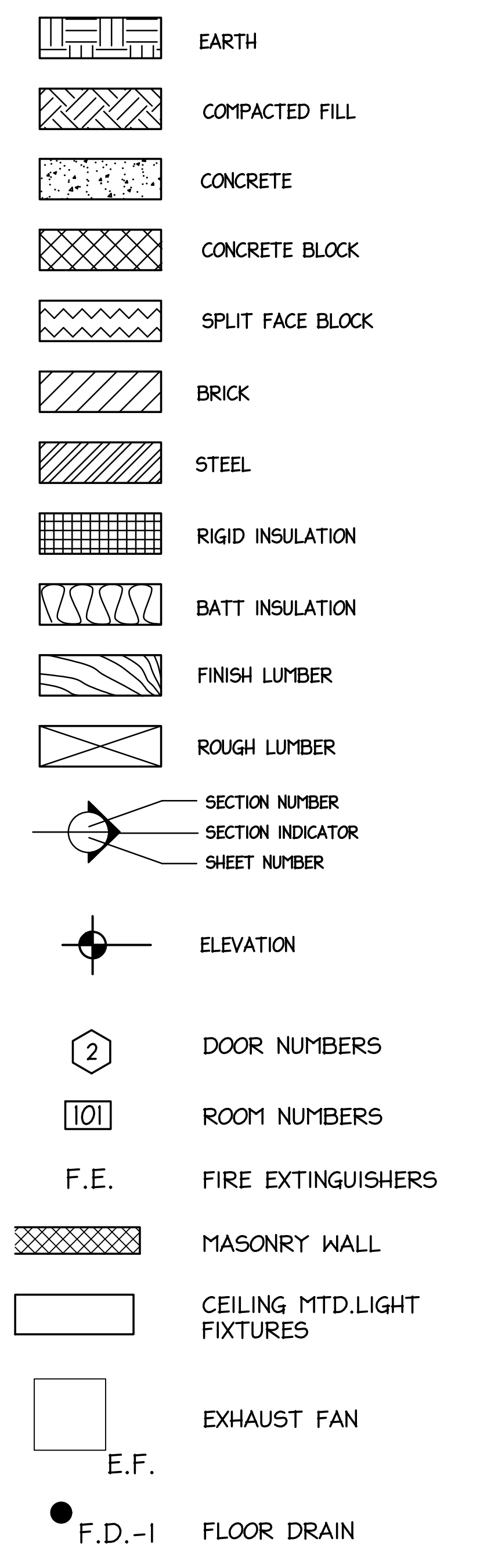
NEW RESTROOM BUILDING
FOR
FASOLA PARK

12 SYCAMORE LANE,
DEPTFORD TOWNSHIP, NJ 08096

ABBREVIATIONS

AL. TH.	ALUMINUM THRESHOLD
A.T.	AIR TERMINAL
B.L.P.	BORROWED LIGHT PANEL
B.P.	BEARING PLATE
BRG.	BEARING
BRK.	BRICK
CAB.	CABINET
C.A.B.C.	COURSE AGGREGATE BITUMINOUS CONCRETE
CARP.	CARPET
C.B.	CATCH BASIN
C.J.	CONTROL JOINT
CLG.	CEILING
CL.	CLOSET
C.L.L.	CONTRACT LIMIT LINE
CLR.	CLEAR - CLEARANCE
C.I.	CAST IRON
C.M.U.	CONCRETE MASONRY UNIT
C.O.	CLEAN OUT
COL.	COLUMN
CONC.	CONCRETE
CONT.	CONTINUOUS
CONTR.	CONTRACTOR
CORR.	CORRIDOR
CORRU.	CORRUGATED
C.S.	CONSTRUCTION SHOWING
C.S.P.	CONSTRUCTION SHOWING PAINTED
C.T.	CERAMIC TILE
C.T.C.B.	CERAMIC TILE COVE BASE
C.W.	COLD WATER
DEMO.	DEMOLISH
DIA.	DIAMETER
D.F.	DRINKING FOUNTAIN
D.L.	DOUBLE LOAD
DR.	DOOR
DWG.	DRAWING
EA.	EACH
ELEC.	ELECTRIC - ELECTRICAL
ELEV.	ELEVATION
E. PNL.	ELECTRICAL PANEL
EQUIP.	EQUIPMENT
EWC.	ELECTRIC WATER COOLER
EXP. JT.	EXPANSION JOINT
EXH.	EXHAUST
EXIST'G	EXISTING
E.T.R.	EXISTING TO REMAIN
F.A.B.C.	FINE AGGREGATE BITUMINOUS CONCRETE
F.B.	FACE BRICK
F.D.	FLOOR DRAIN
F.E.	FIRE EXTINGUISHER
FIN. FL.	FINISH FLOOR
FIN. GR.	FINISH GRADE
FL.	FLOOR
FD'N	FOUNDATION
FTG.	FOOTING
GYP.	GYPSUM BOARD
HRD. WD.	HARDWOOD
INSUL.	INSULATION
INT.	INTERIOR
INV.	INVERT
JAN.	JANITOR
JST.	JOIST
JT.	JOINT
KIT.	KITCHEN
LAV.	LAVATORY
L.W.T.	LIGHT WEIGHT
L.F.	LINEAR FEET
MAX.	MAXIMUM
MB.TH.	MARBLE THRESHOLD
MECH.	MECHANICAL
MFR.	MANUFACTURER
MIN.	MINIMUM
MIR.	MIRROR
M.O.	MASONRY OPENING
M.T.P.	METAL TOILET PARTITION
M.R.	MAT RECESS
M. REC.	MOP RECEPTOR
M.T.	METAL THRESHOLD
MTL.	METAL
N.I.C.	NOT IN CONTRACT
N.T.S.	NOT TO SCALE
O.C.	ON CENTER
O.D.	OUTSIDE DIAMETER
OFF.	OFFICE
O.H.D.	OVERHEAD DOOR
OPN'G.	OPENING
PERF.	PERFORATED
PLAS.	PLASTIC
PLAT.	PLATFORM
PLY'WD	PLYWOOD
P.S.F.	POUNDS PER SQUARE FOOT
P.S.I.	POUNDS PER SQUARE INCH
P.T.	PORCELAIN TILE
P.T.C.B.	PORCELAIN TILE COVE BASE
PTD.	PAINTED
PVC.	POLYVINYL CHLORIDE
Q.T.	QUARRY TILE
Q.T.C.B.	QUARRY TILE COVE BASE
R.	RISER
RAD.	RADIUS
R.D.	ROOF DRAIN
REQ'D	REQUIRED
RFG.	ROOFING
R.F.S.	RECESSED FLOOR SLEEVE
RM.	ROOM
R.O.	ROUGH OPENING
R.O.W.	RIGHT OF WAY
R.W.C.	RAIN WATER CONDUCTOR
S.A.	SOUND ATTENUATION BLANKET
SAN.	SANITARY
SCH.	SCHEDULE
S.D.	SOAP DISPENSER
SECT.	SECTION
SEW.	SEWER
S.L.	SKYLIGHT
SPEC.	SPECIFICATION(S)
S.S.	SERVICE SINK
STL.	STEEL
ST.STL.	STAINLESS STEEL
STOR.	STORAGE
S.U.	SINK UNIT
T.	TREAD
T. CN.	TOP OF CONCRETE
T.D.	TOWEL DISPENSER
T.& G.	TONGUE AND GROOVE
TH.	THRESHOLD
THK.	THICK - THICKNESS
T.O.F.	TOP OF FOOTING
T.O.M.	TOP OF MASONRY
T.O.S.	TOP OF STEEL
T.PNL.	TELEPHONE PANEL
TYP.	TYPICAL
T.P.	TOILET PARTITION
UC.	UNDERCUT
U.D.	UNIT DIMENSION
U/G	UNDERGROUND
U.H.	UNIT HEATER
U.N.O.	UNLESS NOTED OTHERWISE
U/S	UNDER SLAB
U.V.	UNIT VENTILATOR
V.	SHEET VINYL
V.C.B.	VINYL COVE BASE
V.C.T.	VINYL COMPOSITION TILE
V.S.B.	VINYL STRAIGHT BASE
VEST.	VESTIBULE
V.T.R.	VENT THRU ROOF
W/	WITH
W.B.	WONDER BD. CEMENTATIOUS BACKER
W.C.	WATER CLOSET
WD.	WOOD
W/O	WITHOUT
WSCT.	WAINSCOT
WTH.	WIDTH
W.W.M.	WELD WIRE MESH

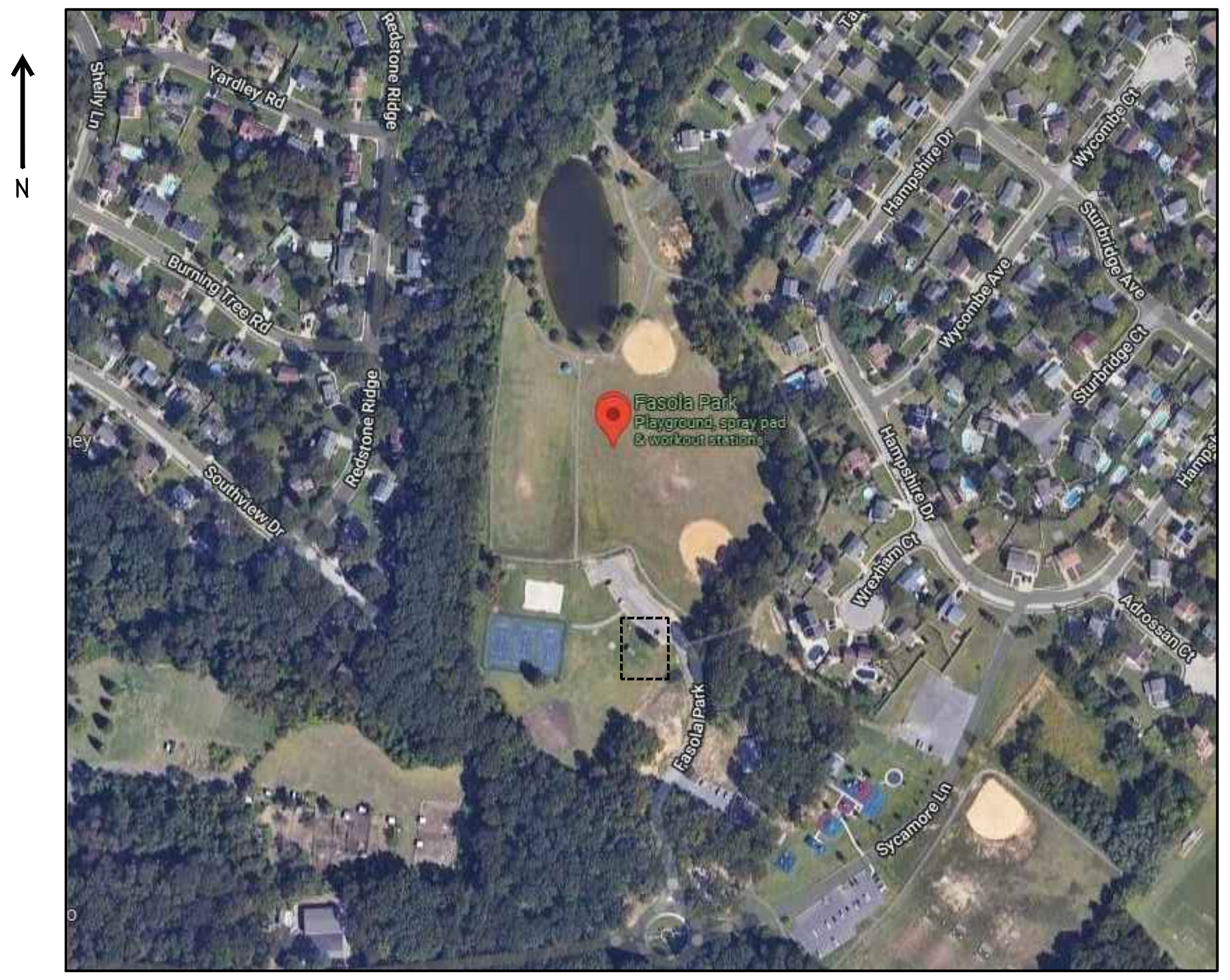
SYMBOLS



LOCATION MAP

SITE LOCATION

12 SYCAMORE LN, DEPTFORD
TOWNSHIP, NEW JERSEY 08096



LIST OF CONSULTANTS

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CHERRYHILL, N.J 08034
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HOLSTEIN WHITE INC.
210 E. STREET ROAD, SUITE 2D
FEASTERVILLE, PA 19053
TEL: (215) 322-7711
FAX: (215) 322-7709

TOWNSHIP ENGINEER

SITE ENGINEER
BRYSON & YATES CONSULTING ENGINEERS
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SEWELL, NJ 08080
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FAX: (856) 582-7976

DRAWING INDEX- FASOLA PARK

CS-1	COVER SHEET

ARCHITECTURAL DRAWINGS:

A-1	PLANS, SCHEDULES & DETAILS
A-2	BUILDING ELEVATIONS
A-3	BUILDING SECTIONS, WALL SECTIONS, DETAILS
A-4	ROOF PLAN & ROOF FRAMING PLAN

ENGINEERING DRAWINGS:

M-1	FIRST FLOOR MECHANICAL PLAN & MECHANICAL SCHEDULES & DETAILS
E-0	SITE ELECTRICAL PLAN
E-1	FIRST FLOOR POWER AND LIGHTING PLAN
P-1	FIRST FLOOR PLUMBING PLAN
P-2	PLUMBING SCHEDULES & DETAILS

SITE IMPROVEMENTS & UTILITIES

SHEET 1	LEGEND & NOTES
SHEET 2	EXISTING CONDITIONS PLAN
SHEET 3	OVERALL UTILITY PLAN
SHEET 4	SITE GRADING & UTILITY PLAN
SHEET 5	CONSTRUCTION DETAILS
SHEET 6	CONSTRUCTION DETAILS
SHEET 7	SOIL EROSION & SEDIMENT CONTROL PLAN
SHEET 8	SOIL EROSION CONTROL NOTES & DETAILS

BUILDING CODES

IBC- NJ- 2018

UCC. VJAC 5:23-7 BARRIER FREE
ICC/ ANSI A 117.1- 2009

INTER MECH. CODE- 2018

NATIONAL ELEC. CODE- 2017

NATIONAL STD PLB'G CODE- 2018

INTERNATIONAL EMERGENCY CODE- 2018

BUILDING CHARACTERISTICS- FASOLA PARK

BLOCK	223
LOT	64
USE GROUP	U
CONSTRUCTION TYPE (1 STORY MASONRY STRUCTURE)	III
NUMBER OF STORIES	1
HEIGHT OF STRUCTURE	±17'
BUILDING AREA	±804 S.F.

ROO DESIGN LOADS

LIVE LOAD ------------------ 30 P.S.F.
SHINGLE ROOF --------------- 7
CEILING AND MISC. ----------- 7
TOTAL --------------------- 44

MISCELLANEOUS LOADS

WIND LATERAL --- 20 P.S.F. & 1/3 FOR IMPACT
WIND UPLIFT LOAD ON CANOPIES & OVERHANGS --------------- 40 P.S.F.
WIND UPLIFT ON GENERAL ROOF AREA ---------------------- 15 P.S.F.
SEISMIC LOADS --- SAME AS WIND LATERAL LOADS
SNOW LOADS --- 20 P.S.F.

RE-BID DATE: 12/12/22

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Joseph F. McKernan Jr., Architects & Associates
100 Dobbs Lane Suite 204 Cherry Hill, New Jersey 08034

TITLE:
COVER SHEET

JOSEPH F. McKERNAN JR., R.A.
NJ ARCH AI 10984 . PA ARCH RA-011402-X . CT ARCH 7324

SEAL:

DIMENSIONS MUST BE VERIFIED BY CONTRACTOR. NOTIFY THE ARCHITECT OF ANY DISCREPANCIES BEFORE PROCEEDING WITH CONSTRUCTION.
DO NOT SCALE DRAWING.

SCALE: AS NOTED
PROJ.NO.: 1181
DATE: 9/23/22
REV'D.:
DRAWN BY: TC
CHKD.BY: DBF

DRAWING NO:
CS-1

DOOR SCHEDULE

DOOR NO.	OPENING SIZE	TYPE	THICK	MAT.	FRAME TYPE	FRAME MAT.	HEAD	JAMB	SILL	HDW. SET	REMARKS
1	3'-0" x 7'-0"	1	1 3/4"	FRP	A	AL.	2	2	AL.	1	KICKPLATE
2	3'-0" x 7'-0"	1	1 3/4"	FRP	A	AL.	2	2	AL.	1	KICKPLATE
3	3'-0" x 7'-0"	1	1 3/4"	HM	A	HM	1	1	-	2	

ROOM FINISH SCHEDULE: RENOVATED AREA(FIRST FLOOR)

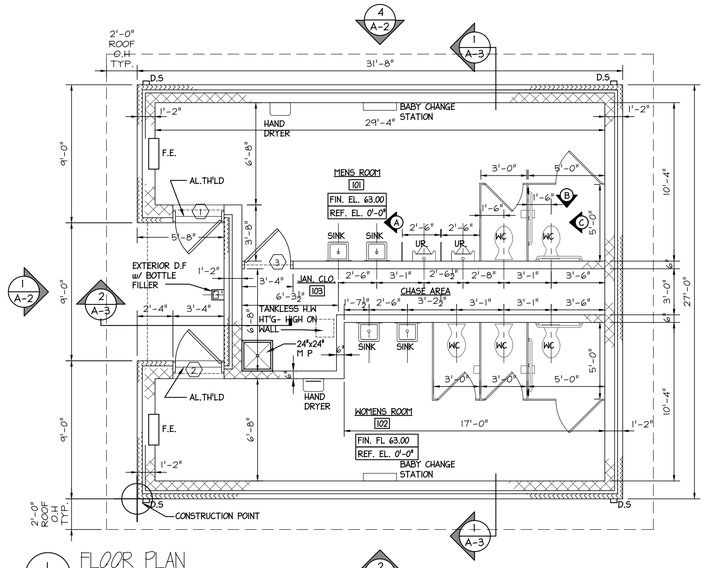
ROOM NO.	ROOM NAME	FLOOR	WALLS	CEILING	HEIGHT	REMARKS
101	WOMENS ROOM	RESINOUS FLOORING	EPOXY PTD.	PTD. GYP. BD.	10'-0"	RESINOUS FLR. COATING- EXTEND 4" UP WALL
102	MENS ROOM	RESINOUS FLOORING	EPOXY PTD.	PTD. GYP. BD.	10'-0"	RESINOUS FLR. COATING- EXTEND 4" UP WALL
103	JANITORS CLOSET	CONCRETE	---	---	---	#SEAL CONC. FLOOR SLAB

GENERAL NOTES:

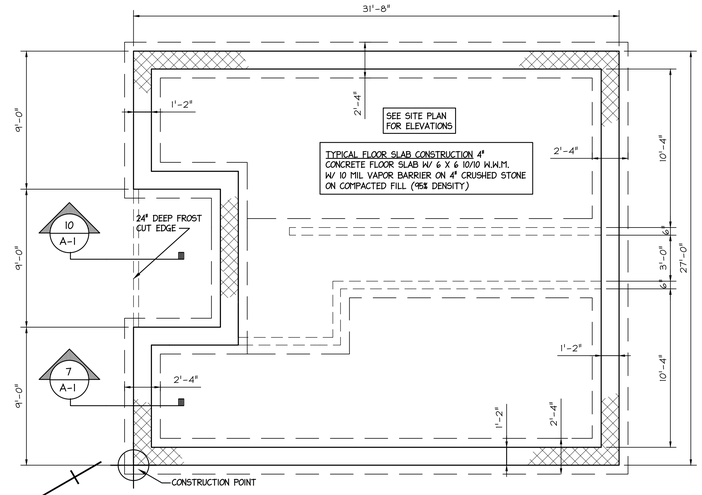
1. PROVIDE AND INSTALL FIRE EXTINGUISHER & SEMI-RECESSED CABINET AS FOLLOWS: MULTIPURPOSE DRY-CHEMICAL TYPE, UL-RATED 4-A:60-BC, 10 LBS. NOMINAL CAPACITY IN ENAMELED STEEL CONTAINER. MULTIPURPOSE DRY-CHEMICAL TYPE, UL-RATED 4-A:60-BC, 10 LBS. NOMINAL CAPACITY IN ENAMELED STEEL CONTAINER. ⅄ SAF-T-LOK SEMI-RECESSED CABINET, MODEL: "AMBASSADOR" MODEL NO. 1017G10 W/ SAF-T-LOK
2. CONTRACTOR IS RESPONSIBLE FOR THE RESTORATION OF SITE AROUND PERIMETER OF BUILDING ±20'-0".

SEE BRYSON & YATES SHEET 4 OF 10 FOR FIN. FL. ELEV: 63.00 REF. EL. 0'-0"

SEE BRYSON & YATES SHEET 3 OF 10 FOR ELEVATION BENCH MARK



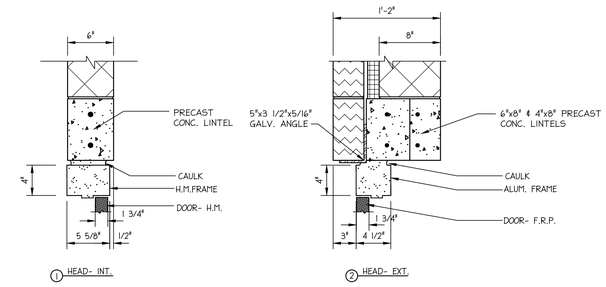
1 A-1 FLOOR PLAN
SCALE: 1/4" = 1'-0"

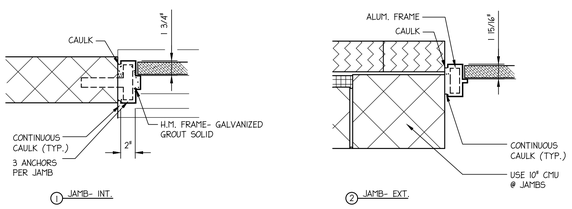


2 A-1 FOUNDATION PLAN
SCALE: 1/4" = 1'-0"

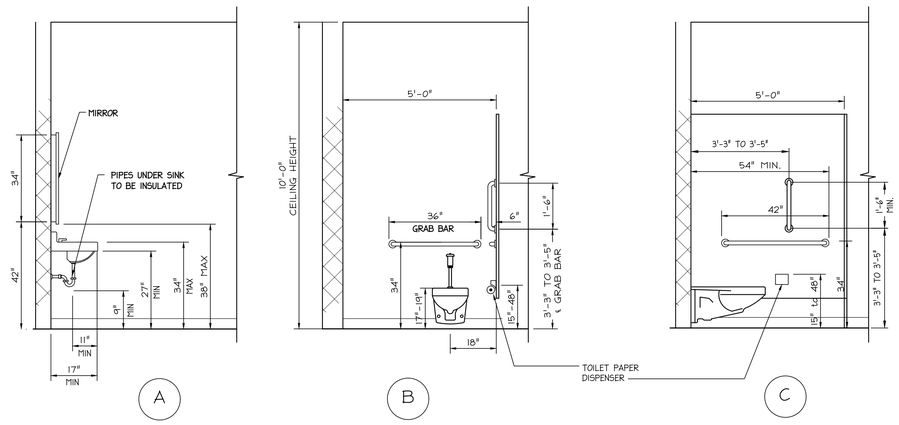
TYP- B.O.F.= -3'-8"

SEE SITE PLAN FOR EXACT LOCATION OF THIS CONSTRUCTION POINT





3 A-1 HEAD & JAMB DETAIL
SCALE: H/2 = 1'-0"

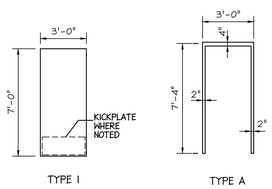


4 A-1 HANDICAP LAV. & TOILETS
SCALE: 1/2" = 1'-0"

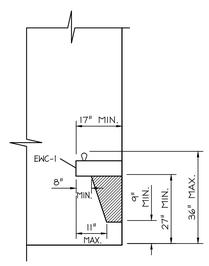
FOUNDATION NOTES

1. ALL FOOTINGS TO BE FORMED AND WELL TAMPED. IF FOOTINGS ARE PERMITTED BY ARCHITECT TO BE POURED WITHOUT FORMS, TRENCHES MUST BE SHARP AND TRUE IF NOT, FORMS MUST BE USED.
2. ALL FOOTING ELEVATIONS ARE TO BOTTOM OF FOOTING (B.O.F.)
3. ALL FLOOR SLABS ARE TO BE 4" WITH 6 X 6 X 6 10/10 WELDED WIRE MESH.
4. INSTALL 10 MIL. VAPOR BARRIER UNDER ENTIRE BUILDING.
5. ALL FOOTINGS SHALL BE A MINIMUM OF 12" BELOW EXISTING UNDISTURBED GRADE, AND 3'-0" BELOW FINISH GRADE. B.O.F. (BOTTOM OF FOOTING) IS GIVEN AS A GUIDE ONLY. SHOULD EXISTING GRADE BE OTHER THAN INDICATED, THE G.C. SHALL COMPENSATE FOR THE DIFFERENCE.
6. ALL REINFORCED CONCRETE SHALL BE INSTALLED ACCORDING TO THE "BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE" AC 318-63, APPROVED AS AMERICAN STANDARD BY THE AMERICAN STANDARD ASSOCIATION.
7. ALL MASONRY WALLS ARE TO COMPLY WITH THE AMERICAN STANDARD BUILDING CODE REQUIREMENTS FOR MASONRY.
8. ALL HOLLOW BLOCK IS TO COMPLY WITH THE A.S.T.M. SPECIFICATION DESIGNATION C-90-54, GRADE "A", WITH 1-1/4" FACE SHELL THICKNESS BELOW GRADE AND ABOVE GRADE ON EXTERIOR WALLS WHERE EXPOSED.
9. MORTAR AS SPECIFIED IS A.S.T.M., TYPE N/S (1000 #/SQ. INCH). LOADS ON MASONRY ARE TO BE CALCULATED NOT TO EXCEED CODE VALUES OF: 75#/SQ. INCH ON HOLLOW BLOCK 110#/SQ. INCH ON SOLID BLOCK 250#/SQ. INCH ON CONCRETE

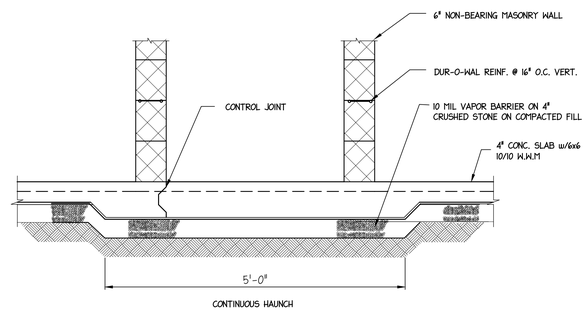
DOOR TYPES FRAME TYPES



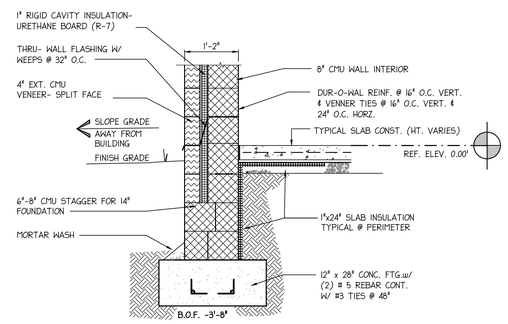
4 A-1 DOOR & FRAME TYPES
SCALE: 1/4" = 1'-0"



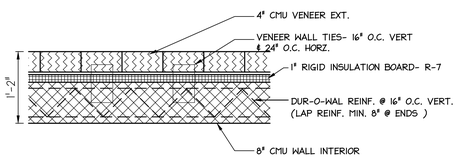
5 A-1 EXT. WATER FOUNTAIN
SCALE: 1/2" = 1'-0"



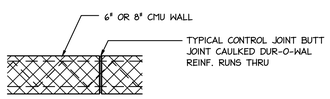
6 A-1 NON-BEARING WALL HAUNCH
SCALE: 1" = 1'-0"



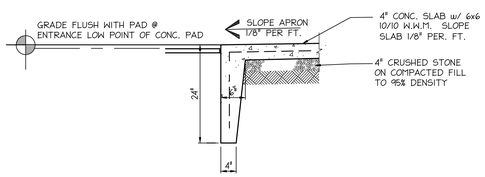
7 A-1 FOOTING DETAIL
SCALE: 3/4" = 1'-0"



8 A-1 WALL REINFORCING DETAIL
SCALE: 1" = 1'-0"



9 A-1 CMU JOINT DETAIL
SCALE: 1" = 1'-0"
#SEE ELEVATIONS FOR C.J. IN 4" EXT. VENEER



10 A-1 FROST- CUT SLAB DETAIL
SCALE: 3/4" = 1'-0"

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Joseph F. McKernan Jr., Architects & Associates
100 Dobbs Lane Suite 204 Cherry Hill, New Jersey 08034

TITLE:
PLANS, SCHEDULES & DETAILS

JOSEPH F. McKERNAN JR., R.A.
NJ ARCH AI 10984 - PA ARCH RA-014825-X - CT ARCH 7024

SEAL:

