NEW DISTRICT MAINTENANCE & OPERATIONS BUILDING

GALLOWAY TOWNSHIP

GALLOWAY TOWNSHIP PUBLIC SCHOOL DISTRICT

101 SOUTH REEDS ROAD, GALLOWAY, NEW JERSEY 08205

- FVHD architects planners

New Jersey | Pennsylvania | fvhdpc.com

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CONSULTING ENGINEERS | SOMERVILLE - NEW JERSEY

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New Jersey Dept. of Education No: 1690-X01-20-1000

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Project Name
NEW DISTRICT MAINTENANCE & OPERATIONS BUILDING

Project Owner Name
GALLOWAY TOWNSHIP PUBLIC SCHOOLS

Project Location
REEDS ROAD GALLOWAY TOWNSHIP NJ

Project Number
5195

Project Date
5.15.2020

Checked By
WDH

Drawn By
TTH

Scale
AS NOTED

Drawing Name
TITLE SHEET DRAWING INDEX AND GENERAL INFO

Revisions

No.	Date	Description
	4.15.20	FOR BIDDING

Drawing Number
G001

GENERAL NOTES

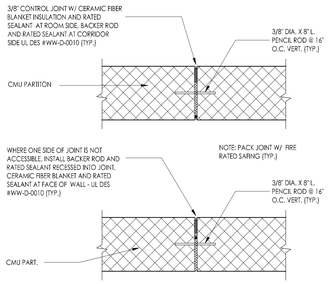
1. ALL CONTRACTORS SHALL VISIT THE SITE AND VERIFY ALL EXISTING CONDITIONS BEFORE SUBMITTING A BID. DISCREPANCIES OR OMISSIONS MUST BE REPORTED TO THE ARCHITECT IN WRITING (15) DAYS PRIOR TO BID OPENING. IF HE OR SHE DOES NOT, CONTRACTOR SHALL CORRECT SAME AT NO CHANGE IN CONTRACT PRICE.
2. CONTRACTOR SHALL PROVIDE ALL REQUIRED SAFETY PROTECTION DURING CONSTRUCTION.
3. IT SHALL BE THE CONTRACTORS RESPONSIBILITY TO PROVIDE A SUFFICIENT WORK FORCE TO MEET COMPLETION DATES AS OUTLINED IN THE SPECIFICATIONS. NO EXCEPTIONS WILL BE ALLOWED.
4. DO NOT SCALE THE DRAWINGS.
5. DETAILS NOTED "TYPICAL" IMPLY ALL SUCH CONDITIONS BE TREATED SIMILARLY.
6. MATERIALS LISTED ON THE FINISH SCHEDULE REFER TO THE MAJORITY OF WALLS, FLOOR AND CEILING OF ROOMS SCHEDULED. REFER TO PLANS, DETAILS, INTERIOR ELEVATION, CEILING PLANS, AND NOTES FOR THOSE MATERIALS NOT INDICATED ON THE SCHEDULE BUT ARE STILL REQUIRED IN THE ROOM.
7. UNLESS OTHERWISE NOTED AND UNLESS FACTORY FINISHED, ALL EXPOSED SURFACES OF CMU, CONCRETE, PLASTER, WOOD, GYPSUM BOARD, HOLLOW METAL, HARDWOODS, MISC., METALS ETC., ARE TO RECEIVE PRIME AND FINISH COATS OF PAINT OR CLEAR FINISH AS SPECIFIED AND IN COLORS AS SELECTED BY ARCHITECT. EXCLUDED FROM THIS IS BRICK.
8. ALL OUTSIDE CORNERS OF INTERIOR CONCRETE MASONRY UNITS (CMU) ARE TO BE BULLNOSED UNLESS NOTED OTHERWISE.
9. CALL BEFORE YOU DIG. BEFORE DIGGING CONTRACTOR SHALL CALL 1-800-242-1776 TO HAVE UTILITIES IDENTIFY UNDERGROUND LOCATION OF ALL SERVICE LINES.
10. ALL WORK PERTAINING TO THESE DRAWINGS SHALL BE PERFORMED IN ACCORDANCE WITH ALL APPLICABLE STATE AND LOCAL CODES AND IN AGREEMENT WITH ALL AGENCIES HAVING JURISDICTION.
11. THE CONTRACTOR IS RESPONSIBLE TO SECURE ALL PERMITS, TO OBTAIN APPROVALS AS REQUIRED AND COORDINATE INSPECTION WITH LOCAL BUILDING INSPECTOR. ALL PERMIT AND APPLICATION FEES WILL BE PAID BY THE OWNER AND DELIVERED BY THE CONTRACTOR.
12. DRAWINGS AND SPECIFICATIONS COMPLEMENT EACH OTHER. WORK NOT SHOWN ON DRAWING BUT CALLED FOR IN THE SPECIFICATIONS IS STILL REQUIRED, AND ALL WORK NOT CALLED FOR IN SPECIFICATIONS, BUT CALLED OUT OR SHOWN IN DRAWINGS IS STILL REQUIRED.
13. IN ACCORDANCE WITH NJAC 5:23-6.6(I), ALL MATERIALS AND METHODS USED SHALL COMPLY WITH THE REQUIREMENTS SPECIFIED IN N.J.A.C. 5:23-6.8, MATERIALS AND METHODS.
14. WHERE THERE IS AN ACCESSIBLE CONCEALED FLOOR, FLOOR-CEILING OR ATTIC SPACE, FIRE WALLS, FIRE BARRIERS, FIRE PARTITIONS, SMOKE BARRIERS AND SMOKE PARTITIONS OR ANY OTHER WALL REQUIRED TO HAVE PROTECTED OPENINGS OR PENETRATIONS SHALL BE EFFECTIVELY AND PERMANENTLY IDENTIFIED IN ACCORDANCE WITH THE FIRE AND/OR SMOKE PROTECTED ASSEMBLY MARKING DETAIL. REFER TO G003 FOR DETAIL.

SYMBOL LIST

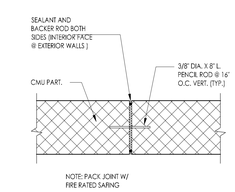
- XX / AXXX — section number / WALL SECTION / drawing number
- XX / AXXX — detail number / DETAIL INFORMATION / drawing number
- X — DEMOLITION NOTE REFERENCE TAG SEE DEMOLITION NOTES
- X — WINDOW OR CURTAINWALL TYPE SEE WINDOW/CURTAINWALL SCHEDULE
- XX — DOOR NUMBER SEE DOOR SCHEDULE
- XX — BORROWED LIGHT NUMBER SEE DOOR SCHEDULE
- XXXX / 100 — ROOM NAME/NUMBER
- X — EQUIPMENT NUMBER OR LETTER
- X — COLUMN NUMBER OR LETTER
- XX / AXXX — elevation number / INTERIOR ELEVATION / drawing number

MATERIAL LEGEND

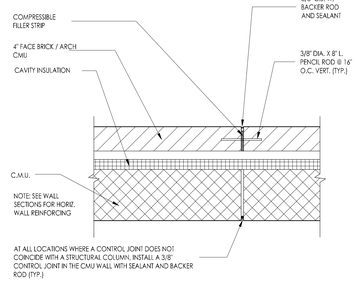
A.C.B. / A.C.T. · CMU
EARTH · POROUS FILL
PLASTER / GYP BD / EIFS · CONCRETE
STUD PARTITION · BATT INSULATION
ROUGH WOOD · PLYWOOD
FINISH WOOD · FACE BRICK
METAL / STEEL · RIGID INSULATION



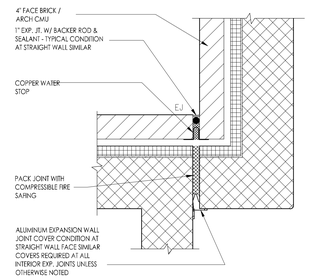
1 TYPICAL CONTROL JOINT (CJ) AT FIRE-RATED INTERIOR CMU WALL
1-1/2" = 1'-0"



2 TYPICAL CONTROL JOINT (CJ) AT INTERIOR CMU WALL
1-1/2" = 1'-0"



3 TYPICAL CONTROL JOINT (CJ) AT EXTERIOR WALL
1-1/2" = 1'-0"



4 TYPICAL EXPANSION JOINT (EJ) AT EXTERIOR AND INTERIOR WALLS & PARTITIONS
1-1/2" = 1'-0"

RESPONSIBILITY CHART

MATERIAL	FURNISHED BY	INSTALLED BY
EQUIPMENT CURB	HVAC CONTRACTOR	HVAC CONTRACTOR
EQUIPMENT FLASHING	GENERAL CONTRACTOR	GENERAL CONTRACTOR
COUNTER FLASHING	HVAC CONTRACTOR	GENERAL CONTRACTOR

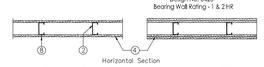
NOTE:
THIS CHART SHALL ONLY APPLY AT CONDITIONS OF NEW ROOF CONSTRUCTION WHERE THERE IS A GENERAL PRIME CONTRACTOR AND AN HVAC PRIME CONTRACTOR CONTRACTED FOR THE PROJECT.

SPECIAL INSPECTION NOTES:

THE FOLLOWING "SPECIAL INSPECTIONS" SHALL APPLY TO THIS PROJECT, AS DEFINED IN IBC-2009 NJ EDITION, CHAPTER 17, SECTION 1704. SEE SPECIFICATION SECTION 01410.

1704 . 2 - FABRICATIONS - SEE SPECIFICATION SECTIONS 05120, 05210 & 05300
1704 . 3 - STEEL CONSTRUCTION - SEE SPECIFICATION SECTIONS 05120, 05210 & 05300
1704 . 4 - CONCRETE CONSTRUCTION - SEE SPECIFICATION SECTION 03300
1704 . 5 - MASONRY CONSTRUCTION
1704 . 6 - Deleted
1704 . 7 - SOIL CONDITIONS, FILL PLACEMENT AND LOAD-BEARING REQUIREMENTS - SEE SPECIFICATION SECTION 02200
1704 . 8 - DRIVEN DEEP FOUNDATIONS
1704 . 9 - CAST-IN-PLACE DEEP FOUNDATIONS
1704 . 10 - HELICAL PILE FOUNDATIONS
1704 . 11 - VERTICAL MASONRY FOUNDATION ELEMENTS
1704 . 12 - SPRAYED FIRE-RESISTANT MATERIALS - SEE SPECIFICATION SECTION 07250
1704 . 13 - MASTIC AND INTUMESCENT FIRE-RESISTANT COATINGS - SEE SPECIFICATION SECTION 07260
~~1704 . 14 - EXTERIOR INSULATION AND FINISH SYSTEMS (EIFS)~~
1704 . 15 - SPECIAL CASES
1704 . 16 - SMOKE CONTROL

THE INSPECTION FIRM(S) SHALL SUBMIT CERTIFICATIONS TO NJ DCA PRIOR TO PERMIT RELEASE.

