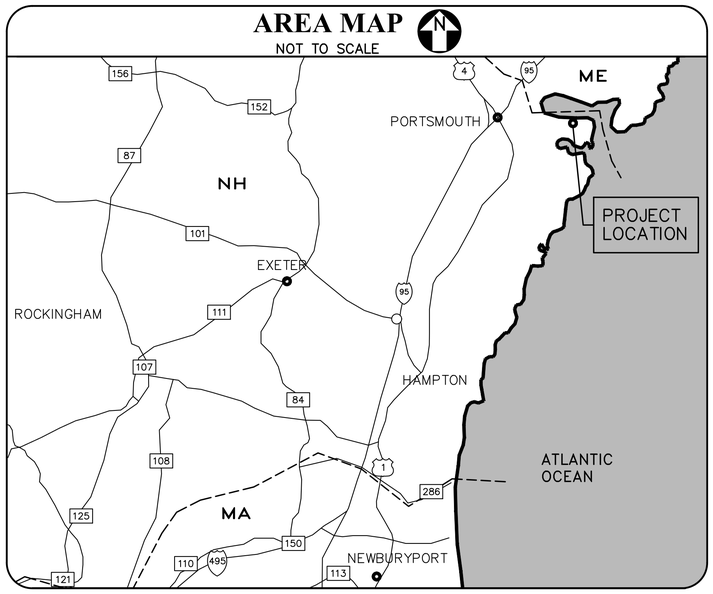
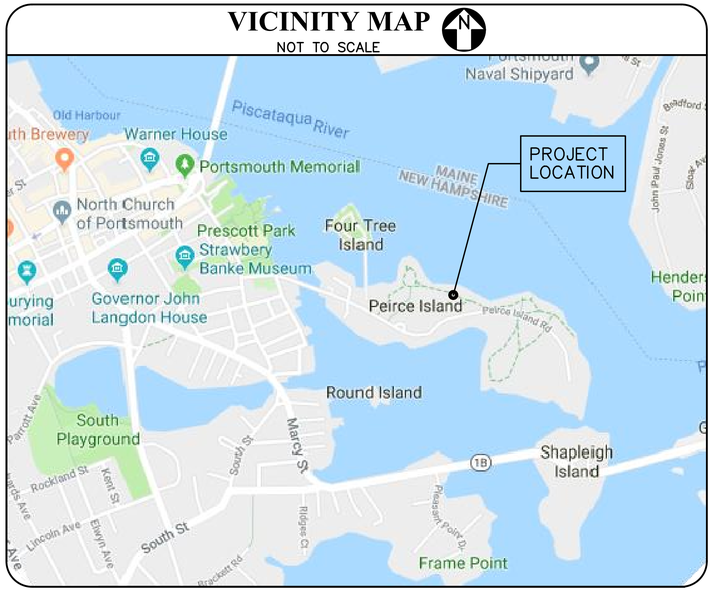
BID #40 - 23
PEIRCE ISLAND PUMP HOUSE AND POOL RENOVATION
PEIRCE ISLAND ROAD, PORTSMOUTH, NH





WTI
WATER TECHNOLOGY INC.
World Leaders in Aquatic Planning, Design and Engineering
100 Park Avenue I Beaver Dam, WI 53916
t 920.887.7375 I #18176

OAK POINT ASSOCIATES
ARCHITECTURE ■ ENGINEERING ■ PLANNING
85 Middle Street, Portsmouth, NH 03801 (T) 603.431.4849 (F) 603.431.1870
www.oakpoint.com

NO.	DATE	DESCRIPTION	BY

REVISIONS

27 Feb, 2023 – 1:14pm
C:\DFILE\21904.14–G001.dwg

OAK POINT ASSOCIATES
ARCHITECTURE ■ ENGINEERING ■ PLANNING
85 Middle Street, Portsmouth, NH 03801 (T) 603.431.4849 (F) 603.431.1870
www.oakpoint.com

LICENSED ARCHITECT
PETER N. MACGOVERN
No. 04674
THE STATE OF NEW HAMPSHIRE

DESIGNED BY: CAM
DRAWN BY: CAM
CHECKED BY: PNM
PROJECT: 21904.14

CITY OF PORTSMOUTH
1 Junkins Avenue
Portsmouth, NH 03801

BID #40 - 23
PEIRCE ISLAND PUMP HOUSE AND POOL RENOVATION
Peirce Island Road
Portsmouth, NH 03801

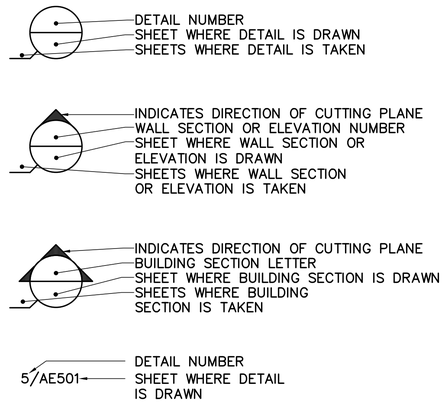
COVER SHEET

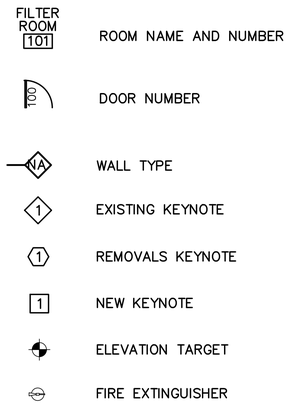
SCALE: AS NOTED
DATE: 03/01/2023
DWG.: G-001
SHEET: 1 OF 72

ABBREVIATIONS

%	PERCENT
&	AND
±	PLUS OR MINUS
@	AT
AFF	ABOVE FINISH FLOOR
ALUM	ALUMINUM
APA	AMERICAN PLYWOOD ASSOCIATION
APPROX	APPROXIMATELY
ASTM	AMERICAN SOCIETY FOR TESTING AND MATERIALS
BF OR ♿	BARRIER FREE
BOT	BOTTOM
℄	CENTERLINE
CJ	CONTROL JOINT
CLG	CEILING
CLR	CLEAR
COL	COLUMN
CONC	CONCRETE
CONT	CONTINUOUS
CPT	CARPET
CT	CERAMIC TILE
CWT	CERAMIC WALL TILE
DIA	DIAMETER
DS	DOWNSPOUT
DWG	DRAWING
EA	EACH
EJ	EXPANSION JOINT
ELEC	ELECTRIC
ELEV,EL	ELEVATION
EQ	EQUAL
EWC	ELECTRIC WATER COOLER
EXT	EXTERIOR
FBO	FURNISHED BY OWNER
FD	FLOOR DRAIN
FDN	FOUNDATION
FE	FIRE EXTINGUISHER
FEC	FIRE EXTINGUISHER CABINET
FF	FINISH FLOOR
GA	GAUGE
GALV	GALVANIZED
GYP BD	GYPSUM BOARD
H,HGT	HEIGHT
HD	HIGH DENSITY
HM	HOLLOW METAL
HORIZ	HORIZONTAL
HYD	HYDRANT
IN	INCHES
INSUL	INSULATION
MAT	MAT (WALK OFF)
MAX	MAXIMUM
MECH	MECHANICAL
MFR	MANUFACTURER
MIN	MINIMUM
MIR	MIRROR
MO	MASONRY OPENING
MTL	METAL
NAT	NATURAL FINISH
NIC	NOT IN CONTRACT
OC	ON CENTER
OD	OUTSIDE DIAMETER
OH	OPPOSITE HAND
PNT	PAINT, PAINTED
PL	PLASTIC LAMINATE
PLF	POUNDS PER LINEAR FOOT
PLY	PLYWOOD
PT	PRESSURE PRESERVATIVE TREATED
PVC	POLYVINYL CHLORIDE
R	RADIUS
RCB	RUBBER COVE BASE
REINF	REINFORCED
RO	ROUGH OPENING
RM	ROOM
SAT	SUSPENDED ACOUSTICAL TILE
SIM	SIMILAR
SF	SQUARE FEET
ST	STAIN
STC	SOUND TRANSMISSION CLASS
STL	STEEL
T	TRANSFORMER
T&G	TONGUE AND GROOVE
TOS	TOP OF SLAB, TOP OF STEEL
TOW	TOP OF WALL
TYP	TYPICAL
UL	UNDERWRITERS LABORATORY
UNO	UNLESS NOTED OTHERWISE
VERT	VERTICAL
VIF	VERIFY IN FIELD
VTR	VENT THROUGH ROOF
W/	WITH
WB	WOOD BASE
WD	WOOD

LEGEND





GENERAL CONSTRUCTION NOTES

1. CONFORM TO LOCAL, STATE, NATIONAL, AND OTHER CODES AND ORDINANCES WHICH APPLY TO THIS PROJECT.
2. OBTAIN PERMITS WHICH ARE REQUIRED FOR THE SATISFACTORY COMPLETION OF THE WORK.
3. COORDINATE THE TIMING AND SEQUENCE OF WORK WITH THE OWNER PRIOR TO COMMENCING WORK.
4. MOBILIZATION, LAY DOWN, AND DUMPSTER LOCATIONS: COORDINATE LOCATION AND USE OF PROPOSED CONTRACTOR LAYDOWN AND STAGING AREAS WITH OWNER PRIOR TO MOBILIZATION.
5. NOTIFY THE OWNER A MINIMUM OF 72 HOURS PRIOR TO INTERRUPTING UTILITY SERVICES.
6. FIELD VERIFY EXISTING CONDITIONS AND REPORT DISCREPANCIES TO THE OWNER. PROCEED WITH THE WORK ONLY AFTER THE DISCREPANCY(IES) HAS(HAVE) BEEN RESOLVED.
7. WORK FROM GIVEN DIMENSIONS AND LARGE SCALE DETAILS ONLY. DO NOT SCALE DRAWINGS.
8. PROVIDE WORK, ITEMS, AND COMPONENTS SHOWN ON THE DRAWINGS AS NEW UNLESS INDICATED AS EXISTING, NOT IN CONTRACT (NIC), OR FURNISHED BY OWNER (FBO).
9. DURING THE ENTIRE CONTRACT PERIOD, MAINTAIN THE CONSTRUCTION SITE IN A SECURE, WEATHER TIGHT, NEAT, CLEAN AND SAFE MANNER.
10. CONFORM TO OSHA WORK PRACTICES, EQUIPMENT, AND PERSONNEL PROTECTION MEASURES STANDARDS.
11. DISPOSE OF AND/OR RECYCLE CONSTRUCTION DEBRIS FROM THE PROJECT SITE AS REQUIRED BY THE STATE OF NEW HAMPSHIRE. OBTAIN DISPOSAL PERMITS WHICH ARE REQUIRED. DISPOSE OF CONSTRUCTION DEBRIS FROM THE PROJECT SITE IN A STATE APPROVED MANNER.

HAZARDOUS MATERIALS NOTES

1. OBTAIN PERMITS AND LICENSES REQUIRED FOR THE REMOVAL, TRANSPORT, AND DISPOSAL OF HAZARDOUS MATERIALS AND DEBRIS AT NO ADDITIONAL COST TO THE OWNER.
2. EXISTING PAINT IS ASSUMED TO CONTAIN LEAD. REMOVE AND DISPOSE OF INCIDENTAL EXISTING LOOSE PAINT AND PAINT DUST, AND LOOSE PAINT AND PAINT DUST CAUSED BY CONSTRUCTION ACTIVITIES.
3. MANAGE LEAD PAINT IN AREAS INDICATED FOR REMOVAL SEPARATE FROM THE SUBSTRATE AND TREAT THE REMOVED LEAD PAINT AS HAZARDOUS MATERIAL IN ACCORDANCE WITH THE SPECIFICATIONS. LEAD MUST BE MANAGED, REMOVED AND DISPOSED OF IN ACCORDANCE WITH FEDERAL, STATE AND LOCAL REGULATIONS.
4. EXISTING LIGHT FIXTURE BALLASTS ARE ASSUMED TO CONTAIN PCBS AND EXISTING LAMPS ARE ASSUMED TO CONTAIN MERCURY. SEE ELECTRICAL DRAWINGS FOR EXTENT OF REMOVALS. REMOVE IN ACCORDANCE WITH FEDERAL, STATE AND LOCAL REGULATIONS.

DRAWING LIST

NO.	DATE	DESCRIPTION	BY

REVISIONS

OAK POINT ASSOCIATES
ARCHITECTURE ■ ENGINEERING ■ PLANNING
85 Middle Street, Portsmouth, NH 03801 (T) 603.431.4849 (F) 603.431.1870
www.oakpoint.com

LICENSED ARCHITECT
PETER N. MACGOVERN
No. 04974
THE STATE OF NEW HAMPSHIRE

DESIGNED BY: CAM
DRAWN BY: CAM
CHECKED BY: PNM
PROJECT: 21904.14

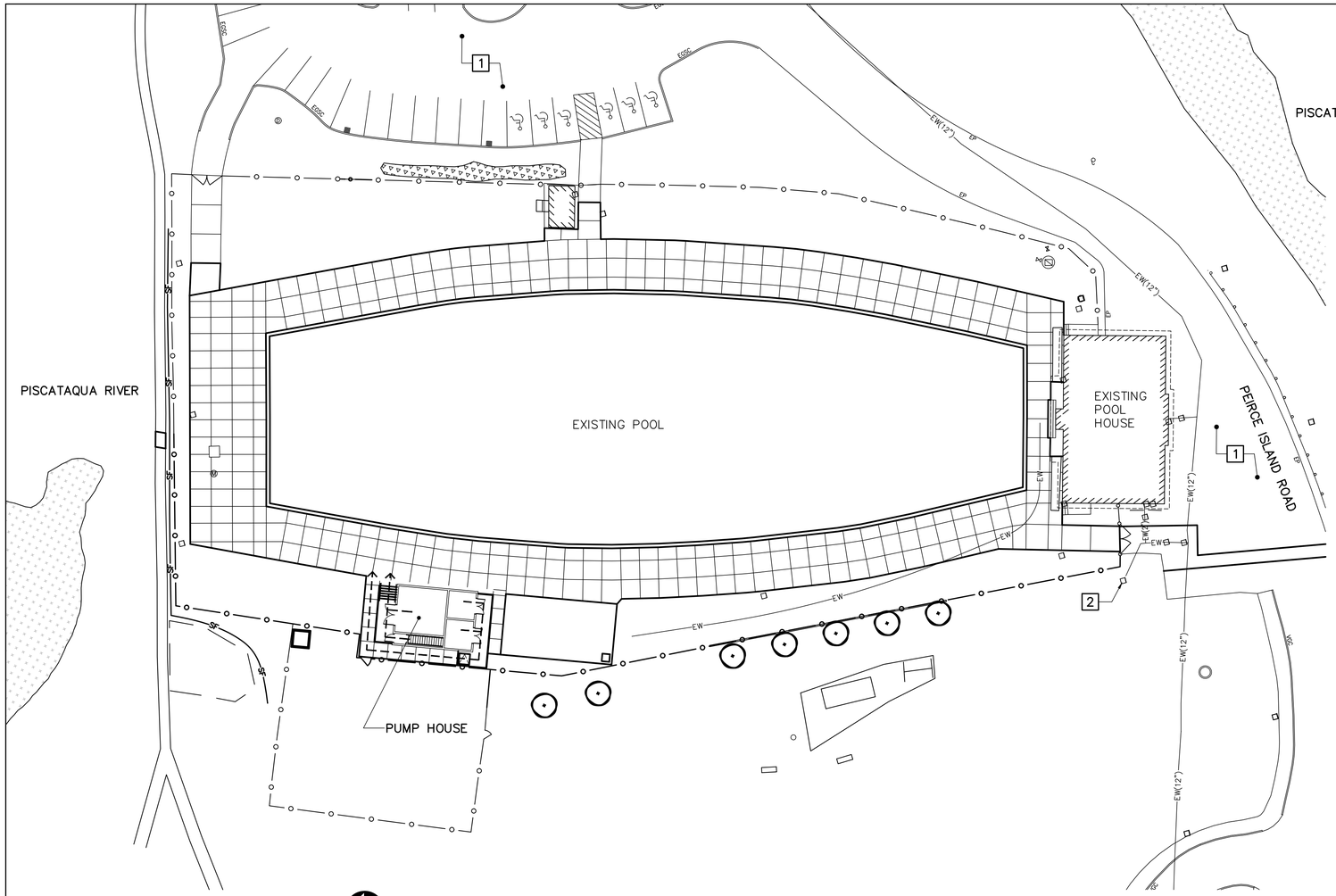
CITY OF PORTSMOUTH
1 Junkins Avenue
Portsmouth, NH 03801

BID #40 - 23
PEIRCE ISLAND PUMP HOUSE AND POOL RENOVATION
Peirce Island Road
Portsmouth, NH 03801

ABBREVIATIONS, LEGEND, GENERAL CONSTRUCTION NOTES, AND LIST OF DRAWINGS

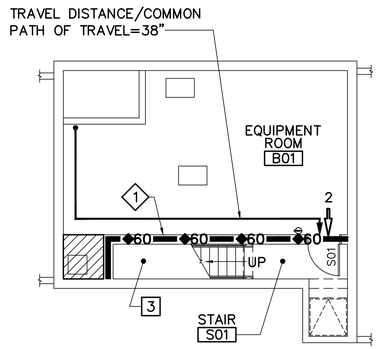
SCALE: AS NOTED
DATE: 03/01/2023
DWG.: G-002
SHEET: 2 OF 72

27 Feb, 2023 – 1:15pm
C:\DFILE\21904.14–G002.dwg



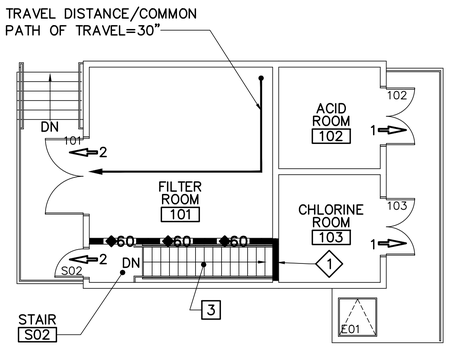
1 SITE LAYOUT PLAN
G–101 NOT TO SCALE

PLAN NORTH



2 BASEMENT LIFE SAFETY PLAN
G–101 1/8" = 1'–0"

PLAN NORTH



3 FIRST FLOOR LIFE SAFETY PLAN
G–102 1/8" = 1'–0"

PLAN NORTH

GENERAL FIRE PROTECTION CODE INFORMATION

APPLICABLE LIFE SAFETY/BUILDING CODES:
- New Hampshire Building Code; which incorporates:
  - 2015 International Building Code with New Hampshire and Portsmouth City amendments
  - 2015 International Swimming Pool and Spa Code.
- New Hampshire State Fire Code (Saf–C 6000); which incorporates:
  - 2015 National Fire Protection Association (NFPA) 1, The Fire Prevention Code
  - 2015 International Fire Code
  - 2015 NFPA 101, The Life Safety Code
- 2013 NFPA 10, Standard for Portable Fire Extinguishers
- 2017 NFPA 70, National Electric Code with New Hampshire amendments

NOTE:
The building will not be provided with a fire alarm or sprinkler system.

KEYNOTES (THIS SHEET ONLY)

1. EXISTING FIRE DEPARTMENT ACCESS.
2. EXISTING FIRE HYDRANT.
3. DO NOT PENETRATE THE STAIR ENCLOSURE WITH THE EXCEPTION OF CONDUIT FOR LIGHTING SERVING THE STAIR.

LEGEND

- 60 60 OR 1 — 1–HOUR FIRE BARRIER WITH 1–HOUR FIRESTOPPING AT PENETRATIONS AND JOINTS AND 60–MINUTE FIRE RESISTANT RATED, SELF–CLOSING AND SELF–LATCHING DOORS, WITH MINIMUM 60 MINUTE DOOR FRAMES.
- 1–HOUR FIRE RESISTANCE RATE FLOOR ASSEMBLY ABOVE
- TRAVEL PATH
- XXX — NUMBER OF OCCUPANTS UTILIZING EXIT
- EXIT DISCHARGE PATH

CALCULATED OCCUPANT LOAD AND EGRESS CAPACITY

ROOM/SPACE	USE	FLOOR AREA (SF)	OCCUPANT LOAD FACTOR	OCCUPANT LOAD (PEOPLE)
EQUIPMENT ROOM	MECHANICAL	544	300 GROSS SF/OCCUPANT	2
FILTER ROOM	MECHANICAL	349	300 GROSS SF/OCCUPANT	2
ACID ROOM	STORAGE	115	300 GROSS SF/OCCUPANT	1
CHLORINE ROOM	STORAGE	122	300 GROSS SF/OCCUPANT	1
TOTAL		1,130		6

EXIT/MEANS OF EGRESS	DOOR CLEAR WIDTH (INCHES)	DOOR CAPACITY (PEOPLE)	STAIR CLEAR WIDTH (INCHES)	STAIR CAPACITY (PEOPLE)	LIMITING CAPACITY (PEOPLE)	USE (PEOPLE)
EXTERIOR DOOR 101	92	460	77	256	256	2
EXTERIOR DOOR 102	66	330	NA	–	330	1
EXTERIOR DOOR 103	66	330	NA	–	330	1
EXTERIOR DOOR S02	32	160	44	146	146	2
					1,062	6

GRAPHIC SCALE
8' 4' 0 8' 16'
1/8"=1'–0"
CHECK GRAPHIC SCALE BEFORE USING

NO.	DATE	DESCRIPTION	BY
REVISIONS			

OAK POINT ASSOCIATES
ARCHITECTURE ■ ENGINEERING ■ PLANNING
85 Middle Street, Portsmouth, NH 03801 (T) 603.431.4849 (F) 603.431.1870
www.oakpoint.com

LICENSED ARCHITECT
PETER N. MACGOVERN
No. 04674
THE STATE OF NEW HAMPSHIRE
05/01/23

DESIGNED BY: CAM
DRAWN BY: SAS
CHECKED BY: PNM
PROJECT: 21904.14

CITY OF PORTSMOUTH
1 Junkins Avenue
Portsmouth, NH 03801

BID #40 - 23
PEIRCE ISLAND PUMP HOUSE AND POOL RENOVATION
Peirce Island Road
Portsmouth, NH 03801

CODE INFORMATION 1

SCALE: AS NOTED
DATE: 03/01/2023
DWG.: G-101
SHEET: 3 OF 72

27 Feb, 2023 – 1:16pm
C:\DFILE\21904.14–G101.dwg

BUILDING CODE SUMMARY (IBC)

BUILDING FEATURE	REQUIRED/ALLOWED	PROVIDED	REFERENCE
OCCUPANCY CLASSIFICATION	NOT APPLICABLE	F-1 (MODERATE HAZARD FACTORY INDUSTRIAL)	IBC, SECTION 306.2
TYPE OF CONSTRUCTION	NOT APPLICABLE	TYPE III-B	IBC, TABLE 601 AND SECTION 602.3
BUILDING HEIGHT	55 FEET ABOVE GRADE PLANE	20 FEET	IBC, TABLE 504.3
BUILDING NUMBER OF STORIES	2 ABOVE GRADE PLANE	1 PLUS BASEMENT	IBC, TABLE 504.4
BUILDING FOOTPRINT AREA	12,000 SQUARE FEET	768 SQUARE FEET	IBC, TABLE 506.2
EXTERIOR WALL FIRE-RESISTANCE RATING (FIRE SEPARATION DISTANCE = >30 FEET)	0	2-HOUR	IBC, TABLE 602
INTERIOR FIRE-RESISTANCE RATINGS	OCCUPANCY SEPARATIONS: NOT APPLICABLE - SINGLE OCCUPANCY CORRIDORS: NOT APPLICABLE STAIRWAYS: 1-HOUR	STAIRWAYS: 1-HOUR	IBC, SECTION 1023.2
STRUCTURAL ELEMENTS FIRE-RESISTANCE RATINGS	EXTERIOR LOAD BEARING WALLS: 2-HOURS ALL OTHERS: 0	EXTERIOR LOAD BEARING WALLS: 2-HOURS ALL OTHERS: 0	IBC, TABLE 601
USE/OCCUPANT LOAD FACTORS	MECHANICAL: 300 GROSS SF/OCCUPANT STORAGE: 300 GROSS SF/ OCCUPANT	SEE CALCULATED OCCUPANT LOAD TABLE, SHEET G-101	IBC, TABLE 1004.1.2
NUMBER OF EXITS	BASEMENT: 1 FIRST FLOOR: 3 (1 FROM EACH SPACE)	BASEMENT: 1 FIRST FLOOR: 3 (1 FROM EACH SPACE)	IBC, SECTION 1006.3.2, CONDITIONS 1 AND 2
EXIT CAPACITY (CLEAR WIDTH)	DOORS: 0.2 INCHES/PERSON STAIRS: 0.3 INCHES/PERSON	SEE CALCULATED OCCUPANT LOAD TABLE, SHEET G-101	IBC, SECTION 1005.3.2 IBC, SECTION 1005.3.1
MINIMUM DOOR CLEAR WIDTH	32 INCHES	>32 INCHES	IBC, SECTION 1010.1.1
MINIMUM STAIR CLEAR WIDTH	44 INCHES	44 INCHES	IBC, SECTION 1011.2
TRAVEL DISTANCE	75 FEET MAXIMUM (DUE TO SINGLE EXIT)	38 FEET	IBC, SECTIONS 1006.3.2(2) AND 1017.2
COMMON PATH OF TRAVEL	75 FEET MAXIMUM	38 FEET	IBC, SECTION 1006.2.1
DEAD END CORRIDOR LENGTH	NOT APPLICABLE	NOT APPLICABLE	IBC, SECTION 1020.4
ACCESSIBLE MEANS OF EGRESS	NOT REQUIRED	0	IBC, SECTION 1103.2.9
DISCHARGE FROM EXITS	DIRECTLY TO THE EXTERIOR AND THE PUBLIC WAY	DIRECTLY TO THE EXTERIOR AND THE PUBLIC WAY	IBC, SECTION 1022.2.2
INTERIOR FINISHES	EXIT STAIRWAYS: CLASS B MIN OTHER SPACES: CLASS C MIN	EXIT STAIRWAYS: CLASS B MIN OTHER SPACES: CLASS C MIN	IBC, TABLE 803.11
FIRE ALARM SYSTEM	NOT REQUIRED	NOT PROVIDED	IBC, SECTION 907.2.4
AUTOMATIC SPRINKLER SYSTEM	NOT REQUIRED	NOT PROVIDED	IBC, SECTION 903.2.4

LIFE SAFETY CODE SUMMARY (NFPA)

BUILDING FEATURE	REQUIRED/ALLOWED	PROVIDED	REFERENCE
OCCUPANCY CLASSIFICATION	NOT APPLICABLE	INDUSTRIAL	NFPA 101, SECTION 6.1.12.1
TYPE OF CONSTRUCTION	NOT APPLICABLE	TYPE III (200)	NFPA 220, SECTION 4.4.1
USE/OCCUPANT LOAD FACTORS	MECHANICAL: NOT APPLICABLE STORAGE: 500 GROSS SF/ OCCUPANT	SEE CALCULATED OCCUPANT LOAD TABLE, SHEET G-101	NFPA 101, TABLE 7.3.1.2
NUMBER OF EXITS	1, PROVIDED COMMON PATH OF TRAVEL LIMITATIONS ARE MET	1 PER AREA	NFPA 101, SECTIONS 7.4.1 AND 40.2.4.1.2
EXIT CAPACITY	DOORS: 0.2 IN/PERSON STAIRWAYS: 0.3 IN/PERSON	SEE CALCULATED OCCUPANT LOAD TABLE, SHEET G-101	NFPA 101, TABLE 7.3.3.1
MINIMUM DOOR CLEAR WIDTH	32 INCHES	32 INCHES	NFPA 101, SECTION 7.2.1.2.3.2
MINIMUM STAIR CLEAR WIDTH	36 INCHES	44 INCHES	NFPA 101, SECTION 7.2.2.2.1.2(A)
REMOTENESS OF EGRESS	NOT APPLICABLE	NOT APPLICABLE	NFPA 101, SECTION 7.5.1.3.2
TRAVEL DISTANCE	50 FEET MAXIMUM (DUE TO SINGLE EXIT)	38 FEET	NFPA 101, TABLES A.7.6 AND 40.2.6.1
COMMON PATH OF TRAVEL	50 FEET MAXIMUM	38 FEET	NFPA 101, TABLES A.7.6 AND 40.2.5.1
DEAD END CORRIDOR LENGTH	NOT APPLICABLE	NOT APPLICABLE	NFPA 101, TABLES A.7.6 AND 40.2.5.1
ACCESSIBLE MEANS OF EGRESS	NOT APPLICABLE	NOT APPLICABLE	NFPA 101, SECTION 7.5.4.1
DISCHARGE FROM EXITS	DIRECTLY TO THE EXTERIOR AND THE PUBLIC WAY	DIRECTLY TO THE EXTERIOR AND THE PUBLIC WAY	NFPA 101, SECTION 7.7.1
INTERIOR FINISHES	EXIT STAIRWAYS: CLASS B MIN OTHER SPACES: CLASS C MIN	EXIT STAIRWAYS: CLASS B MIN OTHER SPACES: CLASS C MIN	NFPA 101, TABLE A.10.2.2
FIRE ALARM SYSTEM	NOT REQUIRED	NOT PROVIDED	NFPA 101, SECTION 40.3.4.1
AUTOMATIC SPRINKLER SYSTEM	NOT REQUIRED	NOT PROVIDED	NFPA 101, SECTION 4.3.5
EMERGENCY LIGHTING	REQUIRED	PROVIDED, SEE ELECTRICAL SHEETS	NFPA 101, SECTIONS 7.9 AND 40.2.9.1
EXIT SIGNAGE	REQUIRED	PROVIDED, SEE ELECTRICAL SHEETS	NFPA 101, SECTION 7.10
FIRE FLOW	1,500 GPM AT 20 PSI	EXISTING TO REMAIN	NFPA 1, TABLE 18.4.5.2.1
DISTANCE TO FIRE HYDRANT	400 FEET MAX FROM CLOSEST POINT OF BUILDING TO HYDRANT	275 FEET	NFPA 1, SECTION 18.5.3(1)

NO.	DATE	DESCRIPTION	BY

REVISIONS

27 Feb, 2023 - 1:16pm
C:\DFILE\21904.14-G102.dwg

OAK POINT ASSOCIATES
ARCHITECTURE ■ ENGINEERING ■ PLANNING
85 Middle Street, Portsmouth, NH 03801 (T) 603.431.4849 (F) 603.431.1870
www.oakpoint.com

LICENSED ARCHITECT
PETER N. MACGOVERN
No. 04574
STATE OF NEW HAMPSHIRE

DESIGNED BY: CAM
DRAWN BY: SAS
CHECKED BY: PNM
PROJECT: 21904.14

CITY OF PORTSMOUTH
1 Junkins Avenue
Portsmouth, NH 03801

BID #40 - 23
PEIRCE ISLAND PUMP HOUSE AND POOL RENOVATION
Peirce Island Road
Portsmouth, NH 03801

CODE INFORMATION 2

SCALE: AS NOTED

DATE: 03/01/2023

DWG.: G-102

SHEET: 4 OF 72

CIVIL LEGEND

- EXISTING BUILDING
- EXISTING CHAIN LINK FENCE
- 62 EXISTING GRADE CONTOUR LINE
- ESD(12") EXISTING STORM DRAIN LINE (SIZE AND TYPE)
- ESS(8") EXISTING SANITARY SEWER LINE (SIZE AND TYPE)
- EUG EXISTING UNDERGROUND NATURAL GAS LINE
- EOU EXISTING OVERHEAD UTILITIES
- EOE EXISTING OVERHEAD ELECTRIC
- EUT EXISTING UNDERGROUND TELEPHONE LINE
- EW(12") EXISTING WATER LINE (SIZE AND TYPE)
- EUE EXISTING UNDERGROUND ELECTRIC LINE
- EFM EXISTING SEWER FORCE MAIN
- EXISTING UTILITY POLE WITH GUY
- EXISTING LIGHT POLE
- EXISTING CATCH BASIN
- EXISTING LANDSCAPE DRAIN
- EXISTING TREE
- B-3 EXISTING SOIL BORING LOCATION
- EXISTING SURVEY CONTROL POINT
- WV EXISTING WATER VALVE
- EXISTING WATER SHUTOFF
- EXISTING FIRE HYDRANT
- GV EXISTING GAS VALVE
- S EXISTING SEWER MANHOLE
- E EXISTING ELECTRIC MANHOLE
- EXISTING SIGN
- BUILDING LINE
- EGSC EXISTING GRANITE SLOPE CURB
- EVGC EXISTING GRANITE CURB
- EP EXISTING EDGE OF PAVEMENT
- SF SILT FENCE
- SD(12") DRAIN LINE (PIPE SIZE AS NOTED)
- UD(4") UNDERDRAIN LINE (PIPE SIZE AS NOTED)
- RD(4") ROOF DRAIN (PIPE SIZE AS NOTED)
- FM(4") SANITARY SEWER FORCE MAIN LINE (PIPE SIZE AS NOTED)
- UE(1") UNDERGROUND ELECTRIC LINE (CONDUIT SIZE AS NOTED)
- W(6") WATER LINE (PIPE SIZE AS NOTED)
- SAWCUT PAVEMENT
- 32 FINISH GRADE CONTOUR LINE
- 35.70 FINISH GRADE SPOT ELEVATION
- E ELECTRIC HANDHOLE
- SIGN
- JOINT RESTRAINT
- WV WATER VALVE
- DRAINAGE FLOW DIRECTION

CIVIL NOTES

1. VERIFY EXISTING CONDITIONS AND DIMENSIONS AND REPORT ANY DISCREPANCIES TO THE OWNER. PROCEED WITH THE WORK ONLY AFTER THE DISCREPANCY(IES) HAS(HAVE) BEEN RESOLVED BY THE OWNER.
2. THE DEPICTED LOCATIONS OF EXISTING UNDERGROUND UTILITIES ARE BASED ON RECORD DRAWINGS AND/OR FIELD SURVEY AND ARE APPROXIMATE. DETERMINE THE EXACT LOCATION OF UNDERGROUND UTILITIES PRIOR TO BEGINNING WORK. CONTACT "DIG SAFE" AT 1-888-344-7233 AND OBTAIN A "DIG SAFE" PERMIT PRIOR TO COMMENCING EXCAVATION OPERATIONS ON THE SITE.
3. PROTECT EXISTING SYSTEMS AND SURFACES TO REMAIN. DAMAGE RESULTING FROM THE CONTRACTOR'S OPERATIONS MUST BE REPAIRED OR REPLACED AS APPROVED BY THE OWNER AT NO ADDITIONAL COST TO THE OWNER.
4. PROVIDE A MINIMUM OF 6 INCHES OF PLANTING SOIL, SEED, AND MULCH FOR DISTURBED AREAS NOT OTHERWISE SPECIFIED.
5. PROVIDE A PAVEMENT SURFACE THAT IS FREE OF LOW SPOTS AND PONDING AREAS.
6. EXISTING CONDITIONS ARE BASED ON A TOPOGRAPHIC SURVEY COMPLETED BY OAK POINT ASSOCIATES DECEMBER 2018 AND JUNE 2021, CITY OF PORTMOUTH GIS MAPS, AND TOPOGRAPHIC SURVEY BY DOUCET SURVEY JULY 2013.
7. HORIZONTAL CONTROL IS BASED ON NEW HAMPSHIRE STATE PLANE COORDINATE SYSTEM, NAD83. VERTICAL CONTROL IS BASED ON NAVD88.
8. GIVEN DIMENSIONS ARE FROM FACE OF CURB, FACE OF WALL, FACE OF BUILDING AND CENTERLINE OF MARKINGS UNLESS INDICATED OR NOTED OTHERWISE.
9. GROUNDWATER CONDITIONS ARE AFFECTED BY TIDAL CONDITIONS AND FLUCTUATE. FOR DEWATERING WORK, EXCAVATION, AND OTHER ASPECTS OF THIS PROJECT, PLAN UNDER THE ASSUMPTION THAT GROUNDWATER WILL BE ENCOUNTERED AT ELEVATION 3.0 FEET. HIGHER ELEVATIONS MAY BE ENCOUNTERED DUE TO TIDAL FLUCTUATIONS AND WEATHER EVENTS. OBTAIN APPROVAL AND DRAINAGE PERMIT FROM THE OWNER FOR DEWATERING DISCHARGES TO CITY DRAINAGE SYSTEMS.
10. COORDINATE WORK ASSOCIATED WITH ELECTRIC SERVICE WITH EVERSOURCE. PROVIDE UTILITY SERVICES IN ACCORDANCE WITH UTILITY COMPANY STANDARDS AND REQUIREMENTS. PAY UTILITY FEES FOR SERVICE CONNECTION.
11. ESTABLISH AND MAINTAIN SURVEY CONTROL AND LAYOUT BY A SURVEYOR OR ENGINEER LICENSED IN THE STATE OF NEW HAMPSHIRE.
12. THE FOLLOWING PERMITS WILL BE OBTAINED BY THE OWNER TO ALLOW FOR THE COMPLETION OF WORK. ALL KNOWN CONDITIONS THAT WILL AFFECT THE CONTRACT HAVE BEEN INCLUDED IN THE SCOPE OF WORK IDENTIFIED ON THE DRAWINGS AND SPECIFICATIONS. ABIDE BY ALL CONDITIONS AND REQUIREMENTS OF EACH PERMIT.
    A. NHDES STANDARD WETLANDS PERMIT.
    B. NHDES SHORELAND PERMIT BY NOTIFICATION (PBN).
    C. CITY OF PORTSMOUTH CONSERVATION COMMISSION REVIEW.
13. MEET THE REQUIREMENTS AND INTENT OF NEW HAMPSHIRE INVASIVE SPECIES REGULATIONS (RSA 430:53 AND AGR 3800).
14. WETLAND BOUNDARIES WERE DELINEATED BY NORMANDEAU ASSOCIATES, INC. ON JUNE 25, 2021, AND WERE DETERMINED USING THE US ARMY CORPS OF ENGINEERS NORTHCENTRAL/NORTHEAST REGIONAL SUPPLEMENT (VERSION 2, JANUARY 2013) TO THE CORPS OF ENGINEERS WETLANDS DELINEATION MANUAL (1987) AND NHDES WETLAND RULES ENV-WT 101.48.
15. UTILITY PROVIDERS:
    WATER: CITY OF PORTSMOUTH
    SEWER: CITY OF PORTSMOUTH
    POWER: EVERSOURCE
    COMMUNICATIONS: BAYRING COMMUNICATIONS
16. SUBSURFACE CONDITIONS BASED ON A REPORT OF GEOTECHNICAL EVALUATION PREPARED BY R.W. GILLESPIE & ASSOCIATES, DATED MAY 5, 2022.

CIVIL ABBREVIATIONS

AASHTO	AMERICAN ASSOCIATION OF STATE HIGHWAY TRANSPORTATION OFFICIALS
ABAN	ABANDONED
AC	ASBESTOS CEMENT
ADA	AMERICANS WITH DISABILITIES ACT
ASTM	AMERICAN SOCIETY FOR TESTING AND MATERIALS
AWG	AMERICAN WIRE GUAGE
AWWA	AMERICAN WATER WORKS ASSOCIATION
BC	BOTTOM OF CURB (AT PAVEMENT SURFACE)
BLDG	BUILDING
BMPs	BEST MANAGEMENT PRACTICES
℄	CENTERLINE
CJ	CONTROL JOINT
CONC	CONCRETE
CY	CUBIC YARD
DI	DUCTILE IRON
DIA	DIAMETER
E	EASTING
EJ	EXPANSION JOINT
ELEV	ELEVATION
EQ	EQUAL
EW	EACH WAY
EXIST	EXISTING
FD	FOUNDATION DRAIN
FFE	FINISH FLOOR ELEVATION
FHWA	FEDERAL HIGHWAY ADMINISTRATION
FT	FEET
GAL	GALLON
GALV	GALVANIZED
HORIZ	HORIZONTAL
HDPE	HIGH DENSITY POLYETHYLENE
ID	IDENTIFICATION
INV	INVERT
L	LENGTH
LB/LBS	POUND/POUNDS
LF	LINEAR FEET
MAX	MAXIMUM
MIN	MINIMUM OR MINUTE
MUTCD	MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES
N	NORTHING
NFPA	NATIONAL FIRE PROTECTION ASSOCIATION
NHDES	NEW HAMPSHIRE DEPARTMENT OF ENVIRONMENTAL SERVICES
NHDOT	NEW HAMPSHIRE DEPARTMENT OF TRANSPORTATION
NOI	NOTICE OF INTENT
NPDES	NATIONAL POLLUTION DISCHARGE ELIMINATION SYSTEM
OC	ON CENTER
OD	OUTSIDE DIAMETER
OSHA	OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION
PC	POINT OF CURVATURE
PE	POLYETHYLENE
PSI	POUNDS PER SQUARE INCH
PT	POINT OF TANGENCY
PVC	POLYVINYL CHLORIDE
R	RADIUS
RCP	REINFORCED CONCRETE PIPE
REINF	REINFORCED
RGS	RIGID GALVANIZED STEEL
SCH	SCHEDULE
SDR	STANDARD DIMENSION RATIO
SF	SQUARE FOOT
SIM	SIMILAR
SY	SQUARE YARDS
T	THICKNESS
TBM	TEMPORARY BENCH MARK
TC	TOP OF CURB
TYP	TYPICAL
USDOT	UNITED STATES DEPARTMENT OF TRANSPORTATION
VERT	VERTICAL
W/	WITH
WWF	WELDED WIRE FABRIC

PARCEL INFORMATION

OWNER OF RECORD:
CITY OF PORTSMOUTH
PO BOX 628
PORTSMOUTH, NH 03802

PARCEL SIZE: 38.0 ACRES

CITY OF PORTSMOUTH MAP-LOT: 208-1

ZONE: MUNICIPAL (M)

DIMENSIONAL REQUIREMENTS: LOTS AND BUILDINGS IN THE MUNICIPAL DISTRICT ARE EXEMPT FROM ALL DIMENSIONAL AND INTENSITY REGULATIONS.

SUBJECT PARCEL IS LOCATED WITHIN A FEDERALLY DESIGNATED FLOOD HAZARD AREA ZONE AE (COMMUNITY PANEL NUMBER 330139 0278 F, EFFECTIVE DATE: JANUARY 29, 2021)

ABUTTERS:

PEASE DEVELOPMENT AUTHORITY
C/O PORTS FISH CO OP
ONE PIERCE ISLAND RD
PORTSMOUTH, NH 03801
LOT: 208-1A
ZONE: WATERFRONT BUSINESS (WB)

CITY OF PORTSMOUTH
PO BOX 628
PORTSMOUTH, NH 03802
LOT: 208-2
ZONE: MUNICIPAL (M)

PLAN REFERENCES

SWIMMING FACILITIES RESTORATION, JUNE 1978, BY WHITMAN AND HOWARD, INC.

PEIRCE ISLAND POOL GUTTER IMPROVEMENTS, FEBRUARY 10, 1996, BY KIMBALL CHASE.

PARKING IMPROVEMENTS PEIRCE ISLAND, NOVEMBER 4, 2000, BY OAK POINT ASSOCIATES.

EXISTING CONDITIONS SURVEY BY DOUCET SURVEY, LLC, JULY 2003.

PEIRCE ISLAND WWTF UPGRADE, NOVEMBER 2015, BY AECOM.

CITY OF PORTSMOUTH PUBLIC WORKS EXISTING CONDITIONS GIS MAP

NO.	DATE	DESCRIPTION	BY

REVISIONS

28 Feb, 2023 - 1:55pm
C:\dfile\21904.14-C001.dwg

OAK POINT ASSOCIATES
ARCHITECTURE ■ ENGINEERING ■ PLANNING
85 Middle Street, Portsmouth, NH 03801 (T) 603.431.4849 (F) 603.431.1870
www.oakpoint.com

WADE ALLEN LIPPERT No. 16331 PROFESSIONAL ENGINEER STATE OF NEW HAMPSHIRE 3/1/23

DESIGNED BY: WAL
DRAWN BY: WAL
CHECKED BY: PJM
PROJECT: 21904.14

CITY OF PORTSMOUTH
1 Junkins Avenue
Portsmouth, NH 03801

BID #40 - 23
PEIRCE ISLAND PUMP HOUSE AND POOL RENOVATION
Peirce Island Road
Portsmouth, NH 03801

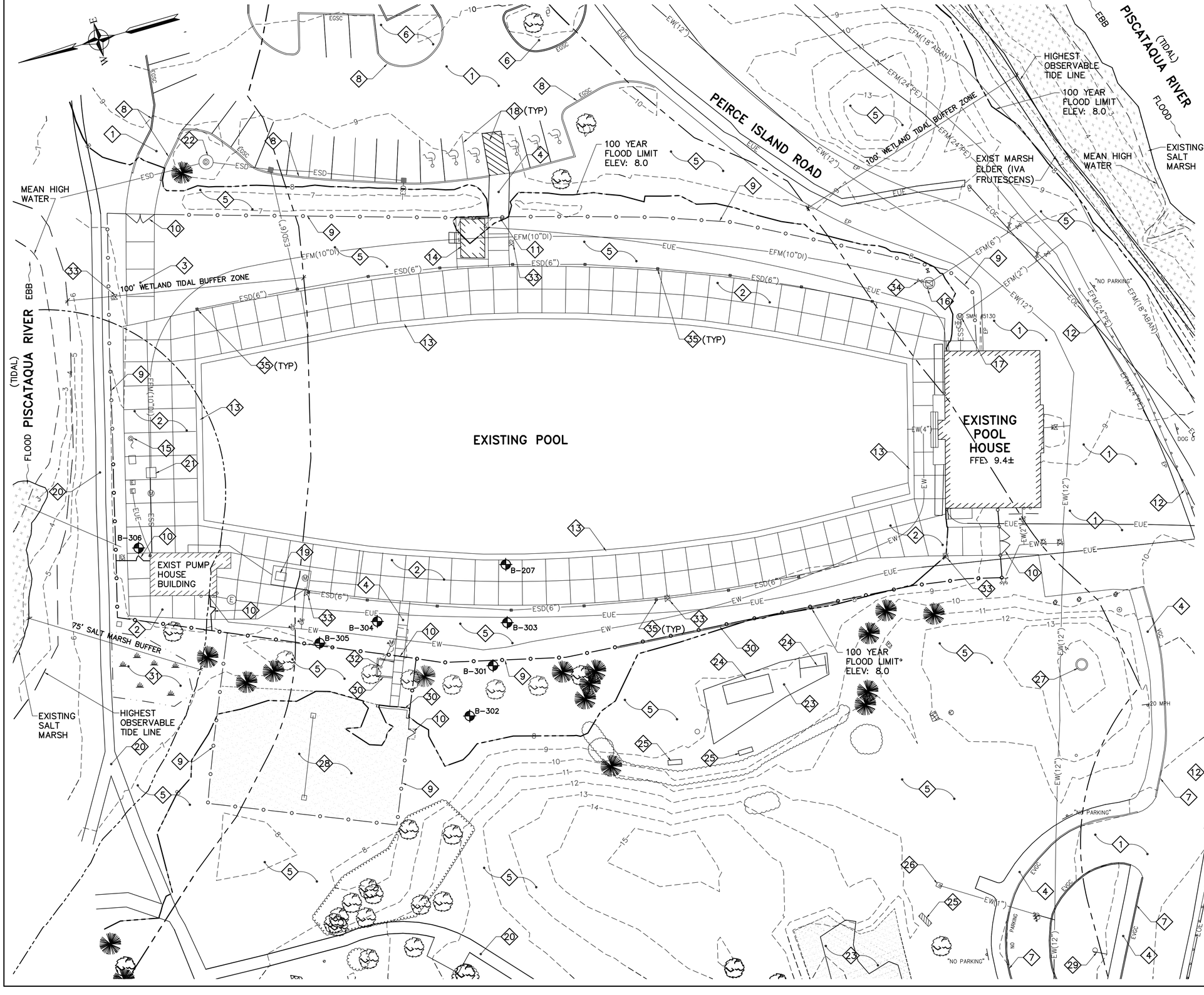
CIVIL LEGEND, NOTES, AND ABBREVIATIONS

SCALE: AS NOTED

DATE: 03/01/2023

DWG.: C-001

SHEET: 5 OF 72



KEYNOTES (THIS SHEET ONLY)

1. EXISTING ASPHALT CONCRETE PAVEMENT.
2. EXISTING CONCRETE POOL DECK.
3. EXISTING CONCRETE PAVEMENT (4"± THICK).
4. EXISTING CONCRETE WALK (4"± THICK).
5. EXISTING TURF.
6. EXISTING MULCH LANDSCAPE AREA.
7. EXISTING VERTICAL GRANITE CURB.
8. EXISTING GRANITE SLOPE CURB.
9. EXISTING 6'± HIGH CHAIN LINK FENCE.
10. EXISTING 6'± HIGH CHAIN LINK SWING GATE.
11. EXISTING 6'± HIGH CHAIN LINK SLIDING GATE.
12. EXISTING WOOD GUARD RAIL.
13. EXISTING POOL GUTTER AND 2'± WIDE CONCRETE CAP.
14. EXISTING 16'x10'± PORTABLE WOOD FRAME TICKET BOOTH BUILDING.
15. EXISTING FLAG POLE.
16. EXISTING CHECK VALVE VAULT.
17. EXISTING SUBMERSIBLE SEWER GRINDER PUMP STATION.
18. EXISTING PAVEMENT MARKING.
19. EXISTING SURGE TANK.
20. EXISTING STONE DUST PATH.
21. EXISTING POOL FILTER BACKWASH PUMP VAULT.
22. EXISTING STORMWATER TREATMENT SYSTEM MANHOLE.
23. EXISTING MULCH PLAYGROUND SURFACE.
24. EXISTING PLAYGROUND EQUIPMENT.
25. EXISTING BENCH.
26. EXISTING WATER FOUNTAIN.
27. EXISTING CONCRETE PLANTER.
28. EXISTING SAND VOLLEYBALL COURT.
29. EXISTING PEIRCE ISLAND PLAYGROUND AND MUNICIPAL POOL SIGN.
30. EXISTING LANDSCAPE TIMBER.
31. EXISTING WETLAND.
32. EXISTING OUTDOOR SHOWER.
33. EXISTING IRRIGATION VALVE PIT.
34. EXISTING FORCE MAIN VALVE.
35. EXISTING LANDSCAPE DRAIN.

GRAPHIC SCALE
20' 10' 0 20' 40'
1"=20'
CHECK GRAPHIC SCALE BEFORE USING

NO.	DATE	DESCRIPTION	BY

REVISIONS

OAK POINT ASSOCIATES
ARCHITECTURE ■ ENGINEERING ■ PLANNING
85 Middle Street, Portsmouth, NH 03801 (T) 603.431.4849 (F) 603.431.1870
www.oakpointllc.com

STATE OF NEW HAMPSHIRE
WADE ALLEN LIPPERT
No. 16331
LICENSED
PROFESSIONAL ENGINEER
3/1/23

DESIGNED BY: WAL
DRAWN BY: WAL
CHECKED BY: PJM
PROJECT: 21904.14

CITY OF PORTSMOUTH
1 Junkins Avenue
Portsmouth, NH 03801

BID #40 - 23
PEIRCE ISLAND PUMP HOUSE AND POOL RENOVATION
Peirce Island Road
Portsmouth, NH 03801

EXISTING CONDITIONS SITE PLAN

SCALE: AS NOTED
DATE: 03/01/2023
DWG.: CX101
SHEET: 6 OF 72

GENERAL NOTE

1. REFER TO DRAWING CG101 FOR EROSION AND SEDIMENT CONTROLS.

KEYNOTES (THIS SHEET ONLY)

1. SAWCUT 4"± THICK ASPHALT CONCRETE PAVEMENT.
2. REMOVE 4"± THICK ASPHALT CONCRETE PAVEMENT.
3. SAWCUT CONCRETE POOL DECK FULL DEPTH AT EXISTING JOINT.
4. REMOVE 4"± THICK CONCRETE POOL DECK. (6"± THICK AT NORTH END OF POOL)
5. REMOVE BUILDING AND FOUNDATION. REFER TO DETAIL 1/SD101.
6. REMOVE TREE. (DIA GIVEN WITH KEYNOTE)
7. STRIP AND STOCKPILE TOPSOIL.
8. REMOVE WOOD GUARD RAIL.
9. REMOVE ABOVE GROUND POOL FILL PIPING, VALVE AND CONCRETE BERM. CAP AND ABANDON EXISTING WATER LINE. REFER TO DRAWING D101.
10. REMOVE 6'± HIGH CHAIN LINK FENCE.
11. REMOVE ALUMINUM RAMP AND STORE FOR REINSTALLATION.
12. REMOVE ELECTRICAL MANHOLE.
13. REMOVE WATER VALVE.
14. REMOVE POOL PIPING.
15. REMOVE 6"x6"x10" DEEP LANDSCAPE DRAIN.
16. REMOVE DRAIN PIPE.
17. REMOVE SEWER PIPE.
18. REMOVE FORCE MAIN PIPE.
19. REMOVE SANITARY SEWER PUMPS, PIPING, AND ASSOCIATED EQUIPMENT. CAP EXISTING PIPE PENETRATIONS.
20. CAP AND ABANDON WATER LINE.
21. REMOVE EXISTING IRRIGATION SYSTEM.
22. CAP AND ABANDON UNDERGROUND ELECTRIC CONDUITS.
23. REMOVE OUTDOOR SHOWER AND FOUNDATION. STORE FOR REINSTALLATION.
24. REMOVE LANDSCAPE TIMBER.
25. REMOVE WATER LINE.

KEYNOTES (CONTINUED)

26. REMOVE UNDERGROUND ELECTRICAL CONDUIT AND CABLES.
27. REMOVE SURGE TANK PIPING, ALUMINUM HATCH, DUCTILE IRON MANHOLE FRAME/COVER, CONCRETE TOP SLAB, AND TOP 3' OF CONCRETE VAULT. BREAK CONCRETE VAULT BOTTOM AND FILL WITH COMPACTED STRUCTURAL FILL.
28. REMOVE EXISTING POOL GUTTER AND CONCRETE APRON, REFER TO DRAWING D101.
29. CAP AND ABANDON EXISTING CONDUITS.
30. REMOVE ALUMINUM HATCH AND TOP 3' OF 4'x4'x10'± DEEP CONCRETE VAULT. FILL WITH COMPACTED STRUCTURAL FILL.
31. CAP AND ABANDON EXISTING DISCHARGE PIPE.
32. REMOVE EXISTING ELECTRIC HANDHOLE.

GRAPHIC SCALE
1"=20'
20' 10' 0 20' 40'
CHECK GRAPHIC SCALE BEFORE USING

NO.	DATE	DESCRIPTION	BY

REVISIONS

OAK POINT ASSOCIATES
ARCHITECTURE ■ ENGINEERING ■ PLANNING
85 Middle Street, Portsmouth, NH 03801 (T) 603.431.4849 (F) 603.431.1870
www.oakpointllc.com

STATE OF NEW HAMPSHIRE
WADE ALLEN LIPPERT
No. 16331
LICENSED PROFESSIONAL ENGINEER
3/1/23

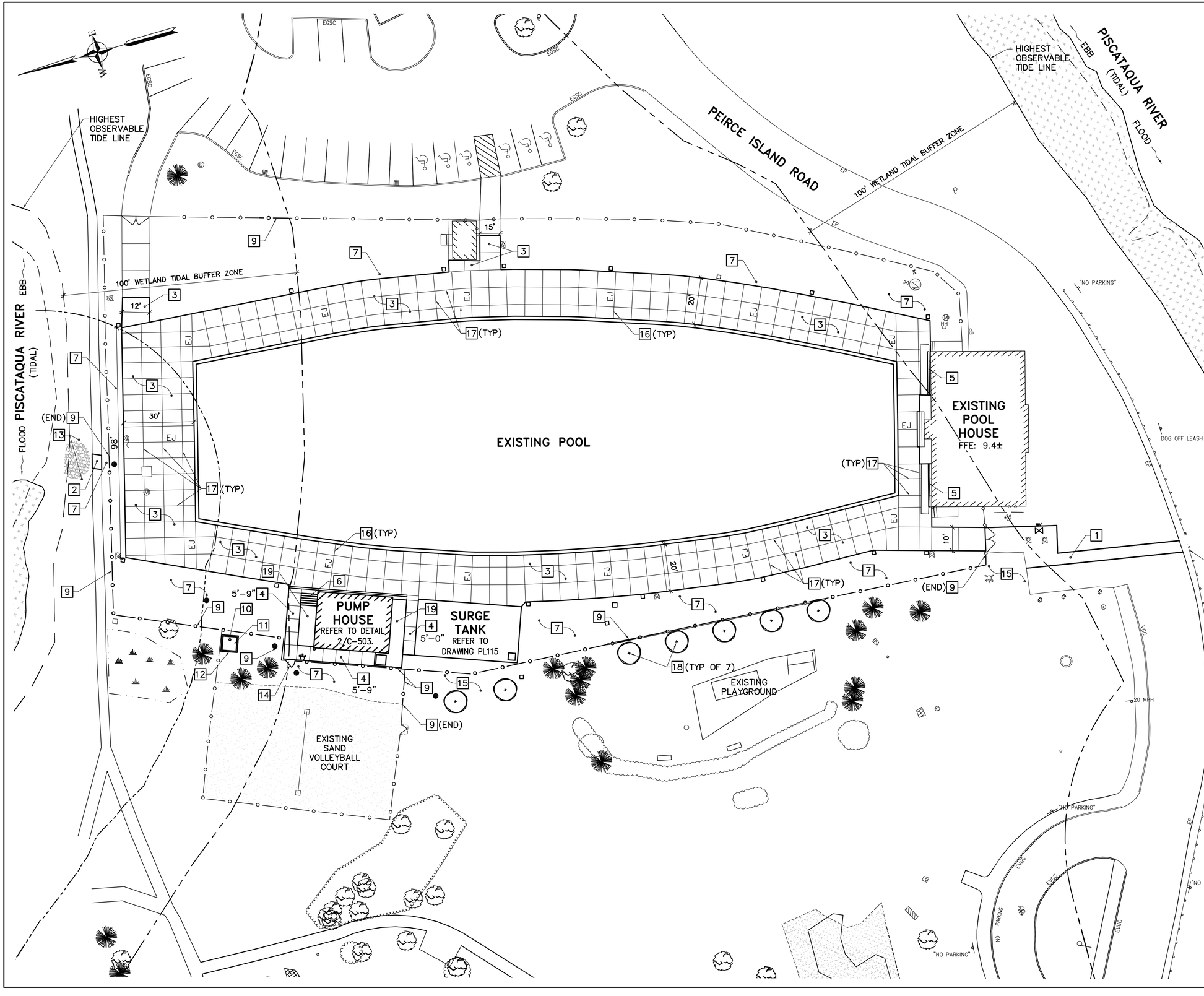
DESIGNED BY: WAL
DRAWN BY: WAL
CHECKED BY: PJM
PROJECT: 21904.14

CITY OF PORTSMOUTH
1 Junkins Avenue
Portsmouth, NH 03801

BID #40 - 23
PEIRCE ISLAND PUMP HOUSE AND POOL RENOVATION
Peirce Island Road
Portsmouth, NH 03801

REMOVALS SITE PLAN

SCALE: AS NOTED
DATE: 03/01/2023
DWG.: CD101
SHEET: 7 OF 72



KEYNOTES (THIS SHEET ONLY)

1. ASPHALT CONCRETE PAVEMENT. REFER TO DETAIL 1/C-502.
2. CHIP STONE TRAIL. REFER TO DETAIL 6/C-502.
3. CONCRETE POOL DECK. REFER TO DETAIL 2/C-502.
4. WIDE CONCRETE WALK (WITH GIVEN WITH KEYNOTE). REFER TO DETAIL 3/C-502.
5. REINSTALL SALVAGED ALUMINUM RAMP.
6. CONCRETE STAIR. REFER TO DETAIL 2/SB502.
7. 6" TOPSOIL AND SOD. ALL DISTURBED AREAS WITHIN FENCED POOL AREA.
8. WOOD GUARD RAIL. REFER TO DETAIL 2/C-503.
9. 6' HIGH CHAIN LINK FENCE. REFER TO DETAIL 1/C-503.
10. REINSTALL SALVAGED OUTDOOR SHOWER AND FOUNDATION.
11. POROUS UNIT PAVERS. REFER TO DETAIL 4/C-503.
12. FLUSH GRANITE CURB. REFER TO DETAIL 4/C-503.
13. RESTORE RIP-RAP SLOPE.
14. 6' HIGH, 4' WIDE CHAIN LINK SWING GATE. REFER TO DETAIL 5/C503.
15. 4" TOPSOIL, SEED, FERTILIZER, AND MULCH.
16. EXPANSION JOINT. REFER TO DETAIL 5/C-502.
17. CONTROL JOINT. REFER TO DETAIL 4/C-502.
18. RED SUNSET MAPLE (ACER RUBRUM 'RED SUNSET') 2 1/2 – 3" CAL. COORDINATE LOCATION WITH CITY ARBORIST.
19. REINFORCED CONCRETE SLAB. REFER TO PLAN 1/SB102.

NO.	DATE	DESCRIPTION	BY
		REVISIONS	

OAK POINT ASSOCIATES
ARCHITECTURE ■ ENGINEERING ■ PLANNING
65 Middle Street, Portsmouth, NH 03801 (T) 603.431.4849 (F) 603.431.1870
www.oakpoint.com

WADE ALLEN LIPPERT No. 16331 – STATE OF NEW HAMPSHIRE – PROFESSIONAL ENGINEER 3/1/23

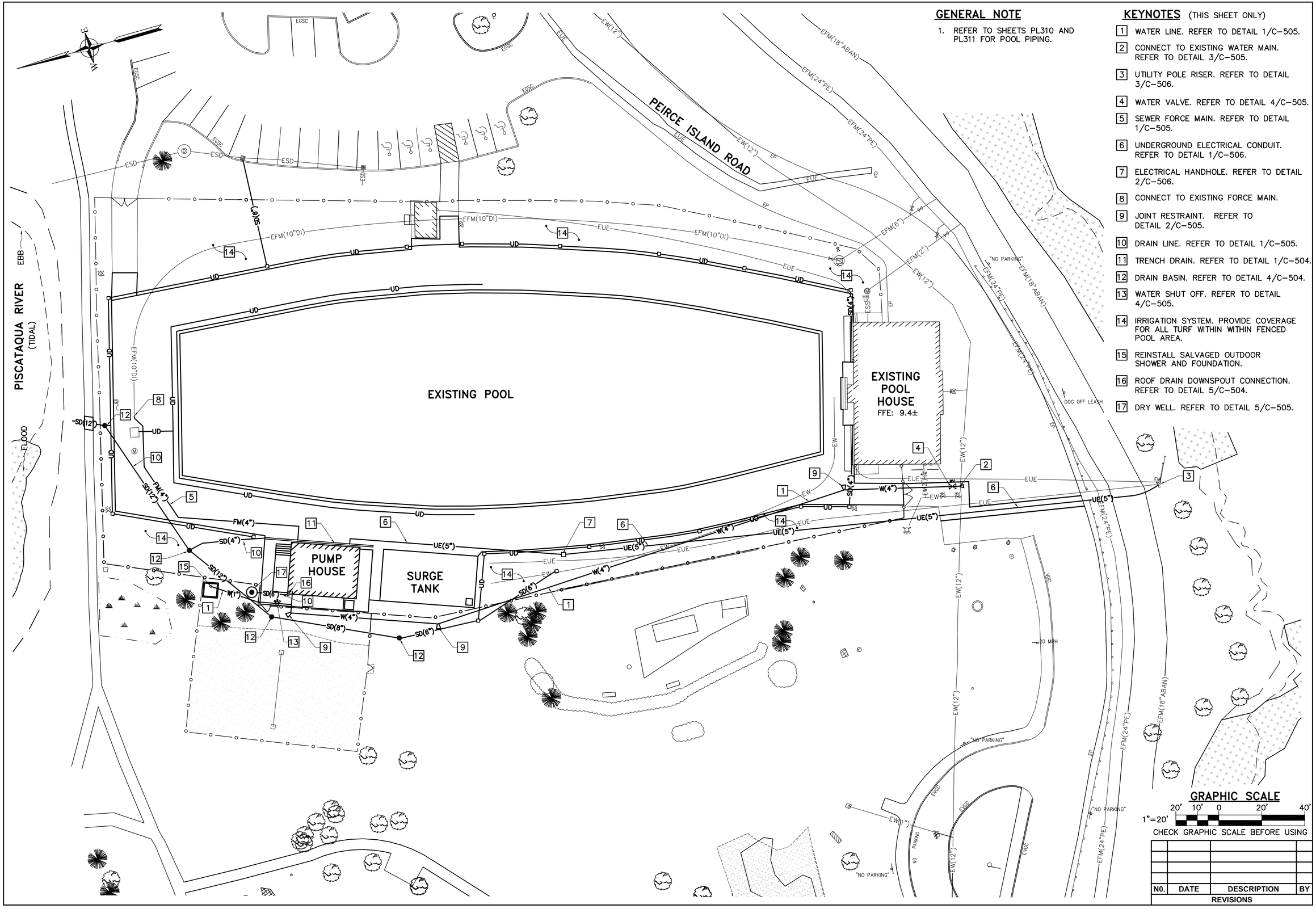
DESIGNED BY: WAL
DRAWN BY: WAL
CHECKED BY: PJM
PROJECT: 21904.14

CITY OF PORTSMOUTH
1 Junkins Avenue
Portsmouth, NH 03801

BID #40 - 23
PEIRCE ISLAND PUMP HOUSE AND POOL RENOVATION
Peirce Island Road
Portsmouth, NH 03801

SITE PLAN

SCALE: AS NOTED
DATE: 03/01/2023
DWG.: CS101
SHEET: 8 OF 72



GENERAL NOTE

1. REFER TO SHEETS PL310 AND PL311 FOR POOL PIPING.

KEYNOTES (THIS SHEET ONLY)

1. WATER LINE. REFER TO DETAIL 1/C–505.
2. CONNECT TO EXISTING WATER MAIN. REFER TO DETAIL 3/C–505.
3. UTILITY POLE RISER. REFER TO DETAIL 3/C–506.
4. WATER VALVE. REFER TO DETAIL 4/C–505.
5. SEWER FORCE MAIN. REFER TO DETAIL 1/C–505.
6. UNDERGROUND ELECTRICAL CONDUIT. REFER TO DETAIL 1/C–506.
7. ELECTRICAL HANDHOLE. REFER TO DETAIL 2/C–506.
8. CONNECT TO EXISTING FORCE MAIN.
9. JOINT RESTRAINT. REFER TO DETAIL 2/C–505.
10. DRAIN LINE. REFER TO DETAIL 1/C–505.
11. TRENCH DRAIN. REFER TO DETAIL 1/C–504.
12. DRAIN BASIN. REFER TO DETAIL 4/C–504.
13. WATER SHUT OFF. REFER TO DETAIL 4/C–505.
14. IRRIGATION SYSTEM. PROVIDE COVERAGE FOR ALL TURF WITHIN WITHIN FENCED POOL AREA.
15. REINSTALL SALVAGED OUTDOOR SHOWER AND FOUNDATION.
16. ROOF DRAIN DOWNSPOUT CONNECTION. REFER TO DETAIL 5/C–504.
17. DRY WELL. REFER TO DETAIL 5/C–505.

NO.	DATE	DESCRIPTION	BY
		REVISIONS	

OAK POINT ASSOCIATES
ARCHITECTURE ■ ENGINEERING ■ PLANNING
85 Middle Street, Portsmouth, NH 03801 (T) 603.431.4849 (F) 603.431.1870
www.oakpointt.com

STATE OF NEW HAMPSHIRE
WADE ALLEN LIPPERT
No. 16331
PROFESSIONAL ENGINEER
3/1/23

DESIGNED BY: WAL
DRAWN BY: WAL
CHECKED BY: PJM
PROJECT: 21904.14

CITY OF PORTSMOUTH
1 Junkins Avenue
Portsmouth, NH 03801

BID #40 - 23
PEIRCE ISLAND PUMP HOUSE AND POOL RENOVATION
Peirce Island Road
Portsmouth, NH 03801

SITE UTILITY PLAN

SCALE: AS NOTED
DATE: 03/01/2023
DWG.: CU101
SHEET: 9 OF 72

DRAINAGE STRUCTURE SCHEDULE

	RIM	INV IN	INV IN	INV OUT
DB A	6.50	4.10 (12")	5.00 (6")	4.00 (12")
DB B	6.50	4.60 (12")	4.60 (6")	4.50 (12")
DB C	7.10	5.00 (12")	5.00 (6")	4.90 (12")
DB D	6.40	5.20 (6")		5.10 (8")

KEYNOTES (THIS SHEET ONLY)

1. DRAIN BASIN. REFER TO DETAIL 4/C–504.
2. STORM DRAIN LINE. REFER TO DETAIL 1/C–505.
3. TRENCH DRAIN. REFER TO DETAIL 1/C–504.
4. UNDER DRAIN. REFER TO DETAIL 2/C–502.
5. POOL PERIMETER UNDERDRAIN. REFER TO DETAIL 6/C–504.
6. CORE EXISTING CONCRETE VAULT AND CONSTRUCT UNDERDRAIN CONNECTION.
7. CONNECT TO BUILDING ROOF DRAIN. REFER TO DETAIL 5/C–504.
8. SILT FENCE. REFER TO DETAIL 1/C–501.
9. RIP–RAP PIPE OUTLET PROTECTION. REFER TO DETAIL 2/C–504.
10. INLET PROTECTION. REFER TO DETAIL 4/C–501.
11. LANDSCAPE DRAIN. REFER TO DETAIL 3/C–504. INSTALL TEMPORARY FILTER FABRIC UNDER GRATE UNTIL SOD IS INSTALLED. REFER TO DETAIL 4/C–501 (SIM).
12. CONNECT TO EXISTING CATCH BASIN.
13. DRY WELL. REFER TO DETAIL 5/C–505. INV 5.8

PEIRCE ISLAND ROAD

PISCATAQUA RIVER (TIDAL)

EXISTING POOL

EXISTING POOL HOUSE FFE: 9.4±

PUMP HOUSE FFE: 10.00

BENCHMARK: X–CUT ON LEFT BOLT OVER MAIN OUTLET ELEV.=12.75

"NO PARKING"

DOG OFF LEASH AREA

20 MPH

GRAPHIC SCALE

1"=20' — 20' 10' 0 20' 40'

CHECK GRAPHIC SCALE BEFORE USING

NO.	DATE	DESCRIPTION	BY
		REVISIONS	

OAK POINT ASSOCIATES
ARCHITECTURE ■ ENGINEERING ■ PLANNING
85 Middle Street, Portsmouth, NH 03801 (T) 603.431.4849 (F) 603.431.1870
www.oakpointpll.com

STATE OF NEW HAMPSHIRE — WADE ALLEN LIPPERT No. 16331 — PROFESSIONAL ENGINEER — 3/1/23

DESIGNED BY: WAL
DRAWN BY: WAL
CHECKED BY: PJM
PROJECT: 21904.14

CITY OF PORTSMOUTH
1 Junkins Avenue
Portsmouth, NH 03801

BID #40 - 23
PEIRCE ISLAND PUMP HOUSE AND POOL RENOVATION
Peirce Island Road
Portsmouth, NH 03801

GRADING AND DRAINAGE PLAN

SCALE: AS NOTED

DATE: 03/01/2023

DWG.: CG101

SHEET: 10 OF 72

EROSION AND SEDIMENT CONTROL NOTES

A. GENERAL NOTES

1. DURING CONSTRUCTION AND THEREAFTER, PROVIDE EROSION CONTROL MEASURES AS INDICATED AND SPECIFIED. EROSION CONTROL MEASURES MUST BE IN ACCORDANCE WITH THE "NEW HAMPSHIRE STORM WATER MANUAL".
2. TEMPORARY EROSION CONTROL MEASURES INCLUDE THE USE OF EROSION CONTROL DEVICES, TEMPORARY SEEDING AND MULCHING, AND PROVISIONS FOR STABILIZING INACTIVE AREAS. PERMANENT EROSION CONTROL MEASURES INCLUDE PERMANENT SEEDING AND MULCHING.
3. INSTALL PERIMETER EROSION CONTROLS PRIOR TO BEGINNING EARTH MOVING OPERATIONS.
4. PROVIDE INLET PROTECTION FOR EACH CATCH BASIN ON THE SAME DAY THAT BACKFILL IS PLACED AROUND THE CATCH BASIN.
5. PROVIDE 6–INCHES PLANTING SOIL, SEED AND MULCH ON DISTURBED AREAS NOT OTHERWISE SPECIFIED. COMPLETE PERMANENT SEEDING BETWEEN THE DATES OF APRIL 1 AND OCTOBER 14. WATER VEGETATED AREAS AS NECESSARY TO ESTABLISH A VIGOROUS TURF.
6. PROVIDE EROSION CONTROL MEASURES TO CONTROL EROSION AND SEDIMENTATION FROM THE PROJECT SITE. THE MEASURES INDICATED ON THE DRAWINGS ARE THE MINIMUM TO BE PROVIDED. PROVIDE ADDITIONAL MEASURES AS NECESSARY AND APPLICABLE TO CONTROL EROSION AND SEDIMENTATION FROM LEAVING THE SITE.
7. LIMIT AREAS OF EXPOSED SOILS TO THOSE AREAS THAT WILL ACTIVELY BE WORKED. TEMPORARILY STABILIZE AREAS OF DISTURBED SOIL THAT REMAIN UNWORKED FOR MORE THAN 14 DAYS USING TEMPORARY MULCHING (IF THE SOIL WILL BE PERMANENTLY STABILIZED WITHIN 30 DAYS) OR TEMPORARY SEEDING AND MULCHING (IF THE SOIL WILL NOT BE PERMANENTLY STABILIZED WITHIN 30 DAYS). PERMANENTLY STABILIZE ANY AREA OF DISTURBED SOIL BROUGHT TO FINAL GRADE WITHIN 7 DAYS. DISTURBED SOILS DO NOT INCLUDE COMPACTED BASE COURSES OR STRUCTURAL FILLS USED FOR ROADS AND PARKING LOTS. UNSTABILIZED AREA MUST NOT EXCEED 1 ACRE AT ANY ONE TIME.
8. AN AREA WILL BE CONSIDERED STABLE IF ONE OF THE FOLLOWING HAS OCCURRED:
   A. BASE COURSE GRAVELS HAVE BEEN INSTALLED IN AREAS TO BE PAVED.
   B. A MINIMUM OF 85 PERCENT VEGETATED GROWTH HAS BEEN ESTABLISHED.
   C. A MINIMUM OF 3 INCHES OF NON–EROSIVE MATERIAL SUCH STONE OR RIPRAP HAS BEEN INSTALLED.
   D. EROSION CONTROL BLANKETS HAVE BEEN PROPERLY INSTALLED.
9. STABILIZE ROADWAYS AND PARKING LOTS WITHIN 72 HOURS OF ACHIEVING FINISHED GRADE. SEED AND LOAM CUT AND FILL SLOPES WITHIN 72 HOURS OF ACHIEVING FINISHED GRADE.
10. INSTALL SWALES EARLY IN THE CONSTRUCTION SEQUENCE. PERMANENTLY STABILIZE SWALES PRIOR TO DIRECTING FLOW TO THEM.
11. INSTALL STABILIZED CONSTRUCTION EXIT AT VEHICULAR ACCESS POINT TO THE SITE TO PREVENT TRACKING ONTO ADJACENT EXISTING PAVEMENT SURFACES. REFER TO DETAIL 3/C–501.

B. INSPECTION AND MAINTENANCE

1. INSPECT DISTURBED AND IMPERVIOUS AREAS, EROSION CONTROL MEASURES, AREAS USED FOR STORAGE THAT ARE EXPOSED TO PRECIPITATION, AND LOCATIONS WHERE VEHICLES ENTER OR EXIT THE PROJECT AREA DAILY AND BEFORE AND AFTER EACH STORM EVENT WITH PRECIPITATION GREATER THAN 0.1" AND PRIOR TO COMPLETION OF PERMANENT STABILIZATION. A PERSON WITH KNOWLEDGE OF EROSION AND STORMWATER CONTROL, INCLUDING THE NPDES STANDARDS MUST CONDUCT THE INSPECTION. THIS PERSON MUST BE IDENTIFIED IN THE INSPECTION LOG. IF BEST MANAGEMENT PRACTICES (BMPs) NEED TO BE MODIFIED OR IF ADDITIONAL BMPs ARE NECESSARY, IMPLEMENTATION MUST BE COMPLETED WITHIN 7 CALENDAR DAYS AND PRIOR TO ANY STORM EVENT (RAINFALL). MEASURES MUST BE MAINTAINED IN EFFECTIVE OPERATING CONDITION UNTIL AREAS ARE PERMANENTLY STABILIZED.
2. KEEP AND MAINTAIN A LOG (REPORT) SUMMARIZING THE SCOPE OF THE INSPECTION, NAME(S) AND QUALIFICATIONS OF THE PERSONNEL MAKING THE INSPECTION, THE DATE(S) OF THE INSPECTION, AND MAJOR OBSERVATIONS RELATING TO OPERATION OF EROSION AND SEDIMENTATION CONTROLS AND POLLUTION PREVENTION MEASURES. MAJOR OBSERVATIONS MUST INCLUDE: BMPs THAT NEED TO BE MAINTAINED; LOCATION(S) OF BMPs THAT FAILED TO OPERATE AS DESIGNED OR PROVED INADEQUATE FOR A PARTICULAR LOCATION; AND LOCATION(S) WHERE ADDITIONAL BMPs ARE NEEDED THAT DID NOT EXIST AT THE TIME OF INSPECTION. FOLLOW–UP TO CORRECT DEFICIENCIES OR ENHANCE CONTROLS MUST ALSO BE INDICATED IN THE LOG AND DATED, INCLUDING WHAT ACTION WAS TAKEN AND WHEN.
3. MAINTAIN EROSION CONTROL MEASURES FOR THE LIFE OF THE PROJECT AND UNTIL PERMANENT STABILIZATION OF THE ENTIRE SITE IS ESTABLISHED. PERMANENT STABILIZATION MUST CONSIST OF AT LEAST 90–PERCENT VEGETATION OR PAVEMENT.
4. PROTECT STABILIZED AREAS FROM EROSION AND IMMEDIATELY REPAIR/REVEGETATE ERODED AREAS.
5. SEDIMENT ACCUMULATIONS MUST BE REMOVED FROM HAY BALE BARRIERS AND SILT FENCES WHEN THE SEDIMENT DEPTH REACHES 6 INCHES.
6. REMOVE TEMPORARY EROSION CONTROL MEASURES WITHIN 30 DAYS AFTER THE TRIBUTARY AREA HAS BEEN PERMANENTLY STABILIZED. REMOVE ANY ACCUMULATED SEDIMENTS AND STABILIZE.

