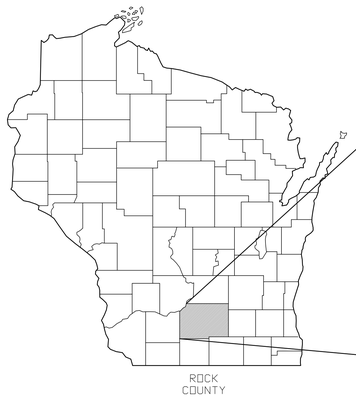
CONSTRUCTION & DEMOLITION WASTE RECYCLING FACILITY
BID DOCUMENTS - BID NO. 315011
7102 U.S. HIGHWAY 12/18
MADISON, WISCONSIN

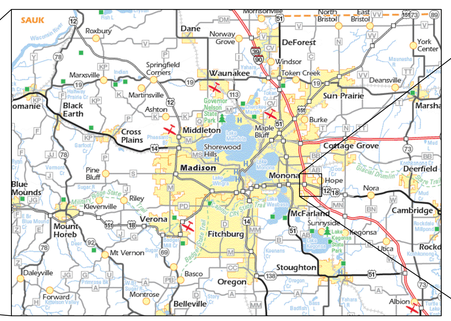
PREPARED FOR: DANE COUNTY DEPARTMENT OF PUBLIC WORKS, HIGHWAY AND TRANSPORTATION
PUBLIC WORKS SOLID WASTE DIVISION
1919 ALLIANT ENERGY CENTER WAY
MADISON, WISCONSIN

PREPARED BY: SCS ENGINEERS
MADISON, WISCONSIN

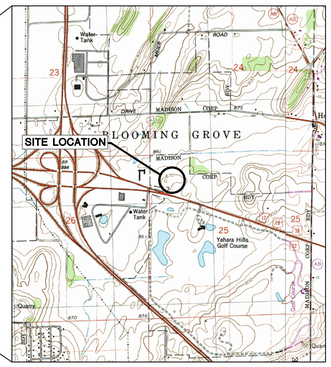
DATE: APRIL 2015



WISCONSIN



VICINITY
LOCATOR MAP



SITE
LOCATOR MAP
APPROXIMATE SCALE: 1"=2,000'

INDEX

SCS ENGINEERS
2830 DAIRY DRIVE MADISON, WI 53718-6751
PHONE: (608) 224-2830

CONSTRUCTION AND DEMOLITION WASTE RECYCLING FACILITY
7102 US HWY 12/18
MADISON, WISCONSIN

DANE COUNTY DEPARTMENT OF PUBLIC WORKS
SOLID WASTE DIVISION
1919 ALLIANT ENERGY CENTER WAY
MADISON, WI 53713

PROCESS AND CIVIL ENGINEER:
SCS ENGINEERS
2830 DAIRY DRIVE
MADISON, WI 53718-6751
(608) 224-2830

ARCHITECT:
DORSCHNER ASSOCIATES, INC.
849 E. WASHINGTON AVE., SUITE 112
MADISON, WI 53703

STRUCTURAL ENGINEER:
PIERCE ENGINEERS, INC.
10 WEST MIFFLIN ST., SUITE 205
MADISON, WI 53703

MECHANICAL, ELECTRIC, PLUMBING DESIGN:
JDR ENGINEERING, INC.
5525 NOBEL DRIVE, SUITE 110
MADISON, WI 53711

N

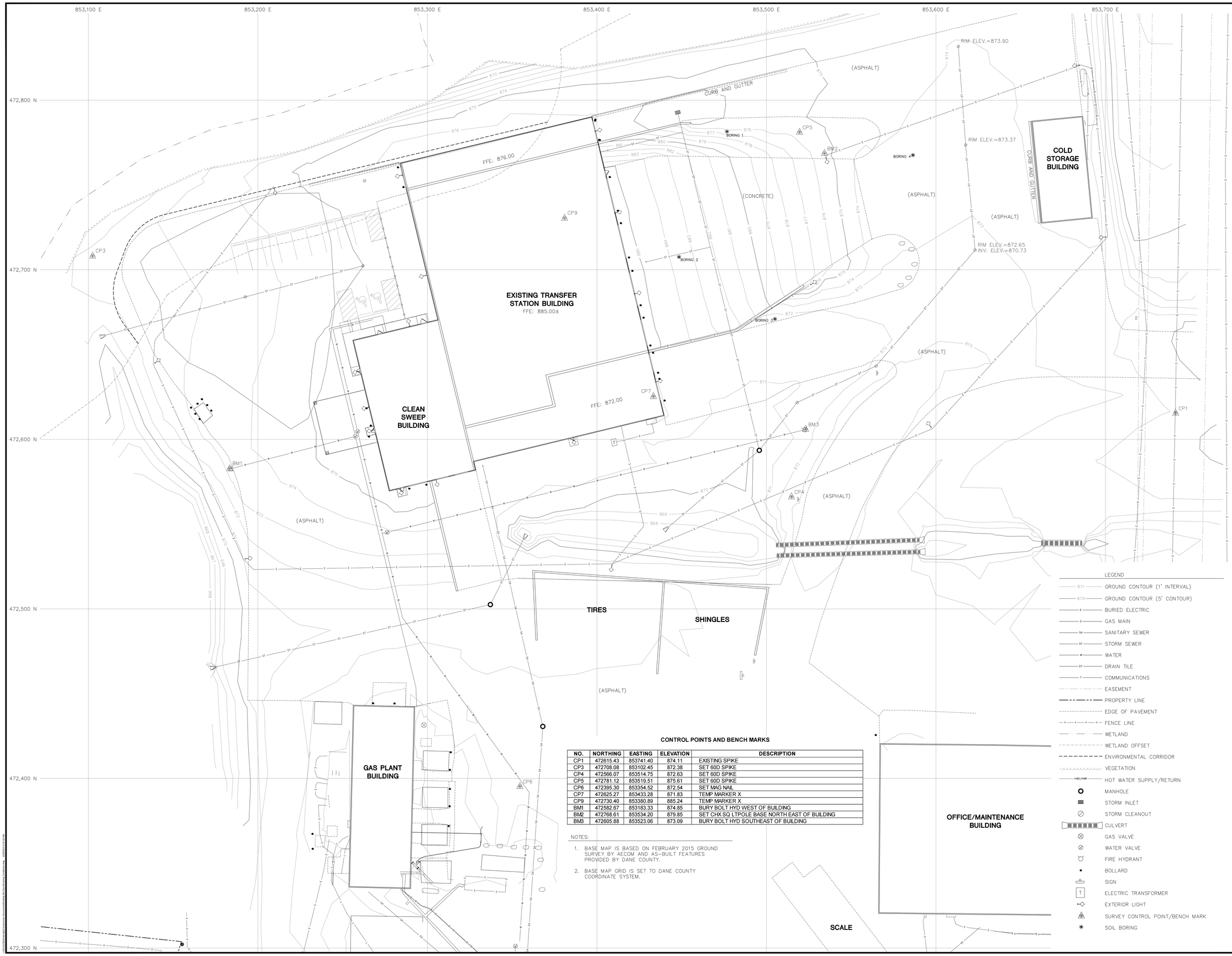
REVISION	DATE	BY	TITLE

PROJECT NO.	25214236.00
DRAWN:	02/13/15
REVISED:	04/27/15
DRAWN BY:	AHB
CHECKED BY:	MH
APPROVED BY:	

BID DOCUMENTS
ISSUED 04/28/15

TITLE SHEET

SHEET NUMBER
G100



CONTROL POINTS AND BENCH MARKS

NO.	NORTHING	EASTING	ELEVATION	DESCRIPTION
CP1	472615.43	853741.40	874.11	EXISTING SPIKE
CP3	472708.08	853102.45	872.38	SET 60D SPIKE
CP4	472566.07	853514.75	872.63	SET 60D SPIKE
CP5	472781.12	853519.51	875.61	SET 60D SPIKE
CP6	472395.30	853354.52	872.54	SET MAG NAIL
CP7	472625.27	853433.28	871.83	TEMP MARKER X
CP9	472730.40	853380.89	885.24	TEMP MARKER X
BM1	472582.67	853183.33	874.85	BURY BOLT HYD WEST OF BUILDING
BM2	472768.61	853534.20	879.85	SET CHX SQ LTPOLE BASE NORTH EAST OF BUILDING
BM3	472605.88	853523.06	873.09	BURY BOLT HYD SOUTHEAST OF BUILDING

NOTES:

1. BASE MAP IS BASED ON FEBRUARY 2015 GROUND SURVEY BY AECOM AND AS-BUILT FEATURES PROVIDED BY DANE COUNTY.
2. BASE MAP GRID IS SET TO DANE COUNTY COORDINATE SYSTEM.

LEGEND

- GROUND CONTOUR (1' INTERVAL)
- GROUND CONTOUR (5' CONTOUR)
- BURIED ELECTRIC
- GAS MAIN
- SANITARY SEWER
- STORM SEWER
- WATER
- DRAIN TILE
- COMMUNICATIONS
- EASEMENT
- PROPERTY LINE
- EDGE OF PAVEMENT
- FENCE LINE
- WETLAND
- WETLAND OFFSET
- ENVIRONMENTAL CORRIDOR
- VEGETATION
- HOT WATER SUPPLY/RETURN
- MANHOLE
- STORM INLET
- STORM CLEANOUT
- CULVERT
- GAS VALVE
- WATER VALVE
- FIRE HYDRANT
- BOLLARD
- SIGN
- ELECTRIC TRANSFORMER
- EXTERIOR LIGHT
- SURVEY CONTROL POINT/BENCH MARK
- SOIL BORING

N

20 0 20

SCALE: 1" = 20'

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DRAWN BY:	AHB
CHECKED BY:	MH
APPROVED BY:	

BID DOCUMENTS ISSUED 04/28/15

EXISTING CONDITIONS

SHEET NUMBER
C100

853,100 E | 853,200 E | 853,300 E | 853,400 E | 853,500 E | 853,600 E | 853,700 E

472,800 N | 472,700 N | 472,600 N | 472,500 N | 472,400 N | 472,300 N

RIM ELEV.=873.90

(ASPHALT)

CURB AND GUTTER

BORING 1

CP5

RELOCATE LIGHT SEE SHEET C200

BM2

BORING

RIM ELEV.=873.37

COLD STORAGE BUILDING

CURB AND GUTTER

(CONCRETE)

DEMOLISH EXISTING RAMP PAVEMENT SEE DETAIL 1 C500

(ASPHALT)

(ASPHALT)

CP9

REMOVE BOLLARDS (TYP.)

RIM ELEV.=872.65
INV. ELEV.=870.73

CP3

BORING 2

REMOVE WALL SEE ARCHITECTURAL DRAWINGS AND DETAIL 3 C500

EXISTING TRANSFER STATION BUILDING

CAP ROOF DRAIN

RELOCATE LIGHT SEE SHEET C200

RELOCATE BOULDERS (TYP.)

BORING 3

SAWCUT AND REMOVE EXISTING ASPHALT SEE DETAIL 2 C500

(ASPHALT)

CP7

CLEAN SWEEP BUILDING

CP1

BM3

BM1

CP4

(ASPHALT)

(ASPHALT)

TIRES

SHINGLES

(ASPHALT)

GAS PLANT BUILDING

CP6

OFFICE/MAINTENANCE BUILDING

SCALE

LEGEND

- 871 GROUND CONTOUR (1' INTERVAL)
- 870 GROUND CONTOUR (5' CONTOUR)
- E BURIED ELECTRIC
- G GAS MAIN
- SA SANITARY SEWER
- ST STORM SEWER
- W WATER
- DT DRAIN TILE
- T COMMUNICATIONS
- EASEMENT
- PROPERTY LINE
- EDGE OF PAVEMENT
- FENCE LINE
- WETLAND
- WETLAND OFFSET
- ENVIRONMENTAL CORRIDOR
- VEGETATION
- HWS/HWR HOT WATER SUPPLY/RETURN
- MANHOLE
- STORM INLET
- STORM CLEANOUT
- CULVERT
- GAS VALVE
- WATER VALVE
- FIRE HYDRANT
- BOLLARD
- SIGN
- T ELECTRIC TRANSFORMER
- EXTERIOR LIGHT
- SURVEY CONTROL POINT/BENCH MARK
- SOIL BORING

N

20 0 20

SCALE: 1" = 20'

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BID DOCUMENTS ISSUED 04/28/15

DEMOLITION PLAN

SHEET NUMBER
C110

SCS ENGINEERS
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CONSTRUCTION AND DEMOLITION WASTE RECYCLING FACILITY 7102 US HWY 12/18 MADISON, WISCONSIN

DANE COUNTY DEPARTMENT OF PUBLIC WORKS
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MADISON, WI 53718-6751
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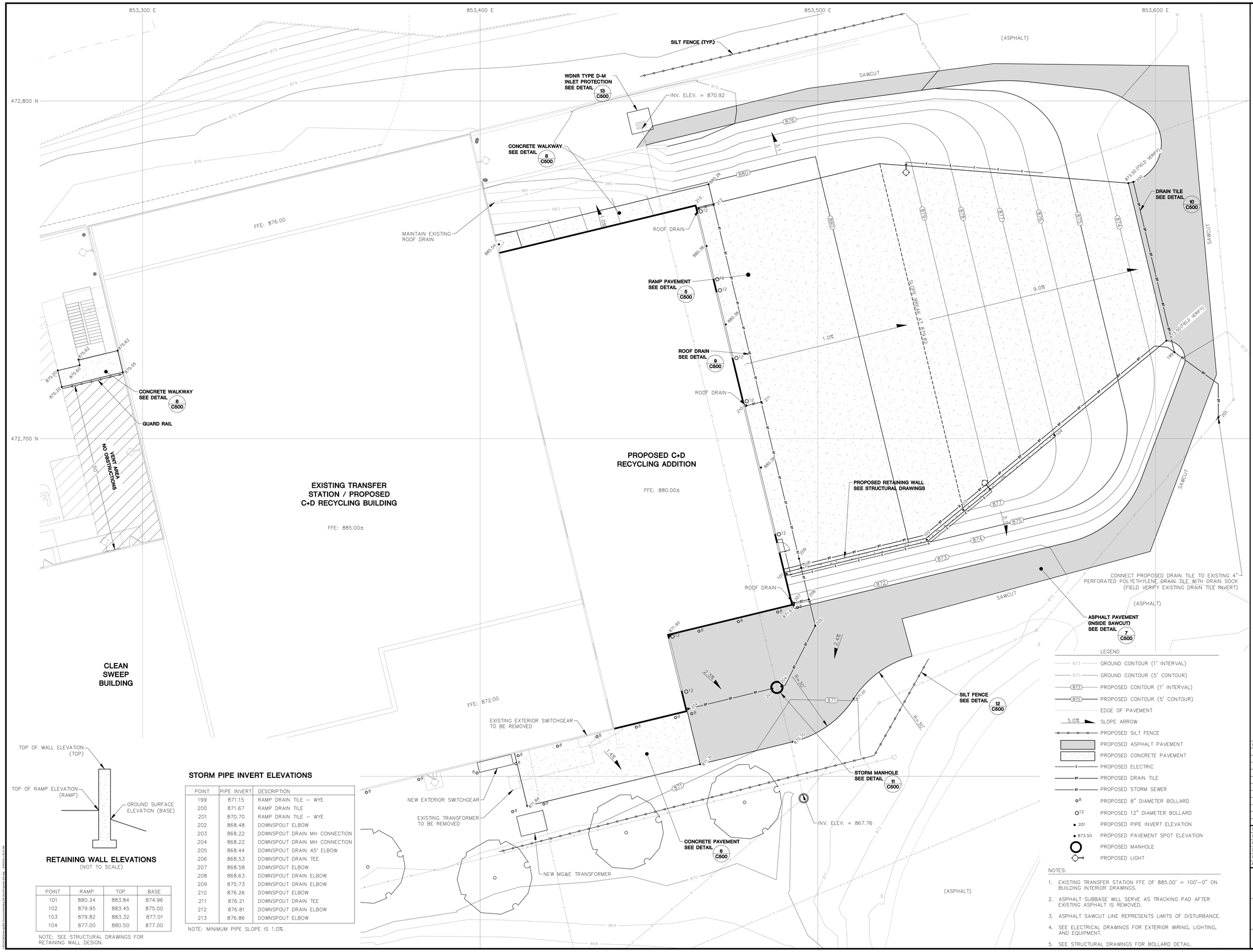

RETAINING WALL ELEVATIONS
(NOT TO SCALE)

POINT	RAMP	TOP	BASE
101	880.34	883.84	874.96
102	879.95	883.45	875.00
103	879.82	883.32	877.01
104	877.00	880.50	877.00

NOTE: SEE STRUCTURAL DRAWINGS FOR RETAINING WALL DESIGN.

STORM PIPE INVERT ELEVATIONS

POINT	PIPE INVERT	DESCRIPTION
199	871.15	RAMP DRAIN TILE – WYE
200	871.67	RAMP DRAIN TILE
201	870.70	RAMP DRAIN TILE – WYE
202	868.48	DOWNSPOUT ELBOW
203	868.22	DOWNSPOUT DRAIN MH CONNECTION
204	868.22	DOWNSPOUT DRAIN MH CONNECTION
205	868.44	DOWNSPOUT DRAIN 45° ELBOW
206	868.53	DOWNSPOUT DRAIN TEE
207	868.58	DOWNSPOUT ELBOW
208	868.63	DOWNSPOUT DRAIN ELBOW
209	875.73	DOWNSPOUT DRAIN ELBOW
210	876.26	DOWNSPOUT ELBOW
211	876.21	DOWNSPOUT DRAIN TEE
212	876.81	DOWNSPOUT DRAIN ELBOW
213	876.86	DOWNSPOUT ELBOW

NOTE: MINIMUM PIPE SLOPE IS 1.0%.

NOTES:

1. EXISTING TRANSFER STATION FFE OF 885.00' = 100'–0" ON BUILDING INTERIOR DRAWINGS.
2. ASPHALT SUBBASE WILL SERVE AS TRACKING PAD AFTER EXISTING ASPHALT IS REMOVED.
3. ASPHALT SAWCUT LINE REPRESENTS LIMITS OF DISTURBANCE.
4. SEE ELECTRICAL DRAWINGS FOR EXTERIOR WIRING, LIGHTING, AND EQUIPMENT.
5. SEE STRUCTURAL DRAWINGS FOR BOLLARD DETAIL.

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5525 NOBEL DRIVE, SUITE 110
MADISON, WI 53711

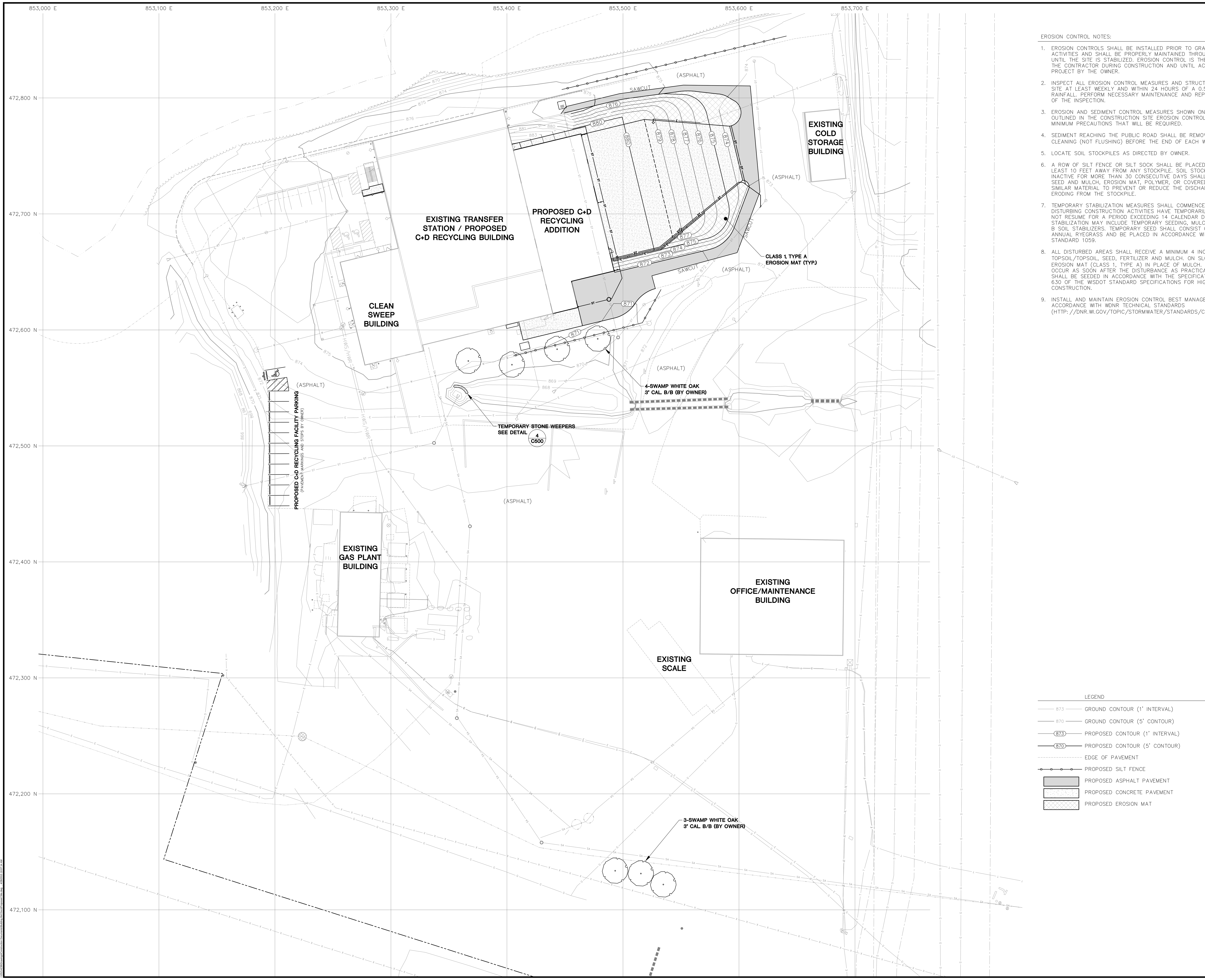
REVISION	DATE	BY	TITLE

PROJECT NO.	252142.36.00
DRAWN:	01/22/15
REVISED:	04/27/15
DRAWN BY:	AHB
CHECKED BY:	MH
APPROVED BY:	

BID DOCUMENTS ISSUED 04/28/15

SITE PLAN

SHEET NUMBER
C300



EROSION CONTROL NOTES:

1. EROSION CONTROLS SHALL BE INSTALLED PRIOR TO GRADING OR DISTURBANCE ACTIVITIES AND SHALL BE PROPERLY MAINTAINED THROUGHOUT CONSTRUCTION UNTIL THE SITE IS STABILIZED. EROSION CONTROL IS THE RESPONSIBILITY OF THE CONTRACTOR DURING CONSTRUCTION AND UNTIL ACCEPTANCE OF THE PROJECT BY THE OWNER.
2. INSPECT ALL EROSION CONTROL MEASURES AND STRUCTURES SERVING THE SITE AT LEAST WEEKLY AND WITHIN 24 HOURS OF A 0.5 INCH OR GREATER RAINFALL. PERFORM NECESSARY MAINTENANCE AND REPAIRS WITHIN 24 HOURS OF THE INSPECTION.
3. EROSION AND SEDIMENT CONTROL MEASURES SHOWN ON THIS PLAN AND OUTLINED IN THE CONSTRUCTION SITE EROSION CONTROL PLAN ARE THE MINIMUM PRECAUTIONS THAT WILL BE REQUIRED.
4. SEDIMENT REACHING THE PUBLIC ROAD SHALL BE REMOVED BY STREET CLEANING (NOT FLUSHING) BEFORE THE END OF EACH WORKDAY.
5. LOCATE SOIL STOCKPILES AS DIRECTED BY OWNER.
6. A ROW OF SILT FENCE OR SILT SOCK SHALL BE PLACED DOWNSLOPE AND AT LEAST 10 FEET AWAY FROM ANY STOCKPILE. SOIL STOCKPILES THAT ARE INACTIVE FOR MORE THAN 30 CONSECUTIVE DAYS SHALL BE STABILIZED WITH SEED AND MULCH, EROSION MAT, POLYMER, OR COVERED WITH TARPS OR SIMILAR MATERIAL TO PREVENT OR REDUCE THE DISCHARGE OF SEDIMENT ERODING FROM THE STOCKPILE.
7. TEMPORARY STABILIZATION MEASURES SHALL COMMENCE WHEN LAND DISTURBING CONSTRUCTION ACTIVITIES HAVE TEMPORARILY CEASED AND WILL NOT RESUME FOR A PERIOD EXCEEDING 14 CALENDAR DAYS. TEMPORARY STABILIZATION MAY INCLUDE TEMPORARY SEEDING, MULCHING, OR WISDOT TYPE B SOIL STABILIZERS. TEMPORARY SEED SHALL CONSIST OF WINTER WHEAT OR ANNUAL RYEGRASS AND BE PLACED IN ACCORDANCE WITH WDNR TECHNICAL STANDARD 1059.
8. ALL DISTURBED AREAS SHALL RECEIVE A MINIMUM 4 INCHES OF SALVAGED TOPSOIL/TOPSOIL, SEED, FERTILIZER AND MULCH. ON SLOPES 3H:1V, INSTALL EROSION MAT (CLASS 1, TYPE A) IN PLACE OF MULCH. RESTORATION SHALL OCCUR AS SOON AFTER THE DISTURBANCE AS PRACTICAL. PERVIOUS AREAS SHALL BE SEEDED IN ACCORDANCE WITH THE SPECIFICATIONS AND SECTION 630 OF THE WISDOT STANDARD SPECIFICATIONS FOR HIGHWAY AND STRUCTURE CONSTRUCTION.
9. INSTALL AND MAINTAIN EROSION CONTROL BEST MANAGEMENT PRACTICES IN ACCORDANCE WITH WDNR TECHNICAL STANDARDS (HTTP: //DNR.WI.GOV/TOPIC/STORMWATER/STANDARDS/CONST_STANDARDS.HTML).

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MECHANICAL, ELECTRIC, PLUMBING DESIGN:
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5525 NOBEL DRIVE, SUITE 110
MADISON, WI 53711

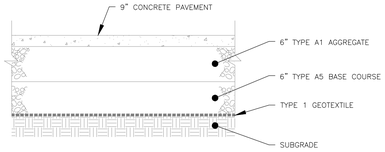
REVISION	DATE	BY:	TITLE

PROJECT NO.	25214236.00
DRAWN:	01/22/15
REVISED:	04/27/15
DRAWN BY:	AHB
CHECKED BY:	MH
APPROVED BY:	

BID DOCUMENTS ISSUED 04/28/15

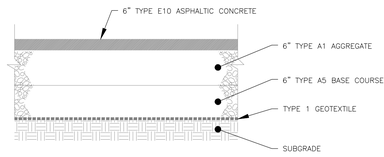
LANDSCAPE AND RESTORATION PLAN

SHEET NUMBER
C310



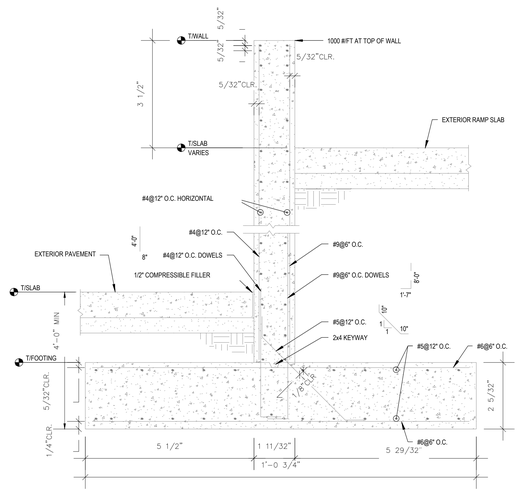
1 C500 EXISTING RAMP PAVEMENT
NOT TO SCALE

NOTE:
DETAIL FROM DANE COUNTY WASTE TRANSFER STATION AND HOUSEHOLD HAZARDOUS WASTE FACILITY, RODEFELD LANDFILL CONSTRUCTION SET, GRAEF, 05/09/2012. CONTRACTOR TO FIELD VERIFY ACTUAL CONDITIONS.



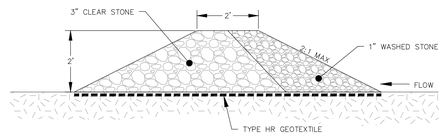
2 C500 EXISTING ASPHALT PAVEMENT
NOT TO SCALE

NOTE:
DETAIL FROM DANE COUNTY WASTE TRANSFER STATION AND HOUSEHOLD HAZARDOUS WASTE FACILITY, RODEFELD LANDFILL CONSTRUCTION SET, GRAEF, 05/09/2012. CONTRACTOR TO FIELD VERIFY ACTUAL CONDITIONS.

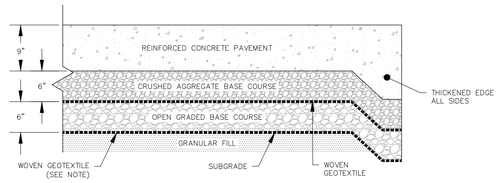


3 C500 EXISTING SOUTH RAMP RETAINING WALL
SCALE: 1/2" = 1'

NOTE:
DETAIL FROM DANE COUNTY WASTE TRANSFER STATION AND HOUSEHOLD HAZARDOUS WASTE FACILITY, RODEFELD LANDFILL CONSTRUCTION SET, GRAEF, 05/09/2012. CONTRACTOR TO FIELD VERIFY ACTUAL CONDITIONS.

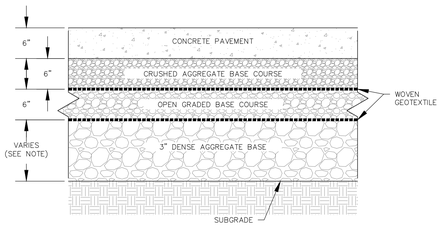


4 C500 TEMPORARY STONE WEEPER
SCALE: 1" = 2'



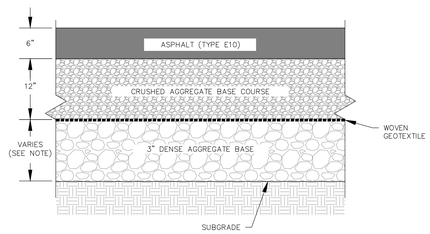
5 C500 RAMP CONCRETE PAVEMENT
SCALE: 1" = 1'

NOTE:
INSTALL WOVEN GEOTEXTILE OVER GRANULAR FILL AS REQUIRED BY SOFT SOIL CONDITIONS.



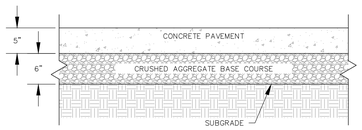
6 C500 CONCRETE PAVEMENT
SCALE: 1" = 1'

NOTE:
3" DENSE AGGREGATE BASE AS REQUIRED TO STABILIZE SUBGRADE. TO BE MEASURED AND PAID BY UNIT PRICE.

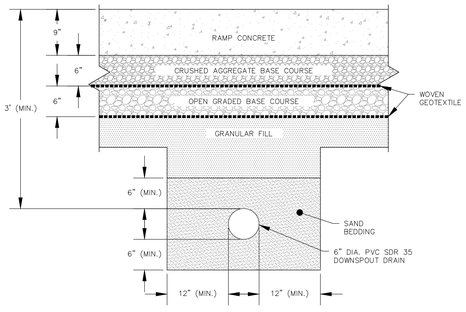


7 C500 ASPHALT PAVEMENT
SCALE: 1" = 1'

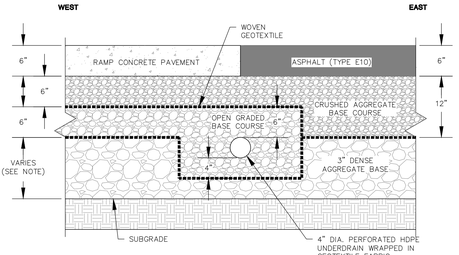
NOTE:
3" DENSE AGGREGATE BASE AS REQUIRED TO STABILIZE SUBGRADE. TO BE MEASURED AND PAID BY UNIT PRICE.



8 C500 CONCRETE WALKWAYS
SCALE: 1" = 1'

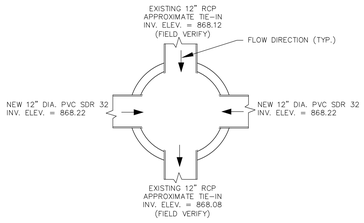


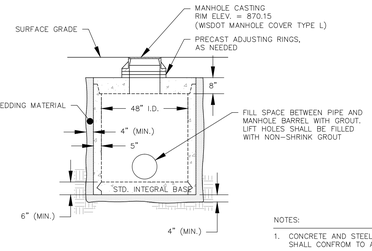
9 C500 ROOF DRAIN
SCALE: 1" = 1'



10 C500 DRAIN TILE
NOT TO SCALE

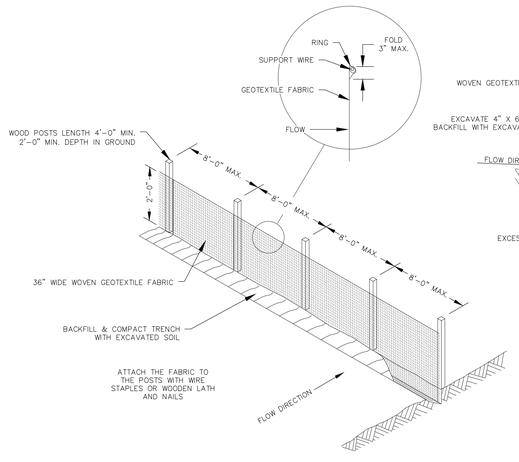
NOTE:
3" DENSE AGGREGATE BASE AS REQUIRED TO STABILIZE SUBGRADE. SEE DETAIL 7 C500



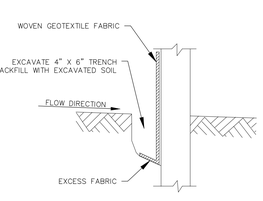


NOTES:
1. CONCRETE AND STEEL REINFORCEMENT SHALL CONFROM TO ASTM C478.
2. JOINTS SHALL BE WATERTIGHT: RUBBER GASKETS OR FLEXIBLE BUTYL RUBBER GASKETS/ROPE.

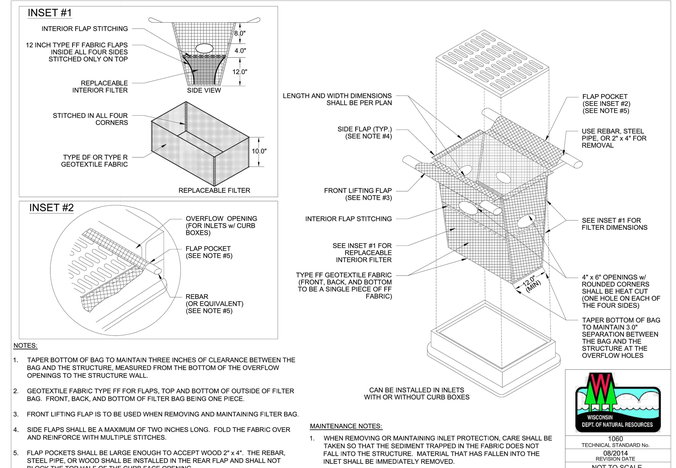
11 C500 STORM MANHOLE
NOT TO SCALE



12 C500 SILT FENCE
NOT TO SCALE



SILT FENCE TRENCH DETAIL



NOTES:
1. TAPER BOTTOM OF BAG TO MAINTAIN THREE INCHES OF CLEARANCE BETWEEN THE BAG AND THE STRUCTURE, MEASURED FROM THE BOTTOM OF THE OVERFLOW OPENINGS TO THE STRUCTURE WALL.
2. GEOTEXTILE FABRIC TYPE FF FOR FLAPS, TOP AND BOTTOM OF OUTSIDE OF FILTER BAG. FRONT, BACK, AND BOTTOM OF FILTER BAG BEING ONE PIECE.
3. FRONT LIFTING FLAP IS TO BE USED WHEN REMOVING AND MAINTAINING FILTER BAG.
4. SIDE FLAPS SHALL BE A MAXIMUM OF TWO INCHES LONG. FOLD THE FABRIC OVER AND REINFORCE WITH MULTIPLE STITCHES.
5. FLAP POCKETS SHALL BE LARGE ENOUGH TO ACCEPT WOOD 2" x 4". THE REBAR, STEEL PIPE, OR WOOD SHALL BE INSTALLED IN THE REAR FLAP AND SHALL NOT BLOCK THE TOP HALF OF THE CURB FACE OPENING.

MAINTENANCE NOTES:
1. WHEN REMOVING OR MAINTAINING INLET PROTECTION, CARE SHALL BE TAKEN SO THAT THE SEDIMENT TRAPPED IN THE FABRIC DOES NOT FALL INTO THE STRUCTURE. MATERIAL THAT HAS FALLEN INTO THE INLET SHALL BE IMMEDIATELY REMOVED.

WISCONSIN DEPT. OF NATURAL RESOURCES
1060
TECHNICAL STANDARD No.
08/2014
REVISION DATE
NOT TO SCALE

13 C500 INLET PROTECTION TYPE D-M
NOT TO SCALE

SCS ENGINEERS
2830 DAIRY DRIVE MADISON, WI 53718-6751
PHONE: (608) 224-2830

CONSTRUCTION AND DEMOLITION WASTE RECYCLING FACILITY
7102 US HWY 12/18
MADISON, WISCONSIN

DANE COUNTY DEPARTMENT OF PUBLIC WORKS
SOLID WASTE DIVISION
1919 ALLIANT ENERGY CENTER WAY
MADISON, WI 53713

PROCESS AND CIVIL ENGINEER:
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2830 DAIRY DRIVE
MADISON, WI 53718-6751
(608) 224-2830

ARCHITECT:
DORSCHNER ASSOCIATES, INC.
849 E. WASHINGTON AVE., SUITE 112
MADISON, WI 53703

STRUCTURAL ENGINEER:
PIERCE ENGINEERS, INC.
10 WEST MIFFLIN ST., SUITE 205
MADISON, WI 53703

MECHANICAL, ELECTRIC, PLUMBING DESIGN:
JDR ENGINEERING, INC.
5525 NOBEL DRIVE, SUITE 110
MADISON, WI 53711

N

20 0 20
SCALE: 1" = 20'

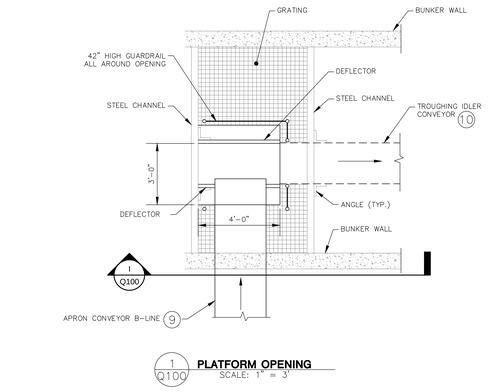
REVISION	DATE	BY	TITLE

PROJECT NO.	25214236.00
DRAWN:	01/22/15
REVISED:	04/27/15
DRAWN BY:	AHB/BJM
CHECKED BY:	MH
APPROVED BY:	

BID DOCUMENTS ISSUED 04/28/15

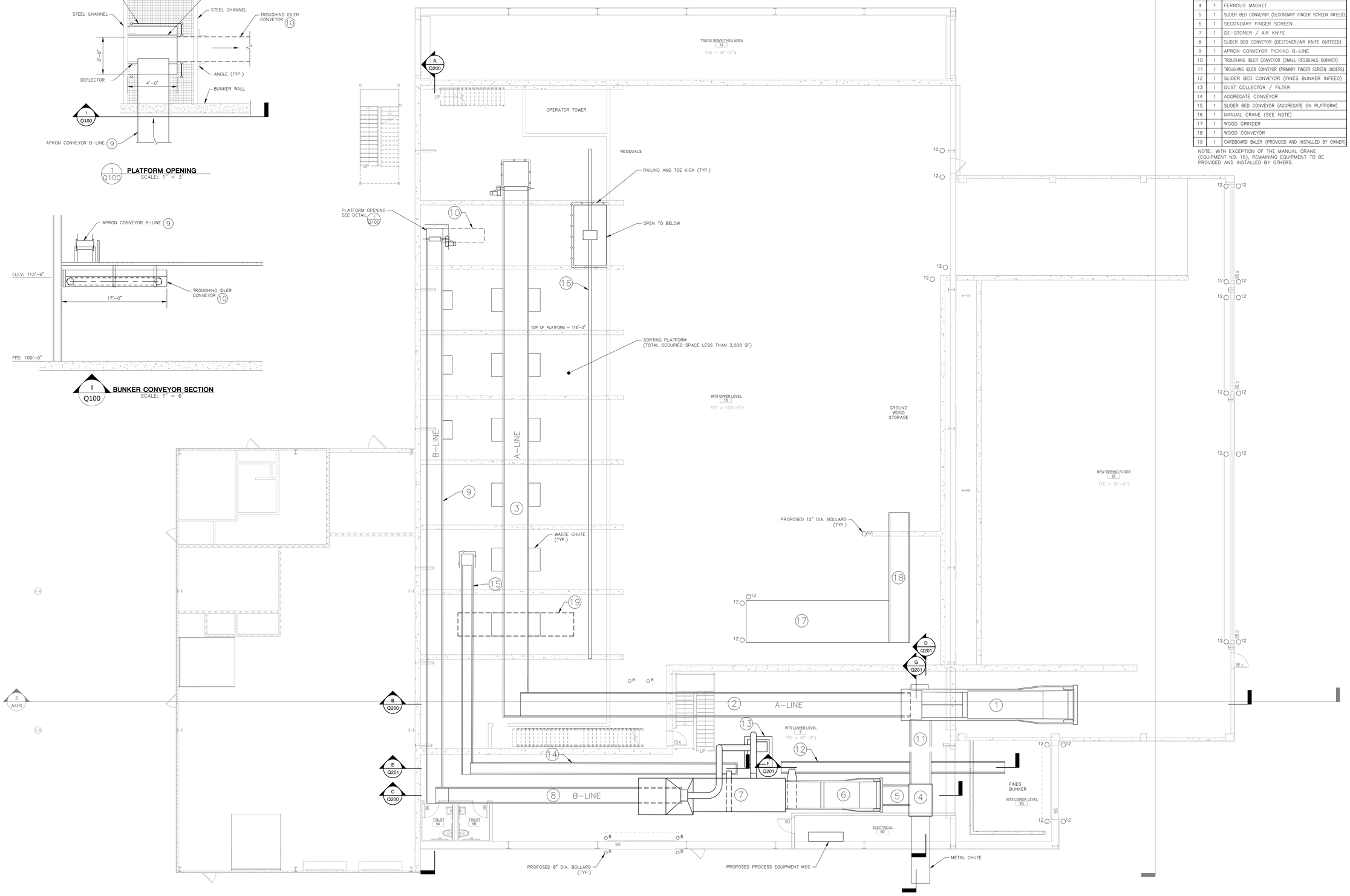
DETAILS

SHEET NUMBER
C500



1 Q100 **PLATFORM OPENING**
SCALE: 1" = 3'

BUNKER CONVEYOR SECTION
SCALE: 1" = 6'



LEGEND		
NO	QTY	DESCRIPTION
1	1	PRIMARY FINGER SCREEN
2	1	SLIDER BED CONVEYOR (PRIMARY FINGER SCREEN OVERS)
3	1	APRON CONVEYOR PICKING A-LINE
4	1	FERROUS MAGNET
5	1	SLIDER BED CONVEYOR (SECONDARY FINGER SCREEN INFEED)
6	1	SECONDARY FINGER SCREEN
7	1	DE-STONER / AIR KNIFE
8	1	SLIDER BED CONVEYOR (DESTONER/AIR KNIFE OUTFEED)
9	1	APRON CONVEYOR PICKING B-LINE
10	1	TROUGHING IDLER CONVEYOR (SMALL RESIDUALS BUNKER)
11	1	TROUGHING IDLER CONVEYOR (PRIMARY FINGER SCREEN UNDERS)
12	1	SLIDER BED CONVEYOR (FINES BUNKER INFEED)
13	1	DUST COLLECTOR / FILTER
14	1	AGGREGATE CONVEYOR
15	1	SLIDER BED CONVEYOR (AGGREGATE ON PLATFORM)
16	1	MANUAL CRANE (SEE NOTE)
17	1	WOOD GRINDER
18	1	WOOD CONVEYOR
19	1	CARDBOARD BALER (PROVIDED AND INSTALLED BY OWNER)

NOTE: WITH EXCEPTION OF THE MANUAL CRANE (EQUIPMENT NO. 16), REMAINING EQUIPMENT TO BE PROVIDED AND INSTALLED BY OTHERS.

NOTES:

1. SEE STRUCTURAL DRAWINGS FOR BOLLARD DETAIL.

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N

0 8 16 Feet
SCALE: 1/8" = 1'

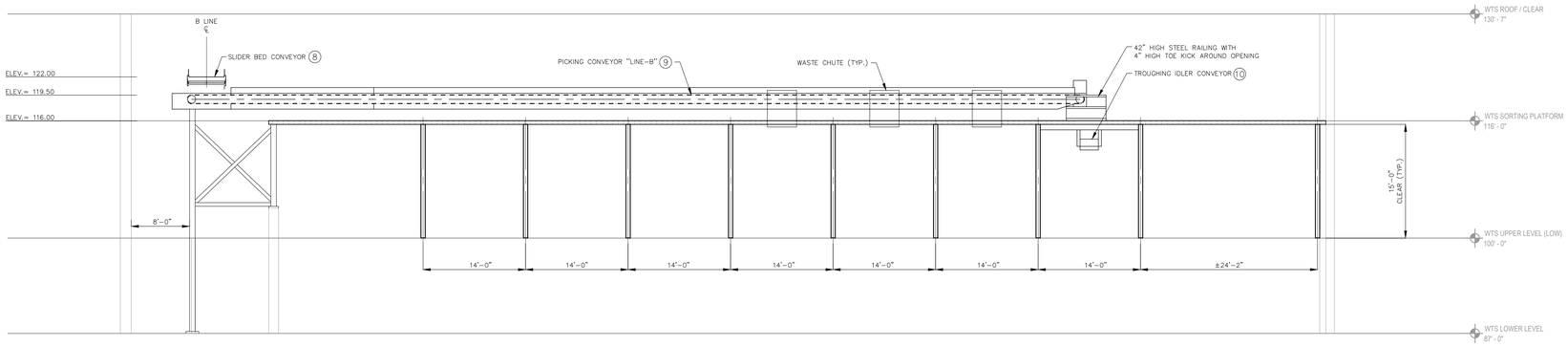
REVISION	DATE	BY	TITLE

PROJECT NO.	25214236.00
DRAWN:	01/22/15
REVISED:	04/24/15
DRAWN BY:	KP
CHECKED BY:	BC/MH
APPROVED BY:	

BID DOCUMENTS ISSUED 04/28/15

GENERAL ARRANGEMENT

SHEET NUMBER
Q100



A Q200 B-LINE PICKING CONVEYOR ELEVATION
1/8" = 1'-0"

LEGEND		
NO	QTY	DESCRIPTION
1	1	PRIMARY FINGER SCREEN
2	1	SLIDER BED CONVEYOR (PRIMARY FINGER SCREEN OVERS)
3	1	APRON CONVEYOR PICKING A-LINE
4	1	FERROUS MAGNET
5	1	SLIDER BED CONVEYOR (SECONDARY FINGER SCREEN INFEED)
6	1	SECONDARY FINGER SCREEN
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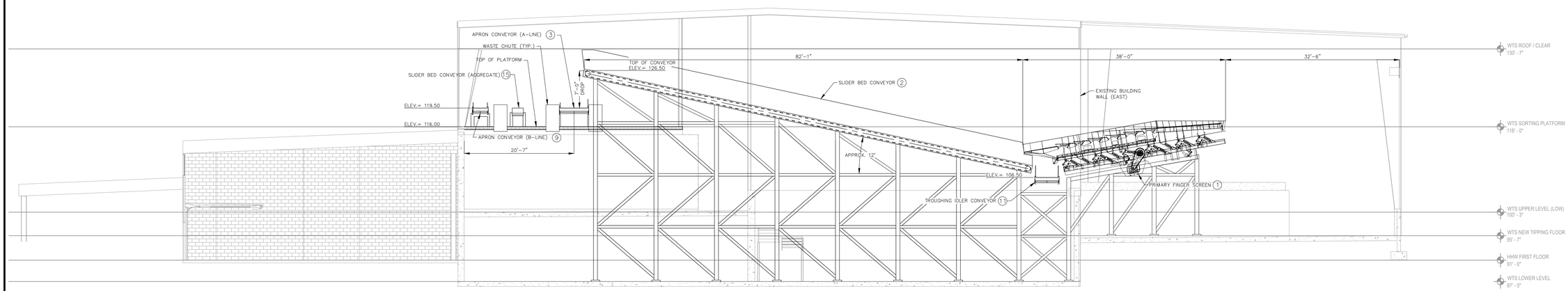
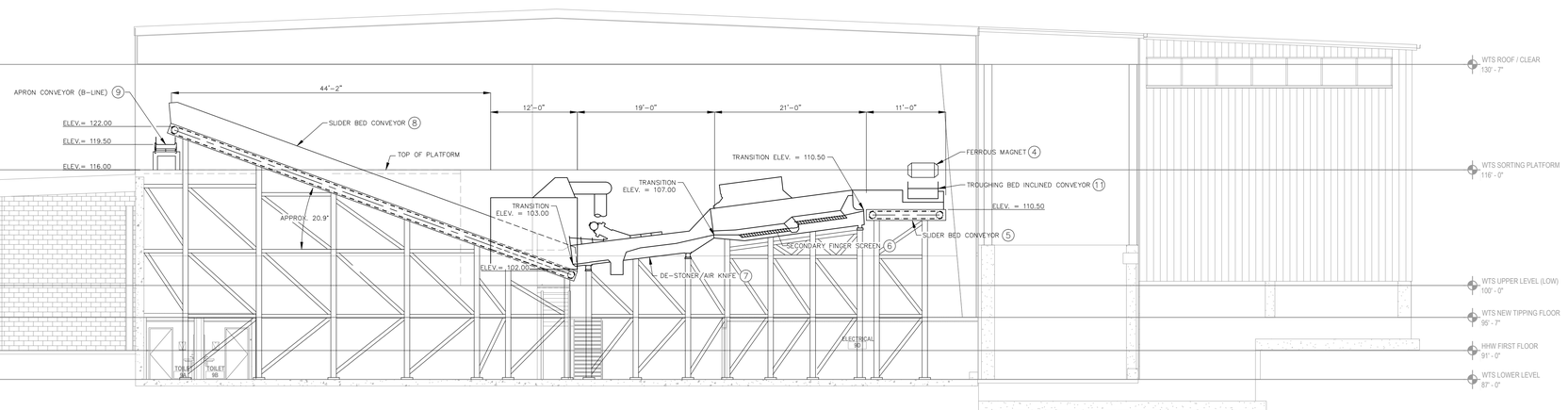
10	1	TROUGHING IDLER CONVEYOR (SMALL RESIDUALS BUNKER)
11	1	TROUGHING IDLER CONVEYOR (PRIMARY FINGER SCREEN UNDERS)
12	1	SLIDER BED CONVEYOR (FINES BUNKER INFEED)
13	1	DUST COLLECTOR / FILTER
14	1	AGGREGATE CONVEYOR
15	1	SLIDER BED CONVEYOR (AGGREGATE ON PLATFORM)
16	1	MANUAL CRANE (SEE NOTE)
17	1	WOOD GRINDER
18	1	WOOD CONVEYOR
19	1	CARDBOARD BALER (PROVIDED AND INSTALLED BY OWNER)

NOTE: WITH EXCEPTION OF THE MANUAL CRANE (EQUIPMENT NO. 16), REMAINING EQUIPMENT TO BE PROVIDED AND INSTALLED BY OTHERS.