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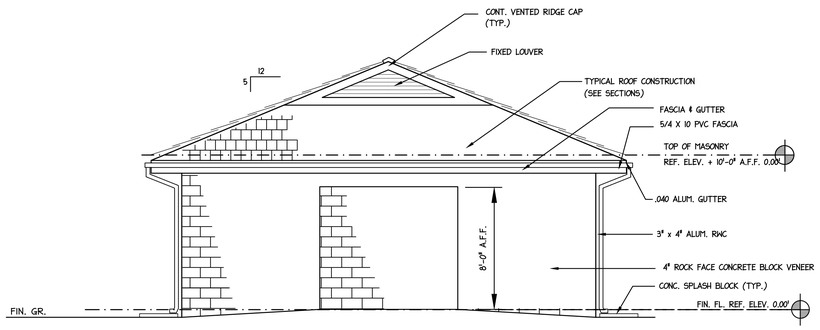
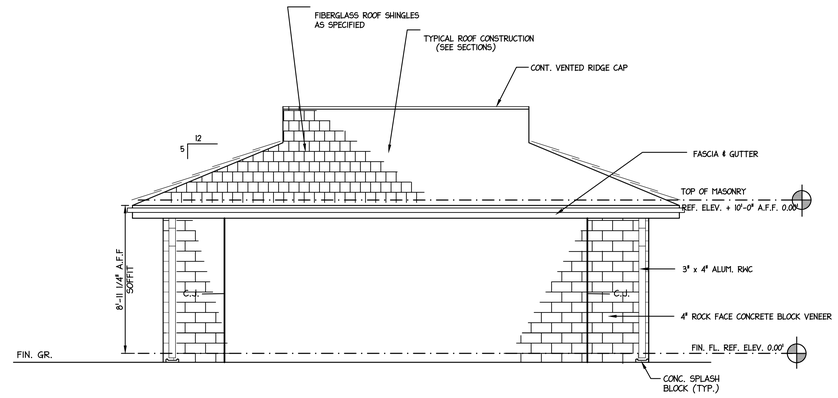
SCALE: AS NOTED
PROJ.NO.: 18N
DATE: 9/23/22
REV'D:
DRAWN BY: TC
CHKD.BY: DBF

DRAWING NO: A-1

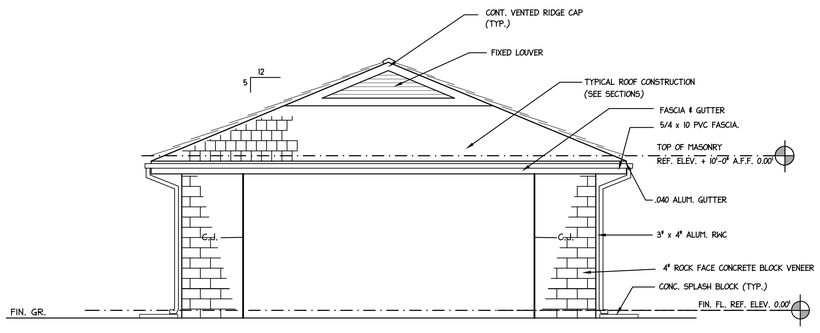


1 / A-2 FRONT ELEVATION
SCALE: 1/4" = 1'-0"



2 / A-2 RIGHT ELEVATION
SCALE: 1/4" = 1'-0"

NOTE:
FINISH GRADE VARIES AROUND THE BUILDING- REFER TO CIVIL ENGINEERS SITE PLAN



3 / A-2 REAR ELEVATION
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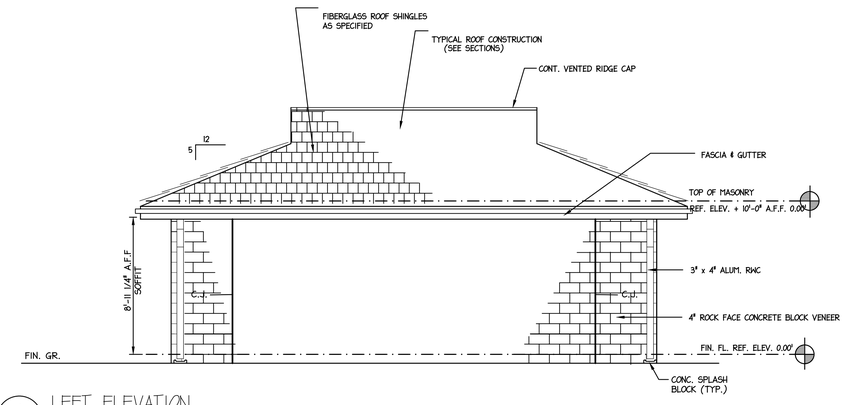

4 / A-2 LEFT ELEVATION
SCALE: 1/4" = 1'-0"

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TITLE:
BUILDING ELEVATIONS

SEAL:

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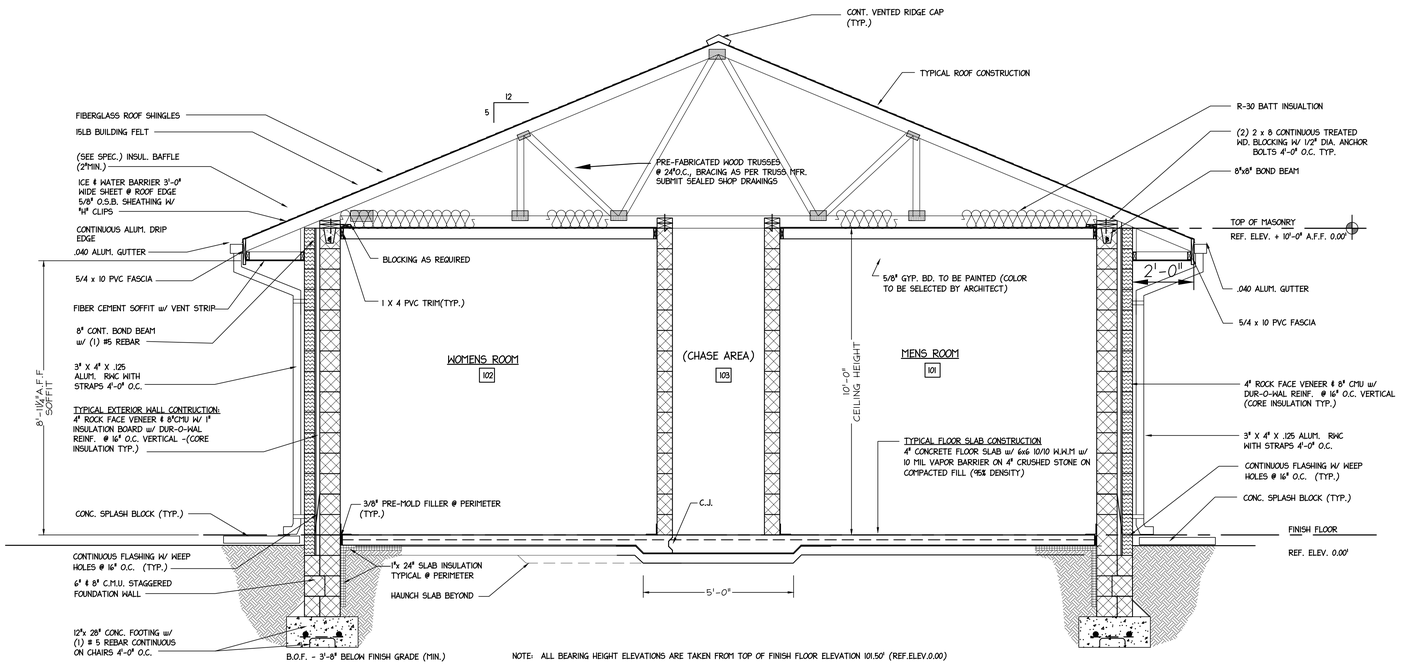
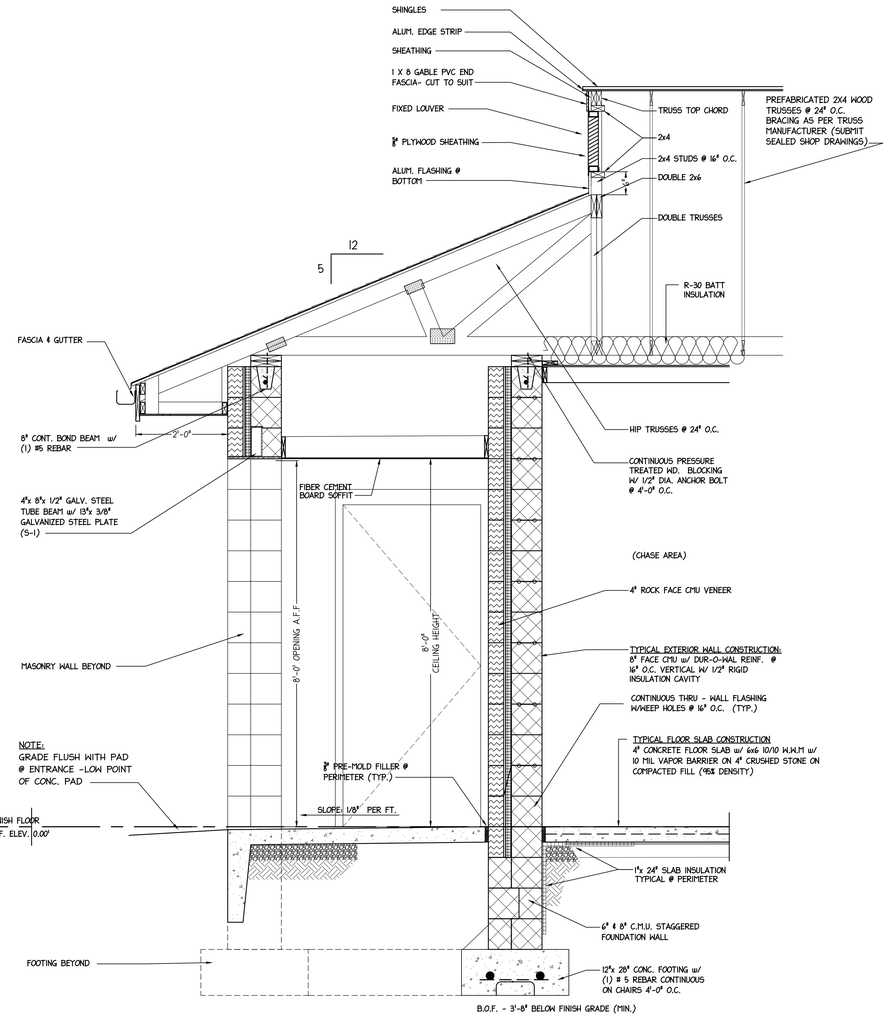
SCALE: AS NOTED
PROJ.NO.: 1184
DATE: 9/23/22
REV'D:
DRAWN BY: TC
CHKD.BY: DBF

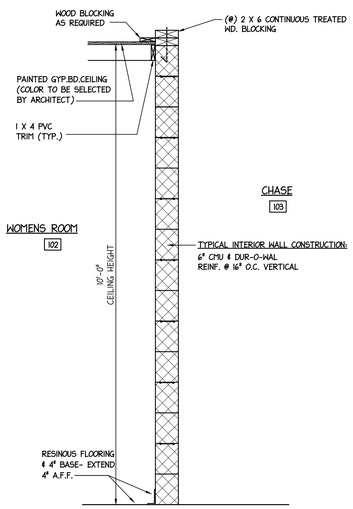
DRAWING NO:
A-2



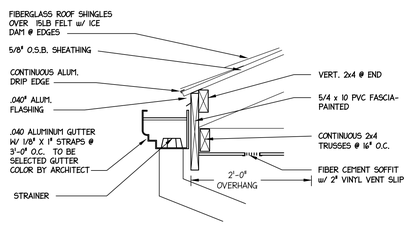
1 A-3 BUILDING SECTION
SCALE: 1/2" = 1'-0"



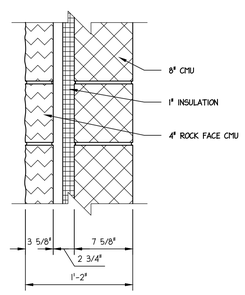
2 A-3 EXTERIOR WALL SECTION @ CANOPY
SCALE: 3/4" = 1'-0"



3 A-3 INTERIOR PARTITION
SCALE: 3/4" = 1'-0"



4 A-3 DETAIL @ GUTTER
SCALE: 1 1/2" = 1'-0"



5 A-3 TYP. WALL DETAIL
SCALE: 1 1/2" = 1'-0"

RE-BID DATE: 12/12/22

No.	DATE	DESCRIPTION	REV'D BY
		REVISIONS	

APPROVAL:

PROJECT:
RESTROOM BUILDING
FOR
FASOLA PARK
12 SYCAMORE LN,
DERPTFORD TOWNSHIP, NJ 08096

Joseph F. McKernan Jr., Architects & Associates
100 Dobbs Lane Suite 204 Cherry Hill, New Jersey 08034

TITLE: BUILDING SECTIONS, WALL SECTIONS & DETAILS

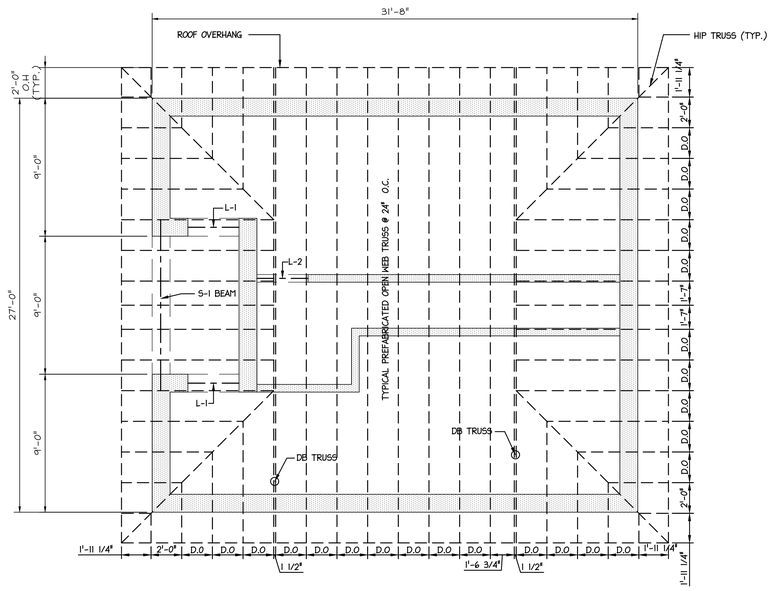
JOSEPH F. McKERNAN JR., R.A.
NJ ARCH LIC #13964 - PA ARCH RM-004824-X - CT ARCH 7524

SEAL:

DIMENSIONS MUST BE VERIFIED BY CONTRACTOR ON SITE BEFORE PROCEEDING WITH CONSTRUCTION. DO NOT SCALE DRAWING.

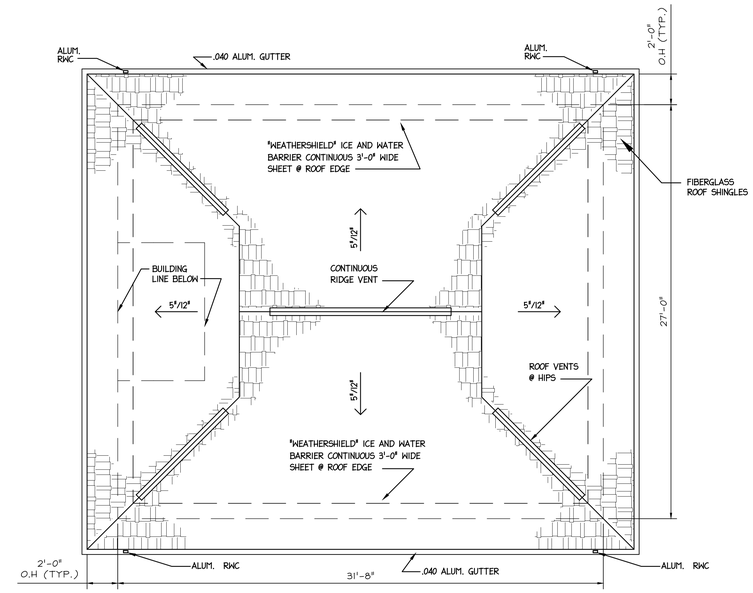
SCALE: AS NOTED
PROJ.NO.: 1151
DATE: 9/23/22
REV'D.:
DRAWN BY: TC
CHKD.BY: DDF

DRAWING NO: A-3



1 / A-4 ROOF FRAMING PLAN

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



2 / A-4 ROOF PLAN

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

LINTEL SCHEDULE:

L-1 (2) 6" X 8" PRE-CAST CONC. LINTEL w/ #4 BARS T & B W/ 3 1/2"x 5"x 5/16" GALV. STEEL ANGLE MINIMUM BEARING 8" ON BOTH ENDS

L-2 6"x8" PRECAST CONC. LINTEL W/ (4) #4 BARS T & B

S-1 4"x8" X 1/4" GALV. STEEL TUBE BEAM W 13"x3/8" GALV. PLATE MINIMUM BEARING 8" ON BOTH ENDS

RE-BID DATE: 12/12/22

No.	DATE	DESCRIPTION	REV'D BY

REVISIONS

APPROVAL:

PROJECT:

RESTROOM BUILDING
FOR
FASOLA PARK
12 SYCAMORE LN,
DERPTFORD TOWNSHIP, NJ 08096

Joseph F. McKernan Jr., Architects & Associates
100 Dobbs Lane Suite 204 Cherry Hill, New Jersey 08034

JOSEPH F. McKERNAN JR., R.A.
NJ ARCH AI 10984 - PA ARCH RA-014231-R - CT ARCH 7024

TITLE: ROOF PLAN & ROOF FRAMING PLAN

SEAL:

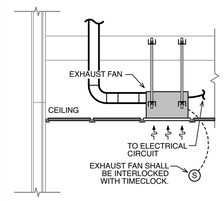
DIMENSIONS MUST BE VERIFIED BY CONTRACTOR. NOTIFY THE ARCHITECT IF ANY DISCREPANCY EXISTS BEFORE PROCEEDING WITH CONSTRUCTION.
DO NOT SCALE DRAWING.

SCALE: AS NOTED
PROJ.NO.: 1184
DATE: 9/23/22
REV'D:
DRAWN BY: TC
CHKD.BY: DBF

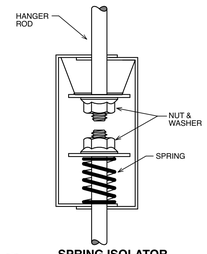
DRAWING NO: A-4

DRAWING NOTES

1. MECHANICAL CONTRACTOR SHALL VERIFY THE LOCATIONS & SIZES OF THE DOMESTIC WATER PIPING, SANITARY PIPING AND STRUCTURAL ELEMENTS IN THE FIELD, COORDINATE THE INSTALLATION OF HVAC COMPONENTS WITH ALL OTHER TRADES.
2. COORDINATE LOCATIONS OF ALL CEILING MOUNTED MECHANICAL EQUIPMENT WITH LIGHTING AND REFLECTED CEILING PLANS.
3. IT IS THE INTENT TO MAINTAIN THE CEILING HEIGHTS AS SHOWN ON THE REFLECTED CEILING PLANS.
4. MECHANICAL CONTRACTOR SHALL FURNISH ALL REQUIRED CEILING ACCESS PANELS AND WALL OPENINGS TO SERVICE ALL MECHANICAL EQUIPMENT, INSTALLED BY G.C. COORDINATE ALL LOCATIONS AND SIZES WITH ARCHITECT PRIOR TO INSTALLATION.
5. ALL INTAKE AIR OPENINGS SHALL BE A MINIMUM OF 10'-0" FROM ALL EXHAUST AIR LOCATIONS. CONTRACTOR SHALL VERIFY THE EXACT TIE-IN LOCATION IN THE FIELD.
6. ALL TRANSVERSE JOINTS AND LONGITUDINAL SEAMS SHALL BE SEALED WITH RCD#8 LOW-VOC MASTIC. ALL DUCTWORK SHALL BE IN ACCORDANCE WITH SMACNA'S SEAL CLASS "B".
7. CONTRACTOR REQUIRED TO PROVIDE ALL COMPONENTS NECESSARY FOR A COMPLETE AND OPERATIONAL SYSTEM.
8. ALL DUCTWORK SIZES SHOWN ON PLAN ARE CLEAR I.D. DIMENSIONS. ALL SUPPLY AND RETURN DUCTWORK WILL BE INSULATED (REFER TO INSULATION SCHEDULE FOR MORE INFORMATION).
9. MECHANICAL CONTRACTOR SHALL COORDINATE THE FINAL LOCATIONS OF THE THERMOSTATS WITH THE OWNER PRIOR TO INSTALLATION OF THE CONTROLS.
10. THERMOSTATS/SENSORS SHALL HAVE A 3-5 DEGREE TEMPERATURE RANGE CONTROL LIMIT, THAT CAN BE SET BY THE OWNER.



2 ROOF-TERMINATED EXHAUST FAN DETAIL
NOT TO SCALE



3 SPRING ISOLATOR DETAIL
NOT TO SCALE

SHEET NOTES

1. EXHAUST FAN OPERATION SHALL BE ON A TIMECLOCK. COORDINATE ALL REQUIREMENTS WITH ELECTRICAL CONTRACTOR.

CEILING HUNG UNIT HEATER SCHEDULE

Unit Designation	UH-1
Description	Unit Heater
Basis of Design	QMARK
Model Number	MUH03-21
Mount	Ceiling - Vertical
Dimensions (L x W x H) (in.)	7-1/2 x 14 x 16
Weight (lbs)	27
Location	Refer to Plans
Quantity	1
Electrical	**208 / 1Ø / 60**
Capacity (kW)	2.2
Number of Elements	1
Unit FLA	11.0 Amps
Accessories	
Finish	---
Mounting Kit	Yes
Disconnect Switch	Yes
Over Current Protection	Yes
Automatic Reset Thermal Limit	Yes
Automatic Fan Delay Circuit	No
Dust Shield	Yes
Fan Guard	Yes
Control	
Unit Mounted Thermostat	Yes, Set to 55°F (ADJ.)

EXHAUST FAN SCHEDULE

Unit Designation	EF-1	EF-2	EF-3
Basis of Design	Cook	Cook	Cook
Model Number	GC-422	GC-422	GC-148
CFM	210	280	100
E.S.P. (in. W.C.)	0.25	0.25	0.25
Drive Type	Direct	Direct	Direct
Dim (L x W x H)(in.)	14-1/4" x 21" x 11-7/8"	14-1/4" x 21" x 11-7/8"	13-1/4" x 15-1/2" x 9"
Weight (lbs.)	24	24	15
Location	Ceiling Mounted	Ceiling Mounted	Ceiling Mounted
Service	Refer to Plans	Refer to Plans	Refer to Plans
Electrical	**115/1Ø/60**	**115/1Ø/60**	**115/1Ø/60**
Motor Power	73 Watts	98 Watts	38 Watts
Motor HP	0.044	0.044	0.040
Accessories			
Backdraft Damper	Yes	Yes	Yes
Roof Curb	No	No	No
Wall Cap	No	No	No
Roof Cap	No	No	No
Exhaust Grille	Yes, White	Yes, White	Yes, White
Vibration Isolation Kit	Yes	Yes	Yes
Standard Disconnect	Yes	Yes	Yes
Control			
Speed Controller	Yes	Yes	Yes
Time Delay Switch	No	No	No
Interlock	Interconnect w/ Timeclock Coordinate w/ E.C.	Interconnect w/ Timeclock Coordinate w/ E.C.	Interconnect w/ Timeclock Coordinate w/ E.C.

MATERIAL AND INSULATION SCHEDULE

System	Material: Basis of Design	Insulation: Basis of Design	Insulation: Type	Insulation: Wall (in.)	Insulation: Vapor Barrier	Remarks
Ductwork, Exhaust Air	Galvanized Steel	----	----	----	----	ASHRAE 2" Pressure class. Seal Class "A"
Ductwork, Outside Air	Galvanized Steel	Certainteed	Duct Wrap	1-1/2	Yes	ASHRAE 2" Pressure class. Seal Class "A"

AIR DEVICE SCHEDULE

No.	CFM	Size	Neck	Mfgr.	Model #	Finish	Damper	Mtd. Surface	Material	Remarks
AD-1	0-280	12x12	10"Ø	Krueger	5880	Note #4	No	Ceiling	Aluminum	Double Deflection Supply Grille w/ 3/4" Spacing

Air Device Notes:
1. Unless other wise indicated, provide duct connection the full size of duct shown on drawing.
2. Provide air device frames to suit wall and ceiling construction.
3. Paint return air plenums above return and transfer grilles black.
4. Coordinate finish of all diffusers, registers and grilles with Architect.

ELECTRICAL COORDINATION

1. IT SHALL BE THE RESPONSIBILITY OF THE MECHANICAL CONTRACTOR TO COORDINATE THE LOCATIONS OF SUPPRESSION SYSTEM PIPING WITH THE ELECTRICAL CONTRACTOR. DUCTWORK SHALL NOT BE INSTALLED WITHIN THE DEDICATED EQUIPMENT SPACE REQUIRED FOR EXISTING OR NEW ELECTRICAL EQUIPMENT.
2. COORDINATION OF DUCTWORK LOCATIONS SHALL BE SOLELY THE RESPONSIBILITY OF THE MECHANICAL CONTRACTOR. APPROVAL OF SHEET METAL SUBMITTAL DRAWINGS DOES NOT RELEASE THE CONTRACTOR FROM COORDINATION RESPONSIBILITY. FINAL COORDINATION SHALL OCCUR IN FIELD WITH ELECTRICAL CONTRACTOR. FAILURE TO COMPLY WITH THIS REQUIREMENT MAY RESULT IN RELOCATION OF SUPPRESSION SYSTEM PIPING AT CONTRACTOR'S EXPENSE.
3. PER NFPA 70, ARTICLE 110.26(F); DEDICATED EQUIPMENT SPACE SHALL APPLY TO SWITCHBOARDS, DISTRIBUTION PANELS, AND MOTOR CONTROL CENTERS. THE SPACE EQUAL TO THE WIDTH AND DEPTH OF THE EQUIPMENT AND EXTENDING FROM THE FLOOR TO A HEIGHT OF 6' ABOVE THE EQUIPMENT OR TO THE STRUCTURAL CEILING, WHICHEVER IS LOWER, SHALL BE DEDICATED TO THE ELECTRICAL INSTALLATION. NO PIPING, DUCTS, LEAK PROTECTION APPARATUS, OR OTHER EQUIPMENT FOREIGN TO THE ELECTRICAL INSTALLATION SHALL BE LOCATED IN THIS ZONE.

PIPING AND DUCT CRITERIA

1. ALL DUCTWORK SHALL BE SIZED USING A STANDARD DUCTULATOR. THE FOLLOWING CRITERIA SHALL BE USED TO CALCULATE DUCT SIZES:
   a. SUPPLY DUCTS SHALL BE NO MORE THAN 0.10 IN. PER 100 FEET OF PRESSURE DROP.
   b. RETURN AND EXHAUST DUCTS SHALL BE NO MORE THAN 0.05 IN. PER 100 FEET OF PRESSURE DROP.
   c. VENTILATION DUCTS SHALL BE NO MORE THAN 0.075 IN. PER 100 FEET OF PRESSURE DROP.
2. CONDENSATE SHALL BE COLLECTED AND RUN WITH ADEQUATE PITCH TO THE CLOSEST SAFE-WASTE. PROVIDE CONDENSATE PUMPS IF PITCH CAN NOT BE ACHIEVED. CONDENSATE PIPING SHALL BE SIZED AS FOLLOWS:

CONDENSATE PIPE SIZING CHART

TONS	SIZE
0-20	3/4"
20-40	1"
40-90	1-1/4"
90-125	1-1/2"
125-250	2"

3. ALL CONDENSATE DRAINS SHALL BE INSTALLED PER MANUFACTURER'S RECOMMENDATIONS.

MECHANICAL DRAWING NOTES

GENERAL NOTES:

1. Contractor shall provide all labor, materials, tools, apparatus and equipment required to complete his work in accordance with the contract documents, codes, laws and ordinances, and accepted trade procedures.
2. The Contractor shall review all of the contract documents including those of the other trades in order to acquaint himself with the existing and related conditions that may, will or could affect his work. He shall be experienced, skilled and knowledgeable with this type of construction and shall be expert and proficient in the preparation of estimates and the comprehension, implementation and interpretation of contract documents such as those prepared for this project.
3. The Contractor shall visit the site before he submits his proposal. He shall examine all existing conditions which affect the work. Submission of the proposal shall be considered evidence that this requirement has been fulfilled. No extra payment will be allowed for additional work made necessary by the failure to visit the site.
4. The Contractor by his acceptance of the contract guarantees that all work installed shall be free from all defects in workmanship and materials and that all apparatus furnished by him shall develop the capacities and characteristics specified. He further guarantees that if, during a period of one (1) year from the date of the certificate of completion and acceptance of the work, any such defects in workmanship, material or performance appear, such defects shall be remedied by him without cost to the Owner. If the Contractor fails to remedy the defects as outlined within a reasonable length of time, to be specified in a notice from the Owner's authorized representative to the Contractor, the Owner will have such work done and he will charge the cost to the Contractor.
5. Mechanical equipment shall be installed in a neat and workmanlike manner in accordance with the latest and best practices of the trade. Only mechanics skilled in this type of work shall be employed and utilized by the Contractor for this division in the execution of this work.
6. The contract drawings are diagrammatic and indicate the general arrangement of systems. The Contractor shall provide all work required for a complete installation. The contract drawings are not to be scaled. The architectural contract drawings and details together with the other contract documents shall be examined for all dimensional information.
7. The Contractor shall follow the contract drawings in laying out his work, and he shall also check the contract drawings of the other trades to verify spaces in which his work shall be provided. Equipment locations shall be coordinated with the Architect and the G.C.
8. The Contractor shall, without additional costs to the Owner, make reasonable modifications in the layout of his work in order to prevent conflicts with the work of other trades or for the proper execution of his work.
9. The Contractor shall provide and maintain in good order a complete set of blueline prints of the contract drawings. As the work progresses, the actual location of all work shall be clearly recorded, including all changes to the contract and equipment size and type. These prints shall be available at the site for inspection at all times. At the conclusion of the work, the contractor shall, at his own expense, obtain a set of reproducibles of the original contract drawings and utilizing the symbols on the contract drawings, shall incorporate all "as-built" data in a clearly legible and reproducible manner. All schedules shall be corrected to indicate "as-built" conditions. All revisions shall be incorporated on these reproducibles including all sketches and written directives. All concealed equipment, mainfeeders, pull and junction boxes, etc. shall be dimensionally located from the building structure. As a condition for acceptance of the work, the "as-built" reproducibles and one (1) set of prints shall be signed, dated and delivered to the Engineer.
10. The Contractor shall supply all labor required to perform all work which may be claimed by trade organizations within his jurisdiction. All work shall be performed without any additional cost to the Owner irregardless of which section of the contract documents the work is described. The Contractor shall be responsible to verify with all local organizations the extent of any collective bargaining agreements and/or any jurisdictional decisions rendered regarding disputes between the respective trades and provide and install his work in accordance with the accepted trade practice in the area.
11. The entire installation shall conform with all pertinent codes and regulations of the local, municipal, county, state and federal authorities. The National Board of Fire Underwriters, the codes of the International Codes Council, the National Fire Protective Association and all other regulatory bodies having jurisdiction. All materials and equipment shall bear the stamps or seals of the NFPA, ASME, NEMA, IEEE, UL and other recognized industry regulatory groups.
12. The Contractor shall give all necessary notices, obtain all permits, pay all governmental taxes, fees and other costs in connection with his work. He shall file all necessary plans and prepare all other documents including additional detailed plans that are required for compliance with all applicable laws, ordinances, rules and regulations.
13. The Contractor shall be responsible for all working conditions and shall maintain a safe environment at the job site for all employees.
14. All work shall be installed in strict accordance with the equipment manufacturer's recommendations and requirements.
15. Openings around ductwork and piping passing through the construction shall be sealed with fire barrier caulking.
16. All systems are to be tested, adjusted and balanced to provide performance as indicated on the drawings. Test and adjust all safety controls.
17. Coordinate to assure that all work of all trades will be concealed within the wall and ceiling construction and without the need to reduce ceiling heights. Report exceptions to the Architect prior to construction and erection of the work.
18. All work shall be supported from the building structural system. Work shall not be supported from the ceiling suspension system, from plumbing work, sprinkler piping, electrical work, nor from other mechanical work.
19. The HVAC and Plumbing trades shall coordinate all work with the General Contractor prior to installation.
20. All work shall be located to avoid conflicts with other work and provide adequate clearances for architectural design, proper operation, adjustments, filter replacement, component service and provide a minimum 2" clearance between all piping, ductwork, conduit and other work.
21. The Contractor shall maintain as-built drawings and deliver them to the Owner upon completion of the project.
22. Provide supports, hangers, flexible pipe connections, vibration isolation, supplementary supports, controls and wiring, cleaning, painting, specialties and all other labor, materials, devices and services required for a complete, quality installation. Unless otherwise indicated, run all piping, ductwork and conduit as high as possible. Provide starters for all motor driven equipment.
23. The HVAC trades shall coordinate all electrical loads with the Electrical Contractor.

