REVISED



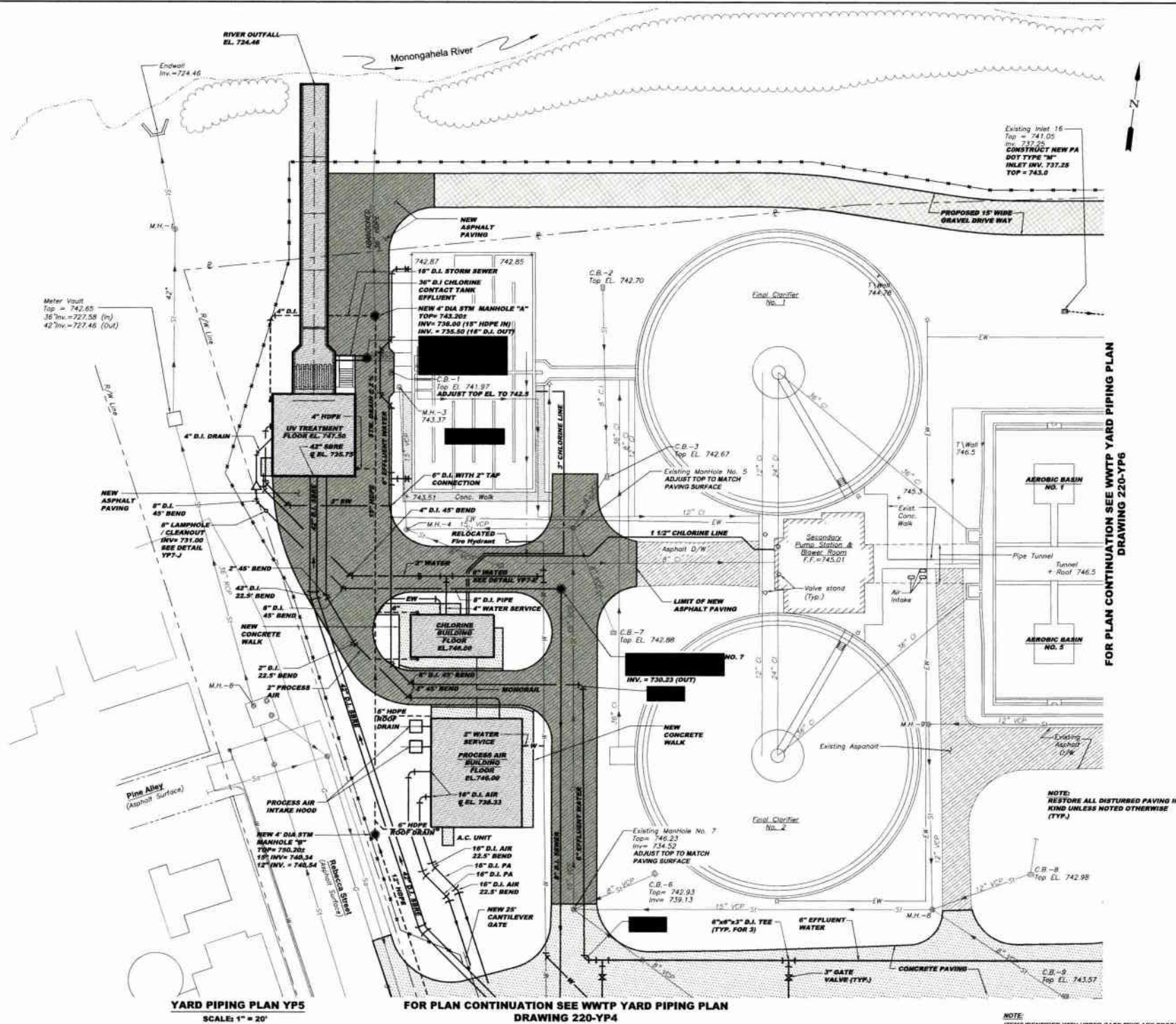
MUNICIPAL AUTHORITY OF THE CITY OF MCKEESPORT
ALLEGHENY COUNTY, PENNSYLVANIA
CONTRACT NUMBER 2010-01 AND 2010-02
WASTEWATER TREATMENT PLANT EXPANSION
PROPOSED YARD PIPING PLAN SHEET 2 OF 4

Existing Manholes				
M.H. No.	Top EL.	Inv. EL. (In)	Inv. EL. (Out)	Inv. EL. (In / Out)
M.H.-1	742.23	726.16		725.72
M.H.-2	742.34	729.29 (36")		729.90 (36")
M.H.-3	743.47			
M.H.-4	BURIED			
M.H.-5	743.84			733.60
M.H.-6	750.00			735.45
M.H.-7	746.23			734.32
M.H.-8	742.58			734.87
M.H.-9	743.84			735.07
M.H.-10	740.72			
M.H.-11	740.96	735.92(6")		729.64
M.H.-12	743.71			735.85
M.H.-13	743.35			736.01
M.H.-14	743.89	737.89(8") (West)		736.60(8")
		734.69(8") (South West)		
M.H.-15	743.30	740.25(8") (North East)		
		739.55(4") (South East)		
		737.81(8") (South)		736.88(12")
		736.60(8")		
M.H.-16	741.84			734.53
M.H.-17	740.26			732.34
M.H.-18	741.16			725.11
M.H.-19	741.07			731.83
M.H.-20	743.04			734.74
M.H.-21	742.87			737.72
M.H.-22	743.10	739.80(South West)		
		736.27(South)		
		737.54(North East)		737.54
M.H.-23	742.70	724.62		724.48
M.H.-24	743.11	724.32(10") (East)		724.31
M.H.-25	743.06	728.54(8") (North West)		724.11
		728.25(8") (North East)		
		724.28(10") (East)		
M.H.-26	746.90			738.64
M.H.-27	750.01	741.80 (12")		741.39(15")
M.H.-28	748.93	745.70 (South East)		740.93
M.H.-29	743.51	739.23		
M.H.-30	743.50			718.41
M.H.-31	743.11	738.06 (8")		717.68 (12")
M.H.-32	743.10			738.84
M.H.-33	743.30	739.52 (East)		723.86
		739.41 (West)		
		739.13 (North West)		
		738.76 (Vector D.S.)		
M.H.-34	743.51	723.05		722.86
M.H.-35	743.13	738.36 (4")		715.42
M.H.-36	745.64	723.77		723.59
M.H.-37	743.20	737.19 (East)		730.92
		737.07 (West)		

PROPOSED PIPE LINES	
PIPE CONTENTS	DESIGNATION
SEWER EFFLUENT	SE
RAW SEWAGE	RS
SANITARY SEWAGE	SS
PROCESS AIR	PA
POTABLE WATER	W
EFFLUENT WATER	EW
STORM SEWER	STM

SEE DRAWING 220-YP1 AND 220-YP2 FOR EXISTING PIPING SIZES AND IDENTIFICATION

SEE DRAWING YP-9 AND YP-10 FOR STORM SEWER AND SANITARY SEWER PROFILES



YARD PIPING PLAN YP5
SCALE: 1" = 20'

FOR PLAN CONTINUATION SEE WWTP YARD PIPING PLAN DRAWING 220-YP4

NOTE: ITEMS IDENTIFIED WITH UPPER CASE TEXT ARE PROPOSED. Items Identified with Mixed Case Text are Existing.

MUNICIPAL AUTHORITY OF THE CITY OF MCKEESPORT
ALLEGHENY COUNTY, PENNSYLVANIA
CONTRACT NUMBER 2010-01 AND 2010-02
WASTEWATER TREATMENT PLANT EXPANSION
PROPOSED YARD PIPING PLAN SHEET 3 OF 4

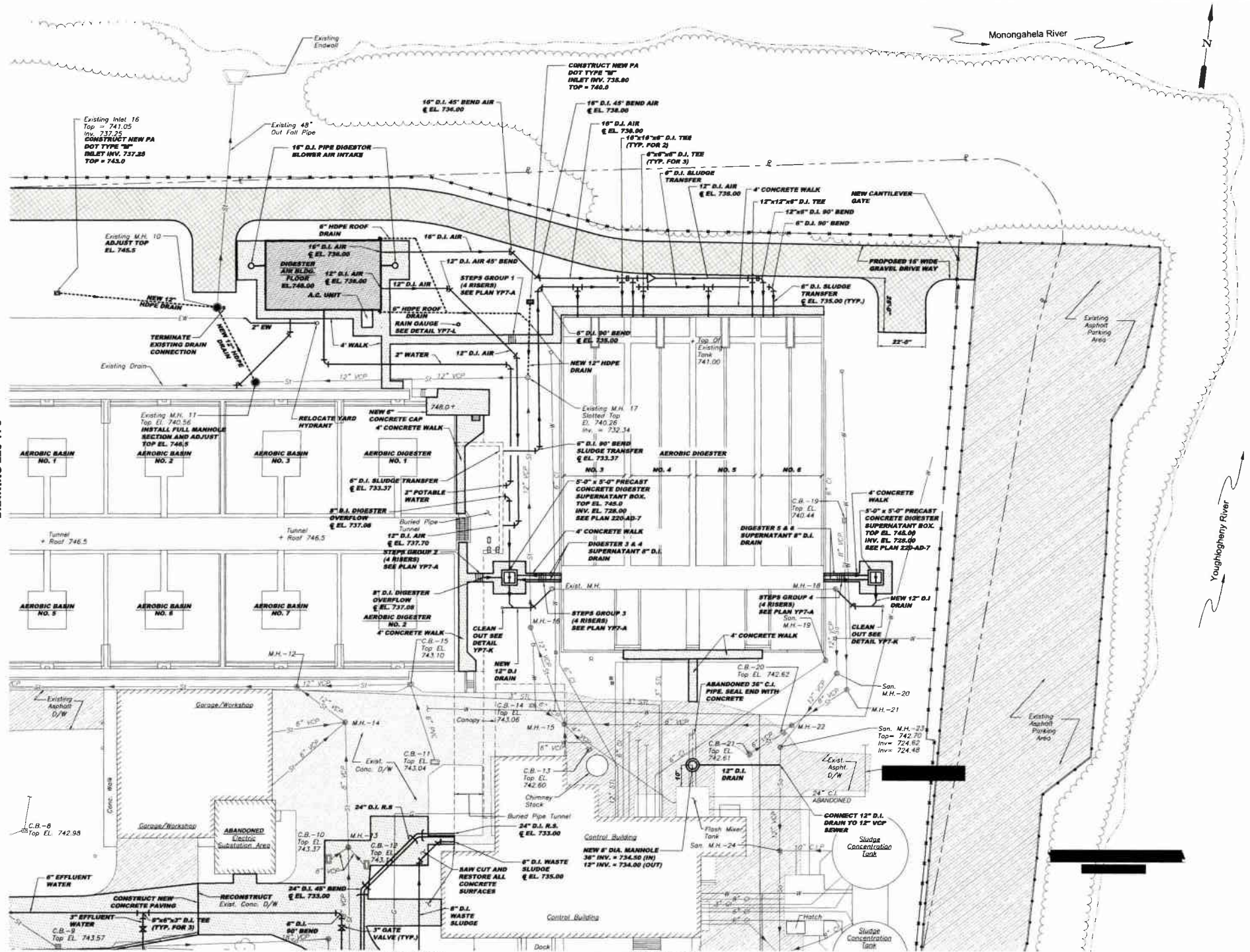


5172 CAMBERELLE BLVD
PITTSBURGH, PA 15205
PH: 412-261-4444
FAX: 412-261-4444
WWW.KLHENGINEERS.COM

Date	Revisions	By	Check	Appr.
03-08	DEF SUBMITTAL			
07-08	REVISED			
10-09	REVISED			
10-09	RELEASE FOR BID			

Scale: 1" = 20'
Date: July 2009
Drawn By: DRG
Checked By: HGF
Approved By: BJB
Sheet No. 5
Drawing No. 220-YP5

FOR PLAN CONTINUATION SEE WWTP YARD PIPING PLAN
DRAWING 220-YP5



NOTE:
RESTORE ALL DISTURBED PAVING IN KIND UNLESS NOTED OTHERWISE (TYP.)

SEE DRAWING 220-YP1 AND 220-YP2 FOR EXISTING PIPING SIZES AND IDENTIFICATION

SEE DRAWING YP-9 AND YP-10 FOR STORM SEWER AND SANITARY SEWER PROFILES

FOR PLAN CONTINUATION SEE WWTP YARD PIPING PLAN
DRAWING 220-YP3

NOTE:
ITEMS IDENTIFIED WITH UPPER CASE TEXT ARE PROPOSED.
Items Identified with Mixed Case Text are Existing.

Revisions	Date	Release For
1-2011	1-2011	RELEASE FOR BID
2-2011	2-2011	DEF SUBMITTAL
3-2011	3-2011	REVISED
4-2011	4-2011	REVISED
5-2011	5-2011	REVISED
6-2011	6-2011	REVISED
7-2011	7-2011	REVISED
8-2011	8-2011	REVISED
9-2011	9-2011	REVISED
10-2011	10-2011	REVISED
11-2011	11-2011	REVISED
12-2011	12-2011	REVISED

5175 CARROLLS RUN ROAD
PITTSBURGH, PA 15208
PHONE 412-444-9910
FAX 412-444-9911
INFO@KLHENGINEERS.COM

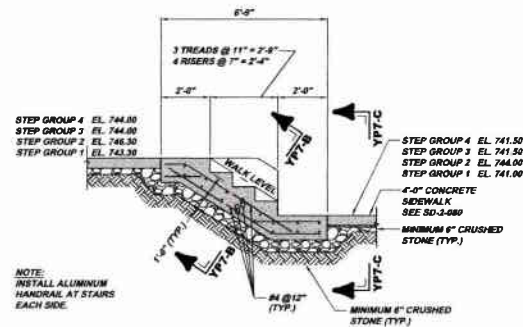
KLH ENGINEERS, INC.

MUNICIPAL AUTHORITY OF THE CITY OF MCKEESPORT
ALLEGHENY COUNTY, PENNSYLVANIA
CONTRACT NUMBER 2010-Q1 AND 2010-Q2
WASTEWATER TREATMENT PLANT EXPANSION
PROPOSED YARD PIPING PLAN SHEET 4 OF 4

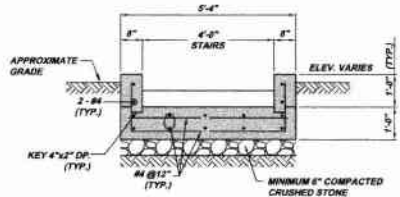
Scale: 1" = 20'
Date: July 2009
Drawn By: DRG
Checked By: HOF
Approved By: SUG

Sheet No. 6

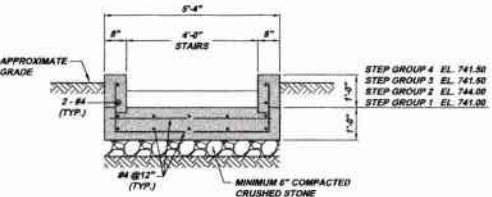
Drawing No. 220-YP6



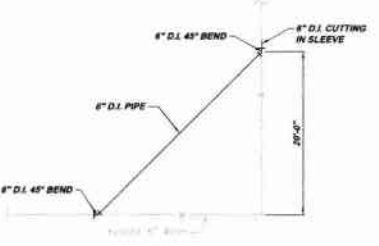
SECTION YP7-A
SCALE: 3/8" = 1'-0"
REFERENCE PLAN DWG. 220-YP6



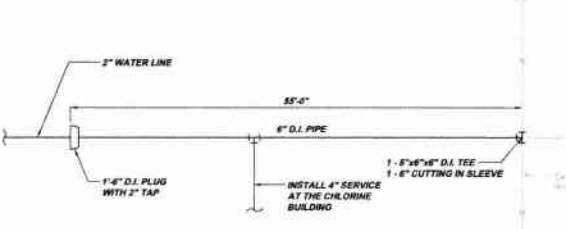
SECTION YP7-B
SCALE: 1/2" = 1'-0"
REFERENCE SECTION YP7-A



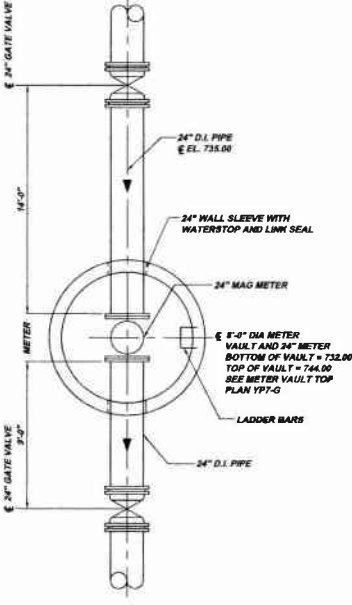
SECTION YP7-C
SCALE: 1/2" = 1'-0"
REFERENCE SECTION YP7-A



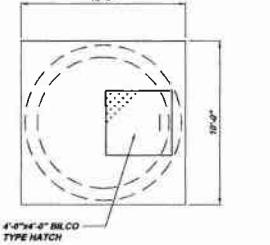
RELOCATED WATER MAIN DETAIL YP7-D
SCALE: 1/8" = 1'-0"



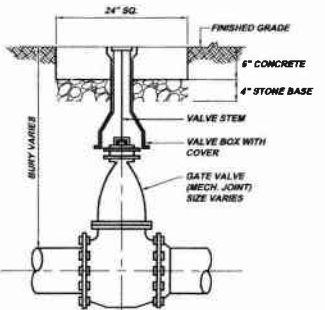
WATER MAIN DETAIL YP7-E
SCALE: 1/8" = 1'-0"



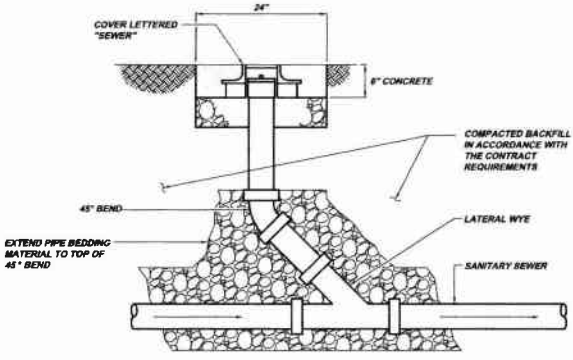
METER VAULT DETAIL PLAN YP7-F
SCALE: 1/2" = 1'-0"
REFERENCE SECTION YP7-G



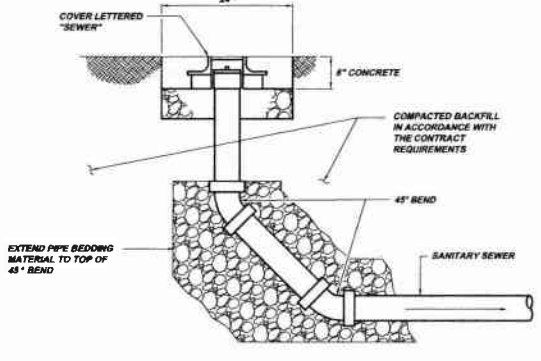
METER VAULT TOP PLAN YP7-G
SCALE: 1/2" = 1'-0"
REFERENCE PLAN YP7-F



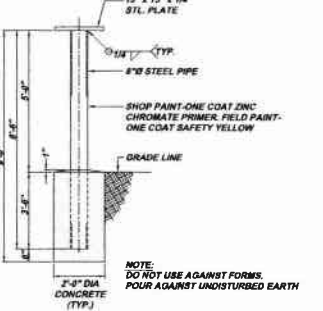
TYPICAL BURIED VALVE DETAIL YP7-H
N.T.S.



IN-LINE CLEANOUT DETAIL YP7-J
N.T.S.



END-LINE CLEANOUT DETAIL YP7-K
N.T.S.



RAIN GAUGE MOUNTING POST DETAIL YP7-L
SCALE: N.T.S.
REFERENCE PLAN YP6

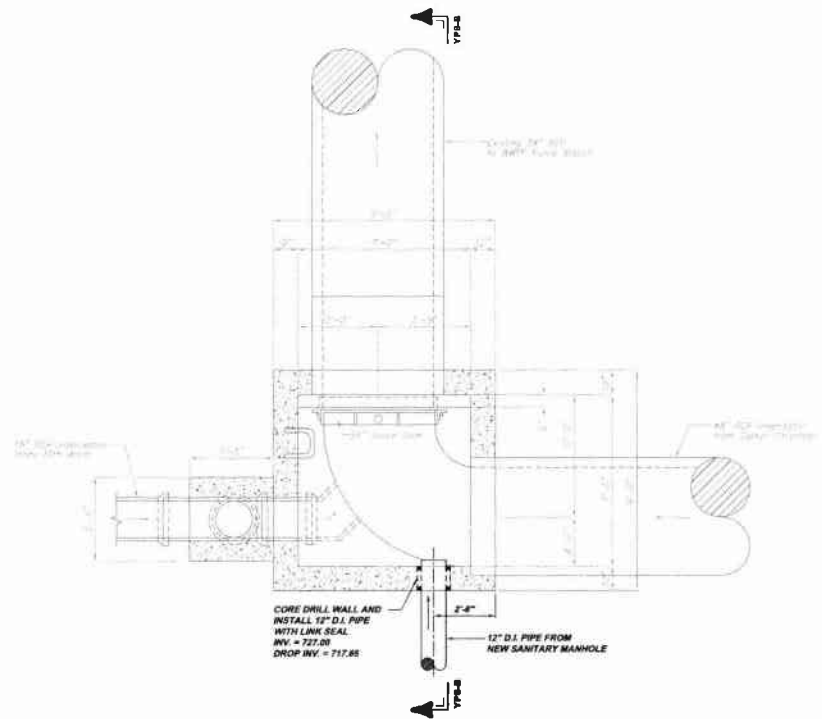
NOTE:
ITEMS IDENTIFIED WITH UPPER CASE TEXT ARE PROPOSED.
Items Identified with Mixed Case Text are Existing.

Scale:	As Shown	Sheet No.	7
Date:	October 2009	Drawing No.	220-YP7
Drawn By:	EHD	Revision:	RELEASE FOR BID
Checked By:	HOF	Date:	1-2011
Approved By:	SHG	Revision:	

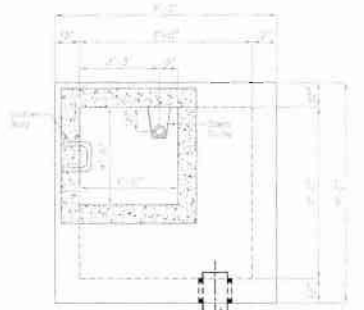
MUNICIPAL AUTHORITY OF THE CITY OF MCKEESPORT
 ALLEGHENY COUNTY, PENNSYLVANIA
 CONTRACT NUMBER 2010-01 AND 2010-02
 WASTEWATER TREATMENT PLANT EXPANSION
 PROPOSED VAULT DETAILS

8172 CHARLES BLVD. ROOM 200
 PITTSBURGH, PA 15203
 PHONE 412-444-0900
 INFO@KLHENGINEERS.COM

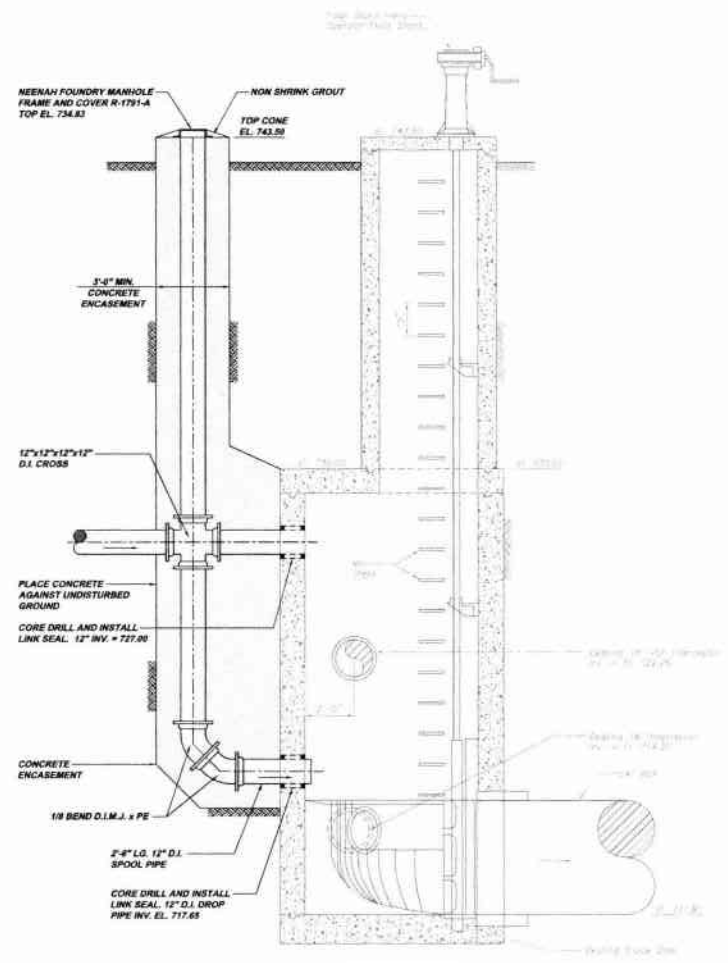
KLH ENGINEERS, INC.



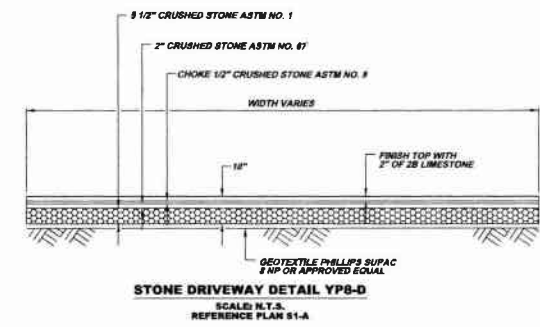
EXISTING WWTP / JUNCTION INFLUENT MANHOLE INVERT PLAN YP8-A
SCALE: 3/8" = 1'-0"



EXISTING WWTP JUNCTION INFLUENT MANHOLE TOP PLAN YP8-C
SCALE: 3/8" = 1'-0"



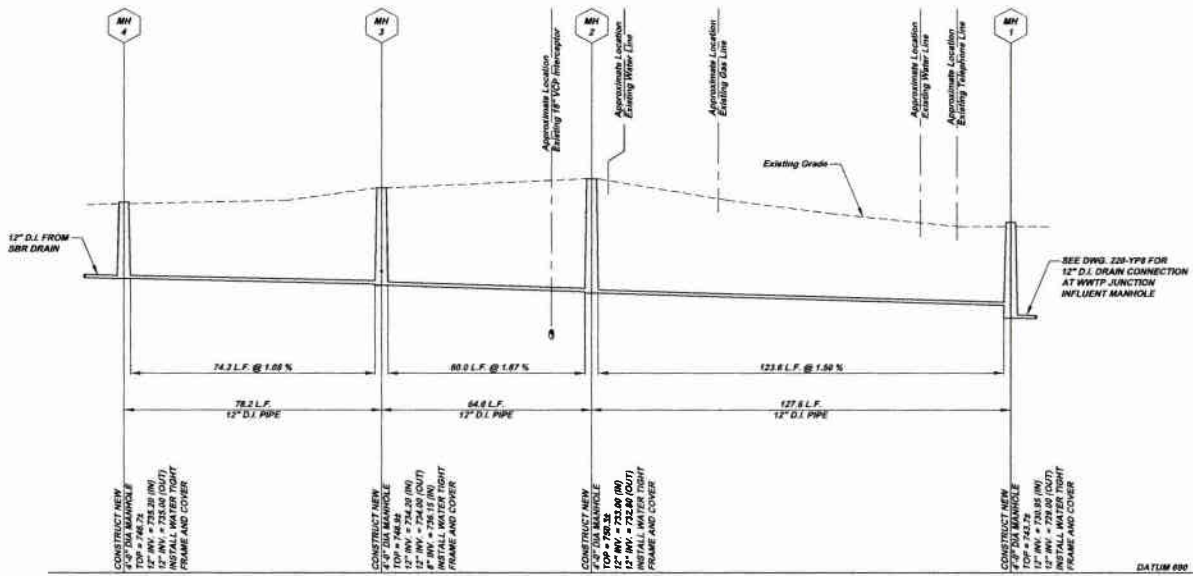
SECTION YP8-B
SCALE: 3/8" = 1'-0"



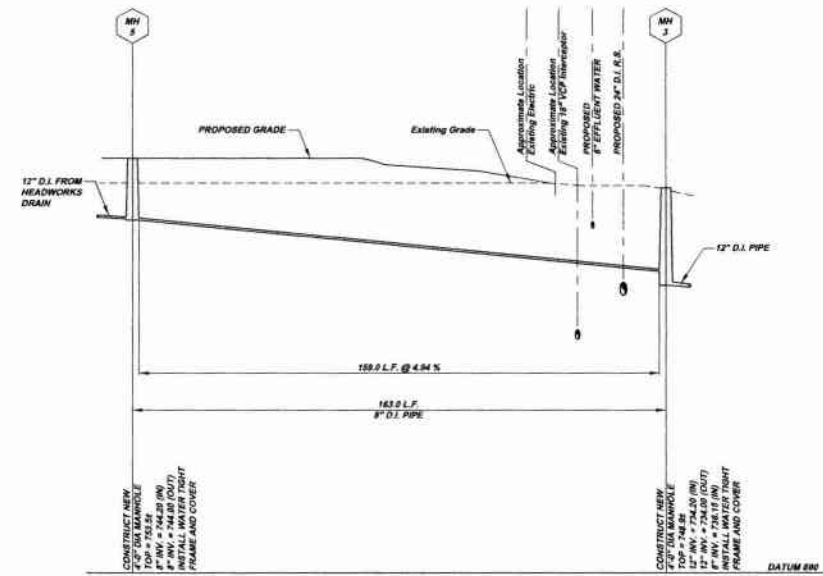
STONE DRIVEWAY DETAIL YP8-D
SCALE: N.T.S.
REFERENCE PLAN S1-A

NOTE:
ITEMS IDENTIFIED WITH UPPER CASE TEXT ARE PROPOSED.
Items Identified with Mixed Case Text are Existing.

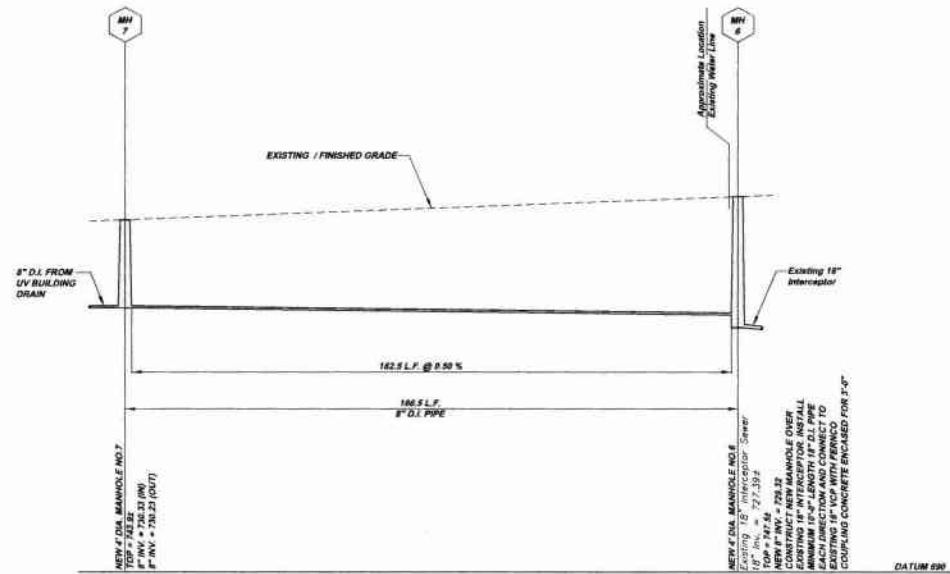
Revisions	Date	By
RELEASE FOR BID	1-2011	
5175 CAMDENVILLE BLVD. SUITE 200 PITTSBURGH, PA 15203 Phone: 412-444-8310 Fax: 412-444-8311 info@klh-engineers.com		
MUNICIPAL AUTHORITY OF THE CITY OF MCKEESPORT ALLEGHENY COUNTY, PENNSYLVANIA CONTRACT NUMBER 2010-01 AND 2010-02 WASTEWATER TREATMENT PLANT EXPANSION PROPOSED YARD DETAILS		
Scale:	As Shown	
Date:	October 2009	
Drawn By:	DMB	
Checked By:	HOJ	
Approved By:	SHG	
Sheet No.	8	
Drawing No.	220-YP8	



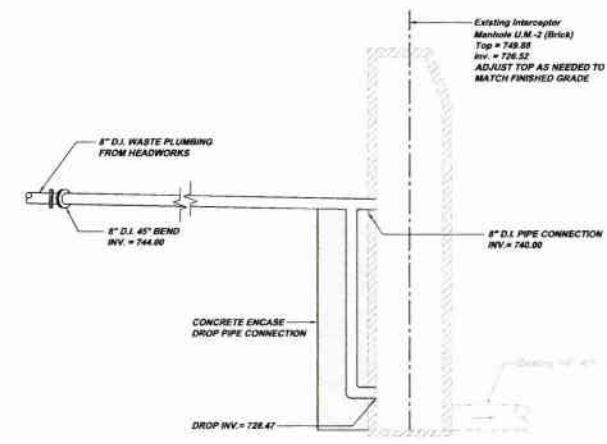
SANITARY DRAIN PROFILE YP9-A
 SCALE: VERT 1"=10'
 HORZ. 1"=20'
 REFERENCE DRAWING YP2 AND YP4



SANITARY DRAIN PROFILE YP9-B
 SCALE: VERT 1"=10'
 HORZ. 1"=20'
 REFERENCE DRAWING YP4



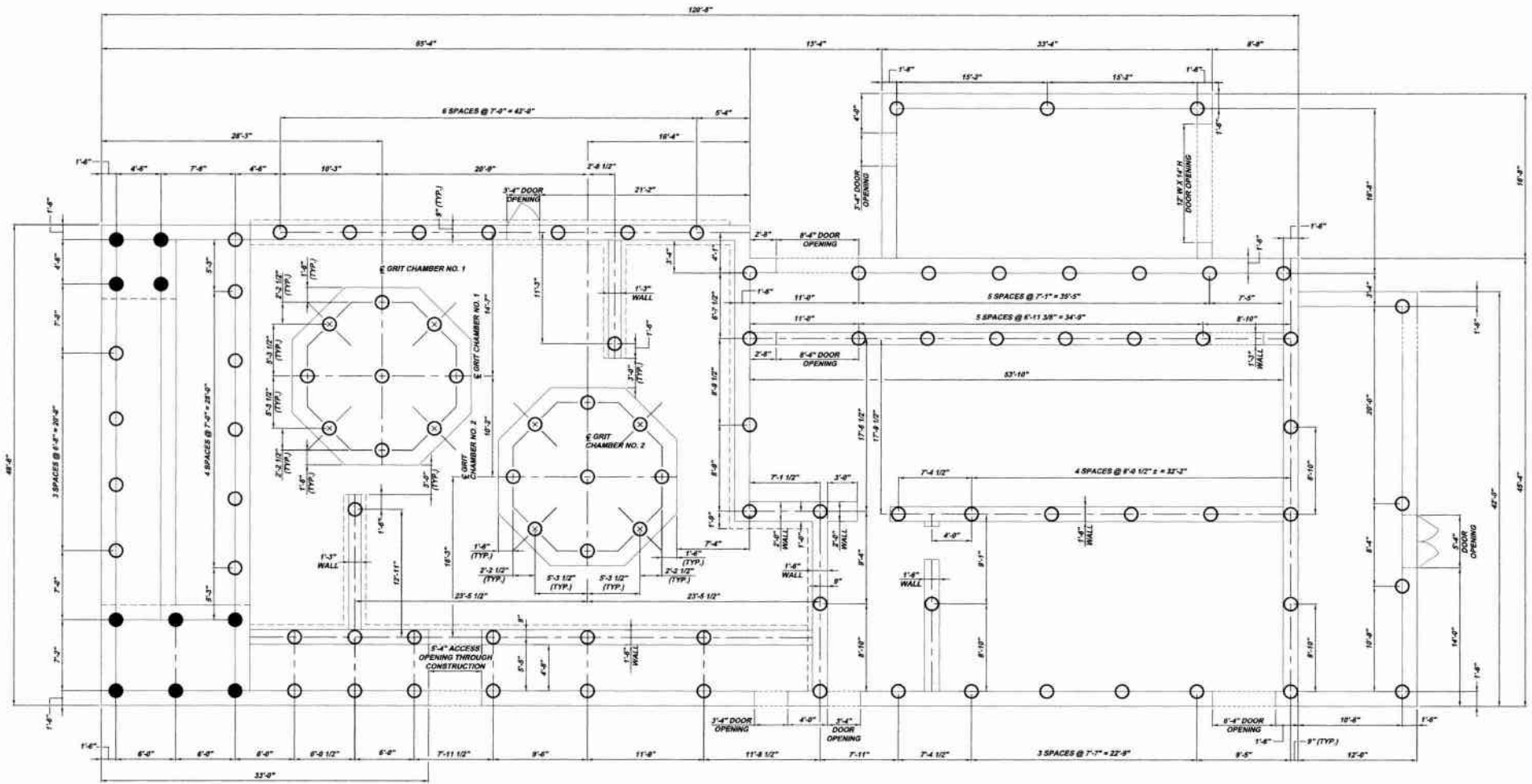
SANITARY DRAIN PROFILE YP9-C
 SCALE: VERT 1"=10'
 HORZ. 1"=20'
 REFERENCE DRAWING YP4 AND YP5



EXISTING MANHOLE U.M.-2 CONNECTION DETAIL YP9-D
 SCALE: 1/4" = 1'-0"
 REFERENCE DRAWING YP4

NOTE:
 ITEMS IDENTIFIED WITH UPPER CASE TEXT ARE PROPOSED.
 ITEMS IDENTIFIED WITH MIXED CASE TEXT ARE EXISTING.

Scale:	As Shown	As Shown	As Shown	As Shown
Date:	October 2009	October 2009	October 2009	October 2009
Drawn By:	DMB	DMB	DMB	DMB
Checked By:	RDH	RDH	RDH	RDH
Approved By:	SHQ	SHQ	SHQ	SHQ
Sheet No.:	9			
Drawing No.:	220-YP9			
Client:	MUNICIPAL AUTHORITY OF THE CITY OF MCKEESPORT ALLEGHENY COUNTY, PENNSYLVANIA CONTRACT NUMBER 2010-01 AND 2010-02 WASTEWATER TREATMENT PLANT EXPANSION SANITARY BEWER PROFILES AND DETAILS			
Engineer:	KLH ENGINEERS, INC. 9179 CAMPBELL BLVD PITTSBURGH, PA 15208 PHONE 412-444-0019 FAX 412-444-0019 INFO@KLHENGINEERS.COM			
Revision:	Date:	Revision:	Date:	Revision:
	1-2011	RELEASE FOR BID		



HEADWORKS BUILDING PILE PLAN S2-A
 SCALE: 3/16" = 1'-0"
 REFERENCE PLAN HW38-A, HW14-A, AND HW14-B.

NOTE:
 MATS - 2'-0"
 PILES 14" DIAMETER (80 TON CAPACITY).
 SHALL EXTEND 6" INTO MAT AND 80" DEEP
 MINIMUM

HEADWORKS PILE PLAN		
DESIGNATION	TOP ELEV.	QUANTITY
●	740.30	10
○	751.79	82

NOTE:
 ITEMS IDENTIFIED WITH UPPER CASE TEXT ARE PROPOSED.
 Items Identified with Mixed Case Text are Existing.

MUNICIPAL AUTHORITY OF THE CITY OF MCKEESPORT
 ALLEGHENY COUNTY, PENNSYLVANIA
 CONTRACT NUMBER 2010-01 AND 2010-02
 WASTEWATER TREATMENT PLANT EXPANSION
 HEADWORKS BUILDING PILE PLAN

KLH ENGINEERS, INC.