FOR INFORMATIONAL PURPOSES ONLY



B Q200 A-LINE ELEVATION
(BUILDING SECTION 2/A400 PROJECTED AS BACKGROUND)
1/8" = 1'-0"



C Q200 B-LINE ELEVATION
(BUILDING SECTION 1/A400 PROJECTED AS BACKGROUND)
1/8" = 1'-0"

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(608) 224-2830

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10 WEST MIFFLIN ST., SUITE 205
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MECHANICAL, ELECTRIC, PLUMBING DESIGN:
JDR ENGINEERING, INC.
5525 NOBEL DRIVE, SUITE 110
MADISON, WI 53711

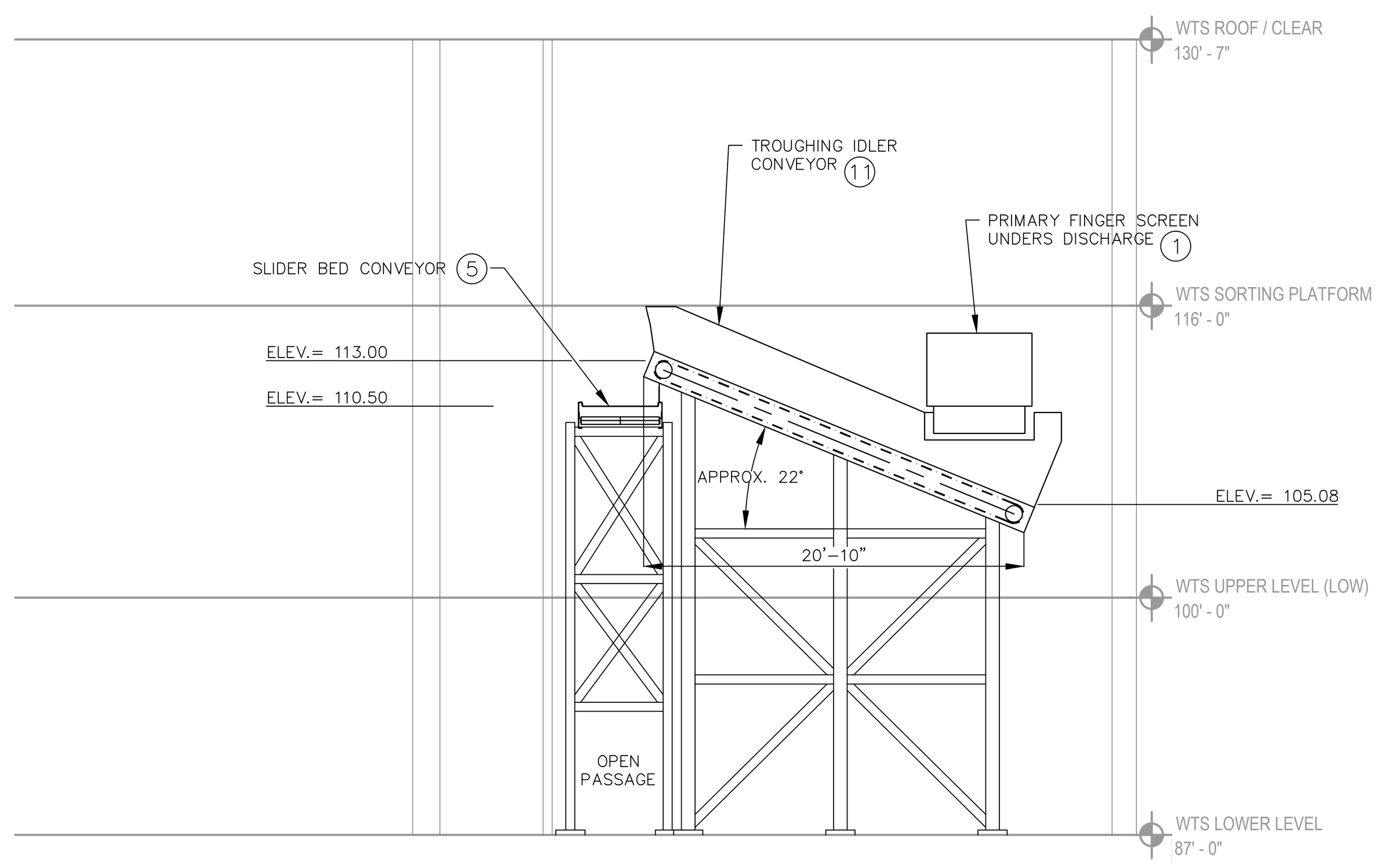
REVISION	DATE	BY	TITLE

PROJECT NO.	25214236.00
DRAWN:	01/22/15
REVISED:	04/27/15
DRAWN BY:	KP
CHECKED BY:	BC/MH
APPROVED BY:	

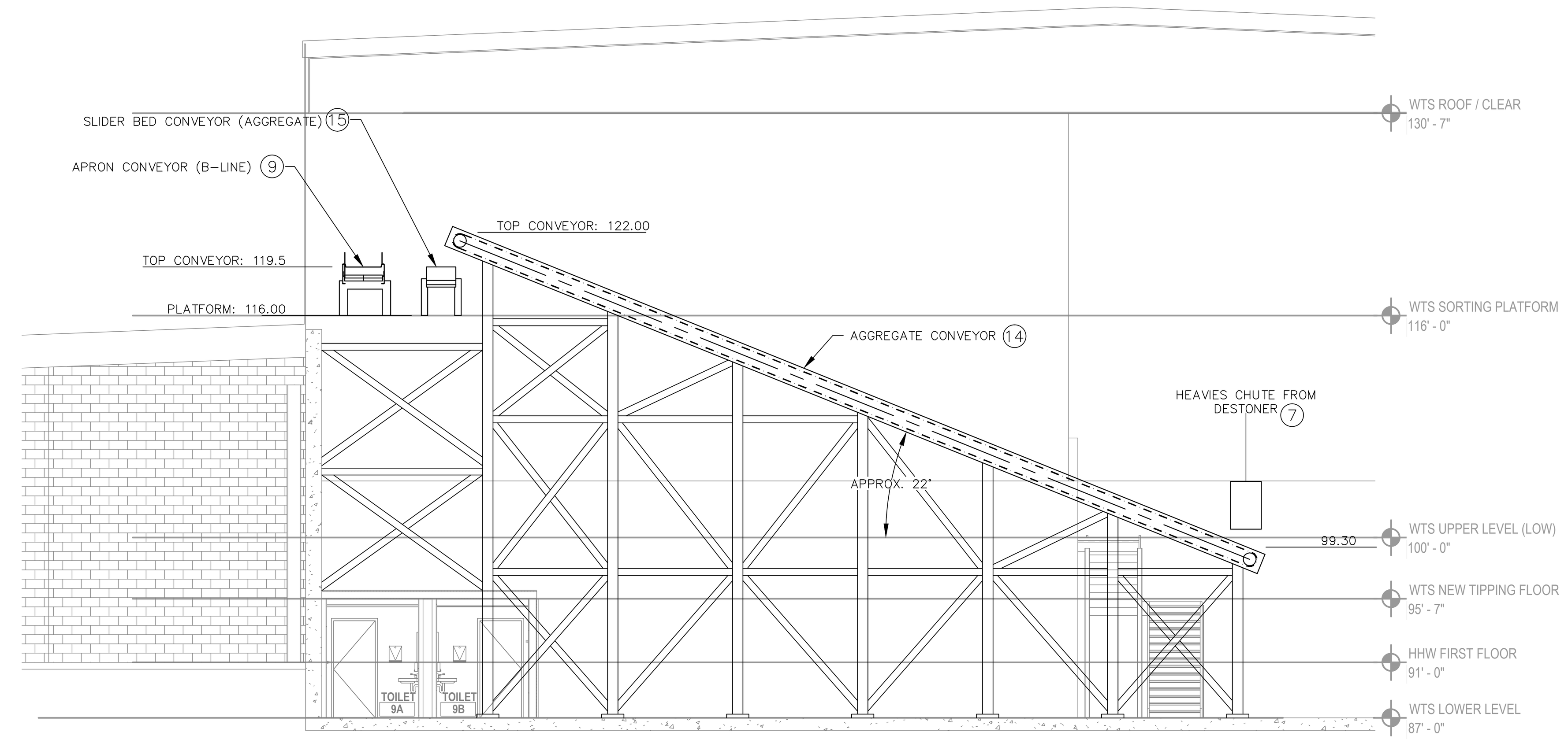
BID DOCUMENTS ISSUED 04/28/15

EQUIPMENT ELEVATIONS A-C

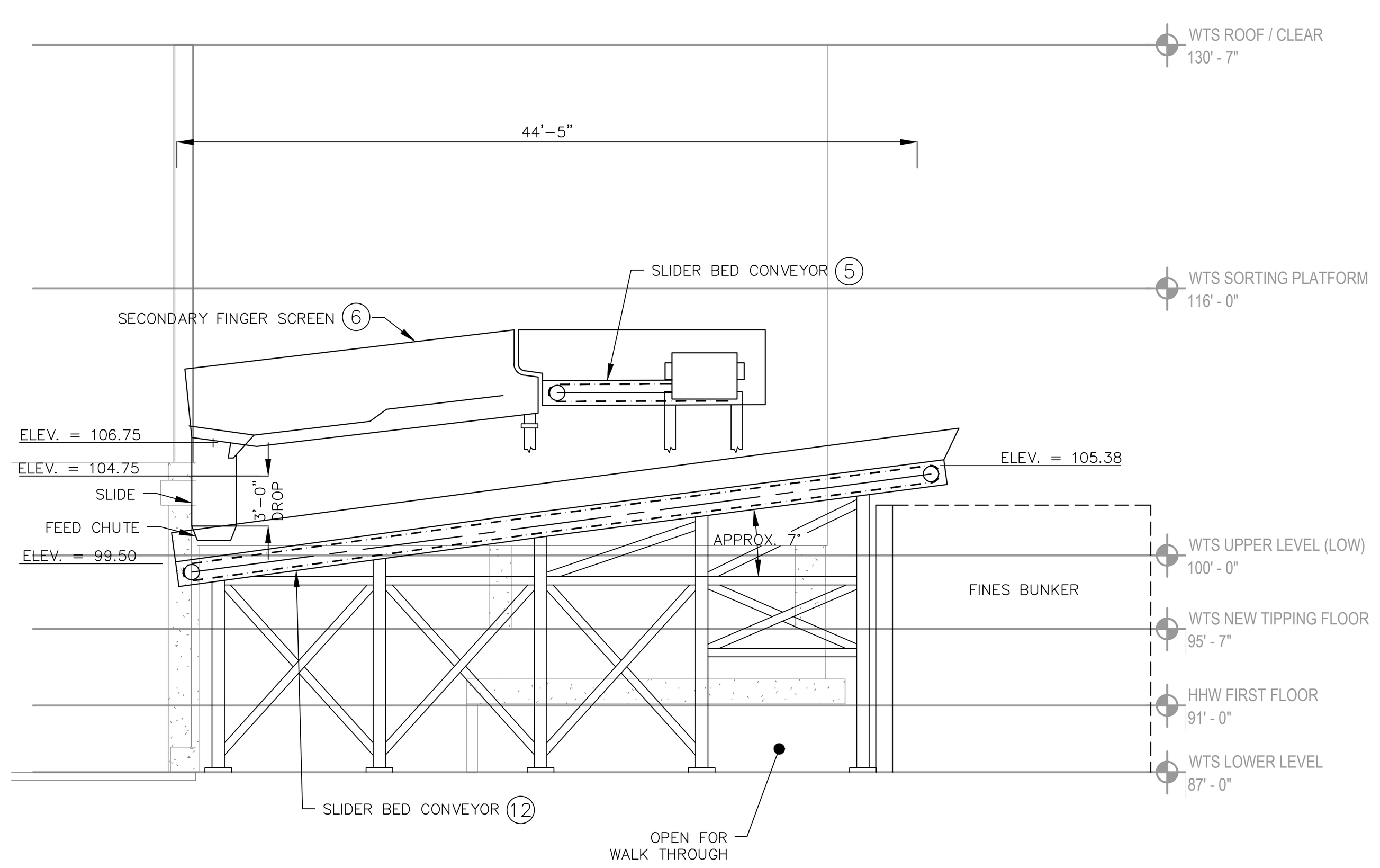
SHEET NUMBER
Q200



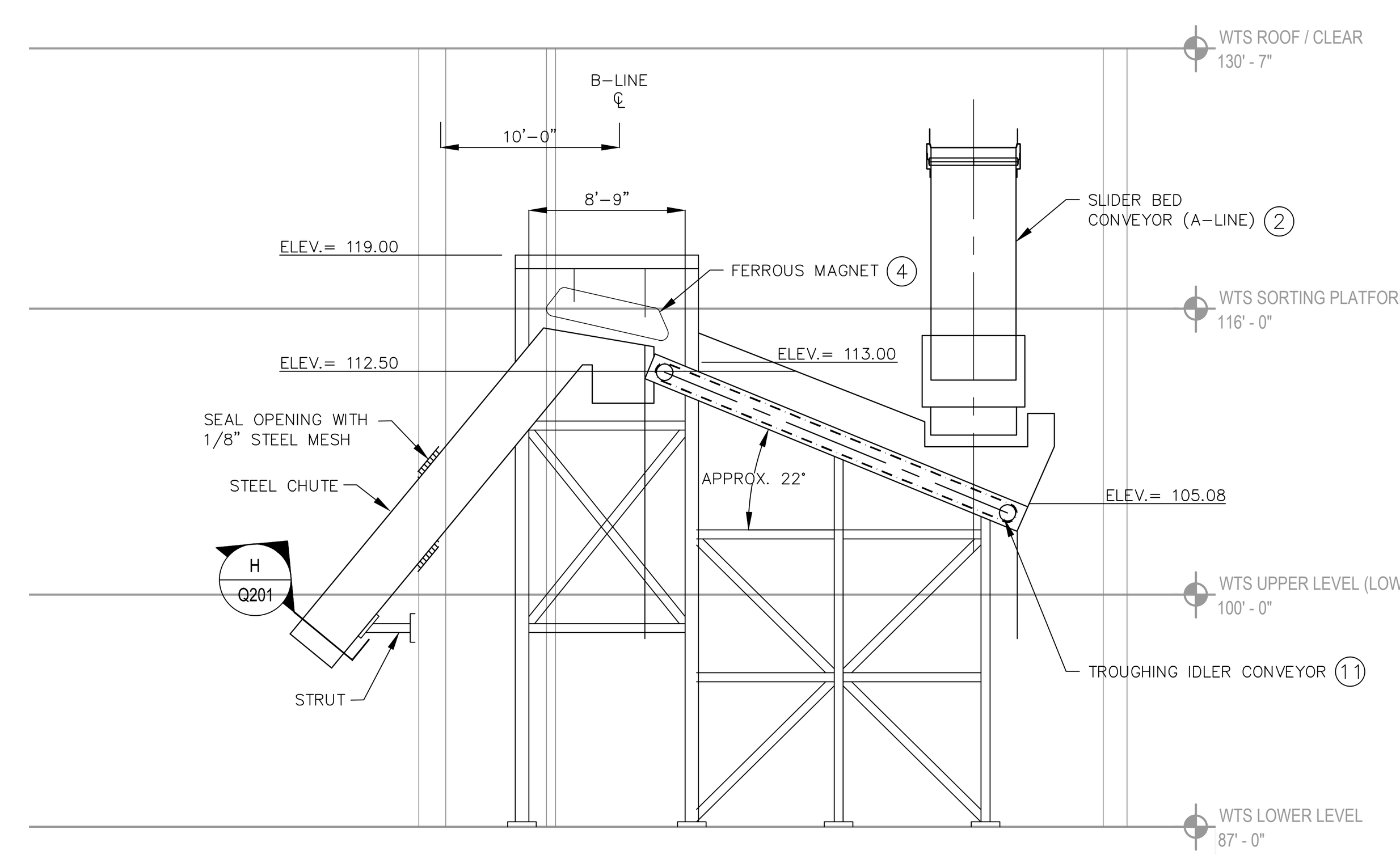
D
Q201
PRIMARY FINGER SCREEN UNDERS ELEVATION
1/8" = 1'-0"



E
Q201
DESTONER HEAVIES CONVEYOR ELEVATION
(BUILDING SECTION 1/A400 PROJECTED AS BACKGROUND)
1/8" = 1'-0"

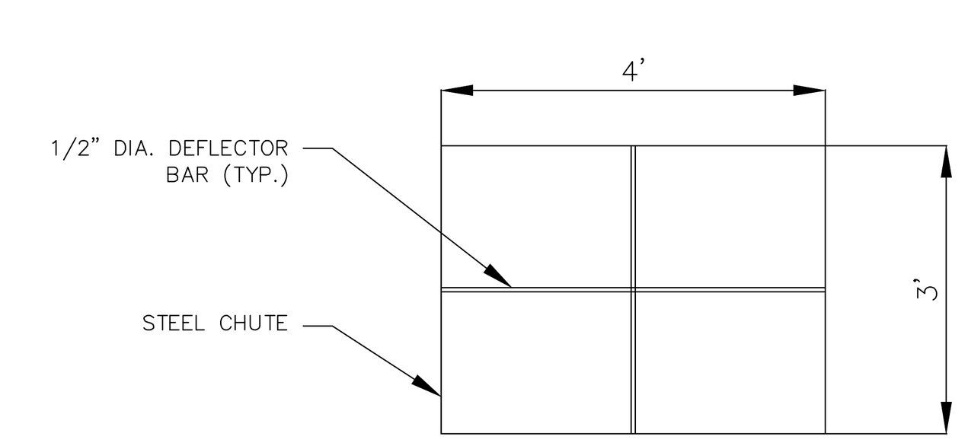


F
Q201
UNDERS CONVEYOR FROM B-LINE ELEVATION
(BUILDING SECTION 1/A400 PROJECTED AS BACKGROUND)
1/8" = 1'-0"



G
Q201
FERROUS MAGNET ELEVATION
1/8" = 1'-0"

FOR INFORMATIONAL PURPOSES ONLY



H
Q201
STEEL CHUTE SECTION
1/2" = 1'-0"

LEGEND

NO	QTY	DESCRIPTION
1	1	PRIMARY FINGER SCREEN
2	1	SLIDER BED CONVEYOR (PRIMARY FINGER SCREEN OVERS)
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REVISION	DATE	BY	TITLE

PROJECT NO.	25214236.00
DRAWN:	01/22/15
REVISED:	04/27/15
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CHECKED BY:	BC/MH
APPROVED BY:	

BID DOCUMENTS ISSUED 04/28/15

EQUIPMENT ELEVATIONS D-H

SHEET NUMBER
Q201

ABBREVIATIONS

AB	- ANCHOR BOLT
AC	- AIR CONDITIONING
ACC	- ACCESSIBLE
ACOUS	- ACOUSTICAL
AD	- AREA DRAIN
ADD	- ADDITIONAL
ADJ	- ADJUSTABLE
AFF	- ABOVE FINISH FLOOR
AGGR	- AGGREGATE
ALT	- ALTERNATE
ALUM	- ALUMINUM
ANCH	- ANCHOR
ANNO	- ANODIZED
AP	- ACCESS PANEL
APC	- ACOUSTICAL PANEL CEILING
APPD	- APPROVED
APPROX	- APPROXIMATE
ARCH	- ARCHITECTURAL
ATC	- ACOUSTICAL TILE CEILING
AUTO	- AUTOMATIC
AV	- AUDIO VISUAL
BEJ	- BRICK EXPANSION JOINT
BD	- BOARD
BLDG	- BUILDING
BLK	- BLOCK
BM	- BEAM
BOT	- BOTTOM
BRK	- BRICK
BSMT	- BASEMENT
BT	- BOLT
BUR	- BUILT-UP ROOFING
CAB	- CABINET
CAT	- CATEGORY
CB	- CATCH BASIN
CBD	- CHALK BOARD
CBU	- CEMENTITIOUS BACKER UNIT
CEM	- CEMENT
CER	- CERAMIC
CG	- CORNER GUARD
CH	- CHILLER
CHAN	- CHANNEL
CHW	- CLOTHES HOOK MOUNTED ON WALL
CI	- CAST IRON
CIP	- CAST-IN-PLACE
CJ	- CONTROL JOINT / CONSTRUCTION JOINT
CL	- CENTER LINE
CLG	- CEILING
CLR	- CLEAR
CMU	- CONCRETE MASONRY UNIT
CNTR	- COUNTER
CO	- CLEANOUT
COL	- COLUMN
COMPART	- COMPARTMENT
CONC	- CONCRETE
COND	- CONDITION
CONN	- CONNECTION
CONT	- CONTINUOUS
CONTR	- CONTRACTOR
COORD	- COORDINATE
CORR	- CORRIDOR
CT	- CERAMIC TILE / COOLING TOWER
CTR	- CENTER
CTSK	- COUNTER SUNK
CW	- COLD WATER (PIPING)
D	- DEEP, DEPTH
DA	- DISABLED
DBL	- DOUBLE
DEG	- DEGREE
DEMO	- DEMOLITION
DEPT	- DEPARTMENT
DET	- DETAIL
DF	- DRINKING FOUNTAIN
DIA	- DIAMETER
DIFF	- DIFFUSER
DIM	- DIMENSION
DIS	- DISABLED
DISP	- DISPENSER
DMPF	- DAMPPROOFING
DMT	- DEMOUNTABLE
DN	- DOWN
DO	- DOOR OPENING
DP	- DIMENSION POINT
DPTN	- DEMOUNTABLE PARTITION
DR	- DOOR
DRN	- DRAIN
DS	- DOWNSPOUT
DW	- DISHWASHER
DWG	- DRAWING
DWR	- DRAWER
(E)	- EXISTING
E	- EAST
EA	- EACH
EB	- EXPANSION BOLT
ED	- ELECTRIC HAND DRYER
EIFS	- EXTERIOR INSULATION AND FINISH SYSTEM
EFS	- EXTERIOR FINISH SYSTEM
EJ	- EXPANSION JOINT
EL	- ELEVATION
ELEC	- ELECTRICAL
ELEV	- ELEVATOR
EMERG	- EMERGENCY
ENCLO	- ENCLOSURE
EP	- ELECTRICAL PANELBOARD
EQ	- EQUAL
EQUIP	- EQUIPMENT
ESCAL	- ESCALATOR
ETD	- ELECTRIC TOWEL DISPENSER
EWC	- ELECTRIC WATER COOLER
EXH	- EXHAUST
EXP	- EXPANSION
EXIST	- EXISTING
EXT	- EXTERIOR
FA	- FIRE ALARM
FB	- FACE BRICK
FC	- FACE
FD	- FLOOR DRAIN
FDC	- FIRE DEPARTMENT CONNECTION
FND	- FOUNDATION
FE	- FIRE EXTINGUISHER
FEC	- FIRE EXTINGUISHER CABINET
FF&E	- FURNITURE, FINISHES & EQUIPMENT
FFEL	- FINISH FLOOR ELEVATION
FH	- FLAT HEAD
FHC	- FIRE HOSE CABINET
FIN	- FINISH
FIXT	- FIXTURE
FL	- FLOOR
FLASH	- FLASHING
FLUOR	- FLUORESCENT
FO	- FACE OF
FP	- FIRE PROTECTION
FPG	- FIREPROOFING
FR	- FRAME
FS	- FOLDING SHOWER SEAT
FT	- FEET
FRTW	- FIRE RETARDANT TREATED WOOD
FTG	- FOOTING
FURN	- FURNITURE
FURR	- FURRING
FWC	- FABRIC WALLCOVERING
FWP	- FABRIC WRAPPED PANEL
G	- GROUND
GA	- GAUGE / GAGE
GALV	- GALVANIZED
GB	- GRAB BAR
GC	- GENERAL CONTRACT(OR)
GRC	- GLASS FIBER REINFORCED CONCRETE
GRG	- GLASS FIBER REINFORCED GYPSUM
GL	- GLASS
GR	- GRADE
GRD	- GROUND
GYPBD	- GYPSUM WALLBOARD
H	- HIGH / HEIGHT
HB	- HOSE BIB
HC	- HOLLOW CORE
HCP	- HANDICAPPED
HDW	- HARDWARE
HDWD	- HARDWOOD
HS	- HEAT STRENGTHEND (GLASS)
HM	- HOLLOW METAL (STEEL FRAME)
HNDRL	- HANDRAIL
HO	- HOLD-OPEN
HORIZ	- HORIZONTAL
HPT	- HIGH POINT
HRC	- HOSE REEL CABINET
HR	- HOUR
HT	- HEIGHT
HVAC	- HEATING, VENTILATION, AIR CONDITIONING
HW	- HOT WATER
HYDR	- HYDRAULIC
ID	- INSIDE DIAMETER
IN	- INCH
INCAND	- INCANDESCENT
INCL	- INCLUDED / INCLUDING
INFO	- INFORMATION
INSUL	- INSULATION
INT	- INTERIOR
INTERM	- INTERMEDIATE
INV	- INVERT
IPS	- INTERNATIONAL PIPE STANDARD
IRMA	- INVERTED ROOF MEMBRANE ASSEMBLY
JAN	- JANITOR
JC	- JANITOR'S CLOSET
JST	- JOIST
JT	- JOINT
K	- KIP (1000 LBF)
KPL	- KICK PLATE
KG	- KILOGRAM
KIT	- KITCHEN
KO	- KNOCKOUT
L	- LONG OR LITER (METRIC DOCS)
LAB	- LABORATORY
LDG	- LANDING
LAM	- LAMINATE / LAMINATION
LAV	- LAVATORY
LB	- POUND
LF	- LINEAR FOOT
LKR	- LOCKER
LLH	- LONG LEG HORIZONTAL
LLV	- LONG LEG VERTICAL
LN	- LINE
LT	- LIGHT
LPT	- LOW POINT
M	- METER, MIRROR
MACH	- MACHINE
MAINT	- MAINTENANCE
MAS	- MASONRY
MATL	- MATERIAL
MAX	- MAXIMUM
MB	- MACHINE BOLT
MBL	- MARBLE
MDF	- MEDIUM DENSITY FIBERBOARD
MEP	- MECHANICAL, ELECTRICAL, PLUMBING
MDO	- MEDIUM DENSITY OVERLAY PLYWOOD
MECH	- MECHANICAL
MEMB	- MEMBRANE
MET	- METAL
MEZZ	- MEZZANINE
MFR	- MANUFACTURER
MH	- MANHOLE
MIN	- MINIMUM
MISC	- MISCELLANEOUS
MM	- MILLIMETER
MO	- MASONRY OPENING
MS	- MACHINE SCREW
MTD	- MOUNTED
MTG	- MOUNTING
MTL	- METAL
MULL	- MULLION
N	- NORTH
NA	- NOT APPLICABLE
NC	- NOISE CRITERIA
NIC	- NOT IN CONTRACT
NO	- NUMBER
NOM	- NOMINAL
NTS	- NOT TO SCALE
OA	- OUTSIDE AIR
OC	- ON CENTER
OCEW	- ON CENTER EACH WAY
OD	- OUTSIDE DIAMETER/DIMENSION
OFCI	- OWNER FURNISHED, CONTR INSTALLED
OFOI	- OWNER FURNISHED, OWNER INSTALLED
OFF	- OFFICE
OH	- OVER HEAD
OPH	- OPPOSITE HAND
OPNG	- OPENING
OPP	- OPPOSITE
OPPHD	- OPPOSITE HAND
ORD	- OVERFLOW ROOF DRAIN
OUTS	- OUTSIDE
OVHD	- OVERHEAD
P	- PAINT
PAV	- PAVING
PARTN	- PARTITION
PATD	- PAPER TOWEL DISPENSER
PBD	- PARTICLEBOARD
PC	- PRECAST CONCRETE
PDF	- POWER DRIVEN FASTENER
PERF	- PERFORATED
PERIM	- PERIMETER
PERP	- PERPENDICULAR
PF	- POINT OF INTERSECTION
PL	- PLATE
PLAM	- PLASTIC LAMINATE
PLAS	- PLASTER
PLBG	- PLUMBING
PLF	- POUNDS PER LINEAR FOOT
PLYWD	- PLYWOOD
PNL	- PANEL
POL	- POLISHED
PR	- PAIR
PREFAB	- PREFABRICATED
PROJ	- PROJECT
PSF	- POUNDS PER SQUARE FOOT
PT	- POINT
PTD	- PAINTED
PTN	- PARTITION
PTR	- PAPER TOWEL RECEPTACLE
Q	- QUARRY TILE
QTY	- QUANTITY
(R)	- RELOCATED
R	- RADIUS OR RISER (PIPING)
RA	- RETURN AIR
RAD	- RADIUS
RB	- RESILIENT BASE
RCP	- REFLECTED CEILING PLAN
RD	- ROOF DRAIN
RECOM	- RECOMMENDED
RECPT	- RECEPTACLE
REC	- RECESSED
REF	- REFERENCE
REFL	- REFLECTED / REFLECTIVE / REFLECT
REFR	- REFRIGERATOR
REG	- REGISTER
REINF	- REINFORCED / REINFORCING
REL	- RELOCATE
REM	- REMOVABLE
REQ	- REQUIRE / REQUIRED
RESIL	- RESILIENT
REV	- REVISION / REVISED
RM	- ROOM
RO	- ROUGH OPENING
RTD	- RATED
RTG	- RATING
RWL	- RAIN WATER LEADER
S	- SOUTH
SA	- SUPPLY AIR
SAN	- SANITARY
SC	- SOLID CORE
SCHED	- SCHEDULE
SD	- STORM DRAIN / SOAP DISPENSER
SDL	- LAVATORY MOUNTED SOAP DISPENSER
SECT	- SECTION
STS	- SELF TAP METAL SCREW
SF	- SQUARE FEET/FOOT
SH	- SPRINKLER HEAD
SHT	- SHEET
SHR	- SHOWER
SIM	- SIMILAR
SLS	- SOLID SURFACE
SM	- SHEET METAL OR SQUARE METER (METRIC DOCS)
SND	- SANITARY NAPKIN DISPENSER
SNL	- SANITARY NAPKIN DISPOSAL
SP	- STANDPIPE
SPEC	- SPECIFICATION
SPR	- SPRINKLER
SPKR	- SPEAKER
SQ	- SQUARE
SSE	- STRUCTURE SLAB ELEVATION
SS	- STAINLESS STEEL
SSK	- SERVICE SINK
STA	- STATION
STD	- STANDARD
ST	- STEEL
STLJST	- STEEL JOIST
STOR	- STORAGE
STRG	- STRINGER
STRL	- STRUCTURAL
STRUC	- STRUCTURAL
SUBCAT	- SUBCATEGORY
SUSP	- SUSPENDED
SYMM	- SYMMETRICAL
SYS	- SYSTEM
T&G	- TONGUE AND GROOVE
T	- TREAD / THERMOSTAT
TB	- TOWEL BAR
TC	- TOP OF CURB
TCONC	- TOP OF CONCRETE
TD	- TOWEL DISPENSER
TEL	- TELEPHONE OR TELECOM
TEMP	- TEMPERATURE
TER	- TERRAZZO
TGB	- TOGGLE BOLT
THK	- THICKNESS
THRES	- THRESHOLD
THRU	- THROUGH
TKBD	- TACKBOARD
TMPD	- TEMPERED
TO	- TOP OF (SEE OTHER WORD)
TOS	- TOP OF SLAB, TOP OF STRUCTURE
TOSTL	- TOP OF STEEL
TP	- TOP OF PAVEMENT
TPH	- TOILET PAPER HOLDER
TRACT	- TRACTION
TV	- TELEVISION
TW	- TOP OF WALL
TYP	- TYPICAL
UNFIN	- UNFINISHED
UON	- UNLESS OTHERWISE NOTED
UR	- URINAL
VAC	- VENTILATION AND AIR CONDITIONING
VCT	- VINYL COMPOSITION TILE
VERT	- VERTICAL
VEST	- VESTIBULE
VIF	- VERIFY IN FIELD
VR	- VAPOR RETARDER
VT	- VINYL TILE
VWC	- VINYL WALL COVERING
W	- WITH
W	- WIDE, WIDTH/WEST
WC	- WATER CLOSET
WD	- WOOD
WDS	- WOOD SCREW
WDW	- WINDOW
W/O	- WITHOUT
WP	- WATERPROOFING
WPM	- WATERPROOF MEMBRANE
WPT	- WORK POINT
WR	- WATER-RESISTENT/REPELLANT, WASTE RECEPTACLE
WS	- WEATHERSTRIPPING
WSCT	- WAINSCOT
WT	- WEIGHT
WW	- WALL TO WALL

TOILET ACCESSORY SCHEDULE:

ABBREVIATION	STD. MOUNTING HEIGHT
AP	SEE PLAN AND ELEVATION
CHW	(1) 5'-6" A.F.F., (1)4'-0" A.F.F. SEE ELEVATIONS FOR OTHER LOCATIONS
EWC	(1) 2'-11" A.F.F. TO SPOUT OUTLET, (1) 3'-5" A.F.F. TO SPOUT OUTLET
ED	TOP @ 41.25" MALE, 38.25" FEMALE
FD	SEE PLUMBING SPECIFICATION
FS	TOP @ 17'-10" A.F.F.
GB8	CENTER @ 2'-10" A.F.F., 3'-2" A.F.F. IN SHOWER
GB18	HORIZ. CENTER @ 2'-10" A.F.F., VERT. 3'-4" @ B.O. BAR HORIZ. CENTER @ 3'-2" A.F.F., VERT. 3'-7" @ B.O. BAR IN SHOWER
GB36	CENTER @ 2'-10" A.F.F., 3'-2" A.F.F. IN SHOWER
GB48	CENTER @ 2'-10" A.F.F., 3'-2" A.F.F. IN SHOWER
GB60	CENTER @ 2'-10" A.F.F., 3'-2" A.F.F. IN SHOWER
LAV	TYPICAL: TOP @ 2'-10" A.F.F. PRESCHOOL: TOP @ 1'-8" A.F.F.
M	BOTTOM @ 3'-4" MAX A.F.F.
SD	TOP @ 48" A.F.F.
SDL	LAVATORY MOUNTED
SND	48" A.F.F. MAX TO OPERATING COMPONENTS (SEE PLAN)
SNL	TOP @ 15" MIN, 48" MAX A.F.F.
TD	48" A.F.F. MAX. TO OPERATING COMPONENTS (SEE PLAN)
TPH	OUTLET 15" MIN, 48" MAX A.F.F., 7-9" IN FRONT OF WC TO CL (SEE PLAN)
WC	SEE PLUMBING
WR	TOP @41-45" A.F.F. MAX., BASED ON SPECIFIED PRODUCT (SEE PLAN)

REFLECTED CEILING PLAN SYMBOLS

- GWB
- ACT -1 OR ACT - 2
- RETURN / EXHAUST GRILLE
- SUPPLY DIFFUSER / GRILL
- 2' X 4' CEILING DIFFUSER
- LINEAR DIFFUSER
- WALL MOUNTED DOWN LIGHT
- PERIMETER TROUGH RECESSED
- 2' X 4' RECESSED FLUORESCENT LIGHT
- 1' X 4' RECESSED FLUORESCENT LIGHT
- RECESSED CAN LIGHT
- INDUSTRIAL PENDANT
- SUSPENDED DIRECT / INDIRECT LIGHT
- RECESSED PERIMETER TROUGH LIGHT
- EXIT LIGHT - ARROW INDICATES DIRECTION OF TRAVEL
- SPRINKLER HEAD - SEE FIRE PROTECTION DRAWINGS FOR SPRINKLER HEAD DESIGN AND LAYOUT.

GENERAL ARCHITECTURAL SYMBOLS:

- DETAIL REFERENCE — SHEET REFERENCE - TOP OF BUBBLE; DETAIL NUMBER - BOTTOM OF BUBBLE
- WALL SECTION REFERENCE — SHEET REFERENCE - TOP OF BUBBLE; DETAIL NUMBER - BOTTOM OF BUBBLE
- BUILDING SECTION REFERENCE — SHEET REFERENCE - TOP OF BUBBLE; DETAIL NUMBER - BOTTOM OF BUBBLE
- CALL OUT REFERENCE — SHEET REFERENCE - TOP OF BUBBLE; DETAIL NUMBER - BOTTOM OF BUBBLE
- INTERIOR ELEVATION REFERENCE
- EXTERIOR ELEVATION REFERENCE
- PARTITION TYPE - SEE SHEET A850
- NEW WALLS
- WINDOW TYPES - SEE A100 - A101 FOR EXTERIOR WINDOWS AND A200 FOR INTERIOR WINDOWS
- 1 HOUR FIRE RATED WALL
- 2 HOUR FIRE RATED WALL
- ODOR CONTROL WALL
- WIRE MESH PARTITION TO UNDERSIDE OF STRUCTURE
- NEW DOOR SWING WITH NUMBER - SEE SHEETS A200-A210
- EXISTING DOOR SWING
- REQUEST FOR INFORMATION (RFI) SYMBOL AND ADDENDUM (ADD) SYMBOL
- CONSTRUCTION BULLETIN (CB) SYMBOL
- REVISION CLOUD
- FX-1 RECESSED FIRE EXTINGUISHER
- FX-2 SURFACE MOUNT FIRE EXTINGUISHER
- FX-3 SURFACE MOUNT FIRE EXTINGUISHER, HOOK MOUNTED
- x70-1 SPOT ELEVATION (FEET-INCHES)
- x70-83 SPOT ELEVATION (FEET-DECIMAL)
- OFFICE E 12 ROOM NAME AND NUMBER - SEE ROOM FINISH SCHEDULE ON SHEET A900
- KEY NOTE
- DEMOLITION

HATCH PATTERNS / MATERIAL SYMBOLS:

TYPICAL HATCH PATTERN / MATERIAL NOTES. UNLESS REQUIRED OTHERWISE:
1. PATTERNS ARE WITHOUT LIMITATION, ILLUSTRATIVE OF MATERIAL SCOPE, WHERE SHOWN
2. NOT ALL SCOPE IS SHOWN WITH PATTERNS OR SYMBOLS. COORDINATE WITH DRAWING AND SPECIFICATION.

- ALUMINUM
- BATT INSUL
- BATT INSUL FIRESAFING
- BRICK
- CONCRETE MASONRY UNIT
- CONCRETE MASONRY UNIT GROUND FACED
- CONCRETE
- EARTH
- EXPANSION JOINT
- GRATE
- GRAVEL
- GROUT
- SEALANT & BACKER ROD
- GWB
- LIMESTONE
- PLASTIC MATRIX
- PLYWOOD LARGE SCALE
- PLYWOOD SMALL SCALE
- PRECAST CONCRETE
- RIGID INSULATION
- SAND
- STAINLESS STEEL
- STEEL
- WOOD
- WOOD BLOCKING CONTINUOUS
- WOOD BLOCKING DISCONTINUOUS
- SLOF OR LGSF

SCS ENGINEERS
2830 DAIRY DRIVE MADISON, WI 53718-6751
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Architecture Planning

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7102 US HIGHWAY 12/18
MADISON, WISCONSIN

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1919 ALLIANT ENERGY CENTER WAY
MADISON, WI 53713

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2830 DAIRY DRIVE
MADISON, WI 53718-6751
(608) 224-2830

ARCHITECT:
DORSCHNER ASSOCIATES, INC.
849 E. WASHINGTON AVE., SUITE 112
MADISON, WI 53703

STRUCTURAL ENGINEER:
PIERCE ENGINEERS, INC.
10 WEST MIFFLIN ST., SUITE 205
MADISON, WI 53703

MECHANICAL, ELECTRICAL, PLUMBING DESIGN
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5525 NOBEL DRIVE, SUITE 110
MADISON, WI 53711

N

20 0 20
SCALE: 1" = 20'

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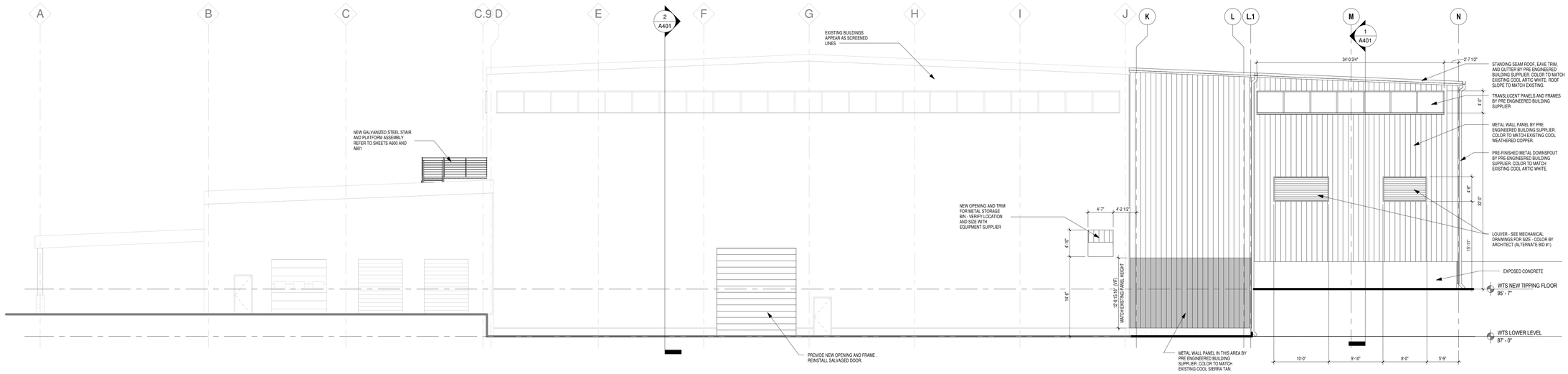
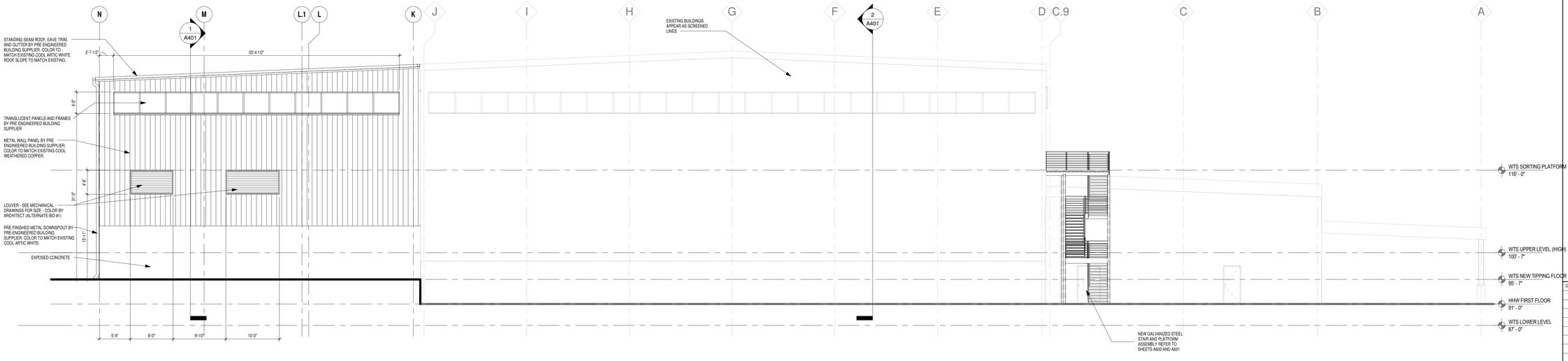
SYMBOLS AND ABBREVIATIONS

SHEET NUMBER
A000



2 SOUTH ELEVATION
1/8" = 1'-0"



1 NORTH ELEVATION
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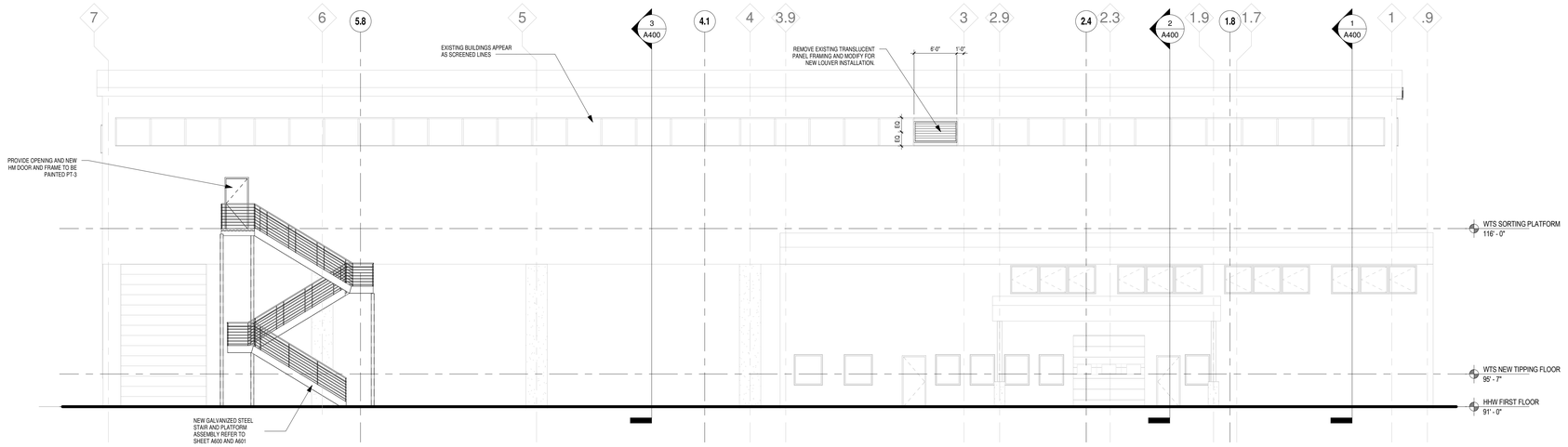
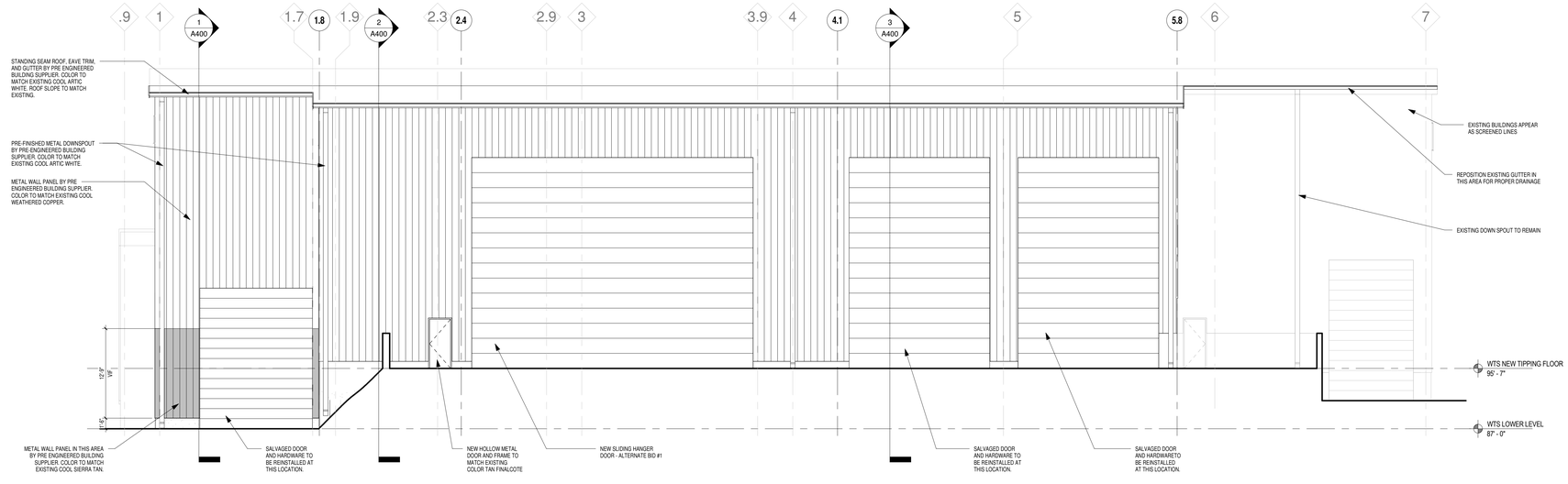
EXTERIOR ELEVATIONS

SHEET NUMBER
A100



2 WEST ELEVATION
1/8" = 1'-0"



1 EAST ELEVATION
1/8" = 1'-0"

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EXTERIOR ELEVATIONS

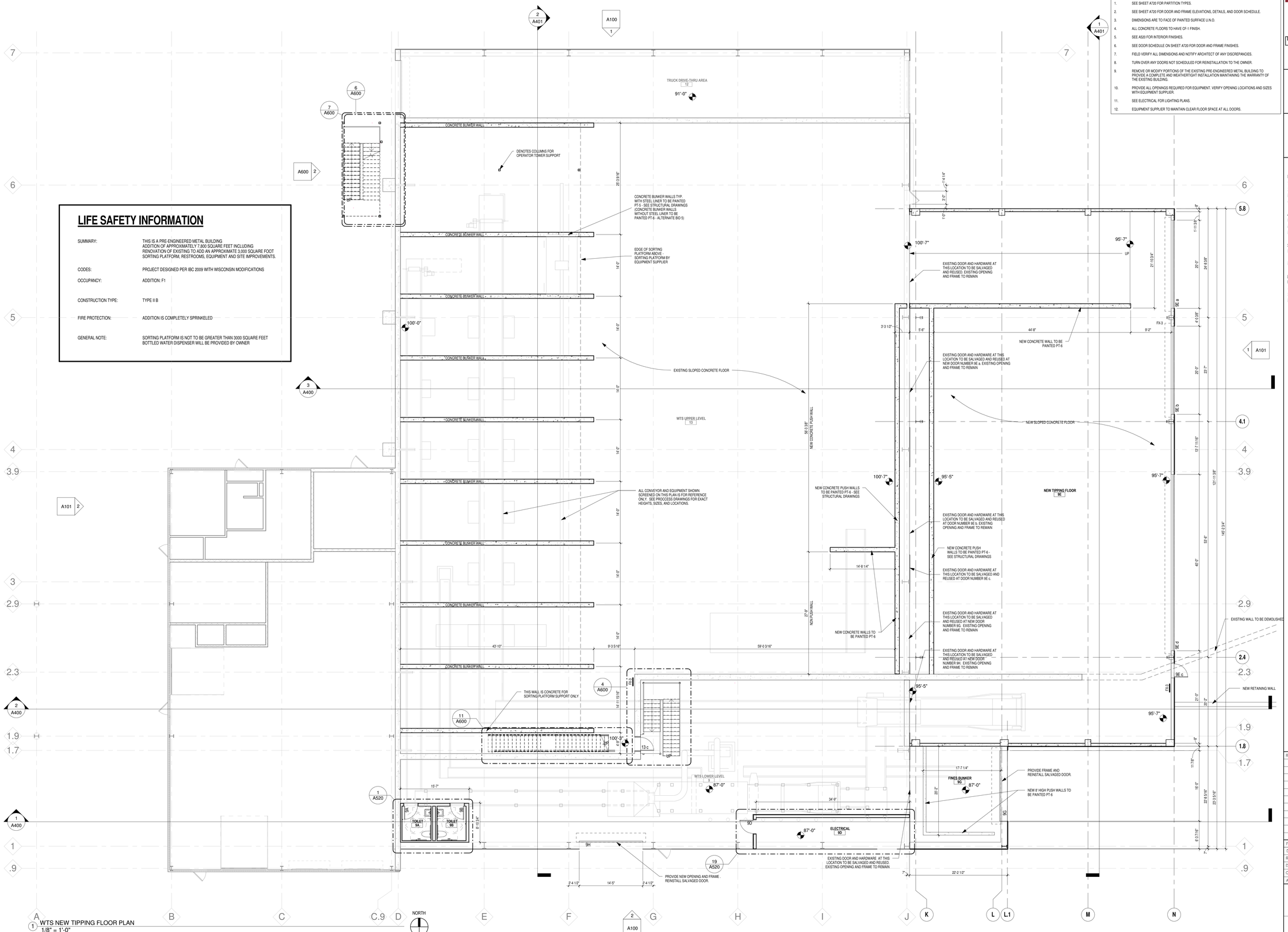
SHEET NUMBER
A101

FLOOR PLAN GENERAL NOTES

1. SEE SHEET A720 FOR PARTITION TYPES.
2. SEE SHEET A720 FOR DOOR AND FRAME ELEVATIONS, DETAILS, AND DOOR SCHEDULE.
3. DIMENSIONS ARE TO FACE OF PAINTED SURFACE U.N.O.
4. ALL CONCRETE FLOORS TO HAVE CF-1 FINISH.
5. SEE A520 FOR INTERIOR FINISHES.
6. SEE DOOR SCHEDULE ON SHEET A720 FOR DOOR AND FRAME FINISHES.
7. FIELD VERIFY ALL DIMENSIONS AND NOTIFY ARCHITECT OF ANY DISCREPANCIES.
8. TURN OVER ANY DOORS NOT SCHEDULED FOR REINSTALLATION TO THE OWNER.
9. REMOVE OR MODIFY PORTIONS OF THE EXISTING PRE ENGINEERED METAL BUILDING TO PROVIDE A COMPLETE AND WEATHERTIGHT INSTALLATION MAINTAINING THE WARRANTY OF THE EXISTING BUILDING.
10. PROVIDE ALL OPENINGS REQUIRED FOR EQUIPMENT. VERIFY OPENING LOCATIONS AND SIZES WITH EQUIPMENT SUPPLIER.
11. SEE ELECTRICAL FOR LIGHTING PLANS.
12. EQUIPMENT SUPPLIER TO MAINTAIN CLEAR FLOOR SPACE AT ALL DOORS.

LIFE SAFETY INFORMATION

SUMMARY:	THIS IS A PRE-ENGINEERED METAL BUILDING ADDITION OF APPROXIMATELY 7,800 SQUARE FEET INCLUDING RENOVATION OF EXISTING TO ADD AN APPROXIMATE 3,000 SQUARE FOOT SORTING PLATFORM, RESTROOMS, EQUIPMENT AND SITE IMPROVEMENTS.
CODES:	PROJECT DESIGNED PER IBC 2009 WITH WISCONSIN MODIFICATIONS
OCCUPANCY:	ADDITION: F1
CONSTRUCTION TYPE:	TYPE II B
FIRE PROTECTION:	ADDITION IS COMPLETELY SPRINKLED
GENERAL NOTE:	SORTING PLATFORM IS NOT TO BE GREATER THAN 3000 SQUARE FEET BOTTLED WATER DISPENSER WILL BE PROVIDED BY OWNER



1 WTS NEW TIPPING FLOOR PLAN
1/8" = 1'-0"

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2830 DAIRY DRIVE MADISON, WI 53718-6751
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2830 DAIRY DRIVE
MADISON, WI 53718-6751
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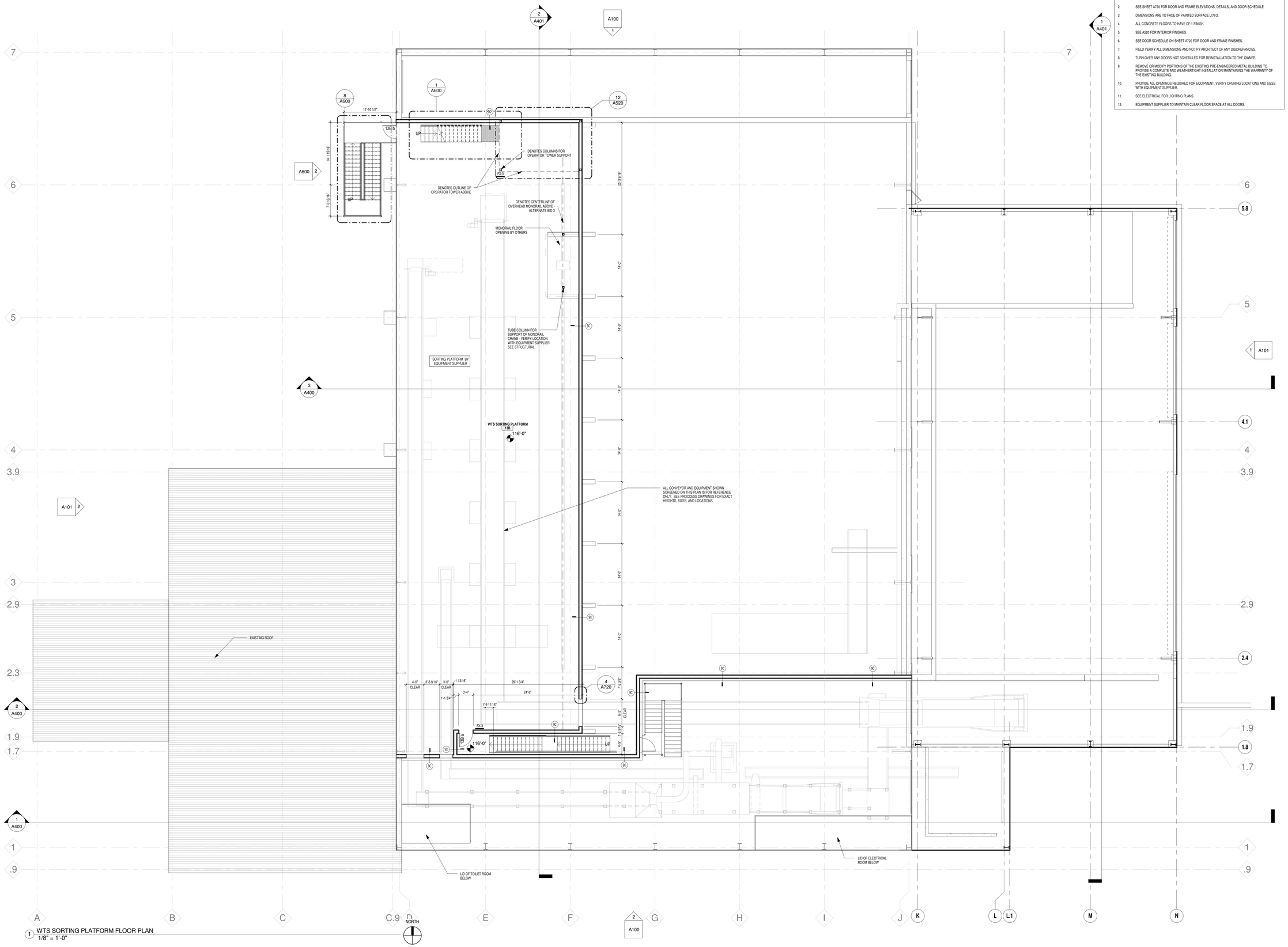
WTS NEW TIPPING FLOOR PLAN

SHEET NUMBER
A200

FLOOR PLAN GENERAL NOTES

1. SEE SHEET A720 FOR PARTITION TYPES.
2. SEE SHEET A720 FOR DOOR AND FRAME ELEVATIONS, DETAILS, AND DOOR SCHEDULE.
3. DIMENSIONS ARE TO FACE OF PAINTED SURFACE U.N.O.
4. ALL CONCRETE FLOORS TO HAVE CF-1 FINISH.
5. SEE A520 FOR INTERIOR FINISHES.
6. SEE DOOR SCHEDULE ON SHEET A720 FOR DOOR AND FRAME FINISHES.
7. FIELD VERIFY ALL DIMENSIONS AND NOTIFY ARCHITECT OF ANY DISCREPANCIES.
8. TURN OVER ANY DOORS NOT SCHEDULED FOR REINSTALLATION TO THE OWNER.
9. REMOVE OR MODIFY PORTIONS OF THE EXISTING PRE-ENGINEERED METAL BUILDING TO PROVIDE A COMPLETE AND WEATHERTIGHT INSTALLATION MAINTAINING THE WARRANTY OF THE EXISTING BUILDING.
10. PROVIDE ALL OPENINGS REQUIRED FOR EQUIPMENT. VERIFY OPENING LOCATIONS AND SIZES WITH EQUIPMENT SUPPLIER.
11. SEE ELECTRICAL FOR LIGHTING PLANS.
12. EQUIPMENT SUPPLIER TO MAINTAIN CLEAR FLOOR SPACE AT ALL DOORS.