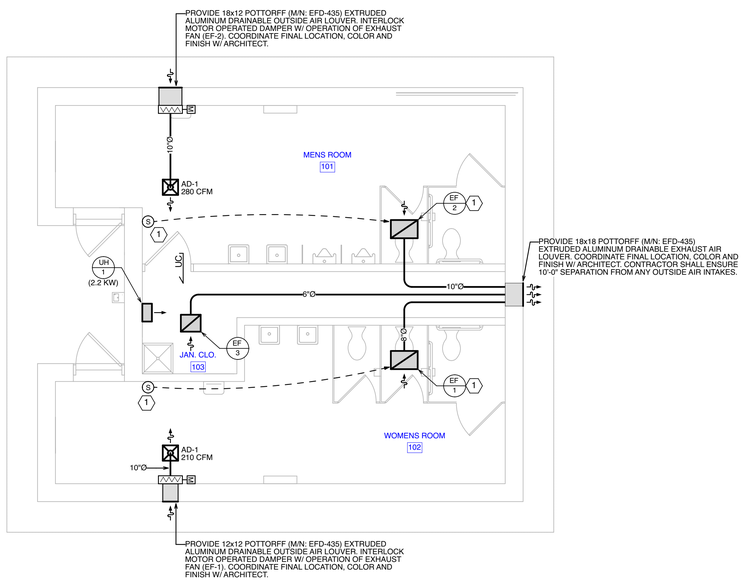
HVAC NOTES:

1. The Contractor shall coordinate with the General Contractor. Locate all required cutting and patching and the like required by the installation of the Mechanical work.
2. Provide all specialties, accessories, controls and the like to provide a complete, quiet, properly operating automatically controlled systems.
3. The HVAC trade shall provide all safety and operating controls, transformers, motor starters, devices and control wiring required for the systems to operate in a safe and satisfactory manner.
4. Do not operate the air conditioning systems during construction except for testing and provide new filters for all units and immediately prior to substantial completion.
5. Ductwork shall be constructed of galvanized sheet metal fabricated and erected in accordance with ASHRAE and SMACNA standards. Provide turning vanes in all elbows, manual volume dampers in all branches, air equalizers and similar devices as required to properly balance the systems and produce quiet, draftless operation. Ductwork sizes shown on the plans are sheet metal I.D. free area.
6. Ductwork shall be constructed to the sizes shown and made airtight during erection with caulked, taped or hardcast joints to restrict leakage to 5% or less of circulated air.
7. All ductwork shall be closely coordinated prior to fabrication. The Architectural contract drawings and details together with the other contract documents shall be examined for all dimensional information. Full sheet metal shop drawings drawings shall be developed with all spacial requirements worked out and shown on drawings. These drawing must show: locations of openings to be cut through the building's exterior, floors, etc. and any problems. These drawing shall be submitted for review by the Architect and Engineer prior to fabrication.
8. Provide UL labeled and inspected fire dampers for all ducts and openings passing through floors, fire rated walls and ceilings, where shown on the drawings and in locations required by codes.
9. Balance all air quantities to within 5% of the CFM shown on the drawings. Finally balance individual outlets to the occupants' satisfaction. Install all devices required for balancing in the system during construction. Provide balancing reports by a certified testing and balancing agency for review by the Engineer.
10. Provide written operating and maintenance instructions including all warranty certificates, in duplicate, to the Architect.
11. Contractor shall coordinate all diffuser, grille and register locations with architectural ceiling plans and lighting layouts.
12. All flexible ductwork shall conform with the UL rating under flexible air duct test UL-181.

MECHANICAL SYMBOLS, INDICATIONS & ABBREVIATIONS

EQUIPMENT DESIGNATION TAG	FLEXIBLE DUCTWORK
SUPPLY AIR DIFFUSER (CEILING)	DUCT W/ ACOUSTICAL LINING
SUPPLY AIR DIFFUSER (SIDEWALL)	RETURN/EXHAUST AIR DUCT UP
SUPPLY AIR DIFFUSER (LINEAR, CEILING)	RETURN/EXHAUST AIR DUCT DN
SUPPLY AIR DIFFUSER (LINEAR, WALL)	SUPPLY/MAKE-UP AIR DUCT UP
RETURN AIR DIFFUSER (CEILING)	SUPPLY/MAKE-UP AIR DUCT DN
EXHAUST AIR DIFFUSER (CEILING)	MOTORIZED DAMPER
RETURN/EXHAUST AIR DIFFUSER (SIDEWALL)	CONDENSATE DRAIN
BRANCH DAMPER	DIRECTION OF FLOW
VOLUME DAMPER	PIPE TURNING DOWN
2" DOOR UNDERCUT	PIPE TURNING UP
THERMOSTAT	CAPPED FLANGE
DUCT MOUNTED SMOKE DETECTOR	
DUCT SIZE TRANSITION	
EXHAUST FAN	

AD	AIR DEVICE
A.F.F.	ABOVE FINISHED FLOOR
CFM	CUBIC FEET OF AIR PER MINUTE
DN	DOWN
EA	EXHAUST AIR
EF	EXHAUST FAN
FFH	FAN FORCED HEATER
M.O.D.	MOTORIZED DAMPER
OA	OUTSIDE AIR
RA	RETURN AIR
RTU	ROOFTOP UNIT
SA	SUPPLY AIR
UC	UNDERCUT



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

RE-BID DATE: 12/12/22

No.	DATE	DESCRIPTION	REV'D BY
		REVISIONS	

APPROVAL:

PROJECT:
RESTROOM BUILDING
FOR
FASOLA PARK
12 SYCAMORE LN,
DERPTFORD TOWNSHIP, NJ 08096

Joseph F. McKernan Jr., Architects & Associates
100 Dobbs Lane Suite 204 Cherry Hill, New Jersey 08034

TITLE:
FIRST FLOOR MECHANICAL PLAN & MECHANICAL SCHEDULES & DETAILS

HOLSTEIN WHITE
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Feasterville, PA 19052
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SEAL:
SCOTT A. WHITE
NJ PE NO. 24GE04677900
NJ AUTH NO. 24GA28161700

DIMENSIONS MUST BE VERIFIED BY CONTRACTOR. NOTIFY THE ARCHITECT OF ANY DISCREPANCIES BEFORE PROCEEDING WITH CONSTRUCTION.
DO NOT SCALE DRAWING.

SCALE: AS NOTED
PROJ.NO.: 22-860
DATE: 09/23/2022
REV'D.: SW
DRAWN BY: RY
CHKD.BY: DB

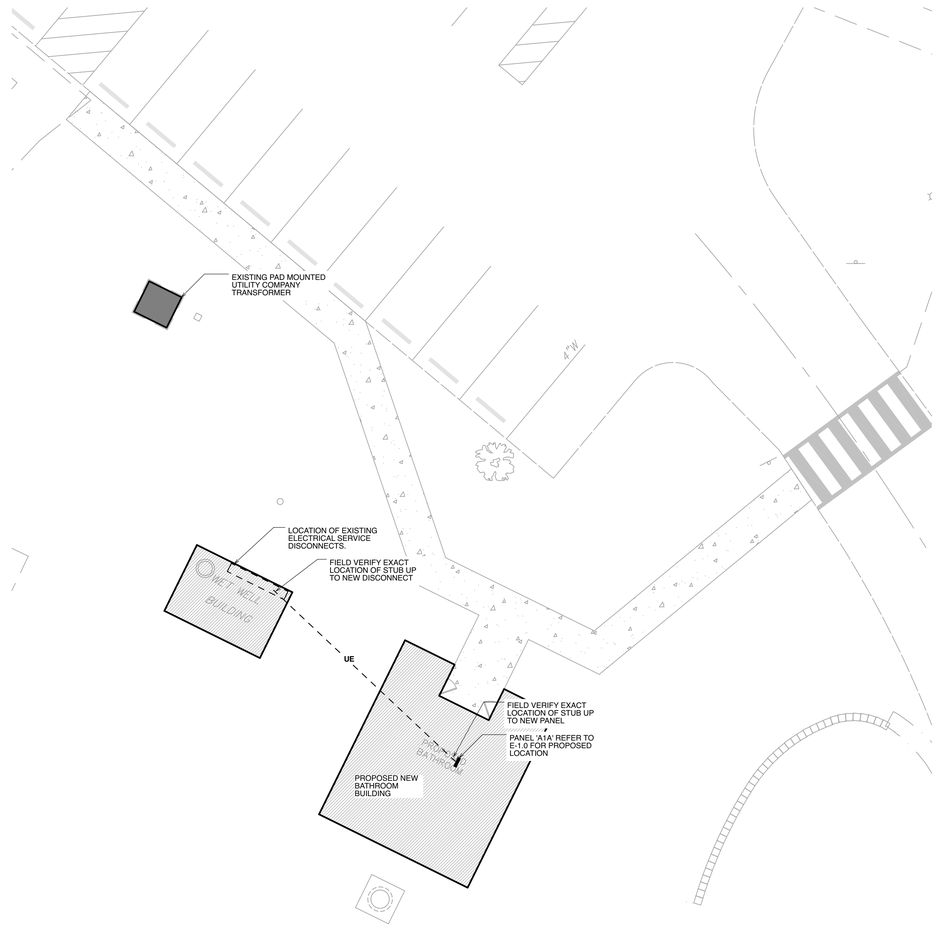
DRAWING NO:
M-1.0

CALL BEFORE YOU DIG !

NEW JERSEY STATUTE 2C:17-5 OF 1979 REQUIRES (3) WORKING DAYS NOTICE FOR CONSTRUCTION PHASE AND (5) WORKING DAYS IN DESIGN STAGE -- STOP CALL

Garden State Underground Utility Locator Service

(908) 232 - 1232

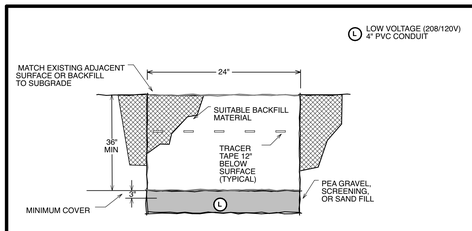


1 SITE ELECTRICAL PLAN

SCALE: 1" = 10' - 0"

SITE ELECTRICAL NOTES

1. PLAN IS DIAGRAMMATIC ONLY. VERIFY EXACT LOCATIONS OF ALL EQUIPMENT AND SITE WORK WITH OWNER, ARCHITECT, AND CIVIL ENGINEER PRIOR TO COMMENCING WORK.
2. CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATION OF UNDERGROUND SERVICES WITH OTHER CONTRACTORS AND UTILITY COMPANIES.
3. EXACT ROUTING AND TERMINATION POINTS OF UNDERGROUND SERVICES SHALL BE VERIFIED WITH THE UTILITY COMPANY AND OTHER CONTRACTORS.
4. IN ADDITION TO THE LENGTH SHOWN, THE CONTRACTOR SHALL PROVIDE A UNIT PRICE PER 25'-0" OF RUN FOR SECONDARY ELECTRIC SERVICE CONDUITS, RELATED TRENCHING, AND BACKFILL.
5. IN ADDITION TO THE LENGTH SHOWN, THE CONTRACTOR SHALL PROVIDE A UNIT PRICE PER 25'-0" OF RUN FOR TELEPHONE SERVICE CONDUITS, RELATED TRENCHING, AND BACKFILL.
6. COORDINATE FINAL INTERCONNECTIONS TO EACH UTILITY COMPANY. PROVIDE ALL MATERIALS AND LABOR REQUIRED FOR SERVICE CONNECTIONS IN ACCORDANCE WITH EACH UTILITY (POWER AND COMMUNICATIONS) COMPANY SERVICE STANDARDS.
7. UNLESS OTHERWISE NOTED, UNDERGROUND ELECTRICAL AND COMMUNICATIONS CONDUITS SHALL BE 24" MINIMUM BELOW GRADE. UNDERGROUND CONDUITS SHALL BE SCHEDULE 40 PVC.
8. PROVIDE, IN TRENCH CONTAINING ELECTRIC AND COMMUNICATION DUCT SYSTEMS, AN UNDERGROUND UTILITY MARKING TAPE. TAPE SHALL BE BURIED 1 FOOT BELOW GRADE AND RUN CONTINUOUS THE ENTIRE LENGTH OF DUCT TRENCH. TAPE SHALL BE BRIGHTLY COLORED RED POLYETHYLENE LONG LIFE TYPE WITH PRINTED WARNING TO READ "CAUTION, BURIED ELECTRIC LINE BELOW".
9. PROVIDE ALL REQUIRED EXCAVATION TRENCHING, BACKFILLING, COMPACTING IN ACCORD WITH THIS DIVISION.
10. PROVIDE APPROVED GROUNDING CONDUCTOR IN ALL CONDUIT.
11. PROVIDE PVC CONDUIT BURIED 30 INCHES MINIMUM BELOW FINISHED GRADE, OR AS OTHERWISE INDICATED, FOR SERVICES AND FEEDERS.
12. PROVIDE UNDERGROUND DUCTS IN A STRAIGHT LINE. POCKETS WHERE WATER CAN ACCUMULATE IN CONDUITS WILL NOT BE PERMITTED.
13. ALL UNDERGROUND CONDUITS SHALL BE WATERTIGHT. DOPE THREADS OF STEEL CONDUIT BEFORE JOINING. PVC CONDUITS SHALL BE CHEMICALLY BONDED AROUND ENTIRE CIRCUMFERENCE OF THE CONDUIT AT EACH JOINT. PROVIDE A MINIMUM OF 6 FEET OF RIGID STEEL CONDUIT WHEN ENTERING OR RUNNING UNDER MANHOLES, TRANSFORMER PADS, AT BUILDING WALLS OR FOUNDATIONS AND ON BOTH SIDES OF ROADS. CONDUITS UNDER ROADS SHALL BE STEEL.
14. PROVIDE ALL EXCAVATION, TRENCHING AND BACKFILLING INCLUDING SHORING, SHEETING, PUMPING, GRADING, BARRICADING AND OTHER RELATED WORK NECESSARY FOR INSTALLATION OF ELECTRICAL WORK.
15. EXCAVATION SHALL BE PERFORMED ON AN UNCLASSIFIED BASIS AND SHALL INCLUDE THE REMOVAL OF MATERIALS ENCOUNTERED.
16. TRENCHES SHALL BE OF SUFFICIENT DEPTH TO ALLOW ADEQUATE COVER OVER RACEWAYS. BOTTOMS OF TRENCHES SHALL BE INSTRUMENT GRADED IN DIRECTION OF FLOW. EARTH SHALL BE SCOOPED OUT SO RACEWAYS WILL HAVE SOLID BEARINGS ON UNDISTURBED EARTH. WHERE RACEWAYS ARE INSTALLED IN FILLED GROUND CONCRETE ENVELOPE ENCASEMENT SHALL SPAN FULL WIDTH OF TRENCH.
17. BACKFILL SHALL BE MADE WITH CLEAN EARTH FREE OF ROCKS, FROZEN EARTH, DEBRIS OR OTHER FOREIGN MATERIAL. DEPOSIT BACKFILL IN UNIFORM LAYERS NOT OVER 6" THICK. TAMP EACH LAYER BEFORE APPLYING NEXT LAYER. CINDERS IN BACKFILL ARE PROHIBITED.
18. EXCAVATED MATERIAL REMAINING AFTER THE BACKFILLING OPERATION SHALL BE REMOVED FROM THE SITE BY THE CONTRACTOR.
19. REPAIR STREETS, PAVEMENTS, LAWNS, CURBS AND OTHER FINISHED SURFACES DAMAGED BY EXCAVATION AND RESTORE SAME TO ORIGINAL CONDITION.
20. CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING AND AVOIDING EXISTING UNDERGROUND FACILITIES. HAND EXCAVATE AREAS OF CONFLICT WITH EXISTING UNDERGROUND PIPING AND OR CABLING. AREAS SHALL BE FIELD INSPECTED AND MARKED BY LICENSED AND INSURED LOCATING CONTRACTOR PRIOR TO COMMENCING WORK IN AREA.



2 ELECTRIC CONDUIT TRENCH DETAIL

NOT TO SCALE

RE-BID DATE: 12/12/22

No.	DATE	DESCRIPTION	REV'D BY:

REVISIONS

APPROVAL:

PROJECT:

RESTROOM BUILDING
FOR
FASOLA PARK

12 SYCAMORE LN,
DERPTFORD TOWNSHIIP, NJ 08096

Joseph F. McKernan Jr., Architects & Associates
100 Dobbs Lane Suite 204 Cherry Hill, New Jersey 08034

TITLE: SITE ELECTRICAL PLAN

HOLSTEIN WHITE Associates
210 E. Street Road, Suite D3
Feasterville, PA 19053
O: (215) 322-7715
F: (215) 322-7729
www.holsteinwhite.com

SEAL:
JEFFREY E. HOLSTEIN
NJ PE NO. 24GE05604300
NJ ATTR NO. 24GA28181700

DWOSIGNS MUST BE VERIFIED BY CONTRACTOR AND ARCHITECT OF ANY DISCREPANCIES BEFORE PROCEEDING WITH WORK OR FABRICATION. DO NOT SCALE DRAWING.

SCALE: AS NOTED
PROJ.NO.: 22-880
DATE: 09/23/2022
REV'D: JH
DRAWN BY: JC
CHK'D BY: PP

DRAWING NO:
E-0.0

ELECTRICAL SPECIFICATIONS

1. Contractor shall provide all labor, materials, tools, apparatus and equipment required to complete his work in accordance with the contract documents, codes, laws and ordinances, and accepted trade procedures.
2. The contractor by his acceptance of the contract guarantees that all work installed shall be free from all defects in workmanship and materials and that all apparatus furnished by him shall develop the capacities and characteristics specified. He further guarantees that if, during a period of one (1) year from the date of the certificate of completion and acceptance of the work, any such defects in workmanship, material or performance appear, such defects shall be remedied by him without cost to the owner. If the contractor fails to remedy the defects as outlined within a reasonable length of time, to be specified in a notice from the owner's authorized representative to the contractor, the owner will have such work done, and he will charge the cost to the contractor.
3. The contractor shall visit the site before he submits his proposal. He shall examine all existing conditions which affect the work. The submission of the proposal shall be considered evidence that this requirement has been fulfilled. No extra payment will be allowed for additional work made necessary by the failure to visit the site.
4. Electrical equipment shall be installed in a neat and workmanlike manner in accordance with latest and best practices of the trade. Only mechanics skilled in this type of Work shall be employed and utilized by Contractor for this Division in the execution of this Work.
5. The contract drawings are diagrammatic and indicate the general arrangement of all systems and work included in the contract. The contract drawings are not to be scaled. The architectural contract drawings and details together with the other contract documents shall be examined for all dimensional information.
6. The contractor shall, without additional costs to the owner, make reasonable modifications in the layout of his work in order to prevent conflicts with the work of other trades or for the proper execution of his work.
7. The contractor shall provide and maintain in good order a complete set of blueline prints of the contract drawings. As the work progresses, the actual location of all work shall be clearly recorded, including all changes to the contract and equipment size and type. These prints shall be available at the site for inspection at all times. At the conclusion of the work, the contractor shall, at his own expense, obtain a set of reproducibles of the original contract drawings, and utilizing the symbols on the contract drawings, shall incorporate all "as built" data in a clearly legible and reproducible manner. All schedules shall be corrected to indicate "as built" conditions. All revisions shall be incorporated on these reproducibles including all sketches and written directives. All concealed equipment, mainfeeders, pull and junction boxes, etc. shall be dimensionally located from the building structure. As a condition for acceptance of the work, the "as built" reproducibles and one (1) set of prints shall be signed, dated and delivered to the engineer.
8. The contractor shall supply all labor required to perform all work which may be claimed by trade organizations within his jurisdiction. All work shall be performed without any additional cost to the owner irregardless of which section of the contract documents the work is described. The contractor shall be responsible to verify with all local organizations the extent of any collective bargaining agreements and/or any jurisdictional decisions rendered regarding disputes between the respective trades, and provide and install his work in accordance with the accepted trade practice in the area.
9. The entire installation shall conform with all pertinent codes and regulations of the local, municipal, county, state, and federal authorities, The National Board of Fire Underwriters, the codes of the International Codes Council, the codes of the National Fire Protective Association, the New Jersey Uniform Construction Codes, and all other regulatory bodies having jurisdiction. All materials and equipment shall bear the stamps or seals of the NFPA, ASME, NEMA, IEEE, UL and other recognized industry regulatory groups.
10. The contractor shall give all necessary notices, obtain all permits, pay all governmental taxes, fees and other costs in connection with his work. He shall file all necessary plans, and prepare all other documents including additional detailed plans that are required for compliance with all applicable laws, ordinances, rules and regulations.
11. Before starting any work under this Contract, file for inspection with the Middle Department Inspection Agency or other certified Agency. Upon completion of the work, furnish Electrical Certificates from said Agency for all Electrical equipment and systems installed or furnished and installed as part of the work.
12. The contractor shall at all times keep the premises free from the accumulation of waste materials or rubbish caused by his employees or work. At the completion of the work, he shall remove all superfluous materials, equipment and debris resulting from the work.
13. All feeder wiring shall be soft drawn copper of 98% conductivity, installed in code conforming metallic raceways or cable assemblies. All wiring shall be copper, thermoplastic covered insulated Type 75° C. THW or 90° C. Type THHN, 600-volt rating. Wire No. 8 AWG and smaller shall be solid. Wire larger than No. 8 shall be stranded.
14. All wiring shall be insulated copper conductors installed in code conforming raceways or cable assemblies.
15. All wiring shall be run concealed wherever possible. All exposed conduit shall be EMT or rigid steel as required. Flexible conduit shall be smooth liquidtight with appropriate fittings. Conduit drops from above ceiling shall be structurally secured and supported. Cable assemblies used for branch circuits shall not be run exposed. Cable assemblies shall be permitted exposed for final connections to Mechanical and Plumbing equipment and shall be limited to 6 feet total length, routing shall not interfere with equipment workspace.
16. Where conductors connect directly to equipment, the insulation temperature rating of the conductor shall meet or exceed the equipment temperature rating.
17. Color code conductors to designate neutral conductor and phases. Color coding shall conform with existing building standard.
18. Exercise great care in maintaining a uniform and consistent arrangement of phase conductors on all systems. Throughout the entire wiring systems, each phase conductor must always be in the same physical position with respect to the other phase wires at equipment terminals.
19. Grounding shall comply with Article 250 of NEC and to approval of local Underwriters inspection authorities.
20. Panelboards shall be dead front type with plated aluminum bus, bolt-on breakers, fully rated neutral bus and grounding bus block. Cabinet shall be code gauge galvanized steel, NEMA 1, minimum 20" wide, 5-3/4" deep. Cover shall have door and trim and adjustable clamps, gray baked finish, and tumbler type key lock. "Spaces" shall be fully bussed and drilled, ready for breaker installation.
21. Contractor shall provide typed updated panel schedules at completion of project for all panels effected by scope of work.
22. Circuit Breakers shall be molded case, bolted, thermal magnetic trip in each pole, enclosure-compensated to carry full rated load at 40°C., trip-free handles shall clearly indicate trip, on and off condition, quick-make and quick-break action. Lugs approved for copper and aluminum conductors and compression type. Ground Fault type breakers shall be provided with thermal and magnetic protection, UL Class A, 5 milliamperes ground fault sensitivity, where required. Circuit breakers used as switches in 120 volt circuits feeding incandescent, fluorescent, and/or HID fixtures shall be approved for such use and marked "SWD", per NEC. Circuit breakers serving Heating and Air Conditioning equipment shall be HACR rated.
23. Provide all labor, materials and equipment required to provide electric power to meet the requirements for heating, ventilating, air-conditioning and plumbing systems. Fully coordinate installation of electrical wiring and equipment with installation of electrically operated mechanical equipment provided by the Mechanical and Plumbing Contractors. Install disconnect switches, motor starters, and control transformers furnished by Mechanical and Plumbing Contractors. Provide final equipment electrical terminations. All internal equipment wiring shall be by manufacturer.
24. Test equipment, including panelboards and all other equipment and wiring for unintended grounds, short circuits, open circuits, continuity, current leakage, and that equipment will operate as specified. Test feeders for insulation resistance; for load balance of the final installation, and for overall operation of systems. Furnish labor and material required for making such tests and make corrections necessary to balance the load and to obtain proper operation.
25. Where existing facilities are being altered, disconnect and remove or relocate all existing electrical work that interferes with or is necessary because of new construction as specified, shown or required.
26. Perform alterations and additions to present electrical systems with a minimum interruption in the operation of these systems. Obtain written clearance from Owner for such interruptions and schedule same at whatever time specified in writing by Owner.
27. Perform alteration of utilities and services in accordance with the rules, regulations and requirements of the involved utility companies and regulatory agencies having jurisdiction.
28. Arrange and pay for the relocation, disconnection or removal of existing utilities and services where shown and where such utilities or services interfere with new construction, whether shown or not. Provide all excavation, backfilling and paving, manholes, and cables required by such work.
29. Coordinate with Power Company; inform them of the proposed work; obtain their approval before beginning work; comply with their requirements for details of installation and materials used.
30. Verify locations of existing underground services in the area of construction. Verify existing locations of underground electrical services, natural gas piping, water services and sanitary piping, which may affect work.
31. Lay out all work from approved building and property lines and benchmarks. Verify and be responsible for the correctness of all measurements in connection with work. Any change made in major overall dimensions as shown which affect the physical size, shape, or location of any part of the Work, whether due to field check or changes due to the use of equipment of a manufacturer other than that used as the basis of design shall not cause any interference with other work.
32. Electrical equipment shall not interfere in any way with other material or equipment and shall provide adequate working space; see Requirements for Electrical Installations, Article 110 and other related articles of the National Electrical Code.
33. Provide materials, equipment, supplies and labor necessary as required to adequately support, brace and strengthen all equipment and materials furnished as part of this work.
34. Locations are subject to changes that may be necessary to avoid obstacles in building construction. Verify all dimensions and conditions at site. Check layout for sizes and clearances, and provide so that the apparatus and material may be installed and operated satisfactorily in space provided. Install equipment and raceways to preserve headroom and to keep openings and passageways clear.
35. Protect all conduit, fittings, panelboards, switchgear, transformers and other equipment before and during installation and keep clean.
36. Identify each switchboard, panel, panelboard, and other electrical equipment as to nature, service and purpose, by means of permanently attached, approved size, laminated phenolic nameplates.
37. Where sleeves containing a single conduit penetrate FIRE RATED walls, floors, partitions or slabs, fill and seal conduit to the sleeve with a 1-part intumescent caulk/putty sealant creating a fire stop equal to or exceeding fire rating of construction material being penetrated. Fire sealant shall prevent spread of flame, smoke, air and water through the sleeve and shall pass 3-hour test per ASTM E814 and UL 1479. Fire sealant shall be installed in accordance with manufacturer's written instructions. Where sleeves containing multiple conduits or multiple cables penetrate FIRE RATED walls, floors, partitions, or slabs, fill and seal spaces between the conduits or cables and the sleeve with 2-part intumescent foam sealant creating a fire stop equal to or exceeding fire rating of construction material being penetrated. Fire sealant shall prevent spread of flame, smoke, air and water through the sleeve and shall pass 3-hour test per ASTM E814 and UL 1479. Fire sealant shall be installed in accordance with manufacturer's written instructions. Where sleeves penetrate exterior walls, fill and seal ends around conduits and/or cables with duct sealant compound equal to Solorite KN--1146, or Link Seal. Install seals in accordance with the manufacturer's recommendations to provide air tightness above ground and hydrostatic sealing below grade. Caulking or other type mastic is not acceptable. Where wiring devices are placed in fire rated construction, fire rating of installed assembly shall meet or exceed the rating of the construction.
38. Provide for each voice and data outlet a 4x4 outlet box with pullstring to accessible ceiling space. In non-finishable construction, provide 3/4" conduit with pullstring between outlet box and accessible ceiling space.
39. Coordinate all lighting fixture locations and quantities with Architectural plans, and provide all fixtures indicated.
40. 120 Volt Switches shall be quiet toggle type with totally enclosed case, rated 20 ampere, specification grade, color as selected by Architect.
41. Provide occupancy sensors where indicated on plan. Occupancy sensors shall be as manufactured by Watt Stopper. Wall type shall be dual technology, combination passive infrared and ultrasonic with toggle switch. Refer to detail for exact model number. Provide as built list of settings to owner in operations manuals.
42. Furnish and install all lighting fixtures as specified OR by other consultants. Provide all interior and exterior lighting fixtures complete with sockets, reflectors, diffusers, shades, holders, lamps, ballasts, protective devices and all other required appurtenances. Prior to ordering lighting fixtures, verify exact type of ceiling to be used for each space. Coordinate with Division 15 to avoid conflicts between lighting fixtures and Mechanical and Plumbing piping, ductwork, supports, fittings and equipment. Furnish to other trades, plaster frames, trim rings, etc., where required.
43. Receptacles shall be permanently labeled to identify panelboard and circuit number from which served. Use hot, stamped or engraved machine printing with black-filled lettering on face of plate, and durable wire markers or tags inside outlet boxes.
44. Standard duplex receptacles shall be polarized, duplex, parallel blade, U-grounding slot, specification grade, rated 20 amperes, 125 volts, style and color as selected by Architect.
45. GFI receptacles shall be 125V, 20 amp rated, as manufactured by Leviton or equal, style and color as selected by Architect. Trip threshold and time shall be as required for the application in accordance with the NEC.
46. Plates for Flush Devices shall be type and color as selected by Architect.
47. Contactors shall be permanent magnetic latched, electrically operated, mechanically-held type with number of poles and current rating as shown. Operating coils shall be 120 volts as required. Contactors shall be housed in NEMA Type 1 enclosures with knockouts and provisions for padlocking or incorporated in branch circuit or distribution panelboards as indicated. Provide hand-off-automatic switch in cover to facilitate safe maintenance. Contactors shall be UL listed for switching 208-volt ballast inductive loads. Install, completely wire and connect all systems in accordance with details on Drawings and manufacturer's instructions.
48. Motor and circuit disconnect means shall be a horsepower rated safety switch or a circuit breaker, each sized for the applied load and system voltage having an interrupting capacity not less than maximum available short-circuit current of circuit on which applied. Disconnects shall be sized in accordance with NEC and NEMA requirements. Safety switches shall be cartridge fuse type or unfused, as required. Manual toggle type motor switches with overload protection may be used as motor disconnects for fractional horsepower motors provided they meet NEC requirements including padlock provision. Safety switches shall be quick-make, quick-break and NEMA Heavy Duty, Type HD. Disconnect enclosures: NEMA 1, NEMA 3R, NEMA 4 to suit application.
49. Contractor shall include in bid Unit Prices for each of the following:
    A. Each type of receptacle, including coverplate connected to area circuit.
    B. Voice outlet box with conduit and pullstring.
    C. Each type of switch, including coverplate connected to area circuit.
    D. 20/1 Homerun to Local Branch Circuit Panel.
50. Unless otherwise noted all electrical equipment is a basis of design of Square D. Equipment shall be as manufactured by Square D or approved equal.
51. All electrical equipment shall be labeled to warn qualified persons of potential Arc Flash hazards in accordance with NEC Article 110.16 and all local codes. Electrical contractor shall provide all required labels.
52. All electrical equipment and HVAC equipment shall be rated in excess of the available fault current, and shall be permanently labeled in accordance with NEC Articles 110.24, 430.98, 430.99, 440.10, 700.5, and all local codes. The electrical contractor shall coordinate with the utility company to verify actual available fault current. Max values shown on the single line diagram are based on worst case conditions, actual conditions may vary.
53. No product shall be installed without prior approval from Owner.
54. Power System Study: The following shall be provided with the gear submittal and be performed by a licensed professional engineer authorized to work in the State of New Jersey. The electrical submittals will not be received until a complete Study including all of the following is received. Provide a Short-Circuit, and Arc Flash Protection Studies. The Studies shall be performed using SKM Power Tools or equal approved by Holstein White. All calculations shall be based on the exact equipment proposed in the gear submittal. All wire types, sizes, and lengths, shall be confirmed by the contractor and accurately reflected in the calculations. The calculations shall start at the utility company termination to the owner's new equipment and shall be based on the available fault current and X/R values furnished by the Utility Company. Contractor shall request the information from the Utility Company and include a copy in the Study Appendix. The short circuit study shall be performed in conformance with IEEE 141 and all submitted equipment shall have an AIC rating equal to or exceeding the calculated values. The arc flash protection study shall be performed in accordance with the requirements of IEEE 1584 and NFPA 70E. The report shall make recommendations for the reduction of any Dangerous conditions. Upon approval of the study, the contractor shall print and apply arc-flash warning labels to the new equipment. The labels shall be compliant with the latest applicable codes, and shall at a minimum contain the following information: Equipment Name, Upstream Protective Device, Flash Hazard Boundary, Flash Hazard at 18 inches, Shock Hazard (Voltage) with covers removed, Glove Class, Limited Approach Boundary, Restricted Approach Boundary, and Prohibited Approach Boundary.