5173 DANBROOK BLVD
 PITTSBURGH, PA 15205
 TEL: 412-244-2525
 FAX: 412-244-2528
 INFO@KLHENGINEERS.COM

Date	Revisions	Date	Revisions
7-31-08	REP SUBMITTAL		
8-2-08	REVISED		
10-28	REVISED		
1-30-11	RELEASE FOR BID		

Scale:	As Shown	Sheet No.:	2
Date:	July 2009	Drawing No.:	220-92
Drawn By:	DRG		
Checked By:	HOF		
Approved By:	PHD		



SBR PILE LEGEND		
DESIGNATION	TOP EL.	QUANTITY
●	733.58	20
○	737.67	672
⊙	735.42	19

ALL PILES 18" DIAMETER AND 60 TON CAPACITY AND SHALL EXTEND 86' DEEP MINIMUM

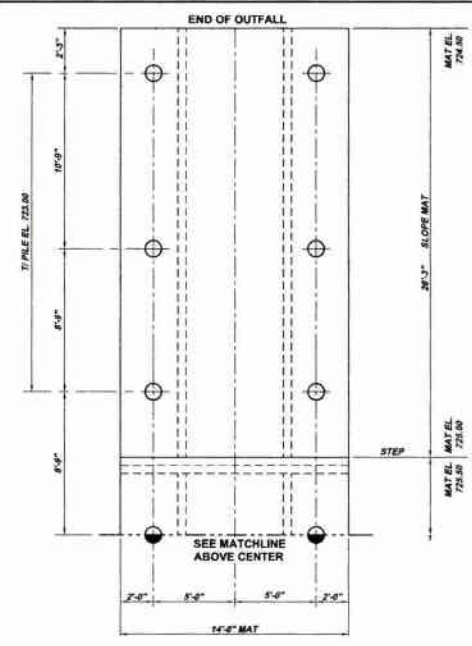
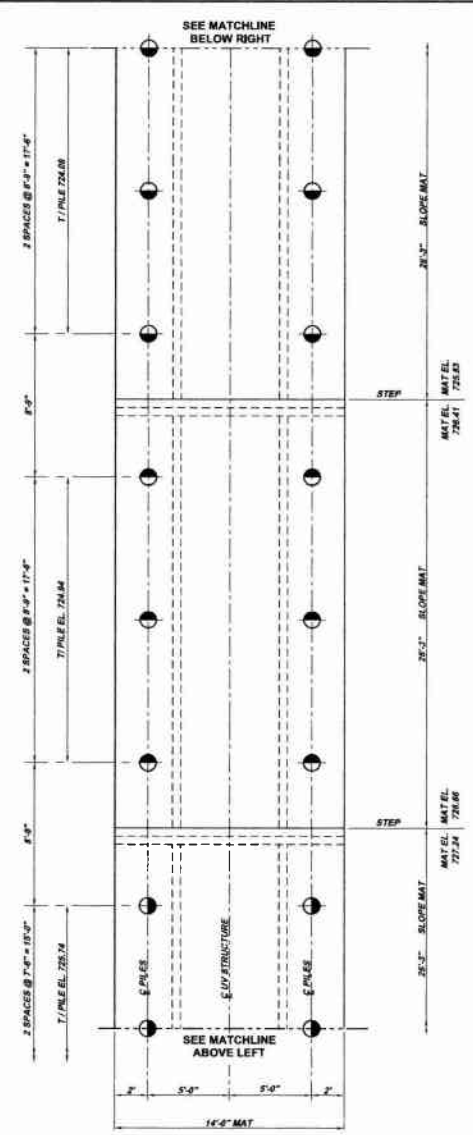
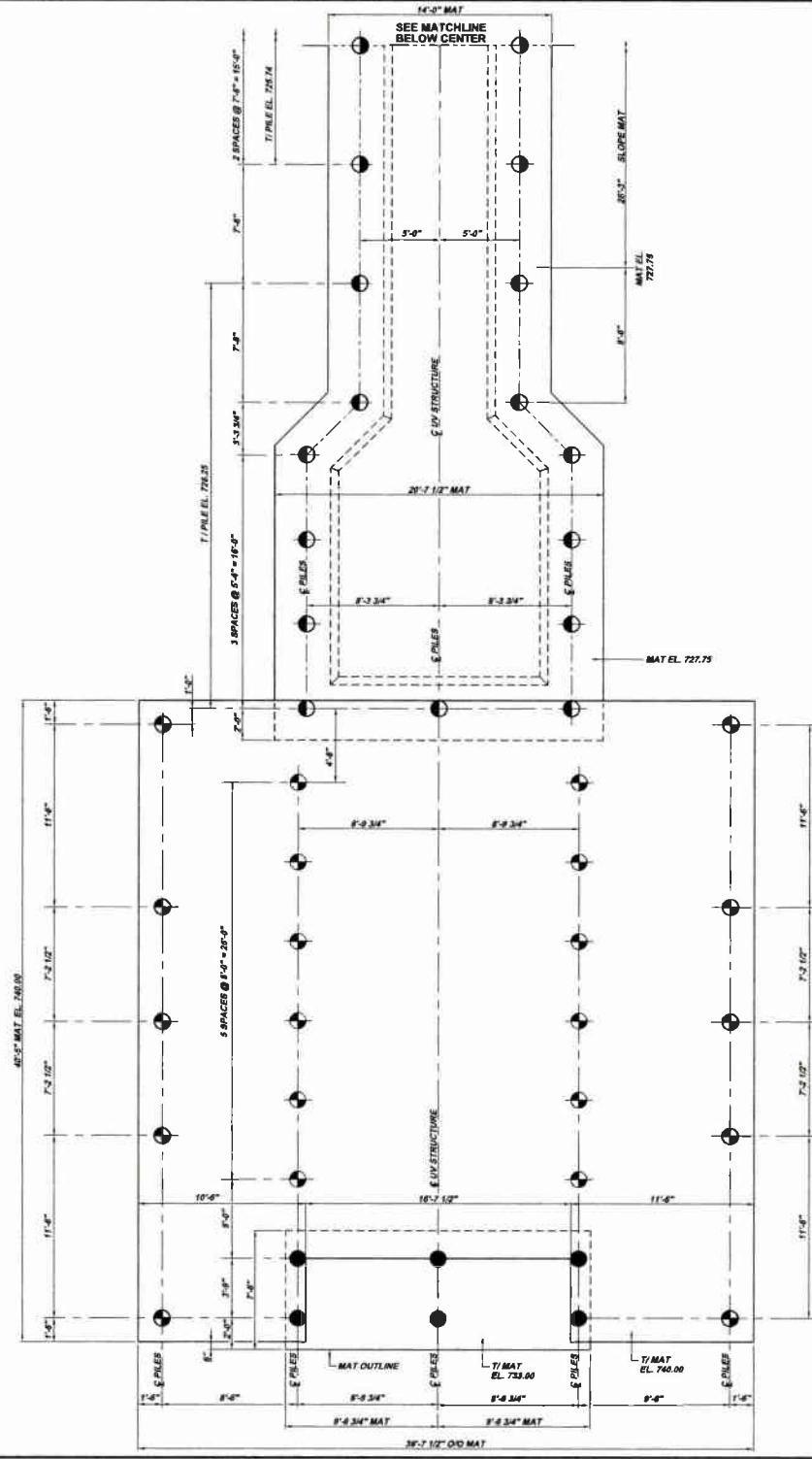
SBR TANKS PILING PLAN S3-A
 SCALE: 3/32" = 1'-0"
 REFERENCE PLAN SBR1-A

Scale:	As Shown	Date:	July 2009
Drawn By:	EJC	Checked By:	HPF
Approved By:	BHG	Revisions:	DATE
Sheet No.	3	1-31-08	DES SUBMITTAL
Drawing No.	220-S3	8-7-08	REVISED
		10-08	REVISED
		1-3-11	RELEASE FOR BID

9172 CAMBELLE RUN ROAD
 PITTSBURGH, PA 15205
 PHONE: 412-944-0222
 INFO@KLHENGINEERS.COM

KLH ENGINEERS, INC.
 MUNICIPAL AUTHORITY OF THE CITY OF MCKEESPORT
 ALLEGHENY COUNTY, PENNSYLVANIA
 CONTRACT NUMBER 2010-01 AND 2010-02
 WASTEWATER TREATMENT PLANT EXPANSION
 SEQUENTIAL BATCH REACTOR (SBR) PILE PLAN

NOTE:
 ITEMS IDENTIFIED WITH UPPER CASE TEXT ARE PROPOSED.
 Items Identified with Mixed Case Text are Existing.



UV PILE LEGEND		
DESIGNATION	TOP ELEV.	QUANTITY
●	738.75	22
●	731.79	6
●	726.25	13
●	725.74	6
●	724.04	6
●	724.06	6
○	723.00	6

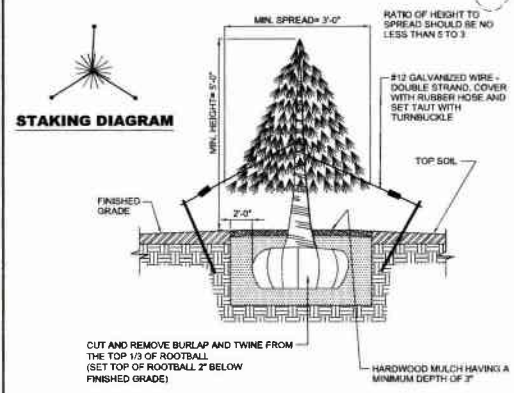
NOTE:
ALL PILES SHALL BE 12" Ø WITH 40 TON CAPACITY AND EXTEND 60' DEEP MINIMUM.

UV BUILDING PILE PLAN S4-A
SCALE: 1/4" = 1'-0"
REFERENCE PLAN UV1-A

NOTE:
WORK THIS DRAWING WITH UV BUILDING STRUCTURAL DRAWINGS.

NOTE:
ITEMS IDENTIFIED WITH UPPER CASE TEXT ARE PROPOSED.
Items identified with Mixed Case Text are Existing.

		8173 CAMPBELL BLVD PITTSBURGH, PA 15206 PHONE: 412-444-0246 FAX: 412-444-0246 INFO@KLHENGINEERS.COM		Date: 7-31-08 Revisions: DEF SUBMITTAL 8-19-08 REVISIONS 10-09 REVISIONS 12-10 RELEASE FOR BID	
MUNICIPAL AUTHORITY OF THE CITY OF MCKEESPORT ALLEGHENY COUNTY, PENNSYLVANIA CONTRACT NUMBER 2010-01 AND 2010-02 WASTEWATER TREATMENT PLANT EXPANSION UV BUILDING PILING PLAN					
Scale:	As Shown	Drawn By:	TCD	Sheet No:	4
Date:	July 2008	Checked By:	HOF	Drawing No.:	220-84
Approved By:	SHO				



PLANTING MIX - 4:1 TOPSOIL TO PEAT MOSS INCLUDE 1 LB. OF 10-4-4 FERTILIZER PER C.Y. OF APPROVED TOPSOIL LOAM.

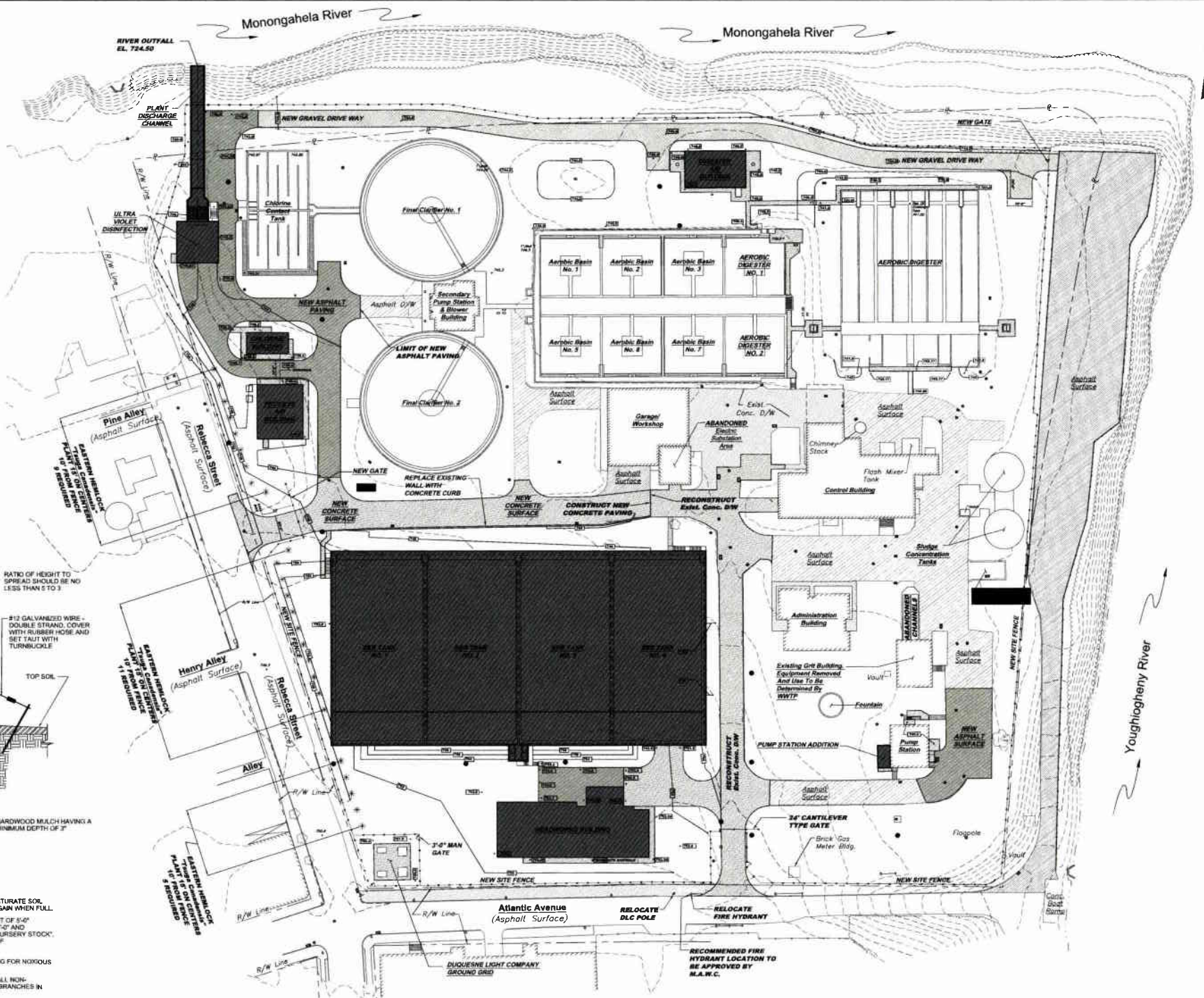
ALL PLANTING BEDS SHALL RECEIVE A MINIMUM OF 6" OF TOPSOIL. SATURATE SOIL WITH WATER WHEN THE PIT OR BED IS HALF FULL OF TOPSOIL AND AGAIN WHEN FULL.

TREES SHALL BE OF HIGH QUALITY HAVING A MINIMUM CROWN HEIGHT OF 5'-0" ABOVE FINISHED GROUND LEVEL AND A MINIMUM CROWN WIDTH OF 7'-0" AND SHALL MEET THE CURRENT EDITION OF "AMERICAN STANDARD FOR NURSERY STOCK", ANS1 280.1 OF THE AAS AND SECTION 808 OF THE PA. DEPARTMENT OF TRANSPORTATION PUBLICATION 406.

HERBICIDE SHALL BE APPLIED TO ALL PLANT BEDS PRIOR TO PLANTING FOR NOXIOUS WEED CONTROL AT A RATE OF 2 POUNDS PER 1000 SQUARE FEET.

TREES SHALL BE ORIENTED FOR BEST APPEARANCE AND VERTICAL. ALL NON-BIODEGRADABLE ROOT CONTAINERS SHALL BE REMOVED. ALL DEAD BRANCHES IN TREES AND SHRUBS SHALL BE PRUNED.

EVERGREEN PLANTING DETAIL
M.T.S.



WASTEWATER TREATMENT PLANT LANDSCAPING PLAN S5-A
SCALE: 1" = 40'

NOTE:
ITEMS IDENTIFIED WITH UPPER CASE TEXT ARE PROPOSED.
ITEMS IDENTIFIED WITH LOWER CASE TEXT ARE EXISTING.

Scale:	1" = 40'	Sheet No.:	5
Date:	October 2009	Drawing No.:	220 - 85
Drawn By:	DRG	Checked By:	ICF
Approved By:	SHG	Revision:	
Release For:	RELEASE FOR BID	Date:	1-2011

8173 CAMPBELL'S RUN ROAD
PITTSBURGH, PA 15205
PHONE: 412-444-0438
FAX: 412-444-0438
INFO@KLHENGINEERS.COM

KLH ENGINEERS, INC.

MUNICIPAL AUTHORITY OF THE CITY OF MCKEESPORT
ALLEGHENY COUNTY, PENNSYLVANIA
CONTRACT NUMBER 2010-01 AND 2010-02
WASTEWATER TREATMENT PLANT EXPANSION
LANDSCAPING PLAN



**TICO BUILDING KITCHEN
DEMOLITION PHOTOGRAPH TB3-A
REFERENCE PLAN TB2-A**



**TICO BUILDING OFFICE
DEMOLITION PHOTOGRAPH TB3-B
REFERENCE PLAN TB2-A**



**TICO BUILDING OFFICE
DEMOLITION PHOTOGRAPH TB3-C
REFERENCE PLAN TB2-A**



**TICO BUILDING OFFICE
DEMOLITION PHOTOGRAPH TB3-D
REFERENCE PLAN TB2-A**



**TICO BUILDING LOBBY
DEMOLITION PHOTOGRAPH TB3-E
REFERENCE PLAN TB2-A**



**TICO BUILDING LOBBY
DEMOLITION PHOTOGRAPH TB3-F
REFERENCE PLAN TB2-A**



**TICO BUILDING OFFICE
DEMOLITION PHOTOGRAPH TB3-G
REFERENCE PLAN TB2-A**



**TICO BUILDING STORAGE ROOM
DEMOLITION PHOTOGRAPH TB3-H
REFERENCE PLAN TB2-A**



**TICO BUILDING STORAGE ROOM
DEMOLITION PHOTOGRAPH TB3-J
REFERENCE PLAN TB2-A**

NOTE:
ITEMS IDENTIFIED WITH UPPER CASE TEXT ARE PROPOSED.
Items Identified with Mixed Case Text are Existing.

5172 CAMPBELL RUN ROAD PITTSBURGH, PA 15206 Phone: 412-244-0238 Fax: 412-244-0238 info@klhengineers.com	Date: 10/31/11 Revisions: RELEASE FOR BID	Date: Revisions:
MUNICIPAL AUTHORITY OF THE CITY OF MCKEESPORT ALLEGHENY COUNTY, PENNSYLVANIA CONTRACT NUMBER 2010-01 AND 2010-02 WASTEWATER TREATMENT PLANT EXPANSION TICO BUILDING DEMOLITION PHOTOGRAPHS		
As Shown: Date: October 2009 Drawn By: MKE Checked By: HOF Approved By: SHG	Street No. 3	
Drawing No. 220-TB3		



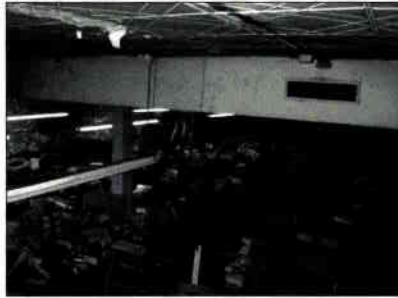
**TICO BUILDING STORAGE STAIRS
DEMOLITION PHOTOGRAPH TB4-A
REFERENCE PLAN TB2-A**



**TICO BUILDING ELECTRICAL PANEL
DEMOLITION PHOTOGRAPH TB4-B
REFERENCE PLAN TB2-A**



**TICO BUILDING WATER MAIN
DEMOLITION PHOTOGRAPH TB4-C
REFERENCE PLAN TB2-A**



**TICO BUILDING STORAGE ROOM
DEMOLITION PHOTOGRAPH TB4-D
REFERENCE PLAN TB2-A**



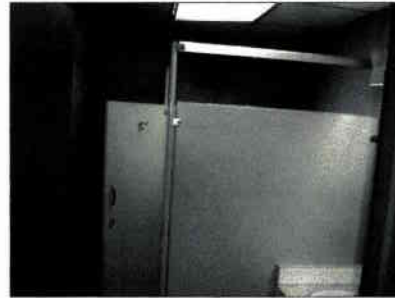
**TICO BUILDING STORAGE ROOM
DEMOLITION PHOTOGRAPH TB4-E
REFERENCE PLAN TB2-A**



**TICO BUILDING MENS ROOM
DEMOLITION PHOTOGRAPH TB4-F
REFERENCE PLAN TB2-A**



**TICO BUILDING WOMENS ROOM
DEMOLITION PHOTOGRAPH TB4-G
REFERENCE PLAN TB2-A**



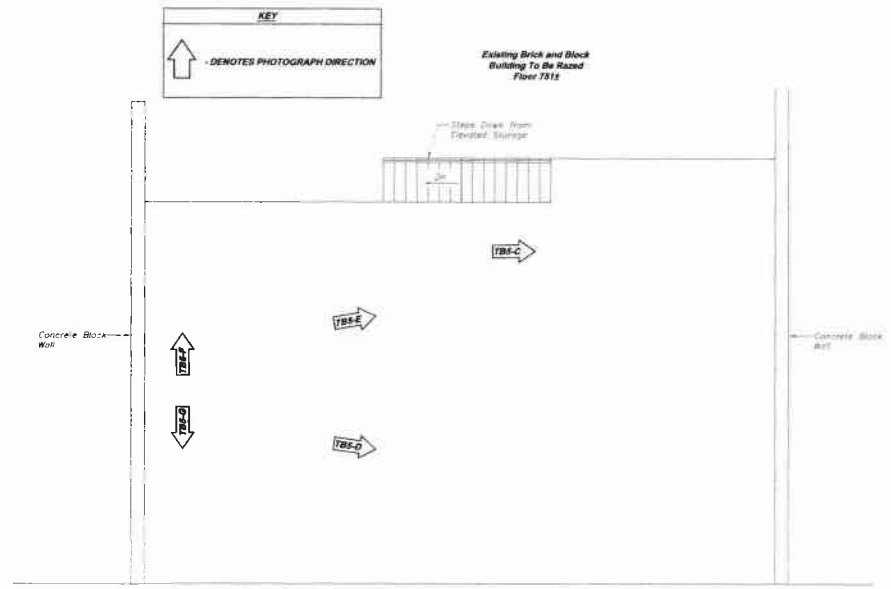
**TICO BUILDING STORAGE ROOM WOMENS ROOM
DEMOLITION PHOTOGRAPH TB4-H
REFERENCE PLAN TB2-A**



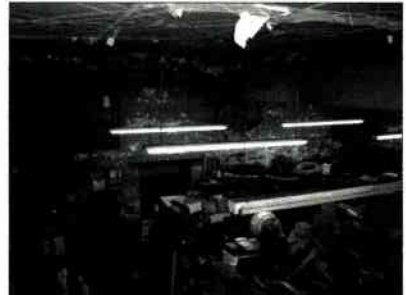
**TICO BUILDING STORAGE ROOM WOMENS ROOM
DEMOLITION PHOTOGRAPH TB4-J
REFERENCE PLAN TB2-A**

NOTE:
ITEMS IDENTIFIED WITH UPPER CASE TEXT ARE PROPOSED.
Items Identified with Mixed Case Text are Existing.

5173 CAMMELLA RUN ROAD PITTSBURGH, PA 15208 Phone: 412-424-0210 Fax: 412-424-0210 info@klhengineers.com	KLH ENGINEERS, INC.	MUNICIPAL AUTHORITY OF THE CITY OF MCKEESPORT ALLEGHENY COUNTY, PENNSYLVANIA CONTRACT NUMBER 2010-01 AND 2010-02 WASTEWATER TREATMENT PLANT EXPANSION TICO BUILDING DEMOLITION PHOTOGRAPHS	Date: 10/01/11 Revision: RELEASE FOR BID	Revisions:
Author: A.L. Brown Date: October 2009 Drawn By: MCE Checked By: HOF Approved By: SMO	Sheet No.: 4	Drawing No.: 220-TB4	Date:	Revisions:



**EXISTING TICO BUILDING
UPPER STORAGE ROOM DEMOLITION PLAN TB5-A**
SCALE: 3/16" = 1'-0"



**TICO BUILDING STORAGE ROOM
DEMOLITION PHOTOGRAPH TB2-A**
REFERENCE PLAN TB2-A



**TICO BUILDING UPPER STORAGE ROOM
DEMOLITION PHOTOGRAPH TB5-A**
REFERENCE PLAN TB5-A



**TICO BUILDING UPPER STORAGE ROOM
DEMOLITION PHOTOGRAPH TB5-D**
REFERENCE PLAN TB5-A



**TICO BUILDING UPPER STORAGE ROOM
DEMOLITION PHOTOGRAPH TB5-E**
REFERENCE PLAN TB5-A



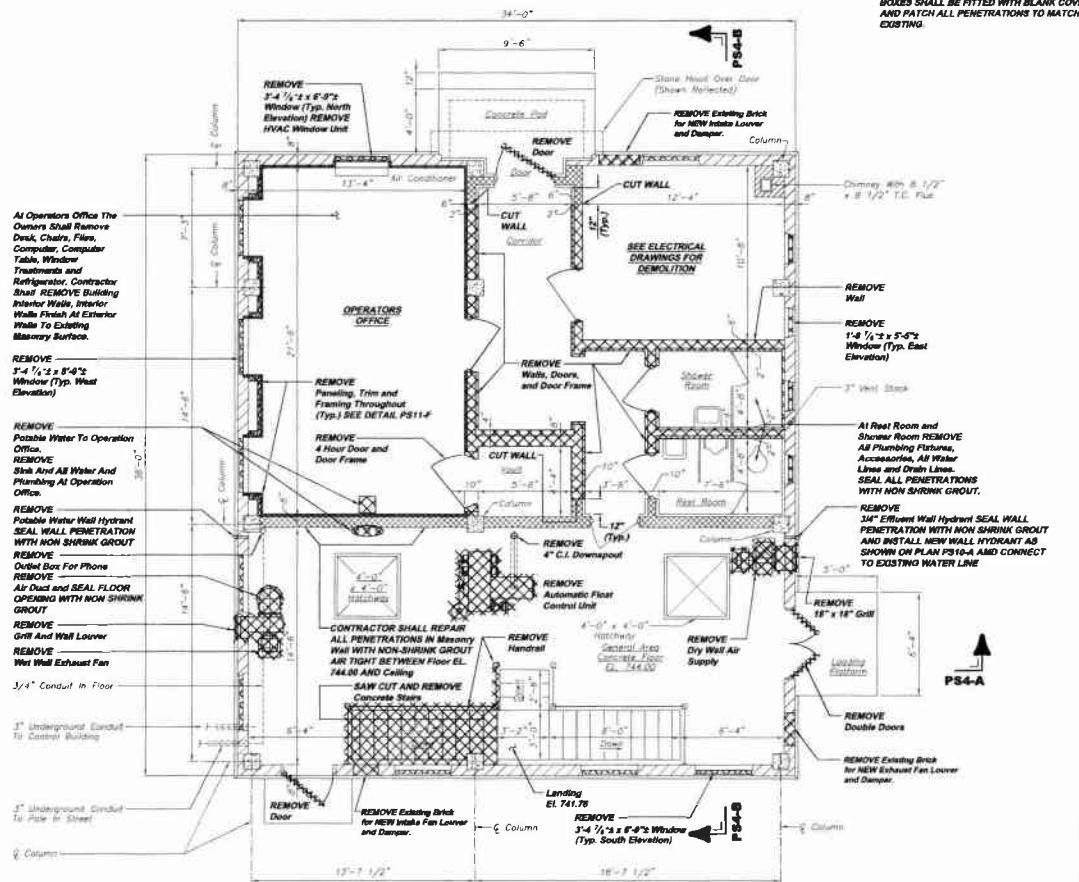
**TICO BUILDING UPPER STORAGE ROOM
DEMOLITION PHOTOGRAPH TB5-F**
REFERENCE PLAN TB5-A



**TICO BUILDING UPPER STORAGE ROOM
DEMOLITION PHOTOGRAPH TB5-G**
REFERENCE PLAN TB5-A

NOTE:
ITEMS IDENTIFIED WITH UPPER CASE TEXT ARE PROPOSED.
Items Identified with Mixed Case Text are Existing.

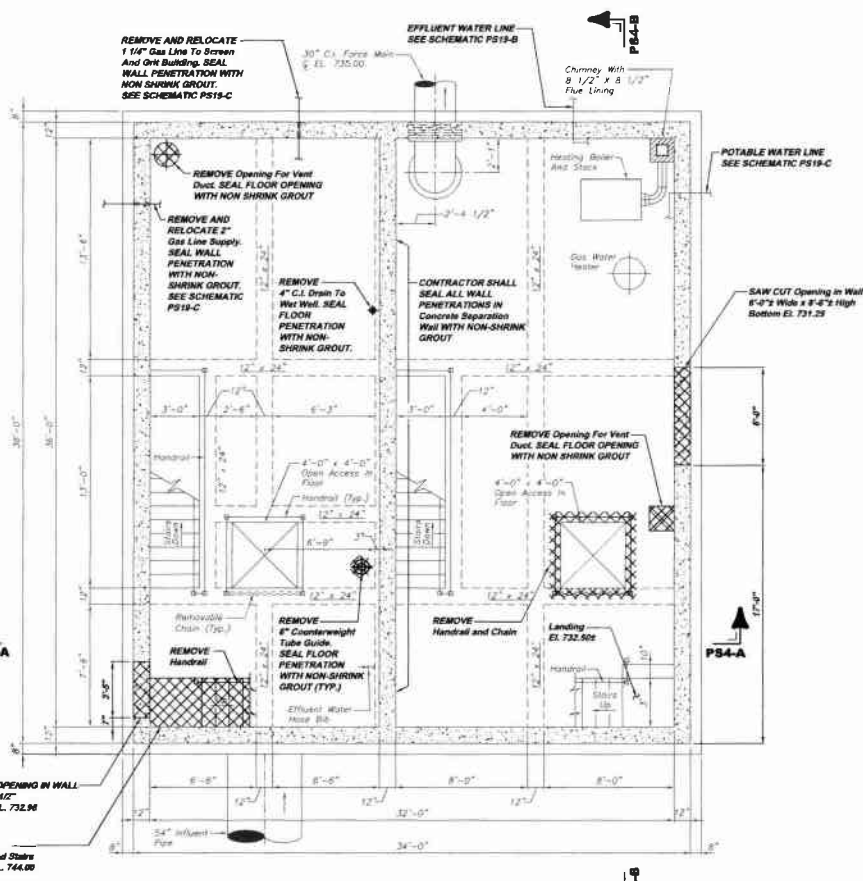
As Shown:	October 2009	DATE	REVISION	DATE	REVISION
Drawn By:	MCE	DATE	RELEASE FOR BID		
Checked By:	HGF				
Approved By:	BNG				
<p>MUNICIPAL AUTHORITY OF THE CITY OF MCKEESPORT ALLEGHENY COUNTY, PENNSYLVANIA CONTRACT NUMBER 2010-01 AND 2010-02 WASTEWATER TREATMENT PLANT EXPANSION TICO BUILDING DEMOLITION PLAN AND PHOTOGRAPHS</p>					
<p>5173 CAMERON RUN ROAD PITTSBURGH, PA 15206 PHONE: 412-242-4218 FAX: 412-242-4218 INFO@KLHENGINEERS.COM</p>					
<p>KLH ENGINEERS, INC.</p>					
<p>Sheet No. 5</p>					
<p>Drawing No. 220-TB5</p>					



W.W.T.P. PUMP STATION FLOOR EL. 744.00
DEMOLITION PLAN PS2-A
 SCALE: 1/4" = 1'-0"
 REFERENCE DRAWING YP 1

NOTE: REMOVE ALL ELECTRICAL EQUIPMENT INSIDE THE ENTIRE PUMP STATION. THIS SHALL INCLUDE ALL CONDUIT, WIRE, PANELS, LIGHTS, RECEPTACLES, ETC. ALL RECESSED BOXES SHALL BE FITTED WITH BLANK COVER AND PATCH ALL PENETRATIONS TO MATCH EXISTING.

NOTE: CONTRACTOR SHALL SEAL AIR TIGHT ALL DEMOLITION PENETRATIONS, EXISTING AND NEW PIPE PENETRATIONS IN CONCRETE BETWEEN PUMP STATION WET WELL AND PUMP STATION DRY WELL. (TYP. ALL FLOOR)



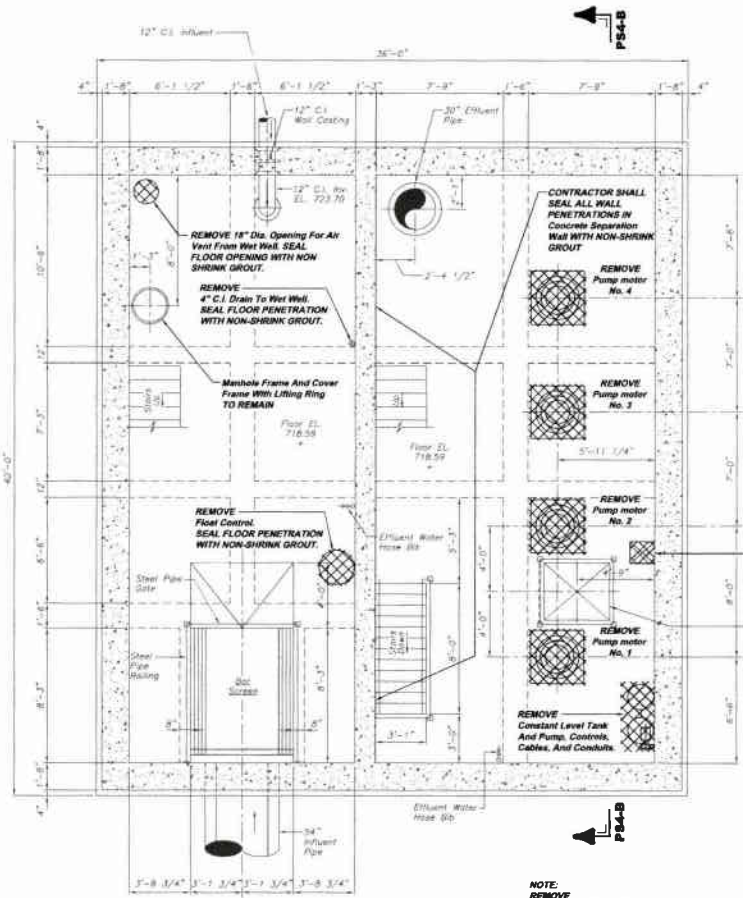
W.W.T.P. PUMP STATION FLOOR EL. 731.28
DEMOLITION PLAN PS2-B
 SCALE: 1/4" = 1'-0"
 REFERENCE PLAN PS2-A

- NOTE:
1. CONTRACTOR SHALL SEAL ALL PENETRATIONS THROUGH AND OR IN THE FLOORS, WALLS, CEILINGS AND OR ROOF. (TYP. FOR PUMP STATION BUILDING)
 2. ALL CONCRETE COLUMNS AND BEAMS SHALL REMAIN INTACT AND NOT DISTURBED.
 3. ITEMS IDENTIFIED WITH UPPER CASE TEXT ARE PROPOSED. Items Identified with Mixed Case Text are Existing.

Scale:	As Shown	Revisions	Rev
Date:	July 2008	DATE SUBMITTED	DATE
Drawn By:	MCE	REVISION	NO.
Checked By:	HOF	RELEASE FOR BID	
Approved By:	GHG		
Sheet No.	2		
Drawing No.	220-PS2		

6175 CAMERELLE RUN ROAD
 PITTSBURGH, PA 15106
 PHONE: 412-244-9400
 FAX: 412-244-9403
 WWW@KLHENGINEERS.COM

KLH ENGINEERS, INC.
 MUNICIPAL AUTHORITY OF THE CITY OF MCKEESPORT
 ALLEGHENY COUNTY, PENNSYLVANIA
 CONTRACT NUMBER 2010-01 AND 2010-02
 WASTEWATER TREATMENT PLANT EXPANSION
 PUMP STATION DEMOLITION PLANS



NOTE: REMOVE ALL ELECTRICAL EQUIPMENT INSIDE THE ENTIRE PUMP STATION. THIS SHALL INCLUDE ALL CONDUIT, WIRE, PANELS, LIGHTS, RECEPTACLES, ETC. ALL RECESSED BOXES SHALL BE FITTED WITH BLANK COVER AND PATCH ALL PENETRATIONS TO MATCH EXISTING.

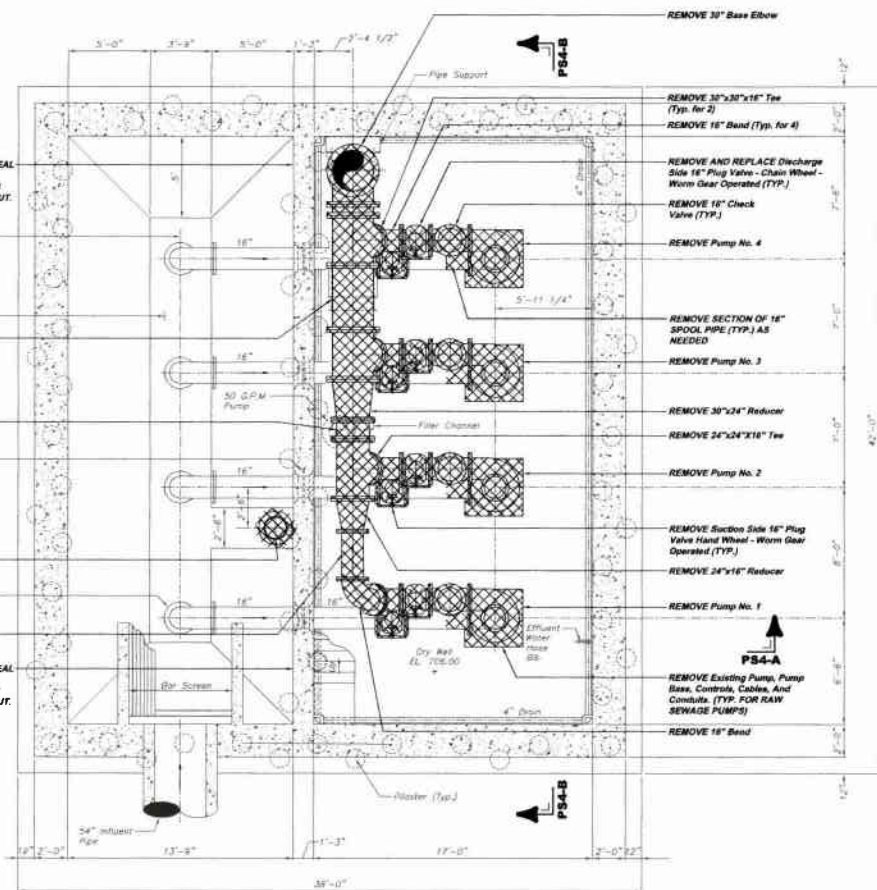
REMOVE 18" Dia. Opening For Air Vent From Wet Well. SEAL FLOOR OPENING WITH NON SHRINK GROUT.

3'-6" x 4'-0" Hatchway

NOTE: REMOVE Existing Pump, Motor, Controls, Cables, And Conduits. (TYP. FOR RAW SEWAGE PUMPS)

NOTE: CONTRACTOR SHALL SEAL AIR TIGHT ALL DEMOLITION PENETRATIONS, EXISTING AND NEW PIPE PENETRATIONS IN CONCRETE BETWEEN PUMP STATION WET WELL AND PUMP STATION DRY WELL. (TYP. ALL FLOORS)

W.W.T.P. PUMP STATION FLOOR EL. 718.59
DEMOLITION PLAN PS3-A
 SCALE: 1/4" = 1'-0"
 REFERENCE PLAN PS2-B



CONTRACTOR SHALL SEAL ALL PENETRATIONS IN Concrete Separation Wall WITH NON-SHRINK GROUT.