1 WTS SORTING PLATFORM FLOOR PLAN
1/8" = 1'-0"

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2830 DAIRY DRIVE MADISON, WI 53718-6751
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SCALE: 1" = 20'

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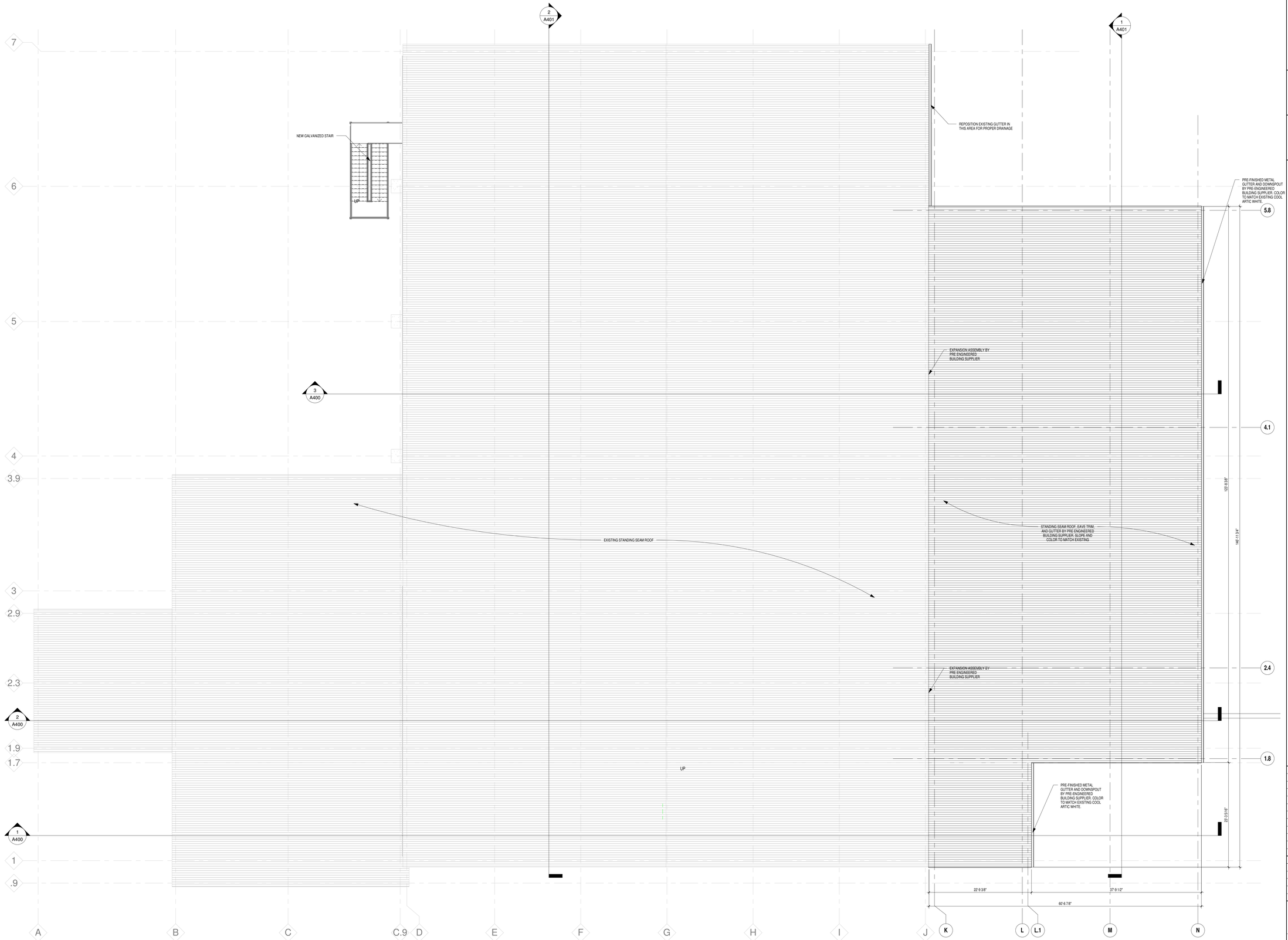
WTS SORTING PLATFORM FLOOR PLAN

SHEET NUMBER
A201



1 ROOF PLAN
1/8" = 1'-0"

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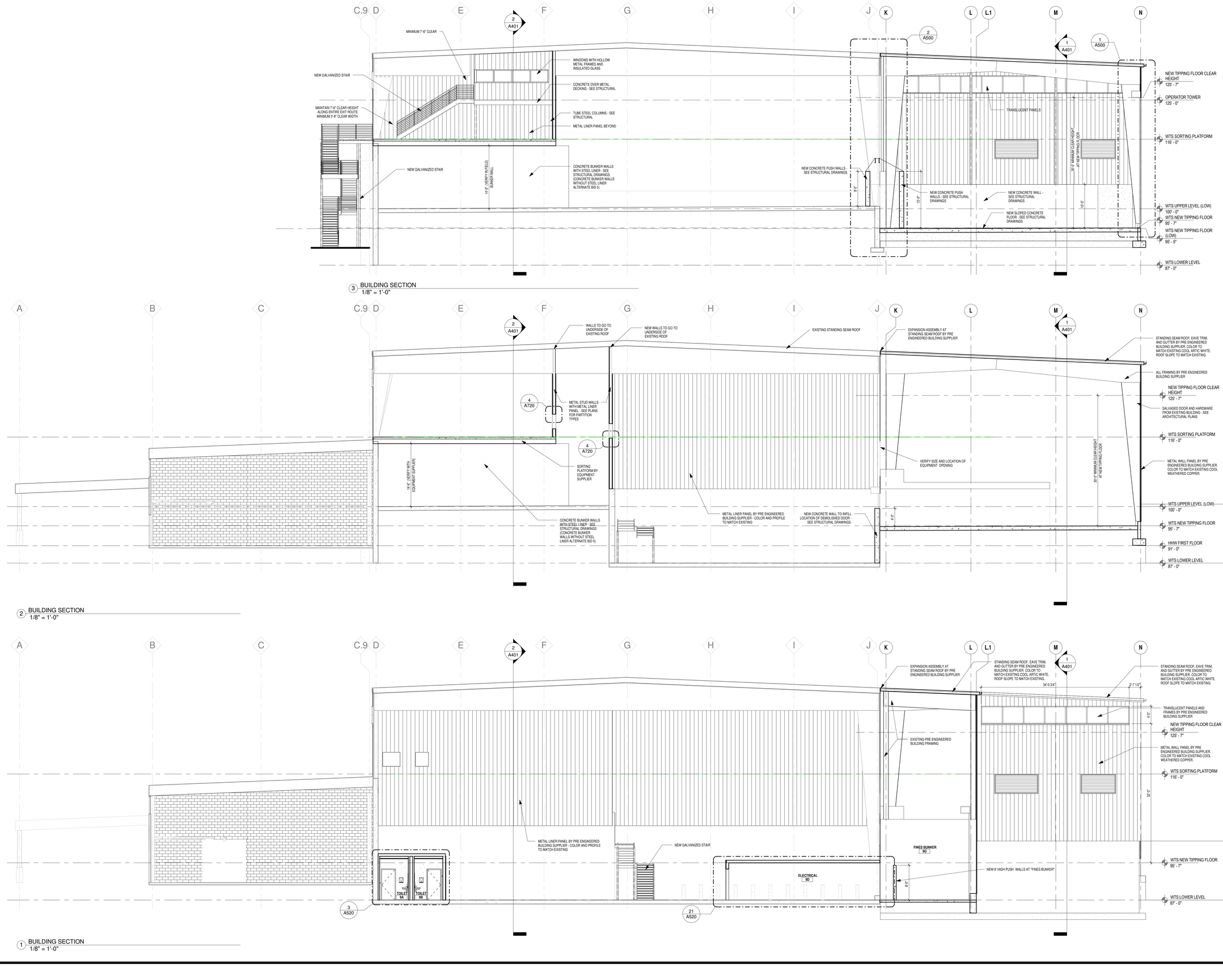
ROOF PLAN

SHEET NUMBER
A202



3 BUILDING SECTION
1/8" = 1'-0"

2 BUILDING SECTION
1/8" = 1'-0"

1 BUILDING SECTION
1/8" = 1'-0"

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2830 DAIRY DRIVE, MADISON, WI 53718-6751
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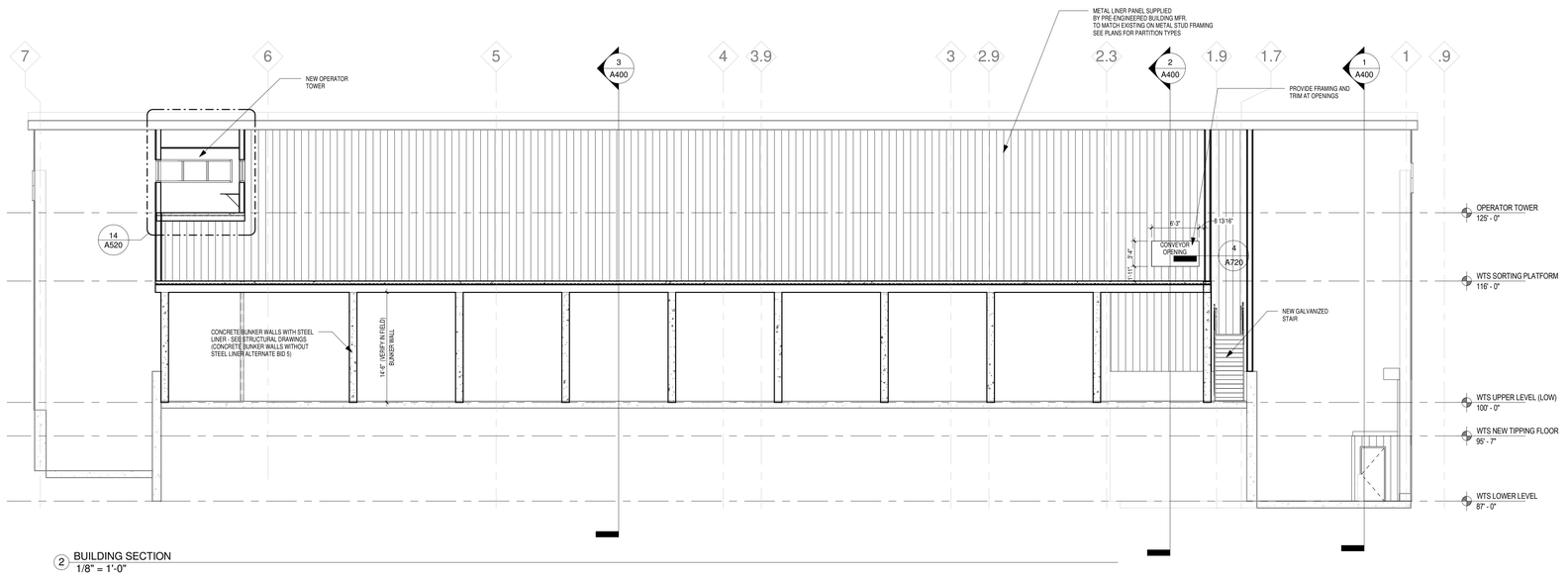
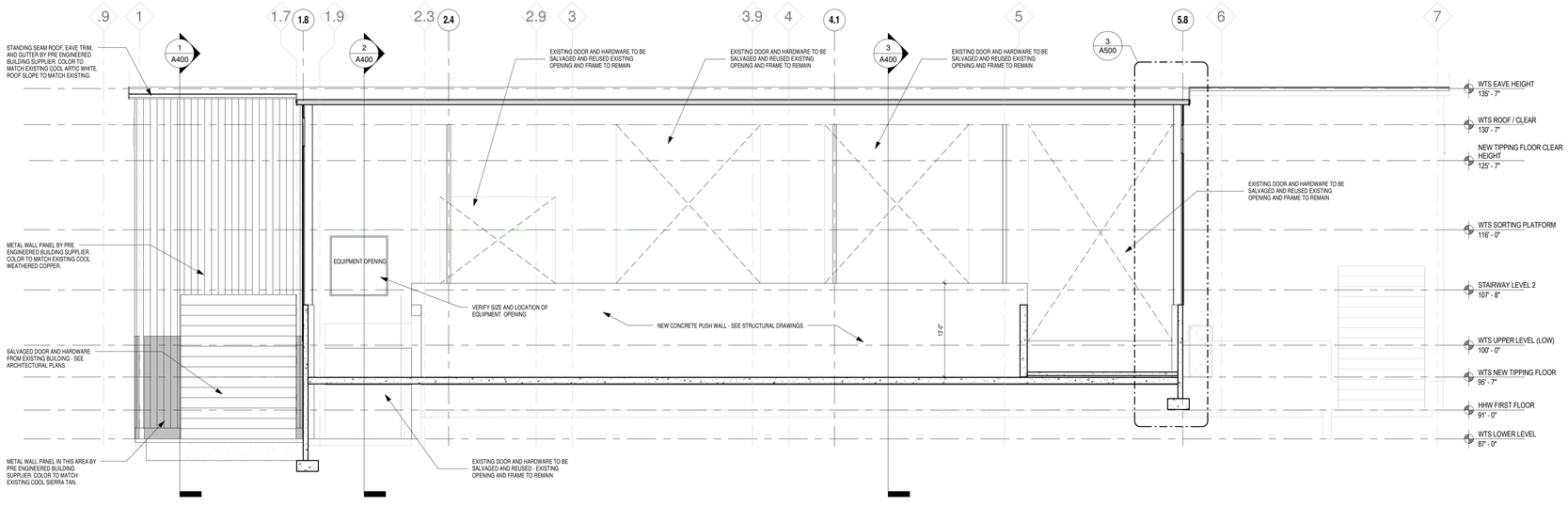
BUILDING SECTIONS

SHEET NUMBER
A400



2 BUILDING SECTION
1/8" = 1'-0"



1 BUILDING SECTION
1/8" = 1'-0"

SCS ENGINEERS
2830 DAIRY DRIVE MADISON, WI 53718-6751
PHONE: (608) 224-2830

DORSCHNER ASSOCIATES
Architecture Planning

CONSTRUCTION AND DEMOLITION WASTE RECYCLING FACILITY
7102 US HIGHWAY 12/18
MADISON, WISCONSIN

DANE COUNTY DEPARTMENT OF PUBLIC WORKS
SOLID WASTE DIVISION
1919 ALLIANT ENERGY CENTER WAY
MADISON, WI 53713

PROCCESS AND CIVIL ENGINEER:
SCS ENGINEERS
2830 DAIRY DRIVE
MADISON, WI 53718-6751
(608) 224-2830

ARCHITECT:
DORSCHNER ASSOCIATES, INC.
849 E. WASHINGTON AVE., SUITE 112
MADISON, WI 53703

STRUCTURAL ENGINEER:
PIERCE ENGINEERS, INC.
10 WEST MIFFLIN ST., SUITE 205
MADISON, WI 53703

MECHANICAL, ELECTRICAL, PLUMBING DESIGN
JDR ENGINEERING, INC.
5525 NOBEL DRIVE, SUITE 110
MADISON, WI 53711

N

20 0 20
SCALE: 1" = 20'

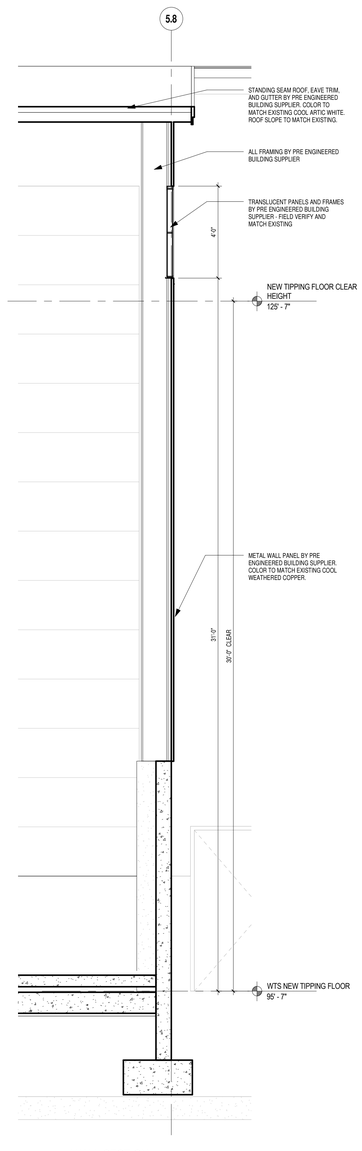
REVISION	DATE	BY	TITLE

PROJECT NO:	14016-00
DRAWN:	02.16.15
REVISED:	
DRAWN BY:	
CHECKED BY:	
APPROVED BY:	

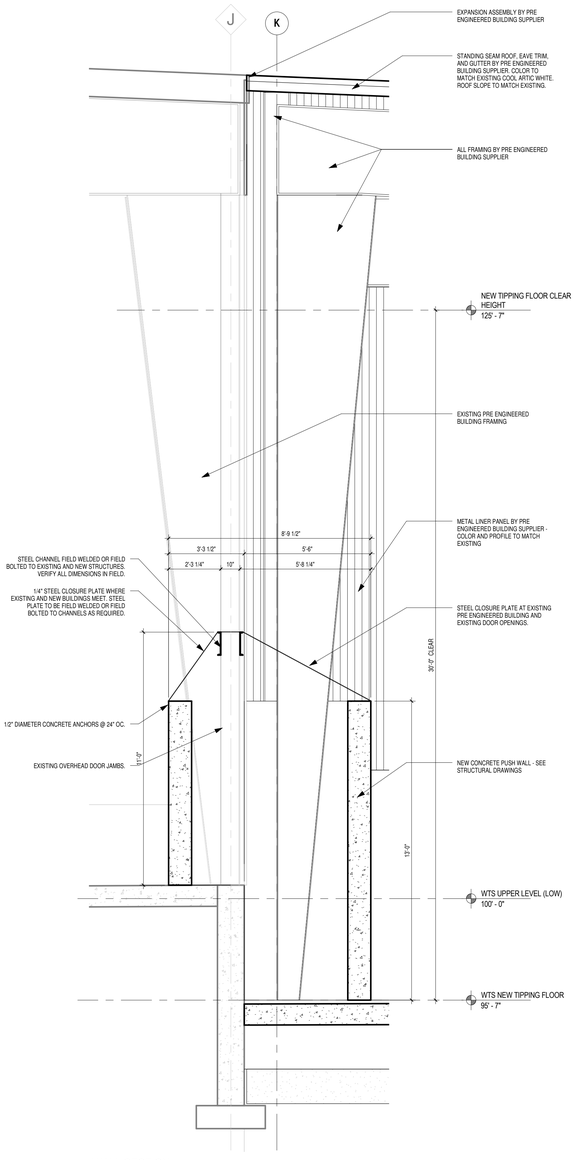
BID DOCUMENTS
ISSUED 04/28/15

BUILDING SECTIONS

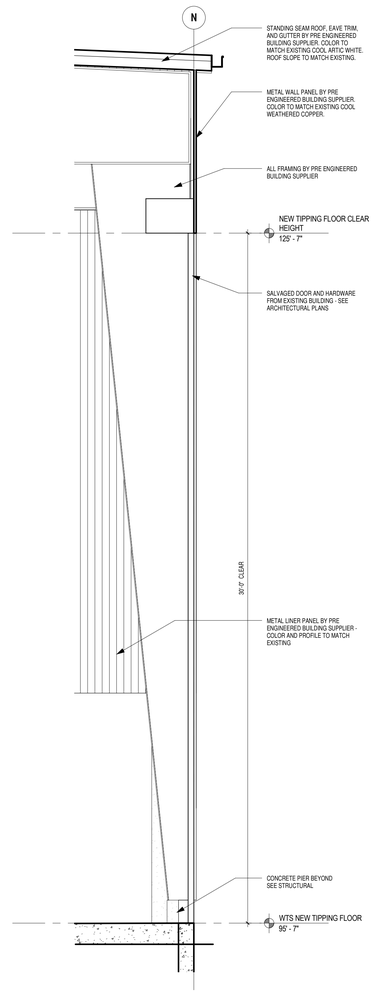
SHEET NUMBER
A401



3 WALL SECTION
3/8" = 1'-0"



2 WALL SECTION
3/8" = 1'-0"



1 WALL SECTION
3/8" = 1'-0"

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5525 NOBEL DRIVE, SUITE 110
MADISON, WI 53711

N

20 0 20
SCALE: 1" = 20'

REVISION	DATE	BY	TITLE

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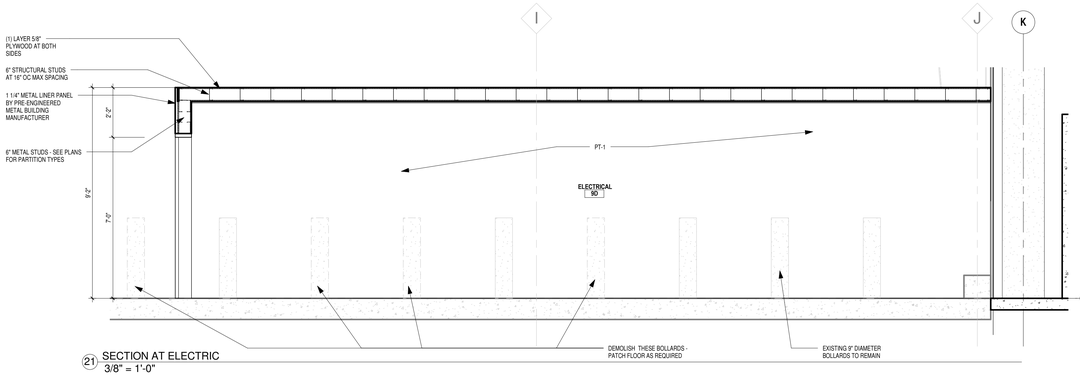
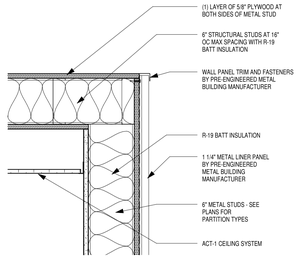
BID DOCUMENTS
ISSUED 04/28/15

WALL SECTIONS

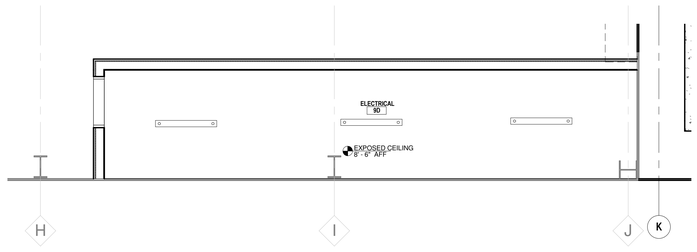
SHEET NUMBER
A500



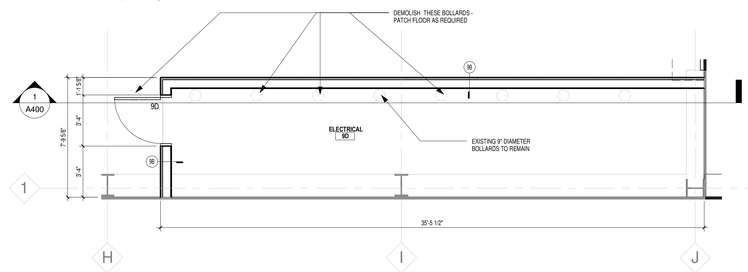
21 SECTION AT ELECTRIC
3/8" = 1'-0"



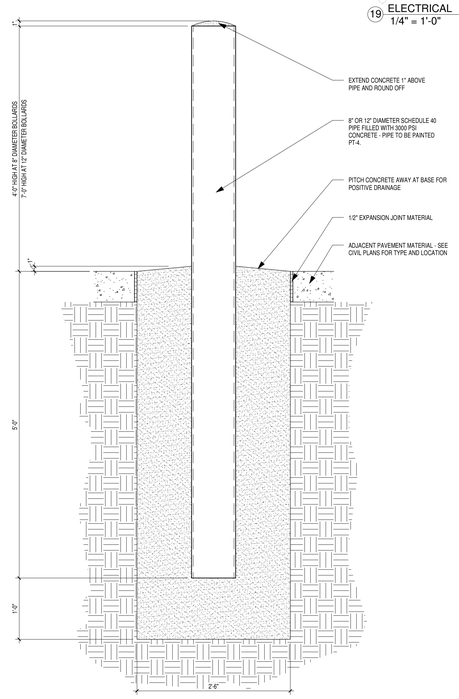
22 TOILET ROOM EDGE DETAIL
1 1/2" = 1'-0"



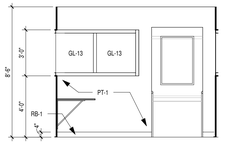
20 REFLECTED CEILING PLAN AT ELECTRICAL
1/4" = 1'-0"



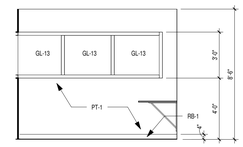
19 ELECTRICAL
1/4" = 1'-0"



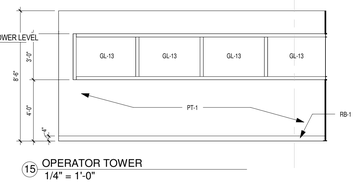
23 PIPE BOLLARD DETAIL
1" = 1'-0"



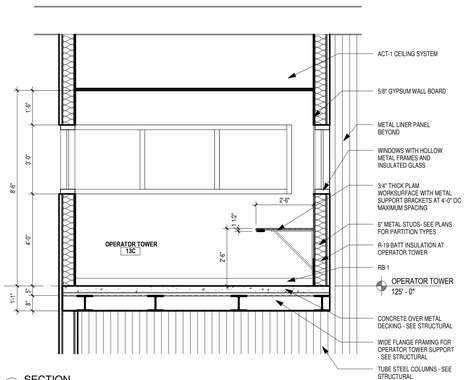
18 OPERATOR TOWER
1/4" = 1'-0"



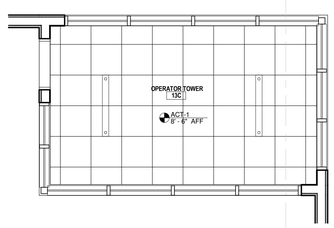
16 OPERATOR TOWER
1/4" = 1'-0"



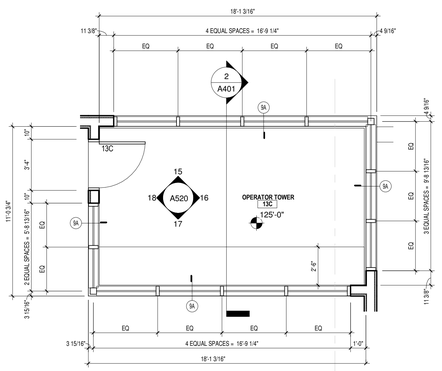
15 OPERATOR TOWER
1/4" = 1'-0"



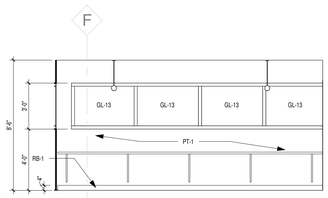
14 SECTION
3/8" = 1'-0"



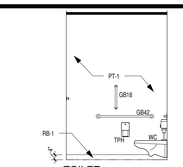
13 REFLECTED CEILING PLAN
1/4" = 1'-0"



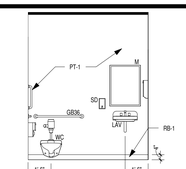
12 FLOOR PLAN
1/4" = 1'-0"



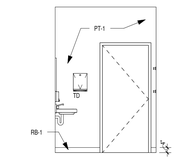
17 OPERATOR TOWER
1/4" = 1'-0"



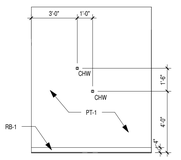
10 TOILET
1/4" = 1'-0"



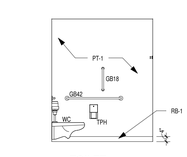
11 TOILET
1/4" = 1'-0"



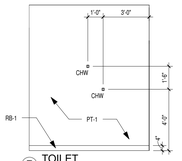
8 TOILET
1/4" = 1'-0"



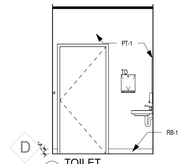
9 TOILET
1/4" = 1'-0"



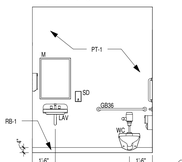
6 TOILET
1/4" = 1'-0"



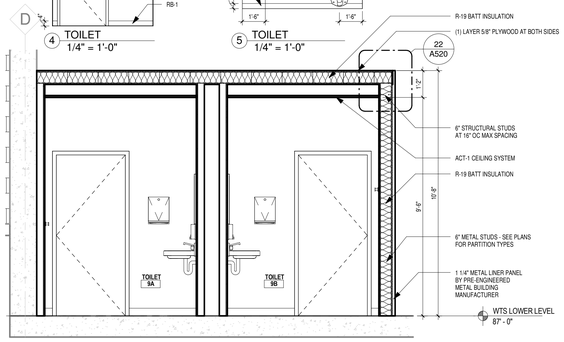
7 TOILET
1/4" = 1'-0"



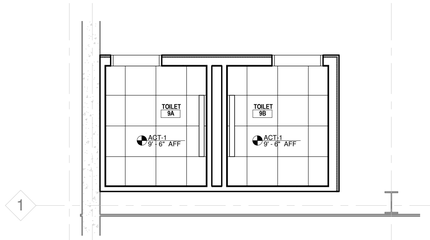
4 TOILET
1/4" = 1'-0"



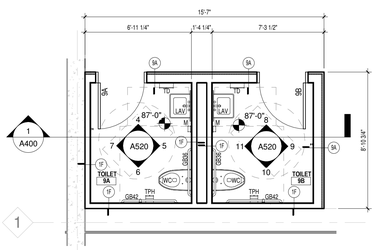
5 TOILET
1/4" = 1'-0"



3 SECTION AT TOILETS
3/8" = 1'-0"



2 REFLECTED CEILING PLAN AT TOILETS
1/4" = 1'-0"



1 TOILETS
1/4" = 1'-0"

SCS ENGINEERS
2830 DAIRY DRIVE MADISON, WI 53718-6751
PHONE: (608) 224-2830

DORSCHNER ASSOCIATES
Architecture Planning

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N

20 0 20
SCALE: 1" = 20'

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BID DOCUMENTS
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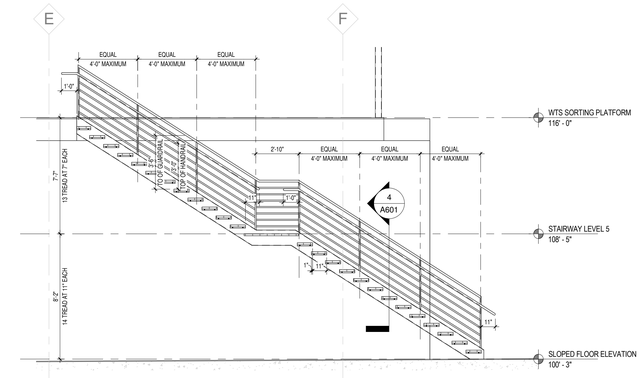
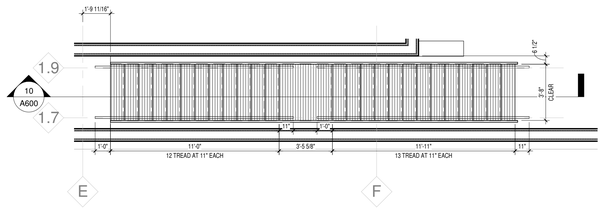
PARTIAL PLANS, SECTIONS, ELEVATIONS AND DETAILS

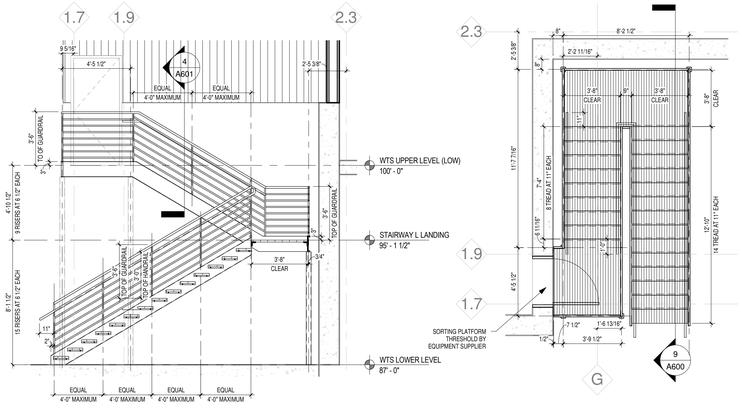
SHEET NUMBER
A520



10 STAIR SECTION
1/4" = 1'-0"

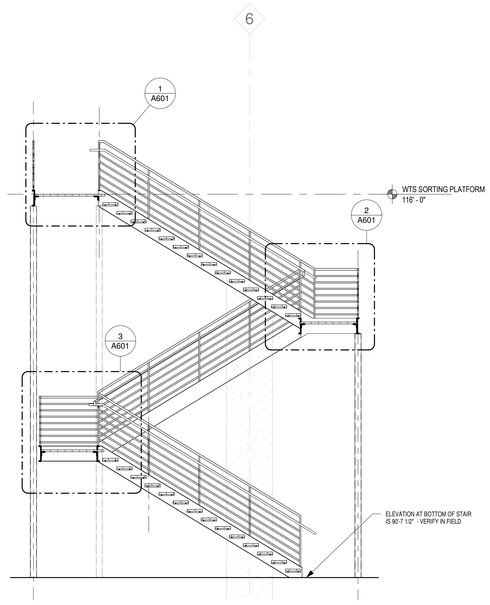


11 STAIR PLAN
1/4" = 1'-0"

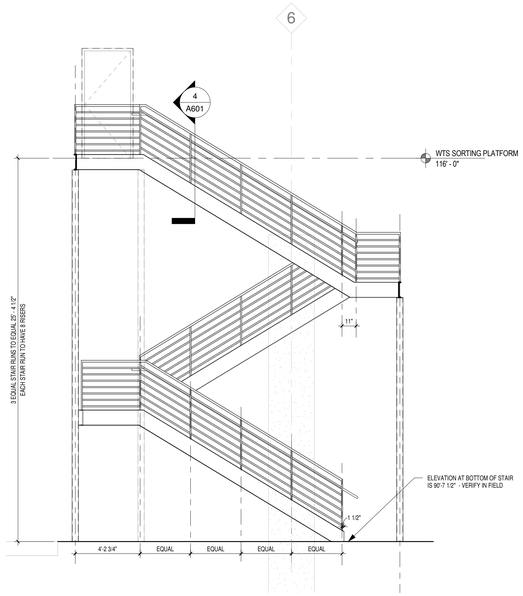


9 STAIR SECTION
1/4" = 1'-0"

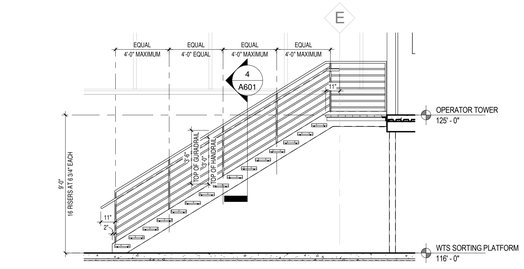
4 STAIR PLAN
1/4" = 1'-0"



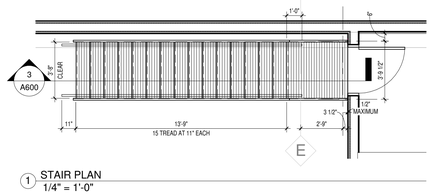
5 STAIR SECTION
1/4" = 1'-0"



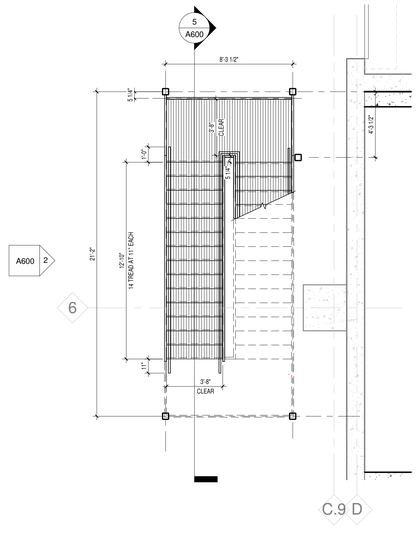
2 STAIR ELEVATION
1/4" = 1'-0"



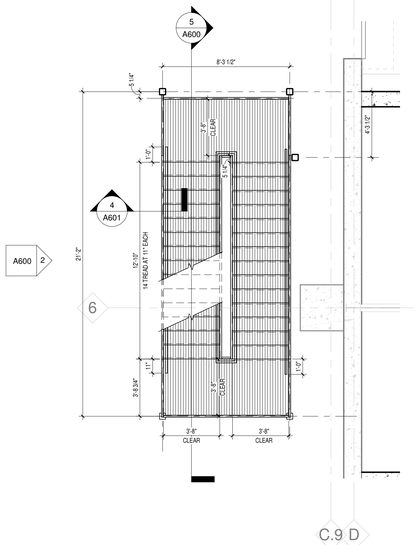
3 STAIR SECTION
1/4" = 1'-0"



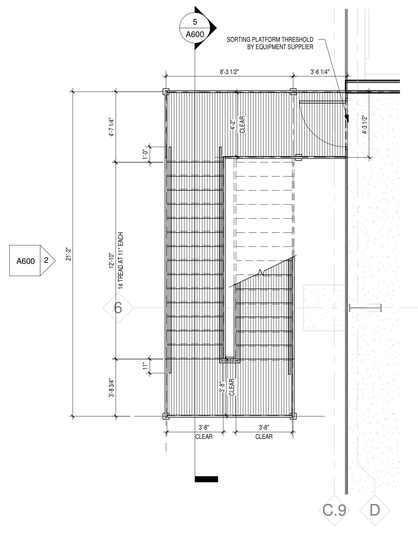
1 STAIR PLAN
1/4" = 1'-0"



6 STAIR PLAN
1/4" = 1'-0"



7 STAIR PLAN
1/4" = 1'-0"



8 STAIR PLAN
1/4" = 1'-0"

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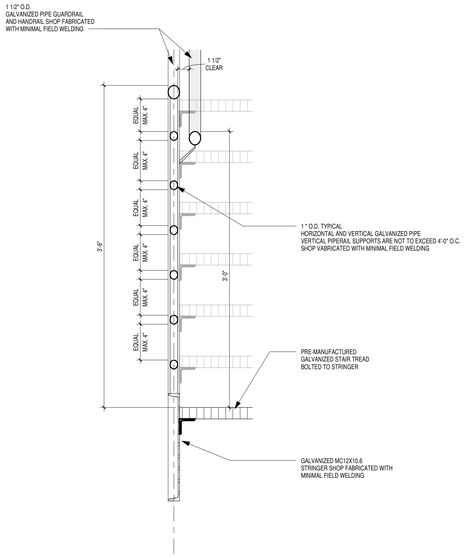
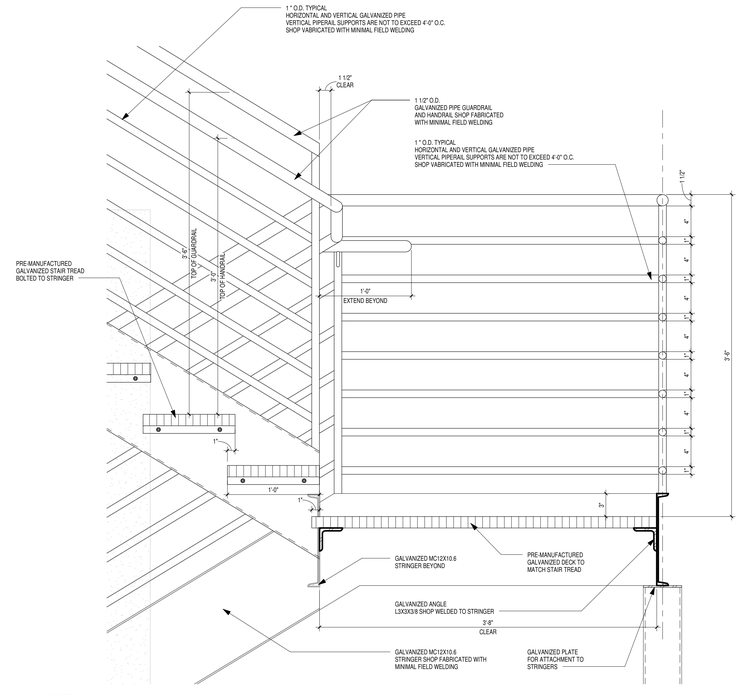
EXTERIOR DETAILS

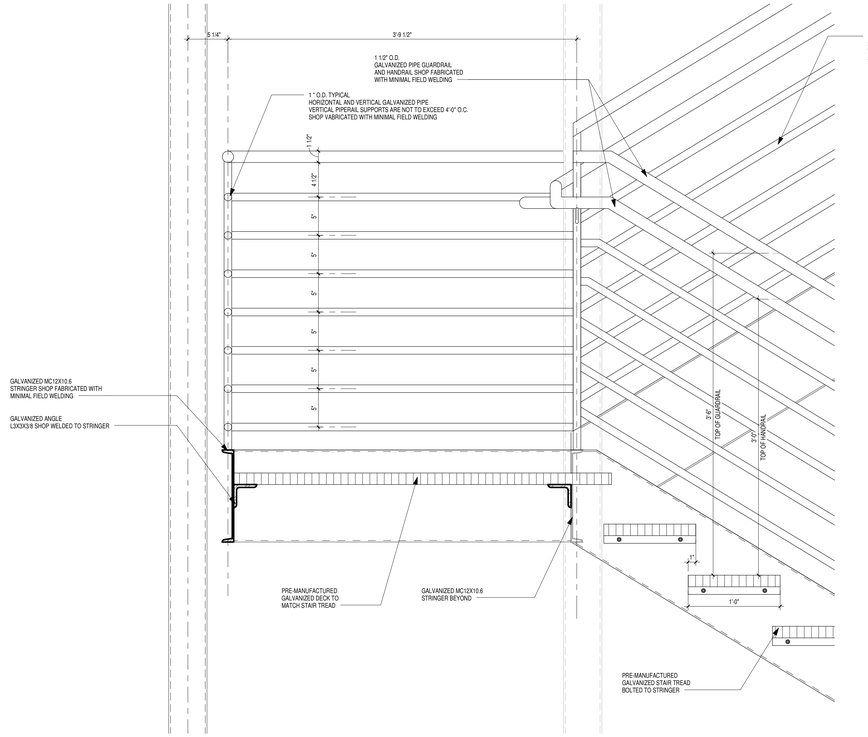
SHEET NUMBER
A600



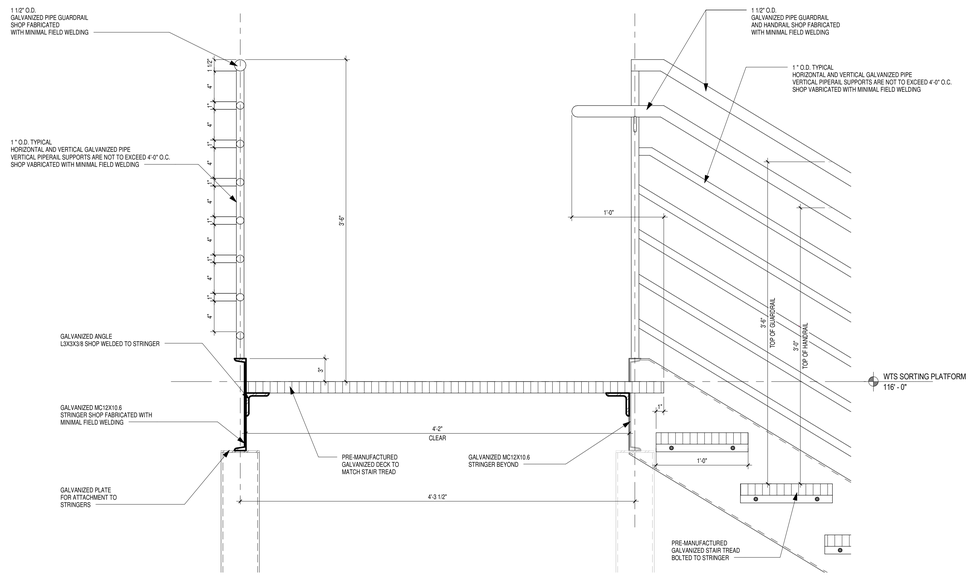
4 DETAIL
1 1/2" = 1'-0"



2 DETAIL
1 1/2" = 1'-0"



3 DETAIL
1 1/2" = 1'-0"



1 DETAIL
1 1/2" = 1'-0"

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2830 DAIRY DRIVE MADISON, WI 53718-6751
PHONE: (608) 224-2830

DORSCHNER ASSOCIATES
Architecture
Planning

CONSTRUCTION AND DEMOLITION WASTE RECYCLING FACILITY
7102 US HIGHWAY 12/18
MADISON, WISCONSIN

DANE COUNTY DEPARTMENT OF
PUBLIC WORKS
SOLID WASTE DIVISION
1919 ALLIANT ENERGY CENTER WAY
MADISON, WI 53713

PROCCESS AND CIVIL ENGINEER:
SCS ENGINEERS
2830 DAIRY DRIVE
MADISON, WI 53718-6751
(608) 224-2830

ARCHITECT:
DORSCHNER ASSOCIATES, INC.
849 E. WASHINGTON AVE., SUITE 112
MADISON, WI 53703

STRUCTURAL ENGINEER:
PIERCE ENGINEERS, INC.
10 WEST MIFFLIN ST., SUITE 205
MADISON, WI 53703

MECHANICAL, ELECTRICAL, PLUMBING DESIGN
JDR ENGINEERING, INC.
5525 NOBEL DRIVE, SUITE 110
MADISON, WI 53711

N

20 0 20
SCALE: 1" = 20'

REVISION	DATE	BY	TITLE

PROJECT NO:	14016-00
DRAWN:	02.16.15
REVISED:	
DRAWN BY:	
CHECKED BY:	
APPROVED BY:	

BID DOCUMENTS
ISSUED 04/28/15

EXTERIOR DETAILS

SHEET NUMBER
A601

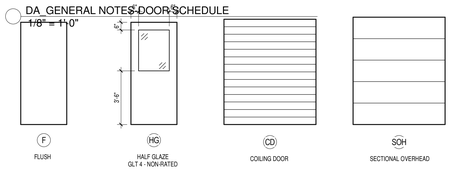
Door Schedule

DOOR NUMBER	QTY	DOOR WIDTH	DOOR HEIGHT	DOOR ELEV	DOOR MATERIAL	DOOR GLAZING	FRAME ELEV	FRAME MATERIAL	DETAILS HEAD	DETAILS JAMB	DETAILS SILL	LABEL	HARDWARE SET	COMMENTS
9A	1	30	70	F	HM (PT-2)	-	1	HM (PT-2)	5/A720	6/A720	-	-	03	
9B	1	30	70	F	HM (PT-2)	-	1	HM (PT-2)	5/A720	6/A720	-	-	03	
9D	1	30	70	F	HM (PT-2)	-	1	HM (PT-2)	5/A720	6/A720	-	-	05	
9E a	1	200	300	CD	STL	-	-	-	9/A720	10/A720	-	-	-	(SALVAGED AND RELOCATED - SEE PLANS)
9E b	1	200	300	CD	STL	-	-	-	9/A720	10/A720	-	-	-	(SALVAGED AND RELOCATED - SEE PLANS)
9E c	1	30	70	HG	HM (PT-3)	-	1	HM (PT-3)	-	-	-	-	06	(SALVAGED AND RELOCATED DOOR AND HARDWARE - SEE PLANS)
9E d	1	400	300	CD	STL	-	-	-	-	-	-	-	-	HORIZONTAL SLIDING HANGER DOOR - ALTERNATE BID #1
9G	1	160	200	CD	STL	-	-	-	9/A720	10/A720	-	-	-	(SALVAGED AND RELOCATED - SEE PLANS)
9H	1	145	160	CD	STL	-	-	-	9/A720	10/A720	-	-	-	
13 c	1	30	70	HG	HM (PT-2)	-	1	HM (PT-2)	-	-	-	-	01	
13B a	1	30	70	HG	HM (PT-2)	-	1	HM (PT-2)	7/A720	8/A720	-	-	01	
13B b	1	30	70	HG	HM (PT-2)	-	1	HM (PT-2)	7/A720	8/A720	-	-	06	
13C	1	30	70	HG	HM (PT-2)	-	1	HM (PT-2)	5/A720	6/A720	-	-	07	

DOOR SCHEDULE GENERAL NOTES

1. APPROXIMATE DIMENSIONS ARE PROVIDED. CONTRACTORTO FIELD VERIFY ALL DIMENSIONS AND COMPLETE ALL MODIFICATIONS TO DOORS AND HARDWARE AS REQUIRED FOR COMPLETE REINSTALLATION.