C. SEQUENCE OF CONSTRUCTION

1. INITIAL OPERATIONS INCLUDE INSTALLATION OF EROSION CONTROL DEVICES.
2. CLEAR TREES, GRUB OUT STUMPS AND STRIP TOPSOIL AND STOCKPILE. PROVIDE SILT FENCE DOWNGRADIENT OF STOCKPILES AND COVER STOCKPILES WITH MULCH.
3. COMMENCE LARGE–SCALE EARTH EXCAVATION MOVING OPERATIONS. CONSTRUCT STORM DRAINAGE SYSTEM BEGINNING AT THE LOW POINT OF THE SYSTEM.
4. CONTINUE WITH OTHER UTILITY AND PAVEMENT CONSTRUCTION.
5. COMPLETE PAVEMENT CONSTRUCTION. PROVIDE PERMANENT SEEDING, MULCHING, OR OTHER SURFACE TREATMENTS AS INDICATED IMMEDIATELY UPON ESTABLISHMENT OF FINISH GRADES.

D. SOIL STOCKPILE STABILIZATION

1. COVER SOIL AND FILL STOCKPILES EXPECTED TO REMAIN IN PLACE FOR LESS THAN 30 DAYS WITH HAY MULCH (90 LBS HAY/1000 SF) OR COVERED WITH AN ANCHORED TARP WITHIN 7 DAYS OR PRIOR TO ANY RAINFALL.
2. SEED SOIL AND FILL STOCKPILES EXPECTED TO REMAIN LONGER THAN 30 DAYS WITH A CONSERVATION MIX OF ANNUAL RYE GRASS (0.9 LB/1000 SF) AND HAY MULCHED (90 LBS. HAY/1000 SF) WITHIN 7 DAYS OR PRIOR TO ANY RAINFALL.
3. INSTALL SEDIMENT BARRIER (e.g. SILT FENCE) INSTALLED AROUND THE DOWNHILL EDGE OF THE SOIL STOCKPILES TO TRAP SEDIMENTS.

E. TEMPORARY SEEDING

1. BEDDING – REMOVE STONES AND TRASH THAT WILL INTERFERE WITH SEEDING THE AREA. WHERE FEASIBLE, TILL THE SOIL TO A DEPTH OF ABOUT 4" TO PREPARE SEED BED AND MIX THE FERTILIZER INTO THE SOIL.
2. FERTILIZER – UNIFORMLY SPREAD FERTILIZER MUST OVER THE AREA PRIOR TO BEING TILLED INTO THE SOIL. APPLY A 10–10–10 MIX OF ORGANIC FERTILIZER AT A RATE OF 300 LBS PER ACRE.
3. SEED MIXTURE – USE ANY OF THE FOLLOWING IN UPLAND AREAS:

SPECIES	ACRE	SEEDING RATES 1,000 SF	DATES	DEPTH
WINTER RYE	112 LBS	2.5 LBS	8/15 – 9/15	1 INCH
OATS	80 LBS	2.0 LBS	SPRING – 5/15	1 INCH
ANNUAL RYEGRASS	40 LBS	1.0 LBS	4/15 – 9/15 WITH MULCH	0.25 INCH

4. MULCHING FOR TEMPORARY SEEDING – WHERE IT IS IMPRACTICAL TO INCORPORATE FERTILIZER AND SEED INTO MOIST SOIL, MULCH THE SEEDED TO FACILITATE GERMINATION. APPLY MULCH IN THE FORM OF HAY OR STRAW MUST BE APPLIED AT A RATE OF 70 TO 40 90 LBS PER 1,000 SF.
5. REMOVE TEMPORARY GROWTH FROM TEMPORARY SEEDING PRIOR TO PERMANENT SEEDING.

F. MULCHING

PROVIDE TEMPORARY MULCHING ON SLOPES, CHANNELS, OTHER EROSION PRONE AREAS, AND EXPOSED SOILS THAT CANNOT RECEIVE PERMANENT COVER WITHIN 14 DAYS OF DISTURBANCE. ALSO PROVIDE MULCH FOLLOWING TEMPORARY AND PERMANENT SEEDING AS SPECIFIED. MULCH ANCHORS MUST BE USED ON SLOPES GREATER THAN 5% IN FALL (PAST OCTOBER 1, AND OVER WINTER TO APRIL 1).

MULCH TYPE	RATE PER 1000 SF
HAY OR STRAW	70 TO 40 90 LBS
WOOD CHIPS OR BARK MULCH	480 TO 920 LBS
JUTE AND FIBROUS MATTING	AS PER MANUFACTURERS' SPECIFICATIONS
CRUSHED STONE 1/4" TO 1–1/2"	SPREAD MORE THAN 1/2" THICK

G. TEMPORARY EROSION CONTROL MAT SPECIFICATIONS

1. PROVIDE STRAW EROSION CONTROL MAT CONSISTING OF A MACHINE PRODUCED MAT OF 100 PERCENT AGRICULTURAL STRAW FIBER, MINIMUM WEIGHT: 0.5 LBS/SY. NETTINGS MUST BE LIGHTWEIGHT BIO OR PHOTO DEGRADEABLE, TOP SIDE ONLY, MINIMUM WEIGHT: 1.5 LBS/1000 SF. MINIMUM WIDTH: 48", MINIMUM THICKNESS: 0.39 INCH. THE MINIMUM FUNCTIONAL LONGEVITY OF THE EROSION CONTROL MAT MUST BE 45 DAYS.

H. EXTENDED USE EROSION CONTROL BLANKET SPECIFICATION

1. PROVIDE STRAW EROSION CONTROL MAT CONSISTING OF A MACHINE PRODUCED MAT OF 100 PERCENT AGRICULTURAL STRAW FIBER, MINIMUM WEIGHT: 0.5 LBS/SY. NETTINGS MUST BE 100 PERCENT BIO OR PHOTO DEGRADABLE WOVEN NATURAL ORGANIC FIBER, TOP SIDE ONLY, MINIMUM WEIGHT: 9.3 LB/1000 SF. MINIMUM WIDTH: 6.7 FT, MINIMUM THICKNESS: 0.24 INCH. THE MINIMUM FUNCTIONAL LONGEVITY OF THE EROSION CONTROL MAT MUST BE 12 MONTHS.

I. WINTER STABILIZATION

THE WINTER CONSTRUCTION PERIOD IS FROM OCTOBER 15 THROUGH APRIL 1. IF THE SITE IS NOT STABILIZED WITH PAVEMENT, A ROAD GRAVEL BASE, 85% MATURE VEGETATION COVER, OR RIPRAP BY OCTOBER 15 THEN PROTECT THE SITE WITH OVER–WINTER STABILIZATION.

1. PROVIDE STABILIZATION AS FOLLOWS WITHIN A DAY OF ESTABLISHING THE GRADE THAT IS FINAL OR THAT OTHERWISE WILL EXIST FOR MORE THAN 5 DAYS:
   A. PROPOSED VEGETATED AREAS HAVING A SLOPE OF LESS THAN 15% WHICH DO NOT EXHIBIT A MINIMUM OF 85% VEGETATIVE GROWTH BY OCTOBER 15TH, OR WHICH ARE DISTURBED AFTER OCTOBER 15TH MUST BE SEEDED AND COVERED WITH 3 TO 4 TONS OF HAY OR STRAW MULCH PER ACRE SECURED WITH ANCHORED NETTING, OR 2 INCHES OF EROSION CONTROL MIX.
   B. PROPOSED VEGETATED AREAS HAVING A SLOPE OF GREATER THAN 15% WHICH DO NOT EXHIBIT A MINIMUM OF 85% VEGETATIVE GROWTH BY OCTOBER 15TH, OR WHICH ARE DISTURBED AFTER OCTOBER 15TH, SHOULD BE SEEDED AND COVERED WITH A PROPERLY INSTALLED AND ANCHORED EROSION CONTROL BLANKET OR WITH A MINIMUM OF 4 INCH THICKNESS OF EROSION CONTROL MIX, UNLESS OTHERWISE SPECIFIED BY THE MANUFACTURER. NOTE THAT COMPOST BLANKETS SHOULD NOT EXCEED 2 INCHES IN THICKNESS OR THEY MAY OVERHEAT.
2. DO NOT INSTALL ANCHORED HAY MULCH OR EROSION CONTROL MIX OVER ACCUMULATED SNOW OR FROZEN GROUND. INSTALLATION MUST BE COMPLETED IN ADVANCE OF THAW OR SPRING MELT EVENTS.
3. ANCHOR MULCH APPLIED DURING WINTER (e.g, BY NETTING, TRACKING, WOOD CELLULOSE FIBER).
4. MULCH STOCKPILES OF SOIL MATERIALS FOR OVER WINTER PROTECTION WITH HAY OR STRAW AT TWICE THE NORMAL RATE OR WITH A FOUR–INCH LAYER OF EROSION CONTROL MIX. MULCHING MUST BE DONE WITHIN 24 HOURS OF STOCKING, AND RE–ESTABLISHED PRIOR TO ANY RAINFALL OR SNOWFALL. NO SOIL STOCKPILE MUST BE PLACED (EVEN COVERED WITH MULCH) WITHIN 100 FEET FROM ANY WETLAND OR OTHER WATER RESOURCE AREA.
5. CONSTRUCT GRASS LINED DITCHES AND CHANNELS AND STABILIZE BY SEPTEMBER 1. ALL DITCHES OR SWALES WHICH DO NOT EXHIBIT A MINIMUM OF 85% VEGETATIVE GROWTH BY OCTOBER 15TH MUST BE STABILIZED TEMPORARILY WITH STONE OR EROSION CONTROL BLANKETS APPROPRIATE FOR THE DESIGN FLOW CONDITIONS.
6. AFTER NOVEMBER 15TH, PROTECT INCOMPLETE ROAD OR PARKING AREAS WHERE ACTIVE CONSTRUCTION OF THE ROAD OR PARKING AREA HAS STOPPED FOR THE WINTER SEASON WITH A MINIMUM 3 INCH LAYER OF BASE COURSE (NHDOT ITEM 304.3).
7. DO NOT EXPOSE MORE THAN ONE ACRE OF THE SITE (WITHOUT STABILIZATION) AT ANY ONE TIME. GENERALLY THE EXPOSED AREA SHOULD BE LIMITED TO ONLY THOSE AREAS IN WHICH WORK WILL OCCUR DURING THE FOLLOWING 15 DAYS AND THAT CAN BE MULCHED IN ONE DAY PRIOR TO ANY SNOW OR RAINFALL EVENT.

J. PERMANENT SEEDING

1. REFER TO TURF AND GRASSES SPECIFICATION.

K. OFF–SITE VEHICLE TRACKING

1. SWEEP ADJACENT PAVED AREAS AND ROADS AS NECESSARY AND AS DIRECTED BY THE OWNER TO KEEP THEM FREE OF SEDIMENTS RESULTING FROM CONSTRUCTION ACTIVITIES.
2. PROVIDE A STABILIZED CONSTRUCTION EXIT AT LOCATIONS USED FOR EXITING THE CONSTRUCTION SITE AS DETAILED ON THE DRAWINGS.

L. HOUSEKEEPING

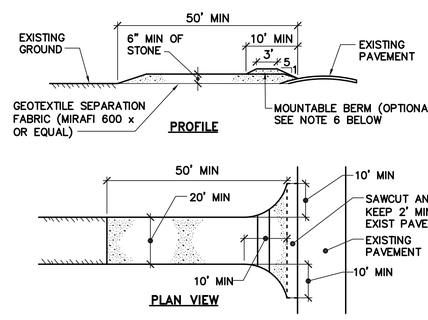
1. COLLECT AND STORE WASTE MATERIALS IN SECURELY LIDDED RECEPTACLES. TRASH AND CONSTRUCTION DEBRIS FROM THE SITE MUST BE DEPOSITED IN A DUMPSTER PROVIDED BY THE CONTRACTOR. CONSTRUCTION WASTE MATERIALS MUST NOT BE BURIED ON SITE.
2. DISPOSE OF HAZARDOUS WASTE MATERIALS IN THE MANNER SPECIFIED BY LOCAL OR STATE REGULATIONS OR BY THE MANUFACTURER.
3. STORE MATERIALS ON SITE IN A NEAT, ORDERLY MANNER IN THEIR PROPER (ORIGINAL IF POSSIBLE) CONTAINER AND IF POSSIBLE UNDER A ROOF OR OTHER ENCLOSURE. STORE ONLY SUFFICIENT AMOUNTS OF MATERIALS TO COMPLETE THE JOB.
4. DISPOSE OF SURPLUS MATERIALS IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS, LOCAL, STATE AND FEDERAL CODES.
5. MONITOR CONSTRUCTION RELATED EQUIPMENT AND VEHICLES FOR LEAKS AND PROVIDE REGULAR PREVENTATIVE MAINTENANCE TO AVOID LEAKAGE.
6. EQUIPMENT SHALL BE STAGED AND REFUELED IN ACCORDANCE TO ENV–WT 307.15.

M. DUST CONTROL

1. CONTROL DUST WITH PERIODIC WATERING OF THE EXPOSED SOIL SURFACES WITH ADEQUATE WATER TO CONTROL DUST FROM BECOMING AIRBORNE. APPLY REPETITIVE TREATMENTS AS NEEDED TO CONTROL DUST THROUGHOUT CONSTRUCTION UNTIL AREAS HAVE BEEN STABILIZED.
2. OTHER METHODS TO CONTROL DUST MAY BE ALLOWED WITH APPROVAL BY THE OWNER.

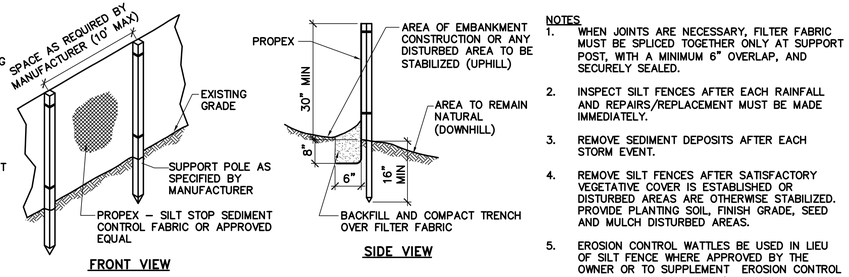
N. RIPRAP SPECIFICATION

1. PROVIDE RIPRAP CONSISTING OF SOUND, DURABLE ROCK WHICH WILL NOT DISINTEGRATE BY EXPOSURE TO WATER OR WEATHER. ANGULAR FIELD STONE, ROUGH QUARRY STONE OR BLASTED LEDGE ROCK MAY BE USED. THE MEDIAN STONE SIZE MUST BE AS INDICATED. THE MAXIMUM STONE SIZE MUST BE TWICE THE MEDIAN SIZE. PROVIDE SMALLER STONES TO FILL THE VOIDS IN THE LARGER STONES.



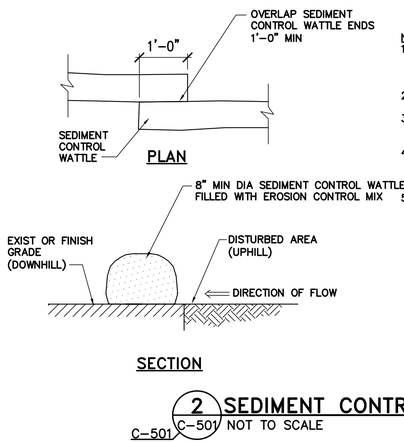
NOTES:
1. PROVIDE 2 TO 3 INCH STONE, RECLAIMED STONE, OR RECYCLED CONCRETE EQUIVALENT.
2. THE LENGTH OF THE STABILIZED ENTRANCE MUST NOT BE LESS THAN 50 FEET.
3. THE THICKNESS OF THE STONE FOR THE STABILIZED ENTRANCE MUST NOT BE LESS THAN 6 INCHES.
4. THE WIDTH OF THE ENTRANCE MUST NOT BE LESS THAN THE FULL WIDTH OF THE ENTRANCE WHERE INGRESS OR EGRESS OCCURS OR 20 FEET, WHICHEVER IS GREATER.
5. PLACE GEOTEXTILE SEPARATION FILTER FABRIC OVER THE ENTIRE AREA PRIOR TO PLACING THE STONE.
6. PIPE SURFACE WATER THAT IS FLOWING TO OR DIVERTED TOWARD THE CONSTRUCTION ENTRANCE BENEATH THE ENTRANCE. IF PIPING IS IMPRACTICAL, A MOUNTABLE BERM MAY BE SUBSTITUTED FOR THE PIPE. THE MOUNTABLE BERM MUST HAVE 5:1 SLOPES AND THICKNESS REQUIRED TO DIVERT FLOW WHILE MAINTAINING ACCESS THAT CAN BE CROSSED BY VEHICLES.
7. MAINTAIN THE ENTRANCE IN A CONDITION THAT WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO ADJACENT PAVED AREAS. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE AS CONDITIONS DEMAND AND REPAIR AND/OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT. SEDIMENT SPILLED, WASHED, OR TRACKED ONTO ADJACENT PAVED AREAS MUST BE REMOVED IMMEDIATELY.
8. CLEAN WHEELS TO REMOVE MUD PRIOR TO ENTRANCE ONTO ADJACENT PAVED AREAS. WHEN WASHING IS REQUIRED, IT MUST BE PERFORMED ON AN AREA STABILIZED WITH STONE WHICH DRAINS INTO AN APPROVED SEDIMENT TRAPPING DEVICE.

3 STABILIZED CONSTRUCTION EXIT
C–501 (C–501) NOT TO SCALE



NOTES
1. WHEN JOINTS ARE NECESSARY, FILTER FABRIC MUST BE SPLICED TOGETHER ONLY AT SUPPORT POST, WITH A MINIMUM 6" OVERLAP, AND SECURELY SEALED.
2. INSPECT SILT FENCES AFTER EACH RAINFALL AND REPAIRS/REPLACEMENT MUST BE MADE IMMEDIATELY.
3. REMOVE SEDIMENT DEPOSITS AFTER EACH STORM EVENT.
4. REMOVE SILT FENCES AFTER SATISFACTORY VEGETATIVE COVER IS ESTABLISHED OR DISTURBED AREAS ARE OTHERWISE STABILIZED. PROVIDE PLANTING SOIL, FINISH GRADE, SEED AND MULCH DISTURBED AREAS.
5. EROSION CONTROL WATTLES BE USED IN LIEU OF SILT FENCE WHERE APPROVED BY THE OWNER OR TO SUPPLEMENT EROSION CONTROL MEASURES. SEE DETAIL 2/C–501.

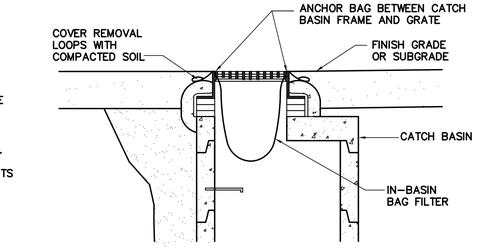
1 SILT FENCE
CG101 (C–501) NOT TO SCALE



NOTES
1. SEDIMENT CONTROL WATTLES SHALL BE MANUFACTURED FOR THE PURPOSE OF TEMPORARY SEDIMENT CONTROL AND INSTALLED ACCORDING TO THE MANUFACTURERS RECOMMENDATIONS.
2. REMOVE ACCUMULATED SEDIMENT WHEN IT REACHES 2" IN DEPTH.
3. SEDIMENT CONTROL WATTLES SHALL REMAIN IN PLACE UNTIL AREAS ARE STABILIZED.
4. SECURE SEDIMENT CONTROL WATTLES WITH CONCRETE BLOCKS OR WOOD STAKES IN LOCATIONS WHERE WATTLE FAILS TO REMAIN IN PLACE DUE TO HYDRAULIC FORCE.
5. EROSION CONTROL MIX SHALL CONSIST PRIMARILY OF WELL GRADED ORGANIC MATERIAL AND SHALL INCLUDE SHREDDED BARK, STUMP GRINDINGS, COMPOSTED BARK, OR OTHER PRODUCTS BASED ON A SIMILAR RAW SOURCE. SILT, CLAY, OR FINE SAND ARE NOT ACCEPTABLE IN THE MIX.

2 SEDIMENT CONTROL WATTLE DETAIL
C–501 (C–501) NOT TO SCALE

NOTES:
1. IN–BASIN BAG FILTERS MUST BE "DANDY SACK" BY TENCATE OR APPROVED EQUAL. INSTALL ACCORDING TO THE MANUFACTURER'S INSTRUCTIONS.
2. REMOVE ACCUMULATED SEDIMENTS IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.



4 INLET PROTECTION
CG101 (C–501) NOT TO SCALE

OAK POINT ASSOCIATES
ARCHITECTURE ■ ENGINEERING ■ PLANNING
85 Middle Street, Portsmouth, NH 03801 (T) 603.431.4844 (F) 603.431.1870
www.oakpoint.com

STATE OF NEW HAMPSHIRE – WADE ALLEN LIPHERT No. 16331 – PROFESSIONAL ENGINEER – 3/1/23

DESIGNED BY: WAL
DRAWN BY: WAL
CHECKED BY: PJM
PROJECT: 21904.14

CITY OF PORTSMOUTH
1 Junkins Avenue
Portsmouth, NH 03801

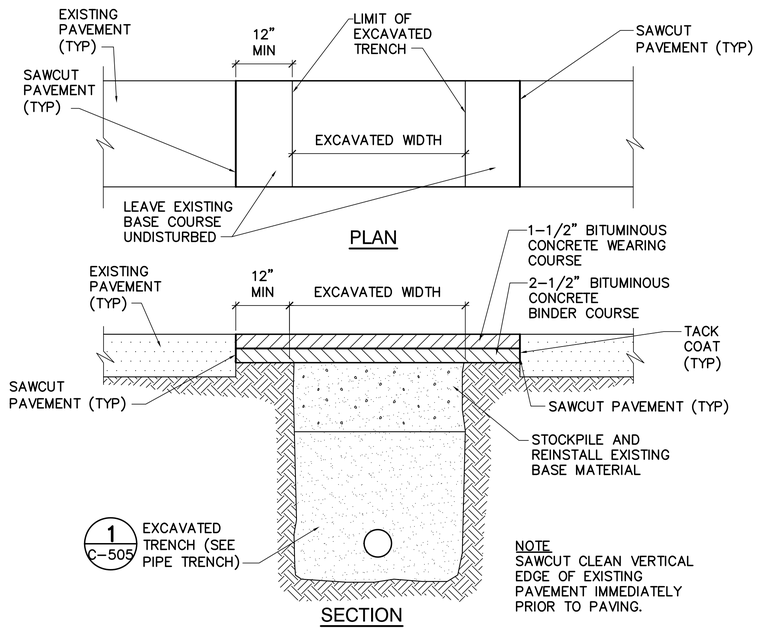
BID #40 - 23
PEIRCE ISLAND PUMP HOUSE AND POOL RENOVATION
Peirce Island Road
Portsmouth, NH 03801

EROSION AND SEDIMENT CONTROL DETAILS

SCALE: AS NOTED
DATE: 03/01/2023
DWG.: C-501
SHEET: 11 OF 72

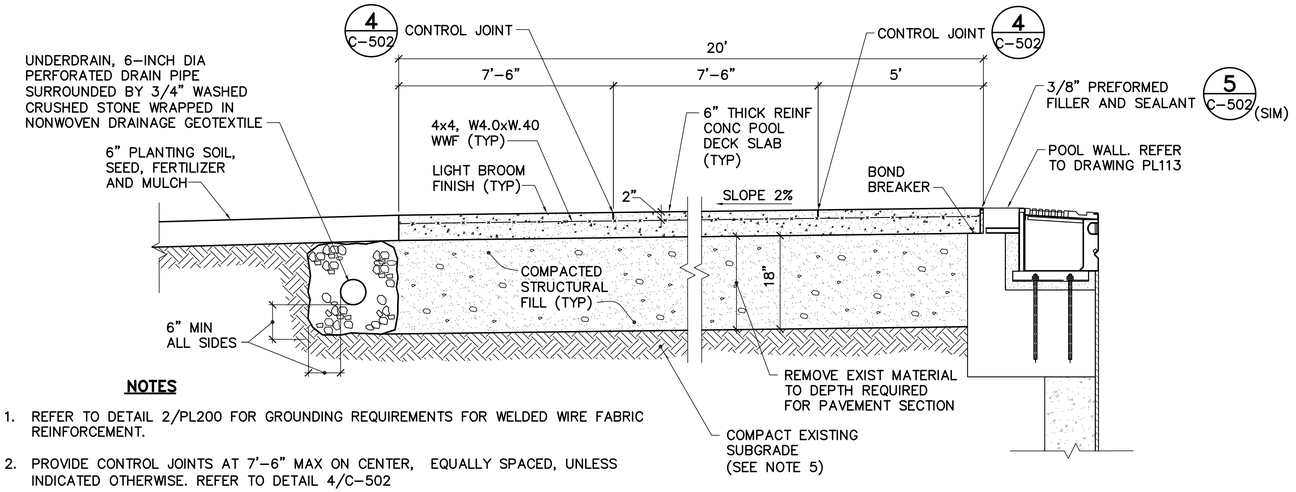
NO.	DATE	DESCRIPTION	BY

REVISIONS



1 ASPHALT CONCRETE TRENCH REPAIR

CS101, C-505 — 1 C-502 — NOT TO SCALE

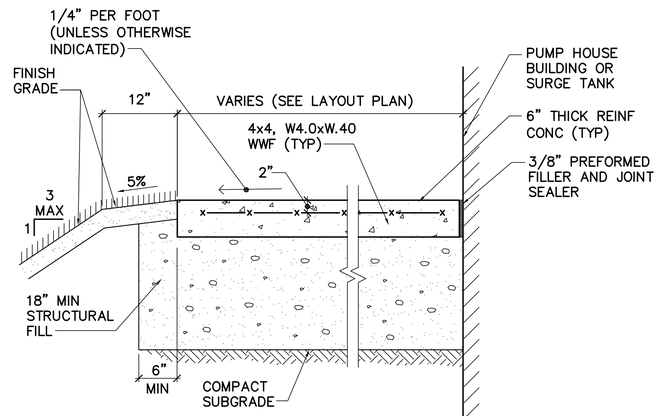


NOTES

1. REFER TO DETAIL 2/PL200 FOR GROUNDING REQUIREMENTS FOR WELDED WIRE FABRIC REINFORCEMENT.
2. PROVIDE CONTROL JOINTS AT 7'-6" MAX ON CENTER, EQUALLY SPACED, UNLESS INDICATED OTHERWISE. REFER TO DETAIL 4/C-502
3. PROVIDE EXPANSION JOINTS AT 60'-0" MAX ON CENTER, EQUALLY SPACED, UNLESS INDICATED OTHERWISE. REFER TO DETAIL 5/C-502.
4. PROVIDE 3/8" PREFORMED FILLER AND JOINT SEALANT WHERE POOL DECK ABUTS THE TRENCH DRAIN, BUILDING FOUNDATION, OR STRUCTURES.
5. AFTER REMOVAL OF EXISTING FILL AND ORGANIC MATERIAL, AND PRIOR TO STRUCTURAL FILL BASE PLACEMENT, COMPACT THE EXPOSED SUBGRADE WITH A MINIMUM OF TWO PASSES OF A 5-TON, OR LARGER, STATIC ROLLER TO IMPROVE DENSITY OF THE SUBGRADE SOILS. EXCAVATE AREAS WHERE SOFT AND/OR LOOSE SOILS ARE ENCOUNTERED OR THAT WEAVE AND/OR RUT IN EXCESS OF 1-INCH IN DEPTH AND REPLACE WITH COMPACTED STRUCTURAL FILL. THE COMPACTION PROCESS MUST BE PERFORMED UNDER THE OBSERVATION OF A QUALIFIED GEOTECHNICAL ENGINEER.

2 CONCRETE POOL DECK

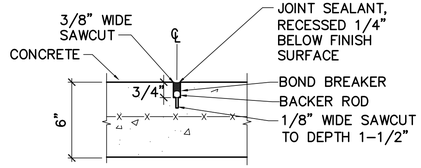
CS101, SB502, C-504 — 2 C-502 — NOT TO SCALE



NOTES
1. PROVIDE FINE BROOM FINISH PERPENDICULAR TO DIRECTION OF TRAVEL.
2. PROVIDE CONTROL JOINTS AT 6'-0" MAX ON CENTER, EQUALLY SPACED, UNLESS INDICATED OTHERWISE — 4 C-502
3. PROVIDE 3/8" PREFORMED FILLER AND JOINT SEALANT WHERE WALK ABUTS THE SURGE TANK OR BUILDING FOUNDATION. — 5 C-502 (SIM)

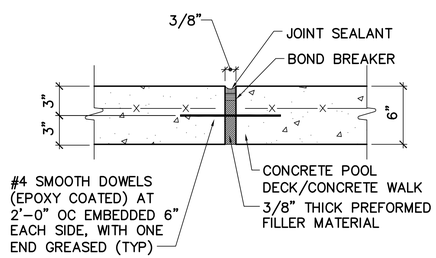
3 CONCRETE WALK

CS101, C-505 — 3 C-502 — NOT TO SCALE



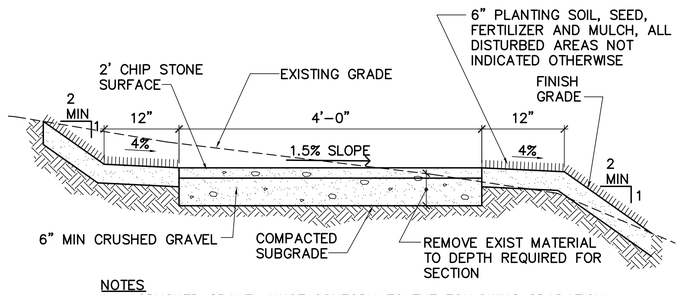
4 CONTROL JOINT

C-502, CS101, CS101 — 4 C-502 — NOT TO SCALE



5 EXPANSION JOINT

C-502, C-504, CS101 — 5 C-502 — NOT TO SCALE



NOTES
1. CRUSHED GRAVEL MUST CONFORM TO THE FOLLOWING GRADATION:

SIEVE SIZE	PERCENT FINE BY WEIGHT
1-1/2 INCH	100
1 INCH	90-100
NO. 4	27-52
NO. 200	0-10

2. CHIP STONE SURFACE MUST CONFORM TO THE FOLLOWING GRADATION:

SIEVE SIZE	PERCENT FINE BY WEIGHT
1/2 INCH	90-100
3/8 INCH	75-90
1/4 INCH	60-75
NO. 30	40-60
NO. 100	20-40
NO. 200	10-20

3. CHIP STONE MUST BE MADE OF HARD, DURABLE, SHARP EDGED ROCK FRAGMENTS, FREE FROM SILT, ORGANIC, OR OTHER DELETERIOUS MATERIAL.
4. SEE GRADING PLAN FOR FINISH GRADES.

6 CHIP STONE TRAIL SECTION

CS101 — 6 C-502 — NOT TO SCALE

NO.	DATE	DESCRIPTION	BY

REVISIONS

28 Feb, 2023 - 2:03pm
C:\dfile\21904.14-C502.dwg

OAK POINT ASSOCIATES
ARCHITECTURE ■ ENGINEERING ■ PLANNING
85 Middle Street, Portsmouth, NH 03801 (T) 603.431.4640 (F) 603.431.1870
www.oakpoint.com

STATE OF NEW HAMPSHIRE — WADE ALLEN LIPPERT No. 16331 — PROFESSIONAL ENGINEER — 3/1/23

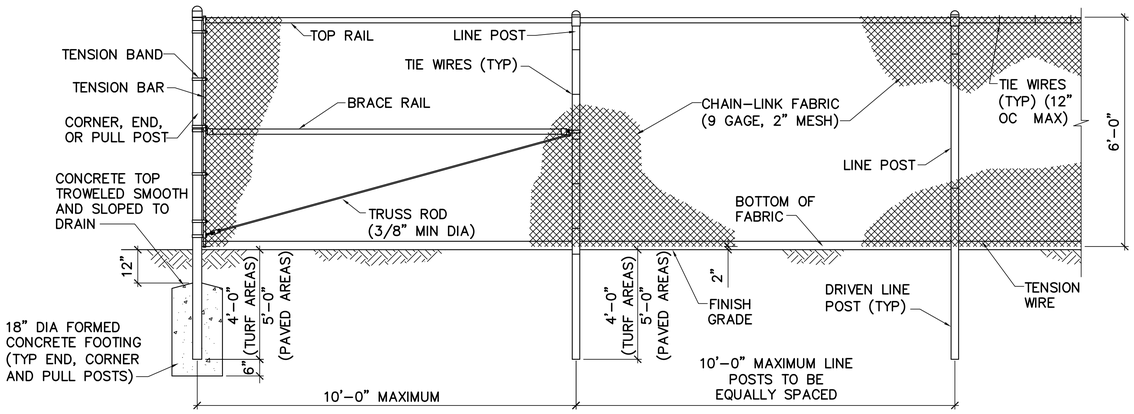
DESIGNED BY: WAL
DRAWN BY: WAL
CHECKED BY: PJM
PROJECT: 21904.14

CITY OF PORTSMOUTH
1 Junkins Avenue
Portsmouth, NH 03801

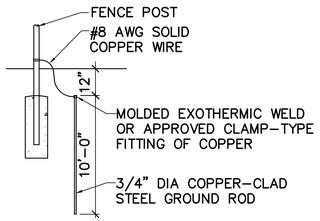
BID #40 - 23
PEIRCE ISLAND PUMP HOUSE AND POOL RENOVATION
Peirce Island Road
Portsmouth, NH 03801

SITE DETAILS 1

SCALE: AS NOTED
DATE: 03/01/2023
DWG.: C-502
SHEET: 12 OF 72



FENCE DETAIL



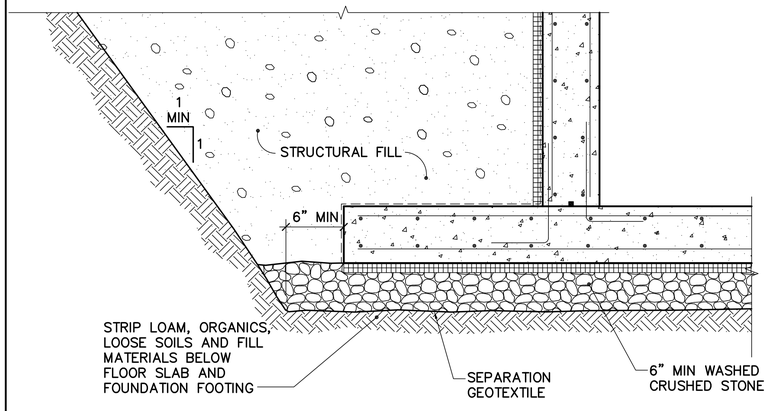
GROUNDING DETAIL

STEEL POST SCHEDULE	
USE AND SECTION	MINIMUM OUTSIDE DIMENSIONS (NOMINAL)
CORNER, END & PULL POSTS TUBULAR – ROUND	2.875" OD
LINE POSTS TUBULAR – ROUND	2.375" OD
TOP, BOTTOM & BRACE RAILS TUBULAR – ROUND	1.66" OD

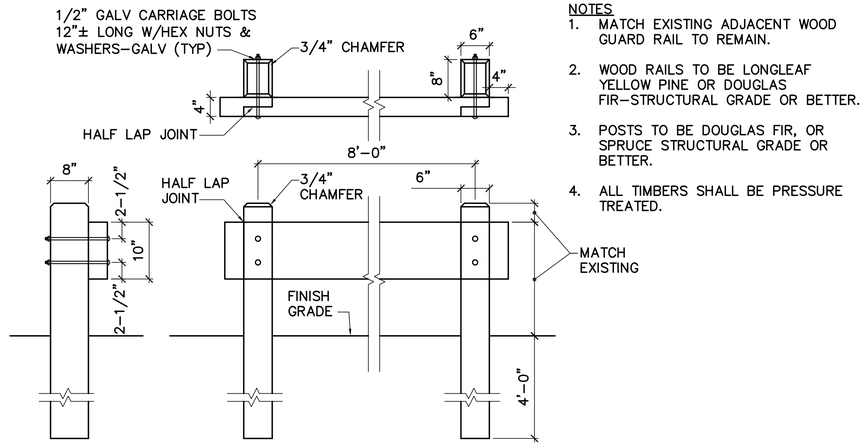
NOTES
1. INSTALL WIRE TIES, RAILS, POSTS, AND BRACES ON THE SECURE SIDE OF THE FENCE ALIGNMENT. INSTALL CHAIN–LINK FABRIC ON THE SIDE OPPOSITE THE SECURE AREA.
2. PROVIDE 9–GAGE GALVANIZED STEEL TIE WIRES FOR FASTENING THE FENCE FABRIC TO FENCE POSTS AND RAILS. PROVIDE 16–GAGE STAINLESS STEEL TIE WIRES FOR FASTENING FENCE FABRIC TO TENSION WIRES.

1 CHAIN LINK FENCE
CS101 / C–503 NOT TO SCALE

NOTES
1. PROVIDE STRUCTURAL FILL WITHIN 4 FEET OF FOOTINGS AND FOUNDATION WALLS.
2. WHERE BEDROCK IS ENCOUNTERED, REMOVE ROCK TO ONE FOOT BELOW BOTTOM OF FOOTING AND REPLACE WITH COMPACTED CRUSHED STONE.
3. SEE SHEET SB101 FOR FOUNDATION DETAILS, INCLUDING SLAB, FOOTING, INSULATION, AND VAPOR BARRIER INFORMATION.
4. PROTECT PREPARED SUBGRADES AND FOUNDATION SOILS FROM FREEZING, EXCESSIVE MOISTURE, AND CONSTRUCTION ACTIVITIES. DO NOT ALLOW SURFACE WATER TO ACCUMULATE ON PREPARED SUBGRADES OR FOUNDATION SOILS. RECONSTRUCT SUBGRADE/FOUNDATION SOILS DAMAGED BY FREEZING TEMPERATURES, FROST, RAIN, ACCUMULATED WATER, OR CONSTRUCTION ACTIVITIES, AS DIRECTED BY QUALIFIED GEOTECHNICAL ENGINEER AND AS APPROVED BY THE OWNER, AT NO ADDITIONAL COST TO THE OWNER.
5. REFER TO SPECIFICATION SECTION 312000, "EARTHMOVING" FOR ADDITIONAL REQUIREMENTS.

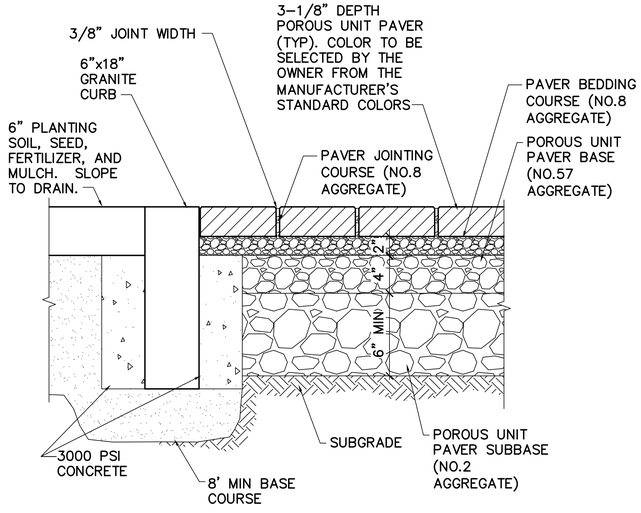


2 FOUNDATION PREPARATION DETAIL
CS101 / C–503 NOT TO SCALE



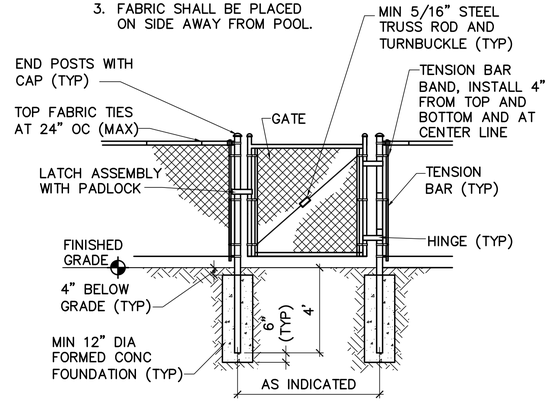
NOTES
1. MATCH EXISTING ADJACENT WOOD GUARD RAIL TO REMAIN.
2. WOOD RAILS TO BE LONGLEAF YELLOW PINE OR DOUGLAS FIR–STRUCTURAL GRADE OR BETTER.
3. POSTS TO BE DOUGLAS FIR, OR SPRUCE STRUCTURAL GRADE OR BETTER.
4. ALL TIMBERS SHALL BE PRESSURE TREATED.

2 WOOD GUARD RAIL
CS101 / C–503 NOT TO SCALE



4 POROUS UNIT PAVER
CS101 / C–503 NOT TO SCALE

CHAIN LINK FENCE NOTES:
1. ALL POSTS, RAILS, FABRIC AND APPURTENANCES SHALL BE GALVANIZED.
2. CONCRETE FOR POST FOUNDATIONS SHALL BE 3000 PSI MIN.
3. FABRIC SHALL BE PLACED ON SIDE AWAY FROM POOL.



5 CHAIN LINK GATE
CS101 / C–503 NOT TO SCALE

NO.	DATE	DESCRIPTION	BY

REVISIONS

28 Feb, 2023 – 2:07pm
C:\dfile\21904.14–C503.dwg

OAK POINT ASSOCIATES
ARCHITECTURE ■ ENGINEERING ■ PLANNING
85 Middle Street, Portsmouth, NH 03801 (T) 603.431.4644 (F) 603.431.1870
www.oakpoint.com

STATE OF NEW HAMPSHIRE – WADE ALLEN LIPHERT No. 16331 – LICENSED PROFESSIONAL ENGINEER – 3/1/23

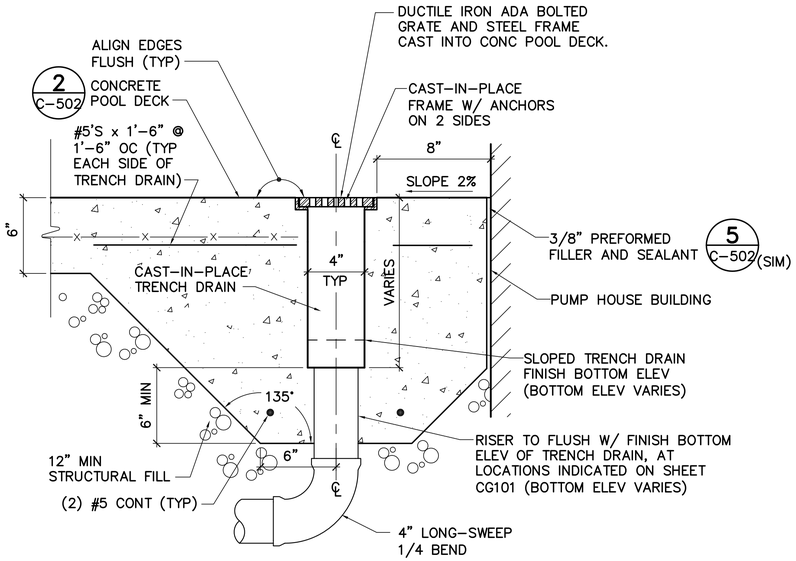
DESIGNED BY: WAL
DRAWN BY: WAL
CHECKED BY: PJM
PROJECT: 21904.14

CITY OF PORTSMOUTH
1 Junkins Avenue
Portsmouth, NH 03801

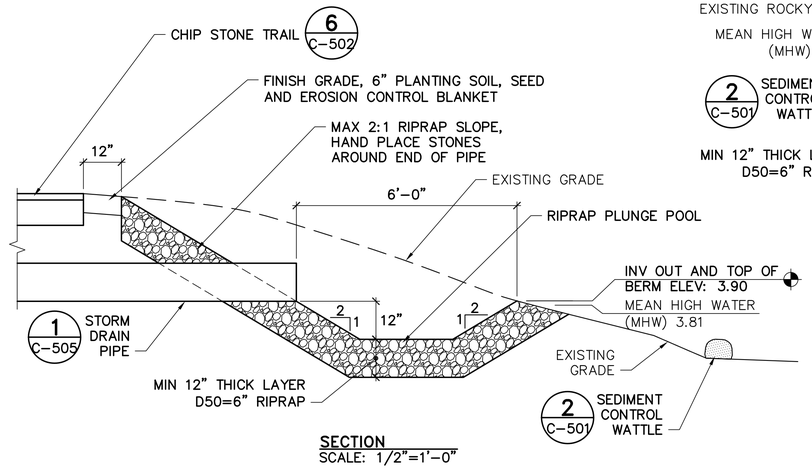
BID #40 - 23
PEIRCE ISLAND PUMP HOUSE AND POOL RENOVATION
Peirce Island Road
Portsmouth, NH 03801

SITE DETAILS 2

SCALE: AS NOTED
DATE: 03/01/2023
DWG.: C-503
SHEET: 13 OF 72



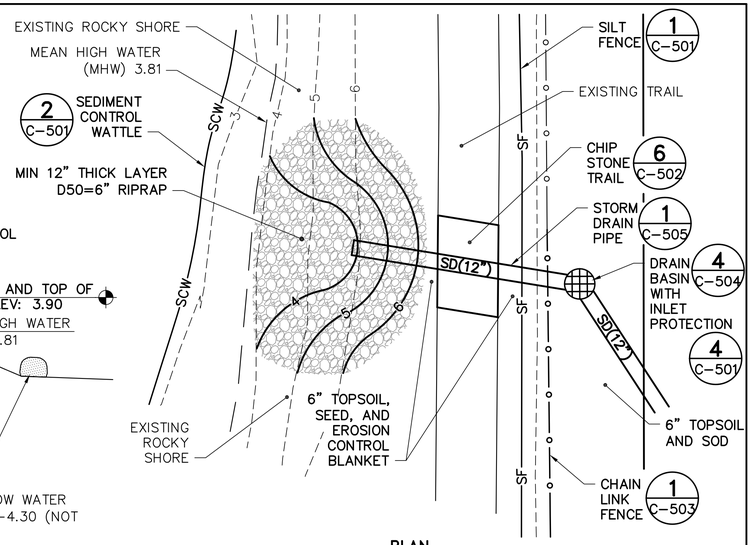
1 TRENCH DRAIN
CG101, CU101 — 1 C-504 NOT TO SCALE



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

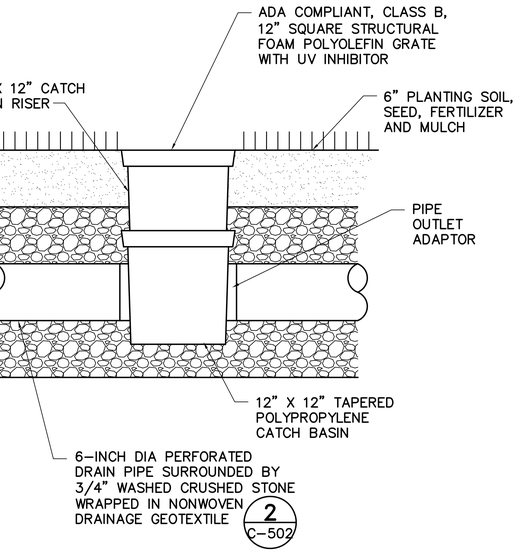
NOTES
1. PIPE OUTLET CONSTRUCTION MUST OCCUR DURING LOW TIDE CONDITIONS.
2. TEMPORARY EROSION CONTROL MEASURES MUST BE INSTALLED PRIOR TO CONSTRUCTION AND REMOVED ONCE THE OUTLET HAS BEEN STABILIZED.
3. OUTLET CONSTRUCTION AND PERMANENT STABILIZATION MUST BE COMPLETED IN ONE WORKING DAY PRIOR TO HIGH TIDE CONDITIONS.

MEAN LOW WATER (MLW): −4.30 (NOT SHOWN)

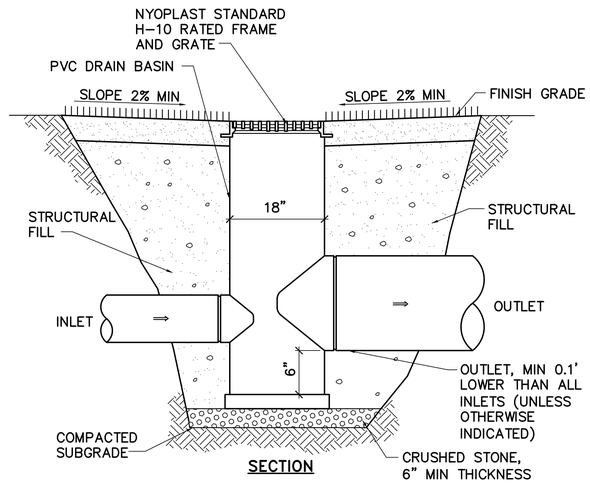


PLAN
SCALE: 1"=5'

2 RIP RAP OUTLET PROTECTION DETAIL
CG101 — 2 C-504 SCALE: AS NOTED



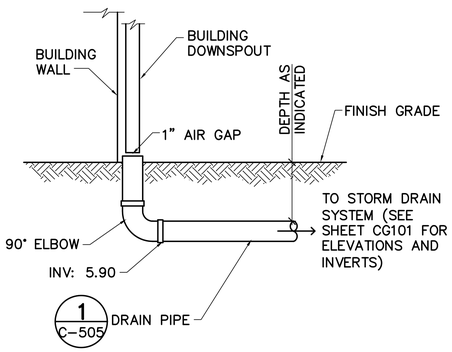
3 LANDSCAPE DRAIN
CG101 — 3 C-504 NOT TO SCALE



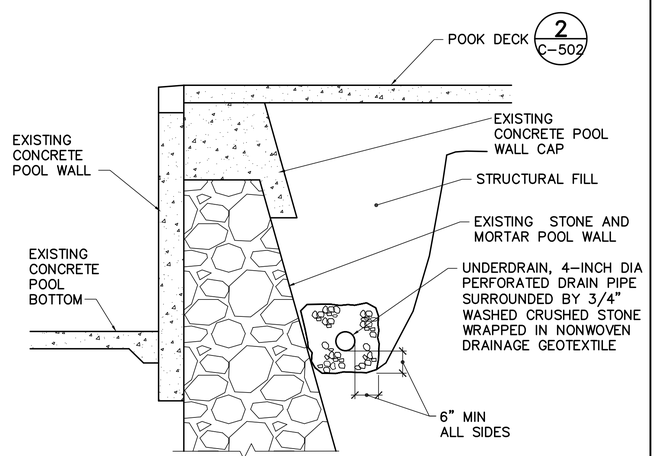
SECTION

NOTES
1. PROVIDE PIPE PENETRATION AS INDICATED ON SHEET CG101.
2. PVC CATCH BASIN MUST BE NYOPLAST DRAIN BASIN, H-10 RATED OR APPROVED EQUAL.

4 DRAIN BASIN
CU101, CG101 — 4 C-504 NOT TO SCALE



5 ROOF DRAIN RISER
CU101, CG101 — 5 C-504 NOT TO SCALE



6 POOL UNDERDRAIN DETAIL
CG101 — 6 C-504 NOT TO SCALE

GRAPHIC SCALES
1"=5' (5' 0 5' 10')
1/2"=1'-0" (2' 1' 0 1' 4')
CHECK GRAPHIC SCALE BEFORE USING

NO.	DATE	DESCRIPTION	BY

REVISIONS

28 Feb, 2023 – 2:20pm
C:\dfile\21904.14-C504.dwg

OAK POINT ASSOCIATES
ARCHITECTURE ■ ENGINEERING ■ PLANNING
85 Middle Street, Portsmouth, NH 03801 (T) 603.431.4640 (F) 603.431.1870
www.oakpoint.com

WADE ALLEN LIPPERT No. 16331 LICENSED PROFESSIONAL ENGINEER – STATE OF NEW HAMPSHIRE – 3/1/23

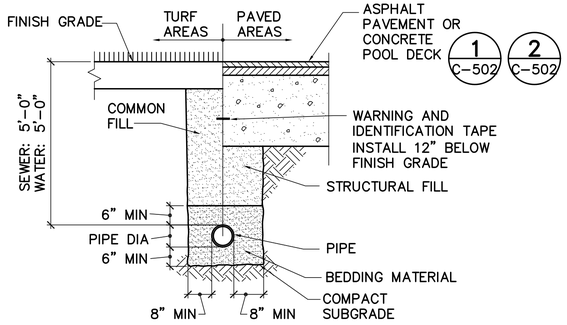
DESIGNED BY: WAL
DRAWN BY: WAL
CHECKED BY: PJM
PROJECT: 21904.14

CITY OF PORTSMOUTH
1 Junkins Avenue
Portsmouth, NH 03801

BID #40 - 23
PEIRCE ISLAND PUMP HOUSE AND POOL RENOVATION
Peirce Island Road
Portsmouth, NH 03801

SITE DETAILS 3

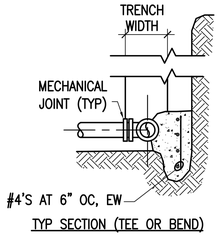
SCALE: AS NOTED
DATE: 03/01/2023
DWG.: C-504
SHEET: 14 OF 72



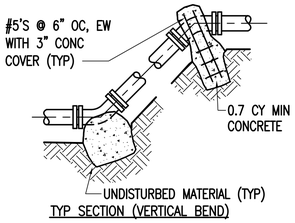
NOTES
1. EXCAVATION WORK MUST COMPLY WITH OSHA STANDARDS. TRENCH SIDEWALLS MUST BE VERTICAL FROM TRENCH BOTTOM TO 12" ABOVE TOP OF PIPE.
2. PROVIDE A MINIMUM OF 18" VERTICAL CLEARANCE BETWEEN CROSSING PIPES.
3. PROVIDE 10' HORIZONTAL CLEARANCE BETWEEN WATER AND SEWER LINE.
4. WHERE 5'-0" MIN COVER OVER SEWER LINE CANNOT BE ACHIEVED PROVIDE 4' WIDE, 4" THICK RIGID FOAM BOARD INSULATION OVER BLANKET MATERIAL. (2-2" LAYERS WITH JOINTS STAGGERED)
5. PROVIDE A SEPARATION OF AT LEAST 18 INCHES BETWEEN THE BOTTOM OF THE WATER PIPING AND THE TOP OF THE SEWER PIPING IN CASES WHERE WATER PIPING CROSSES ABOVE SEWER PIPING. IF SEPARATION CANNOT BE ACHIEVED PROVIDE 6" MIN CONCRETE ENCASEMENT OF WATER PIPE FOR A DISTANCE OF 10' ON EITHER SIDE OF THE CROSSING.

1 PIPE TRENCH
CU101, CG101, C-502, C-504, C-505 — C-505 — NOT TO SCALE

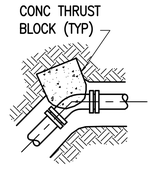
NOTES
1. PROVIDE JOINT RESTRAINT FOR TEES, BENDS, AND PLUGS. FOR DUCTILE IRON PIPE PROVIDE CONCRETE THRUST BLOCKS AND WEDGE-ACTION TYPE RETAINER GLANDS. FOR POLYETHYLENE PIPE PROVIDE CONCRETE THRUST BLOCKS.
2. WRAP DI PIPE FITTINGS IN POLYETHYLENE OR BUILDING PAPER PRIOR TO INSTALLATION OF CONCRETE THRUST BLOCKING.
3. PLACE CONCRETE PAVERS OR BRICKS IN FRONT OF PLUGS BEFORE PLACING THRUST BLOCKS.
4. PLACE THRUST BLOCKS AGAINST UNDISTURBED MATERIAL. WHERE TRENCH WALL HAS BEEN DISTURBED, EXCAVATE LOOSE MATERIAL AND EXTEND CONCRETE THRUST BLOCK TO UNDISTURBED MATERIAL. AREA OF THRUST BLOCKS SHOWN ARE BASED ON A MINIMUM SOIL BEARING CAPACITY OF 1,500 POUNDS PER SQUARE FOOT AND 1.5 SAFETY FACTOR. BEARING CAPACITY MAY BE ALTERED BASED ON CONDITIONS ENCOUNTERED WITH APPROVAL BY THE OWNER.
5. EXTEND CONCRETE THRUST BLOCKING THE ENTIRE LENGTH OF THE FITTING. DO NOT COVER ANY PART OF THE JOINT WITH CONCRETE.
6. PROVIDE LIFT HOOKS INTO THRUST BLOCKS AT END CAPS AND PLUGS.
7. CONCRETE THRUST BLOCKS MUST BE 3,000 PSI (MIN) PORTLAND CEMENT CONCRETE.
8. PROVIDE CONCRETE THRUST BLOCKING IN ACCORDANCE WITH NFPA 24 AND CITY OF PORTSMOUTH WATER DIVISION CONSTRUCTION MANUAL.
9. PROVIDE WEDGE-ACTION TYPE RETAINER GLANDS ACCORDING TO THE MANUFACTURERS INSTRUCTIONS.



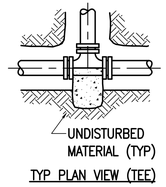
TYP SECTION (TEE OR BEND)



TYP SECTION (VERTICAL BEND)



TYP PLAN VIEW (HORIZONTAL BEND)



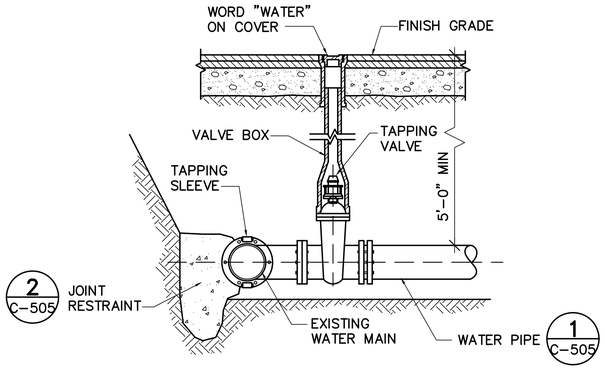
TYP PLAN VIEW (TEE)

THRUST BLOCK SCHEDULE
SQUARE FEET OF CONCRETE THRUST BLOCKING BEARING ON UNDISTURBED MATERIAL (BASED ON 100 PSI WORKING PRESSURE)

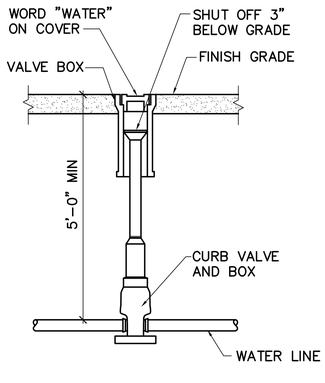
REACTION TYPE	PIPE SIZE (INCHES)				
	4"	6"	8"	10"	12"
TEE	1.4	2.8	4.8	7.3	10.3
90° BEND	1.9	4.0	6.8	10.3	14.5
45° BEND	1.0	2.2	3.7	5.6	7.9
22.5° BEND	0.5	1.1	1.9	2.8	4.0
11.25° BEND	0.3	0.6	1.0	1.4	2.0

NOTE: FOR OTHER PRESSURES, AREA OF CONCRETE THRUST BLOCKING IS DIRECTLY PROPORTIONAL TO AREAS SHOWN IN ABOVE TABLE.

2 JOINT RESTRAINT
CU101, C-505 — C-505 — NOT TO SCALE

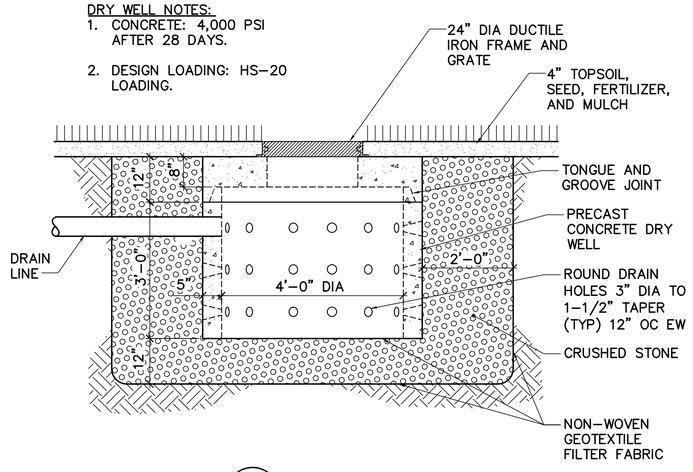


3 WATER SERVICE CONNECTION
CU101 — C-505 — NOT TO SCALE



4 WATER SHUT OFF VALVE
CU101 — C-505 — NOT TO SCALE

DRY WELL NOTES:
1. CONCRETE: 4,000 PSI AFTER 28 DAYS.
2. DESIGN LOADING: HS-20 LOADING.



5 DRY WELL
CU101,CG101 — C-505 — NOT TO SCALE

NO.	DATE	DESCRIPTION	BY
REVISIONS			

28 Feb, 2023 – 2:22pm
C:\dfile\21904.14-C505.dwg

OAK POINT ASSOCIATES
ARCHITECTURE ■ ENGINEERING ■ PLANNING
85 Middle Street, Portsmouth, NH 03801 (T) 603.431.4640 (F) 603.431.1870
www.oakpoint.com

WADE ALLEN LIPHERT No. 16331 LICENSED PROFESSIONAL ENGINEER STATE OF NEW HAMPSHIRE 3/1/23

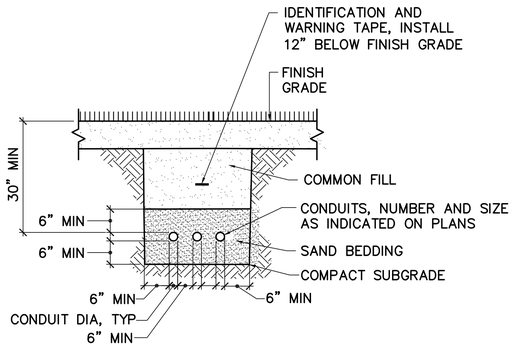
DESIGNED BY: WAL
DRAWN BY: WAL
CHECKED BY: PJM
PROJECT: 21904.14

CITY OF PORTSMOUTH
1 Junkins Avenue
Portsmouth, NH 03801

BID #40 - 23
PEIRCE ISLAND PUMP HOUSE AND POOL RENOVATION
Peirce Island Road
Portsmouth, NH 03801

SITE DETAILS 4

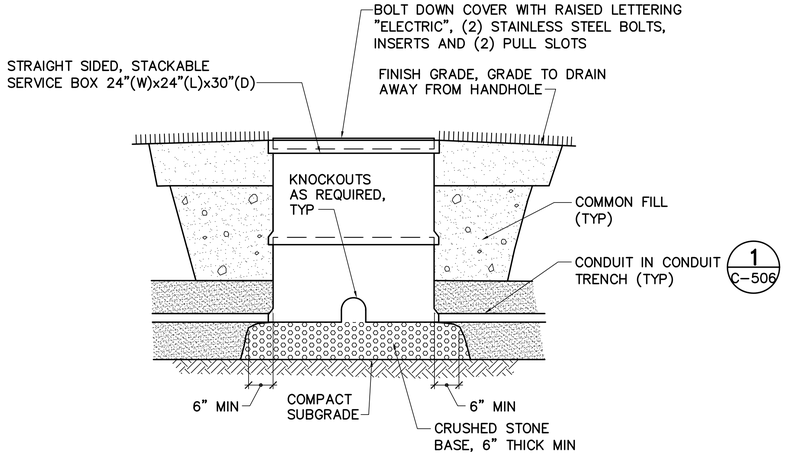
SCALE: AS NOTED
DATE: 03/01/2023
DWG.: C-505
SHEET: 15 OF 72



NOTES
1. ELECTRIC SERVICE TRENCH MUST CONFORM TO EVERSOURCE CONSTRUCTION STANDARDS.

2. PROVIDE 18" MIN SEPARATION TO WATER LINES.

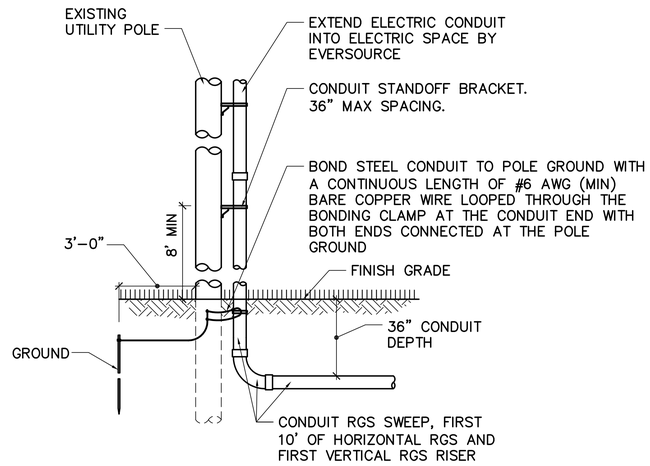
1 ELECTRIC SERVICE TRENCH
CU101, C-506 / C-506 NOT TO SCALE



NOTES
1. HOUSING AND COVER MUST BE POLYMER CONCRETE REINFORCED WITH A HEAVY WEAVE FIBERGLASS REINFORCING WITH A COMPRESSIVE STRENGTH NO LESS THAN 10,000 PSI AND ABLE TO SUPPORT A SERVICE LOAD OF NO LESS THAN 20,800 POUNDS OVER A 10"x10" AREA.

2. HANDHOLE BOX AND COVER MUST BE LISTED BY UNDERWRITERS LABORATORIES.

2 ELECTRIC HANDHOLE
CU101 / C-506 NOT TO SCALE



NOTES
1. ELECTRIC CONDUIT AND SPARE CONDUIT RISER MUST BE IN ACCORDANCE WITH EVERSOURCE STANDARD.

2. COMMUNICATION CONDUIT RISER MUST BE IN ACCORDANCE WITH FAIRPOINT COMMUNICATIONS STANDARDS AND SPECIFICATIONS. PROVIDE SWEEP AND FIRST SECTION OF VERTICAL CONDUIT SIMILAR TO ELECTRIC RISER INSTALLATION.

3. WEATHER SEAL TOP END OF VERTICAL RISER CONDUITS AFTER INSTALLATION OF CABLES. TEMPORARILY CAP THE TOP END OF THE VERTICAL RISER CONDUIT UNTIL CABLES ARE INSTALLED.

3 UTILITY POLE CONDUIT RISER
CU101, EP101 / C-506 NOT TO SCALE

NO.	DATE	DESCRIPTION	BY

REVISIONS

28 Feb, 2023 – 2:25pm
C:\dfile\21904.14-C506.dwg

OAK POINT ASSOCIATES
ARCHITECTURE ■ ENGINEERING ■ PLANNING
85 Middle Street, Portsmouth, NH 03801 (T) 603.431.4844 (F) 603.431.1870
www.oakpointl.com

STATE OF NEW HAMPSHIRE
WADE ALLEN LIPPERT
No. 16331
PROFESSIONAL ENGINEER
3/1/23

DESIGNED BY: WAL
DRAWN BY: WAL
CHECKED BY: PJM
PROJECT: 21904.14

CITY OF PORTSMOUTH
1 Junkins Avenue
Portsmouth, NH 03801

BID #40 - 23
PEIRCE ISLAND PUMP HOUSE AND POOL RENOVATION
Peirce Island Road
Portsmouth, NH 03801

SITE DETAILS 5

SCALE: AS NOTED
DATE: 03/01/2023
DWG.: C-506
SHEET: 16 OF 72

R.W. Gillespie & Associates • Geotechnical Engineering • Environmental Consulting • Materials Testing Services

Boring Log B-301
Total Depth (ft): 18.2
Sheet 1 of 1

Project Name: Peirce Island Pool Renovations
RWG&A Project No. 0767-152
Location: Portsmouth, New Hampshire
Client: Oak Point Associates
RWG&A Representative: Tom Snow
Boring Location: See Exploration Location Plan
Boring Abandonment Method: Backfill with cuttings
Observed Water Depth: 6.5'

Drilling Co.: Northern Test Boring
Drill Rig: Diedrich D-50
Driller Rep.: Mike Nadeau
Date Started: 03/28/2022
Date Completed: 03/28/2022
Surface Elevation: 8 Feet
Drilling Method: 2 1/4" HSA
Casing Type: N/A

DEPTH, FT.	SYMBOL	SAMPLES	SAMPLE NUMBER	DESCRIPTION OF MATERIAL	SAMPLE RECOVERY, IN.	BLOWS PER 6"	SPT-N BLOWS PER FT.	MOISTURE CONTENT %	LAB TESTS
0			S-1	TOPSOIL AND ORGANIC MATERIAL (12 inches).	2	1 2 2	4		
			S-2	CLAYEY SILT (ML); Medium dense, moist, silt, few clay, few fine sand, gray-brown.	5	5 6 5	11		
5			S-3	SILTY SAND (SM); Medium Dense to loose, wet, coarse to fine sand, little to some silt, interbedded silt lenses, brown.	17	5 9 14 20	23		
10			S-4		15	3 3 2 4	5		
15			S-5	Auger action indicates gravel and denser strata.	15	4 3 3 6	6		
20				Bottom of Exploration at 18.2'; Auger refusal on possible bedrock or boulder.					
25									

Notes: Seasonal high groundwater observed at 5 feet below ground surface.

R.W. Gillespie & Associates • Geotechnical Engineering • Environmental Consulting • Materials Testing Services

Boring Log B-302
Total Depth (ft): 16.4
Sheet 1 of 1

Project Name: Peirce Island Pool Renovations
RWG&A Project No. 0767-152
Location: Portsmouth, New Hampshire
Client: Oak Point Associates
RWG&A Representative: Tom Snow
Boring Location: See Exploration Location Plan
Boring Abandonment Method: Backfill with cuttings
Observed Water Depth: 7'

Drilling Co.: Northern Test Boring
Drill Rig: Diedrich C-50
Driller Rep.: Mike Nadeau
Date Started: 03/28/2022
Date Completed: 03/28/2022
Surface Elevation: 8 Feet
Drilling Method: 2 1/4" HSA
Casing Type: N/A

DEPTH, FT.	SYMBOL	SAMPLES	SAMPLE NUMBER	DESCRIPTION OF MATERIAL	SAMPLE RECOVERY, IN.	BLOWS PER 6"	SPT-N BLOWS PER FT.	MOISTURE CONTENT %	LAB TESTS
0			S-1	TOPSOIL AND ORGANIC MATERIAL (6 inches).	8	3 7 10 11	17		
				SILTY SAND (SM); Medium dense, dry, coarse to fine sand, little silt, some gravel, brown.					
5			S-2	Few gravel. Wet.	12	5 5 6 15	11	16	GS NM
10			S-3	SILTY SAND (SM); Loose, wet, coarse to fine sand, few silt, trace gravel, brown.	10	5 4 3 3	7		
15			S-4	SILTY SAND WITH GRAVEL (SM); Dense, wet, coarse to fine sand, some gravel, little silt, gray-brown.	12	7 20 50/2"			
20				Bottom of Exploration at 16.4'; Auger refusal on possible bedrock or boulder.					
25									

Notes: Seasonal high groundwater observed at 5 feet below ground surface.

R.W. Gillespie & Associates • Geotechnical Engineering • Environmental Consulting • Materials Testing Services

Boring Log B-303
Total Depth (ft): 18.9
Sheet 1 of 1

Project Name: Peirce Island Pool Renovations
RWG&A Project No. 0767-152
Location: Portsmouth, New Hampshire
Client: Oak Point Associates
RWG&A Representative: Tom Snow
Boring Location: See Exploration Location Plan
Boring Abandonment Method: Backfill with cuttings
Observed Water Depth: 6'

Drilling Co.: Northern Test Boring
Drill Rig: Diedrich C-50
Driller Rep.: Mike Nadeau
Date Started: 03/28/2022
Date Completed: 03/28/2022
Surface Elevation: 7 Feet
Drilling Method: 2 1/4" HSA
Casing Type: N/A

DEPTH, FT.	SYMBOL	SAMPLES	SAMPLE NUMBER	DESCRIPTION OF MATERIAL	SAMPLE RECOVERY, IN.	BLOWS PER 6"	SPT-N BLOWS PER FT.	MOISTURE CONTENT %	LAB TESTS
0			S-1	TOPSOIL AND ORGANIC MATERIAL (4 inches).	14	4 9 14 15	23		
				SILTY SAND WITH GRAVEL (SM); Medium dense, moist, coarse to fine sand, some gravel, little silt, brown to gray-brown.					
5			S-2	CLAYEY SILT (ML); Loose, wet, silt, few clay, trace fine sand, gray. Pocket Penetrometer: Undrained Shear Strength: Su= 1.25 ksf.	17	3 3 3 3	6		
10			S-3	SILTY SAND (SM); Medium dense, wet, medium to fine sand, little silt, orange-brown.	16	12 11 12 14	23	21	GS NM
15			S-4	Coarse to fine sand, orange-brown to brown. Auger action indicates gravel and denser strata.	11	5 6 7 12	13		
20				Bottom of Exploration at 18.9'; Auger refusal on possible bedrock or boulder.					
25									

Notes:

R.W. Gillespie & Associates • Geotechnical Engineering • Environmental Consulting • Materials Testing Services

Boring Log B-304
Total Depth (ft): 19.5
Sheet 1 of 1

Project Name: Peirce Island Pool Renovations
RWG&A Project No. 0767-152
Location: Portsmouth, New Hampshire
Client: Oak Point Associates
RWG&A Representative: Tom Snow
Boring Location: See Exploration Location Plan
Boring Abandonment Method: Backfill with cuttings
Observed Water Depth: 10'

Drilling Co.: Northern Test Boring
Drill Rig: Diedrich C-50
Driller Rep.: Mike Nadeau
Date Started: 03/28/2022
Date Completed: 03/28/2022
Surface Elevation: 7 Feet
Drilling Method: 2 1/4" HSA
Casing Type: N/A

DEPTH, FT.	SYMBOL	SAMPLES	SAMPLE NUMBER	DESCRIPTION OF MATERIAL	SAMPLE RECOVERY, IN.	BLOWS PER 6"	SPT-N BLOWS PER FT.	MOISTURE CONTENT %	LAB TESTS
0			S-1	TOPSOIL AND ORGANIC MATERIAL (6 inches).	12	3 9 11	20		
			S-2	SILTY SAND WITH GRAVEL (SM); Medium dense to dense, dry, coarse to fine sand, some gravel, little silt, brown to gray-brown.	13	10 13 8 6	14		
5			S-3		10	5 9 21 20	75+		
10			S-4	Becomes wet.	0	25 50/4" 39 35	65		
15			S-5	SILTY SAND (SM); Loose, wet, coarse to fine sand, few silt, trace gravel, brown. Auger action indicates gravel and denser strata.	12	30 14 3 3 3 2	6	22	GS NM
20				Bottom of Exploration at 19.5'; Auger refusal on possible bedrock or boulder.					
25									

Notes:

R.W. Gillespie & Associates • Geotechnical Engineering • Environmental Consulting • Materials Testing Services

Boring Log B-305
Total Depth (ft): 14.2
Sheet 1 of 1

Project Name: Peirce Island Pool Renovations
RWG&A Project No. 0767-152
Location: Portsmouth, New Hampshire
Client: Oak Point Associates
RWG&A Representative: Tom Snow
Boring Location: See Exploration Location Plan
Boring Abandonment Method: Backfill with cuttings
Observed Water Depth: 6'

Drilling Co.: Northern Test Boring
Drill Rig: Diedrich C-50
Driller Rep.: Mike Nadeau
Date Started: 03/28/2022
Date Completed: 03/28/2022
Surface Elevation: 7 Feet
Drilling Method: 2 1/4" HSA
Casing Type: N/A

DEPTH, FT.	SYMBOL	SAMPLES	SAMPLE NUMBER	DESCRIPTION OF MATERIAL	SAMPLE RECOVERY, IN.	BLOWS PER 6"	SPT-N BLOWS PER FT.	MOISTURE CONTENT %	LAB TESTS
0			S-1	TOPSOIL AND ORGANIC MATERIAL (4 inches).	7	3 4 11 7			
				FILL; Silty sand with gravel, moist, brown.					
5			S-2	SILTY SAND (SM); Medium dense to loose, moist to wet, medium to fine sand, little silt, light brown to gray.	16	9 12 12 15	24		
10			S-3		18	3 4 6 8	10		
15				Bottom of Exploration at 14.2'; Auger refusal on possible bedrock or boulder.					
20									
25									

Notes:

R.W. Gillespie & Associates • Geotechnical Engineering • Environmental Consulting • Materials Testing Services

Boring Log B-306
Total Depth (ft): 26.6
Sheet 1 of 1

Project Name: Peirce Island Pool Renovations
RWG&A Project No. 0767-152
Location: Portsmouth, New Hampshire
Client: Oak Point Associates
RWG&A Representative: Tom Snow
Boring Location: See Exploration Location Plan
Boring Abandonment Method: Backfill with cuttings
Observed Water Depth: 7.5'

Drilling Co.: Northern Test Boring
Drill Rig: Diedrich C-50
Driller Rep.: Mike Nadeau
Date Started: 03/28/2022
Date Completed: 03/28/2022
Surface Elevation: 7 Feet
Drilling Method: 2 1/4" HSA
Casing Type: N/A

DEPTH, FT.	SYMBOL	SAMPLES	SAMPLE NUMBER	DESCRIPTION OF MATERIAL	SAMPLE RECOVERY, IN.	BLOWS PER 6"	SPT-N BLOWS PER FT.	MOISTURE CONTENT %	LAB TESTS
0			S-1	CONCRETE (4 inches).	3	4 8 7 8			
				FILL; Silty sand with gravel, gray to brown.					
			S-2	SANDY SILT (ML); Medium dense, moist, little to some medium to fine sand, organic silts 3.5' to 4.0', gray to black.	10	7 8 4 4	12		
5			S-3	SILTY CLAY (CL); Stiff, dry, trace fine sand, gray-brown, mottled.	15	4 4 6 9	15		
10			S-4	SILTY CLAY (CL) and SILTY SAND (SM); Medium dense, wet, interbedded clay and sand, medium to fine sand, gray-brown to orange-brown.	12	3 5 5 7	10		
15			S-5	SILTY SAND WITH GRAVEL (SM); Medium dense, wet, coarse to fine sand, little gravel, gray-brown.	13	4 7 8 8	15		
20			S-6		12	12 12 14 14	26		
25			S-7		10	19 12 12 50/1"	24		
				Bottom of Exploration at 26.6'; SPT refusal on possible boulder.					

