NORTHERN KENTUCKY WATER DISTRICT
KENTON COUNTY, KENTUCKY

TAYLOR MILL WATER TREATMENT PLANT ELECTRICAL AND BASIN IMPROVEMENTS

DRAWINGS FOR:
NKWD PROJECT NO. 184-0476
DOW LOAN NO. DWL 13060

JANUARY 2014

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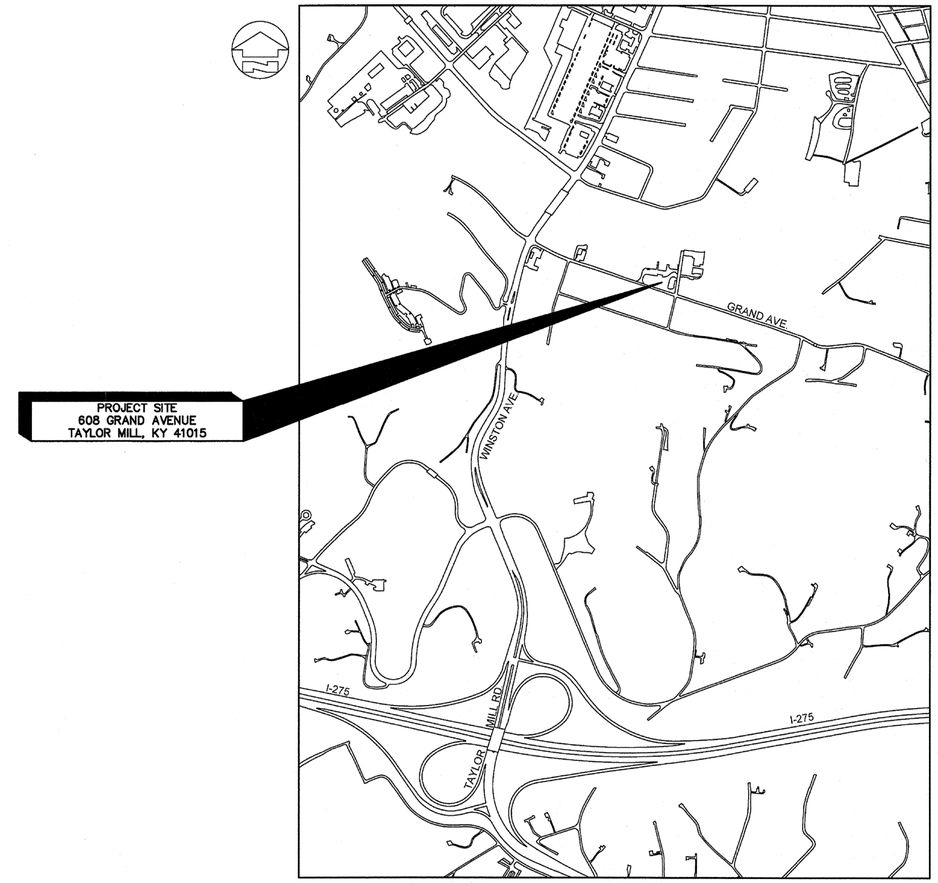

VICINITY MAP
NOT TO SCALE

BID SET

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LICENSED PROFESSIONAL ENGINEER

REVISIONS			
NO.	BY	DATE	REMARKS

DES JIL
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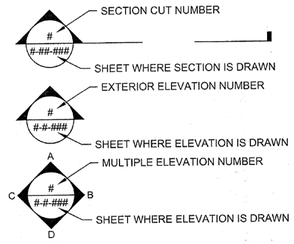
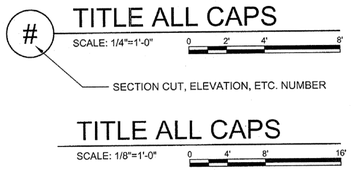
NORTHERN KENTUCKY WATER DISTRICT
TAYLOR MILL WATER TREATMENT PLANT
ELECTRICAL AND BASIN IMPROVEMENTS

GENERAL
INDEX OF DRAWINGS
SCALE: NO SCALE

ISSUED STATUS: BID SET
DATE JANUARY 2014
SHEET G-00-002
CAD REF. NO. 2142001.0002

TYPICAL SECTION/ ELEVATION TAGS





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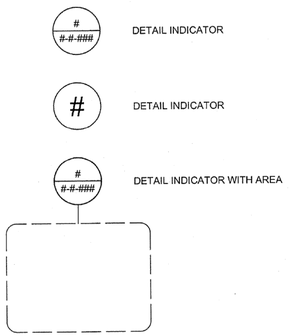

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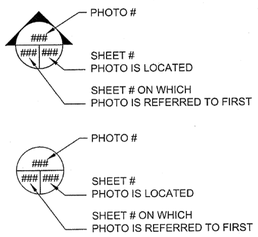

TYPICAL NOTE TAG

⬡ SHEET KEYNOTES:

1. KEYNOTES
2.
3.
4.

GENERAL NOTES:

1. GENERAL NOTES
2.
3.
4.

TYPICAL NORTH SYMBOL

MECHANICAL ABBREVIATIONS

AB	ANCHOR BOLT
ABAN.	ABANDONED
AC	ASPHALT CONCRETE PAVEMENT
ADD'L.	ADDITIONAL
ADJ.	ADJUSTABLE
AH	ACCESS HATCH
ALUM.	ALUMINUM
ALT.	ALTERNATE
ARCH	ARCHITECTURE
BF	BLIND FLANGE
BFV	BUTTERFLY VALVE
BITUM.	BITUMINOUS
BL	BASELINE
BLDG.	BUILDING
BM	BENCH MARK
BM.	BEAM
BOP	BOTTOM OF PIPE
BOT.	BOTTOM
BRG	BEARING
BRP	BUILDING REFERENCE POINT
BW	BACKWASH
BWS	BACKWASH SUPPLY
BWW	BACKWASH WASTE
C	CENTERLINE
C/C	CENTER TO CENTER
CB	CATCH BASIN
CHEM	CHEMICAL LINE
CHH	COMMUNICATION HANDHOLE
CJ	CONSTRUCTION JOINT
CL.	CLEAR
CMH	COMMUNICATION MANHOLE
CMU	CONCRETE MASONRY UNIT
CO	CLEANOUT
COL.	COLUMN
CONC.	CONCRETE
CONN	CMU CORNER OF EXT. FACE
CONT.	CONTINUED
CPLG.	COUPLING
CTW	CONTACTOR TO WASTE
CY	CUBIC YARD(S)
CW	COLD WATER (POTABLE)
D	DRAIN
DET.	DETAIL
DIP	DUCTILE IRON PIPE
DIA.	DIAMETER
DIM	DIMENSION
DISCH.	DISCHARGE
DMH	DROP MANHOLE
DN.	DOWN
DTL	DETAIL
DWGS	DRAWINGS
DWL.	DOWELS
EA.	EACH
ECC	ECCENTRIC
EDB	ELECTRICAL DUCT BANK
EF	EACH FACE
EFF.	EFFLUENT
EJ	EXPANSION JOINT
EL.	ELEVATION
ELEC.	ELECTRIC
EMH	ELECTRICAL MANHOLE
EQ.	EQUALIZATION
EW	EACH WAY
EX.	EXISTING
FD	FLOOR DRAIN
FDN	FOUNDATION
FDND	FOUNDATION DRAIN
FF	FAR FACE
FIN.	FINISHED
FIPT	FEMALE IRON PIPE THREAD
FLEX.	FLEXIBLE
FLG.	FLANGE
FLR.	FLOOR
FTG.	FOOTING
FT., '	FEET
GA.	GAGE OR GAUGE
GAC	GRANULAR ACTIVATED CARBON
GALV.	GALVANIZED
GE	GROOVED END JOINT
GRD.	GROUND
GRAT.	GRATING
HB	HOSE BIB
HFCA	HARNESSED FLANGE COUPLING ADAPTER
HORIZ.	HORIZONTAL
HP	HIGH POINT
ID	INSIDE DIAMETER
IF	INSIDE FACE
IN., "	INCHES
INF.	INFLUENT
INV.	INVERT
JST.	JOIST
JT.	JOINT
K	KIP (1000 POUNDS)
KSF	KIPS PER SQUARE FOOT
LG.	LONG
LLH	LONG LEG HORIZONTAL
LLV	LONG LEG VERTICAL
LR	LONG RADIUS
LSH	LEVEL SWITCH HIGH
LSLL	LEVEL SWITCH LOW LOW
MAS	MASONRY
MAX.	MAXIMUM
MCC	MOTOR CONTROL CENTER
MFR.	MANUFACTURER
MGD	MILLION GALLONS PER DAY
MH	MANHOLE
MIN.	MINIMUM
MIPT	MALE IRON PIPE THREAD
MJ	MECHANICAL JOINT
MO	MASONRY OPENING
NC	NORMALLY CLOSED
NF	NEAR FACE
NO	NORMALLY OPEN
NO.	NUMBER
O	OVERFLOW
OC	ON CENTER
OD	OUTSIDE DIAMETER
OF	OUTSIDE FACE
OPNG.	OPENING
OPP.	OPPOSITE
PC	POINT OF CURVATURE
PE	PLAIN END
PI	POINT OF INTERSECTION
PL	PLATE OR PROPERTY LINE
PSF	POUNDS PER SQUARE FOOT
PSI	POUNDS PER SQUARE INCH
PT	POINT OF TANGENCY
R	RISER
RED.	REDUCER
REINF.	REINFORCEMENT OR REINFORCE
REQ'D.	REQUIRED
RMJ	RESTRAINED JOINT
RM.	ROOM
ROW	RIGHT OF WAY
RPCV	ROTARY PUMP CONTROL VALVE
SHT.	SHEET
SOC	SOCKET
SPA.	SPACING
SR	SHORT RADIUS
SS	STAINLESS STEEL
STD.	STANDARD
STL.	STEEL
STRUC.	STRUCTURAL
T	TREAD
T/	TOP OF
T&B	TOP AND BOTTOM
THK.	THICK
TYP.	TYPICAL
UON	UNLESS OTHERWISE NOTED
USG	UNITED STATES STANDARD GAGE
VERT.	VERTICAL
W/	WITH
WP	WORK POINT
WRF	WATER RECLAMATION FACILITY
WS	WATER STOP
WWF	WELDED WIRE FABRIC

IDENTIFYING LETTERS FOR GROUP OF DRAWINGS

G	GENERAL
M	MECHANICAL
S	STRUCTURAL
A	ARCHITECTURAL
H	HVAC
E	ELECTRICAL

TMTP AREA LEGEND

AREA IDENTIFIER NUMBER	AREA DESCRIPTION
00	GENERAL SHEETS
01	FILTER BUILDING
02	SEDIMENTATION BASINS

DIMENSIONS:

(*) DENOTES DIMENSIONS TO BE DETERMINED BY MANUFACTURER

(**) DENOTES DIMENSIONS TO BE DETERMINED IN FIELD BY CONTRACTOR.

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25937
LICENSED
PROFESSIONAL ENGINEER

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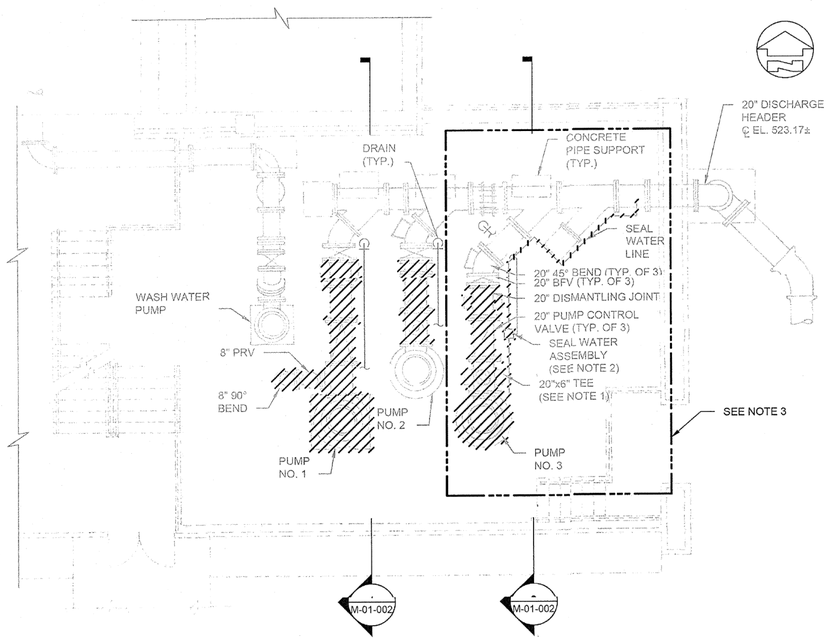
NORTHERN KENTUCKY WATER DISTRICT
TAYLOR MILL WATER TREATMENT PLANT
ELECTRICAL AND BASIN IMPROVEMENTS

GENERAL
NOTES, SYMBOLS, AND ABBREVIATIONS
SCALE: NO SCALE

ISSUED STATUS: BID SET
DATE JANUARY 2014
SHEET G-00-003
CAD REF. NO. 2142001.003

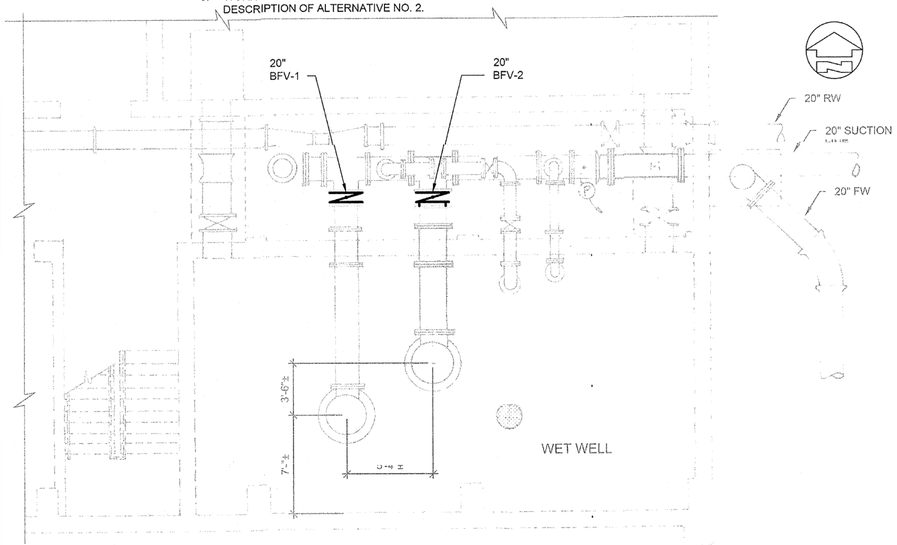


1 1ST FLOOR DEMO PLAN

NOT TO SCALE

NOTES:

1. CONTRACTOR SHALL DEMOLISH TEE, AIR RELIEF VALVE AND 6" DRAIN LINE.
2. CONTRACTOR SHALL DEMOLISH SEAL WATER ASSEMBLY AND ASSOCIATED SEAL WATER LINE. CONTRACTOR SHALL ADEQUATELY PLUG CORP. STOP ON DISCHARGE HEADER.
3. WORK SHOWN WITHIN THIS BOUNDARY LINE IS PART OF ALTERNATIVE NO. 2. SEE SPECIFICATION SECTION 01 23 00 FOR DESCRIPTION OF ALTERNATIVE NO. 2.



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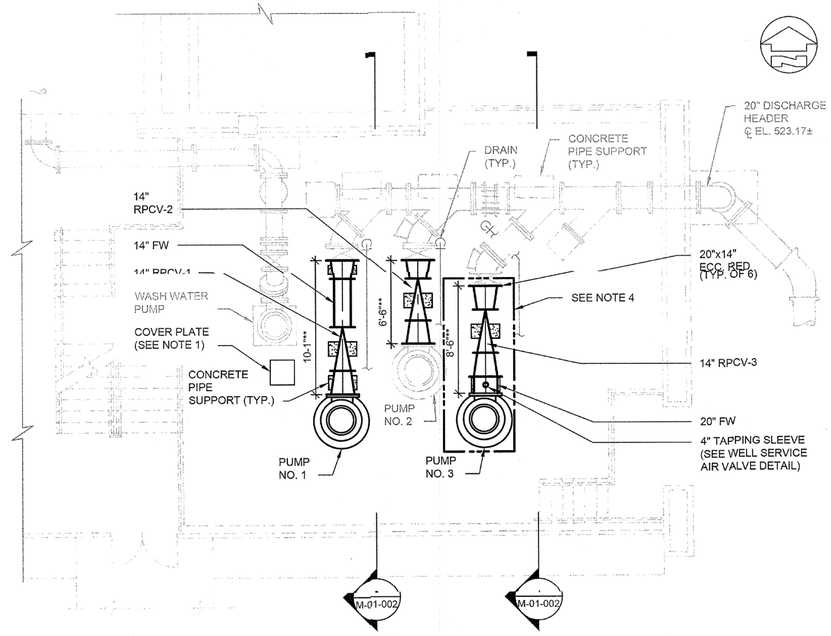
2 BASEMENT MODIFICATION PLAN

NOT TO SCALE

NOTES:

1. CONTRACTOR SHALL REMOVE AND REPLACE BUTTERFLY VALVES.

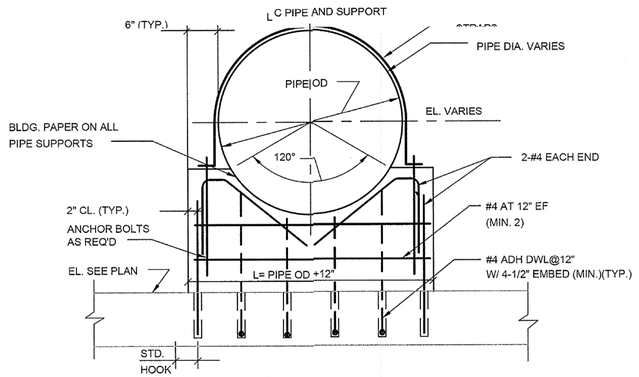


3 1ST FLOOR PLAN

NOT TO SCALE

NOTES:

1. CONTRACTOR SHALL PROVIDE AND INSTALL 1/4" GALVANIZED, PAINTED COVER PLATE OVER EXISTING OPENING. CONTRACTOR SHALL VERIFY SIZE REQUIRED. PAINTING AND ANCHOR HARDWARE PER CONTRACT DOCUMENTS.
2. CONTRACTOR SHALL CONNECT EACH RPCV TO ASSOCIATED EXISTING PVC DRAIN LINE AS REQUIRED.
3. DIMENSIONS MARKED WITH "*" SHALL BE DETERMINED IN FIELD BY CONTRACTOR. CONTRACTOR SHALL PROVIDE ANY ADDITIONAL PIPING, FITTINGS AND SPECIALTIES AS REQUIRED TO ASSEMBLE DISCHARGE PIPING. WHEN POSSIBLE, CONTRACTOR SHALL PROVIDE DISMANTLING JOINT.
4. WORK WITHIN THIS BOUNDARY LINE IS PART OF ALTERNATIVE NO. 2. SEE SPECIFICATION SECTION 01 23 00 FOR DESCRIPTION OF ALTERNATIVE NO. 2.

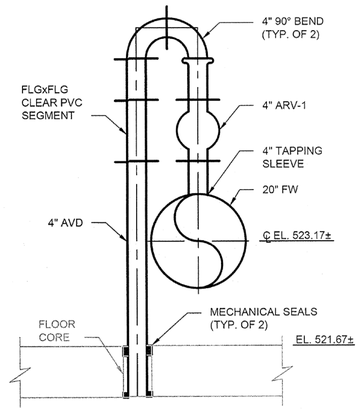


TYPICAL PIPE/VALVE SUPPORT DETAIL

NOT TO SCALE

NOTES:

1. SUPPORT TO BE 12" THICK. (U.O.N.)
2. COORDINATE LOCATION OF PIPE SUPPORTS WITH M SHEETS AND SPECIFICATIONS.



PUMP NO. 3 AIR VALVE DETAIL

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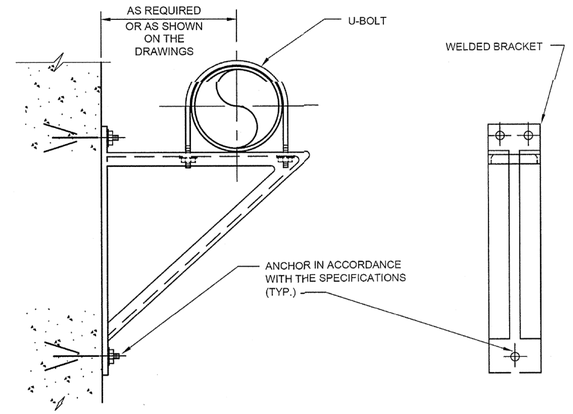

WALL BRACKET DETAIL

NOT TO SCALE

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12/20/13

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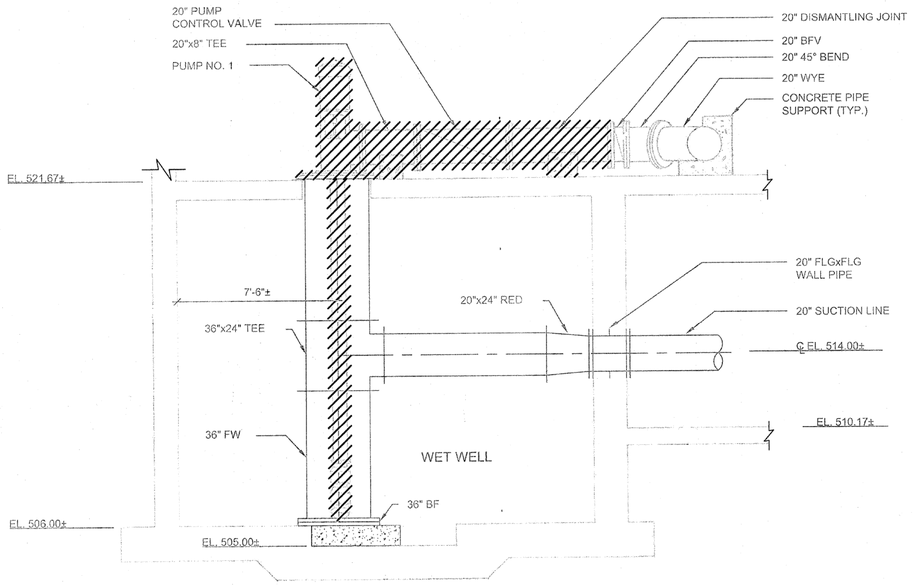
NORTHERN KENTUCKY WATER DISTRICT
TAYLOR MILL WATER TREATMENT PLANT
ELECTRICAL AND BASIN IMPROVEMENTS

FILTER BUILDING
FRONT PUMP ROOM AND BASEMENT MODIFICATION PLANS AND DETAILS
SCALE: N.T.S

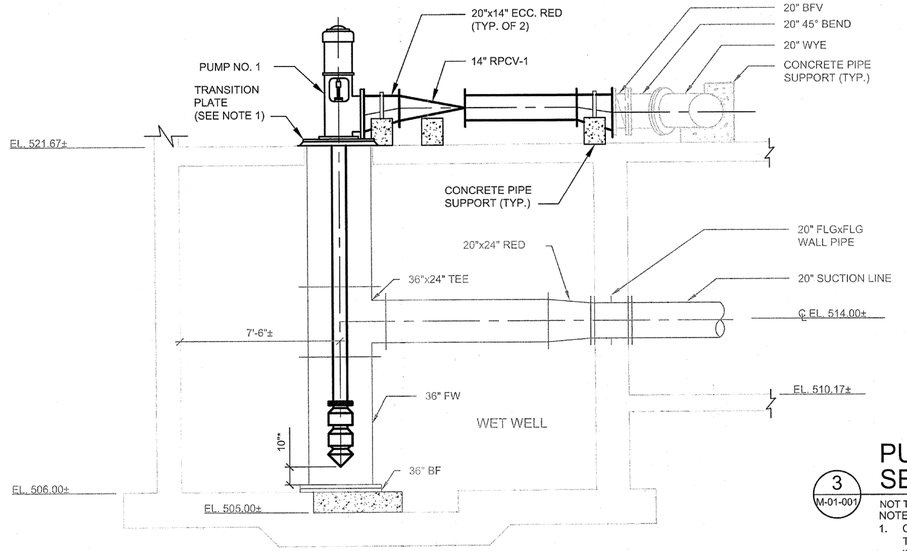
ISSUED STATUS: BID SET
DATE JANUARY 2014
SHEET M-01-001
CAD REF. NO. M-01-001.DWG



PUMP NO. 1 DEMO SECTION

1 / M-01-001

NOT TO SCALE



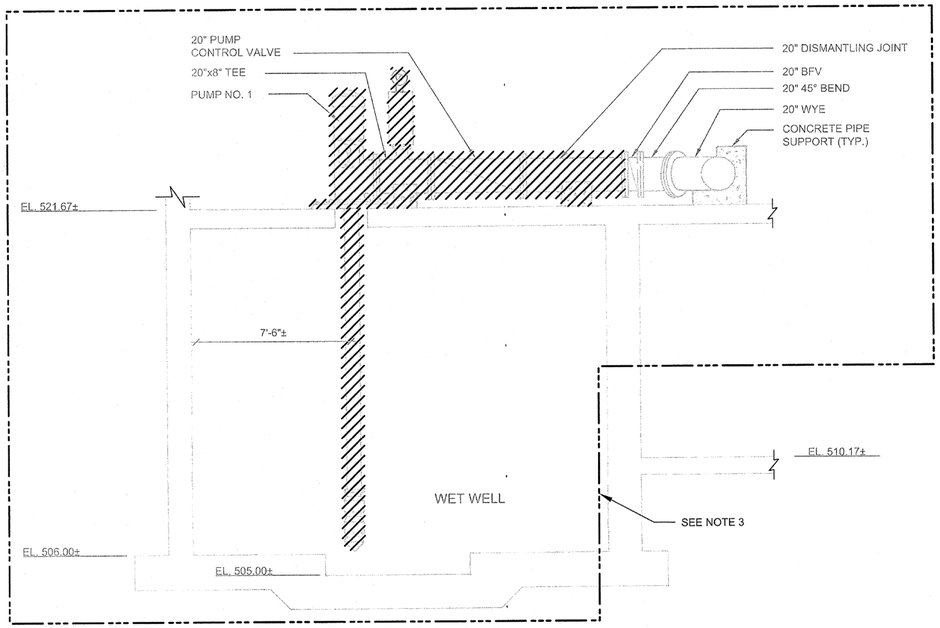
PUMP NO. 1 SECTION

3 / M-01-001

NOT TO SCALE

NOTES:

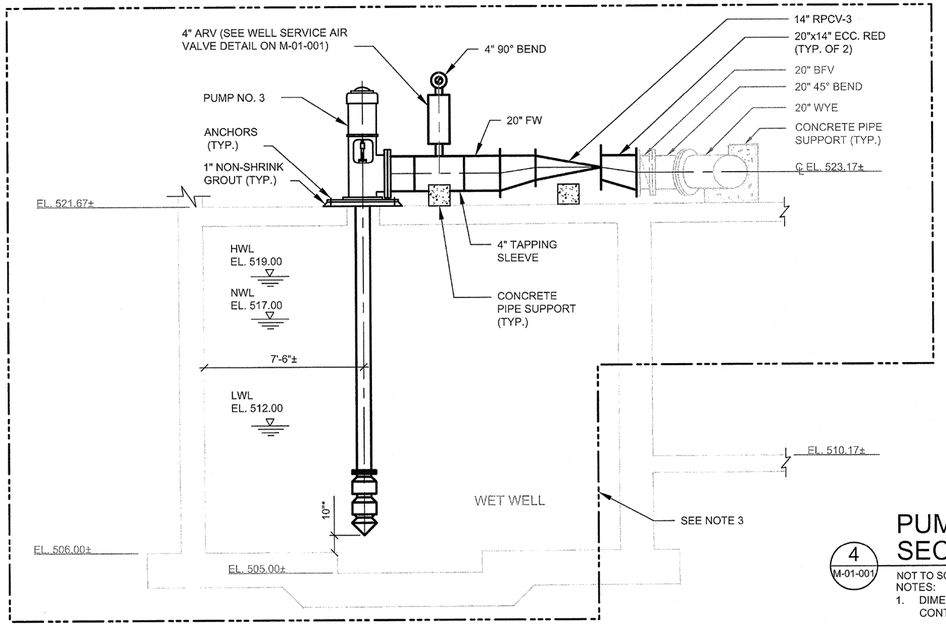
1. CONTRACTOR SHALL COORDINATE WITH PUMP MANUFACTURER TO PROVIDE / INSTALL REQUIRED TRANSITION PLATE FOR INSTALLATION OF NEW PUMP ONTO EXISTING CAN.
2. DIMENSIONS MARKED WITH A "±" SHALL BE COORDINATED BY CONTRACTOR WITH PUMP MANUFACTURER AND FIELD VERIFIED.