REMOVE Pump motor No. 4

REMOVE Pump motor No. 3

REMOVE Pump motor No. 2

REMOVE Pump motor No. 1

REMOVE Constant Level Tank And Pump, Controls, Cables, And Conduits

REMOVE 16" Dia. Floor Control

REMOVE 16" Flange And Floor Elbow (Typ.)

REMOVE 18" Spool Pipe (Typ.)

CONTRACTOR SHALL SEAL ALL PENETRATIONS IN Concrete Separation Wall WITH NON-SHRINK GROUT.

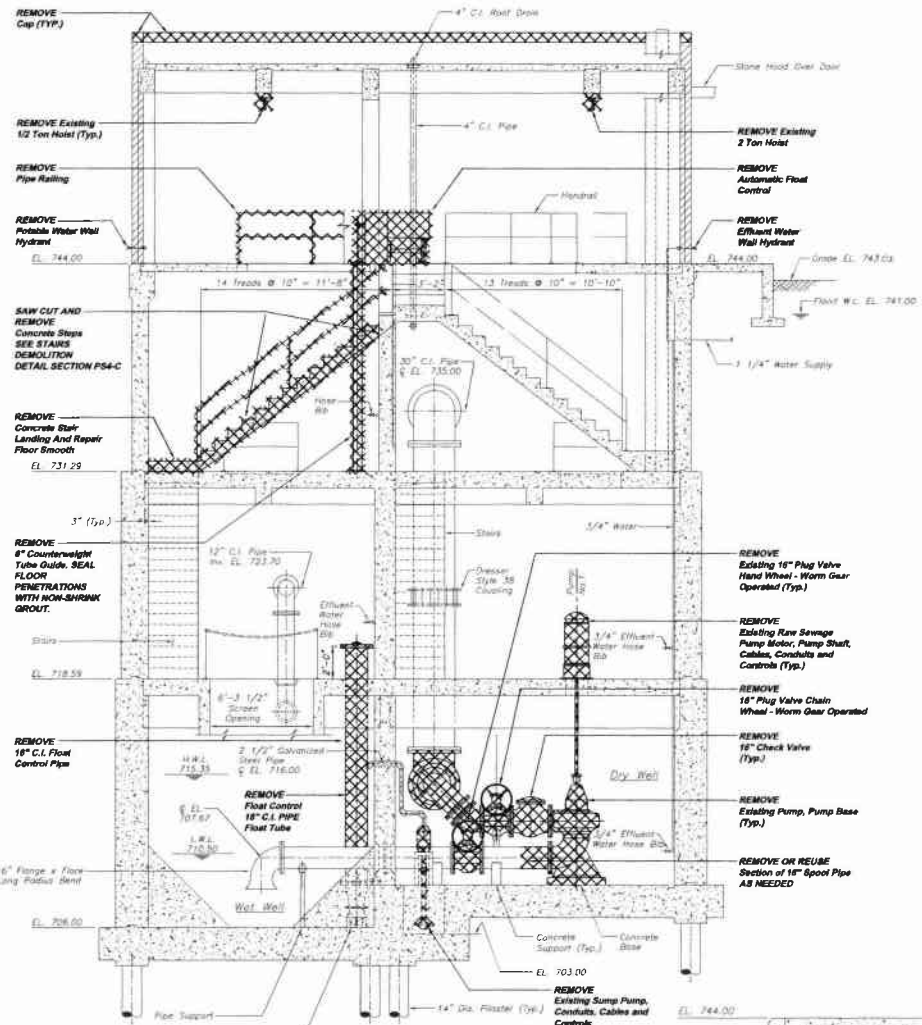
W.W.T.P. PUMP STATION
PUMP ROOM FLOOR EL. 706.00 DEMOLITION
AND WET WELL EL. 703.00 DEMOLITION PLAN PS3-B
 SCALE: 1/4" = 1'-0"
 REFERENCE PLAN PS3-A

NOTE: ITEMS IDENTIFIED WITH UPPER CASE TEXT ARE PROPOSED. Items Identified with Mixed Case Text are Existing.

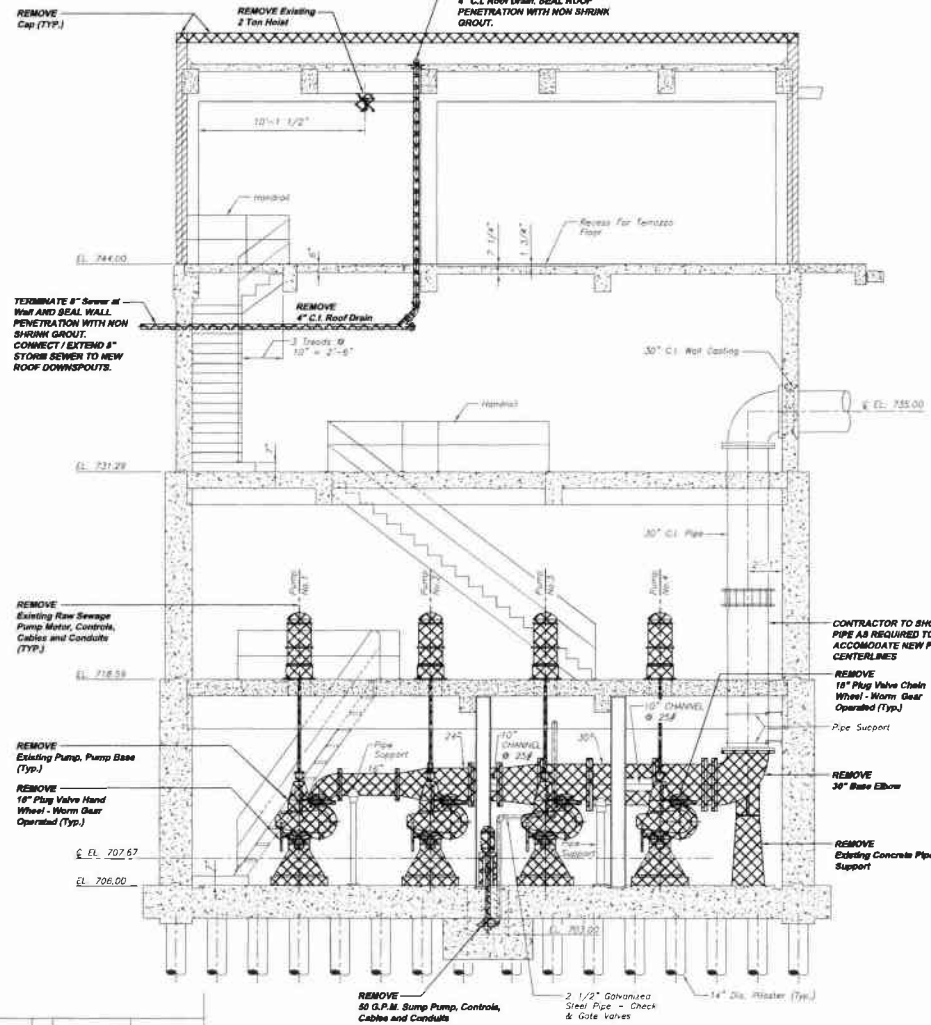
Scale:	As Shown	Revisions:	
Date:	July 2009	Date:	
Drawn By:	MCE	Revised:	
Checked By:	HDF	Released For Bid:	
Approved By:	BHD		
Sheet No.	3		
Drawing No.	220-PS3		

5172 CAMERON BLVD. SUITE 200
 PITTSBURGH, PA 15208
 PHONE: 412-644-2248
 FAX: 412-644-2249
 INFO@KLHENGINEERS.COM

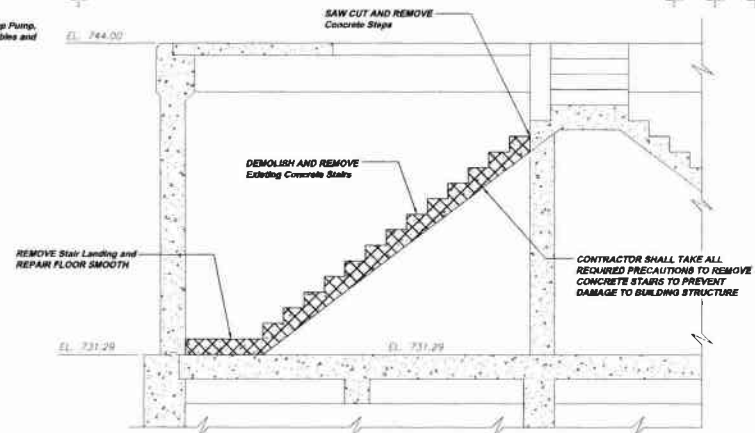
KLH ENGINEERS, INC.
 MUNICIPAL AUTHORITY OF THE CITY OF MCKEESPORT
 ALLEGHENY COUNTY, PENNSYLVANIA
 CONTRACT NUMBER 2010-01 AND 2010-02
 WASTEWATER TREATMENT PLANT EXPANSION
 PUMP STATION DEMOLITION PLANS



DEMOLITION SECTION PS4-A
 SCALE: 1/4" = 1'-0"
 REFERENCE PLAN PS2-A, PS2-B, PS3-A AND PS11-A



DEMOLITION SECTION PS4-B
 SCALE: 1/4" = 1'-0"
 REFERENCE PLAN PS2-A, PS2-B, PS3-A AND PS11-A



DEMOLITION SECTION PS4-C
 SCALE: 3/8" = 1'-0"
 REFERENCE PLAN PS2-A

NOTE:
 ITEMS IDENTIFIED WITH UPPER CASE TEXT ARE PROPOSED.
 Items identified with lower case text are existing.

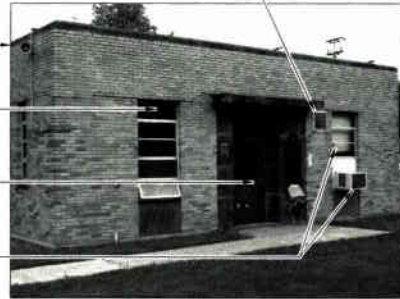
Revisions	Date	Function
DCP SUBMITTAL		
REVISED		
RELEASE FOR BIDD		
Date	7-21-09	
Drawn By:	MLC	
Checked By:	HOF	
Approved By:	SKG	
Scale:	As Shown	
Date:	July 2009	
Drawn By:	MJE	
Checked By:	HOF	
Approved By:	SKG	
Sheet No.	5	
Drawing No.	220-PS4	

6175 CAMPBELL BLVD. #200
 PITTSBURGH, PA 15203
 PHONE: 412-444-0330
 FAX: 412-444-0330
 WWW.KLHENGINEERS.COM



MUNICIPAL AUTHORITY OF THE CITY OF MCKEESPORT
 ALLEGHENY COUNTY, PENNSYLVANIA
 CONTRACT NUMBER 2011-01 AND 2010-02
 WASTEWATER TREATMENT PLANT EXPANSION
 PUMP STATION DEMOLITION SECTIONS

- REMOVE
Louver
CLOSE OPENING WITH
SPLIT FACE BLOCK.
- REMOVE
Stone Coping (TYP.)
- REMOVE
Exterior Window. CONTRACTOR
SHALL FIELD VERIFY OPENING
DIMENSION AND INSTALL GLASS
BLOCK.
- REMOVE
Door, Transom, AND Door Frame.
CONTRACTOR SHALL FIELD VERIFY
OPENING DIMENSIONS.
- REMOVE
Windows, Exhaust Vents, Louvers,
and Window Sills. INSTALL SPLIT
FACE BLOCK.



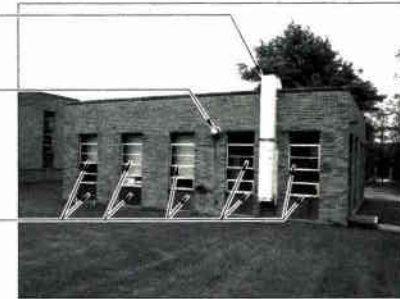
**W.W.T.P. PUMP STATION
NORTH ELEVATION DEMOLITION PHOTOGRAPH PS5-A
REFERENCE ELEVATION PS1-A**

- REMOVE
Stone Coping (TYP.)
- REMOVE
Door, Transom, AND Door Frame.
CONTRACTOR SHALL FIELD
VERIFY OPENING DIMENSIONS.
- REMOVE
Exterior Windows, AND
INSTALL GLASS BLOCK
CONTRACTOR SHALL FIELD
VERIFY OPENING DIMENSIONS
(TYP. FOR 3 THIR WALL)



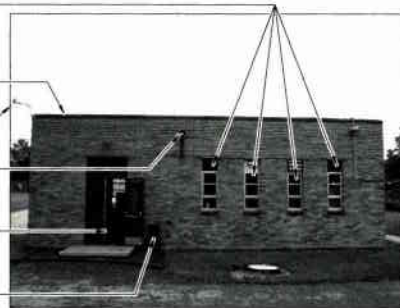
**W.W.T.P. PUMP STATION
SOUTH ELEVATION DEMOLITION PHOTOGRAPH PS5-B
REFERENCE ELEVATION PS1-C**

- REMOVE
Exterior Duct AND Housing.
REPAIR ALL PENETRATIONS
IN BRICK WITH SPLIT FACE
BLOCK AND IN ROOF WITH
NON-SHRINK GROUT.
- REMOVE
Exhauster
CLOSE OPENING WITH
SPLIT FACE BLOCK.
- REMOVE
Existing Windows and Greenstone
Panel (TYP.) See Demolition
Detail PS11-C



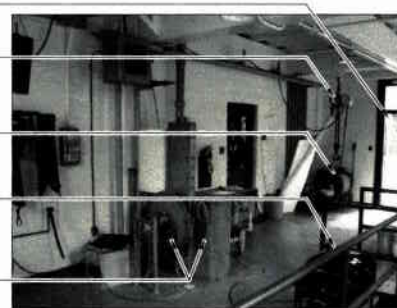
**W.W.T.P. PUMP STATION
WEST ELEVATION DEMOLITION PHOTOGRAPH PS5-C
REFERENCE ELEVATION PS1-B**

- REMOVE
Windows, Exhaust Vents, Louvers,
and Window Sills. INSTALL SPLIT
FACE BLOCK. See Demolition
Detail PS11-G AND PS11-E
- REMOVE
Stone Coping (TYP.)
- REMOVE
Light, Support, Cabling,
AND Conduits.
- REMOVE
Roof Scupper.
SEAL OPENING WITH
NON-SHRINK GROUT.
- REMOVE
Double Door, Transom,
AND Door Frame.
CONTRACTOR SHALL FIELD
VERIFY OPENING DIMENSIONS.
- REMOVE
Louver/ Damper
CLOSE OPENING WITH
SPLIT FACE BLOCK.



**W.W.T.P. PUMP STATION
EAST ELEVATION DEMOLITION PHOTOGRAPH PS5-D
REFERENCE ELEVATION PS1-D**

- REMOVE
Door, Transom and
Door Frame
- REMOVE
2 Ten Hoist and
Return to Owner
- REMOVE
Fan
- REMOVE
Handrail
- REMOVE
Float Control Unit



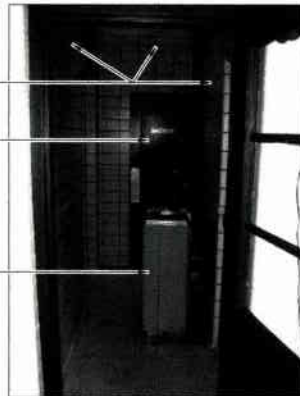
**W.W.T.P. PUMP STATION
FLOOR EL. 744.00 DEMOLITION PHOTOGRAPH PS5-E
REFERENCE PLAN PS2-A**

- REMOVE
Cast Iron Roof Drain
- REMOVE
Venting Machines
TO LOCATION SELECTED
BY OWNER
- REMOVE
Windows
REPLACE WITH BLOCK
- REMOVE
Railing
- REMOVE
Fan



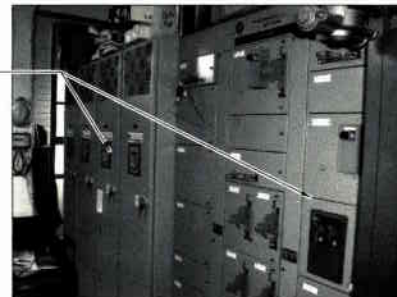
**W.W.T.P. PUMP STATION
FLOOR EL. 744.00 DEMOLITION PHOTOGRAPH PS5-F
REFERENCE PLAN PS2-A**

- REMOVE
Interior Walls
- REMOVE
Door and Door Frame
- REMOVE
Water Cooler and
RETURN TO OWNER



**W.W.T.P. PUMP STATION
FLOOR EL. 744.00 DEMOLITION PHOTOGRAPH PS5-G
REFERENCE PLAN PS2-A**

- REMOVE
Motor Control Center, Cables
and Conduits in Accordance
with Electrical Drawings.



**W.W.T.P. PUMP STATION
FLOOR EL. 744.00 DEMOLITION PHOTOGRAPH PS5-H
REFERENCE PLAN PS2-A**

- REMOVE
Ceiling
See Contract Drawings
- Existing Operators Office - Owner
Shall REMOVE Desk, Chair, File,
Computer, Computer Table,
Window Treatments, Refrigerator.
Contractor Shall REMOVE Building
Interior Walls, All Interior Wall
Finishes on Interior and Exterior Walls
to Existing Masonry Surface as
Identified in the Contract Drawings.
- REMOVING
Existing Paneling



**W.W.T.P. PUMP STATION
FLOOR EL. 744.00 DEMOLITION PHOTOGRAPH PS5-I
REFERENCE PLAN PS2-A**

NOTE:
ITEMS IDENTIFIED WITH UPPER CASE TEXT ARE PROPOSED.
ITEMS IDENTIFIED WITH LOWER CASE TEXT ARE EXISTING.

Scale:	As Shown	Revision	
Date:	July 2009	Date	
Drawn By:	MCE	Revision	
Checked By:	HOE	REP SUBMITTAL	
Approved By:	6103	RECEIVED	
		RELEASE FOR BID	
6173 CAMPBELL RUN ROAD PITTSBURGH, PA 15205 PHONE: 412-442-0288 FAX: 412-442-0288 INFO@KLENGE.COM			
MUNICIPAL AUTHORITY OF THE CITY OF MCKEESPORT ALLEGHENY COUNTY, PENNSYLVANIA CONTRACT NUMBER 2010-01 AND 2010-02 WASTEWATER TREATMENT PLANT EXPANSION PUMP STATION DEMOLITION PHOTOGRAPHS			
Sheet No.	6	Drawing No.	220-PS5

REMOVE
Ceiling
See Demolition Drawing

REMOVE
Existing Paneling

Existing Operators Office - Owner
Shall REMOVE Desk, Chairs, Files,
Computer, Computer Table,
Window Treatments, Refrigerator.
Contractor Shall REMOVE Building
Interior Walls. All Interior Wall
Finishes on Interior and Exterior Walls
to Existing Masonry Surface as
Identified in the Contract Drawings.



W.W.T.P. PUMP STATION
FLOOR EL. 744.00 DEMOLITION PHOTOGRAPH PS6-A
REFERENCE PLAN PS2-A

REMOVE
Rest Room, Inclusive of All
Water Lines, Drain Lines,
Toilet Partition and Plumbing
Fixtures, and Building Interior
Walls as Identified in the
Contract Drawings



W.W.T.P. PUMP STATION
FLOOR EL. 744.00 DEMOLITION PHOTOGRAPH PS6-B
REFERENCE PLAN PS2-A

REMOVE
Shower Room Inclusive of All
Water Lines, Drain Lines,
Plumbing Fixtures, and
Building Interior Walls as
Identified in the Contract
Drawings.

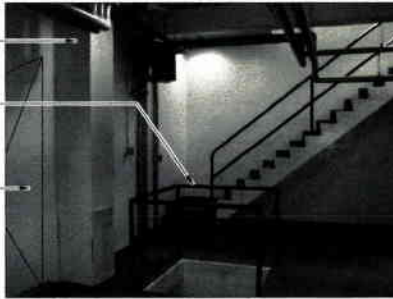


W.W.T.P. PUMP STATION
FLOOR EL. 744.00 DEMOLITION PHOTOGRAPH PS6-C
REFERENCE PLAN PS2-A

Existing Duct

REMOVE
Railing Around Floor Opening

CUT WALL
See Demolition Drawings



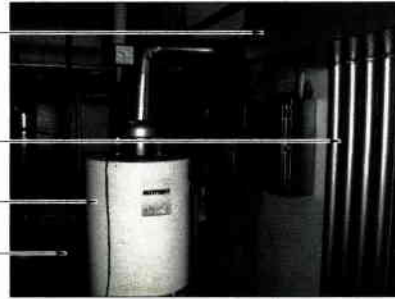
W.W.T.P. PUMP STATION (DRY WELL)
FLOOR EL. 731.29 DEMOLITION PHOTOGRAPH PS6-D
REFERENCE PLAN PS2-A

Existing Electric
Junction Box

Existing Electric Conduits

Existing Gas Fired
Water Heater

Existing Water &
Heater Gas Supply



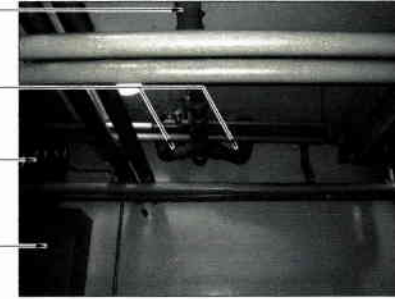
W.W.T.P. PUMP STATION (DRY WELL)
FLOOR EL. 731.29 DEMOLITION PHOTOGRAPH PS6-E
REFERENCE PLAN PS2-A

REMOVE
Drain Pipe

REMOVE
Drain Pipe
SEAL PENETRATIONS WITH
NON SHRINK GROUT.

Existing Electric Conduits

Existing Electric
Junction Box



W.W.T.P. PUMP STATION (DRY WELL)
FLOOR EL. 731.29 DEMOLITION PHOTOGRAPH PS6-F
REFERENCE PLAN PS2-A

Existing Electric
Junction Box

REMOVE
Pump Motor, Shaft and
Pump Base and All Pump
Controls. (Typ. for 4)

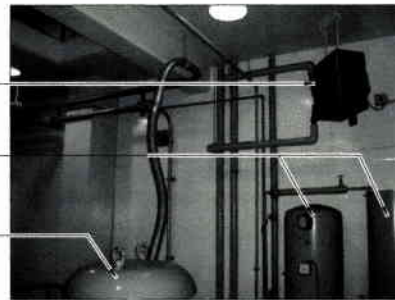


W.W.T.P. PUMP STATION (DRY WELL)
FLOOR EL. 718.59 DEMOLITION PHOTOGRAPH PS6-G
REFERENCE PLAN PS3-A

Existing Unit Heater

REMOVE
Constant Level Tank and
Pump, Controls, Cables
and Conduits.

REMOVE
Pump Motors (Typ. for 4)



W.W.T.P. PUMP STATION (DRY WELL)
FLOOR EL. 718.59 DEMOLITION PHOTOGRAPH PS6-H
REFERENCE PLAN PS3-A

REMOVE
Constant Level Tank and
Pump, controls, Cables
and Conduits.



W.W.T.P. PUMP STATION (DRY WELL)
FLOOR EL. 718.59 DEMOLITION PHOTOGRAPH PS6-J
REFERENCE PLAN PS3-A

NOTE:
ITEMS IDENTIFIED WITH UPPER CASE TEXT ARE PROPOSED.
Items Identified with Mixed Case Text are Existing.

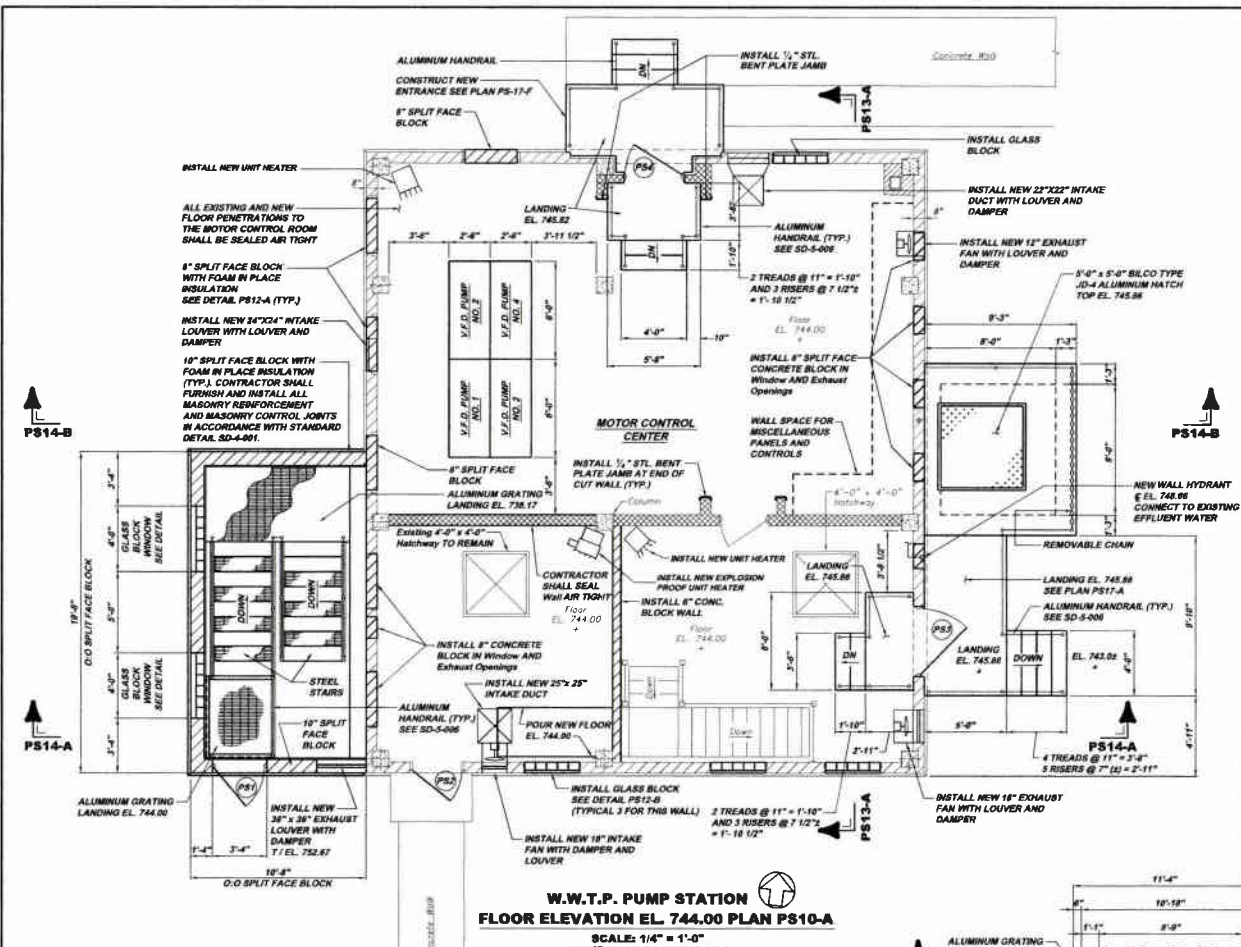
Scale:	As Shown	As Shown	As Shown
Date:	July 2009	July 2009	July 2009
Drawn By:	BKE	BKE	BKE
Checked By:			
Approved By:			
Sheet No.	7		
Drawing No.	220-PS6		

MUNICIPAL AUTHORITY OF THE CITY OF MCKEESPORT
 ALLEGHENY COUNTY, PENNSYLVANIA
 CONTRACT NUMBER 2010-01 AND 2010-02
 WASTEWATER TREATMENT PLANT EXPANSION
 PUMP STATION DEMOLITION PHOTOGRAPHS

5175 CAMPBELL RUN ROAD
 PITTSBURGH, PA 15205
 PH: 412-241-8440
 FAX: 412-241-8440
 INFO@KLHENGINEERS.COM

KLH
ENGINEERS, INC.

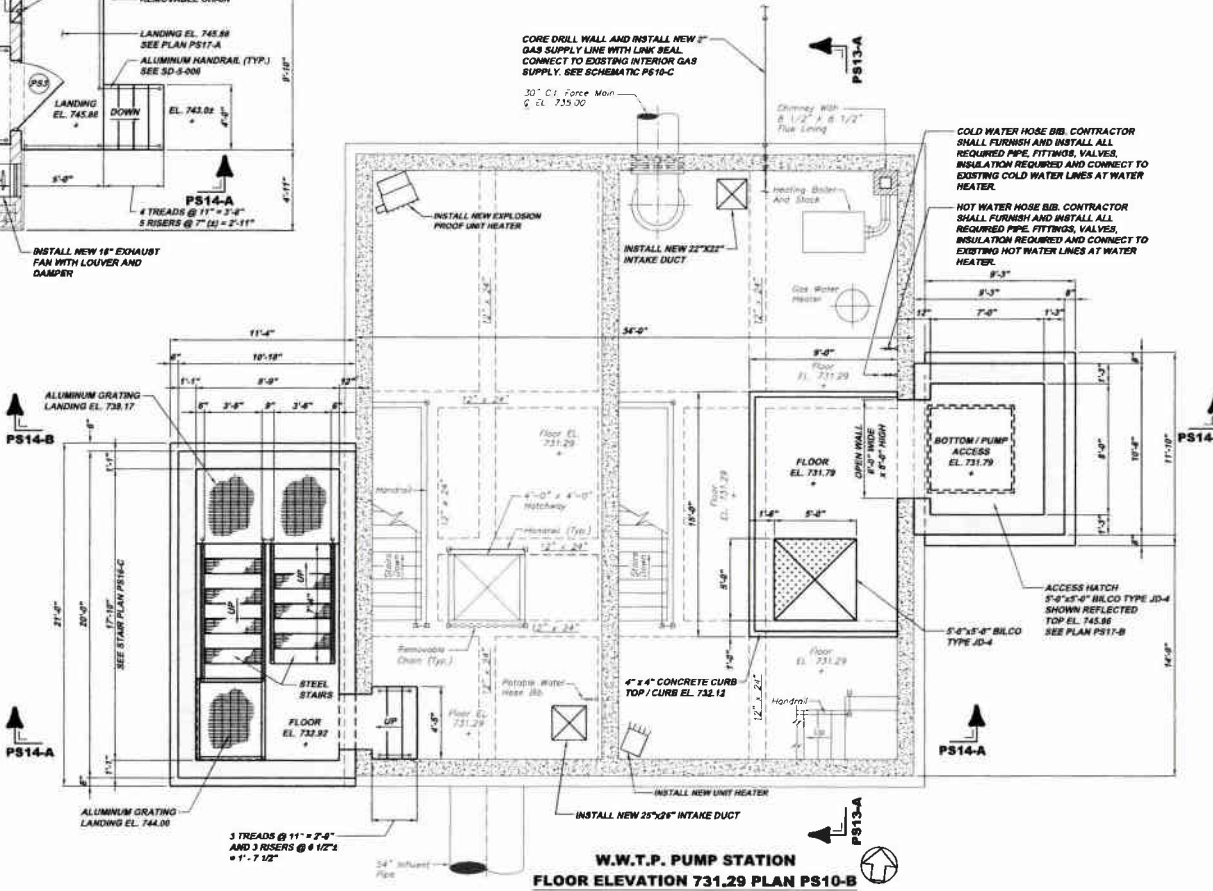
Revisions	Date	Description
1	07/21/09	ISSUE FOR PERMITS
2	07/21/09	ISSUE FOR BID



W.W.T.P. PUMP STATION
FLOOR ELEVATION EL. 744.00 PLAN PS10-A
 SCALE: 1/4" = 1'-0"
 REFERENCE DRAWING VP3

NOTE:
 SEE DOOR SCHEDULE ON
 DRAWING 220-PS13.

NOTE:
 CONTRACTOR SHALL SEAL AIR TIGHT ALL
 DEMOLITION PENETRATIONS, EXISTING AND NEW
 PIPE PENETRATIONS IN CONCRETE BETWEEN
 PUMP STATION WET WELL AND PUMP STATION
 DRY WELL. (TYP. ALL FLOORS)



W.W.T.P. PUMP STATION
FLOOR ELEVATION 731.29 PLAN PS10-B
 SCALE: 1/4" = 1'-0"
 REFERENCE PLAN PS10-A

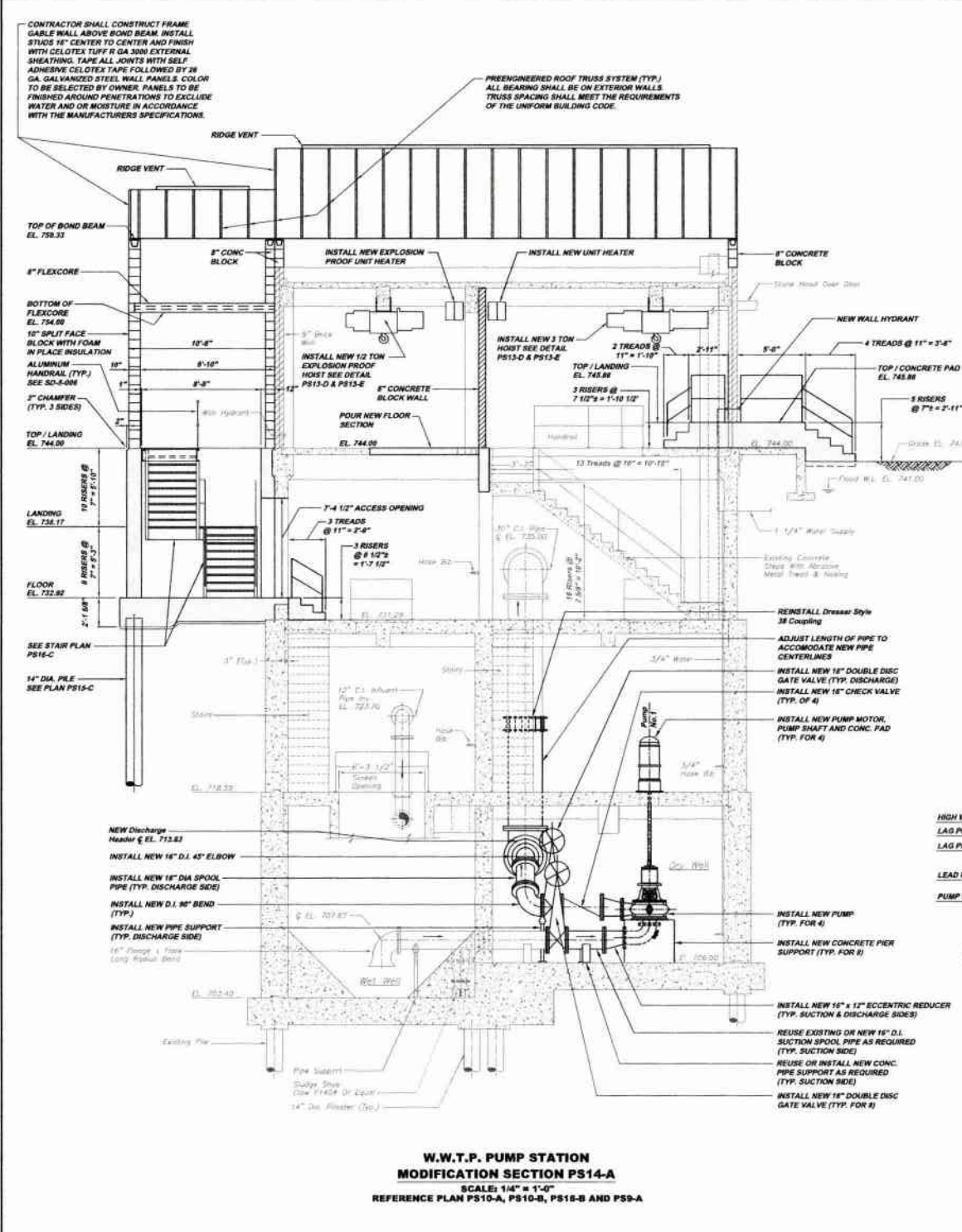
NOTE:
 ITEMS IDENTIFIED WITH UPPER CASE TEXT ARE PROPOSED.
 Items Identified with Mixed Case Text are Existing.

Scale:	As Shown	Date:	By:	Checked By:	Approved By:
1/4" = 1'-0"	July 2009	July 2009	MKE	HOF	BHG
Sheet No.	10				
Drawing No.	220-PS10				

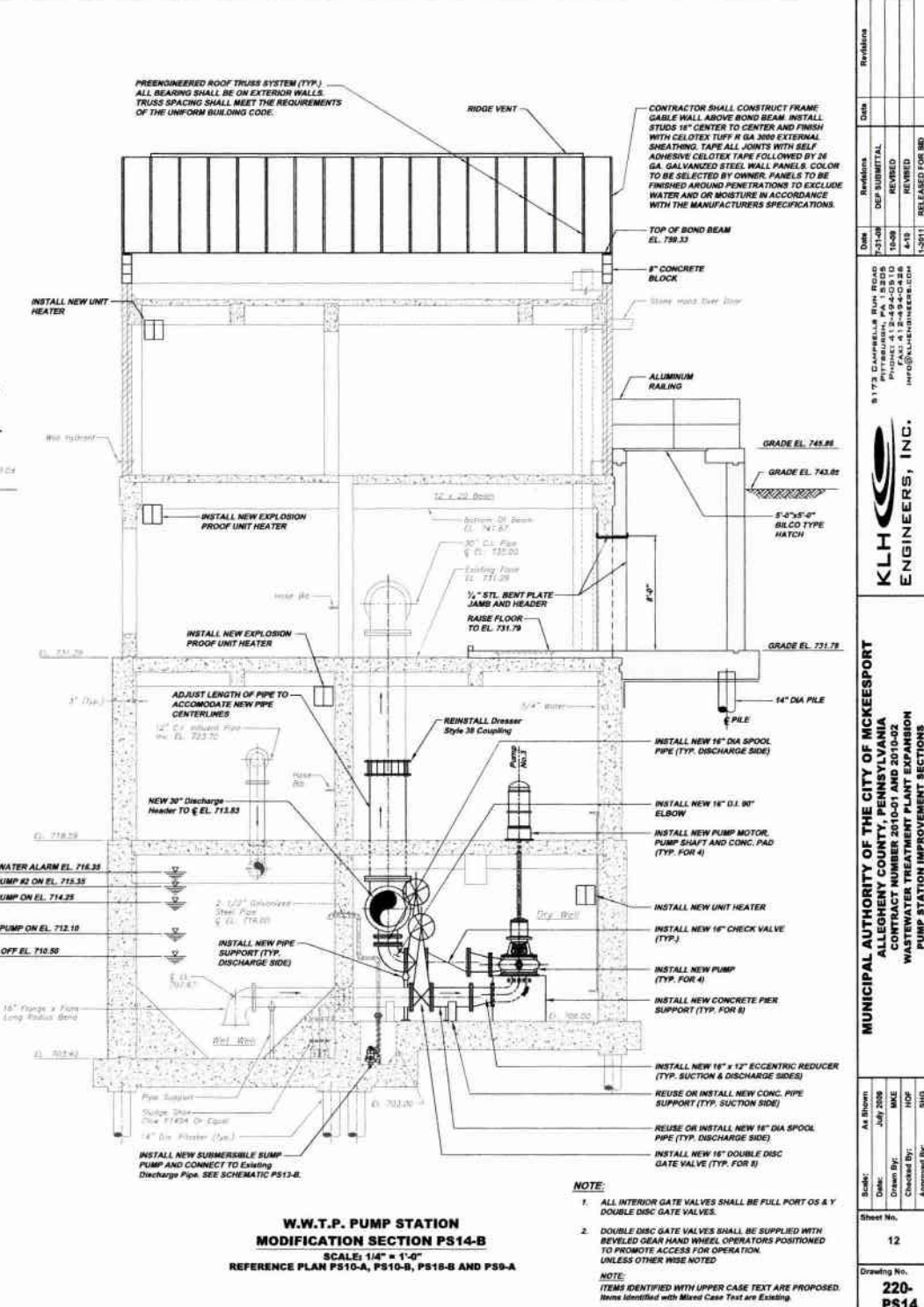
Revisions	Date	By	Checked By	Approved By
1	7-13-09	DEF	REVISIT	RELEASE FOR BID
2	10-09	REVISIT	RELEASE FOR BID	
3	1-31-11	REVISIT	RELEASE FOR BID	

5175 CLAYBOROUGH BLVD. SUITE 2005 PITTSBURGH, PA 15205 PHONE 412-494-0310 FAX 412-494-0311 INFO@KLHENGINEERS.COM	
--	--

MUNICIPAL AUTHORITY OF THE CITY OF MCKEESPORT
 ALLEGHENY COUNTY, PENNSYLVANIA
 CONTRACT NUMBER 2010-01 AND 2010-02
 WASTEWATER TREATMENT PLANT EXPANSION
 PUMP STATION IMPROVEMENT PLANS



**W.W.T.P. PUMP STATION
MODIFICATION SECTION PS14-A**
SCALE: 1/4" = 1'-0"
REFERENCE PLAN PS10-A, PS10-B, PS18-B AND PS9-A



**W.W.T.P. PUMP STATION
MODIFICATION SECTION PS14-B**
SCALE: 1/4" = 1'-0"
REFERENCE PLAN PS10-A, PS10-B, PS18-B AND PS9-A

NOTE:
1. ALL INTERIOR GATE VALVES SHALL BE FULL PORT OS & Y DOUBLE DISC GATE VALVES.
2. DOUBLE DISC GATE VALVES SHALL BE SUPPLIED WITH BEVELED GEAR HAND WHEEL OPERATORS POSITIONED TO PROMOTE ACCESS FOR OPERATION, UNLESS OTHERWISE NOTED.
NOTE:
ITEMS IDENTIFIED WITH UPPER CASE TEXT ARE PROPOSED. ITEMS IDENTIFIED WITH MIXED CASE TEXT ARE EXISTING.