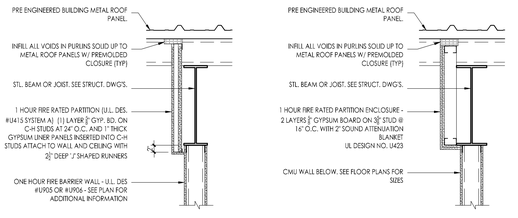


1. Floor and Ceiling Runners (Not Shown) - Channel shaped, fabricated from min. 0.0329 in., bare metal thickness (No. 20 MSG) corrosion-protected steel, that provides a sound structural connection between steel studs and adjacent assemblies such as floor, ceiling and/or other walls. Attached to floor and ceiling assemblies with steel fasteners spaced not greater than 24 in OC.
2. Steel Studs - Min. 0.0329 in. bare metal thickness (No. 20 MSG) corrosion-protected studs, min 3-1/2 in wide, cold formed, designed in accordance with the current edition of the Specification for the Design of Cold-Formed Steel Structural Members by the American Iron and Steel Institute (AISI). All design details enhancing the structural integrity of the wall assembly, including the axial design load of the studs, shall be as specified by the steel stud designer and/or producer, and shall meet the requirements of all applicable local code agencies. The max. studs spacing shall not exceed 24 in. OC. Studs attached to floor and ceiling runners with 1/2 in long Type S-12 steel screws on both sides of the stud or by welded or bolted connections designed in accordance with the AISI specifications.
3. Lateral Support Members (Not Shown) - Where required for lateral support of studs, support shall be provided by means of steel straps, channels, or other similar means as specified in the design of a particular steel stud wall system.
4. Wallboard, Gypsum - Gypsum panels with beveled, square or tapered edges, applied vertically or horizontally. Vertical joints centered over studs and staggered one stud cavity on opposite sides of studs. Vertical joints in adjacent layers (multi-layer systems) staggered one stud cavity. Horizontal edge joints and horizontal butt joints on opposite sides of studs need not be staggered when load is reduced to 90 percent of max stud capacity. When load is at 100 percent, horizontal edge joints and horizontal butt joints on opposite sides of studs staggered a min of 12 in. Horizontal edge joints and horizontal butt joints in adjacent layers (multi-layer systems) staggered a min of 12 in. The thickness and number of layers and percent of design load for the 1 hour and 2 hour ratings are as follows:

Rating	No of Layers & Thickness of Panels	Percent of Design Load
1 Hour	1 Layer, 5/8" thick	100
2 Hours	2 Layers, 5/8" thick	80

5. Fasteners (Not Shown) - Type S-12 steel screws used to attach panels to runners and studs or furring channels. Single layer systems: 1 in long, spaced 8 in OC when panels are applied horizontally or 12 in OC when panels are applied vertically. Double layer systems: First layer- 1 in long spaced 16 in OC. Second layer- 1-5/8 in long spaced 16 in OC with screws offset 8 in from first layer.
6. Batts and Blankets (Optional, Not Shown) - Placed in stud cavities, any glass fiber or mineral wool insulation bearing the U. Classification Marking as to Surface Burning Characteristics and/or Fire Resistance. (See Floor Plan, Sections or Details for Thickness)
7. Furring Channels (Optional on One or Both Sides, Not Shown) - Resilient furring channels fabricated from min 25 MSG corrosion-protected steel, spaced vertically a max of 24 in OC. Flange portion attached to each intersecting stud with 1/2 in long Type S-12 panhead steel screws.
8. Joint Tape and Compound - Vinyl or casein, dry or premixed joint compound applied in two coats to joints and screw heads of outer layers. Paper tape, nom 2 in wide, embedded in first layer of compound over all joints of outer layers.
9. Caulking and Sealants (Not Shown) - A bead of acoustical sealant applied around the partition perimeter for sound control.

IN ALL LOCATIONS OF CORRIDOR AND PASSAGE WALLS, THE GYPSUM WALL BOARD SHALL BE IMPACT-RESISTANT ON THE CORRIDOR OR PASSAGE SIDE OF THE PARTITION.



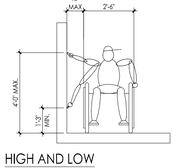
5 TYPICAL CLOSURE DETAIL AT STEEL BEAM & 1-HR FIRE BARRIER ASSEMBLY
NTS.



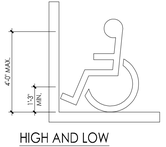
KNEE CLEARANCE



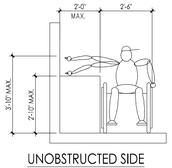
TOE CLEARANCE



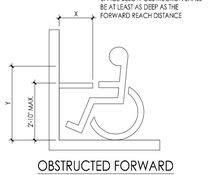
HIGH AND LOW UNOBSTRUCTED SIDE REACH LIMITS



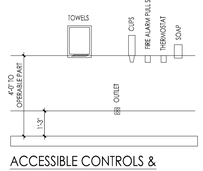
HIGH AND LOW UNOBSTRUCTED FORWARD REACH LIMITS



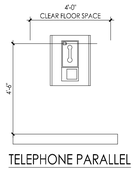
UNOBSTRUCTED SIDE REACH LIMITS



OBSTRUCTED FORWARD REACH LIMITS



ACCESSIBLE CONTROLS & OPERATING MECHANISMS - FORWARD APPROACH



TELEPHONE PARALLEL APPROACH

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Architect
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Corporate: 1515 Lower Ferry Road - Trenton - New Jersey 08628
Pennsylvania: 140 Whitaker Ave - Mont Clare - Pennsylvania 19453

Project Name
NEW DISTRICT MAINTENANCE & OPERATIONS BUILDING

Project Owner Name
GALLOWAY TOWNSHIP PUBLIC SCHOOLS

Project Location
REEDS ROAD
GALLOWAY TOWNSHIP NJ

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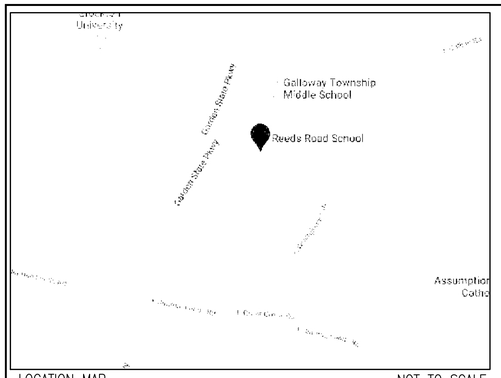
Scale
AS NOTED

Drawing Name
TYPICAL DETAILS

Revisions

No.	Date	Description
	4.15.20	FOR BIDDING

Drawing Number
G002



LOCATION MAP NOT TO SCALE

NOTE:
THE HORIZONTAL DATUM IS BASED UPON THE NEW JERSEY STATE PLANE COORDINATE SYSTEM, NAD83 AND WAS ESTABLISHED BY TAKING STATIC GPS OBSERVATIONS ON KNOWN SURVEY CONTROL POINTS AND SUBMITTING THE DATA TO OPUS RS FOR POST-PROCESSING.
THE VERTICAL DATUM IS NAVD88 AND WAS ALSO ESTABLISHED BY TAKING STATIC GPS OBSERVATIONS

0 20 40 60
SCALE: 1"=20'

REEDS ROAD

SEMINOLE PLACE

BM: PK NAIL
N:237929.68
E:487788.55
elev:40.97

BM: PK NAIL
N:237767.78
E:487892.78
elev:40.36

BM: PK NAIL
N:237638.45
E:487985.87
elev:40.19

BM: PK NAIL
N:237499.77
E:487887.54
elev:42.40

BM: PK NAIL
N:237382.96
E:487676.46
Elev: 43.09

W2-1/W2-12
N:237775.59
E:487742.50

W1-1/W1-15
N:237812.89
E:487663.26

W1-7
N:237971.92
E:487368.54

W2-5
N:237620.20
E:487690.86

W3-6
N:237576.18
E:487936.04

Wetland Area "A"
28924± Sq. Feet
0.664± Acres

LINE	BEARING	DISTANCE
L1	S 24°00'12" W	39.61'
L2	S 52°04'21" W	49.08'
L3	N 57°05'18" W	71.46'
L4	N 49°07'47" W	67.31'
L5	N 48°33'28" W	67.49'
L6	N 52°42'51" W	78.48'
L7	N 40°26'40" W	114.78'
L8	N 18°56'34" E	41.93'
L9	N 45°08'38" E	41.14'
L10	S 62°09'02" E	40.80'
L11	S 54°14'06" E	61.31'
L12	S 51°15'26" E	45.34'
L13	S 50°55'52" E	86.12'
L14	S 48°22'30" E	76.92'

Wetland Area "B"
16191± Sq. Feet
0.372± Acres

LINE	BEARING	DISTANCE
L15	N 57°20'00" E	26.56'
L16	S 48°44'00" E	35.50'
L17	S 11°49'29" E	56.22'
L18	S 11°23'52" W	40.61'
L19	S 47°11'17" W	37.99'
L20	S 71°25'02" W	80.51'
L21	N 80°10'19" W	30.18'
L22	N 27°56'59" W	27.39'
L23	N 15°50'02" E	33.36'
L24	N 39°42'03" E	93.51'
L25	N 49°04'09" E	33.60'

man made storm water management basin
wet pond

BLOCK 953.01, LOT 1.01

storm water basin
wet pond

REEDS ROAD ELEMENTARY SCHOOL
103 South Reeds Road
Galloway, NJ 08205

BLOCK 953.01, LOT 1.01

REEDS ROAD ELEMENTARY SCHOOL
103 South Reeds Road
Galloway, NJ 08205

BLOCK 953.01, LOT 1.01

LEGEND – EXISTING CONDITIONS

SYMBOL	DESCRIPTION
Vertical Text	NOTES AND TEXT
○	MANHOLE
□	INLET
6" PVC SS	SANITARY SEWER
24" RCP ST	STORM SEWER
GV WV	VALVE–TYPE
	FIRE HYDRANT
W E T	UTILITY LINES: WATER–GAS–ELEC–TELE OVERHEAD WIRES
	UTILITY POLE/W–LIGHT/LIGHT
	CLEANOUT

SYMBOL	DESCRIPTION
	PAVEMENT EDGE
	CURB/DEPRESSED CURB
	CONCRETE SIDEWALK
	FENCE
10	CONTOUR LINE
+22.75	SPOT ELEVATION
	STREET & TRAFFIC SIGNS
SB	SOIL TEST LOCATION SL: LOG, SB: BORING, PERC TEST.
	EVERGREEN/DECIDUOUS TREES
	DEMOLITION AREA