Notes:

NO.	DATE	DESCRIPTION	BY

REVISIONS

OAK POINT ASSOCIATES
ARCHITECTURE ■ ENGINEERING ■ PLANNING
85 Middle Street, Portsmouth, NH 03801 (T) 603.431.4640 (F) 603.431.1870
www.oakpoint.com

STATE OF NEW HAMPSHIRE – WADE ALLEN LIPPERT No. 16331 – PROFESSIONAL ENGINEER – 3/1/23

DESIGNED BY: WAL
DRAWN BY: WAL
CHECKED BY: PJM
PROJECT: 21904.14

CITY OF PORTSMOUTH
1 Junkins Avenue
Portsmouth, NH 03801

BID #40 - 23
PEIRCE ISLAND PUMP HOUSE AND POOL RENOVATION
Peirce Island Road
Portsmouth, NH 03801

BORING LOGS

SCALE: AS NOTED
DATE: 03/01/2023
DWG.: B-001
SHEET: 17 OF 72

STRUCTURAL NOTES

CONCRETE

1. CONFORM WITH ACI 117 (EXCEPT AS NOTED BELOW), ACI 201, ACI 211.1, ACI 301, ACI 302.1R, ACI 305R, ACI 306.1, ACI 308.1, ACI 309R, ACI 315, ACI 318, ACI 330 AND ACI 347R. CONCRETE TOLERANCES FOR FOUNDATION WALL VERTICAL, LATERAL, AND LEVEL ALIGNMENT MUST NOT EXCEED 1/2 INCH.
2. CONCRETE EXPOSED TO WEATHER: NORMAL WEIGHT, F'c=4000 PSI WITH A MAXIMUM WATER/CEMENT RATIO=0.45.
   CONCRETE FOR FOUNDATION WALLS, MAT FOOTING AND ELEVATED SLAB: NORMAL WEIGHT, F'c=3000 PSI WITH A MAXIMUM WATER/CEMENT RATIO=0.50.
3. COMPACT THE EXISTING SUBGRADE BENEATH MAT FOOTING PRIOR TO CONCRETE PLACEMENT. COMPACT IN ACCORDANCE WITH THE SPECIFICATIONS.
4. DO NOT PLACE MAT FOOTING ON FROZEN SUBGRADE.
5. PROTECT FOOTING SUBGRADE FROM FREEZING PRIOR TO, DURING, AND POST FOOTING INSTALLATION UNTIL THE PROPER FROST PROTECTION IS PROVIDED VIA BACKFILL AND COMPACTION.
6. DEFORMED REINFORCING BARS: ASTM A615/A615M (GRADE 60).
7. WELDED WIRE FABRIC: ASTM A1064 (PLAIN), ASTM A1060 (GALVANIZED), ASTM A884 (EPOXY COATED). PROVIDE AS INDICATED.
8. LAP SPLICE CONCRETE REINFORCEMENT 2'-7" UNLESS NOTED OTHERWISE. WELDING OF STEEL REINFORCEMENT IS NOT PERMITTED.
9. MINIMUM REINFORCING STEEL COVER: FOOTINGS 3", WALLS 2", ELEVATED SLABS 1-1/2", UNLESS INDICATED OTHERWISE.
10. SUPPORT STEEL REINFORCEMENT AND WELDED WIRE FABRIC BY APPROVED MATERIALS.
11. CURE CONCRETE AS SPECIFIED. CONCRETE NOT CURED WILL NOT BE ACCEPTED.
12. NON-SHRINK GROUT: ASTM C1107, GRADE C.
13. EPOXY GROUT: ASTM C881, TYPE IV OR V.
14. EPOXY BONDING ADHESIVE: ASTM C881, TYPE I.
15. PROVIDE CONCRETE SLAB PROTECTION (BEYOND THE 7-DAY CURING PERIOD) UNTIL THE BUILDING ENVELOPE IS COMPLETELY ENCLOSED AND PROTECTS THE SLAB FROM WIND, SUN AND PRECIPITATION.
16. PROVIDE POWER TROWELED FINISH ON TOP SURFACE OF MAT FOOTING.
17. PROVIDE PENETRATING LIQUID FLOOR TREATMENT TO TOP SURFACE OF MAT FOOTING AND ELEVATED SLAB.

MASONRY

1. CONFORM TO TMS 402/602-11.
2. CONCRETE MASONRY UNITS AND DECORATIVE CONCRETE MASONRY UNITS: ASTM C90, TYPE 1, NORMAL WEIGHT, WITH A MINIMUM NET COMPRESSIVE CMU BLOCK STRENGTH OF 3250 PSI.
   MORTAR: ASTM C270, TYPE S.
   GROUT: ASTM C476 FINE, Fg = 2500 PSI.
   DEFORMED REINFORCEMENT: ASTM A615/A615M, GRADE 60.
3. CONCRETE MASONRY ASSEMBLIES MUST HAVE THE FOLLOWING MINIMUM COMPRESSIVE STRENGTH: F'm = 2500 PSI.
4. PERFORM DAILY MASONRY INSPECTIONS AS SPECIFIED. SUBMIT DAILY MASONRY INSPECTION REPORTS TO THE OWNER WITHIN 24 HOURS AFTER DAY OF INSPECTION. MASONRY CONSTRUCTED WITHOUT THE COMPLETION OF DAILY MASONRY INSPECTIONS WILL NOT BE ACCEPTED AND MUST BE REMOVED AND REPLACED AT NO ADDITIONAL COST TO THE OWNER.
5. REINFORCE CONCRETE MASONRY WALLS AND PARTITIONS AS INDICATED WITH CELLS GROUTED SOLID UNLESS NOTED OTHERWISE.
6. DO NOT MAKE HOLES OR PENETRATIONS THROUGH CMU BOND BEAMS.
7. LAP SPLICE REINFORCING AS INDICATED ON FOUNDATION DETAILS AND MASONRY WALL ELEVATION SHEET SF201.
8. BRACE INTERIOR CMU PARTITION WALLS TO ROOF AS INDICATED IN DETAIL 3/AE101.

POST INSTALLED ANCHORS

1. INSTALL POST INSTALLED ANCHORS IN ACCORDANCE WITH THE MANUFACTURER'S PRINTED INSTRUCTIONS. BASIS OF DESIGN PRODUCT IS THE HILTI KWIK BOLT 3 (STAINLESS STEEL). ANCHORS FROM OTHER MANUFACTURERS ARE ACCEPTABLE PROVIDED THEY MEET OR EXCEED INDICATED LOAD CAPACITIES BELOW.
2. 1/2" DIAMETER ANCHORS/EXPANSION BOLTS ATTACHED TO GROUT FILLED CMU TO HAVE THE FOLLOWING MINIMUM ALLOWABLE CAPACITIES. CAPACITIES INDICATED ARE PRIOR TO APPLICATION OF ADJUSTMENT FACTORS:
   a. SHEAR = 1080 LBS
   b. TENSION = 905 LBS

WOOD

1. WOOD FRAMING AND FASTENERS TO BE IN ACCORDANCE WITH THE 2015 INTERNATIONAL BUILDING CODE AND THE AMERICAN FOREST AND PAPER ASSOCIATION NATIONAL DESIGN SPECIFICATION (2015) (AFPA NDS).
2. EACH PIECE OF LUMBER MUST BE "S-DRY" AND BEAR THE GRADE STAMP OF A GRADING RULES AGENCY APPROVED BY THE PS-20 "AMERICAN SOFTWOOD LUMBER STANDARDS COMMITTEE".
3. MINIMUM STRUCTURAL PROPERTIES OF WOOD FRAMING ARE AS FOLLOWS:
   BLOCKING AND BRACING:
   SPRUCE-PINE-FIR NO. 2 OR BETTER WITH MINIMUM DESIGN VALUES:
   Fb=875 PSI, Fv=135 PSI, Ft=450 PSI, $Fc_{\perp}$=1,150 PSI AND E=1,400,00 PSI.
4. MINIMUM ALLOWABLE STRESSES OF LAMINATED VENEER LUMBER (LVL) ARE AS FOLLOWS:
   JOISTS: BENDING Fb = 3,100 PSI
   SHEAR Fv = 285 PSI
   TENSION Ft = 2,150 PSI
   COMPRESSION (PERPENDICULAR TO GRAIN) $Fc_{\perp}$= 750 PSI
   COMPRESSION (PARALLEL TO GRAIN) Fc_{II}= 3,000 PSI
   MODULUS OF ELASTICITY E = 2,000,000 PSI
   NOTE: PARALLEL STRAND LUMBER WILL NOT BE AN ACCEPTABLE SUBSTITUTE IF IT DOES NOT MEET THE ABOVE MINIMUM DESIGN PROPERTIES.
5. ROOF SHEATHING IS DESIGNED TO ACT AS A ROOF DIAPHRAGM. LAY SHEATHING WITH LONG DIMENSION PERPENDICULAR TO SUPPORTS. NAIL AT PANEL EDGES WITH 8d NAILS AT 6" ON-CENTER AND 12" ON-CENTER AT OTHER LOCATIONS UNLESS NOTED OTHERWISE.
6. PROVIDE NAILING (OTHER THAN ROOF DIAPHRAGM) IN ACCORDANCE WITH TABLE 2304.10.1 OF THE 2015 INTERNATIONAL BUILDING CODE UNLESS NOTED OTHERWISE.
7. CONNECTION HARDWARE TO HAVE MINIMUM ALLOWABLE CAPACITIES AS INDICATED. INSTALL IN ACCORDANCE WITH THE MANUFACTURER'S PRINTED INSTRUCTIONS. DESIGN BASED ON SIMPSON STRONG TIE PRODUCTS. ALTERNATE DESIGNS OR PRODUCTS THAT MEET OR EXCEED THE REQUIRED DESIGN CAPACITIES ARE PERMITTED.
8. PROVIDE STANDARD CUT WASHERS FOR BOLT HEADS AND NUTS BEARING ON WOOD. DRILL BOLT HOLES 1/32-INCH IN DIAMETER LARGER THAN BOLT DIAMETER.

GENERAL NOTES

1. FIELD VERIFY DIMENSIONS AND ELEVATIONS OF CONCRETE, MASONRY, AND WOOD MEMBERS PRIOR TO FABRICATION OF ANY MEMBERS. REPORT DISCREPANCIES TO THE OWNER PRIOR TO FABRICATION OF MEMBERS.
2. PROVIDE TEMPORARY SUPPORT OF FRAMING DURING CONSTRUCTION TO PREVENT FAILURE AND DAMAGE.
3. DO NOT BACKFILL BASEMENT FOUNDATION WALLS UNTIL THE REINFORCED CONCRETE STRUCTURAL SLAB IS PLACED AND HAS REACHED A MINIMUM OF 75% OF THE SPECIFIED 28-DAY DESIGN COMPRESSIVE STRENGTH.
4. COORDINATE THE LOCATION OF CONCRETE AND MASONRY MEMBERS WITH ARCHITECTURAL, CIVIL, MECHANICAL, PLUMBING, AND ELECTRICAL PLANS AND DETAILS.
5. REQUIRED TESTS AND INSPECTIONS MUST BE COMPLETED AND SUBMITTED TO THE OWNER PRIOR TO ACCEPTANCE OF COMPLETED WORK. MATERIAL PLACED WITHOUT THE REQUIRED CONTRACTOR QUALITY CONTROL TESTS OR REQUIRED INSPECTIONS BEING PERFORMED WILL NOT BE ACCEPTED.
6. CONSTRUCTION IS SUBJECT TO SPECIAL INSPECTIONS IN ACCORDANCE WITH CHAPTER 17 OF IBC 2015. NOTIFY THE OWNER OF DEFICIENCIES AND AFTER DEFICIENCIES HAVE BEEN CORRECTED.
7. NO DEVIATIONS IN CONTRACT DRAWINGS ARE PERMITTED.

STRUCTURAL ABBREVIATIONS

±	PLUS OR MINUS
∠	ANGLE
ACI	AMERICAN CONCRETE INSTITUTE
ALT	ALTERNATE
ALUM	ALUMINUM
APA	AMERICAN PLYWOOD ASSOCIATION
APPROX	APPROXIMATELY
ARCH	ARCHITECTURAL
ASCE	AMERICAN SOCIETY OF CIVIL ENGINEERS
ASTM	AMERICAN SOCIETY FOR TESTING AND MATERIALS
BFE	BOTTOM OF FOOTING ELEVATION
CJ	CONTROL JOINT
℄	CENTERLINE
CMU	CONCRETE MASONRY UNIT
CONC	CONCRETE
CONN	CONNECTION
CONT	CONTINUOUS
DIA	DIAMETER
DN	DOWN
DWG	DRAWING
EA	EACH
ELEV	ELEVATION
EQ	EQUAL
EXIST	EXISTING
EXP	EXPANSION
F'c	CONCRETE COMPRESSIVE STRENGTH
F'm	MASONRY COMPRESSIVE STRENGTH
FD	FLOOR DRAIN
Fg	GROUT COMPRESSIVE STRENGTH
FND	FOUNDATION
FT	FOOT
FTG	FOOTING
GA	GAUGE
GALV	GALVANIZED
HORIZ	HORIZONTAL
IBC	INTERNATIONAL BUILDING CODE
INSUL	INSULATION
LBS	POUNDS
MAX	MAXIMUM
MIN	MINIMUM
MO	MASONRY OPENING
MPH	MILES PER HOUR
MTL	METAL
#, NO	NUMBER
OC	ON CENTER
OPNG	OPENING
PSF	POUNDS PER SQUARE FOOT
PSI	POUNDS PER SQUARE INCH
PT	PRESERVATIVE TREATED
REINF	REINFORCED
SIM	SIMILAR
SS	STAINLESS STEEL
STL	STEEL
TMS	THE MASONRY SOCIETY
TWE	TOP OF WALL ELEVATION
TYP	TYPICAL
VERT	VERTICAL
W/	WITH

BUILDING DESIGN LOADS

ROOF SNOW LOAD (ROOF LIVE LOAD) ASCE 7-10/IBC 2015

GROUND SNOW LOAD (Pg) = 49 PSF

SNOW EXPOSURE FACTOR (Ce) = 0.9
SNOW LOAD ROOF SLOPE FACTOR (Cs) = 1.0
SNOW LOAD THERMAL FACTOR (Ct) = 1.2
SNOW LOAD RISK CATEGORY = II
BALANCED ROOF SNOW LOAD (Pf) = 36 PSF
SNOW LOAD IMPORTANCE FACTOR (I) = 1.0

ROOF DEAD LOAD:
  TOP CHORD = 15 PSF + SELF WEIGHT + EXHAUST FANS
  BOTTOM CHORD = 15 PSF + SELF WEIGHT
ROOF LIVE LOAD:
  TOP CHORD = 20 PSF
  BOTTOM CHORD = 0 PSF

CONSTRUCTION LIVE LOAD = 20 PSF

ELEVATED SLAB FLOOR DEAD LOAD = 140 PSF
FLOOR LIVE LOAD:
  1ST FLOOR = 100 PSF
  BASEMENT = 100 PSF

WIND LOAD ASCE 7-10/IBC 2015

BASIC WIND SPEED = 115 MPH
WIND LOAD RISK CATEGORY = II
WIND EXPOSURE = EXPOSURE D
BUILDING TYPE = "ENCLOSED"
WIND DESIGN PRESSURE:
  MAIN WIND FORCE RESISTING SYSTEM = 34 PSF
  (MAXIMUM PRESSURE)

SEISMIC DESIGN DATA ASCE 7-10/IBC 2015

SHORT PERIOD SPECTRAL RESPONSE ACCELERATION (Ss) = 0.33
ONE SECOND SPECTRAL RESPONSE ACCELERATION (S_1) = 0.08
SEISMIC RISK CATEGORY = II
SEISMIC DESIGN CATEGORY = B
SEISMIC IMPORTANCE FACTOR = 1.0
SITE CLASS = C
TOTAL BASE SHEAR = 8 KIPS

BASIC STRUCTURAL SYSTEM

INTERMEDIATE REINFORCED CONCRETE MASONRY SHEAR WALLS
RESPONSE MODIFICATION COEFFICIENT (R) = 3.50
DEFLECTION AMPLIFICATION FACTOR (Cd) = 2.25
SYSTEM OVER STRENGTH FACTOR (Ωo) = 2.50

ANALYSIS PROCEDURE = EQUIVALENT LATERAL FORCE PROCEDURE

DESIGN SOIL BEARING PRESSURE = 1500 PSF

NOTES

1. SEISMIC LOAD RESISTING SYSTEM CONSISTS OF THE FOLLOWING:
   A. VERTICAL ELEMENTS – INTERMEDIATE REINFORCED CONCRETE MASONRY SHEAR WALLS.
   B. HORIZONTAL ELEMENTS – PLYWOOD SHEATHING DIAPHRAGMS.
   C. COLLECTOR ELEMENTS – CMU BOND BEAMS.

NO.	DATE	DESCRIPTION	BY

REVISIONS

OAK POINT ASSOCIATES
ARCHITECTURE ■ ENGINEERING ■ PLANNING
85 Middle Street, Portsmouth, NH 03801 (T) 603.431.4846 (F) 603.431.1870
www.oakpoint.com

STATE OF NEW HAMPSHIRE
DAVID N. MARTIN
No. 9134
PROFESSIONAL ENGINEER

DESIGNED BY: DNM
DRAWN BY: MJC
CHECKED BY: DNM
PROJECT: 21904.14

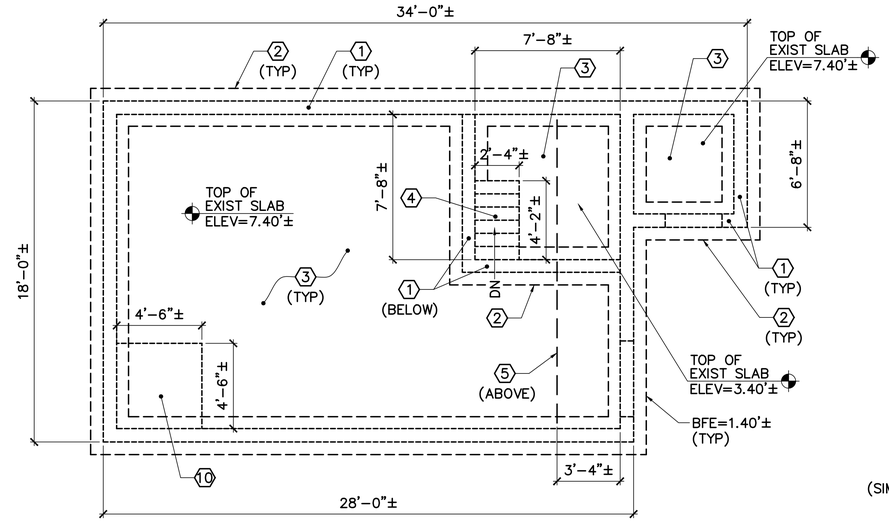
CITY OF PORTSMOUTH
1 Junkins Avenue
Portsmouth, NH 03801

PEIRCE ISLAND PUMP HOUSE AND POOL RENOVATION
Peirce Island Road
Portsmouth, NH 03801

STRUCTURAL NOTES, ABBREVIATIONS, AND DESIGN LOADS

SCALE: AS NOTED
DATE: 03/01/2023
DWG.: S-001
SHEET: 18 OF 72

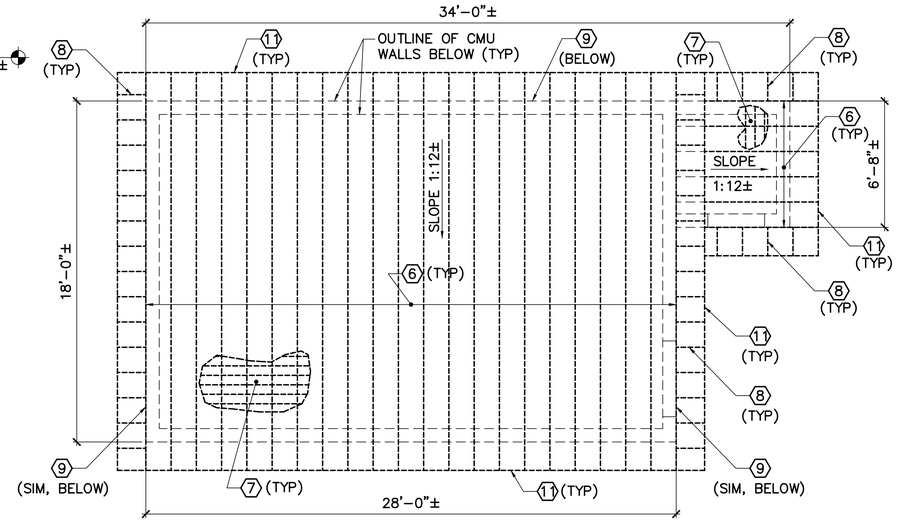
15 Feb, 2023 – 9:31am
C:\Users\Matt\appdata\local\temp\AcPublish_13688\21904.14-S001.dwg



1 EXISTING PUMP HOUSE FOUNDATION REMOVALS PLAN

CD101 / SD101 SCALE: 1/4"=1'-0"

PLAN NORTH



2 EXISTING PUMP HOUSE ROOF FRAMING REMOVALS PLAN

AD101 / SD101 SCALE: 1/4"=1'-0"

PLAN NORTH

GENERAL REMOVALS NOTES

1. EXISTING PAINT IS ASSUMED TO CONTAIN LEAD. HANDLE IN ACCORDANCE WITH LEAD REMEDIATION REQUIREMENTS.
2. SEE CIVIL, ARCHITECTURAL, AND ELECTRICAL SHEETS FOR ADDITIONAL REMOVALS.
3. INTENT IS TO REMOVE THE EXISTING BUILDING IN ITS ENTIRETY.

REMOVALS KEYNOTES (THIS SHEET ONLY)

1. REMOVE EXISTING 8"± REINFORCED CONCRETE FOUNDATION WALL.
2. REMOVE EXISTING 1'-0"± x 2'-0"± CONTINUOUS REINFORCED CONCRETE FOOTING.
3. REMOVE EXISTING 6"± THICK REINFORCED CONCRETE SLAB-ON-GRADE.
4. REMOVE EXISTING REINFORCED CONCRETE MONOLITHIC STAIRS.
5. REMOVE EXISTING 8"± STEEL BEAM AND HOIST SYSTEM BOLTED TO FACE OF EXISTING CMU WALL.
6. REMOVE EXISTING 2x12± WOOD ROOF JOISTS SPACED 1'-4"± ON-CENTER AND MIDSPAN WOOD DIAGONAL BRIDGING.
7. REMOVE EXISTING 1x6± TONGUE AND GROOVE WOOD BOARD SHEATHING.
8. REMOVE EXISTING 2x12± WOOD FRAMED RAKE.
9. REMOVE EXISTING 2'-0"± TALL WOOD FRAMED 2x4± KNEEWALL AND WOOD BOARD EXTERIOR SHEATHING.
10. REMOVE EXISTING 5"± THICK REINFORCED CONCRETE HOUSEKEEPING PAD.
11. REMOVE CONTINUOUS 2x12± RIM BOARD.

GRAPHIC SCALE

1/4"=1'-0" 4' 2' 0 4' 8'

CHECK GRAPHIC SCALE BEFORE USING

NO.	DATE	DESCRIPTION	BY
REVISIONS			

15 Feb, 2023 - 9:31am
Z:\21904.14\21904.14-SD101.dwg

OAK POINT ASSOCIATES
ARCHITECTURE ■ ENGINEERING ■ PLANNING
85 Middle Street, Portsmouth, NH 03801 (T) 603.431.4849 (F) 603.431.1870
www.oakpoint.com

STATE OF NEW HAMPSHIRE - DAVID N. MARTIN No. 9134 - PROFESSIONAL ENGINEER

DESIGNED BY: DNM
DRAWN BY: MJC
CHECKED BY: DNM
PROJECT: 21904.14

CITY OF PORTSMOUTH
1 Junkins Avenue
Portsmouth, NH 03801

PEIRCE ISLAND PUMP HOUSE AND POOL RENOVATION
Peirce Island Road
Portsmouth, NH 03801

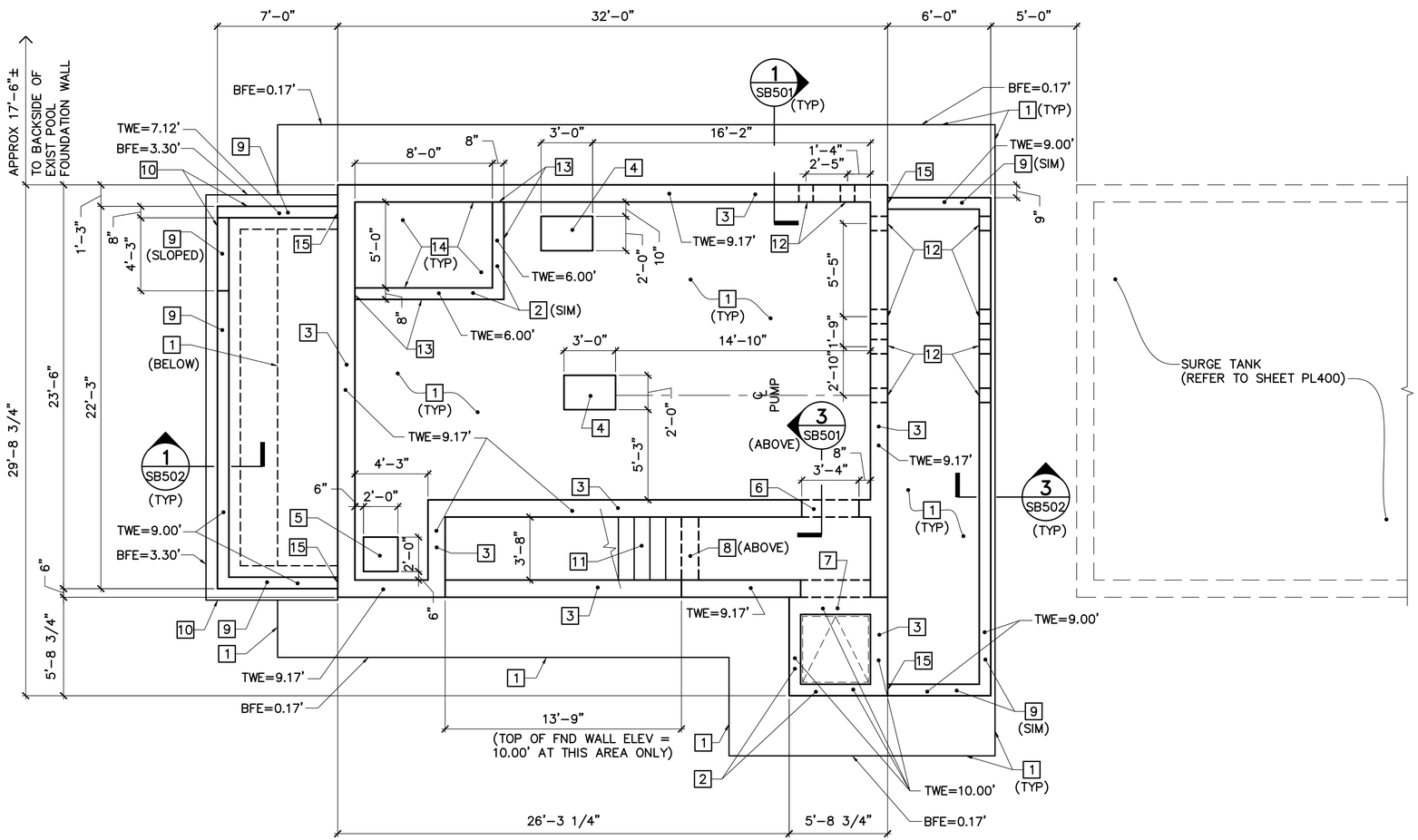
EXISTING PUMPHOUSE FOUNDATION AND ROOF FRAMING REMOVALS PLANS

SCALE: AS NOTED

DATE: 03/01/2023

DWG.: **SD101**

SHEET: 19 OF 72



1 PUMP HOUSE FOUNDATION PLAN
SB101 SCALE: 1/4"=1'-0"

PLAN NORTH

GENERAL NOTES

1. REFER TO SHEET SB102 FOR STRUCTURAL ELEVATED SLAB INFORMATION.
2. PROVIDE RIGID INSULATION AROUND PERIMETER OF BASEMENT, STAIRWELL, AND HATCH ACCESS FOUNDATION WALLS.
3. REFER TO SHEET C-503 FOR FOUNDATION PREPARATION DETAILS.
4. PROVIDE STEEL POWER TROWEL SLAB FINISH ON TOP SURFACE OF REINFORCED CONCRETE MAT FOOTING.
5. COORDINATE EXACT PUMP HOUSEKEEPING PAD LOCATION WITH THE AQUATIC DRAWING PIPING LAYOUT REQUIREMENTS.
6. THE WATERPROOF MEMBRANE MUST BE CONTINUOUS UNDER THE ENTIRE MAT FOOTING AND CONTIGUOUS WITH THE FOUNDATION WALLS AROUND THE BASEMENT.

KEYNOTES (THIS SHEET ONLY)

1. 1'-0" THICK REINFORCED CONCRETE MAT FOOTING. REFER TO DETAIL 1/SB501 AND DRAWING NOTE 4.
2. 8" REINFORCED CONCRETE FOUNDATION WALL. REFER TO DETAIL 6/SB501.
3. 1'-0" REINFORCED CONCRETE FOUNDATION WALL. REFER TO DETAILS 1/SB501 AND 2/SB501.
4. REINFORCED CONCRETE PUMP PAD. REFER TO DETAIL 2/PL401 AND DRAWING NOTE 5.
5. 2'-0"x2'-0"x2'-0" SUMP PIT. REFER TO DETAIL 4/SB501.
6. OPENING IN FOUNDATION WALL BELOW. REFER TO DETAIL 3/SB501.
7. 1'-0"x1'-4" REINFORCED CONCRETE BEAM. REFER TO DETAIL 6/SB501.
8. 12" WIDE REINFORCED CONCRETE BEAM. REFER TO DETAIL 3/SB501 (SIMILAR).
9. 8" REINFORCED CONCRETE FOUNDATION WALL. REFER TO DETAIL 1/SB502.
10. 1'-0"x2'-0" CONTINUOUS REINFORCED CONCRETE FOOTING. REFER TO DETAIL 1/SB502.
11. GALVANIZED STEEL BASEMENT STAIRS. REFER TO DETAIL 8/SB501.
12. PIPE SLEEVE WITH LINK SEAL. REFER TO SCHEDULE ON SHEET PL600 AND DETAIL 3/PL403. COORDINATE SLEEVE SIZE AND ELEVATION WITH PIPE LOCATIONS SHOWN ON DETAILS 2/PL600 AND 3/PL600.
13. PROVIDE WATERSTOP ALONG HORIZONTAL AND VERTICAL EDGES OF CONCRETE TANK WALLS ABUTTING MAT FOUNDATION AND BASEMENT FOUNDATION WALLS.
14. APPLY SHEET WATERPROOFING TO INTERIOR TANK VERTICAL AND HORIZONTAL SURFACES.
15. DRILL AND EPOXY GROUT #5 DOWELS, 2'-0" LONG, 4" INTO BASEMENT FOUNDATION WALL. SPACE DOWELS 1'-4" ON-CENTER.

GRAPHIC SCALE

1/4"=1'-0" (4' 2' 0 4' 8')

CHECK GRAPHIC SCALE BEFORE USING

NO.	DATE	DESCRIPTION	BY
		REVISIONS	

15 Feb, 2023 - 9:31am
Z:\21904.14\21904.14-SB101.dwg

OAK POINT ASSOCIATES
ARCHITECTURE ■ ENGINEERING ■ PLANNING
85 Middle Street, Portsmouth, NH 03801 (T) 603.431.4846 (F) 603.431.1870
www.oakpoint.com

DAVID N. MARTIN No. 9131 - STATE OF NEW HAMPSHIRE - PROFESSIONAL ENGINEER

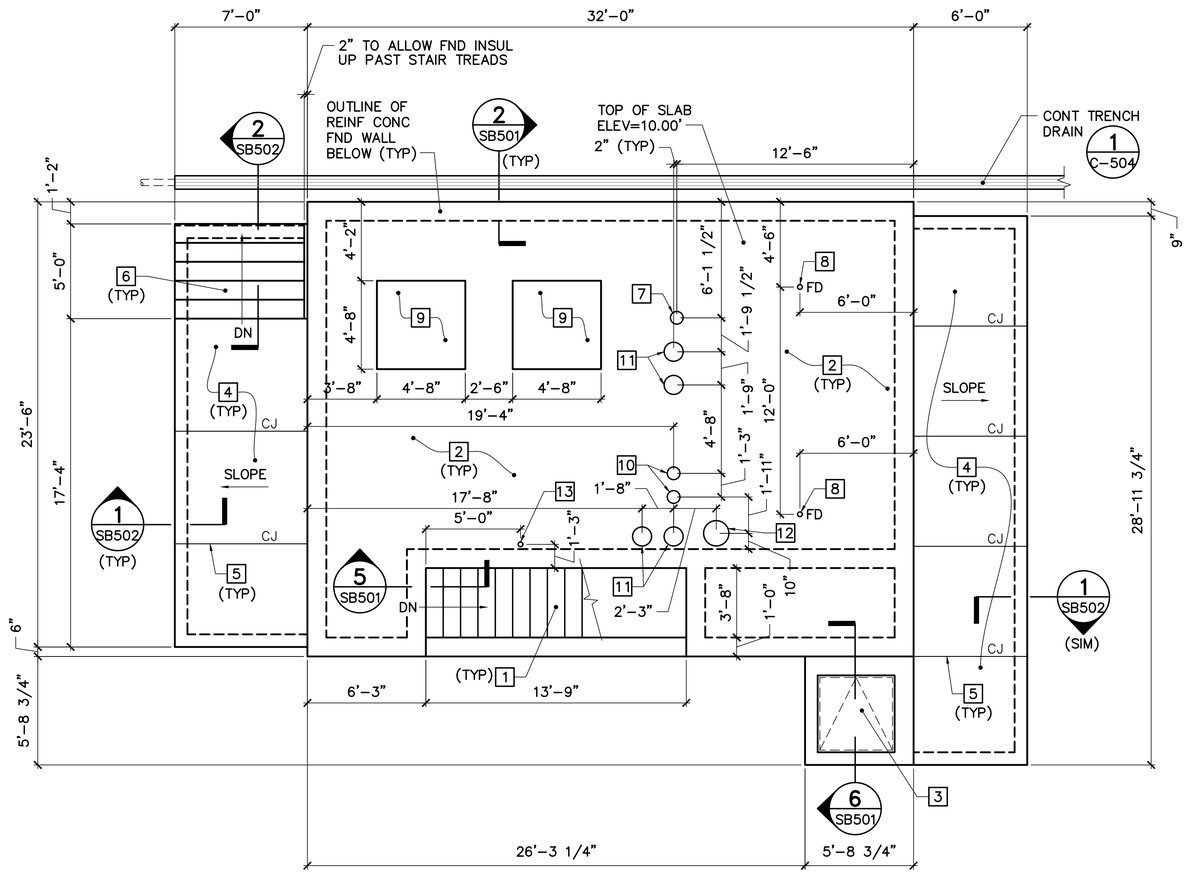
DESIGNED BY: DNM
DRAWN BY: MJC
CHECKED BY: DNM
PROJECT: 21904.14

CITY OF PORTSMOUTH
1 Junkins Avenue
Portsmouth, NH 03801

PEIRCE ISLAND PUMP HOUSE AND POOL RENOVATION
Peirce Island Road
Portsmouth, NH 03801

PUMP HOUSE FOUNDATION PLAN

SCALE: AS NOTED
DATE: 03/01/2023
DWG.: SB101
SHEET: 20 OF 72



1 SB102 PUMP HOUSE SLAB PLAN
SCALE: 1/4"=1'-0"

PLAN NORTH

GENERAL NOTES

1. REFER TO SHEET SB101 FOR MAT FOOTING AND FOUNDATION WALL INFORMATION.
2. VERIFY VERTICAL REINFORCING DOWEL LAYOUT MATCHES CMU CELL LAYOUT PRIOR TO PLACING SLAB. REFER TO "GENERAL NOTE" ON SHEET SB501.
3. RAILINGS ARE NOT SHOWN FOR CLARITY. REFER TO SHEET AE101 FOR RAILING LOCATIONS AND REQUIREMENTS.
4. REFER TO DETAIL 7/SB501 FOR ADDITIONAL REINFORCING REQUIREMENTS AT SLAB PENETRATIONS LARGER THAN 4" DIAMETER.
5. REFER TO SHEET CU101 FOR CONTINUOUS TRENCH DRAIN LOCATION AND LAYOUT.

KEYNOTES (THIS SHEET ONLY)

[1] GALVANIZED STEEL BASEMENT STAIRS. REFER TO DETAIL 5/SB501.

[2] 10" REINFORCED CONCRETE STRUCTURAL SLAB. REFER TO DETAIL 2/SB501. TOP OF SLAB ELEVATION = 10.00'.

[3] ACCESS HATCH COVER. REFER TO DETAIL 6/SB501.

[4] 6" REINFORCED CONCRETE SLAB-ON-GRADE WITH BROOM FINISH. TOP OF SLAB ELEVATION = 10.00'.

[5] SAWCUT CONTROL JOINT (1-1/2" DEEP), EQUALLY SPACED.

[6] REINFORCED CONCRETE STAIRS. REFER TO DETAIL 2/SB502.

[7] 8" DIAMETER HOLE IN SLAB FOR INDIRECT WASTE LINE WITH 12" FUNNEL (DETAIL 1/P-001). ADJUST SLAB REINFORCING AROUND OPENING.

[8] FLOOR DRAIN BODY CAST INTO SLAB.

[9] 4" HIGH CONCRETE HOUSEKEEPING PAD. REFER TO DETAIL 3/PL406. COORDINATE EXACT SIZE WITH EQUIPMENT MANUFACTURER'S REQUIREMENTS.

[10] 8" DIAMETER SLEEVE CAST IN SLAB FOR POOL PIPING. FILL ANGULAR SPACE BETWEEN SLEEVE AND POOL PIPING WITH NON-SHRINK GROUT AFTER PIPE INSTALLATION IS APPROVED.

[11] 12" DIAMETER SLEEVE CAST IN SLAB FOR POOL PIPING. FILL ANGULAR SPACE BETWEEN SLEEVE AND POOL PIPING WITH NON-SHRINK GROUT AFTER PIPE INSTALLATION IS APPROVED.

[12] 16" DIAMETER HOLE IN SLAB FOR EXHAUST FAN DUCT. ADJUST SLAB REINFORCING AROUND OPENING.

[13] 3" DIAMETER HOLE IN SLAB FOR COLD WATER LINE.

GRAPHIC SCALE
1/4"=1'-0"
4' 2' 0 4' 8'
CHECK GRAPHIC SCALE BEFORE USING

NO.	DATE	DESCRIPTION	BY

REVISIONS

15 Feb, 2023 - 9:31am
Z:\21904.14\21904.14-SB102.dwg

OAK POINT ASSOCIATES
ARCHITECTURE ■ ENGINEERING ■ PLANNING
85 Middle Street, Portsmouth, NH 03801 (T) 603.431.4840 (F) 603.431.1870
www.oakpoint.com

STATE OF NEW HAMPSHIRE - DAVID N. MARTIN No. 9134 - PROFESSIONAL ENGINEER

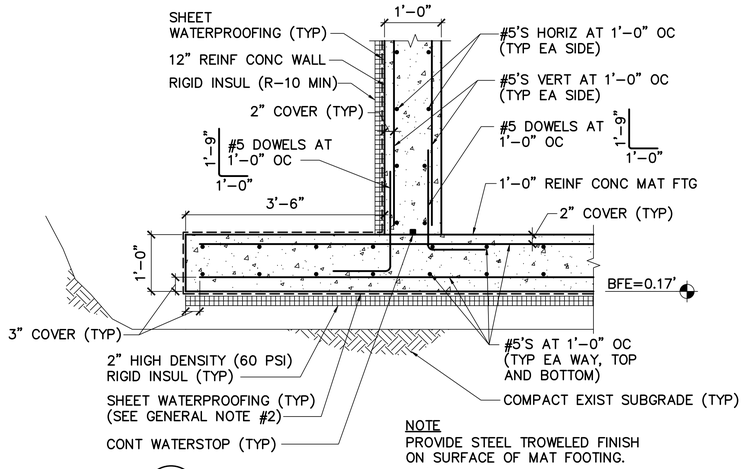
DESIGNED BY: DNM
DRAWN BY: MJC
CHECKED BY: DNM
PROJECT: 21904.14

CITY OF PORTSMOUTH
1 Junkins Avenue
Portsmouth, NH 03801

PEIRCE ISLAND PUMP HOUSE AND POOL RENOVATION
Peirce Island Road
Portsmouth, NH 03801

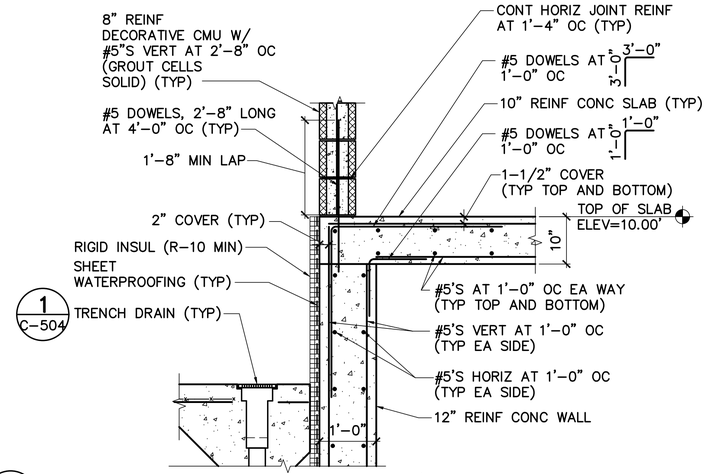
PUMP HOUSE SLAB PLAN

SCALE: AS NOTED
DATE: 03/01/2023
DWG.: SB102
SHEET: 21 OF 72

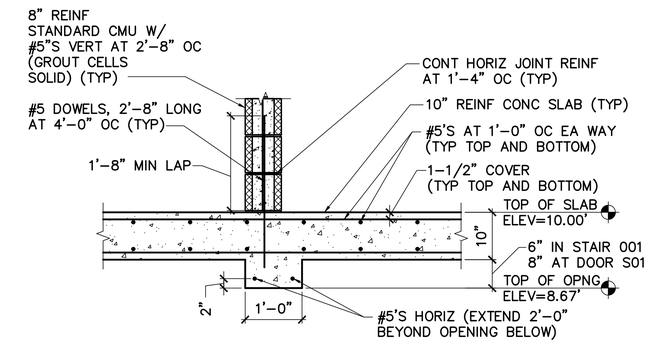


NOTE
PROVIDE STEEL TROWELED FINISH ON SURFACE OF MAT FOOTING.

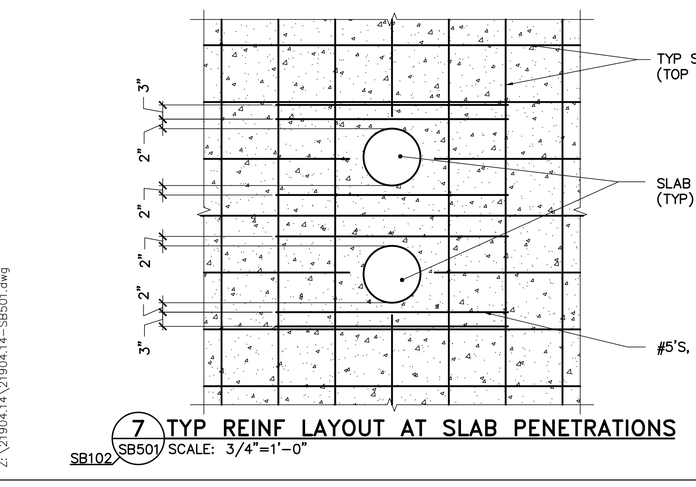
1 REINF CONC WALL/MAT FOOTING DETAIL
SB101, SB501, SB502 — SCALE: 3/4"=1'-0"



2 REINF CONC STRUCTURAL SLAB/REINF CONC WALL DETAIL
SB101, SB102, SB501 — SCALE: 3/4"=1'-0"

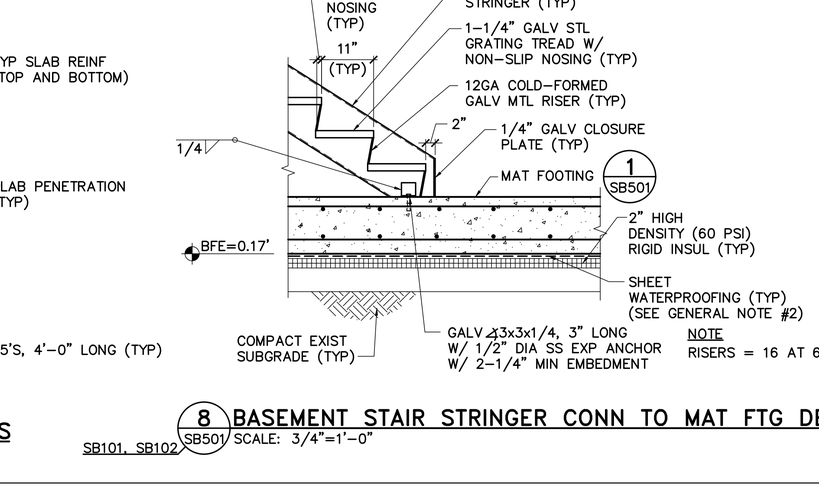


3 TYP WALL OPENING HEAD DETAIL
SB101 — SB501 — SCALE: 3/4"=1'-0"



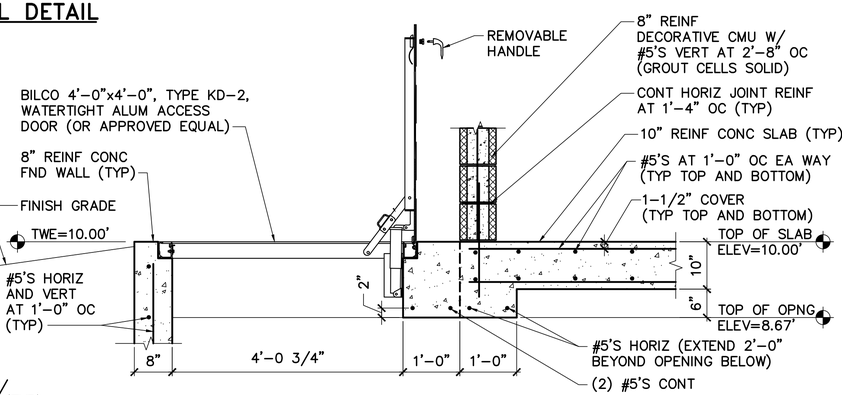
NOTE
PROVIDE STEEL TROWELED FINISH ON SURFACE OF MAT FOOTING.

4 TYP SUMP PIT DETAIL
SB101 — SB501 — SCALE: 3/4"=1'-0"



NOTE
RISERS = 16 AT 6-5/8"

5 BASEMENT STAIR STRINGER CONN DETAIL
SB101, SB102 — SB501 — SCALE: 3/4"=1'-0"



6 EXTERIOR ACCESS DOOR DETAIL
SB101, SB102 — SB501 — SCALE: 3/4"=1'-0"
AE220, AE401

7 TYP REINF LAYOUT AT SLAB PENETRATIONS
SB102 — SB501 — SCALE: 3/4"=1'-0"

NOTE
RISERS = 16 AT 6-5/8"

8 BASEMENT STAIR STRINGER CONN TO MAT FTG DETAIL
SB101, SB102 — SB501 — SCALE: 3/4"=1'-0"

GENERAL NOTES

1. AT CONTRACTOR'S OPTION, THE VERTICAL REINFORCING DOWELS TYING THE CMU WALL TO THE SUPPORTED SLAB/FOUNDATION WALL MAY BE DRILLED AND EPOXY GROUTED IN PLACE AFTER SLAB PLACEMENT USING A MINIMUM 1'-0" EMBEDMENT DEPTH.
2. SHEET WATERPROOFING BENEATH MAT FOOTING: BASIS-OF-DESIGN PRODUCT IS POLYGUARD UNDERSEAL UNDERSLAB MEMBRANE OR APPROVED EQUAL.

GRAPHIC SCALE
3/4"=1'-0"
1' 6" 0 1' 2' 3'
CHECK GRAPHIC SCALE BEFORE USING

NO.	DATE	DESCRIPTION	BY

REVISIONS

OAK POINT ASSOCIATES
ARCHITECTURE ■ ENGINEERING ■ PLANNING
85 Middle Street, Portsmouth, NH 03801 (T) 603.431.4849 (F) 603.431.1870
www.oakpoint.com

DAVID N. MARTIN No. 9134 — STATE OF NEW HAMPSHIRE — PROFESSIONAL ENGINEER

DESIGNED BY: DNM
DRAWN BY: MJC
CHECKED BY: DNM
PROJECT: 21904.14

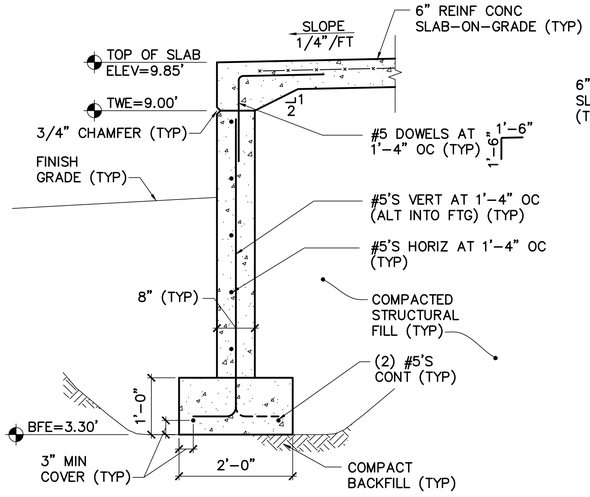
CITY OF PORTSMOUTH
1 Junkins Avenue
Portsmouth, NH 03801

PEIRCE ISLAND PUMP HOUSE AND POOL RENOVATION
Peirce Island Road
Portsmouth, NH 03801

FOUNDATION DETAILS 1

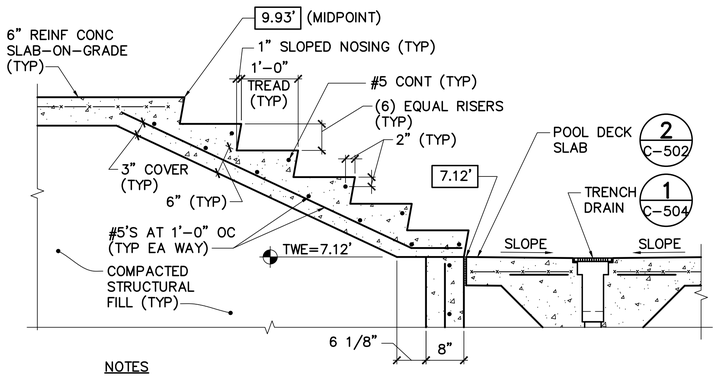
SCALE: AS NOTED
DATE: 03/01/2023
DWG.: SB501
SHEET: 22 OF 72

15 Feb, 2023 - 9:31am
Z:\21904.14\21904.14-SB501.dwg



1 TYP REINF CONC STOOP WALL DETAIL

SB101, SB102, SB502 — SB502 — SCALE: 3/4"=1'-0"

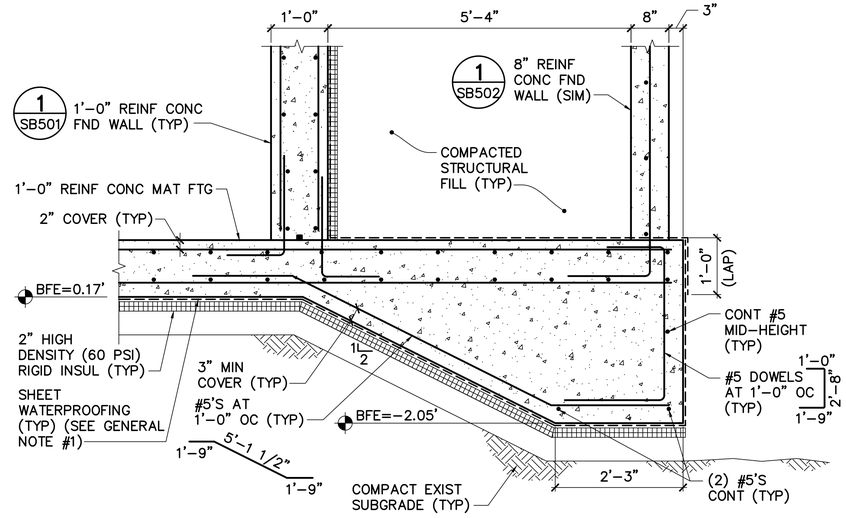


NOTES

1. PROVIDE LIGHT BROOM FINISH ON EACH STAIR TREAD.
2. PROVIDE SMOOTH RUBBED FINISH ON EACH STAIR RISER.
3. RAILINGS NOT SHOWN FOR CLARITY.

2 REINF CONC STAIRS DETAIL

SB102 — SB502 — SCALE: 3/4"=1'-0"



3 SOUTH EDGE MAT FOOTING EDGE DETAIL

SB101, SB501 — SB502 — SCALE: 3/4"=1'-0"

GENERAL NOTE

1. SHEET WATERPROOFING BENEATH MAT FOOTING: BASIS-OF-DESIGN PRODUCT IS POLYGUARD UNDERSEAL UNDERSLAB MEMBRANE OR APPROVED EQUAL.

GRAPHIC SCALE

3/4"=1'-0" — 1' 6" 0 1' 2' 3'

CHECK GRAPHIC SCALE BEFORE USING

NO.	DATE	DESCRIPTION	BY
		REVISIONS	

15 Feb, 2023 - 9:31am
Z:\21904.14\21904.14-SB502.dwg

OAK POINT ASSOCIATES
ARCHITECTURE ■ ENGINEERING ■ PLANNING
85 Middle Street, Portsmouth, NH 03801 (T) 603.431.4849 (F) 603.431.1870
www.oakpoint.com

STATE OF NEW HAMPSHIRE - DAVID N. MARTIN No. 9134 - PROFESSIONAL ENGINEER

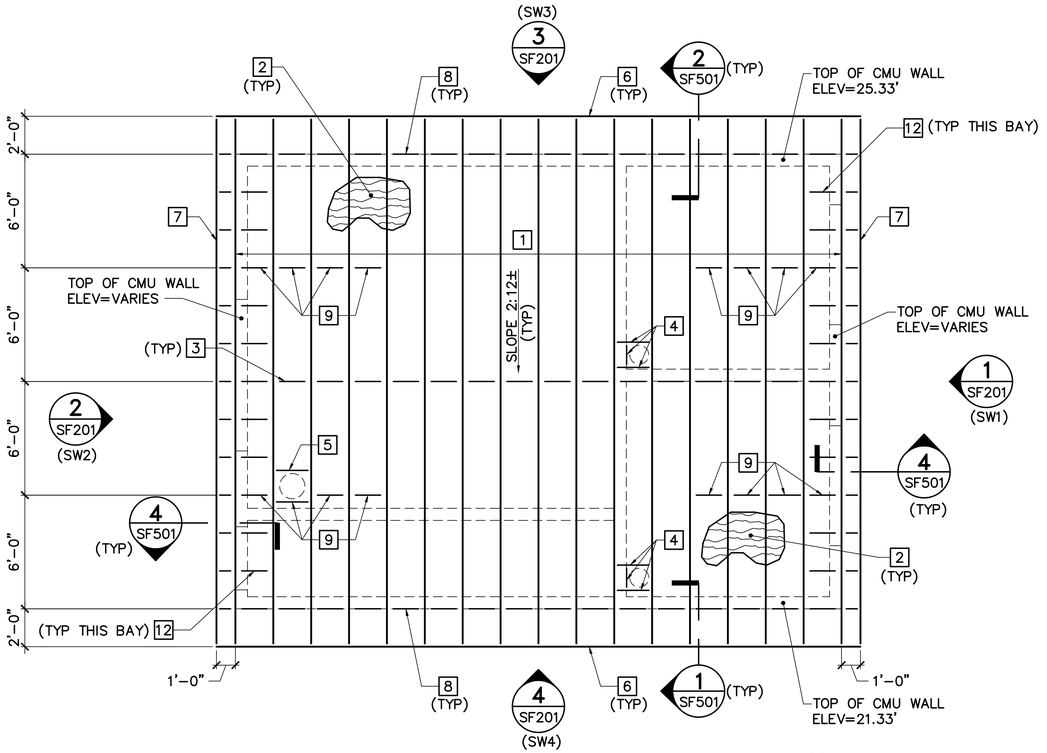
DESIGNED BY: DNM
DRAWN BY: MJC
CHECKED BY: DNM
PROJECT: 21904.14

CITY OF PORTSMOUTH
1 Junkins Avenue
Portsmouth, NH 03801

PEIRCE ISLAND PUMP HOUSE AND POOL RENOVATION
Peirce Island Road
Portsmouth, NH 03801

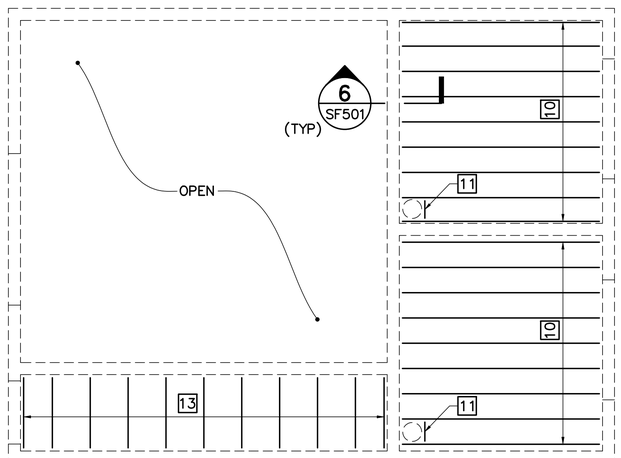
FOUNDATION DETAILS 2

SCALE: AS NOTED
DATE: 03/01/2023
DWG.: SB502
SHEET: 23 OF 72



1 SF101 PUMP HOUSE ROOF FRAMING PLAN
SCALE: 1/4"=1'-0"

PLAN NORTH



2 SF101 PUMP HOUSE CEILING FRAMING PLAN
SCALE: 1/4"=1'-0"

PLAN NORTH

GENERAL NOTES

1. ROOF SHEATHING IS DESIGNED TO ACT AS A DIAPHRAGM. FASTEN ROOF SHEATHING AS INDICATED ON SHEET S-001.
2. DO NOT PROVIDE WOOD PLATE TO TOP OF INTERIOR CMU WALLS. JOISTS MUST NOT BEAR ON INTERIOR CMU WALLS.

KEYNOTES (THIS SHEET ONLY)

1. 1-3/4"x11-7/8" LVL SLOPED JOISTS (WITH TAPERED ENDS) AT 2'-0" ON-CENTER.
2. 19/32" APA RATED PLYWOOD ROOF SHEATHING.
3. 1-3/4"x11-7/8" LVL BLOCKING AT MID SPAN OF JOISTS. FASTEN ROOF SHEATHING TO BLOCKING WITH 8d NAILS SPACED 6" ON-CENTER.
4. 2x8 BLOCKING AT JOISTS TO ACCOMMODATE A 12-INCH DIAMETER ROOF EXHAUST DUCT. COORDINATE EXACT LOCATION WITH MECHANICAL DRAWINGS.
5. 2x8 BLOCKING AT JOISTS TO ACCOMMODATE A 16-INCH DIAMETER ROOF EXHAUST DUCT. COORDINATE EXACT LOCATION WITH MECHANICAL DRAWINGS.
6. CONTINUOUS 2x10 RIM JOIST.
7. 1-3/4"x11-7/8" LVL SLOPED JOIST (WITH TAPERED ENDS) AT OVERHANG.
8. 1-3/4"x11-7/8" LVL BLOCKING AT OUTSIDE FACE OF CMU WALL BELOW. SEE DETAILS 1/SF501 AND 3/SF501.
9. 1-3/4"x11-7/8" LVL BLOCKING AT QUARTER POINTS OF JOISTS. FASTEN ROOF SHEATHING TO BLOCKING WITH 8d NAILS SPACED 6" ON-CENTER.
10. 2x6 CEILING JOISTS SPACED 1'-4" ON-CENTER. COORDINATE JOIST HEIGHT WITH ARCHITECTURAL DRAWINGS.
11. 2x6 BLOCKING AT JOIST TO ACCOMMODATE A 12-INCH DIAMETER ROOF EXHAUST DUCT. COORDINATE EXACT LOCATION WITH MECHANICAL DRAWINGS.
12. 1-3/4"x11-7/8" LVL BLOCKING AT 2'-0" ON-CENTER.
13. 400 CH 20-34 COLD-FORMED STEEL SHAFT WALL CEILING JOISTS AT 2'-0" ON-CENTER. FASTEN JOISTS TO CMU WALL WITH SIMPSON STRONG-TIE GALVANIZED SSC2.25 CONNECTORS AT EACH END.

GRAPHIC SCALE
1/4"=1'-0"
4' 2' 0 4' 8'
CHECK GRAPHIC SCALE BEFORE USING

NO.	DATE	DESCRIPTION	BY
		REVISIONS	

15 Feb, 2023 - 9:31am
Z:\21904.14\21904.14-SF101.dwg

OAK POINT ASSOCIATES
ARCHITECTURE ■ ENGINEERING ■ PLANNING
85 Middle Street, Portsmouth, NH 03801 (T) 603.431.4846 (F) 603.431.1870
www.oakpoint.com

DAVID N. MARTIN No. 9131 - STATE OF NEW HAMPSHIRE - PROFESSIONAL ENGINEER

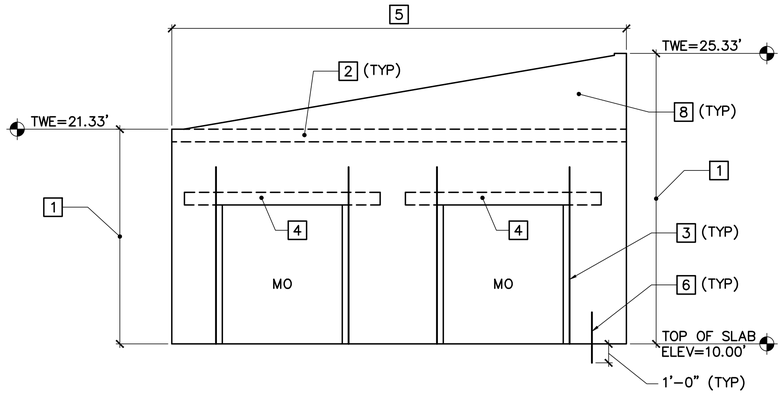
DESIGNED BY: DNM
DRAWN BY: MJC
CHECKED BY: DNM
PROJECT: 21904.14

CITY OF PORTSMOUTH
1 Junkins Avenue
Portsmouth, NH 03801

PEIRCE ISLAND PUMP HOUSE AND POOL RENOVATION
Peirce Island Road
Portsmouth, NH 03801

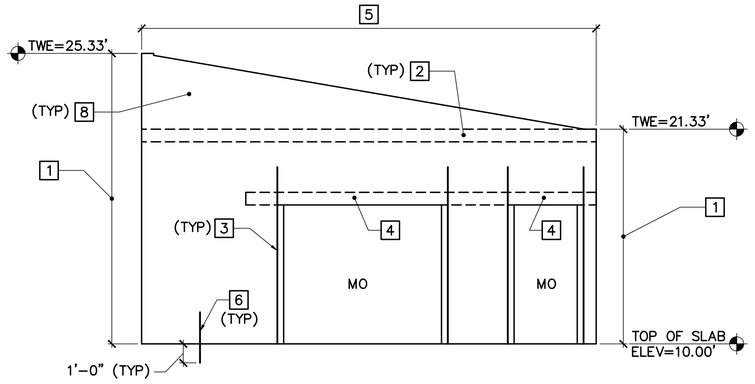
PUMP HOUSE ROOF AND CEILING FRAMING PLANS

SCALE: AS NOTED
DATE: 03/01/2023
DWG.: SF101
SHEET: 24 OF 72



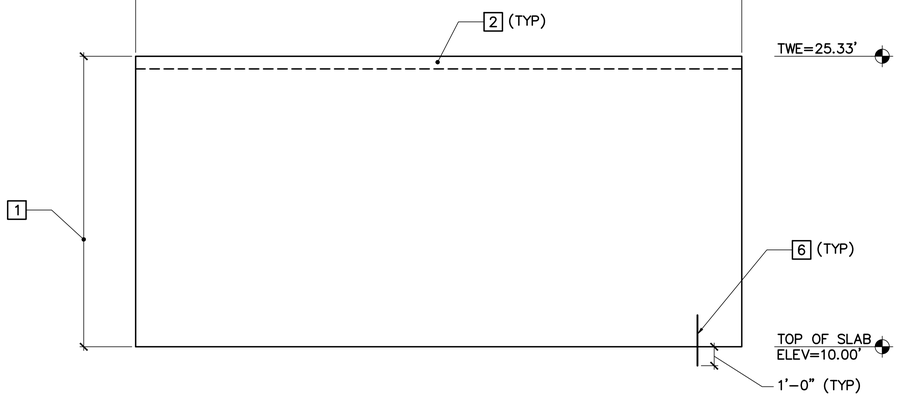
1 SHEAR WALL 1 ELEVATION (SW1)

SF101, SF501 / SF201 SCALE: 1/4"=1'-0"



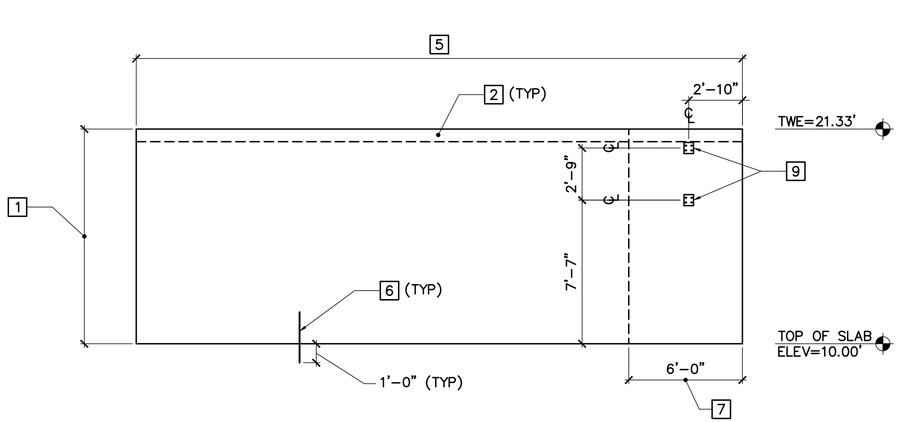
2 SHEAR WALL 2 ELEVATION (SW2)

SF101, SF501 / SF201 SCALE: 1/4"=1'-0"



3 SHEAR WALL 3 ELEVATION (SW3)

SF101, SF501 / SF201 SCALE: 1/4"=1'-0"



4 SHEAR WALL 4 ELEVATION (SW4)

SF101, SF501 / SF201 SCALE: 1/4"=1'-0"

GENERAL NOTES

1. LAP SPLICE #5 = 1'-6".
2. COORDINATE EXACT SIZE AND LOCATION OF MASONRY OPENINGS WITH ARCHITECTURAL DRAWINGS.
3. EXTERIOR MASONRY WALLS ARE DECORATIVE CMU UNITS (A COMBINATION OF SPLIT FACE AND SMOOTH FACE). SEE ARCHITECTURAL DRAWINGS FOR PATTERN.
4. INTERIOR MASONRY WALLS (NOT SHOWN) ARE STANDARD CMU UNITS.

KEYNOTES (THIS SHEET ONLY)

1. CONTINUOUS HORIZONTAL JOINT REINFORCEMENT AT 1'-4" ON-CENTER VERTICALLY.
2. CONTINUOUS 8" CMU BOND BEAM WITH (1) CONTINUOUS #5, GROUTED SOLID.
3. (1) #5 VERTICAL IN JAMB CELL, GROUTED SOLID. EXTEND REINFORCING 2'-0" PAST OPENING.
4. 8" REINFORCED CMU LINTEL WITH (1) #5, GROUTED SOLID. EXTEND REINFORCING 2'-0" PAST OPENING.
5. #5'S VERTICAL AT 2'-8" ON-CENTER. GROUT CELLS WITH REINFORCING SOLID.
6. #5 DOWELS, 2'-8" LONG, SPACED TO MATCH VERTICAL WALL REINFORCING.
7. FULLY GROUT ALL CELLS.
8. FULLY GROUT ALL CELLS ABOVE BOND BEAM.
9. JIB CRANE WALL BRACKET. SEE DETAIL 5/SF501.

GRAPHIC SCALE

1/4"=1'-0" 4' 2' 0 4' 8'

CHECK GRAPHIC SCALE BEFORE USING

NO.	DATE	DESCRIPTION	BY

REVISIONS

15 Feb, 2023 - 9:31am
Z:\21904.14\21904.14-SF201.dwg

OAK POINT ASSOCIATES
ARCHITECTURE ■ ENGINEERING ■ PLANNING
85 Middle Street, Portsmouth, NH 03801 (T) 603.431.4848 (F) 603.431.1870
www.oakpoint.com

STATE OF NEW HAMPSHIRE - DAVID N. MARTIN No. 9134 - PROFESSIONAL ENGINEER

DESIGNED BY: DNM
DRAWN BY: MJC
CHECKED BY: DNM
PROJECT: 21904.14

CITY OF PORTSMOUTH
1 Junkins Avenue
Portsmouth, NH 03801

PEIRCE ISLAND PUMP HOUSE AND POOL RENOVATION
Peirce Island Road
Portsmouth, NH 03801

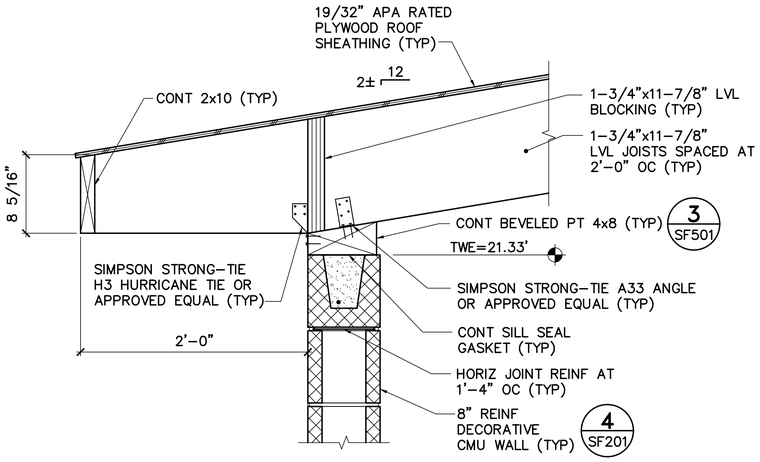
PUMP HOUSE SHEAR WALL ELEVATIONS

SCALE: AS NOTED

DATE: 03/01/2023

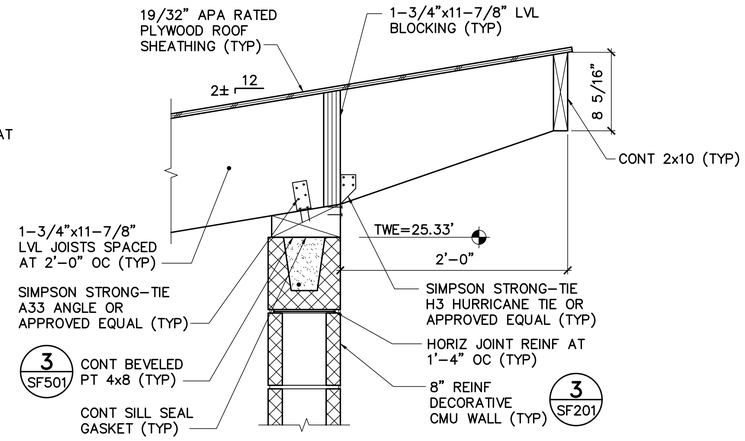
DWG.: SF201

SHEET: 25 OF 72



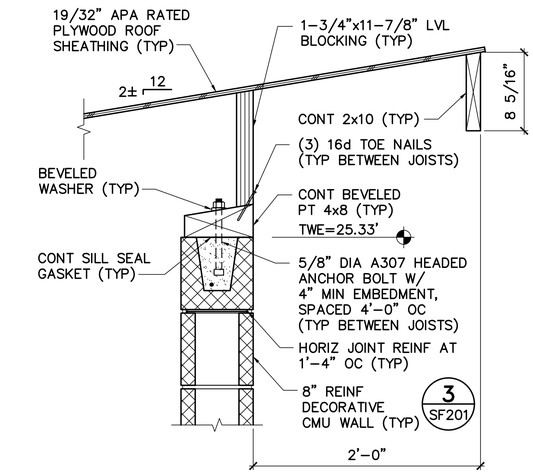
1 SF501 TYP 1-3/4"x11-7/8" LVL JOIST TO 8" REINF CMU WALL CONN DETAIL

SF101 SCALE: 1-1/2"=1'-0"



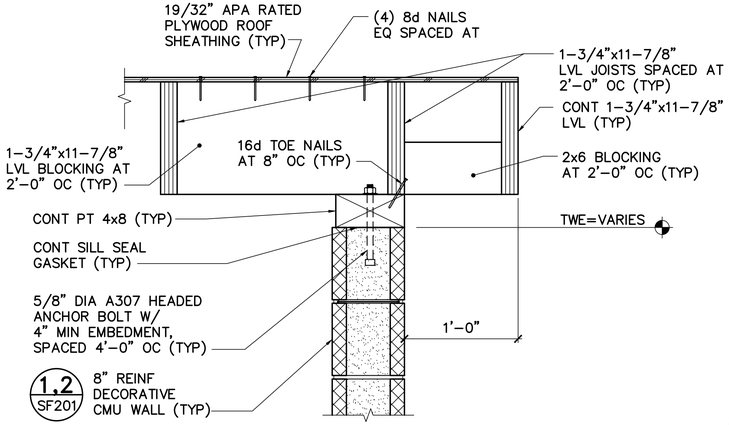
2 SF501 TYP 1-3/4"x11-7/8" LVL JOIST TO 8" REINF CMU WALL CONN DETAIL

SF101 SCALE: 1-1/2"=1'-0"



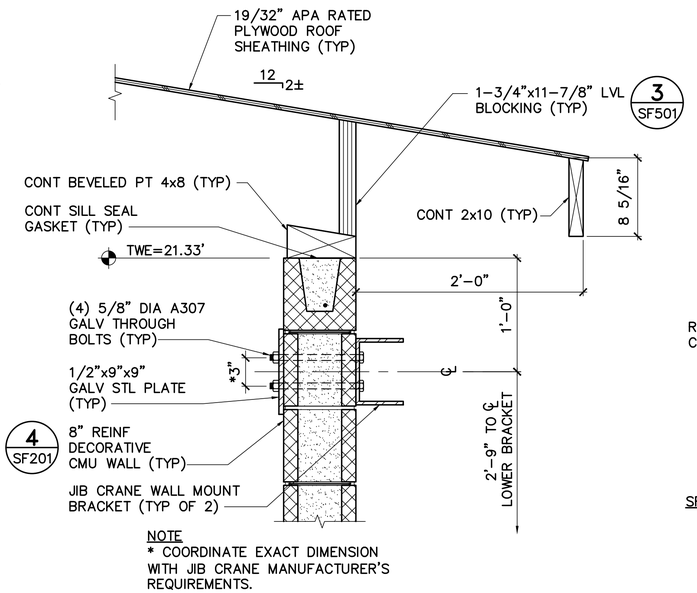
3 SF501 TYP BEVELED PT 4x8 BLOCKING TO 8" REINF CMU WALL CONN DETAIL

SF101, SF501 SCALE: 1-1/2"=1'-0"



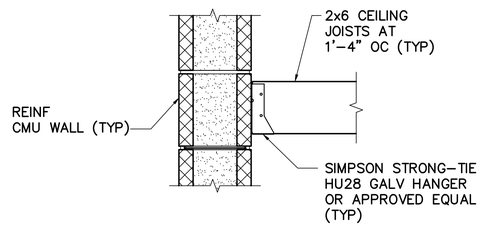
4 SF501 TYP RAKE DETAIL

SF101 SCALE: 1-1/2"=1'-0"



5 SF501 TYP JIB CRANE WALL MOUNT BRACKET CONN DETAIL

SF201 SCALE: 1-1/2"=1'-0"



6 SF501 TYP CEILING JOIST CONN DETAIL

SF101 SCALE: 1-1/2"=1'-0"

GRAPHIC SCALE

1-1/2"=1'-0" 1' 8" 4" 0 1'

CHECK GRAPHIC SCALE BEFORE USING

NO.	DATE	DESCRIPTION	BY

REVISIONS

15 Feb, 2023 - 9:31am
Z:\21904.14\21904.14-SF501.dwg

OAK POINT ASSOCIATES
ARCHITECTURE ■ ENGINEERING ■ PLANNING
85 Middle Street, Portsmouth, NH 03801 (T) 603.431.4846 (F) 603.431.1870
www.oakpoint.com

STATE OF NEW HAMPSHIRE - DAVID N. MARTIN No. 9134 - PROFESSIONAL ENGINEER

DESIGNED BY: DNM
DRAWN BY: MJC
CHECKED BY: DNM
PROJECT: 21904.14

CITY OF PORTSMOUTH
1 Junkins Avenue
Portsmouth, NH 03801

PEIRCE ISLAND PUMP HOUSE AND POOL RENOVATION
Peirce Island Road
Portsmouth, NH 03801

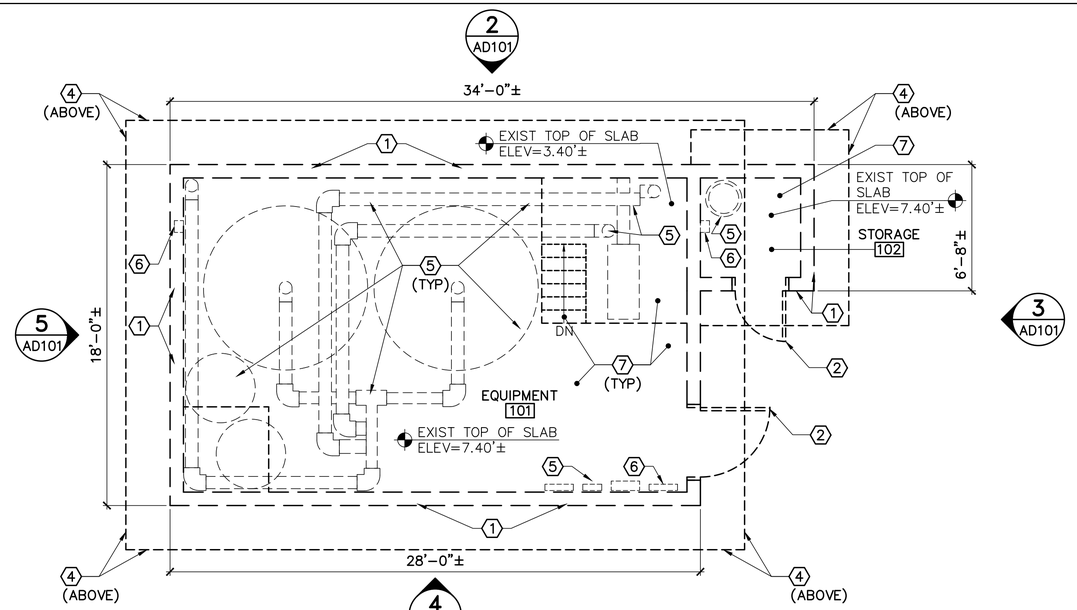
STRUCTURAL DETAILS

SCALE: AS NOTED

DATE: 03/01/2023

DWG.: SF501

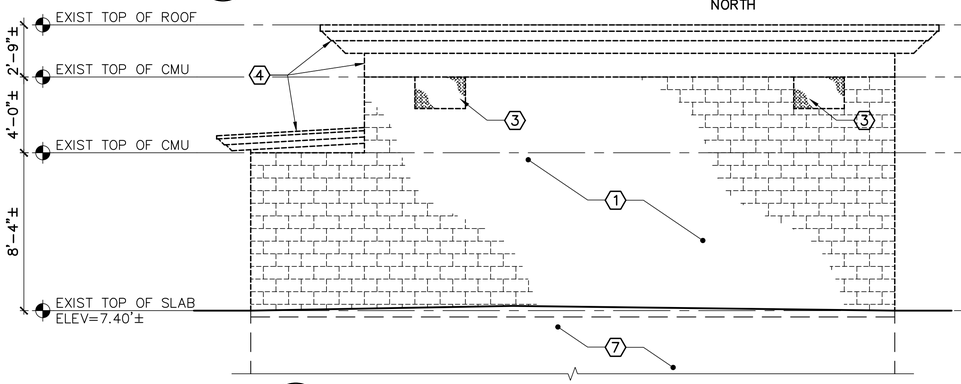
SHEET: 26 OF 72



1 AD101 PUMP HOUSE REMOVALS FLOOR PLAN

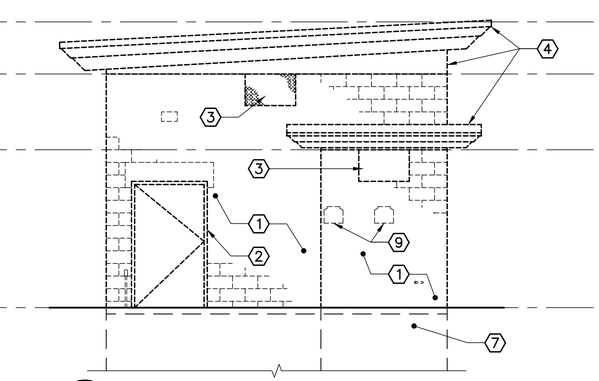
SCALE: 1/4"=1'-0"

PLAN NORTH



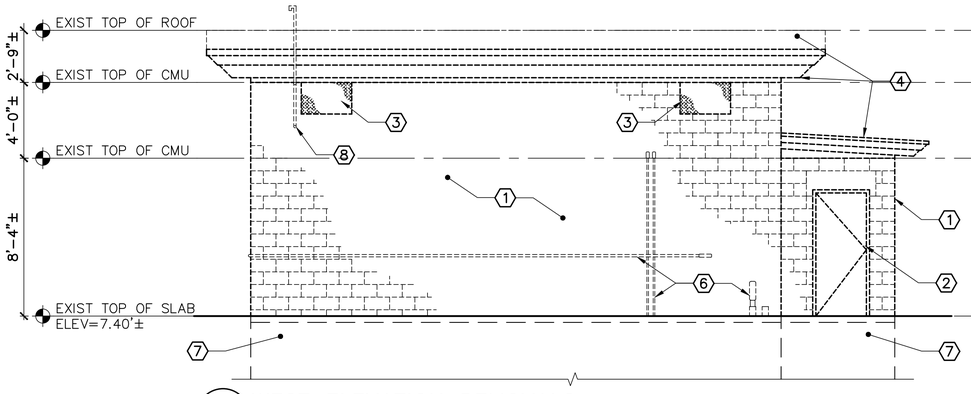
2 AD101 EAST ELEVATION REMOVALS

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



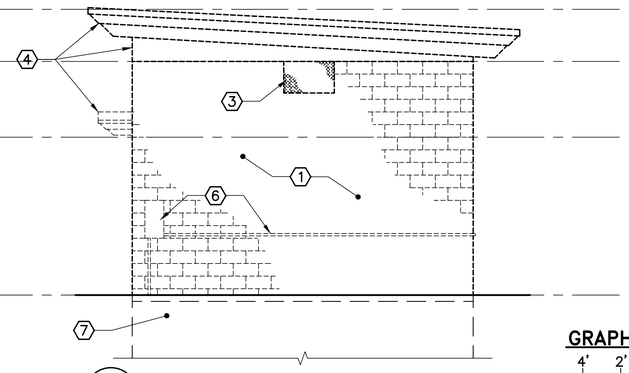
3 AD101 SOUTH ELEVATION REMOVALS

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



4 AD101 WEST ELEVATION REMOVALS

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



5 AD101 NORTH ELEVATION REMOVALS

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

GRAPHIC SCALE

4' 2' 0 4' 8'

1/4"=1'-0"

CHECK GRAPHIC SCALE BEFORE USING

27 Feb, 2023 – 1:17pm
C:\DFILE\21904.14–AD101.dwg

GENERAL REMOVALS NOTES

1. INTENT IS TO REMOVE THE BUILDING IN ITS ENTIRETY. SEE CIVIL, STRUCTURAL, MECHANICAL, AND ELECTRICAL SHEETS FOR ADDITIONAL REMOVALS.
2. EXISTING PAINT IS ASSUMED TO CONTAIN LEAD. HANDLE IN ACCORDANCE WITH LEAD REMEDIATION REQUIREMENTS AND SPECIFICATION SECTION 028313 – LEAD PAINT RELATED WORK.