DRAWING NOTES

1. FIELD VERIFY LOCATION OF ALL WIRING DEVICES WITH ARCHITECT PRIOR TO ROUGH-IN.
2. COORDINATE INSTALLATION OF HVAC EQUIPMENT WITH MECHANICAL CONTRACTOR. INSTALL AND WIRE DISCONNECT SWITCHES FURNISHED BY MECHANICAL CONTRACTOR.
3. MOTORIZED DAMPERS REFER TO MECHANICAL PLAN FOR EXACT LOCATION. INTERCONNECT TO LOCAL AHU AS DIRECTED BY M.C.
4. FIELD VERIFY EXACT LOCATIONS OF ALL LIGHTING FIXTURES WITH ARCHITECT PRIOR TO ROUGH-IN.
5. UNLESS OTHERWISE NOTED, ALL POWER SHALL BE CIRCUITED TO PANEL 'A1A'.
6. UNLESS OTHERWISE NOTED ALL LIGHTING SHALL BE CIRCUITED TO PANEL 'A1A'.
7. EMERGENCY LIGHTING AND EXIT SIGNS SHALL BE CONNECTED TO LINE SIDE OF LOCAL LIGHTING CONTROL.
8. COORDINATE ALL LOW VOLTAGE WORK WITH OWNER AND OWNERS LOW VOLTAGE VENDOR. ELECTRICAL CONTRACTORS SHALL FURNISH AND INSTALL ALL BACKBOARDS WITH CONDUIT AND PULL STRING TO ACCESSIBLE CEILING SPACE.

LIGHTING FIXTURE SCHEDULE

Type	Manufacturer	Catalog No.	Lamps No.	Lamps Watts	Lamps Type	Volts	Mounting	Remarks
A1	CertoLux	VRSE-3556 48LED 8 35 048L UNV		53	LED	120V	Surface	Surface mounted vandel resistant fixture.
N1	Performance IN Lighting	SH113.5-X-35K-120V-NA		13.5	LED	120V	Surface	Surface mounted wall pack. Color selected by Architect.
E1	Evenlite	TEBL3W	2	3	LED	120/9.6VD	Surface	Indoor battery pack w/ dual 9.6V/3W LED lighting heads, nickel-cadmium battery, white housing.
E2	Evenlite	PRWLED2-MV	2	1	LED	9.6VDC	Surface	Indoor battery pack w/ dual 9.6V/3W LED lighting heads, nickel-cadmium battery, white housing.
E3	Evenlite	PRWLED2-MV	2	1	LED	9.6VDC	Surface	Outdoor dual remote heads 9.6V/2W LED lighting heads.
X1	Evenlite	TLX-EM-RU-W		1	LED	120VAC / 3.6VDC	As Indicated	LED exit sign, red letters, number of faces and directional arrows as indicated on plan or required by installed location, intergral battery to provide 90 mintues of illumination.

Notes:
1. In addition to those indicated above, refer to Architectural drawings and provide all fixtures specified.
2. All fixtures shall be provided with lamping.
3. Confirm final fixture options and color selection with Architect prior to purchase.
4. Refer to specifications for detailed requirements for construction, handling, ballasts, lamps, etc.
5. Coordinate fixture location and mounting requirements with Architectural drawings and details.
6. Refer to Architectural reflected ceiling plans for ceiling types and conditions affecting mounting and installation of lighting fixtures.
7. Coordinate exact fixture color temperature with owner and architect prior to purchase.

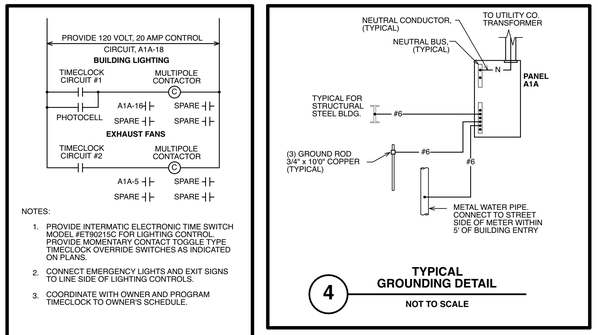
PANEL A1A

60 A MCB
10 KAIC
24 POLE
208/120V - 3Ø - 4W

Cir. No.	Cir. Bkr.	Wire Size	Description	Load - KVA A	B	C	Load - KVA A	B	C	Description	Wire Size	Cir. Bkr.	Cir. No.
1	20/2	#12	UH-1	1.5			2.8			DWH-1	#12	30/2	2
3			-		1.5			2.8		-	-	-	4
5	20/1	#12	EF-1,2,3			0.3			0.7	Mens Hand Dryer	#12	20/2	6
7	20/1	#12	Water Cooler	0.5			0.7			-	-	-	8
9	20/1	#12	Mens Receptacle		0.2			0.7		Womens Hand Dryer	#12	20/2	10
11	20/1	#12	Womens Receptacle			0.2			0.7	-	-	-	12
13	20/1		Space				0.4			Interior Lighting	#12	20/1	14
15	15/3	#12	Grinder Pump	0.9				0.1		Exterior Lighting	#12	20/1	16
17	-	-	-			0.9			0.2	Time Clock Control Panel	#12	20/1	18
19	-	-	-	0.9						Space			20
21	20/1		Spare							Space			22
23	20/1		Spare							Space			24
Total				2.9	2.6	1.4	3.9	3.6	1.6				Total

Phase (KVA)		Load Summary by Type		
A	6.8	Connected Receptacles		KVA
B	6.2	Connected Lighting		KVA
C	3.0	Connected Motor		KVA
Total	15.9	Connected Heating		KVA
		Connected Air Conditioning		KVA
		Connected Kitchen		KVA
		Connected Miscellaneous		KVA
		Total	15.9	KVA

Options and Accessories - (X) Indicates Selection
- [X] Feed Through Lugs
- [ ] Subfeed Main Lugs
- [ ] Split Bus
- [X] Contactor Controlled
- [ ] Top
- [ ] Bottom
- [ ] Recessed
- [X] Surface
- [ ] Double Panel
- [X] Ground Bus
- [ ] Insulated Ground Bus



4 TYPICAL GROUNDING DETAIL
NOT TO SCALE

NOTES:
1. PROVIDE INTERMATIC ELECTRONIC TIME SWITCH MODEL #ETM9215C FOR LIGHTING CONTROL. PROVIDE MOMENTARY CONTACT TOGGLE TYPE TIMECLOCK OVERRIDE SWITCHES AS INDICATED ON PLANS.
2. CONNECT EMERGENCY LIGHTS AND EXIT SIGNS TO LINE SIDE OF LIGHTING CONTROLS.
3. COORDINATE WITH OWNER AND PROGRAM TIMECLOCK TO OWNER'S SCHEDULE.

3 TIMECLOCK CONTROL DETAIL
NOT TO SCALE

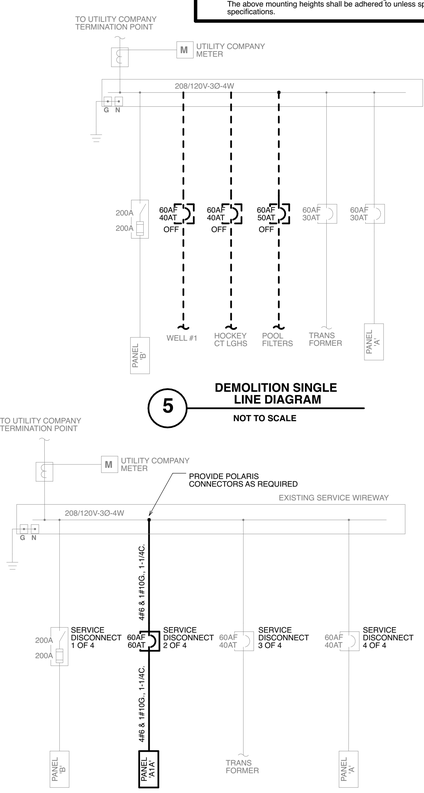
ELECTRICAL STANDARD MOUNTING HEIGHTS

9" Below Finished Ceiling	Wall-Mounted Clocks, Program Bells, Fire Alarm Gongs and Horns
10'-0"	Battery Lighting Units and Remote Wall Mounted Lighting Heads (Or 1'-0" Below Finised Ceiling)
8'-6"	Pendant Hung Industrial and Strip Lighting Fixtures
Center Above Door or Window Opening	Warning and Signaling Fixtures/Signs
6'-8" or 6" Below Finished Ceiling	Fire Alarm Illuminated Flashing Lights (Lowest of the two Heights). **Mounting Height to the Bottom of Device.**
6'-8"	Top of Back-Mounted Wall Exit Signs (Not Mounted Above Doors)
6'-6"	Top of Flush and Surface Mounted Electrical Panelboards and Communication System Cabinets
6'-0"	Top of Highest Electrical Safety Disconnect Switches, Magnetic Motor Starters and Contactors
4'-6"	Wall Mounted Telephones and Pay Stations (3'-6" at Handicap Locations)
4'-0"	Top of Highest Circuit Breaker in Accessible Load Centers
3'-6"	Fire Alarm Pull Stations
3'-4"	Wall Mounted Electrical Device Lighting Switches
2'-0"	Electrical Receptacles in Mechanical Spaces, Electrical and Elevator Rooms
1'-6"	Electrical Receptacles, Television Outlets, Telephone Outlets, and Computer Outlets
0'-0"	Finished Floor

Mounting Heights to center of outlets unless otherwise noted. In masonry construction the mounting heights shall be used for reference to the nearest block or brick course.
The above mounting heights shall be adhered to unless specifically noted or detailed on the Architectural drawings or specifications.

ELECTRICAL SYMBOLS

	GFI Duplex Receptacle - 125V, 2P, 3W
+	Device Mounted Above Counter Top
	Solid Connection to Equipment
	Motor
	Unfused Disconnect Switch
	Electrical Panel
	Occupancy Sensor
CLG	Ceiling Mounted
EM	Emergency Battery Pack
	Dual Remote Lighting Heads
	Incandescent, Fluorescent or High Intensity Discharge Lighting Fixture
S	Single Pole Switch
WP	Weatherproof
PC	Photocell Control Switch

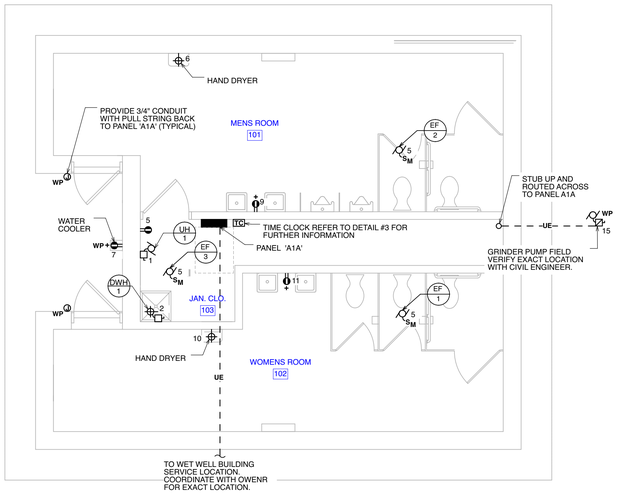


5 DEMOLITION SINGLE LINE DIAGRAM
NOT TO SCALE

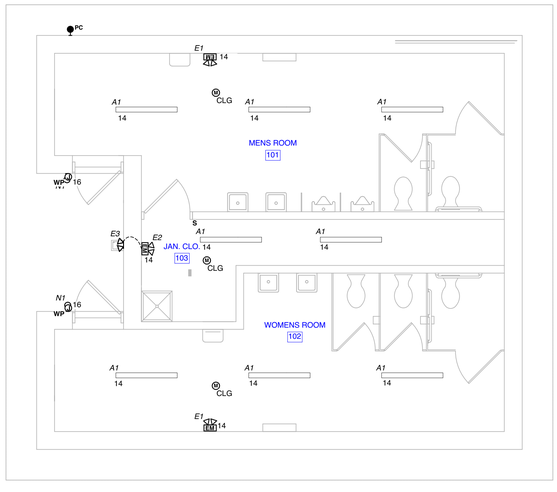
6 NEW SINGLE LINE DIAGRAM
NOT TO SCALE

SINGLE LINE DIAGRAM NOTES

1. UNLESS OTHERWISE NOTED, ALL DEVICES AND SPACES ARE 3 POLE.
2. UNLESS OTHERWISE NOTED, ALL ABOVE GRADE CONDUCTORS SHALL BE COPPER, TYPE THW, RATED 75°C.
3. UNLESS OTHERWISE NOTED ALL BELOW GRADE CONDUCTORS SHALL BE COPPER, TYPE XHHW-2, RATED 75°C.
4. UNLESS OTHERWISE NOTED, ALL INTERIOR CONDUITS SHALL BE EMT.
5. UNLESS OTHERWISE NOTED ALL UNDERGROUND AND EXTERIOR CONDUITS SHALL BE SCHEDULE 40 PVC.
6. LIGHT LINEWEIGHT INDICATES EXISTING EQUIPMENT.
7. HEAVY LINEWEIGHT INDICATES NEW EQUIPMENT.
8. HEAVY DASHED LINEWEIGHT INDICATED EXISTING EQUIPMENT TO BE DEMOLISHED AND REMOVED.
9. ALL EQUIPMENT SHALL BE SERIES RATED TO WITHSTAND THE AVAILABLE SHORT CIRCUIT CURRENT.
10. CONTRACTOR SHALL PROVIDE PERMANENT LABELS ON ALL ELECTRICAL AND HVAC EQUIPMENT INDICATING THE MAXIMUM AVAILABLE FAULT CURRENT.
11. CONTRACTOR SHALL PROVIDE NEW LABELING FOR ALL EXISTING AND NEW SERVICES DISCONNECTS. DISCONNECTS SHALL BE LABELED AS FOLLOWS " SERVICES DISCONNECT X OF X".



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



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

RE-BID DATE: 12/12/22

No.	DATE	DESCRIPTION	REV'D BY

REVISIONS

APPROVAL:

PROJECT: RESTROOM BUILDING FOR FASOLA PARK
12 SYCAMORE LN, DERPTFORD TOWNSHIP, NJ 08096

Joseph F. McKernon Jr., Architects & Associates
100 Dobbs Lane Suite 204 Cherry Hill, New Jersey 08034

TITLE: FIRST FLOOR POWER AND LIGHTING PLAN

HOLSTEIN WHITE
210 E. Street Road, Suite 20
Feasterville, PA 19053
O: (215) 322-7710
F: (215) 322-7160
www.holsteinwhite.com

SEAL:
JEFFREY E. HOLSTEIN
NJ PE NO: 24GE04041300
NJ ALTH NO: 24GA28143500

DIMENSIONS MUST BE VERIFIED BY CONTRACTOR. NOTIFY THE ARCHITECT OF ANY DISCREPANCIES BEFORE PROCEEDING WITH CONSTRUCTION. DO NOT SCALE DRAWING.

SCALE: AS NOTED
PROJ.NO.: 22-860
DATE: 09/23/2022
REV'D.: JH
DRAWN BY: JC
CHKD.BY: FP

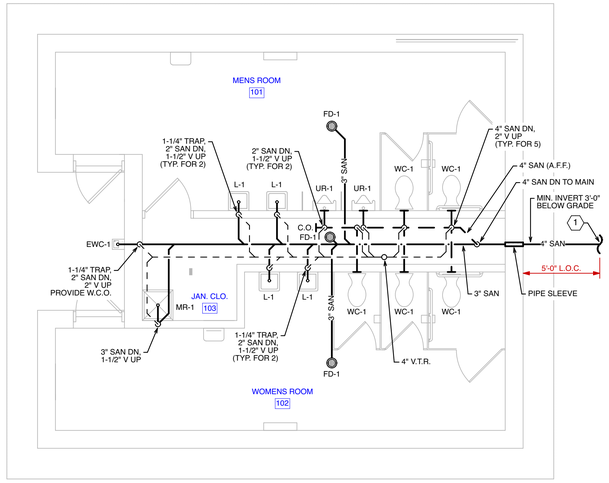
DRAWING NO: E-1.0

SHEET NOTES

1. 4"Ø SANITARY SEWER. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL TRENCH PREPARATION, TRENCHING, EXCAVATION, AND BACKFILL. COORDINATE THE INSTALLATION AND LOCATION OF THE SERVICE WITH THE CIVIL ENGINEER'S PLANS & THE LOCAL WATER DEPARTMENT.
2. 2"Ø DOMESTIC WATER SERVICE. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL TRENCH PREPARATION, TRENCHING, EXCAVATION AND BACKFILL (INV. MIN. 48" B.F.F.). COORDINATE THE INSTALLATION AND LOCATION OF THE SERVICE WITH THE CIVIL ENGINEER'S PLANS & THE LOCAL WATER DEPARTMENT.
3. ALL DOMESTIC WATER PIPING SHALL BE PITCHED BACK TO METER LOCATION FOR WINTER DRAIN DOWN PURPOSES. PROVIDE DRAIN DOWN FAUCET NEAR METER TO ALLOW DRAIN DOWN TO NEARBY MOP RECEPTOR (MR-1).
4. DOMESTIC WATER HEATER (DWH-1) SHALL BE MOUNTED ABOVE MOP RECEPTOR (MR-1) ON STRUCTURAL STAND. PLATFORM SHALL BE SUSPENDED FROM STRUCTURE ABOVE. PROVIDE EMERGENCY DRAIN PAN BELOW UNIT AND PIPE DISCHARGE TO MOP RECEPTOR BELOW. PROVIDE FLOODMASTER HOT WATER HEATER FEED WATER ALARM/SHUT-OFF FOR LEAK DETECTION.

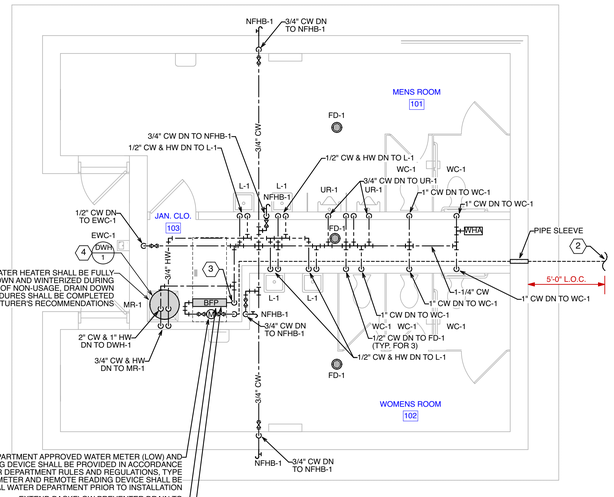
GENERAL NOTES

1. REFER TO ARCHITECTURAL DRAWINGS FOR THE EXACT LOCATIONS OF ALL THE FURNITURE, PLUMBING FIXTURES, AND EQUIPMENT.
2. CONTRACTOR SHALL COORDINATE THE INSTALLATION OF ALL PIPING WITH THE LOCATION OF ALL FOOTERS AND UTILITY PIPING.
3. ALL SANITARY PIPING 4"Ø AND LARGER SHALL BE SLOPED AT A MINIMUM OF 1/8" PER FOOT. ALL SANITARY PIPING 3"Ø AND SMALLER SHALL BE SLOPED AT A MINIMUM OF 1/4" PER FOOT. CONTRACTOR SHALL VERIFY THE EXACT INVERTS IN THE FIELD.
4. CONTRACTOR SHALL COORDINATE THE INSTALLATION OF THE NEW PIPING WITH ALL OTHER TRADES TO AVOID CONFLICTS.
5. ALL FLOOR DRAINS SHALL HAVE A TRAP PRIMER CONNECTION. REFER TO SANITARY FLOOR PLANS FOR LOCATIONS OF ALL FLOOR DRAINS. PROVIDE TRAP PRIMER AND 1/2" CW PIPE FROM TRAP PRIMER TO FLOOR DRAIN CONNECTION. WRAP ALL CW PIPE WITH 1/2" ARMAFLEX.
6. REFER TO PLUMBING FIXTURE SCHEDULE AND RISER DIAGRAMS FOR MORE INFORMATION REGARDING SANITARY, VENT, COLD WATER AND HOT WATER PIPING SIZES.



1 FIRST FLOOR SANITARY PLAN

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



2 FIRST FLOOR DOMESTIC WATER PLAN

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

RE-BID DATE: 12/12/22

No.	DATE	DESCRIPTION	REV'D BY

REVISIONS

APPROVAL:

PROJECT:
RESTROOM BUILDING
FOR
FASOLA PARK
12 SYCAMORE LN,
DERPTFORD TOWNSHIP, NJ 08096

Joseph F. McKernan Jr., Architects & Associates
100 Dobbs Lane Suite 204 Cherry Hill, New Jersey 08034

TITLE
FIRST FLOOR PLUMBING PLAN

HOLSTEIN WHITE ENGINEERING
210 E. Street Road, Suite 201
Feasterville, PA 19052
O: (215) 322-7100
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www.holsteinwhite.com

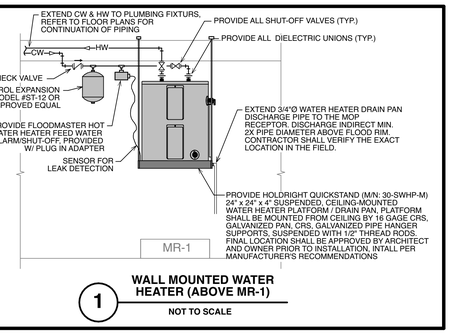
SEAL:
SCOTT A. WHITE
NJ PE NO. 24GE04637900
NJ AUTH NO. 24GA28161700

DIMENSIONS MUST BE VERIFIED BY CONTRACTOR. NOTIFY THE ARCHITECT OF ANY DISCREPANCIES BEFORE PROCEEDING WITH CONSTRUCTION.
DO NOT SCALE DRAWING

NOT FOR CONSTRUCTION UNLESS SEALED AND SIGNED BY ARCHITECT & ENGINEER

SCALE: AS NOTED
PROJ.NO.: 22-860
DATE: 09/23/2022
REV'D: BW
DRAWN BY: RY
CHKD.BY: DB

DRAWING NO:
P-1.0



1 WALL MOUNTED WATER HEATER (ABOVE MR-1)

NOT TO SCALE

ELECTRIC DOMESTIC WATER HEATER SCHEDULE	
Unit Designation	**DWH-1**
Basis of Design	Bradford White
Model Number	LE230LN3-3
Design Pressure (PSI)	150
Operating Pressure (PSI)	300
DOE Storage Capacity (Gal.)	28
Recovery (GPH @ 100°F Rise)	23 @ 100°F Rise
Operating Temperature (°F)	140
Dimensions (Diameter x Height) (in.)	23"Ø x 29-9/16"
Approx. Operating Weight (lbs.)	350
Electrical	**208/1Ø/60**
Standard kW Rating	5.5 kW
No. / Capacity of Elements	1 @ 5.5 kW
FLA(per Element)	---
Accessories	
ASME T&P Relief Valve	Yes
Brass Drain Valve	Yes
Immersion Thermostat (ASME)	No
Wall Mounting Hardware	No
Manual Reset Energy Cutoff	Yes
Drain Pan	Yes
Pan Drain with Alarm	Yes
2" Non CFC Foam Insulation	Yes
Factory Installed Heat Trap	Yes
Temp. & Pressure Gauge	Yes
Voltage and Wattage Conversion Kit	No
Ceiling Mounted Water Heater Platform	Yes

MATERIAL AND INSULATION SCHEDULE

	Material		Insulation				
System	**Basis of Design**	**Alternate Material**	**Basis of Design**	**Type**	**Wall (in)**	**Vapor Barrier**	**Remarks**
Domestic Cold Water - Above Grade	Type "L" Copper	------	Certainteed	500° Snap On	1/2	Yes	Lead free solder shall conform to ASTM B32, Flux shall Conform to ASTM B813
Domestic Hot Water - Above Grade	Type "L" Copper	------	Certainteed	500° Snap On	1	Yes	Lead free solder shall conform to ASTM B32, Flux shall Conform to ASTM B813
Sanitary Piping - Above Grade	Cast Iron	Sch. 40 PVC (Solid Wall)	------	------	------	------	Cast Iron Pipe shall meet ASTM A74, ASTM A888 or CISPI 301
Sanitary Piping - Below Grade	Service Wt. Cast Iron	Sch. 40 PVC (Solid Wall)	------	------	------	------	Cast Iron Pipe shall meet ASTM A74, ASTM A888 or CISPI 301
Sanitary Vent Piping	Cast Iron	Sch. 40 PVC (Solid Wall)	------	------	------	------	Cast Iron Pipe shall meet ASTM A74, ASTM A888 or CISPI 301

PLUMBING FIXTURE SCHEDULE

NOTE: ALL PLUMBING FIXTURES AND FAUCETS SHALL BE PROVIDED IN CUSTOM COLORS AND FINISHES. COORDINATE COLOR & FIXTURE SELECTION WITH THE ARCHITECT AND OWNER.