A GENERAL NOTES: DOOR SCHEDULE
1/8" = 1'-0"



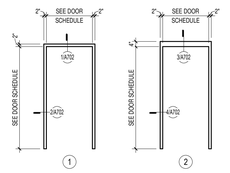
F — FLUSH

HG — HALF GLAZE GLT 4 - NON-RATED

CD — COILING DOOR

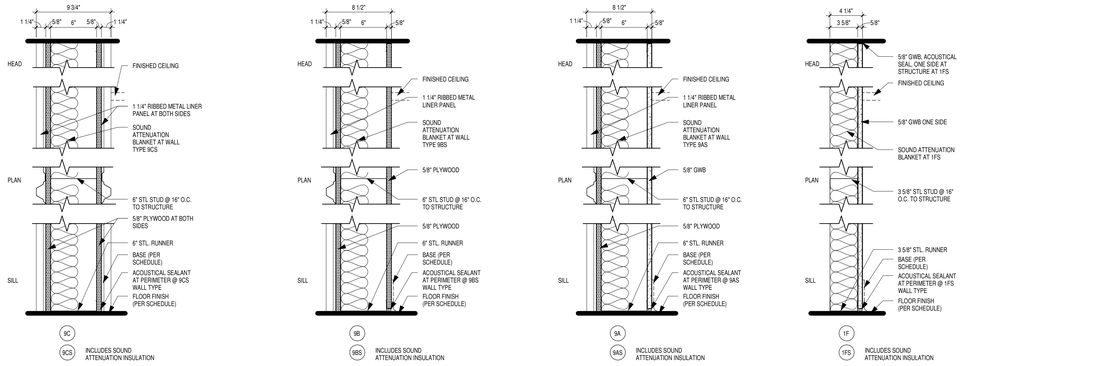
SOH — SECTIONAL OVERHEAD

1 DOOR TYPE ELEVATIONS
1/4" = 1'-0"

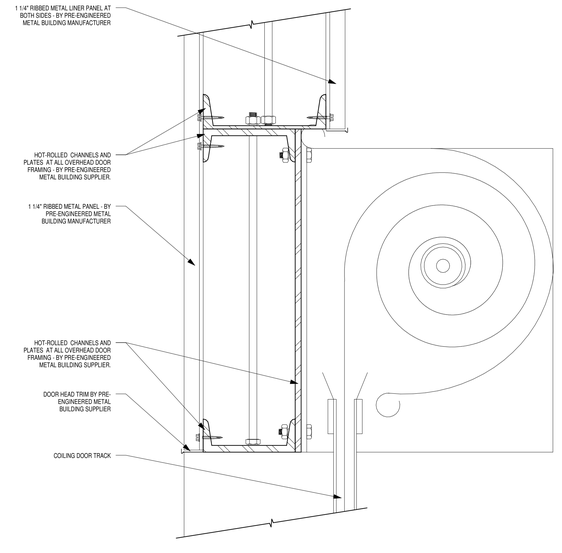


1 2

2 DOOR FRAME ELEVATIONS
1/4" = 1'-0"

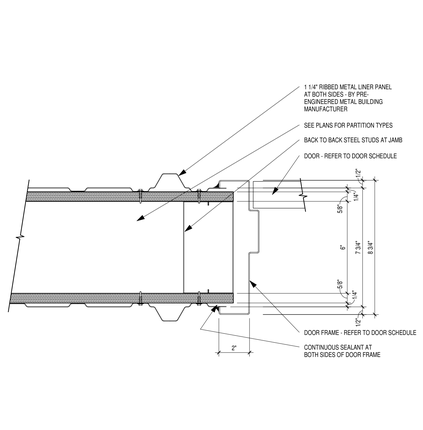


3 PARTITION TYPES
1 1/2" = 1'-0"

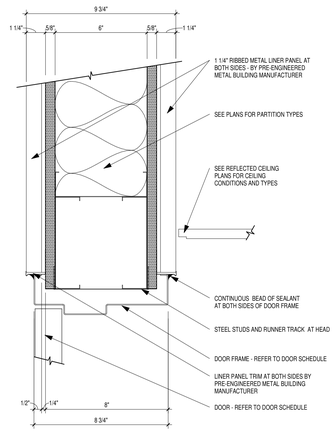


10 DOOR JAMB
3" = 1'-0"

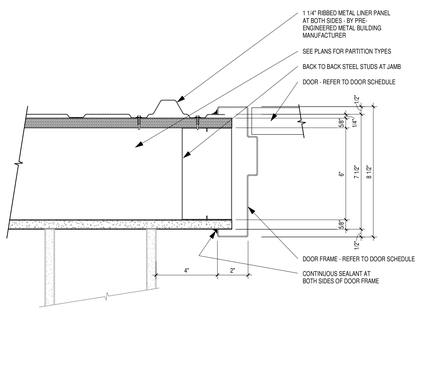
9 DOOR HEAD
3" = 1'-0"



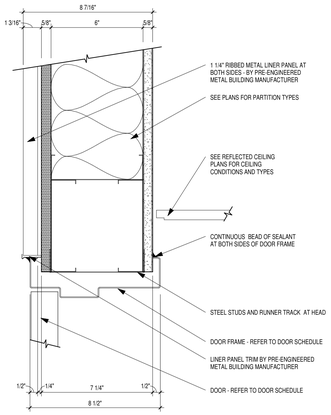
8 DOOR JAMB
3" = 1'-0"



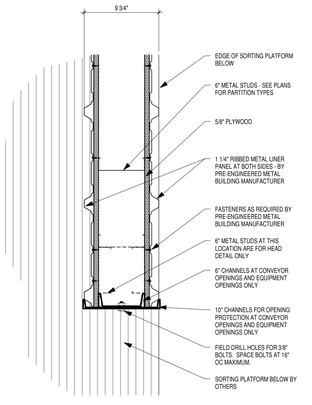
7 DOOR HEAD
3" = 1'-0"



6 DOOR JAMB
3" = 1'-0"



5 DOOR HEAD
3" = 1'-0"



4 JAMB DETAIL (HEAD AND SILL SIMILAR)
1 1/2" = 1'-0"

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BID DOCUMENTS
ISSUED 04/28/15

DOOR SCHEDULES, DETAILS, AND PARTITION TYPES

SHEET NUMBER
A720

DESIGN DATA

DESIGN CODE:
INTERNATIONAL BUILDING CODE 2006 (IBC)

WIND LOAD INFORMATION:

BASIC WIND SPEED	90 MPH		
BUILDING OCCUPANCY CATEGORY	II		
WIND LOAD IMPORTANCE FACTOR (Iw)	1.00		
WIND EXPOSURE	C		
INTERNAL PRESSURE COEFFICIENTS	± .18		
COMPONENTS AND CLADDING (GROSS WIND PRESSURES): (FOR ZONE DEFINITIONS & DIAGRAMS SEE DESIGN GUIDE ASCE/SEI 7 SECTION 6)			
WIDTH OF PRESSURE COEFFICIENT ZONE (a)	12.2 ft		
TRIBUTARY WIND LOAD AREAS:	10 ft²	50 ft²	100 ft²
ROOF (GABLE/HIP/MONOSLOPE):			
NEGATIVE ZONE 1	-22.7 psf	-21.4 psf	-20.8 psf
NEGATIVE ZONE 2	-38.2 psf	-28.7 psf	-24.7 psf
NEGATIVE ZONE 3	-57.4 psf	-34.5 psf	-24.7 psf
POSITIVE PRESSURE ALL ZONES	10.0 psf	10.0 psf	10.0 psf
	10 ft²	100 ft²	500 ft²
WALLS:			
ZONE 4	-22.6 psf	-19.5 psf	-17.4 psf
ZONE 5	-27.8 psf	-21.6 psf	-17.4 psf

SEISMIC LOAD INFORMATION:

SEISMIC USE GROUP / OCCUPANCY CATEGORY	II
SEISMIC LOAD IMPORTANCE FACTOR (Ie)	1.00
SEISMIC SITE CLASS	E
MAPPED SPECTRAL RESPONSE ACCELERATION (Ss)	0.158
MAPPED SPECTRAL RESPONSE ACCELERATION (S1)	0.044
SPECTRAL RESPONSE COEFFICIENT (Sds)	0.180
SPECTRAL RESPONSE COEFFICIENT (Sd1)	0.103
SEISMIC DESIGN CATEGORY	B
BASIC SEISMIC FORCE RESISTING SYSTEM	STEEL ORDINARY MOMENT FRAMES
RESPONSE MODIFICATION FACTOR	3.5
SEISMIC RESPONSE COEFFICIENT (Cs)	0.051
DESIGN BASE SHEAR	0.051W
ANALYSIS PROCEDURE	EQUIVALENT LATERAL FORCE

SNOW LOAD INFORMATION:

GROUND SNOW LOAD (Pg)	30 psf
SNOW EXPOSURE FACTOR (Ce)	1.00
SNOW LOAD IMPORTANCE FACTOR (Is)	1.00
THERMAL FACTOR (Ct)	1.10
RAIN ON SNOW SURCHARGE	1.20 AT OVERHANGS
DESIGN/BALANCED SNOW LOAD (Ps)	0 psf 30 psf

SOIL LOAD INFORMATION:

COEFFICIENT OF SLIDING FRICTION (μ)	0.32
LATERAL EARTH PRESSURE:	
ACTIVE	35 pcf
AT-REST	55 pcf
PASSIVE	200 pcf
ALLOWABLE NET SOIL BEARING PRESSURE	Qa = 3,000psf

MATERIAL DESIGN PROPERTIES

CIP CONCRETE STRENGTHS:

FOOTINGS	f'c = 3000 psi
CONCRETE WALLS / PIERS / COLUMNS	f'c = 4000 psi
SLAB ON GRADE, UNO	f'c = 4000 psi
EXTERIOR SLAB ON GRADE	f'c = 4500 psi
TIPPING SLAB	f'c = 6000 psi

REINFORCING STEEL STRENGTHS:

BARS (ASTM A 615, grade 60)	Fy = 60,000 psi
WWF (ASTM A 185)	Fy = 65,000 psi

STRUCTURAL STEEL STRENGTHS:

WF SHAPES (ASTM A992)	Fy = 50,000 psi
ANGLES, CHANNELS, PLATES, & BARS (ASTM A36)	Fy = 36,000 psi
SQUARE & RECTANGULAR TS OR HSS SECTIONS (ASTM A500, grade B)	Fy = 46,000 psi
ROUND HSS SECTIONS (ASTM A500, grade B)	Fy = 42,000 psi
STEEL PIPE (ASTM A53, grade B)	Fy = 35,000 psi
HIGH STRENGTH BOLTS (ASTM A325)	
ANCHOR BOLTS (ASTM F1554)	Fy = 36,000 psi
WELD ELECTRODES	E70 XX
HEADED WELDED STUDS (ASTM A108)	Fu = 55,000 psi
PRE-ENGINEERED METAL BUILDING	PER MANUFACTURER

EXISTING CONDITIONS NOTE

1. FIELD VERIFY ALL EXISTING CONDITIONS AS REQUIRED PRIOR TO DEMOLITION. REPORT DISCREPANCIES BETWEEN EXISTING CONDITIONS AND INFORMATION NOTED ON THE STRUCTURAL DRAWINGS TO THE STRUCTURAL ENGINEER FOR EVALUATION.

GENERAL FOUNDATION NOTES

1. ANCHOR BOLTS SHALL BE SET TO THE FOLLOWING TOLERANCES:
   ELEVATION OF TOP OF BOLTS +1" TO -3/4"
   OUT OF POSITION OF ANCHOR BOLTS ± 1/2"
2. PROTECT IN-PLACE FOUNDATIONS AND SLABS ON GRADE FROM FROST PENETRATION UNTIL PROJECT COMPLETION
3. WHERE FILL MATERIAL IS REQUIRED ON BOTH SIDES OF GRADE BEAMS OR WALLS, IT SHALL BE PLACED SIMULTANEOUSLY. REFER TO PLANS AND SPECIFICATIONS FOR TYPE AND PLACING OF BACKFILL.
4. WHERE FILL MATERIAL IS PLACED ON ONE SIDE OF A WALL (OR GRADE BEAM), THE WALL (OR BEAM) SHALL BE ADEQUATELY SHORED AND BRACED OR THE MATERIAL SHALL NOT BE PLACED UNTIL SUPPORTING FLOOR SLABS HAVE BEEN POURED AND SET.
5. REFER TO ARCHITECTURAL DRAWINGS OR PLUMBING DRAWINGS FOR SPECIFIC FLOOR DRAIN LOCATIONS & ELEVATIONS.
6. NO PROVISION HAS BEEN MADE FOR FUTURE EXPANSION.
7. VERIFY SIZES OF ALL STOOPS WITH ARCHITECT PRIOR TO CONSTRUCTION.

CAST-IN-PLACE CONCRETE NOTES

1. DESIGN AND CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST PROVISIONS OF ACI 318/318R.
2. CONTRACTOR SHALL NOTIFY THE ARCHITECT/ENGINEER AT LEAST 48 HOURS PRIOR TO PLACING CONCRETE TO FACILITATE ON SITE OBSERVATION OF REBAR.
3. ARRANGEMENT AND BENDING OF REINFORCING STEEL SHALL BE IN ACCORDANCE WITH ACI DETAILING MANUAL (ACI SP-66), LATEST EDITION.
4. WHEN THE AVERAGE TEMPERATURE FROM MIDNIGHT TO MIDNIGHT IS EXPECTED TO DROP BELOW 40 DEGREES FAHRENHEIT FOR THREE SUCCESSIVE DAYS, COLD WEATHER CONCRETING REQUIREMENTS MUST BE FOLLOWED.
5. WHEN AMBIENT AIR OR CONCRETE TEMPERATURES EXCEED 90 DEGREES FAHRENHEIT, STEEL REINFORCING AND/OR FORMING SURFACES ARE ABOVE 120 DEGREES, OR WHEN WIND VELOCITY, HUMIDITY, OR SOLAR RADIATION CREATE CONDITIONS OF ACCELERATED MOISTURE LOSS AND INCREASED RATE OF HYDRATION, HOT WEATHER CONCRETING REQUIREMENTS SHALL BE FOLLOWED.
6. ALL HOOKS IN STEEL REINFORCING SHALL BE ACI STANDARD HOOKS, UNLESS NOTED OTHERWISE IN CONSTRUCTION DOCUMENTS.
7. ALL CONCRETE SURFACES SHALL BE FORMED, UNLESS OTHERWISE NOTED.
8. CONTROL JOINTS SHALL BE PLACED IN SLAB ON GRADE AND SLAB ON METAL DECK CONSTRUCTION WITHIN 24 HOURS OF INITIAL POUR.
9. WIRE SPACERS, CHAIRS, TIES, ETC., FOR SUPPORT OF STEEL REINFORCING SHALL BE PROVIDED BY THE CONTRACTOR TO ENSURE REINFORCING IS PLACED IN THE PROPER POSITION DURING CONCRETE PLACEMENT.
10. STEEL REINFORCING SPLICES OF ADJACENT BARS SHALL BE STAGGERED SUCH THAT SPLICES ARE 4 FEET APART, MINIMUM.
11. PROVIDE (2) #5 BARS AROUND ALL OPENINGS AND (2) #5 DIAGONALLY AT ALL OPENING CORNERS UNLESS OTHERWISE SPECIFIED. EXTEND 2'-0" PAST OPENING TYPICALLY.
12. WELDED WIRE REINFORCING SHALL BE IN FLAT SHEETS ONLY, AND LAPPED A MINIMUM OF 6 INCHES.
13. WELDING OF STEEL REINFORCING IS NOT PERMITTED.
14. SLEEVES, CONDUITS, OR PIPES THROUGH SLABS AND WALLS SHALL BE PLACED AT THREE DIAMETERS ON CENTER, OR 4 INCHES MINIMUM.
15. ALUMINUM CONDUIT OR PIPING SHALL NOT BE CAST IN CONCRETE.
16. PROVIDE A ¾" CHAMFER ON EXPOSED CORNERS OF CONCRETE UNO. TOP EDGES OF WALLS SHALL BE TOOLED UNO.
17. FINISH & COVER CONCRETE SLABS w/ FILM FORMING CURING COMPOUND OR VAPOR RETARDER UNO OR SPECIFIED OTHERWISE.

HOT WEATHER CONCRETING NOTES

1. CONCRETE MIXES TO BE PLACED DURING DRY AND WINDY CONDITIONS SHALL BE MODIFIED BY THE ADDITION OF RETARDING ADMIXTURES OR SLOWER CURING CEMENT SUBSTITUTES TO MINIMIZE THE EFFECTS OF ACCELERATED CURING.
2. WATER SHALL NOT BE ADDED TO CONCRETE MIXES ON SITE FOR WORKABILITY. MID OR HIGH RANGE WATER REDUCERS SHALL BE APPROVED BY ENGINEER BEFORE ADDING TO CONCRETE MIX FOR INCREASED WORKABILITY.
3. INGREDIENTS USED IN CONCRETE MIXES SHALL BE COOLED TO MAINTAIN A CONCRETE TEMPERATURE BELOW 90 DEGREES FAHRENHEIT AT TIME OF PLACEMENT.
4. CHILLED WATER AND CHOPPED ICE MAY BE USED IN CONCRETE MIXTURES TO CONTROL CONCRETE TEMPERATURES. AMOUNT OF CHOPPED ICE SHALL NOT EXCEED THE EQUIVALENT AMOUNT OF MIXING WATER REQUIRED FOR THE DESIGN MIX.
5. RETARDING ADMIXTURES SHALL NOT BE USED IN CONCRETE MIXES WITHOUT THE APPROVAL OF THE ENGINEER.

COLD WEATHER CONCRETING NOTES

1. SNOW, FROST, AND ICE SHALL BE REMOVED FROM ALL SURFACES, INCLUDING REINFORCING, AGAINST WHICH THE CONCRETE IS TO BE PLACED.
2. DO NOT PLACE CONCRETE ON FROZEN SUBGRADE.
3. THE MINIMUM PLACEMENT AND PROTECTION TEMPERATURE OF CONCRETE SHALL BE AS FOLLOWS:

LEAST DIMENSION OF SECTION	MINIMUM TEMP OF CONCRETE AS PLACED AND MAINTAINED DURING PROTECTION PERIOD (DEGREES FAHRENHEIT)
LESS THAN 12"	55
12" TO LESS THAN 36	50
36" TO 72"	45
GREATER THAN 72"	40

4. TEMPERATURES OF CONCRETE SHALL BE MEASURED AT THE CONCRETE SURFACE.
5. CONCRETE TEMPERATURES SHALL BE MEASURED AND RECORDED FOR THE FIRST 3 DAYS UPON PLACEMENT OF CONCRETE, AT THE BEGINNING, MIDDLE, AND END OF EACH WORK DAY AT 4 HOUR INTERVALS. OVERNIGHT TEMPERATURE MEASUREMENTS ARE NOT REQUIRED.
6. HEATED AIR TEMPERATURES SHALL NOT EXCEED THE REQUIRED CONCRETE TEMPERATURES LISTED IN TABLE ABOVE BY MORE THAN 20 DEGREES.
7. CONCRETE SHALL BE CURED AND PROTECTED AGAINST DAMAGE FROM FREEZING FOR A MINIMUM PERIOD OF 3 DAYS.
8. DURING PERIODS NOT DEFINED AS COLD WEATHER, BUT WHEN FREEZING TEMPERATURES MAY OCCUR, PROTECT CONCRETE SURFACES FROM FREEZING FOR THE FIRST 24 HOURS AFTER PLACEMENT.
9. IF TEMPERATURE REQUIREMENTS DURING PROTECTION PERIOD ARE NOT MET, BUT CONCRETE WAS PREVENTED FROM FREEZING, CONTACT ARCHITECT/ENGINEER FOR EXTENT OF ADDITIONAL PROTECTION TIME REQUIRED.

CLASS 'B' TENSION LAP SPLICE LENGTHS (INCHES)

BAR SIZE	f'c = 3000		f'c = 4000	
CLASS	BOT	TOP	BOT	TOP
#3	22	28	19	24
#4	29	37	25	33
#5	36	47	31	41
#6	43	56	37	49
#7	63	81	54	71
#8	72	93	62	81
#9	81	105	70	91
#10	91	118	79	102
#11	101	131	87	113

NOTES (d_b = BAR DIAMETER, C-C = CENTER TO CENTER):

1. SCHEDULE BASED ON CLEAR COVER >1 d_b AND C-C > $2d_b$
2. TOP BARS OF BEAMS AND JOIST AND HORIZONTAL WALL REINFORCING

THIS SCHEDULE IS IS PROVIDED FOR THE CONVENIENCE OF THE CONTRACTOR AND IS NOT INTENDED TO COVER ALL SITUATIONS. SHOP DRAWINGS SHALL CLEARLY INDICATE ALL REQUIRED LAP LENGTHS

CAST-IN-PLACE CONCRETE TOLERANCES

1. CONCRETE COVER MEASURED PERPENDICULAR FROM THE SURFACE IN DIRECTION OF TOLERANCES:
   MEMBERS 12" OR LESS ±3/8"
   MEMBERS OVER 12" ±1/2"
2. STEEL REINFORCEMENT SPACING SHALL BE WITHIN THE FOLLOWING TOLERANCES:
   1/4" SPACING DISTANCE, NOT TO EXCEED 1"
3. PLACEMENT OF EMBEDDED ITEMS SHALL BE WITHIN THE FOLLOWING TOLERANCES:
   VERTICAL ALIGNMENT ±1"
   LATERAL ALIGNMENT ±1"
   LEVEL ALIGNMENT ±1"
4. PLACEMENT OF FOOTINGS SHALL BE WITHIN THE FOLLOWING TOLERANCES:
   LATERAL ALIGNMENT ±2"
   LEVEL ALIGNMENT +1/2" TO -2"
   (LEVEL ALIGNMENT SUPPORTING MASONRY) ±1/2"
5. CROSS-SECTIONAL DIMENSION OF FOOTINGS SHALL BE WITHIN THE FOLLOWING TOLERANCES:
   FORMED FOOTINGS +2" TO -1/2"
   EARTHCAST FOOTINGS:
   2' OR LESS +3" TO -1/2"
   GREATER THAN 2' BUT LESS THAN 6' +6" TO -1/2"
   GREATER THAN 6' +12" TO -1/2"
   FOOTING THICKNESS ±5%
6. TOP OF FOOTING SLOPE 1" IN 10'
7. SEE DRILLED PIER NOTES FOR ADDITIONAL INFORMATION AT DRILLED PIER FOUNDATIONS.

MILD STEEL PROTECTION

FOOTINGS - BOTTOM & SIDES	3"
FOOTING - TOP	2"
PERIMETER WALLS - #5 & SMALLER	1½"
PERIMETER WALLS - #6 & LARGER	2"
INTERIOR WALLS	¾"
BEAMS, PIERS, & COLUMNS	1½"
SLABS - BOTTOM & SIDES	1"
SLABS - TOP	¾"

STRUCTURAL STEEL NOTES

1. FABRICATION AND ERECTION OF STRUCTURAL STEEL SHALL CONFORM WITH THE AISC (AMERICAN INSTITUTE OF STEEL CONSTRUCTION), "MANUAL OF STEEL CONSTRUCTION", LATEST EDITION.
2. ALL STEEL DETAILS AND CONNECTIONS SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF THE AISC "SPECIFICATIONS FOR STRUCTURAL STEEL BUILDINGS, ALLOWABLE STRESS DESIGN AND PLASTIC DESIGN", LATEST EDITION.
3. FABRICATORS SHALL DESIGN CONNECTIONS NOT SPECIFICALLY DETAILED ON PLANS AS FOLLOWS:
   A. GENERAL: MEMBERS REQUIRING END MOMENT CONNECTIONS SHALL MEET THE REQUIREMENTS OF TYPE 1 "RIGID FRAME" CONSTRUCTION INCLUDING FRICTION BOLTS IF UTILIZED. ALL OTHER MEMBERS SHALL FOLLOW THE REQUIREMENTS OF TYPE 2 "SIMPLE" CONSTRUCTION.
   B. MEMBER SHEAR CONNECTIONS: UNLESS A LARGER END VERTICAL REACTION IS SHOWN OTHERWISE ON THE DRAWINGS (IE R = 85k), MINIMUM DESIGN SHEAR FORCES SHALL BE AS FOLLOWS:
      I. NON-COMPOSITE BEAMS: SUPPORT A REACTION "R" EQUAL TO ONE HALF THE TOTAL UNIFORM LOAD CAPACITY FROM THE TABLE OF UNIFORM LOAD CONSTANTS IN THE AISC MANUAL PART 2 FOR GIVEN SHAPE, SPAN, AND GRADE OF STEEL.
4. USE A325N BOLTS UNLESS NOTED OTHERWISE.
5. SPLICES SHALL BE ALLOWED ONLY AT LOCATIONS SPECIFICALLY INDICATED ON THE STRUCTURAL DRAWINGS UNLESS APPROVED OTHERWISE BY THE ENGINEER.
6. OVERSIZED OR SLOTTED HOLES SHALL NOT BE USED FOR ANY CONNECTIONS UNLESS SPECIFICALLY INDICATED ON THE DRAWINGS OR APPROVED BY THE ENGINEER.
7. BEAM AND GIRDER CONNECTIONS SHALL BE AS NOTED ON PLANS AND IN DETAILS.
8. PROVIDE HOLES IN ALL STEEL AS REQUIRED TO PREVENT ANY ACCUMULATION OF WATER DURING ERECTION. ALL PENETRATIONS THROUGH MAIN MEMBERS SHALL NOT EXCEED 1½" IN DIAMETER AND SHALL BE GROUND SMOOTH.
9. CUTS, HOLES, COPING, ETC. REQUIRED FOR WORK OF OTHER TRADES SHALL BE SHOWN ON THE SHOP DRAWINGS AND MADE IN THE SHOP. CUTS OR BURNING OF HOLES IN STRUCTURAL STEEL MEMBERS IN THE FIELD WILL NOT BE PERMITTED.
10. PROVIDE ANY NECESSARY TEMPORARY BRACING OR GUYS TO PROVIDE LATERAL SUPPORT OF THE BUILDING UNTIL PERMANENT FRAME IS COMPLETELY INSTALLED.
11. STRUCTURAL STEEL FRAMING SHALL BE TRUE AND PLUMB BEFORE CONNECTIONS ARE FINALLY BOLTED OR WELDED.
12. THE DETAILS OF DESIGN, WORKMANSHIP, AND TECHNIQUE FOR WELDING, INSPECTION OF WELDING, AND QUALIFICATIONS OF WELDING OPERATORS SHALL CONFORM TO THE REQUIREMENTS OF THE SPECIFICATIONS LISTED IN IBC SECTIONS 2205, 2206, 2207, 2209, AND 2210.

STRUCTURAL ABBREVIATIONS

ABBRV.	WORD OR PHRASE
@	AT
&	AND
AB	ANCHOR BOLT
ALT	ALTERNATE
APA	AMERICAN PLYWOOD ASSOC.
ARCH	ARCHITECT(URAL)
BC	BOTTOM CHORD
BLDG	BUILDING
BLKG	BLOCKING
BM	BEAM
BOT	BOTTOM
BRG	BEARING
℄	CENTERLINE
CB	COLUMN BASE
CIP	CAST-IN-PLACE
CL	CENTERLINE
CLR	CLEAR
CJ	CONTROL OR CONSTRUCTION JOINT
CMU	CONCRETE MASONRY UNIT
COL	COLUMN
CONC	CONCRETE
CONT	CONTINUOUS
DBA	DECK BEARING ANGLE
DEFL	DEFLECTION
DEMO	DEMOLITION
DFL	DOUGLAS FIR LARCH
DIA (Ø)	DIAMETER
DIM	DIMENSION
DL	DEAD LOAD
DTL	DETAIL
DWL	DOWEL
DWG	DRAWING
EA	EACH
EF	EACH FACE
EJ	EXPANSION JOINT
EL	ELEVATION
EMBED	EMBEDMENT
EOSL	EDGE OF SLAB
EOS	EDGE OF STEEL
EQ	EQUAL
EW	EACH WAY
EXIST	EXISTING
EXP	EXPANSION
EXT	EXTERIOR
FD	FLOOR DRAIN
FND	FOUNDATION
FF	FINISH FLOOR
FIN	FINISH
FLR	FLOOR
FRMG	FRAMING
FTG	FOOTING
GA	GAGE
GALV	GALVANIZED
GB	GRADE BEAM
GC	GENERAL CONTRACTOR
GT	GIRDER TRUSS
GYP	GYPSUM
HORIZ	HORIZONTAL
HIF	HORIZONTAL INSIDE FACE
HOF	HORIZONTAL OUTSIDE FACE
HSS	HOLLOW STRUCTURAL SECTION
HT	HEIGHT
HVAC	HEATING, VENTILATING & AIR COND.
HWS	HEADED WELD STUD
I.F.	INSIDE FACE
INFO	INFORMATION
JST	JOIST
KSI	KIPS PER SQUARE INCH
L	ANGLE

ABBRV.	
LL	LIVE LOAD
LLH	LONG LEG HORIZONTAL
LLV	LONG LEG VERTICAL
LSL	LAMINATED STRAND LUMBER
LVL	LAMINATED VENEER LUMBER
LW	LONG WAY
MFR	MANUFACTURER
MAX	MAXIMUM
MECH	MECHANICAL
MIN	MINIMUM
MISC	MISCELLANEOUS
NIC	NOT IN CONTRACT
NTS	NOT TO SCALE
OC	ON CENTER
O.F.	OUTSIDE FACE
OPP	OPPOSITE
PARA	PARALLEL
P/C	PRECAST CONCRETE
PCF	POUNDS PER CUBIC FOOT
PERP	PERPENDICULAR
℄	STEEL PLATE
PLY	PLYWOOD
PSI	POUNDS PER SQUARE INCH
PSF	POUNDS PER SQUARE FOOT
PSL	PARALLEL STRAND LUMBER
P/T	POST TENSIONED CONCRETE
PT	PRESSURE TREATED
REINF	REINFORCEMENT
REQD	REQUIRED
RTU	ROOF TOP UNIT
SCHD	SCHEDULE
SHT	SHEET
SIM	SIMILAR
SMS	SHEET METAL SCREWS
SOG	SLAB ON GRADE
SPEC	SPECIFICATION
SPF	SPRUCE-PINE-FIR
SQ	SQUARE
SS	STAINLESS STEEL
STL	STEEL
STR	STRUCTURAL
SW	SHORT WAY
SYM	SYMMETRICAL
SYP	SOUTHERN YELLOW PINE
T&B	TOP AND BOTTOM
TC	TOP CHORD
T&G	TONGUE AND GROOVE
TF	TOP OF FOOTING ELEVATION
TL	TOP OF LEDGE ELEVATION
TOC	TOP OF CONCRETE ELEVATION
TOSL	TOP OF SLAB ELEVATION
TOS	TOP OF STEEL ELEVATION
TP	TOP OF PIER ELEVATION
T/PC	TOP OF PILE CAP
TRANS	TRANSVERSE
TS	TUBE STEEL
TW	TOP OF WALL ELEVATION
TYP	TYPICAL
UNO	UNLESS NOTED OTHERWISE
VERT	VERTICAL
VIF	VERTICAL INSIDE FACE
VOF	VERTICAL OUTSIDE FACE
w/	WITH
WF	WIDE FLANGE
w/o	WITHOUT
WP	WORKPOINT
WT	WEIGHT
WWF	WELDED WIRE FABRIC
SLRS	SEISMIC LOAD RESISTING SYSTEM
SMF	SPECIAL MOMENT FRAME
SCBF	SPECIAL CONCENTRIC BRACED FRAME

SCS ENGINEERS
2830 DAIRY DRIVE, MADISON, WI 53718-6751
PHONE: (608) 224-2830

CONSTRUCTION AND DEMOLITION WASTE RECYCLING FACILITY
7102 US HWY 12/18
MADISON, WISCONSIN

DANE COUNTY DEPARTMENT OF PUBLIC WORKS
SOLID WASTE DIVISION
1919 ALLIANT ENERGY CENTER WAY
MADISON, WI 53713

PROCESS AND CIVIL ENGINEER:
SCS ENGINEERS
2830 DAIRY DRIVE
MADISON, WI 53718-6751
(608) 224-2830

ARCHITECT:
DORSCHNER ASSOCIATES, INC.
849 E. WASHINGTON AVE., SUITE 112
MADISON, WI 53703

STRUCTURAL ENGINEER:
PIERCE ENGINEERS, INC.
10 WEST MIFFLIN ST., SUITE 205
MADISON, WI 53703

MECHANICAL, ELECTRIC, PLUMBING DESIGN:
JDR ENGINEERING, INC.
5525 NOBEL DRIVE, SUITE 110
MADISON, WI 53711

PIERCE ENGINEERS INC
CONSULTING STRUCTURAL ENGINEERS
10 West Mifflin St, Suite 205 | Madison, WI 53703
Phone: 608.256.7504 | Fax: 608.256.7506
PE PROJECT 15080

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REVISION	DATE	BY	TITLE

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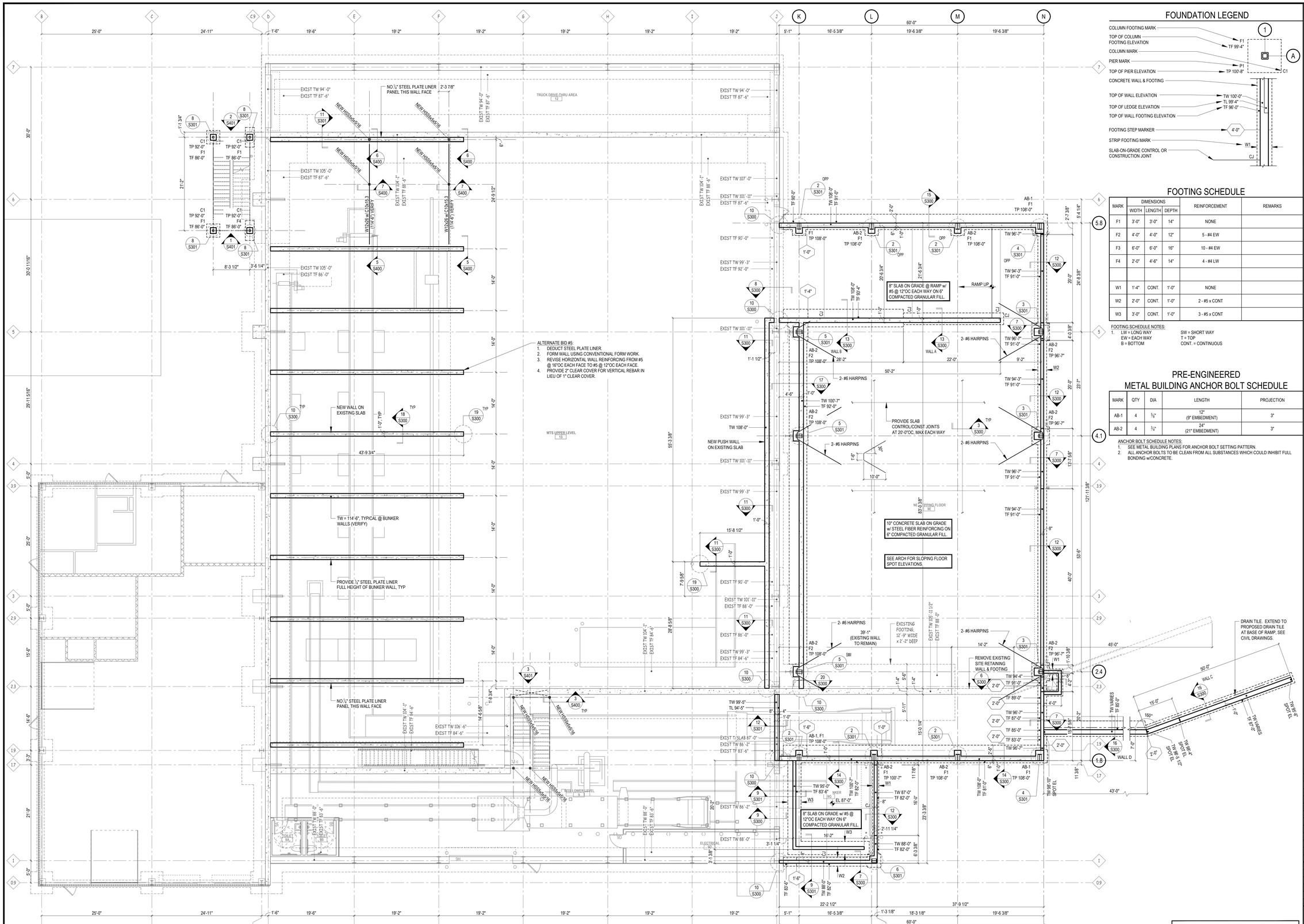
DRAWN:	04/28/15
REVISED:	
DRAWN BY:	PE
CHECKED BY:	PE
APPROVED BY:	

BID DOCUMENTS ISSUED 04/28/15

STRUCTURAL NOTES

SHEET NUMBER
S001



FOUNDATION LEGEND

FOOTING SCHEDULE

MARK	DIMENSIONS			REINFORCEMENT	REMARKS
	WIDTH	LENGTH	DEPTH		
F1	3'-0"	3'-0"	14"	NONE	
F2	4'-0"	4'-0"	12"	5 - #4 EW	
F3	6'-0"	6'-0"	16"	10 - #4 EW	
F4	2'-0"	4'-6"	14"	4 - #4 LW	
W1	1'-4"	CONT.	1'-0"	NONE	
W2	2'-0"	CONT.	1'-0"	2 - #5 x CONT	
W3	3'-0"	CONT.	1'-0"	3 - #5 x CONT	

FOOTING SCHEDULE NOTES:
1. LW = LONG WAY — SW = SHORT WAY
   EW = EACH WAY — T = TOP
   B = BOTTOM — CONT. = CONTINUOUS

PRE-ENGINEERED METAL BUILDING ANCHOR BOLT SCHEDULE

MARK	QTY	DIA	LENGTH	PROJECTION
AB-1	4	⅝"	12" (9" EMBEDMENT)	3"
AB-2	4	¾"	24" (21" EMBEDMENT)	3"

ANCHOR BOLT SCHEDULE NOTES:
1. SEE METAL BUILDING PLANS FOR ANCHOR BOLT SETTING PATTERN.
2. ALL ANCHOR BOLTS TO BE CLEAN FROM ALL SUBSTANCES WHICH COULD INHIBIT FULL BONDING w/CONCRETE.

1/S100 FOUNDATION PLAN

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

NOTES:
1. SITE ELEVATION 886'-0" EQUALS BUILDING REFERENCE ELEVATION 100'-0".
2. SEE SHEET S001 FOR ALL STRUCTURAL NOTES.
3. SEE SHEET S300 FOR TYPICAL FOUNDATION DETAILS.

NOTE: CONCRETE CONTRACTOR TO VERIFY PRE-ENGINEERED METAL BUILDING COLUMN PIERS AND ANCHOR BOLT SETTING PATTERN w/ PRE-ENGINEERED METAL BUILDING CONTRACTOR.

FIELD VERIFY ALL EXISTING CONDITIONS AS REQUIRED PRIOR TO DEMOLITION. REPORT DISCREPANCIES BETWEEN EXISTING CONDITIONS AND INFORMATION NOTED ON THE STRUCTURAL DRAWINGS TO THE STRUCTURAL ENGINEER FOR EVALUATION.

SCS ENGINEERS
2830 DAIRY DRIVE MADISON, WI 53718-6751
PHONE: (608) 224-2830

CONSTRUCTION AND DEMOLITION WASTE RECYCLING FACILITY 7102 US HWY 12/18 MADISON, WISCONSIN

DANE COUNTY DEPARTMENT OF PUBLIC WORKS
SOLID WASTE DIVISION
1919 ALLIANT ENERGY CENTER WAY
MADISON, WI 53713

PROCESS AND CIVIL ENGINEER:
SCS ENGINEERS
2830 DAIRY DRIVE
MADISON, WI 53718-6751
(608) 224-2830

ARCHITECT:
DORSCHNER ASSOCIATES, INC.
849 E. WASHINGTON AVE., SUITE 112
MADISON, WI 53703

STRUCTURAL ENGINEER:
PIERCE ENGINEERS, INC.
10 WEST MIFFLIN ST., SUITE 205
MADISON, WI 53703

MECHANICAL, ELECTRIC, PLUMBING DESIGN:
JDR ENGINEERING, INC.
5525 NOBEL DRIVE, SUITE 110
MADISON, WI 53711

PIERCE ENGINEERS INC
CONSULTING STRUCTURAL ENGINEERS
10 West Mifflin St, Suite 205 | Madison, WI 53703
Phone: 608.256.7504 | Fax: 608.256.7506
PE PROJECT 15080

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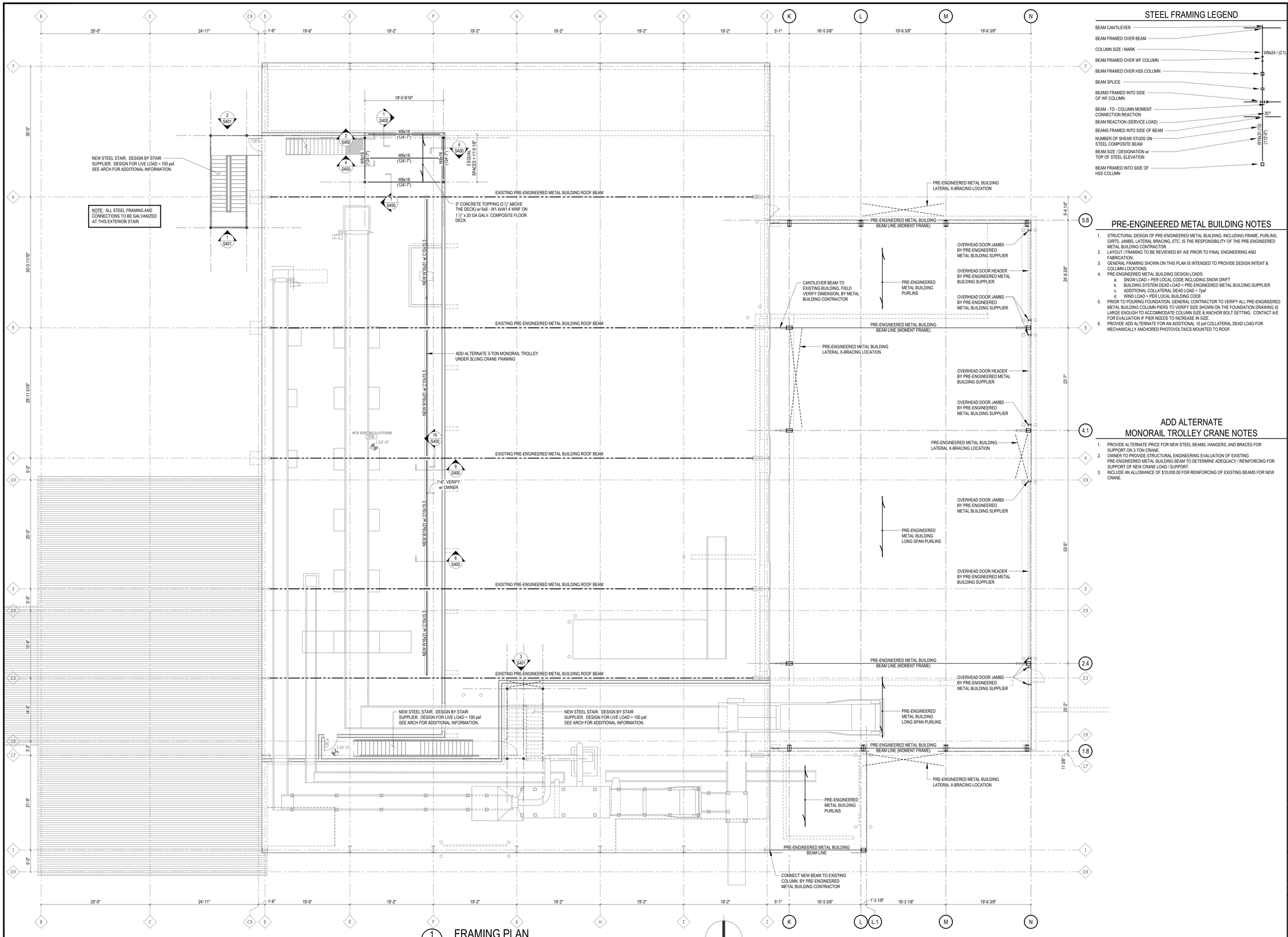
FOUNDATION PLAN

SHEET NUMBER
S100



STEEL FRAMING LEGEND

PRE-ENGINEERED METAL BUILDING NOTES

1. STRUCTURAL DESIGN OF PRE-ENGINEERED METAL BUILDING; INCLUDING FRAME, PURLINS, GIRTS, JAMBS, LATERAL BRACING, ETC. IS THE RESPONSIBILITY OF THE PRE-ENGINEERED METAL BUILDING CONTRACTOR.
2. LAYOUT / FRAMING TO BE REVIEWED BY A/E PRIOR TO FINAL ENGINEERING AND FABRICATION.
3. GENERAL FRAMING SHOWN ON THIS PLAN IS INTENDED TO PROVIDE DESIGN INTENT & COLUMN LOCATIONS.
4. PRE-ENGINEERED METAL BUILDING DESIGN LOADS:
   a. SNOW LOAD = PER LOCAL CODE INCLUDING SNOW DRIFT
   b. BUILDING SYSTEM DEAD LOAD = PRE-ENGINEERED METAL BUILDING SUPPLIER
   c. ADDITIONAL COLLATERAL DEAD LOAD = 7psf
   d. WIND LOAD = PER LOCAL BUILDING CODE
5. PRIOR TO POURING FOUNDATION, GENERAL CONTRACTOR TO VERIFY ALL PRE-ENGINEERED METAL BUILDING COLUMN PIERS TO VERIFY SIZE SHOWN ON THE FOUNDATION DRAWING IS LARGE ENOUGH TO ACCOMMODATE COLUMN SIZE & ANCHOR BOLT SETTING. CONTACT A/E FOR EVALUATION IF PIER NEEDS TO INCREASE IN SIZE.
6. PROVIDE ADD ALTERNATE FOR AN ADDITIONAL 10 psf COLLATERAL DEAD LOAD FOR MECHANICALLY ANCHORED PHOTOVOLTAICS MOUNTED TO ROOF.

ADD ALTERNATE MONORAIL TROLLEY CRANE NOTES

1. PROVIDE ALTERNATE PRICE FOR NEW STEEL BEAMS, HANGERS, AND BRACES FOR SUPPORT ON 3-TON CRANE.
2. OWNER TO PROVIDE STRUCTURAL ENGINEERING EVALUATION OF EXISTING PRE-ENGINEERED METAL BUILDING BEAM TO DETERMINE ADEQUACY / REINFORCING FOR SUPPORT OF NEW CRANE LOAD / SUPPORT.
3. INCLUDE AN ALLOWANCE OF $10,000.00 FOR REINFORCING OF EXISTING BEAMS FOR NEW CRANE.

1 S200 FRAMING PLAN

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

NOTES:
1. SEE SHEET S001 FOR ALL STRUCTURAL NOTES.
2. SEE SHEET S400 FOR TYPICAL FRAMING DETAILS.

FIELD VERIFY ALL EXISTING CONDITIONS AS REQUIRED PRIOR TO DEMOLITION. REPORT DISCREPANCIES BETWEEN EXISTING CONDITIONS AND INFORMATION NOTED ON THE STRUCTURAL DRAWINGS TO THE STRUCTURAL ENGINEER FOR EVALUATION.

SCS ENGINEERS
2830 DAIRY DRIVE MADISON, WI 53718-6751
PHONE: (608) 224-2830

CONSTRUCTION AND DEMOLITION WASTE RECYCLING FACILITY
7102 US HWY 12/18
MADISON, WISCONSIN

DANE COUNTY DEPARTMENT OF PUBLIC WORKS
SOLID WASTE DIVISION
1919 ALLIANT ENERGY CENTER WAY
MADISON, WI 53713

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2830 DAIRY DRIVE
MADISON, WI 53718-6751
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10 WEST MIFFLIN ST., SUITE 205
MADISON, WI 53703

MECHANICAL, ELECTRIC, PLUMBING DESIGN:
JDR ENGINEERING, INC.
5525 NOBEL DRIVE, SUITE 110
MADISON, WI 53711

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CONSULTING STRUCTURAL ENGINEERS
10 West Mifflin St, Suite 205 | Madison, WI 53703
Phone: 608.256.7504 | Fax: 608.256.7506
PE PROJECT: 15080

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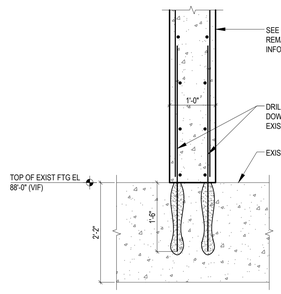
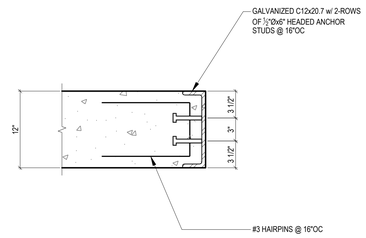
FRAMING PLAN

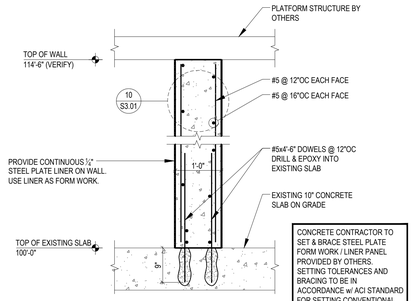
SHEET NUMBER
S200



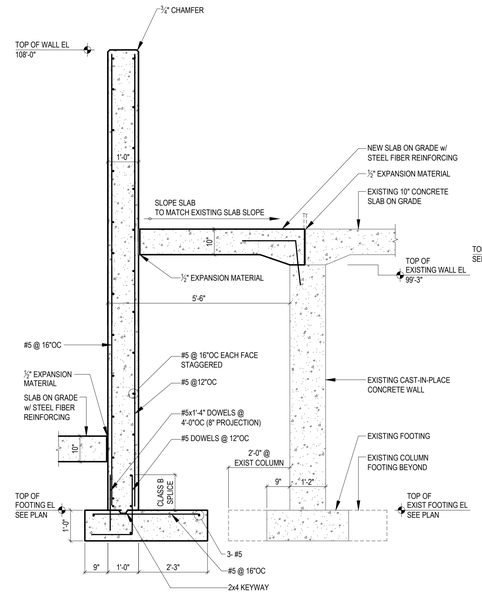
20 S300 SECTION
SCALE : NTS



19 S300 DETAIL
SCALE : NTS



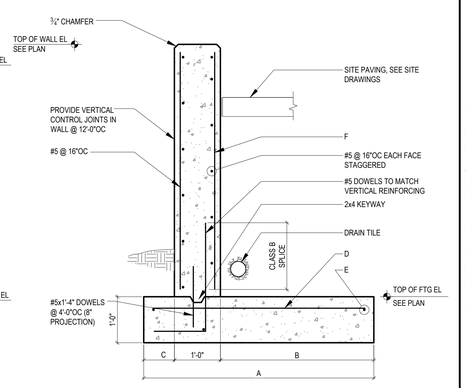
18 S300 SECTION
SCALE : NTS



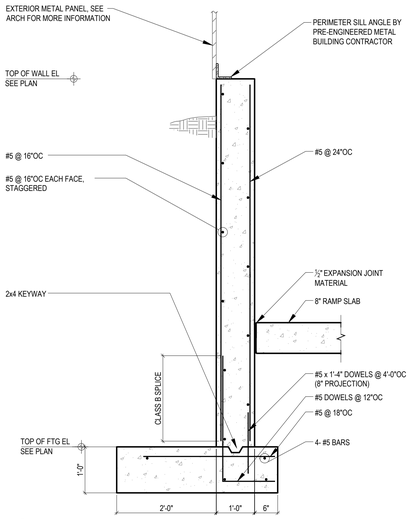
17 S300 SECTION
SCALE : NTS

RETAINING WALL SCHEDULE

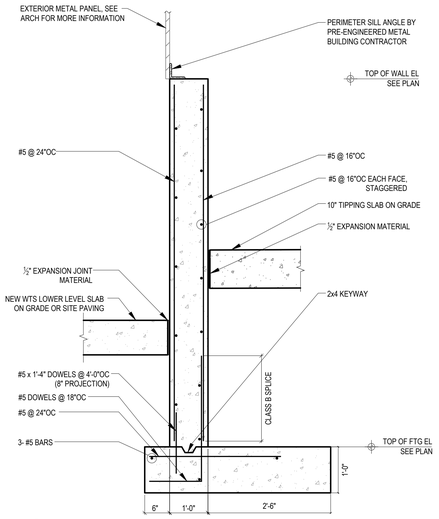
MARK	WALL DIMENSIONS			REINFORCEMENT		
	A	B	C	D	E	F
WALL C	2'-6"	1'-0"	0'-6"	NONE	3 - #5	#5 @ 16"OC
WALL D	3'-6"	2'-0"	0'-6"	#5 @ 18"OC	3 - #5	#5 @ 12"OC



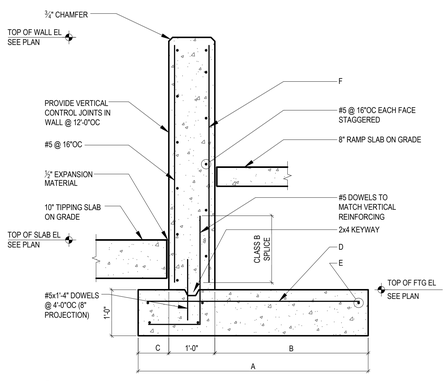
16 S300 RETAINING WALL SECTION
SCALE : NTS



15 S300 SECTION
SCALE : NTS



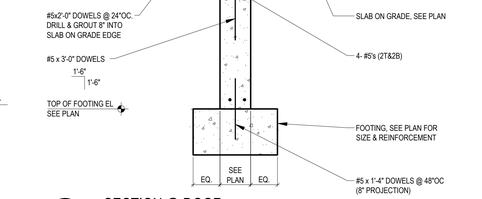
14 S300 SECTION
SCALE : NTS



13 S300 RETAINING WALL SECTION
SCALE : NTS

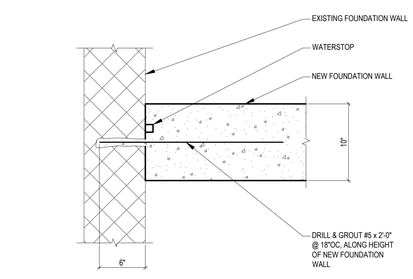
RETAINING WALL SCHEDULE

MARK	WALL DIMENSIONS			REINFORCEMENT		
	A	B	C	D	E	F
WALL A	2'-8"	1'-2"	0'-6"	#5 @ 24"OC	3 - #5	#5 @ 16"OC
WALL B	4'-0"	2'-0"	1'-0"	#5 @ 16"OC	3 - #5	#5 @ 12"OC

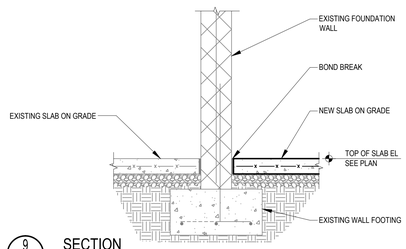


12 S300 SECTION @ DOOR
SCALE : NTS

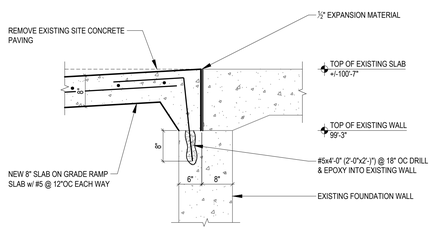
11 S300 SECTION
SCALE : NTS



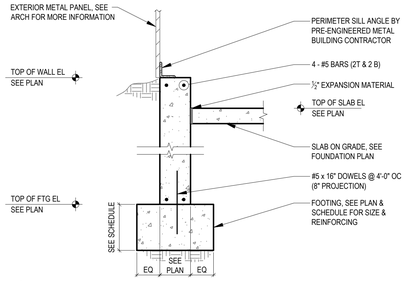
10 S300 DETAIL
SCALE : NTS



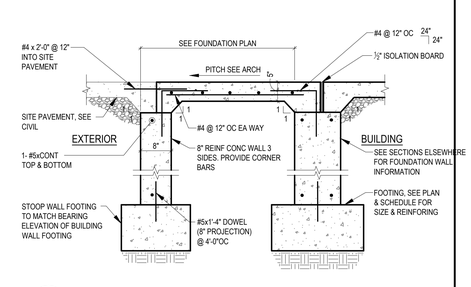
9 S300 SECTION
SCALE : NTS



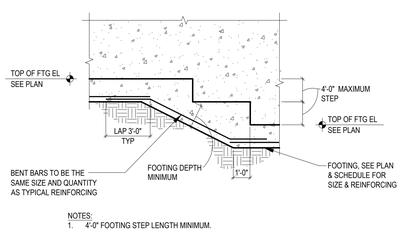
8 S300 SECTION
SCALE : NTS



7 S300 EXTERIOR FOUNDATION WALL
SCALE : NTS

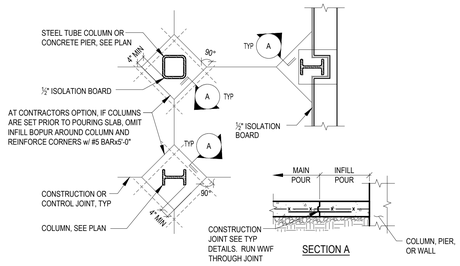


6 S300 TYPICAL STOOP SECTION
SCALE : NTS

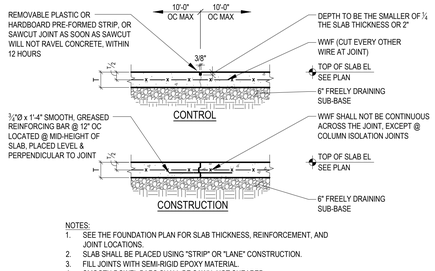


NOTES:
1. 4'-0" FOOTING STEP LENGTH MINIMUM.

5 S300 STEPPED FOOTING @ CONCRETE WALL
SCALE : NTS

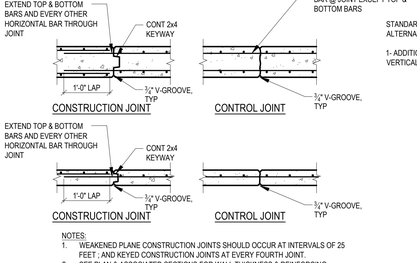


4 S300 TYPICAL SLAB ON GRADE ISOLATION JOINTS @ COLUMN
SCALE : NTS



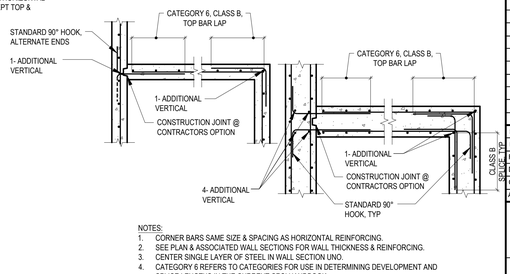
NOTES:
1. SEE THE FOUNDATION PLAN FOR SLAB THICKNESS, REINFORCEMENT, AND JOINT LOCATIONS.
2. SLAB SHALL BE PLACED USING "STRIP" OR "LANE" CONSTRUCTION.
3. FILL JOINTS WITH SEMI-RIGID EPOXY MATERIAL.
4. SMOOTH DOWEL BARS SHALL BE SAWN, NOT SHEARED.

3 S300 SLAB ON GRADE CONSTRUCTION/CONTROL JOINT
SCALE : NTS



NOTES:
1. WEAKENED PLANE CONSTRUCTION JOINTS SHOULD OCCUR AT INTERVALS OF 25 FEET ; AND KEYED CONSTRUCTION JOINTS AT EVERY FOURTH JOINT.
2. SEE PLAN & ASSOCIATED SECTIONS FOR WALL THICKNESS & REINFORCING.
3. CENTER SINGLE LAYER OF STEEL IN WALL SECTION, UNO.