REMOVALS KEYNOTES (THIS SHEET ONLY)

1. REMOVE 8"± PAINTED REINFORCED CMU WALL.
2. REMOVE PAINTED HOLLOW METAL DOOR, FRAME, AND HARDWARE.
3. REMOVE PAINTED METAL LOUVER.
4. REMOVE MEMBRANE ROOF SYSTEM, WOOD DECKING, 2x WOOD RAFTERS, AND PAINTED WOOD FASCIA. SEE DETAIL 2/SD101 FOR ROOF FRAMING REMOVALS.
5. REMOVE POOL EQUIPMENT AND PIPING.
6. REMOVE ELECTRICAL PANEL AND CONDUITS. SEE ELECTRICAL SHEETS.
7. REMOVE REINFORCED CONCRETE FOUNDATION, SLAB, AND STAIRS. SEE STRUCTURAL REMOVALS SHEETS.
8. REMOVE ABANDONED PVC PIPE.
9. REMOVE WALL MOUNTED HOSE HANGER.

NO.	DATE	DESCRIPTION	BY
		REVISIONS	

OAK POINT ASSOCIATES
ARCHITECTURE ■ ENGINEERING ■ PLANNING
85 Middle Street, Portsmouth, NH 03801 (T) 603.431.4849 (F) 603.431.1870
www.oakpoint.com

LICENSED ARCHITECT
PETER N. MACGOVERN
No. 04674
THE STATE OF NEW HAMPSHIRE

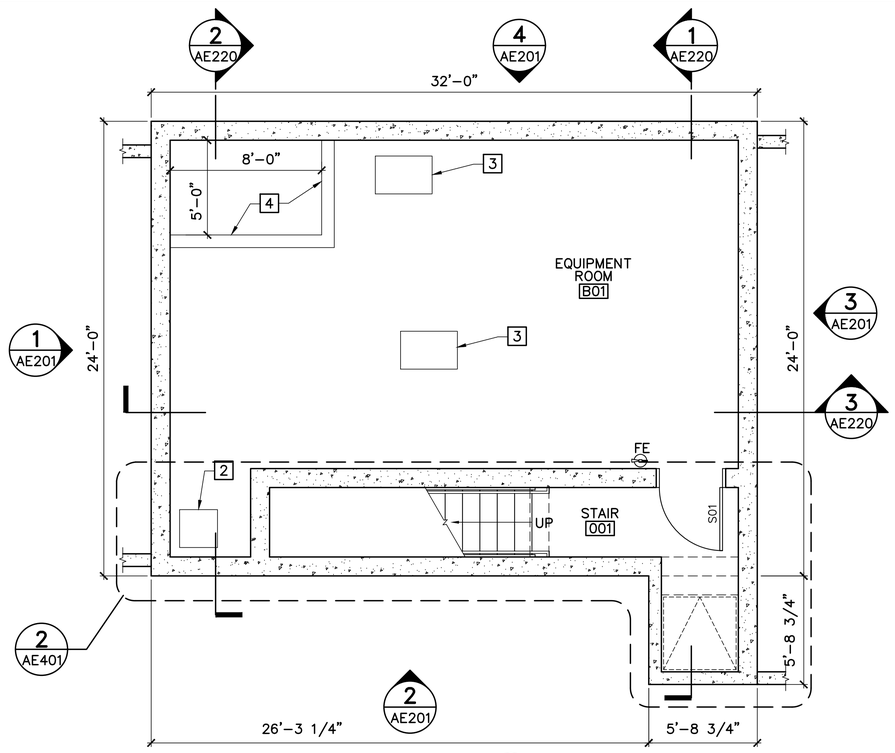
DESIGNED BY: CAM
DRAWN BY: RMT
CHECKED BY: PNM
PROJECT: 21904.14

CITY OF PORTSMOUTH
1 Junkins Avenue
Portsmouth, NH 03801

BID #40 - 23
PEIRCE ISLAND PUMP HOUSE AND POOL RENOVATION
Peirce Island Road
Portsmouth, NH 03801

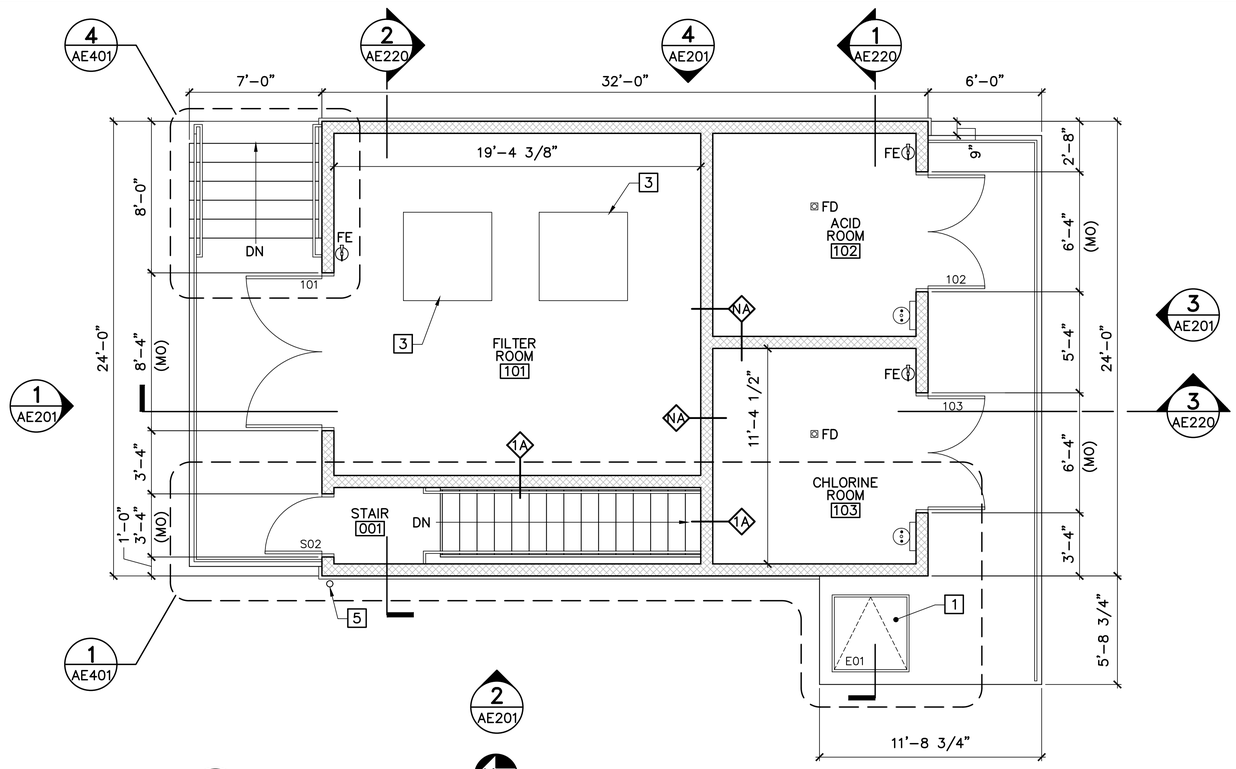
EXISTING PUMP HOUSE REMOVALS PLAN AND ELEVATIONS

SCALE: AS NOTED
DATE: 03/01/2023
DWG.: AD101
SHEET: 27 OF 72



1 BASEMENT FLOOR PLAN
AE101 SCALE: 1/4"=1'-0"

PLAN NORTH



2 FIRST FLOOR PLAN
AE101 SCALE: 1/4"=1'-0"

PLAN NORTH

GENERAL NOTES

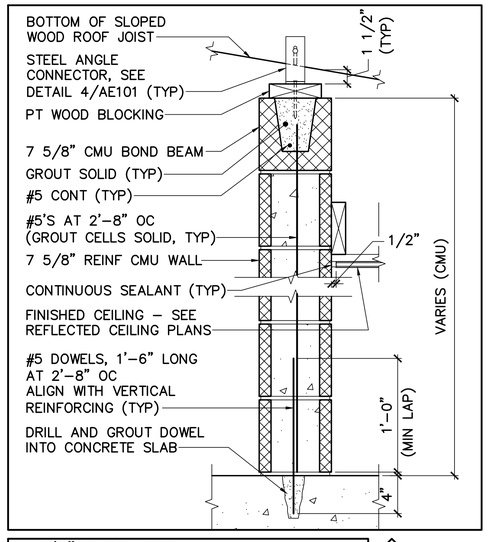
1. SEE SHEET AE601 FOR DOOR AND FINISH SCHEDULES.
2. SEE SHEET AE701 FOR REFLECTED CEILING PLANS.
3. SEE SHEET AE701 FOR SIGNAGE SCHEDULE AND DETAILS.

KEYNOTES (THIS SHEET ONLY)

1. 4'-0" x 4'-0" WATERTIGHT ALUMINUM ACCESS DOOR. COORDINATE LOCATION WITH STRUCTURAL DRAWINGS.
2. SUMP PIT AND PUMP, SEE STRUCTURAL AND PLUMBING DRAWINGS.
3. REINFORCED CONCRETE EQUIPMENT PAD, SEE STRUCTURAL AND AQUATIC DRAWINGS.
4. 4'-10" (HIGH) 8" REINFORCED CONCRETE WALL. SEE STRUCTURAL DRAWINGS.
5. METAL DOWNSPOUT TO ROOF DRAIN RISER. SEE DETAIL 5/C504.

WALL TYPE GENERAL NOTES

1. SEE STRUCTURAL SHEETS FOR EXTERIOR AND FOUNDATION WALLS.
2. SEE SHEET G-101 FOR FIRE-RESISTANT RATED WALL LOCATIONS.
3. FIRESTOP PENETRATIONS THROUGH FIRE-RESISTANT RATED WALL AND FLOOR ASSEMBLIES ON EACH SIDE OF THE WALL AND FLOOR IN ACCORDANCE WITH THE FIRESTOPPING MANUFACTURER'S PRINTED INSTRUCTIONS.
4. SEE REFLECTED CEILING PLANS AND/OR ROOM FINISH SCHEDULE FOR CEILING FINISH HEIGHT.
5. MAINTAIN 1/2" GAP BETWEEN INTERSECTION OF GYPSUM BOARD AND CMU WALL. PROVIDE CONTINUOUS SEALANT AT INTERSECTION PRIOR TO FINISH INSTALLATION. PROVIDE FIRE-RESISTANT RATED SEALANT AT RATED CEILING ASSEMBLIES.
6. SEAL PENETRATIONS THROUGH WALLS.



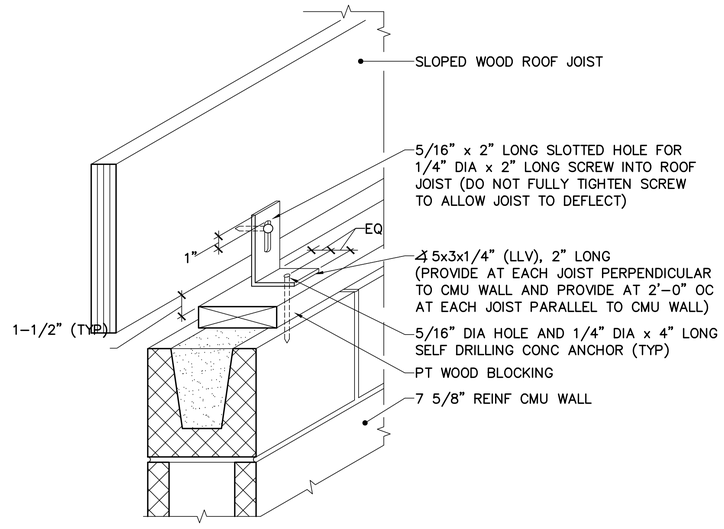
7 5/8" REINF CMU	
WIDTH = 7 5/8"	STC: N/A
NON-FIRE RATED	

NA

7 5/8" REINF CMU	
WIDTH = 7 5/8"	STC: N/A
1 HR FIRE RATED, UL WALL ASSEMBLY #U905	

1A

3 WALL TYPE
AE101 SCALE: 1-1/2"=1'-0"



4 SLOPED JOIST TO CMU INTERIOR WALL
AE101 NOT TO SCALE

GRAPHIC SCALES

1/4"=1'-0" 4' 2' 0 4' 8'

1-1/2"=1'-0" 1' 8" 4" 0 1'

CHECK GRAPHIC SCALES BEFORE USING

NO.	DATE	DESCRIPTION	BY

REVISIONS

OAK POINT ASSOCIATES
ARCHITECTURE ■ ENGINEERING ■ PLANNING
85 Middle Street, Portsmouth, NH 03801 (T) 603.431.4849 (F) 603.431.1870
www.oakpoint.com

LICENSED ARCHITECT
PETER N. MACGOVERN
No. 04974
THE STATE OF NEW HAMPSHIRE

DESIGNED BY: CAM
DRAWN BY: RMB
CHECKED BY: PNM
PROJECT: 21904.14

CITY OF PORTSMOUTH
1 Junkins Avenue
Portsmouth, NH 03801

BID #40 - 23
PEIRCE ISLAND PUMP HOUSE AND POOL RENOVATION
Peirce Island Road
Portsmouth, NH 03801

PUMP HOUSE FLOOR PLANS AND WALL TYPE DETAILS

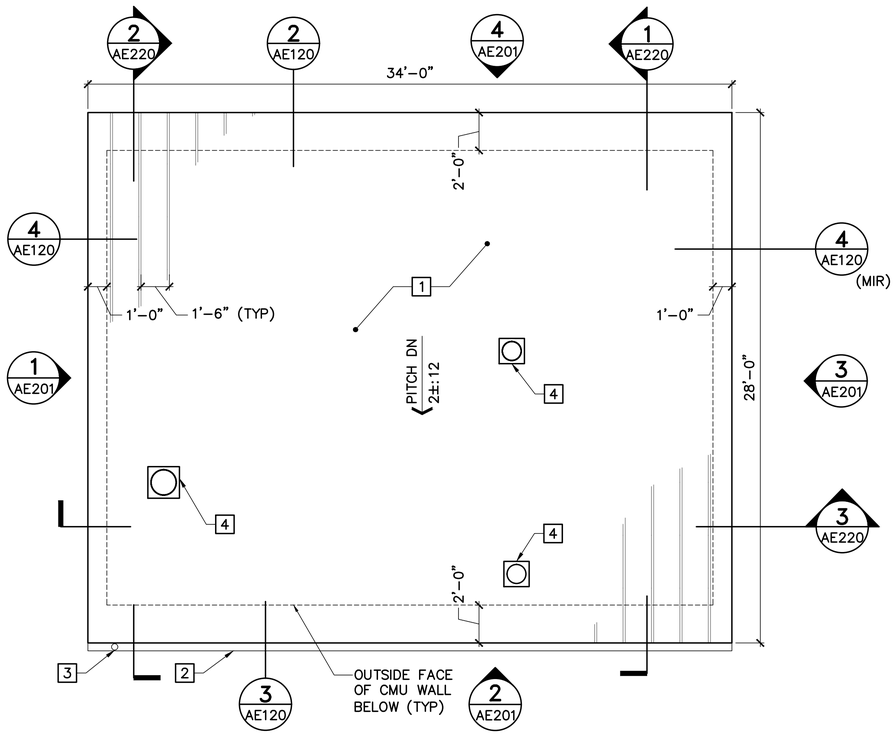
SCALE: AS NOTED

DATE: 03/01/2023

DWG.: AE101

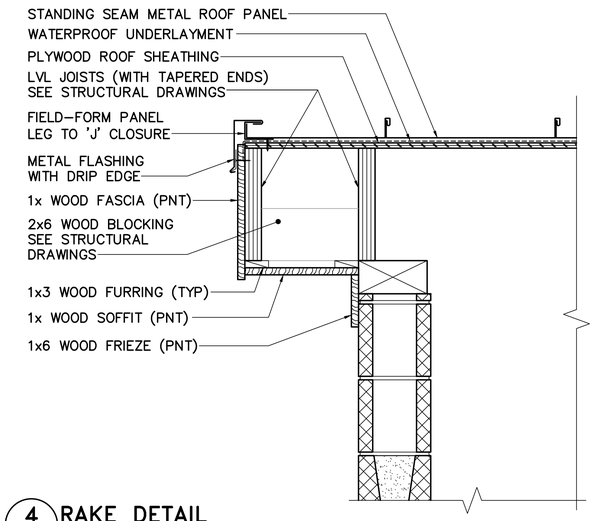
SHEET: 28 OF 72

27 Feb, 2023 - 1:18pm
C:\DFILE\21904.14-AE101.dwg

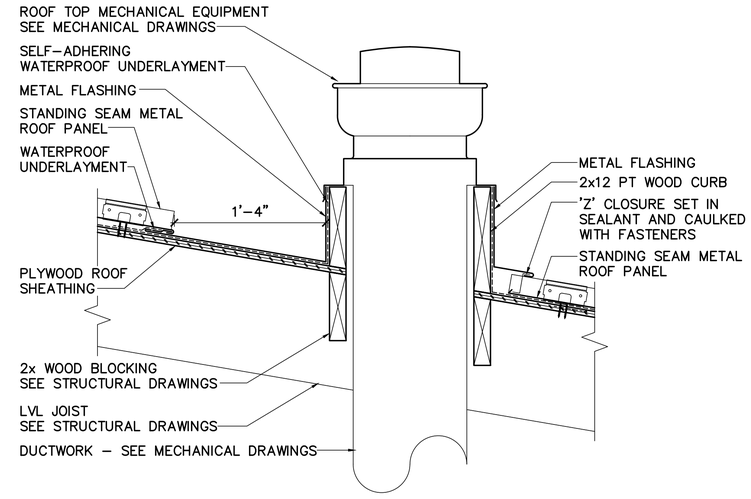


1 AE120 **ROOF PLAN** SCALE: 1/4"=1'-0"

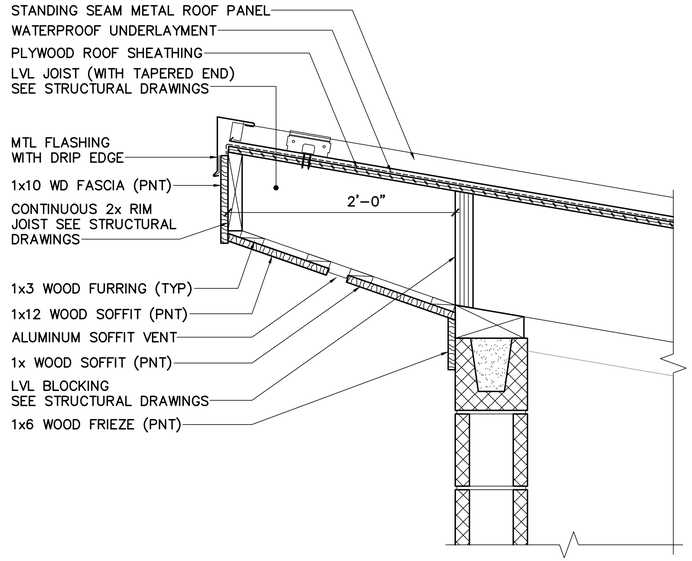
PLAN NORTH



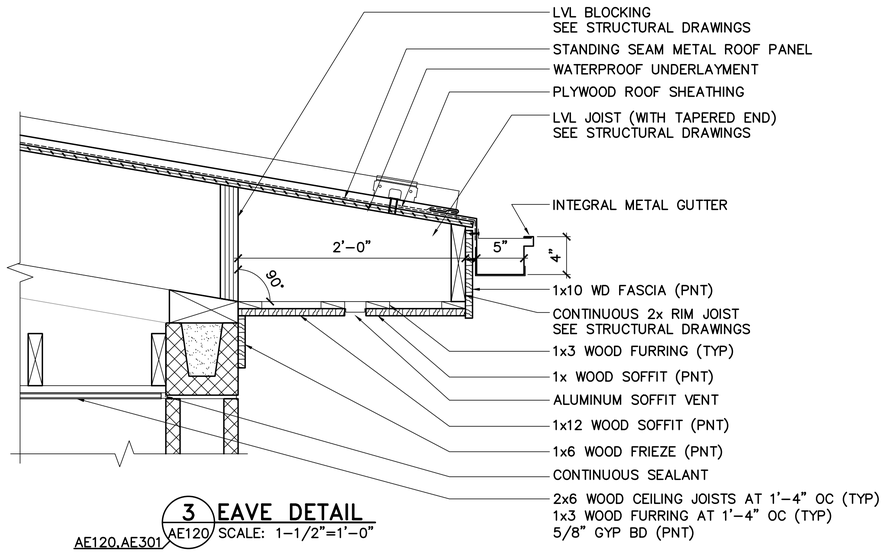
4 AE120,AE301 AE120 **RAKE DETAIL** SCALE: 1-1/2"=1'-0"



5 AE120 **EQUIPMENT CURB DETAIL** SCALE: 1-1/2"=1'-0"



2 AE120,AE301 AE120 **EAVE DETAIL** SCALE: 1-1/2"=1'-0"



3 AE120,AE301 AE120 **EAVE DETAIL** SCALE: 1-1/2"=1'-0"

GENERAL NOTE

1. SEE SHEET AE601 FOR FINISH SCHEDULES.

KEYNOTES (THIS SHEET ONLY)

1. STANDING SEAM METAL ROOF SYSTEM.
2. METAL GUTTER.
3. METAL DOWNSPOUT TO ROOF DRAIN RISER, SEE DETAIL 5/C-504.
4. EXHAUST FAN, SEE DETAIL 5/AE120. COORDINATE LOCATION WITH MECHANICAL DRAWINGS.

GRAPHIC SCALES

1/4"=1'-0" 4' 2' 0 4' 8'

1-1/2"=1'-0" 1' 8" 4" 0 1'

CHECK GRAPHIC SCALES BEFORE USING

NO.	DATE	DESCRIPTION	BY
		REVISIONS	

27 Feb, 2023 - 1:19pm
C:\DFILE\21904.14-AE120.dwg

OAK POINT ASSOCIATES
ARCHITECTURE ■ ENGINEERING ■ PLANNING
85 Middle Street, Portsmouth, NH 03801 (T) 603.431.4849 (F) 603.431.1870
www.oakpoint.com

LICENSED ARCHITECT
PETER N. MACGOVERN
No. 04974
THE STATE OF NEW HAMPSHIRE

DESIGNED BY: CAM
DRAWN BY: RMB
CHECKED BY: PNM
PROJECT: 21904.14

CITY OF PORTSMOUTH
1 Junkins Avenue
Portsmouth, NH 03801

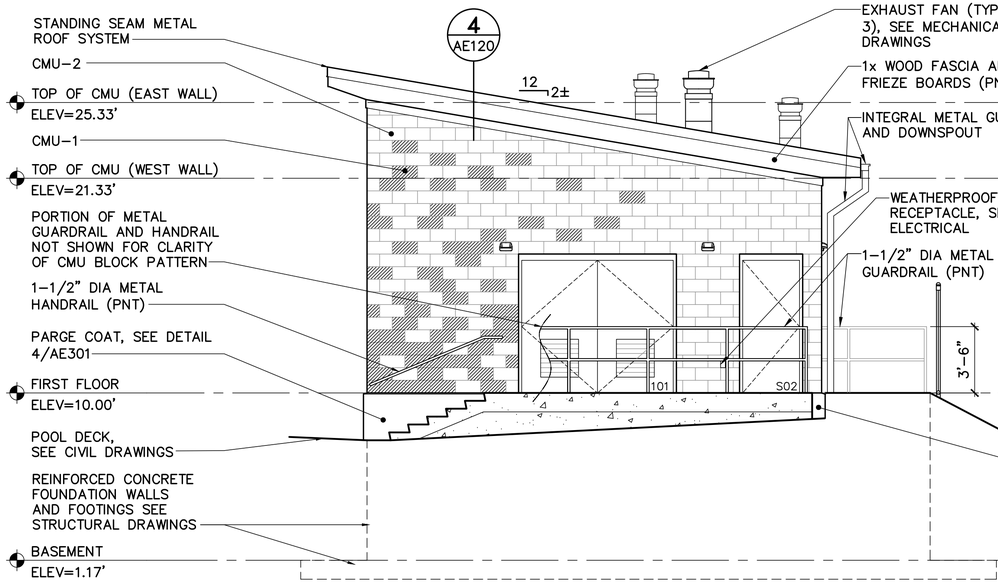
BID #40 - 23
PEIRCE ISLAND PUMP HOUSE AND POOL RENOVATION
Peirce Island Road
Portsmouth, NH 03801

PUMP HOUSE ROOF PLAN AND DETAILS

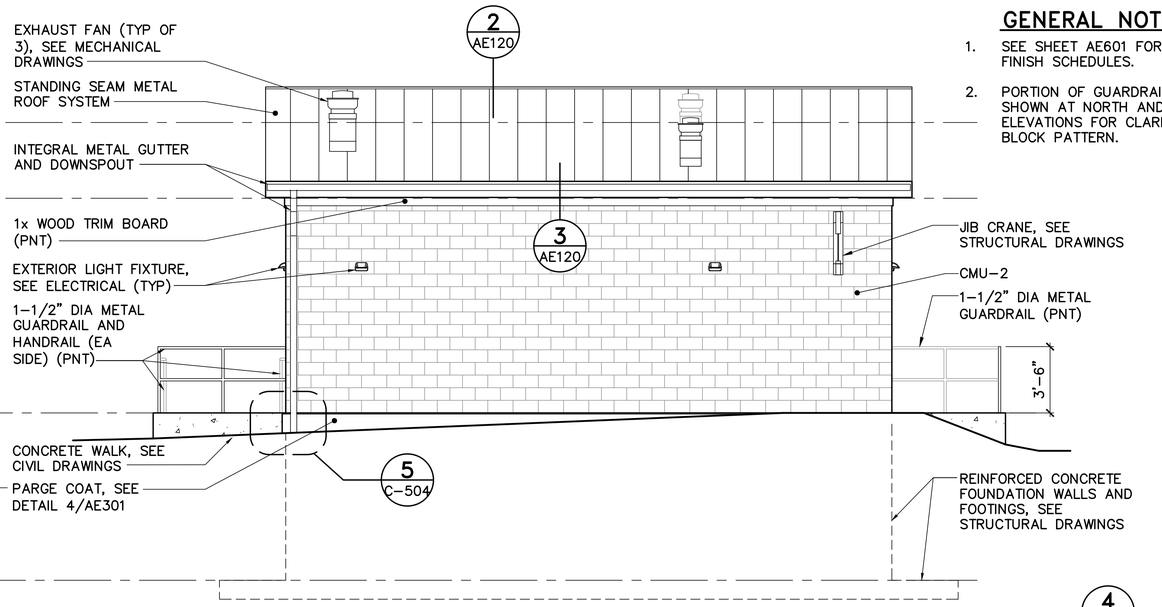
SCALE: AS NOTED
DATE: 03/01/2023
DWG.: **AE120**
SHEET: **29** OF **72**

GENERAL NOTES

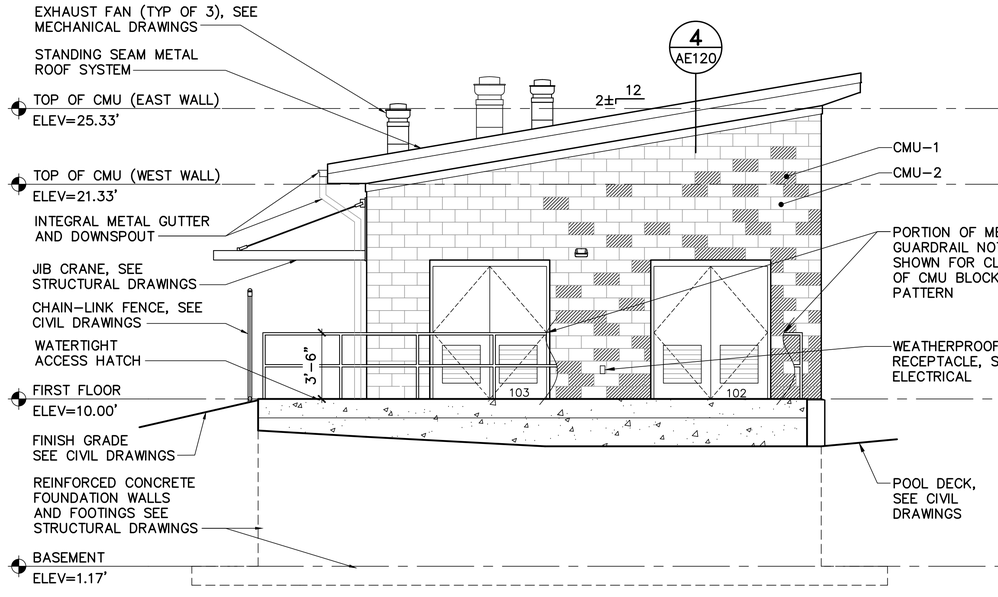
1. SEE SHEET AE601 FOR DOOR AND FINISH SCHEDULES.
2. PORTION OF GUARDRAIL NOT SHOWN AT NORTH AND SOUTH ELEVATIONS FOR CLARITY OF CMU BLOCK PATTERN.



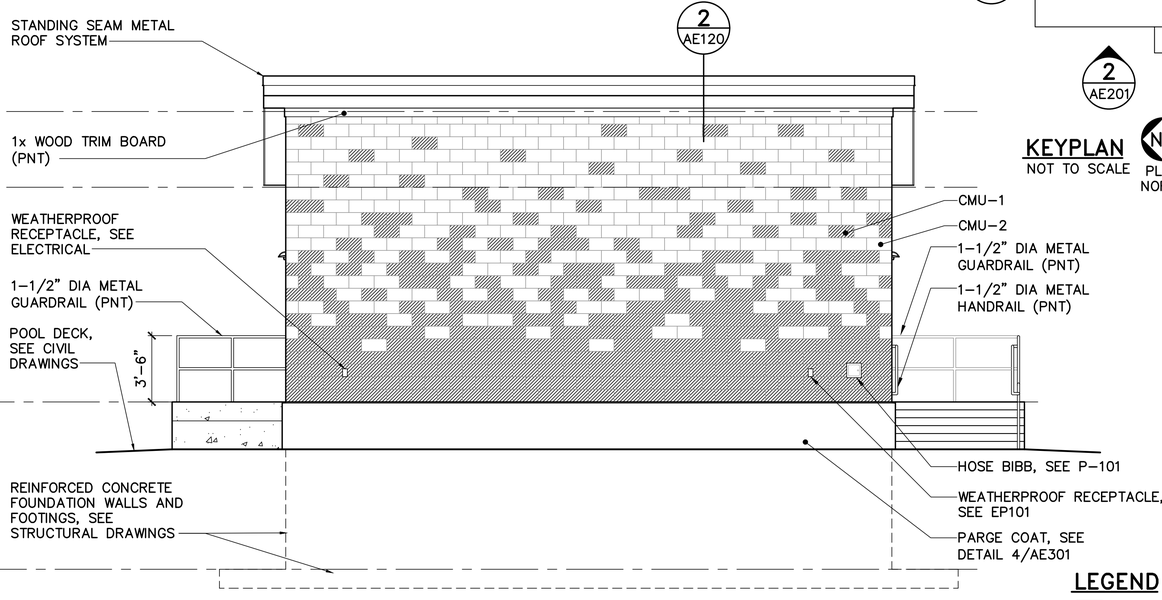
1 NORTH ELEVATION
AE101,AE120,AE201 — AE201 SCALE: 1/4"=1'-0"



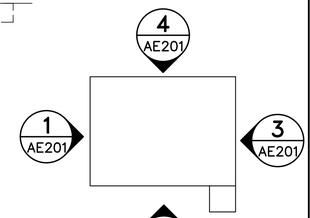
2 WEST ELEVATION
AE101,AE120,AE201 — AE201 SCALE: 1/4"=1'-0"



3 SOUTH ELEVATION
AE101,AE120,AE201 — AE201 SCALE: 1/4"=1'-0"



4 EAST ELEVATION
AE101,AE120,AE201 — AE201 SCALE: 1/4"=1'-0"



KEYPLAN
NOT TO SCALE — PLAN NORTH

LEGEND
- CMU 1
- CMU 2
- EXTERIOR LIGHT FIXTURE, SEE ELECTRICAL

GRAPHIC SCALE
1/4"=1'-0" — 4' 2' 0 4' 8'
CHECK GRAPHIC SCALE BEFORE USING

NO.	DATE	DESCRIPTION	BY
REVISIONS			

27 Feb, 2023 – 1:20pm
C:\DFILE\21904.14-AE201.dwg

OAK POINT ASSOCIATES
ARCHITECTURE ■ ENGINEERING ■ PLANNING
85 Middle Street, Portsmouth, NH 03801 (T) 603.431.4849 (F) 603.431.1870
www.oakpoint.com

LICENSED ARCHITECT — PETER N. MACGOVERN — No. 04674 — 12/31/23 — THE STATE OF NEW HAMPSHIRE

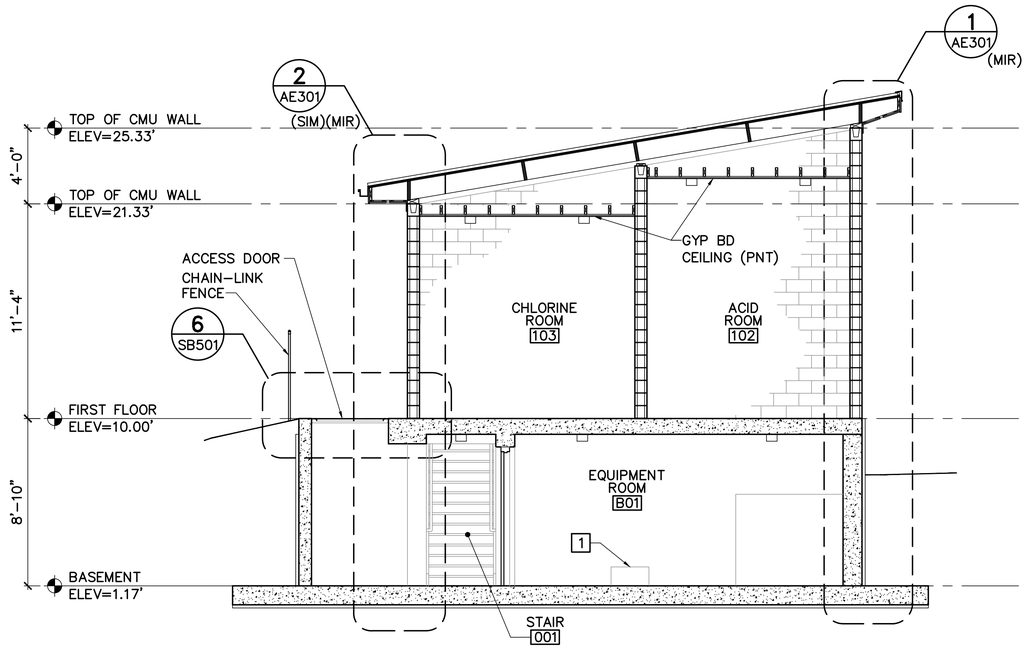
DESIGNED BY: CAM
DRAWN BY: RMB
CHECKED BY: PNM
PROJECT: 21904.14

CITY OF PORTSMOUTH
1 Junkins Avenue
Portsmouth, NH 03801

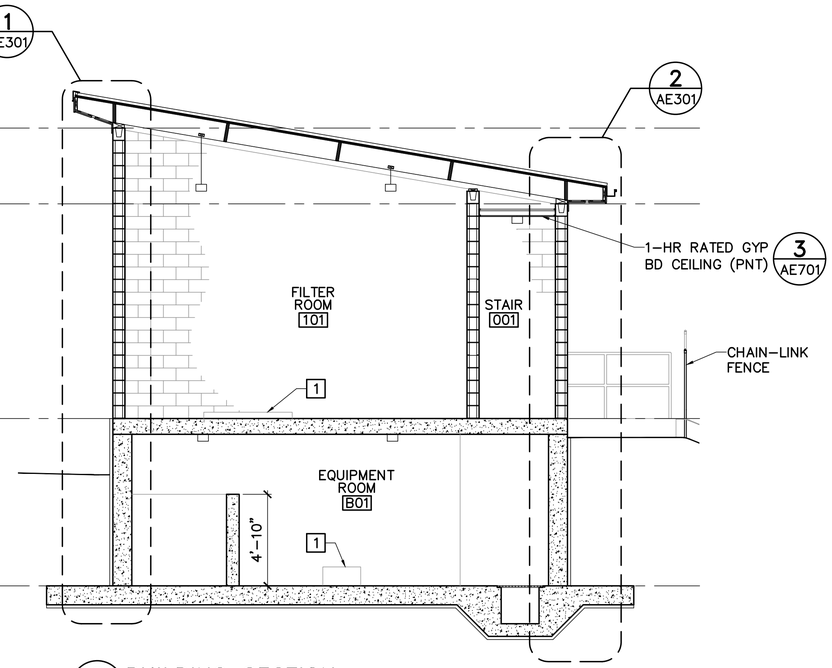
BID #40 - 23
PEIRCE ISLAND PUMP HOUSE AND POOL RENOVATION
Peirce Island Road
Portsmouth, NH 03801

PUMP HOUSE ELEVATIONS

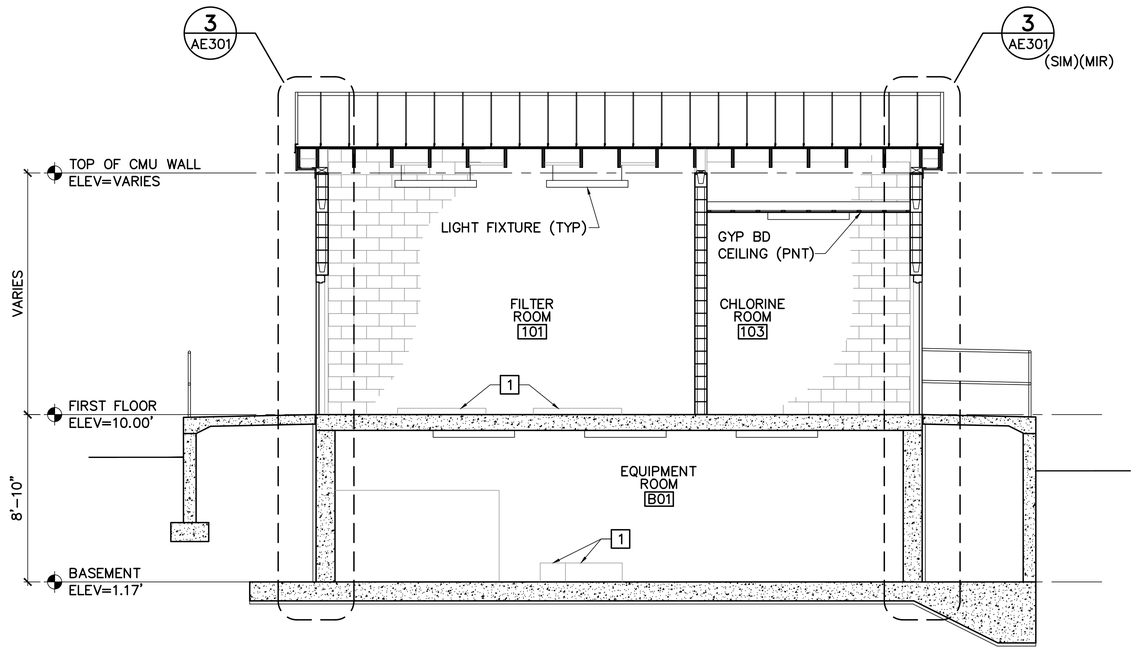
SCALE: AS NOTED
DATE: 03/01/2023
DWG.: AE201
SHEET: 30 OF 72



1 AE220 **BUILDING SECTION**
AE101,AE120,AE220 SCALE: 1/4"=1'-0"



2 AE220 **BUILDING SECTION**
AE101,AE120,AE220 SCALE: 1/4"=1'-0"



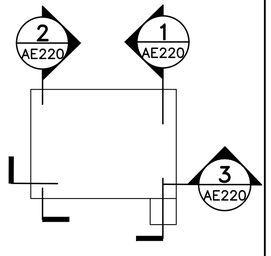
3 AE220 **BUILDING SECTION**
AE101,AE120,AE220 SCALE: 1/4"=1'-0"

GENERAL NOTES

1. SEE SHEET AE601 FOR DOOR SCHEDULE AND FINISH SCHEDULES.
2. POOL AND MECHANICAL EQUIPMENT NOT SHOWN FOR CLARITY.

KEYNOTES (THIS SHEET ONLY)

[1] REINFORCED CONCRETE EQUIPMENT PAD. SEE STRUCTURAL AND AQUATIC DRAWINGS.



KEYPLAN
NOT TO SCALE

PLAN NORTH

GRAPHIC SCALE
1/4"=1'-0"
4' 2' 0 4' 8'
CHECK GRAPHIC SCALE BEFORE USING

NO.	DATE	DESCRIPTION	BY

REVISIONS

OAK POINT ASSOCIATES
ARCHITECTURE ■ ENGINEERING ■ PLANNING
85 Middle Street, Portsmouth, NH 03801 (T) 603.431.1850 (F) 603.431.1870
www.oakpoint.com

LICENSED ARCHITECT
PETER N. MACGOVERN
No. 04974
THE STATE OF NEW HAMPSHIRE

DESIGNED BY: CAM
DRAWN BY: RMB
CHECKED BY: PNM
PROJECT: 21904.14

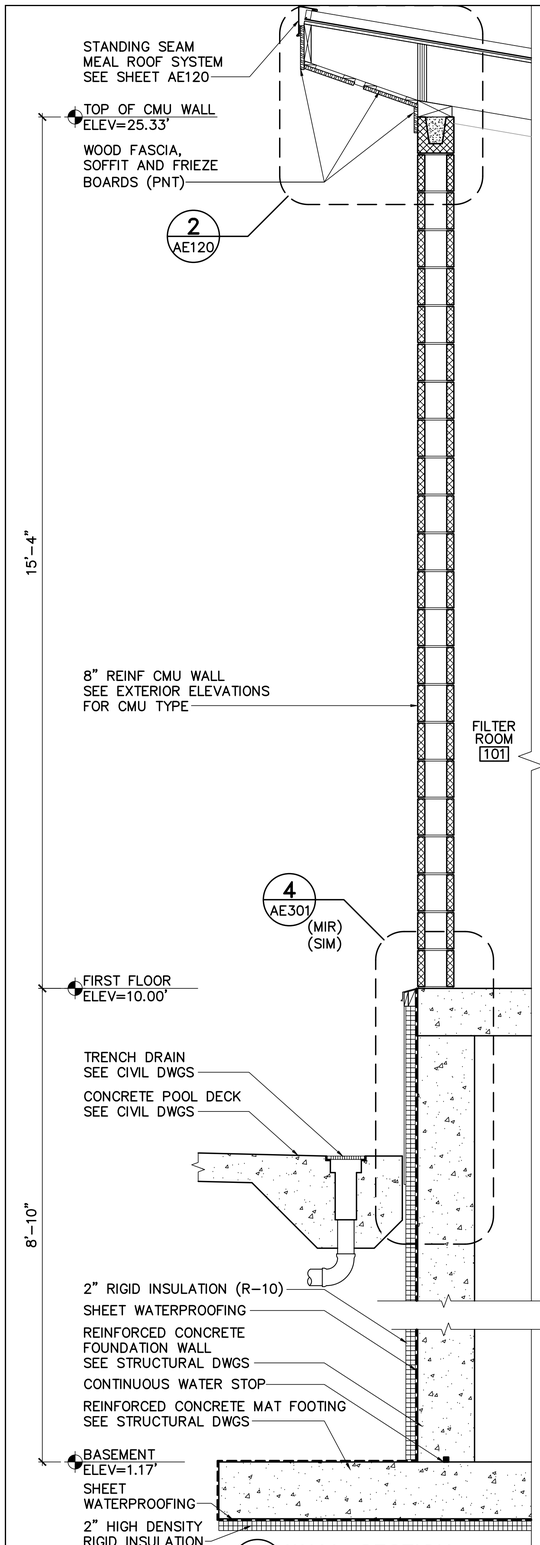
CITY OF PORTSMOUTH
1 Junkins Avenue
Portsmouth, NH 03801

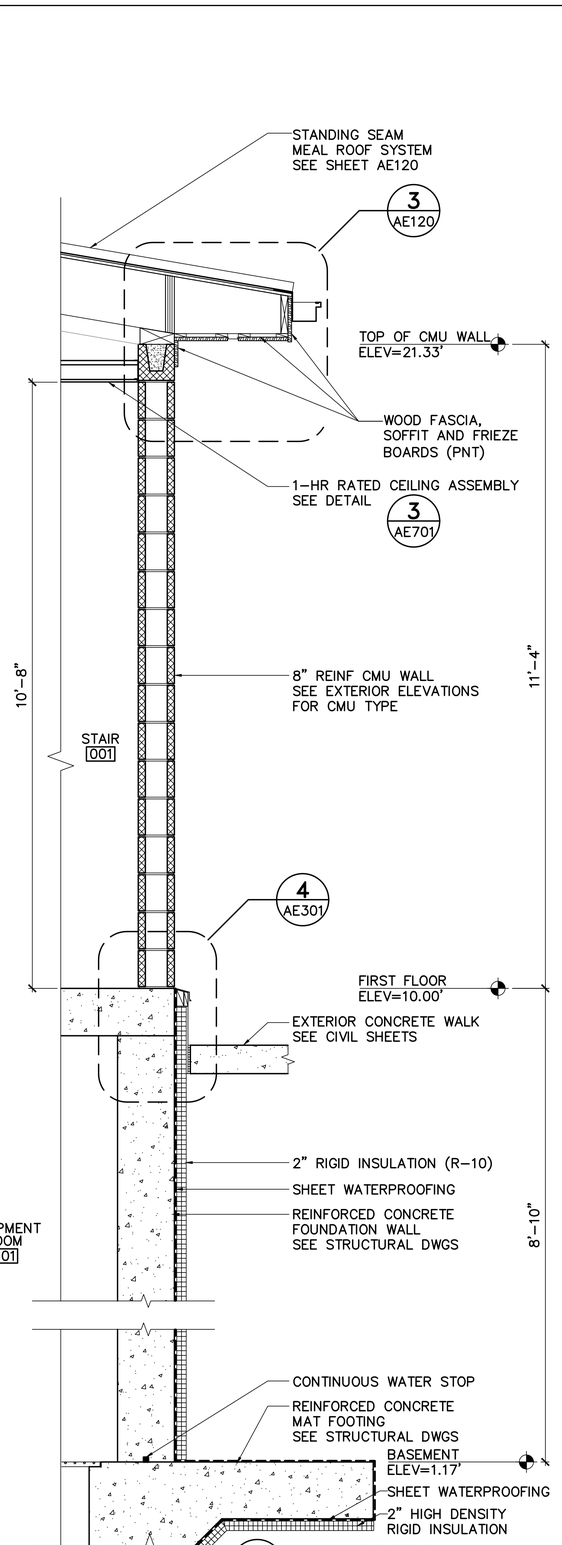
BID #40 - 23
PEIRCE ISLAND PUMP HOUSE AND POOL RENOVATION
Peirce Island Road
Portsmouth, NH 03801

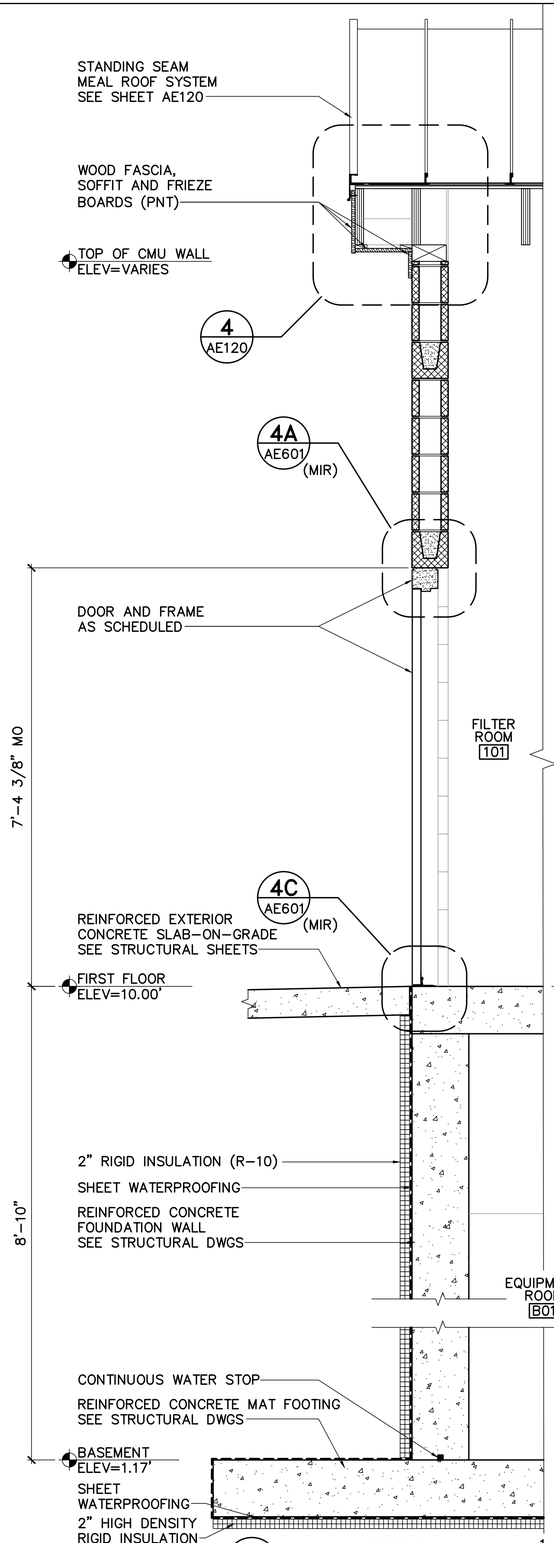
PUMP HOUSE SECTIONS

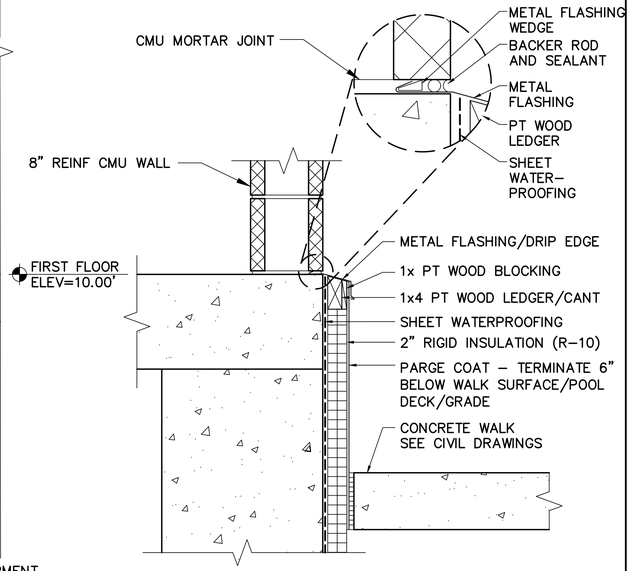
SCALE: AS NOTED
DATE: 03/01/2023
DWG.: **AE220**
SHEET: 31 OF 72

27 Feb, 2023 - 1:21pm
C:\DFILE\21904.14-AE220.dwg









GRAPHIC SCALES

3/4"=1'-0" 1' 6" 0 1' 2' 3'

1-1/2"=1'-0" 1' 8" 4" 0 1'

CHECK GRAPHIC SCALES BEFORE USING

NO.	DATE	DESCRIPTION	BY

REVISIONS

27 Feb, 2023 - 1:22pm
C:\DFILE\21904.14-AE301.dwg

OAK POINT ASSOCIATES
ARCHITECTURE ■ ENGINEERING ■ PLANNING
85 Middle Street, Portsmouth, NH 03801 (T) 603.431.4849 (F) 603.431.1870
www.oakpoint.com

LICENSED ARCHITECT
PETER N. MACGOVERN
No. 04574
THE STATE OF NEW HAMPSHIRE

DESIGNED BY: CAM
DRAWN BY: RMT
CHECKED BY: PNM
PROJECT: 21904.14

CITY OF PORTSMOUTH
1 Junkins Avenue
Portsmouth, NH 03801

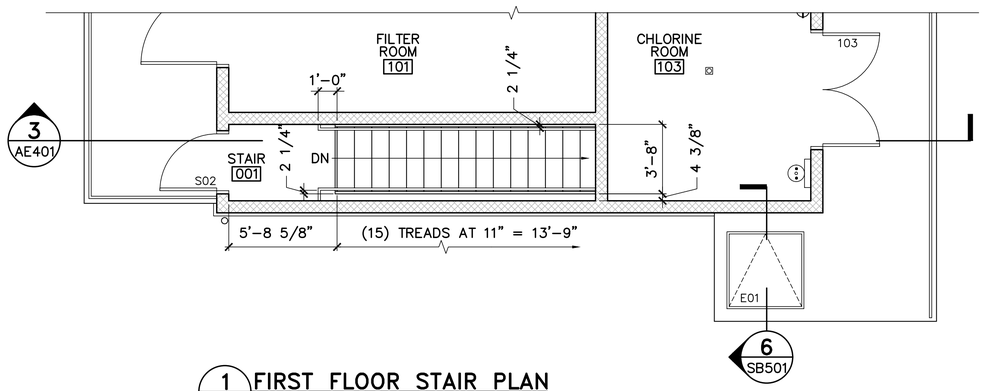
BID #40 - 23
PEIRCE ISLAND PUMP HOUSE
AND POOL RENOVATION
Peirce Island Road
Portsmouth, NH 03801

WALL SECTIONS AND DETAILS

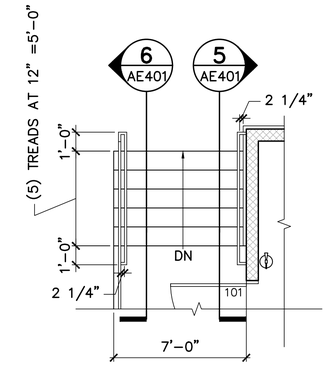
SCALE: AS NOTED
DATE: 03/01/2023
DWG.: AE301
SHEET: 32 OF 72

GENERAL NOTE

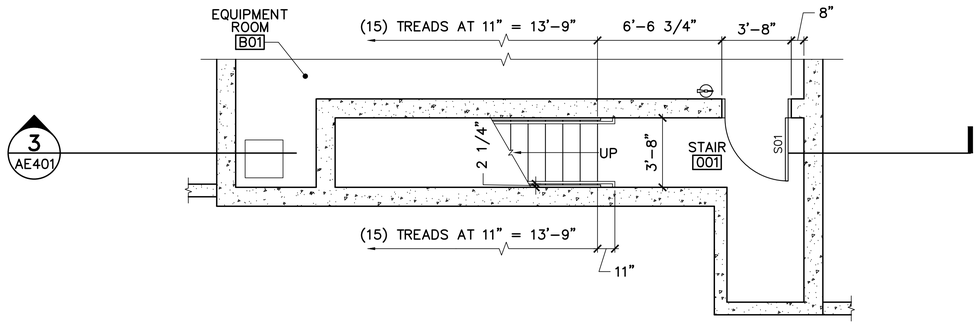
1. SEE SHEET AE601 FOR DOOR SCHEDULE AND FINISH SCHEDULES.

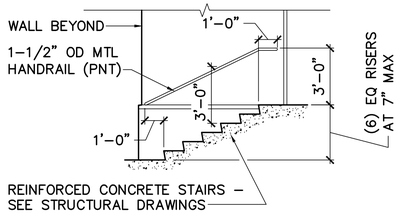


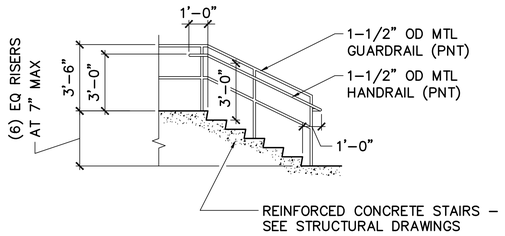
1 FIRST FLOOR STAIR PLAN
AE101,AE401 AE401 SCALE: 1/4"=1'-0"



4 EXTERIOR STAIR PLAN
AE401 AE401 SCALE: 1/4"=1'-0"



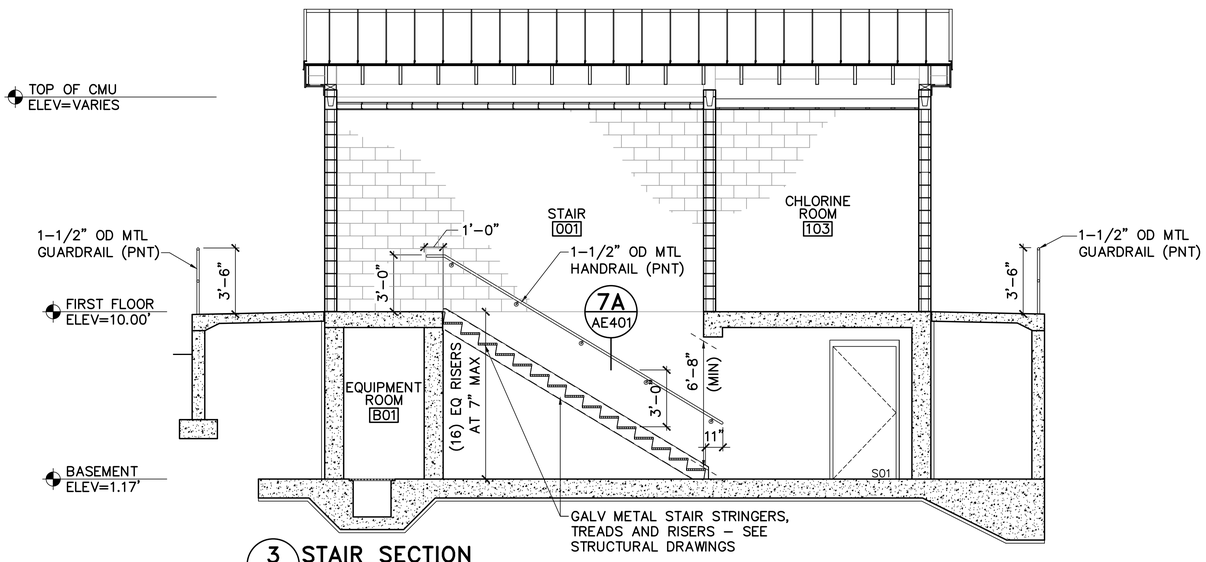




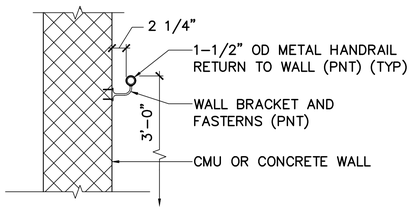
2 BASEMENT STAIR PLAN
AE101,AE401 AE401 SCALE: 1/4"=1'-0"

5 EXTERIOR STAIR SECTION
AE401 AE401 SCALE: 1/4"=1'-0"

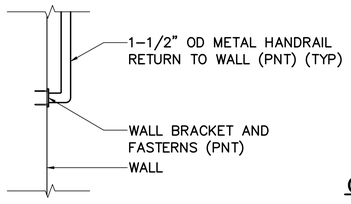
6 EXTERIOR STAIR SECTION
AE401 AE401 SCALE: 1/4"=1'-0"



3 STAIR SECTION
AE401 AE401 SCALE: 1/4"=1'-0"

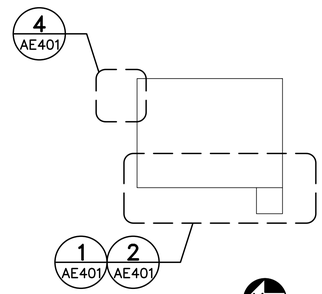


A RAILING TO MASONRY WALL SECTION DETAIL



B RAILING TO WALL PLAN DETAIL

7 RAILING DETAILS
AE401 AE401 SCALE: 1"=1'-0"



KEYPLAN
NOT TO SCALE
PLAN NORTH

GRAPHIC SCALES

1/4"=1'-0" 4' 2' 0 4' 8'

1"=1'-0" 1' 6" 0 1' 2'

CHECK GRAPHIC SCALES BEFORE USING

NO.	DATE	DESCRIPTION	BY
REVISIONS			

OAK POINT ASSOCIATES
ARCHITECTURE ■ ENGINEERING ■ PLANNING
85 Middle Street, Portsmouth, NH 03801 (T) 603.431.4849 (F) 603.431.1870
www.oakpoint.com

LICENSED ARCHITECT PETER N. MACGOVERN No. 04574 STATE OF NEW HAMPSHIRE

DESIGNED BY: CAM
DRAWN BY: RMB
CHECKED BY: PNM
PROJECT: 21904.14

CITY OF PORTSMOUTH
1 Junkins Avenue
Portsmouth, NH 03801

BID #40 - 23
PEIRCE ISLAND PUMP HOUSE AND POOL RENOVATION
Peirce Island Road
Portsmouth, NH 03801

STAIR PLANS, SECTIONS, AND DETAILS

SCALE: AS NOTED
DATE: 03/01/2023
DWG.: AE401
SHEET: 33 OF 72

27 Feb, 2023 – 1:23pm
C:\DFILE\21904.14–AE401.dwg

DOOR SCHEDULE

DOOR NO.	QTY	W	H	THK	TYPE	MAT	FINISH	FRAME TYPE	FRAME MAT	FRAME WIDTH	FRAME FINISH	DETAILS HEAD	DETAILS JAMB	DETAILS SILL	HDWR SET	FIRE RATING	NOTES
E01	1	–			–	–	–	–	–		–	–	–	–	–	–	A
S01	1	3'–0"	7'–0"	1–3/4"	F	HM	PNT	1	HM	3'–4"	PNT	3A/AE601	3B/AE601	–	1	60–MIN	–
S02	1	3'–0"	7'–0"	1–3/4"	F	FRP	PNT	1	FRP	3'–4"	PNT	4A/AE601	4B/AE601	4C/AE601	2	60–MIN	–
101	2	4'–0"	7'–0"	1–3/4"	L	FRP	PNT	1	FRP	8'–4"	PNT	4A/AE601	4B/AE601	4C/AE601	3	–	–
102	2	3'–0"	7'–0"	1–3/4"	L	FRP	PNT	1	FRP	6'–4"	PNT	4A/AE601	4B/AE601	4C/AE601	3	–	–
103	2	3'–0"	7'–0"	1–3/4"	L	FRP	PNT	1	FRP	6'–4"	PNT	4A/AE601	4B/AE601	4C/AE601	3	–	–

DOOR SCHEDULE GENERAL NOTES

1. PROVIDE DOORS WITH CONSTRUCTION CORES.

DOOR SCHEDULE NOTES

A. 4'–0" x 4'–0" ALUMINUM WATERTIGHT ACCESS HATCH. PROVIDE BILCO MODEL KD–2 OR APPROVED EQUIVALENT.

DOOR SCHEDULE LEGEND

FRP	FIBER–REINFORCED POLYMER	NO.	NUMBER
H	HEIGHT	PNT	PAINT
HDWR	HARDWARE	QTY	QUANTITY
HM	HOLLOW METAL	THK	THICKNESS
MAT	MATERIAL	W	WIDTH
MIN	MINUTE		

ROOM FINISH SCHEDULE

ROOM NO.	ROOM NAME	FLOOR	BASE	WALLS NORTH	WALLS EAST	WALLS SOUTH	WALLS WEST	CEILING MATERIAL	CEILING HEIGHT	NOTES
BASEMENT										
B01	EQUIPMENT ROOM	CONC	–	SEAL	SEAL	SEAL	SEAL	OPEN TO ABOVE	8'–0"	A
001	STAIR	CONC	–	–	SEAL	SEAL	SEAL	–	–	–
FIRST FLOOR										
001	STAIR	CONC	–	–	–	–	–	GYP BD, P–1	10'–8"	B
101	FILTER ROOM	CONC	–	–	–	–	–	OPEN TO ABOVE	VARIES	–
102	ACID ROOM	CONC	–	–	–	–	–	GYP BD, P–1	12'–8"	–
103	CHLORINE ROOM	CONC	–	–	–	–	–	GYP BD, P–1	10'–8"	–

ROOM FINISH LEGEND

FLOOR FINISHES:
CONC = SEALED CONCRETE

WALL FINISHES:
P– = PAINT
SEAL = INTERIOR CONCRETE SEALER

CEILING FINISHES:
GYP BD = GYPSUM BOARD, PAINTED

ROOM FINISH NOTES

A. PROVIDE INTERIOR CONCRETE SEALER AT UNDERSIDE OF CONCRETE SLAB ABOVE.

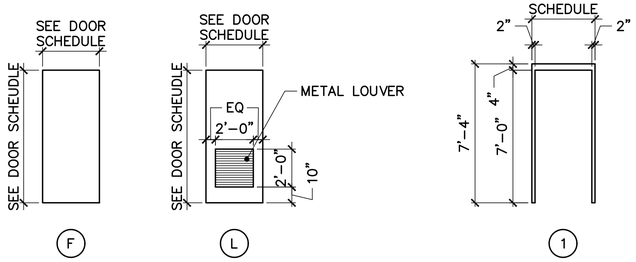
B. 1–HOUR FIRE RATED CEILING ASSEMBLY, SEE DETAIL 3/AE701.

COLOR KEY/MANUFACTURER GUIDE

MATERIAL	MANUFACTURER MODEL/TYPE	COLOR AND FINISH
CEILINGS		
P–1	BENJAMIN MOORE, WATERBORNE CEILING PAINT	SUPER WHITE (OC–152), EGGSHELL
EXTERIOR FINISHES		
TRIM	WOOD, PAINTED	TO BE SELECTED
STANDING SEAM METAL ROOFING	PAC–CLAD, TITE–LOC PLUS	TO BE SELECTED
SPLIT FACE CMU BLOCK (CMU 1)	YORK BUILDING PRODUCTS, SPLIT FACE	TO BE SELECTED
SMOOTH FACE CMU BLOCK (CMU 2)	YORK BUILDING PRODUCTS, GEMSTONE	TO BE SELECTED
PARGE COAT	NUDURA PARGE COAT	TO BE SELECTED
HANDRALS/GUARDRAILS	METAL, PAINTED	TO BE SELECTED

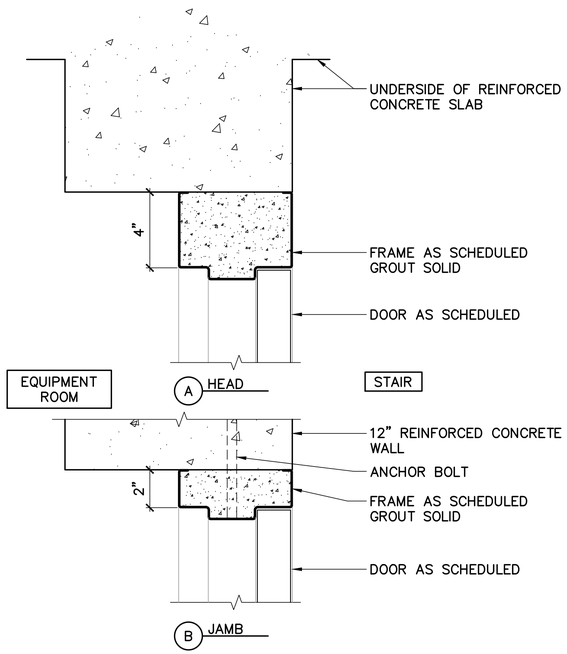
GENERAL FINISH NOTE

1. MANUFACTURER'S NAMES AND COLOR/PATTERN IDENTIFICATIONS ARE USED FOR THE PURPOSE OF AESTHETIC COORDINATION ONLY. APPROVED PRODUCTS FROM OTHER MANUFACTURERS ARE ACCEPTABLE IF THE COLOR/PATTERN IS EQUIVALENT TO THE COLOR/PATTERN INDICATED AND THE PRODUCT CONFORMS TO THE SPECIFICATIONS.

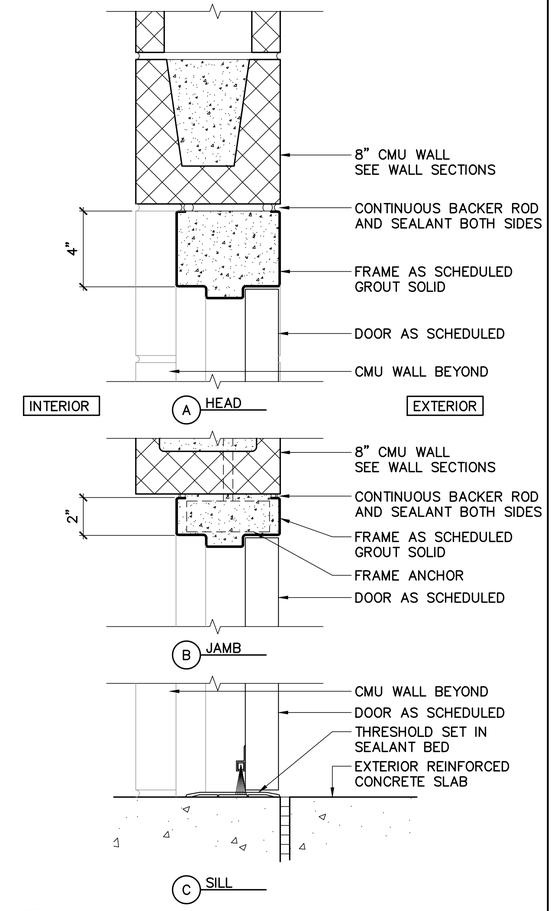


1 DOOR TYPES
AE601 AE601 SCALE: 1/4"=1'–0"

2 FRAME TYPE
AE601 AE601 SCALE: 1/4"=1'–0"



3 INTERIOR DOOR DETAILS
AE601 AE601 SCALE: 3"=1'–0"



4 EXTERIOR DOOR DETAILS
AE301,AE601 AE601 SCALE: 3"=1'–0"

GRAPHIC SCALES

1/4"=1'–0" 4' 2' 0 4' 8"

3"=1'–0" 6" 4" 2" 0 6"

CHECK GRAPHIC SCALES BEFORE USING

NO.	DATE	DESCRIPTION	BY
REVISIONS			

OAK POINT ASSOCIATES
ARCHITECTURE ■ ENGINEERING ■ PLANNING
85 Middle Street, Portsmouth, NH 03801 (T) 603.431.4849 (F) 603.431.1870
www.oakpoint.com

LICENSED ARCHITECT
PETER N. MACGOVERN
No. 04574
THE STATE OF NEW HAMPSHIRE

DESIGNED BY: CAM
DRAWN BY: CAM
CHECKED BY: PNM
PROJECT: 21904.14

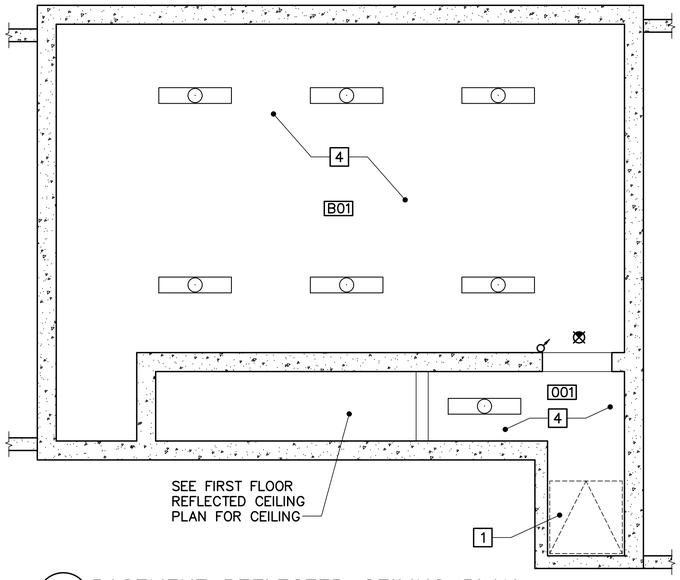
CITY OF PORTSMOUTH
1 Junkins Avenue
Portsmouth, NH 03801

BID #40 - 23
PEIRCE ISLAND PUMP HOUSE AND POOL RENOVATION
Peirce Island Road
Portsmouth, NH 03801

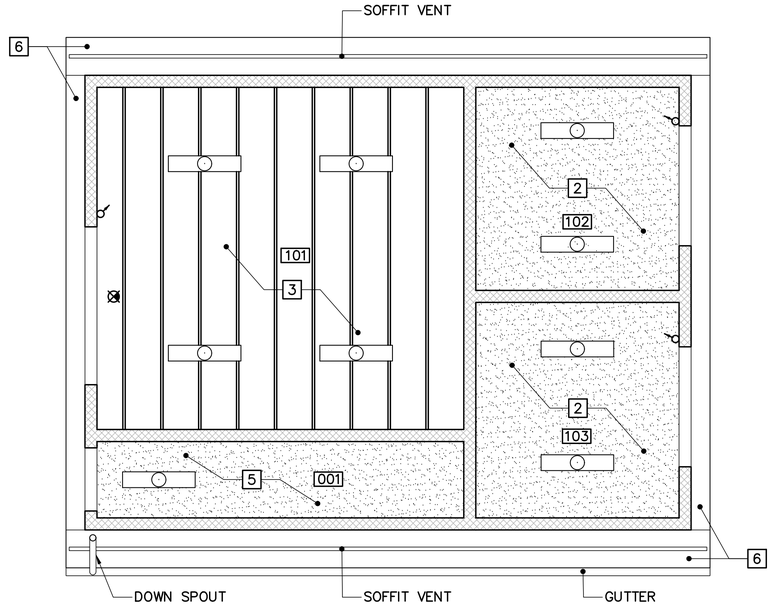
DOOR AND ROOM FINISH SCHEDULES AND DOOR TYPES AND DETAILS

SCALE: AS NOTED
DATE: 03/01/2023
DWG.: AE601
SHEET: 34 OF 72

27 Feb, 2023 – 1:24pm
C:\DFILE\21904.14–AE601.dwg



1 BASEMENT REFLECTED CEILING PLAN
AE701 SCALE: 1/4"=1'–0"



2 FIRST FLOOR REFLECTED CEILING PLAN
AE701 SCALE: 1/4"=1'–0"

GENERAL NOTES

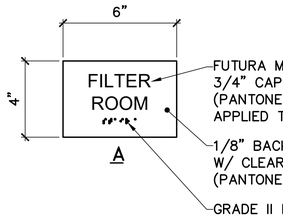
1. SEE SHEET AE601 FOR FINISH SCHEDULE.
2. CEILING MOUNTED ELECTRICAL EQUIPMENT SHOWN FOR COORDINATION PURPOSES ONLY. SEE ELECTRICAL SHEETS FOR SPECIFIC EQUIPMENT INFORMATION.
3. MECHANICAL EQUIPMENT AND PENETRATIONS NOT SHOWN FOR CLARITY. SEE MECHANICAL SHEETS.