ABBREVIATIONS

A/C	AIR CONDITIONING UNIT			ML/M.L.	MEASURE LINE	S.O.W.	STATE OPEN WATER
AC.	ACRES	E	ELECTRIC	MOD	MODULAR (BLOCK)	SF/S.F.	SQUARE FEET
ADA	AMERICAN DISABILITIES ACT	E	EAST	MON	CONCRETE MONUMENT (CONTROL)	ST.	STORM SEWER
ALT.	ALTERNATE	ELEC	ELECTRICAL			STD.	STANDARD
APPROX	APPROXIMATE	EL/ELEV	ELEVATION	N	NORTH	SY/S.Y.	SQUARE YARD
AST	ABOVE GROUND STORAGE TANK	EX/EXIST	EXISTING	N/F	NOW OR FORMERLY		
				NIC	NOT IN CONTRACT	TEL	TELEPHONE
BBC	BELGIAN BLOCK CURB	FF/F.F.	FINISHED FLOOR (ELEVATION)			TB	TOP OF BORDER
BC	BOTTOM OF CONC. CURB (FACE)	FDC	FIRE DEPARTMENT CONNECTION	O/A	OVERALL	TBR	TO BE REMOVED
BF	BARRIER FREE (ADA)	FM	FORCE MAIN (SEWAGE)	O.C.	ON CENTER	TC	TOP OF CONC. CURB
BIT	BITUMINOUS (ASPHALTIC)	FND.	FOUND	O/H	OVERHEAD	TCU	TEMPORARY CLASSROOM UNIT
BM	BENCHMARK (CONTROL POINT)	FO/F.O.	FIBER OPTIC CABLE	OT	OUTSIDE TRACK EDGE	TCW	TOP OF CURB WALL
BR	BOTTOM OF RAMP	FTG	FOOTING			TP	TEST PIT
BS	BOTTOM STEP			PC	POINT OF CURVATURE	TR	TOP OF RAMP
BW	BOTTOM WALL (FACE)	G	GAS PIPE LINE	PCC	POINT OF COMPOUND CURVATURE	TRANSF	TRANSFORMER
		GA	GAUGE (WIRE)	PEP	POLYETHYLENE PIPE (HDPE)	TRC	TOP ROLLED ASPHALT CURB
C	CONDUIT	GALV.	GALVANIZED	PERF	PERFORATED	TW	TOP OF WALL
C	COPPER PIPE	GND	GROUND	PK	SURVEYOR'S NAIL (CONTROL)	TYP	TYPICAL
CAL	CALIPER	GRT	GRATE ELEVATION	PL	PROPERTY LINE		
CIP/C.I.P.	CAST IRON PIPE	GV	GAS VALVE (COVER)	PROP	PROPOSED	UD/U.D.	UNDER DRAIN
CLF	CHAIN LINK FENCE			PT	POINT OF TANGENCY	U/G	UNDERGROUND
CMP	CORRUGATED METAL PIPE	HC	HANDICAPPED	PVC	POINT OF VERTICAL CURVATURE	UNK	UNKNOWN (UNDERGROUND)
CMU	CONCRETE MASONRY UNIT	HDPE	HIGH DENSITY POLYETHYLENE PIPE	PVC	POLYVINYL CHLORIDE PIPE	UP	UTILITY POLE
CO/C.O.	CLEANOUT	HERCP	HORIZONTAL ELLIPTICAL RCP	PVT	POINT OF VERTICAL TANGENCY	UST	UNDERGROUND STORAGE TANK
COMM	COMMUNICATIONS/DATA CABLE	HP	HIGH POINT				
CONC	CONCRETE (PORTLAND CEMENT)	HYD	FIRE HYDRANT	RCP	REINFORCED CONCRETE PIPE	VCP	VITRIFIED CLAY PIPE
CONFIG.	CONFIGURATION			REG	REGULATOR	VIF/V.I.F.	VERIFY IN FIELD
CY/C.Y.	CUBIC YARD	INV	INVERT ELEVATION (PIPE)	RIM	RIM ELEVATION (OF CASTING)		
		IP/I.P.	IRON PIPE (CONTROL)	RL	ROOF LEADER TO GRADE	W	WATER
DB	DEED BOOK	IT	INSIDE TRACK EDGE	RLUG	ROOF LEADER UNDERGROUND	W	WEST
DBH	DIA. @ BREAST HEIGHT (4.5')			ROW	RIGHT OF WAY		
DC/DEPR	DEPRESSED CURB	LF	LINEAR FEET	RR	RAILROAD	WTA	WETLAND TRANSITION AREA
DEMO	DEMOLISH	LOI/L.O.I.	LETTER OF INTERPRETATION			WWM	WELDED WIRE MESH
DIA	DIAMETER	LP	LOW POINT	S	SOUTH	WV	WATER VALVE (COVER)
DIP	DUCTILE IRON PIPE	LPG	LIQUIFIED PETROLEUM GAS	SAN/SS	SANITARY SEWER		
DS	DOWNSPOUT			SCD	SOIL CONSERVATION DISTRICT	Z	ZENITH (ELEVATION)
DW	DRY WELL	MH	MANHOLE	SDR	STD. DIMENSION RATIO		

ABBREVIATIONS

EX	EXISTING	G	NATURAL GAS	U/G	UNDERGROUND
TBR	TO BE REMOVED	W	WATER	FDC	FIRE DEPT. CONN.
CO	CLEAN OUT	T	TELEPHONE	DIP	DUCTILE IRON PIPE
DS	DOWN SPOUT	GV	GAS VALVE	RCP	REINFORCED CONC. PIPE
CATV	CABLE	WV	WATER VALVE	PVC	POLYVINYL CHLORIDE PIPE
E	ELECTRIC	UP	UTILITY POLE	PEP	POLYETHYLENE PIPE
SL	SOIL LOG	SB	SOIL BORING	PERC	PERC TEST
F/m	FORCE MAIN	fo	FIBER OPTIC		
rlug	ROOF LEADER–UNDER GROUND	rlg	ROOF LEADER–DISCHARGE TO GRADE		

CONTRACTOR NOTE: YOU MUST ENGAGE A CERTIFIED MATERIALS & INSPECTION COMPANY AND PROVIDE GEOTECHNICAL ENGINEERING OVERSIGHT IN THE PROJECT. REFER TO FIELD ENGINEERING NOTES & SPECIFICATIONS.

EXISTING CONDITIONS SHOWN ON THIS PLAN SERT ARE BASED UPON A TOPOGRAPHIC SURVEY PERFORMED BY DAVID LUCCHI, PLS, OF EDWARDS ENGINEERING GROUP, IN DECEMBER 2019.

UNDERGROUND UTILITIES:
1. ALL UNDERGROUND UTILITIES REPRESENTED ON THIS PLAN ARE SHOWN APPROXIMATELY. IN ALL CASES THE EXACT DEPTH, SIZE AND ALIGNMENT OF UNDERGROUND PIPES, WIRES, AND OTHER FEATURES SHALL BE CONSIDERED UNKNOWN AND MUST BE FIELD VERIFIED AT THE START OF THE PROJECT.
2. ENGAGE THE SERVICES OF A PRIVATE UNDERGROUND UTILITY LOCATING AND MARK OUT SERVICE TO PERFORM A MARK OUT OF THE ENTIRE SITE. REFER TO THE PROJECT SPECIFICATIONS FOR ADDITIONAL INFORMATION ON THE MARK OUT AND REQUIRED TEST PITS.
3. CONDUCT TEST PITS AT ALL LOCATIONS WHERE PROPOSED UNDERGROUND UTILITIES (WATER SUPPLY PIPING, STORM SEWERS, ELECTRIC & DATA CONDUITS) WILL CROSS EXISTING UNDERGROUND UTILITIES AND RECORD THE DEPTH, SIZE, AND ALIGNMENT OF EACH UTILITY AT THE CROSSING. VERIFY CLEARANCES CAN BE ACHIEVED WITHOUT DEVIATING FROM THE DESIGN INTENT. REPORT TO THE OWNER'S REPRESENTATIVE ANY POTENTIAL CONFLICTS VIA THE R.F.I. PROCESS.

UTILITY COMPANY INFORMATION:

NJ American Water Co: Tel. 800–272–1325
PSE&G: Tel. 855–249–7734
Elizabethtown Gas: Tel. 800–492–4009

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Project Name
NEW DISTRICT MAINTENANCE & OPERATIONS BUILDING

Project Owner Name
GALLOWAY TOWNSHIP PUBLIC SCHOOLS

Project Location
BLOCK 953.01, LOT 1.01
103 S. REEDS ROAD, GALLOWAY TWP., ATLANTIC COUNTY, NEW JERSEY

Project Number
5195

Project Date
06.19.20

Checked By
WBE

Drawn By
BEK

Scale
NOTED

Drawing Name
EXISTING CONDITIONS PLAN

Revisions

No.	Date	Description

Civil Engineering Consultant: EEG 1228C

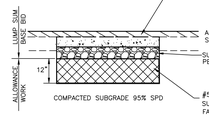
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William B. Edwards 06.19.2020
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C–1.0

NOTES:
1. INCLUDE IN THE BASE BID, A UNIT PRICE AND ALLOWANCE FOR UP TO 250 CUBIC YARDS OF SUBGRADE SOIL RECONSTRUCTION, WHERE/IF AUTHORIZED BY THE ENGINEER.
2. THE CONTRACTOR'S GEOTECHNICAL ENGINEER MUST PROVIDE FIELD REPORTS DOCUMENTING THAT THE UNSUITABLE SOILS CANNOT BE RE-CONDITIONED (PER THE EARTHWORK SPECIFICATION) FOR PROPER COMPACTION, BEFORE THE ENGINEER WILL AUTHORIZE THIS WORK.
3. THIS ALLOWANCE ITEM SHALL INCLUDE ALL EXCAVATION OF POOR SUBGRADE SOIL, DISPOSAL OF WASTE MATERIALS, IMPORTED STONE, PLACEMENT AND COMPACTION OF ALL MATERIALS, AND ALL ELSE NECESSARY AND INCIDENTAL THERETO..
4. THE CONTRACTOR'S TESTING & INSPECTION COMPANY MUST OVERSEE ALL SUBGRADE RECONSTRUCTION AND MUST RETAIN MATERIAL SUPPLY TICKETS TO CONFIRM THE CONSTRUCTED QUANTITIES.
5. PROVIDE A SUBMITTAL CONFIRMING THE AGGREGATE MEETS NJ DOT SPECIFICATIONS AND THAT THE MATERIAL IS NOT CONTAMINATED.
6. THE 12" DEPTH NOTED MAY BE CHANGED WITH PERMISSION FROM THE OWNER'S ENGINEER, PROVIDED THAT THE REQUIRED COMPACTION AND STABILITY IS OBTAINED.

DEMOLITION, EARTHWORK, AND CONSTRUCTION RELATED TO THE BITUMINOUS PAVEMENT AND SUBBASE SHOWN IN THIS DETAIL SHALL BE INCLUDED IN THE LUMP SUM BASE BID. ONLY THE SUBGRADE EARTHWORK, GRANULAR MATERIAL, GEOTEXTILE FABRIC AND RELATED WORK IS PART OF THE UNIT PRICE WORK.



SUBGRADE RECONSTRUCTION
IF & WHERE (SEE NOTE #2)

SITE MAINTENANCE REQUIREMENTS:
1. INSTALL DE-WATERING MEASURES AT THE COMMENCEMENT OF EARTHWORK OPERATIONS AND MAINTAIN DE-WATERING OF ALL OPEN EXCAVATIONS THROUGHOUT CONSTRUCTION. STORM WATER RUNOFF MUST BE IMMEDIATELY EVACUATED FROM THE PROJECT SITE THROUGH DE-WATERING PRACTICES. WATER MUST NOT BE TRAPPED OR ALLOWED TO POOL IN ANY AREA. DE-WATERING MEASURES SHALL INCLUDE DE-WATERING PUMPS AND A MEANS OF FILTERING SEDIMENT AND SILT FROM THE WATER BEFORE IT IS DISCHARGED INTO DOWNSTREAM DRAINAGE SYSTEMS.
2. ENGAGED A NJ LICENSED PROFESSIONAL GEOTECHNICAL ENGINEER TO OVERSEE ALL EARTHWORK. CONTRACTOR MUST INSURE THAT EXISTING SOILS ARE CONDITIONED TO BE AT OR NEAR OPTIMUM MOISTURE LEVELS FOR COMPACTION. THE CONTRACTOR'S GEOTECHNICAL ENGINEER MUST DOCUMENT SOIL CONDITIONS.
3. ANY SOIL THAT IS SATURATED SHALL BE DRIED BY THE CONTRACTOR TO RESTORE OPTIMUM MOISTURE LEVEL (VERIFIED BY GEOTECHNICAL ENGINEER.) SOILS THAT ARE SATURATED AND CANNOT BE RECONDITIONED IN SUFFICIENT TIME, WITHOUT AFFECTING THE PROJECT SCHEDULE, SHALL BE REMOVED AND REPLACED WITH SUITABLE COMPACTED SOIL (DENSE GRADED AGGREGATE) AT THE CONTRACTOR'S EXPENSE. SEE NOTE #1 ABOVE.
4. PROTECT ADJACENT AREAS TO MAINTAIN THEIR ORIGINAL CONDITION THROUGHOUT CONSTRUCTION. ANY AREAS DAMAGED OR DISTURBED BY THE CONTRACTOR SHALL BE RESTORED TO A "LIKE NEW" CONDITION AT THE CONTRACTOR'S EXPENSE.
5. MAINTAIN THE UNDERGROUND UTILITY MARK-OUT THROUGHOUT CONSTRUCTION.
6. PRESERVE AND MAINTAIN SURVEY CONTROL POINTS THROUGHOUT CONSTRUCTION.
7. SWEEP AND MAINTAIN ALL PAVEMENT AREAS TO A "BROOM CLEAN" CONDITION AROUND ALL WORK AREAS. SOIL AND DEBRIS SHALL NOT BE TRACKED OUTSIDE THE WORK AREA.
8. INSTALL TEMPORARY POST-IN-GROUND, 6 FOOT HIGH CONSTRUCTION FENCING AS NEEDED TO SECURE THE SITE. THE OWNER RESERVES THE RIGHT TO REQUIRE THE INSTALLATION OF ADDITIONAL CONSTRUCTION FENCING TO MAINTAIN SITE SAFETY AND SECURITY AT NO ADDITIONAL COST.