2 S300 TYPICAL VERTICAL WALL JOINTS
SCALE : N.T.S.



NOTES:
1. CORNER BARS SAME SIZE & SPACING AS HORIZONTAL REINFORCING.
2. SEE PLAN & ASSOCIATED WALL SECTIONS FOR WALL THICKNESS & REINFORCING.
3. CENTER SINGLE LAYER OF STEEL IN WALL SECTION UNO.
4. CATEGORY 6 REFERS TO CATEGORIES FOR USE IN DETERMINING DEVELOPMENT AND SPLICE LENGTHS IN THE CURRENT CRSI HANDBOOK.

1 S300 REINFORCING @ WALL CORNERS
SCALE : NTS

SCS ENGINEERS
2830 DAIRY DRIVE MADISON, WI 53718-6751
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MADISON, WI 53713

PROCESS AND CIVIL ENGINEER:
SCS ENGINEERS
2830 DAIRY DRIVE
MADISON, WI 53718-6751
(608) 224-2830

ARCHITECT:
DORSCHNER ASSOCIATES, INC.
849 E. WASHINGTON AVE., SUITE 112
MADISON, WI 53703

STRUCTURAL ENGINEER:
PIERCE ENGINEERS, INC.
10 WEST MIFFLIN ST., SUITE 205
MADISON, WI 53703

MECHANICAL, ELECTRIC, PLUMBING DESIGN:
JDR ENGINEERING, INC.
5525 NOBEL DRIVE, SUITE 110
MADISON, WI 53711

PIERCE ENGINEERS INC
CONSULTING STRUCTURAL ENGINEERS
10 West Mifflin St, Suite 205 | Madison, WI 53703
Phone: 608.256.7504 | Fax: 608.256.7506
PE PROJECT: 15080

N

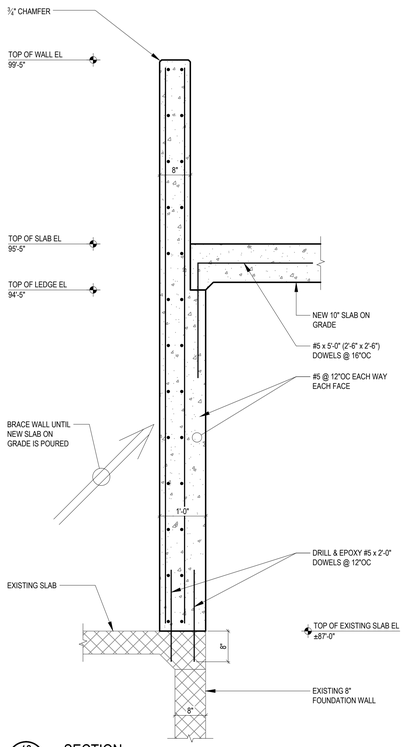
REVISION	DATE	BY	TITLE

PROJECT NO.	25214236.00
DRAWN:	04/28/15
REVISED:	
DRAWN BY:	PE
CHECKED BY:	PE
APPROVED BY:	

BID DOCUMENTS ISSUED 04/28/15

FOUNDATION DETAILS

SHEET NUMBER
S300



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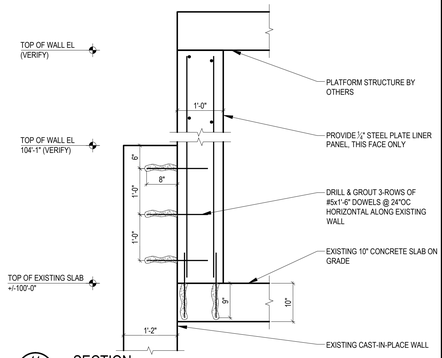

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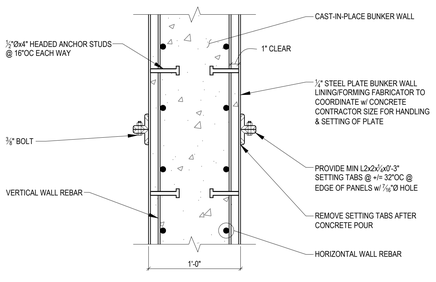

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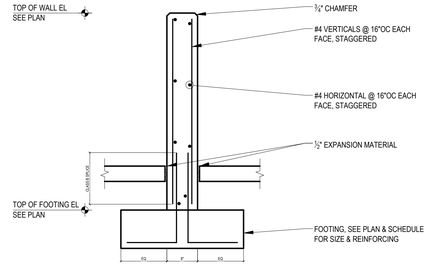

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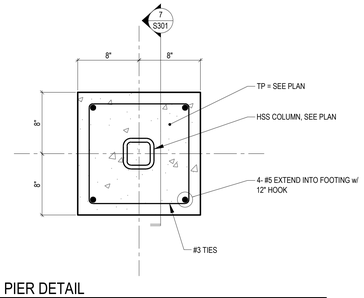

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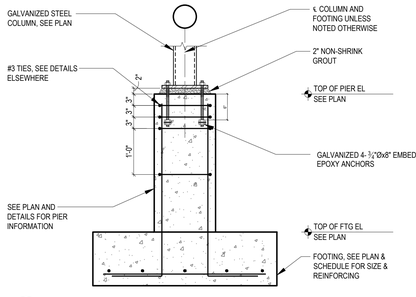

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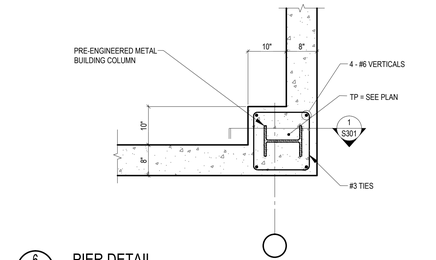

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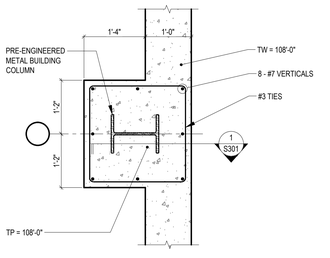

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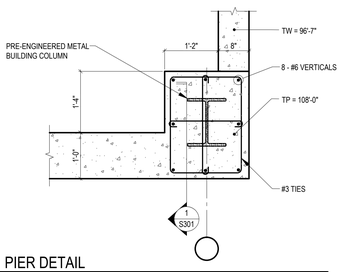

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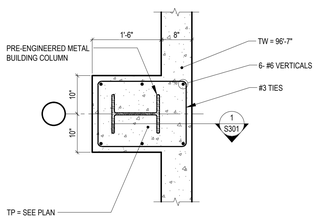

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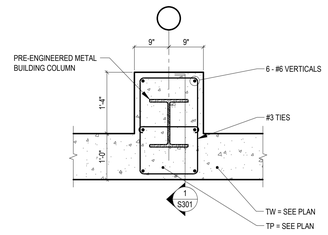

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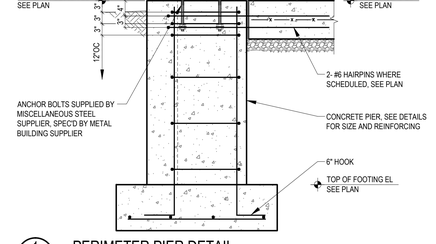

1 S301 PERIMETER PIER DETAIL
SCALE : NTS

SCS ENGINEERS
2830 DAIRY DRIVE MADISON, WI 53718-6751
PHONE: (608) 224-2830

CONSTRUCTION AND DEMOLITION WASTE RECYCLING FACILITY
7102 US HWY 12/18
MADISON, WISCONSIN

DANE COUNTY DEPARTMENT OF PUBLIC WORKS
SOLID WASTE DIVISION
1919 ALLIANT ENERGY CENTER WAY
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PE PROJECT: 15080

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10 West Mifflin St, Suite 205 | Madison, WI 53703
Phone: 608.256.7504 | Fax: 608.256.7506
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10 S400 SECTION
SCALE : NTS

9 S400 SECTION
SCALE : NTS

8 S400 SECTION
SCALE : NTS

7 S400 SECTION
SCALE : NTS

6 S400 SECTION
SCALE : NTS

5 S400 SECTION
SCALE : NTS

4 S400 SECTION
SCALE : NTS

3 S400 SECTION
SCALE : NTS

2 S400 SECTION
SCALE : NTS

1 S400 SECTION
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2830 DAIRY DRIVE MADISON, WI 53718-6751
PHONE: (608) 224-2830

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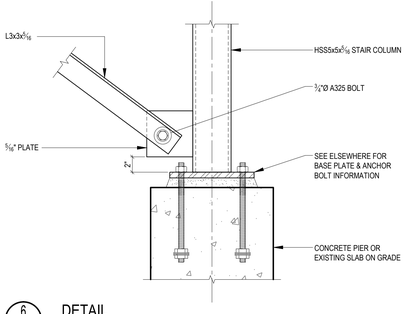

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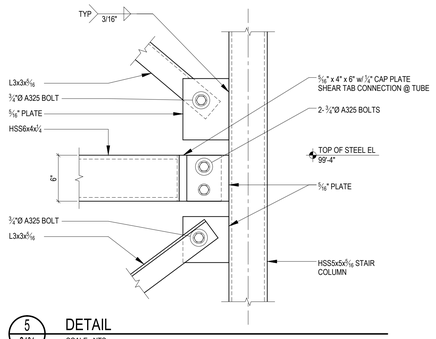

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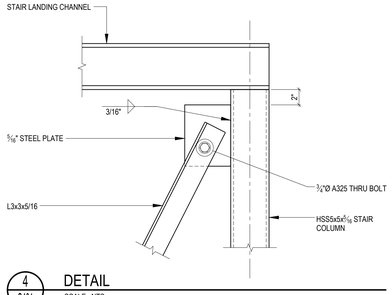

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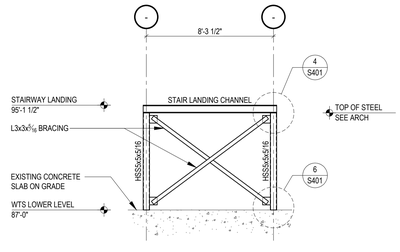

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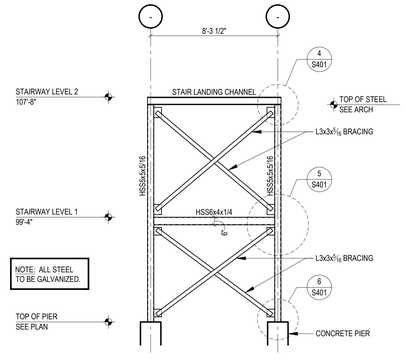

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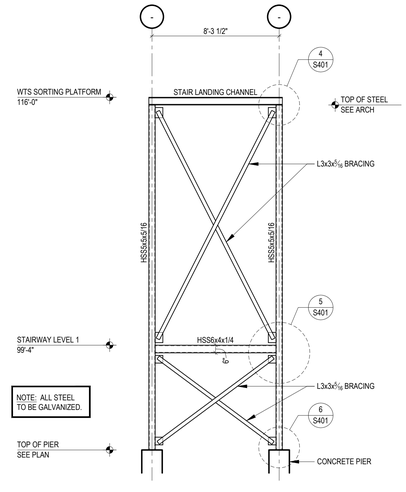

1 S401 STAIR LATERAL BRACING ELEVATION
SCALE : NTS

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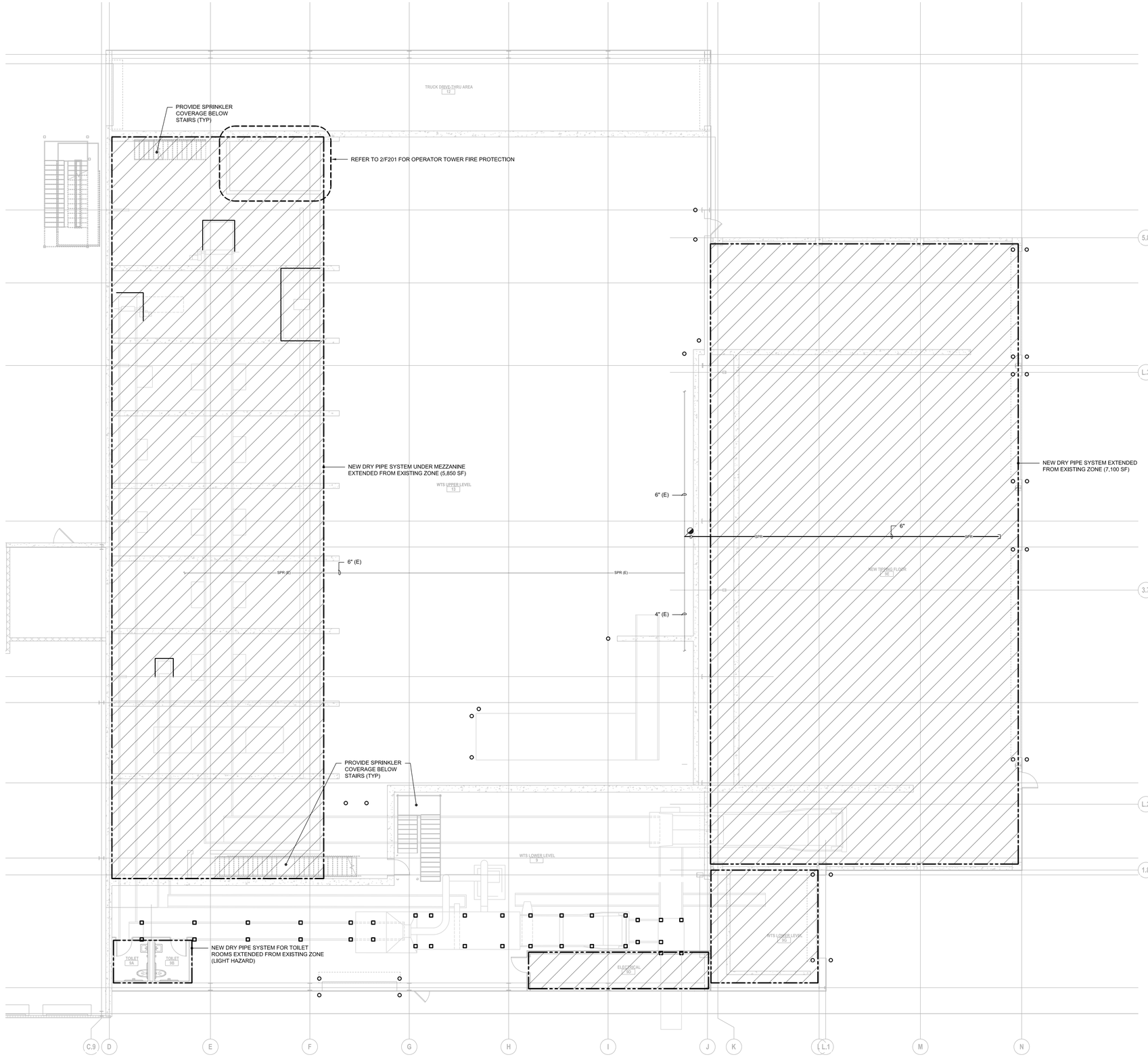

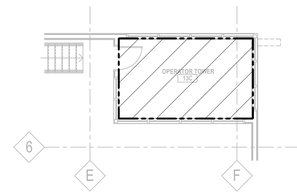

2 F201 OPERATOR TOWER - FIRE PROTECTION
SCALE: 1/8"=1'-0"

FIRE PROTECTION GENERAL NOTES:

1. VERIFY UTILITY INFORMATION WITH LOCAL UTILITY COMPANIES, VISIT THE BUILDING SITE AND BECOME THOROUGHLY FAMILIAR WITH ALL EXISTING CONDITIONS AFFECTING THE WORK.
2. FPC SHALL FIELD VERIFY ALL EXISTING CONDITIONS AND REPORT ANY DISCREPANCIES TO THE A/E IMMEDIATELY PRIOR TO COMMENCING WORK.
3. VERIFY ALL MEASUREMENTS, PIPE SIZES, PIPE LOCATIONS, ELEVATIONS, ETC. AT SITE.
4. DRAWINGS OF ALL OTHER TRADES SHALL BE REVIEWED. COORDINATE THE INSTALLATION AND SCHEDULING OF THE WORK WITH OTHER TRADES TO PREVENT INTERFERENCE WITH THEIR RESPECTIVE INSTALLATION.
5. REFER TO ARCHITECTURAL DRAWINGS FOR EXACT LOCATION OF ALL STRUCTURAL DIMENSIONS AND LAYOUT.
6. IT IS THE INTENT OF THESE DRAWINGS THAT A COMPLETE WORKING SYSTEM, PROPERLY TESTED, WILL BE OPERATIONAL UPON COMPLETION OF INSTALLATION.
7. CONFLICT BETWEEN DRAWINGS AND SPECIFICATIONS SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER PRIOR TO BID OPENING. THE ENGINEER RESERVES THE RIGHT TO FINAL INTERPRETATION.
8. ALL SPRINKLER PIPING SHALL BE LOCATED WITHIN THE JOIST SPACE UNLESS INDICATED OTHERWISE.
9. SPRINKLER/FIRE SUPPRESSION SYSTEM(S) SHALL BE DEFINED FOR INDIVIDUAL AREAS. REFER TO ARCHITECTURAL REFLECTED CEILING PLANS FOR CEILING TYPES, EXPOSED STRUCTURE AND CEILING DEVICES. IN EXPOSED AREAS, COORDINATE PIPE ROUTING AND HEAD LAYOUT TO PROVIDE A CLEAN SYMMETRICAL INSTALLATION WITH DUCTWORK, LIGHTING, ETC.
10. ALL PIPING AND COMPONENTS SHALL BE INSTALLED 30'-0" MINIMUM ABOVE FLOOR.
11. PROVIDE SPRINKLER COVERAGE UNDER OBSTRUCTIONS 48" WIDE OR GREATER INCLUDING EQUIPMENT CONVEYOR BELTS.
12. NOTE THAT EXISTING FIRE PROTECTION SYSTEM IS NEAR MINIMUM REQUIRED PRESSURE FOR REMOTE AREA. FPC SHALL TAKE THIS INTO CONSIDERATION WHILE SIZING PIPING AND SELECTING SPRINKLER HEADS.

FIRE PROTECTION NARRATIVE

1. THE FIRE PROTECTION SYSTEM IS TO BE DESIGNED TO THE CONTRACT SCOPE DOCUMENTS, NFPA 13 LATEST EDITION, AND THE LOCAL AUTHORITY HAVING JURISDICTION REQUIREMENTS.
2. SPRINKLER COVERAGE AND PIPING SHALL BE WET PIPE HYDRAULICALLY DESIGNED BY THE FIRE PROTECTION CONTRACTOR BASED ON NFPA 13.

FIRE PROTECTION SYSTEM CLASSIFICATION

LIGHT HAZARD OCCUPANCY:

THE PROTECTION AREA ALLOTTED PER SPRINKLER SHOULD NOT EXCEED 220 SQUARE FEET WITH THE MAXIMUM DISTANCE BETWEEN LINES AND SPRINKLERS ON LINES BEING 15 FEET. THE SPRINKLERS DO NOT NEED TO BE STAGGERED.

AREAS OF LIGHT HAZARD SHALL INCLUDE: ALL TOILET ROOMS.

ORDINARY HAZARD OCCUPANCY:

THE PROTECTION AREA ALLOTTED PER SPRINKLER SHOULD NOT EXCEED 130 SQUARE FEET WITH THE MAXIMUM DISTANCE BETWEEN LINES AND SPRINKLERS ON LINES BEING 15 FEET. SPRINKLERS SHALL BE STAGGERED IF THE DISTANCE BETWEEN HEADS EXCEEDS 12 FEET.

AREAS OF ORDINARY HAZARD SHALL INCLUDE: MECHANICAL ROOMS, AND GARAGE AREAS.

HAZARD CLASSIFICATIONS:

ORDINARY HAZARD GROUP II (NFPA 13) - MAXIMUM AREA PER ZONE = 52,000 SF (SPRINKLER HEADS: UPRIGHT DRY TYPE IN EXPOSED STRUCTURE)

1 F201 FLOOR PLAN - TIPPING FLOOR - FIRE PROTECTION
SCALE: 1/8"=1'-0"

NORTH

SCS ENGINEERS
2830 DAIRY DRIVE MADISON, WI 53718-6751
PHONE: (608) 224-2830

JDR ENGINEERING, INC.
5525 NOBEL DRIVE
SUITE 110
MADISON, WI 53711
ph:608.277.1728 fax:608.271.7046
JDR Project No. 150012

CONSTRUCTION AND DEMOLITION WASTE RECYCLING FACILITY
7102 US HIGHWAY 12/18
MADISON, WISCONSIN

DANE COUNTY DEPARTMENT OF PUBLIC WORKS
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APPROVED BY:	

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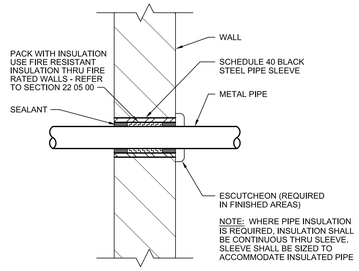
WTS NEW TIPPING FLOOR PLAN - FIRE PROTECTION

SHEET NUMBER
F201

PLUMBING FIXTURE SCHEDULE

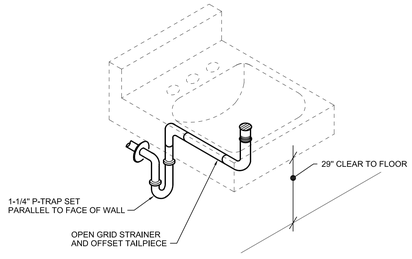
REFER TO SPECIFICATION SECTION 22 40 00 FOR ACCEPTABLE EQUAL MANUFACTURERS

ID	FIXTURE	WASTE			WATER				DETAIL/ SHEET	DESCRIPTION/REMARKS
		DFU	TRAP	VENT (MIN)	COLD		HOT			
					CWFU	SIZE	HWFU	SIZE		
L-1	LAVATORY (ADA COMPLIANT)	1	1-1/4"	1-1/2"	0.5	1/2"	0.5	1/2"	2/P000	FIXTURE: KOHLER KINGSTON K-2005 WALL HUNG LAVATORY SINK, WHITE VITREOUS CHINA, THREE FAUCET HOLES ON 2" CENTERS, 21.25" x 18.125", WITH OVERFLOW, ADA COMPLIANT.
										FAUCET: CHICAGO FAUCETS 2200-4-2300-4KCP MANUAL FAUCET, SINGLE LEVER, SOLID BRASS CONSTRUCTION, CHROME FINISH, CERAMIC CARTRIDGE, 1.5 GPM AERATOR, MOUNTED ON 4" CENTERS, ADA COMPLIANT.
										TRAP & DRAIN: PRE-WRAPPED OFFSET DRAIN & P-TRAP, WITH GRID STRAINER DRAIN.
										STOPS & SUPPLIES: McGUIRE H2167LK, LOOSE KEY QUARTER TURN ANGLE STOPS WITH CHROME PLATED ESCUTCHEONS & CHROME PLATED COPPER RISER SUPPLIES.
WC-1	WATER CLOSET	6	4"	2"	6.5	1-1/2"	---	---	---	FIXTURE: KOHLER KINGSTON K-4325, WALL HUNG, FLUSH VALVE TOILET, WHITE VITREOUS CHINA, ELONGATED BOWL, 1.6 GPF MAX, 2.25" TRAPWAY, 1-1/2" TOP SPUD.
										FLUSH VALVE: SLOAN ROYAL 111-1.28 MANUAL FLUSH VALVE, EXPOSED VALVE, CHROME FINISH, 1.28 GPF, FOR 1-1/2" TOP SPUD, 1" SCREWDRIVER ANGLE STOP, RUBBER DIAPHRAGM, ADA COMPLIANT.
										SEAT: KOHLER LUSTRA K-4670-CA, OPEN FRONT TOILET SEAT, ELONGATED BOWL, INJECTION MOLDED, WITH ANTI-MICROBIAL AGENT.
										SUPPORT: COMMERCIAL GRADE, WALL HUNG WATER CLOSET SUPPORT, STEEL STANCHIONS, IRON WELDED FEET, STEEL SLEEVES, FASTEN TO FLOOR.



1 / P000 SLEEVE THRU WALL DETAIL

SCALE: NONE



NOTE: PROVIDE SAME WASTE PIPE TRAP CONFIGURATION FOR SELF-RIMMING COUNTERTOP LAVATORIES WITH OPEN SPACE BELOW COUNTER.

2 / P000 BARRIER FREE LAVATORY DETAIL

SCALE: NONE

PLUMBING LEGEND

- EXISTING PIPING TO BE REMOVED/DEMOLISHED
- CW (E) — EXISTING PIPING (SERVICE DESIGNATED)
- SANITARY DRAIN, WASTE OR SEWER (SAN)
- ST — STORM DRAIN CONDUCTOR OR SEWER
- SD — SUBSOIL DRAIN (FOOTING DRAIN)
- VENT (V)
- CW — COLD WATER
- HW — HOT WATER
- HWR — HOT WATER RECIRCULATION
- NPC — NON-POTABLE COLD WATER
- A — COMPRESSED AIR
- W — DOMESTIC WATER SERVICE
- TEE (BRANCH TO SIDE)
- TEE (BRANCH DOWN)
- RISER UP
- RISER DOWN
- CLEANOUT (CO)
- OR WALL CLEANOUT (WCO)
- FLOOR CLEANOUT (FCO)
- YARD CLEANOUT (YCO)
- DOWNSPOUT NOZZLE (DSN)
- UNION
- FLANGE
- FLOW
- CHECK VALVE
- HOSE BIBB (HB) OR WALL HYDRANT (WH)
- EXISTING / NEW — POINT OF CONNECTION (POC)
- CAP
- BALANCING VALVE
- SHUT-OFF VALVE
- PIPE STRAINER
- FIXTURE STOP
- VALVE IN RISER
- THERMOMETER
- P — PRESSURE GAUGE
- WATER HAMMER ARRESTOR
- RELIEF VALVE
- RPBP - REDUCED PRESSURE ZONE BACKFLOW PREVENTER
- FLOOR DRAIN (FD)
- HUB DRAIN (HD)
- FINISHED FLOOR ELEVATION
- XX — FIXTURE UNITS - DRAINAGE OR SUPPLY (DFU OF WSFU)
- # — DEMOLITION KEYED NOTE
- # — NEW WORK KEYED NOTE
- # — REVISION KEYED NOTE
- X / PX — TAG FOR CONTINUATION MATCH POINTS

ABBREVIATIONS

A	COMPRESSED AIR
AFF	ABOVE FINISHED FLOOR
CB	CATCH BASIN
CO	CLEANOUT
CW	COLD WATER
DSN	DOWNSPOUT NOZZLE
E	EXISTING
EC	ELECTRICAL CONTRACTOR
ESEW	EMERGENCY SHOWER/EYEWASH
FCO	FLOOR CLEANOUT
FPC	FIRE PROTECTION CONTRACTOR
GC	GENERAL CONTRACTOR
HB	HOSE BIBB
HC	HVAC CONTRACTOR
HW	HOT WATER
HWR	HOT WATER RECIRCULATION
IE	INVERT ELEVATION
L	LAVATORY
MB	MOP BASIN
MH	MANHOLE
NPC	NON-POTABLE COLD WATER
PC	PLUMBING CONTRACTOR
PRV	PRESSURE REGULATING VALVE
RPBP	REDUCED PRESSURE ZONE BACKFLOW PREVENTER
S	SINK
SAN	SANITARY
SD	SUBSOIL DRAIN
SH	SHOWER
ST	STORM
T	TEMPERED WATER
TMV	THERMOSTATIC MIXING VALVE
UR	URINAL
V	VENT
VTR	VENT THRU ROOF
W	DOMESTIC WATER SERVICE
WC	WATER CLOSET
WCO	WALL CLEAN OUT
WH	WALL HYDRANT
WHA	WATER HAMMER ARRESTOR
WHR	WATER HEATER
YCO	YARD CLEANOUT

PLUMBING SHEET INDEX

SCS ENGINEERS
2830 DAIRY DRIVE MADISON, WI 53718-6751
PHONE: (608) 224-2830

JDR ENGINEERING, INC.
5525 NOBEL DRIVE
SUITE 110
MADISON, WI 53711
ph:608.277.1728 fax:608.271.7046
JDR Project No. 15012

CONSTRUCTION AND DEMOLITION WASTE RECYCLING FACILITY
7102 US HIGHWAY 12/18
MADISON, WISCONSIN

DANE COUNTY DEPARTMENT OF PUBLIC WORKS
SOLID WASTE DIVISION
1919 ALLIANT ENERGY CENTER WAY
MADISON, WI 53713

PROCCESS AND CIVIL ENGINEER:
SCS ENGINEERS
2830 DAIRY DRIVE
MADISON, WI 53718-6751
(608) 224-2830

ARCHITECT:
DORSCHNER ASSOCIATES, INC.
849 E. WASHINGTON AVE., SUITE 112
MADISON, WI 53703

STRUCTURAL ENGINEER:
PIERCE ENGINEERS, INC.
10 WEST MIFFLIN ST., SUITE 205
MADISON, WI 53703

MECHANICAL, ELECTRICAL, PLUMBING DESIGN
JDR ENGINEERING, INC.
5525 NOBEL DRIVE, SUITE 110
MADISON, WI 53711

REVISION	DATE	BY	TITLE

PROJECT NO.	25214236.00
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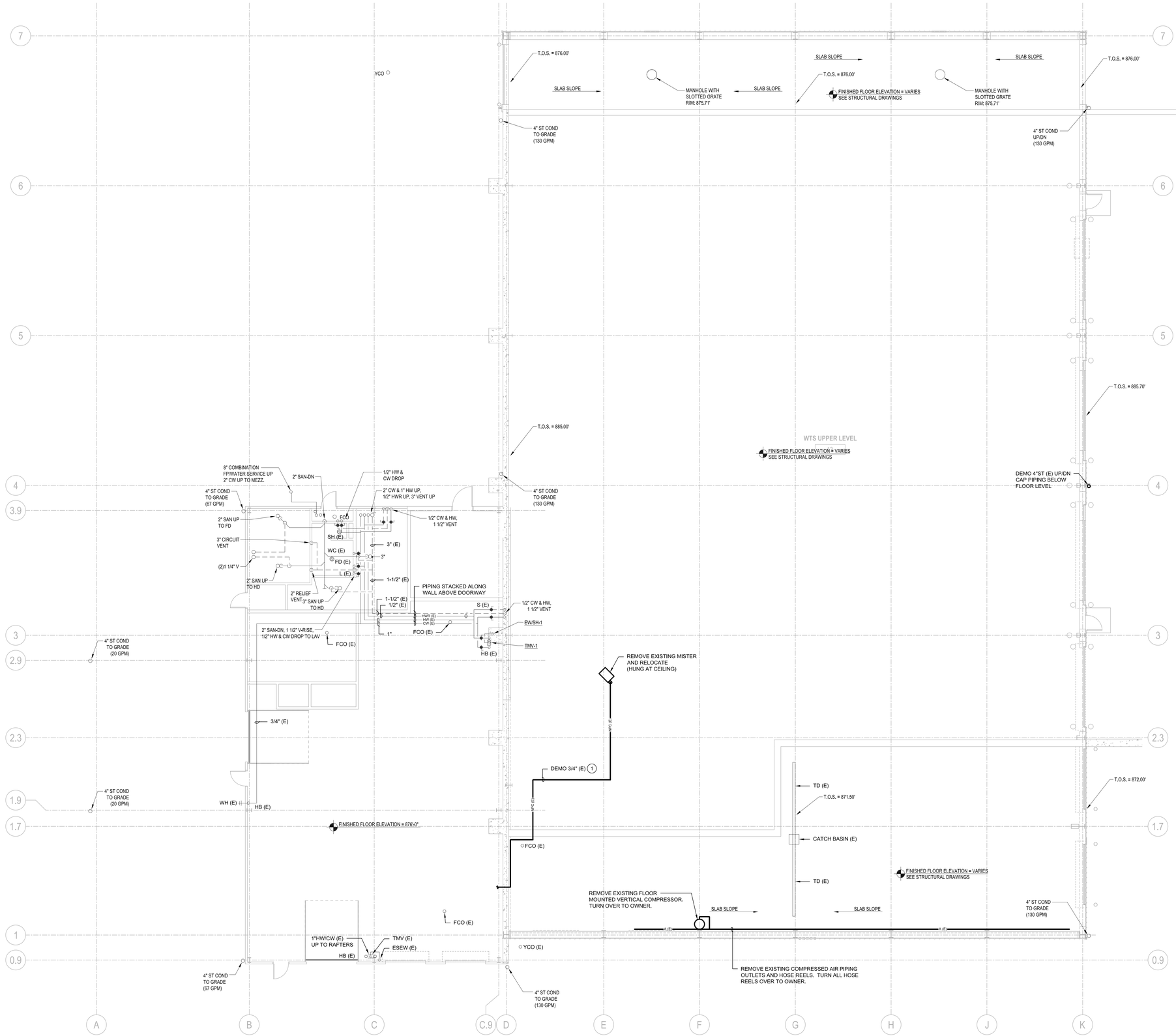
CHECKED BY:	JDR
APPROVED BY:	

BID DOCUMENTS ISSUED 04/28/15

SYMBOLS, ABBREVIATIONS, DETAILS, AND SCHEDULES - PLUMBING

SHEET NUMBER

P000



GENERAL NOTES:

1. PC SHALL FIELD VERIFY ALL EXISTING CONDITIONS AND REPORT ANY DISCREPANCIES TO THE A/E IMMEDIATELY PRIOR TO COMMENCING WORK.
2. PC SHALL BE RESPONSIBLE FOR ALL CUTTING AND PATCHING FOR REQUIRED FOR PLUMBING WORK.

KEYED NOTES:

(1) DEMOLISH EXISTING 3/4"NPC LINE AND REPLACE WITH 1"NPC LINE. MAKE CONNECTION BACK TO NEAREST ADEQUATELY SIZED MAIN.

1 P101 WTS TIPPING FLOOR PLAN DEMOLITION - PLUMBING
SCALE: 1/8"=1'-0"

NORTH

SCS ENGINEERS
2830 DAIRY DRIVE MADISON, WI 53718-6751
PHONE: (608) 224-2830

JDR ENGINEERING, INC.
5525 NOBEL DRIVE
SUITE 110
MADISON, WI 53711
ph:608.277.1728 fax:608.271.7046
JDR Project No. 150412

CONSTRUCTION AND DEMOLITION WASTE RECYCLING FACILITY
7102 US HIGHWAY 12/18
MADISON, WISCONSIN

DANE COUNTY DEPARTMENT OF PUBLIC WORKS
SOLID WASTE DIVISION
1919 ALLIANT ENERGY CENTER WAY
MADISON, WI 53713

PROCCESS AND CIVIL ENGINEER:
SCS ENGINEERS
2830 DAIRY DRIVE
MADISON, WI 53718-6751
(608) 224-2830

ARCHITECT:
DORSCHNER ASSOCIATES, INC.
849 E. WASHINGTON AVE., SUITE 112
MADISON, WI 53703

STRUCTURAL ENGINEER:
PIERCE ENGINEERS, INC.
10 WEST MIFFLIN ST., SUITE 205
MADISON, WI 53703

MECHANICAL, ELECTRICAL, PLUMBING DESIGN
JDR ENGINEERING, INC.
5525 NOBEL DRIVE, SUITE 110
MADISON, WI 53711

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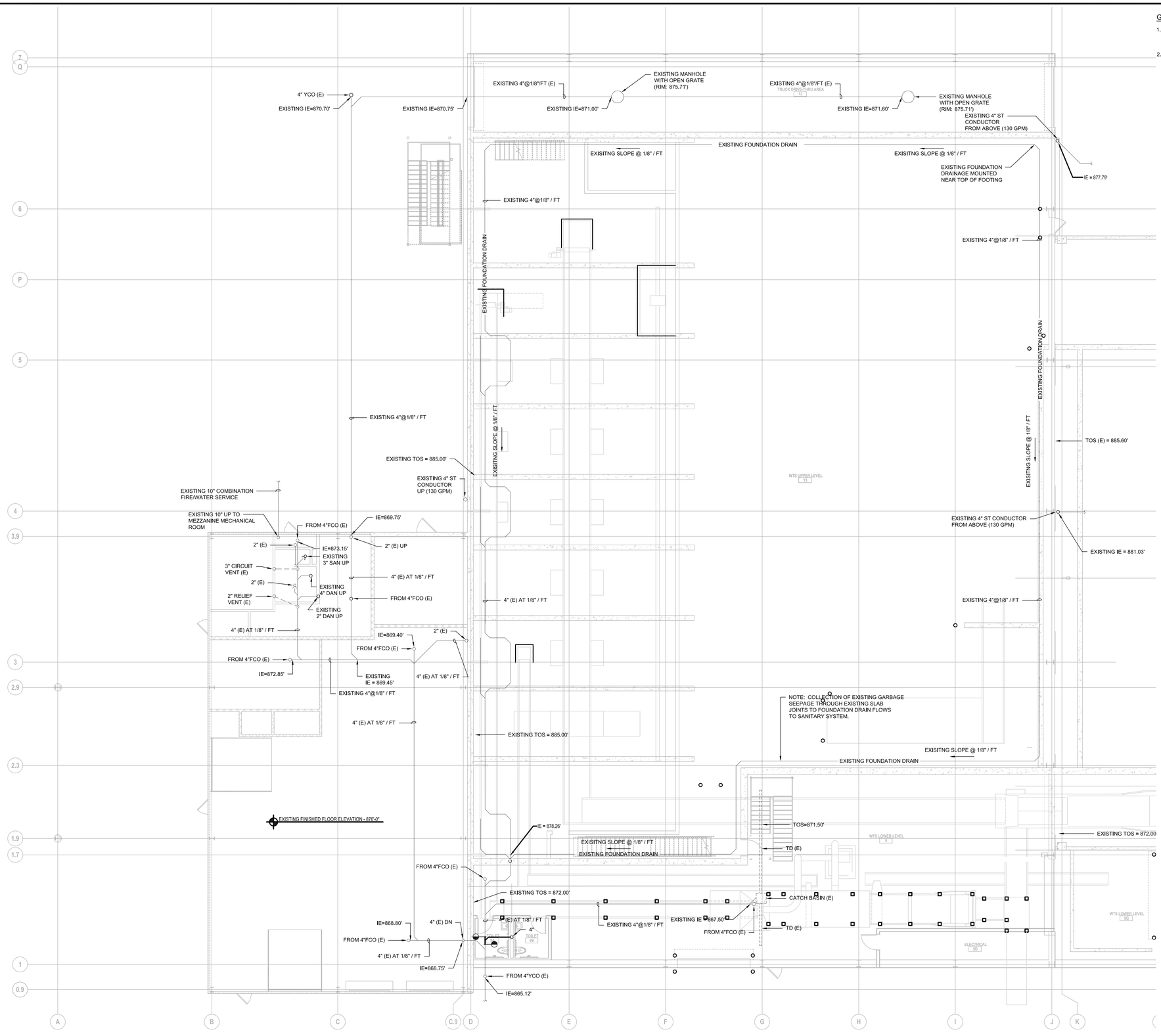
WTS TIPPING FLOOR PLAN DEMOLITION - PLUMBING

SHEET NUMBER
P101

GENERAL NOTES:

1. PC SHALL FIELD VERIFY ALL EXISTING CONDITIONS AND REPORT ANY DISCREPANCIES TO THE A/E IMMEDIATELY PRIOR TO COMMENCING WORK.
2. PC SHALL BE RESPONSIBLE FOR ALL CUTTING AND PATCHING FOR REQUIRED FOR PLUMBING WORK.



1 P200 UNDER FLOOR PLAN - PLUMBING
SCALE: 1/8"=1'-0"

NORTH

SCS ENGINEERS
2830 DAIRY DRIVE MADISON, WI 53718-6751
PHONE: (608) 224-2830

JDR ENGINEERING, INC.
5525 NOBEL DRIVE
SUITE 110
MADISON, WI 53711
ph:608.277.1728 fax:608.271.7046
JDR Project No. 150012

CONSTRUCTION AND DEMOLITION WASTE RECYCLING FACILITY
7102 US HIGHWAY 12/18
MADISON, WISCONSIN

DANE COUNTY DEPARTMENT OF PUBLIC WORKS
SOLID WASTE DIVISION
1919 ALLIANT ENERGY CENTER WAY
MADISON, WI 53713

PROCCESS AND CIVIL ENGINEER:
SCS ENGINEERS
2830 DAIRY DRIVE
MADISON, WI 53718-6751
(608) 224-2830

ARCHITECT:
DORSCHNER ASSOCIATES, INC.
849 E. WASHINGTON AVE., SUITE 112
MADISON, WI 53703

STRUCTURAL ENGINEER:
PIERCE ENGINEERS, INC.
10 WEST MIFFLIN ST., SUITE 205
MADISON, WI 53703

MECHANICAL, ELECTRICAL, PLUMBING DESIGN
JDR ENGINEERING, INC.
5525 NOBEL DRIVE, SUITE 110
MADISON, WI 53711

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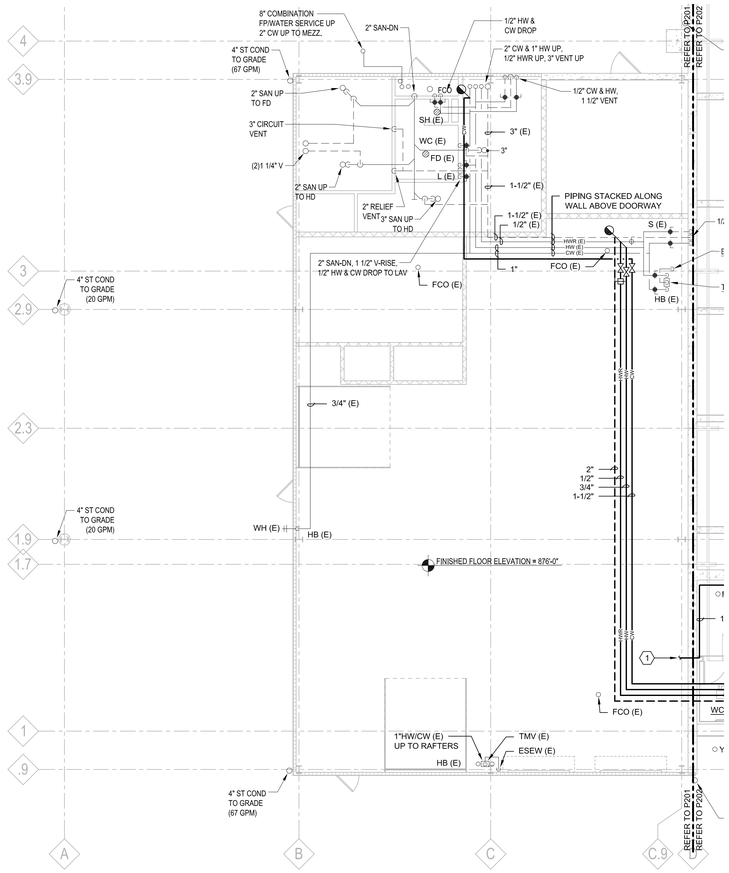
UNDERFLOOR PLAN - PLUMBING

SHEET NUMBER
P200



1 P201 CLEAN SWEEP BUILDING - MAIN LEVEL- PLUMBING

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

NORTH

GENERAL NOTES:

1. PC SHALL FIELD VERIFY ALL EXISTING CONDITIONS AND REPORT ANY DISCREPANCIES TO THE A/E IMMEDIATELY PRIOR TO COMMENCING WORK.

KEYED NOTES:

(1) CONNECT 1"NPC TO EXISTING ADEQUATELY SIZED NPC LINE. PROVIDE DRAIN VALVE IN HEATED SPACE AND PITCH 1"NPC LINE TO BE ABLE TO COMPLETELY DRAIN PRIOR TO FREEZING SEASON. PROVIDE ADDED DRAIN VALVES AT LOW POINTS IN LINE AS REQUIRED.

SCS ENGINEERS
2830 DAIRY DRIVE MADISON, WI 53718-6751
PHONE: (608) 224-2830

JDR
ENGINEERING, INC.
5525 NOBEL DRIVE
SUITE 110
MADISON, WI 53711
ph:608.277.1728 fax:608.271.7046
JDR Project No. 15012

CONSTRUCTION AND DEMOLITION WASTE RECYCLING FACILITY
7102 US HIGHWAY 12/18
MADISON, WISCONSIN

DANE COUNTY DEPARTMENT OF
PUBLIC WORKS
SOLID WASTE DIVISION
1919 ALLIANT ENERGY CENTER WAY
MADISON, WI 53713

PROCCESS AND CIVIL ENGINEER:
SCS ENGINEERS
2830 DAIRY DRIVE
MADISON, WI 53718-6751
(608) 224-2830

ARCHITECT:
DORSCHNER ASSOCIATES, INC.
849 E. WASHINGTON AVE., SUITE 112
MADISON, WI 53703

STRUCTURAL ENGINEER:
PIERCE ENGINEERS, INC.
10 WEST MIFFLIN ST., SUITE 205
MADISON, WI 53703

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JDR ENGINEERING, INC.
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MADISON, WI 53711

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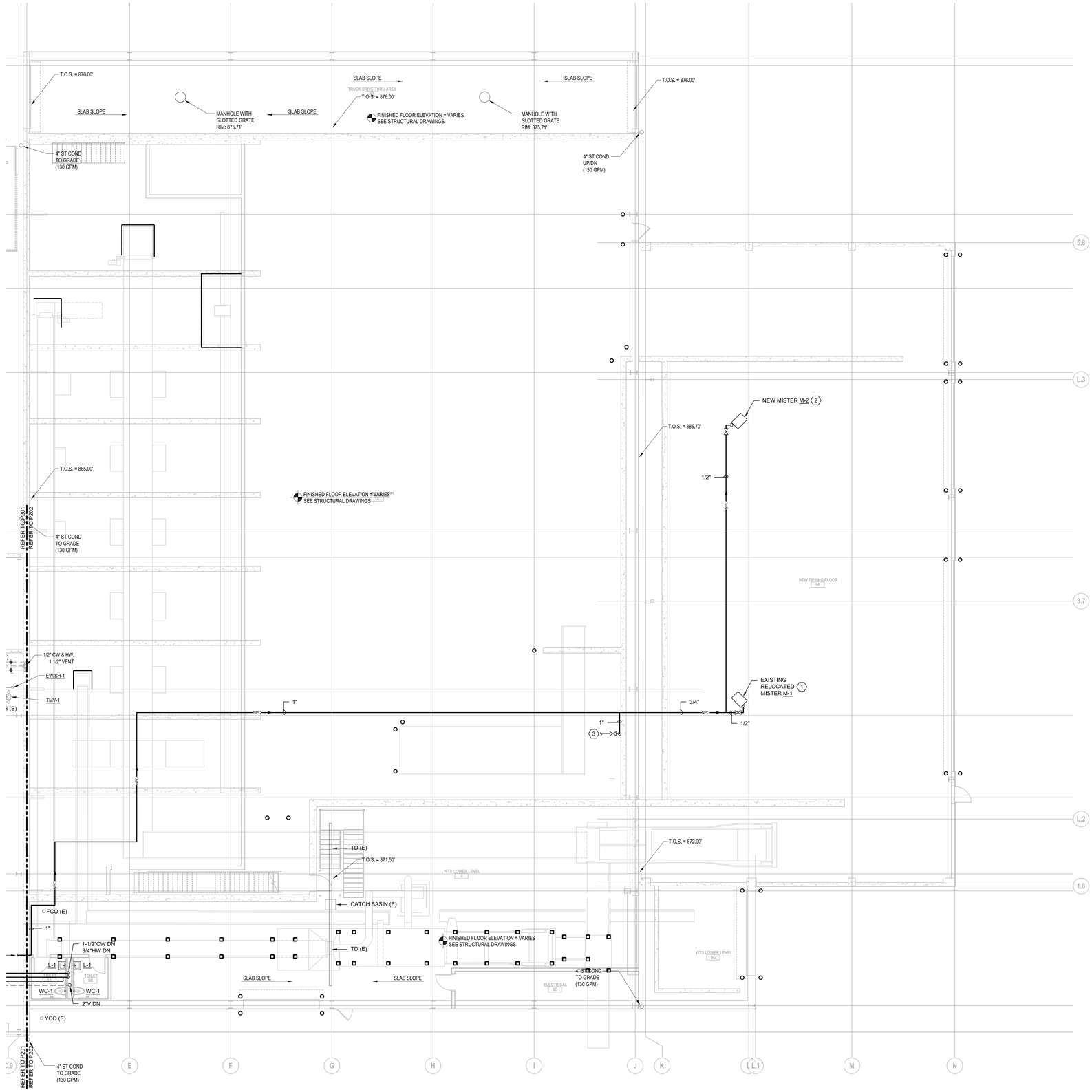
CLEAN SWEEP BUILDING - MAIN LEVEL - PLUMBING

SHEET NUMBER

P201



GENERAL NOTES:

1. FPC SHALL FIELD VERIFY ALL EXISTING CONDITIONS AND REPORT ANY DISCREPANCIES TO THE A/E IMMEDIATELY PRIOR TO COMMENCING WORK.
2. ALL PIPING SHALL BE RAN 30'-0" MINIMUM ABOVE FLOOR.

KEYED NOTES:

(1) RELOCATE EXISTING DUST MISTER M-1 AND CONNECT 1/2"NPC AS REQUIRED PER MANUFACTURER'S WRITTEN INSTRUCTIONS. SUPPORT MISTER FROM ROOF TRUSS.

(2) PROVIDE NEW DUST MISTER AND CONNECT 1/2"NPC AS REQUIRED PER MANUFACTURER'S WRITTEN INSTRUCTIONS. SUPPORT MISTER FROM ROOF TRUSS.
- MISTER M-2: PROBE AMERICA ATOMIZER UNIT, MOUNTED FROM STRUCTURE, 480V 3 PH POWER, CONTROLLER ON WALL, LOW VOLTAGE WIRING BY PC, LINE VOLTAGE WIRING BY EC.

(3) CONNECT 1"NPC TO WOOD GRINDER PER MANUFACTURER'S WRITTEN INSTRUCTIONS.