Tag	Fixture Type	Mfgr.	Model No.	CWS	HWS	Drain	Faucet	Drain	Flush Valve	Seat	Mount	Remarks
WC-1	Water Closet	Zurn	Z5615-BWL	1"	---	4"	---	---	Zurn ZTR6200EV-LL	Zurn Z5955SS-EL	Wall	Wall-Mounted, Vitreous China, Top Spud Toilet w/ Sensor-Operated, Battery-Powered, Exposed Flush Valve (1.28 GPF). High Efficiency, Siphon Jet Flushing Action, Fully Glazed Trap-way and Elongated Front Rim. Provide Elongated, White, Open Front Toilet Seat, Less Cover, with Stainless Steel Check Hinges. Mount at ADA Required Height.
L-1	Lavatory	Zurn	Z5364	1/2"	1/2"	1-1/4"	Zurn Z6915-XL	---	---	---	Wall	Wall-Hung, Vitreous China, 20" x 18" Lavatory w/ Battery-Power, Sensor-Operated Faucet, 4" Center Faucet Holes, Pre-mixed Water Supply. Provide w/ Hanger Plate and Holes for Concealed Arm Carrier System (Zurn Z1231). Provide Lead-Free ADA Compliant Sensor-Operated, 1.5 GPM Faucet w/ Vandal Resistant Aerator, 30-Second Time Out Feature. Provide Zurn Standard Supply Kits w/ 12" Flexible Stainless Steel Supply Hoses. Provide Zurn Z8743-PC Solid-Top, Open Grid Drain and Zurn Z8700-D Cast Brass, Chrome-Plated P-Trap. Provide Trap and Supply Stop Protectors (Zurn Z89461-1-NT) and Below Deck Manual Temperature Mixing Valve (Zurn P6900-MV-XL).
UR-1	Urinal	Zurn	Z5755-U	3/4"	---	2"	---	---	Zurn ZTR6203-QRT-LL	---	Wall	Wall-Hung, Vitreous China, Top Spud, Washdown Urinal w/ Long-life, Battery-Powered, Sensor-Operated, Exposed Flush Valve (0.5 GPF). Wash-down Urinal Complete w/ Asymmetric Backwall Resulting in Reduced Splashback, High Efficiency Wash-down Flushing Action, 3/4" Top Spud, 2" Outlet w/ Integral Trap, 14" Extended Rim to Meet ADA Compliance, Mount at ADA Required Height. Provide Zurn Z1022 Wall Urinal Support System.
MR-1	Mop Receptor	Stern Williams	HL-1800	3/4"	3/4"	3"	Zurn Z843M1	---	---	---	Floor	Floor-Mounted, 24"W x 24"L x 12"H, Terrazzo Mop Receptor w/ 12" Side Walls and 6" Front Drop, One-Piece Stainless Steel Cap on Threshold, Backsplash and Two Handle Faucet. Provide Polished Chrome-Plated Cast Brass 8" Sink Faucet w/ Quarter-turn Ceramic Disc Cartridges, Integral Service Stops and a 6" Centerline Cast Brass Spout w/ Chemical Resistant Vacuum Breaker, 3/4" Hose Threaded Outlet, Pail Hook and Adjustable Wall Brace.
FD-1	Floor Drain	Zurn	Z415-BZ	1/2"	---	3"	---	---	---	---	Floor	Floor Drain Body Assembly w/ Type BZ Leveling Strainer, Dura-Coated Cast Iron Body w/ Bottom Outlet, Combination Invertible Membrane Clamp and Adjustable Collar w/ Seepage Slots and "Type BZ" Polished Nickel Bronze, Light-Duty, Leveling Strainer. Provide P.P.P. Industries Trap Primer w/ 1/2" CW Pipe to Trap Primer Connections at all Floor Drains. Wrap 1/2" CW Pipes w/ 1/4 Armaflex if Installed Under Slab.
NFHB-1	Non-Freeze Hose Bibb	Zurn	Z1320XL	3/4"	---	---	---	---	---	---	Wall	Encased, Lead-Free, Non-Freeze, Automatic Draining Wall Hydrant w/ Integral Backflow Preventer for Flush Installation. 1/2 Turn, Long-Life Ceramic Disc Cartridge. Hydrant Furnished w/ Type 304 Stainless Steel Housing w/ Locking Hinged Cover Stamped "WATER", includes operating key.
EWC-1	Electronic Water Cooler	Elkay	VRC8WSK	1/2"	---	1-1/4"	---	---	---	---	Wall	ezH2O Bottle Filling Station, Single Cooler, Stainless Steel. Green Ticker, Laminar Flow, Real Drain, and Vandal Resistant. Chilling Capacity of 8.0 GPH of 50°F Drinking Water.

NOTES:
1. Provide Water Hammer Arrestors similar to P.P.P., Industries Series SWA on the domestic water branch pipes serving the flush valve fixtures. Install and size per manufacturer's recommendations.
2. Provide Trap Primer Valves similar to P.P.P., Industries Series PR-500 for all floor drains. Install and per manufacturer's recommendations.
3. All electronic flush valves shall be equipped with manual overrides. Coordinate all colors and finishes of all plumbing fixtures with the Architect.
4. All Wall Cleanouts (W.C.O.) shall be similar to Zurn Z1441.
5. All Floor Cleanouts (F.C.O.) shall be similar to Zurn Z1400-BZ.

PLUMBING DRAWING NOTES

GENERAL WORK:

1. The Contractor shall provide all labor, materials, tools, apparatus and equipment required to complete his work in accordance with the contract documents, codes, laws and ordinances and accepted trade procedures.
2. In preparing his estimate, the Contractor shall review all of the contract documents including those of the other trades in order to acquaint himself with existing and related conditions that may, will, or could affect his work. He shall be experienced, skilled and knowledgeable with this type of construction and shall be expert and proficient in the preparation of estimates and the comprehension, implementation and interpretation of contract documents such as those prepared for this project.
3. The Contractor by his acceptance of the contract guarantees that all work installed shall be free from all defects in workmanship and materials and that all apparatus furnished by him shall develop the capacities and characteristics specified. He further guarantees that if, during a period of one (1) year from the date of the certificate of completion and acceptance of the work, any such defects in workmanship, material or performance appear, such defects shall be remedied by him without cost to the Owner. If the Contractor fails to remedy the defects as outlined within a reasonable length of time, to be specified in a notice from the Owner's authorized representative to the Contractor, the Owner will have such work done and he will charge the cost to the Contractor.
4. The Contractor shall visit the site before he submits his proposal. He shall examine all existing conditions which affect the work. The submission of the proposal shall be considered evidence that this requirement has been fulfilled. No extra payment will be allowed for additional work made necessary by the failure to visit the site.
5. Plumbing work shall be installed in a neat and workmanlike manner in accordance with latest and best practices of the trade. Only mechanics skilled in this type of Work shall be employed and utilized by Contractor for this Division in the execution of this Work.
6. The contract drawings are diagrammatic and indicate the general arrangement of all systems and work included in the contract. The contract drawings are not to be scaled. The architectural contract drawings and details together with the other contract documents shall be examined for all dimensional information.
7. The Contractor shall follow the contract drawings in laying out his work, and he shall also check the contract drawings of the other trades to verify spaces in which his work shall be provided.
8. The Contractor shall, without additional costs to the Owner, make reasonable modifications in the layout of his work in order to prevent conflicts with the work of other trades or for the proper execution of his work.
9. The Contractor shall supply all labor required to perform all work which may be claimed by trade organizations within his jurisdiction. All work shall be performed without any additional cost to the Owner irregardless of which section of the contract documents the work is described. The Contractor shall be responsible to verify with all local organizations the extent of any collective bargaining agreements and/or any jurisdictional decisions rendered regarding disputes between the respective trades, and provide and install his work in accordance with the accepted trade practice in the area.
10. The entire installation shall conform with all pertinent codes and regulations of the local, municipal, county, state and federal authorities. The National Board of Fire Underwriters, the 2018 International Building Code, the 2018 National Standard Plumbing Code, the National Fire Protective Association and all other regulatory bodies having jurisdiction. All materials and equipment shall bear the stamps or seals of the NFPA, ASME, NEMA, IEEE, UL and other recognized industry regulatory groups.
11. The Contractor shall give all necessary notices, obtain all permits, pay all governmental taxes, fees and other costs in connection with his work. He shall file all necessary plans, and prepare all other documents including additional detailed plans that are required for compliance with all applicable laws, ordinances, rules and regulations.
12. The Contractor shall coordinate with the General Contractor and locate all required cutting and patching and the like required by the installation of the plumbing work.
13. All work shall be installed in strict accordance with the equipment manufacturer's recommendations and requirements. All systems are to be tested, adjusted and balanced to provide performance as indicated on the drawings. Test and adjust all safety controls.
14. Coordinate to assure that all work of all trades will be concealed within the wall and ceiling construction and without the need to reduce ceiling heights. Report exceptions to the Architect prior to construction and erection of the work. Openings around piping passing through the construction shall be sealed with fire barrier caulking. All materials located within the return air plenum shall be noncombustible with flame spread ratings of 25 or less and smoke developed ratings of 50 or less. All control wiring located within ceiling return air plenums shall be plenum rated or shall be run in conduit. All work shall be located to avoid conflicts with other work and provide adequate clearances for architectural design, proper operation, adjustments, component service and provide a minimum 2" clearance between all piping and other work.
15. Provide supports, hangers, flexible pipe connections, vibration isolation, supplementary supports, controls and wiring, cleaning, painting, specialties and all other labor, materials, devices and services required for a complete, first quality installation. All work shall be supported from the building structural system. Work shall not be supported from the ceiling suspension system, from electrical work, nor from other mechanical work. Unless otherwise indicated, run all piping as high as possible. Provide starters for all motor driven equipment.
16. The Contractor shall provide and maintain in good order a complete set of blueline prints of the contract drawings. As the work progresses, the actual location of all work shall be clearly recorded, including all changes to the contract and equipment size and type. These prints shall be available at the site for inspection at all times. At the conclusion of the work, the Contractor shall, at his own expense, obtain a set of reproducibles of the original contract drawings, and utilizing the symbols on the contract drawings, shall incorporate all "as-built" data in a clearly legible and reproducible manner. All schedules shall be corrected to indicate "as-built" conditions. All revisions shall be incorporated on these reproducibles including all sketches and written directives. All concealed equipment, main-feeders, pull and junction boxes, etc. shall be dimensionally located from the building structure. As a condition for acceptance of the work, the "as-built" reproducibles and one (1) set of prints shall be signed, dated and delivered to the Engineer.

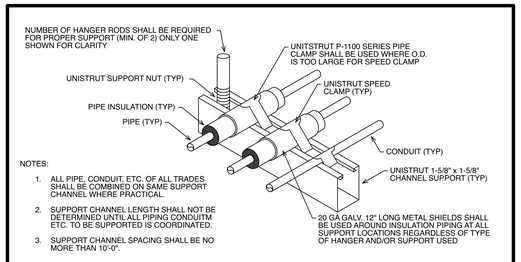
PLUMBING:

1. Gate valves shall be all red bronze, 125 psi WP, solid wedge disc, non-rising stem, soldered ends and equivalent to Stockham B-109. Provide shut-off valves for all connected equipment.
2. The Contractor shall provide a sanitary drain from all fixtures. The Contractor shall provide all required vent piping for all fixtures installed. Pitch drainage piping 1/8" per foot (1%) unless otherwise noted. Snake all lines and test system just prior to turn over to owner. Provide cleanouts in new sanitary and piping 50 feet on centers on all horizontal piping, at direction changes of 45° or more and elsewhere required by codes. Cleanouts accessible through walls shall be provided with chrome-plated covers and frame, in floors with recessed top to receive floor finishing material.
3. The Contractor shall sterilize all new domestic water piping as required by the 2018 National Standard Plumbing Code. The Plumbing Contractor shall provide water hammer arresters as required. Water hammer arresters: Smith Series 5000 stainless steel Hydrotrols, P.D.I. certified and A.S.S.E. approved.
4. Alternate sanitary vent piping shall be standard weight uncoated cast iron bell and spigot soil pipe and fittings conforming to ASTM A74 with caulked oakum and lead joints, no-hub if permitted by code, DWV Copper, or standard weight galvanized steel with galvanized cast iron banded and recessed screwed drainage fittings, ASTM A126. Alternate sanitary piping within the building shall be standard weight, uncoated cast iron bell and spigot soil pipe and fittings conforming to ASTM A74 with caulked oakum and lead joints or DWV copper. Codes permitting, no-hub may be used.
5. Provide trap primers where required by the local Plumbing Inspector. All plumbing must be tested and approved by plumbing inspector and meet the requirements of section 2018 National Standard Plumbing Code. Floor drains shall be installed according to the 2018 National Standard Plumbing Code. All potable water outlets shall be protected from cross connection as required under the 2018 National Standard Plumbing Code.
6. All Plumbing must be tested and approved by plumbing inspector and meet the requirements of section 2018 National Standard Plumbing Code.
7. All potable water outlets shall be protected from cross connection as required under section 2018 National Standard Plumbing Code.
8. Provide an unconditional one-year written guarantee to replace or repair all defective work.
9. All hole drilling for pipe hangers or floor and wall penetrations shall be by the Plumbing Contractor for plumbing work.
10. All piping shall be supported by pipe hangers of similar material as piping being supported. Suspend from building structure with spacing of hangers not to exceed requirements of the latest edition of the 2018 NSPC and IBC 2018 as well as the local authority having jurisdiction. Do not use wire or perforated metal strap to support piping. Do not rest piping on any part of building structure for support.
11. Seismic protection for the plumbing system shall be provided as required by the 2018 International Building Code.
12. The following system components shall be provided with seismic restraints:

    -Plumbing system piping having hangers longer than 12".
    -Plumbing system piping in mechanical rooms larger than 1-1/4" I.D.
    -Plumbing system piping outside of mechanical rooms larger than 2-1/2" I.D.
    -Domestic water heaters.

DISCLAIMER

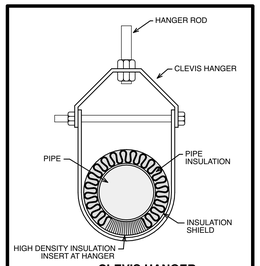
THE DESIGN INTENTION FOR THIS PROJECT IS TO WINTERIZE THE BUILDING AND ITS CONTENTS EACH SEASON. THE OWNER HAS ASSUMED RESPONSIBILITY TO DRAIN DOWN THE ENTIRE BUILDING'S PLUMBING SYSTEM AND REMOVE ANY OTHER ASSOCIATED ITEMS THAT COULD POTENTIALLY FREEZE WITHIN THE BUILDING. HWI HOLDS NO RESPONSIBILITY FOR FREEZE PROTECTION OF THIS BUILDING OR ITS CONTENT.



NOTES:
1. ALL PIPE, CONDUIT, ETC. OF ALL TRADES SHALL BE COMBINED ON SAME SUPPORT CHANNEL WHERE PRACTICAL.
2. SUPPORT CHANNEL LENGTH SHALL NOT BE DETERMINED UNTIL ALL PIPING CONDUITM ETC. TO BE SUPPORTED IS COORDINATED.
3. SUPPORT CHANNEL SPACING SHALL BE NO MORE THAN 10'-0".

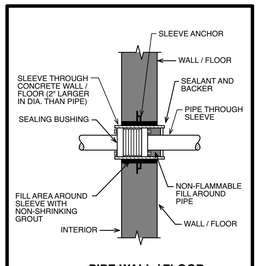
2 PIPING SUPPORT ABOVE CEILING DETAIL

NOT TO SCALE



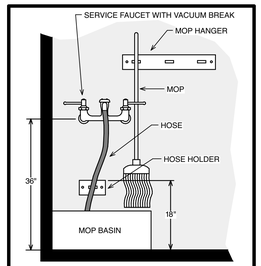
3 CLEVIS HANGER DETAIL

NOT TO SCALE



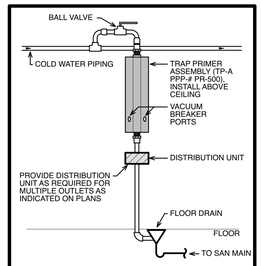
4 PIPE WALL / FLOOR PENETRATION DETAIL

NOT TO SCALE



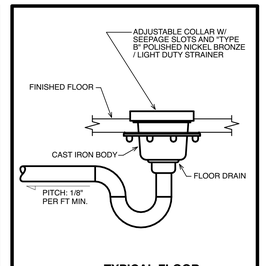
5 MOP RECEPTOR DETAIL

NOT TO SCALE



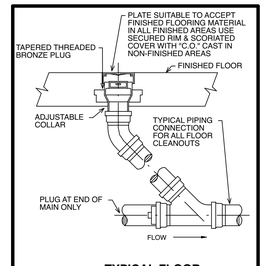
6 TRAP PRIMER DETAIL

NOT TO SCALE



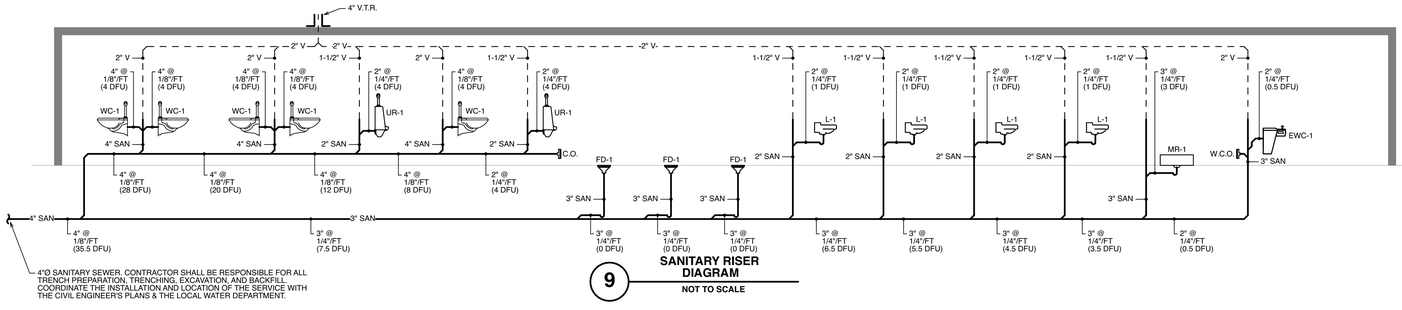
7 TYPICAL FLOOR DRAIN DETAIL

NOT TO SCALE



8 TYPICAL FLOOR CLEANOUT DETAIL

NOT TO SCALE



9 SANITARY RISER DIAGRAM

NOT TO SCALE

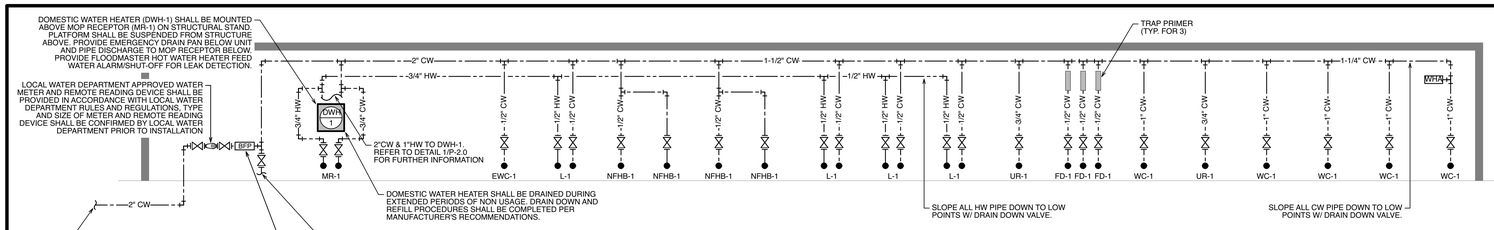
ELECTRICAL COORDINATION

1. IT SHALL BE THE RESPONSIBILITY OF THE PLUMBING CONTRACTOR TO COORDINATE THE LOCATIONS OF PIPING WITH THE ELECTRICAL CONTRACTOR. PLUMBING PIPING SHALL NOT BE INSTALLED WITHIN THE DEDICATED EQUIPMENT SPACE REQUIRED FOR EXISTING OR NEW ELECTRICAL EQUIPMENT.
2. COORDINATION OF PIPING LOCATIONS SHALL BE SOLELY THE RESPONSIBILITY OF THE PLUMBING CONTRACTOR. APPROVAL OF PLUMBING SUBMITTAL DRAWINGS DOES NOT RELEASE THE CONTRACTOR FROM COORDINATION RESPONSIBILITY. FINAL COORDINATION SHALL OCCUR IN FIELD WITH ELECTRICAL CONTRACTOR. FAILURE TO COMPLY WITH THIS REQUIREMENT MAY RESULT IN RELOCATION OF SUPPRESSION SYSTEM PIPING AT CONTRACTOR'S EXPENSE.
3. PER NFPA 70, ARTICLE 110.26(F); DEDICATED EQUIPMENT SPACE SHALL APPLY TO SWITCHBOARDS, DISTRIBUTION PANELS, AND MOTOR CONTROL CENTERS. THE SPACE EQUAL TO THE WIDTH AND DEPTH OF THE EQUIPMENT AND EXTENDING FROM THE FLOOR TO A HEIGHT OF 6' ABOVE THE EQUIPMENT OR TO THE STRUCTURAL CEILING, WHICHEVER IS LOWER, SHALL BE DEDICATED TO THE ELECTRICAL INSTALLATION. NO PIPING, DUCTS, LEAK PROTECTION APPARATUS, OR OTHER EQUIPMENT FOREIGN TO THE ELECTRICAL INSTALLATION SHALL BE LOCATED IN THIS ZONE.

PLUMBING SYMBOLS & INDICATIONS

Condensate Piping	
Sanitary Piping	
Sanitary Vent Piping	
Domestic Cold Water Piping - Above Grade	
Domestic Cold Water Piping- In Raised Floor	
Domestic Hot Water Piping (110°F)	
Domestic Hot Water Recirc Piping	
Gas Piping	
Existing Piping	
Shut-Off Valve w/ Drain	
Direction of Flow Arrow	
Cleanout	
Pipe Turning Down	
Pipe Turning Up	
Equipment Designation	A / 1
Shut-Off Valve	
Mixing Valve	
Back Flow Preventer	
Balancing Valve	
Existing - to - New Connection	
Pump	

BFP	Backflow Preventer
BT	Bathtub
CO	Cleanout
CW	Cold Water
DFU	Drainage Fixture Unit
DN	Down
DWH	Domestic Water Heater
(E)	Existing
EA	Each
FD	Floor Drain
FFD	Funnel Floor Drain
FU	Fixture Unit
G	Gas
GC	General Contractor
HW	Hot Water
L	Lavatory
PC	Plumbing Contractor
RD	Roof Drain
SAN	Sanitary
SH	Shower
SK	Sink
SQFT	Square Feet
WC	Water Closet
WH	Wall Hydrant
VTR	Vent Thru Roof



10 DOMESTIC WATER RISER DIAGRAM

NOT TO SCALE

RE-BID DATE: 12/12/22

No.	DATE	DESCRIPTION	REV'D BY
		REVISIONS	

APPROVAL:

PROJECT:
RESTROOM BUILDING
FOR
FASOLA PARK
12 SYCAMORE LN,
DERPTFORD TOWNSHIP, NJ 08096

Joseph F. McKernon Jr., Architects & Associates
100 Dobbs Lane Suite 204 Cherry Hill, New Jersey 08034

HOLSTEIN WHITE
210 E. Street Road, Suite 202
Feasterville, PA 19053
O: (215) 333-7777
info@holsteinwhite.com
www.holsteinwhite.com

TITLE: PLUMBING SCHEDULES & DETAILS

SEAL:

SCOTT A. WHITE
NJ PE NO. 24GE04477900
NJ AUTH NO: 24GA28143700

DIMENSIONS MUST BE VERIFIED BY CONTRACTOR. NOTIFY THE ARCHITECT OF ANY DISCREPANCIES BEFORE PROCEEDING WITH CONSTRUCTION. DO NOT SCALE DRAWING.

SCALE: AS NOTED
PROJ.NO.: 22-860
DATE: 09/23/2022
REV'D.: SW
DRAWN BY: RV
CHKD.BY: CB

DRAWING NO: P-2.0

LEGEND

North Point To Be Used On Standard Construction Sheets Where Bearings Refer to N.J. Plane Coordinate System

	Slant Lettering = Existing	Vertical Lettering = Proposed
Sanitary Sewer Main	EXISTING: SIZE AND TYPE — S — PROPOSED MH RIM ELEV. INV. ELEV.	PROPOSED: SIZE AND TYPE — S — PROPOSED MH RIM ELEV. INV. ELEV.
Sanitary Sewer Main by DTMUA		BY DTMUA — S —
Water Service	SIZE AND TYPE — W —	SIZE AND TYPE — W —
Water Service by DTMUA		BY DTMUA — W —
Gas Main	SIZE AND TYPE — G —	SIZE AND TYPE — G —
Storm Sewer Main	SIZE AND TYPE — ST —	SIZE AND TYPE — ST —
Roof Drain	SIZE — RD — RD —	SIZE — RD — RD —
Cable Conduit	— C — C —	
Electrical Conduit	— E — E —	
Overhead Wire	— OH — OH —	
Fiber Optic Conduit	— FO — FO —	
Unknown Utility	— UU — UU —	
Edge Of Pavement	TYPE	TYPE
Pavement Marking Stripes	TYPE	
Cut and Fill Slope Lines	F — C	C — F
Center Line Or Base Line (If Both Label As Such)	℄ 12+00 — ℄ 13+00	℄ 24+00 — ℄ 25+00
Property Lines	℄	℄
Curb	TYPE	SIZE, SLOPING, OR VERTICAL
Wooden Fence		
Steel / Chainlink Fence		
Beam Guide Rail		
Railroad Track		
Block Wall		
Treeline		
Seam		
Saw-Cut Line		
Limit of Disturbance		L.O.D.
Silt Fence		
Tree Protection		
Major Contour		75
Minor Contour		74

Cable TV	CTV	Signs	
18" Pole No. & Type	UP No. ACE4159	Iron Pins	
Pole with Guy Wire		P.K. Nail / Drill Hole	
Luminaire		Raised Pavement Markers	
Lantern		Mailbox	MB
Water Gate Valve		Fire Hydrant Assembly	
Gas Gate Valve		Clean Out	C.O.
Junction Box	JB	Curb Stop	C.S.
Loop Detector		Tree (Size, Kind)	12" OAK
Inlet Type 'A'		Proposed Building	
Inlet Type 'B'		Proposed Concrete, 4" Thick	
Inlet Type 'E'		Proposed Utility Trench	
Manhole		Stabilized Construction Entrance	
Benchmark Label	BENCHMARK N: 0.00 E: 0.00 ELEV.=0.00	Proposed Elevation Pavement Ground Sidewalk Corner	0.00

ABBREVIATIONS

Approximate	APPROX.	High-Density Polyethylene	H.D.P.E.	Rim Elevation	RIM
Bituminous Surface	BIT.	Hot Mix Asphalt	H.M.A.	Reinforced Concrete Pipe	R.C.P.
Cast Iron Pipe	C.I.P.	Invert Elevation	INV.	Right Of Way	R.O.W.
Cement Lined Ductile Iron Pipe	C.L.D.I.P.	Linear Foot	L.F.	Sanitary Manhole	SAN. MH
Corrugated Metal Pipe	C.M.P.	Limit Of Cut	LOC	Square Feet	S.F.
Cleanout	CO	Limit Of Disturbance	LOD	Station	STA
Concrete Surface	CONC.	Limit Of Fill	LOF	Storm Manhole	ST. MH
Curb Stop	CS	Limit Of Milling	LOM	Square Yard	S.Y.
Cubic Yard	C.Y.	Limit Of Paving	LOP	Top Of Curb Elevation	TC
Ductile Iron Pipe	D.I.P.	Lump Sum	L.S.	To Be Removed	TBR
Elevation	ELEV.	Manhole	MH	Utility Pole	UP
Edge Of Pavement	E.O.P.	Match Existing Elevation	M.E.	Water Service	WS
Fire Hydrant	FH	Man-Hour	M.H.	Water Valve	WV
Found Monument	FND. MON.	Not To Scale	N.T.S.	4" Solid Blue Stripe	4"B
Found Rebar	FND. RB	On Center	O.C.	4" Solid Double Yellow Stripe	4"DY
Gas Valve	GV	PK Nail	PK	4" Solid White Stripe	4"W
Inlet Grate Elevation	GR.	Polyvinyl Chloride Pipe	P.V.C.	4" Solid Yellow Stripe	4"Y
				24" Solid White Stripe	24"W

SURVEY NOTES

1. THE SURVEY WAS PREPARED WITHOUT THE BENEFIT OF A TITLE REPORT AND IS SUBJECT TO ANY EASEMENT, RESTRICTION AND/OR COVENANTS THAT A CURRENT REPORT OF TITLE, OR COMPLETE SEARCH OF THE PUBLIC RECORD, MAY DISCLOSE.
2. BLOCK AND LOT NUMBER REFER TO THE OFFICIAL TAX MAPS OF THE TOWNSHIP OF DEPTFORD, COUNTY OF GLOUCEESTER, STATE OF NEW JERSEY.
3. THE LOCATION OF UNDERGROUND UTILITIES ARE APPROXIMATE. ALL LOCATIONS ILLUSTRATED ARE BASED UPON UTILITY MARKOUT ABOVE GROUND STRUCTURES THAT WERE VISIBLE & ACCESSIBLE IN THE FIELD. THE STATE OF NEW JERSEY REQUIRES NOTIFICATION PRIOR TO ANY EXCAVATION BY UTILIZING THE NEW JERSEY ONE-CALL SYSTEM (1-800-272-1000).
4. SURVEY BASED ON N.J.S.P.C.S. (NAV '83) (2011). VERTICAL DATUM: NAVD 1988 (GEOID 12A).