PUMP NO. 3 DEMO SECTION

2 / M-01-001

NOT TO SCALE



PUMP NO. 3 SECTION

4 / M-01-001

NOT TO SCALE

NOTES:

1. DIMENSIONS MARKED WITH A "±" SHALL BE COORDINATED BY CONTRACTOR WITH PUMP MANUFACTURER AND FIELD VERIFIED.
2. CONTRACTOR SHALL COORDINATE WITH PUMP MANUFACTURER AND PROVIDE ANCHORAGE OF PUMP NO. 3 WITH EXISTING SOLE PLATE.
3. WORK SHOWN WITHIN THIS BOUNDARY LINE IS PART OF ALTERNATIVE NO. 2. SEE SPECIFICATION SECTION 01 23 00 FOR DESCRIPTION OF ALTERNATIVE NO. 2.

0 1/2 1

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FRONT PUMP ROOM MODIFICATION SECTIONS
SCALE: N.T.S

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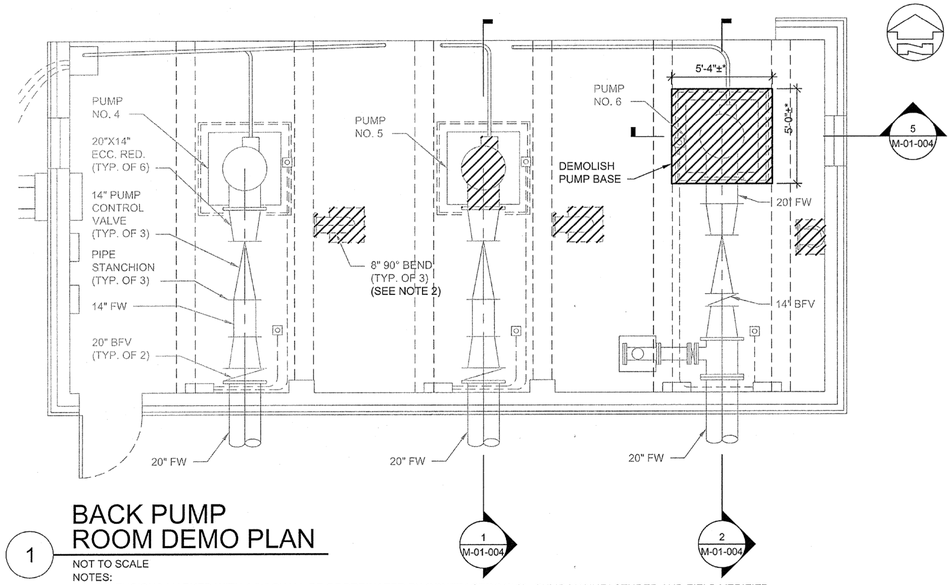
SHEET M-01-002
CAD REF. NO. M-01-002.DWG

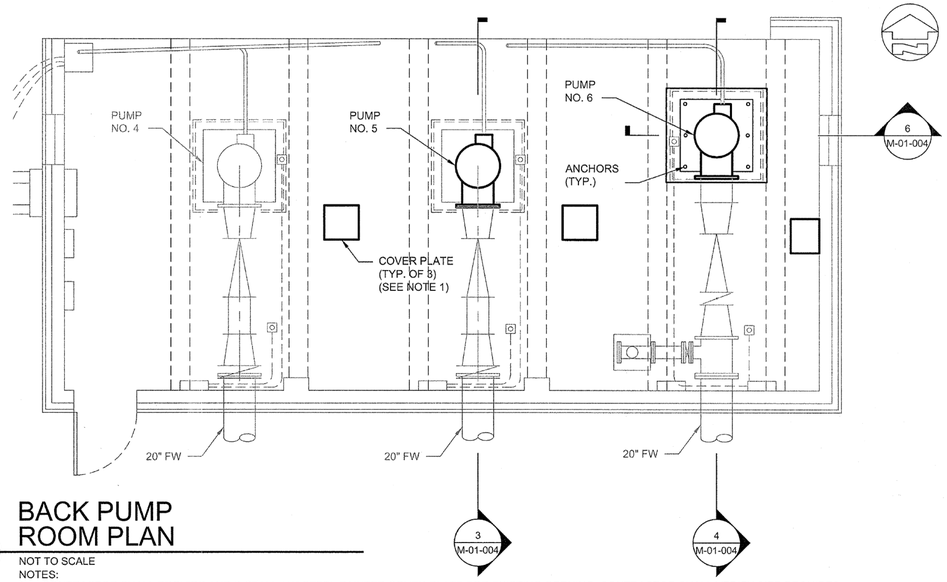


1 BACK PUMP ROOM DEMO PLAN

NOT TO SCALE

NOTES:

1. DIMENSIONS MARKED WITH A "±" SHALL BE COORDINATED BY CONTRACTOR WITH PUMP MANUFACTURER AND FIELD VERIFIED.
2. CONTRACTOR SHALL DEMOLISH BEND, PIPING, AND BASE PLATE. CONCRETE PAD TO REMAIN.

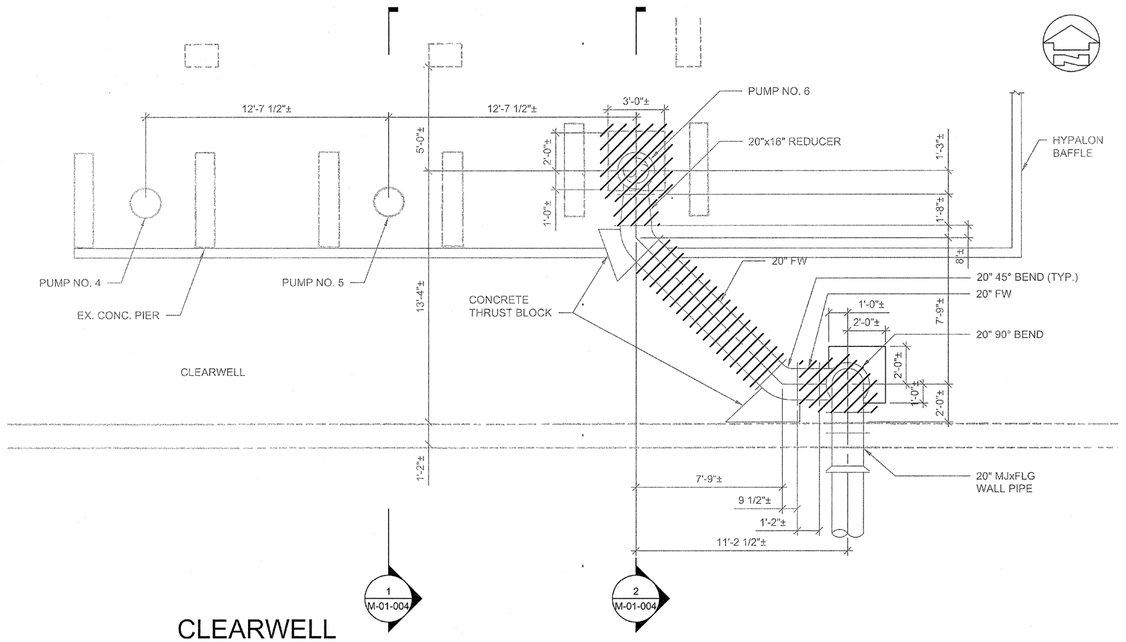


3 BACK PUMP ROOM PLAN

NOT TO SCALE

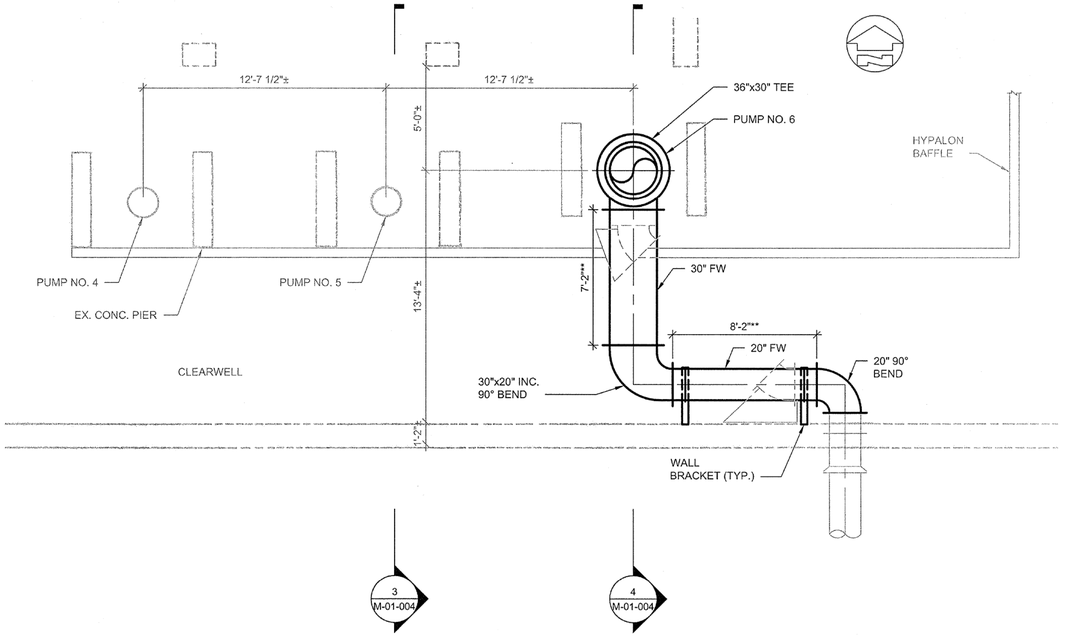
NOTES:

1. CONTRACTOR SHALL PROVIDE AND INSTALL 1/4" STEEL PAINTED COVER PLATE FOR EXISTING OPENING. CONTRACTOR SHALL VERIFY SIZE REQUIRED. PAINTING AND ANCHOR HARDWARE PER CONTRACT DOCUMENTS.
2. CONTRACTOR SHALL MODIFY PUMP DISCHARGE PIPING, VALVES, FITTINGS, AND APPURTENANCES AS REQUIRED FOR INSTALLATION OF NEW PUMPS.



2 CLEARWELL DEMO PLAN

NOT TO SCALE



4 CLEARWELL PLAN

NOT TO SCALE

NOTES:

1. DIMENSIONS MARKED WITH A "±" SHALL BE COORDINATED BY CONTRACTOR WITH PUMP MANUFACTURER AN FIELD VERIFIED.
2. DIMENSIONS MARKED WITH "**" SHALL BE DETERMINED IN FIELD BY CONTRACTOR. CONTRACTOR SHALL PROVIDE ANY ADDITIONAL PIPING, FITTINGS AND SPECIALTIES AS REQUIRED TO ASSEMBLE SUCTION PIPING. WHEN POSSIBLE, CONTRACTOR SHALL PROVIDE DISMANTLING JOINT.

0 1/2 1

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ELECTRICAL AND BASIN IMPROVEMENTS

FILTER BUILDING
BACK PUMP ROOM MODIFICATION PLANS
SCALE: N.T.S.

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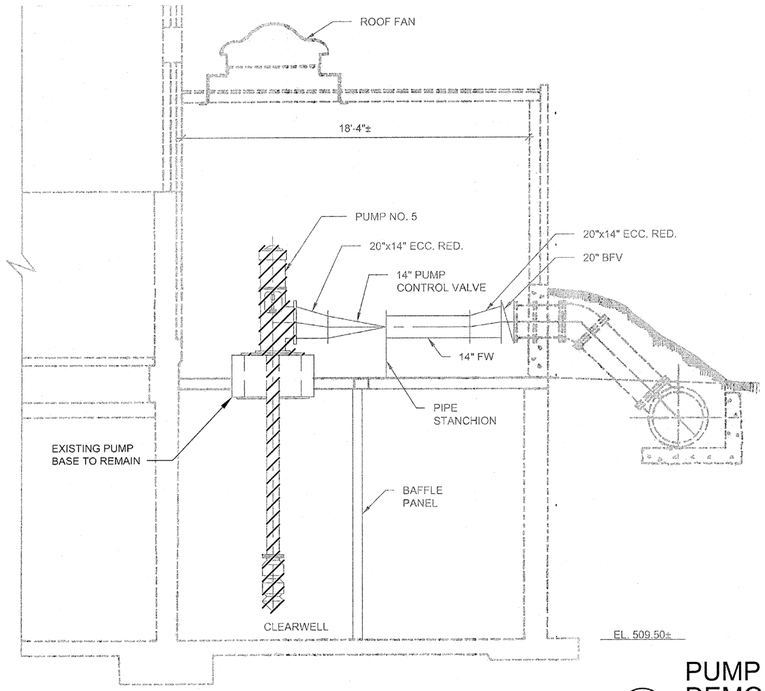
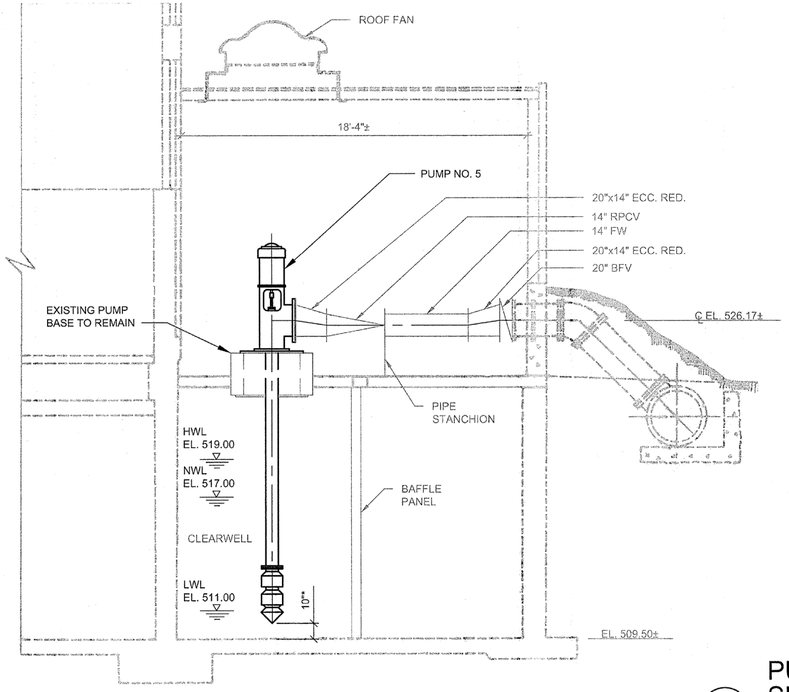
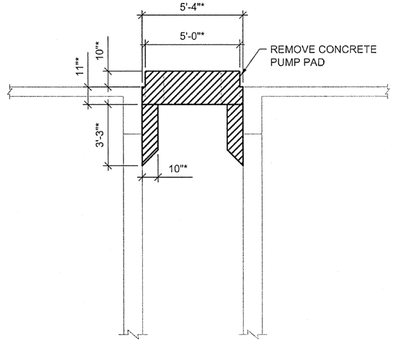
SHEET M-01-003
CAD REF. NO. M-01-003.DWG



1 M-01-004 **PUMP NO. 5 DEMO SECTION**
NOT TO SCALE



3 M-01-004 **PUMP NO. 5 SECTION**
NOT TO SCALE
NOTES:
1. DIMENSIONS MARKED WITH A "±" SHALL BE COORDINATED BY CONTRACTOR WITH PUMP MANUFACTURER AND FIELD VERIFIED.



5 M-01-004 **PUMP NO. 6 DEMO SECTION**
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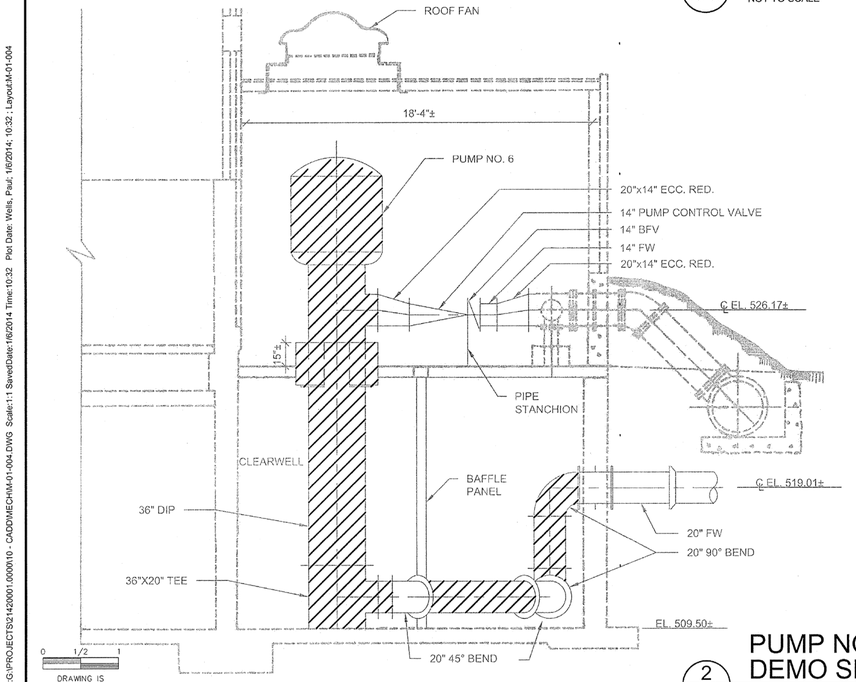
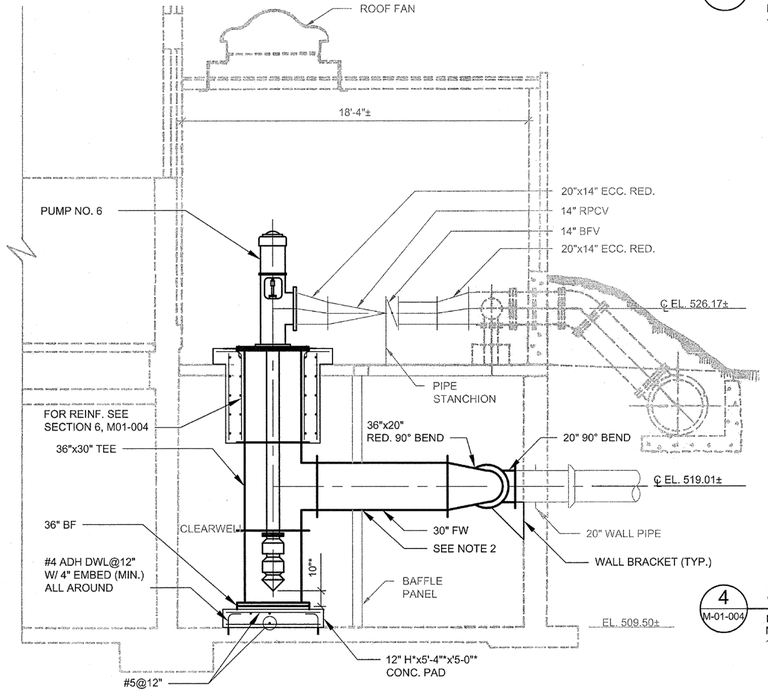
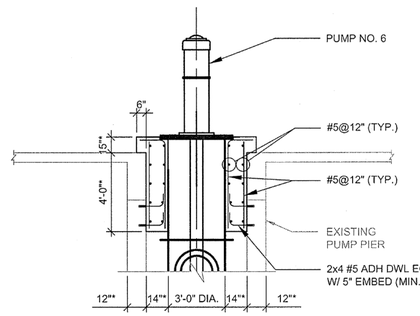


2 M-01-004 **PUMP NO. 6 DEMO SECTION**
NOT TO SCALE



4 M-01-004 **PUMP NO. 6 SECTION**
NOT TO SCALE
NOTES:
1. DIMENSIONS MARKED WITH A "±" SHALL BE COORDINATED BY CONTRACTOR WITH PUMP MANUFACTURER AND FIELD VERIFIED.
2. CONTRACTOR SHALL CUT OPENING IN BAFFLE PANEL AS REQUIRED TO ADEQUATELY INSTALL PIPING.