1 / P202 WTS NEW TIPPING FLOOR PLAN - PLUMBING
SCALE: 1/8"=1'-0"

NORTH

SCS ENGINEERS
2830 DAIRY DRIVE MADISON, WI 53718-6751
PHONE: (608) 224-2830

JDR ENGINEERING, INC.
5525 NOBEL DRIVE
SUITE 110
MADISON, WI 53711
ph:608.277.1728 fax:608.271.7046
JDR Project No. 150012

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7102 US HIGHWAY 12/18
MADISON, WISCONSIN

DANE COUNTY DEPARTMENT OF PUBLIC WORKS
SOLID WASTE DIVISION
1919 ALLIANT ENERGY CENTER WAY
MADISON, WI 53713

PROCCESS AND CIVIL ENGINEER:
SCS ENGINEERS
2830 DAIRY DRIVE
MADISON, WI 53718-6751
(608) 224-2830

ARCHITECT:
DORSCHNER ASSOCIATES, INC.
849 E. WASHINGTON AVE., SUITE 112
MADISON, WI 53703

STRUCTURAL ENGINEER:
PIERCE ENGINEERS, INC.
10 WEST MIFFLIN ST., SUITE 205
MADISON, WI 53703

MECHANICAL, ELECTRICAL, PLUMBING DESIGN
JDR ENGINEERING, INC.
5525 NOBEL DRIVE, SUITE 110
MADISON, WI 53711

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WTS NEW TIPPING FLOOR PLAN - PLUMBING

SHEET NUMBER
P202

ABBREVIATIONS

A	COMPRESSED AIR
ACC	AIR COOLED CONDENSER
ACCU	AIR COOLED CONDENSING UNIT
ACU	AIR CONDITIONING UNIT
AD	ACCESS DOOR
ADJ	ADJUSTABLE
A/E	ARCHITECT/ENGINEER
AF	AIR FOIL
AFF	ABOVE FINISHED FLOOR
AFMS	AIR FLOW MEASURING STATION
AHU	AIR HANDLING UNIT
AL	ALUMINUM
AMP	AMPERE
AP	ACCESS PANEL
APD	AIR PRESSURE DROP
ASC	ABOVE SUSPENDED CEILING
ATR	AIR TROFFER - RETURN
ATS	AIR TROFFER - SUPPLY
AUTO	AUTOMATIC
B	BOILER
BB	BASEBOARD
BC	BOOSTER COIL
BDD	BACK DRAFT DAMPER
BFP	BACKFLOW PREVENTER
BHP	BRAKE HORSEPOWER
BI	BACKWARD INCLINED
BLDG	BUILDING
BOD	BOTTOM OF DUCT
BOP	BOTTOM OF PIPE
BOS	BOTTOM OF STRUCTURE
BR	BRINE RETURN
BRG	BEARING
BS	BRINE SUPPLY
BSMT	BASEMENT
BTU	BRITISH THERMAL UNIT
C	CONVECTOR
CA	COMBUSTION AIR
CAB	CABINET
CCC	COOLING COIL CONDENSATE
CD	CEILING DIFFUSER
CF	CEILING (DESTRATIFICATION) FAN
CFM	CUBIC FEET PER MINUTE
CH	CHILLER
CWR	CHILLED WATER RETURN
CWS	CHILLED WATER SUPPLY
CI	CAST IRON OR CUBIC INCH
CL	CENTERLINE
CLG	CEILING
CMU	CONCRETE MASONARY UNIT
COMB	COMBINATION OR COMBUSTION
CONC	CONCRETE
COND	CONDENSATE
CONTR	CONTRACTOR
COP	COEFFICIENT OF PERFORMANCE
CP	CONDENSATE PUMP
CRU	COMPUTER ROOM UNIT
CR	CONDENSER WATER RETURN
CS	CONDENSER WATER SUPPLY
CT	COOLING TOWER
CU	COPPER
CUH	CABINET UNIT HEATER
CW	COLD WATER
D	DRAIN
DB	DRY BULB
DC	DRY COOLER
DCO	DOOR CUTOFF BY GC
DDC	DIRECT DIGITAL CONTROL
DEPT	DEPARTMENT
DG	DOOR GRILLE BY GC
DIA	DIAMETER
DN	DOWN
DSA	DUCT SOUND ATTENUATOR
DSF	DESTRATIFICATION FAN
DWD	DUAL WALL DUCTWORK
DWDI	DOUBLE WIDTH DOUBLE INLET
DWG	DRAWING
(E)	EXISTING
EAT	ENTERING AIR TEMPERATURE
EC	ELECTRICAL CONTRACTOR
EF	EXHAUST FAN
EER	ENERGY EFFICIENCY RATIO
EFBP	EXTERNAL FACE & BYPASS
EG	EXHAUST GRILLE
EJ	EXPANSION JOINT
EL	ELEVATION
ELEC	ELECTRICAL
EQUIP	EQUIPMENT
ER	EXHAUST REGISTER
ERU	ENERGY RECOVERY UNIT
ERV	ENERGY RECOVERY VENTILATOR
ET	EXPANSION TANK
ETR	EXISTING TO REMAIN
EWH	ELECTRIC WALL HEATER
EWT	ENTERING WATER TEMPERATURE
EXH	EXHAUST
EXT	EXTERIOR OR EXTERNAL
F	FURNACE
°F	DEGREES FAHRENHEIT
F&B	FACE & BYPASS
F&T	FLOAT & THERMOSTAT TRAP
FA	FREE AREA
FC	FORWARD CURVED
FCU	FAN COIL UNIT
FD	FLOOR DRAIN OR FIRE DAMPER
FFA	FROM FLOOR ABOVE
FFB	FROM FLOOR BELOW
FILL	FILL LINE
FLA	FULL LOAD AMPS
FLEX	FLEXIBLE
FM	FLOW METER
FOO	FUEL OIL OVERFLOW
FOR	FUEL OIL RETURN
FOS	FUEL OIL SUPPLY
FOV	FUEL OIL VENT
FPC	FIRE PROTECTION CONTRACTOR
FPM	FEET PER MINUTE
FS	FLOW SWITCH
FT	FOOT OR FEET
G	GAS
GA	GAUGE
GAL	GALLON
GALV	GALVANIZED
GC	GENERAL CONTRACTOR
GLYR	GLYCOL RETURN
GLYS	GLYCOL SUPPLY
GRH	GAS FIRED RADIANT HEAT
GPM	GALLONS PER MINUTE
GUH	GAS FIRED UNIT HEATER
GV	GAS VENT
H	HUMIDIFIER
HB	HOSE BIBB
HC	HEATING CONTRACTOR
HCR	HOT/CHILLED WATER RETURN
HCS	HOT/CHILLED WATER SUPPLY
HD	HUB DRAIN
HDT	HORIZONTAL DRAW THRU
HG	MERCURY
HGT	HEIGHT
HP	HORSEPOWER
HPC	HIGH PRESSURE CONDENSATE
HPS	HIGH PRESSURE STEAM
HPU	HEAT PUMP UNIT
HPWR	HEAT PUMP WATER RETURN
HPWS	HEAT PUMP WATER SUPPLY
HR	HOUR
HRU	HEAT RECOVERY UNIT
HSR	HEAT SINK RETURN
HSS	HEAT SINK SUPPLY
HTWR	HIGH TEMPERATURE HOT WATER RETURN
HTWS	HIGH TEMPERATURE HOT WATER SUPPLY
HVAC	HEATING VENTILATING AND AIR CONDITIONING
HW	HOT WATER
HWR	HOT WATER RETURN
HWS	HOT WATER SUPPLY
HWY	HIGHWAY
HX	HEAT EXCHANGER
HYD	HYDRANT
HZ	HERTZ
IH	INTAKE HOOD
IFBP	INTERNAL FACE & BYPASS
IN	INCH
INV	INVERT
IPLV	INTEGRATED PART LOAD VALUE
JWR	JACKET WATER RETURN
JWS	JACKET WATER SUPPLY
KW	KILOWATT
LAT	LEAVING AIR TEMPERATURE
LBS	POUNDS
LD	LINEAR DIFFUSER
LPC	LOW PRESSURE CONDENSATE
LPS	LOW PRESSURE STEAM
LR	LINEAR RETURN
LT	LIGHT TROFFER
LWT	LEAVING WATER TEMPERATURE
M	MOTOR OPERATED DAMPER
MAT	MIXED AIR TEMPERATURE
MA	MIXED AIR
MAU	MAKE-UP AIR UNIT
MAX	MAXIMUM
MBH	1000 BRITISH THERMAL UNITS/HOUR
MCA	MINIMUM CIRCUIT AMPS
MCC	MOTOR CONTROL CENTER
MECH	MECHANICAL
MEZZ	MEZZANINE
MFS	MAXIMUM FUSE SIZE
MH	MANHOLE
MIN	MINIMUM
MOCP	MAXIMUM OVERCURRENT PROTECTION
MTD	MOUNTED
MUA	MAKE-UP AIR UNIT
NC	NOISE CRITERIA
NC	NORMALLY CLOSED
NIC	NOT IN CONTRACT
NO	NORMALLY OPEN
NPLV	NOMINAL PART LOAD VALUE
NTS	NOT TO SCALE
O	OXYGEN
OA	OUTDOOR AIR
OAT	OUTDOOR AIR TEMPERATURE
OC	ON CENTER
OPD	OPPOSED BLADE DAMPER
P	PUMP
PC	PLUMBING CONTRACTOR
PD	PUMP DISCHARGE
PLBG	PLUMBING
POC	POINT OF CONNECTION
PRE	POWER ROOF EXHAUST FAN
PRELIM	PRELIMINARY
PRESS	PRESSURE
PRV	PRESSURE REDUCING VALVE
PS	PRESSURE SWITCH
PSD	PUMP SUCTION DIFFUSER
PSI	POUNDS PER SQUARE INCH
PTAC	PACKAGED TERMINAL AIR CONDITIONER
PVC	POLYVINYL CHLORIDE
R	REFRIGERANT
RA	RETURN AIR
RCP	RADIANT CEILING PANEL
RD	ROOF DRAIN
REQD	REQUIRED
RF	RETURN FAN
RG	RETURN GRILLE
RH	RELIEF HOOD
RHG	REFRIGERANT HOT GAS
RL	REFRIGERANT LIQUID
RPM	REVOLUTIONS PER MINUTE
RS	REFRIGERANT SUCTION
RR	RETURN REGISTER
RTU	ROOF TOP UNIT
S	SUPPLY
SA	SUPPLY AIR
SCR	SILICONE CONTROLLED RECTIFIERS
SD	SLOT DIFFUSER
SEER	SEASONAL ENERGY EFFICIENCY RATIO
SEG	SECURITY EXHAUST GRILLE
SF	SUPPLY FAN
SG	SUPPLY GRILLE
SM	SHEET METAL
SQ FT	SQUARE FEET
SR	SUPPLY REGISTER
SRG	SECURITY RETURN GRILLE
SRV	SAFETY RELIEF VALVE
SS	STAINLESS STEEL
SSG	SECURITY SUPPLY GRILLE
STG	SECURITY TRANSFER GRILLE
SWD	SINGLE WALL DUCTWORK
SWSI	SINGLE WIDTH SINGLE INLET
T	THERMOSTAT/TEMPERATURE SENSOR
TA	THROWAWAY
TCAC	TEMPERATURE CONTROL AIR COMPRESSOR
TCC	TEMPERATURE CONTROL CONTRACTOR
TCP	TEMPERATURE CONTROL PANEL
TCV	TEMPERATURE CONTROL VALVE
TEMP	TEMPORARY
TF	TRANSFER FAN
TFA	TO FLOOR ABOVE
TFB	TO FLOOR BELOW
TG	TO TRANSFER GRILLE
TO	TEST OPENINGS
TS	TIP SPEED
TYP	TYPICAL
UH	UNIT HEATER
UST	UNDERGROUND STORAGE TANK
UV	UNIT VENTILATOR
UNEX	UNEXCAVATED
V	VENT
VAC	VACUUM
VAV	VARIABLE AIR VOLUME
VB	VACUUM BREAKER
VD	VOLUME DAMPER
VDT	VERTICAL DRAW THRU
VEL	VELOCITY
VERT	VERTICAL
VFD	VARIABLE FREQUENCY DRIVE
VSC	VARIABLE SPEED CONTROL
W TO W	WALL TO WALL
WB	WET BULB
WC	WATER COLUMN
WF	WALL FIN
WP	WEATHER PROOF
WPD	WATER PRESSURE DROP
YH	YARD HYDRANT

PIPING SYSTEMS

- BALL VALVE
- GAUGE VALVE
- BUTTERFLY VALVE
- GATE VALVE
- GATE, ANGLE VALVE
- GLOBE VALVE
- GLOBE, ANGLE VALVE
- PLUG VALVE (GAS)
- GENERAL SHUTOFF VALVE SEE SPECIFICATIONS FOR TYPE
- CALIBRATED BALANCE/SHUTOFF VALVE (FLOW MEASURING)
- OS & Y GATE VALVE
- OS & Y GLOBE VALVE
- 2-WAY TEMPERATURE CONTROL VALVE (PNEUMATIC OR ELECTRIC)
- 3-WAY TEMPERATURE CONTROL VALVE (PNEUMATIC OR ELECTRIC)
- CHECK VALVE
- DRAIN VALVE (W/ HOSE CONNECTION & BRASS CAP)
- LOCK SHIELD VALVE
- NEEDLE VALVE
- PRESSURE REDUCING VALVE
- RELIEF (R) OR SAFETY (S) VALVE
- SOLENOID VALVE
- BLIND FLANGE
- CAP
- CONNECTION, BOTTOM
- CONNECTION, TOP
- ELBOW, TURNED UP
- ELBOW, TURNED DOWN
- REDUCER, CONCENTRIC
- REDUCER, ECCENTRIC - STRAIGHT INVERT
- REDUCER, ECCENTRIC - STRAIGHT CROWN
- AIR VENT
- VACUUM BREAKER
- AIR SEPARATOR
- PIPE ALIGNMENT GUIDE
- PIPE ANCHOR
- BALL JOINT
- EXPANSION JOINT
- EXPANSION LOOP
- FLEXIBLE CONNECTOR
- STEAM TRAP
- FLOW METER
- FLOW SWITCH
- TEMPERATURE SENSOR
- PITCH OF PIPE
- PRESSURE GAUGE AND COCK
- PRESSURE SWITCH
- PUMP
- PUMP IN VERTICAL
- STRAINER
- STRAINER, W/ BLOW DOWN VALVE
- THERMOMETER
- THERMOMETER WELL, ONLY
- PETES PLUG
- BACKFLOW PREVENTER
- FLOW DIRECTION IN PIPES
- HANGERS
- UNION
- PIPE FLANGE
- WATER METER
- FLOW REGULATOR

BBD	BOILER BLOWDOWN
COND	CONDENSATE
VAC	VACUUM PUMP CONDENSATE
CW	COLD WATER (DOMESTIC)
MU	MAKEUP WATER
V	ATMOSPHERIC VENT
G XXX PSIG	GAS
LP	LIQUID PROPANE
HWS	HOT WATER SUPPLY
HWR	HOT WATER RETURN
A	COMPRESSED AIR
VAC	VACUUM (AIR)
RHG	REFRIGERANT HOT GAS
RS	REFRIGERANT SUCTION
RL	REFRIGERANT LIQUID
H	HUMIDIFICATION LINE
D	DRAIN

GENERAL SYMBOLS

- THERMOSTAT OR TEMPERATURE SENSOR
- THERMOSTAT OR TEMPERATURE SENSOR WITH SECURITY COVER
- HUMIDISTAT OR HUMIDITY SENSOR
- HUMIDISTAT OR HUMIDITY SENSOR WITH SECURITY COVER
- MOTOR STARTER
- SPEED CONTROLLER
- START/STOP SWITCH
- EXISTING TO REMAIN (DUCTWORK, PIPING, & EQUIPMENT)
- EXISTING TO BE REMOVED (DUCTWORK, PIPING, & EQUIPMENT)
- NEW DUCTWORK/PIPING
- NEW EQUIPMENT

DOUBLE LINE PIPING SYMBOLS

- BUTTERFLY VALVE
- CHECK VALVE
- FLOW METER
- VENTURI FLOW METER
- OS&Y VALVE
- PRESSURE REDUCING VALVE
- RELIEF/SAFETY VALVE
- 3-WAY VALVE
- 2-WAY VALVE
- GATE VALVE
- GLOBE VALVE
- GATE ANGLE VALVE
- GLOBE ANGLE VALVE
- PIPE SECTION
- PIPE (DOWN OR AWAY)
- LOCK SHIELD HANDLE
- SOLENOID
- FLEXIBLE CONNECTION
- BASKET STRAINER
- AIR SEPARATOR
- PUMP

DUCTWORK SYSTEMS

- DUCT SIZE, (FIRST FIGURE IS SIDE SHOWN) (20/12)
- ROUND DUCT (12" Ø)
- OVAL DUCT (20/12 Ø)
- AXIAL FLOW FAN
- CHANGE OF ELEVATION IN DIRECTION OF AIR FLOW (UP/DN)
- ACCESS DOOR, VERTICAL OR HORIZONTAL (AD)
- ACOUSTICAL DUCT LINER
- DUCT LAGGING
- FLEXIBLE CONNECTION
- DUCT SOUND ATTENUATOR
- DUCT TRANSITION (DOUBLE LINE)
- DUCT TRANSITION (RECT. TO ROUND)
- DUCT TRANSITION (SINGLE LINE)
- HIDDEN DUCTWORK
- BACK DRAFT DAMPER (B)
- DUCT HEATER, ELECTRIC
- MOTOR OPERATED DAMPER (M)
- MANUAL VOLUME DAMPER
- SMOKE DETECTOR (S)
- SMOKE DAMPER
- FIRE DAMPER (NEW / EXISTING)
- COMBINATION FIRE/SMOKE DAMPER (NEW / EXISTING)
- STANDARD BRANCH, SUPPLY, RETURN, OR EXHAUST, NO SPLITTER
- ROOF VENTILATOR OR HOOD ON ROOF ABOVE
- ROOF VENTILATOR OR HOOD ON ROOF
- DUCT CAP
- END OF DUCT
- POSITIVE PRESSURE DUCT SECTION (EXISTING / EXISTING / NEW / NEW)
- POSITIVE PRESSURE DUCT (DOWN OR AWAY)
- NEGATIVE PRESSURE DUCT SECTION (EXISTING / EXISTING / NEW / NEW)
- NEGATIVE PRESSURE DUCT (DOWN OR AWAY)
- FLEXIBLE DUCT DIFFUSER CONNECTION
- SIDEWALL AIR DEVICE
- EXHAUST, RETURN, OR TRANSFER AIR DEVICE
- SUPPLY AIR DEVICE
- LINEAR OR SLOT AIR DEVICE
- TRANSFER GRILLE ASSEMBLY (SIZE)
- LOUVER AND BIRD SCREEN
- DOOR GRILLE (DG, X.X @FA)
- 3/4" DOOR CUTOFF (UNDERCUT) BY GC (DCO)
- ELBOW WITH TURNING VANES
- TERMINAL UNIT, MIXING
- TERMINAL UNIT, VARIABLE VOLUME WITH REHEAT
- TERMINAL UNIT, VARIABLE VOLUME WITH REHEAT
- TERMINAL UNIT, VARIABLE VOLUME
- BOOSTER COIL
- UNIT HEATER
- CENTRIFUGAL FAN
- PROPELLER FAN
- AIR FLOW
- POINT OF NEW CONNECTION (PIPE OR DUCT) (EXISTING / NEW)
- MAXIMUM SECURITY BARS
- MEDIUM SECURITY BARS
- SQUARE FEET
- ELEVATION SYMBOL

HVAC SHEET INDEX

SCS ENGINEERS
2830 DAIRY DRIVE MADISON, WI 53718-6751
PHONE: (608) 224-2830

JDR ENGINEERING, INC.
5525 NOBEL DRIVE
SUITE 110
MADISON, WI 53711
ph:608.277.1728 fax:608.271.7046
JDR Project No. 15012

CONSTRUCTION AND DEMOLITION WASTE RECYCLING FACILITY
7102 US HIGHWAY 12/18
MADISON, WISCONSIN

DANE COUNTY DEPARTMENT OF PUBLIC WORKS
SOLID WASTE DIVISION
1919 ALLIANT ENERGY CENTER WAY
MADISON, WI 53713

PROCCESS AND CIVIL ENGINEER:
SCS ENGINEERS
2830 DAIRY DRIVE
MADISON, WI 53718-6751
(608) 224-2830

ARCHITECT:
DORSCHNER ASSOCIATES, INC.
849 E. WASHINGTON AVE., SUITE 112
MADISON, WI 53703

STRUCTURAL ENGINEER:
PIERCE ENGINEERS, INC.
10 WEST MIFFLIN ST., SUITE 205
MADISON, WI 53703

MECHANICAL, ELECTRICAL, PLUMBING DESIGN
JDR ENGINEERING, INC.
5525 NOBEL DRIVE, SUITE 110
MADISON, WI 53711

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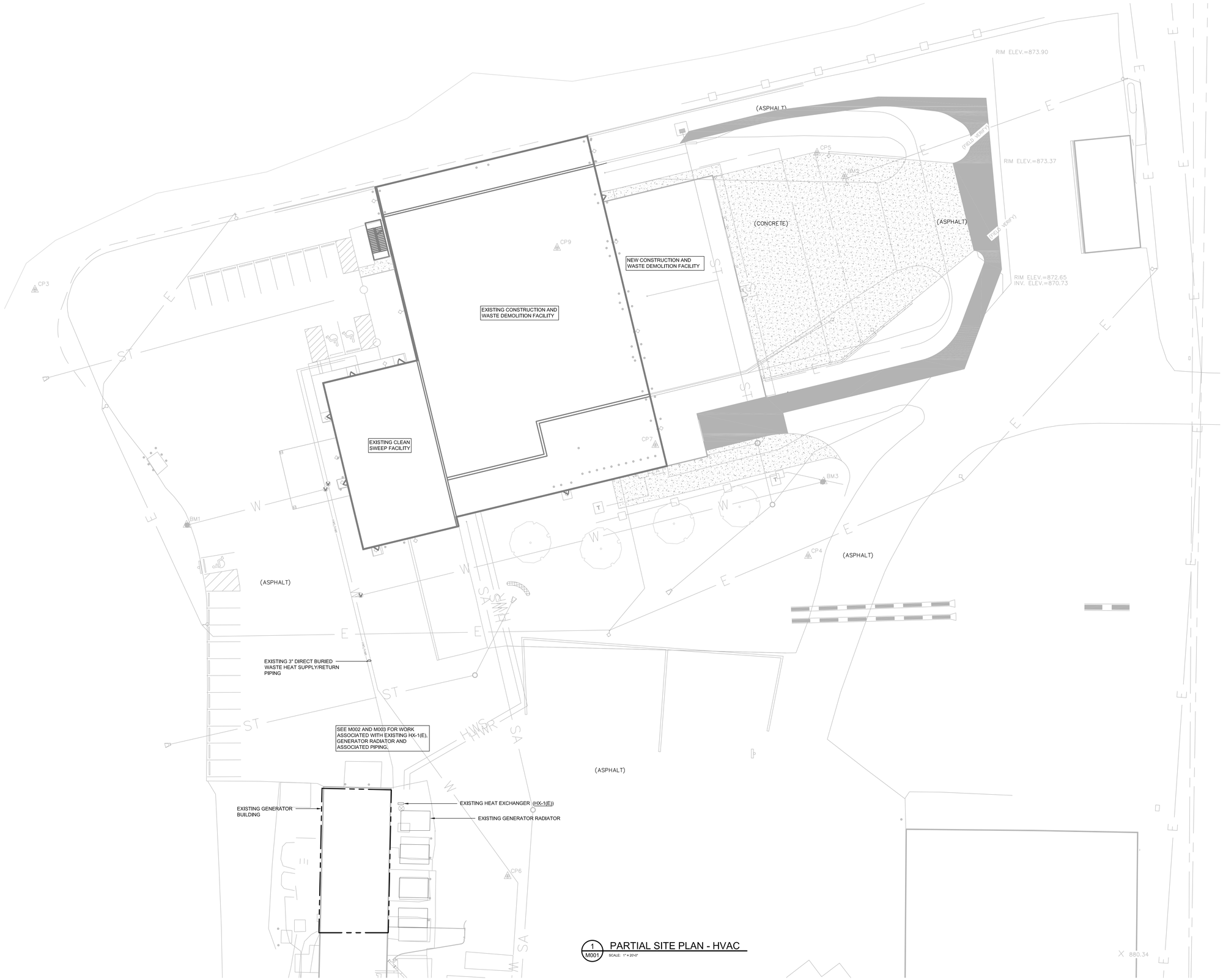
SYMBOLS AND ABBREVIATIONS - HVAC

SHEET NUMBER
M000



1 M001 PARTIAL SITE PLAN - HVAC
SCALE: 1" = 20'-0"

SCS ENGINEERS
2830 DAIRY DRIVE MADISON, WI 53718-6751
PHONE: (608) 224-2830

JDR ENGINEERING, INC.
5525 NOBEL DRIVE
SUITE 110
MADISON, WI 53711
ph:608.277.1728 fax:608.271.7046
JDR Project No. 150012

CONSTRUCTION AND DEMOLITION WASTE RECYCLING FACILITY 7102 US HIGHWAY 12/18 MADISON, WISCONSIN

DANE COUNTY DEPARTMENT OF PUBLIC WORKS
SOLID WASTE DIVISION
1919 ALLIANT ENERGY CENTER WAY
MADISON, WI 53713

PROCCESS AND CIVIL ENGINEER:
SCS ENGINEERS
2830 DAIRY DRIVE
MADISON, WI 53718-6751
(608) 224-2830

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DORSCHNER ASSOCIATES, INC.
849 E. WASHINGTON AVE., SUITE 112
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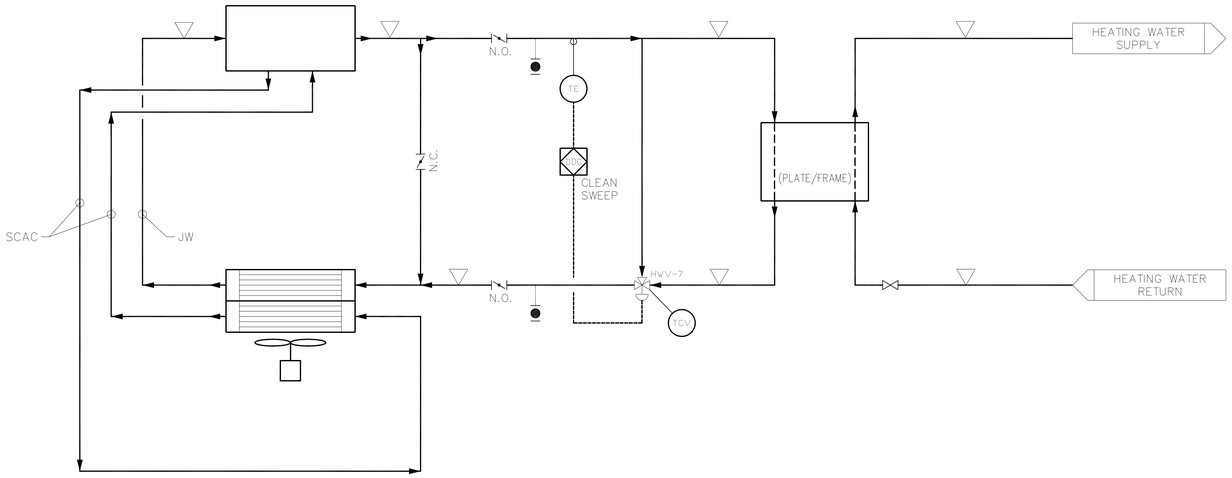
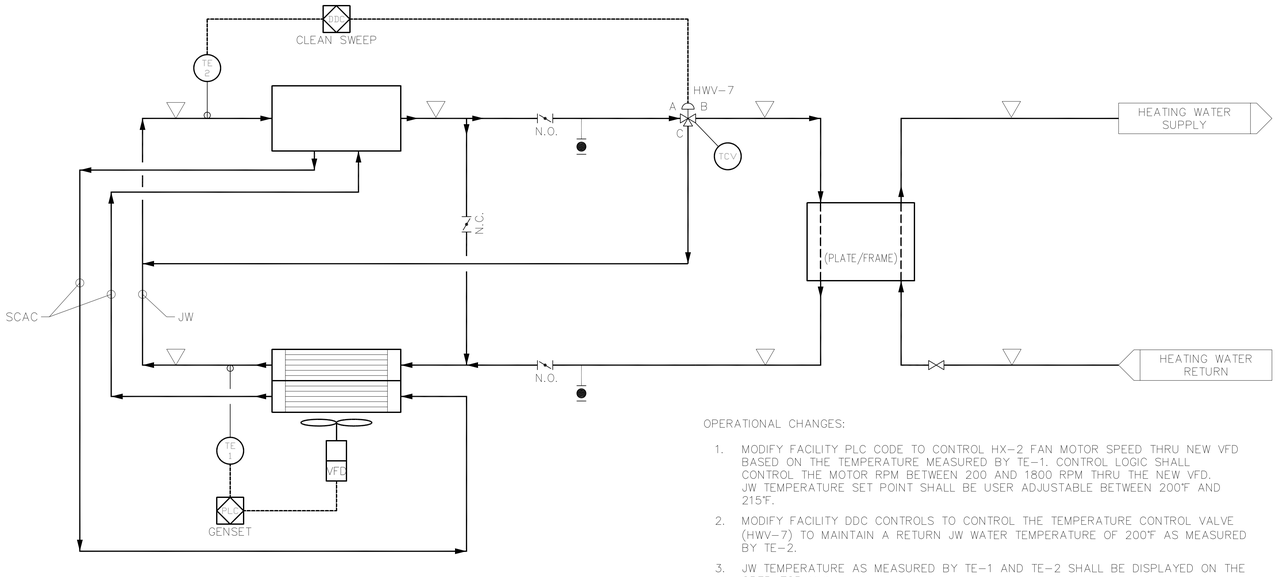
PARTIAL SITE PLAN - HVAC

SHEET NUMBER
M001



2 M002 EXISTING JACKET WATER PROCESS FLOW DIAGRAM

SCALE: NONE

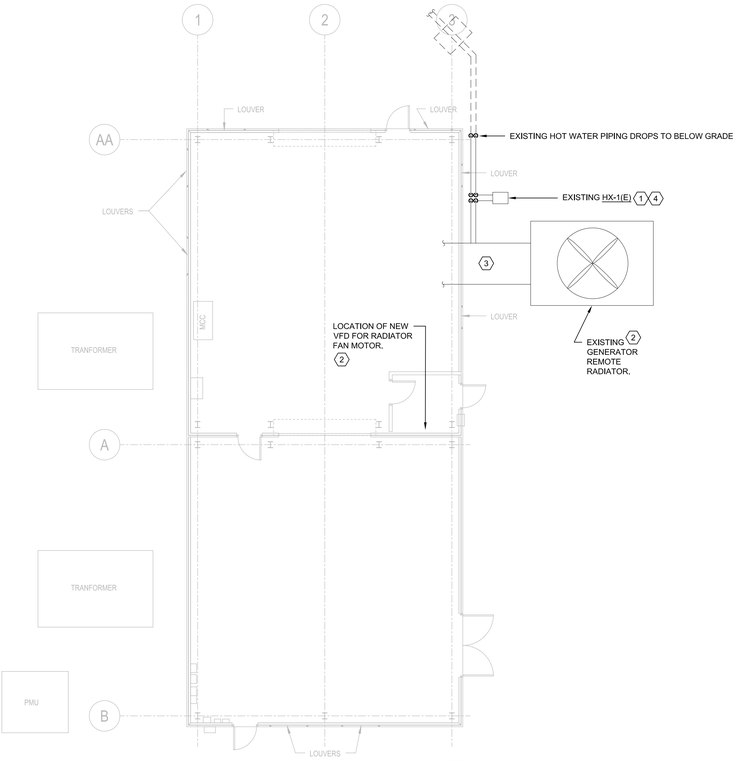


OPERATIONAL CHANGES:

1. MODIFY FACILITY PLC CODE TO CONTROL HX-2 FAN MOTOR SPEED THRU NEW VFD BASED ON THE TEMPERATURE MEASURED BY TE-1. CONTROL LOGIC SHALL CONTROL THE MOTOR RPM BETWEEN 200 AND 1800 RPM THRU THE NEW VFD. JW TEMPERATURE SET POINT SHALL BE USER ADJUSTABLE BETWEEN 200°F AND 215°F.
2. MODIFY FACILITY DDC CONTROLS TO CONTROL THE TEMPERATURE CONTROL VALVE (HWV-7) TO MAINTAIN A RETURN JW WATER TEMPERATURE OF 200°F AS MEASURED BY TE-2.
3. JW TEMPERATURE AS MEASURED BY TE-1 AND TE-2 SHALL BE DISPLAYED ON THE OPERATOR HMI.

3 M002 PROPOSED JACKET WATER PROCESS FLOW DIAGRAM

SCALE: NONE



1 M002 GENERATOR BUILDING - HVAC

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

NORTH

KEYED NOTES:

1. EXISTING WATER TO WATER PLATE AND FRAME HEAT EXCHANGER (ITT/XYLEM, MODEL PZ2-27-TK). PROVIDE AND INSTALL (22) ADDITIONAL PLATES FOR A TOTAL OF (49) PLATES (MAXIMUM) AT THE HEAT EXCHANGER. PLATES SHALL BE 304 STAINLESS STEEL WITH EPDM GASKETS COMPATIBLE WITH GENERATOR JACKET WATER TEMPERATURE RANGE. MECHANICAL CONTRACTOR SHALL FLUSH HEAT EXCHANGER AFTER INSTALLATION OF NEW PLATES AND PURGE SYSTEM OF ALL AIR. SEE DEMOLITION AND NEW WORK SCHEMATIC PIPING DIAGRAMS FOR ADDITIONAL PIPING, SENSOR AND CONTROL MODIFICATIONS.
2. EXISTING GENERATOR RADIATOR. MECHANICAL CONTRACTOR SHALL REMOVE EXISTING SIEMENS 20 HP, 460V/3P FAN MOTOR, TYPE RGZPSD, 256T FRAME, INSULATION CLASS 'F'. INSTALL BEARING PROTECTION GROUNDING RINGS ON EXISTING FAN MOTOR TO BLEED CURRENT FROM THE MOTOR SHAFT TO THE MOTOR CASING AND BE COMPATIBLE WITH NEW VARIABLE SPEED DRIVE. PROVIDE AND INSTALL 20 HP VARIABLE FREQUENCY DRIVE FOR FAN MOTOR. COORDINATE FINAL VFD LOCATION WITH OWNER AND EC. EC SHALL WIRE NEW VFD. MECHANICAL CONTRACTOR SHALL REINSTALL EXISTING FAN MOTOR AT SAME LOCATION. EC SHALL DISCONNECT AND RECONNECT POWER TO FAN MOTOR.
3. SEE DEMOLITION AND NEW WORK SCHEMATIC PIPE DIAGRAMS ON M003 FOR ADDITIONAL PIPING, SENSOR AND CONTROL MODIFICATIONS.
4. PROVIDE INSULATION PER SPECIFICATIONS ON EXISTING HEAT EXCHANGER HX-1 (E).

SCS ENGINEERS
2830 DAIRY DRIVE MADISON, WI 53718-6751
PHONE: (608) 224-2830

JDR ENGINEERING, INC.
5525 NOBEL DRIVE
SUITE 110
MADISON, WI 53711
ph:608.277.1728 fax:608.271.7046
JDR Project No. 150012

CONSTRUCTION AND DEMOLITION WASTE RECYCLING FACILITY
7102 US HIGHWAY 12/18
MADISON, WISCONSIN

DANE COUNTY DEPARTMENT OF PUBLIC WORKS
SOLID WASTE DIVISION
1919 ALLIANT ENERGY CENTER WAY
MADISON, WI 53713

PROCCESS AND CIVIL ENGINEER:
SCS ENGINEERS
2830 DAIRY DRIVE
MADISON, WI 53718-6751
(608) 224-2830

ARCHITECT:
DORSCHNER ASSOCIATES, INC.
849 E. WASHINGTON AVE., SUITE 112
MADISON, WI 53703

STRUCTURAL ENGINEER:
PIERCE ENGINEERS, INC.
10 WEST MIFFLIN ST., SUITE 205
MADISON, WI 53703

MECHANICAL, ELECTRICAL, PLUMBING DESIGN
JDR ENGINEERING, INC.
5525 NOBEL DRIVE, SUITE 110
MADISON, WI 53711

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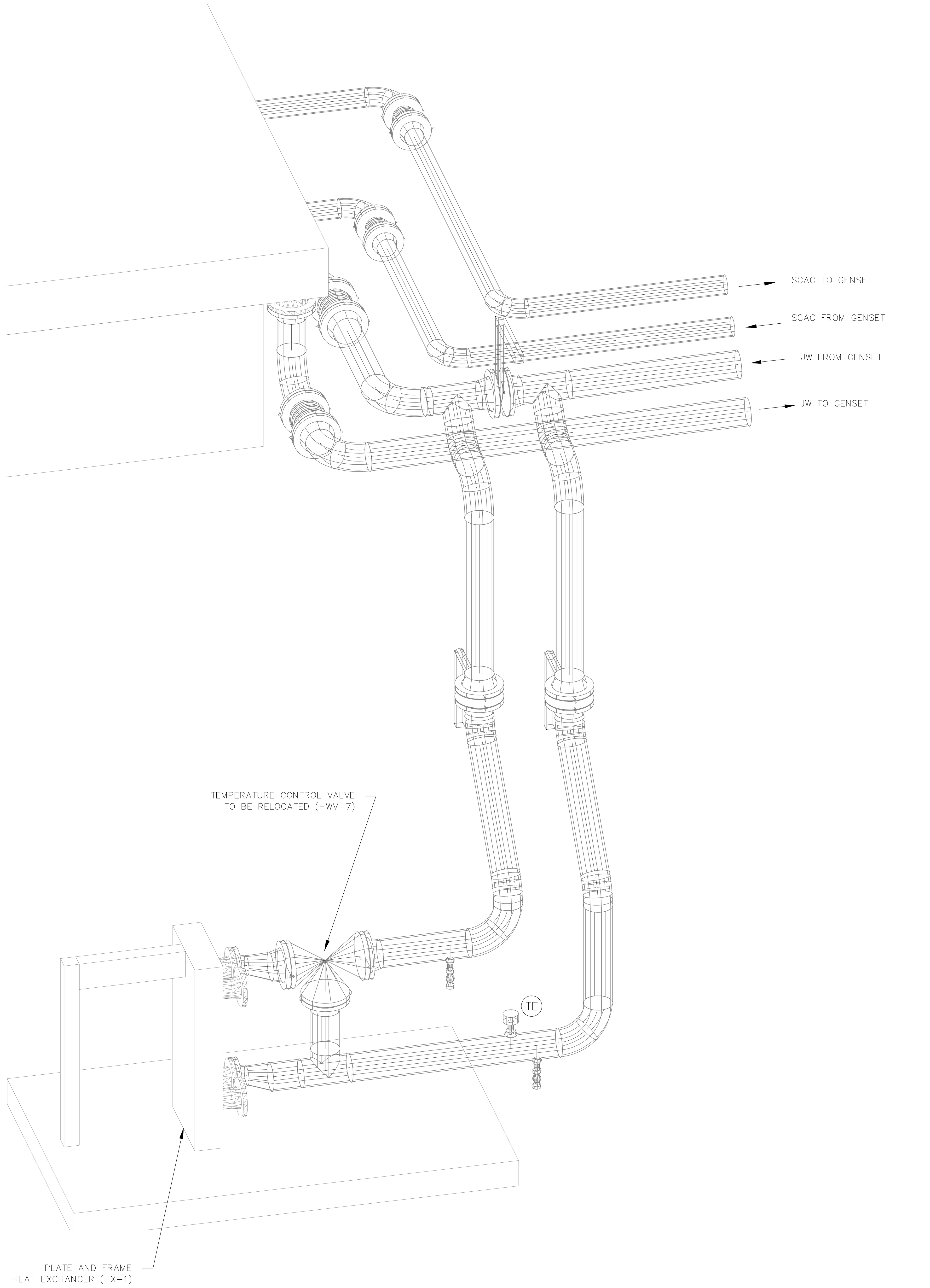
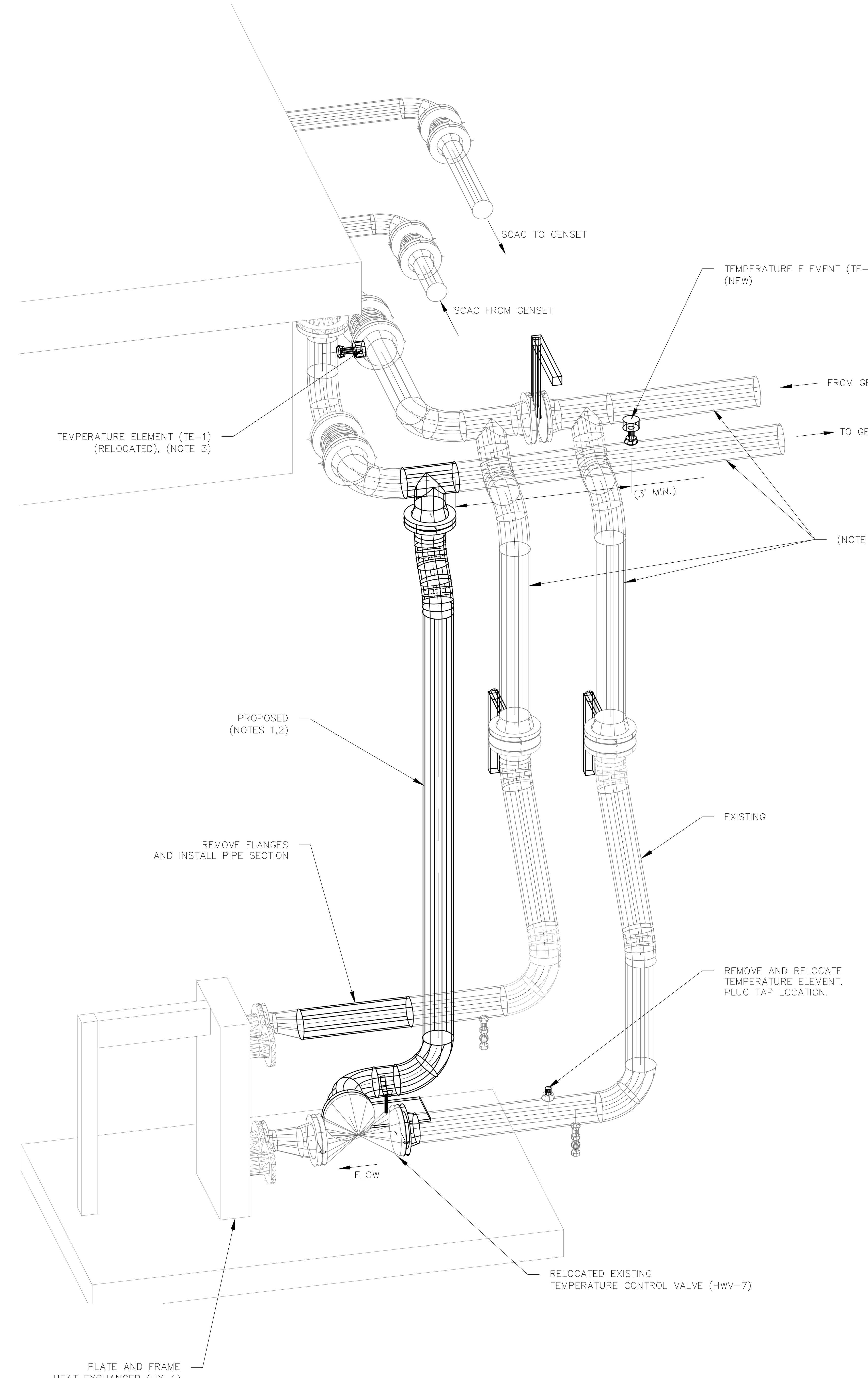
GENERATOR BUILDING - HVAC

SHEET NUMBER
M002



VIEW A M003
SCALE: N.T.S.

EXISTING PIPING



VIEW B M003
SCALE: N.T.S.

PROPOSED

EXISTING

NOTES:
1. INSULATE ALL PIPE TO MATCH EXISTING.
2. PIPE AND FITTINGS TO BE SCH 40 CS. MATCH EXISTING PIPE DIAMETER.
3. FIELD VERIFY THERMOCOUPLE EXTENSION WIRE (TEW), MATCH EXISTING. PROVIDE CONTINUOUS LENGTH OF TEW FROM TEMPERATURE ELEMENT TO VALVE. CONDUIT TO BE RIGID GALVANIZED STEEL.

SCS ENGINEERS
2830 DAIRY DRIVE MADISON, WI 53718-6751
PHONE: (608) 224-2830

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7102 US HWY 12/18
MADISON, WISCONSIN

DANE COUNTY DEPARTMENT OF
PUBLIC WORKS
SOLID WASTE DIVISION
1919 ALLIANT ENERGY CENTER WAY
MADISON, WI 53713

PROCESS AND CIVIL ENGINEER:
SCS ENGINEERS
2830 DAIRY DRIVE
MADISON, WI 53718-6751
(608) 224-2830

ARCHITECT:
DORSCHNER ASSOCIATES, INC.
849 E. WASHINGTON AVE., SUITE 112
MADISON, WI 53703

STRUCTURAL ENGINEER:
PIERCE ENGINEERS, INC.
10 WEST MIFFLIN ST., SUITE 205
MADISON, WI 53703

MECHANICAL, ELECTRIC, PLUMBING DESIGN:
JDR ENGINEERING, INC.
5525 NOBEL DRIVE, SUITE 110
MADISON, WI 53711

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JACKET WATER AND SCAC PIPING

SHEET NUMBER
M003

EXISTING 3'-0" X 3'-0" INTAKE LOUVER BOTTOM OF LOUVER 14'-0" ABOVE FLOOR

M (EF-1 (E))

60/10(E) EA DUCT DOWN TO 12" AFF

EG(E) 1625

60/10 (E)

EG(E) 1625

S CO(E)

EXISTING GAS MONITOR

M

UP TO EXISTING EXHAUST FAN EF-1(E).

EXISTING 3'-0" X 3'-0" INTAKE LOUVER BOTTOM OF LOUVER 14'-0" ABOVE FLOOR

M

GENERAL NOTES:

1. HVAC CONTRACTOR TO FIELD VERIFY EXACT LOCATION OF DUCT & PIPE ROUTING AND EQUIPMENT LOCATIONS AND CLEARANCES ON JOB SITE.

S CO(E)

EXISTING GAS MONITOR

REMOVE EXISTING FAN STARTER EF-2(E)

EXISTING FAN STARTER FOR EF-1(E)

S CO(E)

S NO2(E)

RELOCATE EXISTING SENSORS (CEILING MOUNTED).

S CO(E)

S NO2(E)

REMOVE EXISTING SIDEWALL EXHAUST FAN EF-2(E). LOUVER AND MOTORIZED DAMPER SHALL REMAIN.

M

WTS UPPER LEVEL

13

EF-5(E)

REMOVE AND RELOCATE EXISTING FAN STARTER EF-5(E)

EF-1(E) THRU EF-4 (E)

EXISTING TEMPERATURE SENSOR AT CEILING. EXISTING FANS EF-1 THRU EF-4 INDEX ON WHEN INTERIOR TEMPERATURE EXCEEDS 85°F.

EXISTING 3" DIRECT BURIED HWS AND HWR PIPING FROM GENERATOR PLANT

EXISTING 3" HWS AND HWR PIPING TO MECH. MEZZANINE ABOVE.

34/16 EA HIGH (E)
34/16 SA BELOW (E)

8/8(E)

EG(E) 200

34/16 EA HIGH (E)
34/16 SA BELOW (E)
10/8 (E)

8/8 EA (E) DOWN. EG(E). 200 CFM

2" HWS/R(E)

SG(E) 450

8/8 EA (E) DOWN. EG(E). 200 CFM

SR(E) 150

SR(E) 150

24/16 EA HIGH (E)

10/8(E)

UH-1(E)

1-1/4" HWS/R(E)

24/16 SA BELOW (E)

REMOVE EXISTING SIDEWALL EXHAUST FAN EF-3(E). LOUVER AND MOTORIZED DAMPER SHALL REMAIN.

M

SG(E) 950

16/8 EA (E) DOWN. EG(E). 700 CFM

20/16 EA HIGH (E)
18/16 SA BELOW (E)

EG(E) 700

16/8 (E)

SG(E) 950

1-1/2" HWS/R(E)

16/14 EA HIGH (E)
14/14 SA BELOW 9E)

SG(E) 950

16/8 (E)

UH-2(E)

1-1/4" HWS/R(E)

EG(E) 700

16/8 EA (E) DOWN. EG(E). 700 CFM

1-1/4" HW BYPASS (E) AT END OF HOT WATER MAIN.

M

(EF-9 (E))

M (EF-4 (E))

EXISTING 3'-0" X 3'-0" INTAKE LOUVER BOTTOM OF LOUVER 18'-0" ABOVE FLOOR

RELOCATE EXISTING SENSORS (CEILING MOUNTED).

S CO(E)

S NO2(E)

REMOTE SENSORS (E) AT CEILING (TYPICAL AT 4 LOCATIONS)

S CO(E)

S NO2(E)

REMOVE AND RELOCATE EXISTING GAS MONITOR

S CO(E)

UP TO EXISTING EXHAUST FAN EF-4 (E).

M

REMOVE EXISTING MOTORIZED DAMPER AND ACTUATOR. PATCH EXHAUST DUCTWORK AIRTIGHT.

60/10 (E)

EXISTING GAS MONITOR

S CO(E)

60/10(E) EA DUCT DOWN

REMOVE EXISTING FAN STARTER EF-3(E)

EXISTING FAN STARTER FOR EF-4(E)

1 M101 WTS TIPPING FLOOR PLAN DEMOLITION - HVAC

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

NORTH

SCS ENGINEERS
2830 DAIRY DRIVE MADISON, WI 53718-6751
PHONE: (608) 224-2830

JDR ENGINEERING, INC.
5525 NOBEL DRIVE
SUITE 110
MADISON, WI 53711
ph:608.277.1728 fax:608.271.7046
JDR Project No. 150012

CONSTRUCTION AND DEMOLITION WASTE RECYCLING FACILITY 7102 US HIGHWAY 12/18 MADISON, WISCONSIN

DANE COUNTY DEPARTMENT OF PUBLIC WORKS
SOLID WASTE DIVISION
1919 ALLIANT ENERGY CENTER WAY
MADISON, WI 53713

PROCCESS AND CIVIL ENGINEER:
SCS ENGINEERS
2830 DAIRY DRIVE
MADISON, WI 53718-6751
(608) 224-2830

ARCHITECT:
DORSCHNER ASSOCIATES, INC.
849 E. WASHINGTON AVE., SUITE 112
MADISON, WI 53703

STRUCTURAL ENGINEER:
PIERCE ENGINEERS, INC.
10 WEST MIFFLIN ST., SUITE 205
MADISON, WI 53703

MECHANICAL, ELECTRICAL, PLUMBING DESIGN
JDR ENGINEERING, INC.
5525 NOBEL DRIVE, SUITE 110
MADISON, WI 53711

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WTS TIPPING FLOOR PLAN DEMOLITION - HVAC

SHEET NUMBER

M101

GENERAL NOTES:

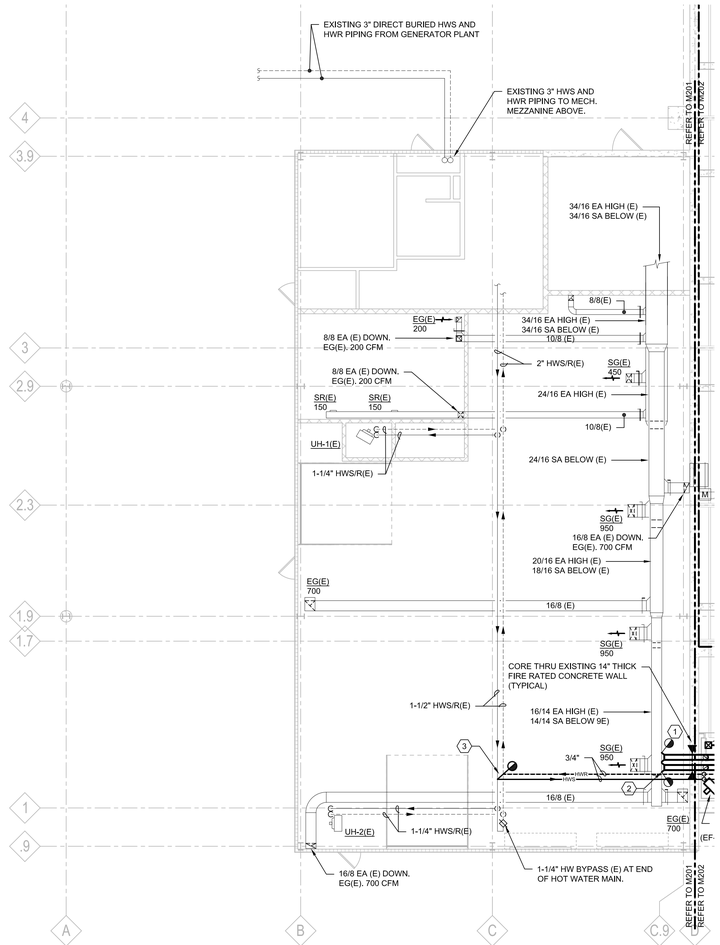
1. HVAC CONTRACTOR TO FIELD VERIFY EXACT LOCATION OF DUCT & PIPE ROUTING AND EQUIPMENT LOCATIONS AND CLEARANCES ON JOB SITE.

KEYED NOTES:

(1) CONNECT NEW 8" SUPPLY AIR DUCT INTO EXISTING 14/14 SUPPLY AIR DUCT. PATCH INSULATION AT CONNECTION POINT TO PROVIDE CONTINUOUS INSULATION AND VAPOR BARRIER.

(2) CONNECT NEW 8" EXHAUST AIR DUCT INTO EXISTING 16/14 EXHAUST AIR DUCT.

(3) LOCATION FOR TIE INTO EXISTING HOT WATER SYSTEM TO SERVE NEW UNISEX TOILET ROOMS HOT WATER UNIT HEATERS.



1 M201 CLEAN SWEEP BUILDING - MAIN LEVEL - HVAC

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

NORTH

SCS ENGINEERS
2830 DAIRY DRIVE MADISON, WI 53718-6751
PHONE: (608) 224-2830

JDR ENGINEERING, INC.
5525 NOBEL DRIVE
SUITE 110
MADISON, WI 53711
ph:608.277.1728 fax:608.271.7046
JDR Project No. 150412

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7102 US HIGHWAY 12/18
MADISON, WISCONSIN

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PROCCESS AND CIVIL ENGINEER:
SCS ENGINEERS
2830 DAIRY DRIVE
MADISON, WI 53718-6751
(608) 224-2830

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DORSCHNER ASSOCIATES, INC.
849 E. WASHINGTON AVE., SUITE 112
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5525 NOBEL DRIVE, SUITE 110
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CLEAN SWEEP BUILDING - MAIN LEVEL - HVAC

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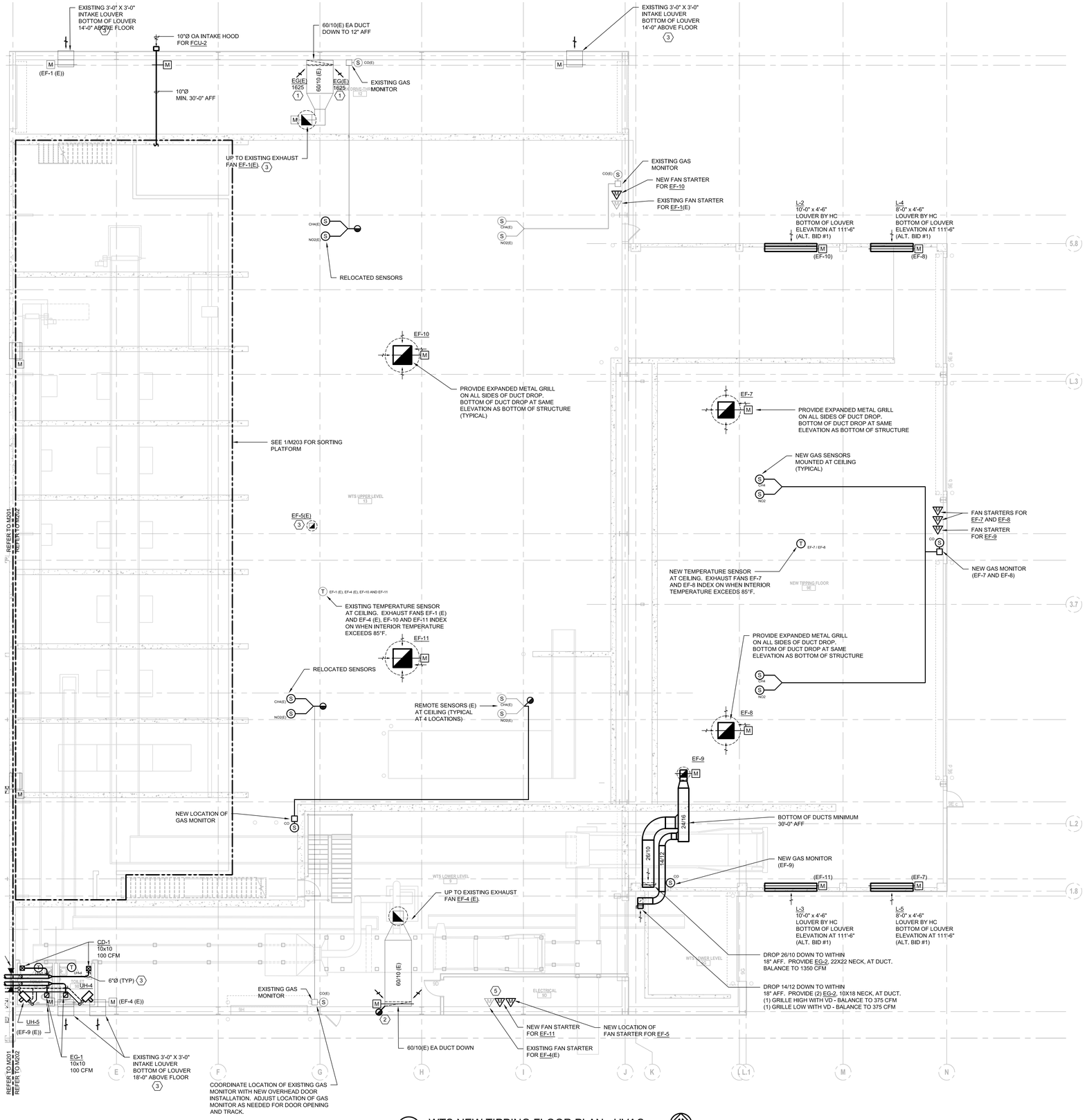

1 M202 WTS NEW TIPPING FLOOR PLAN - HVAC
SCALE: 1/8"=1'-0"

NORTH

GENERAL NOTES:

1. HVAC CONTRACTOR TO FIELD VERIFY EXACT LOCATION OF DUCT & PIPE ROUTING AND EQUIPMENT LOCATIONS AND CLEARANCES ON JOB SITE.
2. CLEAN ALL EXISTING LOUVERS, FANS, MOTORIZED DAMPERS, ACTUATORS AND CALIBRATE ALL SENSORS.

KEYED NOTES:

1. REMOVE AND CLEAN EXISTING GRILLE TO LIKE NEW CONDITION.
2. EXTEND 60/10 EXHAUST DUCT DOWN TO 12" AFF. PROVIDE (2) EG-2 GRILLES, 22X22 NECK, AT FACE OF DUCT, 1625 CFM EACH. PROVIDE 60/10 MOTORIZED DAMPER AND ACTUATOR AND MOUNT AT DUCT DROP.
3. CLEAN EXISTING LOUVER, DAMPER AND ACTUATOR.
4. ROUTE 6"Ø DOWN THRU CEILING DECK OF TOILET ROOMS TO CD AND EG CONNECTIONS. PACK AND SEAL PERIMETER OF DUCT PENETRATION AIRTIGHT.
5. COORDINATE WITH EC THE EXISTING AND NEW FAN STARTER LOCATIONS WITH NEW ELECTRICAL EQUIPMENT. MOVE EXISTING FAN STARTER AS NEEDED FOR NEW ELECTRICAL EQUIPMENT AT THIS LOCATION.