GENERAL DEMOLITION REQUIREMENTS:
1. PRIOR TO STARTING WORK, ENGAGE THE SERVICES OF A PRIVATE UNDERGROUND UTILITY LOCATION AND MARK OUT SERVICE TO MARK THE LOCATION OF ALL UNDERGROUND UTILITIES WITHIN THE SCOPE OF THIS PROJECT. THE NJ ONE CALL SERVICE MAY NOT PERFORM A LOCATION WITH THE SCHOOL SITE, THEREFORE, IT IS THE CONTRACTOR'S RESPONSIBILITY TO UNDERTAKE THIS WORK. MAINTAIN THE MARK OUT THROUGHOUT THE ENTIRE PROJECT, UNTIL SUCH TIME AS SURFACES ARE INSTALLED AND NO FURTHER SUBSURFACE PENETRATIONS WILL OCCUR.
2. ALL DEMOLITION WORK, INCLUDING, BUT NOT LIMITED TO EXCESS FILL, EMBANKMENT, FENCING, CONCRETE, PAVEMENT, ETC. INCLUDES HAULING TO AND DISPOSAL OF SAME IN A LEGAL MANNER, OFF-SITE.
3. ALL ITEMS ACCIDENTALLY DISTURBED OR DAMAGED BY DEMOLITION, SAW CUTTING, EXCAVATION, ETCETERA, THAT ARE TO REMAIN, SHALL BE REPLACED, RESET, OR RECONSTRUCTED AS REQUIRED TO RESTORE STRUCTURAL INTEGRITY AND SUITABLE ("LIKE NEW") APPEARANCE AT NO ADDITIONAL COST.
4. ALL MATERIALS AND EQUIPMENT THAT ARE TO BE RE-USED IN NEW CONSTRUCTION SHALL BE STORED IN A SAFE LOCATION AT THE PROJECT WORK SITE. ALL MATERIALS THAT ARE NOTED TO BE RE-USED SHALL BE CAREFULLY DISMANTLED TO AVOID DAMAGE. ALL PARTS SHALL BE IDENTIFIED AND SECURELY BAGGED. ANY DAMAGED OR LOST EQUIPMENT, HARDWARE, PARTS, OR MATERIALS THAT ARE TO BE RE-USED SHALL BE REPLACED WITH NEW MATERIAL OF EQUIVALENT SIZE AND COMPOSITION. DISASSEMBLE AND DISMANTLE EQUIPMENT ONLY AS MUCH AS NEEDED TO SAFELY REMOVE AND RELOCATE SAME WITHOUT DAMAGING OR COMPROMISING ITS INTEGRITY.
5. A SMOOTH UNIFORM EDGE MUST BE PROVIDED ALONG THE LIMIT OF PAVEMENT REMOVAL. THE CONTRACTOR SHALL SAW-CUT THE PAVEMENT ALONG THE LIMIT OF PAVEMENT DEMOLITION.
6. REMOVE ALL OBSTRUCTIONS WITHIN THE LIMIT OF SITE CONSTRUCTION INCLUDING, BUT NOT LIMITED TO, PAVEMENT, CURB & GUTTER, SIDEWALKS, SIGNS, BOLLARDS, FENCES, TREES, CONCRETE SLABS, WALLS, DEBRIS, GRASS & ROOT MASS, AND FOLIAGE.
7. THE VOIDS CREATED BY THE DEMOLITION AND REMOVAL OF SITE FEATURES AND OTHER STRUCTURES, SHALL BE BACKFILLED WITH ON-SITE SUBGRADE SOIL THAT HAS BEEN PREPARED TO CONTROL ITS MOISTURE CONTENT AS PER THE EARTHWORK SPECIFICATIONS. IMPORTED DENSE GRADED AGGREGATE MAY ALSO BE USED TO BACKFILL THE VOIDS CREATED BY DEMOLITION, AT THE CONTRACTOR'S OPTION, HOWEVER, NO SEPARATE PAYMENT WILL BE MADE FOR THE IMPORTED MATERIAL. ALL BACKFILL SHALL BE PLACED IN 8" LIFTS AND COMPACTED TO 95% STANDARD PROCTOR DENSITY PER ASTM D-698.
8. PROTECT EXISTING UNDERGROUND UTILITIES AND STORM SEWERS, AND KEEP ACTIVE UNTIL NEW UTILITY SERVICES ARE CONNECTED.
9. PHASE THE DEMOLITION OF HARD SURFACES AND THE STRIPPING OF LAWN AREAS TO MINIMIZE THE EXPOSURE OF SUBGRADE SOILS TO INCLEMENT WEATHER.
10. MAINTAIN PEDESTRIAN WALKWAYS AND EGRESS ROUTES FROM BUILDING DOORWAYS UNTIL SUCH TIME AS THE OWNER ALLOWS THEIR DEMOLITION. NEW WALKWAYS SHALL BE CONSTRUCTED SHORTLY THEREAFTER TO MINIMIZE THE TIME THAT BUILDING DOORWAYS ARE UNUSABLE.
11. INSTALL TEMPORARY BITUMINOUS WALKWAYS COMPRISED OF 1.5 INCH THICK LAYER OF FINE AGGREGATE BITUMINOUS CONCRETE, HOT MIX ASPHALT (HMA) 9.5M64, IF THE CONSTRUCTION OF PERMANENT WALKWAYS WILL BE DELAYED AND IF BUILDING EGRESS MUST BE RESTORED TO MAINTAIN THE BUILDING'S CERTIFICATE OF OCCUPANCY.

NOTE:
THE HORIZONTAL DATUM IS BASED UPON THE NEW JERSEY STATE PLANE COORDINATE SYSTEM, NAD83 AND WAS ESTABLISHED BY TAKING STATIC GPS OBSERVATIONS ON KNOWN SURVEY CONTROL POINTS AND SUBMITTING THE DATA TO OPUS RS FOR POST-PROCESSING.
THE VERTICAL DATUM IS NAVD88 AND WAS ALSO ESTABLISHED BY TAKING STATIC GPS OBSERVATIONS

SCALE: 1"=20'

LEGEND – EXISTING CONDITIONS

SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
Vertical Text	NOTES AND TEXT		PAVEMENT EDGE
○	MANHOLE		CURB/DEPRESSED CURB
□	INLET		CONCRETE SIDEWALK
8" PVC SS / 24" RCP ST	SANITARY SEWER / STORM SEWER		FENCE
GV WV	VALVE-TYPE		CONTOUR LINE
	FIRE HYDRANT	+22.75	SPOT ELEVATION
W G T E OHW	UTILITY LINES: WATER-GAS-ELEC-TELE OVERHEAD WIRES		STREET & TRAFFIC SIGNS
	UTILITY POLE/W-LIGHT/LIGHT		SOIL TEST LOCATION, SL: LOG, SB: BORING, PERC TEST.
CO	CLEANOUT		EVERGREEN/DECIDUOUS TREES
			DEMOLITION AREA

ABBREVIATIONS

EX	EXISTING	G	NATURAL GAS	U/G	UNDERGROUND
TBR	TO BE REMOVED	W	WATER	FDC	FIRE DEPT. CONN.
CO	CLEAN OUT	T	TELEPHONE	DIP	DUCTILE IRON PIPE
DS	DOWN SPOUT	GV	GAS VALVE	RCP	REINFORCED CONC. PIPE
CATV	CABLE	WV	WATER VALVE	PVC	POLYVINYL CHLORIDE PIPE
E	ELECTRIC	UP	UTILITY POLE	PEP	POLYETHYLENE PIPE
SL	SOIL LOG	SB	SOIL BORING	PERC	PERC TEST
f/m	FORCE MAIN	fo	FIBER OPTIC		
r/leg	ROOF LEADER-UNDER GROUND	r/g	ROOF LEADER-DISCHARGE TO GRADE		

CONTRACTOR NOTE: YOU MUST ENGAGE A CERTIFIED MATERIALS & INSPECTION COMPANY AND PROVIDE GEOTECHNICAL ENGINEERING OVERSIGHT IN THE PROJECT. REFER TO FIELD ENGINEERING NOTES & SPECIFICATIONS.

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Project Name
NEW DISTRICT MAINTENANCE & OPERATIONS BUILDING

Project Owner Name
GALLOWAY TOWNSHIP PUBLIC SCHOOLS

Project Location
BLOCK 953.01, LOT 1.01
103 S. REEDS ROAD, GALLOWAY TWP., ATLANTIC COUNTY, NEW JERSEY

Project Number
5195

Project Date
06.19.20

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Drawn By
BEK

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Drawing Name
DEMOLITION PLAN

Revisions

No.	Date	Description

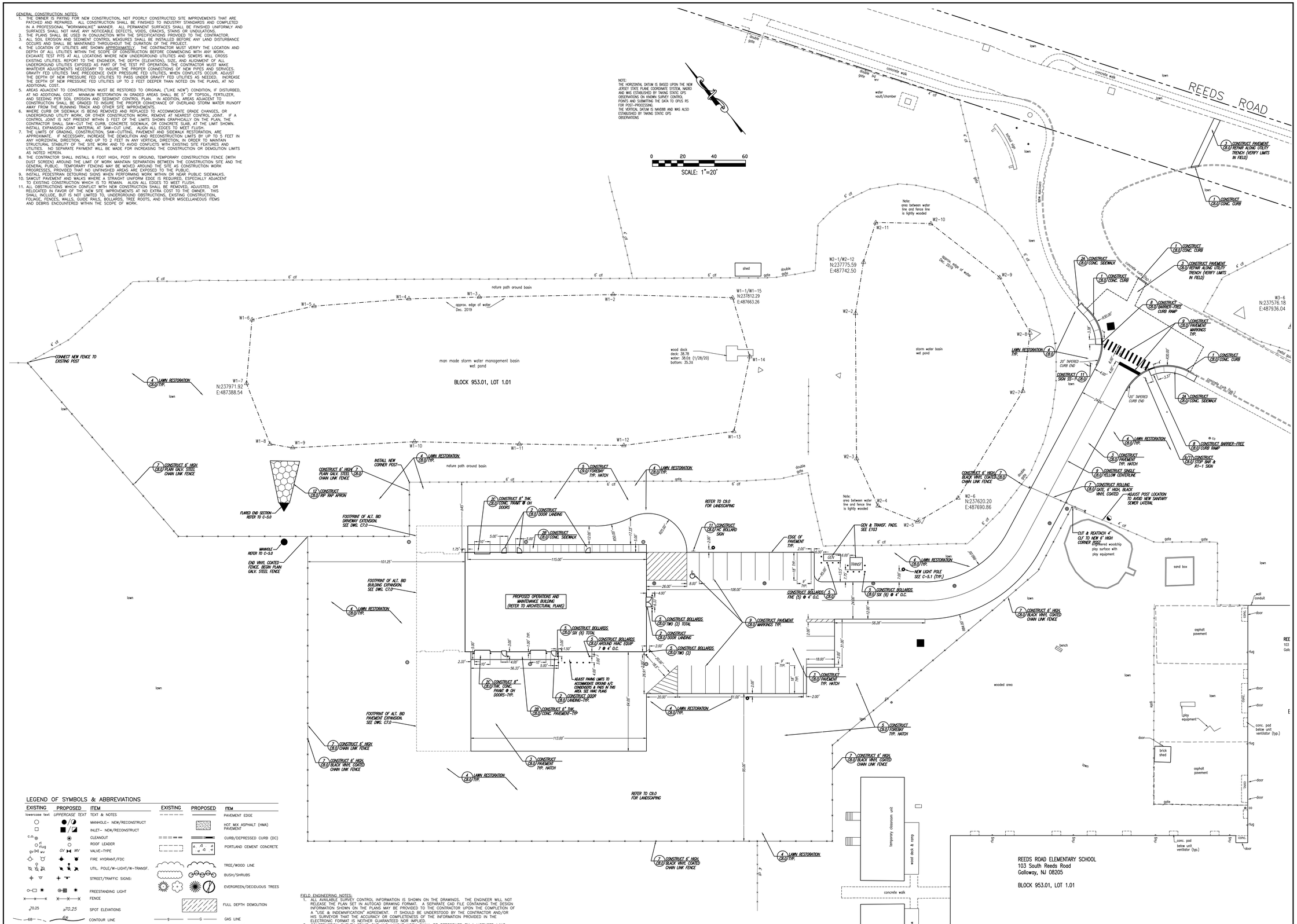
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Drawing Number
C-2.0