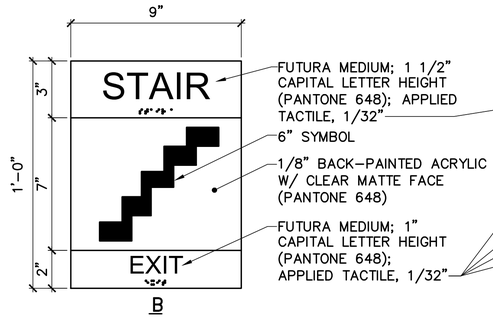
KEYNOTES (THIS SHEET ONLY)

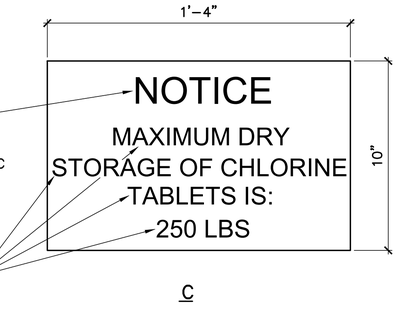
1. BASEMENT ACCESS HATCH, SEE FLOOR PLANS.
2. 5/8" GYP BD (PNT) ON 1x3 WOOD FURRING AT 1'–4" OC (TYP) ON 2x6 WOOD CEILING JOISTS AT 1'–4" OC (TYP). SEE PUMP HOUSE CEILING FRAMING PLAN 2/SF101.
3. OPEN TO UNDERSIDE OF WOOD STRUCTURE ABOVE.
4. OPEN TO UNDERSIDE OF CONCRETE STRUCTURE ABOVE.
5. 1–HR RATED CEILING ASSEMBLY, SEE DETAIL 3/AE701. (PNT).
6. WOOD SOFFIT (PNT).

CEILING LEGEND

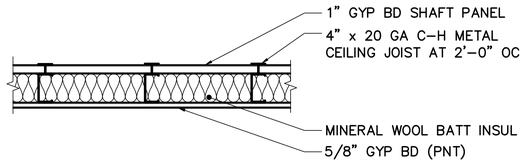
- GYPSUM BOARD CEILING SYSTEM
- 1'–0"x4'–0" LED LIGHT FIXTURE
- EXIT SIGN
- OCCUPANCY SENSOR







4 SIGN TYPES
AE701 NOT TO SCALE



UL ASSEMBLY DESIGN NO U415 SYSTEM A.

3 1–HR FIRE RATED CEILING ASSEMBLY
220.AE301,AE601,AE701 AE701 SCALE: 1–1/2"=1'–0"

SIGNAGE SCHEDULE

ROOM NO.	SIGN TEXT	SIGN TYPE	NOTES
BASEMENT			
B01	[SEE SIGN TYPE]	B	MOUNT OUTSIDE STAIRWELL AT DOOR S01.
001	EQUIPMENT ROOM	A	MOUNT INSIDE STAIRWELL AT DOOR S01.
FIRST FLOOR			
101	FILTER ROOM	A	MOUNT ON EXTERIOR SIDE OF INACTIVE LEAF OF DOOR 101.
102	ACID ROOM	A	MOUNT ON EXTERIOR SIDE OF INACTIVE LEAF OF DOOR 102.
103	CHLORINE ROOM	A	MOUNT ON EXTERIOR SIDE OF INACTIVE LEAF OF DOOR 103.
103	[SEE SIGN TYPE]	C	MOUNT ON NORTH WALL IN A CONSPICUOUS SPOT.
001	EQUIPMENT ROOM	A	MOUNT ON EXTERIOR SIDE OF LEAF OF DOOR S02.

GENERAL SIGNAGE NOTES

1. CONFIRM FINAL SIGNAGE TEXT WITH OWNER PRIOR TO FABRICATION OF SIGNS.
2. UNLESS OTHERWISE NOTED, MOUNT SIGN ON WALL ON LATCH SIDE OF THE DOOR, 9" FROM DOOR FRAME TO THE CENTERLINE OF SIGN, AND 4'–0" FROM FINISHED FLOOR TO THE BASELINE OF THE LOWEST TACTILE LETTER.

GRAPHIC SCALES

1/4"=1'–0" 4' 2' 0 4' 8'

1–1/2"=1'–0" 1' 8" 4" 0 1'

CHECK GRAPHIC SCALES BEFORE USING

NO.	DATE	DESCRIPTION	BY
REVISIONS			

OAK POINT ASSOCIATES
ARCHITECTURE ■ ENGINEERING ■ PLANNING
85 Middle Street, Portsmouth, NH 03801 (T) 603.431.4848 (F) 603.431.1870
www.oakpoint.com

LICENSED ARCHITECT
PETER N. MACGOVERN
No. 04674
THE STATE OF NEW HAMPSHIRE
2/27/23

DESIGNED BY: CAM
DRAWN BY: RMB
CHECKED BY: PNM
PROJECT: 21904.14

CITY OF PORTSMOUTH
1 Junkins Avenue
Portsmouth, NH 03801

BID #40 - 23
PEIRCE ISLAND PUMP HOUSE AND POOL RENOVATION
Peirce Island Road
Portsmouth, NH 03801

PUMP HOUSE REFLECTED CEILING PLANS AND SIGNAGE DETAILS

SCALE: AS NOTED
DATE: 03/01/2023
DWG.: AE701
SHEET: 35 OF 72

27 Feb, 2023 – 1:24pm
C:\DFILE\21904.14–AE701.dwg

MECHANICAL ABBREVIATIONS

AFF	ABOVE FINISHED FLOOR
APPROX	APPROXIMATELY
ASME	AMERICAN SOCIETY OF MECHANICAL ENGINEERS
ASS'Y	ASSEMBLY
BLDG	BUILDING
CAP	CAPACITY
CFM	CUBIC FEET/MINUTE
CL	CHLORINE
℄	CENTERLINE
CLG	CEILING
CONN	CONNECTION
COND	CONDITIONS
D	DEPTH, DAMPER
ø,DIA	DIAMETER
DN	DOWN
DWG	DRAWING
E	EXISTING, EXHAUST
EA	EXHAUST AIR, EACH
ELEV	ELEVATION
EQUIP	EQUIPMENT
EXIST	EXISTING
FBG	FURNISHED BY GOVERNMENT
FC	FLEX CONNECTOR, FAN COIL
FLR	FLOOR
FT	FOOT/FEET
GYP	GYPSUM WALLBOARD
H	HEIGHT
H2O	WATER
HGT	HEIGHT, HIGH
HORIZ	HORIZONTAL
HR	HOUR
HZ	HERTZ
ID	INSIDE DIAMETER
IN	INCHES
L	LENGTH
LBS	POUNDS
LF	LINEAR FEET
LOC	LOCATION/LOCATED
MAX	MAXIMUM
MAX PD	MAXIMUM PRESSURE DROP
MECH	MECHANICAL
MFR	MANUFACTURER
MIN	MINIMUM
MTG	MOUNTING
N/A	NOT APPLICABLE
N/C	NOT IN CONTRACT
NC	NOISE CRITERIA, NORMALLY CLOSED
NO	NUMBER, NORMALLY OPEN
NTS	NOT TO SCALE
OC	ON CENTER
OD	OUTSIDE DIAMETER
PD	PRESSURE DIFFERENCE
POS	POSITIVE
PRESS	PRESSURE
QTY	QUANTITY
R	RETURN
RA	RETURN AIR
REQ'D	REQUIRED
RM	ROOM
RO	RETURN/TRANSFER OPENING
S	SUPPLY
SA	SUPPLY AIR
SAT	SUPPLY AIR TEMPERATURE, SUSPENDED ACOUSTICAL TILE
SF	SQUARE FOOT
SIM	SIMILAR
SMACNA	SHEET METAL AND AIR CONDITIONING CONTRACTORS' NATIONAL ASSOCIATION
SP	STATIC PRESSURE
SQ	SQUARE
T	THERMOSTAT, TRANSFER
TA	TRANSFER AIR
TEMP	TEMPERATURE
TS	TEMPERATURE SENSOR
TSP	TOTAL STATIC PRESSURE
TYP	TYPICAL
VAV	VARIABLE AIR VOLUME
VEL	VELOCITY
W	WIDTH, WIDE
W/	WITH
WC	WATER COLUMN
WG	WATER GAUGE
WPD	WATER PRESSURE DROP

MECHANICAL SYMBOLS LEGEND

ANNOTATION

- H / 2 — SYMBOL PER ABBREVIATION LIST; EQUIPMENT SEQUENCE NUMBER
- S-1 / 100 — AIR INLET OR OUTLET WITH CFM
- 1 / 1 — KEYNOTE
- DIRECTION OF AIR FLOW
- CONNECT TO EXISTING

DUCTWORK

- SIDEWALL REGISTER/GRILLE
- AD — ACCESS DOOR ON BOTTOM OF DUCT
- DUCT
- MANUAL BALANCING DAMPER IN DUCT
- EXHAUST DUCT UP

EQUIPMENT

- TERMINAL UNIT, VARIABLE VOLUME

CONTROLS AND METERING

- WALL MOUNTED TEMPERATURE SENSOR (REFER TO CONTROL DIAGRAMS FOR VARYING SPECIFIC REQUIREMENTS)
- T — WALL MOUNTED THERMOSTAT WITH INTEGRAL CONTACTORS, USER-ADJUSTABLE
- OC — OCCUPANCY SENSOR
- CO2 — CARBON MONOXIDE SENSOR
- CL — CHLORINE SENSOR
- R — CHLORINE ALARM LIGHT

ELECTRICAL

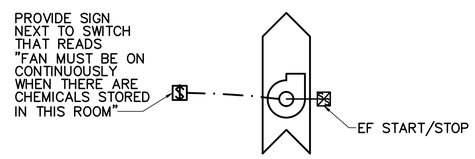
- $ — MANUAL SWITCH

LINE TYPE LEGEND

- REMOVE ITEMS
- EXIST ITEMS TO REMAIN
- PROVIDE ITEMS
- CONTROL WIRING
- PNEUMATIC CONTROL TUBING

MECHANICAL GENERAL NOTES

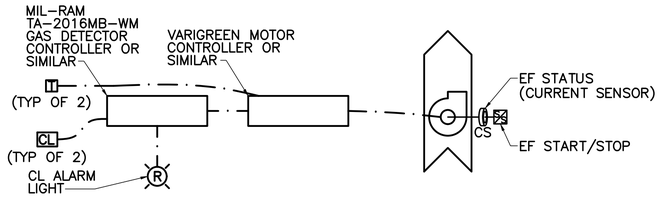
1. MECHANICAL WORK MUST BE PERFORMED IN ACCORDANCE WITH STATE AND LOCAL CODES, THE INTERNATIONAL MECHANICAL CODE (I MC), 2015, AND THE INTERNATIONAL ENERGY AND CONSERVATION CODE (IECC), 2015.
2. DUCTWORK IS SHOWN DIAGRAMMATICALLY, EXACT LOCATIONS MUST BE DETERMINED IN THE FIELD.
3. COORDINATE LOCATION OF HVAC WORK WITH OTHER TRADES. PERFORM CUTTING WORK ASSOCIATED WITH MECHANICAL SYSTEMS.
4. HVAC WORK MUST BE SUPPORTED FROM BUILDING STRUCTURE. DO NOT CUT STRUCTURAL MEMBERS.



SEQUENCE OF OPERATION

EF-2 AND EF-3 SHALL RUN CONTINUOUSLY.

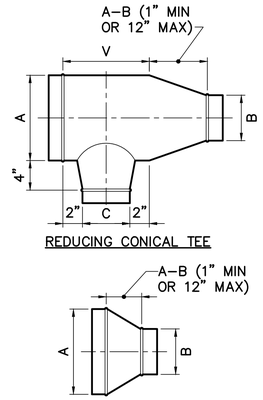
1 EF-2 AND EF-3 EXHAUST FAN CONTROL DIAGRAM
M-001 NOT TO SCALE



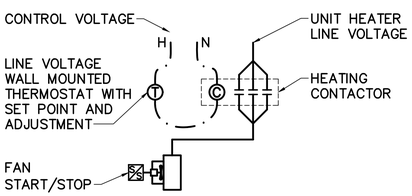
SEQUENCE OF OPERATION

EF SHALL BE ENABLED AND THE EXTERIOR EMERGENCY ALARM SHALL TURN ON IF THE CHLORINE LEVELS REACH 1 PPM. EF AND THE EXTERIOR EMERGENCY LIGHT SHALL REMAIN ON UNTIL THE CHLORINE LEVELS LOWER TO 0.5 PPM. EF-1 SHALL REMAIN ON IF TEMPERATURE RISES ABOVE 80°F.

2 EF-1 EXHAUST FAN CONTROL DIAGRAM
M-001 NOT TO SCALE



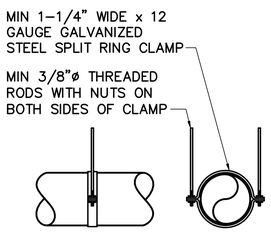
3 TYPICAL ROUND DUCT FITTINGS DETAIL
M-001 NOT TO SCALE



SEQUENCE OF OPERATION

IF THE ROOM TEMPERATURE FALLS 2°F BELOW THE ROOM SET POINT (50°F, ADJUSTABLE) THE ELECTRIC HEAT SHALL TURN ON AND THE FAN SHALL START. WHEN THE ROOM SET POINT IS SATISFIED THE FAN SHALL STOP.

4 UNIT HEATER EUH-1 AND EUH-2 CONTROL DIAGRAM
M-001 NOT TO SCALE



5 ROUND DUCT HANGER DETAIL
M-001 NOT TO SCALE

NO.	DATE	DESCRIPTION	BY

REVISIONS

OAK POINT ASSOCIATES
ARCHITECTURE ■ ENGINEERING ■ PLANNING
85 Middle Street, Portsmouth, NH 03801 (T) 603.431.4848 (F) 603.431.1870
www.oakpoint.com

STATE OF MAINE — ANDREW J. KITCHEN — No. 13917 — LICENSED PROFESSIONAL ENGINEER

DESIGNED BY: AJK
DRAWN BY: KLG
CHECKED BY: MSA
PROJECT: 21904.14

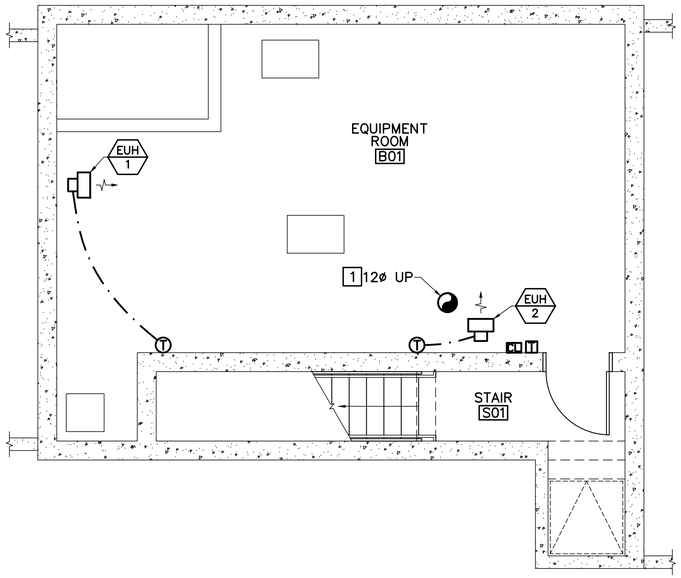
CITY OF PORTSMOUTH
1 Junkins Avenue
Portsmouth, NH 03801

BID #40 - 23
PEIRCE ISLAND PUMP HOUSE AND POOL RENOVATION
Peirce Island Road
Portsmouth, NH 03801

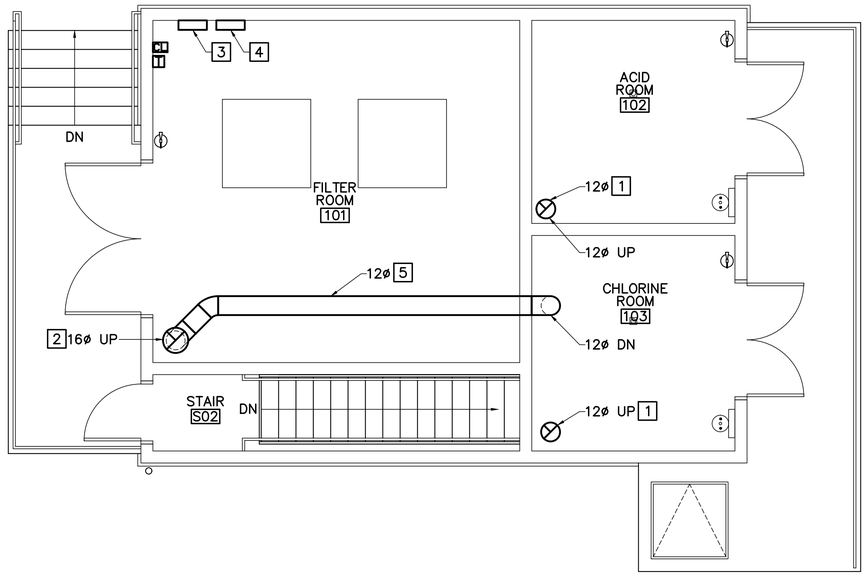
MECHANICAL DETAILS, LEGENDS, AND NOTES

SCALE: AS NOTED
DATE: 03/01/2023
DWG.: M-001
SHEET: 36 OF 72

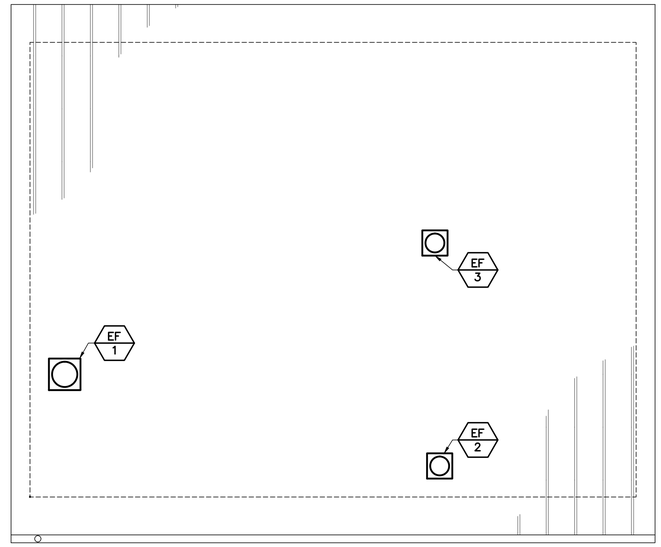
01 Mar, 2023 - 3:15pm
Z:\21904.14\21904.14-M001.dwg



1 M-101 BASEMENT MECHANICAL PLAN
SCALE: 1/4"=1'-0"
PLAN NORTH



2 M-101 FIRST FLOOR MECHANICAL PLAN
SCALE: 1/4"=1'-0"
PLAN NORTH



3 M-101 ROOF MECHANICAL PLAN
SCALE: 1/4"=1'-0"
PLAN NORTH

ELECTRIC UNIT HEATER SCHEDULE

UNIT NO	LOCATION	CFM	HEATING KW	VOLTS/PHASE	MBH	BASIS OF DESIGN	NOTES
EUH-1	EQUIPMENT B01	1100	15	408/3	50	TRANE UHEC	1
EUH-2	EQUIPMENT B01	1100	15	408/3	50	TRANE UHEC	1

NOTES: 1. PROVIDE WALL MOUNTED THERMOSTAT AND CONTROL DEVICES.

FAN SCHEDULE

UNIT NO	SERVES	CFM	ESP IN WC	DRIVE TYPE	FAN TYPE	FAN RPM	HP	VOLTS/ PHASE	BASIS OF DESIGN	ACCESSORIES
EF-1	FILTER AND EQUIPMENT ROOM	1000	0.75	DIRECT	UPBLAST	1550	0.75	115/1	GREENHECK CUEQ	A,B,C,D
EF-2	CHLORINE ROOM	500	0.50	DIRECT	UPBLAST	1550	0.75	115/1	GREENHECK CUEQ	A,B,C,D
EF-3	ACID ROOM	500	0.50	DIRECT	UPBLAST	1550	0.75	115/1	GREENHECK CUEQ	A,B,C,D

ACCESSORIES:
A. GRAVITY BACKDRAFT DAMPER.
B. MFR FAN MOUNTED DISCONNECT SWITCH.
C. PROVIDE CHLORINE RESISTANT COATING.
D. PROVIDE ACID RESISTANT COATING.
E. NEOPRENE VIBRATION ISOLATORS.

SPECIFICATIONS:
ELECTRIC UNIT HEATERS:
HEATERS SHALL BE INSTALLED AND WIRED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS AND APPLICABLE NATIONAL AND LOCAL CODES. CASING CASINGS FABRICATED OF DIE-FORMED, HEAVY GAUGE STEEL AND FINISHED IN HIGH GLOSS, BAKED ENAMEL. ADJUSTABLE DISCHARGE LOUVERS SHALL BE PROVIDED TO CONTROL THE DIRECTION OF AIRFLOW. A LARGE, HINGED ACCESS DOOR SHALL EXTEND THE WIDTH OF THE HEATER AND LOCKED IN POSITION BY QUARTER-TURN FASTENERS. HEATER AND SUPPLY WIRING DIAGRAM SHALL BE PERMANENTLY ATTACHED TO THE INSIDE OF THE ACCESS DOOR. ELEMENTS SHALL BE HIGH MASS, ALL STEEL TUBULAR FINNED TYPE, COPPER BRAZED. CENTRALLY LOCATED AND INSTALLED IN FIXED ELEMENT BANKS. MOTORS SHALL BE TOTALLY ENCLOSED, ALL ANGLE INDUSTRIAL RATED. PROVIDE SEALED BEARINGS TO ASSURE PERMANENT LUBRICATION. FAN BLADES FAN BLADES SHALL BE OF THE AXIAL FLOW TYPE DESIGNED FOR QUIET EFFICIENT OPERATION. HEATERS SHALL BE A SINGLE CIRCUIT, WITH ELEMENTS, MOTOR AND CONTROL CIRCUITS SUBDIVIDED WITH FACTORY WIRED FUSES TO CONFORM TO THE NATIONAL ELECTRIC CODE AND UNDERWRITER'S LABORATORY, INC., STANDARD 1278. THREE-PHASE HEATERS SHALL HAVE BALANCED PHASES. ALL HEATERS SHALL BE EQUIPPED WITH AUTOMATIC RESET THERMAL OVERLOADS WHICH SHUT DOWN THE ELEMENT AND MOTOR IF SAFE OPERATING TEMPERATURES ARE EXCEEDED. FUSING ELEMENT, MOTOR AND TRANSFORMER PRIMARY FUSING ARE FACTORY INSTALLED AND WIRED WHERE REQUIRED BY NEC. CONTROL CONTACTORS AND CONTROL CIRCUIT TRANSFORMERS WHERE REQUIRED ARE FACTORY INSTALLED AND WIRED. ONLY DIRECT LINE SUPPLY AND THERMOSTAT CONNECTIONS IN THE FIELD ARE REQUIRED. BUILT- IN FAN OVERRIDE IS TO BE PROVIDED TO PURGE UNIT CASING OF EXCESS HEAT AFTER UNIT SHUTDOWN. THE UNITS ARE LISTED UNDER THE REEXAMINATION SERVICE OF UNDERWRITER'S LABORATORIES, INC. UNITS SHALL BE WARRANTED TO BE FREE FROM DEFECTIVE MATERIAL AND WORKMANSHIP FOR A PERIOD OF ONE YEAR WITH THE EXCEPTION OF THE HEATING ELEMENTS WHICH SHALL BE WARRANTED FOR FIVE YEARS.

DUCTWORK: PROVIDE SUBMITTAL FOR DUCTWORK. DUE TO THE CHLORINE ENVIRONMENT, METALLIC DUCTWORK IS NOT TO BE USED. DUCTWORK SHALL BE PVC OR PVS SPIRAL DUCTWORK SUITABLE FOR CHLORINE ENVIRONMENTS.

EXHAUST FANS, EF-1, 2 AND 3. PROVIDE SUBMITTALS FOR FANS EF-1, EF-2 AND EF-3. FANS SHALL BE ROOF CURB MOUNTED. PROVIDE CORROSIVE RESISTANT COATING, BASIS OF DESIGN GREENHECK, HI-PRO POLYESTER OR HI-PRO-Z.

DRAWING KEYNOTES (THIS SHEET ONLY)

1. 12ø DROP TO 6" AFF. EXHAUST AIR INTAKE AT BOTTOM OF DUCT. PROVIDE PLASTIC MESH INSECT SCREEN ON DUCT OPENING.
2. 16ø UP THROUGH ROOF, DROP 16ø DUCT TO 6" AFF AND PROVIDE BALANCE DAMPER IN VERTICAL. EXHAUST AIR INTAKE FOR ROOM 101 AT BOTTOM OF DUCT, PROVIDE PLASTIC MESH INSECT SCREEN ON DUCT OPENING.
3. MOTOR CONTROLLER.
4. GAS DETECTOR CONTROLLER.
5. INSTALL DUCT UNDER POOL PIPING, AS CLOSE TO CEILING AS POSSIBLE TO PRESERVE MAXIMUM HEAD CLEARANCE.

GRAPHIC SCALE
1/4"=1'-0"
4' 2' 0 4' 8'
CHECK GRAPHIC SCALES BEFORE USING

NO.	DATE	DESCRIPTION	BY
		REVISIONS	

01 Mar, 2023 - 3:16pm
Z:\21904.14\21904.14-M101.dwg

OAK POINT ASSOCIATES
ARCHITECTURE ■ ENGINEERING ■ PLANNING
85 Middle Street, Portsmouth, NH 03801 (T) 603.431.4848 (F) 603.431.1970
www.oakpoint.com

STATE OF MAINE
ANDREW J. KITCHEN
No. 13917
LICENSED PROFESSIONAL ENGINEER

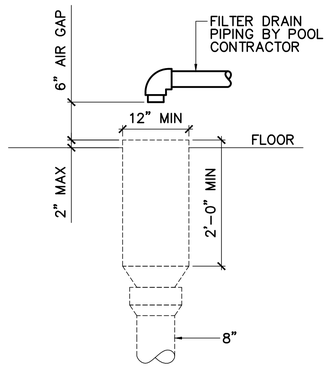
DESIGNED BY: AJK
DRAWN BY: RDA
CHECKED BY: MSA
PROJECT: 21904.14

CITY OF PORTSMOUTH
1 Junkins Avenue
Portsmouth, NH 03801

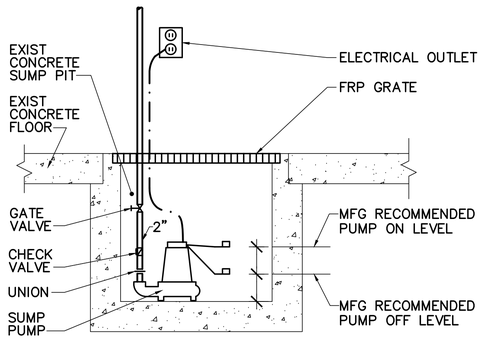
BID #40 - 23
PEIRCE ISLAND PUMP HOUSE AND POOL RENOVATION
Peirce Island Road
Portsmouth, NH 03801

PUMP HOUSE MECHANICAL PLANS AND SCHEDULES

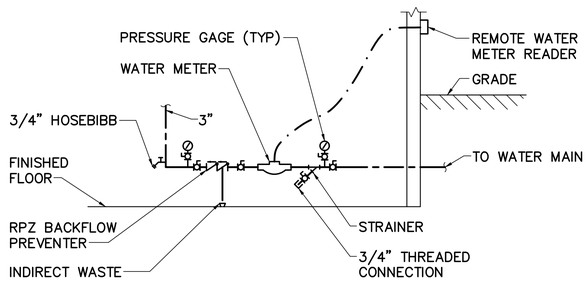
SCALE: AS NOTED
DATE: 03/01/2023
DWG.: M-101
SHEET: 37 OF 72



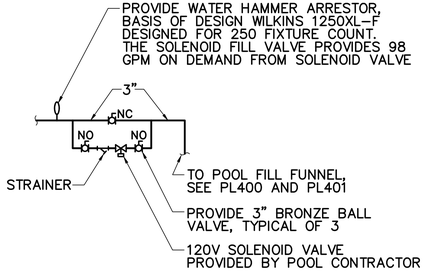
1 INDIRECT WASTE DETAIL
SB102 P-001 NOT TO SCALE



2 SUMP PUMP SP-1 DETAIL
P-101 P-001 NOT TO SCALE



3 WATER SUPPLY ENTRANCE DETAIL
P-001 NOT TO SCALE



NOTE:
INSTALL PIPING WITH MINIMUM 1/8" PER FOOT SLOPE FOR OFF SEASON DRAINING FREEZE PROTECTION. THIS DETAIL SHOWS THE ARRANGEMENT OF THE BYPASS IN VERTICAL, HOWEVER INSTALL THE BYPASS IN THE HORIZONTAL PLANE TO ENSURE THERE ARE NOT LOW SPOTS.

4 POOL FILL DETAIL
PL401 P-001 NOT TO SCALE

PLUMBING FIXTURE ROUGH-IN SCHEDULE

UNIT NO	DESCRIPTION	WASTE	VENT	HW	CW	REMARKS	NOTES
EM-1	EMERGENCY EYEWASH	–	–	–	–	EMERGENCY EYE WASH	1

NOTE: 1. PROVIDE SELF CONTAINED, STORAGE TYPE EMERGENCY EYE WASH CAPABLE OF PROVIDING 0.4 GPM FOR 15 MINUTES, WITH VALVES THAT REMAIN OPEN HANDS FREE AFTER ACTIVATION AND HAVE A MAXIMUM VALVE RESPONSE TIME OF 1 SECOND.

SUMP PUMP SCHEDULE

UNIT NO	SERVES	TYPE	GPM	TOTAL HEAD FT	MOTOR DATA			SUCTION/ DISCHARGE (IN)	BASIS OF DESIGN	NOTES
					HP	RPM	VOLTS/PHASE			
SP-1	BASEMENT	SUMP	20	17	4/10		115/1	2"	STANCOR SV-40A FS	1
SP-2	BASEMENT	SUMP	300	190	25		480/3	4"	WEIL 2525	

NOTE: 1. PROVIDE WITH 15 FOOT POWER CORD.

GENERAL NOTE

NOTE ON BASIS OF DESIGN

PRODUCTS OF OTHER MANUFACTURERS ARE ACCEPTABLE IF THEY MEET THE OPERATIONAL REQUIREMENTS INDICATED. ANY ADJUSTMENTS TO DUCTING, PIPING, WIRING OR CONFIGURATION DUE TO THE SELECTION OF A MANUFACTURER OTHER THAN THAT LISTED AS THE BASIS OF DESIGN WILL BE ACCOMPLISHED BY THE CONTRACTOR AT NO ADDITIONAL EXPENSE TO THE GOVERNMENT.

PLUMBING SYMBOLS LEGEND

ANNOTATION

H – SYMBOL PER ABBREVIATION LIST
2 – EQUIPMENT SEQUENCE NUMBER
2 – KEY NOTE

FIXTURES

EMERGENCY EYE WASH

EQUIPMENT & SPECIALTIES

FD – FLOOR DRAIN
WATER METER
REDUCED PRESSURE ZONE BACKFLOW PREVENTOR
HOSE BIBB OR HYDRANT

PIPING & VALVES

ELBOW DOWN
PIPE TEE UP OR UP AND DOWN
ELBOW UP OR UP AND DOWN
PIPE TEE DOWN
STRAINER
BALL VALVE
UNION
WCO – WALL CLEANOUT
FCO – FLOOR CLEANOUT
PRESSURE GAUGE AND COCK
CHECK VALVE, SWING
P – PIPE PITCH DOWN
PRESSURE RELIEF VALVE
CAP

PLUMBING ABBREVIATIONS

BFP	BACKFLOW PREVENTER
CW	COLD WATER
DN	DOWN
EM	EMERGENCY PLUMBING FIXTURE
FCO	FLOOR CLEANOUT
FD	FLOOR DRAIN
GPH	GALLONS PER HOUR
GPM	GALLONS PER MINUTE
HP	HORSEPOWER
HW	HOT WATER
IN	INCHES
KW	KILOWATT
NFWH	NON-FREEZE WALL HYDRANT
RPM	REVOLUTIONS PER MINUTE
RPZ	REDUCED PRESSURE ZONE
SAN	SANITARY
SP	STATIC PRESSURE, SUMP PUMP
SS	STAINLESS STEEL
TEMP	TEMPERATURE
TYP	TYPICAL
W	WASTE
WC	WATER COLUMN, WATER CLOSET
WCO	WALL CLEANOUT
WH	WALL HYDRANT/WATER HEATER
W&T	WASTE & TRAP

PLUMBING LINE TYPE LEGEND

REMOVE ITEMS
PROVIDE ITEMS
VENT
DOMESTIC COLD WATER
DOMESTIC HOT WATER
SAN – SANITARY SEWER
SAN – SANITARY SEWER BELOW FLOOR OR GRADE
W – WASTE PIPE

GENERAL PLUMBING NOTES

1. DUE TO THE USE OF CHLORINE, ALL PIPING MUST BE CPVC, SCHEDULE 40.
2. PLUMBING MUST BE DONE IN ACCORDANCE WITH INTERNATIONAL PLUMBING CODE (IPC) 2015 AND THE NEW HAMPSHIRE AMENDMENTS TO THE CODE, AND THE INTERNATIONAL ENERGY AND CONSERVATION CODE (IECC), 2015.
3. INSTALL SANITARY DRAINAGE WITH A PITCH OF 1/4 INCH PER FOOT FOR BUILDING SANITARY PIPING 3 INCHES AND SMALLER AND A PITCH OF 1/8 INCH PER FOOT FOR BUILDING SANITARY PIPING 4 INCHES AND LARGER.
4. FOR PIPE SIZES NOT SHOWN ON PLANS REFER TO APPROPRIATE PART PLANS AND RISER DIAGRAMS.
5. PIPING IS SHOWN DIAGRAMMATICALLY, EXACT LOCATION MUST BE DETERMINED IN THE FIELD.
6. PIPING MUST BE SUPPORTED FROM BUILDING STRUCTURE. DO NOT CUT STRUCTURAL MEMBERS.
7. PROVIDE ACCESSIBLE CLEANOUTS AT THE BASE OF STACKS, AT HORIZONTAL CHANGES OF DIRECTION GREATER THAN 45°, AND WHERE SHOWN ON DRAWINGS.
8. PIPING DROPS TO FIXTURES MUST BE ANCHORED SOLID TO WALL WITH CORROSION RESISTANT SUPPORT BRACKET WITH ADJUSTABLE CLIP.
9. PITCH WATER SUPPLY PIPING AS INDICATED TO GRAVITY DRAIN SYSTEM IN THE WALL.

NO.	DATE	DESCRIPTION	BY

REVISIONS

OAK POINT ASSOCIATES
ARCHITECTURE ■ ENGINEERING ■ PLANNING
85 Middle Street, Portsmouth, NH 03801 (T) 603.431.4846 (F) 603.431.1870
www.oakpoint.com

STATE OF MAINE
ANDREW J. KITCHEN
No. 13917
LICENSED PROFESSIONAL ENGINEER

DESIGNED BY: AJK
DRAWN BY: KLG
CHECKED BY: MSA
PROJECT: 21904.14

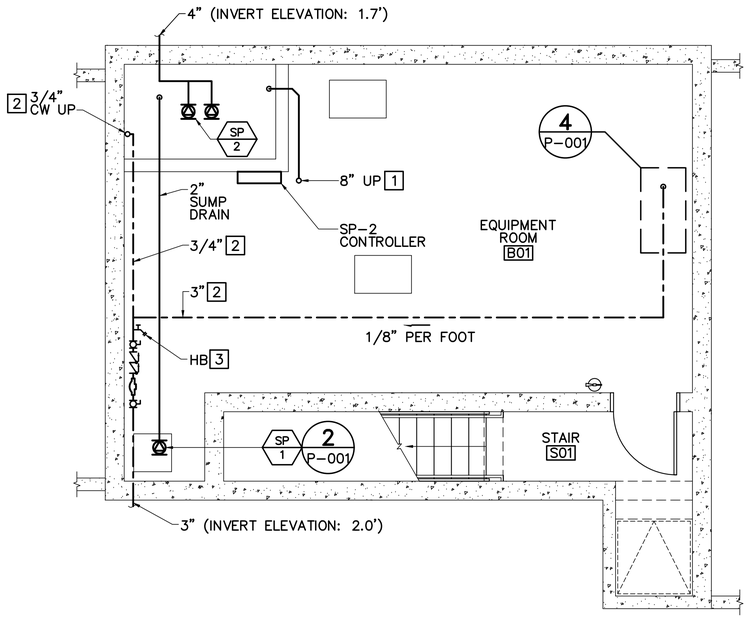
CITY OF PORTSMOUTH
1 Junkins Avenue
Portsmouth, NH 03801

BID #40 - 23
PEIRCE ISLAND PUMP HOUSE AND POOL RENOVATION
Peirce Island Road
Portsmouth, NH 03801

PLUMBING GENERAL NOTES, ABBREVIATIONS, LEGENDS AND SCHEDULES

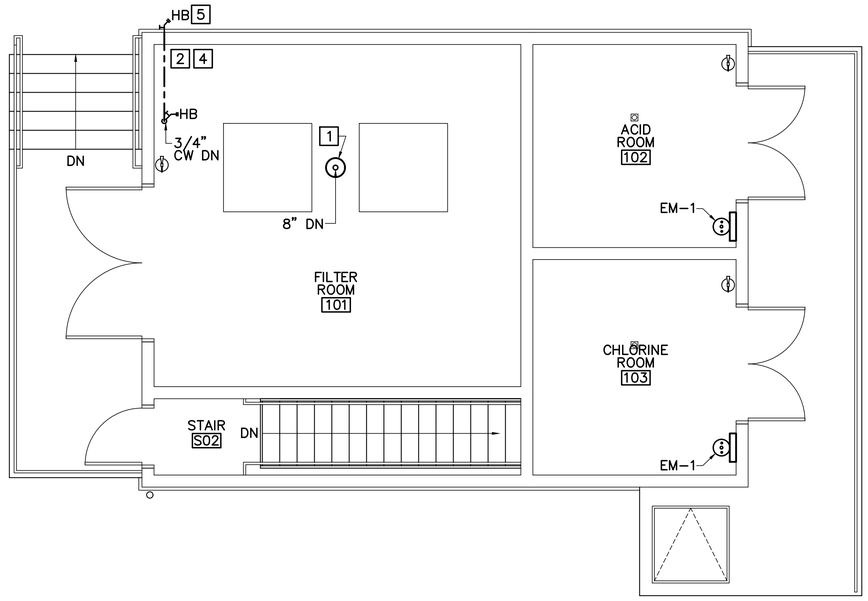
SCALE: AS NOTED
DATE: 03/01/2023
DWG.: P-001
SHEET: 38 OF 72

01 Mar, 2023 – 3:15pm
Z:\21904.14\21904.14-P001.dwg



1 BASEMENT AND UNDERSLAB PLUMBING PLAN
P-101 SCALE: 1/4"=1'-0"

PLAN NORTH



2 FIRST FLOOR PLUMBING PLAN
P-101 SCALE: 1/4"=1'-0"

PLAN NORTH

DRAWING KEYNOTES (THIS SHEET ONLY)

1. COORDINATE EXACT LOCATION OF DRAIN WITH DETAIL 5/PL401 AND DRAIN DETAIL 1/P-001.
2. INSTALL PIPING WITH 1/8" PER FOOT MINIMUM PITCH FOR OFF SEASON DRAINING.
3. HOSE BIBB FOR OFF SEASON FREEZE PROTECTION DRAINING, SLOPE ALL PIPE TO THIS POINT.
4. INSTALL PIPING LOW ON WALL UNDER VFD AND EQUIPMENT.
5. INSTALL BRASS HOSE BIBB WITH INTEGRAL WALL ESCUTCHEON AND REMOVABLE LEVER HANDLE.

GRAPHIC SCALE
4' 2' 0 4' 8'
1/4"=1'-0"
CHECK GRAPHIC SCALE BEFORE USING

NO.	DATE	DESCRIPTION	BY

REVISIONS

01 Mar, 2023 - 3:15pm
Z:\21904.14\21904.14-P101.dwg

OAK POINT ASSOCIATES
ARCHITECTURE ■ ENGINEERING ■ PLANNING
85 Middle Street, Portsmouth, NH 03801 (T) 603.431.4846 (F) 603.431.1870
www.oakpoint.com

STATE OF MAINE
ANDREW J. KITCHEN
No. 13917
LICENSED PROFESSIONAL ENGINEER

DESIGNED BY: AJK
DRAWN BY: RDA
CHECKED BY: MSA
PROJECT: 21904.14

CITY OF PORTSMOUTH
1 Junkins Avenue
Portsmouth, NH 03801

BID #40 - 23
PEIRCE ISLAND PUMP HOUSE AND POOL RENOVATION
Peirce Island Road
Portsmouth, NH 03801

PLUMBING PLANS

SCALE: AS NOTED
DATE: 03/01/2023
DWG.: P-101
SHEET: 39 OF 72

ELECTRICAL SYMBOLS

LIGHTING

NOTE: UPPER CASE SUBSCRIPTS INDICATE FIXTURE TYPE. REFER TO LIGHTING FIXTURE SCHEDULE.

- S — 120/277V, 20A LIGHT SWITCH, SPECIFICATION GRADE
- S_3 — 120/277V, 20A 3–WAY LIGHT SWITCH, SPECIFICATION GRADE
- A — LED LIGHT FIXTURES
- A — WALL MOUNTED FIXTURE
- OCCUPANCY SENSOR – DUAL TECHNOLOGY W=WALL SWITCH SENSOR
- ILLUMINATED EXIT SIGN, LED TYPE SINGLE FACE OR DOUBLE FACE, ARROW INDICATES DIRECTION OF FLOW FOR THE FACE
- WALL MOUNTED EMERGENCY LIGHT

RECEPTACLES

- DUPLEX RECEPTACLE, 120V, 20A, SPECIFICATION GRADE, NEMA 5–20 R
- G — DUPLEX RECEPTACLE, 120V, 20A SPECIFICATION GRADE, NEMA 5–20 R SUBSCRIPT "G" INDICATES GROUND FAULT INTERRUPT, "WP" INDICATES WEATHERPROOF GROUND FAULT INTERRUPT WITH WEATHERPROOF WHILE IN USE COVER.

GROUNDING

- G — GROUND WIRE, BARE
- GROUND ROD, COPPER CLAD.

SINGLE LINE DIAGRAM

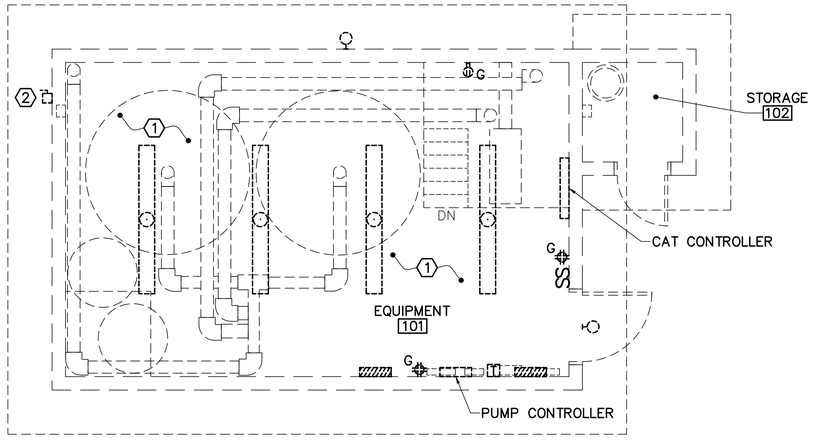
- M — METER
- GROUND CONNECTION
- TRANSFORMER

GENERAL

- MOTOR
- T — TRANSFORMER
- FUSED DISCONNECT SWITCH
- COMBINATION MOTOR STARTER/DISCONNECT
- A–1 — BRANCH CIRCUIT HOMERUN, A–1 INDICATES PANEL DESIGNATION AND CIRCUIT NUMBER
- PANELBOARD
- EXISTING PANELBOARD
- SPD — EXTERNAL SURGE PROTECTIVE DEVICE

LINE TYPE LEGEND

- REMOVE EXISTING ITEMS
- EXIST ITEMS TO REMAIN
- PROVIDE ITEMS



1 E–001 EXISTING PUMP HOUSE ELECTRICAL REMOVALS PLAN
SCALE: 1/4"=1'–0"

PLAN NORTH

ELECTRICAL GENERAL NOTES

1. ELECTRICAL INSTALLATION MUST COMPLY WITH THE REQUIREMENTS OF THE LATEST EDITION OF THE NATIONAL ELECTRICAL CODE (NEC), NFPA, AND STATE AND LOCAL CODES.
2. COORDINATE WORK WITH ARCHITECTURAL, CIVIL, STRUCTURAL, PLUMBING, AND MECHANICAL TRADES.
3. ELECTRICAL EQUIPMENT AND WIRING MUST BE NEW AND UL LISTED UNLESS OTHERWISE NOTED.
4. COORDINATE LIGHT FIXTURES AND OTHER CEILING MOUNTED ELECTRICAL EQUIPMENT WITH ARCHITECTURAL, STRUCTURAL, PLUMBING, AND MECHANICAL WORK TO AVOID INTERFERENCE.
5. A SEPARATE GREEN GROUNDING CONDUCTOR MUST BE PROVIDED FOR EACH INDIVIDUAL CIRCUIT. METAL CONDUIT MUST BE GROUNDED BUT MUST NOT BE USED AS THE EQUIPMENT GROUNDING CONDUCTOR.
6. VERIFY EXISTING CONDITIONS AND DIMENSIONS AND REPORT DISCREPANCIES TO THE OWNER. PROCEED WITH THE WORK ONLY AFTER THE DISCREPANCIES HAVE BEEN RESOLVED BY THE OWNER.
7. CONDUCTORS MUST BE MINIMUM #12 AWG UNLESS NOTED OTHERWISE.
8. CONDUIT MUST BE MINIMUM 1/2" UNLESS OTHERWISE NOTED.
9. UNLESS OTHERWISE INDICATED, WIRE AND CONDUIT SIZE FOR EACH 15A 1P, 15A 2P, 20A 1P AND 20A 2P BRANCH CIRCUIT MUST BE 2 #12 + #12G, IN 3/4"C.
10. PROVIDE A SEPARATE NEUTRAL CONDUCTOR FOR EACH INDIVIDUAL 120V CIRCUIT.
11. EXTERIOR MUST BE CONCEALED.

MOUNTING HEIGHT SCHEDULE

1. RECEPTACLES: 36" AFF UNLESS NOTED OTHERWISE.
2. SWITCHES: 48" AFF.

ELECTRICAL ABBREVIATIONS

A, AMP	AMPERE
A3P	AMPERES, 3–POLE
AC	ALTERNATING CURRENT
AFF	ABOVE FINISHED FLOOR
AIC	AMPERE INTERRUPTING CAPACITY
AVG	AVERAGE
AWG	AMERICAN WIRE GAUGE
BKR	BREAKER
C	CONDUCTOR, CONDUIT
CAT	CATALOG, CATEGORY
CB	CIRCUIT BREAKER
CKT	CIRCUIT
CU	COPPER
DWG	DRAWING
EF	EXHAUST FAN
EMT	ELECTRICAL METALLIC TUBING
G	GROUND; GROUND FAULT CIRCUIT INTERRUPTER
GFCI	GROUND FAULT CIRCUIT INTERRUPTER
H	HEATING LOAD TYPE FOR PANEL SCHEDULE
HVAC	HEATING, VENTILATION, AND AIR CONDITIONING
KCMIL	KILO–CIRCULAR MILS
KVA	KILO–VOLT–AMPERE
KW	KILO–WATT
L	LIGHTING LOAD TYPE FOR PANEL SCHEDULE
LED	LIGHT EMITTING DIODE
LTG	LIGHTING
M	MOTOR LOAD TYPE FOR PANEL SCHEDULE
MAX	MAXIMUM
MCB	MAIN CIRCUIT BREAKER
MDP	MAIN DISTRIBUTION PANELBOARD
MIN	MINIMUM
MLO	MAIN LUG ONLY
N	NEUTRAL
NEC	NATIONAL ELECTRIC CODE
NEMA	NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION
NFPA	NATIONAL FIRE PROTECTION ASSOCIATION
NO, #	NUMBER
OCC	OCCUPANCY
ø	PHASE
P	POLE
P/O	PART OF
R	RECEPTACLE LOAD TYPE FOR PANEL SCHEDULE
REC	RECEPTACLE
RGS	RIGID GALVANIZED STEEL
RM	ROOM
RMC	RIGID METAL CONDUIT
SPD	SURGE PROTECTIVE DEVICE
SW	SWITCH
THHN	HEAT RESISTANT THERMOPLASTIC WIRE WITH NYLON JACKET
THWN	MOISTURE & HEAT RESISTANT THERMOPLASTIC WIRE WITH NYLON JACKET
TYP	TYPICAL
UE	UNDERGROUND ELECTRIC
UH	UNIT HEATER
UL	UNDERWRITERS LABORATORIES
V	VOLT
VA	VOLT AMPERE
W	WATT, WIRE
W/	WITH
WP	WEATHERPROOF

REMOVALS KEYNOTES (THIS SHEET ONLY)

1. REMOVE AND DISPOSE (12) FLUORESCENT LAMPS AND (6) BALLASTS.
2. REMOVE UNDERGROUND CONNECTION TO THE BUILDING. PULL BACK WIRE FROM POLE. REFER TO SHEET CD101 FOR LOCATIONS.

GRAPHIC SCALE

1/4"=1'–0" (4' 2' 0 4' 8')

CHECK GRAPHIC SCALE BEFORE USING

NO.	DATE	DESCRIPTION	BY
REVISIONS			

28 Feb, 2023 – 11:02am
C:\DFILE\21904.14–E001.dwg

OAK POINT ASSOCIATES
ARCHITECTURE ■ ENGINEERING ■ PLANNING
85 Middle Street, Portsmouth, NH 03801 (T) 603.431.4808 (F) 603.431.1870
www.oakpoint.com

STATE OF NEW HAMPSHIRE — KELLY ANN O'BRIEN No. 15235 LICENSED PROFESSIONAL ENGINEER — 3.1.2023

DESIGNED BY: KAO
DRAWN BY: RSW
CHECKED BY: KAO
PROJECT: 21904.14

CITY OF PORTSMOUTH
1 Junkins Avenue
Portsmouth, NH 03801

BID #40 - 23
PEIRCE ISLAND PUMP HOUSE AND POOL RENOVATION
Peirce Island Road
Portsmouth, NH 03801

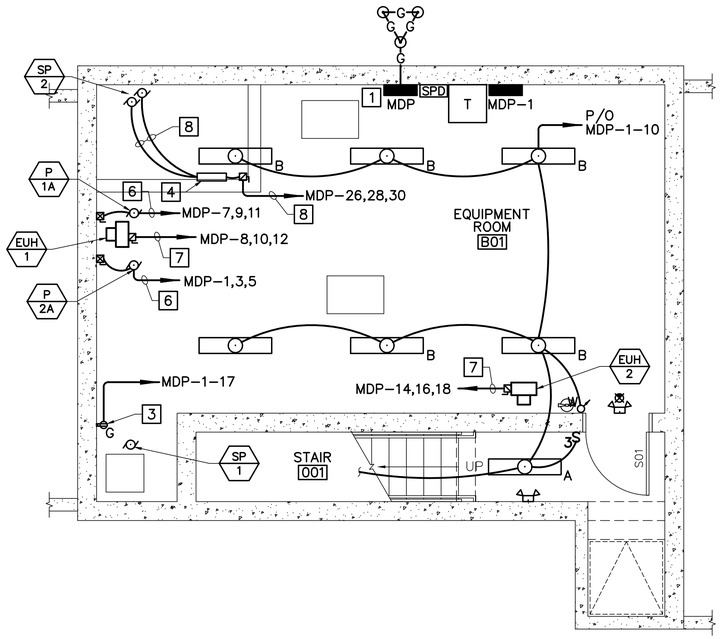
ELECTRICAL SYMBOLS, ABBREVIATIONS, GENERAL NOTES, AND REMOVALS

SCALE: AS NOTED

DATE: 03/01/2023

DWG.: E-001

SHEET: 40 OF 72



1 BASEMENT ELECTRICAL PLAN
EP101 SCALE: 1/4"=1'-0"

PLAN NORTH

GENERAL NOTES (THIS SHEET ONLY)

1. REFER TO SHEET E-001 FOR ELECTRICAL SYMBOLS, ABBREVIATIONS, AND GENERAL NOTES.
2. REFER TO SHEET EP601 FOR PANELBOARD SCHEDULES.
3. BOND METALLIC POOL EQUIPMENT, ACCESSORIES, AND REINFORCING BARS.
4. PROVIDE COPPER CONDUCTOR GRID. PROVIDE MINIMUM 8 AWG BARE SOLID COPPER CONDUCTORS BONDED TO EACH OTHER AT ALL POINTS OF CROSSING. WHEN CONNECTING TO REBAR, USE REBAR CLAMPS. THE GRID MUST CONFORM TO THE CONTOUR OF THE POOL IN A 12" BY 12" UNIFORMLY SPACED. SECURE WITHIN OR UNDER THE POOL NO MORE THAN 6 INCHES FROM THE OUTER CONTOUR OF THE POOL SHELL.
5. CONNECT EXIT SIGNS AND EMERGENCY FIXTURES TO LOCAL LIGHTING CIRCUITS AHEAD OF ANY SWITCHES, OCCUPANCY SENSORS, ETC.

DRAWING KEYNOTES (THIS SHEET ONLY)

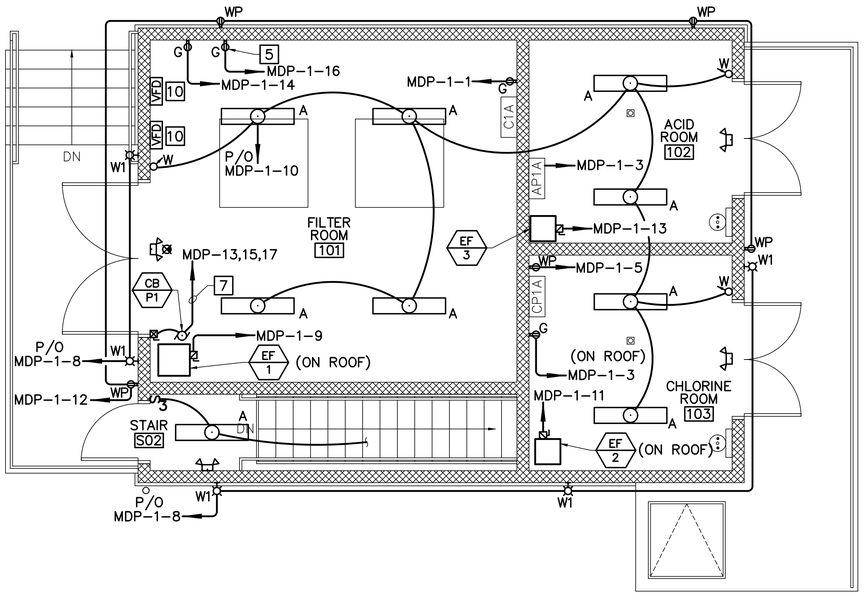
1. WALL MOUNT REMOTE INVERTER FOR EXTERIOR FIXTURES, CONNECT TO TYPE W1 FIXTURES.
2. REFER TO SHEET EP601 FOR GROUNDING DETAILS.
3. COORDINATE LOCATION WITH SUMP PUMP.
4. PROVIDE CONNECTIONS FROM SUMP PUMP TO WALL MOUNTED PUMP CONTROLLER PANEL.
5. PROVIDE CONNECTIONS FROM EF-1 TO CONTROLLER PANEL.
6. 3 #4, #8G-1"C.
7. 3 #10, #12G-3/4"C.
8. 3 #8, #8G-1"C.
9. UTILITY METER. COMPLY WITH EVERSOURCE STANDARDS. COORDINATE WITH EVERSOURCE FOR LOCATION AND INSTALLATION.
10. PROVIDE CONNECTIONS FROM VFD TO ASSOCIATED PUMP, WITH 3#4, #8G – 1"C.

LIGHTING FIXTURE SCHEDULE

TYPE	DESCRIPTION	SOURCE	LUMENS	VOLTS	WATTS	MOUNTING	NOTES	MANUFACTURER	CATALOG NUMBER
A	ENCLOSED GASKETED FIXTURE	LED	4184	120	33.3	CHAIN	1	COLUMBIA	LXEM4-35LW-RFA-EDU
B	ENCLOSED GASKETED FIXTURE	LED	3150	120	24.5	CHAIN	1	COLUMBIA	LXEM4-35VW-RFA-EDU
W1	WALL MOUNTED FULL CUTOFF EXTERIOR FIXTURE	LED	1272	120	17	WALL	2,3	HUBBELL	LNC-7LU-3K-2
⊠	EXIT SIGN – SINGLE FACE	LED'S (2)	–	120	17	UNIVERSAL	–	DUAL LITE	EVE-U-R-W-E
	DUAL HEAD EMERGENCY LIGHT W/BATTERY	LED	–	12	10.8	WALL	–	HUBBELL	LM-16-12-1205L

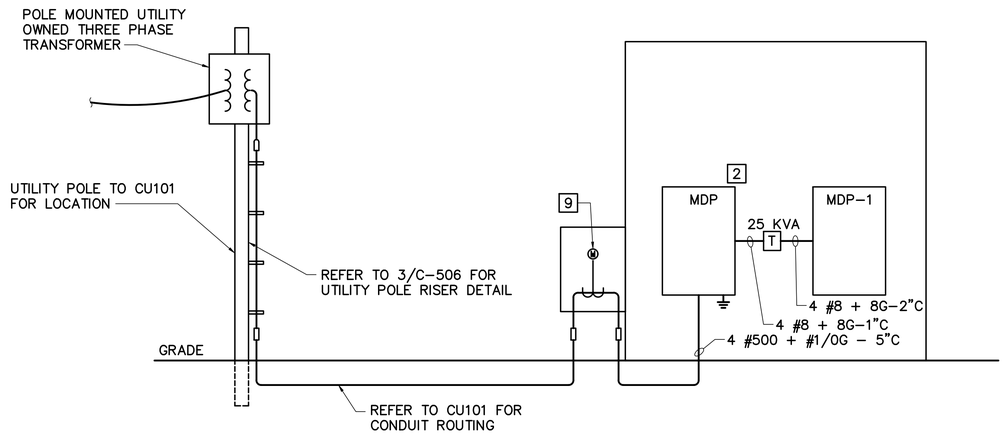
FIXTURE SCHEDULE NOTES:

1. COORDINATE MOUNTING WITH ARCHITECTURAL TRADE.
2. PROVIDE REMOTE MOUNTED EMERGENCY INVERTER TO OPERATE. SIZE FOR CONNECTED LOAD. BASIS OF DESIGN: DUALLITE LITEGEAR LG125.
3. PROVIDE PHOTOCELL AND TIME CLOCK FOR BUILDING MOUNTED LIGHTING CONTROL. PHOTOCELL SHALL TURN FIXTURES ON AT 3FC. COORDINATE TIMECLOCK ON/OFF SCHEDULE WITH BUILDING OWNER.



2 FIRST FLOOR ELECTRICAL PLAN
EP101 SCALE: 1/4"=1'-0"

PLAN NORTH



3 ONE-LINE DIAGRAM
EP101 NOT TO SCALE

GRAPHIC SCALE
1/4"=1'-0"
4' 2' 0 4' 8'
CHECK GRAPHIC SCALE BEFORE USING

NO.	DATE	DESCRIPTION	BY
		REVISIONS	

28 Feb, 2023 – 11:10am
C:\DFILE\21904.14-EP101.dwg

OAK POINT ASSOCIATES
ARCHITECTURE ■ ENGINEERING ■ PLANNING
85 Middle Street, Portsmouth, NH 03801 (T) 603.431.4849 (F) 603.431.1870
www.oakpoint.com

STATE OF NEW HAMPSHIRE – KELLY ANN O'BRIEN No. 15235 – LICENSED PROFESSIONAL ENGINEER
3.1.2023

DESIGNED BY: KOA
DRAWN BY: RSW
CHECKED BY: KAO
PROJECT: 21904.14

CITY OF PORTSMOUTH
1 Junkins Avenue
Portsmouth, NH 03801

BID #40 - 23
PEIRCE ISLAND PUMP HOUSE AND POOL RENOVATION
Peirce Island Road
Portsmouth, NH 03801

PUMP HOUSE ELECTRICAL PLANS, SCHEDULE AND DIAGRAM

SCALE: AS NOTED
DATE: 03/01/2023
DWG.: EP101
SHEET: 41 OF 72

PANELBOARD SCHEDULE MDP

SERVICE ENTRANCE RATED
PROVIDE SURGE PROTECTIVE DEVICE

CKT NO	AMPS PER PHASE A	B	C	DESCRIPTION	LOAD TYPE	CKT BKR TRIP	POLE	CKT BKR TRIP	POLE	LOAD TYPE	DESCRIPTION	AMPS PER PHASE A	B	C	CKT NO
1	65			2A (50 HP)	M	100	3	40	3	–	PANEL MDP-1 VIA TRANSFORMER	22.9			2
3		65											15		4
5			65											13	6
7	65			1A (50 HP)	M	100	3	25	3	H	EUH-1 (15KW)	18			8
9		65											18		10
11			65											18	12
13	3.4			CBP1 (2 HP)	M	15	3	25	3	H	EUH-2 (15KW)	18			14
15		3.4											18		16
17			3.4											18	18
19	·			–	–	20	1	20	1	–	–	·			20
21		·		–	–	20	1	20	1	–	–		·		22
23			·	–	–	20	1	20	1	–	–			·	24
25	·			–	–	20	1	20	1	–	–	·			26
27		·		–	–	20	1	80	3	M	SP-2 (30 HP)		40		28
29			·	–	–	20	1							40	30
31	·			–	–	20	1					40			32
33		·		–	–	20	1	20	1	–	–		·		34
35			·	–	–	20	1	20	1	–	–			·	36
37	·			–	–	20	1	20	1	–	–	·			38
39		·		–	–	20	1	20	1	–	–		·		40
41			·	–	–	20	1	20	1	–	–			·	42
	230.7	224.4	222.4	TOTAL/PHASE											

VOLTS: 480/277, 3 PHASE, 4 WIRE
MCB: ☒ MCB AMPS: 400
MLO: ☐ BUS AMPS: 400
FAULT AMPS: 24,000

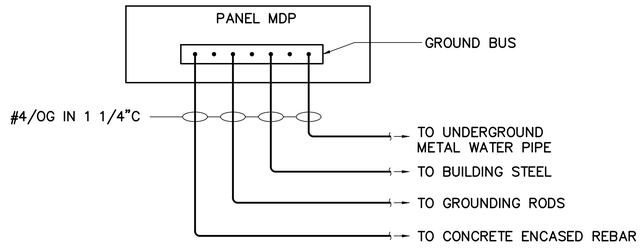
DESIGNATION: MDP
LOCATION: B01
MOUNTING: SURFACE

PANELBOARD SCHEDULE MDP-1

CKT NO	AMPS PER PHASE A	B	C	DESCRIPTION	LOAD TYPE	CKT BKR TRIP	POLE	CKT BKR TRIP	POLE	LOAD TYPE	DESCRIPTION	AMPS PER PHASE A	B	C	CKT NO
1	5			C1A	R	20	1	50	1	M	AC-1 AIR COMPRESSOR 2 HP	24			2
3		5		AP1A	R	20	1	20	1	R	AF1A WATER LEVEL CONTROL		5		4
5			·	CP1A	R	20	1	20	1	–	–			·	6
7	·			–	–	20	1	20	1	L	EXTERIOR LIGHTING	5			8
9		13.8		EF-1 (3/4 HP)	M	20	1	20	1	L	INTERIOR LIGHTING		5		10
11			13.8	EF-2 (3/4 HP)	M	20	1	20	1	R	EXTERIOR REC			3	12
13	13.8			EF-3 (3/4 HP)	M	20	1	20	1	R	MOTOR CONTROLLER	5			14
15		·		–	–	20	1	20	1	R	GAS CONTROLLER		5		16
17			9.8	SP-1 (2/5 HP)	M	20	1	20	1	R	SUMP PUMP 2 CONTROLLER			5	18
19	·			–	–	20	1	20	1	–	–	·			20
21		·		–	–	20	1	20	1	–	–		·		22
23			·	–	–	20	1	20	1	–	–			·	24
	52.8	33.8	31.6	TOTAL/PHASE											

VOLTS: 120/208, 3 PHASE, 4 WIRE
MCB: ☒ MCB AMPS: 100
MLO: ☐ BUS AMPS: 100
FAULT AMPS: 24,000

DESIGNATION: MDP-1
LOCATION: B01
MOUNTING: SURFACE



ELECTRIC SERVICE GROUNDING DETAIL NOTES:

1. COMPLY WITH NEC, SPECIFICALLY NEC 250.50 AND 250.52.
2. PROVIDE THERMAL WELDED OR IRREVERSIBLE COMPRESSION CONNECTIONS.
3. MINIMUM CONDUCTOR SIZE TO GROUND RODS MUST BE #1/0 COPPER.
4. MINIMUM CONDUCTOR SIZE TO OTHER GROUNDING ELECTRODES MUST BE #4/0 COPPER.
5. GROUND ROD CONNECTION MUST BE UL LISTED, SUITABLE FOR DIRECT BURIAL, THERMAL WELD.
6. CONDUCTORS AND CONDUIT MUST BE CONCEALED.

1 / EP601 GROUNDING ELECTRODE SYSTEM DETAIL

NOT TO SCALE

GENERAL NOTE

1. REFER TO SHEET E-001 FOR ELECTRICAL SYMBOLS, ABBREVIATIONS, AND GENERAL NOTES.

NO.	DATE	DESCRIPTION	BY

REVISIONS

28 Feb, 2023 – 11:13am
C:\DFILE\21904.14-EP601.dwg

OAK POINT ASSOCIATES
ARCHITECTURE ■ ENGINEERING ■ PLANNING
85 Middle Street, Portsmouth, NH 03801 (T) 603.431.4849 (F) 603.431.1870
www.oakpoint.com

KELLY ANN O'BRIEN No. 15235 LICENSED PROFESSIONAL ENGINEER STATE OF NEW HAMPSHIRE
3.1.2023

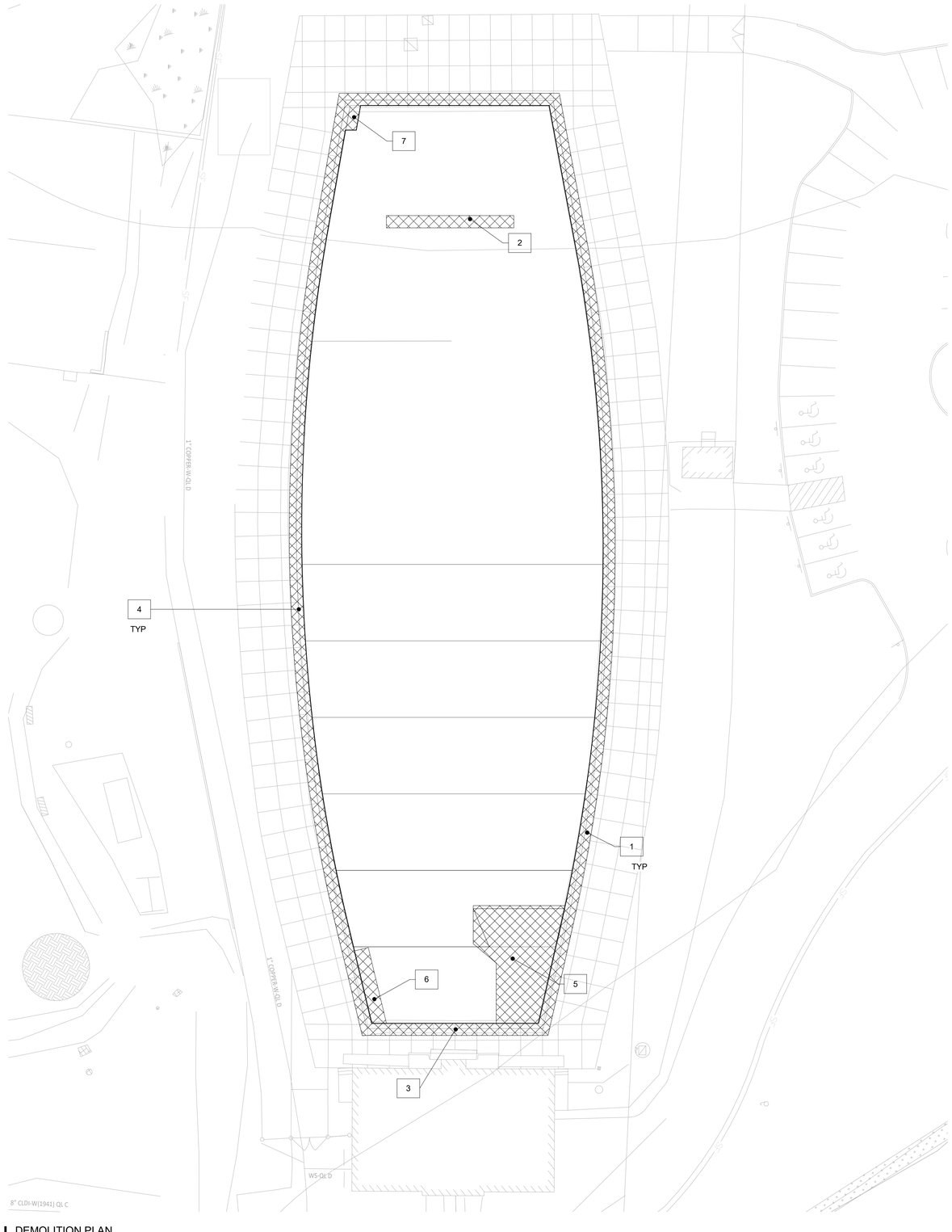
DESIGNED BY: KAO
DRAWN BY: RSW
CHECKED BY: KAO
PROJECT: 21904.14

CITY OF PORTSMOUTH
1 Junkins Avenue
Portsmouth, NH 03801

BID #40 - 23
PEIRCE ISLAND PUMP HOUSE AND POOL RENOVATION
Peirce Island Road
Portsmouth, NH 03801

PANELBOARD SCHEDULES AND DETAILS

SCALE: AS NOTED
DATE: 03/01/2023
DWG.: EP601
SHEET: 42 OF 72



1 D100 DEMOLITION PLAN
PLAN VIEW
1" = 20'-0"

SCHEDULE - SHEET LIST

SHEET NO.	SHEET NAME
D100	DEMOLITION PLAN
D101	DEMOLITION IMAGES AND DETAILS
PL100	OVERALL AQUATIC PLAN
PL101	GENERAL DETAILS AND SCHEDULES
PL110	POOL A - LEISURE POOL PLAN
PL111	POOL A - LEISURE POOL DIMENSION PLAN
PL112	POOL A - LEISURE POOL SECTIONS AND DETAILS
PL113	POOL A - LEISURE POOL DETAILS - 1
PL114	POOL A - LEISURE POOL DETAILS - 2
PL115	POOL A - SURGE TANK PLAN AND SECTIONS
PL200	STRUCTURAL NOTES, PLAN(S) AND SCHEDULE
PL210	STRUCTURAL GENERAL DETAILS
PL211	STRUCTURAL DETAILS - 1
PL212	STRUCTURAL DETAILS - 2
PL300	OVERALL PIPING PLAN
PL301	GENERAL NOTES
PL302	GENERAL DETAILS
PL310	POOL A - PIPING PLAN (NORTHERN END)
PL311	POOL A - PIPING PLAN (SOUTHERN END)
PL400	MECHANICAL EQUIPMENT PLAN
PL401	MECHANICAL DETAILS 1
PL402	MECHANICAL DETAILS 2
PL403	MECHANICAL DETAILS 3
PL404	MECHANICAL DETAILS 4
PL405	DEFENDER SCHEMATIC
PL406	DEFENDER DETAILS
PL500	MECHANICAL SCHEMATIC
PL501	ELECTRICAL SCHEMATIC
PL600	MECHANICAL ROOM PIPE PENETRATIONS
PL601	PIPE PENETRATION SECTIONS

GENERAL DEMOLITION NOTES:

1. ALL CONDITIONS SHOWN ON THIS DRAWING ARE EXISTING. OWNER AND ARCHITECT ASSUME NO RESPONSIBILITY FOR ACCURACY OR COMPLETENESS OF INFORMATION SHOWN. CONTRACTORS ARE RESPONSIBLE TO VISIT THE SITE AND REVIEW ALL DOCUMENTS PRIOR TO SUBMITTING THEIR BID TO COMPLETELY FAMILIARIZE THEMSELVES WITH ALL CONDITIONS.
2. DEMOLITION DRAWINGS ARE INTENDED TO BE SCHEMATIC IN NATURE, AND MAY NOT DESCRIBE ALL MISCELLANEOUS WORK NECESSARY TO COMPLETE THE DEMOLITION AND NEW WORK. CONTRACTOR MUST INCLUDE THIS MISCELLANEOUS NECESSARY WORK IN BASE BID.
3. CONTRACTOR MUST DISCONNECT AND REMOVE ALL EXISTING POOL EQUIPMENT WITHIN THE LIMITS INDICATED WITH HATCHING (▽▽▽▽▽▽). SEE DRAWING NOTES FOR EQUIPMENT THAT MUST BE REUSED IN PLACE AND EQUIPMENT THAT MUST BE RELOCATED AND REUSED.
4. CONTRACTOR MUST DISCONNECT AND REMOVE ALL EXISTING ABOVE GRADE POOL RECIRCULATION SYSTEM PIPING, VALVES, FITTINGS, PIPING SUPPORTS, AND SUPPORT FASTENING HARDWARE. THIS SYSTEM PIPING TO INCLUDE BUT IS NOT LIMITED TO: POOL FILTRATION SUPPLY AND RETURN, POOL CHEMICAL TREATMENT SUPPLY AND RETURN.
5. CONTRACTOR MUST DISCONNECT AND REMOVE ALL FILTRATION PUMP SUCTION PIPING, VALVES, FITTINGS, PIPING SUPPORTS, AND SUPPORT FASTENING HARDWARE LOCATED INSIDE THE EXISTING SURGE TANK. FOLLOW ALL HEALTH AND SAFETY WORK RELATED REQUIREMENTS FOR CONFINED SPACE ENTRY.
6. UNLESS NOTED OTHERWISE ON THE PLAN, CONTRACTOR SHALL DISPOSE OF ALL REMOVED EQUIPMENT AND MATERIALS IN A LEGAL MANNER OFF SITE. COPIES OF ALL MANIFESTS SHALL BE GIVEN TO THE OWNER SHOWING FINAL DISPOSAL LOCATION OF ALL MATERIALS.
7. CONTRACTOR MUST MAINTAIN DUST CONTROL AT ALL TIMES.
8. CONTRACTOR MUST PROTECT ALL CATCH BASINS, SEWER INLETS, ETC., FROM DEBRIS AND SEDIMENTATION DURING DEMOLITION.
9. CONTRACTOR MUST LIMIT THE EXTENT OF HIS DISRUPTION TO THE INDICATED WORK AREA, AND TAKE CARE NOT TO DISRUPT THE SURROUNDING AREA.
10. CONTRACTOR IS RESPONSIBLE FOR COORDINATING AND TERMINATING EXISTING ELECTRICAL POWER, WATER, AND GAS LINES WITH LOCAL UTILITIES.
11. REFER TO STRUCTURAL SD SERIES DRAWINGS, MECHANICAL MD SERIES DRAWINGS, ELECTRICAL ED SERIES DRAWINGS, AND PLUMBING PD SERIES DRAWINGS FOR ADDITIONAL DEMOLITION SCOPE OF WORK.
12. REFER TO ALL OTHER DRAWINGS FOR FURTHER DETAIL ON NEW CONSTRUCTION REQUIREMENTS.

DEFINITIONS:

A. ***REMOVE***: REMOVE AND LEGALLY DISPOSE OF ITEMS EXCEPT THOSE INDICATED TO BE REINSTALLED, SALVAGED, OR TO REMAIN THE OWNER'S PROPERTY.
B. ***REMOVE AND SALVAGE***: ITEMS INDICATED TO BE REMOVED AND SALVAGED REMAIN THE OWNER'S PROPERTY. REMOVE, CLEAN, AND PACK OR CRATE ITEMS TO PROTECT AGAINST DAMAGE. IDENTIFY CONTENTS OF CONTAINERS AND DELIVER TO OWNER'S DESIGNATED STORAGE AREA.
C. ***REMOVE AND REINSTALL***: REMOVE ITEMS INDICATED; CLEAN, SERVICE, AND OTHERWISE PREPARE THEM FOR REUSE; STORE AND PROTECT AGAINST DAMAGE. REINSTALL ITEMS IN THE SAME LOCATIONS OR IN LOCATIONS INDICATED.
D. ***EXISTING TO REMAIN***: PROTECT CONSTRUCTION INDICATED TO REMAIN AGAINST DAMAGE AND SOILING DURING SELECTIVE DEMOLITION. WHEN PERMITTED BY THE OWNER OR ARCHITECT, ITEMS MAY BE REMOVED TO A SUITABLE, PROTECTED STORAGE LOCATION DURING SELECTIVE DEMOLITION AND THEN CLEANED AND REINSTALLED IN THEIR ORIGINAL LOCATIONS.

KEYNOTE	DESCRIPTION
1	REMOVE EXISTING CONCRETE GUTTER. REFER TO DETAIL 5 / PL113 FOR DEPTH AND EXTENT OF CUT
2	REMOVE EXISTING POOL MAIN DRAINS.
3	REMOVE EXISTING MANUAL FILL, VALVES AND ABOVE GRADE PIPING. CAP PIPING BELOW GRADE AND ABANDON
4	REMOVE EXISTING CONCRETE APRON FOR INSTALLATION OF NEW SS GUTTER
5	REMOVE EXISTING FINISH AND CONCRETE AS NEEDED FOR INSTALLATION OF NEW RAMPED ENTRY.
6	REMOVE EXISTING RAMPED ENTRY, HANDRAILS AND ASSOCIATED HARDWARE.
7	REMOVE EXISTING BUMP OUT IN POOL WALL.