SCS ENGINEERS
2830 DAIRY DRIVE MADISON, WI 53718-6751
PHONE: (608) 224-2830

JDR ENGINEERING, INC.
5525 NOBEL DRIVE
SUITE 110
MADISON, WI 53711
ph:608.277.1728 fax:608.271.7046
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7102 US HIGHWAY 12/18
MADISON, WISCONSIN

DANE COUNTY DEPARTMENT OF PUBLIC WORKS
SOLID WASTE DIVISION
1919 ALLIANT ENERGY CENTER WAY
MADISON, WI 53713

PROCCESS AND CIVIL ENGINEER:
SCS ENGINEERS
2830 DAIRY DRIVE
MADISON, WI 53718-6751
(608) 224-2830

ARCHITECT:
DORSCHNER ASSOCIATES, INC.
849 E. WASHINGTON AVE., SUITE 112
MADISON, WI 53703

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PIERCE ENGINEERS, INC.
10 WEST MIFFLIN ST., SUITE 205
MADISON, WI 53703

MECHANICAL, ELECTRICAL, PLUMBING DESIGN
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WTS NEW TIPPING FLOOR PLAN - HVAC

SHEET NUMBER
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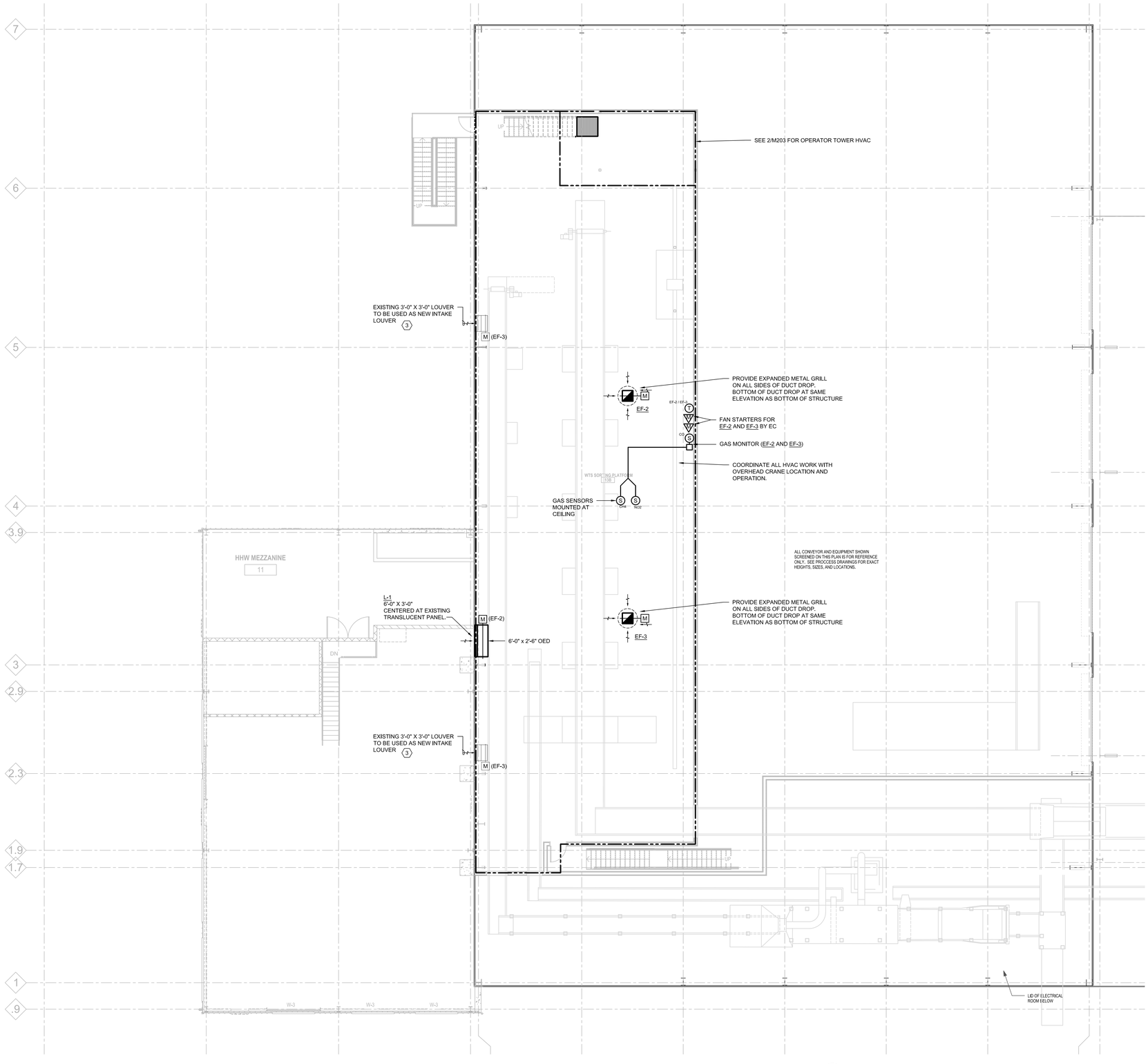


1 M203 WTS SORTING PLATFORM FLOOR PLAN - HVAC
SCALE: 1/8"=1'-0"

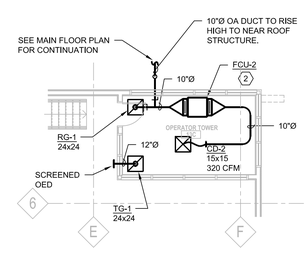
NORTH

GENERAL NOTES:

1. HVAC CONTRACTOR TO FIELD VERIFY EXACT LOCATION OF DUCT & PIPE ROUTING AND EQUIPMENT LOCATIONS AND CLEARANCES ON JOB SITE.
2. CLEAN ALL EXISTING LOUVERS, FANS, MOTORIZED DAMPERS, ACTUATORS AND CALIBRATE ALL SENSORS.

KEYED NOTES:

1. RE-BALANCE EXISTING MAU-1 TO ACCOMMODATE ADDITIONAL SUPPLY AND EXHAUST AIR FROM TOILET ROOMS 9A AND 9B. NEW AIRFLOW SHALL BE 4,200 SUPPLY AND 4,200 EXHAUST.
2. FAN COIL UNIT SHALL BE MOUNTED ABOVE LAY-IN CEILING WITH SPRING VIBRATION ISOLATORS AND FLEXIBLE DUCT CONNECTIONS. ROUTE ALL DUCTWORK ABOVE LAY-IN CEILING. PROVIDE INSULATION AT DUCTWORK PER SPECIFICATIONS.
3. CLEAN EXISTING LOUVER, DAMPER AND ACTUATOR.



2 M203 OPERATOR TOWER - HVAC
SCALE: 1/8"=1'-0"

SCS ENGINEERS
2830 DAIRY DRIVE MADISON, WI 53718-6751
PHONE: (608) 224-2830

JDR ENGINEERING, INC.
5525 NOBEL DRIVE
SUITE 110
MADISON, WI 53711
ph:608.277.1728 fax:608.271.7046
JDR Project No. 15012

CONSTRUCTION AND DEMOLITION WASTE RECYCLING FACILITY
7102 US HIGHWAY 12/18
MADISON, WISCONSIN

DANE COUNTY DEPARTMENT OF PUBLIC WORKS
SOLID WASTE DIVISION
1919 ALLIANT ENERGY CENTER WAY
MADISON, WI 53713

PROCCESS AND CIVIL ENGINEER:
SCS ENGINEERS
2830 DAIRY DRIVE
MADISON, WI 53718-6751
(608) 224-2830

ARCHITECT:
DORSCHNER ASSOCIATES, INC.
849 E. WASHINGTON AVE., SUITE 112
MADISON, WI 53703

STRUCTURAL ENGINEER:
PIERCE ENGINEERS, INC.
10 WEST MIFFLIN ST., SUITE 205
MADISON, WI 53703

MECHANICAL, ELECTRICAL, PLUMBING DESIGN
JDR ENGINEERING, INC.
5525 NOBEL DRIVE, SUITE 110
MADISON, WI 53711

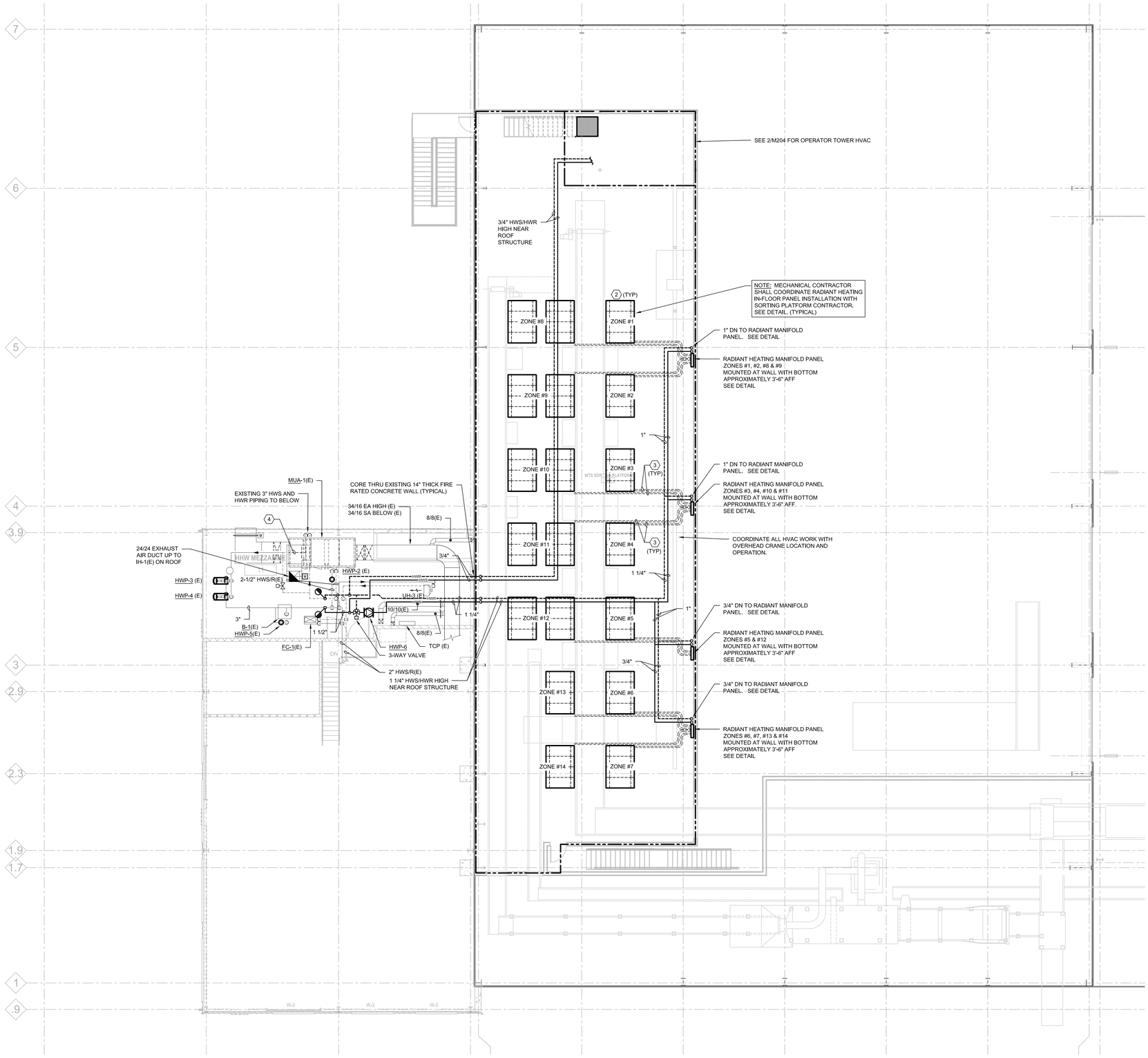
REVISION	DATE	BY	TITLE

PROJECT NO.	25214236.00
DRAWN:	04/28/15
REVISED:	04/28/15
DRAWN BY:	JDR
CHECKED BY:	JDR
APPROVED BY:	

BID DOCUMENTS ISSUED 04/28/15

WTS SORTING PLATFORM FLOOR PLAN - HVAC

SHEET NUMBER
M203



1 M204 WTS SORTING PLATFORM FLOOR PLAN - HVAC PIPING
SCALE: 1/8"=1'-0"

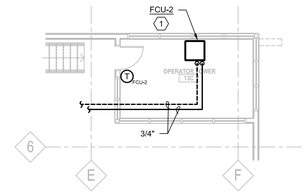
NORTH

GENERAL NOTES:

1. HVAC CONTRACTOR TO FIELD VERIFY EXACT LOCATION OF DUCT & PIPE ROUTING AND EQUIPMENT LOCATIONS AND CLEARANCES ON JOB SITE.

KEYED NOTES:

1. FAN COIL UNIT SHALL BE MOUNTED ABOVE LAY-IN CEILING. CONNECT HWS/HWR PIPING TO HW COIL CONNECTIONS. SEE DETAIL.
2. HOT WATER RADIANT HEATING PANEL INSTALLED AT FLOOR. 1/2" PEX TUBING, 6" OC INSTALLED WITHIN INSULATED RADIANT PANEL SYSTEM. SEE DETAIL.
3. 1/2" PEX TUBING ROUTED FROM MANIFOLD PANEL TO RADIANT FLOOR PANEL. ROUTE PEX TUBING ATTACHED TO UNDERSIDE OF SORTING FLOOR STRUCTURE. INSULATE ALL TUBING ROUTED AT UNDERSIDE OF SORTING FLOOR STRUCTURE PER SPECIFICATIONS. PROVIDE MINIMUM 20 GA. SHEETMETAL ENCLOSURE COVER OVER INSULATED TUBING TO PROTECT TUBING. TYPICAL EACH RADIANT FLOOR PANEL.
4. PROVIDE AND INSTALL NEW HWS TEMPERATURE SENSOR AT EXISTING HWS PIPING IN MECHANICAL ROOM BEFORE BY-PASS LINE.



2 M204 OPERATOR TOWER - HVAC PIPING
SCALE: 1/8"=1'-0"

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WTS SORTING PLATFORM FLOOR PLAN - HVAC PIPING

SHEET NUMBER

M204

FAN COIL UNIT SCHEDULE

UNIT NO.		FCU-2	
MANUFACTURER		ENVIRO-TEC	
MODEL NO.		HLP 40	
SERVICE		CONTROL TOWER	
LOCATION		CONTROL TOWER	
TYPE		HORIZ. DUCTED	
FAN SECTION	SUPPLY CFM	320	
	MIN. OA CFM	25	
	EXT. SP (IN WC)	0.50	
	SUPPLY FAN HP	1/6	
	VOLTAGE/PHASE	208 / 1	
	SUPPLY FAN TYPE	FC	
	SUPPLY FAN SPEED	MED.	
HEATING COIL DATA	CAPACITY (MBH)	22.0	
	EAT (°F) DB/WB	45.0	
	LAT (°F) DB/WB	115.0	
	EWT (°F)	180	
	LWT (°F)	160	
	GPM	2.5	
	MAX. FACE VELOCITY (FPM)	-	
	MAX. AIR PD (FT)	0.10	
	MIN. ROWS/MAX FINS	2 / 10	
UNIT WEIGHT (LBS)		80.0	
REMARKS		⟨1⟩	

KEYED NOTES:

⟨1⟩ HOT WATER PERFORMANCE BASED ON 50% ETHYLENE GLYCOL.

PUMP SCHEDULE

UNIT NO.	HWP-6	HWP-3 (E) & 4 (E)
MANUFACTURER	B&G	TACO
MODEL NO.	PL-55	FI 1506
LOCATION	MECH ROOM	MECH ROOM
SERVICE	SORTING FLOOR RADIANT	BUILDING HEATING LOOP
TYPE	INLINE	BASE MTD
CAPACITY GPM	9.0	80.0
PRESSURE HEAD (FT)	35.0	35.0
SHUT-OFF PRESSURE HEAD (FT)	-	-
MIN. NPSH REQUIRED (FT)	-	-
INLET/OUTLET (IN)	1.5 / 1.5	-
IMPELLER DIAMETER	3.8	6.25
MIN. EFF. %	-	-
RPM	3250	1760
BHP	-	-
HP	0.40	1.5
VOLTAGE/PHASE	208 / 1	-
VFD	NO	YES (E)
UNIT WEIGHT (LBS)	-	-
REMARKS	⟨1⟩	⟨2⟩

KEYED NOTES:

⟨1⟩ PUMP PERFORMANCE BASED ON 50% ETHYLENE GLYCOL.

⟨2⟩ EXISTING PUMPS (100% STAND-BY). REBALANCE EXISTING PUMPS TO LISTED FLOW.

HOT WATER UNIT HEATER SCHEDULE

UNIT NO.	UH-4	UH-5	
SERVICE	TOILET ROOMS	TOILET ROOMS	
MANUFACTURER	VULCAN	VULCAN	
MODEL NO.	HV-108A	HV-108A	
TYPE	HORIZONTAL	HORIZONTAL	
THROW (FT)	-	-	
AIRFLOW (CFM)	210	210	
EAT (°F)	60.0	60.0	
CAPACITY (MBH)	4.5	4.5	
GPM	0.50	0.50	
EWT (°F)	180	180	
LWT (°F)	160	160	
WPD (FT)	1.0	1.0	
MOTOR HP	16.0 WATTS	16.0 WATTS	
VOLTAGE/PHASE	120 / 1	120 / 1	
RPM	1350	1350	
FAN SPEED	MED	MED	
REMARKS	⟨1⟩⟨2⟩	⟨1⟩⟨2⟩	

KEYED NOTES:

⟨1⟩ HOT WATER PERFORMANCE BASED ON 50% ETHYLENE GLYCOL.

⟨2⟩ PROVIDE OPTIONAL MOTOR SPEED CONTROLLER MOUNTED TO UNIT. SET ON MED SPEED. WIRED BY EC.

FAN SCHEDULE

SF = SUPPLY FAN
RF = RETURN FAN
EF = EXHAUST FAN
TF = TRANSFER FAN
CF = CEILING (DESTRATIFICATION) FAN
CEF = CEILING EXHAUST FAN

UNIT NO.		EF-1(E)	EF-2	EF-3	EF-4(E)	EF-5(E)	EF-6(E)	EF-7	EF-8	EF-9	EF-10	EF-11
LOCATION		ROOF	ROOF	ROOF	ROOF	ROOF	ROOF	ROOF	ROOF	ROOF	ROOF	ROOF
MANUFACTURER		EXIST	GREENHECK	GREENHECK	EXIST	EXIST	EXIST	GREENHECK	GREENHECK	GREENHECK	GREENHECK	GREENHECK
MODEL NO.		EXIST	CUBE-240-15	CUBE-240-15	EXIST	EXIST	EXIST	CUBE-240-15	CUBE-360-30	CUBE-161-5	CUBE-420-50	CUBE-420-50
SERVICE		TRUCK DRIVE THRU	SORTING PLATFORM	SORTING PLATFORM	WTS LOWER LEVEL	WTS UPPER LEVEL	MECH ROOM	NEW TIPPING FLOOR	NEW TIPPING FLOOR	NEW WTS LOWER ELVEL	WTS UPPER LEVEL	WTS UPPER LEVEL
FAN TYPE		PRV	PRV	PRV	PRV	PRV	PRV	PRV	PRV	PRV	PRV	PRV
ARRANGEMENT		-	UPBLAST	UPBLAST	-	-	-	UPBLAST	UPBLAST	UPBLAST	UPBLAST	UPBLAST
DESIGN CFM		3250	6000	6000	3250	1300	400	10,500	10,500	2100	15,500	15,500
EXT. SP (IN WC)		-	0.50	0.50	-	-	-	0.50	0.50	0.50	0.50	0.50
FAN WHEEL TYPE		-	BI	BI	-	-	-	BI	BI	BI	BI	BI
FAN DIAMETER		-	24"	24"	-	-	-	36"	36"	16"	42"	42"
APPROXIMATE FAN RPM		-	793	793	-	-	-	483	483	969	438	438
BHP		-	1.30	1.30	-	-	-	1.82	1.82	0.38	3.0	3.0
MOTOR HP		-	1.5	1.5	-	-	-	3.0	3.0	0.50	5.0	5.0
VOLTS/PHASE		-	460/3	460/3	-	-	-	460/3	460/3	460/3	460/3	460/3
DRIVE		-	BELT	BELT	-	-	-	BELT	BELT	BELT	BELT	BELT
TWO SPEED		-	-	-	-	-	-	-	-	-	-	-
VFD		-	-	-	-	-	-	-	-	-	-	-
MAX. SONES		-	17.0	17.0	-	-	-	17.0	17.0	11.0	15.0	15.0
MAX. FAN INLET AIR SOUND DATA SOUND POWER (dB) OCTAVE BAND (dB)	1	-	79	79	-	-	-	84	84	72	88	88
	2	-	88	88	-	-	-	91	91	78	84	84
	3	-	82	82	-	-	-	79	79	74	78	78
	4	-	74	74	-	-	-	70	70	71	73	73
	5	-	73	73	-	-	-	69	69	67	69	69
	6	-	68	68	-	-	-	64	64	64	65	65
	7	-	60	60	-	-	-	56	56	59	57	57
	8	-	55	55	-	-	-	52	52	55	52	52
REMARKS			⟨1⟩	⟨1⟩				⟨1⟩	⟨1⟩	⟨1⟩	⟨1⟩	⟨1⟩

KEYED NOTES:

⟨1⟩ PROVIDE FAN WITH EXPLOSION PROOF MOTOR, ALL ALUMINUM WHEEL AND RUB RING, STAINLESS STEEL SHAFT AND STAINLESS STEEL FASTENERS.

AIR DEVICE SCHEDULE

EG 1 (3) 12x12/10"Ø 300
- 1 (3): UNIT NUMBER
- 12x12/10"Ø: THROW (IF OTHER THAN NORMAL)
- 300: NECK SIZE (SQ/RO)
- EG: CFM

SG = SUPPLY GRILLE
RG = RETURN GRILLE
EG = EXHAUST GRILLE

LD = LINEAR DIFFUSER (SUPPLY)
CD = CEILING DIFFUSER (SUPPLY)
TG = TRANSFER GRILLE

UNIT NO.	CD-1	CD-2	RG-1	EG-1	EG-2	TG-1	
SERVICE	SUPPLY	SUPPLY	RETURN	EXHAUST	EXHAUST	TRANSFER	
MANUFACTURER	TITUS	TITUS	TITUS	TITUS	TITUS	TITUS	
MODEL NO.	TDCA-AA	TDCA-AA	350FL	350FL	60FL	350FL	
FACE STYLE	LOUVERED	LOUVERED	LOUVERED	LOUVERED	HEAVY DUTY	LOUVERED	
PATTERN	SEE PLANS	SEE PLANS	SINGLE DEFLECTION	SINGLE DEFLECTION	SINGLE DEFLECTION	SINGLE DEFLECTION	
FINISH	STANDARD	STANDARD	STANDARD	STANDARD	STANDARD	STANDARD	
MATERIAL	ALUMINUM	ALUMINUM	ALUMINUM	ALUMINUM	ALUMINUM	ALUMINUM	
SIZE (FACE/NECK)	SEE PLANS	SEE PLANS	SEE PLANS	SEE PLANS	SEE PLANS	SEE PLANS	
CFM RANGE	SEE PLANS	SEE PLANS	SEE PLANS	SEE PLANS	SEE PLANS	SEE PLANS	
MOUNTING	SURFACE	LAY-IN	LAY-IN	SURFACE	SURFACE	SURFACE	
DAMPER	NO	NO	NO	NO	NO	NO	
REMARKS	⟨1⟩	⟨1⟩					

GENERAL NOTES:
1. CONTRACTOR SHALL VERIFY MOUNTING SURFACE / FRAME REQUIREMENTS.
2. BRANCH DUCT SIZE TO DIFFUSER SHALL BE THE NECK SIZE OF THE DIFFUSER UNLESS NOTED OTHERWISE.
3. SEE SPECIFICATION FOR GRILLE, REGISTER, AND DIFFUSER FINISHES.
4. MAXIMUM STATIC PRESSURE DROP THROUGH GRILLE, REGISTER, OR DIFFUSER SHALL NOT EXCEED 0.1".
5. MAXIMUM NC LEVELS FOR GRILLES, REGISTERS, OR DIFFUSERS SHALL NOT EXCEED 25.
6. UNLESS THROW IS NOTED OTHERWISE, ALL DIFFUSERS SHALL BE 4-WAY THROW.

LOUVER SCHEDULE

UNIT NO.	L-1	L-2 AND L-3	L-4 AND L-5	
MANUFACTURER	GREENHECK	GREENHECK	GREENHECK	
MODEL NO.	ESD-635	ESD-635	ESD-635	
SERVICE	SORTING AREA	SORTING AREA	SORTING AREA	
AIRFLOW (CFM)	6,000	15,500	10,500	
SIZE WxH (IN)	72 X 36	120 X 54	96 X 54	
MIN. FREE AREA (FT²)	9.9	26.5	18.5	
FREE AREA VEL. (FPM)	625	585	570	
STATIC PRESSURE (IN W.C.)	0.08	0.08	0.08	
REMARKS		⟨1⟩	⟨1⟩	

KEYED NOTES:

⟨1⟩ PROVIDE LOUVERS AND MOTORIZED DAMPER/ACTUATORS AS PART OF ALTERNATE BID #1.

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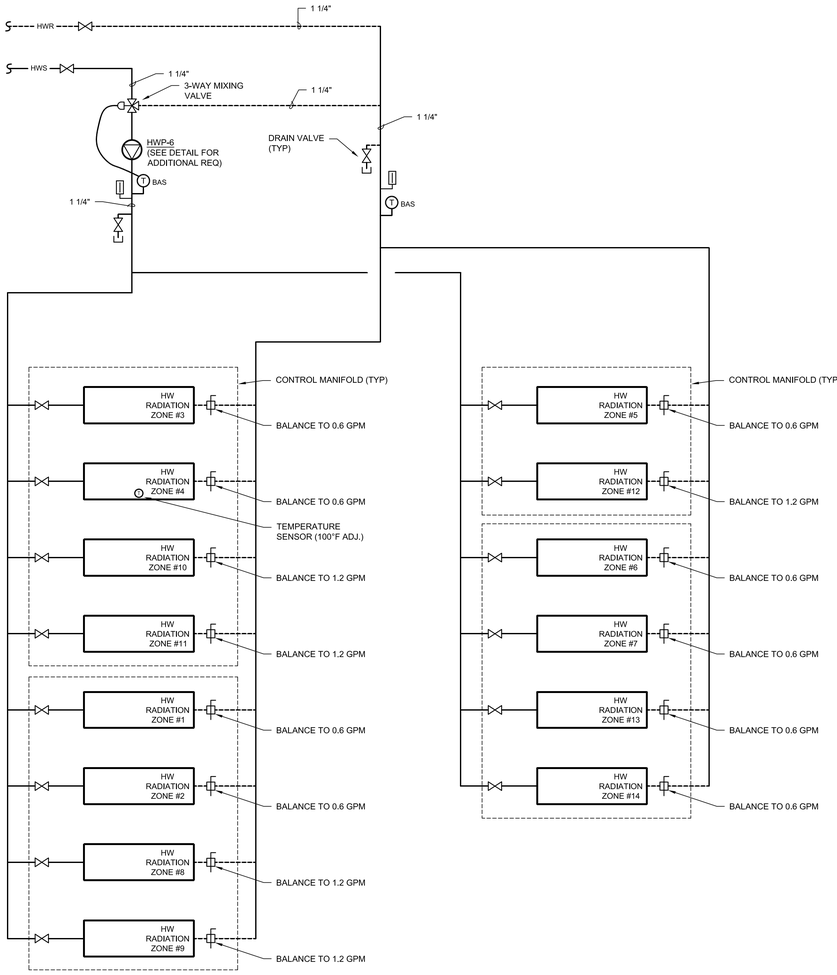
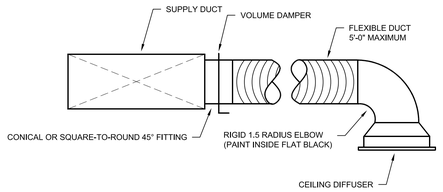
SCHEDULES - HVAC

SHEET NUMBER
M800



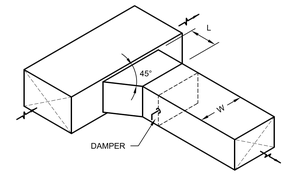
9 M900 RADIANT HEATING MANIFOLD PIPING SCHEMATICS

SCALE: NONE



5 M900 CEILING DIFFUSER CONNECTION

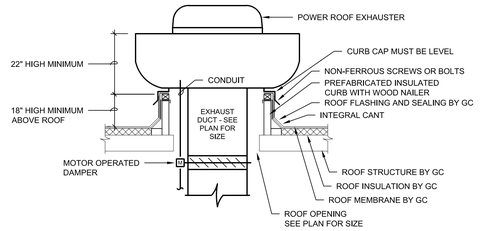
SCALE: NONE



NOTE: L = 1/4W (4" MINIMUM)

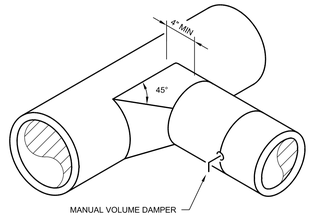
1 M900 BRANCH DUCT TAKEOFF

SCALE: NONE (REVERSE FLOW ARROWS FOR EXHAUST AND RETURN)



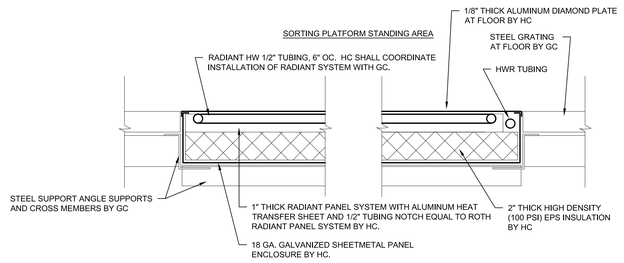
6 M900 UPBLAST POWER ROOF EXHAUSTER

SCALE: NONE



2 M900 BRANCH DUCT TAKEOFF DETAIL

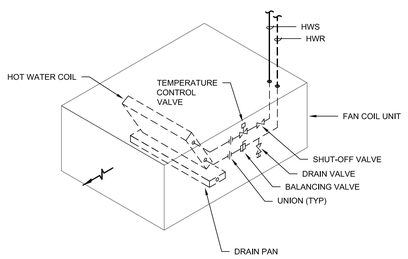
SCALE: NONE



7 M900 SECTION AT RADIANT FLOOR HEATING SYSTEM

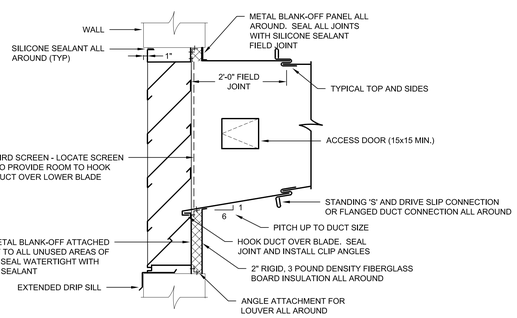
SCALE: NONE

NOTE:
HC SHALL COORDINATE ALL RADIANT FLOOR INSTALLATION REQUIREMENTS AND DETAILS WITH SORTING FLOOR CONTRACTOR. THE HC AND SORTING FLOOR CONTRACTOR SHALL WORK TOGETHER TO PROVIDE ADEQUATE AND NECESSARY MOUNTING AND SUPPORTS FOR THE RADIANT FLOOR PANELS AND COORDINATE INSTALLATION OF THE PANELS. RADIANT FLOOR PANELS SHALL BE INTEGRATED INTO THE SORTING PLATFORM STRUCTURAL DESIGN.



3 M900 FAN COIL UNIT PIPING DETAIL

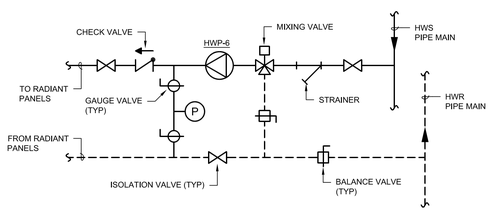
SCALE: NONE



NOTE: ALL DUCT JOINTS, CORNERS AND SEAMS SHALL BE SEALED WITH SILICONE SEALANT OR SOLDERED LEAK TIGHT.

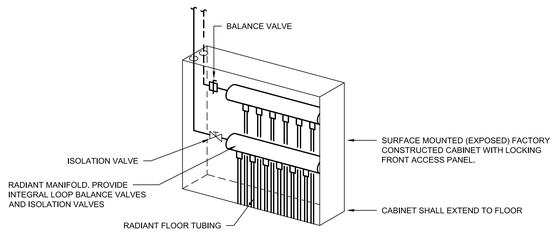
11 M900 LOUVER INSTALLATION DETAIL

SCALE: NONE



10 M900 MIXING VALVE DETAIL

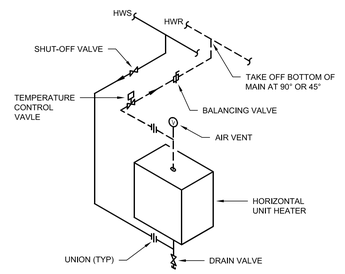
SCALE: NONE



NOTE:
CONTRACTOR SHALL COORDINATE / VERIFY LOOP QUANTITY REQUIRED FOR EACH ZONE MANIFOLD. SEE PLAN FOR LOOP QUANTITY AND LAYOUT.

8 M900 RADIANT MANIFOLD DETAIL

SCALE: NONE



4 M900 HORIZONTAL HOT WATER UNIT HEATER PIPING DETAIL

SCALE: NONE

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MADISON, WI 53718-6751
(608) 224-2830

ARCHITECT:
DORSCHNER ASSOCIATES, INC.
849 E. WASHINGTON AVE., SUITE 112
MADISON, WI 53703

STRUCTURAL ENGINEER:
PIERCE ENGINEERS, INC.
10 WEST MIFFLIN ST., SUITE 205
MADISON, WI 53703

MECHANICAL, ELECTRICAL, PLUMBING DESIGN
JDR ENGINEERING, INC.
5525 NOBEL DRIVE, SUITE 110
MADISON, WI 53711

REVISION	DATE	BY	TITLE

PROJECT NO.	25214236.00
DRAWN:	04/28/15
REVISED:	04/28/15
DRAWN BY:	JDR
CHECKED BY:	JDR
APPROVED BY:	

BID DOCUMENTS ISSUED 04/28/15

DETAILS AND SCHEMATICS - HVAC

SHEET NUMBER

M900

LIGHT FIXTURE SCHEDULE

CALLOUT	SYMBOL	LAMP	DESCRIPTION	MODEL	INPUT WATTS	VOLTS	NOTE 1
A		(1) 320W PSMH	HID HIGHBAY	LUMARK MPLX-PD-PC3-FH-1 LITHONIA DAYBRITE	375	277V 1P 2W	PROVIDE CORD AND PLUG CONNECTION
A(ALT)		(1) 228W LED	LED HIGHBAY	METALUX HBLED-LD4-30-W-CL-277-L850-ED3-MP-MPC3 LITHONIA DAYBRITE	228	277V 1P 2W	ALTERNATE BID #2 - PROVIDE IN LIEU OF ALL TYPE A, A(EX) AND A(RE) FIXTURES
A(EX)		(1) 320W PSMH	EXISTING HID HIGHBAY	LUMARK MPLX-PD-PC3-FH-1	375	277V 1P 2W	EXISTING FIXTURE REUSED IN PLACE
A(RE)		(1) 320W PSMH	EXISTING HID HIGHBAY	LUMARK MPLX-PD-PC3-FH-1	375	277V 1P 2W	EXISTING FIXTURE RELOCATED
B		(2) 32W T8	4' WALL MOUNT BATHROOM VANITY	METAUX BAU EB LITHONIA DAYBRITE	64	277V 1P 2W	
C		(2) 32W T8	4' VAPORTIGHT INDUSTRIAL	METALUX VT3-232DR100-UNV-EB81 LITHONIA DAYBRITE	64	277V 1P 2W	
D		(4) 32W T8	HIGH BAY FLUORESCENT	METALUX 2HB-432-MPC3 LITHONIA DAYBRITE	128	277V 1P 2W	PROVIDE WITH CORD AND PLUG CONNECTION
EBU		(2) 20W MR16	EGRESS BATTERY UNIT	EMERGI-LITE B12SV24N-2MW-DA SURELITES LITHONIA	20	277V 1P 2W	
EG		(2) 20W MR16	DOUBLE HEAD REMOTE EGRESS	EMERGI-LITE EF39-MD SURELITES LITHONIA	3	MULTIPLE	
OB		(6) 52W LED	EXTERIOR WALL MOUNT	McGRAW EDISON GLEON-AAE-6-LED-E1-T4W-BK-WM LITHONIA DAYBRITE	312	277V 1P 2W	
OC		(6) 52W LED	EXTERIOR POLE MOUNT	McGRAW EDISON GLEON-AAE-6-LED-E1-T4W-BK LITHONIA DAYBRITE	312	277V 1P 2W	REPLACE EXISTING POLE MOUNTED FIXTURE WITH NEW FIXTURE. REUSE EXISTING POLE.
X		(2) 12W MR16	SELF POWERED EXIT LIGHT W/ EGRESS	EMERGI-LITE BBSVX24NRDA2MK SURELITES LITHONIA	3	MULTIPLE	

BUILDING EQUIPMENT SCHEDULE

SYMBOL	CALLOUT	DESCRIPTION	VOLTS	AMPS	KVA	HP	CIRCUIT	STARTER DESCRIPTION	STARTER PROVIDED BY	STARTER INSTALLED BY	NOTES
	EF-2	EXHAUST FAN	480V 3P 3W	3	2.49	1.5 HP	LPA2(X)-2,4,6	COMBINATION	EC	EC	SEE HVAC DRAWINGS FOR STARTER LOCATION
	EF-3	EXHAUST FAN	480V 3P 3W	3	2.49	1.5 HP	LPA2(X)-2,4,6	COMBINATION	EC	EC	SEE HVAC DRAWINGS FOR STARTER LOCATION
	EF-7	EXHAUST FAN	480V 3P 3W	4.8	3.99	3 HP	LPA2(X)-8,10,12	COMBINATION	EC	EC	SEE HVAC DRAWINGS FOR STARTER LOCATION
	EF-8	EXHAUST FAN	480V 3P 3W	4.8	3.99	3 HP	LPA2(X)-8,10,12	COMBINATION	EC	EC	SEE HVAC DRAWINGS FOR STARTER LOCATION
	EF-9	EXHAUST FAN	480V 3P 3W	1.1	0.91	1/2 HP	LPA2(X)-8,10,12	COMBINATION	EC	EC	SEE HVAC DRAWINGS FOR STARTER LOCATION
	EF-10	EXHAUST FAN	480V 3P 3W	7.6	6.32	5 HP	LPA2(X)-14,16,18	COMBINATION	EC	EC	SEE HVAC DRAWINGS FOR STARTER LOCATION
	EF-11	EXHAUST FAN	480V 3P 3W	7.6	6.32	5 HP	LPA2(X)-14,16,18	COMBINATION	EC	EC	SEE HVAC DRAWINGS FOR STARTER LOCATION
	FCU-5	FAN COIL UNIT	208V 2P 2W	0.5	0.1		RPA2(X)-2,4	PACKAGE	EC	EC	PROVIDE DISCONNECT SWITCH AT UNIT. CONNECT TO RECEPTACLE CIRCUIT THE SAME ROOM.
	HWP-6	HOT WATER PUMP	208V 2P 2W	2.3	0.47	1/8 HP	RPA2(X)-2,4	N/A	EC	EC	PROVIDE DISCONNECT SWITCH AT UNIT
	M-1	MISTER (EXISTING)	480V 3P 3W	4.8	3.99	3 HP		COMBINATION	EC	EC	RELOCATE EXISTING WIRING TO NEW LOCATION SHOWN ON FLOOR PLANS
	M-2	MISTER (NEW)	480V 3P 3W	4.8	3.99	3 HP		COMBINATION	EC	EC	PROVIDE NEW WIRING FROM EXISTING BREAKER IN MDP
	MC-1	MONORAIL CRANE	480V 3P 3W	11	9.15	7.5 HP	LPA2(X)-20,22,24	N/A	EC	EC	INCLUDE IN ALTERNATE BID 3. PROVIDE NONFUSED DISCONNECT NEAR CRANE RAIL CONNECTION POINT.
	OHD-1	OVERHEAD DOOR OPERATOR	120V 1P 2W	9.8	1.18	1/2 HP		N/A	EC	EC	PROVIDE NONFUSED DISCONNECT AT DOOR. EXTEND EXISTING OHD CIRCUIT TO NEW LOCATION. INCLUDE INSTALLATION OF DOOR CONTROL WIRING. COORDINATE REQUIREMENTS WITH DOOR INSTALLER.
	OHD-2	OVERHEAD DOOR OPERATOR	120V 1P 2W	9.8	1.18	1/2 HP		N/A	EC	EC	PROVIDE NONFUSED DISCONNECT AT DOOR. EXTEND EXISTING OHD CIRCUIT TO NEW LOCATION. INCLUDE INSTALLATION OF DOOR CONTROL WIRING. COORDINATE REQUIREMENTS WITH DOOR INSTALLER.
	OHD-3	OVERHEAD DOOR OPERATOR	120V 1P 2W	9.8	1.18	1/2 HP		N/A	EC	EC	PROVIDE NONFUSED DISCONNECT AT DOOR. EXTEND EXISTING OHD CIRCUIT TO NEW LOCATION. INCLUDE INSTALLATION OF DOOR CONTROL WIRING. COORDINATE REQUIREMENTS WITH DOOR INSTALLER.
	OHD-4	OVERHEAD DOOR OPERATOR	120V 1P 2W	9.8	1.18	1/2 HP		N/A	EC	EC	PROVIDE NONFUSED DISCONNECT AT DOOR. EXTEND EXISTING OHD CIRCUIT TO NEW LOCATION. INCLUDE INSTALLATION OF DOOR CONTROL WIRING. COORDINATE REQUIREMENTS WITH DOOR INSTALLER.
	OHD-5	OVERHEAD HANGER DOOR OPERATOR	480V 3P 3W	2.1	1.75	1 HP		N/A	EC	EC	INCLUDE IN ALTERNATE BID 1. PROVIDE NONFUSED DISCONNECT AT DOOR. CONNECT TO SPARE BREAKER IN MDP. INCLUDE INSTALLATION OF DOOR CONTROL WIRING. COORDINATE REQUIREMENTS WITH DOOR INSTALLER.
	UH-4	UNIT HEATER	120V 1P 2W	0.8	0.1	F HP		N/A	EC	EC	CONNECT THROUGH VARIABLE SPEED CONTROL PROVIDED BY HC, INSTALLED BY EC. PROVIDE TOGGLE SWITCH AT UNIT. CONENCT TO SAME CIRCUIT SERVING RECEPTACLE IN ROOM.
	UH-5	UNIT HEATER	120V 1P 2W	0.8	0.1	F HP		N/A	EC	EC	CONNECT THROUGH VARIABLE SPEED CONTROL PROVIDED BY HC, INSTALLED BY EC. PROVIDE TOGGLE SWITCH AT UNIT. CONENCT TO SAME CIRCUIT SERVING RECEPTACLE IN ROOM.

SYMBOLS LIST:

MOUNTING HEIGHTS FOR DEVICES AND EQUIPMENT TO BE MEASURED FROM FINISHED FLOOR TO CENTERLINE OF DEVICE.

LIGHTING:

- CEILING MOUNTED FIXTURE
- Ab1 — CIRCUIT NUMBER. SEE PLANS FOR PANEL BOUNDARIES.
- CIRCUIT SWITCH LEG. NO DESIGNATION INDICATES PORTION OF CIRCUIT SWITCHED FROM LOCAL SWITCH OR OCCUPANCY SENSOR.
- FIXTURE TYPE
- SHADING INDICATES FIXTURE WIRED TO EMERGENCY OR NIGHT LIGHTING CIRCUIT
- WALL MOUNTED FIXTURE
- STRIP LIGHT
- DOWNLIGHT - RECESSED
- LIGHTING FIXTURE - CEILING SURFACE
- LIGHTING FIXTURE - WALL SURFACE
- ACCENT LIGHT - RECESSED
- LIGHTING FIXTURE - CEILING PENDANT
- LIGHTING FIXTURE - POLE MOUNTED

NOTE: SHADING OF ANY OF THE LIGHTING FIXTURES ABOVE INDICATES UNITS WIRED TO AN EMERGENCY OR NIGHT LIGHTING CIRCUIT.

- EXIT LIGHT. SHADING INDICATES FACE OF EXIT.
- K a — SINGLE POLE SWITCH - TOGGLE TYPE
- SWITCH DESIGNATION
- SWITCH TYPE
- (3) 3 WAY
- DIMMER SWITCH
- LIGHTING CONTROL OCCUPANCY SENSOR. WALL MOUNTED.
- LIGHTING CONTROL OCCUPANCY SENSOR. CEILING MOUNTED.
- REMOTE EGRESS
- LIGHTING CONTROL STATION

POWER:

- EWC 3 — DUPLEX RECEPTACLE - MOUNTED 18" AFF UNLESS NOTED OTHERWISE
- CIRCUIT NUMBER (SEE PLAN FOR PANEL BOUNDARIES) - TYPICAL
- RECEPTACLE TYPE OR EQUIPMENT SERVED.
  - (D) DEDICATED CIRCUIT
  - (EWC) ELECTRIC WATER COOLER
  - (WP) WEATHERPROOF
- DUPLEX RECEPTACLE - MOUNTED AT 46" TO CENTER OF DEVICE UNLESS NOTED OTHERWISE
- GROUND FAULT INTERRUPTING DUPLEX RECEPTACLE - MOUNTED AT 46" TO CENTER OF DEVICE UNLESS NOTED OTHERWISE
- DUPLEX RECEPTACLE - MOUNTED ABOVE CEILING
- FLOOR MOUNTED ELECTRICAL BOX SEE DRAWINGS AND SCHEDULE FOR TYPES OF OUTLETS REQUIRED AT EACH BOX.
- SIMPLEX RECEPTACLE
- 1 — MOTOR CONNECTION
- MOTOR DESIGNATION. REFER TO BUILDING EQUIPMENT SCHEDULE FOR FEEDER AND STARTER INFORMATION.
- DISCONNECT SWITCH
- JUNCTION BOX
- COMBINATION STARTER

SYSTEMS:

- COMMUNICATIONS ROUGH IN
- COMMUNICATIONS ROUGH IN - MOUNTED AT HEIGHT INDICATED
- W — WALL PHONE ROUGH IN - MOUNTED AT HEIGHT INDICATED
- FIRE ALARM MANUAL PULLSTATION
- FIRE ALARM AUDIO/VISUAL SIGNALLING DEVICE
- FIRE ALARM VISUAL ONLY SIGNALLING DEVICE
- S — SMOKE DETECTOR (PHOTO-ELECTRIC TYPE)
- H — HEAT DETECTOR - RATE OF RISE

ABBREVIATIONS:

ABV	ABOVE
AFF	ABOVE FINISHED FLOOR
AFG	ABOVE FINISHED GRADE
AIC	AVAILABLE INTERRUPTING CURRENT
AIE	ARCHITECT/ENGINEER
ALT	ALTERNATE
ALT SW	ALTERNATOR SWITCH
ARCH	ARCHITECT
ATS	AUTOMATIC TRANSFER SWITCH
BFG	BELOW FINAL GRADE
BLDG	BUILDING
BPC	BOLTED PRESSURE CONTACT SWITCH
BKR	BREAKER
BOL	BUILT IN OVERLOAD
CATV	CABLE TELEVISION
CCTV	CLOSED CIRCUIT TELEVISION
CB	CIRCUIT BREAKER
CKT	CIRCUIT
CLG	CEILING
CP	CONTROL PANEL
CS	COMBINATION STARTER
CT	CURRENT TRANSFORMER
DE	DUAL ELEMENT FUSES
DIR	DIRECT
DISC	DISCONNECT
DN	DOWN
EC	ELECTRICAL CONTRACTOR
ELEV	ELEVATION
EM	EMERGENCY
ENT	ELECTRICAL NON-METALLIC TUBING
EMT	ELECTRIC METALLIC TUBING
EOL	END OF LINE RESISTOR
EP	EXPLOSION PROOF
ER	EXISTING TO BE REMOVED
ERL	EXISTING TO BE RELOCATED
ERLD	EXISTING RELOCATED
ETR	EXISTING TO REMAIN
EX	EXISTING
EWC	ELECTRIC WATER COOLER
F	FLUSH
FAAP	FIRE ALARM ANNUNCIATOR PANEL
FACP	FIRE ALARM CONTROL PANEL
FBO	FURNISHED BY OTHERS
FDR	FEEDER
F HP	FRACTIONAL HORSE POWER
FIXT	FIXTURE
FLR	FLOOR
FLA	FULL LOAD AMPS
FLUOR	FLUORESCENT
FS	FLOW SWITCH
FVNR	FULL VOLTAGE NON-REVERSING
GC	GENERAL CONTRACTOR
GFI	GROUND FAULT INTERRUPTER
GRC	GALVANIZED RIGID CONDUIT
GRD	GROUND
GYP	GYPSUM BOARD
HID	HIGH INTENSITY DISCHARGE
HOA	HAND-OFF-AUTO SWITCH
HP	HORSEPOWER
HPS	HIGH PRESSURE SODIUM
HV	HIGH VOLTAGE
HVAC	HEATING & VENTILATING - AIR CONDITIONING
HVC	HEATING VENTILATING CONTRACTOR
HW	HEAVYWALL
ID	INDIRECT
IL	INTERLOCK
IMC	INTERMEDIATE METAL CONDUIT
INC	INCANDESCENT
IU	IN UNIT
J-BOX	JUNCTION BOX
LG	LAY-IN GRID
LTG	LIGHTING
LV	LOW VOLTAGE
LVT	LINE VOLTAGE THERMOSTAT
MAG	MAGNETIC STARTER
MAN	MANUAL STARTER
MCC	MOTOR CONTROL CENTER
MDP	MAIN DISTRIBUTION PANEL
MLO	MAIN LUGS ONLY
MSB	MAIN SWITCHBOARD
MTD	MOUNTED
NIC	NOT IN CONTRACT
NU	NEAR UNIT
OU	ON UNIT
P	POLE
PB	PUSHBUTTON
PEND	PENDANT
PC	PHOTO CONTROL
PE SW	PNEUMATIC SWITCH
PLBG	PLUMBING CONTRACTOR
PNL	PANEL
R	RELAY
RAI	REMAIN AS IS
REC	RECESS
RECEPT	RECEPTACLE
RM	ROOM
RVS	REDUCED VOLTAGE STARTING
S	SPLINE
SEL SW	SELECTOR SWITCH
SP SW	SPEED SWITCH
SURF	SURFACE
SW	SWITCH
TC	TIME CLOCK
TCP	TEMPERATURE CONTROL PANEL
TCC	TEMPERATURE CONTROL CONTRACTOR
TS	TAMPER SWITCH
TYP	TYPICAL
UG	UNDERGROUND
UNIV	UNIVERSAL
USS	UNIT SUBSTATION
WP	WEATHERPROOF
XFMR	TRANSFORMER

ELECTRICAL SHEET INDEX

SCS ENGINEERS
2830 DAIRY DRIVE MADISON, WI 53718-6751
PHONE: (608) 224-2830

JDR ENGINEERING, INC.
5525 NOBEL DRIVE
SUITE 110
MADISON, WI 53711
ph:608.277.1728 fax:608.271.7046
JDR Project No. 150012

CONSTRUCTION AND DEMOLITION WASTE RECYCLING FACILITY
7102 US HIGHWAY 12/18
MADISON, WISCONSIN

DANE COUNTY DEPARTMENT OF PUBLIC WORKS
SOLID WASTE DIVISION
1919 ALLIANT ENERGY CENTER WAY
MADISON, WI 53713

PROCCESS AND CIVIL ENGINEER:
SCS ENGINEERS
2830 DAIRY DRIVE
MADISON, WI 53718-6751
(608) 224-2830

ARCHITECT:
DORSCHNER ASSOCIATES, INC.
849 E. WASHINGTON AVE., SUITE 112
MADISON, WI 53703

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10 WEST MIFFLIN ST., SUITE 205
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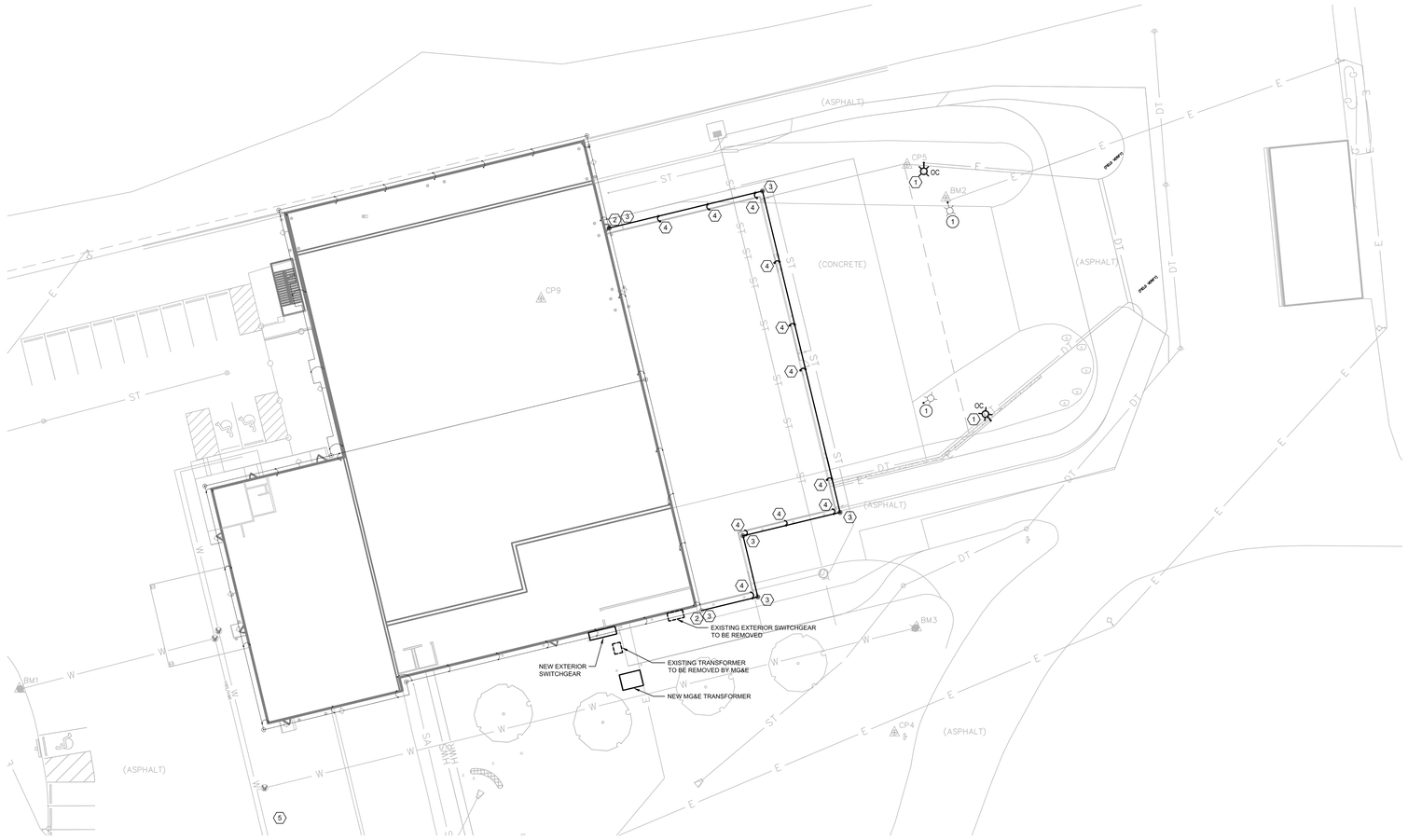
SYMBOLS & SCHEDULES - ELECTRICAL

SHEET NUMBER
E000



1 E001 SITE PLAN - ELECTRICAL
SCALE: 1"=20'-0"

NORTH

GENERAL NOTES:

1. ALL GROUND ELECTRODE COMPONENTS TO BE COPPER.
2. ALL GROUND ELECTRODE CONNECTIONS TO BE EXOTHERMIC WELDS.

DEMOLITION KEYED NOTES:

(1) EXISTING TYPE OC LIGHT POLE TO BE RELOCATED. INTERCEPT EXISTING UNDERGROUND WIRING AND REROUTE THROUGH NEW POLE BASE. DEMO EXISTING POLE BASE.