Revisions	Date	By	Check	Appr.
1	7-27-08	DGP	MM	MM
2	10-08	MM	MM	MM
3	4-19	MM	MM	MM
4	1-20-11	MM	MM	MM

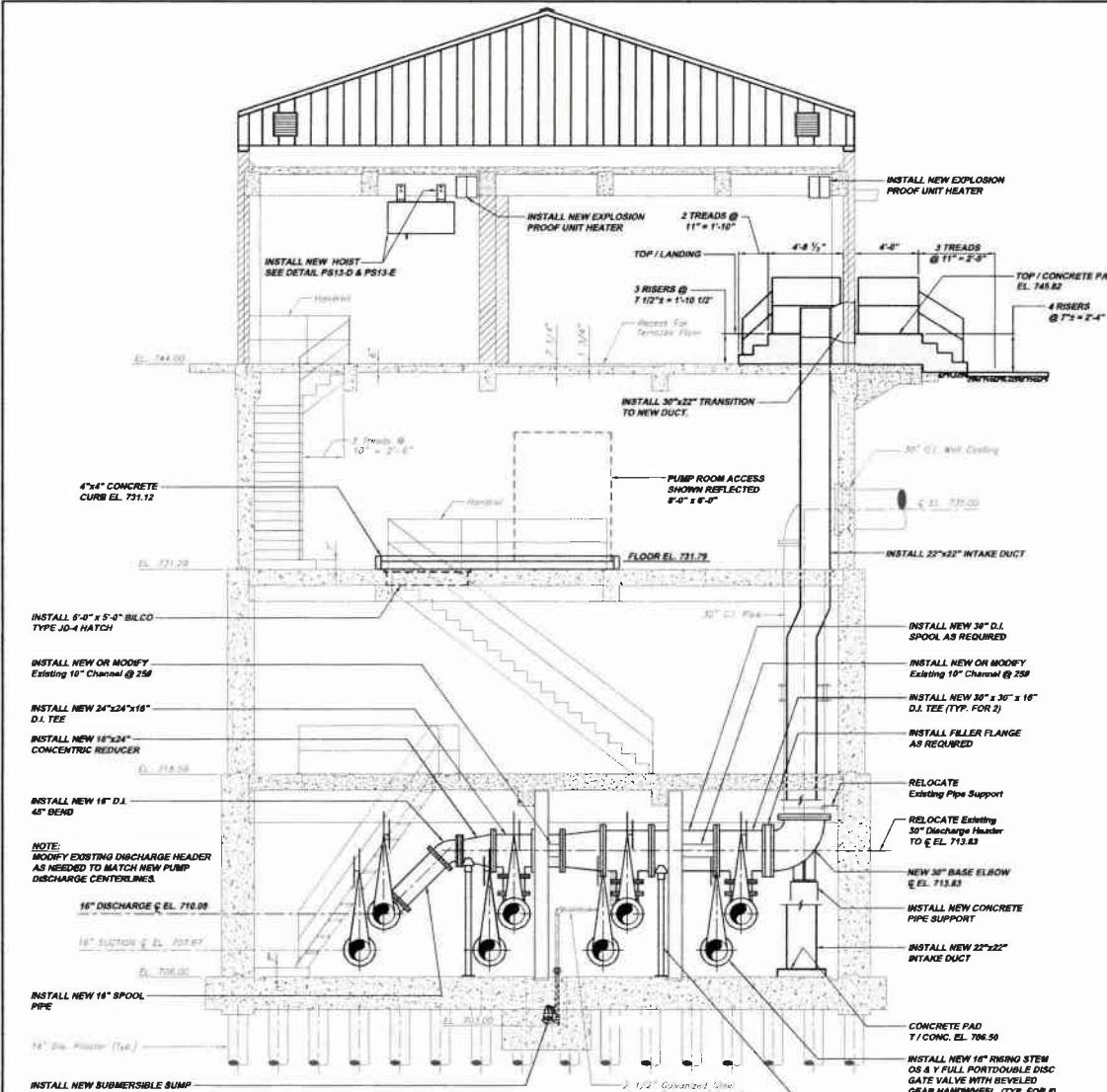
8177 CLARKVILLE RD. ROOM 1505
PITTSBURGH, PA 15205
Project # 10-09-0030
HQP
HFC@KLHENGINEERS.COM
1-2011 RELEASED FOR BID

KLH ENGINEERS, INC.

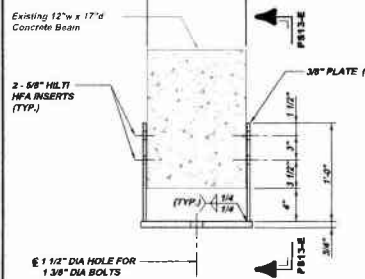
**MUNICIPAL AUTHORITY OF THE CITY OF MCKEESPORT
ALLEGHANY COUNTY, PENNSYLVANIA
CONTRACT NUMBER 2010-01 AND 2010-02
WASTEWATER TREATMENT PLANT EXPANSION
PUMP STATION IMPROVEMENT SECTIONS**

As Shown	July 2009	MM	MM	MM
Date:	Drawn By:	Checked By:	Approved By:	SHG

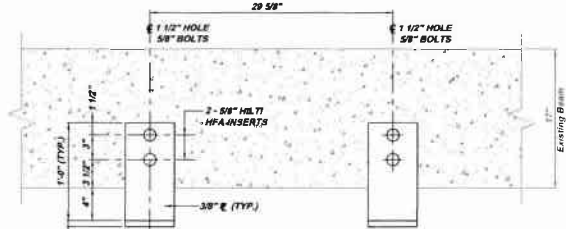
Sheet No. 12
Drawing No. 220-PS14



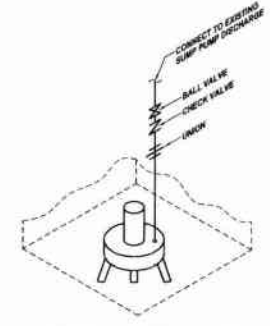
W.W.T.P. PUMP STATION MODIFICATION SECTION PS13-A
 SCALE: 1/4" = 1'-0"
 REFERENCE PLAN P810-A, P810-B, P810-D AND P89-A



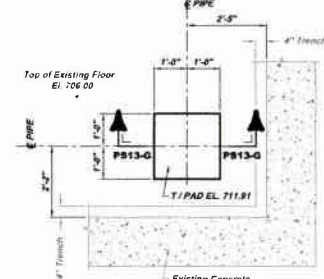
HOIST SUPPORT DETAIL PS13-D
 SCALE: 1 1/2" = 1'-0"
 REFERENCE P814-A, P814-B & P813-A



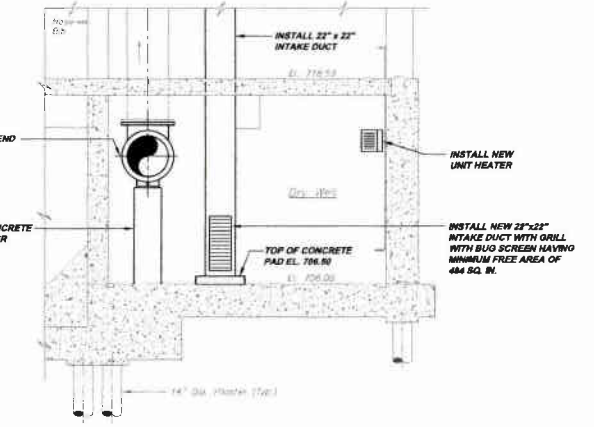
SECTION PS13-E
 SCALE: 1 1/2" = 1'-0"
 REFERENCE P813-D



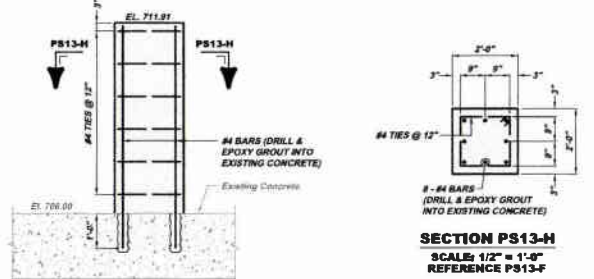
SUMP PUMP SCHEMATIC PS13-B
 SCALE: N.T.S.



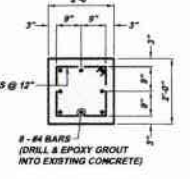
FOUNDATION PLAN PS13-F
 (NEW PUMP SUPPORT)
 SCALE: 1/2" = 1'-0"
 REFERENCE PLAN P810-B



W.W.T.P. PUMP STATION MODIFICATION SECTION PS13-C
 SCALE: 1/4" = 1'-0"
 REFERENCE PLAN P810-A AND P810-B



SECTION PS13-G
 SCALE: 1/2" = 1'-0"
 REFERENCE PS13-F



SECTION PS13-H
 SCALE: 1/2" = 1'-0"
 REFERENCE PS13-F

NOTE:
 ITEMS IDENTIFIED WITH UPPER CASE TEXT ARE PROPOSED.
 ITEMS IDENTIFIED WITH MIXED CASE TEXT ARE EXISTING.

W.W.T.P. PUMP STATION DOOR SCHEDULE (ALL HARDWARE US 32 FINISH)									
MARK	LOCATION	DOOR DESCRIPTION	DIMENSIONS (ROUGH OPENING)	LOCKSET (ROUGH) (FINISH US 32)	HINGE (FINISH US 32)	CLOSER (LCM)	THRESHOLD (NATIONAL GUARDED)	KICKPLATE (ROCK WOOD)	WEATHER-STRIP (NATIONAL GUARDED)
PS1	EXTERIOR SOUTH WALL W/ET WELL ACCESS	CLINE INSULATED ALUMINUM FRAME DOOR WITH ALUMINUM FRAME DOOR PANEL 3'-0" x 7'-0" WITH HALF GLASS	3'-4" x 7'-4"	MORTISE PANIC TYPE EXIT DEVICE SERIES 9900 WITH ETL TRIM	MCKINNEY STAINLESS STEEL CONTINUOUS TYPE (HEAVY DUTY RATED)	1480 ADA COMPLIMENT EACH PANEL	425	10" HIGH ± .050"	180 SDKB PERIMETER SEAL 101 VDKB SWEEP
PS2	EXTERIOR SOUTH WALL ACCESS	CLINE INSULATED ALUMINUM FRAME DOOR WITH ALUMINUM FRAME DOOR PANEL 3'-0" x 7'-0" WITH HALF GLASS	VERIFY EXISTING ROUGH OPENING	MORTISE PANIC TYPE EXIT DEVICE SERIES 9900 WITH ETL TRIM	MCKINNEY STAINLESS STEEL CONTINUOUS TYPE (HEAVY DUTY RATED)	1480 ADA COMPLIMENT EACH PANEL	425	10" HIGH ± .050"	180 SDKB PERIMETER SEAL 101 VDKB SWEEP
PS3	EXTERIOR EAST PUMP ROOM ACCESS	CLINE INSULATED ALUMINUM FRAME DOOR WITH ALUMINUM FRAME DOOR PANEL HALF GLASS 3'-0" x 7'-0"	4'-4" x 7'-4" VERIFY EXISTING ROUGH OPENING	MORTISE PANIC TYPE EXIT DEVICE SERIES 9900 WITH ETL TRIM	MCKINNEY STAINLESS STEEL CONTINUOUS TYPE (HEAVY DUTY RATED)	1480 ADA COMPLIMENT EACH PANEL	425	10" HIGH ± .050"	180 SDKB PERIMETER SEAL 101 VDKB SWEEP
PS4	EXTERIOR NORTH ELECTRIC ROOM ACCESS	CLINE INSULATED ALUMINUM FRAME DOOR WITH ALUMINUM FRAME DOOR PANEL HALF GLASS 3'-4" x 7'-0"	3'-4" x 7'-4" VERIFY EXISTING ROUGH OPENING	MORTISE PANIC TYPE EXIT DEVICE SERIES 9900 WITH ETL TRIM	MCKINNEY STAINLESS STEEL CONTINUOUS TYPE (HEAVY DUTY RATED)	1480 ADA COMPLIMENT EACH PANEL	425	10" HIGH ± .050"	180 SDKB PERIMETER SEAL 101 VDKB SWEEP
PS5	ATTIC ACCESS	CECO CORP INSULATED METAL DOOR PANEL WITH 4 SIDED FRAME 1-HR FIRE RATED	3'-4" x 3'-4"	PASSAGE LOCKSET 8215 CENTER STROKE IN FRAME ESCUTCHION AND LEVER TRIM SERIES 8200 (LNL)	HAGER 1250 4 1/2" x 4 1/2" (2 REVS) SPRING TYPE PRIME COATED				180 SA PERIMETER SEAL

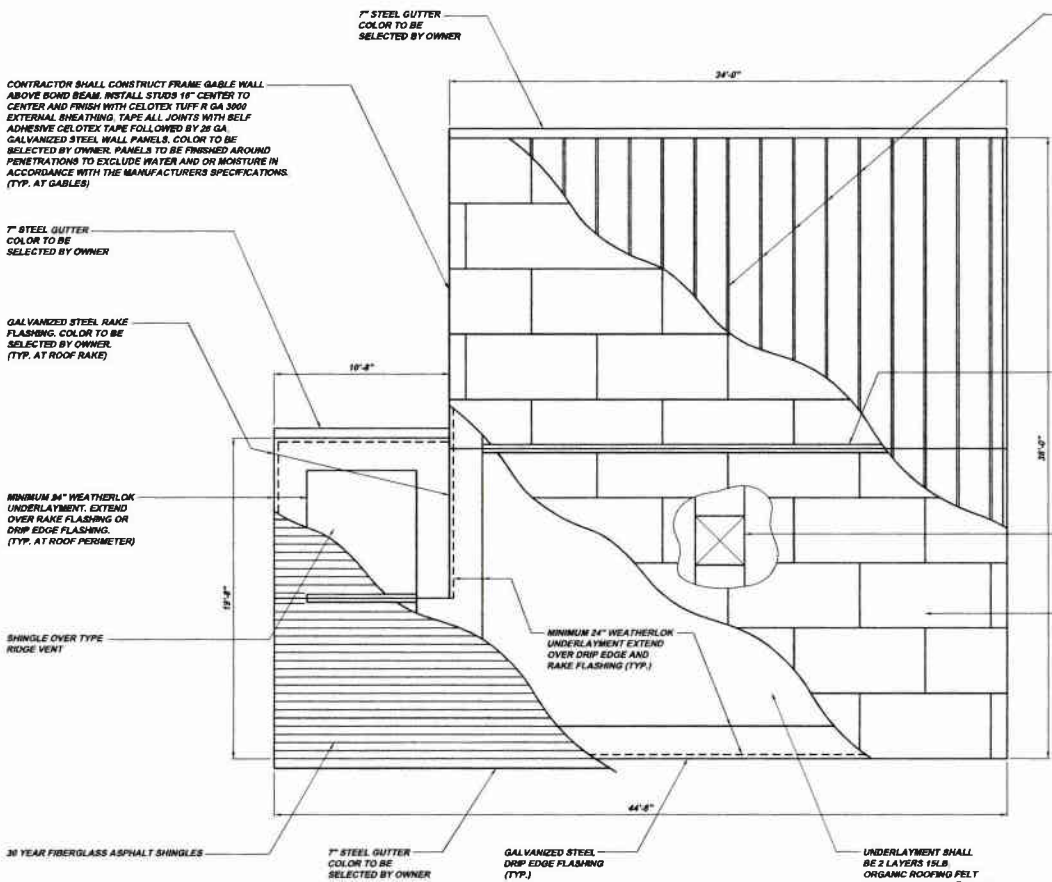


MUNICIPAL AUTHORITY OF THE CITY OF MCKEESPORT
 ALLEGHENY COUNTY, PENNSYLVANIA
 CONTRACT NUMBER 2010-01 AND 2010-02
 WASTEWATER TREATMENT PLANT EXPANSION
 PUMP STATION IMPROVEMENT SECTIONS, DETAILS AND SCHEDULE

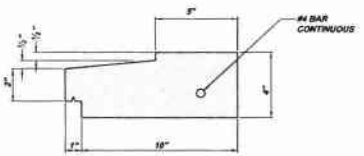
Scale: As Shown
 Date: July 2009
 Drawn By: MCE
 Checked By: HOF
 Approved By: SHQ

Sheet No. 13

Drawing No. 220-PS13



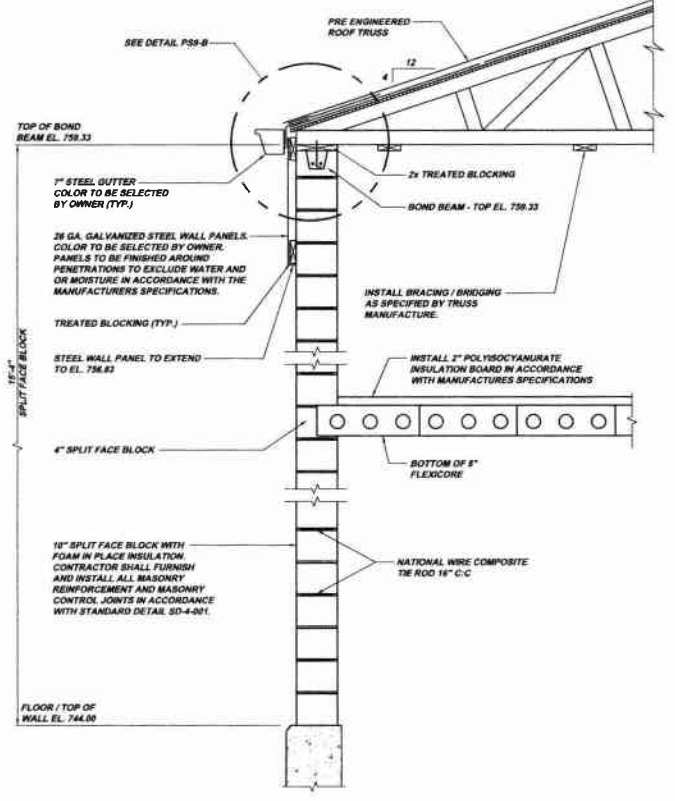
**W.W.T.P. PUMP STATION
ROOF PLAN PS9-A**
SCALE: 1/4" = 1'-0"
REFERENCE PLAN PS10-A



PRECAST CONCRETE SILL DETAIL PS9-D
SCALE: 3" = 1'-0"
REFERENCE SECTION PS12-G



ROOF DETAIL PS9-B
SCALE: 3/4" = 1'-0"
REFERENCE SECTION PS9-C



DRY WELL ACCESS TYPICAL WALL SECTION PS9-C
SCALE: 3/4" = 1'-0"
REFERENCE ELEVATION PS8-A AND PS8-C

NOTE:
ITEMS IDENTIFIED WITH UPPER CASE TEXT ARE PROPOSED.
Items identified with Mixed Case Text are Existing.

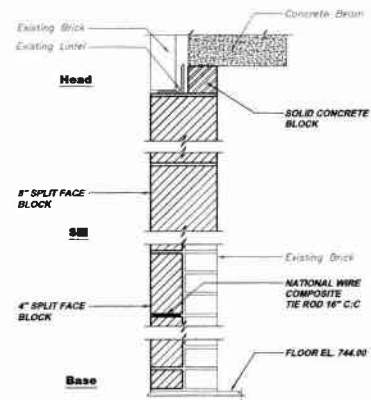
Revision	Date	Description
1	7-31-20	ISSUED FOR PERMITS
2	10-29	REVISED
3	11-27	RELEASE FOR BID

As Shown	July 2020	DATE
Drawn By	HAZ	DATE
Checked By	MOF	DATE
Approved By	SND	DATE

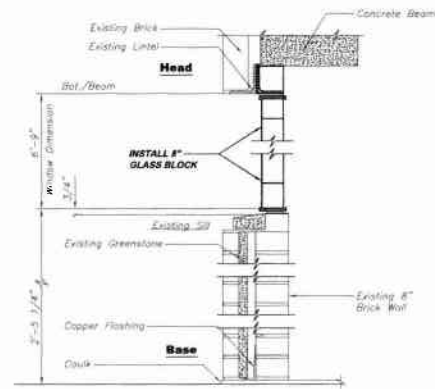
5173 DANIELLE RUN ROAD PHILADELPHIA, PA 19154 TEL: 412-494-9488 INFO@KLHENGINEERS.COM	KLH ENGINEERS, INC.
--	----------------------------

MUNICIPAL AUTHORITY OF THE CITY OF MCKEESPORT ALLEGHENY COUNTY, PENNSYLVANIA CONTRACT NUMBER: 2019-000000000000 W.W.T.P. PUMP STATION PUMP STATION ROOF IMPROVEMENT PLAN AND DETAILS
--

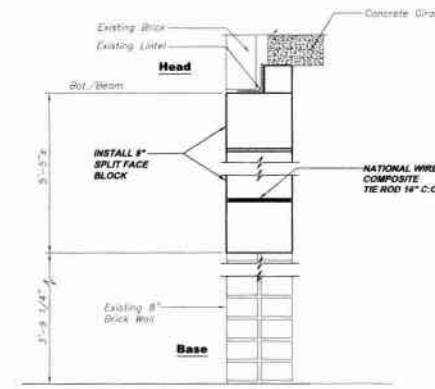
Sheet No.	14
Drawing No.	220-PS9



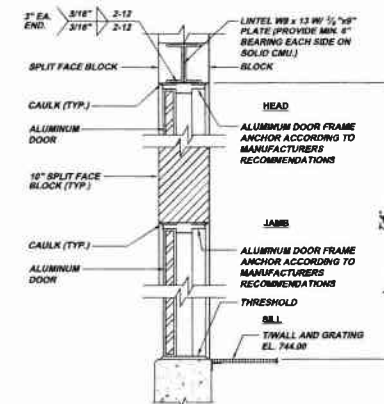
RESTORATION DETAIL PS12-A
SCALE: 1 1/2" = 1'-0"
REFERENCE ELEVATION PS8-B



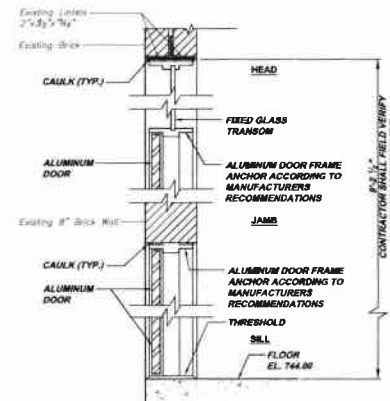
GLASS BLOCK WINDOW DETAIL PS12-B
SCALE: 1 1/2" = 1'-0"
REFERENCE ELEVATION PS8-A AND PS8-C



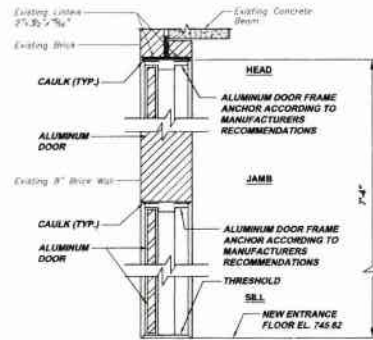
DETAIL PS12-C
SCALE: 1 1/2" = 1'-0"
REFERENCE ELEVATION PS8-D



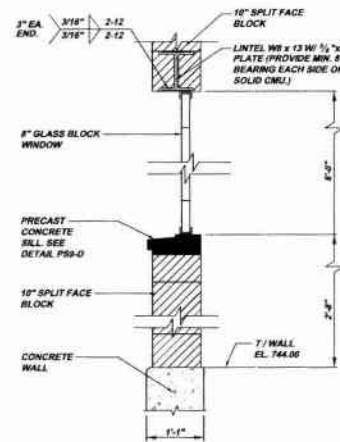
DOOR NO. PS1 DETAIL PS12-D
N.T.S.
REFERENCE PLAN PS10-A



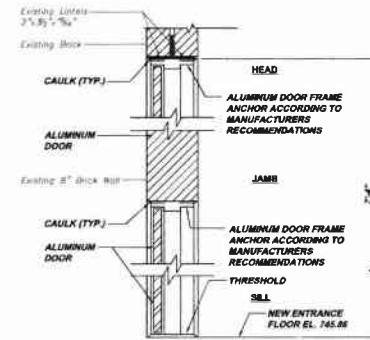
DOOR NO. PS2 DETAIL PS12-E
N.T.S.
REFERENCE PLAN PS10-A



DOOR NO. PS4 DETAIL PS12-F
N.T.S.
REFERENCE PLAN PS10-A



GLASS BLOCK WINDOW DETAIL PS12-G
N.T.S.
REFERENCE PLAN PS8-B



DOOR NO. PS3 DETAIL PS12-H
N.T.S.
REFERENCE PLAN PS10-A



MUNICIPAL AUTHORITY OF THE CITY OF MCKEESPORT
ALLEGHENY COUNTY, PENNSYLVANIA
CONTRACT NUMBER 2010-01 AND 2010-02
WASTEWATER TREATMENT PLANT EXPANSION
PUMP STATION WALL AND WINDOW IMPROVEMENT DETAILS

Scale: As Shown
Date: July 2008
Drawn By: MKE
Checked By:
Assessed By: SHQ

Sheet No. 15

Drawing No. 220-PS12

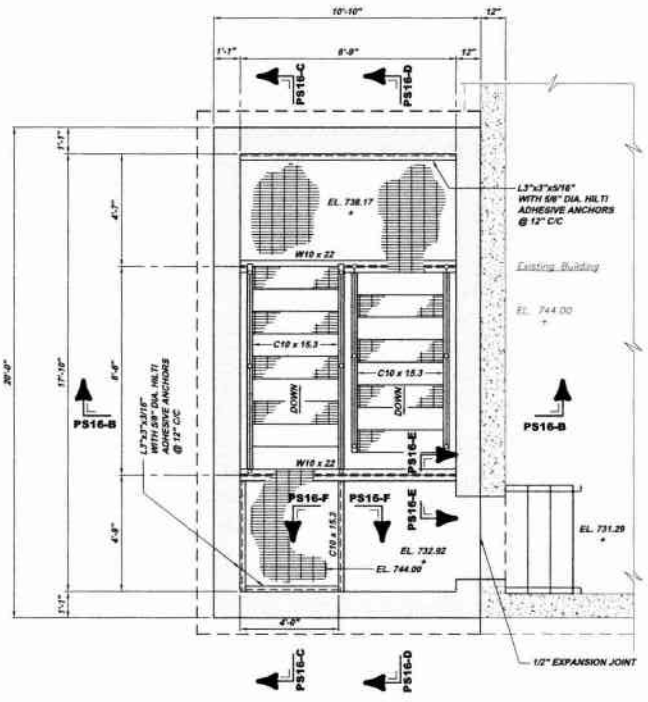
NOTE:
ITEMS IDENTIFIED WITH UPPER CASE TEXT ARE PROPOSED
Items Identified with Mixed Case Text are Existing.

Revisions	Date

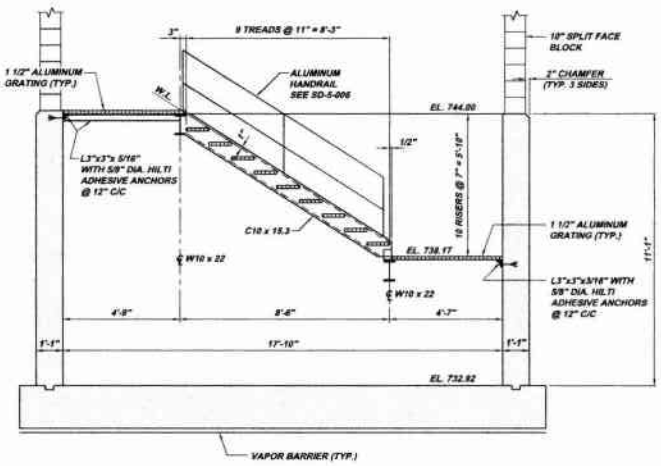
Date	Revisions

DCP SUBMITTAL
PS12-08
10-08
REVISED
1-2011
RELEASE FOR BID

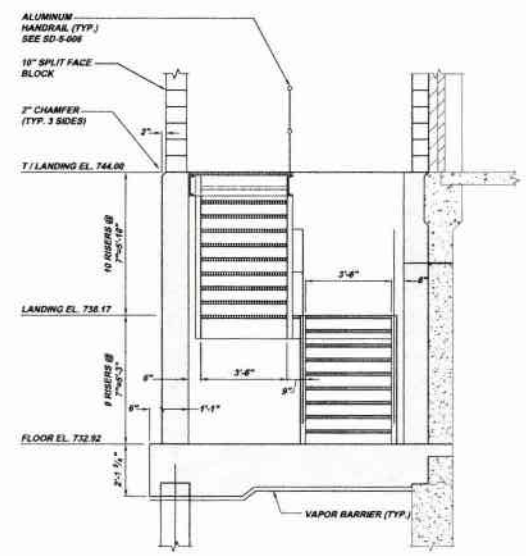
5173 CAMPBELL BLVD
PITTSBURGH, PA 15206
TEL: 412-261-0330
FAX: 412-261-0338
INFO@KLHENGINEERS.COM



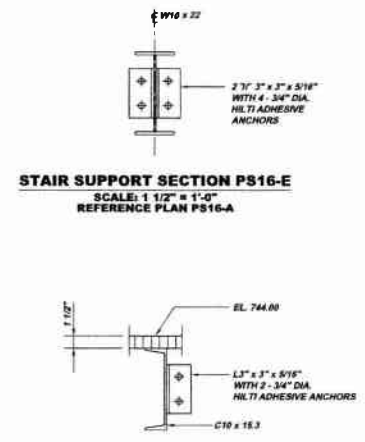
STRUCTURAL STAIR PLAN PS16-A
 SCALE: 3/8" = 1'-0"
 REFERENCE PLAN PS15-B AND PLAN PS15-D



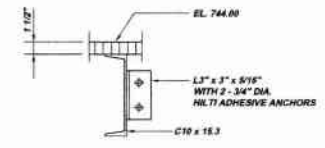
STRUCTURAL STAIR SECTION PS16-C
 SCALE: 3/8" = 1'-0"
 REFERENCE PLAN PS16-A



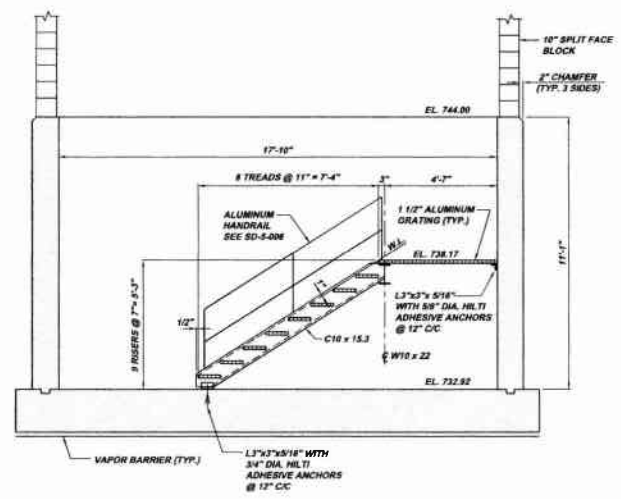
SECTION PS16-B
 SCALE: 3/8" = 1'-0"
 REFERENCE PLAN PS16-A



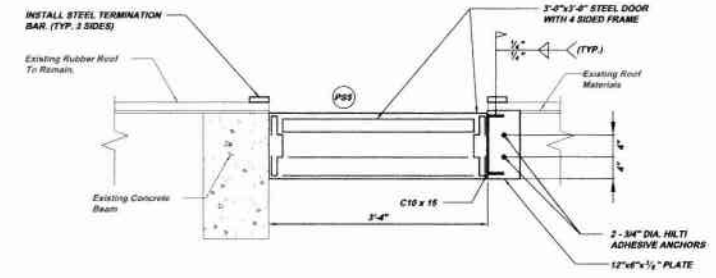
STAIR SUPPORT SECTION PS16-E
 SCALE: 1 1/2" = 1'-0"
 REFERENCE PLAN PS16-A



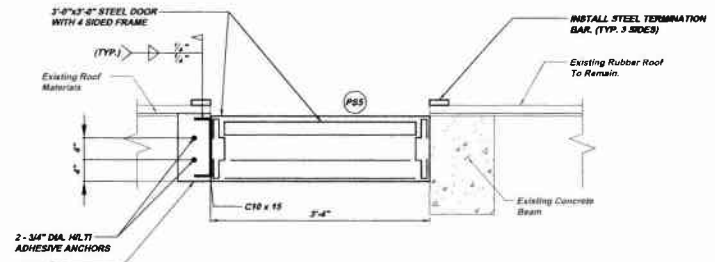
STAIR SUPPORT SECTION PS16-F
 SCALE: 1 1/2" = 1'-0"
 REFERENCE PLAN PS16-A



STRUCTURAL STAIR SECTION PS16-D
 SCALE: 3/8" = 1'-0"
 REFERENCE PLAN PS16-A



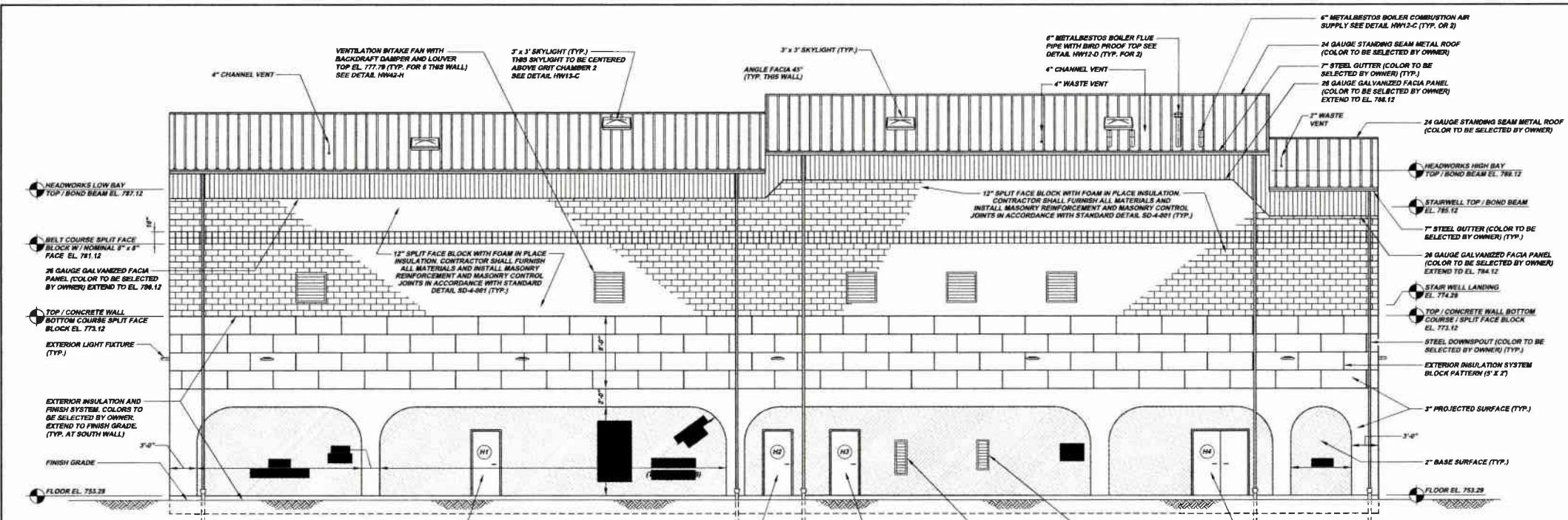
SECTION PS16-G
 SCALE: 1" = 1'-0"
 REFERENCE PLAN PS11-A



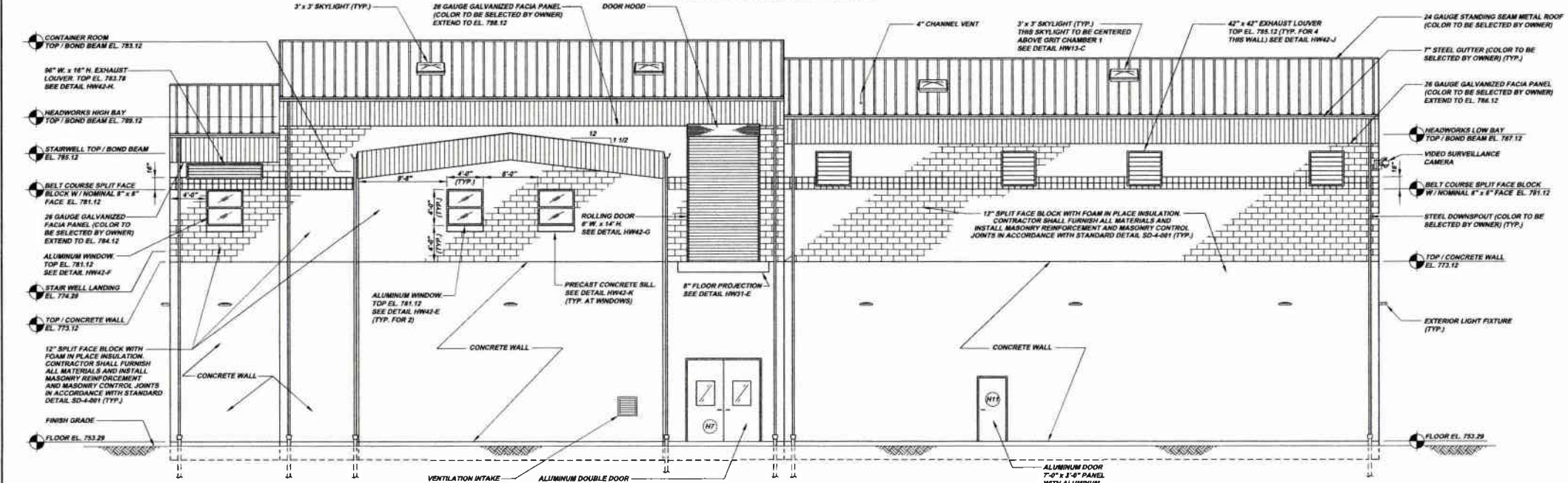
SECTION PS16-H
 SCALE: 1" = 1'-0"
 REFERENCE PLAN PS11-A

NOTE:
 ITEMS IDENTIFIED WITH UPPER CASE TEXT ARE PROPOSED.
 Items identified with lower case text are existing.