GENERAL CONSTRUCTION NOTES:

1. THE OWNER IS PAYING FOR NEW CONSTRUCTION, NOT POORLY CONSTRUCTED SITE IMPROVEMENTS THAT ARE PATCHED AND REPAIRED. ALL CONSTRUCTION SHALL BE FINISHED TO INDUSTRY STANDARDS AND COMPLETED IN A PROFESSIONAL "WORKMANLIKE" MANNER. ALL PERMANENT SURFACES SHALL BE FINISHED UNIFORMLY AND SURFACES SHALL NOT HAVE ANY NOTICEABLE DEFECTS, VOIDS, CRACKS, STAINS OR UNDULATIONS.
2. THE PLANS SHALL BE USED IN CONJUNCTION WITH THE SPECIFICATIONS PROVIDED TO THE CONTRACTOR.
3. ALL SOIL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE INSTALLED BEFORE ANY LAND DISTURBANCE OCCURS AND SHALL BE MAINTAINED THROUGHOUT THE DURATION OF THE PROJECT.
4. THE LOCATION OF UTILITIES ARE SHOWN APPROXIMATELY. THE CONTRACTOR MUST VERIFY THE LOCATION AND DEPTH OF ALL UTILITIES WITHIN THE SCOPE OF CONSTRUCTION BEFORE COMMENCING WITH ANY WORK. EXCAVATE TEST PITS AT ALL LOCATIONS WHERE NEW UNDERGROUND UTILITIES AND SEWERS WILL CROSS EXISTING UTILITIES. REPORT TO THE ENGINEER, THE DEPTH (ELEVATION), SIZE, AND ALIGNMENT OF ALL UNDERGROUND UTILITIES EXPOSED AS PART OF THE TEST PIT OPERATION. THE CONTRACTOR MUST MAKE WHATEVER ADJUSTMENTS NECESSARY TO INSURE THE PROPER CONNECTIONS OF NEW PIPES AND SERVICES. GRAVITY FED UTILITIES TAKE PRECIDENCE OVER PRESSURE FED UTILITIES, WHEN CONFLICTS OCCUR. ADJUST THE DEPTH OF NEW PRESSURE FED UTILITIES TO PASS UNDER GRAVITY FED UTILITIES AS NEEDED. INCREASE THE DEPTH OF NEW PRESSURE FED UTILITIES UP TO 2 FEET DEEPER THAN NOTED ON THE PLANS, AT NO ADDITIONAL COST.
5. AREAS ADJACENT TO CONSTRUCTION MUST BE RESTORED TO ORIGINAL ("LIKE NEW") CONDITION, IF DISTURBED, AT NO ADDITIONAL COST. MINIMUM RESTORATION IN GRADED AREAS SHALL BE 5" OF TOPSOIL, FERTILIZER, AND SEEDING PER SOIL EROSION AND SEDIMENT CONTROL PLAN. IN ADDITION, AREAS ADJACENT TO CONSTRUCTION SHALL BE GRADED TO INSURE THE PROPER CONVEYANCE OF OVERLAND STORM WATER RUNOFF AWAY FROM THE RUNNING TRACK AND OTHER SITE IMPROVEMENTS.
6. WHERE CURB OR SIDEWALK IS BEING REMOVED AND REPLACED TO ACCOMMODATE GRADE CHANGES, OR UNDERGROUND UTILITY WORK, OR OTHER CONSTRUCTION WORK, REMOVE AT NEAREST CONTROL JOINT. IF A CONTROL JOINT IS NOT PRESENT WITHIN 5 FEET OF THE LIMITS SHOWN GRAPHICALLY ON THE PLAN, THE CONTRACTOR SHALL SAW-CUT THE CURB, CONCRETE SIDEWALK, OR CONCRETE SLAB, AT THE LIMIT SHOWN. INSTALL EXPANSION JOINT MATERIAL AT SAW-CUT LINE. ALIGN ALL EDGES TO MEET FLUSH.
7. THE LIMITS OF GRADING, CONSTRUCTION, SAW-CUTTING, PAVEMENT AND SIDEWALK RESTORATION, ARE APPROXIMATE. IF NECESSARY, INCREASE THE DEMOLITION AND RECONSTRUCTION LIMITS BY UP TO 5 FEET IN ANY HORIZONTAL DIRECTION, AND UP TO 2 FEET IN ANY VERTICAL DIRECTION, IN ORDER TO MAINTAIN STRUCTURAL STABILITY OF THE SITE WORK AND TO AVOID CONFLICTS WITH EXISTING SITE FEATURES AND UTILITIES. NO SEPARATE PAYMENT WILL BE MADE FOR INCREASING THE CONSTRUCTION OR DEMOLITION LIMITS AS NOTED HEREIN.
8. THE CONTRACTOR SHALL INSTALL 6 FOOT HIGH, POST IN GROUND, TEMPORARY CONSTRUCTION FENCE (WITH DUST SCREEN) AROUND THE LIMIT OF WORK MAINTAIN SEPARATION BETWEEN THE CONSTRUCTION SITE AND THE GENERAL PUBLIC. TEMPORARY FENCING MAY BE MOVED AROUND THE SITE AS CONSTRUCTION WORK PROGRESSES, PROVIDED THAT NO UNFINISHED AREAS ARE EXPOSED TO THE PUBLIC.
9. INSTALL PEDESTRIAN DETOURING SIGNS WHEN PERFORMING WORK WITHIN OR NEAR PUBLIC SIDEWALKS.
10. SAWCUT PAVEMENT AND WALKS WHERE A STRAIGHT UNIFORM EDGE IS REQUIRED, ESPECIALLY ADJACENT TO EXISTING CONSTRUCTION WHICH IS TO REMAIN. ALIGN ALL EDGES TO MEET FLUSH.
11. ALL OBSTRUCTIONS WHICH CONFLICT WITH NEW CONSTRUCTION SHALL BE REMOVED, ADJUSTED, OR RELOCATED IN FAVOR OF THE NEW SITE IMPROVEMENTS AT NO EXTRA COST TO THE OWNER. THIS SHALL INCLUDE, BUT IS NOT LIMITED TO, UNDERGROUND OBSTRUCTIONS, EXISTING CONSTRUCTION, FOLIAGE, FENCES, WALLS, GUIDE RAILS, BOLLARDS, TREE ROOTS, AND OTHER MISCELLANEOUS ITEMS AND DEBRIS ENCOUNTERED WITHIN THE SCOPE OF WORK.



LEGEND OF SYMBOLS & ABBREVIATIONS

EXISTING	PROPOSED	ITEM
lowercase text	UPPERCASE TEXT	TEXT & NOTES
○	● ◪	MANHOLE- NEW/RECONSTRUCT
□	■ ◪	INLET- NEW/RECONSTRUCT
c.o.	◉	CLEANOUT
○ rl / rlug	○	ROOF LEADER
gv wv	GV WV	VALVE-TYPE
		FIRE HYDRANT/FDC
		UTIL. POLE/W-LIGHT/W-TRANSF.
		STREET/TRAFFIC SIGNS:
		FREESTANDING LIGHT
x x x x	x x x x	FENCE
⁂0.25	⁂0.25	SPOT ELEVATIONS
68	68	CONTOUR LINE
st		STORM SEWER >12" DIA.
		STORM SEWER <=12" DIA

EXISTING	PROPOSED	ITEM
		PAVEMENT EDGE
		HOT MIX ASPHALT (HMA) PAVEMENT
		CURB/DEPRESSED CURB (DC)
		PORTLAND CEMENT CONCRETE
		TREE/WOOD LINE
		BUSH/SHRUBS
		EVERGREEN/DECIDUOUS TREES
		FULL DEPTH DEMOLITION
g	g	GAS LINE
w	W	WATER LINE
//		OVERHEAD POWER LINE
ss	SAN	SANITARY SEWER

ABBREVIATIONS

ADA	AMERICAN DISABILITIES ACT	G	GAS PIPE LINE	RCP	REINFORCED CONC. PIPE
APPROX	APPROXIMATE	GRT	GRATE (ELEVATION)	RL	ROOF LEADER
BF	BARRIER FREE	GV	GAS VALVE	RLUG	ROOF LEADER UNDERGROUND
BC	BOTTOM OF CURB REVEAL				
BIT	BITUMINOUS	HC	HANDICAPPED	SCD	SOIL CONSERVATION DISTRICT
BW	BOTTOM WALL (GRADE)	HP	HIGH POINT	ST	STORM SEWER PIPE
		HYD	FIRE HYDRANT	SS/SAN	SANITARY SEWER PIPE
C	CONDUIT				
COMM	DATA/COMMUNICATION CABLE	INV	INVERT (ELEV.)	TEL	TELEPHONE
CONFIG.	CONFIGURATION	IT	INSIDE TRACK EDGE	TB	TOP OF BORDER
CLF	CHAIN LINK FENCE			TBR	TO BE REMOVED
C.O.	CLEAN OUT	LF	LINEAR FEET	TC	TOP OF CURB
CONC	CONCRETE	LP	LOW POINT	TP	TEST PIT
				TRANSF	TRANSFORMER
DC/D.C.	DEPRESSED CURB	MH	MANHOLE	TW	TOP OF WALL
DEMO	DEMOLITION	NIC	NOT IN CONTRACT	TYP	TYPICAL
DIP	DUCTILE IRON PIPE				
DS	DOWN SPOUT	O/H	OVERHEAD		
		OT	OUTSIDE TRACK EDGE	U/G	UNDERGROUND
E	ELECTRIC			UP	UTILITY POLE
ELEV	ELEVATION (FT.)	PC	POINT OF CURVE		
EP	EDGE OF PAVEMENT	PCC	POINT OF COMPOUND CURVE	V.I.F.	VERIFY IN FIELD
EX	EXISTING	PEP	POLYETHYLENE PIPE (HDPE)		
				W	WATER
FDC	FIRE DEPT. CONN.	PROP	PROPOSED	WV	WATER VALVE
FM	FORCE MAIN (SEWAGE)	PT	POINT OF TANGENT		
FO	FIBER OPTIC CABLE	PVC	POLYVINYL CHLORIDE PIPE		
FTG.	FOOTING				

FIELD ENGINEERING NOTES:

1. ALL AVAILABLE SURVEY CONTROL INFORMATION IS SHOWN ON THE DRAWINGS. THE ENGINEER WILL NOT RELEASE THE PLAN SET IN AUTOCAD DRAWING FORMAT. A SEPARATE CAD FILE CONTAINING THE DESIGN INFORMATION SHOWN ON THE PLANS MAY BE PROVIDED TO THE CONTRACTOR UPON THE COMPLETION OF A "USE & INDEMNIFICATION" AGREEMENT. IT SHOULD BE UNDERSTOOD BY THE CONTRACTOR AND/OR HIS SURVEYOR THAT THE ACCURACY OR COMPLETENESS OF THE INFORMATION PROVIDED IN THE ELECTRONIC FORMAT IS NEITHER GUARANTEED NOR IMPLIED.
2. CONSTRUCTION SURVEY STAKE-OUT AND LAYOUT WORK SHALL BE PERFORMED BY A LICENSED LAND SURVEYOR. ALL PROPOSED CONSTRUCTION SHALL HAVE A SURVEY STAKE OUT.
3. IF THE CONTRACTOR BELIEVES THAT A MAJOR DISCREPANCY EXISTS BETWEEN THE INFORMATION SHOWN ON THESE PLANS AND ACTUAL FIELD CONDITIONS, THEN THE CONTRACTOR'S LICENSED LAND SURVEYOR SHALL PERFORM WORK NECESSARY TO CLEARLY DOCUMENT THE DISCREPANCY IN MAP FORM FOR PRESENTATION TO THE ENGINEER FOR REVIEW AND ACTION.
4. THE CONTRACTOR MUST ENGAGE A MATERIALS TESTING AND INSPECTION COMPANY TO VERIFY THE COMPACTION, COMPOSITION, THICKNESS, SIZE, AND STRENGTH OF ALL MATERIALS USED IN THE PROJECT, IN ACCORDANCE WITH THE INTERNATIONAL BUILDING CODE, RECOGNIZED INDUSTRY STANDARDS, AND AS FURTHER STIPULATED IN THE PROJECT SPECIFICATIONS.
5. THE CONTRACTOR MUST ENGAGE A PROFESSIONAL GEOTECHNICAL ENGINEER, LICENSED IN NJ, TO OVERSEE AND CERTIFY THE PREPARATION AND COMPACTION OF SUBGRADE BELOW PAVEMENTS.
6. THE CONTRACTOR AND HIS LAND SURVEYOR SHALL TAKE MEASUREMENTS AND PERFORM PERIODIC CONTROL SURVEYS AS NEEDED THROUGHOUT THE DURATION OF THE PROJECT TO VERIFY THE HORIZONTAL AND VERTICAL POSITION OF CONSTRUCTION. INTERIM SURVEY WORK IS INTENDED TO VERIFY THAT ALL WORK IS BEING CONSTRUCTED IN ACCORDANCE WITH THE CONTRACT DOCUMENTS. INTERIM TOPOGRAPHIC SURVEYS SHALL BE SUBMITTED TO THE ENGINEER AT CRITICAL MILESTONES IN THE PROJECT DOCUMENTING THAT THE NEW CONSTRUCTION MEETS THE DESIGN INTENT. THESE MILESTONES INCLUDE:
   a.) AFTER STABILIZED BASE IS INSTALLED, PRIOR TO PLACEMENT OF SURFACE COURSE.
   b.) AFTER FINAL GRADING OF ENLARGED DETENTION BASIN EXPANSION AND PRIOR TO PLACEMENT OF TOPSOIL AND SEED.
7. A FINAL, SIGNED AND SEALED, AS-BUILT SURVEY MUST BE SUBMITTED AS EXPLAINED IN THE PROJECT SPECIFICATIONS. THE SURVEY MUST BE SUFFICIENTLY DETAILED SO AS TO CLEARLY DOCUMENT THE LOCATION, ALIGNMENT AND DEPTH OF CONSTRUCTED IMPROVEMENTS AND TO CONFIRM THAT THE SITE GRADING OF ALL IMPROVEMENTS HAS BEEN COMPLETED IN ACCORDANCE WITH THE DESIGN INTENT.
8. THE INTERIM AND FINAL TOPOGRAPHIC SURVEYS MUST CLEARLY DEMONSTRATE THAT THE IMPROVEMENTS HAVE BEEN CONSTRUCTED TO THEIR PROPER HORIZONTAL AND VERTICAL POSITION. ALL CONSTRUCTION DEFICIENCIES SHALL BE CORRECTED PRIOR TO SUBMITTING THE SURVEY (WITH CORRECTED INFORMATION DEPICTED THEREIN). DO NOT SUBMIT INTERIM AND FINAL TOPOGRAPHIC SURVEYS TO THE OWNER'S ENGINEER WITH CONSTRUCTION ERRORS AND EXPECT THE OWNER'S ENGINEER TO VERIFY THE CONTRACTOR'S LAYOUT WORK AND CATCH MISTAKES IN THE PROJECT. THE CONTRACTOR AND HIS/HER LAND SURVEYOR ARE RESPONSIBLE FOR THE HORIZONTAL AND VERTICAL LAYOUT OF ALL CONSTRUCTION.

CONSTRUCTION PROCEDURES:

1. SUBMITTALS SHALL BE PROVIDED TO THE ARCHITECT & ENGINEER AT THE BEGINNING OF THE PROJECT, DURING THE DEMOLITION STAGE OR EARLIER. SUBMITTALS MUST NOT CONTAIN SUBSTITUTIONS OR PROPOSE DEVIATIONS FROM THE DESIGN INTENT THAT HAVE NOT BEEN ADDRESSED THROUGH THE REQUEST FOR INFORMATION (RFI) PROCESS. THE RFI PROCESS MUST BE DOCUMENTED IN WRITING FROM THE OWNER'S ENGINEER.
2. SUBMITTALS AND SHOP DRAWINGS FOR LONG-LEAD TIME ITEMS MUST BE SUBMITTED FIRST.
3. EQUIPMENT, MATERIALS, AND PROCESSES (INCLUDING ALL LABOR) THAT ARE DEFINED IN SUBMITTALS SHALL RESULT IN A ZERO NET CHANGE TO THE CONTRACT AMOUNT (AND THE ALLOWANCE), UNLESS THE SUBMITTAL IS PART OF AN APPROVED CHANGE ORDER REQUEST.
4. IF THE CONTRACTOR OFFERS A TROUBLESHOOTING SOLUTION TO A CONSTRUCTION-RELATED PROBLEM/PUNCHLIST, IT IS UNDERSTOOD THAT SAID SOLUTION WILL RESULT IN NO INCREASED CONSTRUCTION COST. IF THE CONTRACTOR'S RECOMMENDED SOLUTION WILL HAVE A COST IMPACT, THEN THE FULL COST OF SAID AMOUNT SHALL BE SO INDICATED WITH THE RECOMMENDATION, SO THE OWNER, AND ENGINEER MAY RENDER AN INFORMED DECISION.
5. THE CONTRACTOR SHALL NOT ASK THE OWNER TO APPROVE A DESIGN CHANGE WITHOUT PRIOR APPROVAL FROM THE ENGINEER OR ARCHITECT. THE OWNER IS NOT A DESIGN PROFESSIONAL, NOR SHALL THE OWNER BE EXPECTED TO POSSESS A WORKING KNOWLEDGE OF ALL CODES AND STANDARDS THAT APPLY TO THE WORK IN THIS CONTRACT.
6. IN THE EVENT THAT AN UNFORESEEN FIELD CONDITION ARISES, THE CONTRACTOR SHALL FOLLOW THE REQUEST FOR INFORMATION (RFI) PROCESS WHEN SEEKING ASSISTANCE FROM THE ENGINEER, ARCHITECT, OR OWNER. ALL RFI'S SHALL BE FORWARDED IN WRITING TO THE APPROPRIATE PROFESSIONAL. A WRITTEN RFI RESPONSE WILL BE RETURNED TO THE CONTRACTOR. NO VERBAL INSTRUCTIONS SHALL BE CONSIDERED BINDING. THE CONTRACTOR WILL BE WORKING AT ITS OWN RISK, IF THE CONSTRUCTION WORK DEVIATES FROM THE DESIGN INTENT WITHOUT PRIOR WRITTEN APPROVAL.
7. THE CONTRACTOR SHALL SECURE ALL REQUIRED CONSTRUCTION PERMITS AND SCHEDULE INSPECTIONS AT THE TIMES REQUIRED BY THE LOCAL BUILDING DEPARTMENT.
8. THE CONTRACTOR SHALL COORDINATE ALL CONSTRUCTION WITH APPROPRIATE UTILITY COMPANIES AND THE OWNER.

CONTRACTOR NOTE: YOU MUST ENGAGE A CERTIFIED MATERIALS & INSPECTION COMPANY AND PROVIDE GEOTECHNICAL ENGINEERING OVERSIGHT IN THE PROJECT. REFER TO FIELD ENGINEERING NOTES & SPECIFICATIONS.

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F V H D P C . C O M

Project Name
NEW DISTRICT MAINTENANCE & OPERATIONS BUILDING

Project Owner Name
GALLOWAY TOWNSHIP PUBLIC SCHOOLS

Project Location
BLOCK 953.01, LOT 1.01
103 S. REEDS ROAD, GALLOWAY TWP., ATLANTIC COUNTY, NEW JERSEY

Project Number
5195

Project Date
06.19.20

Checked By
WBE

Drawn By
BEK

Scale
NOTED

Drawing Name
SITE PLAN

Revisions

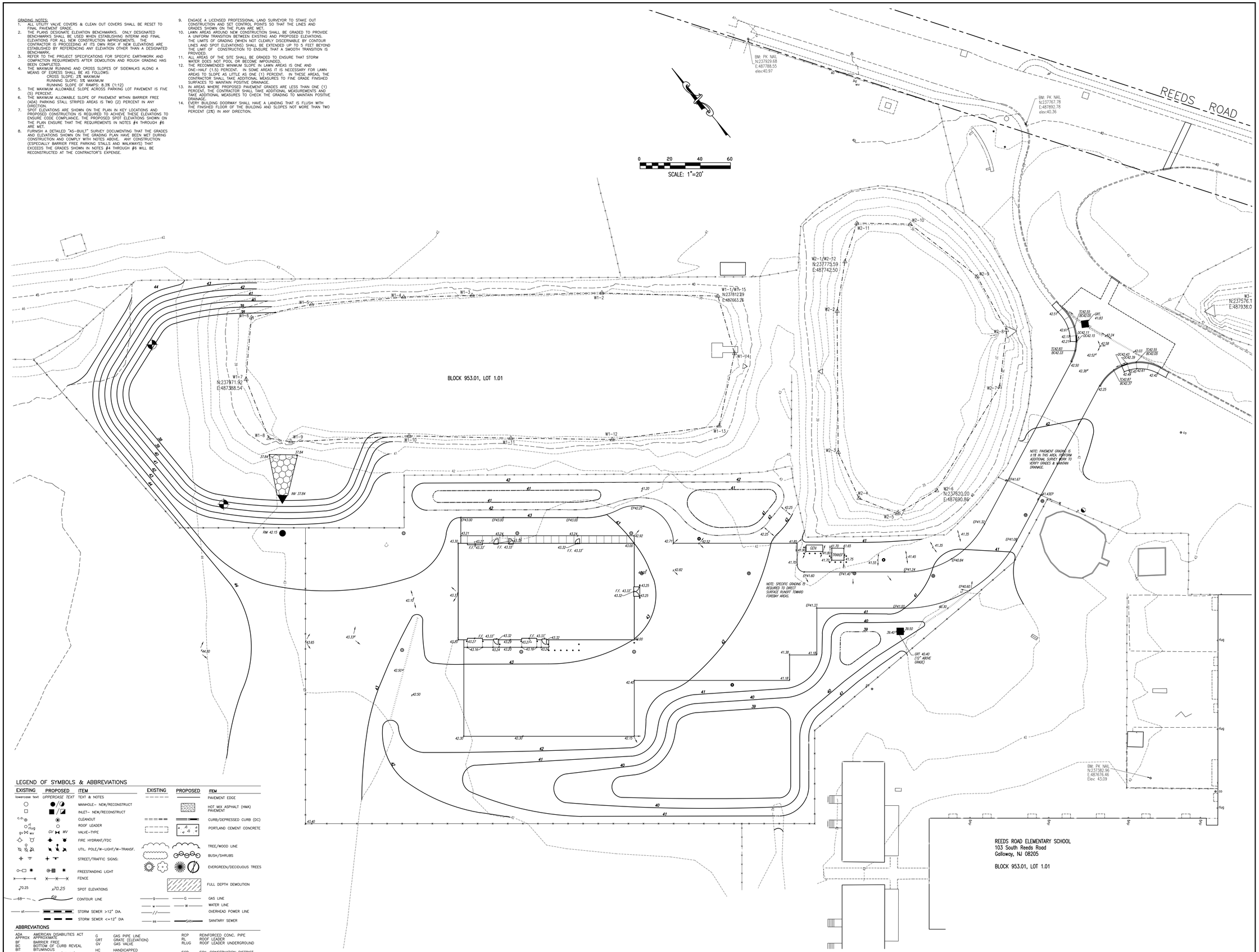
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C-3.0