WTI
WATER TECHNOLOGY INC.
World Leaders in Aquatic Planning, Design and Engineering
100 Park Avenue | Beaver Dam, WI 53916
t 920.887.7375 | #18176

NO.	DATE	DESCRIPTION	BY
REVISIONS			

OAK POINT ASSOCIATES
ARCHITECTURE ■ ENGINEERING ■ PLANNING
85 Middle Street, Portsmouth, NH 03801 (T) 603.431.4849 (F) 603.431.1870
www.oakpoint.com

BRIAN W. FREBER No. 11825 LICENSED PROFESSIONAL ENGINEER STATE OF NEW HAMPSHIRE
03/01/2023

DESIGNED BY: APP
DRAWN BY: MJC
CHECKED BY: WRB
PROJECT: 21904.14

CITY OF PORTSMOUTH
1 Junkins Avenue
Portsmouth, NH 03801

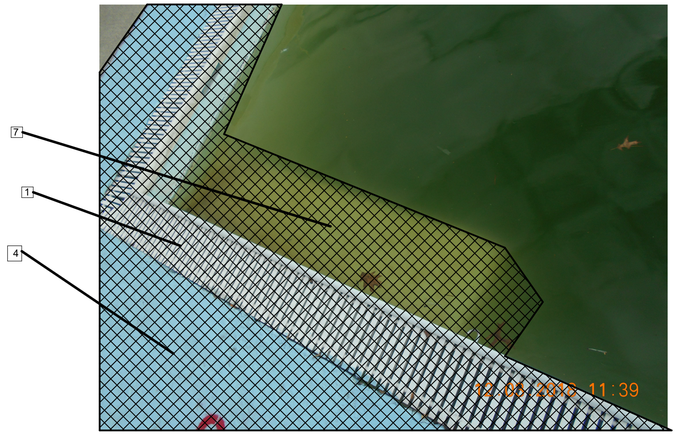
BID #40 - 23
PEIRCE ISLAND PUMP HOUSE AND POOL RENOVATION
Peirce Island Road
Portsmouth, NH 03801

DEMOLITION PLAN

SCALE: AS NOTED
DATE: 03/01/2023
DWG.: D100
SHEET: 43 OF 72

6 D101 EXISTING APRON/GUTTER DEOMLITION DETAIL VIEW
NOT TO SCALE

3 D101 EXISTING RAMP DEMO DETAIL VIEW
NOT TO SCALE



1 D101 EXISTING BUMP OUT DEMO DETAIL VIEW
NOT TO SCALE

7 D101 EXISTING GUTTER DEMO DETAIL VIEW
NOT TO SCALE

4 D101 EXISTING GUTTER DEMO DETAIL VIEW
NOT TO SCALE

2 D101 CONCRETE APRON DEMOLITION DETAIL VIEW
NOT TO SCALE

5 D101 EXISTING MANUAL FILL DEMOLITION DETAIL VIEW
NOT TO SCALE

KEYNOTE	DESCRIPTION
1	REMOVE EXISTING CONCRETE GUTTER. REFER TO DETAIL 5 / PL113 FOR DEPTH AND EXTENT OF CUT
2	REMOVE EXISTING POOL MAIN DRAINS.
3	REMOVE EXISTING MANUAL FILL, VALVES AND ABOVE GRADE PIPING. CAP PIPING BELOW GRADE AND ABANDON
4	REMOVE EXISTING CONCRETE APRON FOR INSTALLATION OF NEW SS GUTTER
5	REMOVE EXISTING FINISH AND CONCRETE AS NEEDED FOR INSTALLATION OF NEW RAMPED ENTRY.
6	REMOVE EXISTING RAMPED ENTRY, HANDRAILS AND ASSOCIATED HARDWARE.
7	REMOVE EXISTING BUMP OUT IN POOL WALL.

WTI
WATER TECHNOLOGY INC.
World Leaders in Aquatic Planning, Design and Engineering
100 Park Avenue | Beaver Dam, WI 53916
t 920.887.7375 | #18176

NO.	DATE	DESCRIPTION	BY

REVISIONS

OAK POINT ASSOCIATES
ARCHITECTURE ■ ENGINEERING ■ PLANNING
85 Middle Street, Portsmouth, NH 03801 (T) 603.431.4849 (F) 603.431.1870
www.oakpoint.com

BRIAN W. FREBER No. 11825 LICENSED PROFESSIONAL ENGINEER STATE OF NEW HAMPSHIRE
03/01/2023

APP MJC
WRB

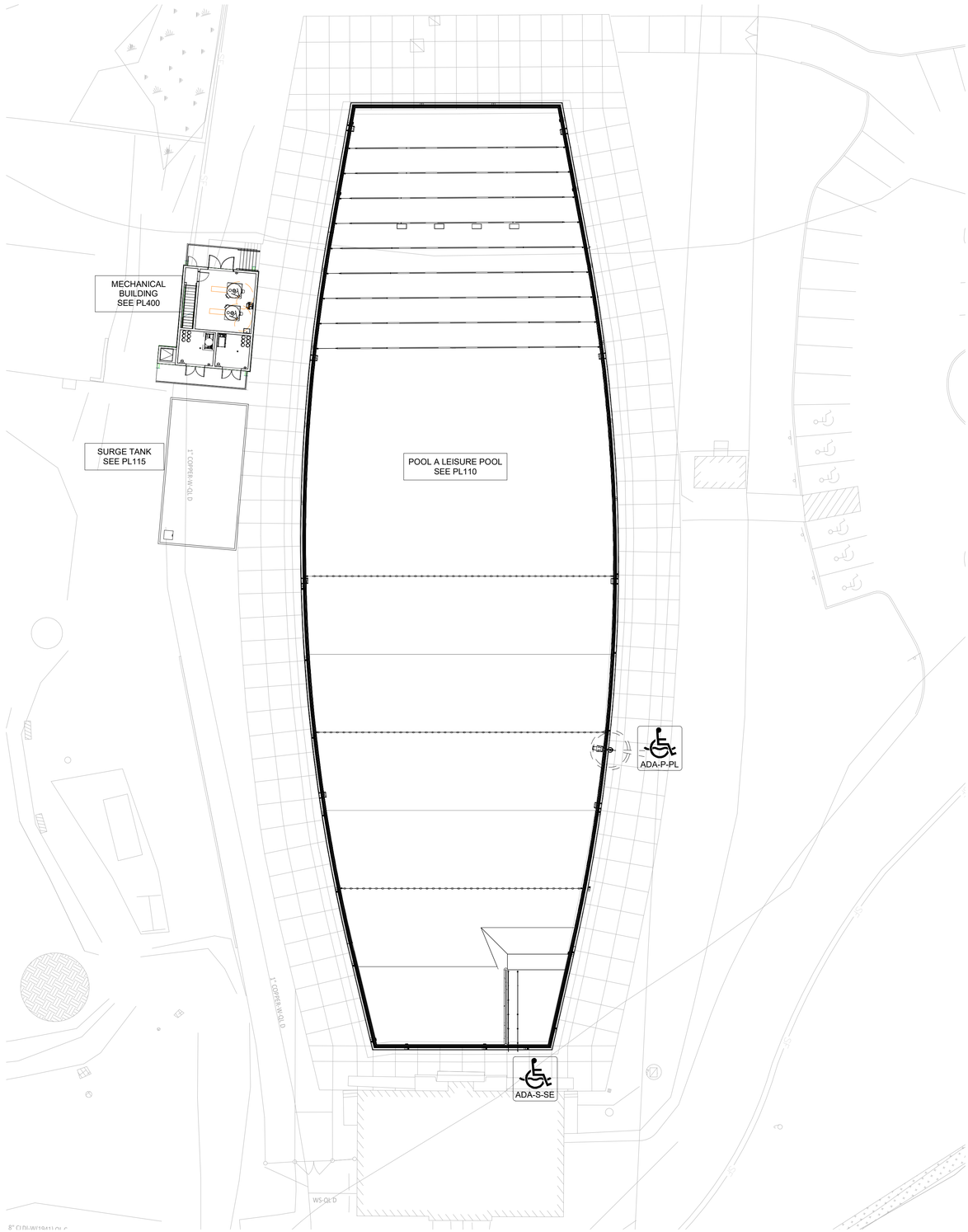
DESIGNED BY:
DRAWN BY:
CHECKED BY:
PROJECT: 21904.14

CITY OF PORTSMOUTH
1 Junkins Avenue
Portsmouth, NH 03801

BID #40 - 23
PEIRCE ISLAND PUMP HOUSE AND POOL RENOVATION
Peirce Island Road
Portsmouth, NH 03801

DEMOLITION IMAGES AND DETAILS

SCALE: AS NOTED
DATE: 06/17/2022
DWG.: D101
SHEET: 44 OF 72



1 PL100 OVERALL AQUATIC CENTER PLAN VIEW
1" = 20'-0"

GENERAL NOTES:

1. LOCATE LIFEGUARD CHAIRS AS REQUIRED PER STATE AND LOCAL CODES AND PER OWNER'S SAFETY CONSULTANT.
2. SCHEDULE QUANTITIES ARE SHOWN FOR VALUE ENGINEERING PURPOSES. IT IS THE INSTALLING CONTRACTORS RESPONSIBILITY TO VERIFY QUANTITIES REQUIRED.
3. CONTRACTOR MUST CONTACT ENGINEER FOR ELECTRONIC DRAWING FILES PRIOR TO COMMENCING POOL STAKING WORK.
4. ENGINEER WILL PROVIDE ELECTRONIC PLAN VIEW OF ALL POOLS IN AUTOCAD DRAWING FORMAT FOR CONTRACTOR'S USE TO LOCATE STRUCTURES AND RELATED POOL DECK EQUIPMENT.
5. REFER TO PL100 SERIES DRAWINGS FOR ALL POOL PLAN INFORMATION, RELATED EQUIPMENT, AND DETAILS.
6. REFER TO PL200 SERIES DRAWINGS FOR ALL POOL STRUCTURAL PLANS, RELATED INFORMATION, AND DETAILS.
7. REFER TO PL300 SERIES DRAWINGS FOR ALL POOL AND DRAIN PIPING AND RELATED INFORMATION AND DETAILS.
8. REFER TO PL400 SERIES DRAWINGS FOR ALL MECHANICAL EQUIPMENT INFORMATION AND RELATED DETAILS.
9. REFER TO PL500 SERIES DRAWINGS FOR ELECTRICAL SCHEMATICS AND P&IDs.
10. REFER TO PL600 SERIES DRAWINGS FOR PIPE PENETRATIONS.

CODES, STANDARDS AND REGULATIONS:
CONTRACTOR MUST BE FAMILIAR WITH ALL CODES AND STANDARDS LISTED BELOW AND ALERT THE ARCHITECT/ENGINEER TO CONFLICTS IN THE DRAWINGS

CODE JURISDICTION
PORTSMOUTH, NH

HEALTH & SAFETY CODE:
STATE HEALTH CODE: NEW HAMPSHIRE CODE OF ADMINISTRATIVE RULES, CHAPTER ENV-WS 1100

MODEL CODES:
2015 INTERNATIONAL SWIMMING POOL AND SPA CODE

ACCESSIBILITY STANDARDS AND REGULATIONS:

UNITED STATES:
2010 ADA STANDARDS FOR ACCESSIBLE DESIGN

OAK POINT ASSOCIATES
ARCHITECTURE ■ ENGINEERING ■ PLANNING
85 Middle Street, Portsmouth, NH 03801 (T) 603.431.4849 (F) 603.431.1870
www.oakpoint.com

STATE OF NEW HAMPSHIRE
BRIAN W. FREBER
No. 11825
LICENSED PROFESSIONAL ENGINEER
03/01/2023

APP MJC
WRB 21904.14

DESIGNED BY:
DRAWN BY:
CHECKED BY:
PROJECT:

CITY OF PORTSMOUTH
1 Junkins Avenue
Portsmouth, NH 03801

BID #40 - 23
PEIRCE ISLAND PUMP HOUSE AND POOL RENOVATION
Peirce Island Road
Portsmouth, NH 03801

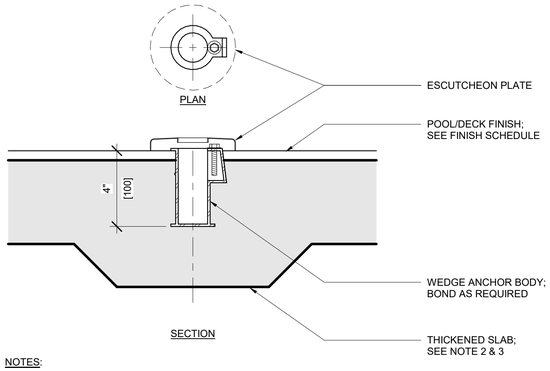
OVERALL AQUATIC PLAN

WTI
WATER TECHNOLOGY, INC.
World Leaders in Aquatic Planning, Design and Engineering
100 Park Avenue | Beaver Dam, WI 53916
t 920.887.7375 | #18176

NO.	DATE	DESCRIPTION	BY

REVISIONS

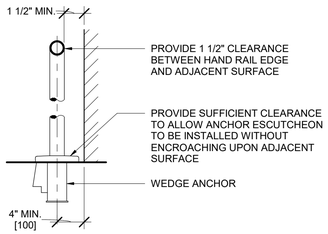
SCALE: AS NOTED
DATE: 03/01/2023
DWG.: PL100
SHEET: 45 OF 72



NOTES:

1. INSTALL ANCHORS IN LINE WITH RAIL.
2. CONCRETE CLEAR COVER AT ANCHOR SHALL BE 3" MINIMUM. THICKEN SLAB IF NECESSARY TO ACHIEVE MINIMUM COVER.
3. WHEN SECOND LAYER OF CONCRETE IS LOCATED DIRECTLY BELOW SLAB IN WHICH ANCHOR IS PLACED (I.E. STAIRS), CLEAR COVER OF CONCRETE AT ANCHOR IN UPPER SLAB SHALL BE 2" MINIMUM.

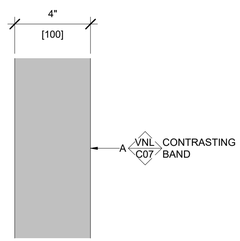
2 | PL101 ANCHOR DETAIL - WEDGE DETAIL VIEW
3" = 1'-0"



NOTES:

1. CONTRACTOR TO PURCHASE AND INSTALL RAIL GOODS IN ACCORDANCE WITH ALL APPLICABLE CODES AND STANDARDS OF PARTIES HAVING JURISDICTION.
2. CONTRACTOR TO VERIFY HANDRAIL DIMENSIONS PRIOR TO FABRICATION.

3 | PL101 RAILING OFFSET TO ADJACENT SURFACE DETAIL VIEW
3/4" = 1'-0"



NOTES:

1. 4" CONTRASTING BAND @ 5'-0" WD CONTINUOUS ON POOL FLOOR AND WALLS; COLOR CONTRASTING TO POOL FINISH.

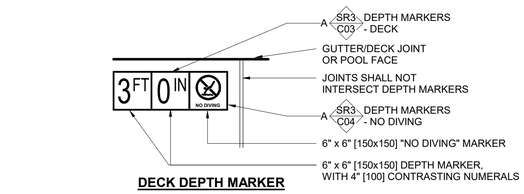
4 | PL101 CONTRASTING BAND DETAIL VIEW
3" = 1'-0"

LEGEND - FINISHES & COLOR CODES - POOL A

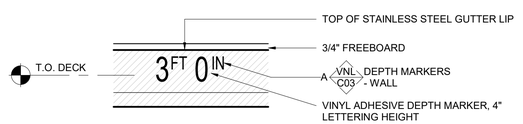
AREA	FINISHES		COLORS		NOTES
	FINISH ID	FINISH	COLOR ID	COLOR	
CONTRASTING BAND	VNL	VINYL	C07	CONTRASTING TO POOL FINISH	
DECK BAND	LB	LIGHT BROOM	C01	AS SELECTED BY ARCHITECT	
DEPTH MARKERS - DECK	SR3	6"x6" SLIP RESISTANT TILE	C03	BLACK ON WHITE	
DEPTH MARKERS - NO DIVING	SR3	6"x6" SLIP RESISTANT TILE	C04	BLACK AND RED ON WHITE	
DEPTH MARKERS - WALL	VNL	VINYL	C03	BLACK ON WHITE	
HORIZONTAL SURFACE (WET)	PL	PVC LINER	C06	LIGHT COLOR	SLIP RESISTANT
INTERMEDIATE STEGMEIER EDGE	LB	LIGHT BROOM	C01	AS SELECTED BY ARCHITECT	
TILE - WATERLINE	KT1	1"x1" KEYSTONE TILE	C01	AS SELECTED BY ARCHITECT	
VERTICAL SURFACE (WET)	PL	PVC LINER	C06	LIGHT COLOR	

FINISH NOTES:

1. FINISHES PER SCHEDULE UNLESS OTHERWISE INDICATED.
2. VERTICAL SURFACE (WET) AND HORIZONTAL SURFACE (WET) SHALL BE AT LEAST 6.5 ON THE MUNSELL COLOR VALUE SCALE.
3. ALL HORIZONTAL SURFACES MUST BE SLIP RESISTANT AND COMPLY WITH THE ANSI A137.1 STANDARD USING THE DCOF ACUTEST METHODOLOGY:
   3A. ON WET LEVEL SURFACES, PROVIDE DYNAMIC COEFFICIENT OF FRICTION OF =/> 0.42.
   3B. ON WET SLOPED SURFACES, PROVIDE DYNAMIC COEFFICIENT OF FRICTION OF =/> 0.65.
4. DESIGN WATERLINE SHALL HAVE A MAXIMUM CONSTRUCTION TOLERANCE WHEN FINISHED OF +/- 1/4" FOR POOLS AND SPAS WITH ADJUSTABLE SURFACE SKIMMING, AND +/- 1/8" FOR POOLS AND SPAS WITH NONADJUSTABLE SURFACE SKIMMING.



DECK DEPTH MARKER



S.S. GUTTER WALL DEPTH MARKER

NOTES:

1. - WALL DEPTH MARKER AT LOCATIONS AS INDICATED ON PLAN BY THIS SYMBOL.
2. EXCLUDE "NO DIVING" MARKER TILES AT POOL WALL DEPTH MARKER LOCATIONS AND AT POOL DEPTHS GREATER THAN 5'-0".
3. DEPTH MARKERS SHALL BE LEGIBLE FROM INSIDE THE POOL AND FROM THE POOL DECK.
4. THE POOL CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING MARKINGS ACCURATE TO WITHIN ONE INCH OF THE CONSTRUCTED WATER DEPTHS AT LOCATIONS INDICATED ON PLAN AT A MAX 25'-0" SPACING AND IN ACCORDANCE WITH LOCAL CODE REQUIREMENTS.
5. DEPTH MARKER TEXT SHALL INDICATE THE ACTUAL POOL DEPTH WITHIN 3" AT NORMAL OPERATING WATER LEVEL WHEN MEASURED 3'-0" FROM POOL WALL. CONTRACTOR IS RESPONSIBLE FOR IDENTIFYING PROPER TEXT FOR EACH MARKER LOCATION.
6. MARKINGS SHALL BE INSTALLED FLUSH WITH SURROUNDING SURFACES AND RECESSED IF NECESSARY.
7. ALL MARKINGS INSTALLED ON HORIZONTAL SURFACES SHALL HAVE A SLIP RESISTANT FINISH.
8. DECK DEPTH MARKERS SHALL BE INSTALLED WITHIN 18" OF THE WATER'S EDGE.

1 | PL101 FINISH DETAIL - DEPTH MARKER DECK & S.S. GUTTER WALL DETAIL VIEW
1" = 1'-0"

TAG LEGEND

PIPE TAG — P1-20A
- LINE TYPE IDENTIFIER
- SYSTEM IDENTIFIER
- PIPE IDENTIFIER
- POOL IDENTIFIER

POOL EQUIPMENT TAG — A01
- POOL IDENTIFIER
- EQUIPMENT IDENTIFIER

MECHANICAL EQUIPMENT TAG — P1A
- EQUIPMENT IDENTIFIER
- SYSTEM IDENTIFIER
- POOL IDENTIFIER

DIMENSION TAG — ⊠ 100
- POINT LOCATION
- POINT IDENTIFIER

WATER FEATURE TAG — F01
- FEATURE DESIGNATOR
- EQUIPMENT IDENTIFIER

ELEVATION TAG
- ELEVATION
- 100.00 REFERENCE
- LOCATION

CUSTOM RAILGOODS TAG — A01
- POOL IDENTIFIER
- RAILGOODS IDENTIFIER

POOL STRUCTURAL TAG — AH1
- POOL IDENTIFIER
- WALL TYPE IDENTIFIER

POOL FIXTURE TAG — A-PF1
- POOL IDENTIFIER
- POOL FIXTURE DESIGNATOR
- EQUIPMENT IDENTIFIER

REVISION TAG — 1
- REVISION NUMBER

POOL FINISH TAG
- FINISH TYPE ID
- POOL IDENTIFIER
- FINISH COLOR ID
- FINISH DESCRIPTION

A OA C01 WATERLINE TILE

DIMENSIONAL UNITS
- IMPERIAL UNITS — 7/8"
- METRIC UNITS (mm) — [25]

POOL ACCESSIBILITY TAG — ADA-P-SE
- P = PRIMARY
- S = SECONDARY
- MEANS OF ACCESS

POOL FLOOR ELEVATION RELATIVE TO (SWL)
- ELEVATION — -5'-0" WD

EQUIPMENT IDENTIFIER KEY

AC	-	AIR COMPRESSOR	HX	-	HEAT EXCHANGER
AF	-	AUTOFILL	P	-	PUMP
AHJ	-	AUTHORITY HAVING JURISDICTION	PV	-	PNEUMATIC MAIN DRAIN VALVE
AOP	-	ADVANCED OXIDATION PROCESS	S	-	STRAINER
AP	-	pH CONTROL PUMP	SC	-	CONTAINMENT PALLETE
AS	-	pH CONTROL STORAGE	SV	-	SURGE TANK FAN
BP	-	BOOSTER PUMP	UV	-	ULTRA-VIOLET DISINFECTION
C	-	CHEMICAL CONTROLLER	V	-	VARIABLE FREQUENCY DRIVE
CP	-	CHLORINE FEED PUMP	WC	-	WATER CHILLER
CS	-	CHLORINE STORAGE	WD	-	WATER DEPTH
EV	-	ELECTRONIC MAIN DRAIN VALVE			
F	-	FILTER			
FM	-	FLOW METER			
FP	-	FLOW METER POWER SUPPLY			
H	-	HEATER			

ABBREVIATIONS

BO	- BOTTOM OF	P&ID	- PIPING & INSTRUMENTATION DIAGRAM
CJ	- CONTROL JOINT	PL	- POOL LIFT
DIA	- DIAMETER	PS	- POOL STAIRS
EJ	- EXPANSION JOINT	SCH	- SCHEDULE
EW	- EACH WAY	SE	- SLOPED ENTRY
FFE	- FINISH FLOOR ELEVATION	SS	- STAINLESS STEEL
ID	- INSIDE DIAMETER	SWL	- STATIC WATER LEVEL
MAX	- MAXIMUM	TO	- TOP OF
MIN	- MINIMUM	TS	- TRANSFER SYSTEM
NC	- NORMALLY CLOSED	TUBC	- TRUE UNION CHECK VALVE
NO	- NORMALLY OPEN	TUBV	- TRUE UNION BALL VALVE
NPS	- NOMINAL PIPE SIZE	TW	- TRANSFER WALL
OC	- ON CENTER	TYP	- TYPICAL
OD	- OUTSIDE DIAMETER	WD	- WATER DEPTH
OWE	- OPERATING WATER ELEVATION		

SCHEDULE - SAFETY & MAINTENANCE EQUIPMENT

QTY	PRODUCT NAME	MANUFACTURER	NOTES
1	25 PERSON AQUATIC FIRST AID KIT	WATER SAFETY PRODUCTS	25 PERSON OSHA FIRST AID KIT TO INCLUDE BIOHAZARD COMPLIANCE RESPONSE AND CPR MICROMASK WITH NITRILE GLOVES
1	AUTOMATIC VACUUM CLEANING SYSTEM	AQUAPRODUCTS ULTRAMAX GEMINI	AUTOMATIC CLEANER, RADIO REMOTE CONTROL, ULTRAKART CADDY, DIGITAL TIMER DISPLAY, 120 FT CORD
1	LIFE BUOY	WATER SAFETY PRODUCTS	30" DIA, MADE OF UNICELL SOFT FOAM WITH HARD SHELL COVERING
1	LIFE HOOK & RESCUE POLE	WATER SAFETY PRODUCTS	ANODIZED ALUMINUM POLE, WITH DOUBLE LIFE HOOK. 2 - 8 FEET SECTIONS WITH CONNECTOR & RUBBER END CAP
1	MANUAL VACUUM CLEANING SYSTEM	WILDCAT E.1	SELF CONTAINED, PORTABLE SWIMMING POOL VACUUM SYSTEM. PROVIDE WITH LARGE MARINE BATTERY BOX, STANDARD DEBRIS BAG, SUPERFINE DEBRIS BAG (HH1508) MK POWER DEEP CYCLE, VLRA MARINE GEL BATTERY, SERIES SIZE 27. PROVIDE NOCO G7200 BATTERY CHARGER (HH1900)
12	RESCUE TUBE	WATER SAFETY PRODUCTS	50" LONG x 6" WIDE x 4" THICK. NO CLIPS, NO RINGS. 2" WIDE ADJUSTABLE SHOULDER STRAP , CONNECTED TO TUBE BY 1" STRAPPING. STRAPPING EXTENDS COMPLETELY THROUGH LENGTH OF TUBE.
1	SPINEBOARD W/ HEAD IMMOBILIZER	WATER SAFETY PRODUCTS	X-RAY TRANSLUCENT BACKBOARD WITH HEAD IMMOBILIZER AND BODY STRAPS
1	THROW LINE	WATER SAFETY PRODUCTS	60' MARINE POLYPRO LINE, WITH 3" x 5" LEMON FLOAT
1	WATER TEST KIT	TAYLOR "SERVICE COMPLETE"	FAS DPD CHLORINE KIT

WTI
WATER TECHNOLOGY INC.
World Leaders in Aquatic Planning, Design and Engineering
100 Park Avenue | Beaver Dam, WI 53916
t 920.887.7375 | #18176

NO.	DATE	DESCRIPTION	BY

REVISIONS

OAK POINT ASSOCIATES
ARCHITECTURE ■ ENGINEERING ■ PLANNING
85 Middle Street, Portsmouth, NH 03801 (T) 603.431.4849 (F) 603.431.1870
www.oakpoint.com

STATE OF NEW HAMPSHIRE
BRIAN W. FREBER No. 11825
LICENSED PROFESSIONAL ENGINEER
03/01/2023

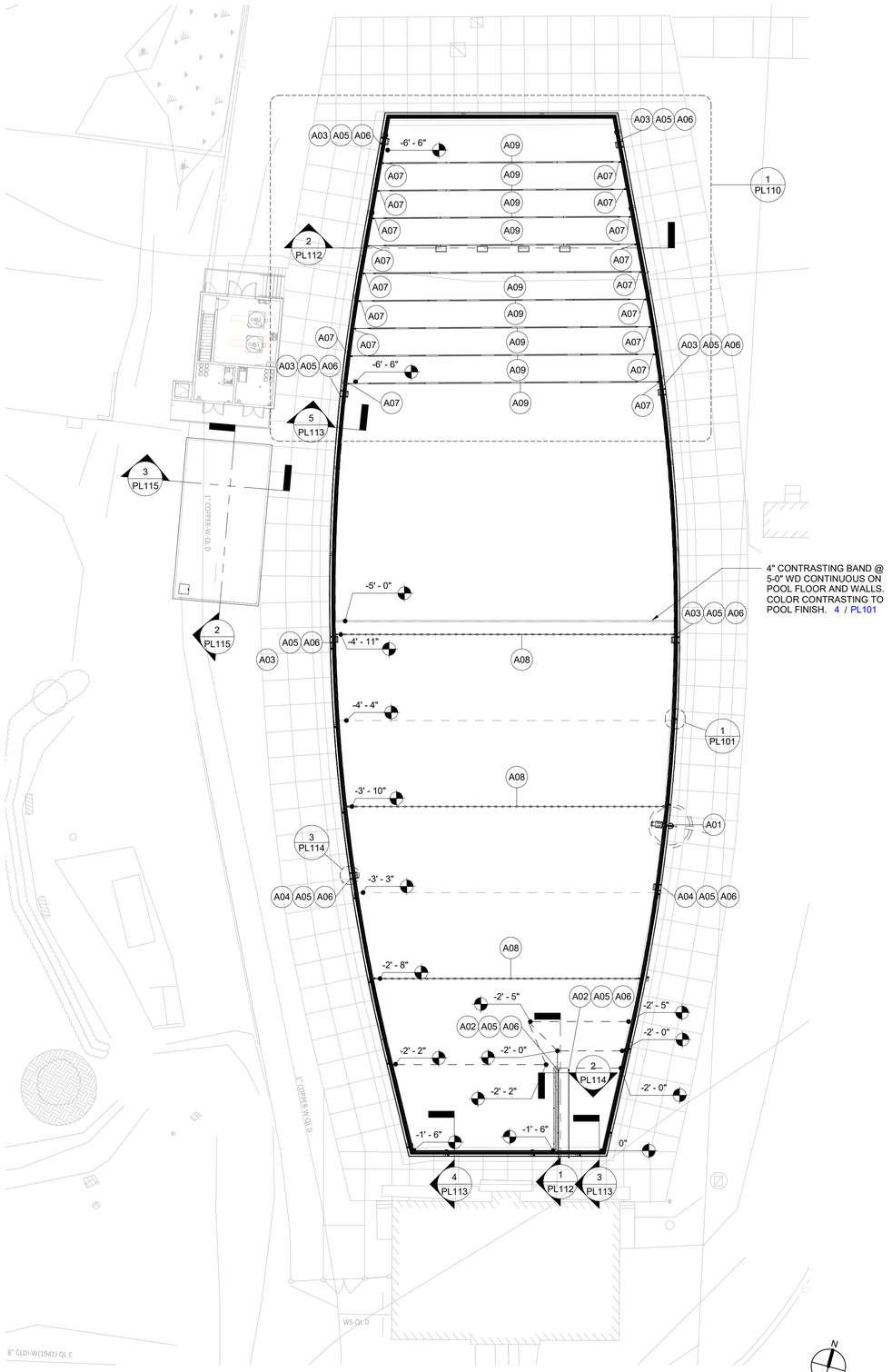
APP: WRB
CHECKED BY: MJC
DRAWN BY:
DESIGNED BY:
PROJECT: 21904.14

CITY OF PORTSMOUTH
1 Junkins Avenue
Portsmouth, NH 03801

BID #40 - 23
PEIRCE ISLAND PUMP HOUSE AND POOL RENOVATION
Peirce Island Road
Portsmouth, NH 03801

GENERAL DETAILS AND SCHEDULES

SCALE: AS NOTED
DATE: 03/01/2023
DWG.: PL101
SHEET: 46 OF 72

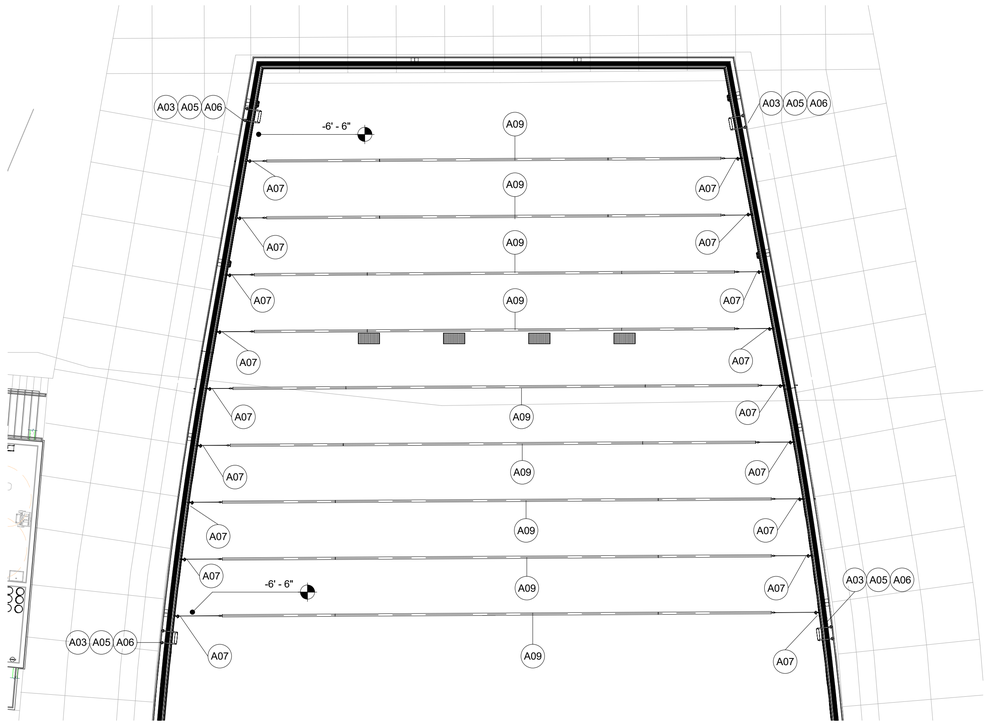


2 | PL110 POOL A - LEISURE POOL PLAN
PLAN VIEW
1" = 20'-0"

POOL A-LEISURE POOL DATA		
DESCRIPTION	QTY	UNITS
POOL PERIMETER	722	FEET
WATER SURFACE AREA	25,287	SQUARE FEET
POOL VOLUME	894,615	GALLONS
SURGE TANK - POOL SURGE VOLUME	25,344	GALLONS
SURGE FACTOR	1.0	GAL/SFT
CIRCULATION RATE	2,982	GPM
TURNOVER/VOLUME/FLOW	300 MIN.	894,615 GAL. 2,982 GPM
FILTRATION RATE	1.23	GPM/FT²
BACKWASH RATE	300	GPM
PATRON LOAD	937	PERSONS

SCHEDULE - BASIS OF DESIGN - POOL A

POOL ID	EQUIPMENT ID	EQUIPMENT	QTY	MANUFACTURER	DESCRIPTION
A	01	POOL LIFT	1	S.R. SMITH OR EQUAL	SPLASH ER EXTENDED REACH CALIFORNIA LIFT PACKAGE: INCLUDES ARM REST PACKAGE AND SPINE BOARD MUST BE ADA COMPLIANT WITH A MINIMUM LIFTING CAPACITY OF 400 LBS. INCLUDE SPLASH CADDY, BATTERY CHARGER AND EXTRA BATTERY AND TOTAL COVER. PROVIDE ANCHOR AND COORDINATE ANCHOR LOCATION WITH GENERAL CONTRACTOR AND STRUCTURAL DRAWINGS,
A	02	HAND RAILS	2	PARAGON AQUATICS, SPECTRUM AQUATICS, SR SMITH OR EQUAL	CUSTOM FABRICATED, 316L SS, 1.50" OD x .120 WALL THICKNESS, 500 GRIT FINISH MIN.
A	03	POOL LADDER	6	PARAGON AQUATICS, SPECTRUM AQUATICS, SR SMITH OR EQUAL	CROSS BRACED, HEAVY DUTY, 18" WIDTH, 4 STEPS 316L SS, 1.50" OD x .120 WALL THICKNESS, 500 GRIT FINISH MIN.
A	04	POOL LADDER	2	PARAGON AQUATICS, SPECTRUM AQUATICS, SR SMITH OR EQUAL	CROSS BRACED, HEAVY DUTY, 18" WIDTH, 3 STEPS 316L SS, 1.50" OD x .120 WALL THICKNESS, 500 GRIT FINISH MIN.
A	05	ESCUTCHEON PLATE	28	PARAGON AQUATICS, SPECTRUM AQUATICS, SR SMITH OR EQUAL	STAINLESS STEEL ROUND ESCUTCHEON FOR 1.50" O.D. RAILS
A	06	WEDGE ANCHOR	28	PARAGON AQUATICS, SPECTRUM AQUATICS, SR SMITH OR EQUAL	CAST BRONZE, 4-1/4" LONG, ACCEPTS 1.500" OD TUBING
A	07	CUP ANCHOR	24	PADDOCK	STAINLESS STEEL CUP ANCHOR INTEGRAL WITH STAINLESS STEEL GUTTER
A	08	SAFETY ROPE	3	PARAGON AQUATICS	3/4" POLYETHYLENE ROPE WITH 5"x9" HANDI-LOCK FLOAT, VERIFY LENGTH WITH PLANS
A	09	LANE DIVIDERS	9	COMPETITOR SWIM PRODUCTS	4" WAVE QUELLING RACING LANE LINE, COLORS BY OWNER / ARCHITECT



1 | PL110 POOL A - LEISURE POOL ENLARGED EQUIPMENT PLAN
PLAN VIEW
3/32" = 1'-0"

WTI
WATER TECHNOLOGY INC.
World Leaders in Aquatic Planning, Design and Engineering
100 Park Avenue | Beaver Dam, WI 53916
t 920.887.7375 | #18176

NO.	DATE	DESCRIPTION	BY

REVISIONS

OAK POINT ASSOCIATES
ARCHITECTURE ■ ENGINEERING ■ PLANNING
85 Middle Street, Portsmouth, NH 03801 (T) 603.431.4849 (F) 603.431.1870
www.oakpoint.com

STATE OF NEW HAMPSHIRE
BRIAN W. FREBER
No. 11825
LICENSED PROFESSIONAL ENGINEER
03/01/2023

APP MJC
WRB

DESIGNED BY:
DRAWN BY:
CHECKED BY:
PROJECT: 21904.14

CITY OF PORTSMOUTH
1 Junkins Avenue
Portsmouth, NH 03801

BID #40 - 23
PEIRCE ISLAND PUMP HOUSE AND POOL RENOVATION
Peirce Island Road
Portsmouth, NH 03801

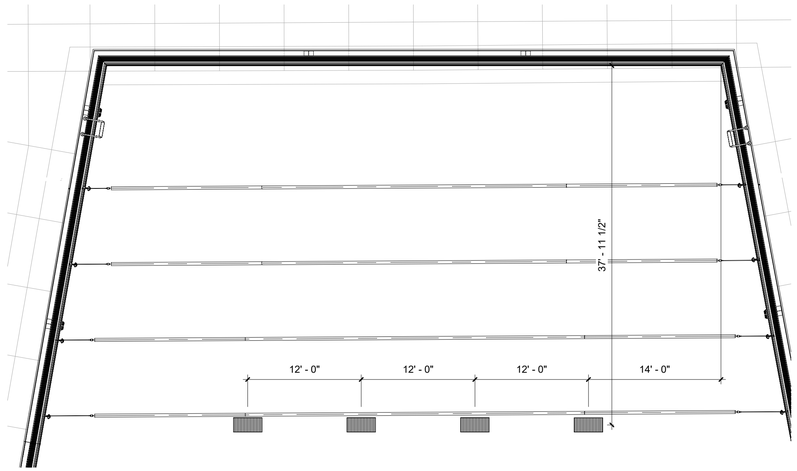
POOL A - LEISURE POOL PLAN

SCALE: AS NOTED

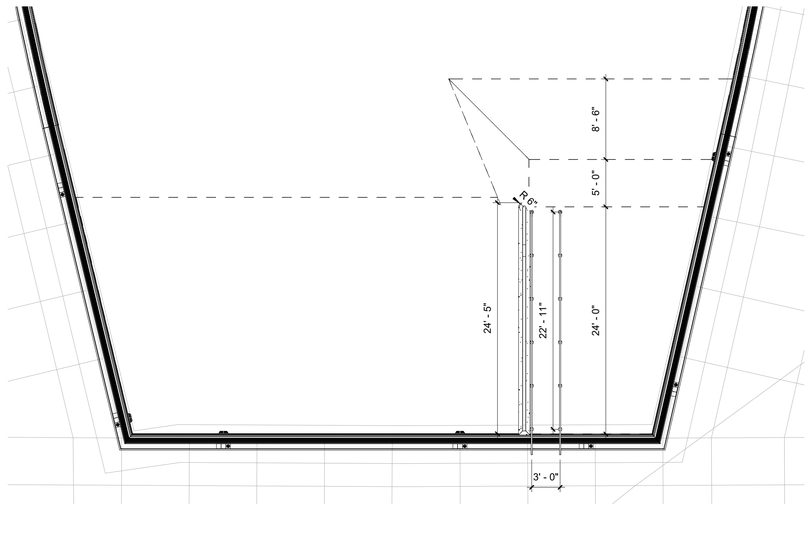
DATE: 03/01/2023

DWG.: PL110

SHEET: 47 OF 72



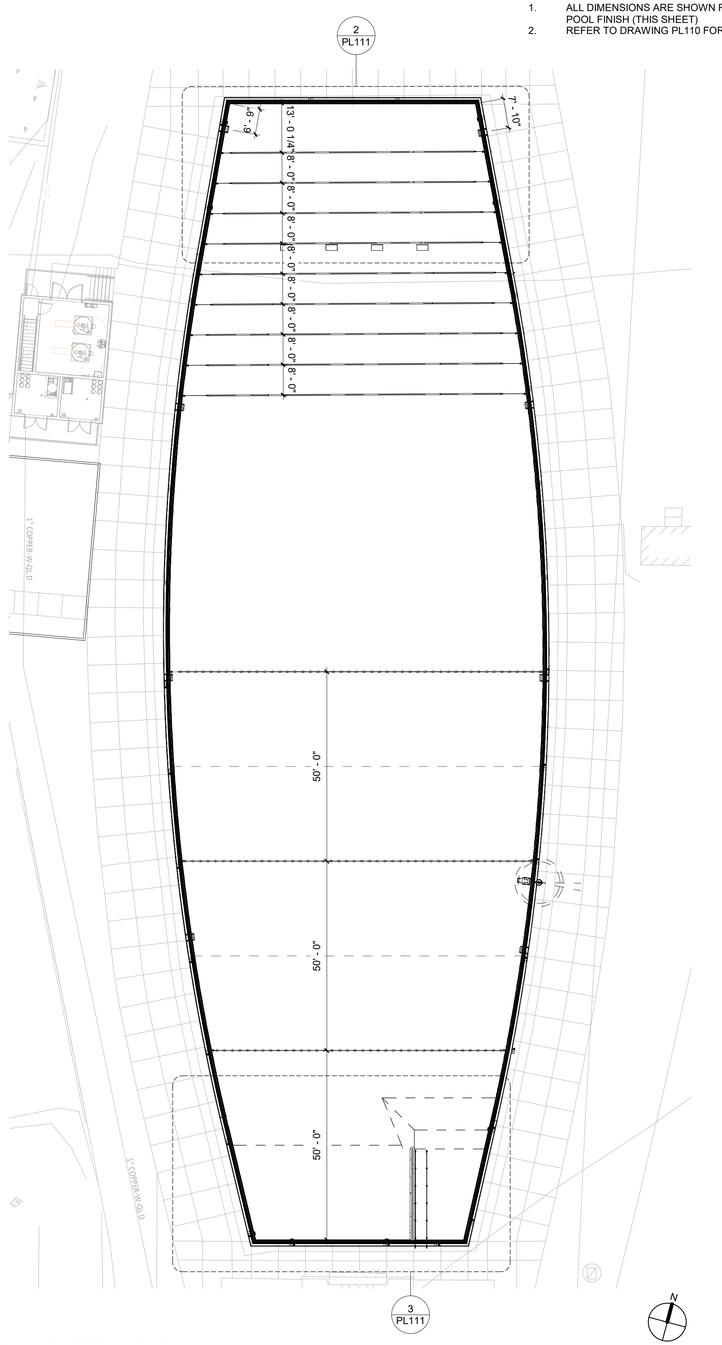
2 PL111 POOL A - LEISURE POOL OUTLET ENLARGED DIMENSION PLAN VIEW
1/8" = 1'-0"



3 PL111 POOL A - LEISURE POOL RAMP ENLARGED DIMENSION PLAN VIEW
1/8" = 1'-0"

DIMENSIONING NOTES:

1. ALL DIMENSIONS ARE SHOWN FROM POOL FINISH TO POOL FINISH (THIS SHEET)
2. REFER TO DRAWING PL110 FOR WATER DEPTHS.



1 PL111 POOL A - LEISURE POOL DIMENSION PLAN VIEW
1" = 20'-0"

OAK POINT ASSOCIATES
ARCHITECTURE ■ ENGINEERING ■ PLANNING
85 Middle Street, Portsmouth, NH 03801 (T) 603.431.4849 (F) 603.431.1870
www.oakpoint.com

BRIAN W. FREBER No. 11825 LICENSED PROFESSIONAL ENGINEER - STATE OF NEW HAMPSHIRE
03/01/2023

DESIGNED BY: APP
DRAWN BY: MJC
CHECKED BY: WRB
PROJECT: 21904.14

CITY OF PORTSMOUTH
1 Junkins Avenue
Portsmouth, NH 03801

BID #40 - 23
PEIRCE ISLAND PUMP HOUSE AND POOL RENOVATION
Peirce Island Road
Portsmouth, NH 03801

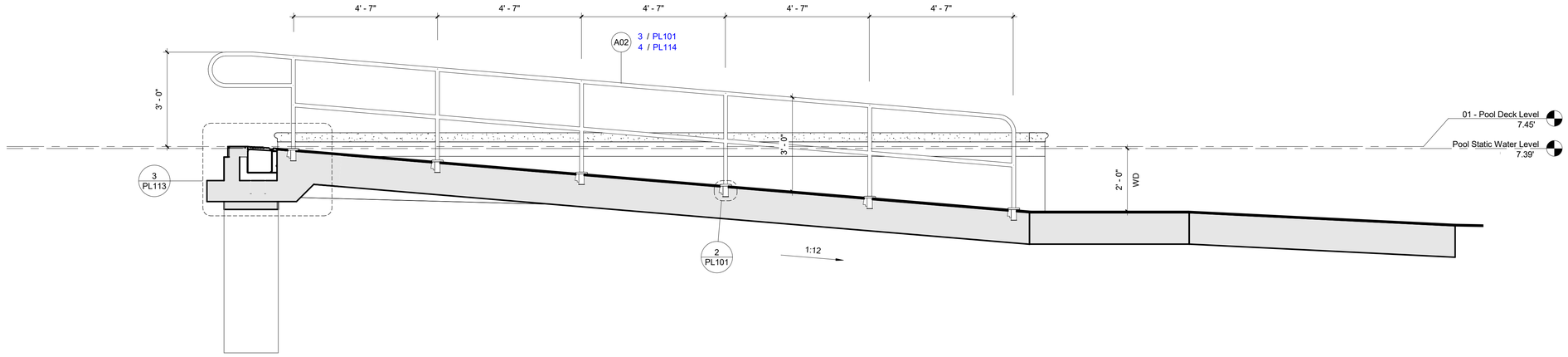
POOL A - LEISURE POOL DIMENSION PLAN

SCALE: AS NOTED
DATE: 03/01/2023
DWG.: PL111
SHEET: 48 OF 72

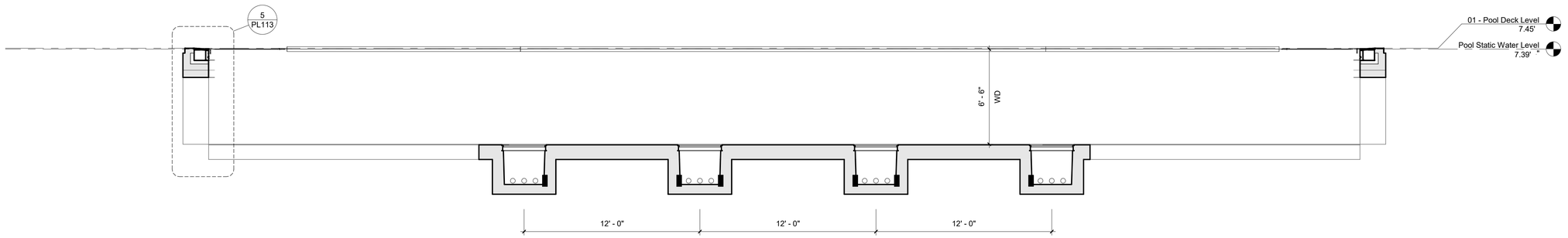
WTI
WATER TECHNOLOGY, INC.
World Leaders in Aquatic Planning, Design and Engineering
100 Park Avenue | Beaver Dam, WI 53916
t 920.887.7375 | #18176

NO.	DATE	DESCRIPTION	BY

REVISIONS



1 | PL112 POOL A - LEISURE POOL - RAMP SECTION VIEW
1/2" = 1'-0"



2 | PL112 POOL A - LEISURE POOL - DRAINS SECTION VIEW
1/4" = 1'-0"

OAK POINT ASSOCIATES
ARCHITECTURE ■ ENGINEERING ■ PLANNING
85 Middle Street, Portsmouth, NH 03801 (T) 603.431.4849 (F) 603.431.1870
www.oakpointassoc.com

STATE OF NEW HAMPSHIRE
BRIAN W. FREBER
No. 11825
LICENSED PROFESSIONAL ENGINEER
03/01/2023

DESIGNED BY: APP
DRAWN BY: MJC
CHECKED BY: WRB
PROJECT: 21904.14

CITY OF PORTSMOUTH
1 Junkins Avenue
Portsmouth, NH 03801

BID #40 - 23
PEIRCE ISLAND PUMP HOUSE AND POOL RENOVATION
Peirce Island Road
Portsmouth, NH 03801

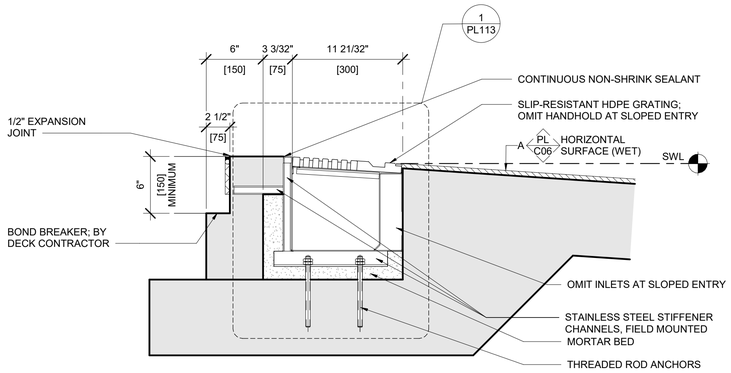
POOL A - LEISURE POOL SECTIONS AND DETAILS

SCALE: AS NOTED
DATE: 03/01/2023
DWG.: PL112
SHEET: 49 OF 72

WTI
WATER TECHNOLOGY, INC.
World Leaders in Aquatic Planning, Design and Engineering
100 Park Avenue | Beaver Dam, WI 53916
t 920.887.7375 | #18176

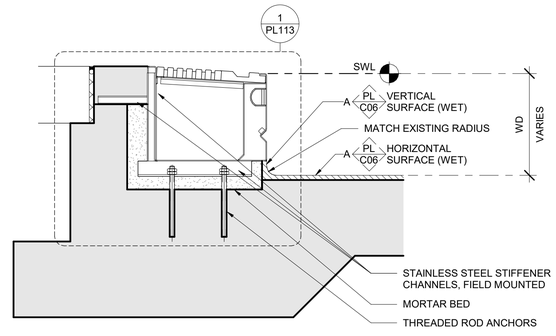
NO.	DATE	DESCRIPTION	BY

REVISIONS



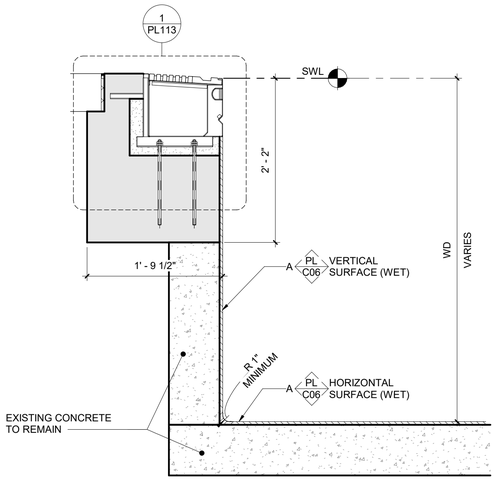
NOTE:
SECURE GRATING ON EACH SIDE WITH SS ANCHORS @ 1'-0" [300mm] INTERVALS.

3 PL113 POOL WALL - 0" WD DETAIL VIEW
1 1/2" = 1'-0"

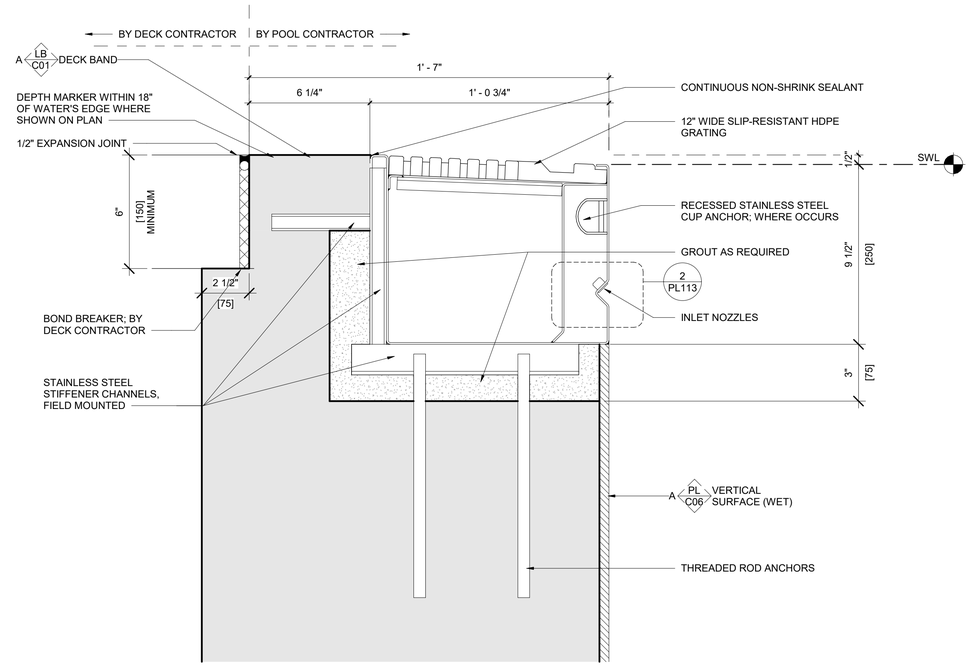


NOTE:
SECURE GRATING ON EACH SIDE WITH SS ANCHORS @ 1'-0" [300mm] INTERVALS.

4 PL113 POOL WALL DETAIL VIEW
1 1/2" = 1'-0"

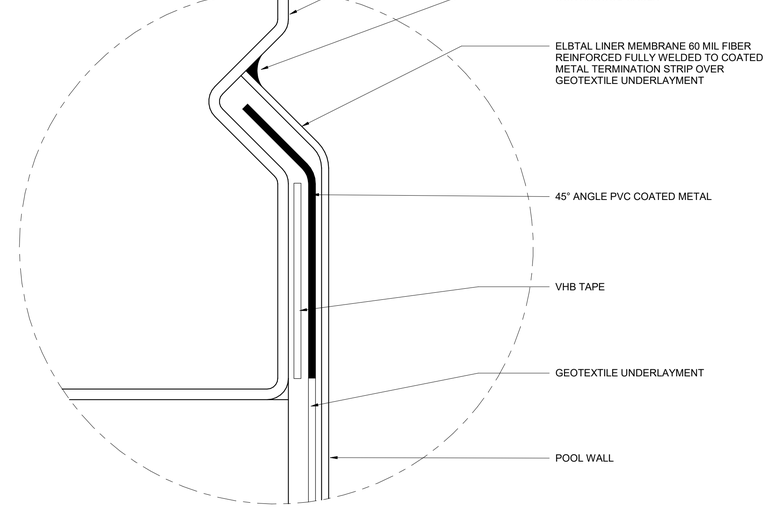


5 PL113 POOL WALL DETAIL AT EXISTING WALL DETAIL VIEW
1" = 1'-0"



NOTE:
SECURE GRATING ON EACH SIDE WITH SS ANCHORS @ 1'-0" [300mm] INTERVALS.

1 PL113 POOL WALL DETAIL - FINISH DETAIL VIEW
3" = 1'-0"



2 PL113 ENLARGED POOL LINER DETAIL DETAIL VIEW
6" = 1'-0"

WATER TECHNOLOGY INC.
World Leaders in Aquatic Planning, Design and Engineering
100 Park Avenue | Beaver Dam, WI 53916
t 920.887.7375 | #18176

NO.	DATE	DESCRIPTION	BY

REVISIONS

OAK POINT ASSOCIATES
ARCHITECTURE ■ ENGINEERING ■ PLANNING
85 Middle Street, Portsmouth, NH 03801 (T) 603.431.4849 (F) 603.431.1870
www.oakpoint.com

STATE OF NEW HAMPSHIRE
BRIAN W. FREBER
No. 11825
LICENSED PROFESSIONAL ENGINEER
03/01/2023

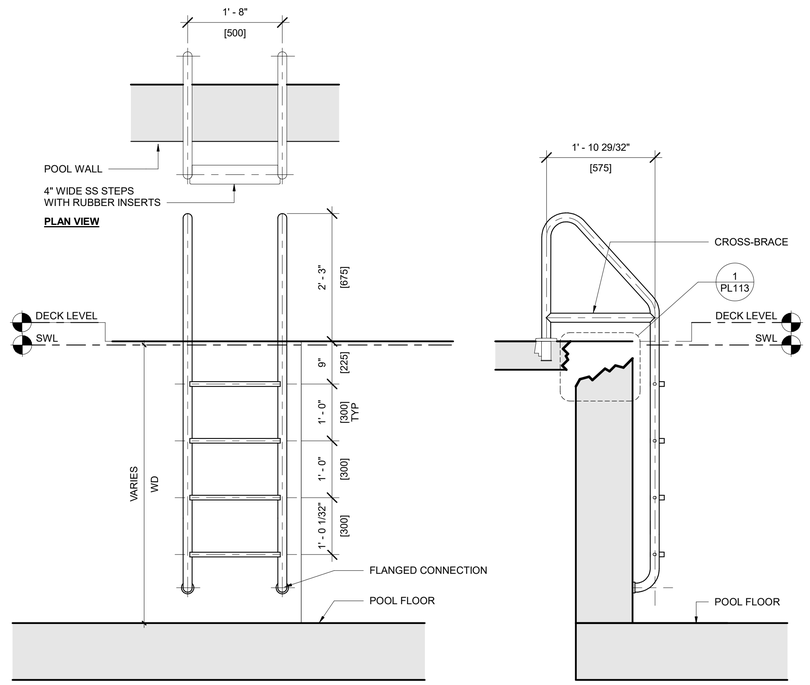
DESIGNED BY: APP
DRAWN BY: MJC
CHECKED BY: WRB
PROJECT: 21904.14

CITY OF PORTSMOUTH
1 Junkins Avenue
Portsmouth, NH 03801

BID #40 - 23
PEIRCE ISLAND PUMP HOUSE AND POOL RENOVATION
Peirce Island Road
Portsmouth, NH 03801

POOL A - LEISURE POOL DETAILS - 1

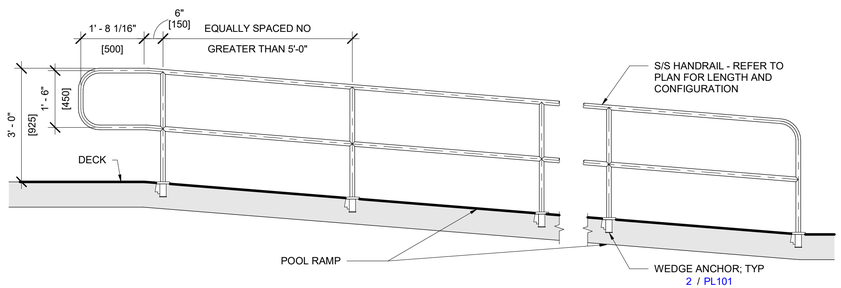
SCALE: AS NOTED
DATE: 03/01/2023
DWG.: PL113
SHEET: 50 OF 72



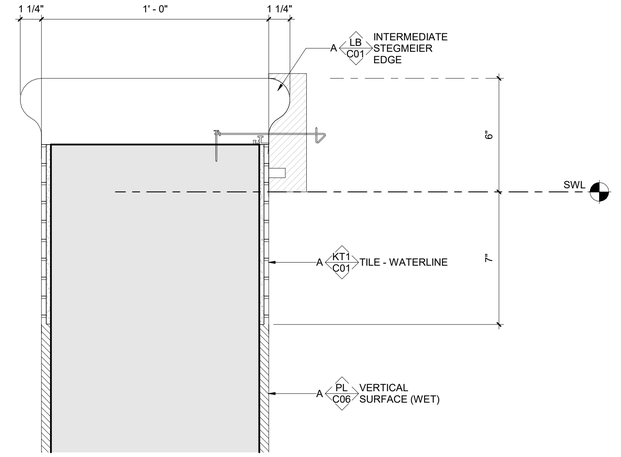
FRONT VIEW **SIDE VIEW**

SPECIFICATIONS
LADDER FRAMES MUST BE FABRICATED WITH SMOOTH, WRINKLE-FREE BENDS. THE PIPE MUST BE 1.900" OD X .109" WALL THICKNESS, TYPE 316L, POLISHED TO 500 GRIT. STEPS SHALL BE SS, 4" WIDE, WITH RAISED NON-SKID RUBBER INSERT TREADS. THE ENDS OF ALL STEPS SHALL BE CURVED TO FIT THE OD OF THE LADDER FRAMES. THE BOLTS FOR ATTACHING THE LADDER STEPS MUST HAVE SMOOTH, ROUNDED HEADS AND THE UNDERSIDE OF THE HEAD MUST BE CURVED TO FIT THE OD OF THE TUBING. ALL LADDERS MUST HAVE FLANGED CONNECTIONS AT THEIR LOWER ENDS. ANCHOR TO POOL WALL WITH 316 SS ANCHORS 4" MIN FROM POOL FLOOR. CROSS-BRACE SHALL BE NOTCHED AND WELDED TO THE LADDER FRAMES. JOINTS MUST BE CLEANED AND BLENDED TO MATCH THE FINISH OF THE PIPE.

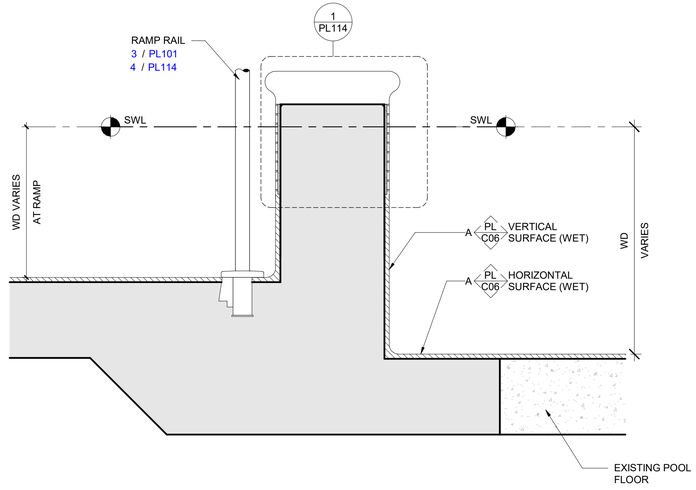
3 PL114 POOL LADDER
DETAIL VIEW
3/4" = 1'-0"



4 PL114 RAIL DETAIL - RAMP
DETAIL VIEW
1/2" = 1'-0"



1 PL114 COMMON WALL DETAIL - FINISH
DETAIL VIEW
3" = 1'-0"



2 PL114 COMMON WALL
DETAIL VIEW
1 1/2" = 1'-0"

OAK POINT ASSOCIATES
ARCHITECTURE ■ ENGINEERING ■ PLANNING
85 Middle Street, Portsmouth, NH 03801 (T) 603.431.4849 (F) 603.431.1870
www.oakpoint.com

STATE OF NEW HAMPSHIRE
BRIAN W. FREBER No. 11825
LICENSED PROFESSIONAL ENGINEER
03/01/2023

APP MJC
WRB 21904.14

DESIGNED BY:
DRAWN BY:
CHECKED BY:
PROJECT:

CITY OF PORTSMOUTH
1 Junkins Avenue
Portsmouth, NH 03801

BID #40 - 23
PEIRCE ISLAND PUMP HOUSE AND POOL RENOVATION

Peirce Island Road
Portsmouth, NH 03801

POOL A - LEISURE POOL DETAILS - 2

SCALE: AS NOTED

DATE: 03/01/2023

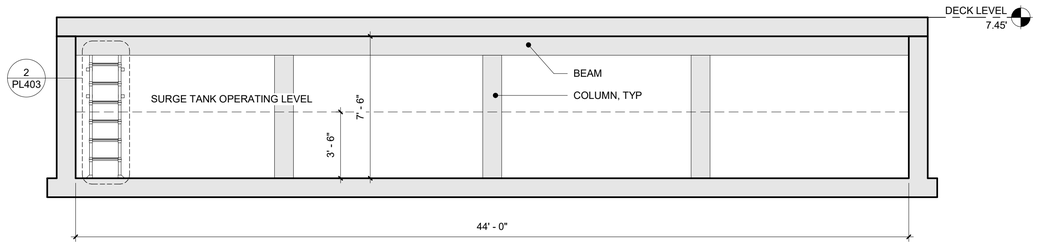
DWG.: PL114

SHEET: 51 OF 72

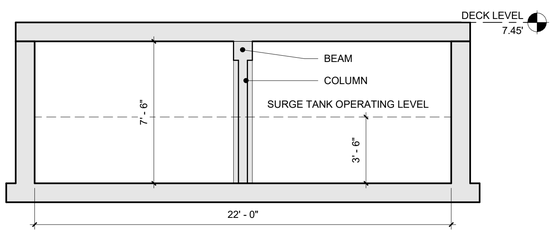
WTI
WATER TECHNOLOGY INC.
World Leaders in Aquatic Planning, Design and Engineering
100 Park Avenue | Beaver Dam, WI 53916
t 920.887.7375 | #18176

NO.	DATE	DESCRIPTION	BY

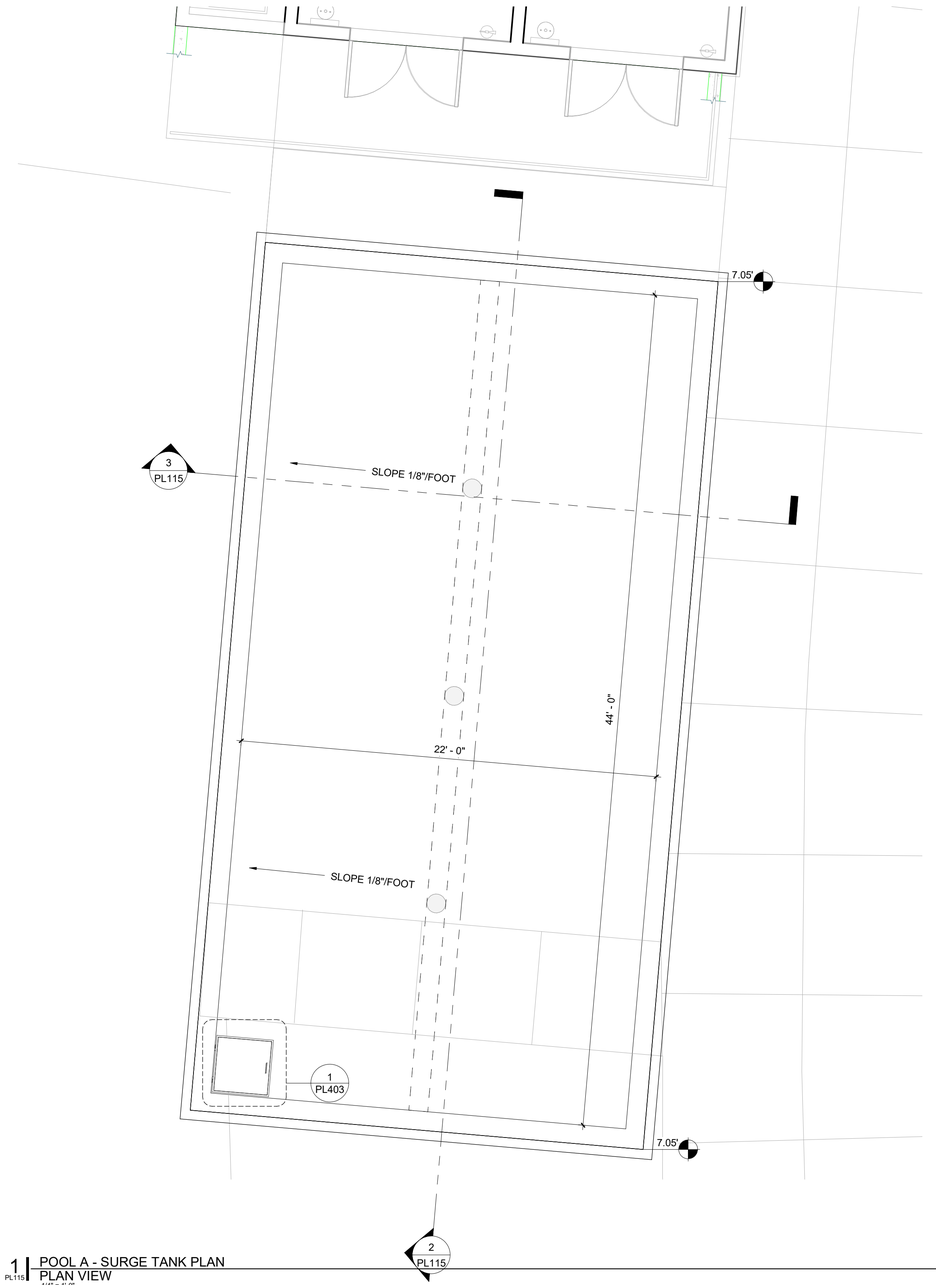
REVISIONS



2 | PL115 POOL A - SURGE TANK SECTION VIEW
1/4" = 1'-0"



3 | PL115 POOL A - SURGE TANK SECTION VIEW
1/4" = 1'-0"



1 | PL115 POOL A - SURGE TANK PLAN PLAN VIEW
1/4" = 1'-0"

OAK POINT ASSOCIATES
ARCHITECTURE ■ ENGINEERING ■ PLANNING
85 Middle Street, Portsmouth, NH 03801 (T) 603.431.4849 (F) 603.431.1870
www.oakpoint.com

STATE OF NEW HAMPSHIRE
BRIAN W. FREBER
No. 11825
LICENSED PROFESSIONAL ENGINEER
03/01/2023

DESIGNED BY: APP
DRAWN BY: MJC
CHECKED BY: WRB
PROJECT: 21904.14

CITY OF PORTSMOUTH
1 Junkins Avenue
Portsmouth, NH 03801

BID #40 - 23
PEIRCE ISLAND PUMP HOUSE AND POOL RENOVATION
Peirce Island Road
Portsmouth, NH 03801

POOL A - SURGE TANK PLAN AND SECTIONS

SCALE: AS NOTED
DATE: 03/01/2023
DWG.: PL115
SHEET: 52 OF 72

WTI
WATER TECHNOLOGY, INC.
World Leaders in Aquatic Planning, Design and Engineering
100 Park Avenue | Beaver Dam, WI 53916
t 920.887.7375 | #18176

NO.	DATE	DESCRIPTION	BY

REVISIONS

DESIGN IS IN ACCORDANCE WITH THE BUILDING CODE 2015 OF NEW HAMPSHIRE AS AMENDED TO DATE.

NOTE

STRUCTURAL DRAWINGS AND POOL DRAWINGS MUST BE USED IN CONJUNCTION WITH EACH OTHER. POOL DRAWINGS DICTATE ALL FINAL CONDITIONS OF POOL, FEATURES, AND DIMENSIONS OF POOL SHELL, INCLUDING POOL FINISH. UNLESS OTHERWISE INDICATED, STRUCTURAL DIMENSIONS ARE CONCRETE TO CONCRETE, AND DICTATE REQUIRED THICKNESSES FOR STRUCTURAL INTEGRITY ONLY.

GEOTECHNICAL PARAMETERS

SOIL PARAMETERS FOR POOL STRUCTURAL DESIGN

1. POOL DESIGNED FOR THE EMPTY CONDITION (CONTROLLING CASE)
2. ALL SOIL PARAMETERS FOR THE POOL STRUCTURAL DESIGN ARE BASED UPON RECOMMENDATIONS FROM THE GEOTECHNICAL REPORT BY R.W. GILLESPE & ASSOCIATES, INC. DATED MAY 5, 2022. POOL SUBGRADE AND SOIL PREPARATION SHALL BE EXECUTED IN ACCORDANCE WITH THE RECOMMENDATIONS OUTLINED IN THE GEOTECHNICAL REPORT. OVER EXCAVATION OF FILL SOIL MAY BE REQUIRED PER THE GEOTECHNICAL ENGINEER.

- STATED NET ALLOWABLE SOIL BEARING CAPACITY= 2000 PSF
- STATED EQUIVALENT FLUID PRESSURE= 95 PSF/FT
- GROUND WATER ASSUMED TO BE LOCATED 5'-0" BELOW GROUND SURFACE.

DESIGN LIVE LOAD SURCHARGE = 250 PSF

STRUCTURAL AND REINFORCEMENT NOTES

STRUCTURAL NOTES

1. REINFORCEMENT AT WALL CORNERS AND WALL BENDS MUST BE DETAILED PER THE ASSOCIATED TYPICAL DETAILS. CORNER AND BEND BARS MUST BE THE SAME SIZE AND SPACING AS THE TYPICAL HORIZONTAL WALL REINFORCING OF THE ASSOCIATED WALLS.
2. UNLESS OTHERWISE INDICATED, ALL WALL REINFORCEMENT BARS MUST BE CONTINUOUS AROUND CORNERS. REINFORCEMENT MUST BE EXTENDED INTO CONNECTING WALLS. UNLESS OTHERWISE INDICATED, CONTRACTOR MAY SPLICE CONTINUOUS SLAB BARS AT LOCATIONS OF THEIR CHOOSING, EXCEPT THAT TOP BAR SPLICES MUST BE LOCATED AT MID-SPAN AND BOTTOM BAR SPLICES MUST BE LOCATED AT SUPPORTS. ALL REINFORCEMENT BENDS AND LAPS, UNLESS OTHERWISE INDICATED, MUST SATISFY THE MINIMUM REQUIREMENTS IN LAP SCHEDULE.
3. FOR REINFORCEMENT AT WALL OR FLOOR SLAB PENETRATIONS, 3 / PL200
4. MINIMUM POURED CONCRETE DESIGN STRENGTH = 4500 PSI. MINIMUM SHOTCRETE DESIGN STRENGTH = 5000 PSI.
5. TANK CONCRETE SHALL CONTAIN CRYSTALLINE WATERPROOFING ADDITIVE PER SPECIFICATIONS.
6. POOL CONCRETE SHALL CONTAIN SHRINKAGE REDUCING ADMIXTURE PER SPECIFICATIONS.

REINFORCEMENT NOTES

1. REINFORCEMENT MUST BE DETAILED AND PLACED IN ACCORDANCE WITH ACI "MANUAL OF CONCRETE PRACTICE", LATEST EDITION, UNLESS OTHERWISE NOTED.
2. ALL LAPS MUST BE CLASS "B" PER ACI 318 UNLESS OTHERWISE NOTES ON THE DESIGN DRAWINGS OR UNLESS THE DETAILER TAKES SPECIAL CARE TO PROVIDE STAGGERED LAPS. USE TOP BAR LAP LENGTHS FOR ALL HORIZONTAL WALL BARS AND FOR TOP BARS IN SLABS AND BEAMS OVER 14" DEEP
3. LAP LENGTH MUST BE SPECIFICALLY NOTED ON PLACING DRAWINGS WHERE MORE THAN ONE BAR MAKES UP A CONTINUOUS STRING.
4. TIE POOL REINFORCING STEEL WITH 18-GAUGE ANNEALED WIRE AS SPECIFIED IN THE CRSI 63 RECOMMENDED PRACTICE FOR PLACING REINFORCING BARS. ALL TIE WIRES MUST BE "MADE TIGHT" FOR ELECTRICAL BONDING PURPOSES, AS REQUIRED BY NEC, ARTICLE 680.
5. ALL HOOKS MUST BE STANDARD HOOKS UNLESS NOTED OTHERWISE.

MILD REINFORCING STEEL MINIMUM CLEAR COVER REQUIREMENTS
COORDINATE WITH REINFORCEMENT STEEL PLACING REQUIREMENTS

3" FOR CONCRETE CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH
2" TYPICAL ALL ELSE, UNLESS NOTED OTHERWISE ON DETAILS

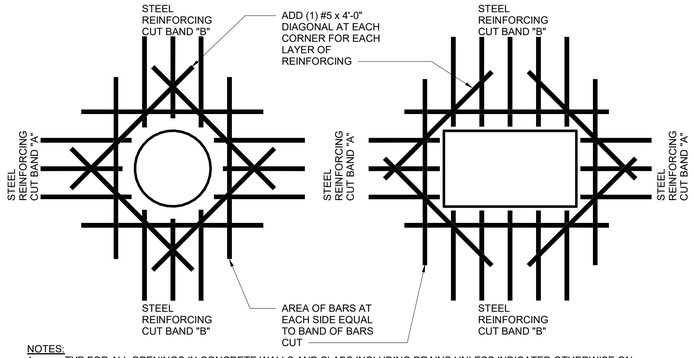
REINFORCEMENT CLASS "B" LAP LENGTHS
TABLE BASED UPON 4500 PSI CONCRETE AND 60 KSI REINFORCING STEEL

BAR SIZE	#3	#4	#5	#6	#7	#8	#9	#10	#11
GR-60 TOP BAR	1'-11" [584]	2'-7" [787]	3'-2" [965]	3'-10" [1168]	5'-7" [1702]	6'-4" [1930]	7'-1" [2159]	7'-11" [2413]	8'-8" [2642]
GR-60 OTHER BAR	1'-6" [457]	2'-0" [610]	2'-6" [762]	2'-11" [889]	4'-3" [1295]	4'-11" [1499]	5'-6" [1676]	6'-1" [1854]	6'-8" [2032]

STANDARD HOOK DIMENSION

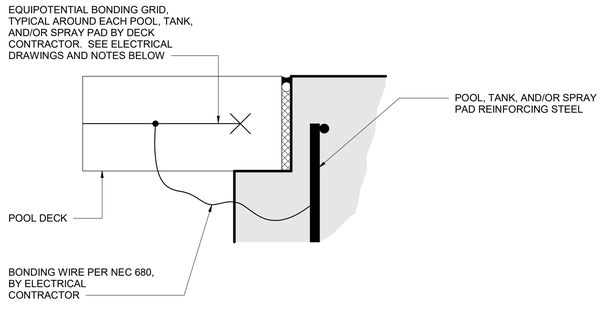
BAR SIZE	#3	#4	#5	#6	#7	#8	#9	#10	#11
HOOK LENGTH	7" [178]	9" [229]	1'-0" [305]	1'-2" [356]	1'-4" [406]	1'-6" [457]	1'-11" [587]	2'-2" [661]	2'-5" [736]

TYPICAL STANDARD DETAILS



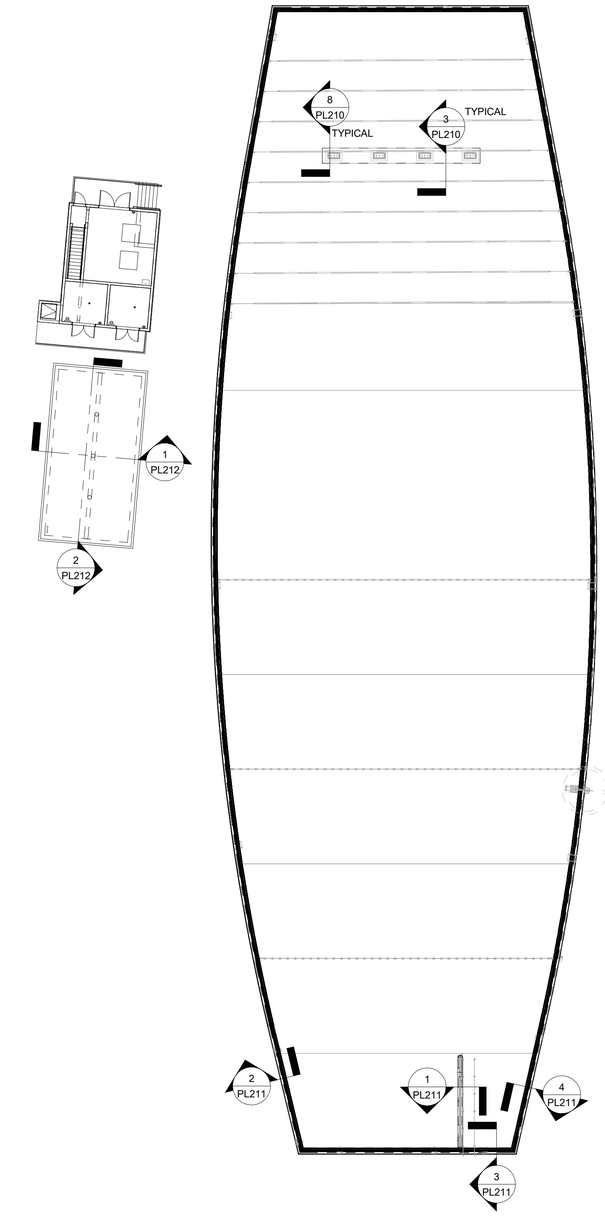
NOTES:
1. TYP FOR ALL OPENINGS IN CONCRETE WALLS AND SLABS INCLUDING DRAINS UNLESS INDICATED OTHERWISE ON PLANS.
2. DO NOT WELD REINFORCEMENT TO PIPE SLEEVES AND INSERTS.
3. ALL OPENINGS THROUGH WATERTIGHT TANK REQUIRE WATERSTOPS.
4. PROVIDE MIN LAP AS NOTED OR SHOWN ON PLANS (TYP)

3 PL200 REINFORCING - REINFORCEMENT AT OPENINGS DETAIL VIEW
NTS



NOTES:
1. THIS DETAIL IS INTENDED TO ILLUSTRATE THE EQUIPOTENTIAL BONDING GRID AROUND EACH POOL, TANK, AND/OR SPRAY PAD AS REQUIRED BY NEC 680.
2. THE GRID MUST CONFORM TO ALL NEC 680 REQUIREMENTS.
3. PER NEC 680, THE GRID SHALL:
   3.a. COMPLETELY SURROUND THE PERIMETER OF THE POOL, TANK, AND/OR SPRAY PAD AND EXTEND 3 FEET HORIZONTALLY FROM THE INSIDE WALLS OF THE POOL, AND/OR TANK, OR PERIMETER EXPANSION JOINT AT SPRAY PADS.
   3.b. BE ARRANGED IN A 12" X 12" (OR LESS) NETWORK OF CONDUCTORS IN A UNIFORMLY SPACED PATTERN.
   3.c. BE BONDED TO THE POOL, TANK, AND/OR SPRAY PAD REINFORCING STEEL.
4. THIS DETAIL IS NOT INTENDED TO DETAIL THE WALLS, SLABS, OR THE DECKS, THE ABOVE DETAIL IS SCHEMATIC. SEE POOL, TANK, AND/OR SPRAY PAD SECTIONS AND DECK SECTIONS FOR ADDITIONAL CONSTRUCTION REQUIREMENTS.
5. SEE POOL, TANK, AND/OR SPRAY PAD ELECTRICAL DRAWINGS FOR ADDITIONAL BONDING & GROUNDING REQUIREMENTS.