Scale:	As Shown	As Shown	As Shown	As Shown	As Shown												
Date:	July 2009	July 2009	July 2009	July 2009	July 2009												
Drawn By:	MKE	MKE	MKE	MKE	MKE												
Checked By:																	
Approved By:																	
Sheet No.	18																
Drawing No.	220-PS16																
Revisions	<table border="1"> <tr> <th>Date</th> <th>By</th> <th>Description</th> </tr> <tr> <td>04/09</td> <td></td> <td>DEP SUBMITTAL</td> </tr> <tr> <td>04/09</td> <td></td> <td>REVISED</td> </tr> <tr> <td>12/01</td> <td></td> <td>RELEASE FOR BID</td> </tr> </table>					Date	By	Description	04/09		DEP SUBMITTAL	04/09		REVISED	12/01		RELEASE FOR BID
Date	By	Description															
04/09		DEP SUBMITTAL															
04/09		REVISED															
12/01		RELEASE FOR BID															
5173 CAMPBELL RUN ROAD PITTSBURGH, PA 15203 PHONE: 412-444-0233 FAX: 412-444-0233 WWW: KLH-ENGINEERS.COM																	
KLH ENGINEERS, INC.																	
MUNICIPAL AUTHORITY OF THE CITY OF MCKEESPORT ALLEGHENY COUNTY, PENNSYLVANIA CONTRACT NUMBER 2010-01 AND 2010-02 WASTEWATER TREATMENT PLANT EXPANSION PUMP STATION STRUCTURAL PLANS, SECTIONS AND DETAILS																	



SOUTH ELEVATION HW1-A
 SCALE: 3/16" = 1'-0"
 REFERENCE PLAN HW38-A AND PLAN HW18-A



NORTH ELEVATION HW1-B
 SCALE: 3/16" = 1'-0"
 REFERENCE PLAN HW38-A AND PLAN HW18-A

NOTE:
 ITEMS IDENTIFIED WITH UPPER CASE TEXT ARE PROPOSED.
 Items Identified with Mixed Case Text are Existing.

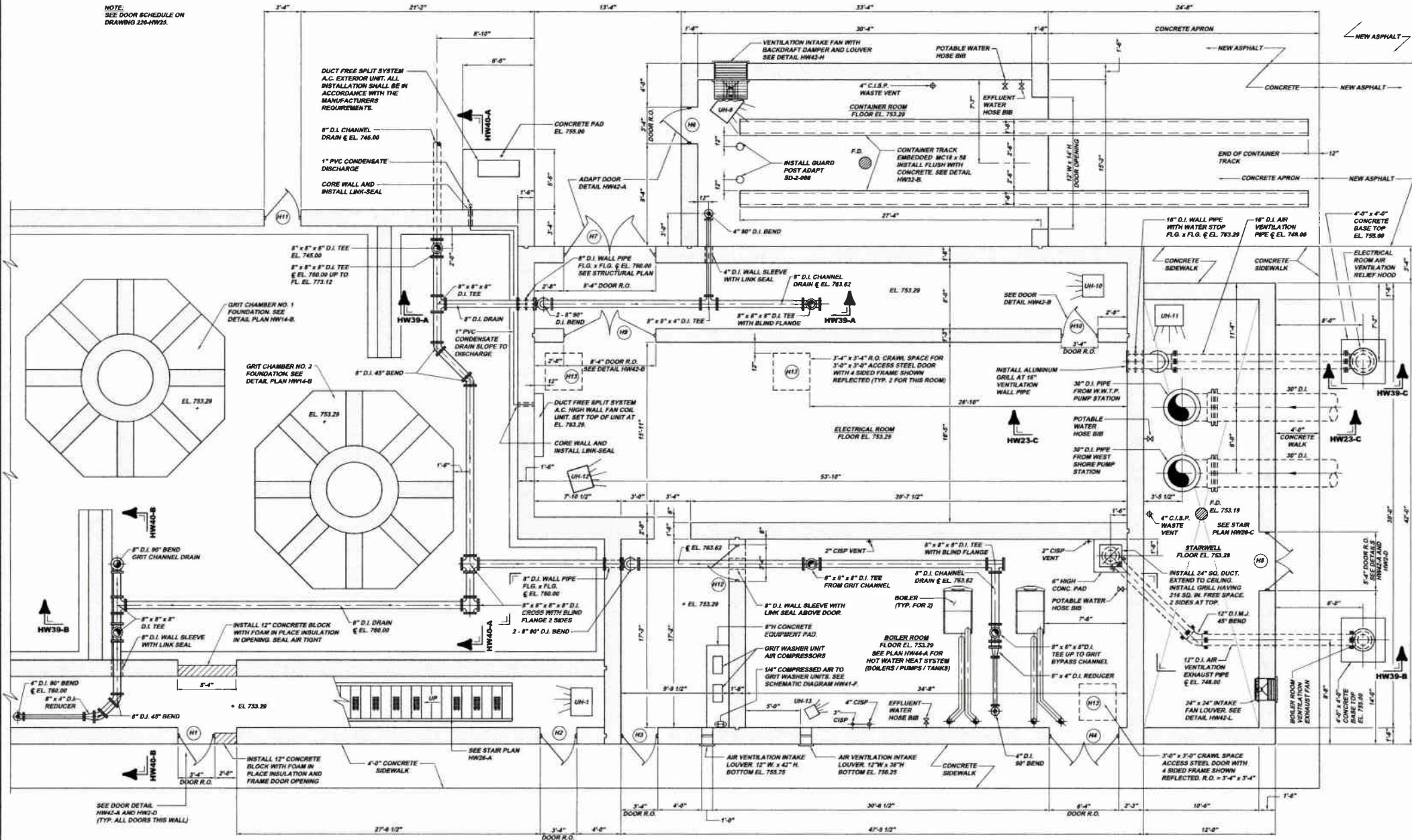
Scale:	As Shown	Disc:	July 2009	Drawn By:	HO	Checked By:	RF	Approved By:	BHG
Sheet No.	2								
Drawing No.	220-HW1								
Revisions	Date	By	Reason						
1	12-01	RF	RELEASE FOR BID						
2	11-08	RF	REVISED						
3	07-09	RF	REVISED						
4	03-08	RF	REVISED						
5	03-08	RF	REVISED						
6	03-08	RF	REVISED						
7	03-08	RF	REVISED						
8	03-08	RF	REVISED						
9	03-08	RF	REVISED						
10	03-08	RF	REVISED						
11	03-08	RF	REVISED						
12	03-08	RF	REVISED						
13	03-08	RF	REVISED						
14	03-08	RF	REVISED						
15	03-08	RF	REVISED						
16	03-08	RF	REVISED						
17	03-08	RF	REVISED						
18	03-08	RF	REVISED						
19	03-08	RF	REVISED						
20	03-08	RF	REVISED						
21	03-08	RF	REVISED						
22	03-08	RF	REVISED						
23	03-08	RF	REVISED						
24	03-08	RF	REVISED						
25	03-08	RF	REVISED						
26	03-08	RF	REVISED						
27	03-08	RF	REVISED						
28	03-08	RF	REVISED						
29	03-08	RF	REVISED						
30	03-08	RF	REVISED						
31	03-08	RF	REVISED						
32	03-08	RF	REVISED						
33	03-08	RF	REVISED						
34	03-08	RF	REVISED						
35	03-08	RF	REVISED						
36	03-08	RF	REVISED						
37	03-08	RF	REVISED						
38	03-08	RF	REVISED						
39	03-08	RF	REVISED						
40	03-08	RF	REVISED						
41	03-08	RF	REVISED						
42	03-08	RF	REVISED						
43	03-08	RF	REVISED						
44	03-08	RF	REVISED						
45	03-08	RF	REVISED						
46	03-08	RF	REVISED						
47	03-08	RF	REVISED						
48	03-08	RF	REVISED						
49	03-08	RF	REVISED						
50	03-08	RF	REVISED						
51	03-08	RF	REVISED						
52	03-08	RF	REVISED						
53	03-08	RF	REVISED						
54	03-08	RF	REVISED						
55	03-08	RF	REVISED						
56	03-08	RF	REVISED						
57	03-08	RF	REVISED						
58	03-08	RF	REVISED						
59	03-08	RF	REVISED						
60	03-08	RF	REVISED						
61	03-08	RF	REVISED						
62	03-08	RF	REVISED						
63	03-08	RF	REVISED						
64	03-08	RF	REVISED						
65	03-08	RF	REVISED						
66	03-08	RF	REVISED						
67	03-08	RF	REVISED						
68	03-08	RF	REVISED						
69	03-08	RF	REVISED						
70	03-08	RF	REVISED						
71	03-08	RF	REVISED						
72	03-08	RF	REVISED						
73	03-08	RF	REVISED						
74	03-08	RF	REVISED						
75	03-08	RF	REVISED						
76	03-08	RF	REVISED						
77	03-08	RF	REVISED						
78	03-08	RF	REVISED						
79	03-08	RF	REVISED						
80	03-08	RF	REVISED						
81	03-08	RF	REVISED						
82	03-08	RF	REVISED						
83	03-08	RF	REVISED						
84	03-08	RF	REVISED						
85	03-08	RF	REVISED						
86	03-08	RF	REVISED						
87	03-08	RF	REVISED						
88	03-08	RF	REVISED						
89	03-08	RF	REVISED						
90	03-08	RF	REVISED						
91	03-08	RF	REVISED						
92	03-08	RF	REVISED						
93	03-08	RF	REVISED						
94	03-08	RF	REVISED						
95	03-08	RF	REVISED						
96	03-08	RF	REVISED						
97	03-08	RF	REVISED						
98	03-08	RF	REVISED						
99	03-08	RF	REVISED						
100	03-08	RF	REVISED						



MUNICIPAL AUTHORITY OF THE CITY OF MCKEESPORT
 ALLEGHENY COUNTY, PENNSYLVANIA
 CONTRACT NUMBER 2010-01 AND 2010-02
 WASTEWATER TREATMENT PLANT EXPANSION
 HEADWORKS BUILDING ELEVATIONS

5172 CAMPBELL RUN ROAD
 PITTSBURGH, PA 15203
 PHONE: 412-440-0228
 FAX: 412-440-0228
 INFO@KLHENGINEERS.COM

NOTE:
SEE DOOR SCHEDULE ON
DRAWING 226-HW23.



HEADWORKS FLOOR EL. 753.29 PLAN HW38-A

SCALE: 1/4" = 1'-0"
REFERENCE PLAN HW16-A

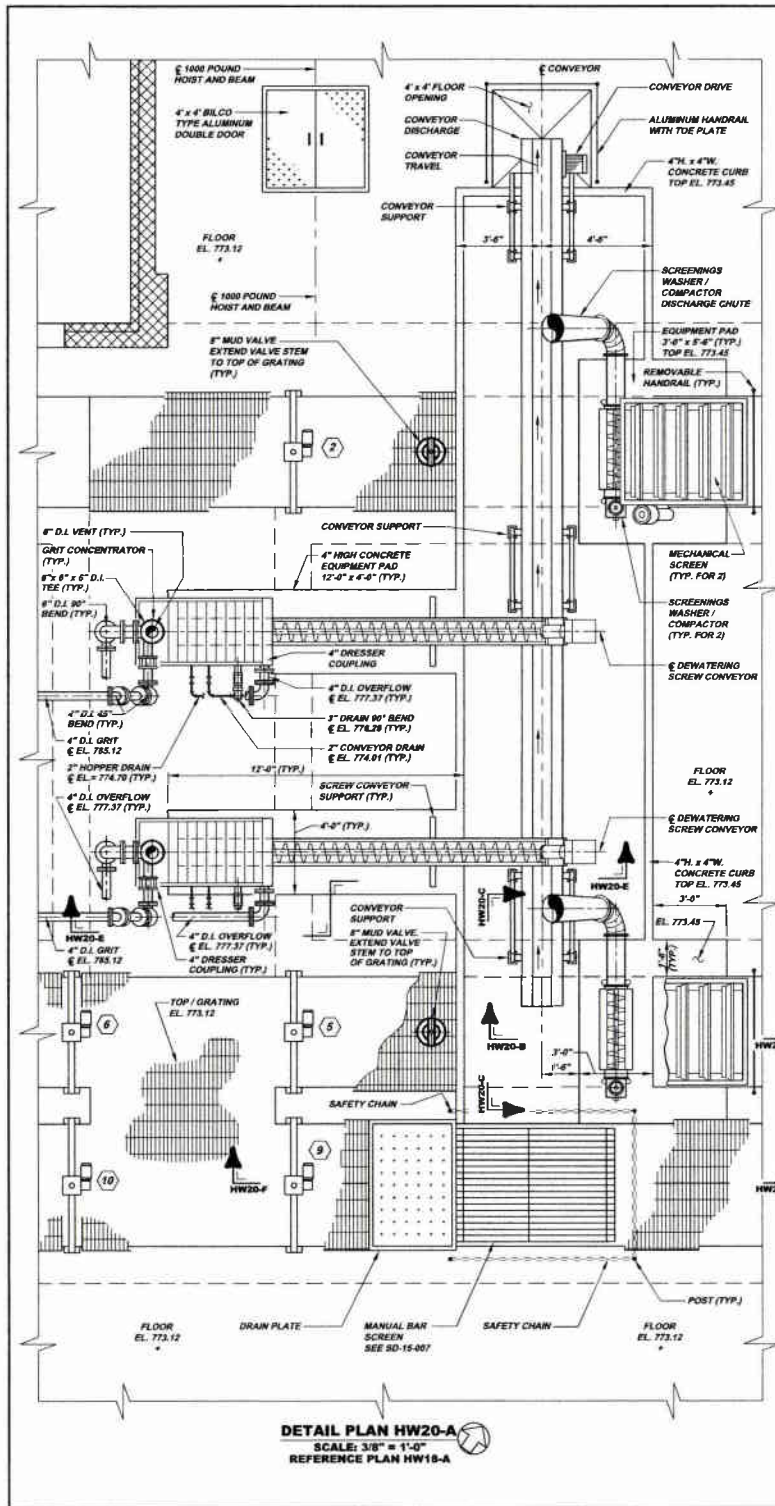
NOTE:
ITEMS IDENTIFIED WITH UPPER CASE TEXT ARE PROPOSED.
ITEMS IDENTIFIED WITH LOWER CASE TEXT ARE EXISTING.



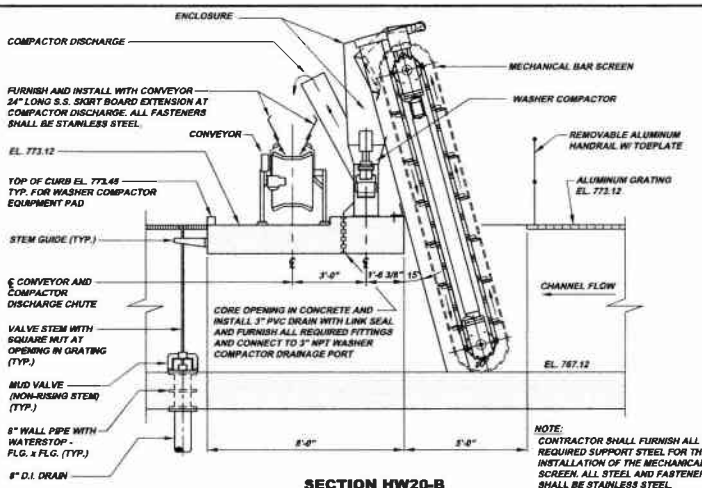
MUNICIPAL AUTHORITY OF THE CITY OF MCKEESPORT
ALLEGHENY COUNTY, PENNSYLVANIA
CONTRACT NUMBER 2010-01 AND 2010-02
WASTEWATER TREATMENT PLANT EXPANSION
HEADWORKS BUILDING EL. 753.29 FLOOR PLAN

As Shown:	July 2009	DMB	HPF	SHD
Scale:				
Drawn By:				
Checked By:				
Approved By:				
Sheet No.:	3			
Drawing No.:	220-HW38			

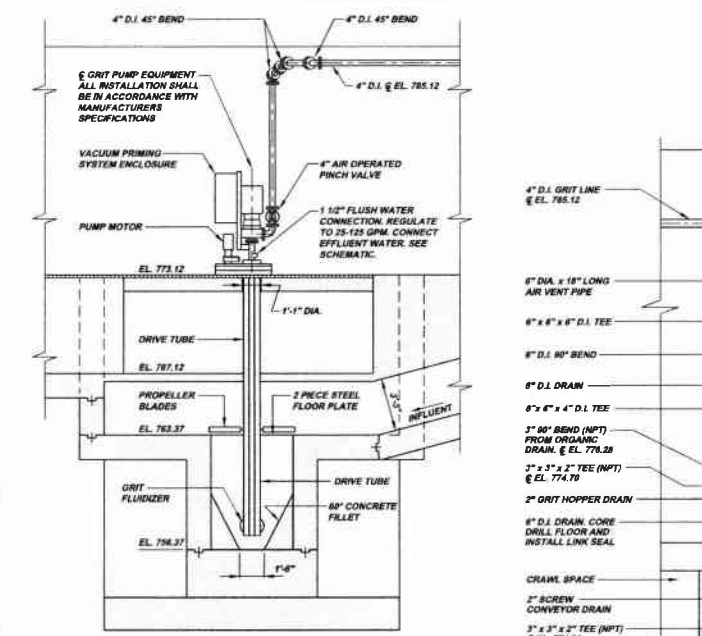
Date:	7-31-09	DEF SUBMITTAL	REVISED	RELEASE FOR BID
Revisions:				
8173 Commerce Run	PO BOX 12308	PITTSBURGH, PA 15206		
	PH: 412-261-9400	FAX: 412-261-9400		
	INFO@KLHENGINEERS.COM			



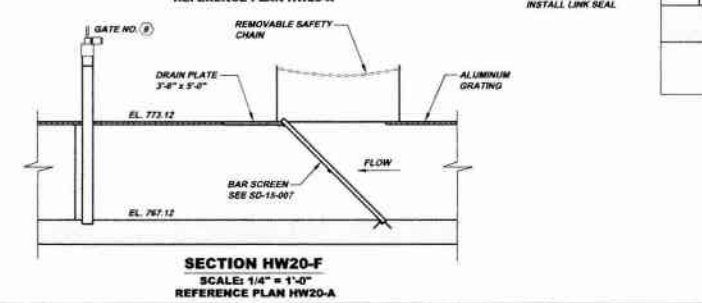
DETAIL PLAN HW20-A
SCALE: 3/8" = 1'-0"
REFERENCE PLAN HW18-A



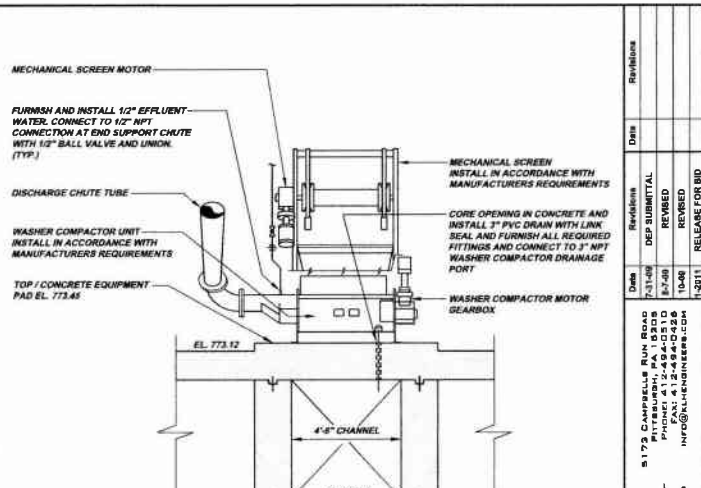
SECTION HW20-B
SCALE: 3/8" = 1'-0"
REFERENCE PLAN HW20-A



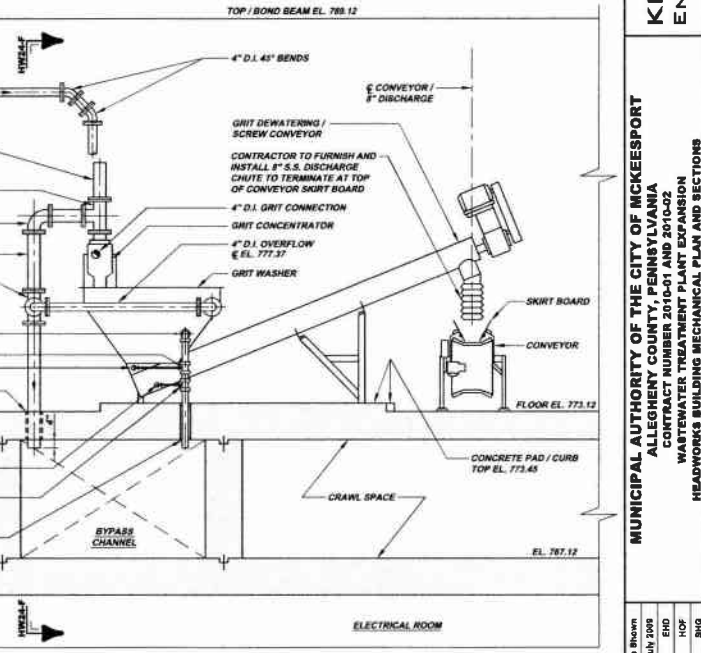
SECTION HW20-C
SCALE: 3/8" = 1'-0"
REFERENCE PLAN HW20-A



SECTION HW20-D
SCALE: 1/4" = 1'-0"
REFERENCE PLAN HW20-A



SECTION HW20-E
SCALE: 3/8" = 1'-0"
REFERENCE PLAN HW20-A



SECTION HW20-F
SCALE: 3/8" = 1'-0"
REFERENCE PLAN HW20-A

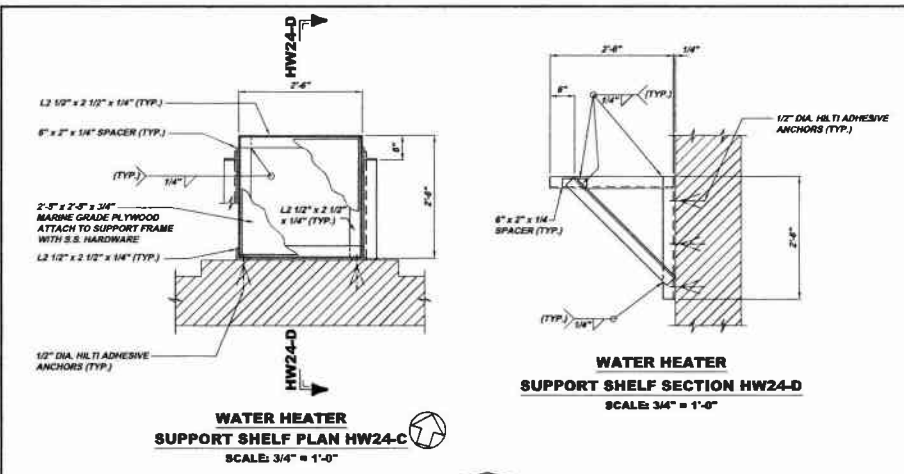
NOTE:
ITEMS IDENTIFIED WITH UPPER CASE TEXT ARE PROPOSED.
Name Identified with Mixed Case Text are Existing

Scale:	As Shown	Sheet No.:	6
Date:	July 2009	Drawn By:	EHJ
Drawn By:	EHJ	Checked By:	HOF
Approved By:	SHG	Approved By:	SHG
Revision:	1	DATE:	7-1-09
Revision:	2	DATE:	7-1-09
Revision:	3	DATE:	7-1-09
Revision:	4	DATE:	7-1-09
Revision:	5	DATE:	7-1-09
Revision:	6	DATE:	7-1-09
Revision:	7	DATE:	7-1-09
Revision:	8	DATE:	7-1-09
Revision:	9	DATE:	7-1-09
Revision:	10	DATE:	7-1-09
Revision:	11	DATE:	7-1-09
Revision:	12	DATE:	7-1-09
Revision:	13	DATE:	7-1-09
Revision:	14	DATE:	7-1-09
Revision:	15	DATE:	7-1-09
Revision:	16	DATE:	7-1-09
Revision:	17	DATE:	7-1-09
Revision:	18	DATE:	7-1-09
Revision:	19	DATE:	7-1-09
Revision:	20	DATE:	7-1-09
Revision:	21	DATE:	7-1-09
Revision:	22	DATE:	7-1-09
Revision:	23	DATE:	7-1-09
Revision:	24	DATE:	7-1-09
Revision:	25	DATE:	7-1-09
Revision:	26	DATE:	7-1-09
Revision:	27	DATE:	7-1-09
Revision:	28	DATE:	7-1-09
Revision:	29	DATE:	7-1-09
Revision:	30	DATE:	7-1-09
Revision:	31	DATE:	7-1-09
Revision:	32	DATE:	7-1-09
Revision:	33	DATE:	7-1-09
Revision:	34	DATE:	7-1-09
Revision:	35	DATE:	7-1-09
Revision:	36	DATE:	7-1-09
Revision:	37	DATE:	7-1-09
Revision:	38	DATE:	7-1-09
Revision:	39	DATE:	7-1-09
Revision:	40	DATE:	7-1-09
Revision:	41	DATE:	7-1-09
Revision:	42	DATE:	7-1-09
Revision:	43	DATE:	7-1-09
Revision:	44	DATE:	7-1-09
Revision:	45	DATE:	7-1-09
Revision:	46	DATE:	7-1-09
Revision:	47	DATE:	7-1-09
Revision:	48	DATE:	7-1-09
Revision:	49	DATE:	7-1-09
Revision:	50	DATE:	7-1-09
Revision:	51	DATE:	7-1-09
Revision:	52	DATE:	7-1-09
Revision:	53	DATE:	7-1-09
Revision:	54	DATE:	7-1-09
Revision:	55	DATE:	7-1-09
Revision:	56	DATE:	7-1-09
Revision:	57	DATE:	7-1-09
Revision:	58	DATE:	7-1-09
Revision:	59	DATE:	7-1-09
Revision:	60	DATE:	7-1-09
Revision:	61	DATE:	7-1-09
Revision:	62	DATE:	7-1-09
Revision:	63	DATE:	7-1-09
Revision:	64	DATE:	7-1-09
Revision:	65	DATE:	7-1-09
Revision:	66	DATE:	7-1-09
Revision:	67	DATE:	7-1-09
Revision:	68	DATE:	7-1-09
Revision:	69	DATE:	7-1-09
Revision:	70	DATE:	7-1-09
Revision:	71	DATE:	7-1-09
Revision:	72	DATE:	7-1-09
Revision:	73	DATE:	7-1-09
Revision:	74	DATE:	7-1-09
Revision:	75	DATE:	7-1-09
Revision:	76	DATE:	7-1-09
Revision:	77	DATE:	7-1-09
Revision:	78	DATE:	7-1-09
Revision:	79	DATE:	7-1-09
Revision:	80	DATE:	7-1-09
Revision:	81	DATE:	7-1-09
Revision:	82	DATE:	7-1-09
Revision:	83	DATE:	7-1-09
Revision:	84	DATE:	7-1-09
Revision:	85	DATE:	7-1-09
Revision:	86	DATE:	7-1-09
Revision:	87	DATE:	7-1-09
Revision:	88	DATE:	7-1-09
Revision:	89	DATE:	7-1-09
Revision:	90	DATE:	7-1-09
Revision:	91	DATE:	7-1-09
Revision:	92	DATE:	7-1-09
Revision:	93	DATE:	7-1-09
Revision:	94	DATE:	7-1-09
Revision:	95	DATE:	7-1-09
Revision:	96	DATE:	7-1-09
Revision:	97	DATE:	7-1-09
Revision:	98	DATE:	7-1-09
Revision:	99	DATE:	7-1-09
Revision:	100	DATE:	7-1-09

KLH ENGINEERS, INC.

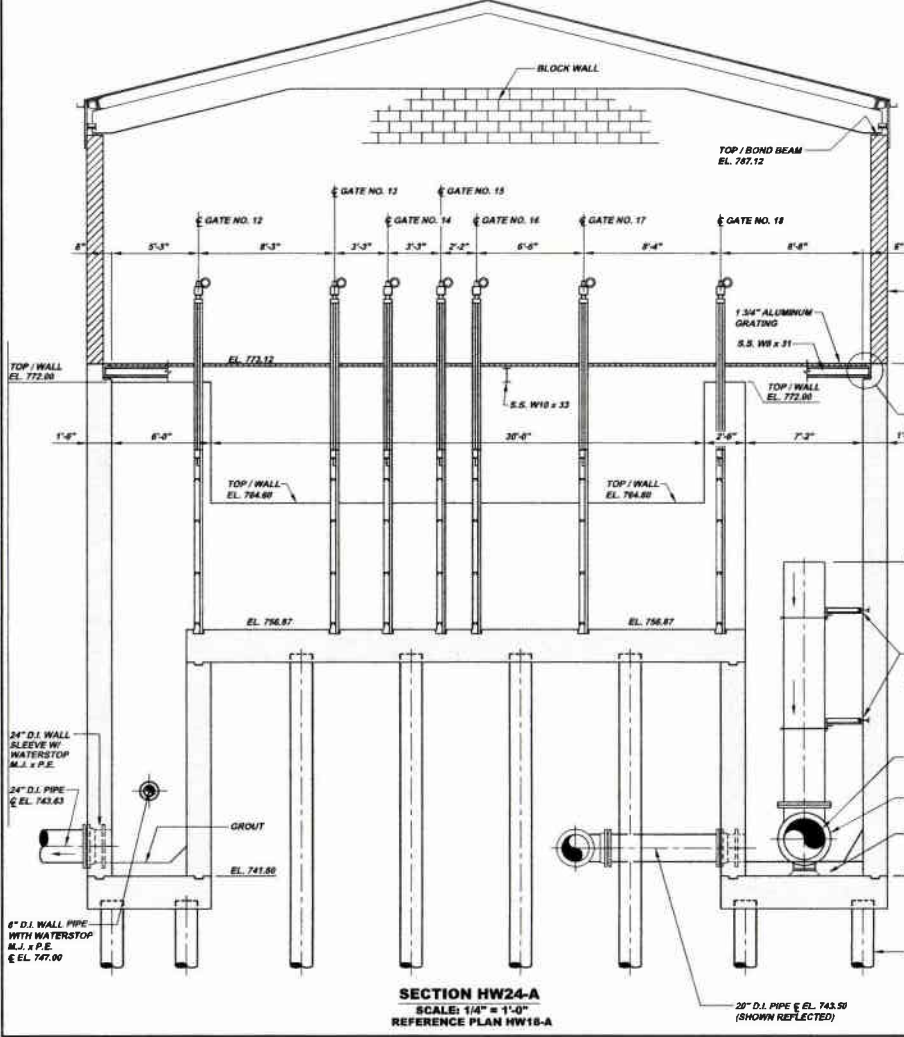
MUNICIPAL AUTHORITY OF THE CITY OF MCKEESPORT
ALLEGHENY COUNTY, PENNSYLVANIA
CONTRACT NUMBER 2010-01 AND 2010-02
WASTEWATER TREATMENT PLANT EXPANSION
HEADWORKS BUILDING MECHANICAL PLAN AND SECTIONS

Drawing No. **220-HW20**

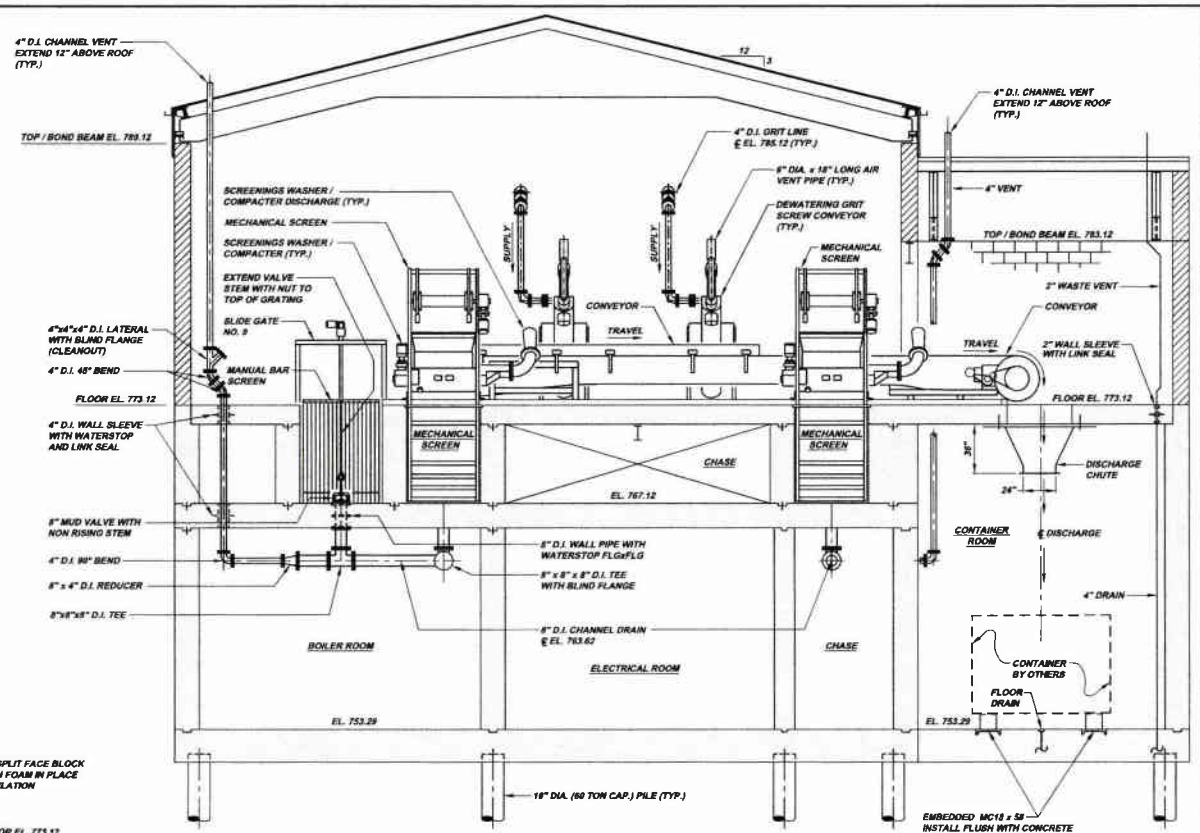


**WATER HEATER
SUPPORT SHELF PLAN HW24-C**
SCALE: 3/4" = 1'-0"

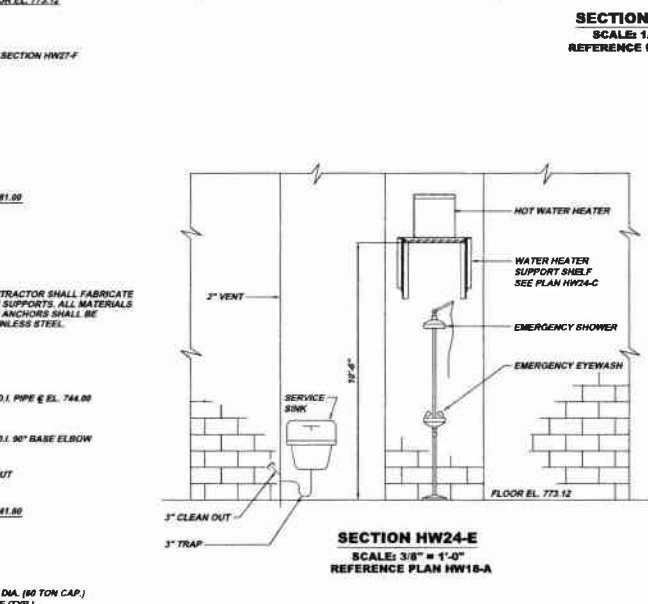
**WATER HEATER
SUPPORT SHELF SECTION HW24-D**
SCALE: 3/4" = 1'-0"



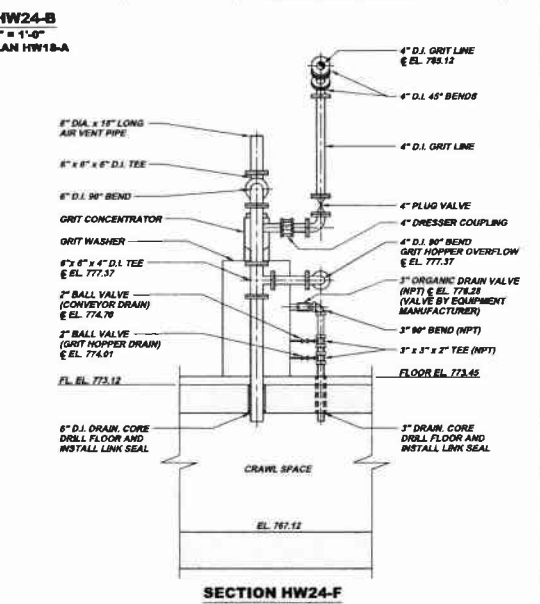
SECTION HW24-A
SCALE: 1/4" = 1'-0"
REFERENCE PLAN HW18-A



SECTION HW24-B
SCALE: 1/4" = 1'-0"
REFERENCE PLAN HW18-A



SECTION HW24-E
SCALE: 3/8" = 1'-0"
REFERENCE PLAN HW18-A



SECTION HW24-F
SCALE: 3/8" = 1'-0"
REFERENCE PLAN HW20-A

NOTE:
ITEMS IDENTIFIED WITH UPPER CASE TEXT ARE PROPOSED.
Items Identified with Mixed Case Text are Existing

Revision	Date	By	Check	Appr.
1	7-11-09	DP	DP	DP
2	8-7-09	REB	REB	REB
3	10-09	REB	REB	REB
4	12-01	REB	REB	REB

5170 CHANCELLER RUN, SUITE 200
 PITTSBURGH, PA 15208
 PHONE: 412-241-9910
 FAX: 412-241-9911
 INFO@KLHENGINEERS.COM

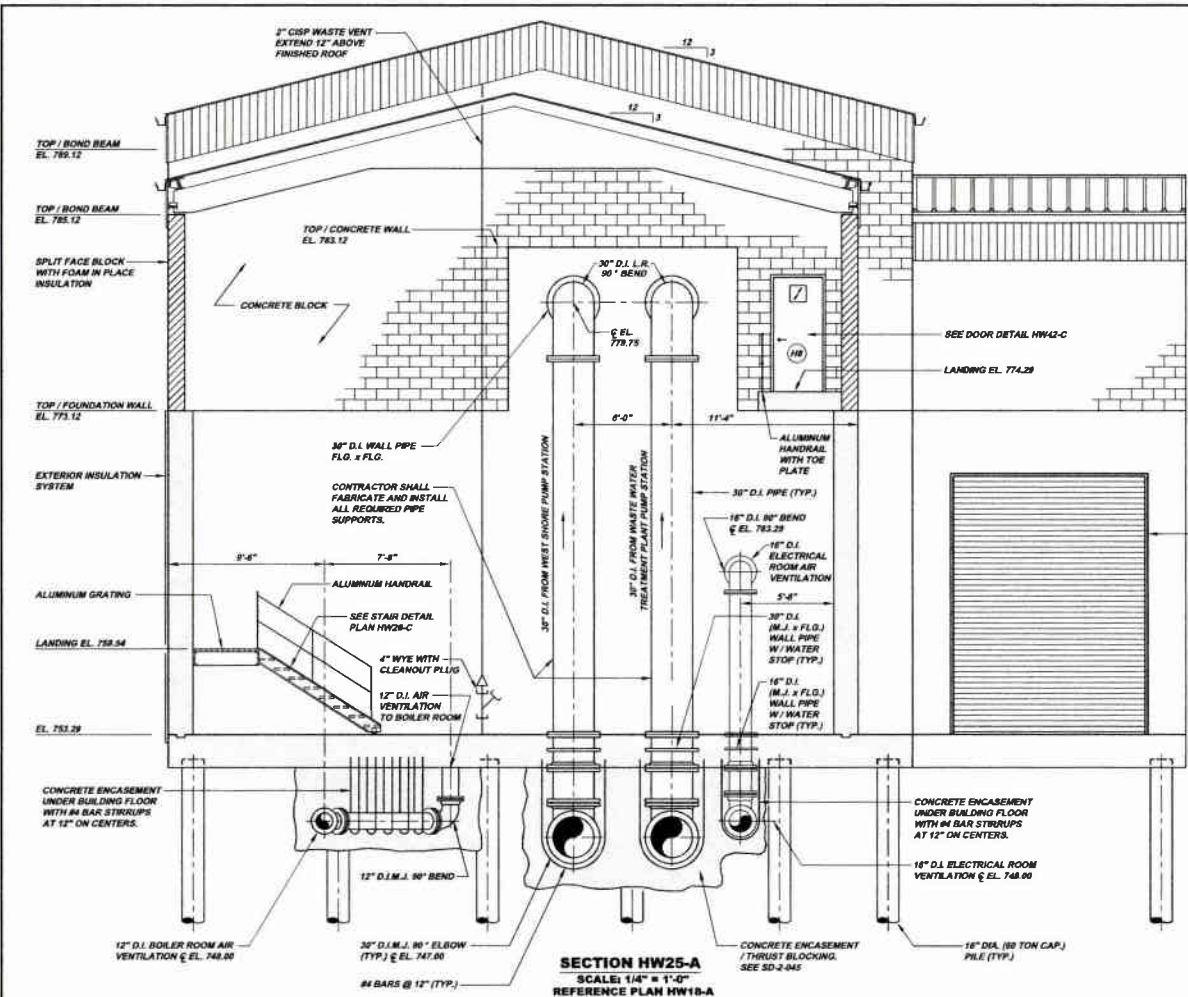
KLH ENGINEERS, INC.