GRADING NOTES:

1. ALL UTILITY VALVE COVERS & CLEAN OUT COVERS SHALL BE RESET TO FINAL PAVEMENT GRADE.
2. THE PLANS DESIGNATE ELEVATION BENCHMARKS. ONLY DESIGNATED BENCHMARKS SHALL BE USED WHEN ESTABLISHING INTERIM AND FINAL ELEVATIONS FOR ALL NEW CONSTRUCTION IMPROVEMENTS. THE CONTRACTOR IS PROCEEDING AT ITS OWN RISK IF NEW ELEVATIONS ARE ESTABLISHED BY REFERENCING ANY ELEVATION OTHER THAN A DESIGNATED BENCHMARK.
3. REFER TO THE PROJECT SPECIFICATIONS FOR SPECIFIC EARTHWORK AND COMPACTION REQUIREMENTS AFTER DEMOLITION AND ROUGH GRADING HAS BEEN COMPLETED.
4. THE MAXIMUM RUNNING AND CROSS SLOPES OF SIDEWALKS ALONG A MEANS OF EGRESS SHALL BE AS FOLLOWS:
   CROSS SLOPE: 2% MAXIMUM
   RUNNING SLOPE: 5% MAXIMUM
   RUNNING SLOPE OF RAMPS: 8.3% (1:12)
5. THE MAXIMUM ALLOWABLE SLOPE ACROSS PARKING LOT PAVEMENT IS FIVE (5) PERCENT.
6. THE MAXIMUM ALLOWABLE SLOPE OF PAVEMENT WITHIN BARRIER FREE (ADA) PARKING STALL STRIPED AREAS IS TWO (2) PERCENT IN ANY DIRECTION.
7. SPOT ELEVATIONS ARE SHOWN ON THE PLAN IN KEY LOCATIONS AND PROPOSED CONSTRUCTION IS REQUIRED TO ACHIEVE THESE ELEVATIONS TO ENSURE CODE COMPLIANCE. THE PROPOSED SPOT ELEVATIONS SHOWN ON THE PLAN ENSURE THAT THE REQUIREMENTS IN NOTES #4 THROUGH #6 ARE MET.
8. FURNISH A DETAILED "AS-BUILT" SURVEY DOCUMENTING THAT THE GRADES AND ELEVATIONS SHOWN ON THE GRADING PLAN HAVE BEEN MET DURING CONSTRUCTION AND COMPLY WITH NOTES ABOVE. ANY CONSTRUCTION (ESPECIALLY BARRIER FREE PARKING STALLS AND WALKWAYS) THAT EXCEEDS THE GRADES SHOWN IN NOTES #4 THROUGH #6 WILL BE RECONSTRUCTED AT THE CONTRACTOR'S EXPENSE.
9. ENGAGE A LICENSED PROFESSIONAL LAND SURVEYOR TO STAKE OUT CONSTRUCTION AND SET CONTROL POINTS SO THAT THE LINES AND GRADES SHOWN ON THE PLAN ARE MET.
10. LAWN AREAS AROUND NEW CONSTRUCTION SHALL BE GRADED TO PROVIDE A UNIFORM TRANSITION BETWEEN EXISTING AND PROPOSED ELEVATIONS. THE LIMITS OF GRADING (WHEN NOT CLEARLY DISCERNABLE BY CONTOUR LINES AND SPOT ELEVATIONS) SHALL BE EXTENDED UP TO 5 FEET BEYOND THE LIMIT OF CONSTRUCTION TO ENSURE THAT A SMOOTH TRANSITION IS PROVIDED.
11. ALL AREAS OF THE SITE SHALL BE GRADED TO ENSURE THAT STORM WATER DOES NOT POOL OR BECOME IMPOUNDED.
12. THE RECOMMENDED MINIMUM SLOPE IN LAWN AREAS IS ONE AND ONE-HALF (1.5) PERCENT. IN SOME AREAS IT IS NECESSARY FOR LAWN AREAS TO SLOPE AS LITTLE AS ONE (1) PERCENT. IN THESE AREAS, THE CONTRACTOR SHALL TAKE ADDITIONAL MEASURES TO FINE GRADE FINISHED SURFACES TO MAINTAIN POSITIVE DRAINAGE.
13. IN AREAS WHERE PROPOSED PAVEMENT GRADES ARE LESS THAN ONE (1) PERCENT, THE CONTRACTOR SHALL TAKE ADDITIONAL MEASUREMENTS AND TAKE ADDITIONAL MEASURES TO CHECK THE GRADING TO MAINTAIN POSITIVE DRAINAGE.
14. EVERY BUILDING DOORWAY SHALL HAVE A LANDING THAT IS FLUSH WITH THE FINISHED FLOOR OF THE BUILDING AND SLOPES NOT MORE THAN TWO PERCENT (2%) IN ANY DIRECTION.



LEGEND OF SYMBOLS & ABBREVIATIONS

EXISTING (lowercase text)	PROPOSED (UPPERCASE TEXT)	ITEM
○	● / ◪	MANHOLE– NEW/RECONSTRUCT
□	■ / ◪	INLET– NEW/RECONSTRUCT
c.o.	◉	CLEANOUT
○ rlug	○	ROOF LEADER
gv wv	GV WV	VALVE–TYPE
		FIRE HYDRANT/FDC
		UTIL. POLE/W–LIGHT/W–TRANSF.
		STREET/TRAFFIC SIGNS:
		FREESTANDING LIGHT
x	x	FENCE
70.25	x70.25	SPOT ELEVATIONS
68	68	CONTOUR LINE
st	ST	STORM SEWER >12" DIA.
		STORM SEWER <=12" DIA

EXISTING	PROPOSED	ITEM
		PAVEMENT EDGE
		HOT MIX ASPHALT (HMA) PAVEMENT
		CURB/DEPRESSED CURB (DC)
		PORTLAND CEMENT CONCRETE
		TREE/WOOD LINE
		BUSH/SHRUBS
		EVERGREEN/DECIDUOUS TREES
		FULL DEPTH DEMOLITION
g	G	GAS LINE
w	W	WATER LINE
//		OVERHEAD POWER LINE
ss	SAN	SANITARY SEWER

ABBREVIATIONS

ADA	AMERICAN DISABILITIES ACT	G	GAS PIPE LINE	RCP	REINFORCED CONC. PIPE
APPROX	APPROXIMATE	GRT	GRATE (ELEVATION)	RL	ROOF LEADER
BF	BARRIER FREE	GV	GAS VALVE	RLUG	ROOF LEADER UNDERGROUND
BC	BOTTOM OF CURB REVEAL				
BIT	BITUMINOUS	HC	HANDICAPPED	SCD	SOIL CONSERVATION DISTRICT
BW	BOTTOM WALL (GRADE)	HP	HIGH POINT	ST	STORM SEWER PIPE
		HYD	FIRE HYDRANT	SS/SAN	SANITARY SEWER PIPE
C	CONDUIT				
COMM	DATA/COMMUNICATION CABLE	INV	INVERT (ELEV.)	TEL	TELEPHONE
CONFIG.	CONFIGURATION	IT	INSIDE TRACK EDGE	TB	TOP OF BORDER
CLF	CHAIN LINK FENCE			TBR	TO BE REMOVED
C.O.	CLEAN OUT	LF	LINEAR FEET	TC	TOP OF CURB
CONC	CONCRETE	LP	LOW POINT	TP	TEST PIT
				TRANSF	TRANSFORMER
DC/D.C.	DEPRESSED CURB	MH	MANHOLE	TW	TOP OF WALL
DEMO	DEMOLITION			TYP	TYPICAL
DIP	DUCTILE IRON PIPE	NIC	NOT IN CONTRACT		
DS	DOWN SPOUT			U/G	UNDERGROUND
		O/H	OVERHEAD	UP	UTILITY POLE
E	ELECTRIC	OT	OUTSIDE TRACK EDGE		
ELEV	ELEVATION (FT.)			V.I.F.	VERIFY IN FIELD
EP	EDGE OF PAVEMENT	PC	POINT OF CURVE		
EX	EXISTING	PCC	POINT OF COMPOUND CURVE	W	WATER
		PEP	POLYETHYLENE PIPE (HDPE)	WV	WATER VALVE
FDC	FIRE DEPT. CONN.	PROP	PROPOSED		
FM	FORCE MAIN (SEWAGE)	PT	POINT OF TANGENT		
FO	FIBER OPTIC CABLE	PVC	POLYVINYL CHLORIDE PIPE		
FTG.	FOOTING				

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Project Owner Name
GALLOWAY TOWNSHIP PUBLIC SCHOOLS

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Project Number
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Checked By
WBE