6 M-01-004 **PUMP NO. 6 SECTION**
NOT TO SCALE

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Electrical - Mechanical - Instrumentation

COMMONWEALTH OF KENTUCKY — Thomas M. ABBOTT — 25937 — LICENSED PROFESSIONAL ENGINEER — 12/24/13

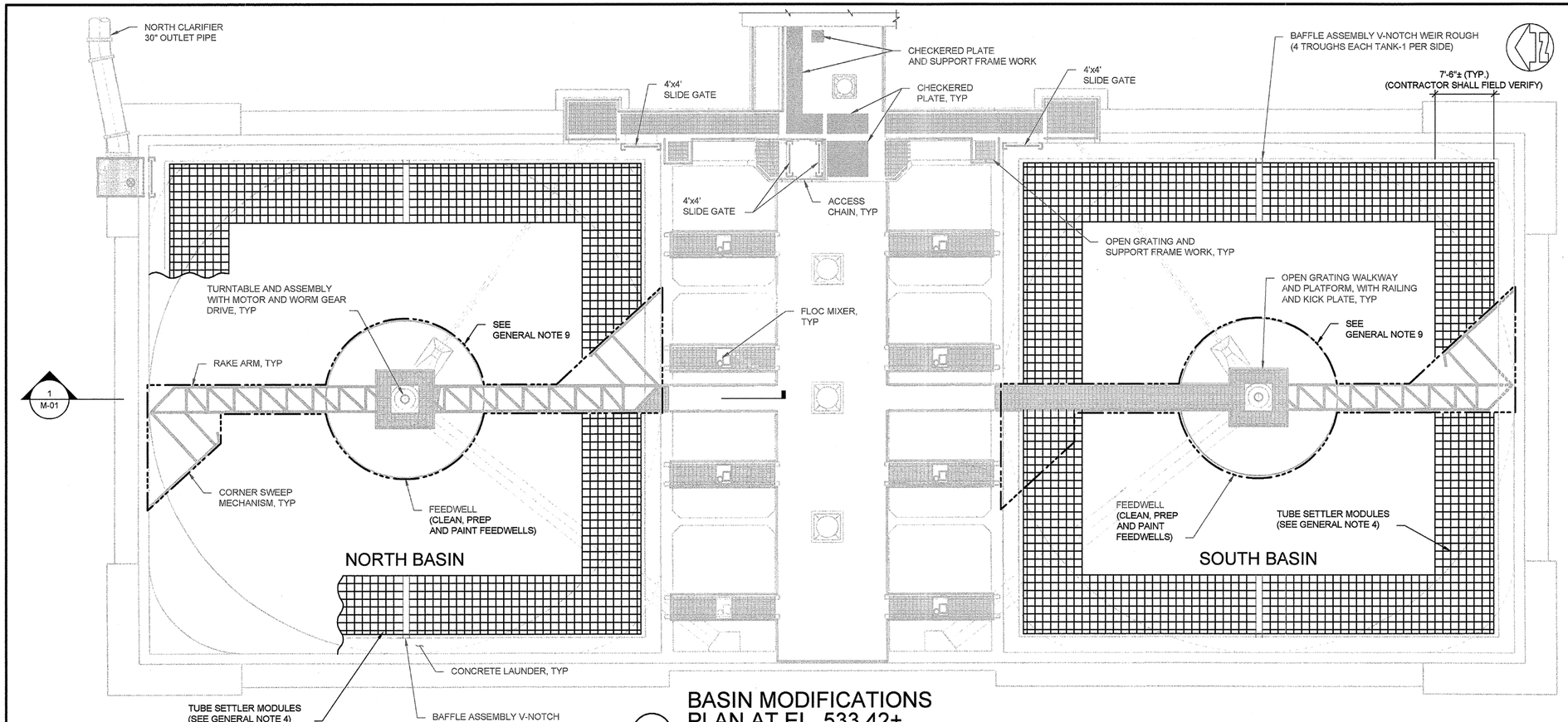
REVISIONS			
NO.	BY	DATE	REMARKS

DES JIL
DWN PJW
CKD JMA

NORTHERN KENTUCKY WATER DISTRICT
TAYLOR MILL WATER TREATMENT PLANT
ELECTRICAL AND BASIN IMPROVEMENTS

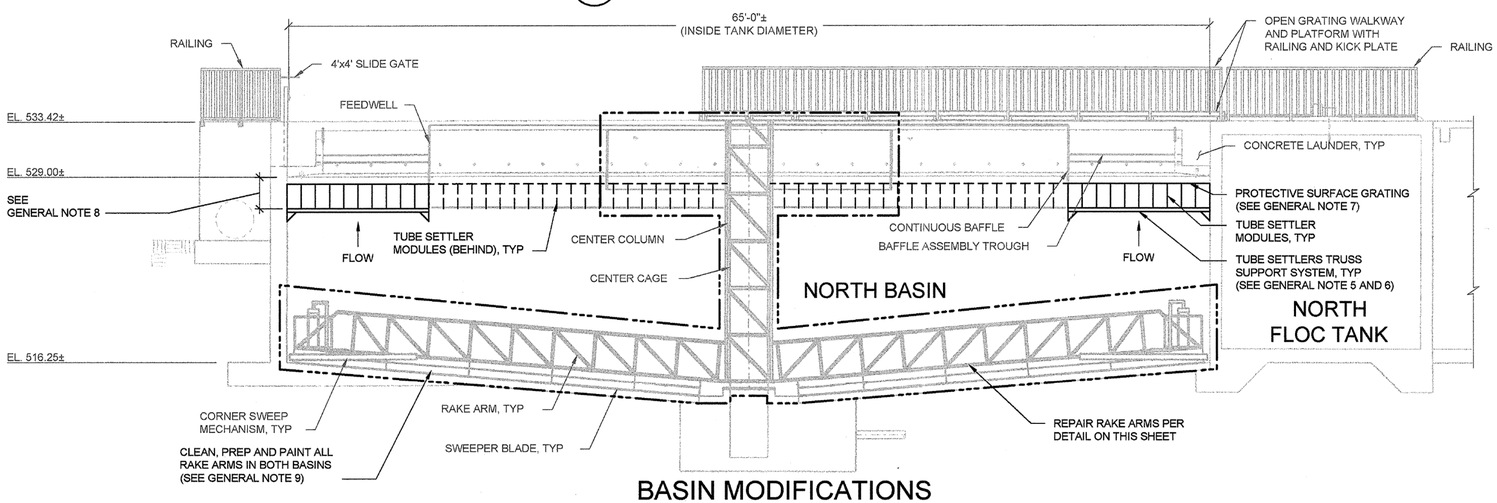
FILTER BUILDING
BACK PUMP ROOM MODIFICATION SECTIONS
SCALE: N.T.S.

ISSUED STATUS: BID SET
DATE JANUARY 2014
SHEET M-01-004
CAD REF. NO. M-01-004.DWG



1 BASIN MODIFICATIONS PLAN AT EL. 533.42±

NOT TO SCALE

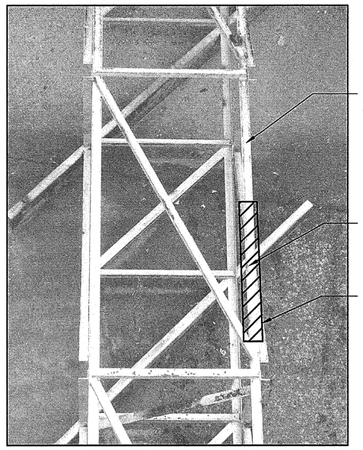


1 BASIN MODIFICATIONS SECTION 1

1 / M-01

NOT TO SCALE

NOTE: SOUTH BASIN ARRANGEMENT SIMILAR



RAKE ARM REPAIR DETAIL

NOT TO SCALE

RAKE ARM NOTES:

1. REPAIR SEDIMENTATION BASIN RAKE ARMS AS GENERALLY INDICATED. REFER TO REPAIR SCHEDULE ON SHEET S-02-008.
2. NO EXISTING INFORMATION REGARDING THE DESIGN OR CONSTRUCTION OF THE RAKE ARMS IS AVAILABLE. CONTRACTOR SHALL DETERMINE DIMENSIONS, MEMBER SIZES AND REVIEW EXISTING CONDITIONS ASSOCIATED WITH THE REPAIR PRIOR TO COMMENCING WITH THE WORK.
3. PROVIDE INFORMATION SUBMITTAL SUMMARIZING RESULTS OF FIELD MEASUREMENTS, INCLUDING DIMENSIONS AND MEMBER SIZES.
4. PROVIDE TEMPORARY SUPPORT OF RAKE ARMS DURING REPAIR.
5. REPAIR EXISTING STEEL RAKE ARMS BY PATCHING DETERIORATED AREAS WITH PAINTED STEEL Lx MATCHING EXISTING CONSTRUCTION AS DESIRED BY ENGINEER. Lx SHALL HAVE EQUAL LEGS OF SAME LENGTH AND THICKNESS AS EXISTING RAKE ARM CONSTRUCTION.
6. EXTEND PATCHING Lx A MINIMUM OF 12" BEYOND DETERIORATED AREAS.

GENERAL NOTES:

1. BASE DRAWING FROM 1999 RECORD DRAWINGS OF TAYLOR MILL PLANT CHEMICAL BUILDING, CLARIFIER, AND CLEARWELL IMPROVEMENTS PROJECT DESIGNED BY CH2M HILL.
2. CONTRACTOR SHALL TAKE ALL MEASURES NECESSARY TO PROTECT EXISTING PIPING, VALVES, EQUIPMENT, INSTRUMENTATION AND OTHER ITEMS DURING CONSTRUCTION.
3. EXISTING MISCELLANEOUS STRUCTURAL SUPPORTS AND OTHER MISCELLANEOUS APPURTENANCES NOT SHOWN. CONTRACTOR SHALL INSPECT EXISTING FACILITIES PRIOR TO SUBMITTING A BID TO DETERMINE ALL CONSTRAINTS THAT MAY AFFECT CONSTRUCTION ACTIVITIES AND INCLUDE ALL COSTS ASSOCIATED WITH THEM IN ITS BID.
4. CONTRACTOR SHALL DEMOLISH EXISTING TUBE SETTLER MODULES AND REPLACE WITH NEW TUBE SETTLER MODULES PER SECTION 46 43 73.
5. CONTRACTOR SHALL REUSE EXISTING TUBE SETTLER TRUSS SUPPORT SYSTEM FOR INSTALLATION OF NEW TUBE SETTLER MODULES PER SECTION 46 43 73.
6. CONTRACTOR SHALL FIELD VERIFY DIMENSIONS OF EXISTING TUBE SETTLERS TRUSS SUPPORT SYSTEM AND COORDINATE WITH MANUFACTURER OF TUBE SETTLERS PRIOR TO SUBMITTAL OF SHOP DRAWINGS FOR TUBE SETTLERS PER SECTION 46 43 73.
7. CONTRACTOR SHALL INSTALL NEW PROTECTIVE SURFACE GRATING PER SECTION 46 43 73.
8. CONTRACTOR SHALL FIELD MEASURE DISTANCE BETWEEN TOP OF TRUSS SUPPORT AND UNDERNEATH EXISTING EFFLUENT LAUNDER. NEW TUBE SETTLER MODULES AND PROTECTIVE SURFACE GRATING SHALL MAINTAIN EXISTING CLEARANCE UNDERNEATH EXISTING EFFLUENT LAUNDER.
9. WORK SHOWN WITHIN THIS BOUNDARY LINE IS PART OF ALTERNATIVE NO. 4. SEE SPECIFICATION SECTION 01 23 00 FOR DESCRIPTION OF ALTERNATIVE NO. 4.

0 1/2 1

DRAWING IS NOT TO SCALE IF THIS DOES NOT MEASURE 1 INCH.

MALCOLM PIRNIE | ARCADIS
The Water Division of ARCADIS

Magna ENGINEERS
Electrical · Mechanical · Instrumentation

STATE OF KENTUCKY
JASON M ABBOTT
25937
LICENSED PROFESSIONAL ENGINEER
12/26/13

REVISIONS			
NO.	BY	DATE	REMARKS

DES JIL
DWN PJW
CKD JMA

NORTHERN KENTUCKY WATER DISTRICT
TAYLOR MILL WATER TREATMENT PLANT
ELECTRICAL AND BASIN IMPROVEMENTS

MECHANICAL
BASIN MODIFICATION PLAN AND SECTION
SCALE: N.T.S.

ISSUED STATUS: BID SET
DATE JANUARY 2014
SHEET M-02-001
CAD REF. NO. M-02-001

GENERAL

1. ITEMS NOTED ON THE DRAWINGS SHALL BE CONSIDERED THE SAME AS NOTED ITEMS WHICH ARE GRAPHICALLY REPRESENTED IN THE SAME MANNER.

2. THE SYMBOLS, ABBREVIATIONS, AND LAP SPLICE AND EMBEDMENT TABLE ON THIS SHEET IS A COMPREHENSIVE STANDARD GUIDE FOR GENERAL USE ON ALL PROJECTS. THEREFORE NOT ALL THE SYMBOLS AND ABBREVIATIONS CONTAINED IN THIS LIST ARE NECESSARILY USED ON THIS PARTICULAR PROJECT AND SHOULD BE USED FOR CLARIFICATION ONLY.

3. QUALITY OF CONSTRUCTION REQUIRED, PERFORMANCE LEVELS OF WORKMANSHIP, MANUFACTURING AND INDUSTRY STANDARDS, STRENGTH AND PHYSICAL REQUIREMENTS OF MATERIALS, CONFORMANCE TO CODES AND REGULATIONS, GUARANTEES AND OTHER PROJECT REQUIREMENTS ARE SPECIFIED IN THE PROJECT MANUAL.

4. IF MATERIALS, QUANTITIES, STRENGTHS OR SIZES INDICATED BY THE DRAWINGS OR SPECIFICATIONS ARE NOT IN AGREEMENT WITH THESE NOTES, THE BETTER QUALITY AND/OR GREATER QUANTITY, STRENGTH OR SIZE INDICATED, SPECIFIED, OR NOTED SHALL BE PROVIDED.

5. PERFORM ALL WORK IN COORDINATION WITH ALL DRAWINGS AND INFORMATION RELATED TO STRUCTURAL WORK. ANY CHANGES TO THE EQUIPMENT REQUIRING CHANGES TO THE STRUCTURAL SYSTEMS SHALL BE REDESIGNED BY A PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF KENTUCKY AT NO COST TO THE OWNER AND SUBMITTED TO THE ENGINEER. SUBMITTAL SHALL BE ACKNOWLEDGED IN WRITING BEFORE BEGINNING CONSTRUCTION.

6. IT IS SOLELY THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE ERECTION PROCEDURE AND SEQUENCE TO ENSURE THE SAFETY OF THE STRUCTURE AND ITS COMPONENT PARTS DURING ERECTION. THIS INCLUDES, BUT IS NOT LIMITED TO, THE ADDITION OF WHATEVER TEMPORARY BRACING, GUYS OR TIE-DOWNS MAY BE NECESSARY. SUCH MATERIAL SHALL BE REMOVED AND SHALL REMAIN THE PROPERTY OF THE CONTRACTOR AFTER COMPLETION OF THE PROJECT.

7. FACILITIES HAVE BEEN DESIGNED FOR DESIGN LOADS SHOWN OR SPECIFIED. THE CONTRACTOR SHALL BE RESPONSIBLE FOR FACILITIES SUBJECT TO CONSTRUCTION LOADS EXCEEDING THE DESIGN LOADS AND SHALL NOTIFY THE ENGINEER OF ANY SUCH ADDITIONAL LOADS.

8. ALL DIMENSIONS AND ELEVATIONS NOTED THUS (*) ON STRUCTURES SHOWN ON THE DRAWINGS SHALL BE VERIFIED BY THE CONTRACTOR IN THE FIELD OR WITH THE EQUIPMENT MANUFACTURER AND SHALL CONFORM TO THOSE SHOWN ON OTHER DRAWINGS.

9. DESIGN LOADS: BASED ON THE KENTUCKY BUILDING CODE, 2007 EDITION.

   FLOOR LIVE LOADS:
   - SEE PLANS

   SNOW LOAD:

- GROUND SNOW LOAD, Pg	20 PSF
- SNOW EXPOSURE FACTOR	0.9
- SNOW LOAD IMPORTANCE FACTOR:	1.1
- THERMAL FACTOR	1.1

   WIND LOAD:

- BASIC WIND SPEED	90 MPH
- WIND IMPORTANCE FACTOR:	1.15
- WIND EXPOSURE	C
- COMPONENTS AND CLADDING (SEE SPECIFICATIONS)	

   EARTHQUAKE DESIGN DATA:

- SEISMIC IMPORTANCE FACTOR:	1.25
- OCCUPANCY CATEGORY	III
- SPECTRAL RESPONSE ACCELERATIONS, S_S	0.180
- SPECTRAL RESPONSE ACCELERATIONS, S_1	0.076
- SITE CLASS	D
- SPECTRAL RESPONSE COEFFICIENT, S_{DS}	0.144
- SPECTRAL RESPONSE COEFFICIENT, S_{D1}	0.086
- SEISMIC DESIGN CATEGORY	B

10. FOR PAINTING SYSTEM REQUIREMENTS REFER TO SPECIFICATION SECTION 09 91 00.

CAST-IN-PLACE CONCRETE

1. CONCRETE SHALL HAVE THE FOLLOWING MINIMUM COMPRESSIVE STRENGTH AT 28 DAYS:

A. 4,500 POUNDS PER SQUARE INCH (PSI) WITH ENTRAINED AIR FOR ALL CONCRETE UNLESS SPECIFICALLY NOTED OTHERWISE.

2. ALL CONCRETE WORK NOT COVERED UNDER ACI 350 SHALL BE IN ACCORDANCE WITH "THE BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE" ACI 318. TOLERANCES SHALL BE IN ACCORDANCE WITH ACI 347, SECTION 3.3.1, TOLERANCES FOR REINFORCED CONCRETE BUILDINGS.

3. ALL REINFORCING STEEL SHALL BE NEW DOMESTIC DEFORMED BILLET STEEL CONFORMING TO ASTM A-615 GRADE 60.

4. ALL REINFORCING DETAILS SHALL CONFORM TO "DETAILS AND DETAILING OF CONCRETE REINFORCEMENT", ACI 315, UNLESS DETAILED OTHERWISE ON THE STRUCTURAL DRAWINGS.

5. CONTRACTOR SHALL REVIEW ALL DRAWINGS FOR SIZE AND LOCATION OF EMBEDDED ITEMS, SLEEVES, SLAB DEPRESSIONS, REQUIRED. THESE ITEMS SHALL BE FURNISHED AND INSTALLED PRIOR TO PLACEMENT OF CONCRETE.

6. ALL BEAMS, SPANDRELS AND SLABS SHALL BE CAST MONOLITHICALLY, EXCEPT FOR REQUIRED CONSTRUCTION JOINTS. CONTRACTOR SHALL SUBMIT ANY AND ALL ALTERNATE AND ADDITIONAL CONSTRUCTION JOINT LOCATIONS AND DETAILS.

7. CONSTRUCTION JOINTS REQUIRED BY THE ENGINEER ARE SHOWN ON THE DRAWINGS. ADDITIONAL CONSTRUCTION JOINTS SHALL BE PROVIDED AS OUTLINED IN SPECIFICATIONS. REINFORCEMENT SHALL BE CONTINUOUS ACROSS CONSTRUCTION JOINTS. SUBMIT ALL CONSTRUCTION JOINT LOCATIONS WITH REINFORCING STEEL SHOP DRAWINGS.

8. CONTRACTOR SHALL PROVIDE 3/4 INCH CHAMFER USING WOOD CHAMFER STRIPS ON ALL EXPOSED CORNERS OF COLUMNS, BEAMS AND WALLS, OR AS REQUIRED TO MATCH EXISTING.

9. COVER FOR REINFORCING STEEL SHALL CONFORM TO THE FOLLOWING:

   TYPICAL REINFORCING BAR COVER TABLE

CONCRETE CAST AGAINST EARTH	3"
REINFORCING TO CLEAR WATERSTOP	3"
SURFACES EXPOSED TO LIQUIDS, EARTH OR WEATHER	2"
ALL OTHER SURFACES	2"

10. PROVIDE WATERSTOPS IN ALL FOUNDATIONS, TANKS AND OTHER SUBSTRUCTURES UP TO AN ELEVATION AT LEAST 12 INCHES ABOVE GRADE OR TO AN ELEVATION AT LEAST 12 INCHES ABOVE LIQUID LEVEL IN TANKS, WHICHEVER IS HIGHER, UNLESS SHOWN OTHERWISE.

11. CALCIUM CHLORIDE SHALL NOT BE PERMITTED NOR SHALL ANY ADMIXTURE CONTAINING CALCIUM CHLORIDE BE PERMITTED THAT RESULTS IN A TOTAL CONCRETE MIX IN WHICH THE PRESENCE OF CHLORIDE IONS EXCEED 0.10 PERCENT BY WEIGHT OF CEMENT.

12. ALUMINUM PIPE SHALL NOT BE USED WITH CONCRETE PUMPS.

13. CONTRACTOR SHALL LOCATE ALL EXISTING REINFORCING PRIOR TO INSTALLING ADHESIVE DOWELS AND ADHESIVE AND MECHANICAL ANCHORS. CONTRACTOR SHALL USE X-RAY TYPE NON-DESTRUCTIVE INSPECTION METHOD.

SPECIAL INSPECTION

1. OWNER WILL RETAIN THE INSPECTION SERVICES FOR SPECIAL INSPECTION. ON SITE INSPECTION WILL BE IN ACCORDANCE TO THE KENTUCKY BUILDING CODE - SECTION 17 REGULATIONS UNDER THE SUPERVISION OF A QUALIFIED INSPECTOR.

2. TESTING SERVICES SHALL BE PERFORMED AS STIPULATED BY THE SPECIFICATIONS.

3. CONTRACTOR SHALL NOTIFY INSPECTION AT LEAST 48 HOURS PRIOR TO THE START OF WORK.

EXISTING CONCRETE

1. EXISTING MATERIAL PROPERTIES UTILIZED FOR ANALYSIS:
   - CONCRETE COMPRESSIVE STRENGTH = 3,000 PSI
   - REINFORCING STEEL YIELD STRENGTH = 40,000 PSI

2. EXISTING CONCRETE REFERS TO CONCRETE WHICH IS IN PLACE PRIOR TO THE START OF THIS PROJECT.

3. PRIOR TO BEGINNING DEMOLITION WORK OF EXISTING CONCRETE PROVIDE ALL NECESSARY TEMPORARY SUPPORTS AND LOCATE AND PROTECT ALL ELECTRICAL CONDUITS AND PIPES AS OUTLINED IN SPECIFICATIONS.

4. REMOVE EXISTING CONCRETE GENERALLY WITHIN THE LIMITS SHOWN ON THE DRAWINGS.

5. WHERE EXISTING REINFORCING IS SHOWN ON THE DESIGN DRAWINGS AS PROJECTING INTO NEW CONCRETE WORK, THE EXISTING REINFORCING SHALL PROJECT INTO THE NEW CONCRETE THE MINIMUM LAP LENGTH AS NOTED IN THE "LAP SPLICE AND EMBEDMENT LENGTH TABLE". REMOVE ALL FOREIGN MATERIAL FROM SURFACE OF EXISTING REINFORCING WITH A WIRE BRUSH OR OTHER MEANS.

6. WHERE NEW REINFORCING DOWELS ARE SHOWN TO BE EMBEDDED INTO THE EXISTING CONCRETE, THE NEW DOWELS SHALL BE INSTALLED INTO INTO THE DEPTH OF HOLE NOTED OR REQUIRED TO FULLY DEVELOP THE TENSILE STRENGTH OF THE REINFORCING BAR. USE ADHESIVE MATERIAL, HOLE DIAMETERS AND DEPTH, AND INSTALLATION PROCEDURES AS REQUIRED BY THE MANUFACTURER AND OUTLINED IN SPECIFICATIONS.

7. WHERE NEW REINFORCING DOWELS ARE PROPOSED BY CONTRACTOR TO REPLACE CUT OR DAMAGED EXISTING REINFORCING, SUBMIT LOCATIONS AND DEPTHS FOR APPROVAL PRIOR TO COMMENCEMENT OF WORK.

8. PROVIDE CHAMFERS ON NEW CONCRETE WORK WHERE REQUIRED TO MATCH CHAMFERS ON EXISTING CONCRETE WORK.

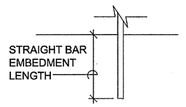
9. WHERE REQUIRED TO SECURE BACKFILLED MATERIAL OR MAKE EXISTING CONCRETE WATERTIGHT, FILL ALL ABANDONED PIPE SLEEVES, AND OTHER OPENINGS WITH NON-SHRINK GROUT.

10. AFTER REMOVAL OF PART OR ALL OF EXISTING CONCRETE WORK, WHICH TIES INTO NEW OR EXISTING WORK, THE EXPOSED AREAS OF THE EXISTING WORK SHALL BE NEATLY REPAIRED AS OUTLINED IN SPECIFICATIONS. PROPERLY CLEAN AND ROUGHEN SURFACE AND APPLY BONDING ADHESIVE PRIOR TO PLACING THE SPECIFIED SPECIFIED CONCRETE SURFACE REPAIR MATERIAL.

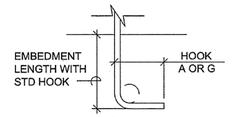
11. WHERE DEMOLITION OF EXISTING STRUCTURES IS PERFORMED, IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO MAINTAIN THE INTEGRITY OF ADJACENT STRUCTURES AND TO PREVENT DAMAGE TO EXISTING FACILITIES AND EQUIPMENT.

REINFORCEMENT LAP SPLICE, EMBEDMENT LENGTH AND STANDARD HOOKS

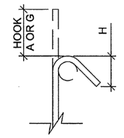
BAR SIZE	MIN LAP LENGTHS FOR: BEAMS AND COLUMNS* CLASS B TOP***	BEAMS AND COLUMNS* CLASS B OTHERS	SLABS AND WALLS ** CLASS B TOP***	SLABS AND WALLS ** CLASS B OTHERS	MIN EMBEDMENT LENGTHS: FOR BEAMS AND COLUMNS * TOP***	FOR BEAMS AND COLUMNS * OTHERS	FOR SLABS AND WALLS ** TOP***	FOR SLABS AND WALLS ** OTHERS	WITH STD HOOKS	MIN STD. HOOKS: 90° A OR G	135° A OR G	135° H
#3	25	19	16	16	19	15	12	12	5	6	4	2.5
#4	33	25	20	16	25	19	15	12	7	8	4.5	3
#5	41	31	25	19	31	24	19	15	9	10	5.5	3.75
#6	49	37	29	23	37	29	23	18	10	12	8	4.5
#7	71	54	43	33	54	42	33	25	12	14	9	5.25
#8	81	62	49	37	62	48	37	29	14	16	10.5	6
#9	91	70	60	46	70	54	46	36	15	19	-	-
#10	102	79	74	57	79	61	57	44	17	22	-	-
#11	114	87	89	69	87	67	68	53	19	24	-	-



STRAIGHT



90° HOOK



135° HOOK

REINFORCEMENT LAP SPLICE, EMBEDMENT LENGTH AND STANDARD HOOKS TABLE IS BASED ON A MINIMUM CONCRETE COMPRESSIVE STRENGTH OF 4000 PSI AND 60000 PSI REINFORCEMENT (WITH NO EPOXY COATING).

ALL LAPS SPLICES SHALL BE CLASS B SPLICES.

* THE MINIMUM LAP LENGTH FOR BEAMS, COLUMNS, AND STRAIGHT EMBEDMENTS ARE BASED ON A 3 BAR DIAMETER MINIMUM CENTER TO CENTER BAR SPACING AND A 2 INCH BAR COVER. IF THE SPLICE AND/OR EMBEDMENT DOES NOT CONFORM TO THESE REQUIREMENTS, THEN CONTRACTOR SHALL APPLY APPROPRIATE FACTORS IN COMPLIANCE WITH ACI 318 WITH APPROVAL BY ENGINEER.