SITE NOTES

1. LOCATION OF EXISTING SURFACE SUBSURFACE UTILITIES AND FEATURES MUST BE VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION.
2. ANY DIFFERING SITE CONDITIONS WHICH WOULD AFFECT THE PERFORMANCE OF THE WORK MUST BE REPORTED TO THE ENGINEER.
3. ALL CONSTRUCTION METHODS, MATERIALS AND DETAILS SHALL BE IN ACCORDANCE WITH DEPTFORD TOWNSHIP REQUIREMENTS.
4. PLANS ARE TO BE USED IN CONJUNCTION WITH ARCHITECTURAL DRAWINGS PREPARED BY OTHERS.
5. REFER TO DETAILS SHEETS FOR MATERIAL SPECIFICATIONS.
6. THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL PERMITS REQUIRED FOR THE CONSTRUCTION OF THE APPROVED IMPROVEMENTS.
7. THE OWNER OR HIS REPRESENTATIVE IS TO DESIGNATE AN INDIVIDUAL RESPONSIBLE FOR CONSTRUCTION SITE SAFETY DURING THE COURSE OF SITE IMPROVEMENTS PURSUANT TO N.J.A.C. 5.23-2.21 (e) OF THE N.J. UNIFORM CONSTRUCTION CODE AND CFR 1926.32(f) (OSHA COMPETENT PERSON).
8. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR MAINTAINING SITE SAFETY DEVICES AND SAFETY TRAINING FOR PERSONNEL, AND SHALL MAINTAIN SAFE PRACTICES ON SITE AT ALL TIMES.
9. ALL TRAFFIC CONTROL DEVICES AND PAVEMENT MARKINGS MUST BE INSTALLED IN ACCORDANCE WITH THE MOST RECENT "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD)".
10. ALL PAINTED TRAFFIC, MARKINGS/STRIPING SUBJECTED TO VEHICLE MOVEMENTS MUST BE HOT EXTRUDED THERMOPLASTIC PAINT WITH GLASS BEADS THAT IS IN COMPLIANCE WITH THE LATEST NJDOT SPECIFICATIONS.
11. ALL TRAFFIC CONTROL SIGNS MUST BE PLACED ON BREAK AWAY POSTS THAT ARE IN COMPLIANCE WITH THE MUTCD.

GRADING NOTES

1. MATERIAL PLACED IN FILL SHALL BE FREE OF DETRIMENTAL AMOUNTS OF SOD. ROOTS, FROZEN SOIL, STONES MORE THAN SIX (6) INCHES, AND OTHER OBJECTIONABLE MATERIAL.
2. DRAIN FILL SHALL BE KEPT FROM BEING CONTAMINATED BY ADJACENT SOIL MATERIALS DURING PLACEMENT BY EITHER PLACING IT IN A CLEANLY EXCAVATED TRENCH, OR BY KEEPING THE DRAIN AT LEAST ONE FOOT ABOVE THE ADJACENT EARTH FILL.
3. SELECTED DRAIN FILL AND BACKFILL MATERIAL SHALL BE PLACED AROUND STRUCTURES PIPE CONDUITS AT ABOUT THE SAME RATE ON ALL SIDES TO PREVENT DAMAGE FROM UNEQUAL LOADING. FILL MATERIAL SHALL BE PLACED AND SPREAD BEGINNING AT THE LOWEST POINT IN THE FOUNDATION, AND THEN BROUGHT UP IN CONTINUOUS HORIZONTAL LAYERS THICK ENOUGH THAT THE REQUIRED COMPACTION CAN BE OBTAINED.
4. THE DISTRIBUTION GRADATION OF MATERIALS SHALL BE SUCH THAT NO LENSES, POCKETS, STREAKS, OR LAYERS OF MATERIAL SHALL DIFFER SUBSTANTIALLY IN TEXTURE OR GRADATION FROM SURROUNDING MATERIAL.
5. THE MOISTURE CONTENT OF THE FILL MATERIAL SHALL BE ADEQUATE FOR OBTAINING THE DESIRED COMPACTION. MATERIAL THAT IS TOO WET SHALL BE DRIED TO MEET THIS REQUIREMENT, AND MATERIAL THAT IS TOO DRY SHALL BE WETTED AND MIXED UNTIL THE REQUIREMENT IS MET. CONSTRUCTION EQUIPMENT SHALL BE OPERATED OVER EACH LAYER OF FILL TO ENSURE THAT THE REQUIRED LEVEL OF COMPACTION IS OBTAINED.
6. FILL ADJACENT TO STRUCTURES, PIPE CONDUITS, OR DRAIN FILL SHALL BE COMPACTED TO A DENSITY EQUIVALENT TO THAT OF THE SURROUNDING FILL BY HAND TAMPING, OR BY USING MANUALLY DIRECTED POWER TAMPERS OR PLATE VIBRATORS. FILL ADJACENT TO CONCRETE STRUCTURES SHALL NOT BE COMPACTED UNTIL THE CONCRETE HAS HAD TIME TO GAIN ENOUGH STRENGTH TO SUPPORT THE LOAD.
7. GRADING SHALL NOT EXCEED 3 HORIZONTAL TO 1 VERTICAL.
8. PROVIDE A MINIMUM OF 1.5% SLOPE IN ALL SHEET FLOW LAWN AREAS.
9. MINIMUM SLOPE OF 1.0% SHALL BE PROVIDED IN SWALES.
10. THERE SHALL BE A MINIMUM OF SIX (6) INCHES OF DROP WITHIN THE FIRST TEN (10) FEET OF THE BUILDING FOUNDATIONS.
11. THE PROPOSED LAWN AREAS WILL BE GRADED WITH LIGHT-WEIGHT CONSTRUCTION EQUIPMENT.
12. NO TOPSOIL SHALL BE REMOVED FROM THE SITE OR USED AS SPOIL WITHOUT FIRST OBTAINING THE APPROPRIATE PERMITS AND APPROVALS FROM THE PROPERTY OWNER AND MUNICIPALITY.

BACKFILLING NOTES

1. BACKFILL SHALL CONSIST OF SUITABLE ON-SITE MATERIAL OR IMPORTED SELECT FILL MEETING THE FOLLOWING UCS CLASSIFICATION: GW, GP, GW-GM, GP-GM, SW, SP, SW-SM, SP-SM, OR NJDT SOIL AGGREGATE CLASSIFICATION: 1-13, 1-5.
2. BACKFILL SHALL BE FREE OF CLAY MATERIAL, STUMPS, TREE PARTS, TRASH, DEBRIS OR MATERIAL OVER 2" IN SIZE.
3. BACKFILL SHALL BE COMPACTED IN A MAXIMUM OF EIGHT (8) INCH LIFTS TO 95% OF THE MAXIMUM IN-SITU DRY DENSITY OF THE MATERIAL BEING PLACED FOR AREAS BELOW STRUCTURES, ROADWAYS, SIDEWALKS, PIPING.
4. BACKFILL SHALL BE COMPACTED IN A MAXIMUM OF ONE (1) FOOT LIFTS TO 90% OF THE MAXIMUM IN-SITU DRY DENSITY OF THE MATERIAL BEING PLACED FOR ALL OTHER AREAS.
   A. CONTRACTOR SHALL CONTACT THE TOWNSHIP ENGINEER TO DISCUSS SAMPLING FREQUENCY AND ANALYTICAL PARAMETERS IF/ONCE A MATERIAL SOURCE HAS BEEN SELECTED. THE RESULTS OF THIS TESTING, IF NECESSARY, SHOULD BE PROVIDED TO THE TOWNSHIP AND TOWNSHIP ENGINEER FOR REVIEW PRIOR TO IMPORTING TO THE SITE.
   B. CONTRACTOR SHALL PROVIDE ARCHITECT/ENGINEER WITH SOIL TESTING RESULTS FOR BACKFILL MATERIAL INCLUDING, BUT NOT LIMITED TO, UCS CLASSIFICATION, OPTIMUM MOISTURE CONTENT, MAXIMUM DRY DENSITY AND SCREENING FOR PESTICIDES AND CONTAMINANTS IN ACCORDANCE WITH THE NJDEP PRIORITY POLLUTANT LIST.
   C. ONE SAMPLE SHALL BE TESTED FOR EACH 500 C.Y. OF BACKFILL MATERIAL TO BE UTILIZED AND THE RESULTS SUBMITTED TO THE ARCHITECT/ENGINEER PRIOR TO INITIATING BACKFILLING OPERATIONS.
5. COMPACTION SHALL BE MONITORED BY CONTRACTOR'S GEOTECHNICAL ENGINEER, UTILIZING THE DENSITY CONTROL METHOD PER SECTION 203. 10 OF THE NJDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, LATEST EDITION. A MINIMUM OF TWO (2) MEASUREMENTS SHALL BE TAKEN PER LIFT FOR EACH STRUCTURE/AREA BEING BACKFILLED. COMPACTION TESTING RESULTS SHALL BE SUBMITTED TO THE ARCHITECT/ ENGINEER FOR REVIEW PRIOR TO PERFORMING ABOVE GRADE ACTIVITIES ON THE AREAS RECEIVING BACKFILL.

UTILITY NOTES

1. THE CONTRACTOR SHALL OBTAIN ALL APPLICABLE PERMITS AT NO COST TO THE DEPTFORD TOWNSHIP INCLUDING BUT NOT LIMITED TO ROAD OPENING PERMITS FROM THE TOWNSHIP AND COUNTY.
2. THE LOCATION AND DEPTHS OF EXISTING UTILITIES MUST BE VERIFIED IN THE FIELD BY THE CONTRACTOR PRIOR TO CONSTRUCTION.
3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR NOTIFYING ALL UTILITY COMPANIES OF PROPOSED EXCAVATIONS IN THE VICINITY OF SAID UTILITIES PRIOR TO CONSTRUCTION.
4. THE CONTRACTOR IS RESPONSIBLE TO PROVIDE PROPER TRAFFIC CONTROL TO THE SATISFACTION OF LOCAL, COUNTY, AND STATE AUTHORITIES.
5. NO MATERIAL SHALL BE PLACED OR DISTURBED BEYOND THE PROPERTY LINE OR RIGHT-OF-WAY WITHOUT WRITTEN PERMISSION OF THE PROPERTY OWNER DIRECTLY INVOLVED.
6. THE CONTRACTOR SHALL BE RESPONSIBLE FOR RESTORING PAVING, PLANTING, ETC. IN KIND AND TOPSOILING, FERTILIZING AND SEEDING ALL AREAS DISTURBED BY HIS ACTIVITIES. ROAD PAVEMENT REPLACEMENT AND ALL RESTORATION IN DISTURBED AREAS SHALL MEET THE REQUIREMENTS OF THE TOWNSHIP OR TOWNSHIP ENGINEER.
7. WHENEVER THE TRENCH BOTTOM DOES NOT AFFORD SUFFICIENT BEARING STRENGTH TO SUSTAIN THE WEIGHT OF THE PIPE AND SUPERIMPOSED LOADS, THE TRENCH BOTTOM SHALL BE OVER EXCAVATED AND STABILIZED WITH SIX (6) INCH MINIMUM THICK LAYERS OF CRUSHED STONE, AS DIRECTED BY THE TOWNSHIP ENGINEER.
8. ALL TRENCHES WILL BE BACKFILLED BY COMPACTION IN SIX (6) INCH LAYERS IN STRICT ACCORDANCE WITH THE TRENCH DETAILS AND SPECIFICATIONS.
9. THE CONSTRUCTION SITE MUST BE SWEPT AND CLEANED DAILY WITH NO TRENCHES OPEN OVERNIGHT.
10. INSPECTION OF, OR FAILURE TO INSPECT ANY MATERIALS OR WORKMANSHIP BY THE ENGINEER, OR THE ENGINEER'S REPRESENTATIVE, OR THE TOWNSHIP SHALL IN NO WAY RELIEVE THE CONTRACTOR OF THE RESPONSIBILITY TO PERFORM THE WORK IN ACCORDANCE WITH THE APPROVED PLANS, SPECIFICATIONS AND APPLICABLE LAWS.
11. THE CONTRACTOR SHALL SUPPLY THE AUTHORITY ENGINEER WITH COMPLETE AS-BUILTS OF ALL UTILITY INSTALLATIONS AND APPURTENANCES PRIOR TO THE AUTHORITY ENGINEER WITNESSING TESTING OF THE SYSTEMS.
12. COVER OVER ALL WATER SERVICES SHALL BE FOUR (4) FOOT MINIMUM.
13. ALL PROPOSED WATER MAINS SHALL HAVE THRUST BLOCKS AT ALL BENDS AND TEES.
14. WATER MAINS AND SANITARY SEWER MAINS SHALL BE SEPARATED BY TEN (10) FEET HORIZONTALLY WHEREVER POSSIBLE; OTHERWISE, THE SANITARY SEWER AND WATER PIPES SHALL BE IN SEPARATE TRENCHES WITH THE SANITARY SEWER EIGHTEEN (18) INCHES MINIMUM BELOW THE BOTTOM OF THE WATER MAIN. THE SEWER SHALL BE EIGHTEEN (18) INCHES BELOW THE WATER MAIN AND/OR STORM PIPE AT ALL CROSSINGS. WHERE THE SANITARY SEWER CROSSES OVER OR WITHIN EIGHTEEN (18) INCHES UNDER A WATER MAIN AND/OR STORM PIPE, THE SANITARY SEWER SHALL BE DUCTILE IRON PIPE WITH SLIP-ON JOINTS FOR TEN (10) FEET ON EACH SIDE OF THE CROSSING.
15. LOCATIONS AND SLOPES OF THE MAINS AND APPURTENANCES SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE APPROVED PLANS.
16. LOCATIONS AND SLOPES OF THE LATERALS AND APPURTENANCES SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE APPROVED PLANS AND SPECIFICATIONS,
17. SANITARY SEWER LATERALS SHALL CONFORM TO STANDARD INSTALLATION REQUIREMENTS AND MAY NOT BE CONNECTED DIRECTLY INTO MANHOLES.
18. WATER AND SEWER SERVICES AND PLUMBING SHALL CONFORM TO THE REQUIREMENTS OF THE PLUMBING SUBCODE OF THE NEW JERSEY STATE UNIFORM CONSTRUCTION CODE.
19. PIPE DIMENSIONS ARE ROUNDED TO THE NEAREST FOOT BETWEEN THE OUTER EDGES OF STRUCTURES. MINOR FIELD ADJUSTMENT MAY BE NECESSARY.
20. ALL CONSTRUCTION, MATERIALS, TESTING. INSPECTION AND ACCEPTANCE OF WATER AND SEWER FACILITIES MUST BE COMPLETED IN ACCORDANCE WITH UTILITY PROVIDER STANDARDS, INVERT ELEVATIONS OF THE COMPLETED SANITARY SEWER SYSTEM SHALL BE SUBMITTED TO THE D.T.M.U.A. AND INVERT ELEVATIONS OF THE COMPLETED WATER MAIN SHALL BE SUBMITTED TO THE D.T.M.U.A PRIOR TO ANY LATERAL CONNECTIONS BEING MADE TO ENSURE THAT THE SYSTEMS WERE CONSTRUCTED ACCORDING TO THE APPROVED PLANS.

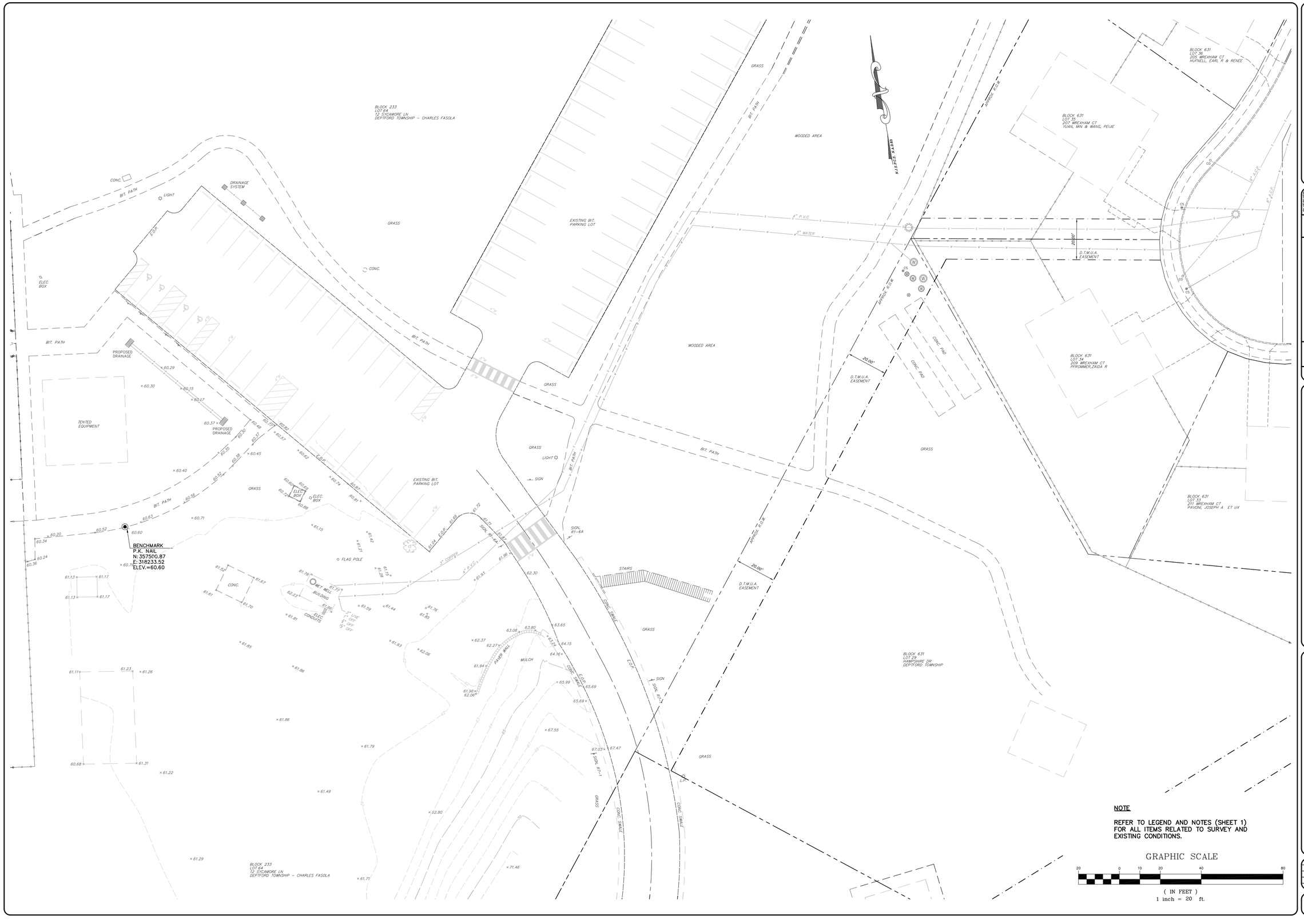
EDWARD F. FARRELL III
PROFESSIONAL ENGINEER N.J. LICENSE NO. GE46154

NO.	DATE	REVISIONS	BY	CHECKED BY
1	12/7/22	REV. FOR REBID	K.D.A.	E.F.F.3

LEGEND & NOTES
FASOLA PARK
BATHROOM IMPROVEMENTS
TOWNSHIP OF DEPTFORD, COUNTY OF GLOUCESTER, STATE OF NEW JERSEY

BRYSON & YATES
CONSULTING ENGINEERS, LLC
307 Greentree Road Sewell, New Jersey 08080
Phone: (856) 589-1400 Fax: (856) 582-7976

JOB NO.:	22323
DATE:	9/19/2022
SCALE:	AS SHOWN
DRAWN BY:	K.D.A.
CHECKED BY:	E.F.F.3



EDWARD F. FARRELL III
PROFESSIONAL ENGINEER N.J. LICENSE NO. GE46154

NO.	DATE	REVISIONS	BY	CHECKED BY
1	12/7/22	REV. FOR REBID	K.D.A.	E.F.F.3

EXISTING CONDITIONS PLAN
FASOLA PARK
BATHROOM IMPROVEMENTS

TOWNSHIP OF DEPTFORD, COUNTY OF GLOUCESTER, STATE OF NEW JERSEY

BRYSON & YATES
CONSULTING ENGINEERS, LLC
307 Greentree Road Sewell, New Jersey 08080
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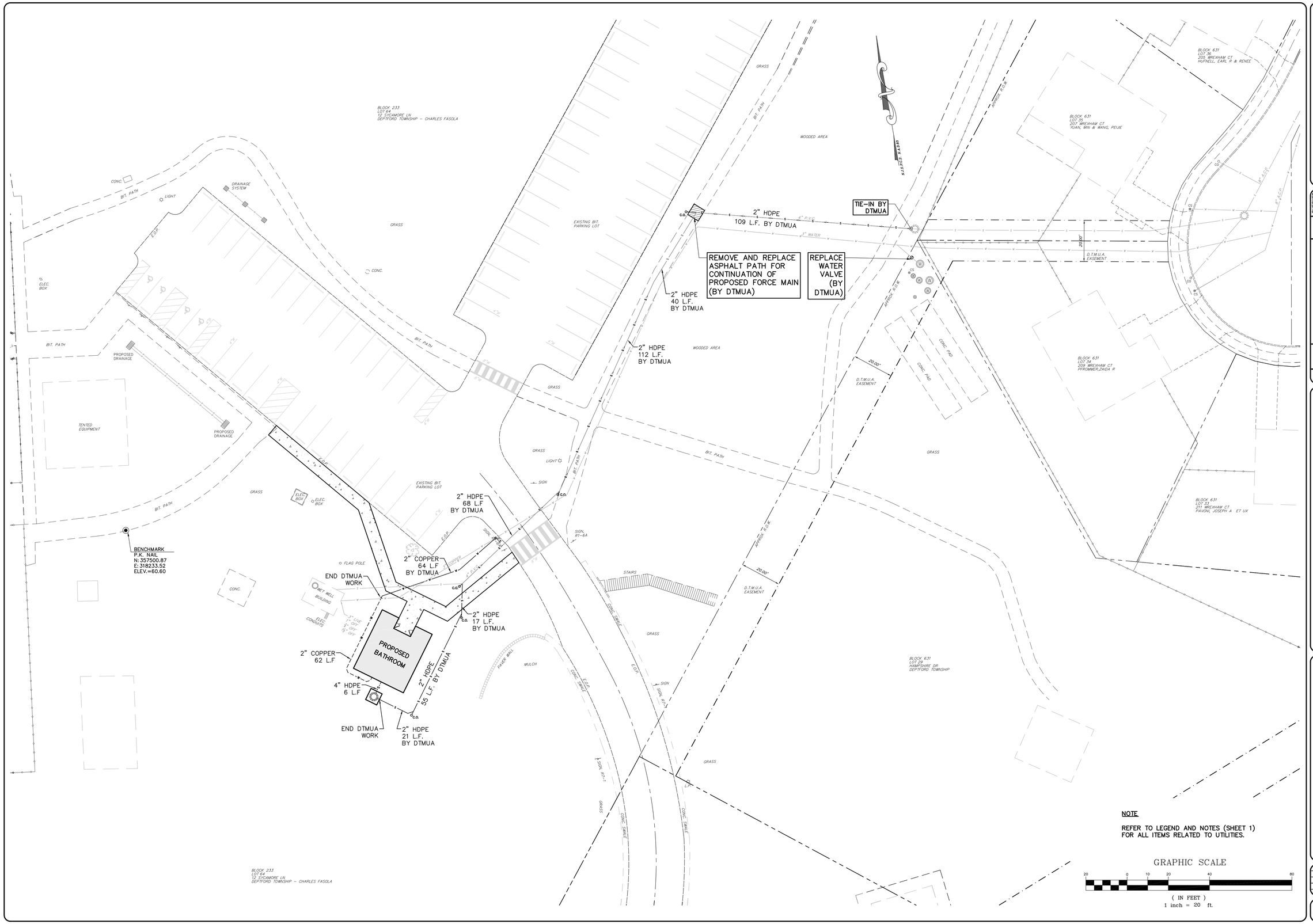
SHEET:
2 OF 8



NOTE

REFER TO LEGEND AND NOTES (SHEET 1) FOR ALL ITEMS RELATED TO UTILITIES.

GRAPHIC SCALE

20 0 10 20 40 80

(IN FEET)
1 inch = 20 ft.

EDWARD F. FARRELL III
PROFESSIONAL ENGINEER N.J. LICENSE NO. GE46154

NO.	DATE	REVISIONS	BY	CHECKED BY
1	12/7/22	REV. FOR REBID	K.D.A.	E.F.F.3

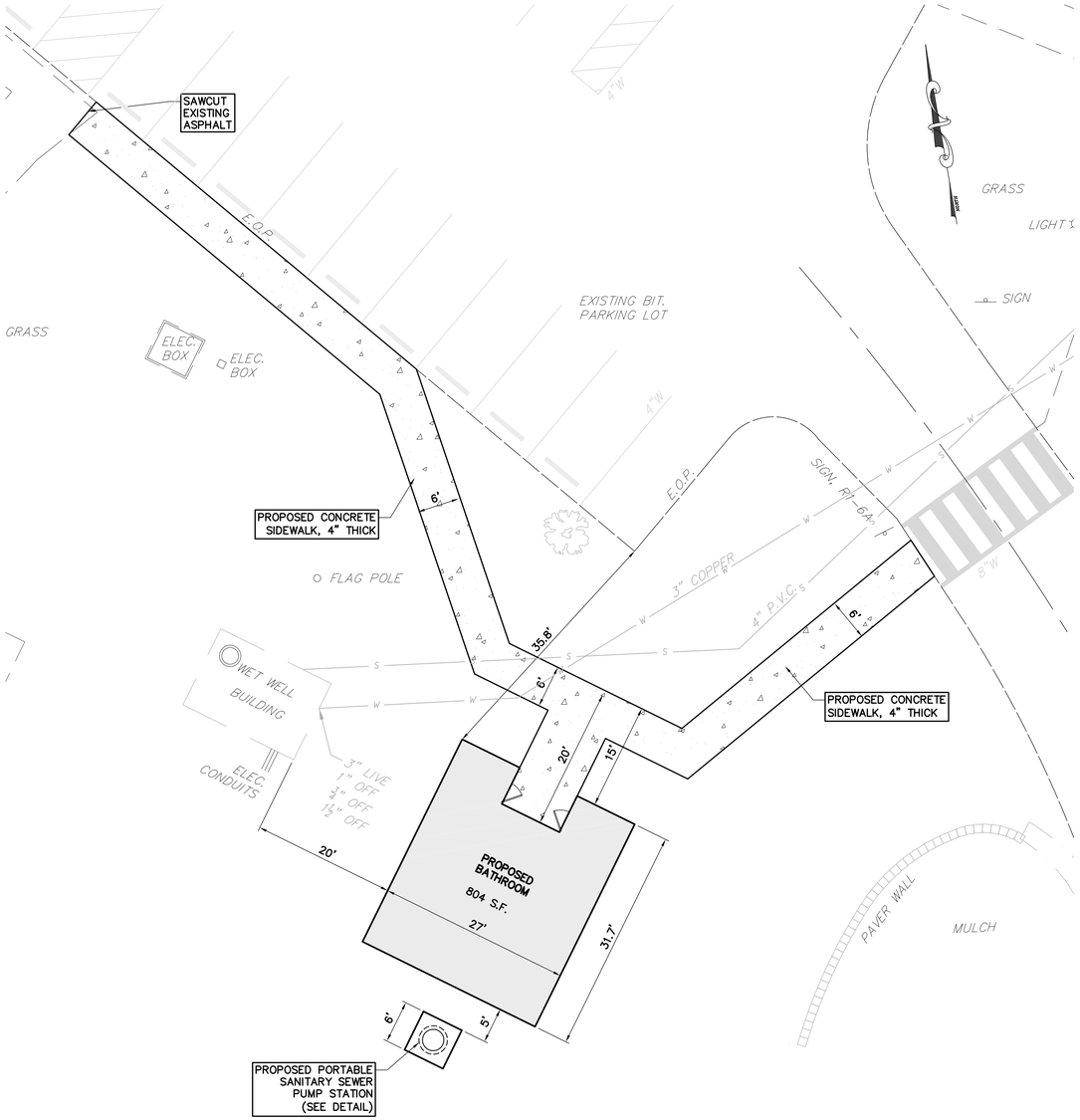
OVERALL UTILITY PLAN
FASOLA PARK
BATHROOM IMPROVEMENTS

TOWNSHIP OF DEPTFORD, COUNTY OF GLOUCESTER, STATE OF NEW JERSEY

BRYSON & YATES
CONSULTING ENGINEERS, LLC
307 Greentree Road Sewell, New Jersey 08080
Phone: (856) 589-1400 Fax: (856) 582-7976

JOB NO.:	22323
DATE:	9/19/2022
SCALE:	AS SHOWN
DRAWN BY:	K.D.A.
CHECKED BY:	E.F.F.3

SHEET:
3 OF 8

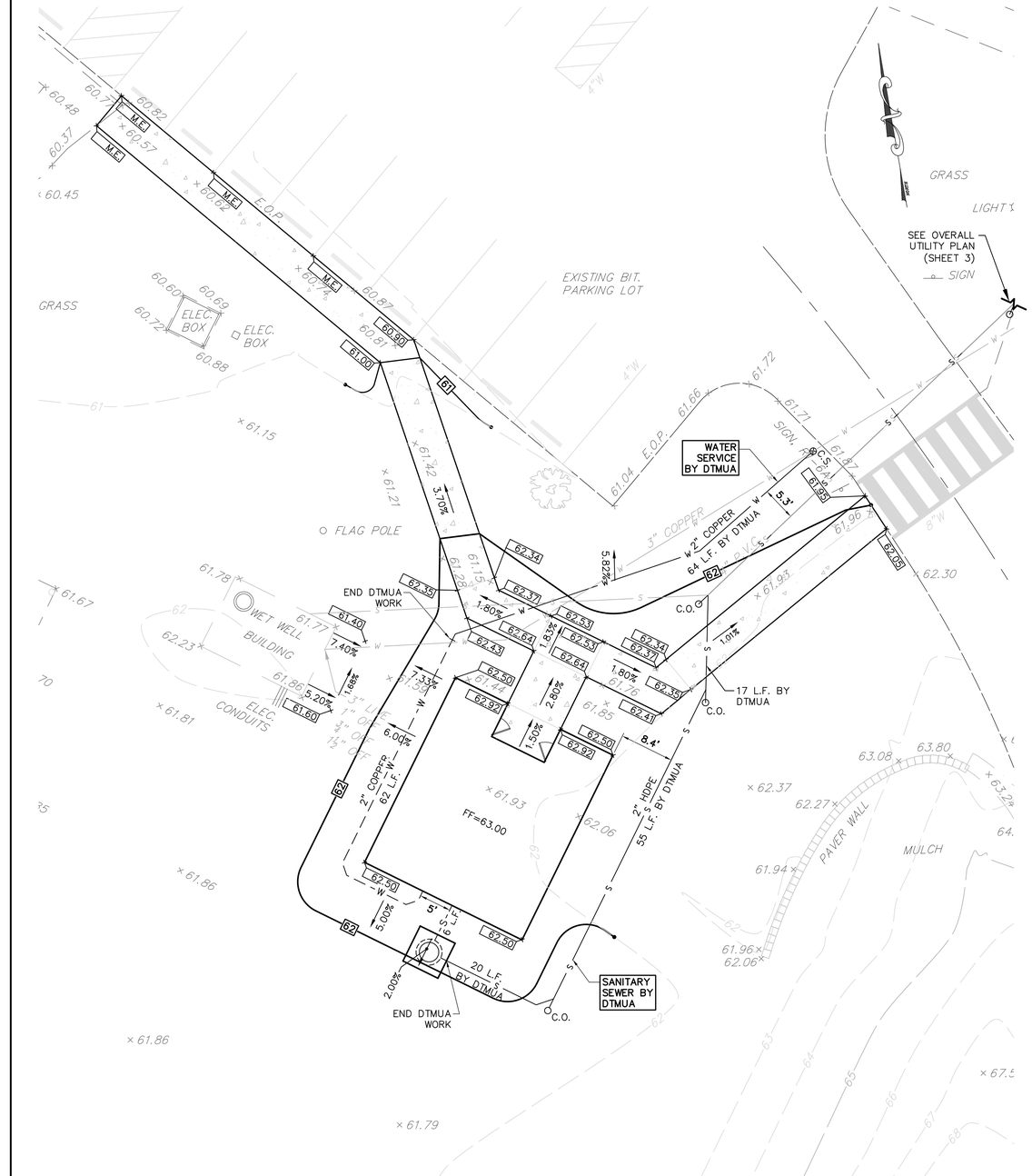


SITE PLAN

SCALE: 1"=10'

NOTE

REFER TO LEGEND AND NOTES (SHEET 1) FOR ALL ITEMS RELATED TO SITE WORK.