2 PL200 EQUIPOTENTIAL BONDING GRID DETAIL VIEW
NOT TO SCALE



1 PL200 POOL A - LEISURE POOL PLAN STRUCTURAL PLAN VIEW
1" = 20'-0"

GRÄEF
Project Number: 2022-2000.XX
Phone 920 / 592 9440

WTI
WATER TECHNOLOGY INC.
World Leaders in Aquatic Planning, Design and Engineering
100 Park Avenue | Beaver Dam, WI 53916
t 920.887.7375 | #18176

NO.	DATE	DESCRIPTION	BY

REVISIONS

OAK POINT ASSOCIATES
ARCHITECTURE ■ ENGINEERING ■ PLANNING
85 Middle Street, Portsmouth, NH 03801 (T) 603.431.4849 (F) 603.431.1870
www.oakpoint.com

BRIAN W. FREBER No. 11825 LICENSED PROFESSIONAL ENGINEER STATE OF NEW HAMPSHIRE
03/01/2023

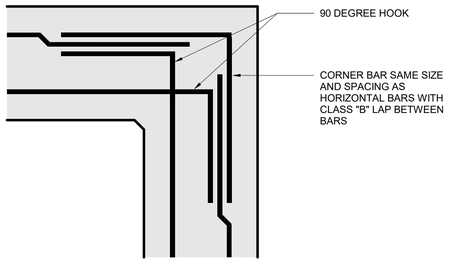
DESIGNED BY: GRAEF
DRAWN BY: GRAEF
CHECKED BY: GRAEF
PROJECT: 21904.14

CITY OF PORTSMOUTH
1 Junkins Avenue
Portsmouth, NH 03801

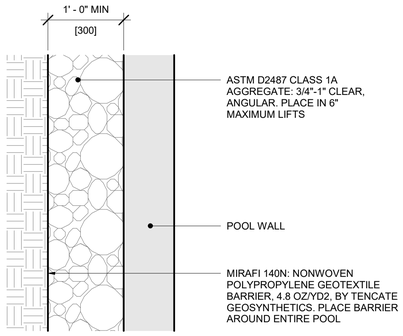
BID #40 - 23
PEIRCE ISLAND PUMP HOUSE AND POOL RENOVATION
Peirce Island Road
Portsmouth, NH 03801

STRUCTURAL NOTES, PLAN(S) AND SCHEDULE

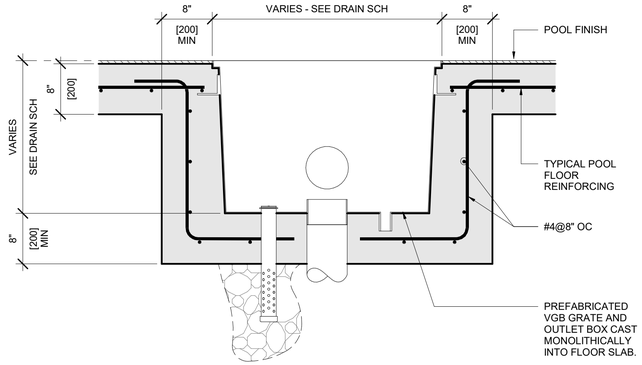
SCALE: AS NOTED
DATE: 03/01/2023
DWG.: PL200
SHEET: 53 OF 72



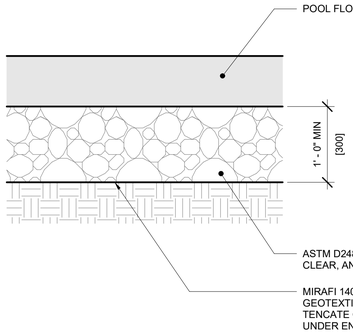
7 PL210 | REINFORCING - DOUBLE MAT REINFORCING AT CORNER DETAIL VIEW
NOT TO SCALE



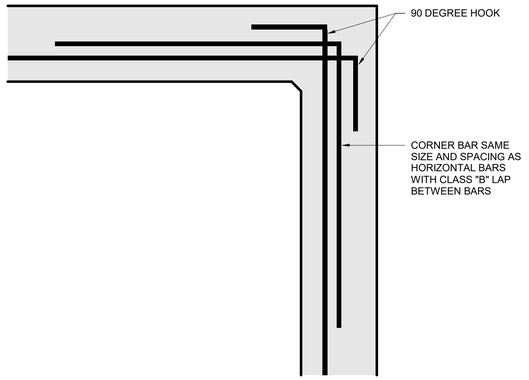
4 PL210 | POOL WALL BACKFILL DETAIL VIEW
NOT TO SCALE



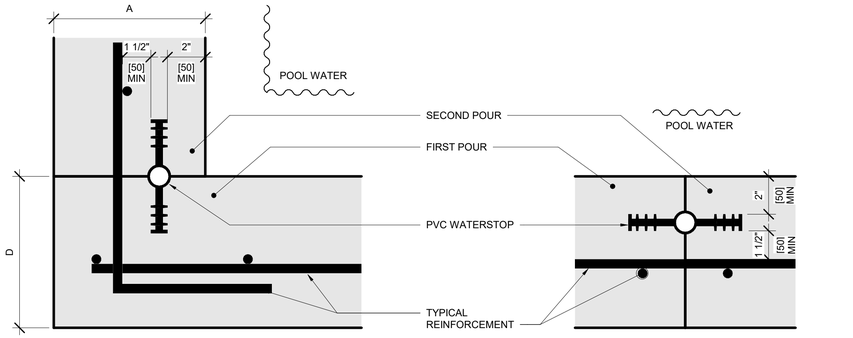
8 PL210 | REINFORCING - FLOOR OUTLET DETAIL VIEW
NOT TO SCALE



5 PL210 | FLOOR SUB BASE DETAIL VIEW
NOT TO SCALE



6 PL210 | REINFORCING - SINGLE MAT REINFORCING AT CORNER DETAIL VIEW
NOT TO SCALE

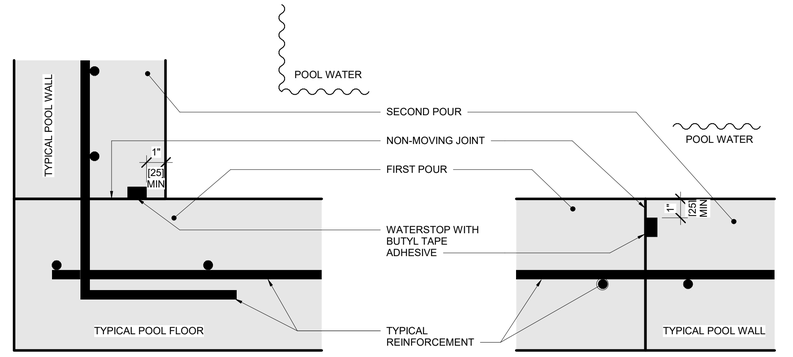


SECTION B-B FLOOR / WALL JOINT

SECTION A-A: WALL / WALL JOINT OR FLOOR/FLOOR JOINT

NOTES:
1. DETAIL IS SCHEMATIC AND INDICATES CLEARANCES AND INSTALLATION INFORMATION ONLY. FOR APPLICABLE INSTALLATION LOCATIONS SEE POOL STRUCTURAL DETAILS.
2. WATERSTOP SHALL BE 6" PVC RIBBED WITH 1" DIA CENTERBULB UNLESS NOTED OTHERWISE.
3. INSTALL WATERSTOP ON WET SIDE(S) OF REINFORCEMENT.
4. ALL WATERSTOPS SHALL BE WELDED PER MANUFACTURER'S REQUIREMENTS.
5. SPACING BETWEEN REINFORCING STEEL AND WATERSTOP SHALL BE NO LESS THAN 1.5 x DIA OF THE LARGEST AGGREGATE IN THE APPROVED CONCRETE MIX.
6. SEE SPECIFICATION SECTION 131120 FOR ADDITIONAL WATERSTOP REQUIREMENTS.

1 PL210 | WATERSTOP - PVC DETAIL VIEW
NOT TO SCALE

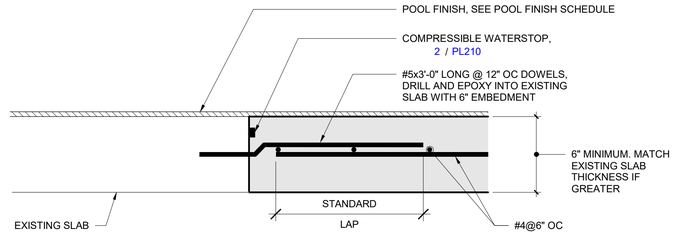


SECTION B-B FLOOR / WALL JOINT

SECTION A-A: WALL / WALL JOINT OR FLOOR/FLOOR JOINT

NOTE:
1. DETAIL IS SCHEMATIC AND INDICATES CLEARANCES AND INSTALLATION INFORMATION ONLY. FOR APPLICABLE INSTALLATION LOCATIONS SEE POOL STRUCTURAL DETAILS.
2. BASIS OF DESIGN IS TYPE KBA-1510FP WATERSTOP BY ADEKA. SUBSTITUTIONS MUST BE APPROVED BY ENGINEER. NOTE THAT CLEARANCES FOR SUBSTITUTIONS MAY DIFFER. REFER TO MANUFACTURER REQUIREMENTS.
3. INSTALL WATERSTOP ON WET SIDE(S) OF REINFORCEMENT.
4. DIMENSION ABOVE IS A MIN FOR CONCRETE COVERAGE AND DOES NOT INCLUDE THE POOL FINISH. PROVIDE ADDITIONAL CONCRETE COVERAGE IF POSSIBLE.
5. PROTECT WATERSTOP FROM WATER, DIRT, DEBRIS, AND DAMAGE PRIOR TO COVERING WITH CONCRETE.
6. SEE SPECIFICATION SECTION 131120 FOR ADDITIONAL WATERSTOP REQUIREMENTS.

2 PL210 | WATERSTOP - COMPRESSIBLE NON-MOVING JOINT - ADEKA DETAIL VIEW
NOT TO SCALE



3 PL210 | REINFORCING - CONSTRUCTION JOINT DETAIL VIEW
NOT TO SCALE

GRÄEF
Project Number: 2022-2000.XX
Phone 920 / 592 9440

WTI
WATER TECHNOLOGY INC.
World Leaders in Aquatic Planning, Design and Engineering
100 Park Avenue | Beaver Dam, WI 53916
t 920.887.7375 | #18176

NO.	DATE	DESCRIPTION	BY
		REVISIONS	

OAK POINT ASSOCIATES
ARCHITECTURE ■ ENGINEERING ■ PLANNING
85 Middle Street, Portsmouth, NH 03801 (T) 603.431.4849 (F) 603.431.1870
www.oakpoint.com

STATE OF NEW HAMPSHIRE
BRIAN W. FREBER No. 11825 LICENSED PROFESSIONAL ENGINEER
03/01/2023

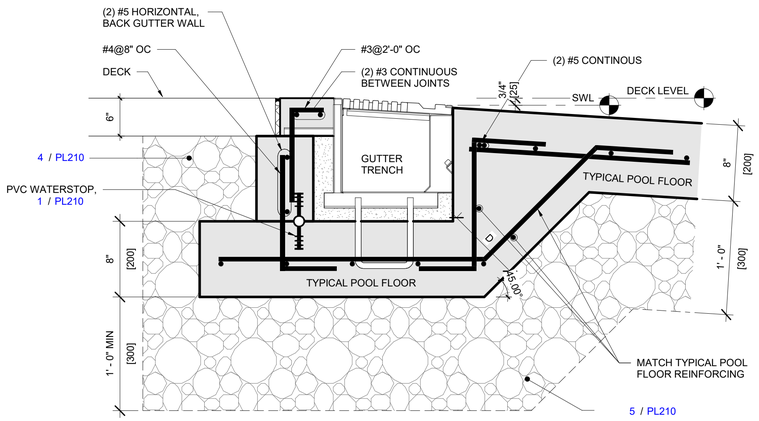
DESIGNED BY: GRAEF
DRAWN BY: GRAEF
CHECKED BY: GRAEF
PROJECT: 21904.14

CITY OF PORTSMOUTH
1 Junkins Avenue
Portsmouth, NH 03801

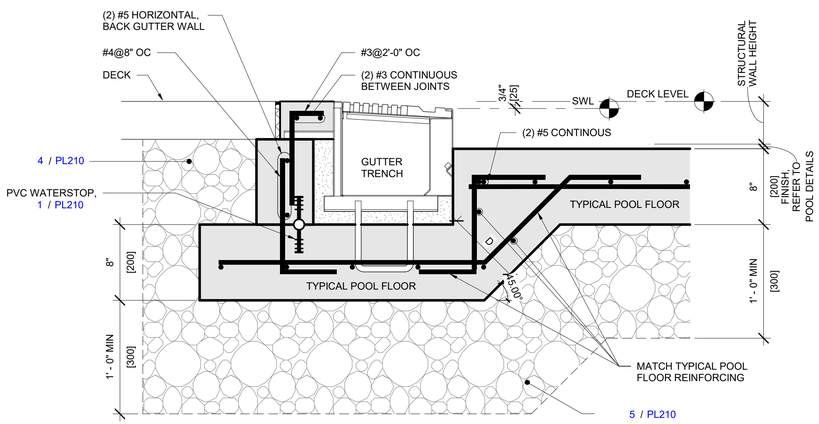
BID #40 - 23
PEIRCE ISLAND PUMP HOUSE AND POOL RENOVATION
Peirce Island Road
Portsmouth, NH 03801

STRUCTURAL GENERAL DETAILS

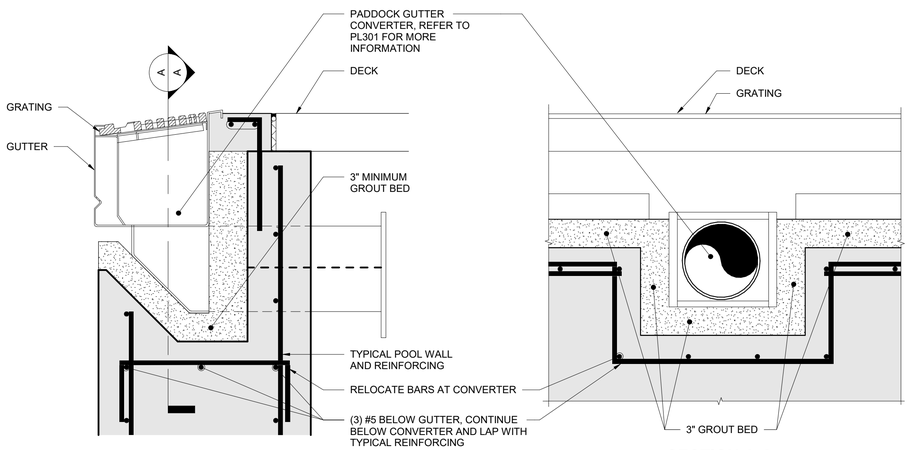
SCALE: AS NOTED
DATE: 03/01/2023
DWG.: PL210
SHEET: 54 OF 72



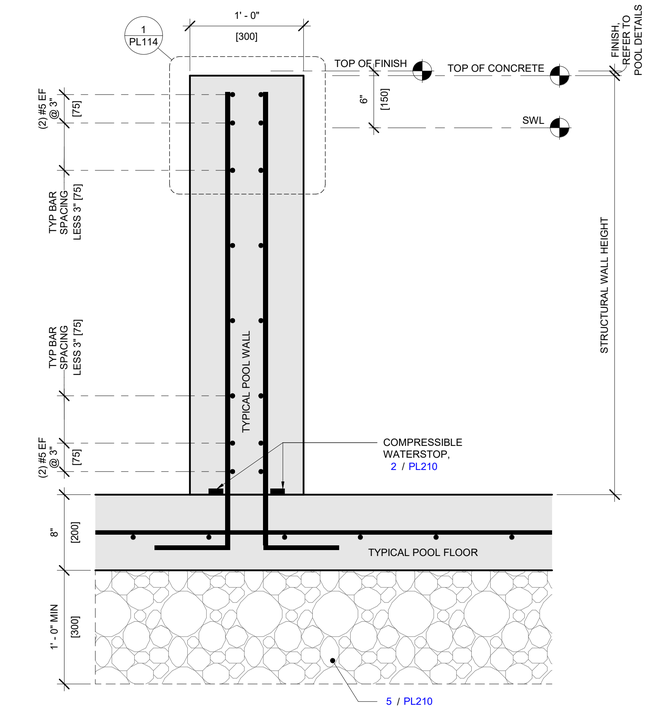
3 PL211 | REINFORCING - ZERO DEPTH GUTTER SECTION VIEW
1 1/2" = 1'-0"



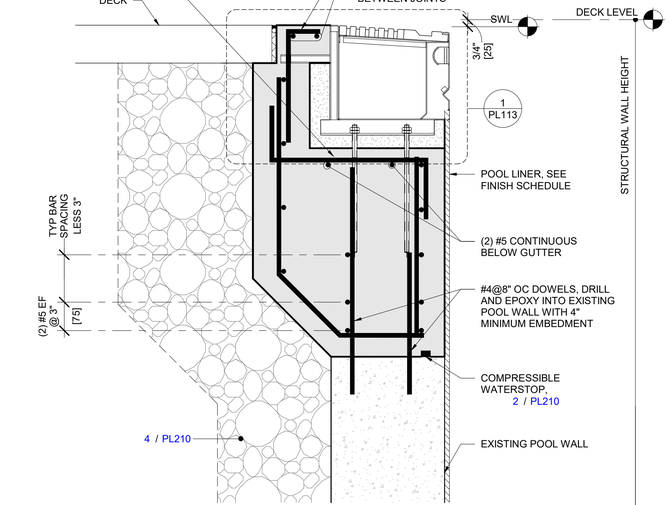
4 PL211 | REINFORCING - ZERO DEPTH TRANSITION TO WALL SECTION VIEW
1 1/2" = 1'-0"



5 PL211 | REINFORCING - GUTTER CONVERTER DETAIL VIEW
NOT TO SCALE



1 PL211 | REINFORCING - TYPICAL COMMON WALL SECTION VIEW
1 1/2" = 1'-0"



2 PL211 | REINFORCING - NEW WALL AT EXISTING SECTION VIEW
1 1/2" = 1'-0"

GRÄEF
Project Number: 2022-2000.XX
Phone 920 / 592 9440

WTI
WATER TECHNOLOGY, INC.
World Leaders in Aquatic Planning, Design and Engineering
100 Park Avenue | Beaver Dam, WI 53916
t 920.887.7375 | #18176

NO.	DATE	DESCRIPTION	BY
		REVISIONS	

OAK POINT ASSOCIATES
ARCHITECTURE ■ ENGINEERING ■ PLANNING
85 Middle Street, Portsmouth, NH 03801 (T) 603.431.4849 (F) 603.431.1870
www.oakpoint.com

BRIAN W. FREBER No. 11825 LICENSED PROFESSIONAL ENGINEER STATE OF NEW HAMPSHIRE
03/01/2023

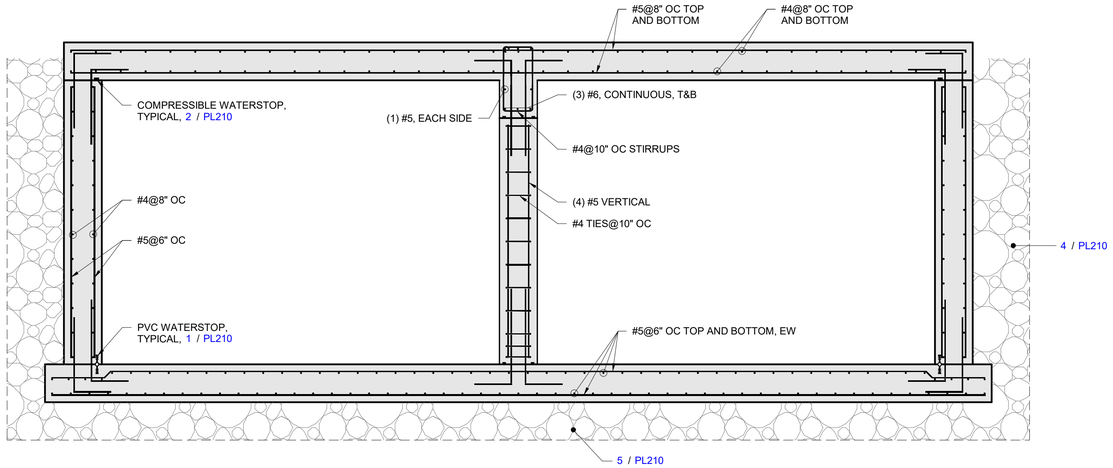
DESIGNED BY: GRAEFF
DRAWN BY: GRAEFF
CHECKED BY: GRAEFF
PROJECT: 21904.14

CITY OF PORTSMOUTH
1 Junkins Avenue
Portsmouth, NH 03801

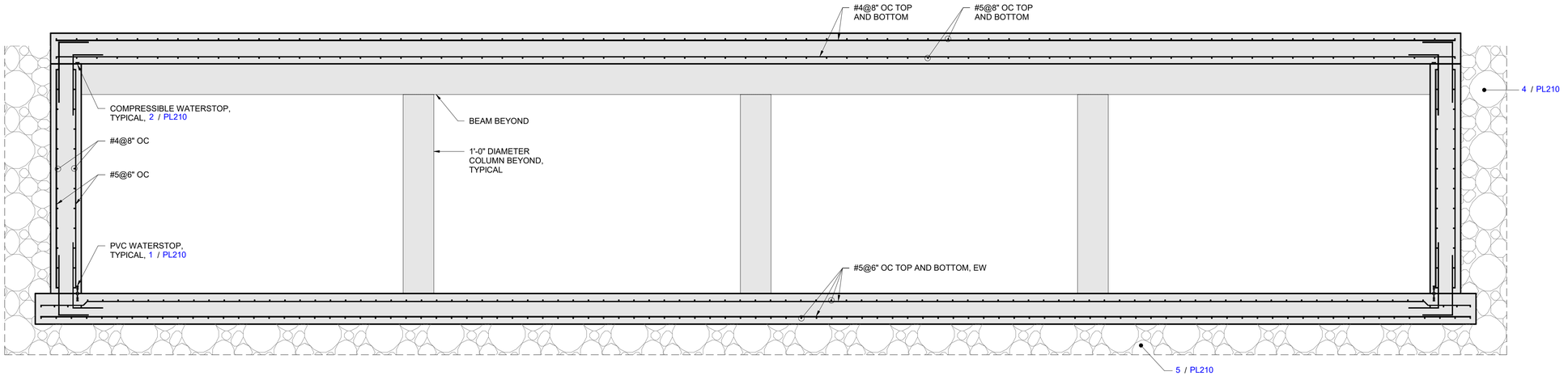
BID #40 - 23
PEIRCE ISLAND PUMP HOUSE AND POOL RENOVATION
Peirce Island Road
Portsmouth, NH 03801

STRUCTURAL DETAILS - 1

SCALE: AS NOTED
DATE: 03/01/2023
DWG.: PL211
SHEET: 55 OF 72



1 PL212 REINFORCING - SURGE TANK SECTION VIEW
1/2" = 1'-0"



2 PL212 REINFORCING - SURGE TANK SECTION VIEW
1/2" = 1'-0"

OAK POINT ASSOCIATES
ARCHITECTURE ■ ENGINEERING ■ PLANNING
85 Middle Street, Portsmouth, NH 03801 (T) 603.431.4849 (F) 603.431.1870
www.oakpointassoc.com

STATE OF NEW HAMPSHIRE
BRIAN W. FREBER No. 11825
LICENSED PROFESSIONAL ENGINEER
03/01/2023

DESIGNED BY: GRAEF
DRAWN BY: GRAEF
CHECKED BY: GRAEF
PROJECT: 21904.14

CITY OF PORTSMOUTH
1 Junkins Avenue
Portsmouth, NH 03801

BID #40 - 23
PEIRCE ISLAND PUMP HOUSE AND POOL RENOVATION
Peirce Island Road
Portsmouth, NH 03801

STRUCTURAL DETAILS - 2

SCALE: AS NOTED
DATE: 03/01/2023
DWG.: PL212
SHEET: 56 OF 72

GRAEF
Project Number: 2022-2000.XX
Phone 920 / 592 9440

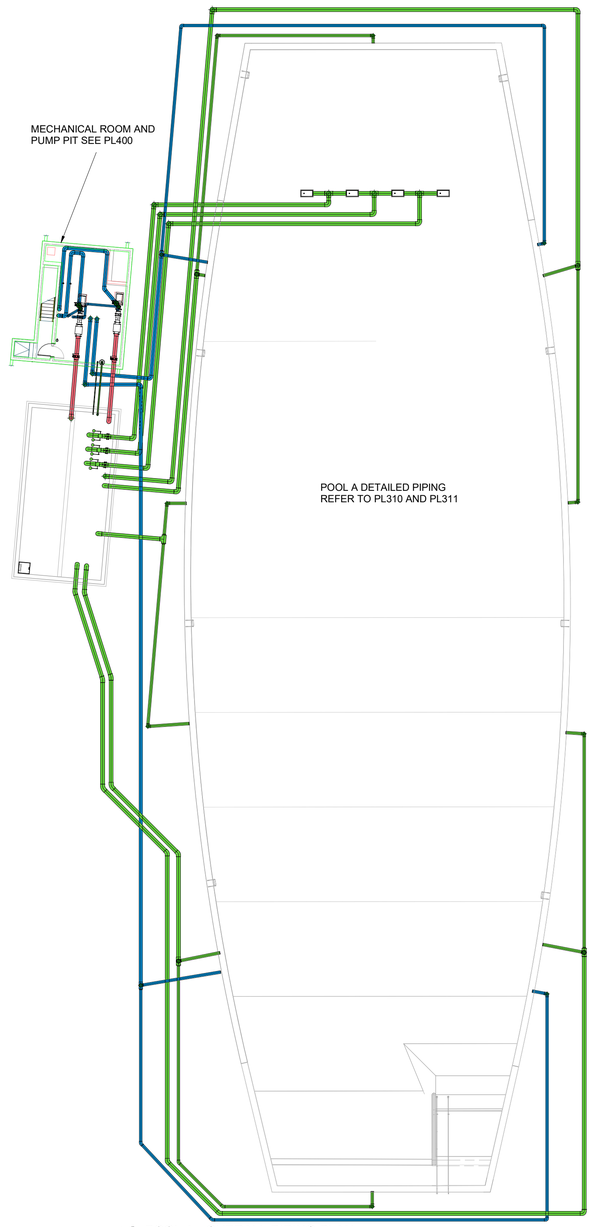
WTI
WATER TECHNOLOGY, INC.
World Leaders in Aquatic Planning, Design and Engineering
100 Park Avenue | Beaver Dam, WI 53916
t 920.887.7375 | #18176

NO.	DATE	DESCRIPTION	BY

REVISIONS

NOTES:

1. THIS DRAWING SHEET MUST BE PRINTED/COPIED IN COLOR.



1 PL300 POOL A - OVERALL PIPING PLAN
PLAN VIEW
1" = 20'-0"

OAK POINT ASSOCIATES
ARCHITECTURE ■ ENGINEERING ■ PLANNING
85 Middle Street, Portsmouth, NH 03801 (T) 603.431.4849 (F) 603.431.1870
www.oakpoint.com

BRIAN W. FREBER No. 11825 LICENSED PROFESSIONAL ENGINEER STATE OF NEW HAMPSHIRE

03/01/2023

DESIGNED BY: MDR
DRAWN BY: MDR
CHECKED BY: WRB
PROJECT: 21904.14

CITY OF PORTSMOUTH
1 Junkins Avenue
Portsmouth, NH 03801

BID #40 - 23
PEIRCE ISLAND PUMP HOUSE AND POOL RENOVATION
Peirce Island Road
Portsmouth, NH 03801

OVERALL PIPING PLAN

SCALE: AS NOTED

DATE: 03/01/2023

DWG.: PL300

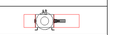
SHEET: 57 OF 72

WTI
WATER TECHNOLOGY INC.
World Leaders in Aquatic Planning, Design and Engineering
100 Park Avenue | Beaver Dam, WI 53916
t 920.887.7375 | #18176

NO.	DATE	DESCRIPTION	BY

REVISIONS

MECHANICAL P&ID SYMBOL LEGEND

EQUIPMENT TYPE	SECTION VIEW	PLAN VIEW
PUMP		
PUMP WITH INTEGRAL STRAINER		
STRAINER		
REGENERATIVE MEDIA FILTER		
HIGH RATE SAND FILTER (HORIZONTAL)		
HIGH RATE SAND FILTER (VERTICAL)		
POOL HEATER		
HEAT EXCHANGER		
UV UNIT		
CHEMICAL CONTROLLER		
CHEMICAL FEED PUMP		
PULSAR CHLORINE FEEDER		
AXIALL CHLORINE FEEDER		
AXIALL ACID FEEDER (ACID RITE)		
CO2 FEEDER		
CHEMICAL STORAGE TANK		
CO2 STORAGE TANK		
AUTO FILL WITH SENSOR		
SURGE TANK VENTILATION FAN		
GEAR OPERATED BUTTERFLY VALVE		
LEVER OPERATED BUTTERFLY VALVE		
PNEUMATIC BUTTERFLY VALVE		
TRUE UNION BALL VALVE		
TRUE UNION CHECK VALVE		
ELECTRONIC MODULATING VALVE		
ELECTRO-PNEUMATIC MODULATING VALVE		
MODULATING FLOAT VALVE		
VENTURI		
SOLENOID VALVE		
CHECK VALVE		
WYE STRAINER		
CONCENTRIC REDUCER		
ECCENTRIC REDUCER		
FLANGED BREAK		
COMPOUND GAUGE		
THERMOMETER		
EXPANSION JOINT		
FLOW METER (SENSOR)		
FLOW SWITCH		

GENERAL POOL PIPING AND EQUIPMENT PLAN NOTES

PIPING

1. THE PIPING LAYOUTS ON THESE DRAWINGS ARE SCHEMATIC AND FOR REFERENCE ONLY. PIPING AS SHOWN IS SPREAD OUT FOR CLARITY. CONTRACTOR SHALL BE RESPONSIBLE FOR DETERMINING FINAL PIPE ROUTING AND ELEVATIONS.
2. REDUCE THE USE OF FITTINGS AND LONG PIPE RUNS TO MINIMIZE HEAD LOSS IN THE SYSTEM.
3. ALL OUTDOOR PIPING MUST BE INSTALLED IN A PIPE TRENCH WITH BEDDING AND COVER MATERIALS PER SPECIFICATIONS. PIPING MAY BE STACKED IN THE PIPE TRENCH.
4. ARROWS DENOTE DIRECTION OF FLOW.
5. REFER TO ALL DISCIPLINES DOCUMENTATION AND COORDINATE ALL PIPING AND EMBEDMENTS WITH AFFECTED TRADES.
6. ALL GRAVITY PIPING MUST BE INSTALLED AT A MINIMUM SLOPE OF 1/2" DROP PER 10' LENGTH. ALL OUTDOOR PIPING MUST BE INSTALLED WITH A SLOPE TO ALLOW COMPLETE DRAINING. PROVIDE WINTERIZING/DRAINING INSTRUCTIONS AND SCHEMATICS TO OWNER.
7. SUPPORT PIPES PER PL404-1 THRU 8.
8. ALL SUPPORTS, BRACING, FASTENERS AND HARDWARE IN THE SURGE TANK(S) MUST BE STAINLESS STEEL.
9. THE INTENT OF THESE DRAWINGS IS NOT TO BE INCLUSIVE OF ALL VALVES OR FITTINGS REQUIRED FOR THIS PROJECT. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO DETERMINE ALL VALVES AND FITTINGS REQUIRED.

PIPE PENETRATIONS

1. SEE BUILDING STRUCTURAL DRAWINGS FOR ALL WALL DIMENSIONS AND WALL/REINFORCING STEEL DIMENSIONS AND DETAILS, INCLUDING REINFORCING REQUIREMENTS AROUND ALL PIPE PENETRATIONS.
2. THE POOL CONTRACTOR MUST FURNISH ALL SLEEVES FOR THE PENETRATIONS SHOWN ON THE POOL DRAWINGS.
3. THE SLEEVES MUST BE INSTALLED BY THE BUILDING CONTRACTOR DURING THE STEEL AND FORMWORK PLACEMENT. BUILDING CONTRACTOR MUST COORDINATE WITH THE POOL CONTRACTOR DURING PLACEMENT AND OBTAIN SLEEVE LOCATION APPROVAL FROM THE POOL CONTRACTOR PRIOR TO POURING THE WALLS.
4. THE POOL CONTRACTOR MUST PROVIDE ALL LINK-SEALS REQUIRED IN THE PIPE PENETRATIONS
5. ALL PIPE PENETRATION DRAWINGS AND DIMENSIONS ARE SPECIFIC TO THE WTI BASIS OF DESIGN POOL EQUIPMENT AND LAYOUTS AS SHOWN. CONTRACTOR IS RESPONSIBLE FOR PROVIDING FINAL PENETRATION LOCATIONS AND SIZES BASED ON ENGINEER APPROVED EQUIPMENT SELECTIONS AND ACTUAL SITE CONDITIONS. PROVIDE SHOP DRAWINGS TO POOL ENGINEER
6. REFER TO PL200-3 FOR REINFORCEMENT AT PIPE PENETRATIONS.
7. SEE PENETRATION SCHEDULE FOR ALL PIPE PENETRATIONS SHOWN IN THE ELEVATION DETAILS ON PL600.

MECHANICAL EQUIPMENT

1. CONTRACTOR MUST PROVIDE EQUIPMENT LAYOUTS PER PLANS. IF ALTERNATE LAYOUT IS REQUESTED, CONTRACTOR MUST PROVIDE SCALED DRAWING LAYOUT FOR REVIEW INDICATING POOL EQUIPMENT, PIPING, PIPE SUPPORTS, REQUIRED CLERANCES, AND SERVICE ACCESS.
2. REFER TO ARCHITECTURAL PLANS FOR ACTUAL ROOM DIMENSIONS AND FINISHED FLOOR ELEVATIONS.
3. VERIFY EQUIPMENT PAD HEIGHT REQUIREMENTS FROM MANUFACTURER AND PROVIDE SHOP DRAWINGS TO POOL ENGINEER
4. PROVIDE MINIMUM 30" SERVICE ACCESS BETWEEN PUMPS. CONTRACTOR MUST PROVIDE THE GREATER OF MANUFACTURER OR CODE REQUIRED CLEARANCES AROUND AND ABOVE ALL OTHER POOL EQUIPMENT.

POOL CHEMICAL STORAGE AND PIPING NOTES

1. ALL CHEMICAL ROOM DOORS AND CONTAINERS MUST BE PROVIDED WITH SIGNAGE AS REQUIRED BY FIRE CODE. SEE ARCHITECTURAL DRAWING FOR THE DOOR LABEL REQUIREMENTS.
2. DO NOT LOCATE CHEMICAL INJECTION POINTS ABOVE DOORWAY, CHEMICAL FEED PUMPS, OR ELECTRICAL OUTLETS.
3. THE DIRECTION OF FLOW FOR THE RECIRCULATION EQUIPMENT MUST BE LABELED CLEARLY WITH DIRECTIONAL SYMBOLS SUCH AS ARROWS ON ALL PIPING IN THE EQUIPMENT AREA PER REQUIREMENTS OF 13 11 20 SPECIFICATIONS.
4. PLUMBING LINES MUST BE LABELED CLEARLY WITH THE SOURCE OR DESTINATION DESCRIPTIONS PER REQUIREMENTS OF 13 11 20 SPECIFICATIONS.
5. EACH VALVE NUST BE INSTALLED IN THE EQUIPMENT AREA AND LABELED AS TO ITS PURPOSE PER REQUIREMENTS OF 13 11 20 SPECIFICATIONS.
6. PER SPECIFICATIONS SECTION 13 11 13, SUBMIT AN ELECTRONIC VERSION OF THE PIPE AND VALVE CHART FOR EACH PIPING SYSTEM TO THE ARCHITECT/ENGINEER FOR APPROVAL. CHART TO CONSIST OF ISOMETRIC DRAWINGS OR PIPING LAYOUTS SHOWING AND IDENTIFYING EACH VALVE AND DESCRIBING ITS FUNCTION. UPON COMPLETION OF THE WORK HANG IN A CONSPICUOUS LOCATION IN THE EQUIPMENT ROOM ONE (1) COPY OF EACH CHART TO A RIGID BACKBOARD WITH CLEAR LACQUER PLACED UNDER GLASS AND FRAMED.

NOTE:

THIS DRAWING SHEET MUST BE PRINTED\COPIED IN COLOR

PIPING NOTES

REFER TO DIVISION 13 SPECIFICATIONS FOR DETAILS

PIPING

ALL PIPING MUST BE IN ACCORDANCE WITH THE NEW HAMPSHIRE STATE PLUMBING CODE AND NEW HAMPSHIRE DEPARTMENT OF PUBLIC HEALTH CODE. THE A.S.T.M. DESIGNATION NUMBER D-1785, AND THE NSF SEAL FOR POTABLE WATER.

ALL PIPING DESIGNED FOR 6'/SECOND MAX SUCTION, 10'/SECOND MAX PRESSURE, AND 3'/SECOND MAX GRAVITY.

MAIN DRAIN PIPING SHALL CARRY 100% OF RECIRCULATION RATE AT A VELOCITY NOT TO EXCEED 3'/SECOND.

a. ALL ZERO DEPTH GUTTER, GUTTER AND INLET SUPPLY PIPING MUST BE LAID ON A GRADE SO IT WILL DRAIN TO THE SURGE TANK COMPLETELY BY GRAVITY. MAIN DRAIN LINE PIPING MUST BE LAID ON A GRADE SO; (A) ALL PIPING FROM BENEATH THE POOL TO THE ELEVATION CHANGE SHALL PITCH TO DRAIN TO THE POOL MAIN DRAIN SUMPS AND; (B) ALL PIPING FROM THE ELEVATION CHANGE TO THE SURGE TANK MUST PITCH TO DRAIN TO THE SURGE TANK. IN ALL INSTANCES WHERE GRAVITY DRAINAGE IS NOT PROVIDED; THE CONTRACTOR SHALL INSTALL DRAIN VALVES SO THAT ALL LINES CAN BE DRAINED COMPLETELY TO SURGE TANK OR ANOTHER APPROVED LOCATION. DRAINAGE PLUGS SHALL BE PROVIDED IN THE PIPING SYSTEM TO ALLOW FOR DRAINING OF POOL PIPING. CONTRACTOR SHALL PROVIDE OPERATION AND DRAINING INSTRUCTIONS TO OWNER.
b. ALL ELEVATIONS TO BE FIELD VERIFIED TO ALLOW FOR PROPER PITCH AND DRAINAGE. PITCH -APPROXIMATE 1"/10'-0". POOL CONTRACTOR SHALL MAKE EVERY EFFORT TO CURTAIL THE USE OF FITTINGS TO REDUCE HEAD.
c. ALL DRAWINGS ARE INTENDED FOR SCHEMATIC USE ONLY!! FINAL LOCATIONS MUST BE FIELD VERIFIED WITH ALL OTHER TRADES, BY CONTRACTOR.
d. CONTRACTOR MUST COORDINATE ALL WORK WITH ARCHITECTURAL, MECHANICAL, ELECTRICAL AND STRUCTURAL DRAWINGS.

DRAINS

a. ALL DRAIN FITTINGS TO CARRY 100% OF RECIRCULATION RATE AT A VELOCITY NOT TO EXCEED 1.5'/SECOND THROUGH THE CLEAR AREA OF THE GRATE.
b. FILTER DRAIN LINE TO DISCHARGE TO SEWER WITH MIN 6" AIR GAP.
c. ALL DRAINS AND OUTLETS MUST CONFORM WITH ANSI/APSP-16 2011 OR ANY SUCCESSOR STANDARD.

PRESSURE GUAGES

a. PRESSURE GAUGES TO BE INSTALLED ON ALL PUMP SUCTION AND DISCHARGE LINES.

VALVES

a. EACH VALVE MUST HAVE A PERMANENT IDENTIFYING LABEL OR TAG ATTACHED TO IT. THE SEQUENCE OF OPERATION, BRIEFLY STATED, MUST BE PROMINENTLY DISPLAYED.

FLOWMETERS

a. FLOWMETER MUST BE PROVIDED IN THE FILTRATION PUMP DISCHARGE LINE AND IN EACH INLET RETURN LINE AS INDICATED ON THE DRAWINGS. FLOWMETERS MUST BE INSTALLED ON A STRAIGHT LENGTH OF PIPE WITHOUT ANY VALVE, ELBOW OR OTHER SOURCE OF TURBULENCE (UNINTERRUPTED FLOW). PROVIDE A MIN OF 10 PIPE DIA UPSTREAM AND 5 PIPE DIA DOWNSTREAM FROM THE FLOWMETER OF UNINTERRUPTED FLOW OR INSTALL PER MANUFACTURER'S RECOMMENDATIONS.
b. MAIN FLOWMETER NUST BE USED TO MONITOR BACKWASH RATE.

FILTERS

a. FILTER MUST BE PROVIDED WITH THE FOLLOWING APPROPRIATELY LOCATED ACCESSORIES: PRESSURE GUAGES, SIGHT GLASS ON PRE-COAT LINE, AN AIR RELIEF VALVE AT THE HIGH POINT OF THE FILTER AND A VALVED TANK DRAIN.

PIPING LEGEND

PIPE DESCRIPTION	PIPE COLOR
AIR:	
ACTIVITY SUPPLY:	
CHEMICAL:	
INLET SUPPLY:	
GRAVITY:	
JET SUPPLY:	
PROPULSION SUPPLY:	
AUTOFILL SENSOR:	
SKIMMER SUCTION:	
SLIDE SUPPLY:	
SUCTION:	

WTI
WATER TECHNOLOGY INC.
World Leaders in Aquatic Planning, Design and Engineering
100 Park Avenue | Beaver Dam, WI 53916
t 920.887.7375 | #18176

NO.	DATE	DESCRIPTION	BY

REVISIONS

OAK POINT ASSOCIATES
ARCHITECTURE ■ ENGINEERING ■ PLANNING
85 Middle Street, Portsmouth, NH 03801 (T) 603.431.4849 (F) 603.431.1870
www.oakpoint.com

STATE OF NEW HAMPSHIRE
BRIAN W. FREBER No. 11825
LICENSED PROFESSIONAL ENGINEER
03/01/2023

DESIGNED BY: Designer
DRAWN BY: Author
CHECKED BY: Checker
PROJECT: 21904.14

CITY OF PORTSMOUTH
1 Junkins Avenue
Portsmouth, NH 03801

BID #40 - 23
PEIRCE ISLAND PUMP HOUSE AND POOL RENOVATION
Peirce Island Road
Portsmouth, NH 03801

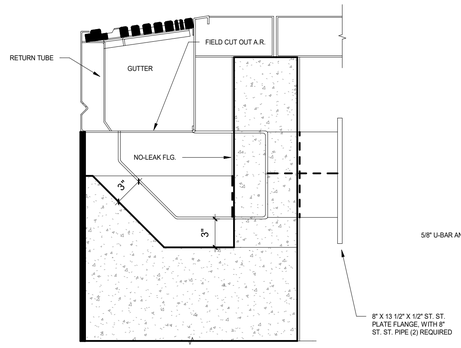
GENERAL NOTES

SCALE: AS NOTED
DATE: 03/01/2023
DWG.: PL301
SHEET: 58 OF 72

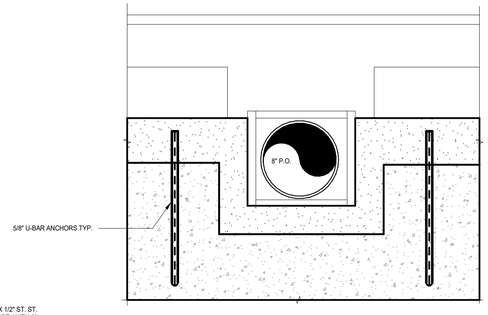
DRAIN SCHEDULE

DRAIN / GRATE ID	DETAIL #	DRAIN/GRATE MFGR SPECIFICATIONS						DESIGN DATA						
		MFGR & MODEL #	DIMENSIONS		OPEN AREA		MAX ALLOWABLE FLOW PER GRATE	CONNECTED PUMPS	SYSTEM TOTAL DESIGN FLOW	DRAIN / GRATE QTY	FLOW PER GRATE	VELOCITY	SYSTEM MAXIMUM	
			WIDTH	LENGTH	PER GRATE	TOTAL							FLOW PER GRATE	VELOCITY
			(ft)	(ft)	(in2)	(in2)	(gpm)		(gpm)		(gpm)	(fps)	(gpm)	(fps)
A-PF1	1/PL301	DALDORADO: DalMAX-SG-183634	1.5	3.0	401	802	2869	P1A	1491	2	746	0.60	1181	0.94
A-PF2	1/PL301	DALDORADO: DalMAX-SG-183634	1.5	3.0	401	802	2869	P2A	1491	2	746	0.60	1181	0.94
		-	-	-	-	-	-	-	-	-	-	-	-	-

NOTE: THE SYSTEM MAXIMUM FLOW RATE AND VELOCITY HAS BEEN DETERMINED BY USING THE FLOW RATE AT THE END OF THE PUMP MANUFACTURER'S PUMP CURVE.

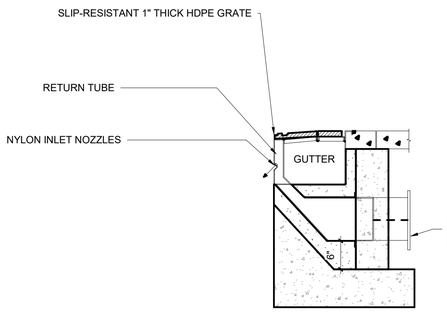


P.O. CONVERTER

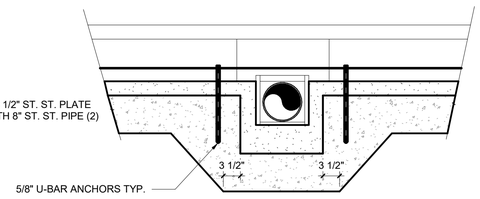


SECTION A-A

2 PL302 PADDOCK GUTTER CONVERTER DETAIL VIEW
NOT TO SCALE

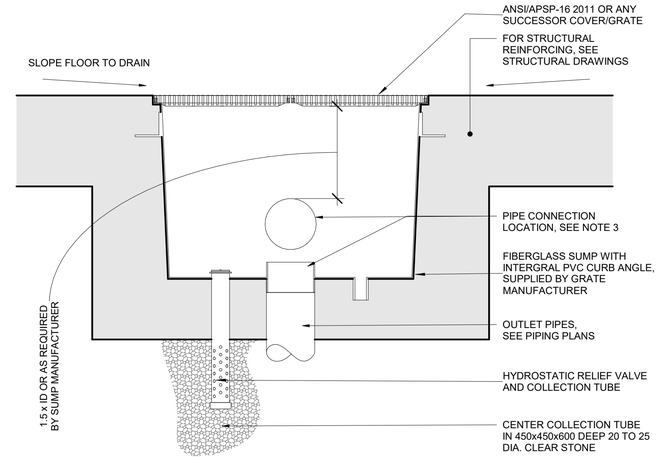


CONVERTER SECTION



CONVERTER WALL CUT - OUT
REAR VIEW

3 PL302 PADDOCK INLET CONVERTER DETAIL VIEW
NOT TO SCALE



NOTES:
1. SUMP AND GRATE COVER SHALL CONFORM WITH CURRENT ANSI/APSP-16 STANDARD. VERIFY GRATE DIMENSIONS AND OUTLET REQUIREMENTS WITH GRATE/SUMP MANUFACTURER PRIOR TO SUBMITTING SHOP DRAWINGS.
2. THE FIBERGLASS SUMP SHALL BE SUPPLIED WITH THE GRATE AS INDICATED IN THE DRAIN SCH. SUMP MATERIALS SHALL MEET OR EXCEED THE SCHEDULED MANUFACTURER'S SPECIFICATION: 225 GRAM FIBERGLASS MAT WITH MARINE GRADE WHITE GELCOAT AND 50mm MINIMUM FRP WATERSTOP AROUND THE OUTSIDE PERIMETER.
3. AT CONTRACTOR'S OPTION, SUMP MAY HAVE BOTTOM OR SIDE OUTLET PIPE CONNECTION.
4. CONTRACTOR SHALL INCLUDE ALL POOL DRAIN/WINTERIZATION PIPE CONNECTIONS AS SHOWN ON PIPING DRAWINGS.
5. ALL SUMPS REQUIRE A MINIMUM OF ONE HYDROSTATIC RELIEF PORT AND 50od VALVE. (HAYWARD MODEL SP1056) WITH COLLECTION TUBE PER SUMP, UNLESS OTHERWISE NOTED. VERTICALLY INSTALLED SUMPS, ELEVATED POOLS AND/OR POOLS CONSTRUCTED ON A VOID FORM DO NOT REQUIRE A HYDROSTATIC RELIEF VALVE SYSTEM. UNUSED HYDROSTATIC PORTS SHALL BE PLUGGED.
6. SEE DRAIN SCHEDULE AND PIPE PLANS.
7. SECURE ALL GRATING TO DRAIN SUMP WITH CORROSION RESISTANT FASTENERS IN ACCORDANCE WITH MANUFACTURER REQUIREMENTS. FASTENERS SHALL NOT BE REMOVABLE WITHOUT THE USE OF A TOOL AND SHALL MEET ALL CURRENT ANSI/APSP/ICC-16 REQUIREMENTS. INSPECT ALL GRATING AND EACH FASTENER TO ASSURE THEY ARE IN PLACE AND PROPERLY SECURED PRIOR TO OPENING THE POOL FOR PUBLIC USE.
8. PROTECT DRAIN FROM EXTERNAL PRESSURE DURING INSTALLATION.
9. PROVIDE A REMOVABLE PLYWOOD AND A REUSABLE 6mm PVC TOP COVER PROTECTOR WITH STAINLESS STEEL HARDWARE TO SHIELD THE INTERNALS OF EACH DRAIN SUMP FROM DEBRIS DURING CONSTRUCTION AND FOR FUTURE OWNER USE DURING WINTERIZATION AND/OR SHUTDOWN.
10. SUPPLY EACH SUMP CONNECTION PORT WITH A THREADED OR FLANGED ADAPTOR CONNECTION INSIDE THE SUMP. INCLUDE CORRESPONDING THREADED/FLANGED ADAPTOR PLUGS/FITTINGS AND STAINLESS STEEL HARDWARE FOR THE PURPOSES OF 345 kPa PRESSURE TESTING AND FUTURE WINTERIZATION AND/OR SHUTDOWN.

1 PL302 MAIN DRAIN DETAIL VIEW
NOT TO SCALE

WTI
WATER TECHNOLOGY INC.
World Leaders in Aquatic Planning, Design and Engineering
100 Park Avenue | Beaver Dam, WI 53916
t 920.887.7375 | #18176

NO.	DATE	DESCRIPTION	BY

REVISIONS

OAK POINT ASSOCIATES
ARCHITECTURE ■ ENGINEERING ■ PLANNING
85 Middle Street, Portsmouth, NH 03801 (T) 603.431.4849 (F) 603.431.1870
www.oakpointassoc.com

BRIAN W. FREBER No. 11825 LICENSED PROFESSIONAL ENGINEER STATE OF NEW HAMPSHIRE
03/01/2023

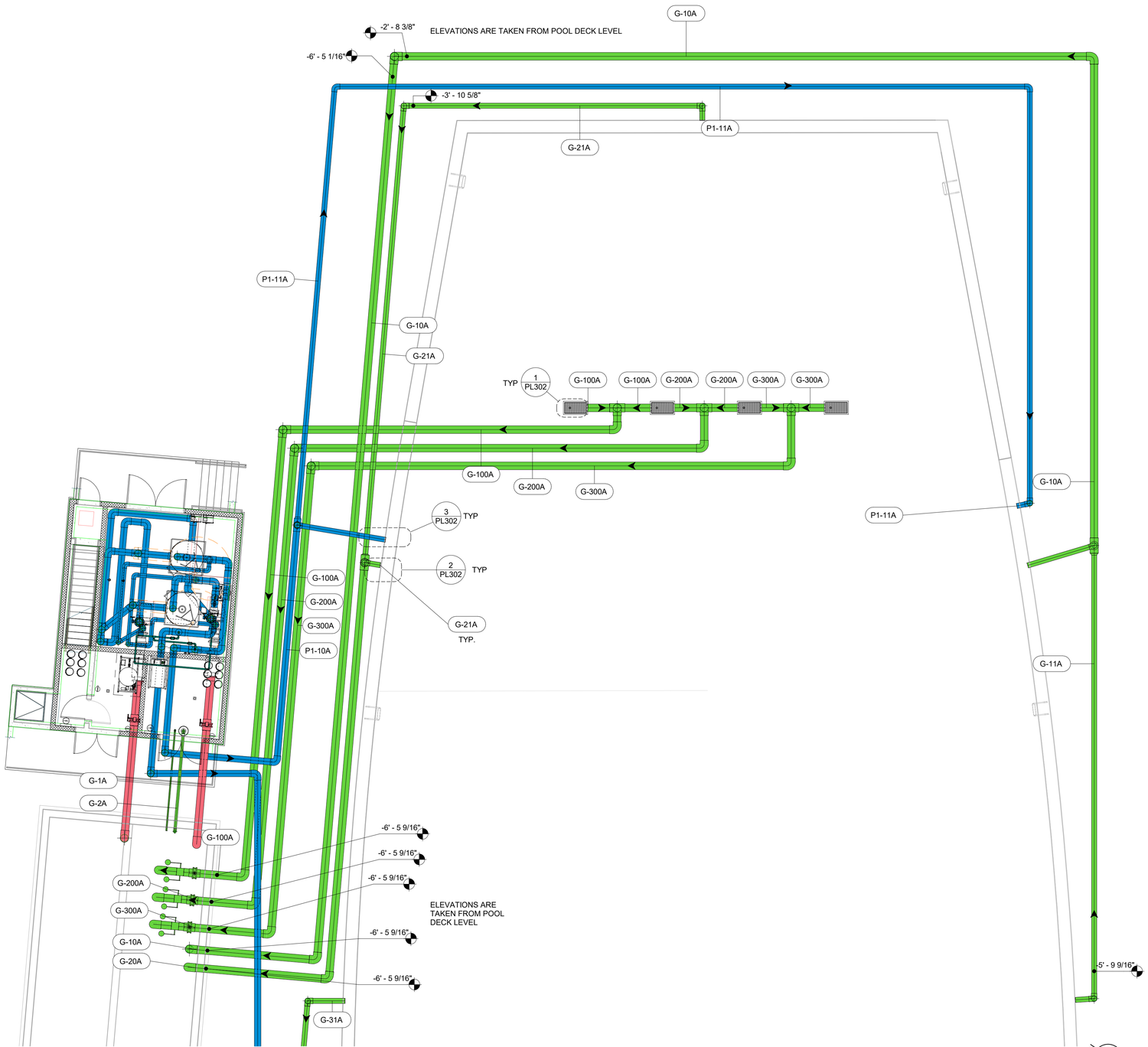
DESIGNED BY: MDR
DRAWN BY: MDR
CHECKED BY: WRB
PROJECT: 21904.14

CITY OF PORTSMOUTH
1 Junkins Avenue
Portsmouth, NH 03801

BID #40 - 23
PEIRCE ISLAND PUMP HOUSE AND POOL RENOVATION
Peirce Island Road
Portsmouth, NH 03801

GENERAL DETAILS

SCALE: AS NOTED
DATE: 03/01/2023
DWG.: PL302
SHEET: 59 OF 72



1 PL310 POOL A - PIPING PLAN (NORTHERN END)
PLAN VIEW
1/8" = 1'-0"

NOTES:

1. THIS DRAWING SHEET MUST BE PRINTED/COPIED IN COLOR.

POOL A - LEISURE POOL PIPE SCHEDULE

PIPE ID	TYPE	NPS (in)	FLOW (gpm)	VELOCITY (fps)	DESCRIPTION
S1-10A	PVC SCH 80	12	1,491	4.8	FILTRATION PUMP SUCTION - SURGE TANK
-	-	-	-	-	-
P1-10A	PVC SCH 80	10	1,491	6.8	INLET SUPPLY
P1-11A	PVC SCH 80	8	746	5.3	INLET SUPPLY
-	-	-	-	-	-
G-10A	PVC SCH 40	12	746	2.2	GUTTER
G-11A	PVC SCH 40	8	373	2.4	GUTTER
-	-	-	-	-	-
G-20A	PVC SCH 40	12	746	2.2	GUTTER
G-21A	PVC SCH 40	8	373	2.4	GUTTER
-	-	-	-	-	-
G-30A	PVC SCH 40	12	746	2.2	GUTTER
G-31A	PVC SCH 40	8	373	2.4	GUTTER
-	-	-	-	-	-
G-100A	PVC SCH 40	12	994	2.9	GRAVITY MAIN DRAIN
G-200A	PVC SCH 40	12	994	2.9	GRAVITY MAIN DRAIN
G-300A	PVC SCH 40	12	994	2.9	GRAVITY MAIN DRAIN
-	-	-	-	-	-
G-1A	PVC SCH 40	2	0	0.0	SENSOR STAND PIPE
G-2A	PVC SCH 40	4	88	2.2	FILL LINE

OAK POINT ASSOCIATES
ARCHITECTURE ■ ENGINEERING ■ PLANNING
85 Middle Street, Portsmouth, NH 03801 (T) 603.431.4849 (F) 603.431.1870
www.oakpoint.com

STATE OF NEW HAMPSHIRE
BRIAN W. FREBER
No. 11825
LICENSED PROFESSIONAL ENGINEER
03/01/2023

DESIGNED BY: MDR
DRAWN BY: MDR
CHECKED BY: WRB
PROJECT: 21904.14

CITY OF PORTSMOUTH
1 Junkins Avenue
Portsmouth, NH 03801

BID #40 - 23
PEIRCE ISLAND PUMP HOUSE AND POOL RENOVATION
Peirce Island Road
Portsmouth, NH 03801

POOL A - PIPING PLAN (NORTHERN END)

SCALE: AS NOTED
DATE: 03/01/2023
DWG.: PL310
SHEET: 60 OF 72

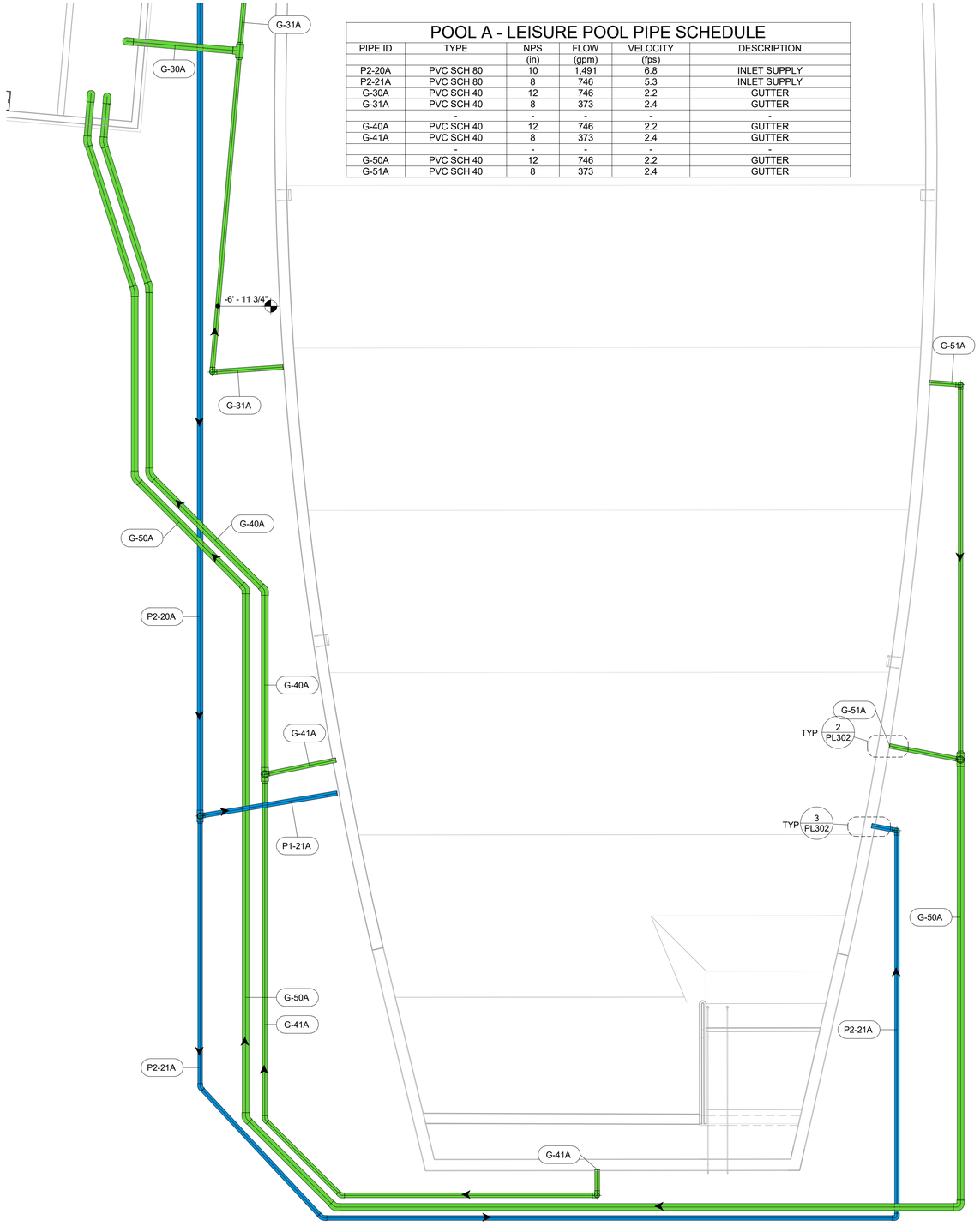
WTI
WATER TECHNOLOGY INC.
World Leaders in Aquatic Planning, Design and Engineering
100 Park Avenue | Beaver Dam, WI 53916
t 920.887.7375 | #18176

NO.	DATE	DESCRIPTION	BY

REVISIONS

POOL A - LEISURE POOL PIPE SCHEDULE

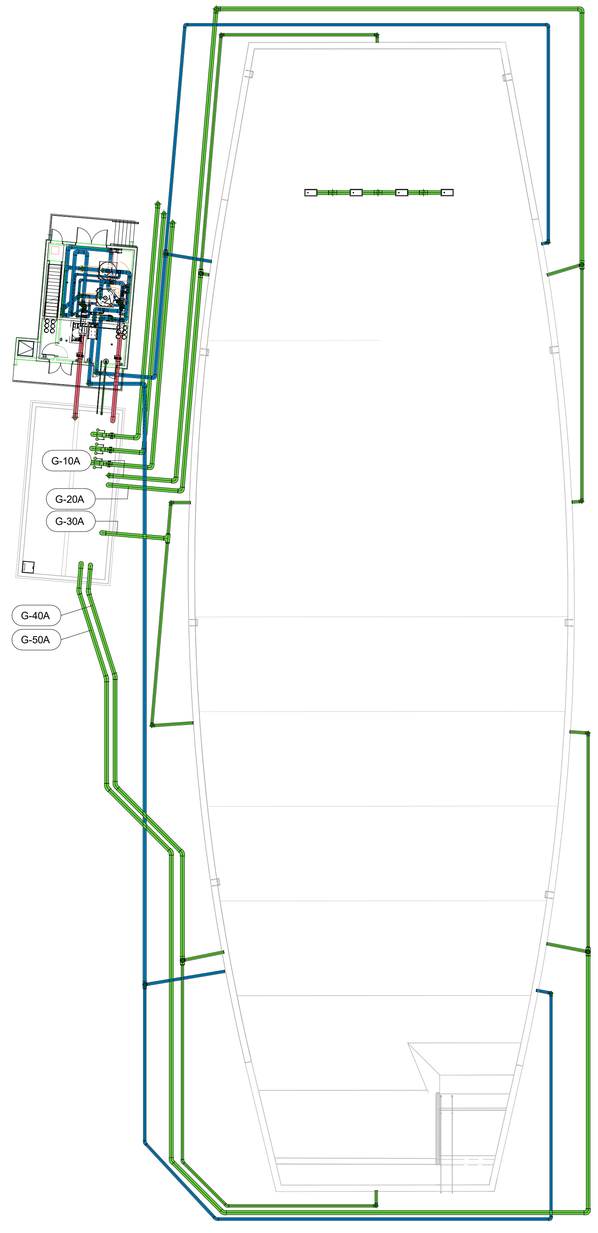
PIPE ID	TYPE	NPS (in)	FLOW (gpm)	VELOCITY (fps)	DESCRIPTION
P2-20A	PVC SCH 80	10	1,491	6.8	INLET SUPPLY
P2-21A	PVC SCH 80	8	746	5.3	INLET SUPPLY
G-30A	PVC SCH 40	12	746	2.2	GUTTER
G-31A	PVC SCH 40	8	373	2.4	GUTTER
	-	-	-	-	-
G-40A	PVC SCH 40	12	746	2.2	GUTTER
G-41A	PVC SCH 40	8	373	2.4	GUTTER
	-	-	-	-	-
G-50A	PVC SCH 40	12	746	2.2	GUTTER
G-51A	PVC SCH 40	8	373	2.4	GUTTER



2 | PL311 POOL A - PIPING PLAN ENLARGED (SOUTHERN END) Copy 1
PLAN VIEW
1" = 10'-0"

NOTES:

1. THIS DRAWING SHEET MUST BE PRINTED/COPIED IN COLOR.



1 | PL311 POOL A - PIPING PLAN (SOUTHERN END)
PLAN VIEW
1" = 20'-0"

WTI
WATER TECHNOLOGY INC.
World Leaders in Aquatic Planning, Design and Engineering
100 Park Avenue | Beaver Dam, WI 53916
t 920.887.7375 | #18176

NO.	DATE	DESCRIPTION	BY

REVISIONS

OAK POINT ASSOCIATES
ARCHITECTURE ■ ENGINEERING ■ PLANNING
85 Middle Street, Portsmouth, NH 03801 (T) 603.431.4849 (F) 603.431.1870
www.oakpoint.com

STATE OF NEW HAMPSHIRE
BRIAN W. FREBER No. 11825
LICENSED PROFESSIONAL ENGINEER
03/01/2023

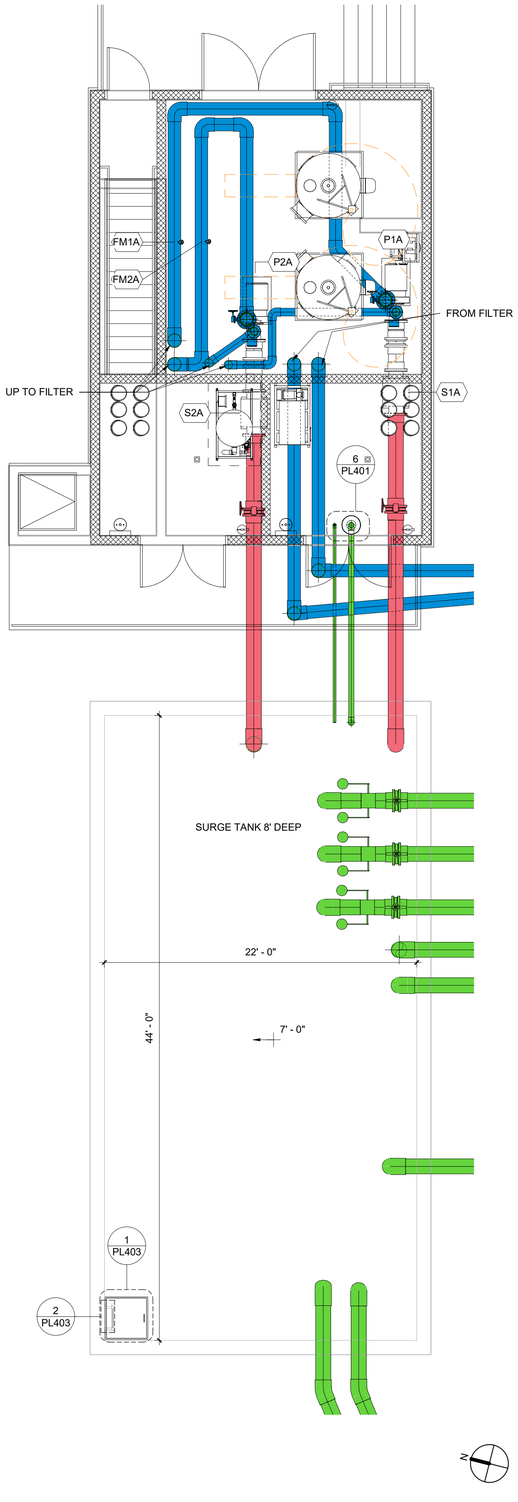
DESIGNED BY: MDR
DRAWN BY: MDR
CHECKED BY: WRB
PROJECT: 21904.14

CITY OF PORTSMOUTH
1 Junkins Avenue
Portsmouth, NH 03801

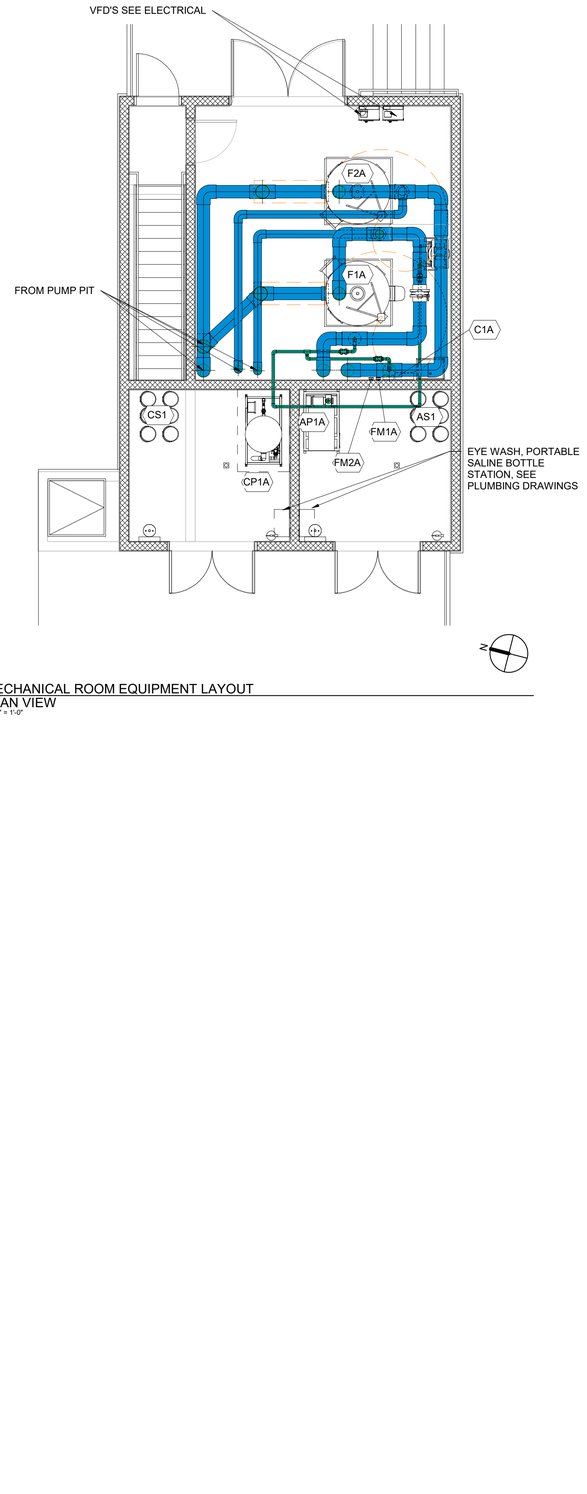
BID #40 - 23
PEIRCE ISLAND PUMP HOUSE AND POOL RENOVATION
Peirce Island Road
Portsmouth, NH 03801

POOL A - PIPING PLAN (SOUTHERN END)

SCALE: AS NOTED
DATE: 03/01/2023
DWG.: PL311
SHEET: 61 OF 72



2 PL400 PUMP PIT EQUIPMENT LAYOUT PLAN VIEW
3/16" = 1'-0"



1 PL400 MECHANICAL ROOM EQUIPMENT LAYOUT PLAN VIEW
3/16" = 1'-0"

NOTES:

1. THIS DRAWING SHEET MUST BE PRINTED/COPIED IN COLOR.

POOL A-LEISURE POOL DATA				
DESCRIPTION	QTY	UNITS		
POOL PERIMETER	722	FEET		
WATER SURFACE AREA	25,287	SQUARE FEET		
POOL VOLUME	894,615	GALLONS		
SURGE TANK - POOL SURGE VOLUME	25,344	GALLONS		
SURGE FACTOR	1.0	GAL/SFT		
CIRCULATION RATE	2,982	GPM		
TURNOVER/VOLUME/FLOW	300 MIN.	894,615 GAL.	2,982	GPM
FILTRATION RATE	1.23	GPM/FT²		
BACKWASH RATE	300	GPM		
PATRON LOAD	937	PERSONS		

EQUIPMENT SCHEDULE

ID	ITEM	QTY.	MANUFACTURER	BASIS OF DESIGN
P1A, P2A	FILTRATION PUMP	2	AURORA PUMP	3801, 6x8x13.5, 50 HP, 230/460 VOLT, 3 PHASE, 1200 RPM, 1491 GPM @ 80' TDH, TEFC MOTOR, END SUCTION, CLOSE COUPLED, 316 STAINLESS STEEL IMPELLOR AND FITTED (SF), EPOXY COATED VOLUTE
S1A, S2A	STRAINER	2	NEPTUNE BENSON, INC.	PRO STRAINER, MODEL PSV1212SC, STAINLESS STEEL HAIR AND LINT STRAINER, STAINLESS STEEL BASKET. PROVIDE WITH EXTRA STAINLESS STEEL BASKET.
F1A, F2A	FILTER	2	NEPTUNE BENSON, INC.	REGENERATIVE MEDIA FILTER, MODEL SP-49-48-1548, 1211.0 SQUARE FEET OF FILTER AREA, 1.24 GPM/SF (FILTER MEDIA RATE), PROVIDE WITH PERLITE MEDIA OR APPROVED EQUAL
C1A	CHEMICAL CONTROLLER (EXISTING)	1	BECS TECHNOLOGY	BECSys7 CONTROLLER
CP1A	CHLORINE FEEDER (EXISTING)	1	AXIALL	ACCUTAB CHLORINATION SYSTEM, POWERBASE 3500 CHLORINATOR, FEEDS UP TO 36.4 LBS/HR CALCIUM HYPOCHLORITE, 500 LBS TABLET STORAGE, 120V, 2" CONNECTIONS. USE ACCU-TAB BLUE SI TABLETS (CALCIUM HYPOCHLORITE) FOR DISINFECTANT.
CS1	CHEMICAL STORAGE	-	CHEMICAL SUPPLIER	BUCKETS OF CALCIUM HYPOCHLORITE PROVIDED BY OWNER'S CHEMICAL SUPPLIER. MAXIMUM STORAGE = 250 POUNDS.
AP1A	ACID FEEDER	1	AXIAL	ACID-RITE, MODEL 2500 pH ADJUSTMENT SYSTEM, FEEDS UP TO 37.5 LBS/HR SODIUM BISULFATE, PROVIDE WITH INJECTION PUMP, BALANCE TANK, FLOWMETER, SOLENOID, ALUMINUM FRAME, PRE-PLUMBED AND PRE-WIRED.
AS1	CHEMICAL STORAGE	-	CHEMICAL SUPPLIER	BUCKETS OF ACID-RITE SODIUM BISULFATE PROVIDED BY OWNER'S CHEMICAL SUPPLIER.
AF1A	WATER LEVEL CONTROL	1	BECS TECHNOLOGY	BECSys SLS SURGE LEVEL SENSOR WITH SUBMERSIBLE CABLE: MODEL #BECSysSLS-4-S-A. PROVIDE WITH ASCO 8221 1.5" SLOW CLOSING SOLENOID VALVE, BRASS BODY, BUNA "N" DISC, 110 V, NORMALLY CLOSED, WATERTIGHT ENCLOSURE. NOTE: ONE LOOP POWER SUPPLY IS REQUIRED IN THE BECSsy7 CONTROLLER FOR THIS 4-20 mA INPUT.
AC1	AIR COMPRESSOR	1	NEPTUNE BENSON, INC.	DEFENDER COMPRESSOR AND WATER SEPARATOR, 2HP, 1 PHASE, 120V, 135 PSI MAXIMUM PRESSURE, 30 GALLON TANK, CAST IRON TWIN CYLINDER COMPRESSOR PUMP, PART #12213. WATER SEPARATOR MODEL AMG350, 1/2" PORT SIZE.
FM1A, FM2A	FLOW METER	1	SIGNET	2551 MAG METER, INSERTION STYLE MAGNETIC FLOW SENSOR. MODEL #3-2551-P2-12. FLOW TO BE DISPLAYED ON VFD. PROVIDE WITH IRON STRAP-ON SADDLE MODEL NUMBER IR8S120 (12").