** THE MINIMUM LAP LENGTH FOR SLABS, WALLS, AND STRAIGHT EMBEDMENTS ARE BASED ON A 6 INCH BAR SPACING AND A 2 INCH BAR COVER. IF THE LAP CONDITION DOES NOTE CONFORM TO THESE REQUIREMENTS, THEN USE BEAM LAP LENGTHS; OR COMPLY WITH LAP REQUIREMENTS OF ACI 318 WITH APPROVAL BY ENGINEER.

*** TOP BARS ARE DEFINED AS ALL HORIZONTAL BARS, EXCLUDING WALL BARS, WITH 12" OR MORE FRESH CONCRETE BENEATH.

WHERE SPLICES ARE REQUIRED BETWEEN BARS OF DIFFERENT SIZES, THE LAP LENGTH SHALL BE NO LESS THAN THE EMBEDMENT LENGTH OF THE LARGER BAR OR THE LAP LENGTH OF THE SMALLER BAR, WHICHEVER IS GREATER.

LAP SPLICE AND EMBEDMENT LENGTH TABLE

SYMBOLS

- UNDISTURBED SOIL
- ROCK
- SUBBASE
- MUDMAT
- SELECT BACKFILL
- GENERAL FILL
- GRATING
- PLANK GRATING
- STEEL
- CHECKERED PLATE
- BRICK
- CMU
- CONCRETE
- GROUT

ABBREVIATIONS

AB	- ANCHOR BOLT
ADD'L.	- ADDITIONAL
ADJ.	- ADJUSTABLE
ALT.	- ALTERNATE
ALUM.	- ALUMINUM
ANCH.	- ANCHOR
AND	- &
ARCH.	- ARCHITECT OR ARCHITECTURAL
ASTM	- AMERICAN SOCIETY FOR TESTING MATERIALS
@	- AT
BSMT.	- BASEMENT
BITUM.	- BITUMINOUS
B/	- BOTTOM OF
BOT.	- BOTTOM
℄	- BUILDING LINE
BLDG.	- BUILDING
BLK.	- BLOCK
BM	- BEAM
B PL	- BASE PLATE
BRG.	- BEARING
BRP	- BUILDING REFERENCE POINT
BT PL.	- BENT PLATE
C/C	- CENTER TO CENTER
CJ	- CONSTRUCTION JOINT
℄	- CENTERLINE
CLR.	- CLEAR
CMU	- CONCRETE MASONRY UNIT
COL.	- COLUMN
CTR.	- CENTER
CONC.	- CONCRETE
CONST.	- CONSTRUCTION
CONT.	- CONTINUOUS
CONTL.	- CONTROL
DEPR.	- DEPRESSION
DET.	- DETAIL
DI	- DUCTILE IRON
DIA.	- DIAMETER
DIM.	- DIMENSION
DL	- DEAD LOAD
DIST.	- DISTANCE
DWG.	- DRAWING
DWL.	- DOWEL
EA.	- EACH
EE	- EACH END
EF	- EACH FACE
EJ	- EXPANSION JOINT
EL.	- ELEVATION
ELEC.	- ELECTRICAL
E.	- EAST
EMBD.	- EMBEDDED
EW	- EACH WAY
EQ.	- EQUAL
EXIST.	- EXISTING
EXP.	- EXPANSION
EXT.	- EXTERIOR
FDN.	- FOUNDATION
FE	- FIRE EXTINGUISHER
FIN.	- FINISH
FL	- FINISH LINE
FLR.	- FLOOR
FRP	- FIBERGLASS REINFORCED PLASTIC
FF	- FAR FACE
FTG.	- FOOTING
FT.	- FOOT
GA.	- GAGE
GALV.	- GALVANIZED
GR.	- GRADE
GRD.	- GROUND
GYP BD	- GYPSUM BOARD
HORIZ.	- HORIZONTAL
HP	- HIGH POINT
HHP	- HIGH HIGH POINT
HR.	- HANDRAIL
HT.	- HEIGHT
HS.	- HIGH STRENGTH
ID	- INSIDE DIAMETER
IF	- INSIDE FACE
INT.	- INTERIOR
INV.	- INVERT
INSUL.	- INSULATION
JT.	- JOINT
K.	- KIP (1000 POUNDS)
KB	- KNEE BRACE
LB.	- POUNDS
LL	- LIVE LOAD
LLBB	- LONG LEG BACK-TO-BACK
LG.	- LONG
LLH	- LONG LEG HORIZONTAL
LLV	- LONG LEG VERTICAL
LONG.	- LONGITUDINAL
LP	- LOW POINT
LW	- LIGHT WEIGHT
MFG.	- MANUFACTURER
MAS.	- MASONRY
MAX.	- MAXIMUM
MID.	- MIDDLE
MIN.	- MINIMUM
MK.	- MARK
MO	- MASONRY OPENING
NA	- NOT APPLICABLE
N.	- NORTH
NF	- NEAR FACE
NTS	- NOT TO SCALE
OC	- ON CENTER
OD	- OUTSIDE DIAMETER
OH.	- OVERHEAD
OPNG.	- OPENING
OPP.	- OPPOSITE
□	- PLATE
PC	- PRECAST
PSF	- POUNDS PER SQUARE FOOT
RAD.	- RADIUS
R.	- RISER
REINF.	- REINFORCING
REQ'D.	- REQUIRED
REQ'MTS.	- REQUIREMENTS
RM.	- ROOM
RO	- ROUGH OPENING
S.	- SOUTH
SCHED.	- SCHEDULE
SECT.	- SECTION
SF	- SQUARE FEET
SHT.	- SHEET
SIM.	- SIMILAR
SJ	- STEEL JOIST
SLBB	- SHORT LEG BACK-TO-BACK
SLV	- SHORT LEG VERTICAL
SPA.	- SPACES OR SPACING
SPRD.	- SPREAD
ST STL	- STAINLESS STEEL
STA.	- STATION
STD.	- STANDARD
STL.	- STEEL
STR.	- STRUCTURAL
SUP.	- SUPPORT
SYM.	- SYMMETRICAL
T.	- TREAD
T/	- TOP OF
T&B	- TOP AND BOTTOM
TEMP.	- TEMPORARY
THK.	- THICK
TOM	- TOP OF MASONRY
TOS	- TOP OF STEEL
TYP.	- TYPICAL
UON	- UNLESS OTHERWISE NOTED
VERT.	- VERTICAL
W/	- WITH
W.	- WEST
W/O	- WITHOUT
WP	- WORK POINT
WS.	- WATER STOP
WT	- WEIGHT
WWF	- WELDED WIRE FABRIC

0 1/2 1

DRAWING IS NOT TO SCALE IF THIS DOES NOT MEASURE 1 INCH.

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The Water Division of ARCADIS
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JAMES V. CAULEY
22541
LICENSED PROFESSIONAL ENGINEER
12/06/13

REVISIONS			
NO.	BY	DATE	REMARKS

DES JH
DWN JJH
CKD IVC

NORTHERN KENTUCKY WATER DISTRICT
TAYLOR MILL WATER TREATMENT PLANT
ELECTRICAL AND BASIN IMPROVEMENTS

STRUCTURAL
GENERAL STRUCTURAL NOTES, AND ABBREVIATIONS
SCALE: N.T.S.

ISSUED STATUS: BID SET
DATE JANUARY 2014
SHEET S-00-001
CAD REF. NO. 2142001S01

1 OVERALL DEMOLITION PLAN

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

0 4' 8' 16'

GENERAL NOTES:

1. REMOVE AND RE-INSTALL AFTER CONCRETE WORK IS COMPLETED.
2. FOR PLAN DIMENSIONS SEE SHEETS 003 AND 005.

** REMOVE DETERIORATED CONCRETE DOWN TO SOUND CONCRETE. LIMITS PROVIDED ARE FOR BID PURPOSES AND MAY BE ADJUSTED FOR REMOVAL. ADJUSTMENTS SHALL NOT OCCUR WITHOUT THE ENGINEER'S APPROVAL.

0 1/2 1
DRAWING IS NOT TO SCALE IF THIS DOES NOT MEASURE 1 INCH.

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22541
LICENSED PROFESSIONAL ENGINEER
10/16/13

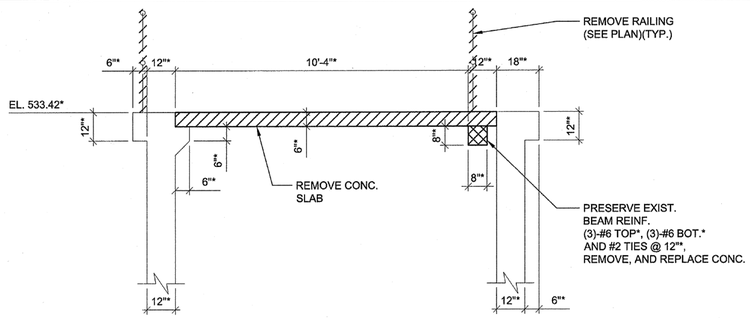
REVISIONS			
NO.	BY	DATE	REMARKS

DES JH
DWN JJH
CKD IVC

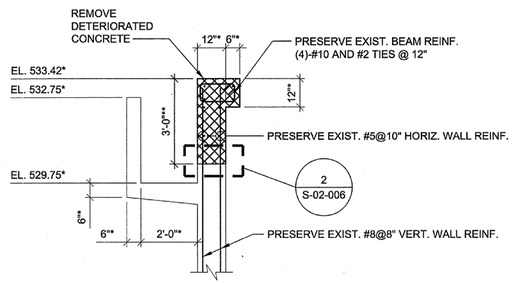
NORTHERN KENTUCKY WATER DISTRICT
TAYLOR MILL WATER TREATMENT PLANT
ELECTRICAL AND BASIN IMPROVEMENTS

STRUCTURAL
OVERALL DEMOLITION PLAN
SCALE: 1/8" = 1'-0"

ISSUED STATUS: BID SET
DATE JANUARY 2014
SHEET S-02-001
CAD REF. NO. 2142001S02



1 SECTION S-02-001



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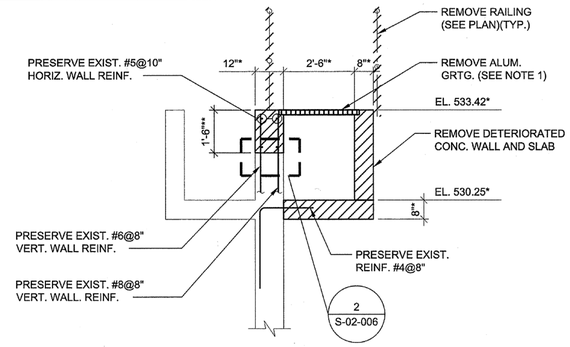

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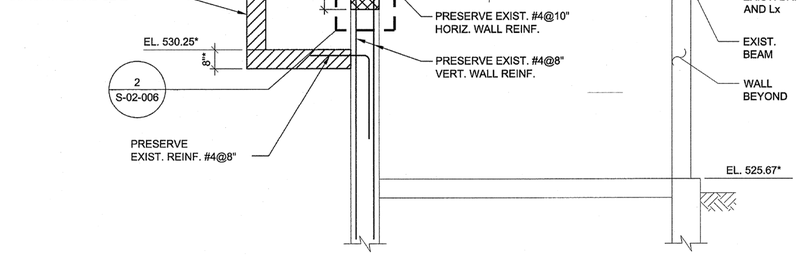
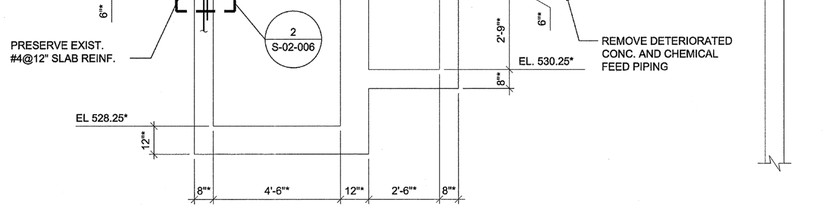
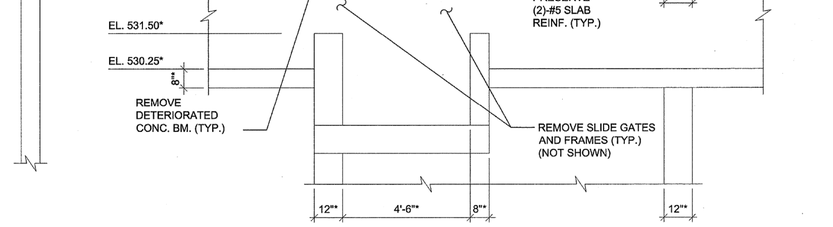


4 SECTION S-02-001



5 SECTION S-02-001



6 SECTION S-02-001

GENERAL NOTE:

1. REMOVE AND RE-INSTALL AFTER CONCRETE WORK IS COMPLETED.

** REMOVE DETERIORATED CONCRETE DOWN TO SOUND CONCRETE. LIMITS PROVIDED ARE FOR BID PURPOSES AND MAY BE ADJUSTED DURING REMOVAL. ADJUSTMENTS SHALL NOT OCCUR WITHOUT THE ENGINEER'S APPROVAL.

0 1/2 1
DRAWING IS NOT TO SCALE IF THIS DOES NOT MEASURE 1 INCH.

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LICENSED PROFESSIONAL ENGINEER
12/30/13

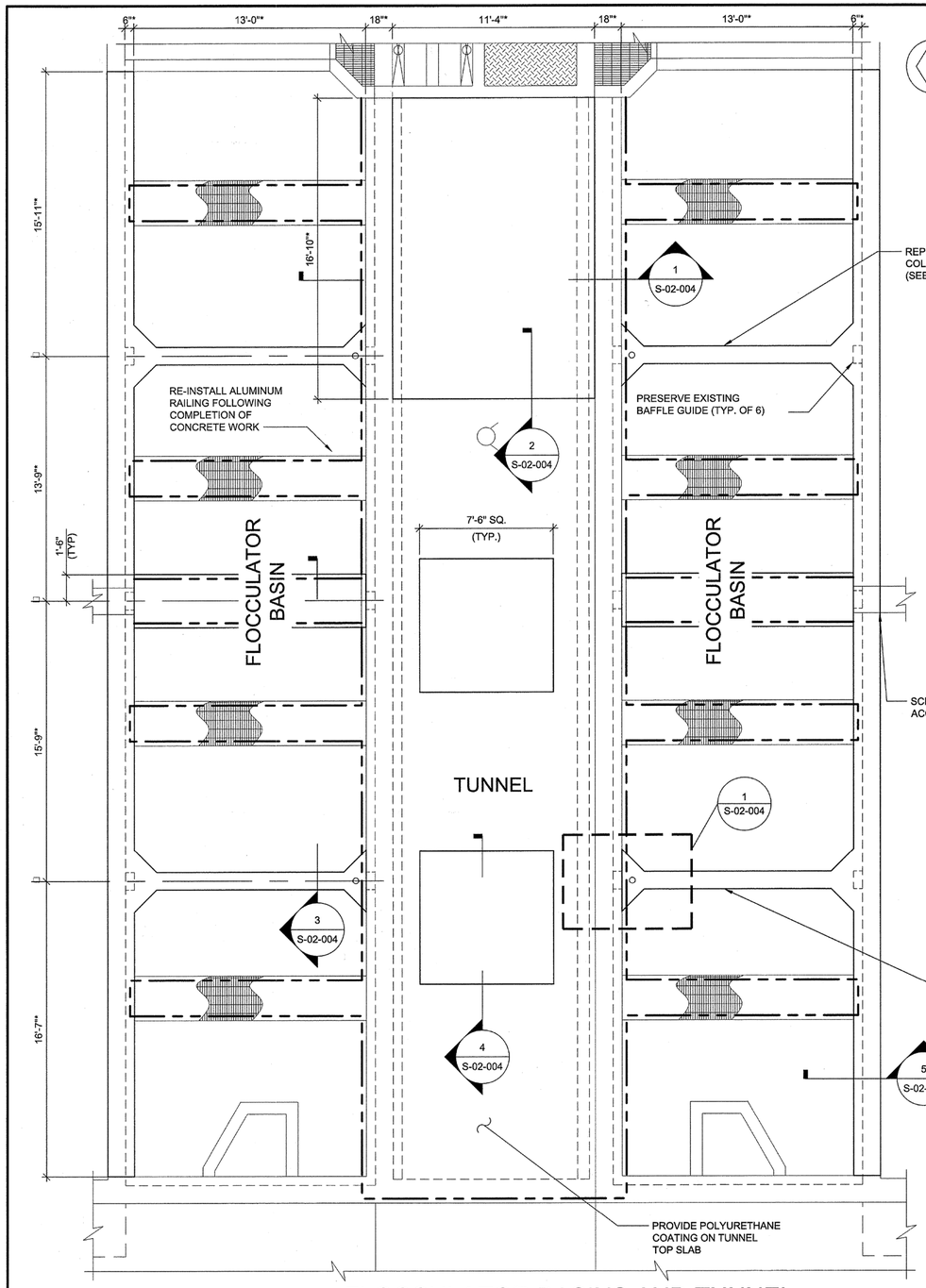
REVISIONS			
NO.	BY	DATE	REMARKS

DES JH
DWN JJH
CKD IVC

NORTHERN KENTUCKY WATER DISTRICT
TAYLOR MILL WATER TREATMENT PLANT
ELECTRICAL AND BASIN IMPROVEMENTS

STRUCTURAL
DEMOLITION SECTIONS
SCALE: 3/8" = 1'-0"

ISSUED STATUS: BID SET
DATE JANUARY 2014
SHEET S-02-002
CAD REF. NO. 2142001S03



1 FLOCCULATOR BASINS AND TUNNEL ENLARGED PLAN

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

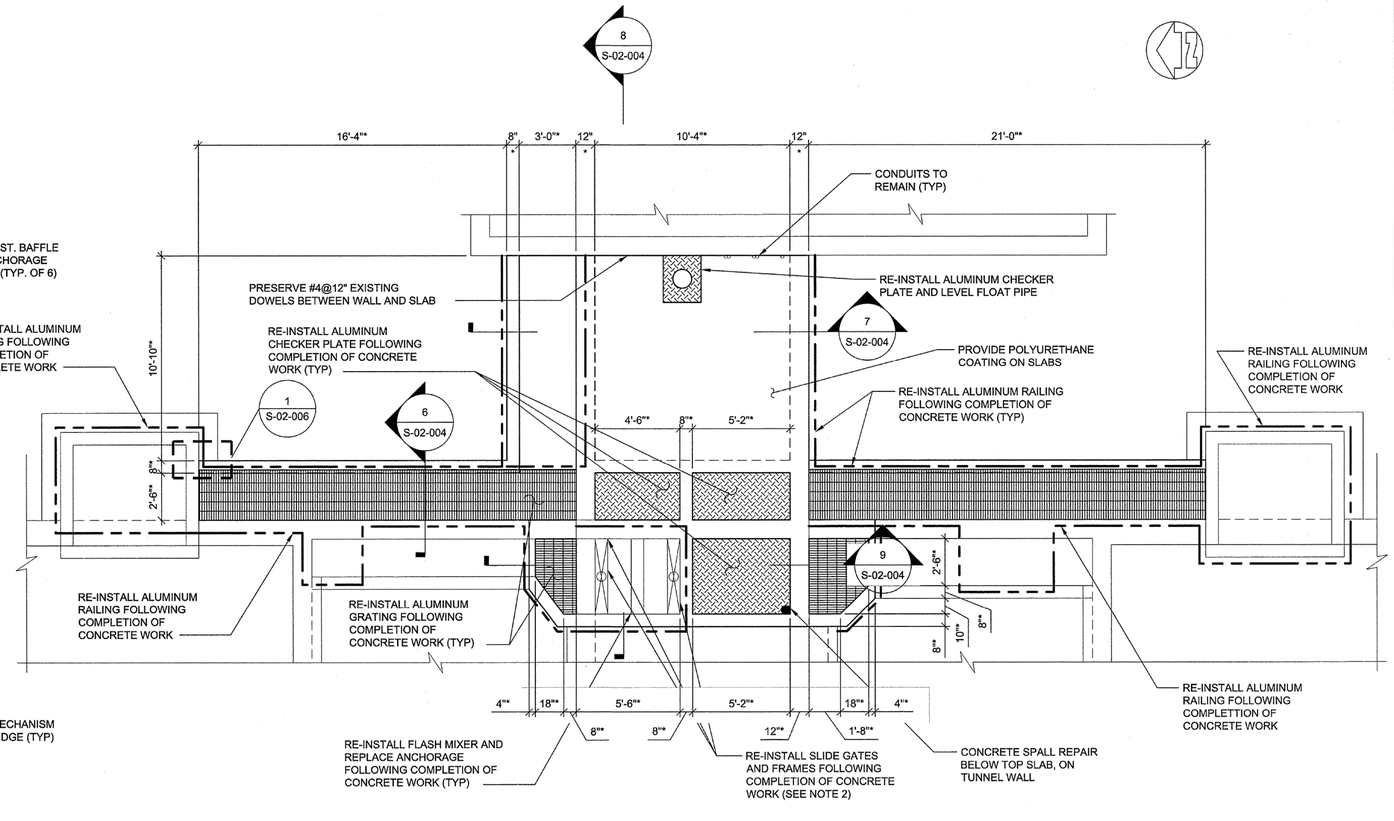
0 2' 4' 8'

0 1/2 1

DRAWING IS NOT TO SCALE IF THIS DOES NOT MEASURE 1 INCH.

NOTE:

1. DESIGN LL = 300 PSF.



2 RAPID MIX AND EFFLUENT CHANNEL ENLARGED PLAN

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

0 2' 4' 8'

NOTE:

1. DESIGN LL = 300 PSF.
   - GRATING DESIGN LL = 100 PSF.

GENERAL NOTES:

1. REMOVE AND RE-INSTALL AFTER CONCRETE WORK IS COMPLETED.
2. REMOVE FRAME ANCHORAGE WHERE ANCHORAGE IS LOCATED IN CONCRETE TO BE REMOVED. REPLACE ANCHORAGE IN KIND FOLLOWING COMPLETION OF CONCRETE WORK.
3. PROVIDE 3/4" DIAMETER STAINLESS STEEL ADHESIVE ANCHORS TO FASTEN BAFFLE SUPPORT COLUMN TO TIE BEAMS. FIELD VERIFY DIAMETER OF BOLTS TO MATCH EXISTING, (MIN EMBED = 6").
3. REFER TO PLAN FOR GENERAL REPAIR LOCATIONS FOR THE TYPE OF REPAIR AS FOLLOWS:
   - ▲ INDICATES CRACK REPAIR
   - ● INDICATES CONCRETE SPALL REPAIR
   - INDICATES DEMOLISH, REMOVE, AND REPLACE
   - INDICATES DEMOLISH CONCRETE, PRESERVE EXISTING REINFORCING, AND REPLACE CONCRETE

** REMOVE DETERIORATED CONCRETE DOWN TO SOUND CONCRETE. LIMITS PROVIDED ARE FOR BID PURPOSES AND MAY BE ADJUSTED DURING REMOVAL. ADJUSTMENTS SHALL NOT OCCUR WITHOUT THE ENGINEER'S APPROVAL.

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22541
LICENSED PROFESSIONAL ENGINEER
12/20/13

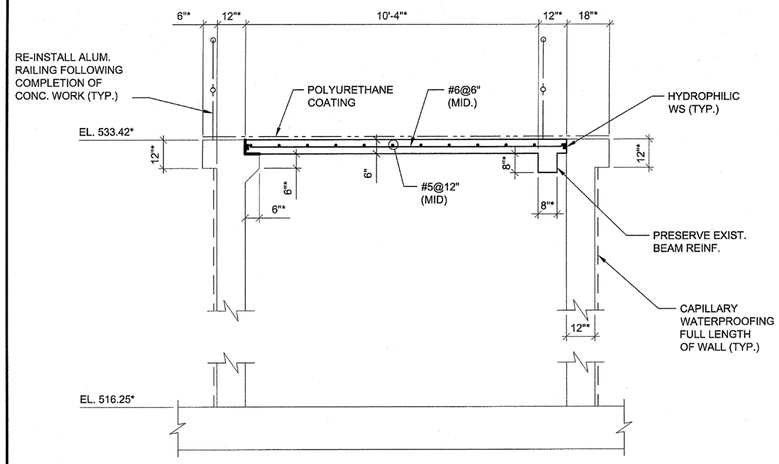
REVISIONS			
NO.	BY	DATE	REMARKS

DES JH
DWN JJH
CKD IVC

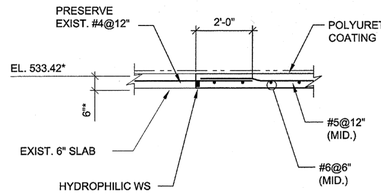
NORTHERN KENTUCKY WATER DISTRICT
TAYLOR MILL WATER TREATMENT PLANT
ELECTRICAL AND BASIN IMPROVEMENTS

STRUCTURAL
ENLARGED RAPID MIX, CHANNEL, AND TUNNEL PLANS
SCALE: N.T.S.