MUNICIPAL AUTHORITY OF THE CITY OF MCKEESPORT
ALLEGHENY COUNTY, PENNSYLVANIA
CONTRACT NUMBER 2010-01 AND 2010-02
WASTEWATER TREATMENT PLANT EXPANSION
HEADWORKS BUILDING MECHANICAL SECTIONS

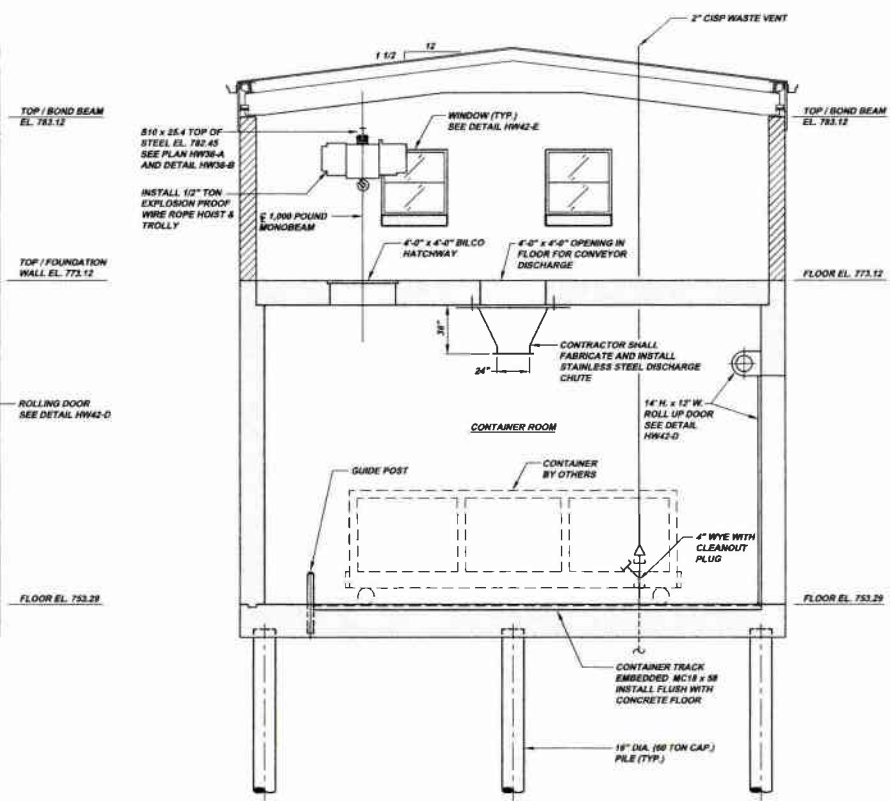
As Shown	Scale	Date	Drawn By	Checked By	Approved By
July 2009	1/4" = 1'-0"	7/1/09	DP	DP	DP

Sheet No. 7

Drawing No. **220-HW24**



SECTION HW25-A
SCALE: 1/4" = 1'-0"
REFERENCE PLAN HW18-A



SECTION HW25-B
SCALE: 1/4" = 1'-0"
REFERENCE PLAN HW18-A

MARK	LOCATION	DOOR DESCRIPTION	DIMENSIONS (ROUGH OPENING)	LOCKSET (MARKING) (FPMH 18-2)	HHSVE (FPMH 18-2)	CLOSER (ICN)	THRESHOLD (RATIONAL SQUARE)	ROCKPLATE (RATIONAL SQUARE)	WEATHER-STOP (RATIONAL SQUARE)	DOOR STOP (ROCK WOOL)
H1	EXTERIOR SOUTH WALL STAIR HALL ENTRANCE	CLERK INSULATED ALUMINUM DOUBLE DOOR WITH ALUMINUM FRAME	3'-4" x 7'-4"	MORTISE LOCK EXIT DEVICE SERIES 888 WITH ETL TRIM	MCKINNEY STAINLESS STEEL CONTINUOUS TYPE (HEAVY DUTY RATED)	148 ADA COMPLIANT EACH PANEL	425	1" x 10" x 10"	148 SA PERIMETER SEAL 151 VDRS SWEEP	
H2	EXTERIOR SOUTH WALL STAIR ACCESS	CLERK INSULATED ALUMINUM DOUBLE DOOR WITH ALUMINUM FRAME	3'-4" x 7'-4"	MORTISE LOCK EXIT DEVICE SERIES 888 WITH ETL TRIM	MCKINNEY STAINLESS STEEL CONTINUOUS TYPE (HEAVY DUTY RATED)	148 ADA COMPLIANT EACH PANEL	425	1" x 10" x 10"	148 SA PERIMETER SEAL 151 VDRS SWEEP	
H3	EXTERIOR SOUTH WALL BOILER ROOM ACCESS	CLERK INSULATED ALUMINUM DOUBLE DOOR WITH ALUMINUM FRAME	3'-4" x 7'-4"	MORTISE LOCK EXIT DEVICE SERIES 888 WITH ETL TRIM	MCKINNEY STAINLESS STEEL CONTINUOUS TYPE (HEAVY DUTY RATED)	148 ADA COMPLIANT EACH PANEL	425	1" x 10" x 10"	148 SA PERIMETER SEAL 151 VDRS SWEEP	
H4	EXTERIOR SOUTH WALL BOILER ROOM ACCESS	CLERK INSULATED ALUMINUM DOUBLE DOOR WITH ALUMINUM FRAME	3'-4" x 7'-4"	MORTISE LOCK EXIT DEVICE SERIES 888 WITH ETL TRIM	MCKINNEY STAINLESS STEEL CONTINUOUS TYPE (HEAVY DUTY RATED)	148 ADA COMPLIANT EACH PANEL	425	1" x 10" x 10"	148 SA PERIMETER SEAL 151 VDRS SWEEP	
H5	EXTERIOR SOUTH WALL STAIR ACCESS	CLERK INSULATED ALUMINUM DOUBLE DOOR WITH ALUMINUM FRAME	3'-4" x 7'-4"	MORTISE LOCK EXIT DEVICE SERIES 888 WITH ETL TRIM	MCKINNEY STAINLESS STEEL CONTINUOUS TYPE (HEAVY DUTY RATED)	148 ADA COMPLIANT EACH PANEL	425	1" x 10" x 10"	148 SA PERIMETER SEAL 151 VDRS SWEEP	
H6	EXTERIOR SOUTH WALL STAIR ACCESS	CLERK INSULATED ALUMINUM DOUBLE DOOR WITH ALUMINUM FRAME	3'-4" x 7'-4"	MORTISE LOCK EXIT DEVICE SERIES 888 WITH ETL TRIM	MCKINNEY STAINLESS STEEL CONTINUOUS TYPE (HEAVY DUTY RATED)	148 ADA COMPLIANT EACH PANEL	425	1" x 10" x 10"	148 SA PERIMETER SEAL 151 VDRS SWEEP	
H7	EXTERIOR SOUTH WALL STAIR ACCESS	CLERK INSULATED ALUMINUM DOUBLE DOOR WITH ALUMINUM FRAME	3'-4" x 7'-4"	MORTISE LOCK EXIT DEVICE SERIES 888 WITH ETL TRIM	MCKINNEY STAINLESS STEEL CONTINUOUS TYPE (HEAVY DUTY RATED)	148 ADA COMPLIANT EACH PANEL	425	1" x 10" x 10"	148 SA PERIMETER SEAL 151 VDRS SWEEP	

MARK	LOCATION	DOOR DESCRIPTION	DIMENSIONS (ROUGH OPENING)	LOCKSET (MARKING) (FPMH 18-2)	HHSVE (FPMH 18-2)	CLOSER (ICN)	THRESHOLD (RATIONAL SQUARE)	ROCKPLATE (RATIONAL SQUARE)	WEATHER-STOP (RATIONAL SQUARE)	DOOR STOP (ROCK WOOL)
H8	INTERIOR MECHANICAL ROOM ACCESS AT SOUTH STAIRS	CRCO CSPP METAL DOOR 1-1/2" MIN FIRE RATED 2-1/2" x 7'-4" 17 1/2" WINDOW WITH 1/4" WIRE GLASS	3'-4" x 7'-4"	MORTISE LOCK EXIT DEVICE SERIES 888 WITH ETL TRIM	MCKINNEY STAINLESS STEEL CONTINUOUS TYPE (HEAVY DUTY RATED)	148 ADA COMPLIANT EACH PANEL	425	1" x 10" x 10"	148 SA PERIMETER SEAL 151 VDRS SWEEP	
H9	INTERIOR MECHANICAL ROOM ACCESS	CRCO CSPP METAL DOOR 1-1/2" MIN FIRE RATED 2-1/2" x 7'-4" 17 1/2" WINDOW WITH 1/4" WIRE GLASS	3'-4" x 7'-4"	MORTISE LOCK EXIT DEVICE SERIES 888 WITH ETL TRIM	MCKINNEY STAINLESS STEEL CONTINUOUS TYPE (HEAVY DUTY RATED)	148 ADA COMPLIANT EACH PANEL	425	1" x 10" x 10"	148 SA PERIMETER SEAL 151 VDRS SWEEP	
H10	INTERIOR MECHANICAL ROOM ACCESS	CRCO CSPP METAL DOOR 1-1/2" MIN FIRE RATED 2-1/2" x 7'-4" 17 1/2" WINDOW WITH 1/4" WIRE GLASS	3'-4" x 7'-4"	MORTISE LOCK EXIT DEVICE SERIES 888 WITH ETL TRIM	MCKINNEY STAINLESS STEEL CONTINUOUS TYPE (HEAVY DUTY RATED)	148 ADA COMPLIANT EACH PANEL	425	1" x 10" x 10"	148 SA PERIMETER SEAL 151 VDRS SWEEP	
H11	EXTERIOR SOUTH WALL STAIR ACCESS	CLERK INSULATED ALUMINUM DOUBLE DOOR WITH ALUMINUM FRAME	3'-4" x 7'-4"	MORTISE LOCK EXIT DEVICE SERIES 888 WITH ETL TRIM	MCKINNEY STAINLESS STEEL CONTINUOUS TYPE (HEAVY DUTY RATED)	148 ADA COMPLIANT EACH PANEL	425	1" x 10" x 10"	148 SA PERIMETER SEAL 151 VDRS SWEEP	
H12	INTERIOR MECHANICAL ROOM ACCESS	CRCO CSPP METAL DOOR 1-1/2" MIN FIRE RATED 2-1/2" x 7'-4" 17 1/2" WINDOW WITH 1/4" WIRE GLASS	3'-4" x 7'-4"	MORTISE LOCK EXIT DEVICE SERIES 888 WITH ETL TRIM	MCKINNEY STAINLESS STEEL CONTINUOUS TYPE (HEAVY DUTY RATED)	148 ADA COMPLIANT EACH PANEL	425	1" x 10" x 10"	148 SA PERIMETER SEAL 151 VDRS SWEEP	
H13	ELECT ROOM BOILER ROOM CHASE ACCESS (3 R/O'S)	CRCO CSPP INSULATED METAL DOOR PLUMB PANEL 2-1/2" x 7'-4" WITH 1/4" WIRE GLASS	3'-4" x 7'-4"	PASSAGE LOCKSET WITH CENTER STROKE AND LEVER FROM SERIES 888 LAL	MCKINNEY STAINLESS STEEL CONTINUOUS TYPE (HEAVY DUTY RATED)	148 ADA COMPLIANT EACH PANEL	425	1" x 10" x 10"	148 SA PERIMETER SEAL 151 VDRS SWEEP	
H14	CHASE ACCESS	CRCO CSPP INSULATED METAL DOOR PLUMB PANEL 2-1/2" x 7'-4" WITH 1/4" WIRE GLASS	3'-4" x 7'-4"	PASSAGE LOCKSET WITH CENTER STROKE AND LEVER FROM SERIES 888 LAL	MCKINNEY STAINLESS STEEL CONTINUOUS TYPE (HEAVY DUTY RATED)	148 ADA COMPLIANT EACH PANEL	425	1" x 10" x 10"	148 SA PERIMETER SEAL 151 VDRS SWEEP	

NOTE:
ITEMS IDENTIFIED WITH UPPER CASE TEXT ARE PROPOSED
ITEMS IDENTIFIED WITH LOWER CASE TEXT ARE EXISTING.

MUNICIPAL AUTHORITY OF THE CITY OF MCKEESPORT
ALLEGHENY COUNTY, PENNSYLVANIA
CONTRACT NUMBER 2016-01 AND 2010-02
WASTEWATER TREATMENT PLANT EXPANSION
HEADWORK BUILDING MECHANICAL SECTIONS

KLH ENGINEERS, INC.

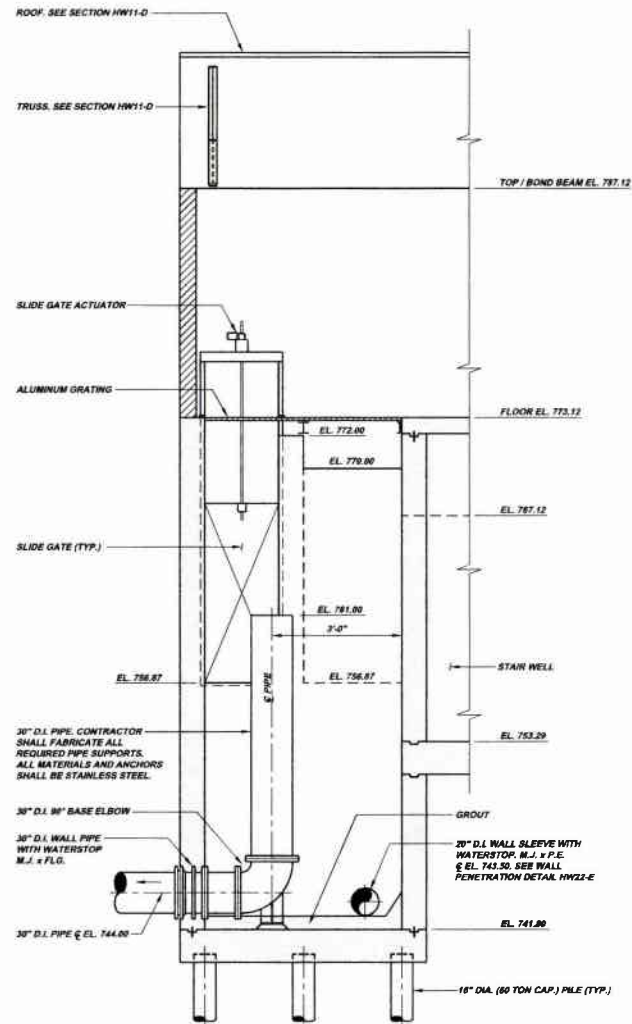
Scale:	All Shown
Date:	July 2018
Drawn By:	EHF
Checked By:	HDF
Approved By:	BDG

Sheet No. 8

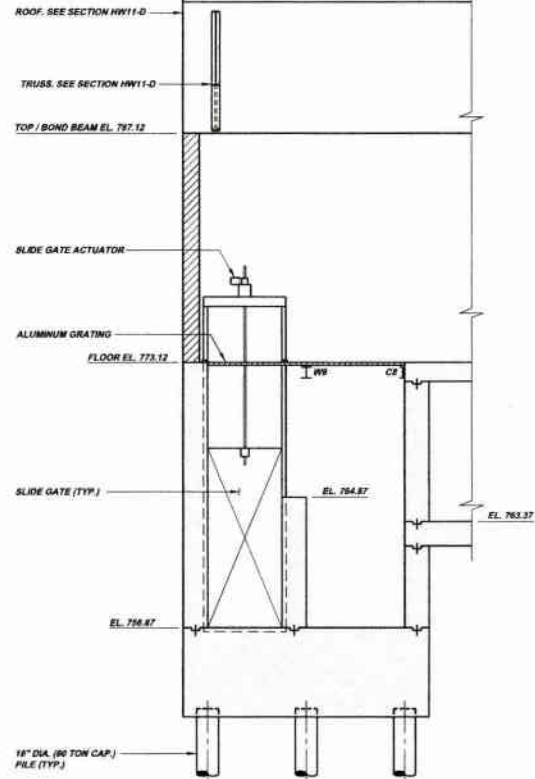
Drawing No. 220-HW25

Revision	Date	By	Reason
1	7/2/18	BDG	ISSUE FOR PERMIT
2	8/1/18	BDG	REVISED
3	10/18	BDG	REVISED
4	1/2019	BDG	REVISED
5	1/2019	BDG	RELEASE FOR BID

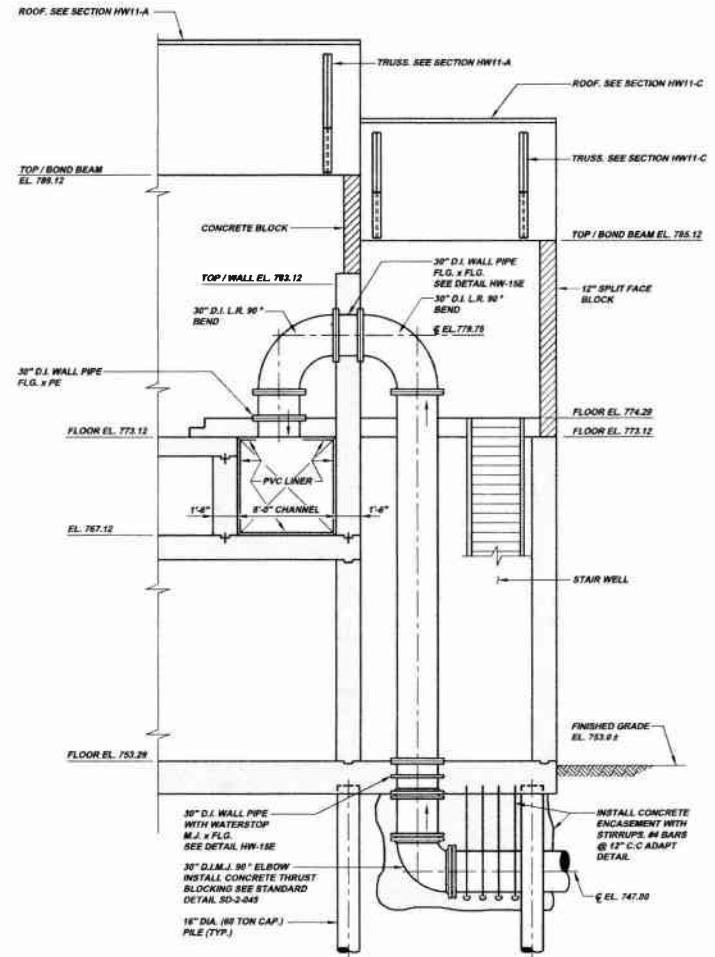
8172 DANWELLS RUN ROAD
PITTSBURGH, PA 15203
PHONE: 412-944-0230
FAX: 412-944-0230
INFO@KLHENGINEERS.COM



SECTION HW23-A
SCALE: 1/4" = 1'-0"
REFERENCE PLAN HW18-A



SECTION HW23-B
SCALE: 1/4" = 1'-0"
REFERENCE PLAN HW18-A

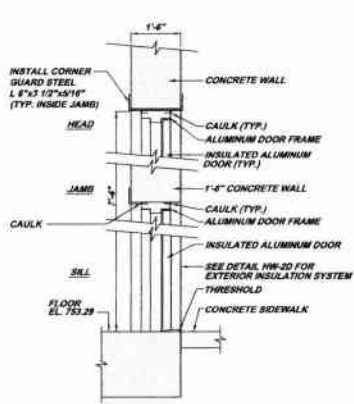


SECTION HW23-C
SCALE: 1/4" = 1'-0"
REFERENCE PLAN HW18-A

Revisions	Date	By	Check	Appr.
1-3011	11-09	REVISED		
15-09	11-09	REVISED		
1-3010	11-09	REVISED		
1-3009	11-09	REVISED		
1-3008	11-09	REVISED		
1-3007	11-09	REVISED		
1-3006	11-09	REVISED		
1-3005	11-09	REVISED		
1-3004	11-09	REVISED		
1-3003	11-09	REVISED		
1-3002	11-09	REVISED		
1-3001	11-09	REVISED		

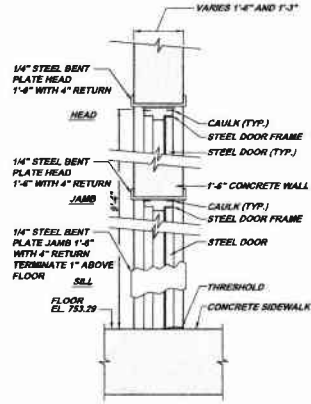
5172 CAMPBELL RUN ROAD PITTSBURGH, PA 15203 PHONE: 412-944-0434 FAX: 412-944-0434 WWW.KLHENGINEERS.COM		MUNICIPAL AUTHORITY OF THE CITY OF MCKEESPORT ALLEGHENY COUNTY, PENNSYLVANIA CONTRACT NUMBER 2010-01 AND 2010-02 WASTEWATER TREATMENT PLANT EXPANSION HEADWORKS BUILDING MECHANICAL SECTIONS
As Shown: July 2009 Date: ETD Drawn By: ETD Checked By: ETD Approved By: ETD		
Sheet No.	9	
Drawing No.	220	
	HW23	

NOTE:
ITEMS IDENTIFIED WITH UPPER CASE TEXT ARE PROPOSED.
ITEMS IDENTIFIED WITH LOWER CASE TEXT ARE EXISTING.



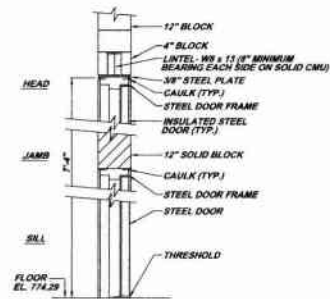
DOOR DETAIL HW42-A

SCALE: N.T.S.
REFERENCE ELEVATION HW1-A, HW1-B,
HW2-A AND ELEVATION HW2-B



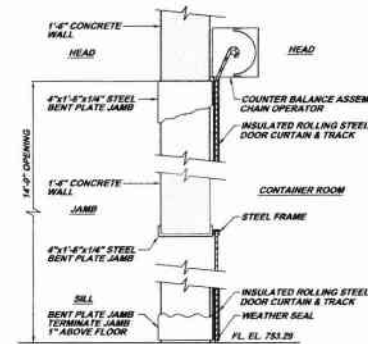
DOOR DETAIL HW42-B

SCALE: N.T.S.
REFERENCE PLAN HW38-A



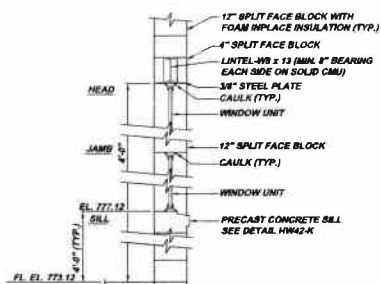
DOOR DETAIL HW42-C

SCALE: N.T.S.
REFERENCE PLAN HW18-A



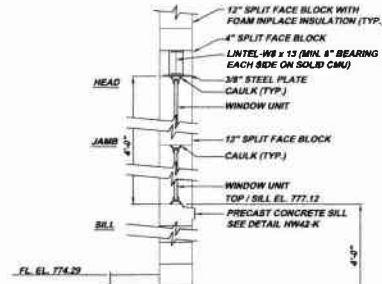
DOOR DETAIL HW42-D

SCALE: N.T.S.
REFERENCE ELEVATION HW2-A



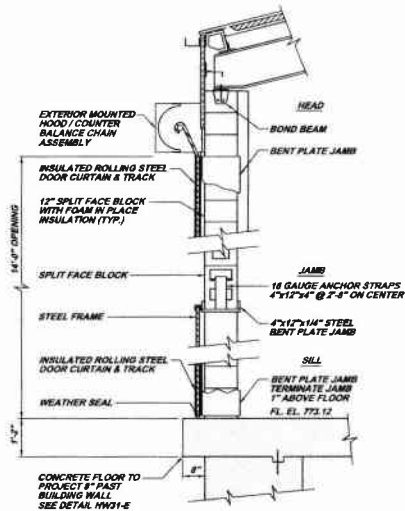
WINDOW DETAIL HW42-E

SCALE: N.T.S.
REFERENCE PLAN HW18-A



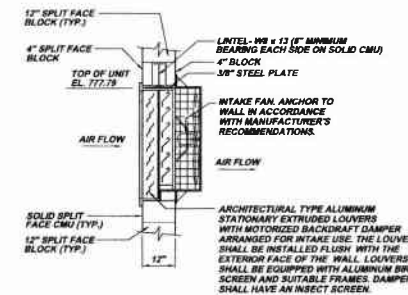
WINDOW DETAIL HW42-F

SCALE: N.T.S.
REFERENCE PLAN HW18-A



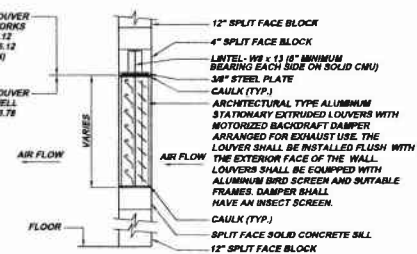
DOOR DETAIL HW42-G

SCALE: N.T.S.
REFERENCE PLAN HW18-A



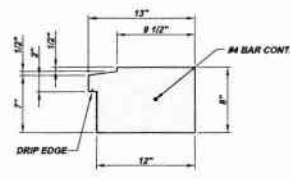
INTAKE FAN DETAIL HW42-H

SCALE: N.T.S.
REFERENCE PLAN HW18-A



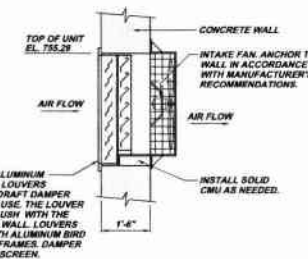
AIR EXHAUST LOUVER DETAIL HW42-J

SCALE: N.T.S.
REFERENCE PLAN HW18-A AND ELEVATION HW1-B



PRECAST CONCRETE SILL DETAIL HW42-K

SCALE: 1 1/2" = 1'-0"
REFERENCE DETAIL HW42-E AND HW42-F



INTAKE FAN DETAIL HW42-L

SCALE: N.T.S.
REFERENCE PLAN HW18-A

NOTE:
ITEMS IDENTIFIED WITH UPPER CASE TEXT ARE PROPOSED.
Items Identified with Mixed Case Text are Existing.

MUNICIPAL AUTHORITY OF THE CITY OF MCKEESPORT
ALLEGHENY COUNTY, PENNSYLVANIA
CONTRACT NUMBER 2010-01 AND 2010-02
WASTEWATER TREATMENT PLANT EXPANSION
HEADWORKS BUILDING DETAILS

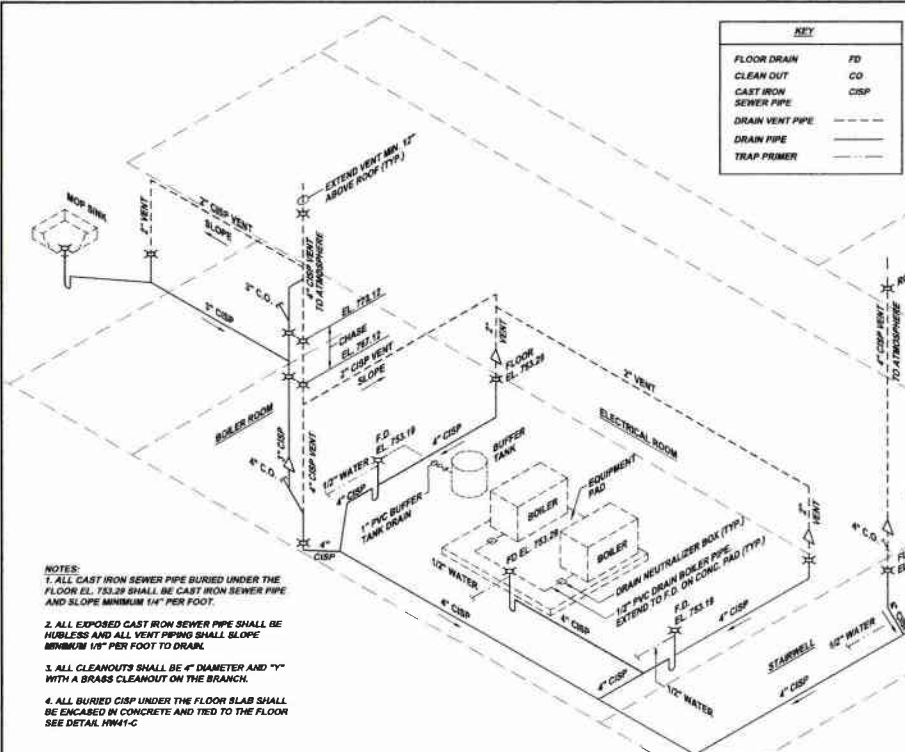
KLH
ENGINEERS, INC.

Date	Revision	Drawn By	Checked By	Approved By
01-10-08	DEF SUBMITTAL	DMB	HPF	
01-20-08	REVISED			
01-09	REVISED			
12-20-11	RELEASE FOR BID			

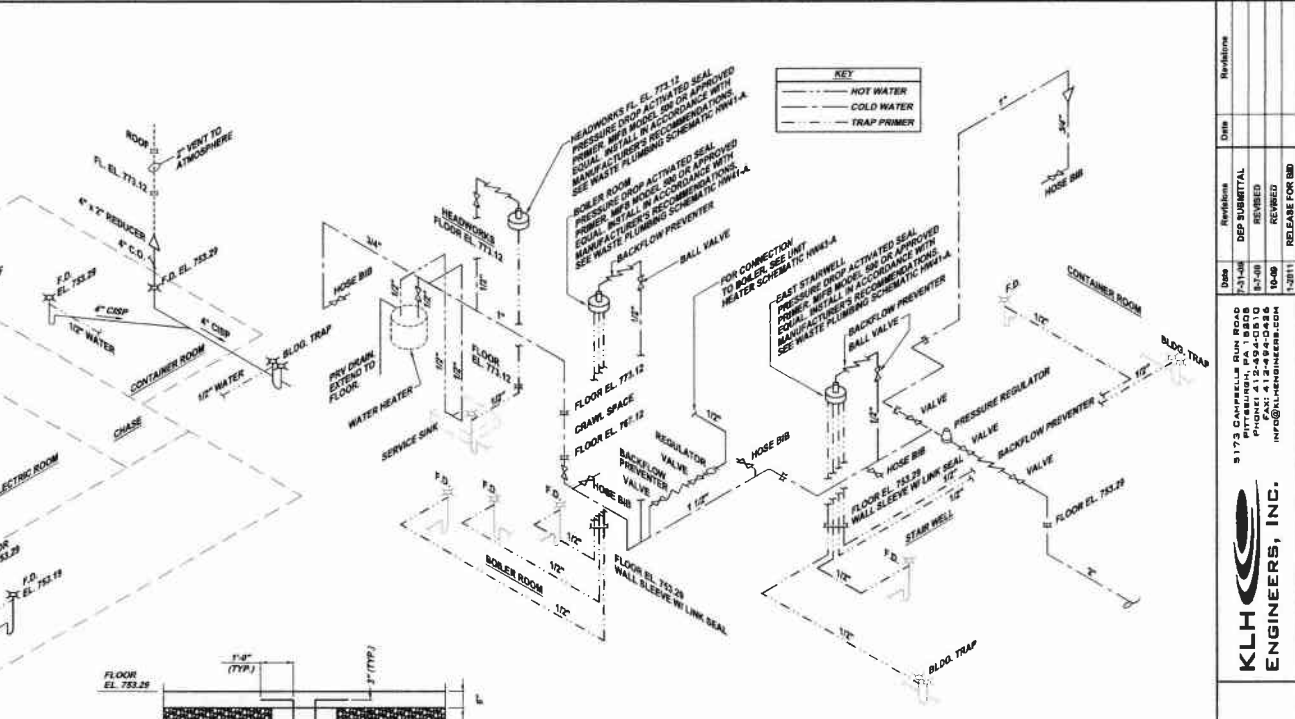
Scale:	As Shown:
DATE:	APR 2009
DRAWN BY:	DMB
CHECKED BY:	HPF
APPROVED BY:	HPF

Sheet No.
12

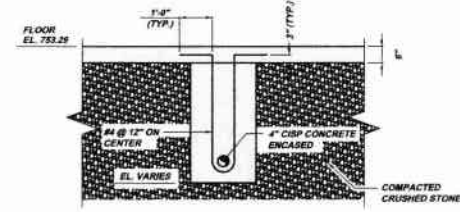
Drawing No.
220
HW42



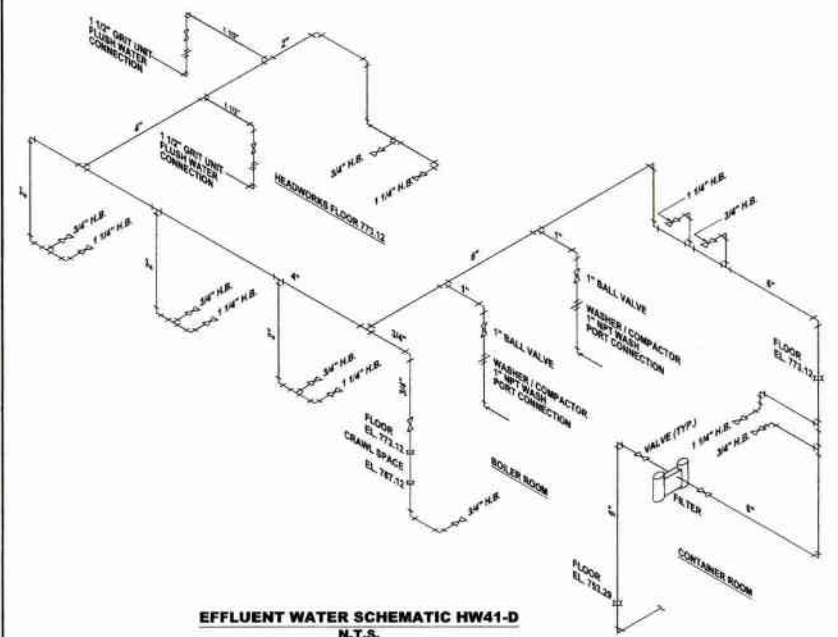
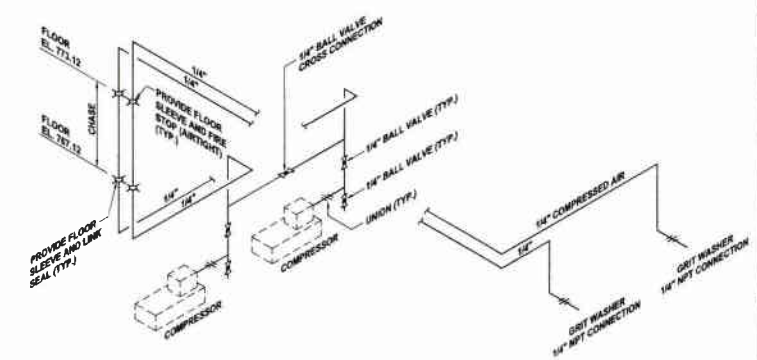
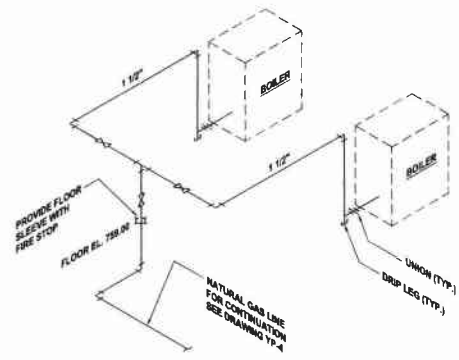
HEADWORKS WASTE PLUMBING SCHEMATIC HW41-A
N.T.S.
REFERENCE PLAN HW18-A AND HW30-A



POTABLE WATER SCHEMATIC HW41-B
N.T.S.



NATURAL GAS SCHEMATIC HW41-E
N.T.S.



NATURAL GAS SCHEMATIC HW41-E
N.T.S.

COMPRESSED AIR SCHEMATIC HW41-F
N.T.S.

NOTE:
ITEMS IDENTIFIED WITH UPPER CASE TEXT ARE PROPOSED.
Items Identified with Lower Case Text are Existing.

Revisions	Date	By
1		
2		
3		
4		
5		
6		
7		
8		
9		
10		
11		
12		
13		
14		
15		

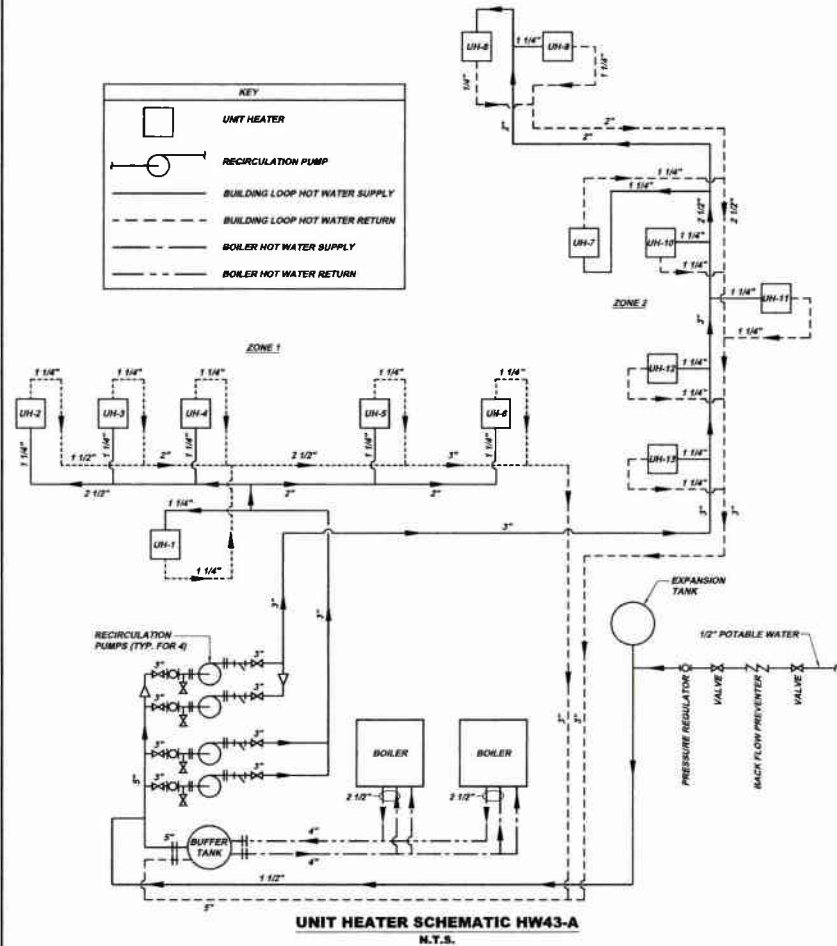
8173 CAMPBELL BLVD. SUITE 200
PITTSBURGH, PA 15208
TEL: 412-281-9436
FAX: 412-281-9436
INFO@KLH-ENGINEERS.COM

KLH ENGINEERS, INC.