NEW WORK KEYED NOTES:

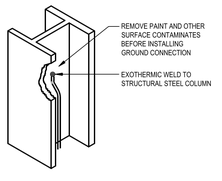
(1) PROVIDE NEW POLE BASE FOR RELOCATED TYPE OC LIGHT POLE. SEE DETAILS 2/E001 AND 3/E001. PROVIDE NEW TYPE OC FIXTURE. RECONNECT TO EXISTING SITE LIGHTING CIRCUIT.

(2) EXTEND EXISTING 4/O BARE GROUND ELECTRODE RING AROUND NEW ADDITION. GROUND ELECTRODE RING TO BE MORE THAN 1' BELOW FINISHED GRADE AND NOT LESS THAN 2' FROM BUILDING.

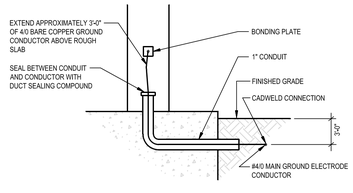
(3) COPPER GROUND ROD (TYPICAL)

(4) BOND TO BUILDING STEEL. SEE DETAILS 4/E001 AND 5/E001 (TYPICAL).

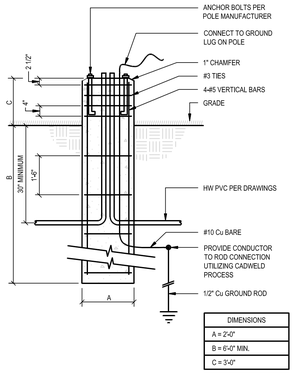
(5) SEE KEYED NOTE 2 ON SHEET M002 FOR ADDITION WORK BY EC TO BE COMPLETED IN GENERATOR BUILDING



5 E001 GROUND CONNECTION DETAIL
SCALE: NOT TO SCALE

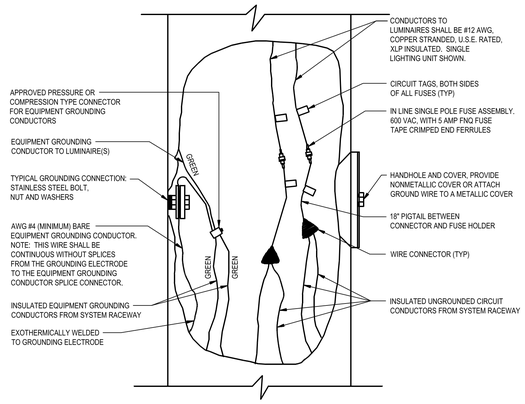


4 E001 METAL BUILDING GROUND CONNECTION DETAIL
SCALE: NOT TO SCALE



DIMENSIONS
A = 2'-0"
B = 6'-0" MIN.
C = 3'-0"

3 E001 FIXTURE TYPE "OC" POLE BASE DETAIL
SCALE: NOT TO SCALE



2 E001 POLE WIRING DETAIL
SCALE: NOT TO SCALE

SCS ENGINEERS
2830 DAIRY DRIVE MADISON, WI 53718-6751
PHONE: (608) 224-2830

JDR ENGINEERING, INC.
5525 NOBEL DRIVE
SUITE 110
MADISON, WI 53711
ph:608.277.1728 fax:608.271.7046
JDR Project No. 15012

CONSTRUCTION AND DEMOLITION WASTE RECYCLING FACILITY
7102 US HIGHWAY 12/18
MADISON, WISCONSIN

DANE COUNTY DEPARTMENT OF PUBLIC WORKS
SOLID WASTE DIVISION
1919 ALLIANT ENERGY CENTER WAY
MADISON, WI 53713

PROCCESS AND CIVIL ENGINEER:
SCS ENGINEERS
2830 DAIRY DRIVE
MADISON, WI 53718-6751
(608) 224-2830

ARCHITECT:
DORSCHNER ASSOCIATES, INC.
849 E. WASHINGTON AVE., SUITE 112
MADISON, WI 53703

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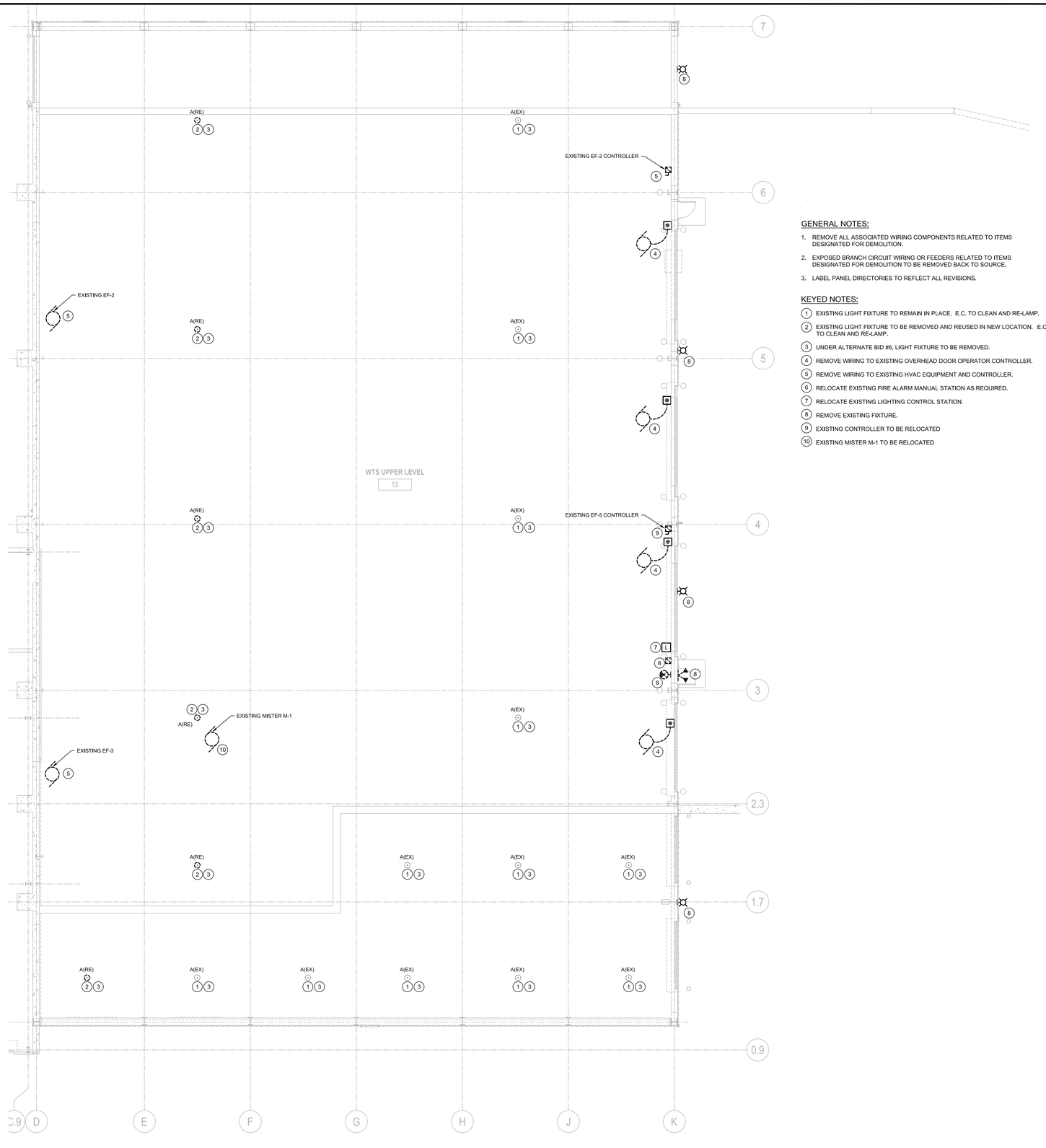
SITE PLAN - ELECTRICAL

SHEET NUMBER
E001



GENERAL NOTES:

1. REMOVE ALL ASSOCIATED WIRING COMPONENTS RELATED TO ITEMS DESIGNATED FOR DEMOLITION.
2. EXPOSED BRANCH CIRCUIT WIRING OR FEEDERS RELATED TO ITEMS DESIGNATED FOR DEMOLITION TO BE REMOVED BACK TO SOURCE.
3. LABEL PANEL DIRECTORIES TO REFLECT ALL REVISIONS.

KEYED NOTES:

1. EXISTING LIGHT FIXTURE TO REMAIN IN PLACE. E.C. TO CLEAN AND RE-LAMP.
2. EXISTING LIGHT FIXTURE TO BE REMOVED AND REUSED IN NEW LOCATION. E.C. TO CLEAN AND RE-LAMP.
3. UNDER ALTERNATE BID #6, LIGHT FIXTURE TO BE REMOVED.
4. REMOVE WIRING TO EXISTING OVERHEAD DOOR OPERATOR CONTROLLER.
5. REMOVE WIRING TO EXISTING HVAC EQUIPMENT AND CONTROLLER.
6. RELOCATE EXISTING FIRE ALARM MANUAL STATION AS REQUIRED.
7. RELOCATE EXISTING LIGHTING CONTROL STATION.
8. REMOVE EXISTING FIXTURE.
9. EXISTING CONTROLLER TO BE RELOCATED
10. EXISTING MISTER M-1 TO BE RELOCATED

1 E101 WTS UPPER LEVEL FLOOR PLAN - DEMOLITION - ELECTRICAL

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

NORTH

SCS ENGINEERS
2830 DAIRY DRIVE MADISON, WI 53718-6751
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JDR ENGINEERING, INC.
5525 NOBEL DRIVE
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ph:608.277.1728 fax:608.271.7046
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7102 US HIGHWAY 12/18
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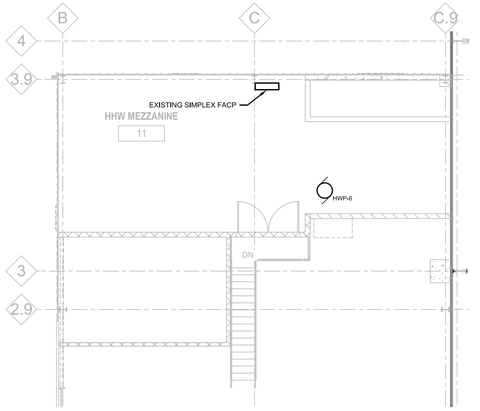
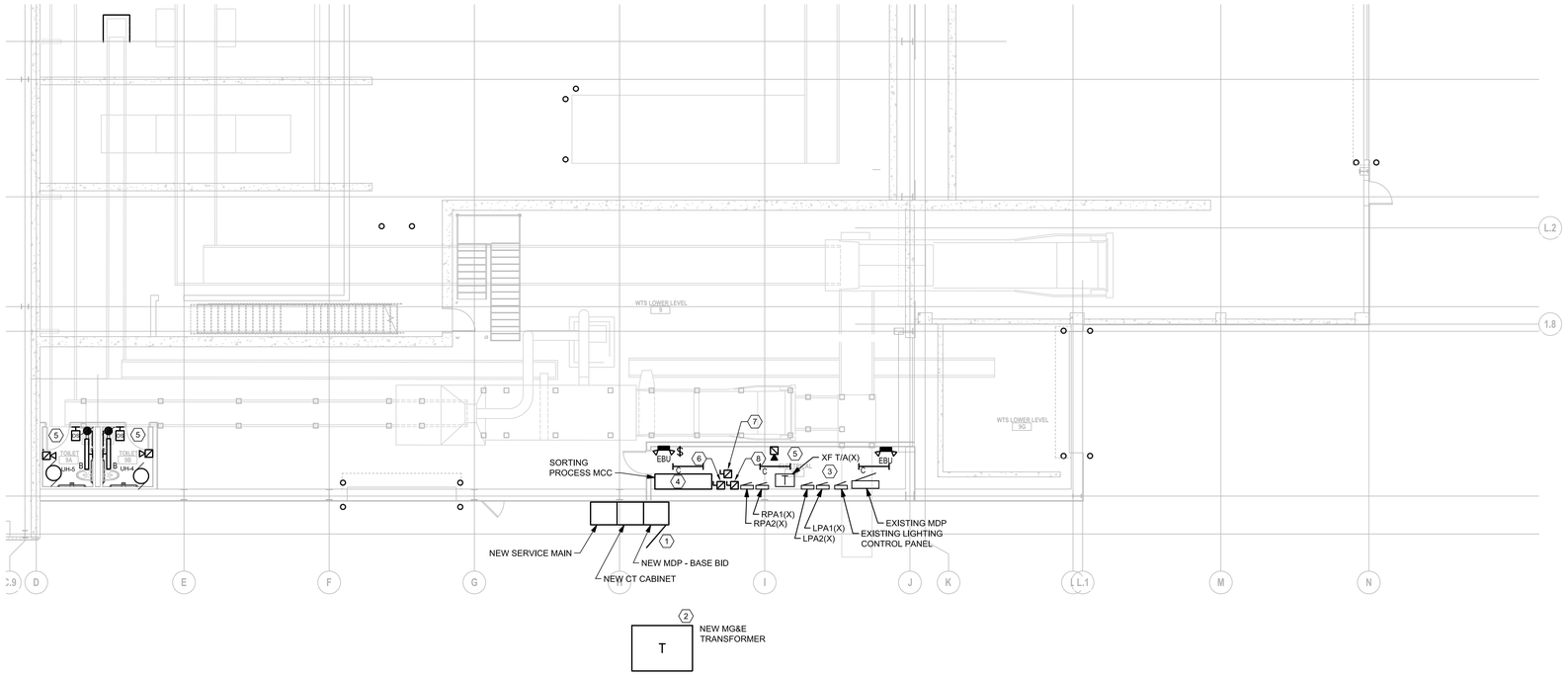
WTS UPPER LEVEL FLOOR PLAN - DEMOLITION - ELECTRICAL

SHEET NUMBER
E101



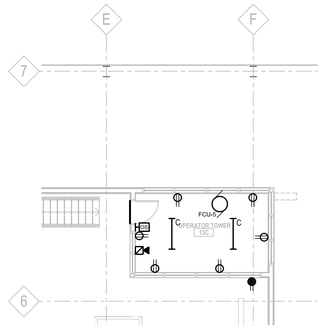
3 / E201 EXISTING MECHANICAL ROOM - NEW ELECTRICAL
SCALE: 1/8"=1'-0"

NORTH



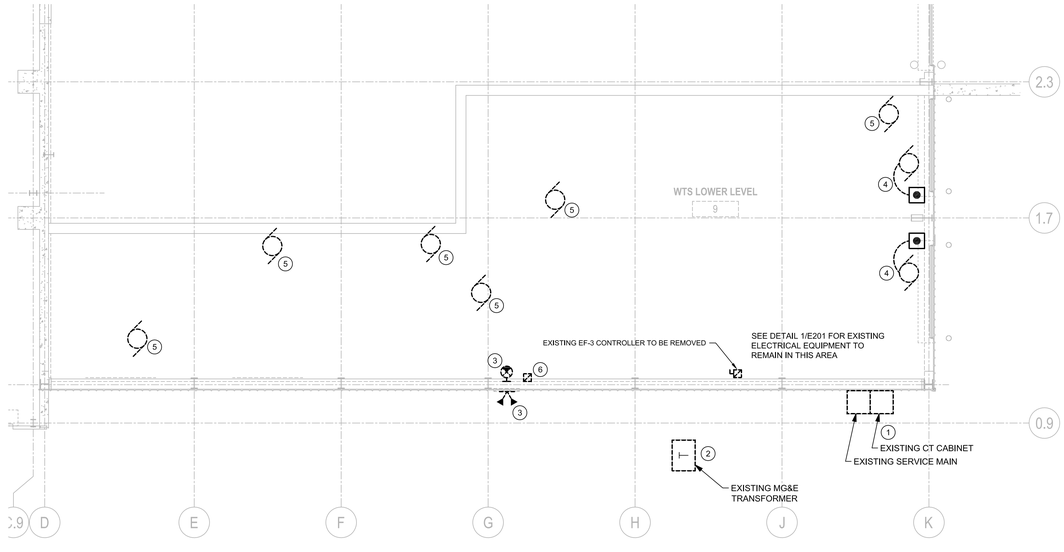
1 / E201 WTS LOWER LEVEL PARTIAL FLOOR PLAN - ELECTRICAL
SCALE: 1/8"=1'-0"

NORTH



4 / E201 CONTROL TOWER - NEW ELECTRICAL
SCALE: 1/8"=1'-0"

NORTH



2 / E201 WTS LOWER LEVEL PARTIAL FLOOR PLAN - DEMOLITION
SCALE: 1/8"=1'-0"

NORTH

GENERAL NOTES:

1. REMOVE ALL ASSOCIATED WIRING COMPONENTS RELATED TO ITEMS DESIGNATED FOR DEMOLITION.
2. EXPOSED BRANCH CIRCUIT WIRING OR FEEDERS RELATED TO ITEMS DESIGNATED FOR DEMOLITION TO BE REMOVED BACK TO SOURCE.
3. LABEL PANEL DIRECTORIES TO REFLECT ALL REVISIONS.
4. EC TO RELOCATE AND/OR ADD FIRE ALARM SYSTEM ANNUNCIATION DEVICES AS REQUIRED TO MEET AUDIBLE AND VISUAL REQUIREMENTS OF NFPA 72 AND CITY OF MADISON CODES IN ADDITION TO DEVICES INDICATED ON DRAWING. PROVIDE ALL REQUIRED SYSTEM COMPONENTS. COORDINATE DEVICE LOCATIONS WITH NEW PROCESS EQUIPMENT. REVISIONS TO THE EXISTING SIMPLEX FIRE ALARM SYSTEM ARE TO BE SUBMITTED TO THE LOCAL AHJ FOR APPROVAL.

DEMOLITION KEYED NOTES:

1. EXISTING SERVICE MAIN DISCONNECT AND CT CABINET TO BE DISCONNECTED AND REMOVED AFTER NEW SERVICE IS ENERGIZED. COORDINATE SERVICE SHUT-DOWN WITH MG&E AND OWNER. SCHEDULE SHUT-DOWN TO MINIMIZE DISRUPTION OF NORMAL OPERATION.
2. EC TO REMOVE EXISTING TRANSFORMER PAD AFTER REMOVAL OF TRANSFORMER BY MG&E.
3. EXISTING FIXTURE TO BE REMOVED
4. REMOVE WIRING TO EXISTING OVERHEAD DOOR OPERATOR AND CONTROLLER.
5. REMOVE WIRING TO EXISTING PROCESS EQUIPMENT.
6. RELOCATE EXISTING FIRE ALARM MANUAL STATION AS REQUIRED.

NEW WORK KEYED NOTES:

1. PROVIDE NEW SERVICE MAIN DISCONNECT, CT CABINET AND MAIN DISTRIBUTION PANEL. EQUIPMENT SHALL BE IN NEMA 4 ENCLOSURES. PROVIDE CONCRETE EQUIPMENT PAD FOR NEW EQUIPMENT. SEE ONE-LINE DIAGRAM FOR ADDITIONAL INFORMATION.
2. PROVIDE SERVICE ENTRANCE PER MG&E REQUIREMENTS. COORDINATE EXACT LOCATION OF TRANSFORMER PAD FOR NEW MG&E TRANSFORMER WITH MG&E AND LOCATION OF PROCESS COMPONENTS ON THE SITE.
3. RE-FEED EXISTING MDP FROM NEW MDP. EXISTING ELECTRICAL DISTRIBUTION EQUIPMENT IN THIS ROOM TO REMAIN AND BE REUSED.
4. NEW SORTING PROCESS MOTOR CONTROL CENTER TO BE FURNISHED BY PROCESS EQUIPMENT CONTRACTOR. EC TO INSTALL MCC AND FEEDER FROM NEW MDP. ALL WIRING FROM MCC TO PROCESS EQUIPMENT TO BE INSTALLED BY PROCESS EQUIPMENT CONTRACTOR.
5. CONNECT NEW LIGHT FIXTURES TO EXISTING UNSWITCHED LIGHTING CIRCUIT SERVING THE AREA. CONNECT RECEPTACLES TO SPARE BREAKER IN PANEL RPA2(X).
6. EXISTING EF-4 CONTROLLER TO REMAIN.
7. NEW EF-11 CONTROLLER LOCATION.
8. RELOCATED EF-5 CONTROLLER LOCATION.

SCS ENGINEERS
2830 DAIRY DRIVE MADISON, WI 53718-6751
PHONE: (608) 224-2830

JDR ENGINEERING, INC.
5525 NOBEL DRIVE
SUITE 110
MADISON, WI 53711
ph:608.277.1728 fax:608.271.7046
JDR Project No. 150012

CONSTRUCTION AND DEMOLITION WASTE RECYCLING FACILITY
7102 US HIGHWAY 12/18
MADISON, WISCONSIN

DANE COUNTY DEPARTMENT OF PUBLIC WORKS
SOLID WASTE DIVISION
1919 ALLIANT ENERGY CENTER WAY
MADISON, WI 53713

PROCCESS AND CIVIL ENGINEER:
SCS ENGINEERS
2830 DAIRY DRIVE
MADISON, WI 53718-6751
(608) 224-2830

ARCHITECT:
DORSCHNER ASSOCIATES, INC.
849 E. WASHINGTON AVE., SUITE 112
MADISON, WI 53703

STRUCTURAL ENGINEER:
PIERCE ENGINEERS, INC.
10 WEST MIFFLIN ST., SUITE 205
MADISON, WI 53703

MECHANICAL, ELECTRICAL, PLUMBING DESIGN
JDR ENGINEERING, INC.
5525 NOBEL DRIVE, SUITE 110
MADISON, WI 53711

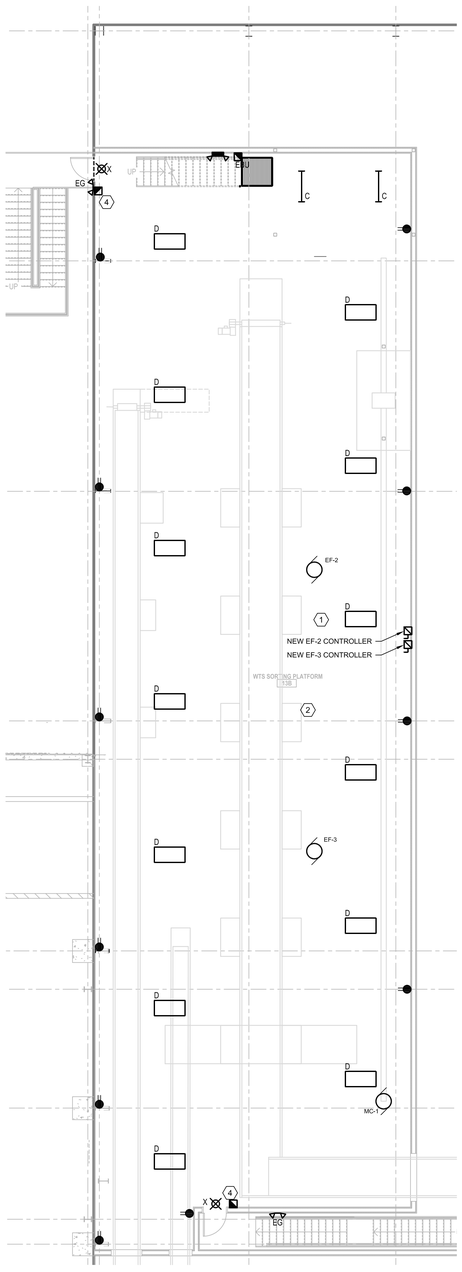
REVISION	DATE	BY	TITLE

PROJECT NO.	25214236.00
DRAWN:	04/28/15
REVISED:	04/28/15
DRAWN BY:	JDR
CHECKED BY:	JDR
APPROVED BY:	

BID DOCUMENTS ISSUED 04/28/15

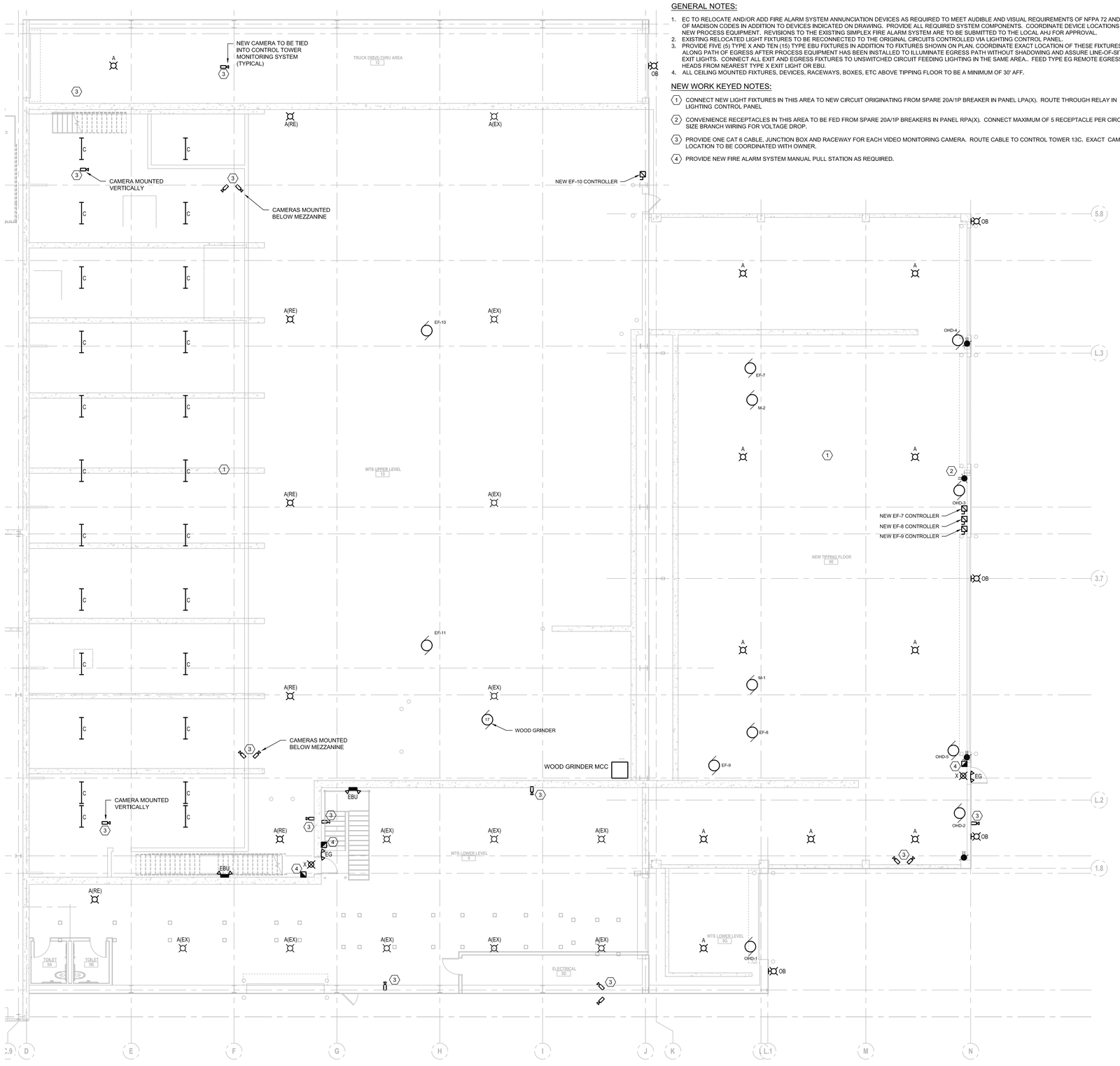
PARTIAL FLOOR PLANS - ELECTRICAL

SHEET NUMBER
E201



2 E202 WTS SORTING PLATFORM FLOOR PLAN - NEW ELECTRICAL
SCALE: 1/8"=1'-0"

NORTH



1 E202 WTS NEW TIPPING FLOOR PLAN - NEW ELECTRICAL
SCALE: 1/8"=1'-0"

NORTH

GENERAL NOTES:

1. EC TO RELOCATE AND/OR ADD FIRE ALARM SYSTEM ANNUNCIATION DEVICES AS REQUIRED TO MEET AUDIBLE AND VISUAL REQUIREMENTS OF NFPA 72 AND CITY OF MADISON CODES IN ADDITION TO DEVICES INDICATED ON DRAWING. PROVIDE ALL REQUIRED SYSTEM COMPONENTS. COORDINATE DEVICE LOCATIONS WITH NEW PROCESS EQUIPMENT. REVISIONS TO THE EXISTING SIMPLEX FIRE ALARM SYSTEM ARE TO BE SUBMITTED TO THE LOCAL AHJ FOR APPROVAL.
2. EXISTING RELOCATED LIGHT FIXTURES TO BE RECONNECTED TO THE ORIGINAL CIRCUITS CONTROLLED VIA LIGHTING CONTROL PANEL.
3. PROVIDE FIVE (5) TYPE X AND TEN (15) TYPE EBU FIXTURES IN ADDITION TO FIXTURES SHOWN ON PLAN. COORDINATE EXACT LOCATION OF THESE FIXTURES ALONG PATH OF EGRESS AFTER PROCESS EQUIPMENT HAS BEEN INSTALLED TO ILLUMINATE EGRESS PATH WITHOUT SHADOWING AND ASSURE LINE-OF-SITE TO EXIT LIGHTS. CONNECT ALL EXIT AND EGRESS FIXTURES TO UNSWITCHED CIRCUIT FEEDING LIGHTING IN THE SAME AREA. FEED TYPE EG REMOTE EGRESS HEADS FROM NEAREST TYPE X EXIT LIGHT OR EBU.
4. ALL CEILING MOUNTED FIXTURES, DEVICES, RACEWAYS, BOXES, ETC ABOVE TIPPING FLOOR TO BE A MINIMUM OF 30' AFF.

NEW WORK KEYED NOTES:

1. CONNECT NEW LIGHT FIXTURES IN THIS AREA TO NEW CIRCUIT ORIGINATING FROM SPARE 20A/1P BREAKER IN PANEL LPA(X). ROUTE THROUGH RELAY IN LIGHTING CONTROL PANEL
2. CONVENIENCE RECEPTACLES IN THIS AREA TO BE FED FROM SPARE 20A/1P BREAKERS IN PANEL RPA(X). CONNECT MAXIMUM OF 5 RECEPTACLE PER CIRCUIT. SIZE BRANCH WIRING FOR VOLTAGE DROP.
3. PROVIDE ONE CAT 6 CABLE, JUNCTION BOX AND RACEWAY FOR EACH VIDEO MONITORING CAMERA. ROUTE CABLE TO CONTROL TOWER 13C. EXACT CAMERA LOCATION TO BE COORDINATED WITH OWNER.
4. PROVIDE NEW FIRE ALARM SYSTEM MANUAL PULL STATION AS REQUIRED.

SCS ENGINEERS
2830 DAIRY DRIVE MADISON, WI 53718-6751
PHONE: (608) 224-2830

JDR ENGINEERING, INC.
5525 NOBEL DRIVE
SUITE 110
MADISON, WI 53711
ph:608.277.1728 fax:608.271.7046
JDR Project No. 15012

CONSTRUCTION AND DEMOLITION WASTE RECYCLING FACILITY
7102 US HIGHWAY 12/18
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DANE COUNTY DEPARTMENT OF PUBLIC WORKS
SOLID WASTE DIVISION
1919 ALLIANT ENERGY CENTER WAY
MADISON, WI 53713

PROCCESS AND CIVIL ENGINEER:
SCS ENGINEERS
2830 DAIRY DRIVE
MADISON, WI 53718-6751
(608) 224-2830

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MADISON, WI 53703

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10 WEST MIFFLIN ST., SUITE 205
MADISON, WI 53703

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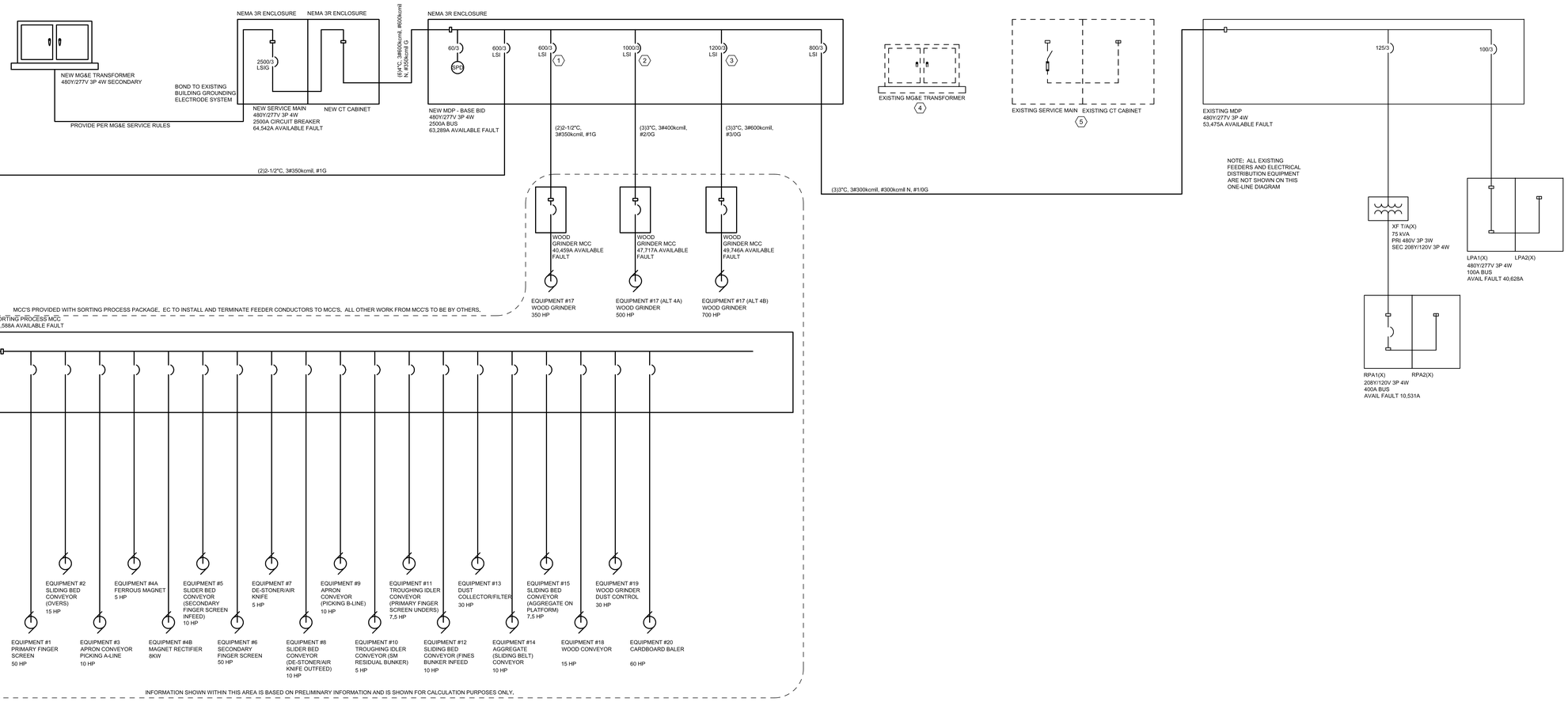
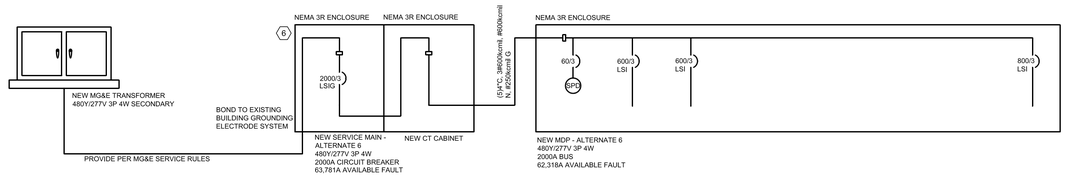
PARTIAL FLOOR PLANS - ELECTRICAL

SHEET NUMBER
E202



1 E600 ONE-LINE DIAGRAM

SCALE: NONE



2 E600 PARTIAL ONE-LINE DIAGRAM - ALTERNATE 6

SCALE: NONE

GENERAL NOTES:

1. DASHED LINES INDICATE EQUIPMENT TO BE REMOVED.
2. LIGHTER LINES INDICATE EXISTING EQUIPMENT TO REMAIN.
3. HEAVIER LINES INDICATE NEW EQUIPMENT.
4. SEE SHEET E600 FOR LOAD SCHEDULES AND PRELIMINARY FAULT CURRENT CALCULATIONS.

KEYED NOTES:

1. BASE BID TO INCLUDE CIRCUIT BREAKER AND ASSOCIATED WIRING FOR A 350 HP WOOD GRINDER.
2. ALTERNATE BID 4A TO INCLUDE CIRCUIT BREAKER AND ASSOCIATED WIRING FOR A 500 HP WOOD GRINDER IN LIEU OF THE 350 HP WOOD GRINDER.
3. ALTERNATE BID 4B TO INCLUDE CIRCUIT BREAKER AND ASSOCIATED WIRING FOR A 700 HP WOOD GRINDER IN LIEU OF THE 350 HP WOOD GRINDER.
4. EXISTING UTILITY TRANSFORMER TO BE REMOVED BY MG&E. EC TO REMOVE TRANSFORMER PAD.
5. EXISTING EXTERIOR SWITCHGEAR AND ASSOCIATED EQUIPMENT PAD TO BE REMOVED BY EC.
6. ALTERNATE BID 6 TO INCLUDE 2000 AMP SERVICE EQUIPMENT AND FEEDERS AS INDICATED IN DETAIL 2/E600 IN LIEU OF 2500 AMP SERVICE EQUIPMENT.

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PHONE: (608) 224-2830

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5525 NOBEL DRIVE
SUITE 110
MADISON, WI 53711
ph:608.277.1728 fax:608.271.7046
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SOLID WASTE DIVISION
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MADISON, WI 53713

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2830 DAIRY DRIVE
MADISON, WI 53718-6751
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MADISON, WI 53703

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10 WEST MIFFLIN ST., SUITE 205
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APPROVED BY:	

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ONE-LINE DIAGRAM ELECTRICAL

SHEET NUMBER
E600

NEW MDP – ALTERNATE 4B

ROOM OUTDOORS
MOUNTING FLOOR
FED FROM NEW CT CABINET
NOTE

VOLTS 480Y/277V 3P 4W
BUS AMPS 2500
NEUTRAL 100%

AIC 65,000
MAIN BKR MLO
LUGS STANDARD

CKT #	BREAKER TRIP/POLES	CIRCUIT DESCRIPTION	LOAD KVA A	LOAD KVA B	LOAD KVA C	FEEDER RACEWAY AND CONDUCTORS
1	800/3	SWITCHBOARD EXISTING MDP	52.5	52.6	52.5	(3)3"C,3#300kcmil,#300kcmil N,#1/0G
2	600/3	MCC SORTING PROCESS MCC	130	130	130	(2)2–1/2"C,3#350kcmil,#1G
3	1200/3	MCC WOOD GRINDER MCC	230	230	230	(3)3"C,3#600kcmil,#3/0G
4	400/3	SPACE	0	0	0	
5	400/3	SPACE	0	0	0	
6	60/3	SPD	0	0	0	
		TOTAL CONNECTED KVA BY PHASE	413	413	413	

	CONN KVA	CALC KVA	
LIGHTING	0	0	(125%)
LARGEST MOTOR	690	863	(125%)
OTHER MOTORS	417	417	(100%)
RECEPTACLES	0	0	(50%>10)
KITCHEN EQUIP	0	0	(N/A)

	CONN KVA	CALC KVA	
CONTINUOUS	10	12.5	(125%)
HEATING	0	0	(N/A)
COOLING	0	0	(N/A)
NONCONTINUOUS	0	0	(100%)
DIVERSE	0	0	(N/A)
METERED DEMAND	270	338	(125%)
TOTAL KVA	1,480	1,720	
BALANCED 3–PHASE AMPS		2,070	

FAULT CURRENT SCHEDULE - ALTERNATE 4B

DEVICE	FAULT	AIC RATING	L-N VOLTS	UTILITY FAULT	FED FROM DEVICE	FED FROM FAULT	FEEDER SIZE
NEW MG&E TRANSFORMER	70,227	100,000	277V	65,000			
NEW SERVICE MAIN	66,167	100,000	277V	60,911	NEW MG&E TRANSFORMER	65,000	(6)#600kcmil
NEW CT CABINET	65,834	100,000	277V	60,576	NEW SERVICE MAIN	60,911	(6)#600kcmil
NEW MDP - ALTERNATE 4B	64,919	65,000	277V	59,654	NEW CT CABINET	60,576	(6)#600kcmil
EXISTING MDP	54,624	65,000	277V	50,829	NEW MDP - ALTERNATE 4B	59,654	(3)#300kcmil
LPA1(X)	41,237	42,000	277V	39,114	EXISTING MDP	50,829	#3
LPA2(X)	37,692	42,000	277V	35,931	LPA1(X)	39,114	#3
XF T/A(X)	10,601	22,000	120V	10,529	EXISTING MDP	50,829	#1
RPA1(X)	10,550	22,000	120V	10,478	XF T/A(X)	10,529	#600kcmil
RPA2(X)	10,470	22,000	120V	10,399	RPA1(X)	10,478	#600kcmil
SORTING PROCESS MCC	62,510	65,000	277V	57,496	NEW MDP - ALTERNATE 4B	59,654	(2)#350kcmil
WOOD GRINDER MCC	49,746	65,000	277V	45,286	NEW MDP - ALTERNATE 4B	59,654	(3)#600kcmil

NEW MDP – ALTERNATE 4A

ROOM OUTDOORS
MOUNTING FLOOR
FED FROM NEW CT CABINET
NOTE

VOLTS 480Y/277V 3P 4W
BUS AMPS 2500
NEUTRAL 100%

AIC 65,000
MAIN BKR MLO
LUGS STANDARD

CKT #	BREAKER TRIP/POLES	CIRCUIT DESCRIPTION	LOAD KVA A	LOAD KVA B	LOAD KVA C	FEEDER RACEWAY AND CONDUCTORS
1	800/3	SWITCHBOARD EXISTING MDP	52.5	52.6	52.5	(3)3"C,3#300kcmil,#300kcmil N,#1/0G
2	600/3	MCC SORTING PROCESS MCC	130	130	130	(2)2–1/2"C,3#350kcmil,#1G
3	1000/3	MCC WOOD GRINDER MCC	164	164	164	(3)3"C,3#400kcmil,#2/0G
4	400/3	SPACE	0	0	0	
5	400/3	SPACE	0	0	0	
6	600/3	SPD	0	0	0	
		TOTAL CONNECTED KVA BY PHASE	346	346	346	

	CONN KVA	CALC KVA	
LIGHTING	0	0	(125%)
LARGEST MOTOR	491	613	(125%)
OTHER MOTORS	417	417	(100%)
RECEPTACLES	0	0	(50%>10)
KITCHEN EQUIP	0	0	(N/A)

	CONN KVA	CALC KVA	
CONTINUOUS	10	12.5	(125%)
HEATING	0	0	(N/A)
COOLING	0	0	(N/A)
NONCONTINUOUS	0	0	(100%)
DIVERSE	0	0	(N/A)
METERED DEMAND	270	338	(125%)
TOTAL KVA	1,280	1,470	
BALANCED 3–PHASE AMPS		1,770	

FAULT CURRENT SCHEDULE - ALTERNATE 4A

DEVICE	FAULT	AIC RATING	L-N VOLTS	UTILITY FAULT	FED FROM DEVICE	FED FROM FAULT	FEEDER SIZE
NEW MG&E TRANSFORMER	69,306	100,000	277V	65,000			
NEW SERVICE MAIN	65,236	100,000	277V	60,911	NEW MG&E TRANSFORMER	65,000	(6)#600kcmil
NEW CT CABINET	64,903	100,000	277V	60,576	NEW SERVICE MAIN	60,911	(6)#600kcmil
NEW MDP - ALTERNATE 4A	63,986	65,000	277V	59,654	NEW CT CABINET	60,576	(6)#600kcmil
EXISTING MDP	53,967	65,000	277V	50,829	NEW MDP - ALTERNATE 4A	59,654	(3)#300kcmil
LPA1(X)	40,890	42,000	277V	39,114	EXISTING MDP	50,829	#3
LPA2(X)	37,411	42,000	277V	35,931	LPA1(X)	39,114	#3
XF T/A(X)	10,590	22,000	120V	10,529	EXISTING MDP	50,829	#1
RPA1(X)	10,539	22,000	120V	10,478	XF T/A(X)	10,529	#600kcmil
RPA2(X)	10,459	22,000	120V	10,399	RPA1(X)	10,478	#600kcmil
SORTING PROCESS MCC	61,646	65,000	277V	57,496	NEW MDP - ALTERNATE 4A	59,654	(2)#350kcmil
WOOD GRINDER MCC	47,717	65,000	277V	44,275	NEW MDP - ALTERNATE 4A	59,654	(3)#400kcmil

NEW MDP – BASE BID

ROOM OUTDOORS
MOUNTING FLOOR
FED FROM NEW CT CABINET
NOTE

VOLTS 480Y/277V 3P 4W
BUS AMPS 2500
NEUTRAL 100%

AIC 65,000
MAIN BKR MLO
LUGS STANDARD

CKT #	BREAKER TRIP/POLES	CIRCUIT DESCRIPTION	LOAD KVA A	LOAD KVA B	LOAD KVA C	FEEDER RACEWAY AND CONDUCTORS
1	800/3	SWITCHBOARD EXISTING MDP	52.5	52.6	52.5	(3)3"C,3#300kcmil,#300kcmil N,#1/0G
2	600/3	MCC SORTING PROCESS MCC	130	130	130	(2)2–1/2"C,3#350kcmil,#1G
3	600/3	MCC WOOD GRINDER MCC	115	115	115	(2)2–1/2"C,3#350kcmil,#1G
4	400/3	SPACE	0	0	0	–
5	400/3	SPACE	0	0	0	–
6	60/3	SPD	0	0	0	–
		TOTAL CONNECTED KVA BY PHASE	297	298	297	

	CONN KVA	CALC KVA	
LIGHTING	0	0	(125%)
LARGEST MOTOR	344	430	(125%)
OTHER MOTORS	417	417	(100%)
RECEPTACLES	0	0	(50%>10)
KITCHEN EQUIP	0	0	(N/A)

	CONN KVA	CALC KVA	
CONTINUOUS	10	12.5	(125%)
HEATING	0	0	(N/A)
COOLING	0	0	(N/A)
NONCONTINUOUS	0	0	(100%)
DIVERSE	0	0	(N/A)
METERED DEMAND	270	338	(125%)
TOTAL KVA	1,140	1,290	
BALANCED 3–PHASE AMPS		1,550	

FAULT CURRENT SCHEDULE - BASE BID

DEVICE	FAULT	AIC RATING	L-N VOLTS	UTILITY FAULT	FED FROM DEVICE	FED FROM FAULT	FEEDER SIZE
NEW MG&E TRANSFORMER	68,617	100,000	277V	65,000			
NEW SERVICE MAIN	64,542	100,000	277V	60,911	NEW MG&E TRANSFORMER	65,000	(6)#600kcmil
NEW CT CABINET	64,208	100,000	277V	60,576	NEW SERVICE MAIN	60,911	(6)#600kcmil
NEW MDP - BASE BID	63,289	65,000	277V	59,654	NEW CT CABINET	60,576	(6)#600kcmil
EXISTING MDP	53,475	65,000	277V	50,829	NEW MDP - BASE BID	59,654	(3)#300kcmil
LPA1(X)	40,628	42,000	277V	39,114	EXISTING MDP	50,829	#3
LPA2(X)	37,198	42,000	277V	35,931	LPA1(X)	39,114	#3
XF T/A(X)	10,582	22,000	120V	10,529	EXISTING MDP	50,829	#1
RPA1(X)	10,531	22,000	120V	10,478	XF T/A(X)	10,529	#600kcmil
RPA2(X)	10,451	22,000	120V	10,399	RPA1(X)	10,478	#600kcmil
SORTING PROCESS MCC	61,001	65,000	277V	57,496	NEW MDP - BASE BID	59,654	(2)#350kcmil
WOOD GRINDER MCC	40,998	65,000	277V	38,536	NEW MDP - BASE BID	59,654	(2)#350kcmil

NEW MDP – ALTERNATE 6

ROOM OUTDOORS
MOUNTING FLOOR
FED FROM NEW CT CABINET
NOTE

VOLTS 480Y/277V 3P 4W
BUS AMPS 2000
NEUTRAL 100%

AIC 65,000
MAIN BKR MLO
LUGS STANDARD

CKT #	BREAKER TRIP/POLES	CIRCUIT DESCRIPTION	LOAD KVA A	LOAD KVA B	LOAD KVA C	FEEDER RACEWAY AND CONDUCTORS
1	800/3	SWITCHBOARD EXISTING MDP	52.5	52.6	52.5	(3)3"C,3#300kcmil,#300kcmil N,#1/0G
2	600/3	MCC SORTING PROCESS MCC	130	130	130	(2)2–1/2"C,3#350kcmil,#1G
3	600/3	MCC WOOD GRINDER MCC	115	115	115	(2)2–1/2"C,3#350kcmil,#1G
4	400/3	SPACE	0	0	0	
5	400/3	SPACE	0	0	0	
6	60/3	SPD	0	0	0	
		TOTAL CONNECTED KVA BY PHASE	297	298	297	

	CONN KVA	CALC KVA	
LIGHTING	0	0	(125%)
LARGEST MOTOR	344	430	(125%)
OTHER MOTORS	417	417	(100%)
RECEPTACLES	0	0	(50%>10)
KITCHEN EQUIP	0	0	(N/A)

	CONN KVA	CALC KVA	
CONTINUOUS	10	12.5	(125%)
HEATING	0	0	(N/A)
COOLING	0	0	(N/A)
NONCONTINUOUS	0	0	(100%)
DIVERSE	0	0	(N/A)
METERED DEMAND	270	338	(125%)
TOTAL KVA	1,140	1,290	
BALANCED 3–PHASE AMPS		1,550	

FAULT CURRENT SCHEDULE - ALTERNATE 6

DEVICE	FAULT	AIC RATING	L-N VOLTS	UTILITY FAULT	FED FROM DEVICE	FED FROM FAULT	FEEDER SIZE
NEW MG&E TRANSFORMER	68,613	100,000	277V	65,000			
NEW SERVICE MAIN - ALTERNATE 6	63,781	100,000	277V	60,151	NEW MG&E TRANSFORMER	65,000	(5)#600kcmil
NEW CT CABINET	63,390	100,000	277V	59,759	NEW SERVICE MAIN - ALTERNATE 6	60,151	(5)#600kcmil
NEW MDP - ALTERNATE 6	62,318	65,000	277V	58,683	NEW CT CABINET	59,759	(5)#600kcmil
EXISTING MDP	52,763	65,000	277V	50,104	NEW MDP - ALTERNATE 6	58,683	(3)#300kcmil
LPA1(X)	40,208	42,000	277V	38,675	EXISTING MDP	50,104	#3
LPA2(X)	36,849	42,000	277V	35,562	LPA1(X)	38,675	#3
XF T/A(X)	10,570	22,000	120V	10,515	EXISTING MDP	50,104	#1
RPA1(X)	10,519	22,000	120V	10,465	XF T/A(X)	10,515	#600kcmil
RPA2(X)	10,440	22,000	120V	10,386	RPA1(X)	10,465	#600kcmil
SORTING PROCESS MCC	60,095	65,000	277V	56,588	NEW MDP - ALTERNATE 6	58,683	(2)#350kcmil
WOOD GRINDER MCC	40,583	65,000	277V	38,111	NEW MDP - ALTERNATE 6	58,683	(2)#350kcmil

SCS ENGINEERS
2830 DAIRY DRIVE MADISON, WI 53718–6751
PHONE: (608) 224–2830

JDR ENGINEERING, INC.
5525 NOBEL DRIVE
SUITE 110
MADISON, WI 53711
ph:608.277.1728 fax:608.271.7046
JDR Project No. 150012

CONSTRUCTION AND DEMOLITION WASTE RECYCLING FACILITY
7102 US HIGHWAY 12/18
MADISON, WISCONSIN

DANE COUNTY DEPARTMENT OF PUBLIC WORKS
SOLID WASTE DIVISION
1919 ALLIANT ENERGY CENTER WAY
MADISON, WI 53713

PROCCESS AND CIVIL ENGINEER:
SCS ENGINEERS
2830 DAIRY DRIVE
MADISON, WI 53718–6751
(608) 224–2830

ARCHITECT:
DORSCHNER ASSOCIATES, INC.
849 E. WASHINGTON AVE., SUITE 112
MADISON, WI 53703

STRUCTURAL ENGINEER:
PIERCE ENGINEERS, INC.
10 WEST MIFFLIN ST., SUITE 205
MADISON, WI 53703

MECHANICAL, ELECTRICAL, PLUMBING DESIGN
JDR ENGINEERING, INC.
5525 NOBEL DRIVE, SUITE 110
MADISON, WI 53711

REVISION	DATE	BY	TITLE

PROJECT NO.	25214236.00
DRAWN:	04/28/15
REVISED:	04/28/15
DRAWN BY:	JDR
CHECKED BY:	JDR
APPROVED BY:	

BID DOCUMENTS ISSUED 04/28/15

ELECTRICAL SCHEDULES

SHEET NUMBER
E800