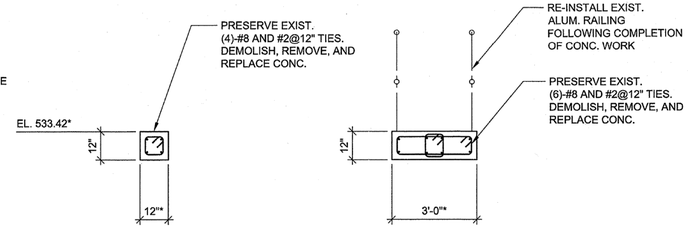
ISSUED STATUS: BID SET
DATE JANUARY 2014
SHEET S-02-003
CAD REF. NO. 2142001S04



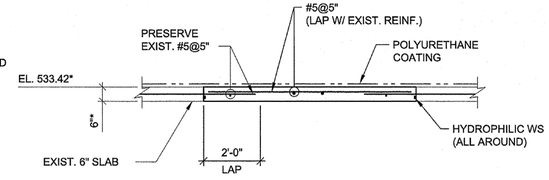
1 S-02-003 SECTION



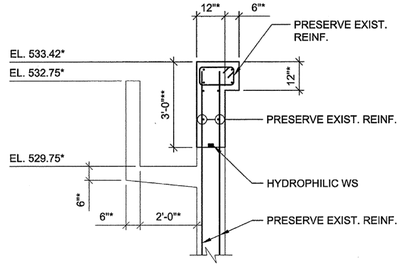
2 S-02-003 SECTION



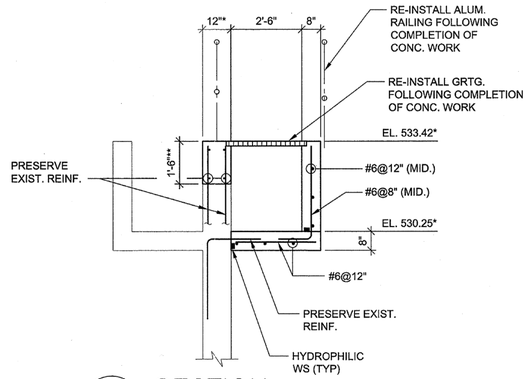
3 S-02-003 SECTION



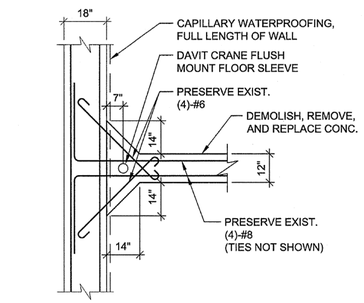
4 S-02-003 SECTION



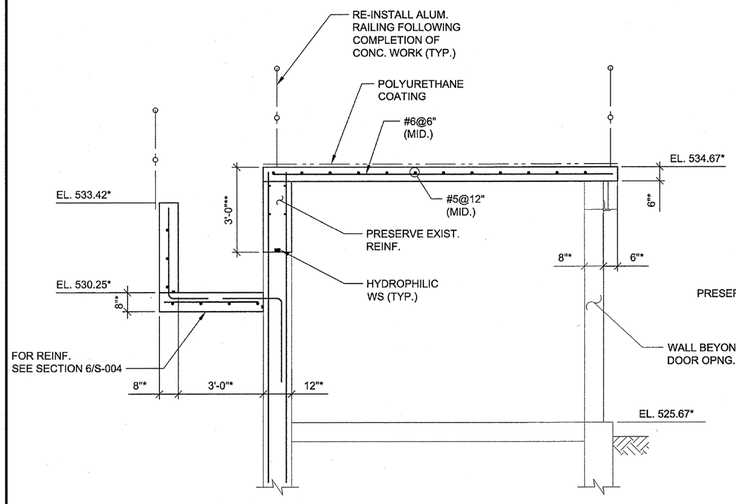
5 S-02-003 SECTION



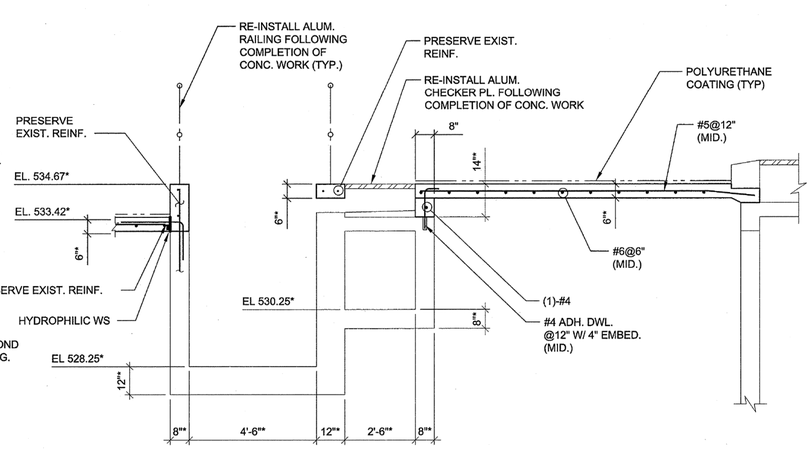
6 S-02-003 SECTION



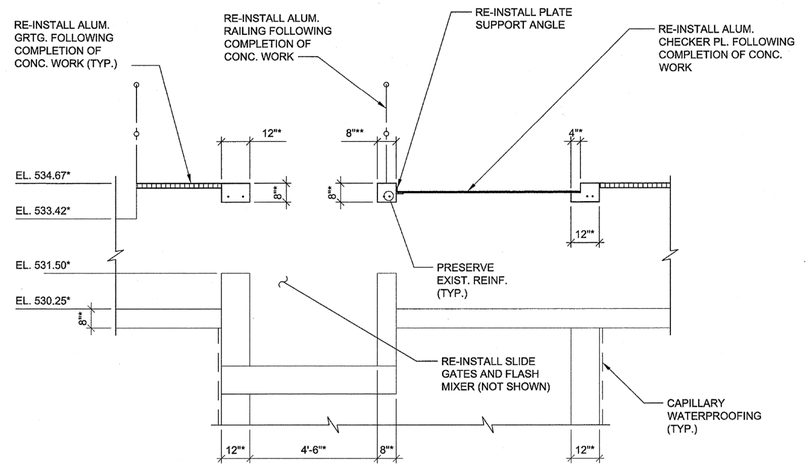
1 S-02-003 DETAIL



7 S-02-003 SECTION



8 S-02-003 SECTION



9 S-02-003 SECTION

GENERAL NOTES:

1. SEE SHEETS 07 AND 08 FOR TYPICAL CONCRETE REPAIR DETAILS.

** LIMITS PROVIDED FOR CONCRETE REPLACEMENT ARE FOR BID PURPOSES AND MAY BE ADJUSTED DURING THE WORK. ADJUSTMENTS SHALL NOT OCCUR WITHOUT ENGINEER'S APPROVAL.

0 1/2 1
DRAWING IS NOT TO SCALE IF THIS DOES NOT MEASURE 1 INCH.

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Magna ENGINEERS

COMMONWEALTH OF KENTUCKY
AMELDA V. CAULEY
22541
LICENSED PROFESSIONAL ENGINEER
12/19/2013

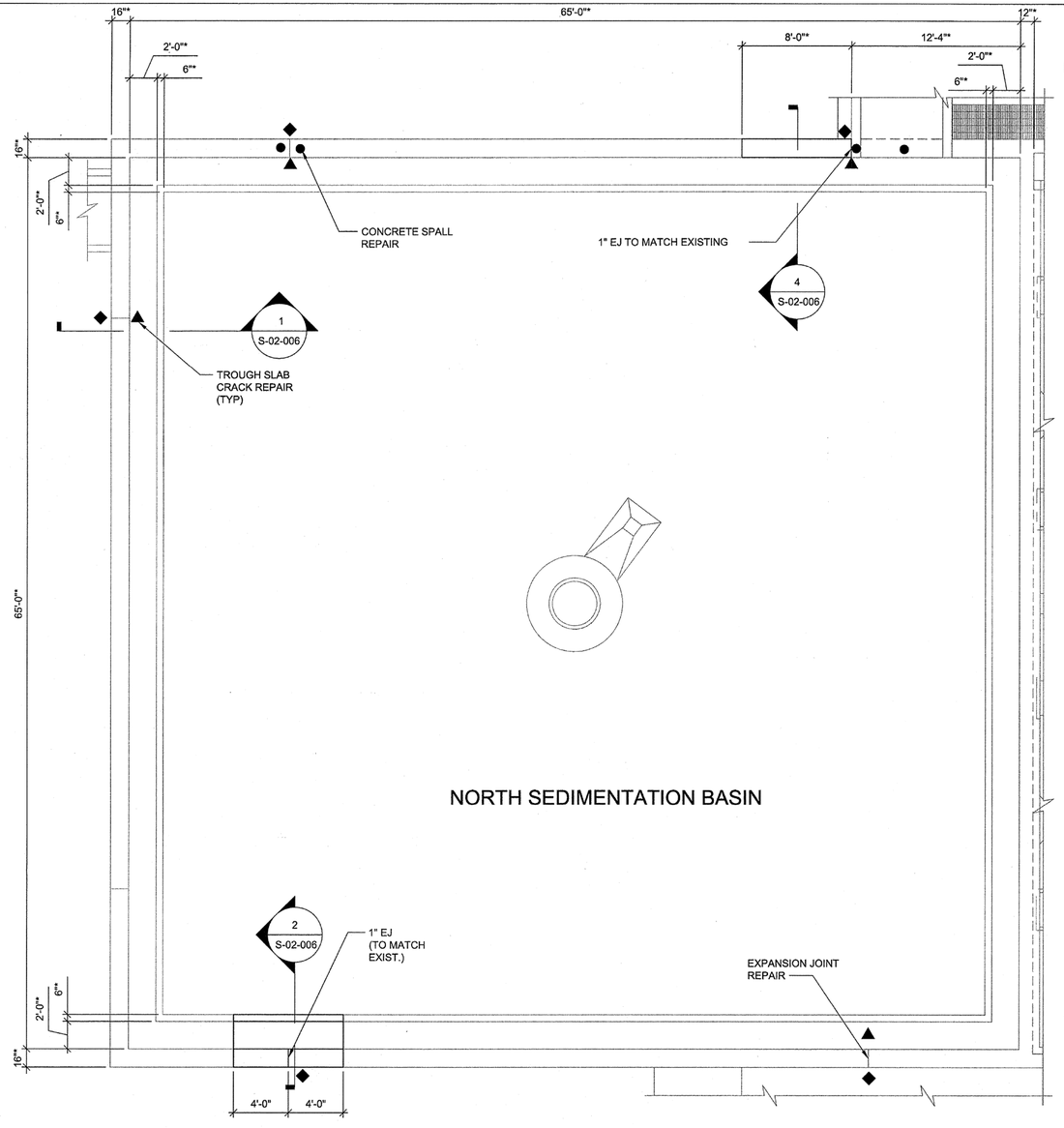
REVISIONS			
NO.	BY	DATE	REMARKS

DES JH
DWN JJH
CKD IVC

NORTHERN KENTUCKY WATER DISTRICT
TAYLOR MILL WATER TREATMENT PLANT
ELECTRICAL AND BASIN IMPROVEMENTS

STRUCTURAL
SECTIONS AND DETAIL
SCALE: 3/8' = 1'-0"

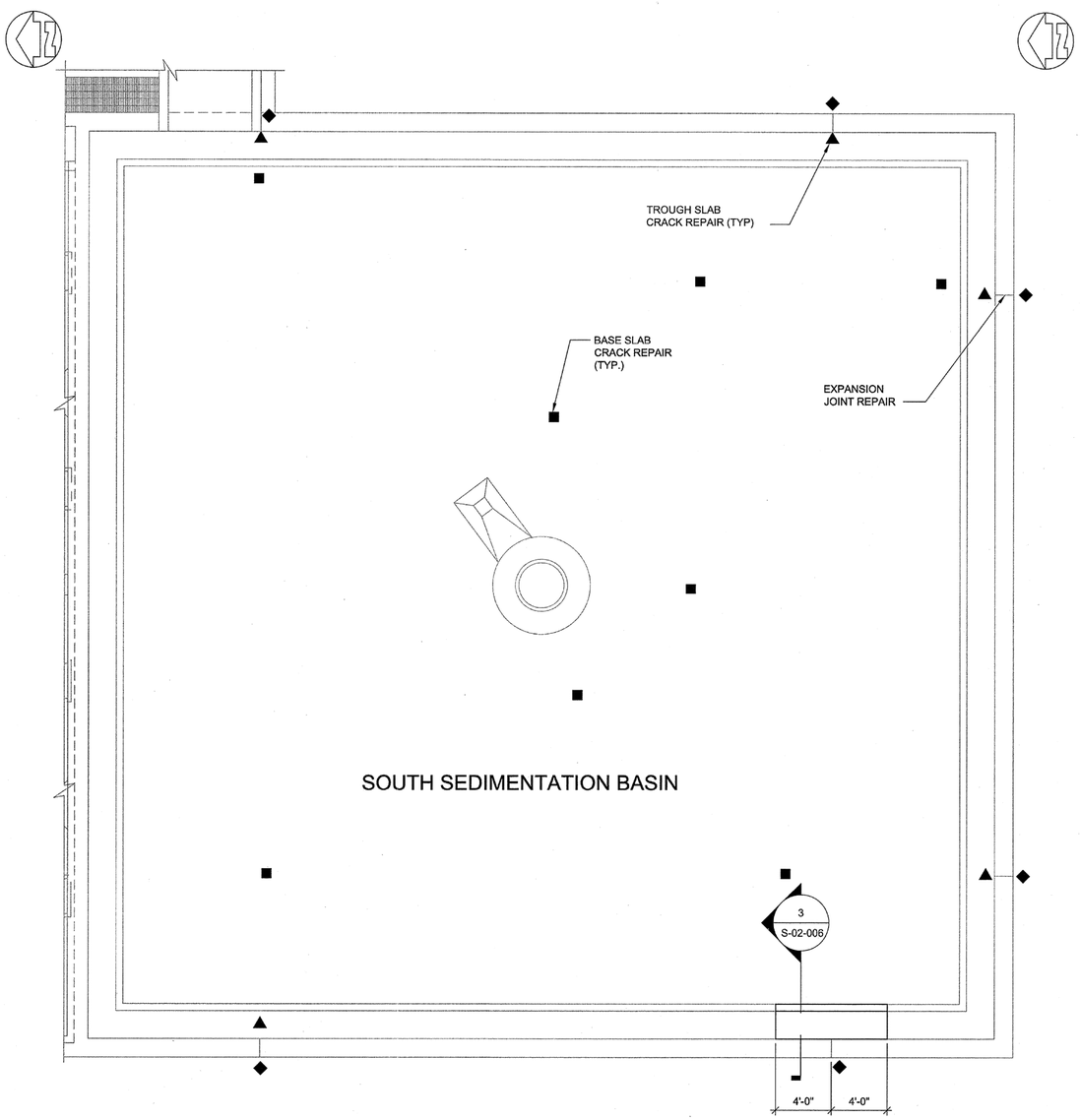
ISSUED STATUS: BID SET
DATE JANUARY 2014
SHEET S-02-004
CAD REF. NO. 2142001S05



NORTH SEDIMENTATION BASIN

NORTH SEDIMENTATION BASIN ENLARGED PLAN

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



SOUTH SEDIMENTATION BASIN

SOUTH SEDIMENTATION BASIN ENLARGED PLAN

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

GENERAL NOTES:

1. REFER TO PLAN FOR GENERAL REPAIR LOCATIONS FOR THE TYPE OF REPAIR AS FOLLOWS:
   - ▲ INDICATES CRACK REPAIR
   - ● INDICATES CONCRETE SPALL REPAIR
   - ■ INDICATES BASE SLAB CRACK REPAIR
   - ◆ INDICATES EXPANSION JOINT REPAIR
2. SEE SHEETS S-007 AND S-008 FOR TYPICAL CONCRETE REPAIR DETAILS.

0 1/2 1
DRAWING IS NOT TO SCALE IF THIS DOES NOT MEASURE 1 INCH.

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12/19/13

REVISIONS			
NO.	BY	DATE	REMARKS

DES JH
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CKD IVC

NORTHERN KENTUCKY WATER DISTRICT
TAYLOR MILL WATER TREATMENT PLANT

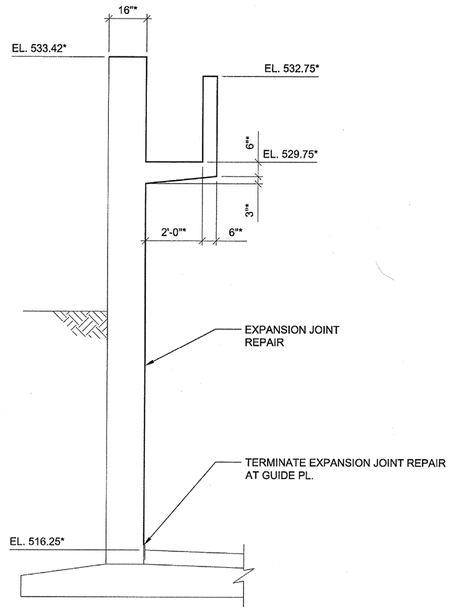
ELECTRICAL AND BASIN IMPROVEMENTS

STRUCTURAL

ENLARGED SEDIMENTATION BASIN PLANS

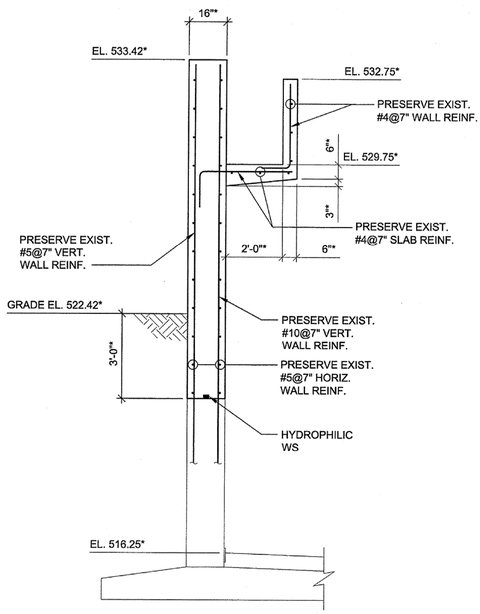
SCALE: AS NOTED

ISSUED STATUS: BID SET
DATE JANUARY 2014
SHEET S-02-005
CAD REF. NO. 2142001S06



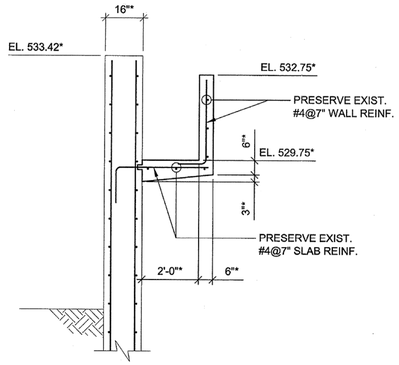
1 S-02-005 SECTION

SCALE: 3/8" = 1'-0"



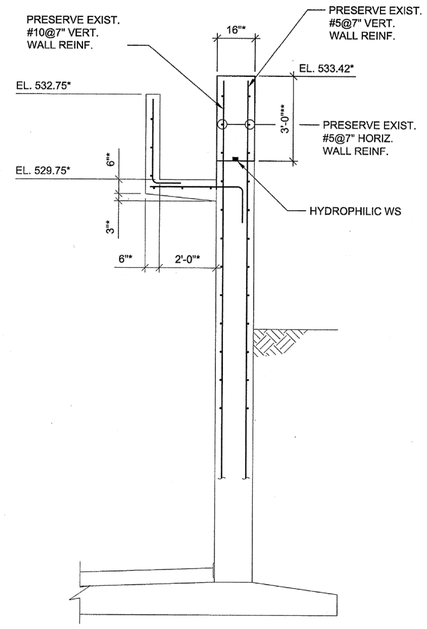
2 S-02-005 SECTION

SCALE: 3/8" = 1'-0"



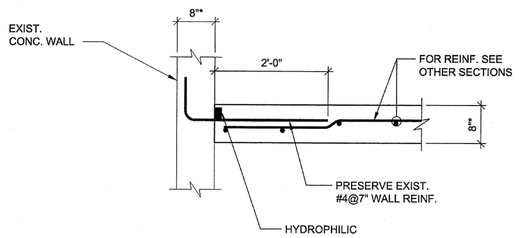
3 S-02-005 SECTION

SCALE: 3/8" = 1'-0"



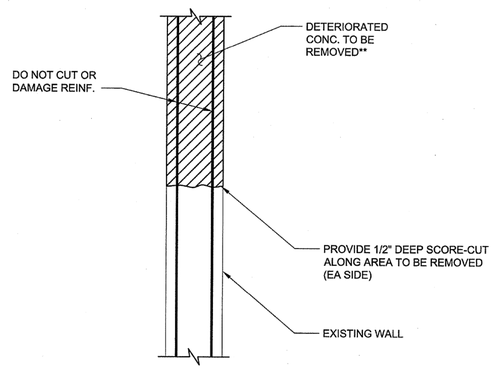
4 S-02-005 SECTION

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



1 S-02-003 DETAIL

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



2 S-02-002 DETAIL

SCALE: NOT TO SCALE

GENERAL NOTE:

** LIMITS PROVIDED FOR CONCRETE REPLACEMENT ARE FOR BID PURPOSES AND MAY BE ADJUSTED DURING THE WORK. ADJUSTMENTS SHALL NOT OCCUR WITHOUT ENGINEER'S APPROVAL.

0 1/2 1

DRAWING IS NOT TO SCALE IF THIS DOES NOT MEASURE 1 INCH.

MALCOLM PIRNIE ARCADIS The Water Division of ARCADIS

Magna ENGINEERS

COMMONWEALTH OF KENTUCKY WILLIAM V. CAULEY 22541 LICENSED PROFESSIONAL ENGINEER 12/20/13

REVISIONS			
NO.	BY	DATE	REMARKS

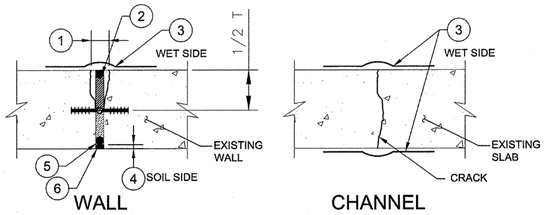
DES JH
DWN JJH
CKD IVC

NORTHERN KENTUCKY WATER DISTRICT
TAYLOR MILL WATER TREATMENT PLANT
ELECTRICAL AND BASIN IMPROVEMENTS

STRUCTURAL
SECTIONS AND DETAILS

SCALE: 3/8" = 1'-0"

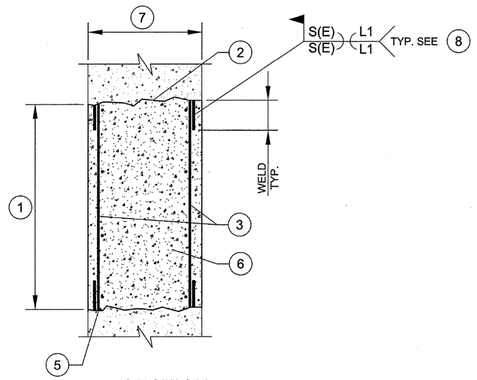
ISSUED STATUS: BID SET
DATE JANUARY 2014
SHEET S-02-006
CAD REF. NO. 2142001S07



1 EXPANSION JOINTS

KEYED NOTES

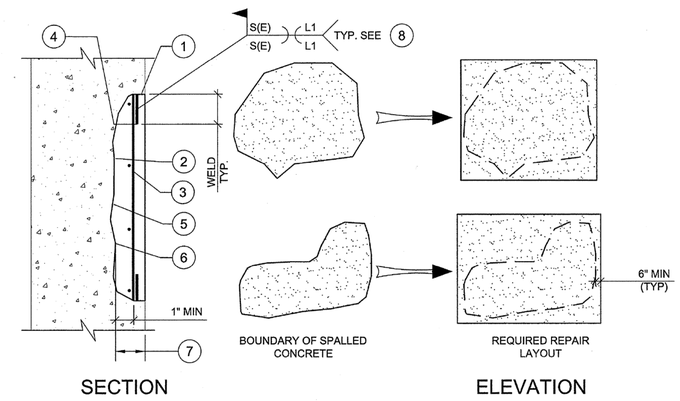
1. REMOVE EXISTING EXPANSION JOINT MATERIAL AND RECONSTRUCT JOINT AS DIRECTED BY ENGINEER IN ACCORDANCE TO SPALL REPAIR DETAIL.
2. PLACE BACKER ROD SOAKED IN CRACK INJECTION REPAIR SYSTEM HYDROPHOBIC POLYURETHANE CHEMICAL GROUT.
3. INSTALL EXPANSION JOINT REPAIR SYSTEM. HYPALON SHEETING SHALL BE INSTALLED TO ALLOW FOR 3/4" MOVEMENT WITHOUT INDUCING TENSION INTO HYPALON.
4. 1/2 THICKNESS OF JOINT.
5. REMOVE EXISTING EXPANSION JOINT MATERIAL AS NECESSARY TO INSTALL BACKER ROD DOWN TO TOP OF GRADE.
6. JOINT SEALER.