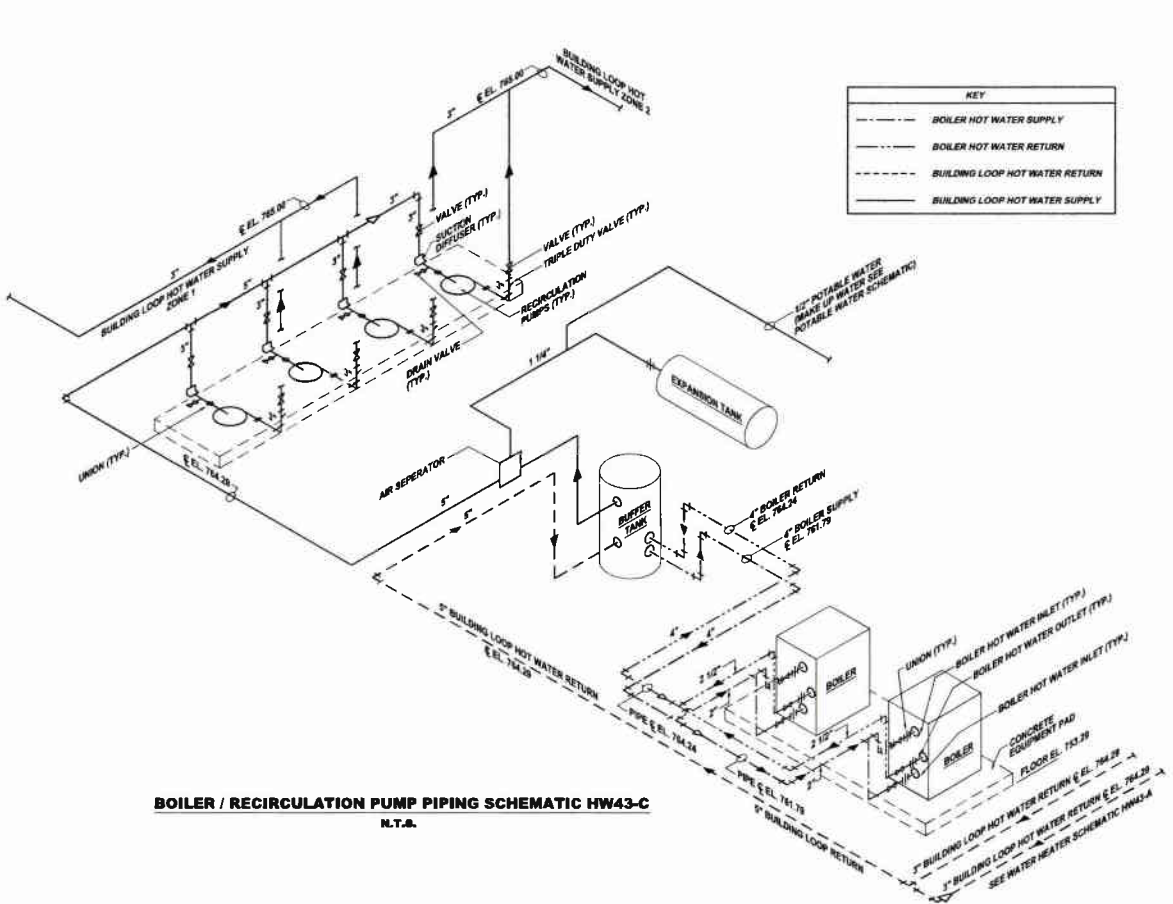
MUNICIPAL AUTHORITY OF THE CITY OF MCKEESPORT
ALLEGHENY COUNTY, PENNSYLVANIA
CONTRACT NUMBER 2018-01 AND 2019-02
WASTEWATER TREATMENT PLANT EXPANSION
HEADWORKS BUILDING SCHEMATIC DIAGRAMS

As Shown:	APR 2008
Drawn By:	HOF
Checked By:	HOF
Approved By:	HOF

Sheet No. 13
Drawing No. 220-HW41



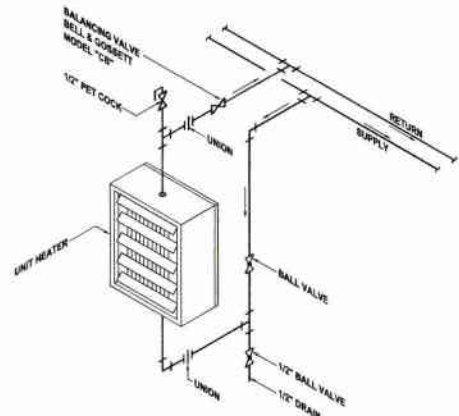
UNIT HEATER SCHEMATIC HW43-A
N.T.S.



BOILER / RECIRCULATION PUMP PIPING SCHEMATIC HW43-C
N.T.S.

UNIT HEATER SCHEDULE				
LOCATION	MARK NO.	MOORE CATALOG NO.	CAPACITY, BTUH	WATER FLOW, GPM
HEADWORKS BUILDING				
SOUTH STAIRWELL	UH-1	HSB-1633-08	130,000	13.6
HEADWORKS ROOM	UH-2	HSB-2585-08	201,900	21
HEADWORKS ROOM	UH-3	HSB-2585-08	201,900	21
HEADWORKS ROOM	UH-4	HSB-2585-08	201,900	21
HEADWORKS ROOM	UH-5	HSB-2585-08	201,900	21
HEADWORKS ROOM	UH-6	HSB-2585-08	201,900	21
HEADWORKS ROOM	UH-7	HSB-2585-08	201,900	21
HEADWORKS ROOM	UH-8	HSB-2585-08	201,900	21
CONTAINER ROOM	UH-9	HSB-2585-08	201,900	21
CHASE AREA	UH-10	HSB-1633-08	130,000	13.6
EAST STAIRWELL	UH-11	HSB-2905-09	228,000	23.9
ELECTRICAL ROOM	UH-12	HSB-1633-08	130,000	13.6
BOILER ROOM	UH-13	HC-348-05	16,200	1.7

* - CLASSIFIED AREAS



UNIT HEATER CONNECTION DETAIL HW43-B
N.T.S.

NOTE:
ITEMS IDENTIFIED WITH UPPER CASE TEXT ARE PROPOSED.
Items Identified with Mixed Case Text are Existing.

Scale:	As Shown	October 2009	DRG	14
Date:	October 2009	DRG	14	
Drawn By:		DRG	14	
Checked By:		DRG	14	
Approved By:		DRG	14	

Sheet No. 14

Drawing No. 220-HW43

Revisions

Date

Revisions

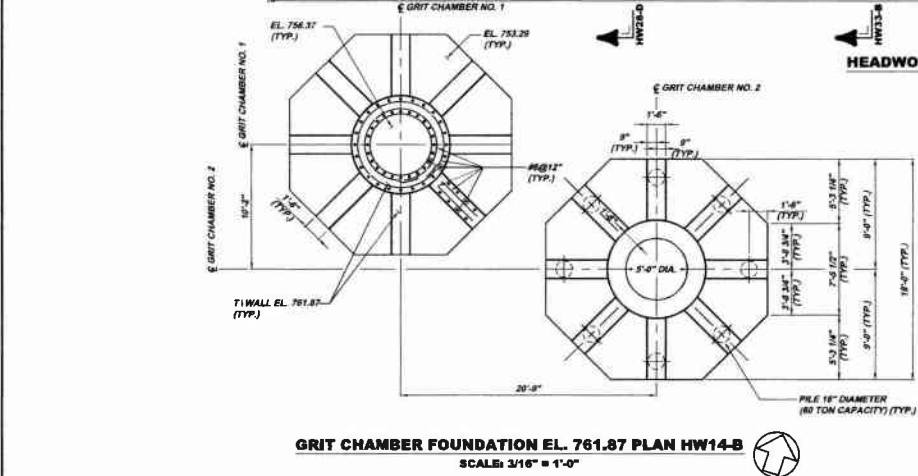
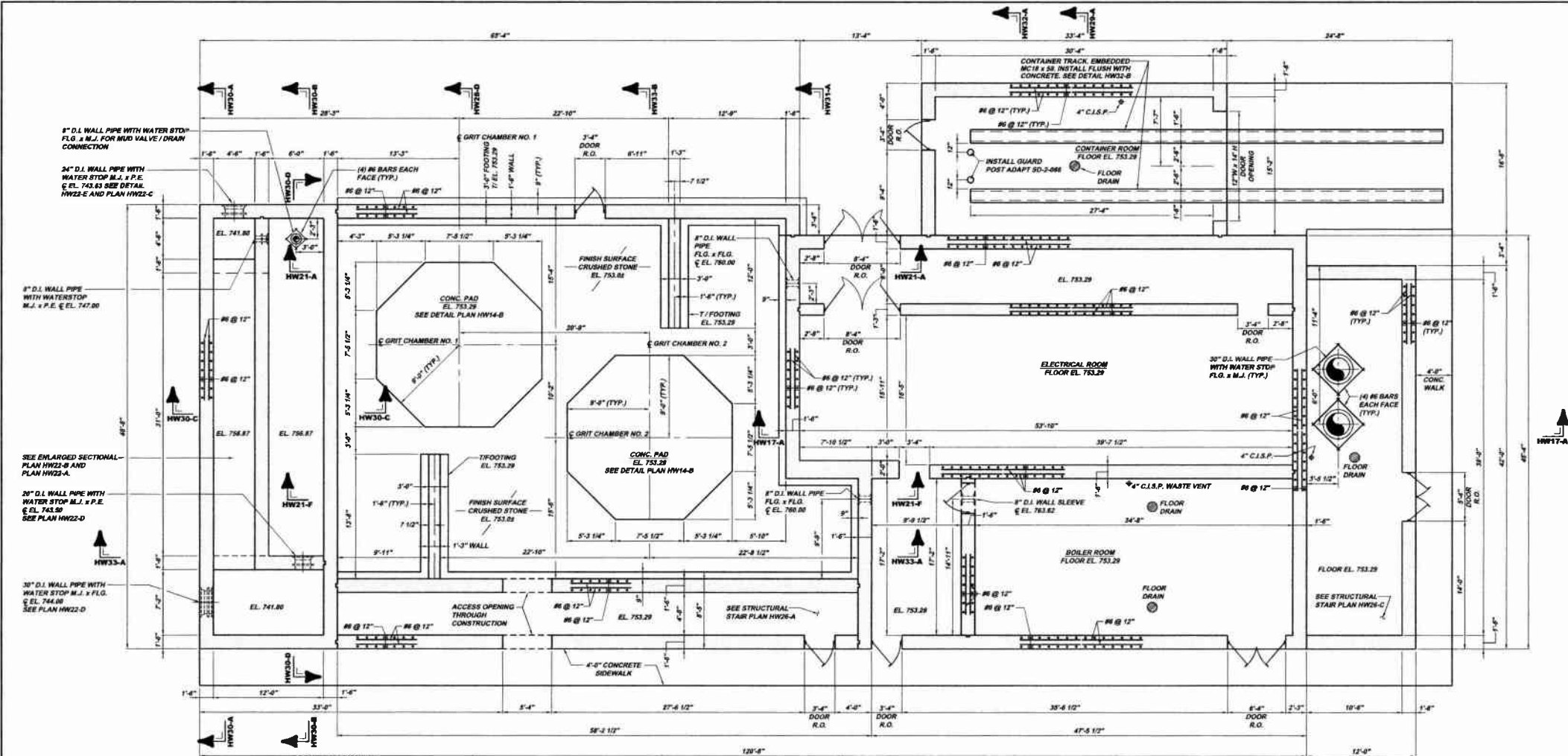
RELEASE FOR BID

Date

5175 CAMPBELL BLVD. ROOM 200
PITTSBURGH, PA 15203
PHONE 412-494-9310
FAX 412-494-9311
INFO@KLH-ENGINEERS.COM

KLH ENGINEERS, INC.

MUNICIPAL AUTHORITY OF THE CITY OF MCKEESPORT
ALLEGHENY COUNTY, PENNSYLVANIA
CONTRACT NUMBER 2010-01 AND 2010-02
WASTEWATER TREATMENT PLANT EXPANSION
BOILER / UNIT HEATER SCHEMATIC DIAGRAM AND SCHEDULE



HEADWORKS BUILDING EL. 753.29 STRUCTURAL PLAN HW14-A
 SCALE: 3/16" = 1'-0"
 REFERENCE PLAN S2-A AND PLAN HW38-A

HEADWORKS DRAWING REFERENCE

SHEET NO.	DWG. NO.	DESCRIPTION	SHEET NO.	DWG. NO.	DESCRIPTION
1	220-4HW1	ELEVATIONS	18	220-4HW16	STRUCTURAL PLANS
2	220-4HW2	ELEVATIONS AND DETAILS	19	220-4HW20	STRUCTURAL PLANS AND SECTIONS
3	220-4HW3	EL. 753.29 FLOOR PLAN	20	220-4HW21	STRUCTURAL PLANS AND SECTIONS
4	220-4HW4	BOILER ROOM FLOOR PLAN AND SECTIONS	21	220-4HW28	STRUCTURAL PLANS AND SECTIONS
5	220-4HW8	EL. 773.12 FLOOR PLAN	22	220-4HW34	STRUCTURAL PLANS AND SECTIONS
6	220-4HW20	MECHANICAL PLAN AND SECTIONS	23	220-4HW35	STRUCTURAL PLANS AND SECTIONS
7	220-4HW24	MECHANICAL SECTIONS	24	220-4HW33	STRUCTURAL SECTIONS
8	220-4HW25	MECHANICAL SECTIONS	25	220-4HW31	STRUCTURAL SECTIONS
9	220-4HW23	MECHANICAL SECTIONS	26	220-4HW32	STRUCTURAL SECTIONS
10	220-4HW40	BUILDING SECTIONS	27	220-4HW17	STRUCTURAL SECTIONS
11	220-4HW39	BUILDING SECTIONS	28	220-4HW36	STRUCTURAL SECTIONS
12	220-4HW42	BUILDING DETAILS	29	220-4HW26	STRUCTURAL PLANS, SECTIONS AND DETAILS
13	220-4HW41	BUILDING SCHEMATIC DIAGRAMS	30	220-4HW28	STRUCTURAL PLAN AND SECTIONS
14	220-4HW43	BOILER / UNIT HEATER SCHEMATIC DIAGRAM AND SCHEDULE	31	220-4HW27	STRUCTURAL SECTIONS AND DETAILS
15	220-4HW14	EL. 753.29 STRUCTURAL PLAN	32	220-4HW12	MASONRY & ROOF PLANS
16	220-4HW22	STRUCTURAL PLANS AND SECTIONS	33	220-4HW11	ROOF SECTIONS AND DETAILS
17	220-4HW19	EL. 767.12 STRUCTURAL PLAN	34	220-4HW13	STRUCTURAL ROOF SECTIONS AND DETAILS

GRIT CHAMBER FOUNDATION EL. 761.87 PLAN HW14-B
 SCALE: 3/16" = 1'-0"

KLH ENGINEERS, INC.

MUNICIPAL AUTHORITY OF THE CITY OF MCKEESPORT
 ALLEGHENY COUNTY, PENNSYLVANIA
 CONTRACT NUMBER 2010-01 AND 2010-02
 WASTEWATER TREATMENT PLANT EXPANSION
 HEADWORKS BUILDING EL. 753.29 STRUCTURAL PLAN

Scale:	As Shown:	Date:	Drawn By:	Checked By:	Approved By:
3/16" = 1'-0"	July 2009	July 2009	DRG	DRG	DRG

Drawing No. **220-HW14**

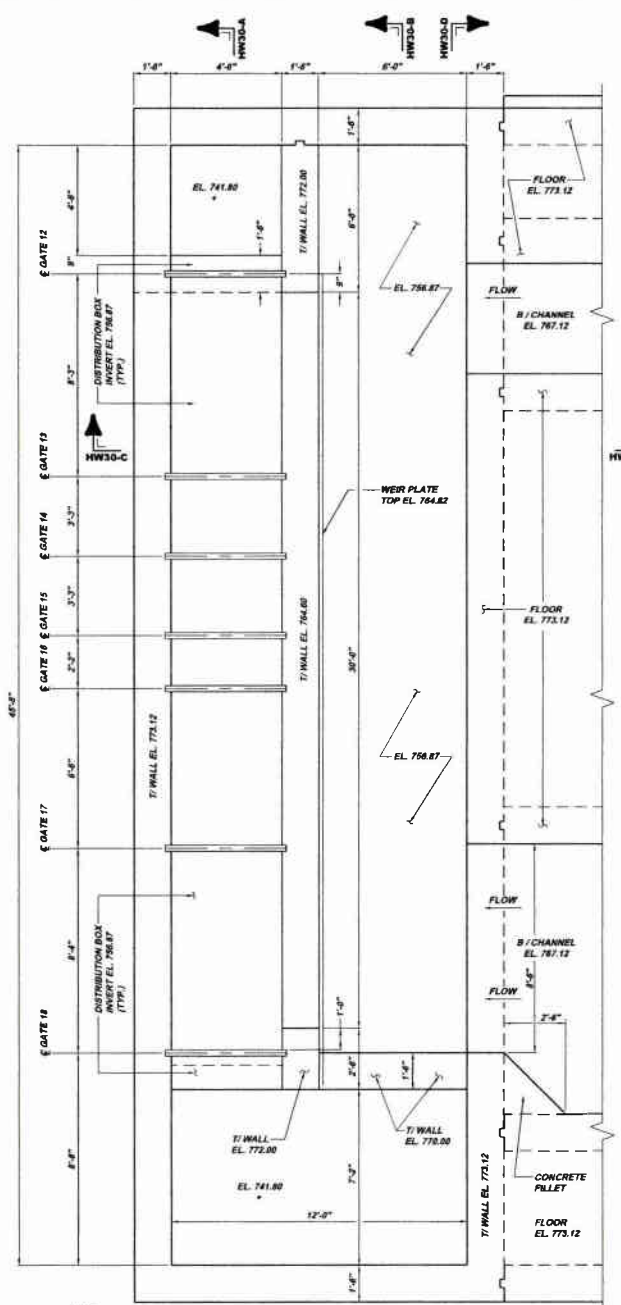
Sheet No. **15**

Date: 7-31-09
 Revision: 8-2-09
 Date: 10-09
 Revision: 1-30-11

8175 CAMBERLE RUN ROAD
 PITTSBURGH, PA 15206
 PHONE: 412-644-1200
 FAX: 412-644-1209
 INFO@KLHENGINEERS.COM

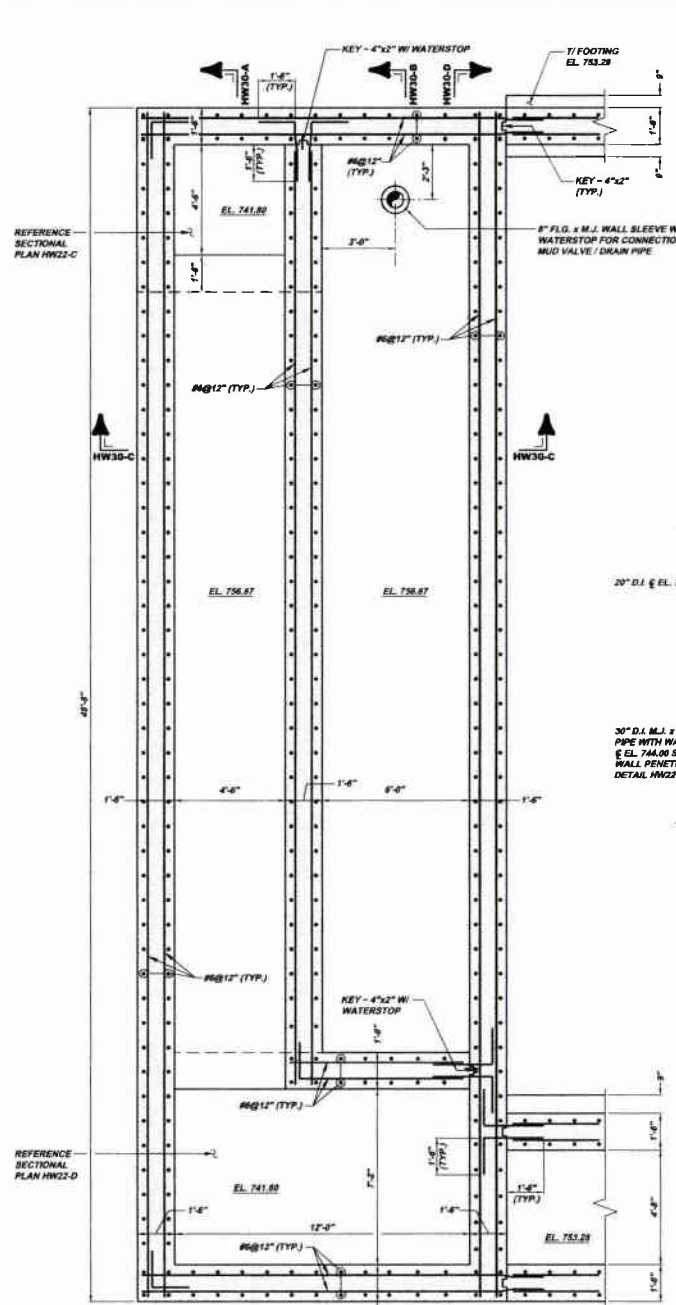
RELEASER FOR BID

NOTE:
 ITEMS IDENTIFIED WITH UPPER CASE TEXT ARE PROPOSED.
 Items identified with Mixed Case Text are Existing.

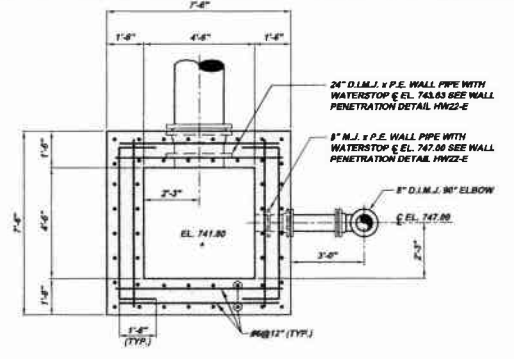


EFFLUENT DISTRIBUTION BOX PLAN HW22-A
 SCALE: 3/8" = 1'-0"
 REFERENCE PLAN HW16-A

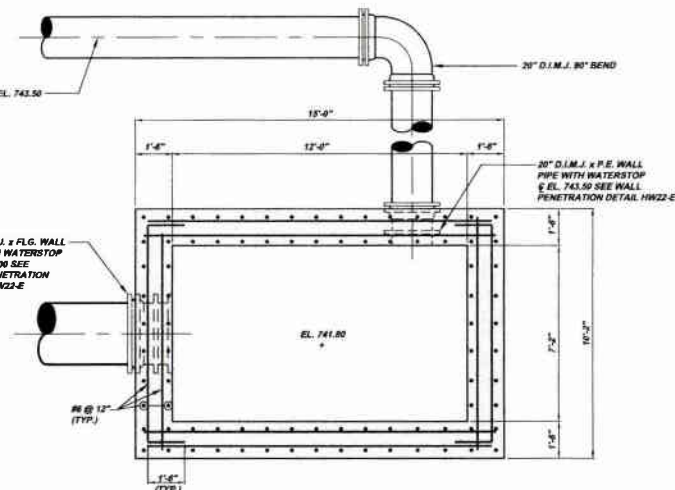
NOTE:
 SEE DRAWING HW-16
 FOR GATE SCHEDULE



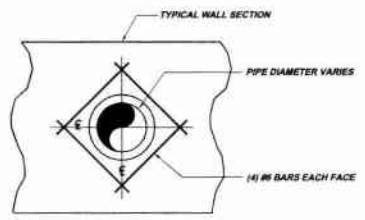
EFFLUENT DISTRIBUTION BOX SECTIONAL PLAN HW22-B
 SCALE: 3/8" = 1'-0"
 REFERENCE PLAN HW22-A



SECTIONAL PLAN HW22-C
 SCALE: 3/8" = 1'-0"
 REFERENCE SECTION HW-30A AND PLAN HW22-B



SECTIONAL PLAN HW22-D
 SCALE: 3/8" = 1'-0"
 REFERENCE SECTION HW30-A AND HW30-B
 AND PLANS HW19-B AND HW22-D



TYPICAL PIPE PENETRATION DETAIL HW22-E
 N.T.S.

NOTE:
 ITEMS IDENTIFIED WITH UPPER CASE TEXT ARE PROPOSED.
 Items Identified with Mixed Case Text are Existing.

Revision	Date	By	Check	Appr.
1	7-21-06	DEF	DEF	DEF
2	8-20-06	DEF	DEF	DEF
3	10-09	DEF	DEF	DEF
4	12-01	DEF	DEF	DEF

5175 CAMPBELL RUN ROAD
 PITTSBURGH, PA 15208
 PHONE: 412-944-0228
 FAX: 412-944-0228
 WWW: WWW.KLHENGINEERS.COM
 INFO: INFO@KLHENGINEERS.COM

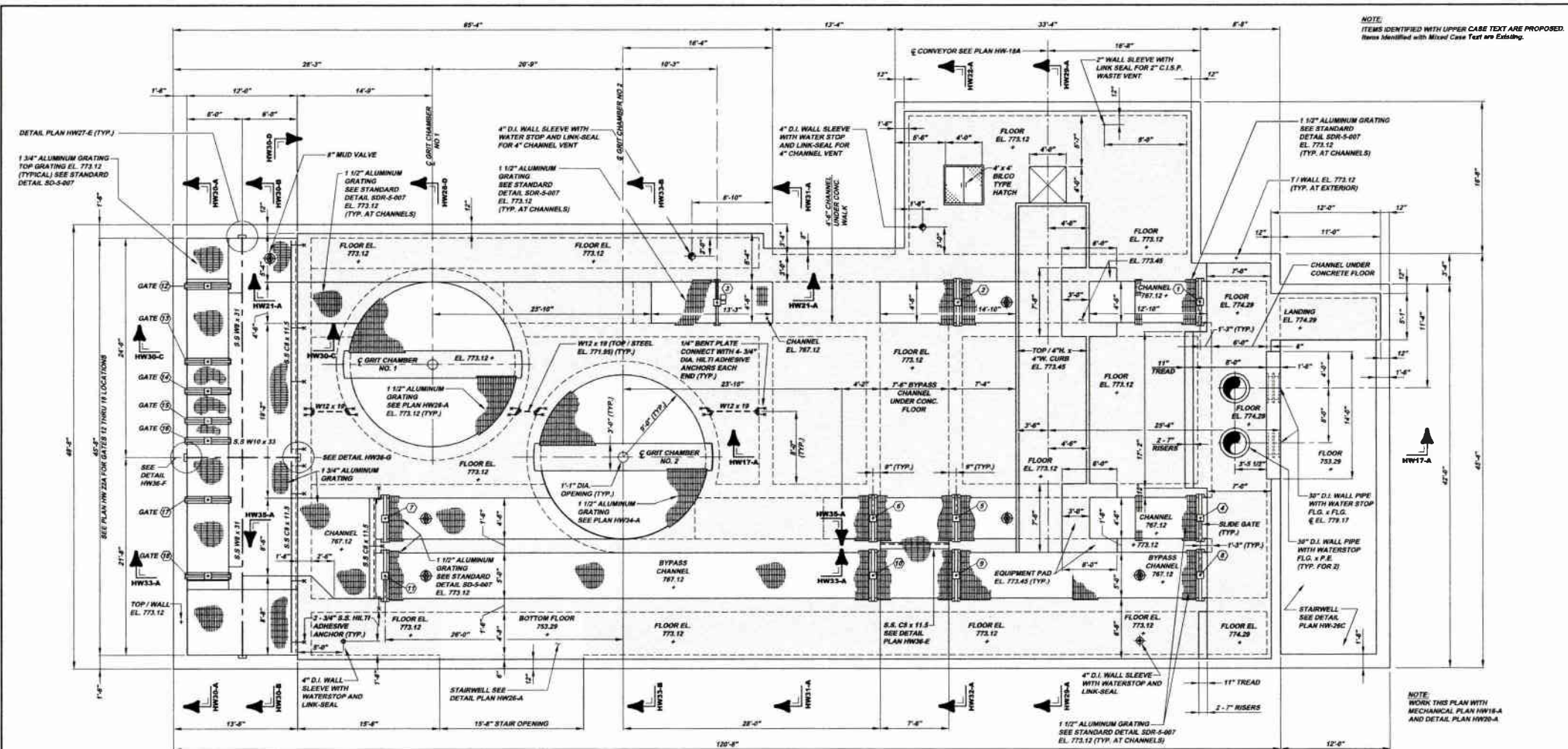
KLH ENGINEERS, INC.

MUNICIPAL AUTHORITY OF THE CITY OF MCKEESPORT
 ALLEGHENY COUNTY, PENNSYLVANIA
 CONTRACT NUMBER 2010-01 AND 2010-02
 WASTEWATER TREATMENT PLANT EXPANSION
 HEADWORKS BUILDING STRUCTURAL PLANS AND SECTIONS

Scale:	All shown
Date:	July 2006
Drawn By:	DMB
Checked By:	HDF
Approved By:	SHG

Sheet No. 16

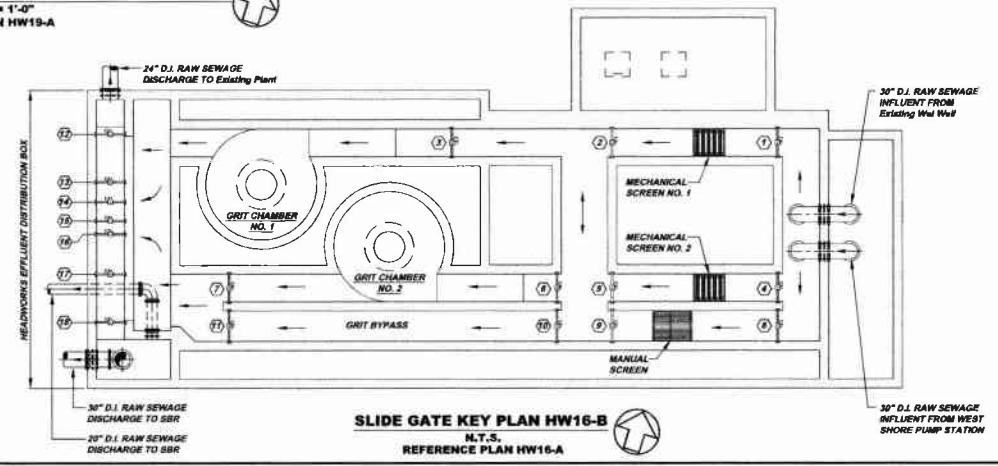
Drawing No. 220-HW22



HEADWORKS BUILDING EL. 773.12 STRUCTURAL PLAN HW16-A
 SCALE: 3/16" = 1'-0"
 REFERENCE PLAN HW19-A

SLIDE GATE SCHEDULE								
DESIGNATION	LOCATION	TYPE	OPERATOR	CHANNEL WIDTH	INVERT ELEVATION	TOP OF WALL	GATE HEIGHT	TRAVEL
1	MECHANICAL SCREEN NO. 1 INLET	EMBEDDED FRAME CHANNEL SLUICE GATE	MOTORIZED	4'-6"	767.12	773.12	5'-6"	5'-0"
2	MECHANICAL SCREEN NO. 1 DISCHARGE	"	"	4'-6"	767.12	"	4'-0"	4'-0"
3	GRIT CHAMBER NO. 1 INLET	"	"	4'-6"	767.12	"	4'-0"	4'-0"
4	MECHANICAL SCREEN NO. 2 INLET	"	"	4'-6"	767.12	"	5'-6"	5'-0"
5	MECHANICAL SCREEN NO. 2 DISCHARGE	"	"	4'-6"	767.12	"	4'-0"	4'-0"
6	GRIT CHAMBER NO. 2 INLET	"	"	4'-6"	767.12	"	4'-0"	4'-0"
7	GRIT CHAMBER NO. 2 OUTLET	"	"	4'-6"	767.12	"	4'-0"	4'-0"
8	MANUAL SCREEN INLET	"	"	5'-0"	767.12	"	5'-6"	5'-0"
9	MANUAL SCREEN DISCHARGE	"	"	5'-0"	767.12	"	4'-0"	4'-0"
10	GRIT BYPASS INLET	"	"	5'-0"	767.12	"	5'-0"	4'-0"
11	GRIT BYPASS OUTLET	"	"	5'-0"	767.12	"	5'-0"	4'-0"
12	MAIN SPLITTER BOX - 0-100	"	"	4'-6"	756.87	"	10'-0"	8'-3"
13	MAIN SPLITTER BOX - 25-75	"	"	4'-6"	756.87	"	10'-0"	8'-3"
14	MAIN SPLITTER BOX - 35-64	"	"	4'-6"	756.87	"	10'-0"	8'-3"
15	MAIN SPLITTER BOX - 45-54	"	"	4'-6"	756.87	"	10'-0"	8'-3"
16	MAIN SPLITTER BOX - 53-47	"	"	4'-6"	756.87	"	10'-0"	8'-3"
17	MAIN SPLITTER BOX - 75-25	"	"	4'-6"	756.87	"	10'-0"	8'-3"
18	MAIN SPLITTER BOX - 100-0	EMBEDDED FRAME SLUICE GATE	MOTORIZED	4'-6"	756.87	773.12	10'-0"	8'-3"

* INDICATES MODULATING



SLIDE GATE KEY PLAN HW16-B
 N.T.S.
 REFERENCE PLAN HW16-A

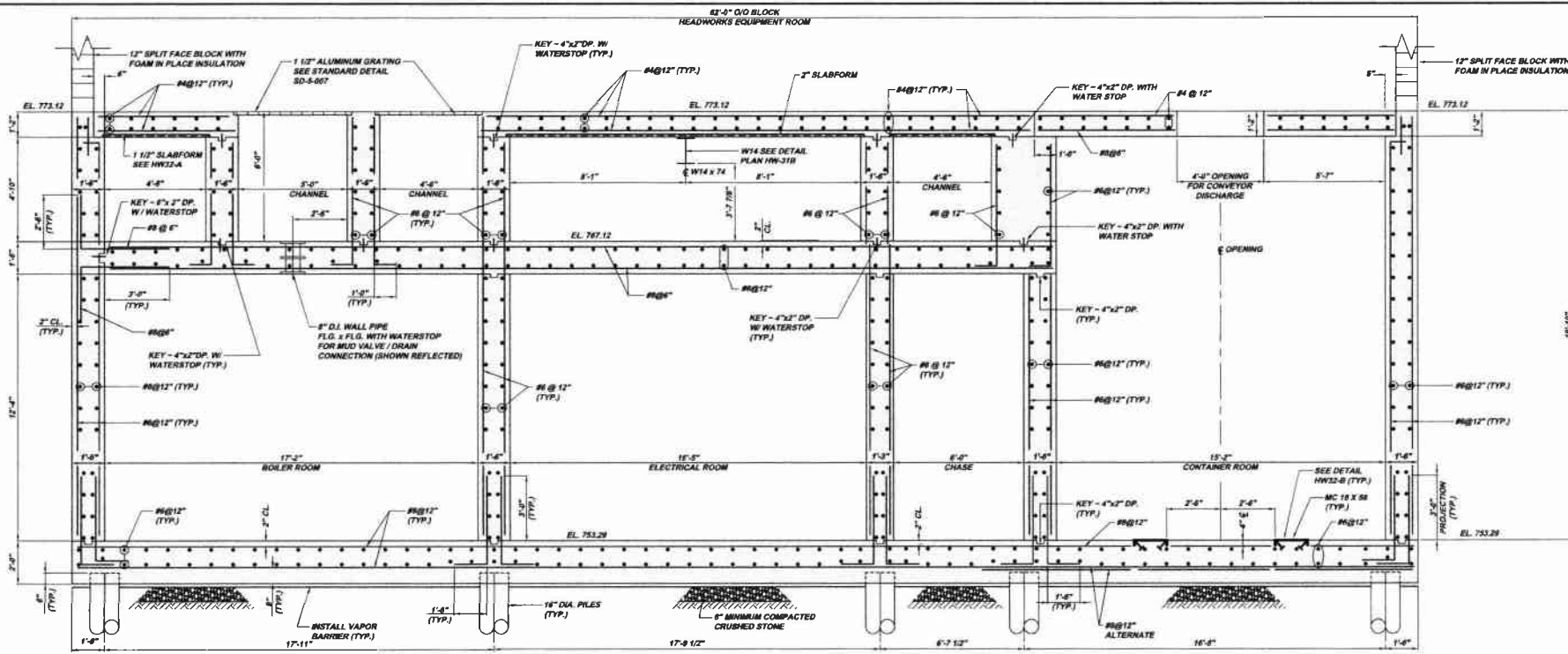
NOTE:
 ITEMS IDENTIFIED WITH UPPER CASE TEXT ARE PROPOSED.
 Items Identified with Mixed Case Text are Existing.

KLH ENGINEERS, INC.

MUNICIPAL AUTHORITY OF THE CITY OF MCKEESPORT
 ALLEGHENY COUNTY, PENNSYLVANIA
 CONTRACT NUMBER 2010-01 AND 2010-02
 WASTEWATER TREATMENT PLANT EXPANSION
 HEADWORKS BUILDING STRUCTURAL PLANS

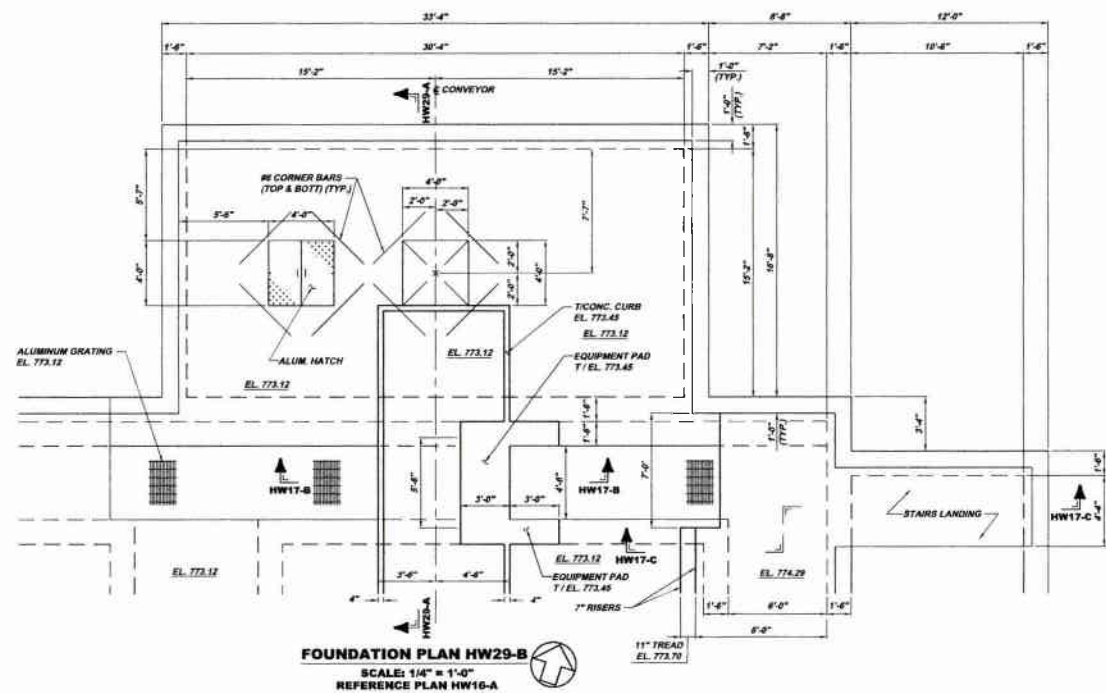
Scale:	As Shown	Date:	12/31/11
Drawn By:	EJD	Rev:	1508
Checked By:	HOF	Rev:	1509
Approved By:	BRG	Rev:	1509

Sheet No. 18
 Drawing No. 220-HW16



SECTION HW29-A
 SCALE: 3/8" = 1'-0"
 REFERENCE PLAN HW14-A, HW16-A & HW19-A

NOTE:
 CONTRACTOR SHALL FURNISH AND INSTALL
 TENSILE FORM 200 WHEELING FORM DECK (19 GA.) OR
 EQUAL AT ALL LOCATIONS IDENTIFYING 2" SLABFORM
 AND TENSILE FORM 150 WHEELING FORM DECK (20 GA.)
 OR EQUAL AT ALL LOCATIONS IDENTIFYING 1 1/2"
 SLABFORM. ALL SLABFORM SHALL BE GALVANIZED.