GRADING & UTILITY PLAN

SCALE: 1"=10'

NOTE

REFER TO LEGEND AND NOTES (SHEET 1) FOR ALL ITEMS RELATED TO GRADING, BACKFILLING, AND UTILITY WORK.

GRAPHIC SCALE

10 0 5 10 40 40

(IN FEET)
1 inch = 10 ft.

EDWARD F. FARRELL III
PROFESSIONAL ENGINEER N.J. LICENSE NO. GE46154

NO.	DATE	REVISIONS	BY	CHECKED BY
1	12/7/22	REV. FOR REBID	K.D.A.	E.F.F.3

SITE, GRADING & UTILITY PLAN
FASOLA PARK
BATHROOM IMPROVEMENTS

TOWNSHIP OF DEPTFORD, COUNTY OF GLOUCESTER, STATE OF NEW JERSEY

BRYSON & YATES
CONSULTING ENGINEERS, LLC
307 Greentree Road Sewell, New Jersey 08080
Phone: (856) 589-1400 Fax: (856) 582-7976

JOB NO.:	22323
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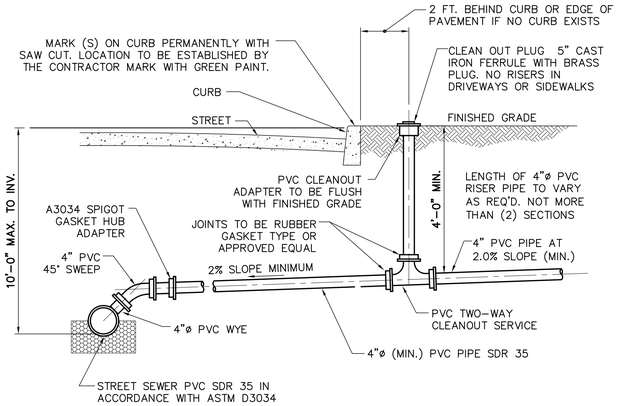
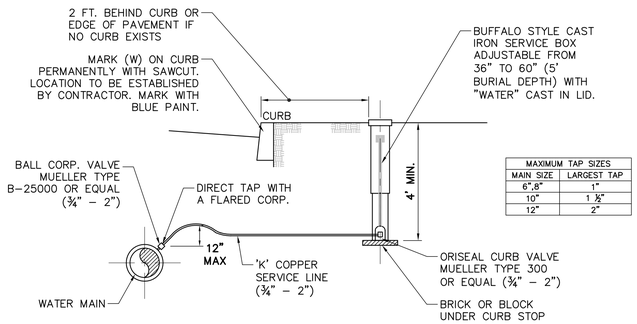
SCALE:	AS SHOWN
DRAWN BY:	K.D.A.
CHECKED BY:	E.F.F.3



SANITARY SERVICE LATERAL DETAIL

N.T.S.



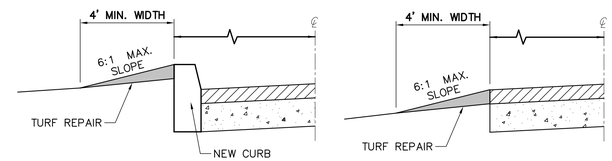
MAXIMUM TAP SIZES	
MAIN SIZE	LARGEST TAP
6",8"	1"
10"	1 ½"
12"	2"

NOTES

1. CURB STOPS SHALL NOT BE LOCATED IN SIDEWALKS OR DRIVEWAYS.
2. STAINLESS STEEL TAPPING SADDLES ONLY APPROVED FOR ACP, SMITH BLAIR MODEL #275 OR APPROVED EQUAL.
3. WATER SERVICE TO HAVE TEN FEET HORIZONTAL SEPARATION FROM SANITARY SEWER LATERAL. UNDER NO CIRCUMSTANCES SHALL THE HORIZONTAL SEPARATION BE LESS THAN FIVE FEET.

WATER SERVICE CONNECTION DETAIL

N.T.S.



TURF REPAIR DETAIL
AREA OF NEW CURBING

TURF REPAIR DETAIL
AREA OF NO CURBING

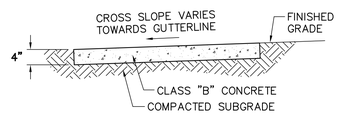
FILL OPERATIONS FOR THESE AREAS SHALL BE DONE USING ON-SITE EXCAVATION MATERIAL, PRIOR TO FURNISHING BORROW MATERIAL. THERE IS NO SPECIFIC PAYMENT FOR HAULING, PLACING AND COMPACTING ON-SITE ROADWAY EXCAVATION MATERIAL, AND THE COST THEREOF SHOULD BE INCLUDED IN THE UNIT PRICE BID FOR 'EXCAVATION, UNCLASSIFIED.'

NOTES

1. ANY AREAS IN WHICH THE NEW TOP OF CURB OR TOP OF SIDEWALK IS GREATER IN HEIGHT THAN 1/2" ABOVE THE EXISTING GROUND SURFACE, THE PROPOSED EDGE OF ROAD TREATMENT AS CALLED FOR IN THIS CONTRACT SHALL BE CONSTRUCTED AS SOON AS POSSIBLE AFTER THE SIDEWALK OR CURBING HAS BEEN CONSTRUCTED. THIS WORK SHALL BE DONE CONCURRENTLY WITH THE OVERLAY WORK, NOT AS A SEPARATE PHASE AFTER THE OVERLAY WORK HAS BEEN COMPLETED.
2. TURF REPAIR STRIP WORK SHALL BE PERFORMED WITHIN TEN (10) CALENDAR DAYS AFTER FINAL PAVING IS COMPLETED, BUT SHALL NOT OCCUR UNTIL THE STRIPING IS COMPLETED.
3. SEED MIXTURE SHALL BE SOWED INTO T.R.S. SOIL STRIP BY HAND; SOIL SHALL THEN BE IMMEDIATELY COMPACTED WITH MECHANICAL PLATE TAMPER TO THE EXACT ELEVATION OF THE TOP OF CURB OR SIDEWALK ELEVATION. ANY SETTLED T.R.S. AREAS SHALL BE RESTORED WITH ADDITIONAL SOIL AND RECOMPACTED TO THE TOP OF CURB OR TOP OF SIDEWALK GRADES.
4. FURNISH, PLACE, AND COMPACT ON-SITE SOIL ADJACENT TO THE CURB AND SIDEWALK WORK, WHEN THE FILL DEPTHS EXCEED 4-INCHES; PLACE TOPSOIL, MINIMUM THICKNESS 2 TO 3 INCHES, ATOP ON-SITE GRAVEL MATERIAL, TO ESTABLISH THE FINISH SURFACE, AT A MAXIMUM SLOPE OF 4H:1V. TOPSOIL DEPTHS SHALL NOT EXCEED 4". STABILIZATION MATTING SHALL BE USED IF & WHERE DIRECTED BY THE ENGINEER AND THE COST THEREOF SHALL BE INCLUDED IN THE COST OF VARIOUS OTHER ITEMS.
5. CONTRACTOR SHALL REVIEW GRADE SHEETS AND DETERMINE SCOPE OF WORK TO COMPLETE THE TURF REPAIR STRIP OPERATIONS. THE CONTRACTOR SHALL ONLY BE PAID FOR THE AREAS REPAIRED UP TO THE LIMIT APPROVED BY THE ENGINEER IN THE FIELD. ANY DISTURBANCE PAST THE LIMIT APPROVED BY THE ENGINEER WILL BE REPAIRED BY THE CONTRACTOR AT NO FURTHER COST TO THE OWNER.

TURF REPAIR STRIP DETAIL

N.T.S.

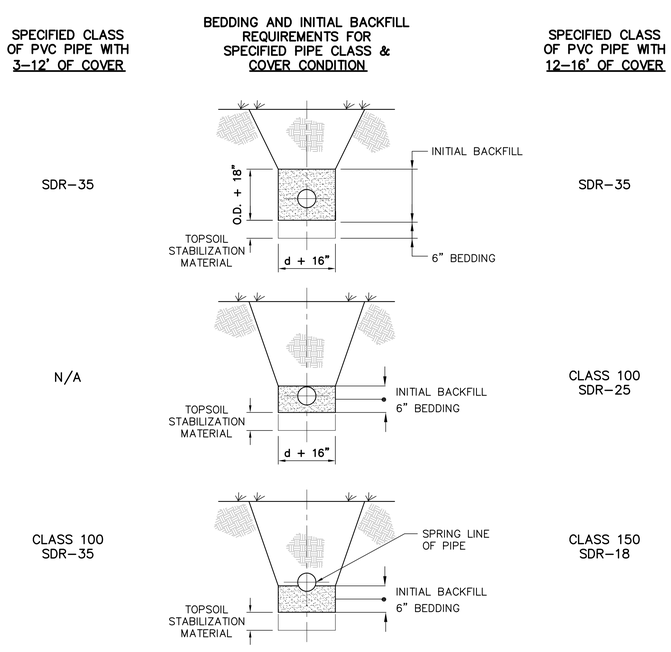


NOTES

1. PROVIDE TRANSVERSE SURFACE GROOVES AT INTERVALS EQUAL TO THE WIDTH OF THE SIDEWALK BETWEEN THE EXPANSION JOINTS.
2. EXPANSION JOINTS SHALL BE PROVIDED WITH FILLER MATERIAL AT TWENTY (20) FOOT INTERVALS.
3. ALL CONCRETE SHALL BE CONSTRUCTED OF CLASS "B" AIR-ENTRAINED CONCRETE WITH A COMPRESSIVE STRENGTH OF 4,000 PSI AT 28 DAYS.

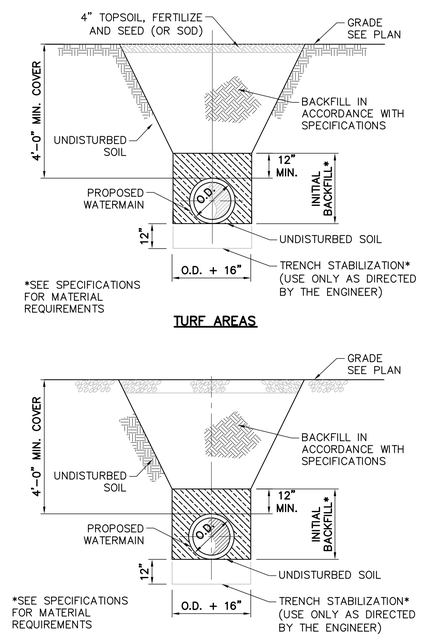
CONCRETE SIDEWALK DETAIL

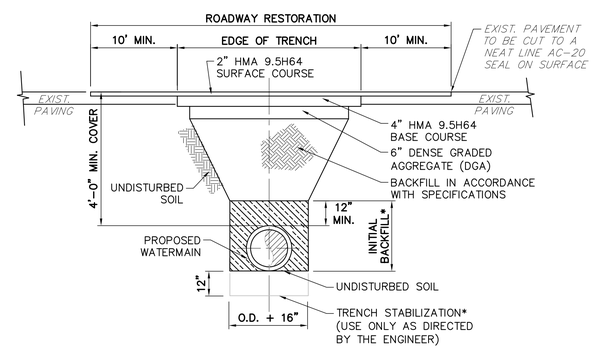
N.T.S.



PVC/DIP SANITARY SEWER TRENCH DETAIL

N.T.S.





RESTORATION ON ANY PUBLIC ROAD OR PUBLIC ACCESS DRIVE/PARKING AREA

NOTES

1. PROPER SIZED PLUG SHALL BE INSERTED INTO PIPE END AT ALL TIMES DURIING CONSTRUCTION.
2. ON ANY COUNTY ROAD, LOW-STRENGTH FLOWABLE FILL SHALL BE USED FOR ENTIRE TRENCH BACKFILL, IF THE TRENCH IS 7-FT. OR GREATER IN DEPTH.
3. FLOWABLE FILL SECTION SHALL BE STEEL-PLATED FOR 24-HOURS PRIOR TO ANY LOADING.
4. TO ACCELERATE CURE-TIME, ADD 'RAPIDSET CEMENT' TO MIX PRIOR TO PLACEMENT.
5. 15:1 MIX MAY BE SUBSTITUTED FOR FLOWABLE FILL, AND REQUIRES COMPACTION IN 12-INCH LIFTS.
6. ANY TRENCHES ACROSS PUBLIC PROPERTY SHALL BE BASE PAVED TO THE TOP OF THE TRENCH, AND THEN PERMITTED TO SETTLE FOR AT LEAST FOUR (4) MONTHS, PRIOR TO THE FINAL ROADWAY RESTORATION CONSISTING OF MILL/RESURFACE TO 10-FT. BEYOND THE ORIGINAL TRENCH LIMITS AS SHOWN.
7. FINAL RESTORATION SHALL NOT OCCUR PRIOR TO AS-BUILT PLANS BEING SUBMITTED AND ACCEPTED BY THE AUTHORITY ENGINEER ALONG WITH ANY OTHER TESTS REQUIRED.

WATER MAIN TRENCHING & ROAD RESTORATION DETAIL

N.T.S.

EDWARD F. FARRELL III
PROFESSIONAL ENGINEER N.J. LICENSE NO. GE46154

NO.	DATE	REVISIONS	BY	CHECKED BY
1	12/7/22	REV. FOR REBID	K.D.A.	E.F.F.3

CONSTRUCTION DETAILS
FASOLA PARK
BATHROOM IMPROVEMENTS
TOWNSHIP OF DEPTFORD, COUNTY OF GLOUCESTER, STATE OF NEW JERSEY

BRYSON & YATES
CONSULTING ENGINEERS, LLC
307 Greentree Road Sewell, New Jersey 08080
Phone: (856) 589-1400 Fax: (856) 582-7976

JOB NO.:	22323
DATE:	9/19/2022
SCALE:	AS SHOWN
DRAWN BY:	K.D.A.
CHECKED BY:	E.F.F.3

TECHNICAL INFORMATION

Myers Pentair Water

DESIGNED FOR RESIDENTIAL, LIGHT COMMERCIAL & INDUSTRIAL APPLICATIONS

The Myers WG/WGX20 Series are rugged 2 horsepower submersible centrifugal grinder pumps designed for residential, light commercial or industrial applications. It is especially suited for use in pressure sewer applications or in systems with long discharge runs or high static heads. The WG/WGX20 Series features a patented cutter mechanism and recessed impeller design to efficiently grind typical domestic sewage solids into a fine slurry. These pumps are available in standard construction and construction for use in Class 1, Group D hazardous locations.

The WG/WGX20 Series can be installed in a variety of packaged systems. Factory-assembled simplex or duplex packages with guide rail systems or suspended systems are available. Individual rail components are also available for installation in on-site concrete systems. Myers offers a complete line of submersible sump, sewage, effluent, grinder, solids handling wastewater pumps, controls, basins, and accessories. For additional information, please contact your local Myers representative or the Myers Ashland, Ohio sales office at 419-289-1144.

Ideal for use in pressure sewer systems.

- Choice of standard or high flow designs.
- Recessed impeller provides steep non-overloading operating curve.

Durable motor will deliver many years of reliable service.

- Oil-filled motor for maximum heat dissipation and constant bearing lubrication.
- Recessed impeller reduces radial bearing loads, increases bearing life.
- High torque capacitor start/run single phase or three phase motors for assured starting under heavy load.
- Seal leak probes and on-winding heat sensors warn of seal leak condition and stop motor if motor overheats. Helps prevent costly motor damage.

The WG/WGX20 Series is designed for easy maintenance.

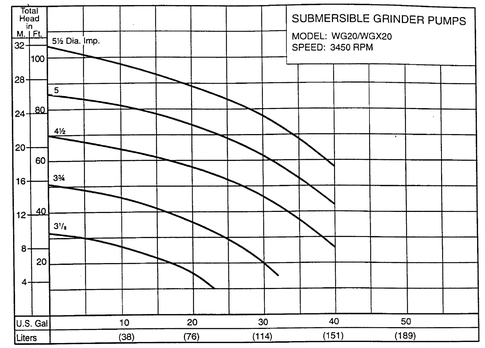
- Shredding ring and grinder impeller are replaceable without dismantling pump or motor.

Product Capabilities		
Capacities To	70 gpm	260 lpm
Heads To	105 ft	32.1 m
Liquids Handling	domestic raw sewage	
Intermittent Liquid Temp.	up to 140°F	up to 60°C
Winding Insulation Temp. (Class F)	311°F	155°C
Motor Electrical Data (single phase motors use capacitor start and capacitor run type. Meyers control panels or capacitors are required for proper operation and warranty.)	2 HP, 3450 RPM 1 ph – capacitor start/run. 208 or 230 volts; 60 Hz 3 ph – induction run 200, 230, 460, 575 volts; 60 Hz	
Third Party Approvals	WG - UL, CSA WGX - CSA, FM	
Acceptable pH Range	6 – 9	
Specific Gravity	9 – 1.1	
Viscosity	28 – 55 SSU	
Discharge, NPT	1¼ in.	31.75 mm
Min. Sump Dia. (Simplex) (Duplex)	24 in. 36 in.	61.0 cm 91.4 c

NOTE: Consult factory for applications outside of these recommendations.

Construction Materials	
Motor Housing, Seal Housing, Cord Cap and Volute Case	cast iron, Class 30, ASTM A48.
Impeller	nickelized bronze
Power Cord	14/4 SOOW
Control Cord	18/5 SOOW
Mechanical Seals Standard Optional	dbl. tandem carbon & ceramic lower tungsten carbide
Pump, Motor Shaft	416 SST
Fasteners	300 series SST
Shredding Ring Grinder Impeller	440 SST, 58-60 Rockwell

Pump Performance

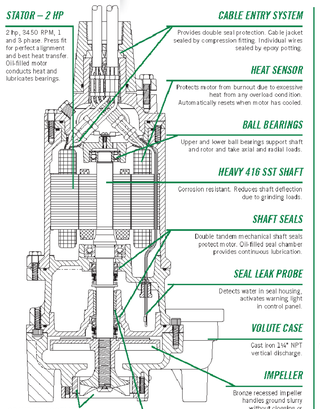


Available Models		Motor Electrical Data										
Standard	Explosion Proof	HP	Volts	Phase	Hertz	Start Amps	Run Amps	Run KW	Start KVA	Run KVA	NEC Code Letter	Service Factor
WG20-01-15	WGX20-01-15	2	200	1	60	50.0	15.0	2.8	10.0	3.0	F	1.25
WG20-21-15	WGX20-21-15	2	230	1	60	44.0	12.0	2.8	10.1	2.8	F	1.25
WG20-03-15	WGX20-03-15	2	200	3	60	30.0	9.5	2.9	10.4	3.3	F	1.25
WG20-23-15	WGX20-23-15	2	230	3	60	27.5	8.4	2.9	11.0	3.3	F	1.25
WG20-43-15	WGX20-43-15	2	460	3	60	13.8	4.2	2.9	11.0	3.3	F	1.25

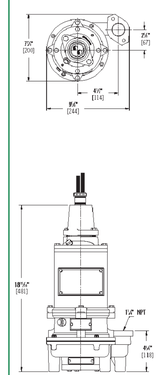
MID ATLANTIC PUMP & EQUIPMENT CO.
228 N RTE 73/ BERLIN, NJ 08009
PH-856-768-3880 FAX-856-768-0925
EMAIL:SALES@MAPECO.COM

ADVANTAGES BY DESIGN

Myers Pentair Water



DIMENSIONS (Dimensions in mm)



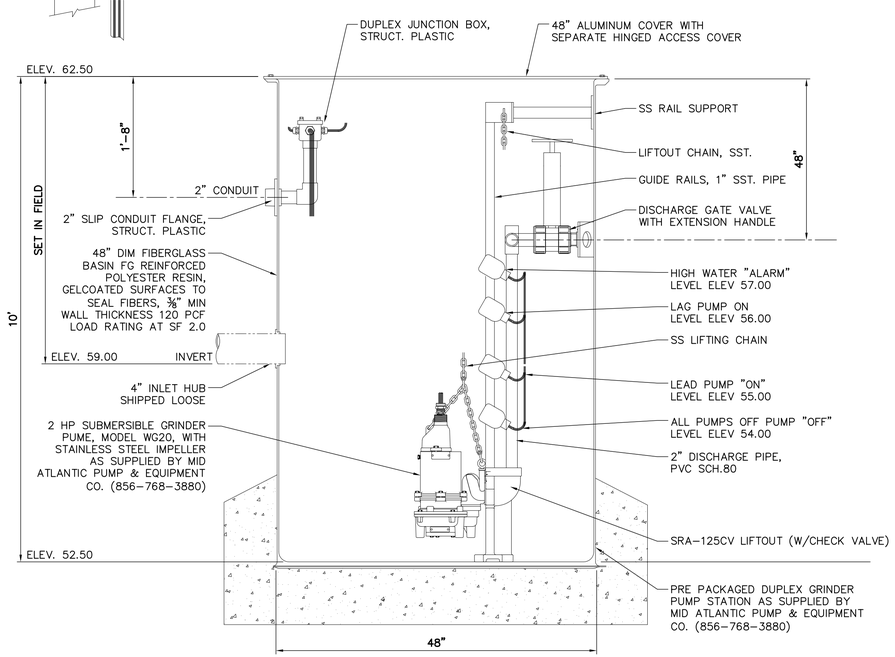
Myers Pentair Water
1101 Myers Parkway
Ashland, Ohio 44805
Tel: (419) 289-1144
Fax: (419) 281-9980
269 Trillium Drive
Kitchener, Ontario
Canada N2G 4W5
Tel: (519) 748-5470
Fax: (519) 748-2565
www.femyers.com

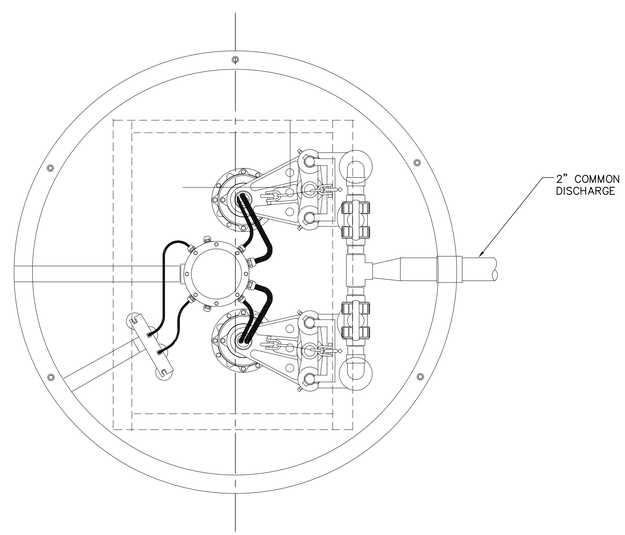
K3368 01/10

SANITARY SEWER PUMP DETAIL

(FASOLA PARK)

N.T.S.





PORTABLE SANITARY SEWER PUMP STATION DETAIL

(FASOLA PARK)

N.T.S.

NO.	DATE	REVISIONS	BY	CHECKED BY
1	12/7/22	REV. FOR REBID	K.D.A.	E.F.F.3

EDWARD F. FARRELL III
PROFESSIONAL ENGINEER N.J. LICENSE NO. GE46154

CONSTRUCTION DETAILS
FASOLA PARK
BATHROOM IMPROVEMENTS
TOWNSHIP OF DEPTFORD, COUNTY OF GLOUCESTER, STATE OF NEW JERSEY

BRYSON & YATES
CONSULTING ENGINEERS, LLC
307 Greentree Road Sewell, New Jersey 08080
Phone: (856) 589-1400 Fax: (856) 582-7976

JOB NO.:	22323
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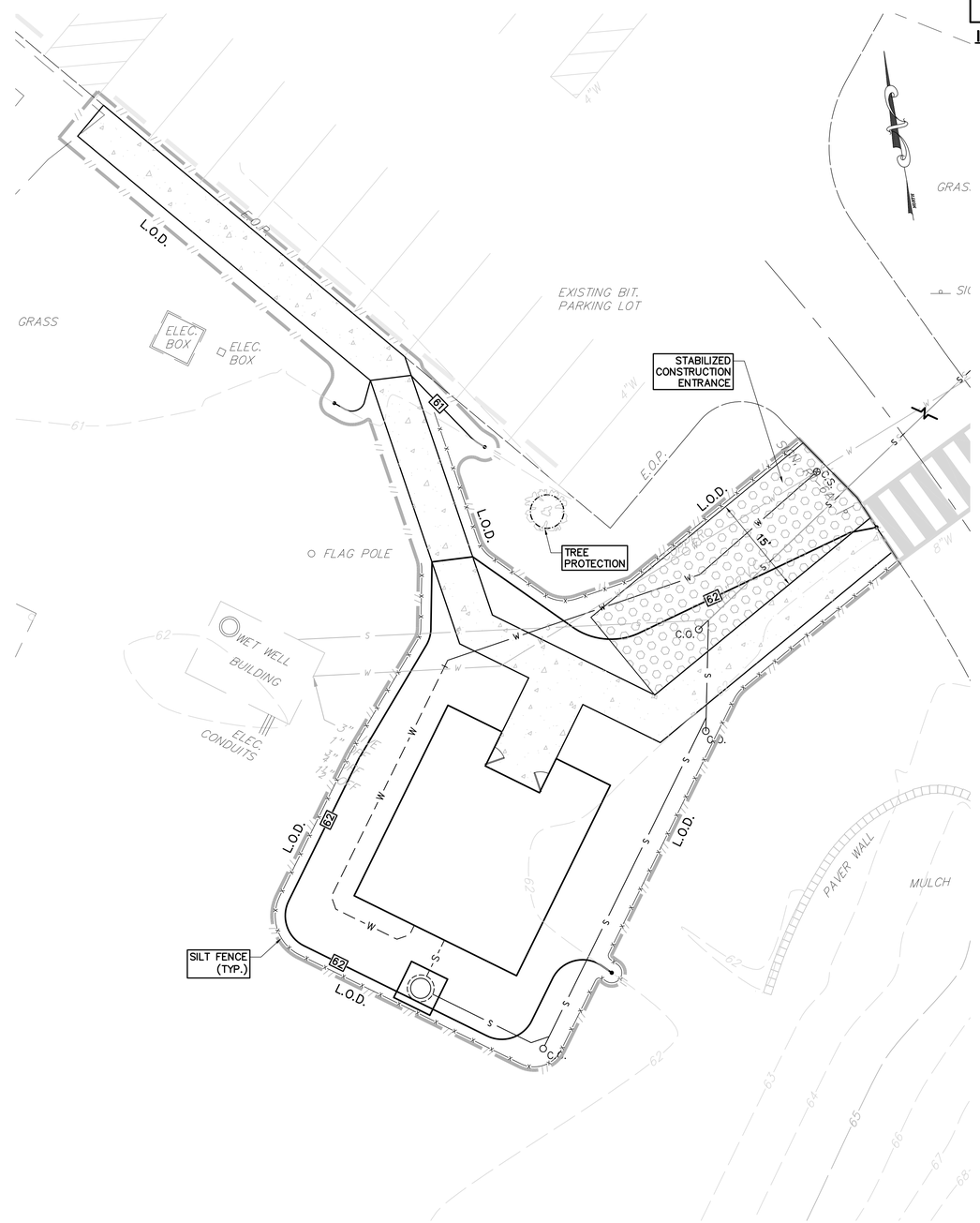
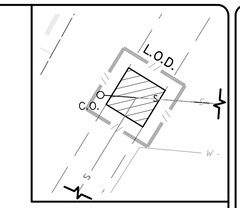
SHEET: 6 OF 8





INSET: DISTURBANCE AT SANITARY SEWER UTILITY DIRECTION CHANGE

TOTAL PROJECT AREA	4,974 S.F.
TOTAL DISTURBED AREA	4,974 S.F.
TOTAL SOIL RESTORATION AREA	2,818 S.F.