2 CONCRETE REMOVAL AND REPLACEMENT

KEYED NOTES

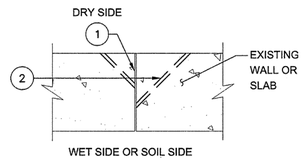
1. REMOVE EXISTING CONCRETE USING HYDRODEMOLITION METHODS AS REQUIRED. DO NOT CUT OR DAMAGE EXISTING REINFORCING DURING CONCRETE REMOVAL PROCESS.
2. REMOVE ALL DETERIORATED CONCRETE TO SOUND CONCRETE. PREPARE CONCRETE SUBSTRATE TO OBTAIN A SURFACE PROFILE OF 1/8-INCH IN DEPTH WITH A NEW FRACTURED AGGREGATE SURFACE.
3. WHERE REINFORCING STEEL WITH ACTIVE CORROSION IS ENCOUNTERED. REPLACEMENT IS REQUIRED WHERE LOSS ON REBAR CROSS SECTION IS OVER 25%. AFTER REPAIR WHERE REINFORCING REMAINS, CLEAN REINFORCING STEEL TO REMOVE ALL CONTAMINANTS AND RUST.
4. IF REINFORCING REPLACEMENT IS REQUIRED, CUT EXISTING CORRODED REINFORCING BAR AS REQUIRED AND WELD NEW REBAR OF SAME SIZE, AS SHOWN.
5. SURFACE PREPARATION SHALL COMPLY WITH BONDING AGENT AND REPAIR MORTAR MANUFACTURER'S INSTRUCTIONS.
6. INSTALL CONCRETE PER PROJECT SPECIFICATION 03 00 05.
7. FOR BID PURPOSES, TOTAL DEPTH OF REPAIR IS EQUAL TO MEMBER DEPTH.
8. S, (E), AND L1 DEFINITIONS CORRESPOND TO ANSI/AWS D1.4. MINIMUM L1 FOR BIDDING PURPOSES IS 3 INCHES.



3 CONCRETE SURFACE SPALL

KEYED NOTES

1. SCORE-CUT PERIMETER OF REPAIR AREA AS GENERALLY SHOWN. DO NOT CUT REINFORCING UNLESS NECESSARY TO REMOVE ALL DETERIORATED CONCRETE.
2. REMOVE ALL DETERIORATED CONCRETE TO SOUND CONCRETE. CHIP CONCRETE SUBSTRATE TO OBTAIN A SURFACE PROFILE OF 1/8-INCH IN DEPTH WITH A NEW FRACTURED AGGREGATE SURFACE.
3. WHERE REINFORCING STEEL WITH ACTIVE CORROSION IS ENCOUNTERED. REPLACEMENT IS REQUIRED WHERE LOSS ON REBAR CROSS SECTION IS OVER 25%. AFTER REPAIR WHERE REINFORCING REMAINS, CLEAN REINFORCING STEEL TO REMOVE ALL CONTAMINANTS AND RUST. REMOVE CONCRETE TO A DEPTH OF 1-INCH MINIMUM BEHIND REINFORCING BAR AS SHOWN.
4. IF REINFORCING REPLACEMENT IS REQUIRED, CUT EXISTING CORRODED REINFORCING BAR AS REQUIRED AND WELD NEW REBAR OF SAME SIZE, AS SHOWN.
5. SURFACE PREPARATION SHALL COMPLY WITH REPAIR MORTAR MANUFACTURER'S INSTRUCTIONS.
6. INSTALL BONDING AGENT AND REPAIR MORTAR PER THE MANUFACTURER'S REQUIREMENTS.
7. FOR BID PURPOSES, ASSUME TOTAL DEPTH OF REPAIR IS 6 INCHES.
8. S, (E), AND L1 DEFINITIONS CORRESPOND TO ANSI/AWS D1.4. MINIMUM L1 FOR BIDDING PURPOSES IS 3 INCHES.



4 CRACK REPAIR

KEYED NOTES

1. LEAKING CRACK
2. INJECTION PORTS FOR HYDROPHILIC CRACK INJECTION MATERIAL.

0 1/2 1

DRAWING IS NOT TO SCALE IF THIS DOES NOT MEASURE 1 INCH.

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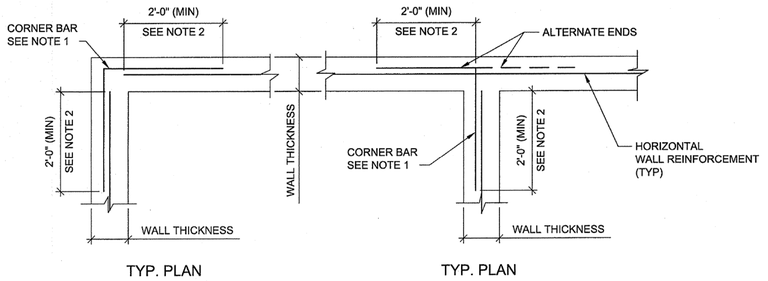
NO.	BY	DATE	REMARKS

DES JH
DWN JJH
CKD IVC

NORTHERN KENTUCKY WATER DISTRICT
TAYLOR MILL WATER TREATMENT PLANT
ELECTRICAL AND BASIN IMPROVEMENTS

STRUCTURAL
REPAIR DETAILS
SCALE: N.T.S.

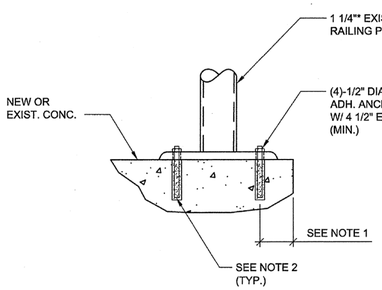
ISSUED STATUS: BID SET
DATE JANUARY 2014
SHEET S-02-007
CAD REF. NO. 2142001S08



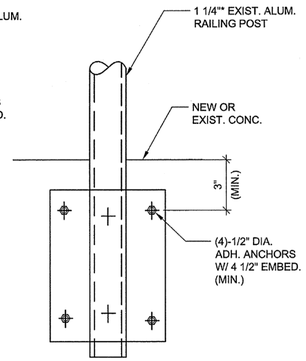
TYP. PLAN TYP. PLAN

TYPICAL REINFORCEMENT DETAIL AT SINGLY REINFORCED WALL INTERSECTIONS

NOTES:
1. CORNER BARS TO MATCH SIZE AND SPACING OF WALL HORIZONTAL REINFORCEMENT (U.O.N.).
2. DIMENSION TO BE 0.25 TIMES THE CLEAR SPAN DISTANCE BETWEEN WALL INTERSECTIONS MEASURED HORIZONTALLY, BUT NO LESS THAN 2'-0" NOR GREATER THAN 6'-0".



TOP MOUNT ANCHORAGE DETAIL



SIDE MOUNT ANCHORAGE DETAIL

TYPICAL EXISTING RAILING ANCHORAGE DETAILS

NOTES:

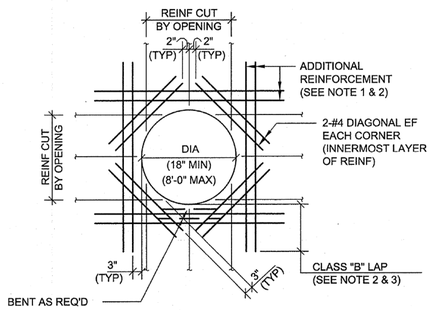
1. PROVIDE A MINIMUM OF 3" OF EDGE DISTANCE.
2. EXISTING ANCHOR HOLES MAY BE RE-USED IF PREPARED ACCORDING TO ANCHOR MANUFACTURER'S WRITTEN INSTALLATION INSTRUCTIONS FOR HOLE DIAMETER, DRILLING, AND CLEANING INSTRUCTIONS. EXISTING RAILING MOUNTING FLANGES MAY BE RE-USED WITHOUT MODIFICATION IF ANCHOR SYSTEM SHOWN FITS INTO EXISTING HOLES. OTHERWISE, CONTRACTOR SHALL MODIFY FLANGES IN ORDER TO ACCOMMODATE NEW ANCHOR. THIS MAY INCLUDE PROVIDING OVERSIZED WASHERS OR REBORING LARGER HOLES.

REPAIR SCHEDULE

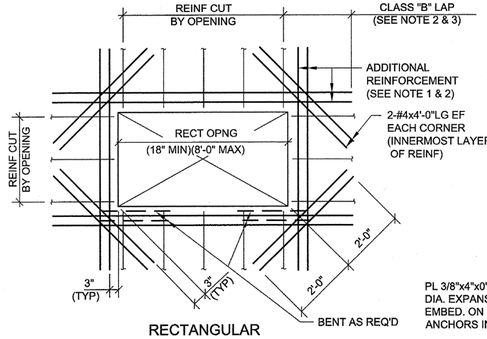
SYMBOLS	REPAIR TYPE	BID QUANTITY	DETAIL REFERENCE NO.	NOTES
◆	WALL EXPANSION JOINTS	600 LF	DETAIL 1 ON S-007	AS DIRECTED BY ENGINEER.
▲	CRACK	200 LF	DETAIL 4 ON S-007	DIMENSIONS OF EACH CRACK REPAIR VARY AS DIRECTED BY ENGINEER.
●	SPALL	100 SF	DETAIL 3 ON S-007	DIMENSIONS OF EACH SPALL REPAIR VARY AS DIRECTED BY ENGINEER.
■	BASE SLAB CRACK	400 LF	DETAIL 4 ON S-007	DIMENSIONS OF EACH BASE SLAB CRACK REPAIR VARY AS DIRECTED BY ENGINEER.
	PAINTING OF CONCRETE	600 SF	SPECIFICATION 09 91 00	AS DIRECTED BY ENGINEER.
	BASIN RAKE REPAIR	2000 LBS	SHEET NO. M-02-001	AS DIRECTED BY ENGINEER.

NOTES:

1. PAYMENT OF CONCRETE REPAIR AND REHABILITATION WORK SHALL BE BASED ON ACTUAL MEASURED REPAIR QUANTITIES MULTIPLIED BY THE ASSOCIATED UNIT PRICES INCLUDED ON THE PROPOSAL BID FORM.
2. ENGINEER MAY DIRECT CONTRACTOR TO PERFORM REPAIR WORK THAT IS GREATER THAN OR LESS THAN THE ESTIMATED QUANTITIES STATED ON THE PROPOSAL BID FORM. CONTRACTOR WILL BE COMPENSATED AT THE UNIT PRICES ON THE PROPOSAL BID FORM FOR THE ACTUAL QUANTITY OF CONCRETE REPAIR WORK AS SHOWN, SPECIFIED OR ORDERED.
3. FOR BID PURPOSES ASSUME A TOTAL OF 5,000 POUNDS OF REINFORCING STEEL REPLACEMENT IS REQUIRED FOR CONCRETE REMOVAL AND REPLACEMENT AND CONCRETE SURFACE SPALL REPAIRS.



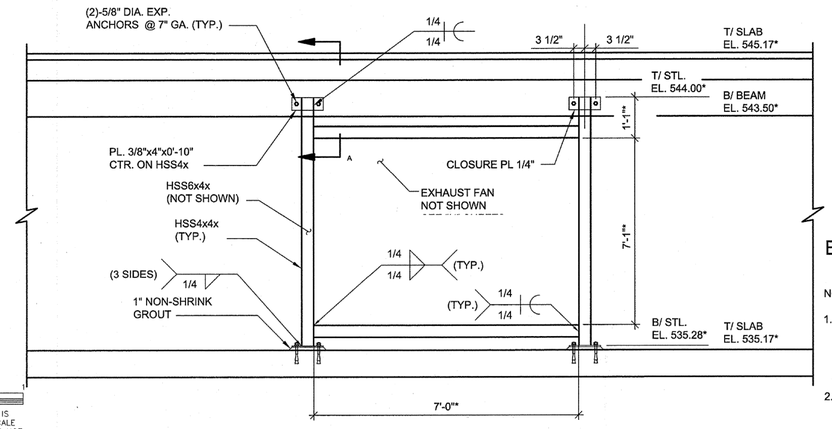
CIRCULAR

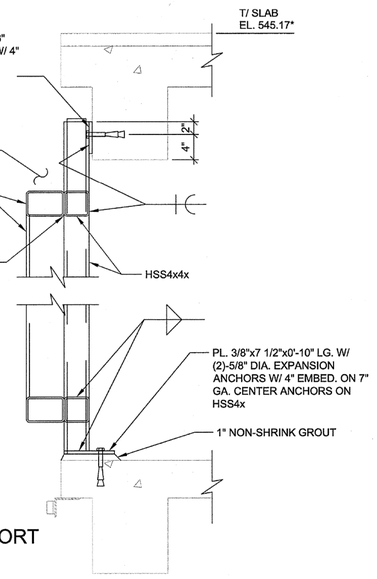


RECTANGULAR

TYPICAL REINFORCING AROUND OPENING IN WALL AND SLAB

NOTES:
1. PROVIDE ADDITIONAL REINFORCEMENT AT ALL OPENINGS, ACCESS HATCHES, PIPE PENETRATIONS, ETC. EQUAL IN AREA TO TYPICAL REINFORCEMENT CUT BY OPENING IN EACH DIRECTION. ADDITIONAL REINFORCEMENT TO MATCH SIZE OF TYPICAL REINFORCEMENT (MIN. 2 BARS ES AND EF) AND PLACED BETWEEN TYPICAL REINFORCEMENT @3" SPACING ON EACH SIDE OF OPENING
2. PROVIDE MATCHING DOWELS WHERE REQUIRED TO PROVIDE CLASS "B" LAP WITH ADDITIONAL REINFORCEMENT. (WHERE LAPPING OF ADDITIONAL REINFORCEMENT FROM ADJACENT OPENINGS OCCUR, ADDITIONAL REINFORCEMENT SHALL BE COMBINED).
3. IF A WALL OR BEAM IS ADJACENT TO THE OPENING, THE ADDITIONAL REINFORCEMENT ON THAT SIDE OF THE OPENING CAN BE OMITTED.



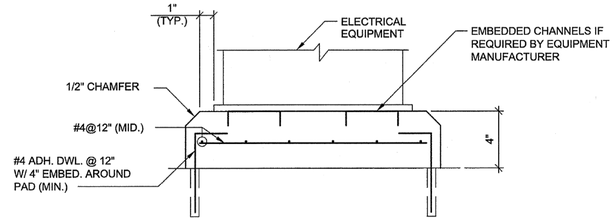


SECTION A-A

EXHAUST FAN SUPPORT FRAME DETAIL

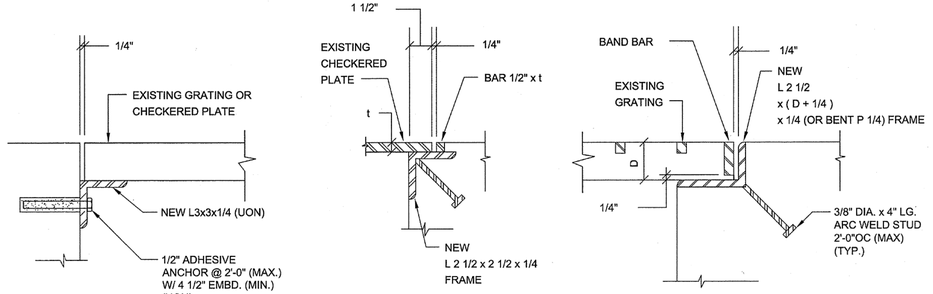
NOTES:

1. ALL STRUCTURAL SHAPES SHALL BE PAINTED GAVLANIZED STEEL AS NOTED:
   - HSS4x4x = HSS4x4x1/4
   - HSS6x4x = HSS6x4x1/2
   - HSS4x2x = HSS2x2x1/4
2. COORDINATE FAN SUPPORT FRAME WITH APPROVED EXHAUST FAN SHOP DRAWINGS.
3. SEE DRAWING A-01-006 FOR ADDITIONAL DETAILS.



ELECTRICAL EQUIPMENT PAD DETAIL

NOTES:
1. COORDINATE DIMENSIONS, BOXOUTS AND CONDUIT PENETRATIONS, WITH EQUIPMENT ACTUALLY BEING PROVIDED.
2. PROVIDE SUPPORT CHANNELS PER EQUIPMENT MANUFACTURER'S RECOMMENDATIONS.



ALL NOTES AND DIMENSIONS ARE TYPICAL FOR SIMILAR CONDITIONS

TYPICAL GRATING AND CHECKERED PLATE SUPPORT DETAILS

NOTES:
1. PROVIDE TYPICAL SUPPORT AS SHOWN FOR ALL EXISTING GRATING AND PLATE SUPPORT. PROVIDE NEW EMBEDDED ANGLE DETAIL (UON).
2. PROVIDE SUPPORT ANGLE AND ANCHOR STUD OF THE SAME MATERIAL AS THE GRATING AND PLATE.

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12/26/13

REVISIONS			
NO.	BY	DATE	REMARKS

DES JH
DWN JJH
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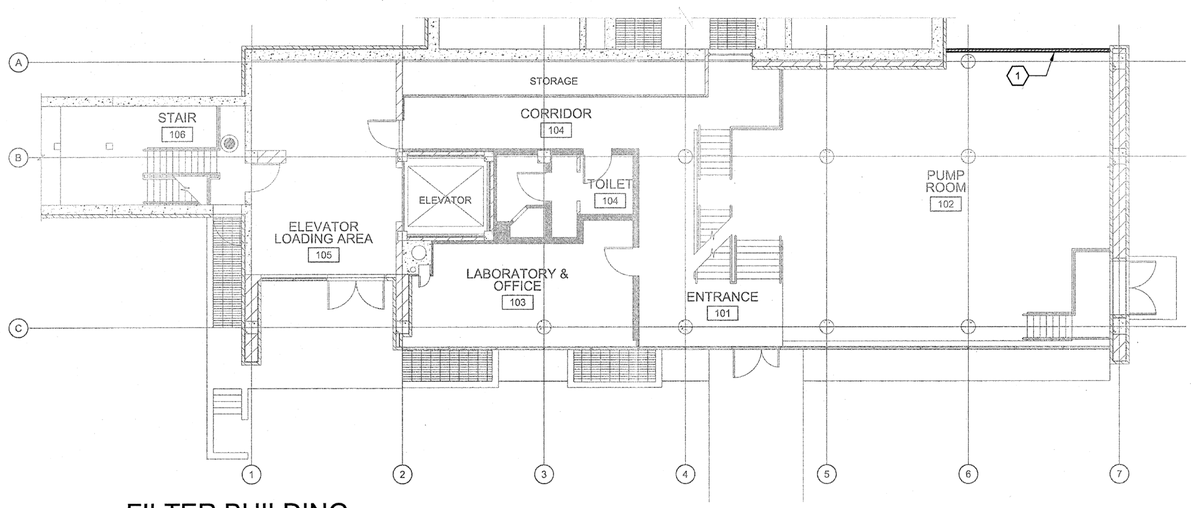
NORTHERN KENTUCKY WATER DISTRICT
TAYLOR MILL WATER TREATMENT PLANT
ELECTRICAL AND BASIN IMPROVEMENTS

STRUCTURAL
TYPICAL DETAILS AND REPAIR SCHEDULE
SCALE: N.T.S.

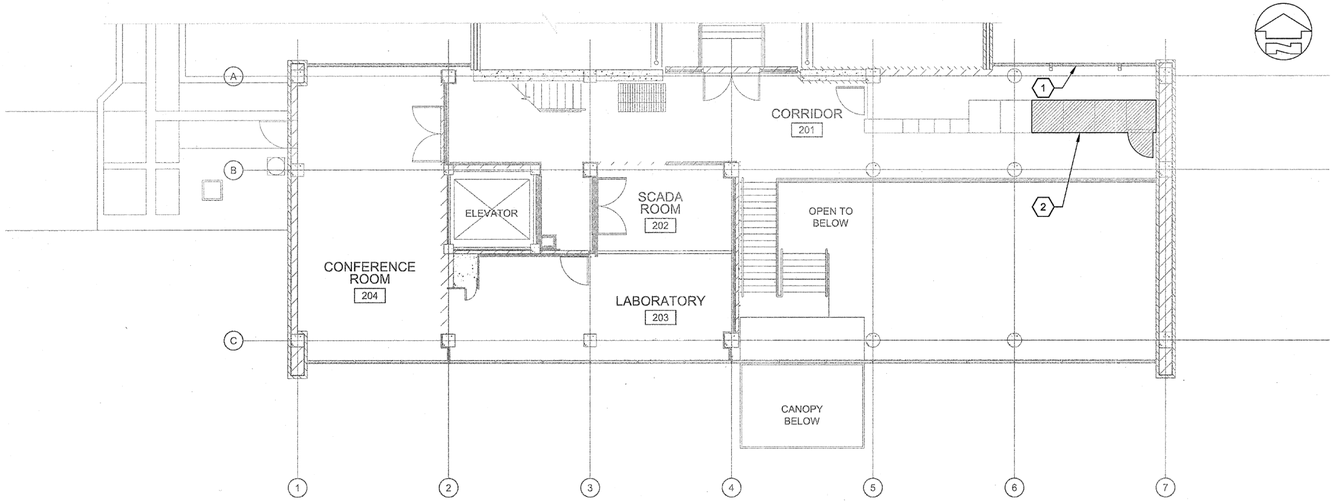
ISSUED STATUS: BID SET
DATE JANUARY 2014
SHEET S-02-008
CAD REF. NO. 2142001S09



1 FILTER BUILDING
DEMO PLAN EL. AT 525.50

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

0 4' 8' 16'



1 FILTER BUILDING
DEMO PLAN EL. AT 535.00

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

0 4' 8' 16'

GENERAL NOTES:

1. CONTRACTOR SHALL PROTECT ALL EXISTING TO REMAIN.
2. PROVIDE TEMPORARY DUST BARRIERS AND WEATHER PROOF ENCLOSURES ACCEPTABLE TO THE OWNER.

⟨#⟩ KEYNOTES:

1. REMOVE GLAZING AND SPANDREL PANELS FROM WINDOW WALL SYSTEM AS REQUIRED FOR INSTALLATION OF LOUVERS MECHANICAL LOUVERS. COORDINATE DEMOLITION WITH SHEET A-01-005.
2. REMOVE ELECTRICAL EQUIPMENT, SEE SHEET E-01-002. REMOVE EQUIPMENT SUPPORT RAILS FLUSH WITH EXISTING FLOOR.

0 1/2 1

DRAWING IS NOT TO SCALE IF THIS DOES NOT MEASURE 1 INCH.

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12/26/13

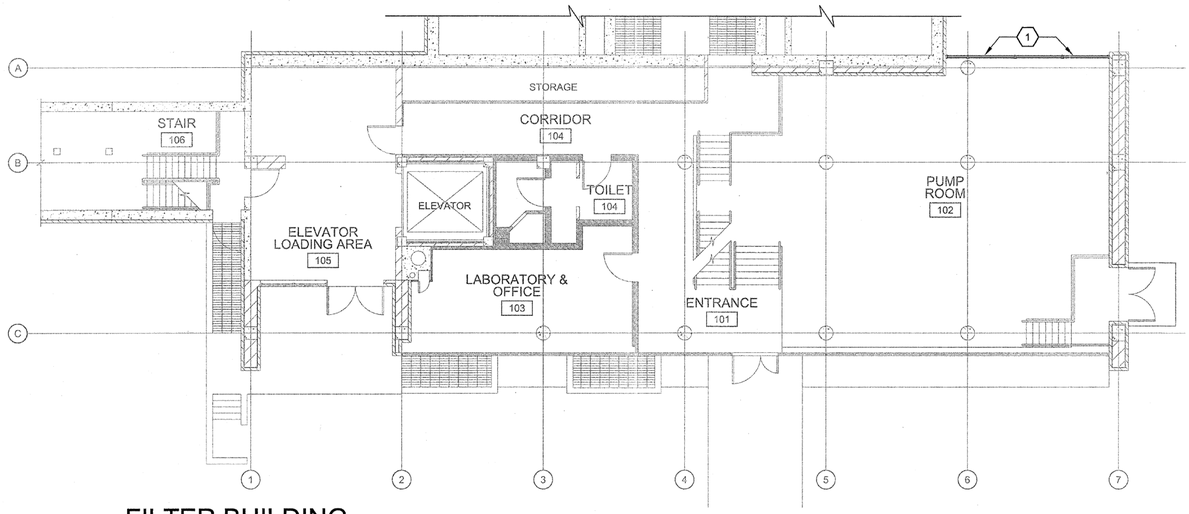
REVISIONS			
NO.	BY	DATE	REMARKS

DES SRZ
DWN JJH
CKD IVC

NORTHERN KENTUCKY WATER DISTRICT
TAYLOR MILL WATER TREATMENT PLANT
ELECTRICAL AND BASIN IMPROVEMENTS

ARCHITECTURAL
FILTER BUILDING DEMOLITION PLANS
SCALE: 1/8" = 1'-0"

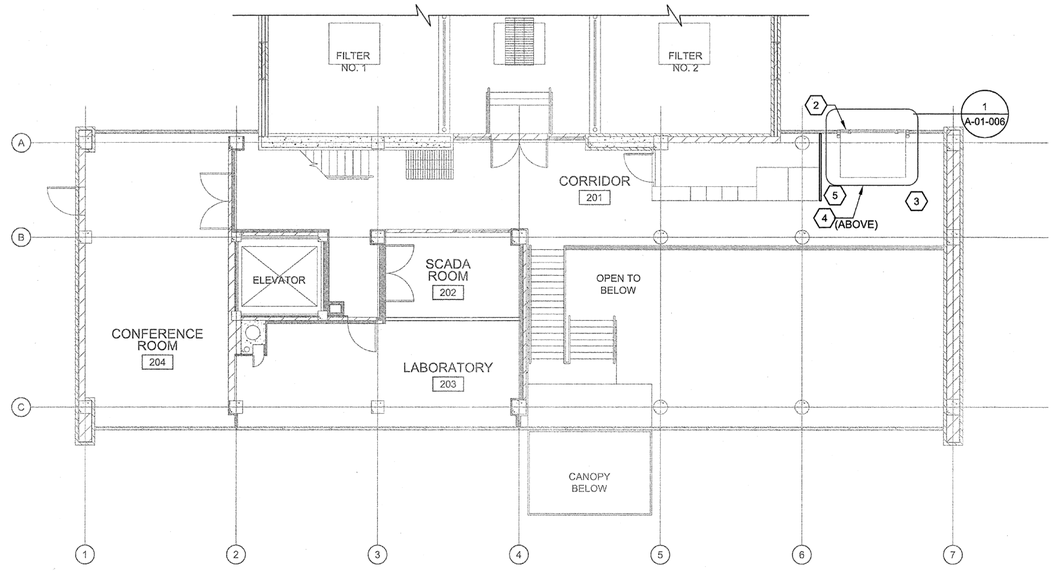
ISSUED STATUS: BID SET
DATE JANUARY 2014
SHEET A-01-001
CAD REF. NO. A-01-001



1 FILTER BUILDING PLAN EL. AT 525.50

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

0 4' 8' 16'



1 FILTER BUILDING PLAN EL. AT 535.00

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

0 4' 8' 16'

GENERAL NOTES:

1. CONTRACTOR SHALL PROTECT ALL EXISTING TO REMAIN.
2. PROVIDE TEMPORARY DUST BARRIERS AND WEATHER PROOF ENCLOSURES ACCEPTABLE TO THE OWNER.