FOUNDATION PLAN HW29-B
 SCALE: 1/4" = 1'-0"
 REFERENCE PLAN HW16-A

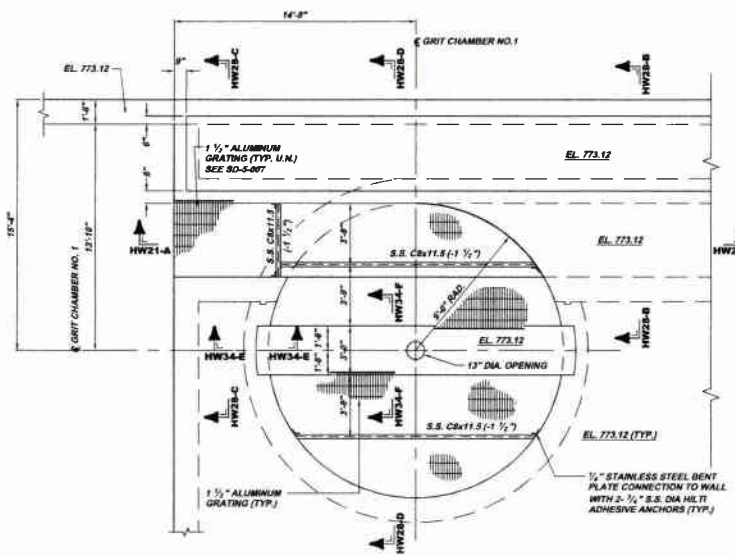
NOTE:
 ITEMS IDENTIFIED WITH UPPER CASE TEXT ARE PROPOSED.
 ITEMS IDENTIFIED WITH LOWER CASE TEXT ARE EXISTING.

Revisions	Date	By	Check	Appr.
1	7/21/09	DEF	REVISION	
2	8/17/09	DEF	REVISION	
3	10/09	DEF	REVISION	
4	12/09	DEF	REVISION	

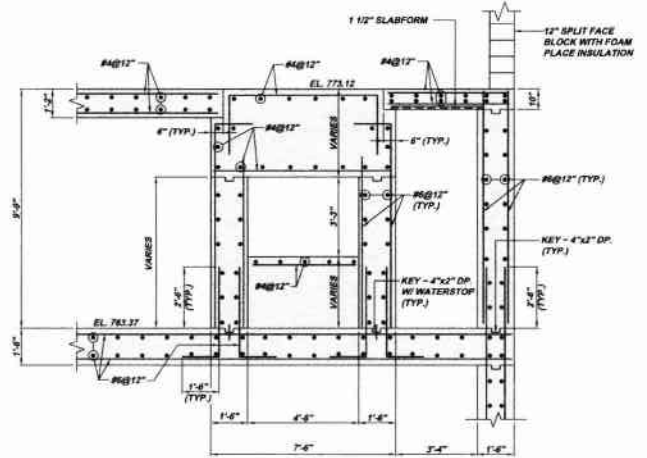
8173 CLAYVILLE PIKE ROAD PITTSBURGH, PA 15209 PHONE: 412-944-0333 FAX: 412-944-0334 INFO@KLHENGINEERS.COM	
MUNICIPAL AUTHORITY OF THE CITY OF MCKEESPORT ALLEGHENY COUNTY, PENNSYLVANIA CONTRACT NUMBER 2010-01 AND 2010-02 WASTEWATER TREATMENT PLANT EXPANSION HEADWORKS BUILDING STRUCTURAL PLANS AND SECTIONS	

As Shown	July 2009	DBS	DBS	DBS
Drawn By:		DBS	DBS	DBS
Checked By:		DBS	DBS	DBS
Approved By:		DBS	DBS	DBS

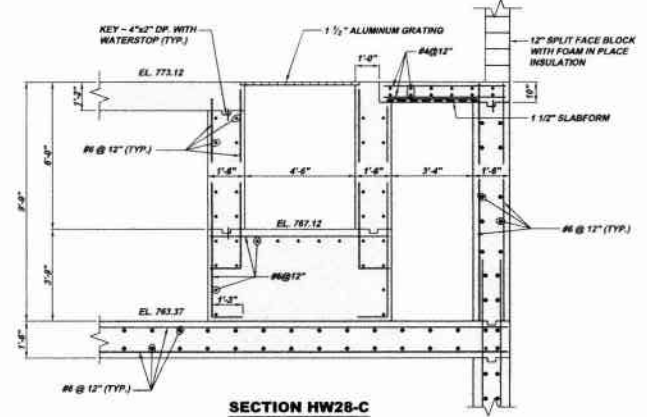
Sheet No.	19
Drawing No.	220-HW29



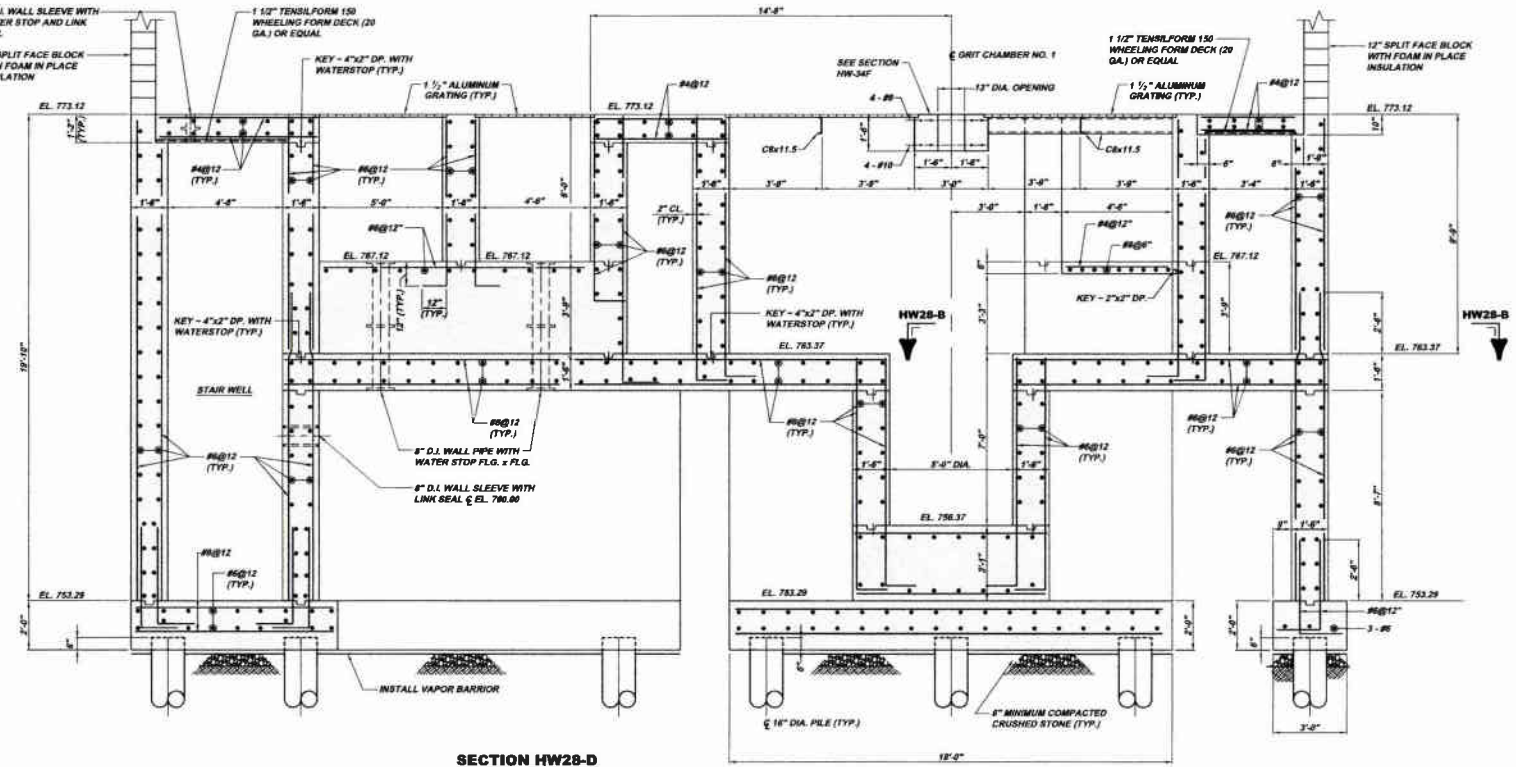
GRIT CHAMBER NO. 1 PLAN HW28-A
 SCALE: 1/4" = 1'-0"
 REFERENCE PLAN HW16-A



SECTION HW28-B
 SCALE: 3/8" = 1'-0"
 REFERENCE PLAN HW28-A



SECTION HW28-C
 SCALE: 3/8" = 1'-0"
 REFERENCE PLAN HW28-A



SECTION HW28-D
 SCALE: 3/8" = 1'-0"
 REFERENCE PLANS HW28-A,
 HW14-A, HW16-A & HW19-A

NOTE:
 CONTRACTOR SHALL FURNISH AND INSTALL
 TENSILFORM 200 WHEELING FORM DECK
 (18 GA.) OR EQUAL AT ALL LOCATIONS
 IDENTIFYING 2" SLABFORM AND TENSILFORM
 150 WHEELING FORM DECK (20 GA.) OR EQUAL
 AT LOCATIONS IDENTIFYING 1 1/2" SLABFORM.
 ALL SLABFORM SHALL BE GALVANIZED DECKING

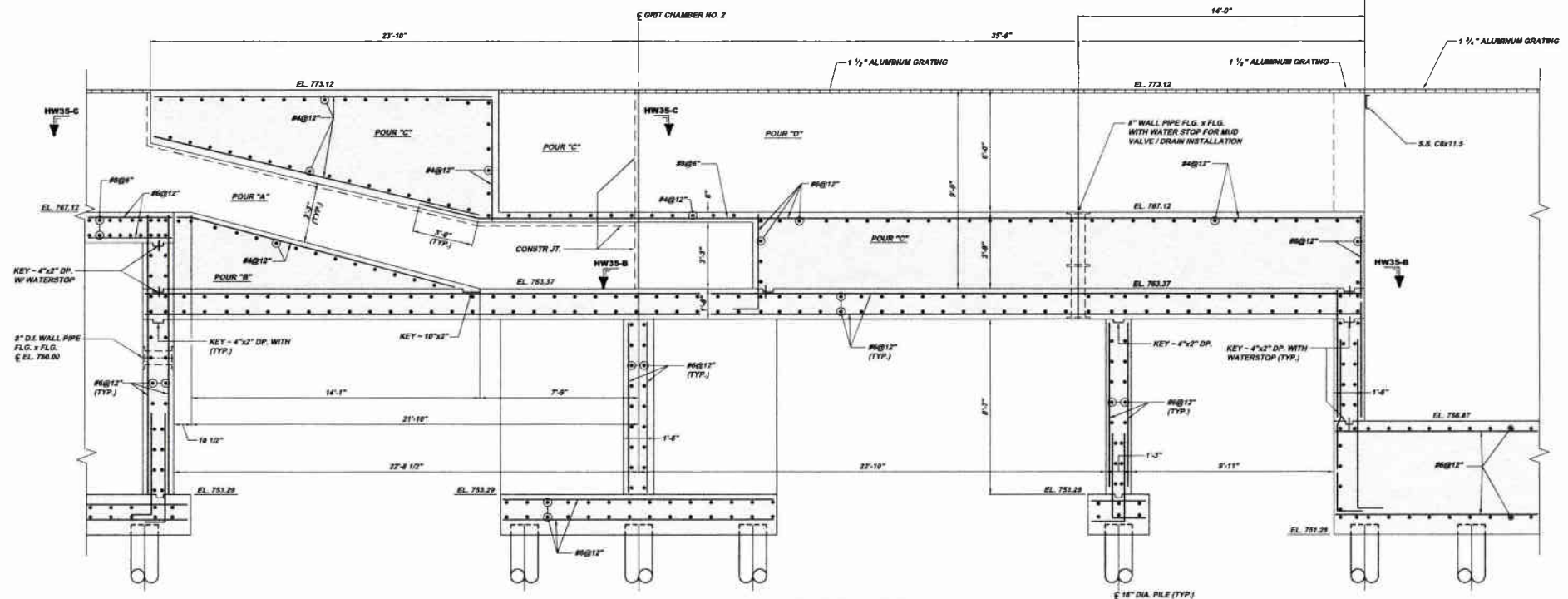
Date	Revision	By	Check	Appr.
7-31-08	DEF SUBMITTAL			
8-7-08	REVISED			
10-09	REVISED			
1-20-11	RELEASE FOR BID			

5172 CLAYVILLE RUN ROAD PITTSBURGH, PA 15203 PHONE: 412-449-4430 FAX: 412-449-4430 INFO@KLHENGINEERS.COM	
MUNICIPAL AUTHORITY OF THE CITY OF MCKEESPORT ALLEGHENY COUNTY, PENNSYLVANIA CONTRACT NUMBER 2010-01 AND 2010-02 WASTEWATER TREATMENT PLANT EXPANSION HEADWORKS BUILDING STRUCTURAL PLANS AND SECTIONS	

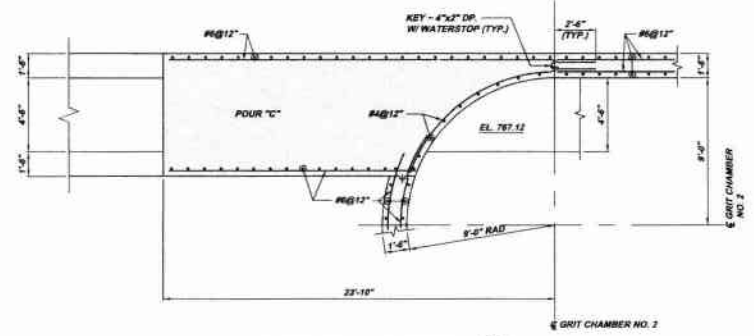
As Shown	Scale:
July 2009	Date:
DMB	Drawn By:
HCF	Checked By:
PHD	Approved By:

Sheet No.	21
Drawing No.	220-HW28

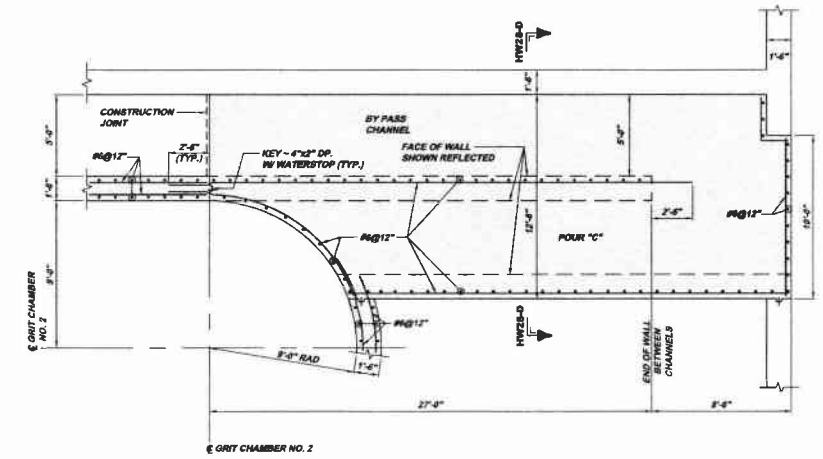
NOTE:
 ITEMS IDENTIFIED WITH UPPER CASE TEXT ARE PROPOSED.
 Items Identified with Mixed Case Text are Existing.



SECTION HW35-A
 SCALE: 3/8" = 1'-0"
 REFERENCE HW14-A, HW16-A & HW18-A



SECTIONAL PLAN HW35-C
 SCALE: 1/4" = 1'-0"
 REFERENCE HW35-A



SECTIONAL PLAN HW35-B
 SCALE: 1/4" = 1'-0"
 REFERENCE HW35-A

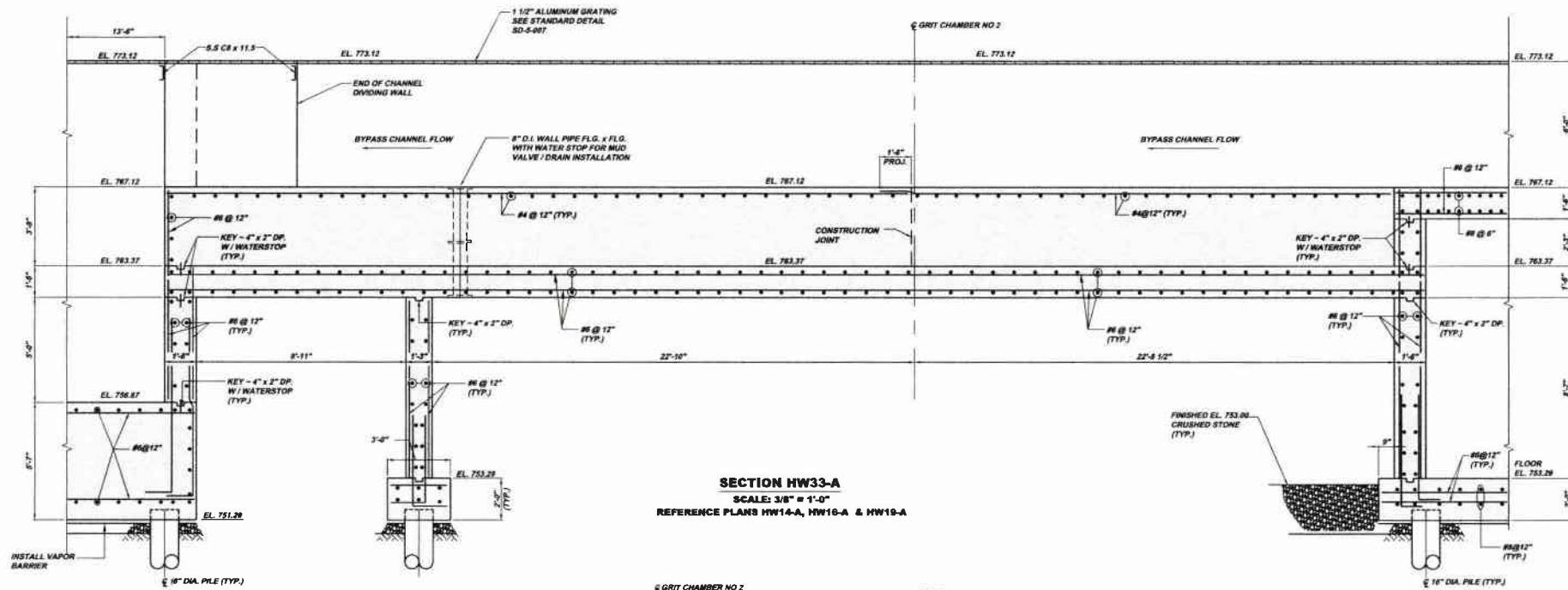
Revisions	Date	By	Check	Appr.
1	7-31-08	DFP	DFP	DFP
2	8-7-08	REVIS	REVIS	REVIS
3	10-09	REVIS	REVIS	REVIS
4	1-20-11	RELEASE	RELEASE	RELEASE

5119 S. CHARLES BLVD. SUITE 200 PITTSBURGH, PA 15209 PHONE 412-464-9310 INFO@KLHENGINEERS.COM	
MUNICIPAL AUTHORITY OF THE CITY OF MCKEESPORT ALLEGHENY COUNTY, PENNSYLVANIA CONTRACT NUMBER 2010-01 AND 2010-02 WASTEWATER TREATMENT PLANT EXPANSION HEADWORKS BUILDING STRUCTURAL PLANS AND SECTIONS	

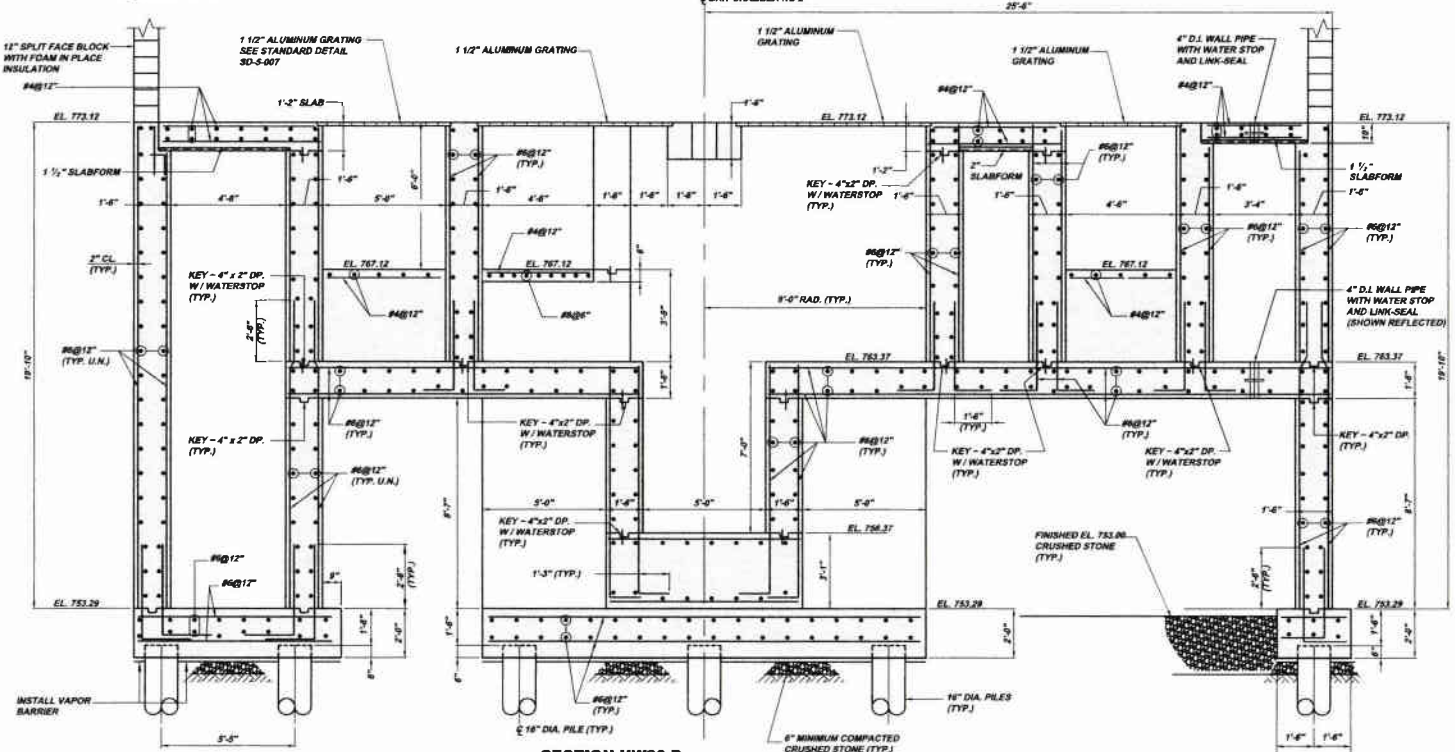
Scale:	As Shown
Date:	July 2008
Drawn By:	DMB
Checked By:	HOF
Approved By:	SHS

Sheet No.	23
Drawing No.	220-HW35

NOTE:
 ITEMS IDENTIFIED WITH UPPER CASE TEXT ARE PROPOSED.
 Items Identified with Mixed Case Text are Existing.



SECTION HW33-A
 SCALE: 3/8" = 1'-0"
 REFERENCE PLANS HW14-A, HW16-A & HW19-A

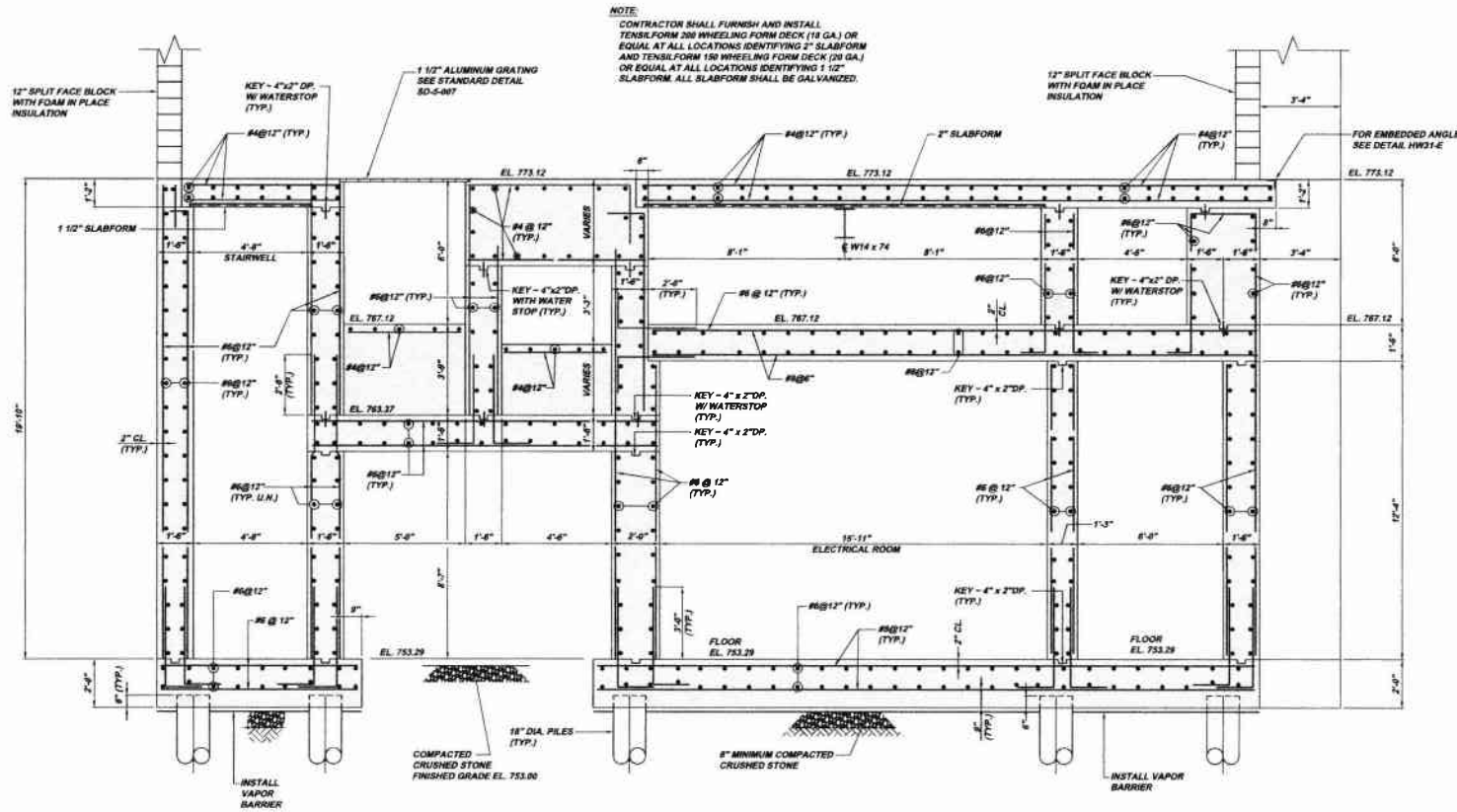


SECTION HW33-B
 SCALE: 3/8" = 1'-0"
 REFERENCE PLANS HW14-A, HW16-A & HW19-A

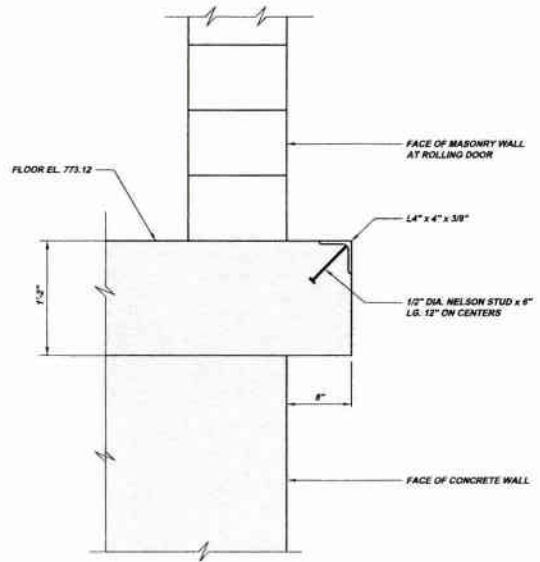
NOTE:
 CONTRACTOR SHALL FURNISH AND INSTALL
 TENSIFORM 200 WHEELING FORM DECK (18 GA.) OR
 EQUAL AT ALL LOCATIONS IDENTIFYING 2" SLABFORM
 AND TENSIFORM 150 WHEELING FORM DECK (20 GA.)
 OR EQUAL AT ALL LOCATIONS IDENTIFYING 1 1/2"
 SLABFORM. ALL SLABFORM SHALL BE GALVANIZED.

NOTE:
 ITEMS IDENTIFIED WITH UPPER CASE TEXT ARE PROPOSED.
 Items Identified with Mixed Case Text are Existing.

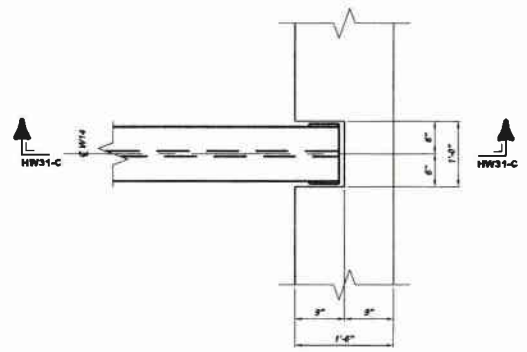
Revisions	Date	Revisions	Date
01	12/01	01	12/01
02	01/08	02	01/08
03	02/08	03	02/08
04	03/08	04	03/08
05	04/08	05	04/08
06	05/08	06	05/08
07	06/08	07	06/08
08	07/08	08	07/08
09	08/08	09	08/08
10	09/08	10	09/08
11	10/08	11	10/08
12	11/08	12	11/08
13	12/08	13	12/08
14	01/09	14	01/09
15	02/09	15	02/09
16	03/09	16	03/09
17	04/09	17	04/09
18	05/09	18	05/09
19	06/09	19	06/09
20	07/09	20	07/09
21	08/09	21	08/09
22	09/09	22	09/09
23	10/09	23	10/09
24	11/09	24	11/09
25	12/09	25	12/09
26	01/10	26	01/10
27	02/10	27	02/10
28	03/10	28	03/10
29	04/10	29	04/10
30	05/10	30	05/10
31	06/10	31	06/10
32	07/10	32	07/10
33	08/10	33	08/10
34	09/10	34	09/10
35	10/10	35	10/10
36	11/10	36	11/10
37	12/10	37	12/10
38	01/11	38	01/11
39	02/11	39	02/11
40	03/11	40	03/11
41	04/11	41	04/11
42	05/11	42	05/11
43	06/11	43	06/11
44	07/11	44	07/11
45	08/11	45	08/11
46	09/11	46	09/11
47	10/11	47	10/11
48	11/11	48	11/11
49	12/11	49	12/11
50	01/12	50	01/12
51	02/12	51	02/12
52	03/12	52	03/12
53	04/12	53	04/12
54	05/12	54	05/12
55	06/12	55	06/12
56	07/12	56	07/12
57	08/12	57	08/12
58	09/12	58	09/12
59	10/12	59	10/12
60	11/12	60	11/12
61	12/12	61	12/12
62	01/13	62	01/13
63	02/13	63	02/13
64	03/13	64	03/13
65	04/13	65	04/13
66	05/13	66	05/13
67	06/13	67	06/13
68	07/13	68	07/13
69	08/13	69	08/13
70	09/13	70	09/13
71	10/13	71	10/13
72	11/13	72	11/13
73	12/13	73	12/13
74	01/14	74	01/14
75	02/14	75	02/14
76	03/14	76	03/14
77	04/14	77	04/14
78	05/14	78	05/14
79	06/14	79	06/14
80	07/14	80	07/14
81	08/14	81	08/14
82	09/14	82	09/14
83	10/14	83	10/14
84	11/14	84	11/14
85	12/14	85	12/14
86	01/15	86	01/15
87	02/15	87	02/15
88	03/15	88	03/15
89	04/15	89	04/15
90	05/15	90	05/15
91	06/15	91	06/15
92	07/15	92	07/15
93	08/15	93	08/15
94	09/15	94	09/15
95	10/15	95	10/15
96	11/15	96	11/15
97	12/15	97	12/15
98	01/16	98	01/16
99	02/16	99	02/16
100	03/16	100	03/16
101	04/16	101	04/16
102	05/16	102	05/16
103	06/16	103	06/16
104	07/16	104	07/16
105	08/16	105	08/16
106	09/16	106	09/16
107	10/16	107	10/16
108	11/16	108	11/16
109	12/16	109	12/16
110	01/17	110	01/17
111	02/17	111	02/17
112	03/17	112	03/17
113	04/17	113	04/17
114	05/17	114	05/17
115	06/17	115	06/17
116	07/17	116	07/17
117	08/17	117	08/17
118	09/17	118	09/17
119	10/17	119	10/17
120	11/17	120	11/17
121	12/17	121	12/17
122	01/18	122	01/18
123	02/18	123	02/18
124	03/18	124	03/18
125	04/18	125	04/18
126	05/18	126	05/18
127	06/18	127	06/18
128	07/18	128	07/18
129	08/18	129	08/18
130	09/18	130	09/18
131	10/18	131	10/18
132	11/18	132	11/18
133	12/18	133	12/18
134	01/19	134	01/19
135	02/19	135	02/19
136	03/19	136	03/19
137	04/19	137	04/19
138	05/19	138	05/19
139	06/19	139	06/19
140	07/19	140	07/19
141	08/19	141	08/19
142	09/19	142	09/19
143	10/19	143	10/19
144	11/19	144	11/19
145	12/19	145	12/19
146	01/20	146	01/20
147	02/20	147	02/20
148	03/20	148	03/20
149	04/20	149	04/20
150	05/20	150	05/20
151	06/20	151	06/20
152	07/20	152	07/20
153	08/20	153	08/20
154	09/20	154	09/20
155	10/20	155	10/20
156	11/20	156	11/20
157	12/20	157	12/20
158	01/21	158	01/21
159	02/21	159	02/21
160	03/21	160	03/21
161	04/21	161	04/21
162	05/21	162	05/21
163	06/21	163	06/21
164	07/21	164	07/21
165	08/21	165	08/21
166	09/21	166	09/21
167	10/21	167	10/21
168	11/21	168	11/21
169	12/21	169	12/21
170	01/22	170	01/22
171	02/22	171	02/22
172	03/22	172	03/22
173	04/22	173	04/22
174	05/22	174	05/22
175	06/22	175	06/22
176	07/22	176	07/22
177	08/22	177	08/22
178	09/22	178	09/22
179	10/22	179	10/22
180	11/22	180	11/22
181	12/22	181	12/22
182	01/23	182	01/23
183	02/23	183	02/23
184	03/23	184	03/23
185	04/23	185	04/23
186	05/23	186	05/23
187	06/23	187	06/23
188	07/23	188	07/23
189	08/23	189	08/23
190	09/23	190	09/23
191	10/23	191	10/23
192	11/23	192	11/23
193	12/23	193	12/23
194	01/24	194	01/24
195	02/24	195	02/24
196	03/24	196	03/24
197	04/24	197	04/24
198	05/24	198	05/24
199	06/24	199	06/24
200	07/24	200	07/24
201	08/24	201	08/24
202	09/24	202	09/24
203	10/24	203	10/24
204	11/24	204	11/24
205	12/24	205	12/24
206	01/25	206	01/25
207	02/25	207	02/25
208	03/25	208	03/25
209	04/25	209	04/25
210	05/25	210	05/25
211	06/25	211	06/25
212	07/25	212	07/25
213	08/25	213	08/25
214	09/25	214	09/25
215	10/25	215	10/25
216	11/25	216	11/25
217	12/25	217	12/25
218	01/26	218	01/26
219	02/26	219	02/26
220	03/26	220	03/26
221	04/26	221	04/26
222	05/26	222	05/26
223	06/26	223	06/26
224	07/26	224	07/26
225	08/26	225	08/26
226	09/26	226	09/26
227	10/26	227	10/26
228	11/26	228	11/26
229	12/26	229	12/26
230	01/27	230	01/27
231	02/27	231	02/27
232	03/27	232	03/27
233	04/27	233	04/27
234	05/27	234	05/27
235	06/27	235	06/27
236	07/27	236	07/27
237	08/27	237	08/27
238	09/27	238	09/27
239	10/27	239	10/27
240	11/27	240	11/27
241	12/27	241	12/27
242	01/28	242	01/28
243	02/28	243	02/28
244	03/28	244	03/28
245	04/28	245	04/28
246	05/28	246	05/28
247	06/28	247	06/28
248	07/28	248	07/28
249	08/28	249	08/28
250	09/28	250	09/28
251	10/28	251	10/28
252	11/28	252	11/28
253	12/2		



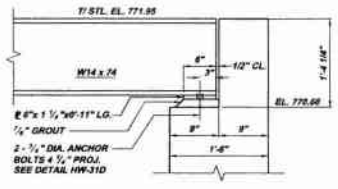
SECTION HW31-A
 SCALE: 3/8" = 1'-0"
 REFERENCE PLANS HW14-A, HW16-A & HW19-A



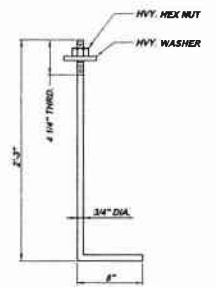
DETAIL HW31-E
 SCALE: 1 1/2" = 1'-0"
 REFERENCE DETAIL HW42-G
 AND ELEVATION HW1-B



PLAN DETAIL HW31-B
 SCALE: 1" = 1'-0"
 REFERENCE PLAN HW19-A
 (TYP. AND OPPOSITE HAND)



SECTION HW31-C
 SCALE: 1" = 1'-0"
 REFERENCE SECTION HW31-B



ANCHOR BOLT DETAIL HW31-D
 SCALE: 1 1/2" = 1'-0"
 REFERENCE SECTION HW31-B

NOTE:
 ITEMS IDENTIFIED WITH UPPER CASE TEXT ARE PROPOSED.
 ITEMS IDENTIFIED WITH MIXED CASE TEXT ARE EXISTING.

Date	Revisions	Revisions
05-10-08	DEF SUBMITTAL	
07-08	REVISED	
10-08	REVISED	
10-08	REVISED	
10-08	RELEASE FOR BID	

8173 CAMPBELL RUN ROAD
 PITTSBURGH, PA 15205
 PHONE: 412-944-0200
 FAX: 412-944-0200
 INFO@KLHENGINEERS.COM

KLH ENGINEERS, INC.

MUNICIPAL AUTHORITY OF THE CITY OF MCKEESPORT
 ALLEGHENY COUNTY, PENNSYLVANIA
 CONTRACT NUMBER 2010-01 AND 2010-02
 WASTEWATER TREATMENT PLANT EXPANSION
 HEADWORK'S BUILDING STRUCTURAL SECTIONS

Scale:	As Shown
DATE:	July 2009
DRAWN BY:	DMS
CHECKED BY:	RCF
APPROVED BY:	SHD

Sheet No. **25**
 Drawing No. **220-HW31**