WATER TECHNOLOGY INC.
World Leaders in Aquatic Planning, Design and Engineering
100 Park Avenue | Beaver Dam, WI 53916
t 920.887.7375 | #18176

NO.	DATE	DESCRIPTION	BY

REVISIONS

OAK POINT ASSOCIATES
ARCHITECTURE ■ ENGINEERING ■ PLANNING
85 Middle Street, Portsmouth, NH 03801 (T) 603.431.4849 (F) 603.431.1870
www.oakpoint.com

STATE OF NEW HAMPSHIRE
BRIAN W. FREBER No. 11825
LICENSED PROFESSIONAL ENGINEER
03/01/2023

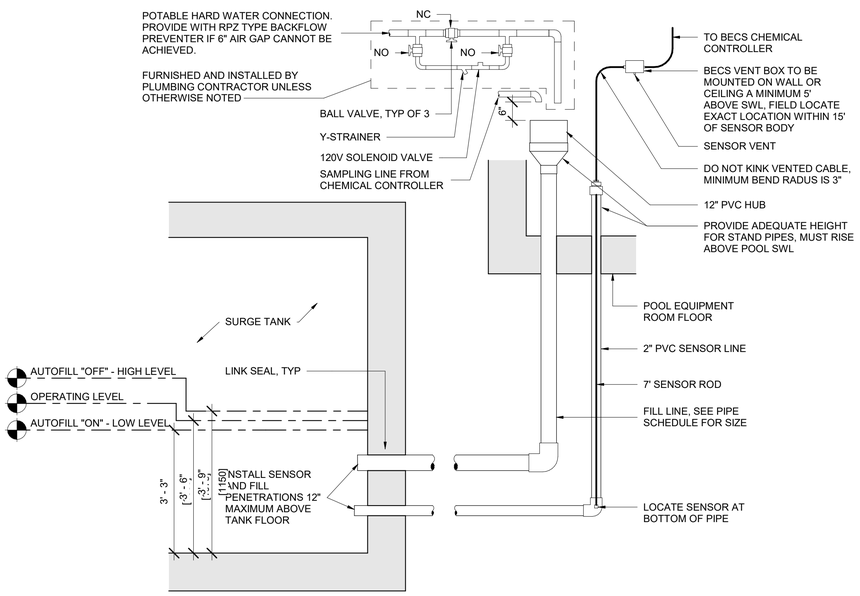
DESIGNED BY: MDR
DRAWN BY: MDR
CHECKED BY: WRB
PROJECT: 21904.14

CITY OF PORTSMOUTH
1 Junkins Avenue
Portsmouth, NH 03801

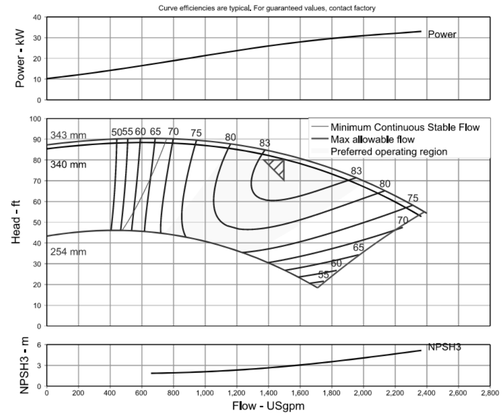
BID #40 - 23
PEIRCE ISLAND PUMP HOUSE AND POOL RENOVATION
Peirce Island Road
Portsmouth, NH 03801

MECHANICAL EQUIPMENT PLAN

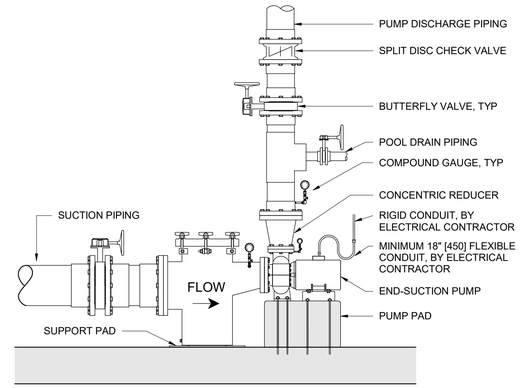
SCALE: AS NOTED
DATE: 03/01/2023
DWG.: PL400
SHEET: 62 OF 72



6 | PL401 AUTOFILL/WATER LEVEL CONTROL
DETAIL VIEW
NOT TO SCALE

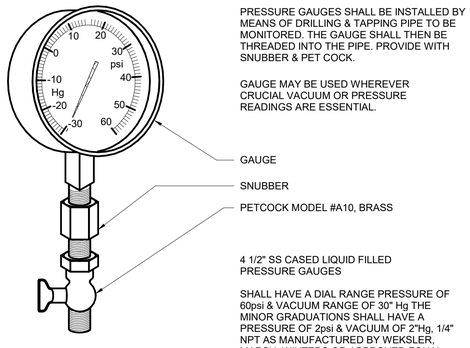


3 | PL401 P1A, P2A PUMP CURVE
DETAIL VIEW
NOT TO SCALE



NOTES:
1. REFER TO EQUIPMENT SCHEDULES FOR A STRAINER TYPE AND SIZE.
2. SUPPLY AND INSTALL ECCENTRIC REDUCER ON SUCTION SIDE AS NECESSARY.
3. INSTALL STRAINER OR REDUCER WITH 1/4" [6] FPT GAUGE CONNECTION AS CLOSE TO PUMP AS POSSIBLE.
4. INSTALL CHECK VALVE PER MANUFACTURER'S RECOMMENDATIONS.

1 | PL401 PUMP INSTALLATION - SAND FILTER
DETAIL VIEW
NOT TO SCALE



PRESSURE GAUGES SHALL BE INSTALLED BY MEANS OF DRILLING & TAPPING PIPE TO BE MONITORED. THE GAUGE SHALL THEN BE THREADED INTO THE PIPE. PROVIDE WITH SNUBBER & PET COCK.

GAUGE MAY BE USED WHEREVER CRUCIAL VACUUM OR PRESSURE READINGS ARE ESSENTIAL.

GAUGE

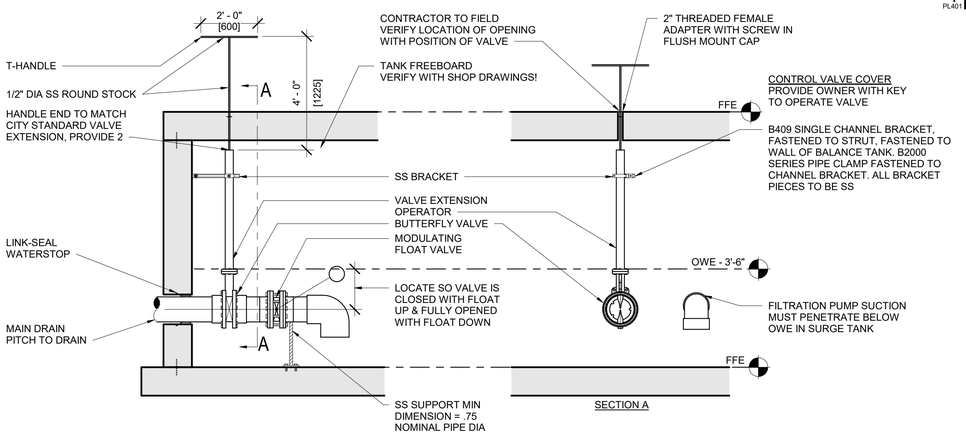
SNUBBER

PETCOCK MODEL #A10, BRASS

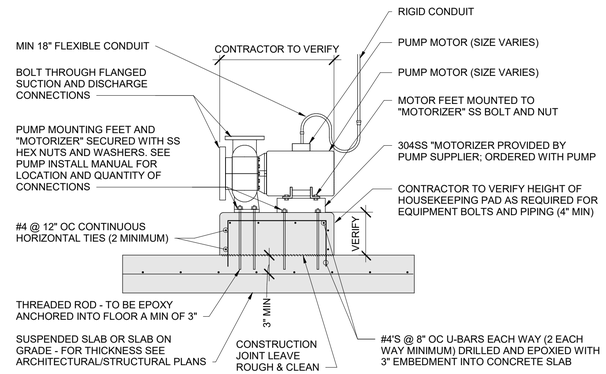
4 1/2" SS CASED LIQUID FILLED PRESSURE GAUGES

SHALL HAVE A DIAL RANGE PRESSURE OF 60psi & VACUUM RANGE OF 30" Hg THE MINOR GRADUATIONS SHALL HAVE A PRESSURE OF 2psi & VACUUM OF 2"Hg, 1/4" NPT AS MANUFACTURED BY WEKSLER, MARSH, WINTERS OR APPROVED EQUAL.

4 | PL401 COMPOUND GAUGE
DETAIL VIEW
NOT TO SCALE



5 | PL401 MAIN DRAIN PENETRATION
DETAIL VIEW
NOT TO SCALE



NOTES:
1. PAD SIZE SHALL BE MIN INDICATED OR AS SHOWN ON THE PLANS OR AS INDICATED BY THE MANUFACTURER.
2. THE SIZE, NUMBER, TYPE, LOCATION, AND THREAD PROJECTION OF THE ALL THREAD ROD SHALL BE DETERMINED BY THE EQUIPMENT MANUFACTURER / INSTALLING CONTRACTOR, ALL THREAD ROD SHALL BE HELD IN POSITION WITH A TEMPLATE WHILE PAD IS BEING POURED.
3. EQUIPMENT BASES SHALL BE INSTALLED LEVEL UNLESS SPECIFIED OTHERWISE. EQUIPMENT BASES SHALL BE PROVIDED AND INSTALLED BY CONTRACTOR. SIZES AND LOCATIONS TO BE VERIFIED BY CONTRACTOR.
4. PROVIDE SUPPORT FOR PUMP SUCTION AND DISCHARGE PIPING WHILE ALLOWING FOR PUMP REMOVAL.

2 | PL401 PUMP PAD
DETAIL VIEW
NOT TO SCALE

OAK POINT ASSOCIATES
ARCHITECTURE ■ ENGINEERING ■ PLANNING
85 Middle Street, Portsmouth, NH 03801 (T) 603.431.4849 (F) 603.431.1870
www.oakpoint.com

BRIAN W. FREBER No. 11825 LICENSED PROFESSIONAL ENGINEER STATE OF NEW HAMPSHIRE
03/01/2023

DESIGNED BY: MDR
DRAWN BY: MDR
CHECKED BY: WRB
PROJECT: 21904.14

CITY OF PORTSMOUTH
1 Junkins Avenue
Portsmouth, NH 03801

BID #40 - 23
PEIRCE ISLAND PUMP HOUSE AND POOL RENOVATION
Peirce Island Road
Portsmouth, NH 03801

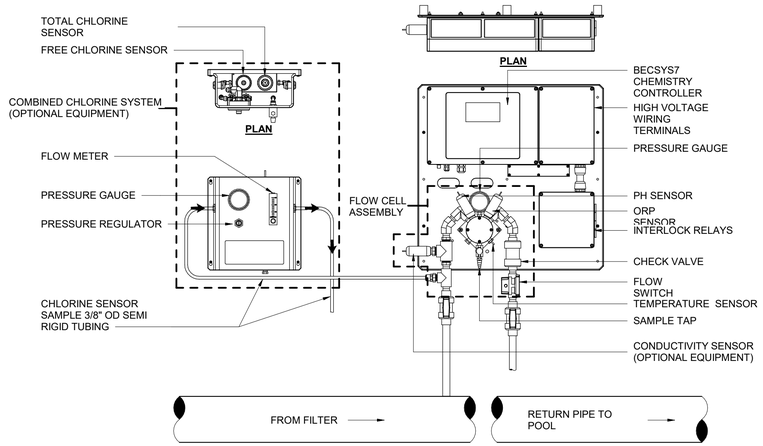
MECHANICAL DETAILS 1

SCALE: AS NOTED
DATE: 03/01/2023
DWG.: PL401
SHEET: 63 OF 72

WTI
WATER TECHNOLOGY INC.
World Leaders in Aquatic Planning, Design and Engineering
100 Park Avenue | Beaver Dam, WI 53916
t 920.887.7375 | #18176

NO.	DATE	DESCRIPTION	BY

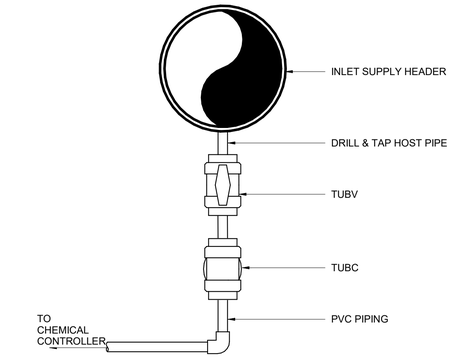
REVISIONS



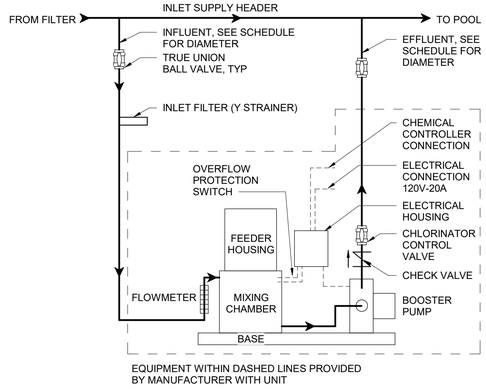
NOTES:

1. PROVIDE STAINLESS STEEL MOUNTING HARDWARE AS REQUIRED FOR WALL TYPE.
2. INTERLOCK CHEMICAL CONTROL RELAYS WITH FILTRATION PUMP.
3. SEE CHEMICAL CONTROLLER SPECIFICATIONS FOR REQUIRED OPTIONAL EQUIPMENT.
4. RIGIDLY SECURE BACK PANEL TO BUILDING WALL, APPROXIMATELY 5'-8" ABOVE FINISHED FLOOR, IN LOCATION INDICATED IN PLAN.
5. CHEMICAL SAMPLING STREAMS SHALL TERMINATE AT THE AUTOFILL WITH 6" AIR GAP.

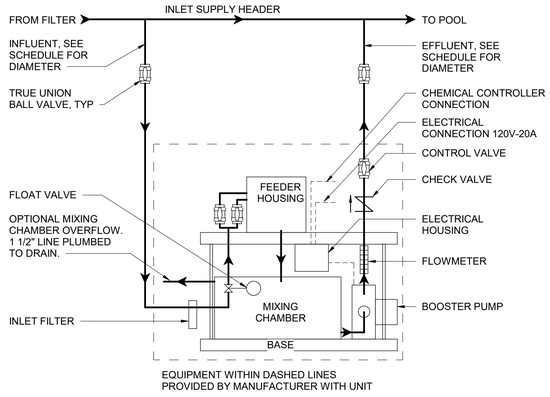
4 | PL403 CHEMICAL CONTROLLER DETAIL VIEW
NOT TO SCALE



1 | PL402 CHEMICAL SAMPLING DETAIL VIEW
NOT TO SCALE



2 | PL402 CHLORINATOR - ACCUTAB DETAIL VIEW
NOT TO SCALE



3 | PL402 pH TREATMENT - ACID RITE DETAIL VIEW
NOT TO SCALE

WATER TECHNOLOGY INC.
World Leaders in Aquatic Planning, Design and Engineering
100 Park Avenue | Beaver Dam, WI 53916
t 920.887.7375 | #18176

NO.	DATE	DESCRIPTION	BY

REVISIONS

OAK POINT ASSOCIATES
ARCHITECTURE ■ ENGINEERING ■ PLANNING
85 Middle Street, Portsmouth, NH 03801 (T) 603.431.4849 (F) 603.431.1870
www.oakpointassoc.com

STATE OF NEW HAMPSHIRE
BRIAN W. FREBER No. 11825
LICENSED PROFESSIONAL ENGINEER
03/01/2023

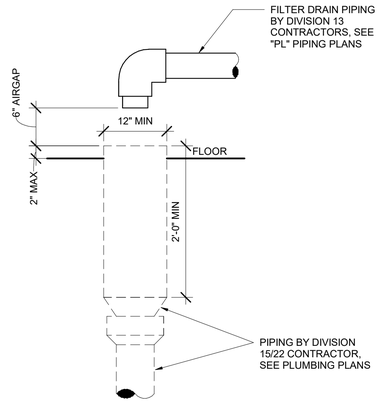
DESIGNED BY: MDR
DRAWN BY: MDR
CHECKED BY: WRB
PROJECT: 21904.14

CITY OF PORTSMOUTH
1 Junkins Avenue
Portsmouth, NH 03801

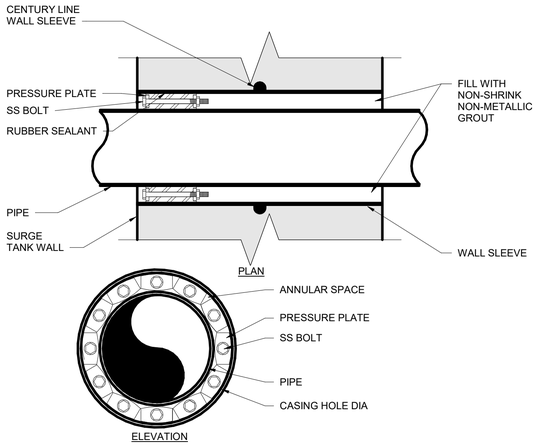
BID #40 - 23
PEIRCE ISLAND PUMP HOUSE AND POOL RENOVATION
Peirce Island Road
Portsmouth, NH 03801

MECHANICAL DETAILS 2

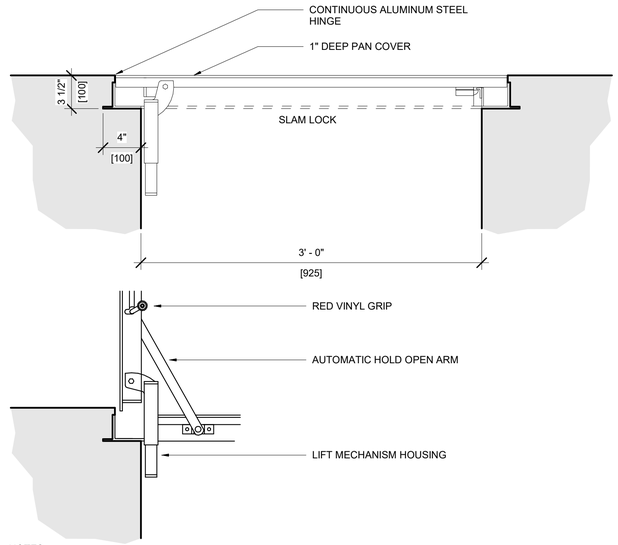
SCALE: AS NOTED
DATE: 03/01/2023
DWG.: PL402
SHEET: 64 OF 72



5 | PL403 | REGENERATIVE MEDIA FILTER DRAIN HUB DETAIL VIEW
NOT TO SCALE

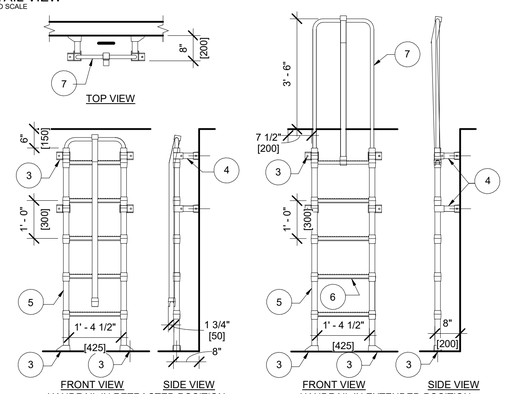


3 | PL403 | WALL SLEEVE / LINK SEAL DETAIL VIEW
NOT TO SCALE



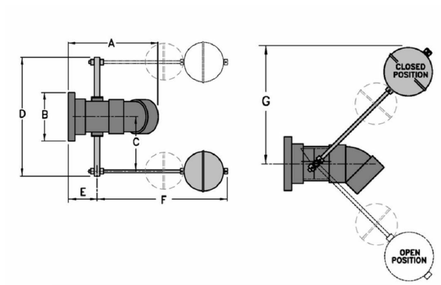
NOTES:
1. FLOOR ACCESS DOOR, SIZE 36" X 36" AS MANUFACTURED BY BILCO (MODEL TER) OR NYSTROM (MODEL FDPPA).
2. PROVIDED WITH 1" FILLABLE PAN TO RECEIVE FILL MATERIAL.
3. FRAME SHALL BE 1/4" EXTRUDED ALUMINUM WITH BUILT-IN NEOPRENE CUSHION AND CONTINUOUS ANCHOR FLANGE.
4. DOOR SHALL BE 1/4" ALUMINUM PLATE REINFORCED WITH ALUMINUM STIFFENERS AS REQUIRED.
5. CAST STEEL HINGES SHALL BE BOLTED TO UNDERSIDE AND PIVOT ON TORSION BARS THAT COUNTERBALANCE THE DOOR FOR EASY OPERATION.
6. DOOR SHALL OPEN 90 DEGREES AND LOCK AUTOMATICALLY IN THAT POSITION. A VINYL GRIP HANDLE SHALL BE PROVIDED TO RELEASE THE COVER FOR CLOSING.
7. DOOR SHALL BE BUILT TO WITHSTAND A LIVE LOAD OF 300 PSF AND EQUIPPED WITH A LOCK THAT REQUIRES A REMOVABLE SQUARE KEY WRENCH.
8. ALUMINUM SHALL BE MILL FINISH WITH BITUMINOUS COATING TO BE APPLIED TO EXTERIOR OF FRAME BY MANUFACTURER.
9. HARDWARE SHALL BE SS.
10. INSTALLATION SHALL BE IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.
11. MANUFACTURER SHALL GUARANTEE AGAINST DEFECTS IN MATERIAL OR WORKMANSHIP FOR A PERIOD OF FIVE YEARS.

1 | PL403 | ACCESS HATCH DETAIL VIEW
NOT TO SCALE



KEYED NOTES:
1. LADDERS WITH PULL-UP HANDRAIL, AVAILABLE IN 5 RUNG THROUGH 25 RUNG.
2. POLYPROPYLENE CONFORMS TO ASTM D-4101. LADDERS MEET ALL ASTM C-497 LOAD REQUIREMENTS & OSHA 1910.26 & 1910.27 SPECIFICATIONS.
3. FASTEN LADDER TO FLOOR & WALL WITH 316L SS 1/2" X 3-3/4" ANCHORS. ANCHORS TO BE INSTALLED PER MANUFACTURERS INSTRUCTIONS.
4. STANDARD ADJUSTABLE MOUNTING BRACKET - 8" OD
5. ALUMINUM REINFORCED COPOLYMER POLYPROPYLENE RAIL 1-3/4" x 1-3/4" DIA
6. STEEL REINFORCED COPOLYMER POLYPROPYLENE RUNG 1-5/8" x 1-1/4" DIA WITH MOLDED FINGER GRIPS, 12" CC
7. ALUMINUM & STEEL REINFORCED COPOLYMER POLYPROPYLENE PULL-UP HANDRAIL. LADDER MANUFACTURED BY LANE INTERNATIONAL CORPORATION, P.O. BOX 925, TUALATIN, OREGON 800-666-0076

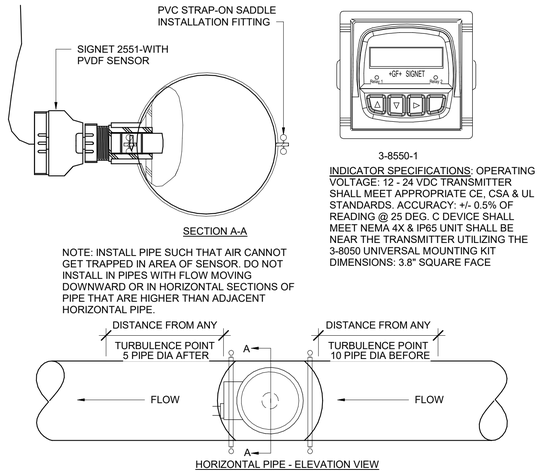
2 | PL403 | ACCESS LADDER DETAIL VIEW
NOT TO SCALE



SIZE IPS	A	B	C	D	E	F	G
4"	13"	9"	8 1/2"	18 1/2"	4"	29"	21"
6"	19 5/8"	11"	9 1/2"	20 1/2"	6"	29"	21"
8"	26 1/4"	13 1/2"	10 3/4"	23"	8"	29"	21"
10"	32 1/2"	16"	12"	25 1/2"	10"	35"	25"
12"	39"	19"	13 1/2"	28 1/2"	12"	35"	25"
14"	51"	21"	15"	31 1/2"	18"	37"	33 1/4"
16"	54"	23 1/2"	16 1/4"	34"	18"	37"	33 1/4"

NOTES:
- ON-SITE ADJUSTMENT OF FLOATS SHALL BE POOL CONTRACTOR'S RESPONSIBILITY.
- DIMENSIONS ARE BASED ON VALVE AS SPECIFIED.
- CONTRACTOR SHALL CUR ARM IN FIELD AS REQUIRED TO ACCOMMODATE ACTUAL "G" DIMENSIONS.

6 | PL403 | MAIN DRAIN FLOAT VALVE DETAIL VIEW
NOT TO SCALE



4 | PL403 | FLOW METER DETAIL VIEW
NOT TO SCALE

OAK POINT ASSOCIATES
ARCHITECTURE ■ ENGINEERING ■ PLANNING
85 Middle Street, Portsmouth, NH 03801 (T) 603.431.4849 (F) 603.431.1870
www.oakpoint.com

STATE OF NEW HAMPSHIRE
BRIAN W. FREBER No. 11825
LICENSED PROFESSIONAL ENGINEER
03/01/2023

DESIGNED BY: MDR
DRAWN BY: MDR
CHECKED BY: WRB
PROJECT: 21904.14

CITY OF PORTSMOUTH
1 Junkins Avenue
Portsmouth, NH 03801

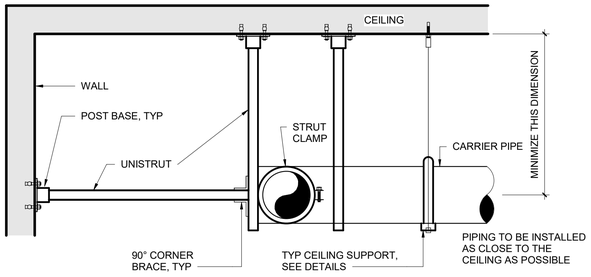
BID #40 - 23
PEIRCE ISLAND PUMP HOUSE AND POOL RENOVATION
Peirce Island Road
Portsmouth, NH 03801

MECHANICAL DETAILS 3

SCALE: AS NOTED
DATE: 03/01/2023
DWG.: PL403
SHEET: 65 OF 72

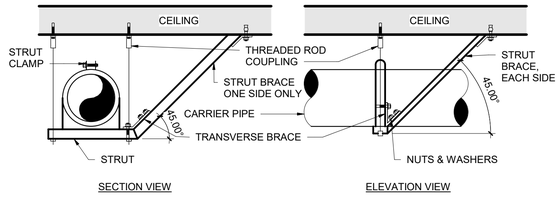
WTI
WATER TECHNOLOGY INC.
World Leaders in Aquatic Planning, Design and Engineering
100 Park Avenue | Beaver Dam, WI 53916
t 920.887.7375 | #18176

NO.	DATE	DESCRIPTION	BY
REVISIONS			



DETAILS ARE TYP THRUST BRACING METHODS, AND NOT INCLUSIVE OF ALL SITE CONDITIONS. CONTRACTOR TO PROVIDE SHOP DRAWINGS OF BRACING METHODS FOR APPROVAL.

6 PL404 PIPE THRUST BRACING
DETAIL VIEW
NOT TO SCALE



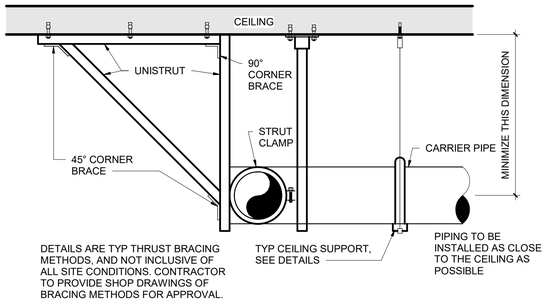
NOTES:
1. DETAILS ARE TYP SUPPORT METHODS & NOT INCLUSIVE OF ALL SITE CONDITIONS.
2. ALL PIPING SHALL BE RIGIDLY SUPPORTED LATERALLY & VERTICALLY. SUPPORT SYSTEM SHALL PROVIDE ZERO MOVEMENT IN PIPING DURING ALL OPERATING CONDITIONS.
3. PROVIDE THRUST RESTRAINT AT ALL HORIZONTAL/HORIZONTAL, HORIZONTAL/VERTICAL, & VERTICAL/HORIZONTAL CHANGES IN DIRECTION.
4. SEE DIVISION 13 SPECIFICATIONS FOR ADDITIONAL SUPPORT REQUIREMENTS & MATERIALS
5. SEE PIPE SUPPORT TABLE ON DRAWINGS.

3 PL404 PIPE SUPPORT
DETAIL VIEW
NOT TO SCALE

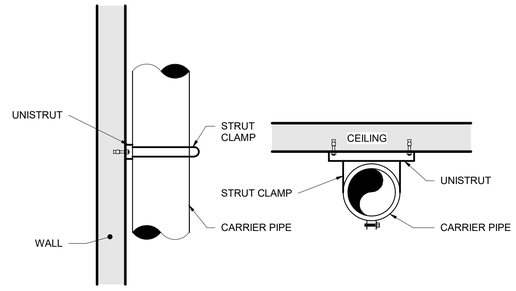
BASIS OF DESIGN FOR SUUPORT OF PIPING:
2016 CALIFORNIA BUILDING CODE, CHAPTER 16; ASCE 7-10, CHAPTER 13 - SEISMIC DESIGN OF NONSTRUCTURAL COMPONENTS

MAX ALLOWABLE SUPPORT SPACING FOR PVC PIPE (IN FT)										
NOMINAL PIPE SIZE	SCHEDULE 40					SCHEDULE 80				
	TEMPERATURE (°F)					TEMPERATURE (°F)				
	60°	80°	100°	120°	140°	60°	80°	100°	120°	140°
1/2"	4.5	4.5	4	2.5	2.5	5	4.5	4.5	3	2.5
3/4"	5	4.5	4	2.5	2.5	5.5	5	4	3	2.5
1"	5.5	5	4.5	3	2.5	6	5.5	5	3.5	3
1 1/4"	5.5	5.5	5	3	3	6	6	5.5	3.5	3
1 1/2"	6	5.5	5	3.5	3	6.5	6	5.5	3.5	3.5
2"	6	5.5	5	3.5	3	7	6.5	6	4	3.5
2 1/2"	7	6.5	6	4	3.5	7.5	7.5	6.5	4.5	4
3"	7	7	6	4	3.5	8	7.5	7	4.5	4
4"	7.5	7	6.5	4.5	4	9	8	7.5	5	4.5
6"	8.5	8	7.5	5	4.5	10	9.5	9	6	5
8"	9	8.5	8	5	4.5	11	10.5	9.5	6.5	5.5
10"	10	9	8.5	5.5	5	12	11	10	7	6
12"	11.5	10.5	9.5	6.5	5.5	12	11	10	7	6

1 PL404 PIPE SUPPORT SCHEDULE
DETAIL VIEW
NOT TO SCALE

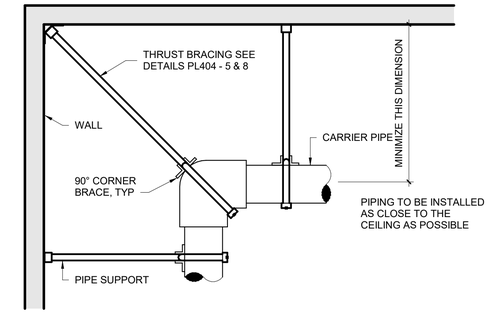


7 PL404 PIPE THRUST BRACING
DETAIL VIEW
NOT TO SCALE



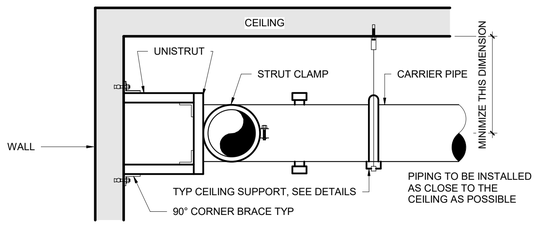
NOTES:
1. DETAILS ARE TYP SUPPORT METHODS & NOT INCLUSIVE OF ALL SITE CONDITIONS.
2. ALL PIPING SHALL BE RIGIDLY SUPPORTED LATERALLY & VERTICALLY. SUPPORT SYSTEM SHALL PROVIDE ZERO MOVEMENT IN PIPING DURING ALL OPERATING CONDITIONS.
3. PROVIDE THRUST RESTRAINT AT ALL HORIZONTAL/HORIZONTAL, HORIZONTAL/VERTICAL, & VERTICAL/HORIZONTAL CHANGES IN DIRECTION.
4. SEE DIVISION 13 SPECIFICATIONS FOR ADDITIONAL SUPPORT REQUIREMENTS & MATERIALS
5. SEE PIPE SUPPORT TABLE ON DRAWINGS.

4 PL404 PIPE SUPPORT
DETAIL VIEW
NOT TO SCALE



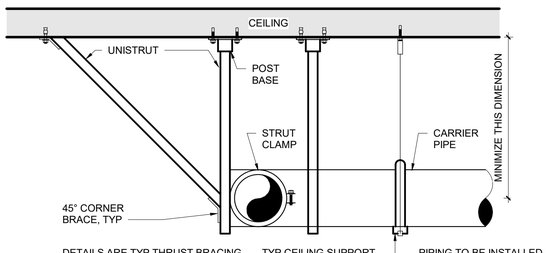
NOTES
1. DETAILS ARE TYP SUPPORT METHODS AND NOT INCLUSIVE OF ALL SITE CONDITIONS.
2. ALL PIPING SHALL BE RIGIDLY SUPPORTED LATERALLY AND VERTICALLY. SUPPORT SYSTEM SHALL PROVIDE ZERO MOVEMENT IN PIPING DURING ALL OPERATING CONDITIONS.
3. PROVIDE THRUST RESTRAINTS AT ALL HORIZONTAL/HORIZONTAL, HORIZONTAL/VERTICAL, AND VERTICAL/HORIZONTAL CHANGES IN DIRECTION. THRUST BRACING SHALL NOT BE LOCATED AWAY FROM THE JOINT.
4. SEE DIVISION 13 SPECIFICATIONS FOR ADDITIONAL SUPPORT REQUIREMENTS AND MATERIALS.
5. SEE PIPE SUPPORT TABLE ON DRAWINGS.
6. CONTRACTOR SHALL VERIFY WITH THE BUILDING STRUCTURAL ENGINEER THE ADEQUACY OF WALL OR CEILING SUPPORT FOR BRACING ANCHORAGE, INCLUDING THRUST.

2 PL404 PIPE SUPPORT
DETAIL VIEW
NOT TO SCALE



DETAILS ARE TYP THRUST BRACING METHODS, AND NOT INCLUSIVE OF ALL SITE CONDITIONS. CONTRACTOR TO PROVIDE SHOP DRAWINGS OF BRACING METHODS FOR APPROVAL.

8 PL404 PIPE THRUST BRACING
DETAIL VIEW
NOT TO SCALE



5 PL404 PIPE THRUST BRACING
DETAIL VIEW
NOT TO SCALE

OAK POINT ASSOCIATES
ARCHITECTURE ■ ENGINEERING ■ PLANNING
85 Middle Street, Portsmouth, NH 03801 (T) 603.431.4849 (F) 603.431.1870
www.oakpoint.com

STATE OF NEW HAMPSHIRE
BRIAN W. FREBER No. 11825
LICENSED PROFESSIONAL ENGINEER
03/01/2023

DESIGNED BY: MDR
DRAWN BY: MDR
CHECKED BY: WRB
PROJECT: 21904.14

CITY OF PORTSMOUTH
1 Junkins Avenue
Portsmouth, NH 03801

BID #40 - 23
PEIRCE ISLAND PUMP HOUSE AND POOL RENOVATION
Peirce Island Road
Portsmouth, NH 03801

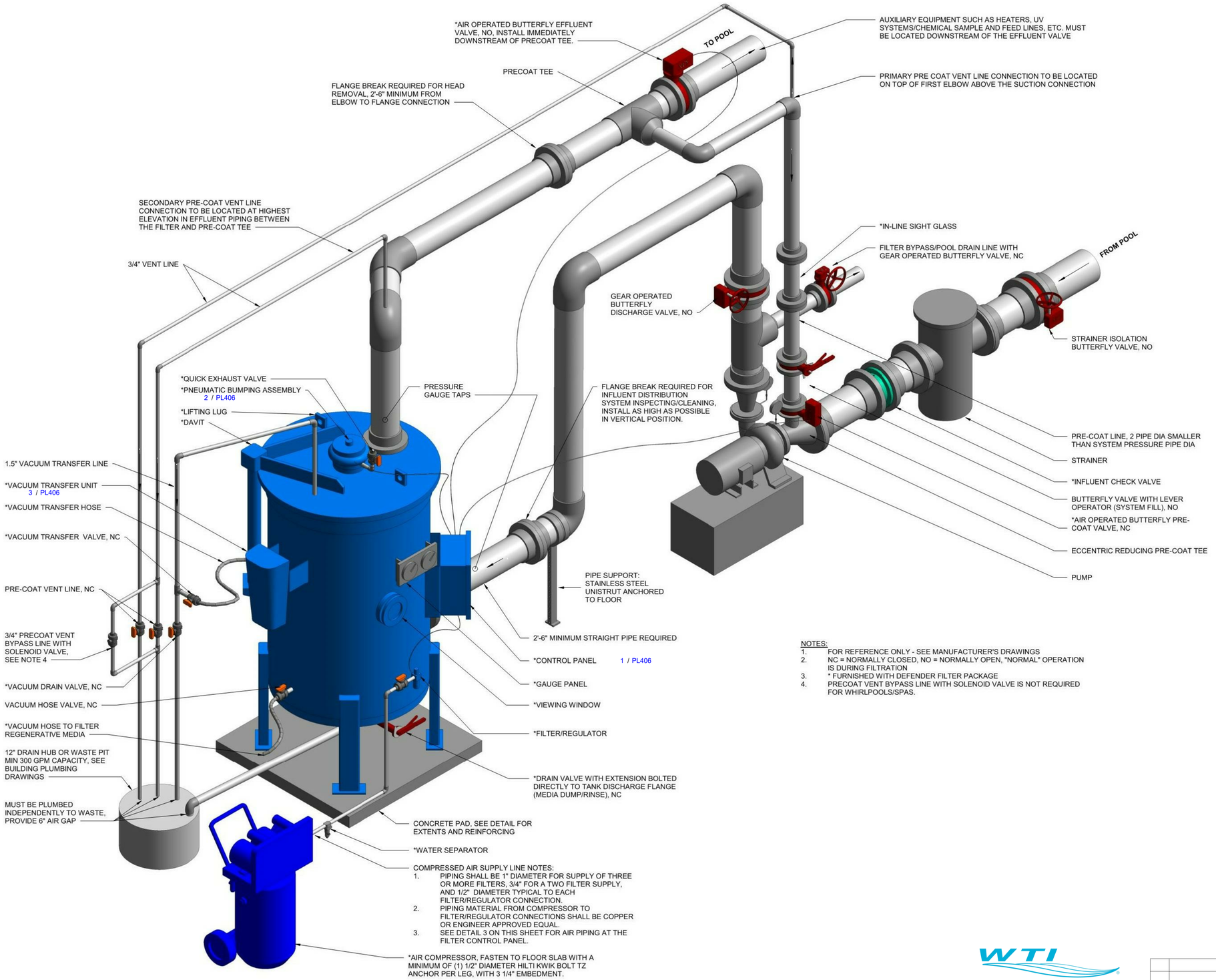
MECHANICAL DETAILS 4

SCALE: AS NOTED
DATE: 03/01/2023
DWG.: PL404
SHEET: 66 OF 72

WTI
WATER TECHNOLOGY, INC.
World Leaders in Aquatic Planning, Design and Engineering
100 Park Avenue | Beaver Dam, WI 53916
t 920.887.7375 | #18176

NO.	DATE	DESCRIPTION	BY

REVISIONS



NOTES:
1. FOR REFERENCE ONLY - SEE MANUFACTURER'S DRAWINGS
2. NC = NORMALLY CLOSED, NO = NORMALLY OPEN, "NORMAL" OPERATION IS DURING FILTRATION
3. * FURNISHED WITH DEFENDER FILTER PACKAGE
4. PRECOAT VENT BYPASS LINE WITH SOLENOID VALVE IS NOT REQUIRED FOR WHIRLPOOLS/SPAS.

OAK POINT ASSOCIATES
ARCHITECTURE ■ ENGINEERING ■ PLANNING
85 Middle Street, Portsmouth, NH 03801 (T) 603.431.4849 (F) 603.431.1870
www.oakpoint.com

BRIAN W. FREBER No. 11825 LICENSED PROFESSIONAL ENGINEER STATE OF NEW HAMPSHIRE
03/01/2023

DESIGNED BY: MDR
DRAWN BY: MDR
CHECKED BY: WRB
PROJECT: 21904.14

CITY OF PORTSMOUTH
1 Junkins Avenue
Portsmouth, NH 03801

BID #40 - 23
PEIRCE ISLAND PUMP HOUSE AND POOL RENOVATION
Peirce Island Road
Portsmouth, NH 03801

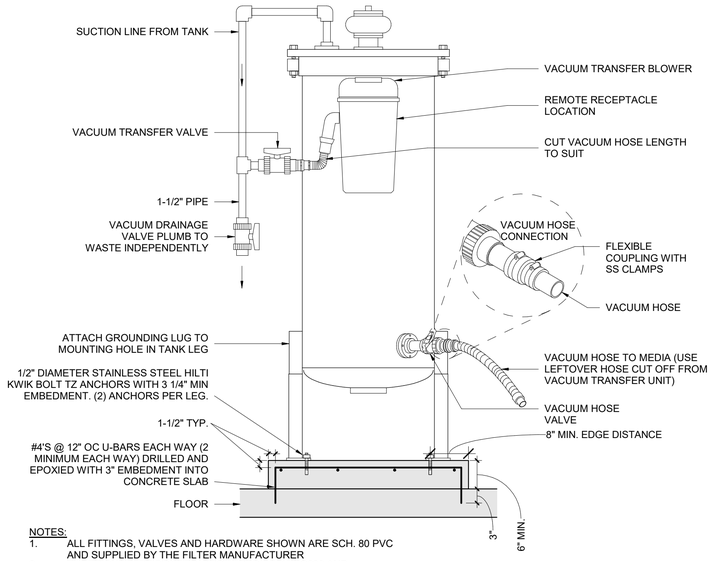
DEFENDER SCHEMATIC

SCALE: AS NOTED
DATE: 03/01/2023
DWG.: PL405
SHEET: 67 OF 72

WTI
WATER TECHNOLOGY INC.
World Leaders in Aquatic Planning, Design and Engineering
100 Park Avenue | Beaver Dam, WI 53916
t 920.887.7375 | #18176

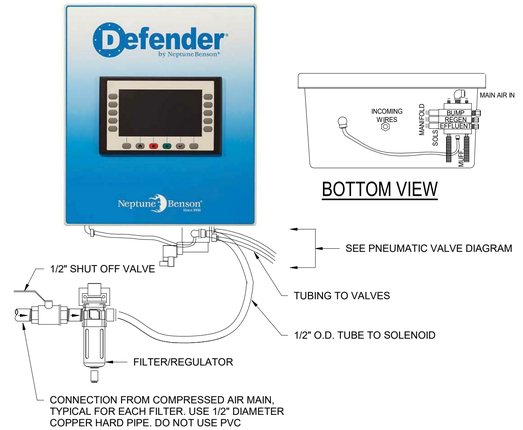
NO.	DATE	DESCRIPTION	BY

REVISIONS

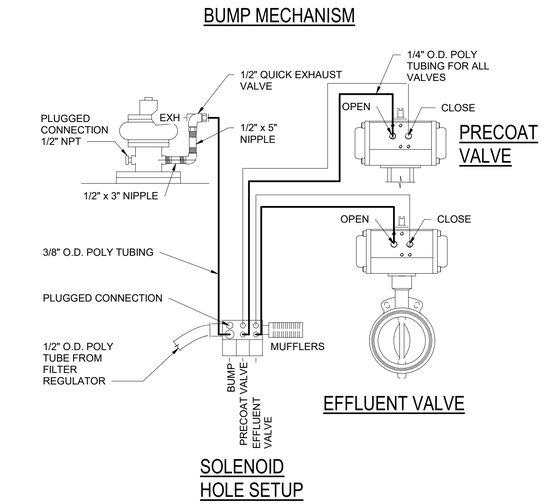


NOTES:
1. ALL FITTINGS, VALVES AND HARDWARE SHOWN ARE SCH. 80 PVC AND SUPPLIED BY THE FILTER MANUFACTURER
2. FILTER SHALL BE BONDED/GROUNDED PER NEC680 AND MANUFACTURER'S INSTRUCTIONS

3 PL406 | VACUUM TRANSFER SYSTEM AND FILTER PAD DETAIL
DETAIL VIEW
NOT TO SCALE



1 PL406 | FILTER CONTROL PANEL
DETAIL VIEW
NOT TO SCALE



2 PL406 | PNEUMATIC VALVE DIAGRAM
DETAIL VIEW
NOT TO SCALE

WTI
WATER TECHNOLOGY, INC.
World Leaders in Aquatic Planning, Design and Engineering
100 Park Avenue | Beaver Dam, WI 53916
t 920.887.7375 | #18176

NO.	DATE	DESCRIPTION	BY

REVISIONS

OAK POINT ASSOCIATES
ARCHITECTURE ■ ENGINEERING ■ PLANNING
85 Middle Street, Portsmouth, NH 03801 (T) 603.431.4849 (F) 603.431.1870
www.oakpointassoc.com

BRIAN W. FREBER No. 11825 LICENSED PROFESSIONAL ENGINEER STATE OF NEW HAMPSHIRE
03/01/2023

DESIGNED BY: MDR
DRAWN BY: MDR
CHECKED BY: WRB
PROJECT: 21904.14

CITY OF PORTSMOUTH
1 Junkins Avenue
Portsmouth, NH 03801

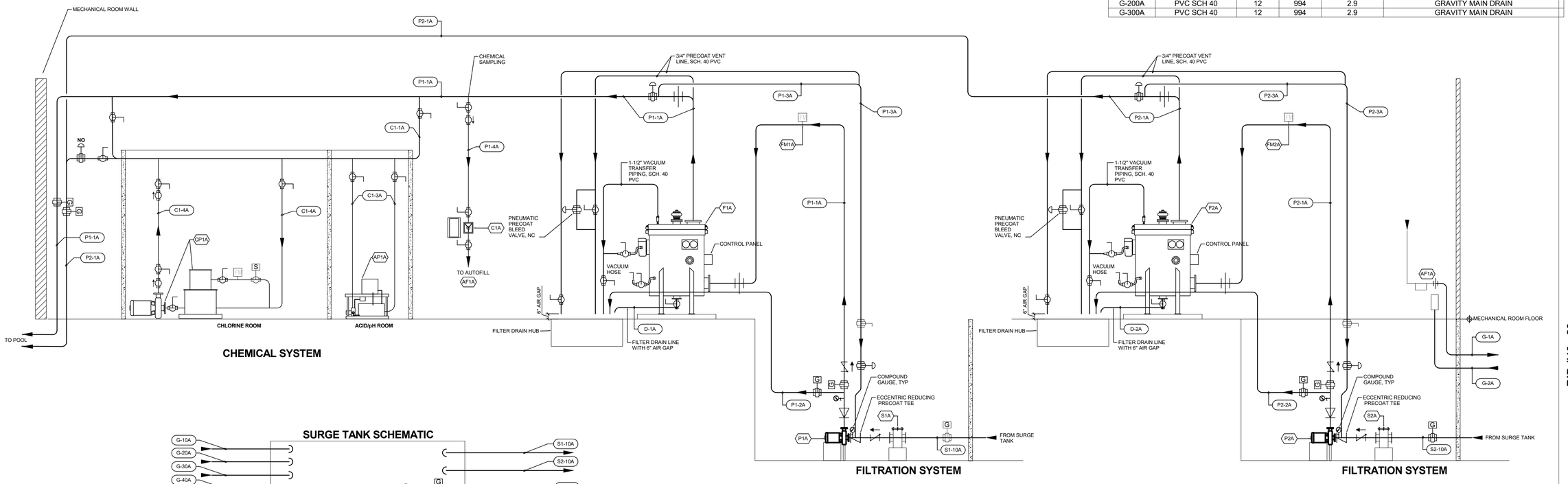
BID #40 - 23
PEIRCE ISLAND PUMP HOUSE AND POOL RENOVATION
Peirce Island Road
Portsmouth, NH 03801

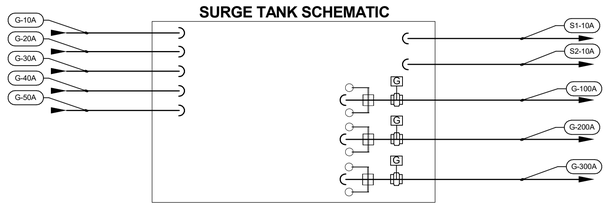
DEFENDER DETAILS

SCALE: AS NOTED
DATE: 03/01/2023
DWG.: PL406
SHEET: 68 OF 72

POOL A - LEISURE POOL PIPE SCHEDULE

PIPE ID	TYPE	NPS (in)	FLOW (gpm)	VELOCITY (fps)	DESCRIPTION
S1-10A	PVC SCH 80	12	1,491	4.8	FILTRATION PUMP SUCTION - SURGE TANK
-	-	-	-	-	-
S2-1A	PVC SCH 80	12	1,491	4.8	FILTRATION PUMP SUCTION - MAIN DRAIN
S2-10A	PVC SCH 80	12	1,491	4.8	FILTRATION PUMP SUCTION - SURGE TANK
-	-	-	-	-	-
P1-1A	PVC SCH 80	10	1,491	6.8	FILTRATION SUPPLY
P1-2A	PVC SCH 80	4	68	1.9	POOL DRAIN LINE
P1-3A	PVC SCH 80	6	300	3.8	FILTER PRECOAT
-	-	-	-	-	-
P2-1A	PVC SCH 80	10	1,491	6.8	FILTRATION SUPPLY
P2-2A	PVC SCH 80	2	68	7.6	POOL DRAIN LINE
P2-3A	PVC SCH 80	6	300	3.8	FILTER PRECOAT
P1-4A	PVC SCH 80	0.75	2	1.8	CHEMICAL SAMPLING
-	-	-	-	-	-
C1-1A	PVC SCH 80	2.5	18	-	CHEMICAL LOOP
C1-3A	PVC SCH 80	2	0	-	ACID RITE PIPING
C1-4A	PVC SCH 80	2	0	-	ACCUTAB PIPING
-	-	-	-	-	-
D-1A	PVC SCH 80	4	0	-	FILTER DRAIN
D-2A	PVC SCH 80	4	0	-	FILTER DRAIN
-	-	-	-	-	-
P1-10A	PVC SCH 80	10	1,491	6.8	INLET SUPPLY
-	-	-	-	-	-
P2-20A	PVC SCH 80	10	1,491	6.8	INLET SUPPLY
-	-	-	-	-	-
G-1A	PVC SCH 40	2	0	0.0	SENSOR STAND PIPE
G-2A	PVC SCH 40	4	88	2.2	FILL LINE
-	-	-	-	-	-
G-10A	PVC SCH 40	12	746	2.2	GUTTER
-	-	-	-	-	-
G-20A	PVC SCH 40	12	746	2.2	GUTTER
-	-	-	-	-	-
G-30A	PVC SCH 40	12	746	2.2	GUTTER
-	-	-	-	-	-
G-40A	PVC SCH 40	12	746	2.2	GUTTER
-	-	-	-	-	-
G-50A	PVC SCH 40	12	746	2.2	GUTTER
-	-	-	-	-	-
G-100A	PVC SCH 40	12	994	2.9	GRAVITY MAIN DRAIN
G-200A	PVC SCH 40	12	994	2.9	GRAVITY MAIN DRAIN
G-300A	PVC SCH 40	12	994	2.9	GRAVITY MAIN DRAIN





OAK POINT ASSOCIATES
ARCHITECTURE ■ ENGINEERING ■ PLANNING
85 Middle Street, Portsmouth, NH 03801 (T) 603.431.4849 (F) 603.431.1870
www.oakpoint.com

STATE OF NEW HAMPSHIRE
BRIAN W. FREBER
No. 11825
LICENSED PROFESSIONAL ENGINEER
03/01/2023

DESIGNED BY: MDR
DRAWN BY: MDR
CHECKED BY: WRB
PROJECT: 21904.14

CITY OF PORTSMOUTH
1 Junkins Avenue
Portsmouth, NH 03801

BID #40 - 23
PEIRCE ISLAND PUMP HOUSE AND POOL RENOVATION

Peirce Island Road
Portsmouth, NH 03801

MECHANICAL SCHEMATIC

SCALE: AS NOTED

DATE: 03/01/2023

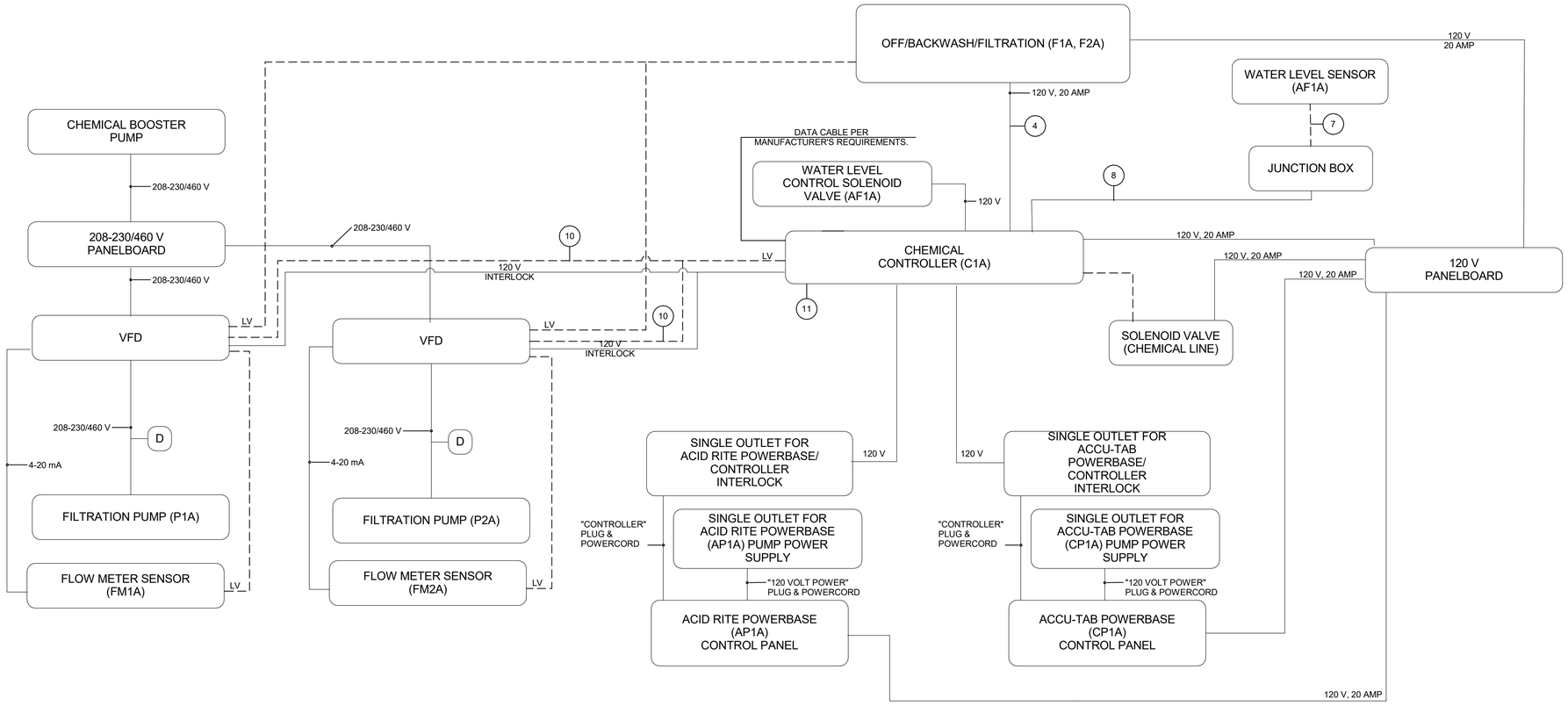
DWG.: PL500

SHEET: 69 OF 72

WTI
WATER TECHNOLOGY, INC.
World Leaders in Aquatic Planning, Design and Engineering
100 Park Avenue | Beaver Dam, WI 53916
t 920.887.7375 | #18176

NO.	DATE	DESCRIPTION	BY

REVISIONS



SEQUENCE OF OPERATIONS - SWIMMING POOL WITH MANUAL BACKWASH SAND FILTER SYSTEM

FILTRATION PUMP MOTOR STARTER SELECTOR SWITCH ("OFF/BACKWASH/FILTRATION"):

- A THREE POSITION SELECTOR SWITCH SHALL BE PROVIDED FOR THE MOTOR STARTER/VFD WITH POSITIONS LABELED "OFF", "BACKWASH", AND "FILTRATION".

"FILTRATION" POSITION:

- PLACE THE SWITCH IN THE "FILTRATION" POSITION FOR THE NORMAL FILTRATION OPERATING MODE OF THE SYSTEM.
- WITH THE FILTRATION PUMP SELECTOR SWITCH IN THE "FILTRATION" POSITION, THE FILTRATION PUMP SHALL RUN AT DESIGN FLOW (FREQUENCY) AND THE CHEMICAL CONTROLLER SHALL BE CAPABLE OF ENERGIZING THE CHEMICAL FEED SYSTEM OUTLETS.
- THE ACTUAL FLOW INFORMATION SHALL BE PROVIDED TO THE VFD BY THE FM TRANSMITTER. THE VFD SHALL ADJUST FREQUENCY AS REQUIRED TO ACHIEVE SYSTEM DESIGN FLOW.
- THE CHEMICAL CONTROLLER SHALL BE WIRED TO THE CHEMICAL FEED OUTLETS AND SHALL ENERGIZE/DE-ENERGIZE THESE OUTLETS BASED UPON POOL WATER CHEMISTRY.
- THE ACID FEED PUMP IS POWERED ON/OFF BY THE CHEMICAL CONTROLLER PH FEED OUTLET.
- IF THE FILTRATION PUMP LOSES POWER WHILE IN THE "FILTRATION" MODE THE CHEMICAL CONTROLLER SHALL NOT BE CAPABLE OF ENERGIZING THE CHEMICAL FEED OUTLETS AND THE POOL HEATER SHALL BE INACTIVE.

"BACKWASH" POSITION:

- PLACE THE SWITCH IN THE "BACKWASH" POSITION WHEN BACKWASHING THE FILTERS.

WITH THE FILTRATION PUMP SELECTOR SWITCH IN THE "BACKWASH" POSITION, THE FILTRATION PUMP SHALL RUN, BUT THE CHEMICAL CONTROLLER SHALL NOT BE CAPABLE OF ENERGIZING THE CHEMICAL FEED SYSTEM OUTLETS .

"OFF" POSITION:

- PLACE THE SWITCH IN THE "OFF" POSITION TO TURN THE PUMP AND FILTRATION SYSTEM OFF.
- WITH THE FILTRATION PUMP SELECTOR SWITCH IN THE "OFF" POSITION, THE FILTRATION PUMP SHALL BE OFF AND THE CHEMICAL CONTROLLER SHALL NOT BE CAPABLE OF ENERGIZING THE CHEMICAL FEED SYSTEM OUTLETS AND THE POOL HEATER SHALL BE INACTIVE.

CHEMICAL CONTROLLER & CHEMICAL FEED OUTLETS:

- THE CHEMICAL CONTROLLER CPU SHALL BE POWERED AT ALL TIMES.
- THE CHEMICAL FEED OUTLETS SHALL BE INTERLOCKED SUCH THAT IF THE FILTRATION PUMP LOSES POWER WHILE IN THE "FILTRATION" MODE, THE IN-LINE FLOW SWITCH IS NOT MADE OR THE SELECTOR SWITCH IS IN THE OFF OR BACKWASH POSITIONS; THE FEED OUTLETS ARE INACTIVE.
- CHEMICAL CONTROLLER FEED OUTLETS ENERGIZES / DE-ENERGIZES SANITIZER AND pH FEED BASED UPON POOL WATER CHEMISTRY.
- CHEMICAL CONTROLLER ACTIVATES CHEMICAL LINE SOLENOID VALVE TO CLOSE WHEN THERE IS NO FLOW.

CHEMICAL FEED PUMPS

- THE CHEMICAL FEED PUMPS ARE ENERGIZED BY THE CHEMICAL FEED OUTLETS.

FLOW METER:

- WHEN FLOW METER POWER SUPPLY IS ENERGIZED, THE FLOW METER SENSOR SHALL PROVIDE THE FLOW READOUT IN GPM.
- THE FLOW METER SHALL PROVIDE FLOW DATA TO THE INDICATED VFD AND CONTROL SPEED OF THE VFD BASED ON FLOW.

POOL EQUIPMENT OPERATING MODES

FILTRATION SELECTOR SWITCH POSITION	FILTRATION PUMP	CHEMICAL CONTROLLER	CHLORINE FEED	ACID FEED
OFF	O	X	O	O
BACKWASH	X	X	O	O
FILTRATION	X	X	X	X

"X" INDICATES THE EQUIPMENT IS ENERGIZED/RUNNING.
"O" INDICATES THE EQUIPMENT IS NOT ENERGIZED.

NOTES:

1. LOW VOLTAGE <=24V. ALL LOW VOLTAGE WIRING IS SUPPLIED, INSTALLED AND CONNECTED BY THE POOL CONTRACTOR.
2. IF CONDUIT IS REQUIRED BY CODE FOR LOW VOLTAGE WIRING, THEN THIS MUST BE SPECIFIED BY THE ELECTRICAL CONSULTANT AND INSTALLED BY THE ELECTRICAL CONTRACTOR.
3. IF CODE REQUIRES THAT LOW VOLTAGE WIRING IS INSTALLED BY A LICENSED ELECTRICAL CONTRACTOR THEN THIS MUST BE SPECIFIED BY THE ELECTRICAL CONSULTANT.
4. CONDUIT, WIRE SIZES, AND SHIELDING REQUIREMENTS SHALL BE DETERMINED & SPECIFIED BY THE ELECTRICAL CONSULTANT AS NEEDED PER LOCAL BUILDING AND ELECTRICAL CODE REQUIREMENTS.
5. THIS SCHEMATIC DRAWING IS NOT AN ELECTRICAL INSTALLATION DIAGRAM AND IS FOR REFERENCE ONLY. IT IS THE RESPONSIBILITY OF THE POOL CONTRACTOR TO COORDINATE ALL INTERLOCKS WITH THE ELECTRICAL CONTRACTOR. THE POOL CONTRACTOR IS RESPONSIBLE TO PROVIDE AN OPERATING SYSTEM PER THE SEQUENCE OF OPERATIONS.

KEYNOTES: (#)

1. NOT USED.
2. NOT USED.
3. NOT USED.
4. POWER FOR THE CHEMICAL FEEDERS . WHEN FILTER SELECTOR SWITCH POSITION IS OFF, BACKWASH, OR THE FILTRATION PUMP LOSES POWER WHILE IN FILTRATION MODE, THIS CONNECTION SHALL INACTIVE CHEMICAL FEED TO THE SYSTEM.
5. NOT USED.
6. NOT USED.
7. SENSOR CABLE FROM WATER LEVEL SENSOR. FURNISHED WITH WATER LEVEL SENSOR AND INSTALLED BY POOL CONTRACTOR.
8. CONDUCTOR CABLE CONTAINS POWER AND SIGNAL CABLES. COORDINATE REQUIREMENTS WITH WATER LEVEL SENSOR AND CHEMICAL CONTROLLER MANUFACTURERS.
9. NOT USED.
10. VFD ANALOG OUTPUT REPEAT FLOW METER DATA TO CHEMICAL CONTROLLER.
11. A FLOW CELL WITH SHUT-OFF SWITCH SHALL COME PREASSEMBLED AND WIRED TO THE CHEMICAL CONTROLLER. POOL CONTRACTOR SHALL ASSURE CHEMICAL CONTROLLER FLOW CELL ASSEMBLY IS WORKING PROPERLY AND DEACTIVATES CHEMICAL FEED UNDER A NO FLOW CONDITION.

LEGEND:

- LOW VOLTAGE
- LINE VOLTAGE
- DATA - CONTRACTOR TO COORDINATE WITH EQUIPMENT REQUIREMENTS
- (D) DISCONNECT - LOCATE AT EQUIPMENT PER CODE REQUIREMENTS

N0.	DATE	DESCRIPTION	BY

REVISIONS

OAK POINT ASSOCIATES
ARCHITECTURE ■ ENGINEERING ■ PLANNING
85 Middle Street, Portsmouth, NH 03801 (T) 603.431.4849 (F) 603.431.1870
www.oakpoint.com

STATE OF NEW HAMPSHIRE
BRIAN W. FREBER No. 11825
LICENSED PROFESSIONAL ENGINEER
03/01/2023

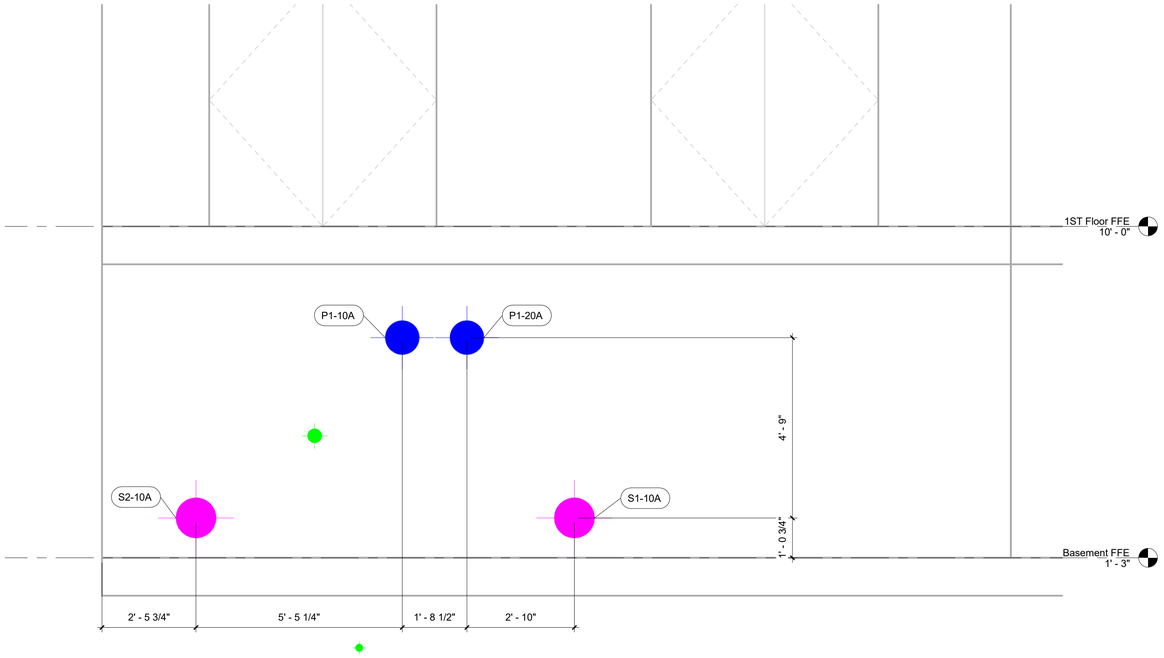
DESIGNED BY: MDR
DRAWN BY: MDR
CHECKED BY: WRB
PROJECT: 21904.14

CITY OF PORTSMOUTH
1 Junkins Avenue
Portsmouth, NH 03801

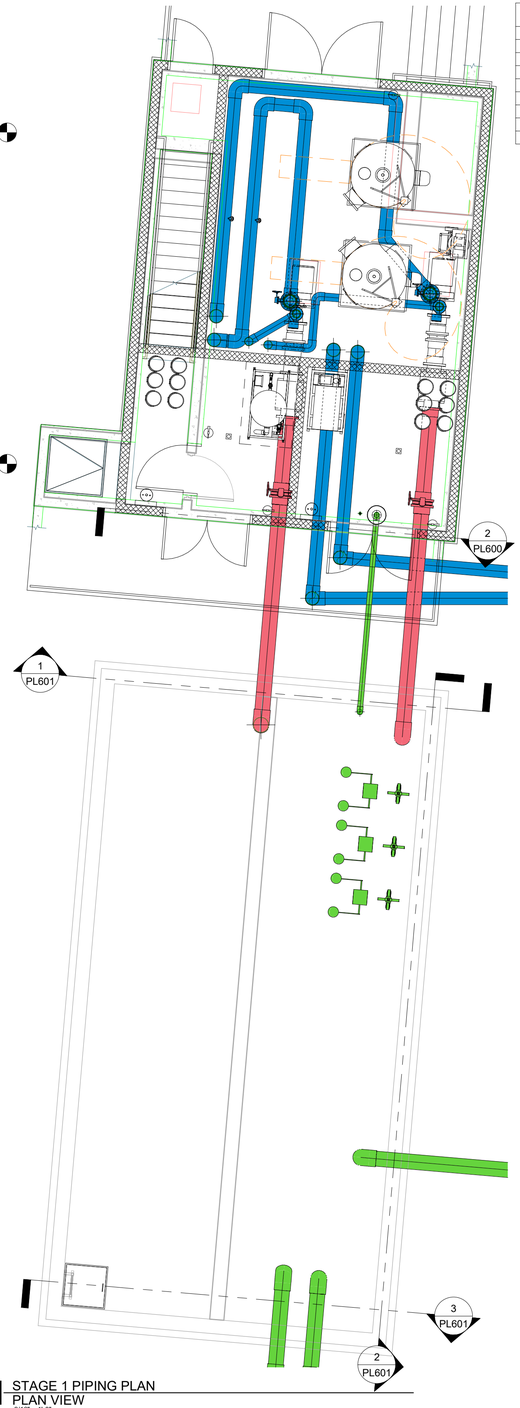
BID #40 - 23
PEIRCE ISLAND PUMP HOUSE AND POOL RENOVATION
Peirce Island Road
Portsmouth, NH 03801

ELECTRICAL SCHEMATIC

SCALE: AS NOTED
DATE: 03/01/2023
DWG.: PL501
SHEET: 70 OF 72



2 PL600 | MECHANICAL ROOM PIPE PENETRATIOND (PLAN SOUTH WALL)
SECTION VIEW
NOT TO SCALE



1 PL600 | STAGE 1 PIPING PLAN
PLAN VIEW
3/16" = 1'-0"

NOTES:

1. THIS DRAWING SHEET MUST BE PRINTED/COPIED IN COLOR.

POOL A PENETRATION SCHEDULE

PIPE ID	DETAIL	NPS (in)	SLEEVE MODE...	DESCRIPTION
S1-10A	2/PL403	12	CS-16	FILTRATION PUMP SUCTION - SURGE TANK
-	-	-	-	-
S2-10A	2/PL403	12	CS-16	FILTRATION PUMP SUCTION - SURGE TANK
-	-	-	-	-
P1-10A	2/PL403	10	CS-14	INLET SUPPLY
-	-	-	-	-
P2-20A	2/PL403	10	CS-14	INLET SUPPLY

WATER TECHNOLOGY, INC.
World Leaders in Aquatic Planning, Design and Engineering
100 Park Avenue | Beaver Dam, WI 53916
t 920.887.7375 | #18176

NO.	DATE	DESCRIPTION	BY

REVISIONS

OAK POINT ASSOCIATES
ARCHITECTURE ■ ENGINEERING ■ PLANNING
85 Middle Street, Portsmouth, NH 03801 (T) 603.431.4849 (F) 603.431.1870
www.oakpoint.com

BRIAN W. FREBER No. 11825 LICENSED PROFESSIONAL ENGINEER - STATE OF NEW HAMPSHIRE
03/01/2023

DESIGNED BY: MDR
DRAWN BY: MDR
CHECKED BY: WRB
PROJECT: 21904.14

CITY OF PORTSMOUTH
1 Junkins Avenue
Portsmouth, NH 03801

BID #40 - 23
PEIRCE ISLAND PUMP HOUSE AND POOL RENOVATION
Peirce Island Road
Portsmouth, NH 03801

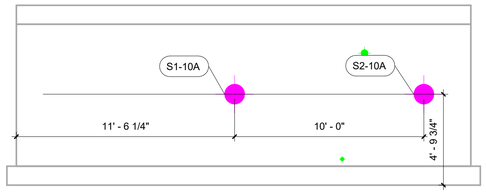
MECHANICAL ROOM PIPE PENETRATIONS

SCALE: AS NOTED
DATE: 03/01/2023
DWG.: PL600
SHEET: 71 OF 72

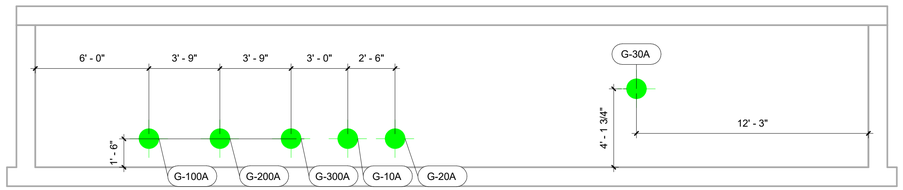
NOTES:

1. THIS DRAWING SHEET MUST BE PRINTED/COPIED IN COLOR.

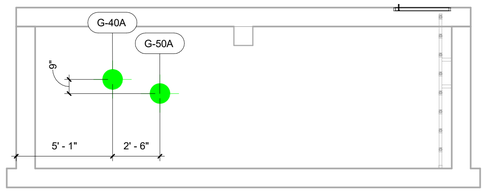
POOL A PENETRATION SCHEDULE				
PIPE ID	DETAIL	NPS (in)	SLEEVE MODE...	DESCRIPTION
S1-10A	3/PL403	12	CS-16	FILTRATION PUMP SUCTION - SURGE TANK
-	-	-	-	-
S2-10A	3/PL403	12	CS-16	FILTRATION PUMP SUCTION - SURGE TANK
-	-	-	-	-
G-10A	3/PL403	12	CS-16	GUTTER
-	-	-	-	-
G-20A	3/PL403	12	CS-16	GUTTER
-	-	-	-	-
G-30A	3/PL403	12	CS-16	GUTTER
-	-	-	-	-
G-40A	3/PL403	12	CS-16	GUTTER
-	-	-	-	-
G-50A	3/PL403	12	CS-16	GUTTER
-	-	-	-	-
G-100A		12	CS-16	GRAVITY MAIN DRAIN
-	-	-	-	-
G-200A		12	CS-16	GRAVITY MAIN DRAIN
-	-	-	-	-
G-300A		12	CS-16	GRAVITY MAIN DRAIN



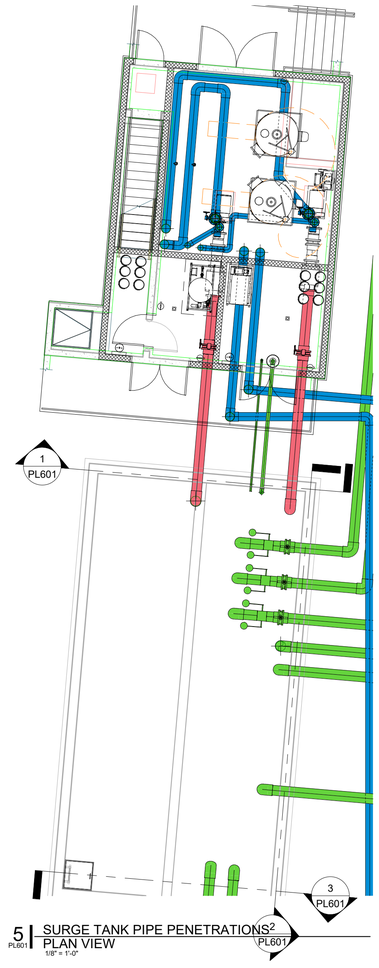
1 PL601 SURGE TANK PIPE PENETRATIONS (PLAN NORTH WALL)
SECTION VIEW
1/4" = 1'-0"



2 PL601 SURGE TANK PIPE PENETRATIONS (PLAN EAST WALL)
SECTION VIEW
1/4" = 1'-0"



3 PL601 SURGE TANK PIPE PENETRATIONS (PLAN SOUTH WALL)
SECTION VIEW
1/4" = 1'-0"



5 PL601 SURGE TANK PIPE PENETRATIONS
PLAN VIEW
1/8" = 1'-0"

OAK POINT ASSOCIATES
ARCHITECTURE ■ ENGINEERING ■ PLANNING
85 Middle Street, Portsmouth, NH 03801 (T) 603.431.4849 (F) 603.431.1870
www.oakpoint.com

STATE OF NEW HAMPSHIRE
BRIAN W. FREBER No. 11825
LICENSED PROFESSIONAL ENGINEER
03/01/2023

DESIGNED BY: MDR
DRAWN BY: MDR
CHECKED BY: WRB
PROJECT: 21904.14

CITY OF PORTSMOUTH
1 Junkins Avenue
Portsmouth, NH 03801

BID #40 - 23
PEIRCE ISLAND PUMP HOUSE AND POOL RENOVATION
Peirce Island Road
Portsmouth, NH 03801

PIPE PENETRATION SECTIONS

SCALE: AS NOTED
DATE: 03/01/2023
DWG.: PL601
SHEET: 72 OF 72

WTI
WATER TECHNOLOGY INC.
World Leaders in Aquatic Planning, Design and Engineering
100 Park Avenue | Beaver Dam, WI 53916
t 920.887.7375 | #18176

NO.	DATE	DESCRIPTION	BY
REVISIONS			