#KEYNOTES:

1. LOUVERS, SEE DRAWINGS A-01-005 AND A-01-006.
2. HVAC EQUIPMENT - SEE "H" DRAWINGS.
3. INSTALL TERRAZZO FLOORING AT EXISTING CONCRETE SLAB TO MATCH EXISTING TERRAZZO FLOORING. APPROX 90 SF.
4. PROVIDE METAL PANEL CEILING TO MATCH EXISTING WHERE ELECTRICAL ENCLOSURE WAS REMOVED. APPROX 90 SF.
5. PROVIDE METAL WALL PANEL TO MATCH EXISTING.

0 1/2 1

DRAWING IS NOT TO SCALE IF THIS DOES NOT MEASURE 1 INCH.

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22541
LICENSED PROFESSIONAL ENGINEER
12/26/13

REVISIONS			
NO.	BY	DATE	REMARKS

DES SRZ
DWN JJH
CKD IVC

NORTHERN KENTUCKY WATER DISTRICT
TAYLOR MILL WATER TREATMENT PLANT

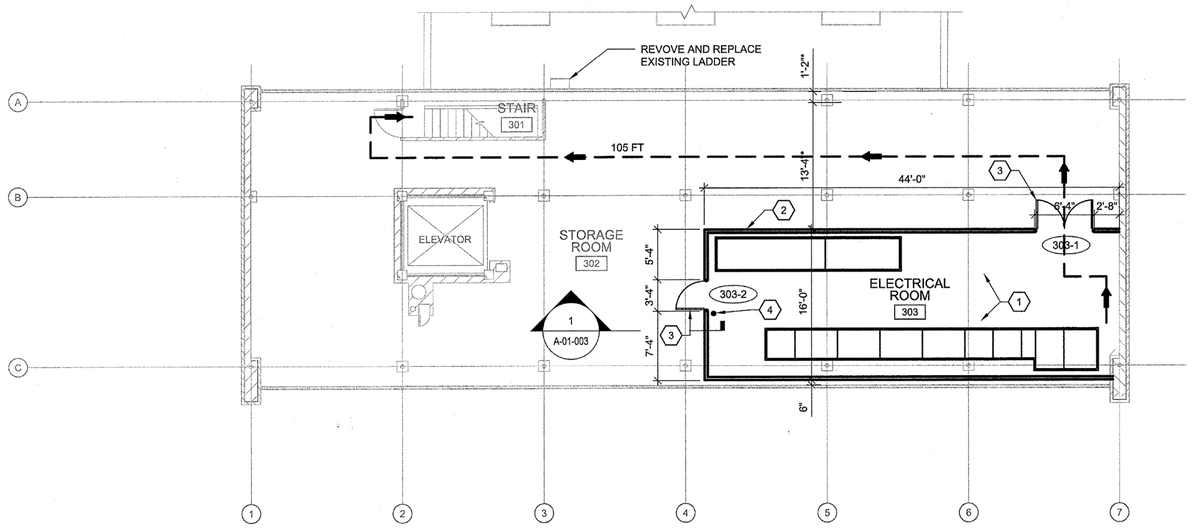
ELECTRICAL AND BASIN IMPROVEMENTS

ARCHITECTURAL

FILTER BUILDING PLANS AT EL. 525.50 AND 535.00

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

ISSUED STATUS: BID SET
DATE JANUARY 2014
SHEET A-01-002
CAD REF. NO. A-01-002



FILTER BUILDING PLAN EL. AT 545.00

1 — SCALE: 1/8"=1'-0"

0 4' 8' 16'

NOTE:

1. FLOOR LIVE LOAD = 250 PSF

BUILDING CODE SUMMARY
EXISTING FILTER BUILDING

EXISTING BUILDING - NEW DEMOLITION PATCHING AT WALLS, MECHANICAL, AND ELECTRICAL WORK ONLY.

WORK WILL NOT AFFECT MAXIMUM EXIT TRAVEL DISTANCE.

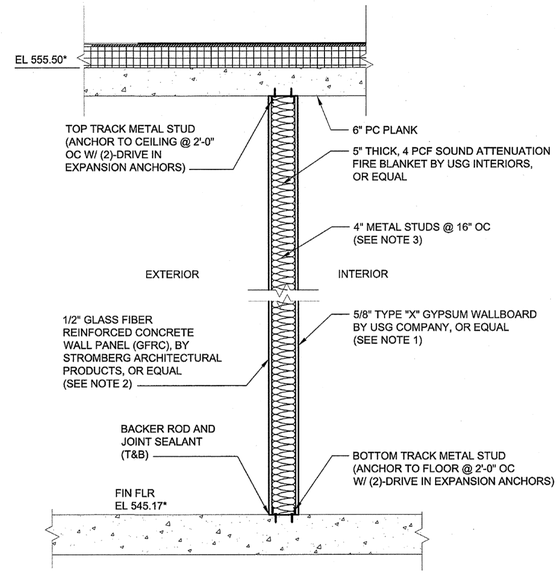
1. USE GROUP - CHAPTER 3:

USE GROUP DESIGNATION	F-2
DESCRIPTION	FACTORY INDUSTRIAL, LOW HAZARD, PROCESSING BEVERAGES

2. BUILDING HEIGHT/AREA - CHAPTER 5"

(TYPE II B CONSTRUCTION)	
ALLOWABLE HEIGHT	3 STORIES
ACTUAL HEIGHT	3 STORIES
ALLOWABLE AREA, PER FLOOR	23,000 SF
ACTUAL AREAS:	
- BASEMENT	2,350 SF
- FIRST	2,660 SF
- SECOND	2,820 SF
- THIRD	2,850 SF

3. TYPE OF CONSTRUCTION - CHAPTER 6:
   - (602.2) II B NON-COMBUSTIBLE MATERIALS
   - TABLE 601 - NO ELEMENTS FOR TYPE II B CONSTRUCTION HAVE FIRE-RESISTANCE RATING REQUIREMENTS
4. FIRE RESISTANT CONSTRUCTION - CHAPTER 7
   - FIRE WALL SEPARATION: N.A.
5. INTERIOR FINISHES - CHAPTER 8:
   - CORRIDORS, ROOMS, AND ENCLOSED SPACES: CLASS C
6. FIRE PROTECTION SYSTEMS - CHAPTER 9:
   - NO REQUIREMENTS
   - OCCUPANCY LOAD:
     - HABITABLE AREA: 7,815 SF
   - HABITABLE AREA / 100 SF PER PERSON (INDUSTRIAL AREAS)= 78 PERSONS OCCUPANT LOAD
7. MEANS OF EGRESS - CHAPTER 10:
   - NO REQUIREMENTS
   - OCCUPANCY LOAD:
     - HABITABLE AREA: 7,815 SF
   - HABITABLE AREA / 100 SF PER PERSON (INDUSTRIAL AREAS)= 78 PERSONS OCCUPANT LOAD
8. EXITS REQUIRED
   - TABLE 1016.1 MAXIMUM EXIT TRAVEL DISTANCE: 300 FT
   - ACTUAL LONGEST TRAVEL DISTANCE: 105 FT
9. ACCESSIBILITY - CHAPTER 11:
   - EQUIPMENT AREAS ARE NOT REQUIRED TO BE ACCESSIBLE PER 1103.2

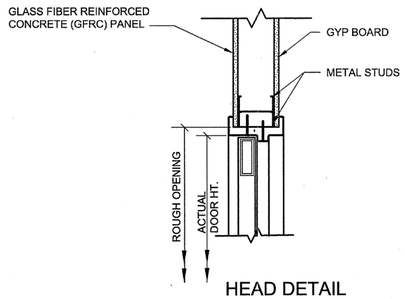


1 / A-01-003 — SECTION

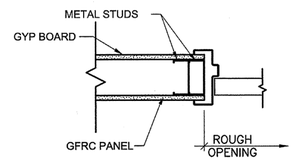
SCALE: 3/4" = 1'-0"

NOTES:

1. ATTACH WALLBOARD TO STUDS WITH 1 1/4" LONG TYPE "S" BUGLEHEAD SCREWS AT 12" SPACING. FINISH IN ACCORDANCE WITH ASTM C840 LEVEL 3.
2. ATTACH GFRC WITH FLEX ANCHORS AT 2'-0" OC SPACING WITH 5" LEG WELDED TO STUDS WITH (2)-1/2" LONG FLARE BEVEL WELDS AND 4" FOOT ATTACHED TO GFRC WITH 5/8" BONDING PADS THAT EXTEND 2 1/2" BEYOND FOOT EACH SIDE. GFRC HAS 1 1/2" RETURNS PACKED WITH MINERAL FIBER.
3. METAL STUD SHALL HAVE A MINIMUM BASE METAL THICKNESS OF 0.060 INCH AND A MINIMUM FLANGE WIDTH OF 1 3/8",AS MANUFACTURED BY DIETRICH METAL FRAMING, OR EQUAL.



HEAD DETAIL



JAMB DETAIL

DOOR DETAILS

GENERAL NOTES:

1. CONTRACTOR SHALL PROTECT ALL EXISTING TO REMAIN.
2. PROVIDE TEMPORARY DUST BARRIERS AND WEATHER PROOF ENCLOSURES ACCEPTABLE TO THE OWNER.
3. PATCH AND REPAIR ALL FINISHES AT M/E PENETRATIONS.
4. FIELD VERIFY ALL DIMENSIONS.

#KEYNOTES:

1. SEE ELECTRICAL DRAWINGS FOR EQUIPMENT
2. PARTITION WALL
3. 1 HOUR FIRE RESISTANT HOLLOW METAL DOOR. IBC TABLE 720.1 (2), ITEM 15.1.11.
4. FIRE EXTINGUISHER - SENTINEL MODEL 10 BY J.L INDUSTRIES OR EQUAL. SECURELY FASTEN TO STRUCTURE PER MANUFACTURER'S INSTRUCTIONS.

0 1/2 1

DRAWING IS NOT TO SCALE IF THIS DOES NOT MEASURE 1 INCH.

MALCOLM PIRNIE | ARCADIS — The Water Division of ARCADIS

Magna ENGINEERS — Electrical • Mechanical • Instrumentation

STATE OF KENTUCKY — MELDA V CAULEY — 22541 — LICENSED PROFESSIONAL ENGINEER — 12/20/13

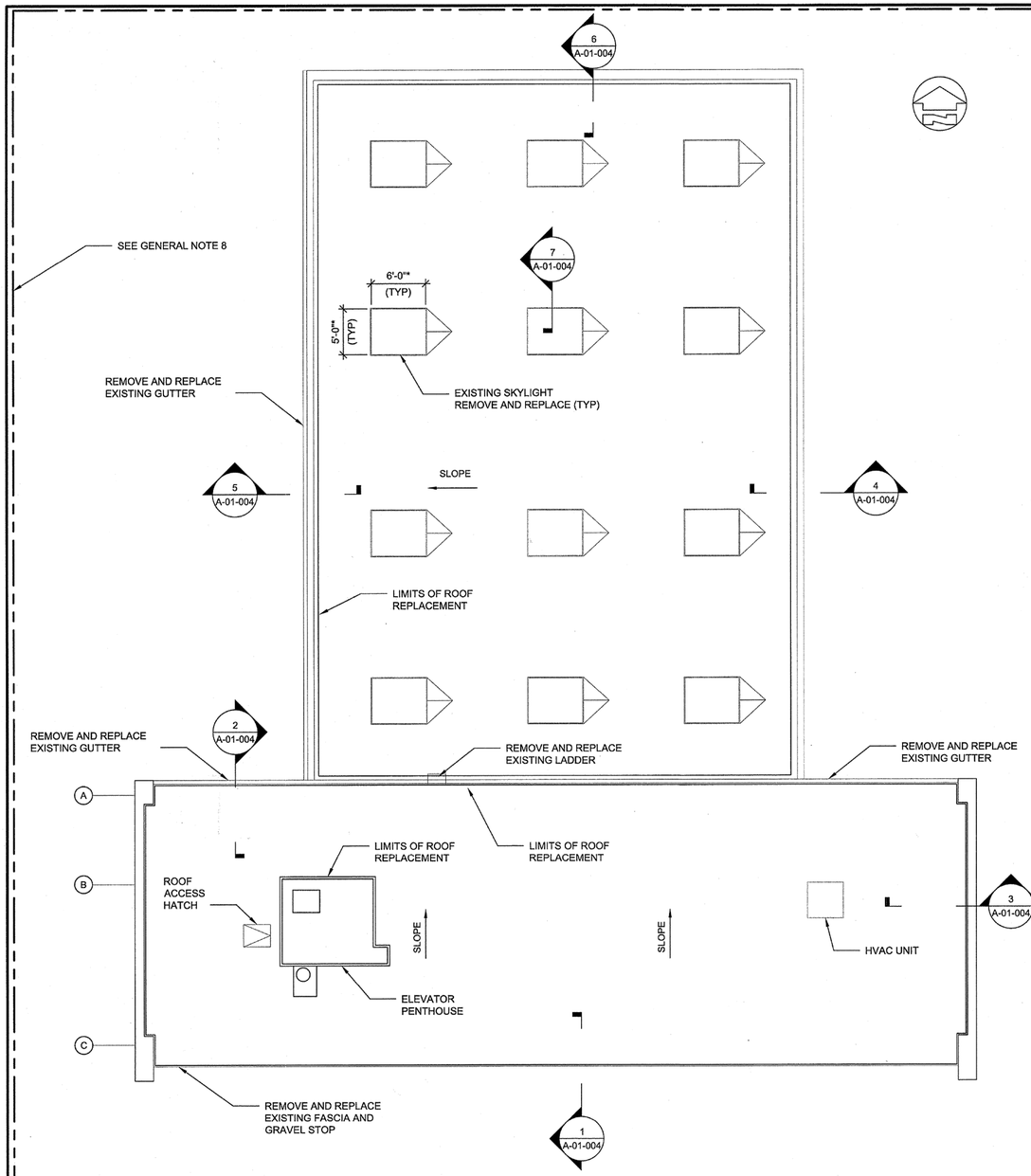
REVISIONS			
NO.	BY	DATE	REMARKS

DES SRZ
DWN JJH
CKD IVC

NORTHERN KENTUCKY WATER DISTRICT
TAYLOR MILL WATER TREATMENT PLANT
ELECTRICAL AND BASIN IMPROVEMENTS

ARCHITECTURAL
FILTER BUILDING PLAN AT EL 545.00, SECTION AND DETAILS
SCALE: AS NOTED

ISSUED STATUS: BID SET
DATE JANUARY 2014
SHEET A-01-003
CAD REF. NO. A-01-003

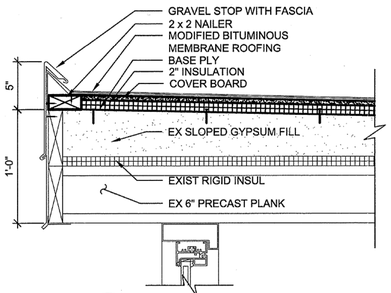


1 FILTER BUILDING PLAN EL. AT 545.00

SCALE: 1/8"=1'-0" 0 4' 8' 16'

0 1/2 1

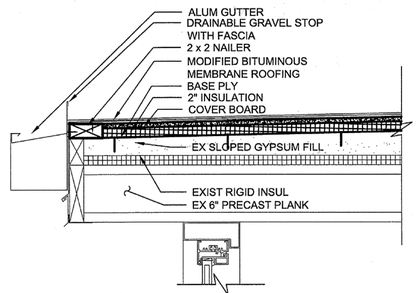
DRAWING IS NOT TO SCALE IF THIS DOES NOT MEASURE 1 INCH.



1 SECTION

1 / A-01-004

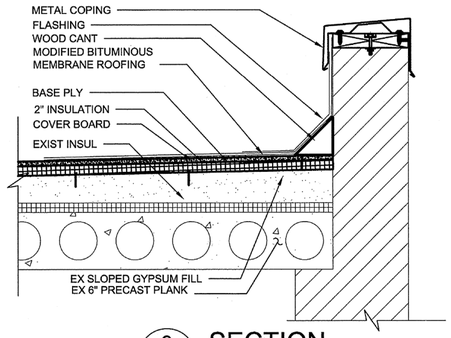
SCALE: 1 1/2" = 1'-0"



2 SECTION

2 / A-01-004

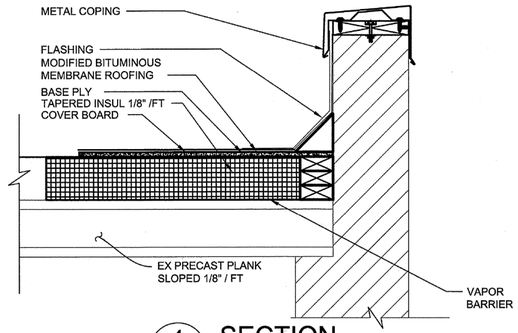
SCALE: 1 1/2" = 1'-0"



3 SECTION

3 / A-01-004

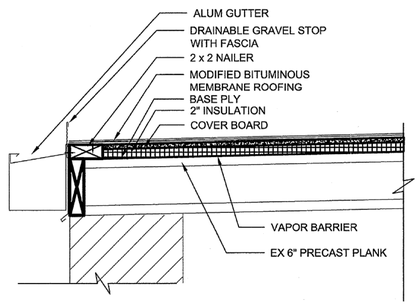
SCALE: 1 1/2" = 1'-0"



4 SECTION

4 / A-01-004

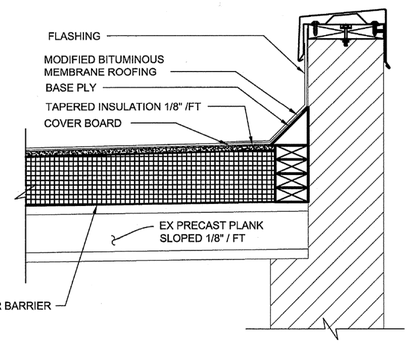
SCALE: 1 1/2" = 1'-0"



5 SECTION

5 / A-01-004

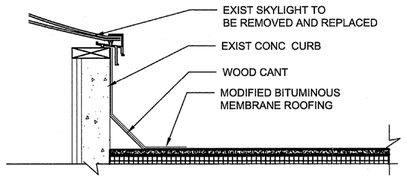
SCALE: 1 1/2" = 1'-0"



6 SECTION

6 / A-01-004

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



7 SECTION

7 / A-01-004

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

GENERAL NOTES:

ROOFING NOTES:

1. REMOVE EXISTING SINGLE PLY EPDM ROOF SYSTEM TO INCLUDE ALL FLASHING, COUNTER FLASHINGS, METAL COPING, GUTTERS AND DOWNSPOUTS, STONE BALLAST, EXISTING ROOF MEMBRANE, AND ROOF INSULATION PRIOR IN INSTALLATION OF GLASS-FIBER REINFORCED ASPHALT EMULSION ROOFING SYSTEM.
2. ROOF PLAN SHOWS GENERAL CONFIGURATION AND DETAILS OF THE EXISTING ROOF. THE CONTRACTOR SHALL FIELD VERIFY EXISTING ROOF SYSTEM TYPES, ALL DIMENSIONS, DETAILS, PENETRATIONS, ROOF MOUNTED EQUIPMENT AND CONDITIONS WHICH MAY AFFECT THE INSTALLATION OF THE NEW ROOF SYSTEM.
3. NEW ROOF LINES AND DIMENSIONS ARE GENERAL LIMITS OF THE NEW ROOF AND IS INTENDED TO SHOW THE VARIOUS LEVEL AND LOCATION OF THE ROOF TO BE REPLACED. THE CONTRACTOR SHALL FIELD VERIFY ALL ROOF LIMITS.
4. KEEP EXISTING ROOF DRAINS FREE OF ALL DEBRIS AND CLEAN OUT AT END OF WORK. TEST ALL ROOF DRAINS TO VERIFY THEY ARE FREE FLOWING AND UNOBSTRUCTED.
5. ALL ROOF MOUNTED EQUIPMENT MAY NOT BE SHOWN. THE CONTRACTOR SHALL INSPECT THE EXISTING ROOF TO BE REPLACED AND COORDINATE THE LOCATION OF ALL EXISTING ROOF MOUNTED EQUIPMENT, VENTS AND PLUMBING STACKS WITH PLACEMENT OF NEW FLASHINGS SEALS AND VENTS.
6. FIELD VERIFY ALL DIMENSIONS.
7. ROOF MAY NOT BE USED AS CONSTRUCTION STAGING AREAS.
8. WORK SHOWN WITHIN THIS BOUNDARY LINE IS PART OF ALTERNATIVE NO. 3. SEE SPECIFICATION SECTION 01 23 00 FOR DESCRIPTION OF ALTERNATIVE NO. 3.

⟨#⟩KEYNOTES:

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COMMONWEALTH OF KENTUCKY
IMELDA V CAULEY
22541
LICENSED PROFESSIONAL ENGINEER

REVISIONS			
NO.	BY	DATE	REMARKS

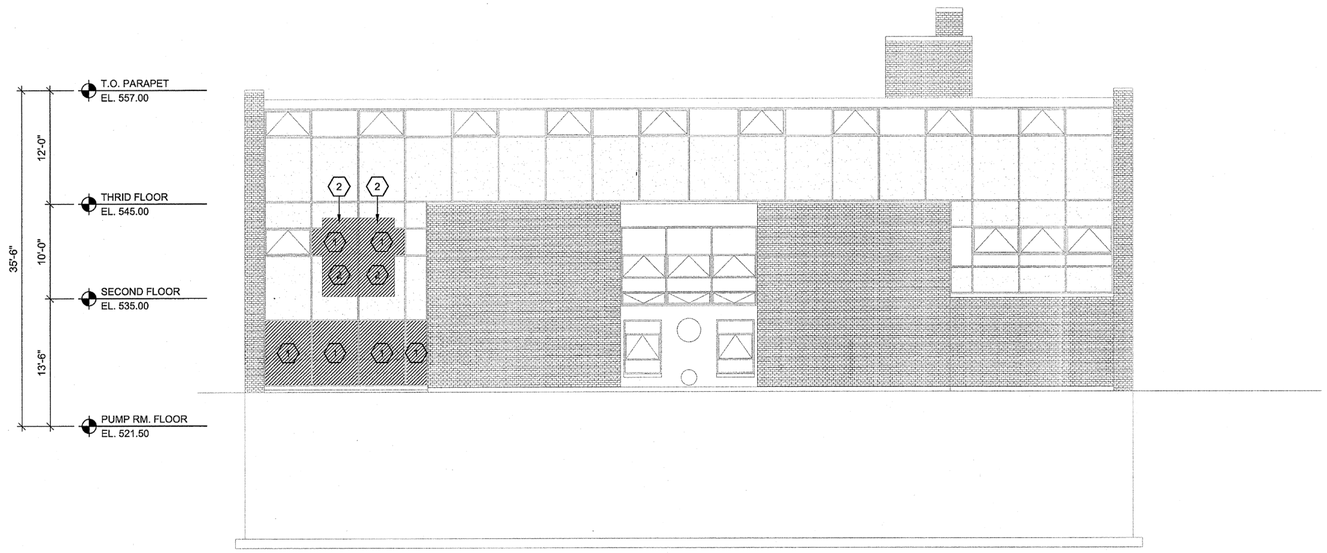
DES SRZ
DWN SRZ
CKD IVC

NORTHERN KENTUCKY WATER DISTRICT
TAYLOR MILL WATER TREATMENT PLANT
ELECTRICAL AND BASIN IMPROVEMENTS

ARCHITECTURAL
FILTER BUILDING ROOF PLAN AND SECTIONS
SCALE: AS NOTED

ISSUED STATUS: BID SET
DATE JANUARY 2014
SHEET A-01-004
CAD REF. NO. A-01-004

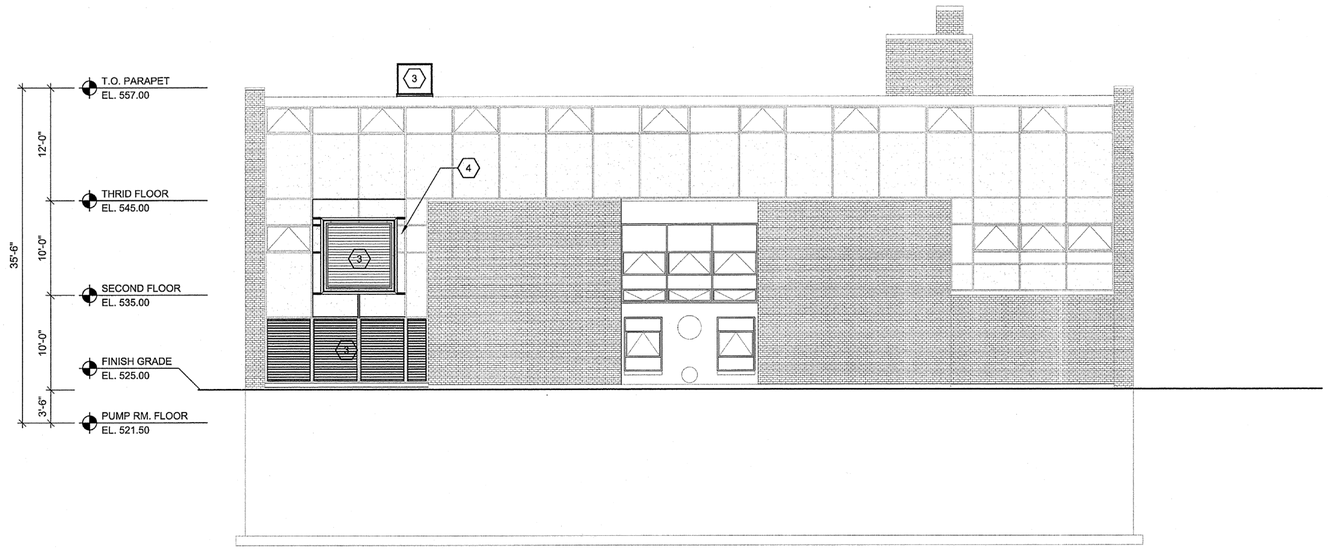
User:HOLLAND Spec:AUS-NCSMOD File:\\ARCADIS-US.COM\OFFICE\DATA\COLUMBUS-OH\PROJECTS\BDS PROJECTS\TAYLOR MILL\CAD\ARCH\A-01-004.DWG Scale:1:1 Saved:Date:12/20/2013 Time:08:40 Plot Date: Holland, Jimmy; 12/20/2013, 08:41 ; Layout:A-01-004



1 FILTER BUILDING
NORTH DEMO ELEVATION

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

0 4' 8' 16'



2 FILTER BUILDING
NORTH ELEVATION

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

0 4' 8' 16'

0 1/2 1

DRAWING IS NOT TO SCALE IF THIS DOES NOT MEASURE 1 INCH.