NOTE

REFER TO LEGEND (SHEET 1) AND NOTES (SHEET 8) FOR ALL ITEMS RELATED TO SOIL EROSION AND SEDIMENT CONTROL.

GRAPHIC SCALE

10 0 5 10 20 40

(IN FEET)
1 inch = 10 ft.

EDWARD F. FARRELL III
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SOIL EROSION & SEDIMENT CONTROL PLAN

FASOLA PARK
BATHROOM IMPROVEMENTS

TOWNSHIP OF DEPTFORD, COUNTY OF GLOUCESTER, STATE OF NEW JERSEY

BRYSON & YATES
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JOB NO.:	22323
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DRAWN BY:	K.D.A.
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STANDARD FOR TEMPORARY VEGETATIVE COVER FOR SOILS STABILIZATION

Seedbed Preparation:

A. Apply limestone and fertilizer according to soil test recommendations such as those offered by Rutgers University Soil Testing Laboratory. Soil sample mailers are available from the local Cooperative Extension Service office. If soil testing is not feasible on small or variable sites, or where timing is critical, fertilizer may be applied at the rate of 500 pounds per acre or 11 pounds per 1,000 square feet of 10–20–20 or equivalent. If seed is drilled over banded fertilizer, the rate of fertilizer is reduced 50 percent. Apply limestone (equivalent to 50 percent calcium plus magnesium oxides) as follows:

TABLE 7–1

Soil Texture	Tons/Acre	Limestone Lbs./1,000 Sq.Ft.
~~Clay, clay loam, and high organic soil~~	~~3~~	~~135~~
~~Sandy loam, loam, silt loam~~	~~2~~	~~90~~
Loamy sand, sand	1	45

Pulverized dolomitic limestone is preferred for most soils south of the New Brunswick–Trenton line.

B. Work lime and fertilizer into the soil as nearly as practical to depth of 4 inches with a disc, springtooth harrow, or other suitable equipment. The final harrowing or discing operation should be on the general contour. Continue tillage until a reasonable uniform seedbed is prepared.

C. Inspect seedbed just before seeding. If traffic has left the soil compacted, the area must be retilled as above.

D. Soils high on sulfides or having a pH of 4 or less refer to Standard for Management of High Acid Producing Soils, pg. 1–1.

Seeding:

A. Select seed from recommendations in Table 7–2. (For application and mulching see below)

TABLE 7–2
TEMPORARY VEGETATIVE STABILIZATION GRASSES, SEEDING RATES, DATES & DEPTH

SEED SELECTIONS	SEEDING RATES[1] (pounds)		OPTIMUM SEEDING DATE[2] Based on Plant Hardiness Zone[3]			OPTIMUM SEED DEPTH[4] (inches)
	Per Acre	Per 1,000 Sq. Ft.	Zone 6B	Zone 7A	Zone 7B	
COOL SEASON GRASSES						
~~Perennial ryegrass~~	~~100~~	~~1.0~~	~~3/1–5/15~~ ~~8/15–10/1~~	~~2/15–5/1~~ ~~8/15–10/15~~	~~2/15–5/1~~ ~~8/15–10/15~~	~~0.5~~
Spring oats	86	2.0	3/1–5/15 8/15–10/1	2/15–5/1 8/15–10/15	2/15–5/1 8/15–10/15	1.0
~~Winter barley~~	~~96~~	~~2.2~~	~~8/15–10/1~~	~~8/15–10/15~~	~~8/15–10/15~~	~~1.0~~
~~Winter cereal rye~~	~~112~~	~~2.8~~	~~8/1–11/15~~	~~8/1–12/15~~	~~8/1–12/15~~	~~1.0~~
WARM SEASON GRASSES						
~~Pearl millet~~	~~20~~	~~0.5~~	~~5/15–8/15~~	~~5/1–9/1~~	~~5/1–9/1~~	~~1.0~~
Millet (German or Hungarian)	~~30~~	~~0.7~~	~~5/15–8/15~~	~~5/1–9/1~~	~~5/1–9/1~~	~~1.0~~
~~Weeping lovegrass~~	~~5~~	~~0.2~~	~~5/15–8/15~~	~~5/1–9/1~~	~~5/1–9/1~~	~~0.25~~

SEE SHEET 2 FOR TEMPORARY SEEDING RATES

1. Seeding rate for warm season grass, selections 5–7 shall be adjusted to reflect the amount of Pure Line Seed (PLS) as determined by a germination test result. No adjustment is required for cool season grasses.
2. May be planted throughout summer if soil moisture is adequate or seeded area can be irrigated.
3. Plant Hardiness Zone (see figure 7–1, pg. 7–4.)
4. Twice the depth for sandy soils

Zone 6B – Portions of Bergen, Passaic, Morris, Essex, Hudson, Union, Somerset, Middlesex, Mercer, Hunterdon, Monmouth, Ocean, Burlington, Camden, Gloucester, Atlantic Cumberland and Cape May Counties

Zone 7A – Portions of Camden, Gloucester, Salem, Cumberland, Cape May, Atlantic, Burlington, Ocean and Monmouth counties of Somerset, Sussex, Union and Warren Counties

Zone 7B – Portions of Cape May, Atlantic, Ocean and Monmouth Counties

B. For seed application see below
Mulching see below

STANDARD FOR PERMANENT VEGETATIVE COVER FOR SOIL STABILIZATION

Seedbed Preparation:

A. Apply limestone and fertilizer according to soil test recommendations such as those offered by Rutgers University Soil Testing Laboratory. Soil sample mailers are available from the local Cooperative Extension Service office. If soil testing is not feasible on small or variable sites, or where timing is critical, fertilizer may be applied at the rate of 500 pounds per acre or 11 pounds per 1,000 square feet of 10–20–20 or equivalent. If seed is drilled over banded fertilizer, the rate of fertilizer is reduced 50 percent. Apply limestone (equivalent to 50 percent calcium plus magnesium oxides) as follows:

TABLE 4–1

Soil Texture	Tons/Acre	Limestone Lbs./1,000 Sq.Ft.
~~Clay, clay loam, and high organic soil~~	~~3~~	~~135~~
~~Sandy loam, loam, silt loam~~	~~2~~	~~90~~
Loamy sand, sand	1	45

Pulverized dolomitic limestone is preferred for most soils south of the New Brunswick–Trenton line.

B. Work lime and fertilizer into the soil as nearly as practical to a depth of 4 inches with a disc, springtooth harrow, or other suitable equipment. The final harrowing or discing operation should be on the general contour. Continue tillage until a reasonable uniform, fine seedbed is prepared. All but clay or silty soils and course sands should be rolled to firm the seedbed wherever feasible.

C. Remove from the surface all stones two inches or larger in an dimension. Remove all of the debris, such as wire, cable, tree roots, pieces of concrete, clods, lumps or other unsuitable material.

D. Inspect seedbed just before seeding. If traffic has left the soil compacted, the area must be retilled and firmed as above.

Acid Soil Conditions:
Soils having a pH of 4 or less, or containing iron sulfide, shall be covered with a minimum of 12 inches of soil having a pH of 5 or more, before seedbed preparation. The added soil shall be limed as above.

Seeding:

A. Select a mixture from Table 3.2–1 or use mixture recommended by the Cooperative Extension Service or Soil Conservation Service, which is approved by the Soil Conservation District.

Apply seed uniformly by hand, cyclone (centrifugal) seeder, drop seeder, drill, cultipacker seeder, or hydroseeder. The latter may be justifiable for large, steep areas where conventional vehicles cannot travel. Mulch shall not be included in the tank with the seed. Except for drilled, hydroseeded or cultipacked seedings, seed shall be incorporated into the soil, to a depth of ¼ to ½ inch, by raking or dragging. Depth of seed placement may be ¼ inch deeper on course textured soil.

TABLE 4.2
PERMANENT STABILIZATION MIXTURES FOR VARIOUS USES

Application	PLANTING MIXTURES BY SOIL DRAINAGE CLASS[1] (see Table 4.3)		
	Excessively Drained	Moderately Well Drained	Somewhat Poorly to Poorly Drained
Residential/ Commercial sites	12, 14, 17	12, 14, 15, 16, 17	18

1. Refer to Soil Survey for drainage class descriptions.

TABLE 4.3
PERMANENT VEGETATIVE MIXTURES, PLANTING RATES AND PLANTING DATES[1]

SEED MIXTURE[2]	PLANTING[3] RATE		PLANTING DATES O=Optimal Planting Period A=Acceptable Planting Period — PLANT HARDINESS ZONES (see Fiqure 4–1)									MAINTENANCE[4] LEVEL	REMARKS
			Zone 5b, 6a			Zone 6b			Zone 7a, 7b				
	lbs/ acre	lbs/1000 sq. ft.	3/15–5/31	6/1–7/31	8/1–10/31	3/1–4/30	5/1–8/14	8/15–11/15	2/1–4/30	5/1–8/14	8/15–11/30		
12. Tall fescue (turf–type) Redtop or ~~Perennial ryegrass~~ Birdsfoot trefoil or White clover	50 ~~5~~ ~~5~~ 10 5	1.1 .10 ~~.10~~ .25 .10	O	A	O	O	A	O	O	A	O	C–D	Birdsfoot trefoil ~~is best adapted~~ to Zone 5
14. Turf–type Tall fescue (Blend of 3 cultivars)	150	3.5	O	A	O	O	A	O	O	A	O	C–D	Use in a managed filter strip for nutrient uptake
15. Hard Fescue ~~Perennial ryegrass~~ Ky. bluegrass (blend)	120 ~~30~~ 40	2.7 ~~0.7~~ 0.9	O	A	O	O	A	O	O	A	O	A–C	General lawn/recreation
16. Tall Fescue ~~Ky. bluegrass (blend)~~ Perennial Ryegrass (blend)	160 ~~20~~ 20	3.7 ~~0.50~~ 0.50	O	A	O	O	A	O	O	A	O	A–B	Athletic field/mix 3 cultivars of Kentucky Bluegrass
17. Hard fescue Creeping fescue Perennial ryegrass	120 30 10	2.7 0.7 .25	O	A	O	O	A	O	O	A	O	C–D	Low maintenance fine fescue lawn mix
18. Rough bluegrass ~~Creeping red fescue~~	90 ~~50~~	2.0 ~~1.2~~	O	A	O	O	A	O	O	A	O	C–D	~~Moist shade~~

1. See Appendix B for descriptions of turf grass mixtures and cultivars. The actual amount of warm season grass mixture used in Table 3 (seed mix 1–7) shall be adjusted to reflect the amount of Pure Live Seed (PLS) as determined by germination testing results. No adjustment is required for cool season grasses (seed mixtures 8–20).

2. Seeding mixtures and/or rates not listed above may be used if recommended by the local Soil Conservation District, Natural Resources Conservation Service; recommendations of Rutgers Cooperative Extension may be used if approved by the Soil Conservation District. Legumes (flatpea, crownvetch, trefoil, lespedeza) should be mixed with the proper innoculant prior to planting.

3. Seeding rates specified are required when a report of compliance is requested prior to actual establishment of permanent vegetation. Up to 50% reduction in rates may be used when permanent vegetation is established prior to a report of compliance inspection. These rates apply to all methods of seeding. Establishing permanent vegetation means 80% vegetative coverage of the seeded area and mowed once.

4. Grass seed mixture checked by the State Seed Analyst, New Jersey Department of Agriculture, Trenton, New Jersey, will assure the purchaser that the seed mixture obtained is the mixture ordered, Pursuant to the N.J. State Seed Law, N.J.S.A. 4:8–17.13 et. seq.

O = optimal planting period A = acceptable planting period

Maintenance Level:

A. Intensive mowing, (2–4 days), fertilization, lime, pest control and irrigation (Examples – high maintenance lawns, commercial and recreation areas, public facilities).

B. Frequent mowing, (4–7 days), occasional fertilization, lime and weed control (Examples – home lawns, commercial sites, school sites).

C. Periodic mowing (7–14 days), occasional fertilization and lime (Examples – home lawns, parks).

D. Infrequent or no mowing, fertilization and lime the first year of establishment (Examples – roadside, recreation areas, public open spaces).

1. Seeding mixtures and/or rates not listed above may be used if recommended by the local Soil Conservation District, Soil Conservation Service; recommendations of the Cooperative Extension Service may be used if approved by the Soil Conservation District. Legumes (flatpea, crownvetch, trefoil, lespedeza) should be mixed with proper inoculant prior to planting.

2. Grass seed mixture checked by the chief of the Bureau of Seed Certification, New Jersey Department of Agriculture, Trenton, New Jersey, will assure the purchaser that the mixture obtained is the mixture ordered.

3. Plant Hardiness Zone (see map, pg. 4–15)

Zone 6B – Portions of Bergen, Passaic, Morris, Essex, Hudson, Union, Somerset, Middlesex, Mercer, Hunterdon, Monmouth, Ocean, Burlington, Camden, Gloucester, Atlantic Cumberland and Cape May Counties

Zone 7A – Portions of Camden, Gloucester, Salem, Cumberland, Cape May, Atlantic, Burlington, Ocean and Monmouth counties of Somerset, Sussex, Union and Warren Counties

Zone 7B – Portions of Cape May, Atlantic, Ocean and Monmouth Counties

If seeding dates are missed, use temporary stabilization as per Standards for Temporary Vegetative Cover for Soil Stabilization p. 3.1.1. (in Standards for Soil Erosion and Sediment Control in New Jersey), or Standards for Stabilization with Mulch Only pg. 5–1.

Mulching:
Mulching is required on all seeding. Mulch will insure against erosion before grass is established and will promote faster and earlier establishment. (The existence of vegetation sufficient to control soil erosion shall be deemed compliance with this mulching requirement.)

A. Mulch materials should be unrotted small grain straw, hay free of seeds, or salt hay to be applied at the rate of 1–1/2 to 2 tons per acre (70 to 90 pounds per 1,000 square feet), except that where a crimper is used instead of a liquid mulchbinder (tackifying or adhesive agent), the rate of application must be double the lower rate. Mulch chopper–blowers must not grind the material.

B. Spread uniformly by hand or mechanically so that approximately 75% to 95% of the soil surface will be covered. For uniform distribution of hand–spread mulch, divide area into approximately 1,000 square feet section and distribute 70 to 90 pounds within each section.

C. Mulch anchoring should be accomplished immediately after placement to minimize loss by wind or water. This may be done by one of the following methods, depending upon the size of the area, steepness of slopes, and costs.

1. Peg and Twine – Drive 8 to 10 inch wooden pegs to within 2 to 3 inches of the soil surface every 4 feet in all directions. Stakes may be driven before or after applying mulch. Secure mulch to soil surface by stretching twine between pegs in a criss–cross and a square pattern. Secure twine around each peg with two or more round turns.

2. Mulch Nettings – Staple paper, jute, cotton, or plastic nettings to the soil surface. Use a degradable netting in areas to be mowed.

3. Crimper (mulch anchoring tool) – A tractor–drawn implement, somewhat like a disc–harrow, especially designed to push or cut some of the broadcast long fiber mulch 3 to 4 inches into the soil so as to anchor it and leave part standing upright. This technique is limited to areas traversable by a tractor, which must operate on the contour of slopes. Straw mulch rate must be 3 tons per acre. No tackifying or adhesive agent is required.

D. Wood–fiber or paper–fiber mulch at the rate of 1,500 pounds per acre may be applied by a hydroseeder. Use is limited to flatter slopes and during optimum seeding periods in spring and fall.

GUIDE FOR CONSTRUCTION SPECIFICATIONS

The following are examples of requirements that may be used for preparing construction specifications. Incorporation of such requirements, will help assure protection of disturbed areas, especially where critical soil erosion problems may exist.

The contractor shall perform all work, furnish all materials, and install all measures required to reasonably control soil erosion, resulting from construction operations and minimize loss of sediment from the construction site. The contractor shall adhere to the certified soil erosion and sediment control plan, showing the methods to be used for controlling erosion during construction, which includes sequence of construction operations. When no work will be performed on critical areas for more than 60 days, they shall be protected by temporary seeding, mulching, or sodding, or the slope lengths shall be reduced by the installation of diversions or other means.

The contractor shall install erosion controls on all disturbed critical areas or disturbances adjacent to critical areas.

Critical areas are any areas subject to excessive erosion due to highly erodible soils, slope length, steepness, water concentration or other factors. Areas may become critical when the vegetation or other soil surface protection is removed.

Excavated soil material shall not be placed adjacent to rivers, streams, or bodies of water, in a manner that will cause it to be washed away by high water or runoff. Excess borrow material removed from the construction site shall be stabilized at the point of placement.

The contractor shall comply with applicable State and local regulations for prevention and abatement of pollution.

SOIL EROSION AND SEDIMENT CONTROL NOTES

1. All applicable erosion and sediment control practices shall be in place prior to any grading operation and/or installation of proposed structures or utilities.
2. Soil erosion and sediment control practices on this plan shall be constructed in accordance with The Standards for Soil Erosion and Sediment Control in New Jersey.
3. Applicable erosion and sediment control practices shall be left in place until construction is completed and/or the area is stabilized.
4. The contractor shall perform all work, furnish all materials and install all measures required to reasonably control soil erosion resulting from construction operations and prevent excessive flow of sediment from the construction site.
5. Any disturbed area that is to be left exposed for more than thirty (30) days and not subject to construction traffic shall immediately receive a temporary seeding and fertilization in accordance with the New Jersey Standards and their rates should be included in the narrative. If the season prohibits temporary seeding, the disturbed areas will be mulched with salt hay or equivalent and anchored in accordance with the New Jersey Standards (i.e. peg and twine, mulch netting or liquid mulch binder).
6. It shall be the responsibility of the developer to provide confirmation of lime, fertilizer and seed application and rates of application at the request of the Gloucester soil conservation district.
7. All critical areas subject to erosion will receive a temporary seeding in combination with straw mulch at a rate of 2 tons per acre, according to the New Jersey Standards immediately following rough grading.
8. The site shall at all times be graded and maintained such that all stormwater runoff is diverted to soil erosion and sediment control facilities.
9. All sedimentation structures will be inspected and maintained on a regular basis and after every storm event.
10. A crushed stone, tire cleaning pad will be installed wherever a construction access exists. the stabilized pad will be installed according to the standard for stabilized construction access.
11. All driveways must be stabilized with 2 ½" crushed stone or subbase prior to individual lot construction.
12. Paved areas must be kept clean at all times.
13. All catch basin inlets will be protected according to the certified plan.
14. All storm drainage outlets will be stabilized, as required, before the discharge points become operational.
15. All dewatering operations must discharge directly into a sediment filter area. the sediment filter should be composed of a suitable sediment filter fabric. (see detail). The basin must be dewatered to normal pool within 10 days of the design storm.
16. NJSA 4:24–39, et seq. requires that no certificate of occupancy be issued before all provisions of the certified soil erosion and sediment control plan have been complied with for permanent measures. all site work for the project must be completed prior to the district issuing a report of compliance as a prerequisite to the issuance of a certificate of occupancy by the municipality.
17. Mulching is required on all seeded areas to insure against erosion before grass is established to promote earlier vegetation cover.
18. Offsite sediment disturbance may require additional control measures to be determined by the erosion control inspector.
19. A copy of the certified soil erosion and sediment control plan must be maintained on the project site during construction.
20. The Gloucester Soil Conservation District shall be notified 48 hours prior to any land disturbance.
21. Any conveyance of this project prior to its completion will transfer full responsibility for compliance with the certified plan to any subsequent owners.
22. Immediately after the completion of stripping and stockpiling of topsoil, the stockpile must be stabilized according to the standard for temporary vegetative cover. stabilize topsoil stockpile with straw mulch for protection if the season does not permit the application and establishment of temporary seeding. all soil stockpiles are not to be located within fifty (50) feet of a floodplain, slope, roadway or drainage facility and the base must be protected with a sediment barrier.
23. Any changes to the site plan will require the submission of a revised soil erosion and sediment control plan to the Gloucester Soil Conservation District. the revised plan must be in accordance with the current New Jersey Standards for Soil Erosion and Sediment Control.
24. Methods for the management of high acid producing soils shall be in accordance with the standards. High acid producing soils are those found to contain iron sulfides or have a pH of 4 or less.
25. Temporary and permanent seeding measures must be applied according to the New Jersey Standards, and mulched with salt hay or equivalent and anchored in accordance with the New Jersey Standards (i.e. peg and twine, mulch netting or liquid mulch binder).
26. Maximum side slopes of all exposed surfaces shall not be constructed steeper than 3:1 unless otherwise approved by the district.
27. Dust is to be controlled by an approved method according to the New Jersey Standards and may include watering with a solution of calcium chloride and water.
28. Adjoining properties shall be protected from excavation and filling operations on the proposed site.
29. Use staged construction methods to minimize exposed surfaces, where applicable.
30. All vegetative material shall be selected in accordance with American Standards for Nursery Stock of the American Association of the Nurseryman and in accordance with the New Jersey Standards.
31. Natural vegetation and species shall be retained where specified on the landscaping plan.
32. The soil erosion inspector may require additional soil erosion measures to be installed, as directed by the district inspector.

STANDARD FOR MAINTAINING VEGETATION

Methods and Materials:
A preventative maintenance program anticipates requirements and accomplishes work when it can be done with least effort and expense to insure adequate vegetative cover.

Maintenance should occur on a regular basis, consistent with favorable plant growth, soil, and climactic conditions. This involves regular seasonal work for mowing, fertilizing, liming, watering, pruning, fire control, weed and pest control, reseeding, and timely repairs.

The degree of preventative maintenance depends upon the category of the vegetation and land; i.e., improved, semi–improved, and unimproved grounds.

A. Mowing is a recurring practice and its intensity depends upon the function of the ground cover. On improved areas, such as lawns, certain recreation fields, and picnic areas, mowing will be frequent. On semi–improved areas, mowing will be infrequent. Unimproved areas may be left unmowed to permit natural succession.

B. Fertilizer should be applied as needed to maintain a dense stand of desirable species. Frequently mowed areas and those on sandy soils will require more fertilization.

C. Lime requirement should be determined by soil testing every two (2) or three (3) years. Fertilization increases the need for liming.

D. Weed invasion may result from abusive mowing and inadequate fertilization and liming. Brush invasion is a common consequence of lack of mowing. The amount of weeds or brush that can be tolerated in any protective planting depends upon the land category and its intended use. Drainageways are subject to rapid infestation by weeds and woody plants. These should be controlled since they often reduce drainageways efficiency. Control of weeds or brush is accomplished by using herbicides or mechanical methods.

E. Pest and disease controls are more necessary on improved areas than on unimproved areas.

F. Fire hazard is greater where dry vegetation has accumulated. The taller the vegetation, the greater the hazard.

STANDARD FOR DUST CONTROL

Tillage – To roughen surface and bring clods to the surface. This is a temporary emergency measure, which should be used before soil blowing starts. Begin plowing on windward side of site. Chisel type plows, spaced about 12 inches apart, and spring toothed harrows are examples of equipment, which may produce the desired effect.

Sprinkling – Site is sprinkled until the surface is wet.

Barriers – Solid board fences, snow fences, burlap fences, crate walls, bales of hay, and similar material can be used to control air currents and soil blowing.

Stones – Cover surface with crushed stone or coarse gravel.

MAINTENANCE OF STRUCTURAL MEASURES

Maintenance is the work required to keep practices in, or restore them to, their original physical and functional condition.

Maintenance, as it applies to this section, is divided into two periods: that which is necessary to allow for continuing performance of erosion controls during the construction period and long term maintenance, following completion of construction, for the life of structural measures.

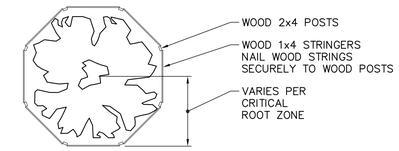
Maintenance During Construction Phase:
All structural measures for control of soil erosion and sedimentation must have timely maintenance if the measures are to endure and efficiently perform their design function. Particular attention should be given to temporary structures.

Maintenance Following Completion of Construction:
At the completion of construction and final stabilization, responsibility for lifetime maintenance of structural measures is usually transferred to a subsequent owner, such as the homeowner, municipality, homeowner association, etc. A comprehensive maintenance program should be prescribed for use of those who will accept such responsibility. All structures should be inspected at least semiannually, and following intensive rainfalls.

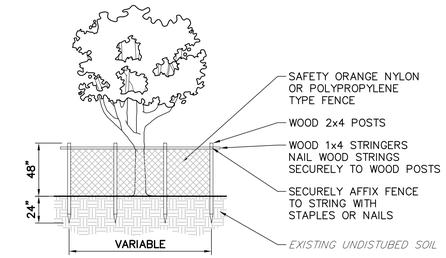
Maintenance items should include, but not be limited to, those shown for each of the following examples.

CONSTRUCTION SEQUENCE

THE FOLLOWING SEQUENCE OF CONSTRUCTION WILL BE FOLLOWED:	DURATION (DAYS)
1. INSTALL CONSTRUCTION ENTRANCE, TREE PROTECTION, SILT FENCE AND MAINTAIN FOR PROJECT DURATION	1–5
2. EXCAVATE SUITABLE SOILS AND STOCKPILE	1–10
3. DEMOLITION PER DESIGN PLANS	1–10
4. CONSTRUCT UTILITIES PER DESIGN PLANS (FASOLA PARK: CONSTRUCT PUMP STATION)	1–10 (+14)
5. CONSTRUCT BATHROOM STRUCTURE	1–20
6. PERFORM EARTHWORK FOR GRADING	1–10
7. CONSTRUCT/INSTALL CONCRETE SIDEWALK PER DESIGN PLANS	1–10
8. INSTALL PERMANENT STABILIZATION MEASURES TO DISTURBED SOILS	1–5
9. FINAL CLEANUP	1–10



PLAN

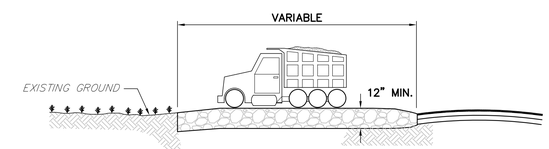


NOTES

1. INSTALLATION OF TREE PROTECTION BARRICADES SHALL BE PERFORMED BEFORE ANY SITE DEVELOPMENT ACTIVITY TAKES PLACE.
2. THE TREE PROTECTION BARRICADES SHALL REMAIN IN PLACE BEFORE ALL CONSTRUCTION ACTIVITIES, THROUGHOUT THE CONSTRUCTION PHASE AND UNTIL ALL ACTIVITIES ARE FULLY COMPLETE.
3. ANY DAMAGE THAT MAY OCCUR TO THE BARRICADES SHALL BE REPAIRED OR REPLACED TO THE ORIGINAL SPECIFICATIONS WITHIN 24 HOURS OF THE DAMAGE OCCURRING.
4. THE AREA WITHIN THE TREE PROTECTION BARRICADES SHALL NOT BE USED FOR THE STORAGE OF ANY MATERIALS, SUPPLIES OR DEBRIS OR THE DISPOSAL OF ANY MATERIALS.
5. ANY PROPOSED UNDERGOUND UTILITIES SHALL BE ROUTED AROUND PROTECTED TREES TO THE OUTSIDE OF THE TREE'S DRIPLINE.
6. TREE PROTECTION BARRICADES SHALL BE LOCATED TO PROTECT A MINIMUM OF 75% OF THE CRITICAL ROOT ZONE.

TREE PROTECTION DETAIL

N.T.S.

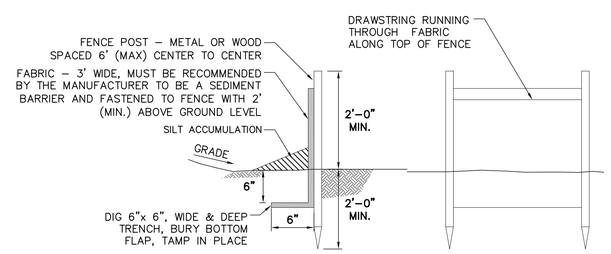


NOTES

1. PROVIDE APPROPRIATE TRANSITION BETWEEN STABILIZED CONSTRUCTION ENTRANCE AND PUBLIC R.O.W.
2. MAINTAIN STABILIZED CONSTRUCTION ENTRANCE FOR DURATION OF PROJECT UNTIL ENTRANCE POINT IS PAVED AND SOILS ARE STABILIZED
3. REPLENISH STONE ON A REGULAR BASIS TO MAINTAIN MINIMUM 12" THICKNESS.

TEMPORARY CONSTRUCTION ENTRANCE DETAIL

N.T.S.



NOTES

1. FABRIC SHALL HAVE A DRAWSTRING IN THE TOP PORTION OF THE FENCE.
2. FABRIC SHALL BE SECURED TO POST WITH METAL FASTENERS AND REINFORCEMENT BETWEEN FASTENER AND FABRIC.

SILT FENCE DETAIL

N.T.S.

EDWARD F. FARRELL III
PROFESSIONAL ENGINEER N.J. LICENSE NO. GE46154

NO.	DATE	REVISIONS	BY	CHECKED BY
1	12/7/22	REV. FOR REBID	K.D.A.	E.F.F.3

SOIL EROSION CONTROL NOTES & DETAILS
FASOLA PARK
BATHROOM IMPROVEMENTS
TOWNSHIP OF DEPTFORD, COUNTY OF GLOUCESTER, STATE OF NEW JERSEY

BRYSON & YATES
CONSULTING ENGINEERS, LLC
307 Greentree Road Sewell, New Jersey 08080
Phone: (856) 589-1400 Fax: (856) 582-7976

JOB NO.:	22323
DATE:	9/19/2022
SCALE:	AS SHOWN
DRAWN BY:	K.D.A.
CHECKED BY:	E.F.F.3