GENERAL NOTES:

1. CONTRACTOR SHALL PROTECT ALL EXISTING TO REMAIN.
2. PROVIDE TEMPORARY DUST BARRIERS AND WEATHER PROOF ENCLOSURES ACCEPTABLE TO THE OWNER.
3. PATCH AND REPAIR ALL FINISHES AT M/E PENETRATIONS.
4. FIELD VERIFY ALL DIMENSIONS.

(#) KEYNOTES:

1. REMOVE SPANDREL PANEL, GLASS, OPERABLE WINDOW SASH REQUIRED FOR INSTALLATION OF HVAC EQUIPMENT AND LOUVERS
2. SAW CUT SPANDREL PANEL FOR INSTALLATION OF HVAC EQUIPMENT AND LOUVERS.
3. NEW HVAC EQUIPMENT - SEE "H" DRAWINGS.
4. RE-USE WHERE POSSIBLE OR PROVIDE NEW SPANDREL PANEL TO MATCH EXISTING.

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12/20/13

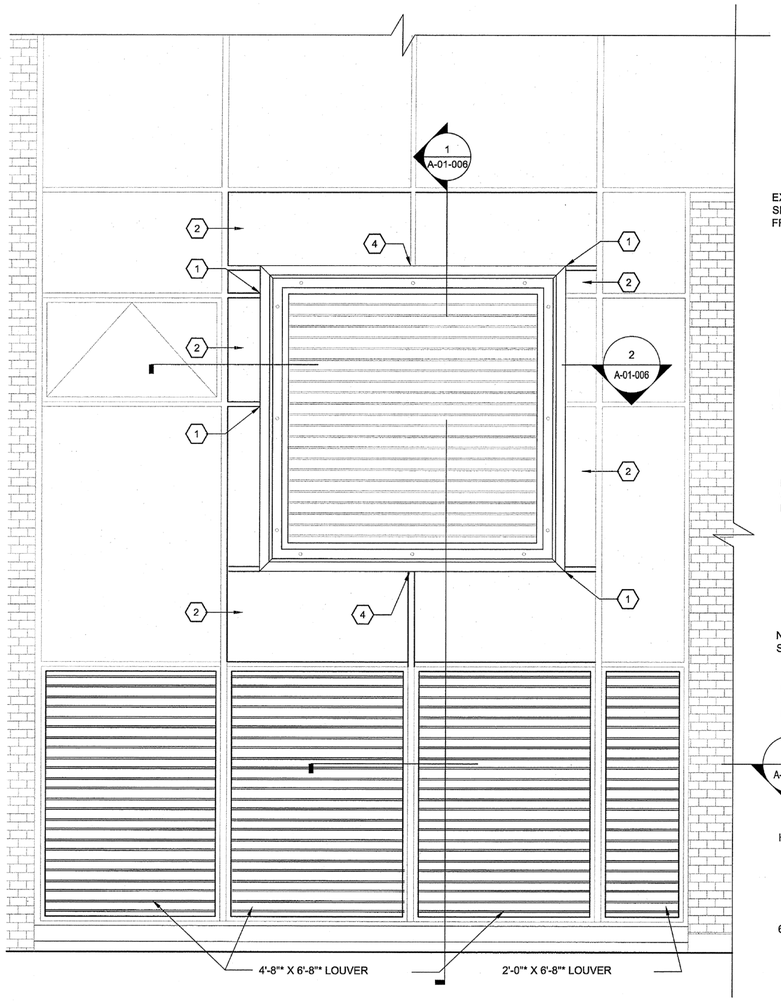
REVISIONS			
NO.	BY	DATE	REMARKS

DES SRZ
DWN JJH
CKD IVC

NORTHERN KENTUCKY WATER DISTRICT
TAYLOR MILL WATER TREATMENT PLANT
ELECTRICAL AND BASIN IMPROVEMENTS

ARCHITECTURAL
FILTER BUILDING ELEVATIONS
SCALE: 1/8" = 1'-0"

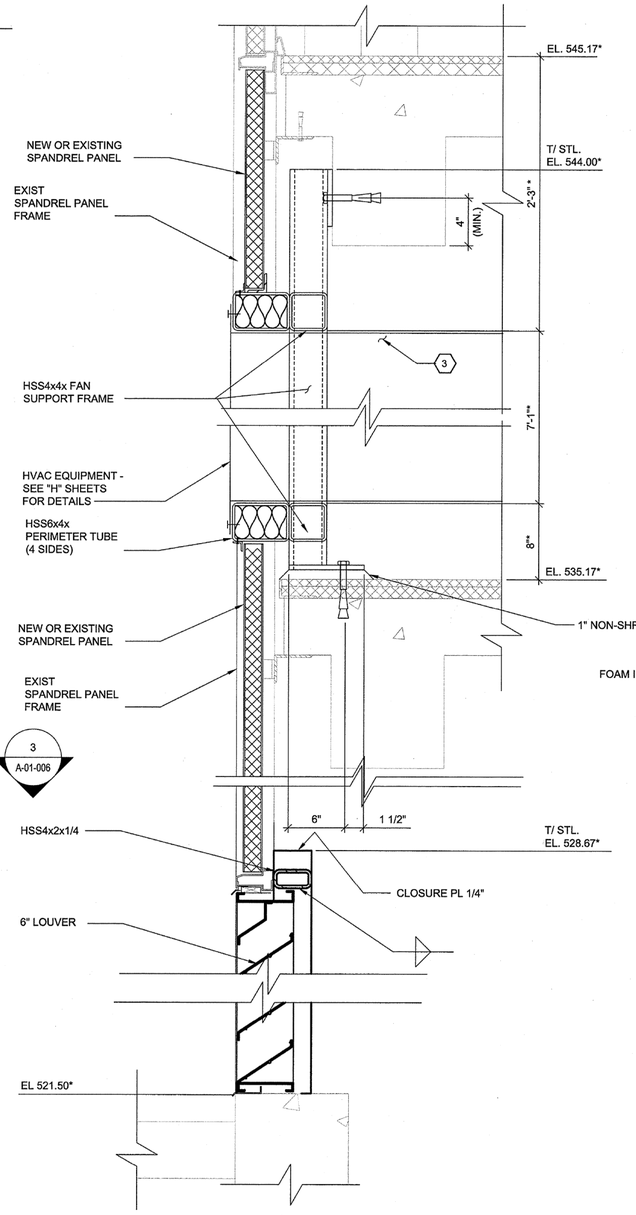
ISSUED STATUS: BID SET
DATE JANUARY 2014
SHEET A-01-005
CAD REF. NO. A-01-005



1 FILTER BUILDING ENLARGED ELEVATION

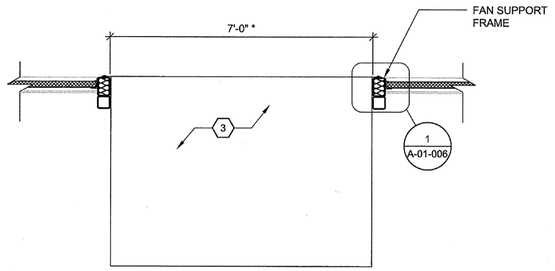
SCALE: 1/2"=1'-0"

0 1' 2' 4'



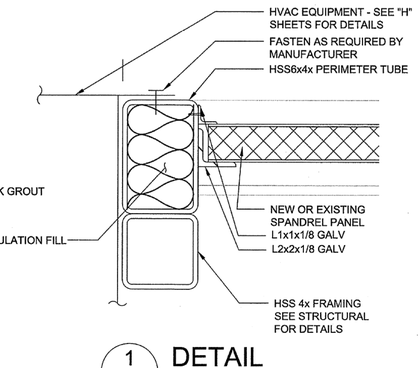
1 SECTION

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



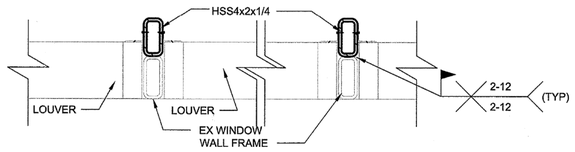
2 SECTION

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



1 DETAIL

SCALE: 3" = 1'-0"



3 SECTION

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

GENERAL NOTES:

1. FIELD VERIFY ALL DIMENSIONS.

KEYNOTES:

1. FASTEN CURTAIN WALL MEMBERS TO FRAMING.
2. RE-USE WHERE POSSIBLE OR PROVIDE NEW SPANDREL PANEL TO MATCH EXISTING.
3. HVAC EQUIPMENT - SEE "H" SHEETS FOR DETAILS.
4. FIELD WELD EXISTING MULLION TO NEW FAN SUPPORT FRAME.

0 1/2 1

DRAWING IS NOT TO SCALE IF THIS DOES NOT MEASURE 1 INCH.

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12/26/13

REVISIONS			
NO.	BY	DATE	REMARKS

DES SRZ
DWN JJH
CKD IVC

NORTHERN KENTUCKY WATER DISTRICT
TAYLOR MILL WATER TREATMENT PLANT
ELECTRICAL AND BASIN IMPROVEMENTS

ARCHITECTURAL
FILTER BUILDING SECTION AND DETAILS SHEET
SCALE: AS SHOWN

ISSUED STATUS: BID SET
DATE JANUARY 2014
SHEET A-01-006
CAD REF. NO. 2142001A-01-006

GENERAL LEGEND

B / E3.1 — B / M-4 — APPEARS ON SHEET WHERE SECTION IS CUT; SECTION IDENTIFICATION LETTER; SHEET WHERE SECTION IS DRAWN

B / E3.1 — B / M-4 — APPEARS ON THE SHEET WHERE SECTION IS DRAWN; SECTION OR DETAIL IDENTIFICATION LETTER; SHEET WHERE DRAWN

M1.2 / M2.1 / B — B / M1.2 / M2.1 — SECTION SYMBOL ON SHEET WHERE CUT; SHEET WHERE SECTION IS CUT; SHEET WHERE SECTION IS DRAWN

C / H1.1 / H2.2 — D / H1.1 / H2.2 — ELEVATION SYMBOL ON SHEET WHERE INDICATED; SHEET WHERE INDICATED; SHEET WHERE DRAWN

B / M1.2 / M2.1 — SECTION, ELEVATION OR DETAIL IDENTIFICATION ON SHEET WHERE DRAWN; SHEET WHERE INDICATED OR CUT; SHEET WHERE DRAWN

B / P3.2 — ENLARGED AREA OR PARTIAL PLAN SYMBOL (ON SHEET WHERE INDICATED AND SHEET WHERE DRAWN); IDENTIFICATION LETTER; SHEET WHERE DRAWN

A — PLAN MATCH LINE SYMBOL

CONNECTION OF NEW WORK TO EXISTING

LINE OR EQUIPMENT TO BE REMOVED

123 — ROOM NUMBER

9'-6" — CEILING HEIGHT

AFF	ABOVE FINISHED FLOOR
TOS, BOS	TOP OF STEEL, BOTTOM
TOB, BOB	TOP OF BEAM, BOTTOM
TOJ, BOJ	TOP OF JOIST, BOTTOM
TOC, BOC	TOP OF CONCRETE, BOTTOM
TOP, BOP	TOP OF PIPE, BOTTOM
BOD	BOTTOM OF DUCT

S — SMOKE BARRIER

1/2 HR. FIRE-RATED

S — 1/2 HR. FIRE-RATED/SMOKE BARRIER

3/4 HR. FIRE-RATED

S — 3/4 HR. FIRE-RATED/SMOKE BARRIER

1 HR. FIRE-RATED

S — 1 HR. FIRE-RATED/SMOKE BARRIER

2 HR. FIRE-RATED

S — 2 HR. FIRE-RATED/SMOKE BARRIER

NOTE: LEGENDS ALSO APPEAR ON INDIVIDUAL PLANS, SCHEDULES AND DETAILS.

MECHANICAL LEGEND
HVAC, PLUMBING & FIRE PROTECTION

20x16 — NEW DUCT - 1ST FIGURE IS DIMENSION SHOWN

SUPPLY OR OUTSIDE AIR DUCTWORK; PLAN, UP & DOWN

RETURN OR EXHAUST DUCTWORK

D / R — DROP AND RISE IN DIRECTION OF FLOW

ACOUSTIC LINED DUCTWORK; PLAN

SA	SUPPLY AIR DUCT
OA	OUTSIDE AIR DUCT
RA	RETURN AIR DUCT
EA	EXHAUST AIR DUCT
TA	TRANSFER AIR DUCT
HVD	HIGH VELOCITY SUPPLY DUCT (MEDIUM PRESSURE)

F/O — FLAT OVAL DUCT

LOW PRESSURE FLEXIBLE DUCT

HIGH PRESSURE FLEXIBLE DUCT

ROUND DUCTWORK; PLAN, UP AND DOWN

AIR FLOW; DIRECTION

REHEAT COIL IN DUCT

MANUAL VOLUME DAMPER; PLAN, ONE LINE DIAGRAM

BDD — BACKDRAFT DAMPER

M / M — MOTOR OPERATED DAMPER; PLAN, ONE LINE DIAGRAM

FD / FD — FIRE DAMPER

SD / SD — SMOKE DAMPER; PLAN, ONE LINE DIAGRAM (FIRE/SMOKE - FSD)

SPLITTER DAMPER; SD; SHOWN IN TEE WITH TURNING VANES.

AIR TURNING VANES; PLAN, ONE LINE DIAGRAM

DUCT BRANCH TAKE OFF WITH RAKE OFF DAMPER; PLAN, ONE DIAGRAM

DUCT TRANSITION; PLAN, ONE LINE DIAGRAM

ACCESS DOOR, VERTICAL OR HORIZONTAL

CEILING DIFFUSERS

DUCT OR PIPE SECTION

SUPPLY DIFFUSER; ONE, TWO, THREE AND FOUR WAY

RETURN, EXHAUST OR TRANSFER GRILLE

RETURN GRILLE WITH ACOUSTIC BAFFLE

EXHAUST OR RETURN BOTTOM WALL REGISTER OR GRILLE

EXHAUST OR RETURN TOP WALL REGISTER OR GRILLE

DOOR GRILLE

S-2 / 200 — AIR DEVICE DESIGNATION. (S) SUPPLY, (R) RETURN, (E) EXHAUST, (T) TRANSFER, (L) LOUVER; I.E. SUPPLY TYPE 2, 200 C.F.M.

SLOT TYPE LINEAR SUPPLY DIFFUSER

SLOT TYPE LINEAR RETURN GRILLE

FLEXIBLE DUCT CONNECTOR; PLAN, ONE LINE DIAGRAM

A DIRECTION OF PIPE FLOW

DIRECTION OF PIPE PITCH

HWS	HOT WATER SUPPLY PIPING
HWR	HOT WATER RETURN PIPING
CWS	CONDENSER WATER SUPPLY PIPING
CWR	CONDENSER WATER RETURN PIPING
CHWS	CHILLED WATER SUPPLY PIPING
CHWR	CHILLED WATER RETURN PIPING
HCWS	HOT/CHILLED WATER SUPPLY PIPING
HCWR	HOT/CHILLED WATER RETURN PIPING
HPWS	WATER SOURCE HEAT PUMP SUPPLY
HPWR	WATER SOURCE HEAT PUMP RETURN
MU	MAKE-UP (NON-POTABLE)
HMU	MAKE-UP (NON-POTABLE) HOT
LPS	LOW PRESSURE STEAM (0-15 PSI) PIPING
MPS	MEDIUM PRESSURE STEAM (16-50 PSI) PIPING
HPS	HIGH PRESSURE STEAM (51 PSI & OVER) PIPING
LPR	LOW PRESSURE CONDENSATE RETURN (0-15 PSI) PIPING
MPR	MEDIUM PRESSURE CONDENSATE RETURN (16-50 PSI) PIPING
HPR	HIGH PRESSURE CONDENSATE RETURN (51 PSI & OVER) PIPING
HRS	HEAT RECOVERY SUPPLY PIPING
HRR	HEAT RECOVERY RETURN PIPING
FOS	FUEL OIL SUPPLY PIPING
FOR	FUEL OIL RETURN PIPING

FOV	FUEL OIL VENT PIPING
RS	REFRIGERANT SUCTION PIPING
RL	REFRIGERANT LIQUID PIPING
D	EQUIPMENT OR SYSTEM DRAIN PIPING
E	EXPANSION LINE
R	SAFETY OR RELIEF VALVE DISCHARGE PIPING
CD	CONDENSATE DRAIN PIPING
G	NATURAL GAS PIPING
S	EXISTING SANITARY SEWER PIPING (SITE)
SS	EXISTING STORM SEWER PIPING (SITE)
S	SANITARY SEWER PIPING (SITE)
SS	STORM SEWER PIPING (SITE)
	SOIL & WASTE PIPING
	DWV VENT PIPING
RL	ROOF LEADER PIPING
FD	FOUNDATION DRAIN PIPING
AW	ACID WASTE
AV	ACID VENT
DCW	DOMESTIC COLD WATER PIPING
DHW	DOMESTIC HOT WATER (140 F) PIPING
DRW	DOMESTIC RECIRCULATING HOT WATER PIPING
105	DOMESTIC HOT WATER (105 F) PIPING
	HOT WATER PIPING (FOR EXAMPLE) HEAT TRACED
W	WATER SERVICE PIPING (EXTERIOR)
O	OXYGEN PIPING
AC	ACETYLENE
V	VENT PIPING
VAC	VACUUM PIPING
A	COMPRESSED AIR PIPING

VALVE (IN GENERAL - SEE SPECS)

GATE VALVES (GV)

GLOBE VALVES

CHECK VALVE

BALANCING VALVE (WITH READ OUT)

BALANCING COCK ONLY (NON-SHUTOFF)

HOSE CONNECTION, BOILER DRAIN

BALL VALVES (BV)

PLUG COCKS, BALANCING COCKS

SILENT CHECK VALVE

BUTTERFLY VALVES (BFV)

CONTROL VALVE; TWO WAY, THREE WAY

SOLENOID OR QUICK-OPENING VALVE

MOTOR OPERATED VALVE

FLOW MEASURING DEVICE

SELF REGULATING FLOW CONTROL VALVE

RELIEF VALVE; PLAN, ELEVATION

PRESSURE REDUCING VALVE (PRV)

TRI-FUNCTION VALVE (TDV)

STRAINER; STRAINER WITH BLOW DOWN.

FLOAT VALVE

FLEXIBLE CONNECTOR

BACKFLOW PREVENTER, REDUCED PRESSURE (STRAINER NOT SHOWN) (BFP - RPZ)

DOUBLE CK. VALVE ASSEMBLY (DCA)

REDUCING BUSHING

COUPLING, JOINT

CAP

PLUG

90° ELBOW

90° ELBOW TURNED UP

90° ELBOW TURNED DOWN

45° ELBOW

TEE OR SIDE CONNECTION

TEE OUTLET UP

TEE OUTLET DOWN

CROSS

TOP / BOT. — UNCONNECTED CROSSING PIPES

RISE OR DROP IN PIPE

LPS — RISER ONLY, SERVICE (LPS) SHOWN

BOTTOM CONNECTION TO LINE

TOP CONNECTION TO LINE

RISER IN SLEEVE

UNION

STRUCTURAL PIPE ANCHOR

BUILDING ENTRANCE PIPE ANCHOR

PIPE GUIDE

EXPANSION JOINT

THRUST BLOCK

WALL SLEEVE

CONCENTRIC REDUCER

ECCENTRIC REDUCER

VTR / VTR — VENT THROUGH ROOF, PLAN & RISER

THROUGH ROOF

THROUGH FLOOR

THROUGH WALL

THERMOMETERS

THERMOMETER WELL

PRESSURE GAUGES

VACUUM AND COMPOUND GAUGES

PRESSURE/TEMPERATURE TEST PLUG

FLOW SWITCH

ORIFICE FLOW METER

METER: WATER, CONDENSATE OR GAS

POT OR SHOT FEEDER

THERMOSTAT, OR TEMP. CONTROLLER

PRESSURE CONTROLLER

HUMIDISTAT, OR HUM. CONTROLLER

CONDUCTIVITY CONTROLLER

MAV — MANUAL AIR VENT

AAV — AUTOMATIC AIR VENT

AAE — AUTOMATIC AIR ELIMINATOR

VACUUM BREAKER

FLOAT AND THERMOSTATIC TRAP, TRAP SET

INVERTED BUCKET TRAP, TRAP SET

F — FLOAT, STEAM OR AIR TRAP

EMD — MAIN OR END OF MAIN DRIP TRAP SET

HORIZONTAL UNIT HEATER

P — PUMP

ROOF EXHAUST HOOD, EXHAUST FAN

ROOF INTAKE HOOD, SUPPLY FAN

F — FIRE PROTECTION

PIPE HANGER

VALVE IN PIT

FIRE RISER

FIRE HYDRANT (FH)

FIRE DEPT. CONNECTION (FDC) (SIAMESE: WALL, POST)

FIRE DEPT. CONNECTION (FDC) (SINGLE: WALL, POST)

ZV — ZONE CONTROL VALVE SET (SEE DETAILS)

TEST VALVE HEADER

POST INDICATOR VALVE (PIV)

YARD HYDRANT (YH)

WATER MOTOR ALARM (GONG)

ALARM CHECK VALVE

DRY PIPE VALVE

DRY PIPE VALVE W/ EXHAUSTERS

PREACTION SYSTEM VALVE

WET STANDPIPE HOSE STATION

DRY STANDPIPE HOSE STATION

ANGLE HOSE (HV) OR DRAIN VALVE

SPRINKLER HEAD: UPRIGHT OR GENERAL

SPRINKLER HEAD: PENDANT

SPRINKLER HEAD: PENDANT ON DROP NIPPLE

SPRINKLER HEAD: DRY PENDANT TYPE

SPRINKLER HEAD: UPRIGHT ON SPRIG

SPRINKLER HEAD: WITH GUARD

SPRINKLER HEAD: SIDEWALL

SPRINKLER HEAD: OUTSIDE

WHA-A	WATER HAMMER ARRESTOR: PDI SIZE A
P-1	PLUMBING FIXTURE I.D. NUMBER
VTR	VENT THRU ROOF; PLAN & RISER
FD-1	FLOOR DRAIN I.D. NUMBER; PLAN & RISER
WCO	WALL CLEAN OUT
CO	CLEAN OUT
FCO	FLOOR CLEAN OUT
GCO	GRADE CLEAN OUT
AD	ACCESS DOOR
WH	WALL HYDRANT
HB	HOSE BIBB
OR OSD	OPEN RECEPTACLE

J / M1.4 — RISER SYMBOL ON PLAN SHEET; SHEET WHERE WASTE & WATER RISERS APPEAR

A / P2.1 / P2.2 — RISER SYMBOL ON PLAN SHEET; SHEET WHERE WASTE RISER APPEARS; SHEET WHERE WATER RISER APPEARS

A / S — A / W — RISER SYMBOLS FOR WASTE (SANITARY) AND WATER ON RISER SHEET

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Magna ENGINEERS — Electrical · Mechanical · Instrumentation

STATE OF KENTUCKY — JAMES H. MARTIN — LICENSED PROFESSIONAL ENGINEER

REVISIONS			
NO.	BY	DATE	REMARKS

DES JLM
DWN YNR
CKD JLM

NORTHERN KENTUCKY WATER DISTRICT
TAYLOR MILL WATER TREATMENT PLANT
ELECTRICAL AND BASIN IMPROVEMENTS

HVAC
GENERAL NOTES, SYMBOLS, AND ABBREVIATIONS
SCALE: NOT TO SCALE

ISSUED STATUS: BID SET
DATE JANUARY 2014
SHEET H-00-001
CAD REF. NO. H-00-001