Drawn By
BEK

Scale
NOTED

Drawing Name
GRADING PLAN

Revisions

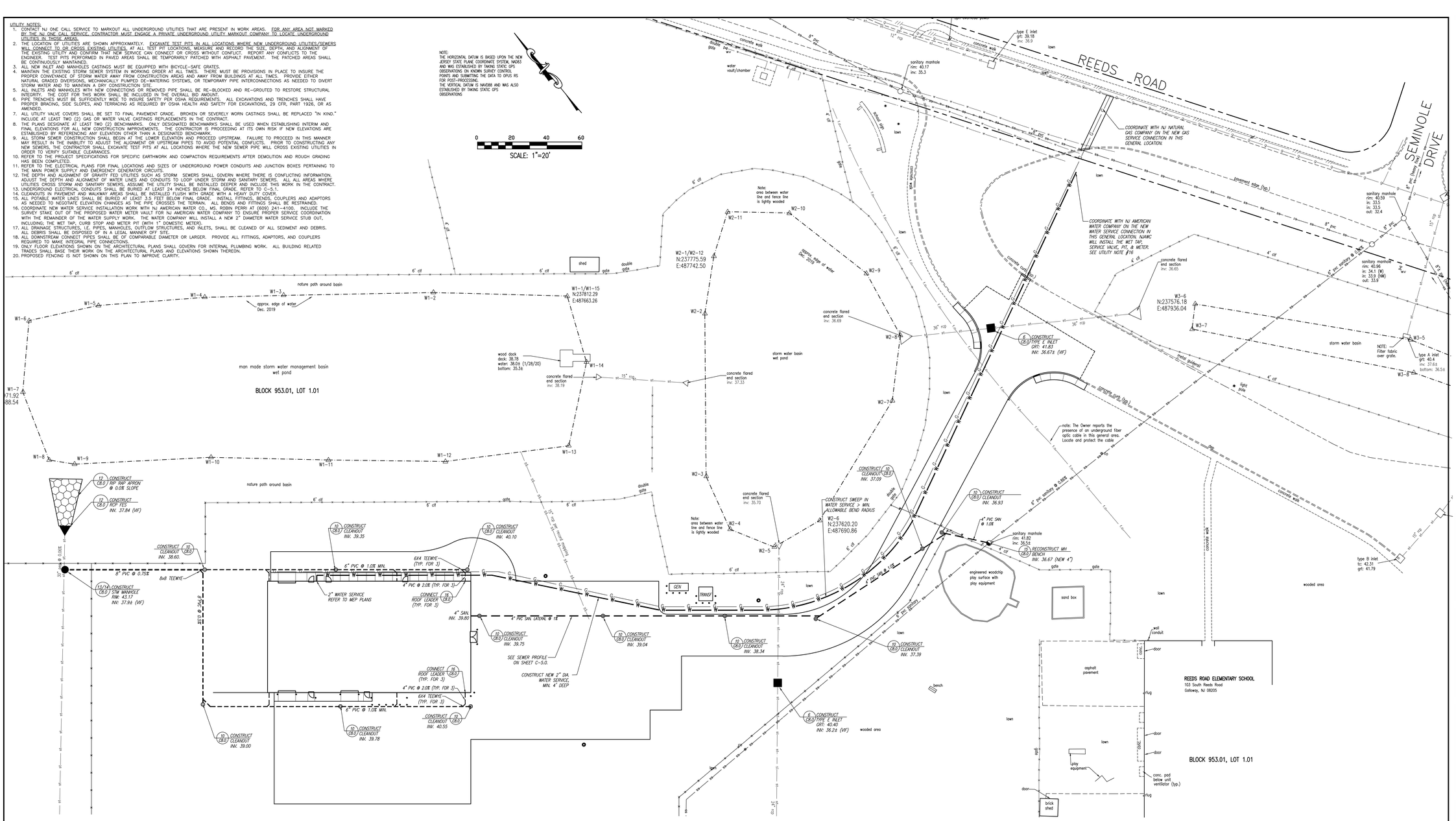
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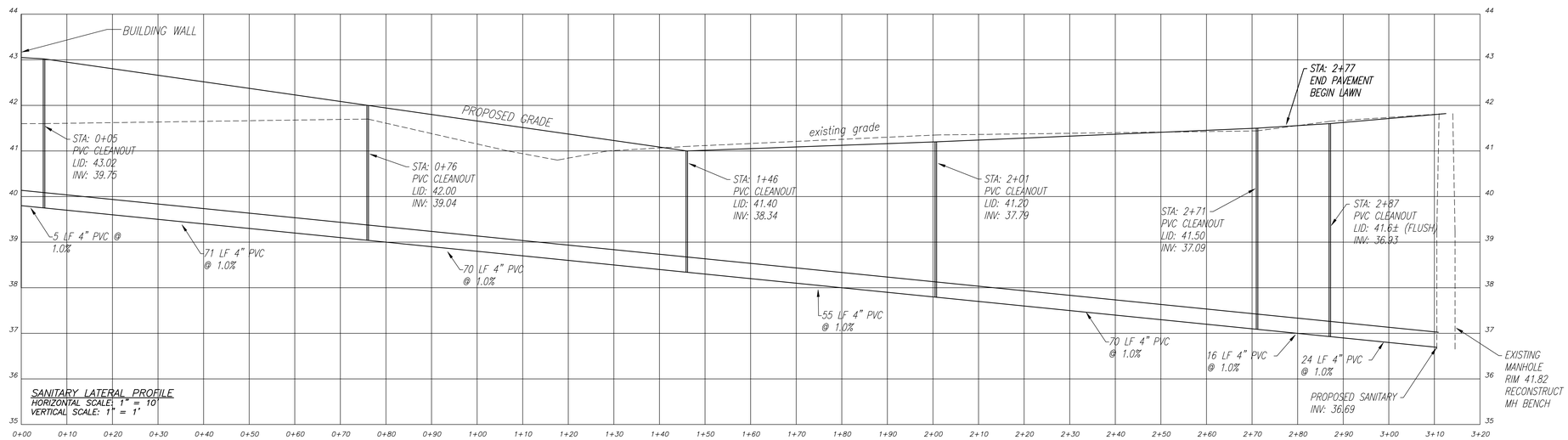
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WILLIAM B. EDWARDS, P.E. Date
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Drawing Number
C–4.0

UTILITY NOTES:

1. CONTACT NJ ONE CALL SERVICE TO MARKOUT ALL UNDERGROUND UTILITIES THAT ARE PRESENT IN WORK AREAS. FOR ANY AREA NOT MARKED BY THE NJ ONE CALL SERVICE, CONTRACTOR MUST ENGAGE A PRIVATE UNDERGROUND UTILITY MARKOUT COMPANY TO LOCATE UNDERGROUND UTILITIES IN THOSE AREAS.
2. THE LOCATION OF UTILITIES ARE SHOWN APPROXIMATELY. EXCAVATE TEST PITS IN ALL LOCATIONS WHERE NEW UNDERGROUND UTILITIES/SEWERS WILL CONNECT TO OR CROSS EXISTING UTILITIES. AT ALL TEST PIT LOCATIONS, MEASURE AND RECORD THE SIZE, DEPTH, AND ALIGNMENT OF THE EXISTING UTILITY AND CONFIRM THAT NEW SERVICE CAN CONNECT OR CROSS WITHOUT CONFLICT. REPORT ANY CONFLICTS TO THE ENGINEER. TEST PITS PERFORMED IN PAVED AREAS SHALL BE TEMPORARILY PATCHED WITH ASPHALT PAVEMENT. THE PATCHED AREAS SHALL BE CONTINUOUSLY MAINTAINED.
3. ALL NEW INLET AND MANHOLES CASTINGS MUST BE EQUIPPED WITH BICYCLE-SAFE GRATES.
4. MAINTAIN THE EXISTING STORM SEWER SYSTEM IN WORKING ORDER AT ALL TIMES. THERE MUST BE PROVISIONS IN PLACE TO INSURE THE PROPER CONVEYANCE OF STORM WATER AWAY FROM CONSTRUCTION AREAS AND AWAY FROM BUILDINGS AT ALL TIMES.. PROVIDE EITHER NATURAL GRADED DIVERSIONS, MECHANICALLY PUMPED DE-WATERING SYSTEMS, OR TEMPORARY PIPE INTERCONNECTIONS AS NEEDED TO DIVERT STORM WATER AND TO MAINTAIN A DRY CONSTRUCTION SITE.
5. ALL INLETS AND MANHOLES WITH NEW CONNECTIONS OR REMOVED PIPE SHALL BE RE-BLOCKED AND RE-GROUTED TO RESTORE STRUCTURAL INTEGRITY. THE COST FOR THIS WORK SHALL BE INCLUDED IN THE OVERALL BID AMOUNT.
6. PIPE TRENCHES MUST BE SUFFICIENTLY WIDE TO INSURE SAFETY PER OSHA REQUIREMENTS. ALL EXCAVATIONS AND TRENCHES SHALL HAVE PROPER BRACING, SIDE SLOPES, AND TERRACING AS REQUIRED BY OSHA HEALTH AND SAFETY FOR EXCAVATIONS, 29 CFR, PART 1926, OR AS AMENDED.
7. ALL UTILITY VALVE COVERS SHALL BE SET TO FINAL PAVEMENT GRADE. BROKEN OR SEVERELY WORN CASTINGS SHALL BE REPLACED "IN KIND." INCLUDE AT LEAST TWO (2) GAS OR WATER VALVE CASTINGS REPLACEMENTS IN THE CONTRACT.
8. THE PLANS DESIGNATE AT LEAST TWO (2) BENCHMARKS. ONLY DESIGNATED BENCHMARKS SHALL BE USED WHEN ESTABLISHING INTERIM AND FINAL ELEVATIONS FOR ALL NEW CONSTRUCTION IMPROVEMENTS. THE CONTRACTOR IS PROCEEDING AT ITS OWN RISK IF NEW ELEVATIONS ARE ESTABLISHED BY REFERENCING ANY ELEVATION OTHER THAN A DESIGNATED BENCHMARK.
9. ALL STORM SEWER CONSTRUCTION SHALL BEGIN AT THE LOWER ELEVATION AND PROCEED UPSTREAM. FAILURE TO PROCEED IN THIS MANNER MAY RESULT IN THE INABILITY TO ADJUST THE ALIGNMENT OR UPSTREAM PIPES TO AVOID POTENTIAL CONFLICTS. PRIOR TO CONSTRUCTING ANY NEW SEWERS, THE CONTRACTOR SHALL EXCAVATE TEST PITS AT ALL LOCATIONS WHERE THE NEW SEWER PIPE WILL CROSS EXISTING UTILITIES IN ORDER TO VERIFY SUITABLE CLEARANCES.
10. REFER TO THE PROJECT SPECIFICATIONS FOR SPECIFIC EARTHWORK AND COMPACTION REQUIREMENTS AFTER DEMOLITION AND ROUGH GRADING HAS BEEN COMPLETED.
11. REFER TO THE ELECTRICAL PLANS FOR FINAL LOCATIONS AND SIZES OF UNDERGROUND POWER CONDUITS AND JUNCTION BOXES PERTAINING TO THE MAIN POWER SUPPLY AND EMERGENCY GENERATOR CIRCUITS.
12. THE DEPTH AND ALIGNMENT OF GRAVITY FED UTILITIES SUCH AS STORM SEWERS SHALL GOVERN WHERE THERE IS CONFLICTING INFORMATION. ADJUST THE DEPTH AND ALIGNMENT OF WATER LINES AND CONDUITS TO LOOP UNDER STORM AND SANITARY SEWERS. ALL ALL AREAS WHERE UTILITIES CROSS STORM AND SANITARY SEWERS, ASSUME THE UTILITY SHALL BE INSTALLED DEEPER AND INCLUDE THIS WORK IN THE CONTRACT.
13. UNDERGROUND ELECTRICAL CONDUITS SHALL BE BURIED AT LEAST 24 INCHES BELOW FINAL GRADE. REFER TO C-5.1.
14. CLEANOUTS IN PAVEMENT AND WALKWAY AREAS SHALL BE INSTALLED FLUSH WITH GRADE WITH A HEAVY DUTY COVER.
15. ALL POTABLE WATER LINES SHALL BE BURIED AT LEAST 3.5 FEET BELOW FINAL GRADE. INSTALL FITTINGS, BENDS, COUPLERS AND ADAPTORS AS NEEDED TO NEGOTIATE ELEVATION CHANGES AS THE PIPE CROSSES THE TERRAIN. ALL BENDS AND FITTINGS SHALL BE RESTRAINED.
16. COORDINATE NEW WATER SERVICE INSTALLATION WORK WITH NJ AMERICAN WATER CO., MS. ROBIN PERRI AT (609) 241-4100. INCLUDE THE SURVEY STAKE OUT OF THE PROPOSED WATER METER VAULT FOR NJ AMERICAN WATER COMPANY TO ENSURE PROPER SERVICE COORDINATION WITH THE REMAINDER OF THE WATER SUPPLY WORK. THE WATER COMPANY WILL INSTALL A NEW 2" DIAMETER WATER SERVICE STUB OUT, INCLUDING, THE WCT TAP, CURB STOP AND METER PIT (WITH 1" DOMESTIC METER).
17. ALL DRAINAGE STRUCTURES, I.E. PIPES, MANHOLES, OUTFLOW STRUCTURES, AND INLETS, SHALL BE CLEANED OF ALL SEDIMENT AND DEBRIS. ALL DEBRIS SHALL BE DISPOSED OF IN A LEGAL MANNER OFF SITE.
18. ALL DOWNSTREAM CONNECT PIPES SHALL BE OF COMPARABLE DIAMETER OR LARGER. PROVIDE ALL FITTINGS, ADAPTORS, AND COUPLERS REQUIRED TO MAKE INTEGRAL PIPE CONNECTIONS.
19. ONLY FLOOR ELEVATIONS SHOWN ON THE ARCHITECTURAL PLANS SHALL GOVERN FOR INTERNAL PLUMBING WORK. ALL BUILDING RELATED TRADES SHALL BASE THEIR WORK ON THE ARCHITECTURAL PLANS AND ELEVATIONS SHOWN THEREON.
20. PROPOSED FENCING IS NOT SHOWN ON THIS PLAN TO IMPROVE CLARITY.





CONTRACTOR NOTE: YOU MUST ENGAGE A CERTIFIED MATERIALS & INSPECTION COMPANY AND PROVIDE GEOTECHNICAL ENGINEERING OVERSIGHT IN THE PROJECT. REFER TO FIELD ENGINEERING NOTES & SPECIFICATIONS.

REFER TO C-4.0 FOR LEGEND

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Project Owner Name
GALLOWAY TOWNSHIP PUBLIC SCHOOLS

Project Location
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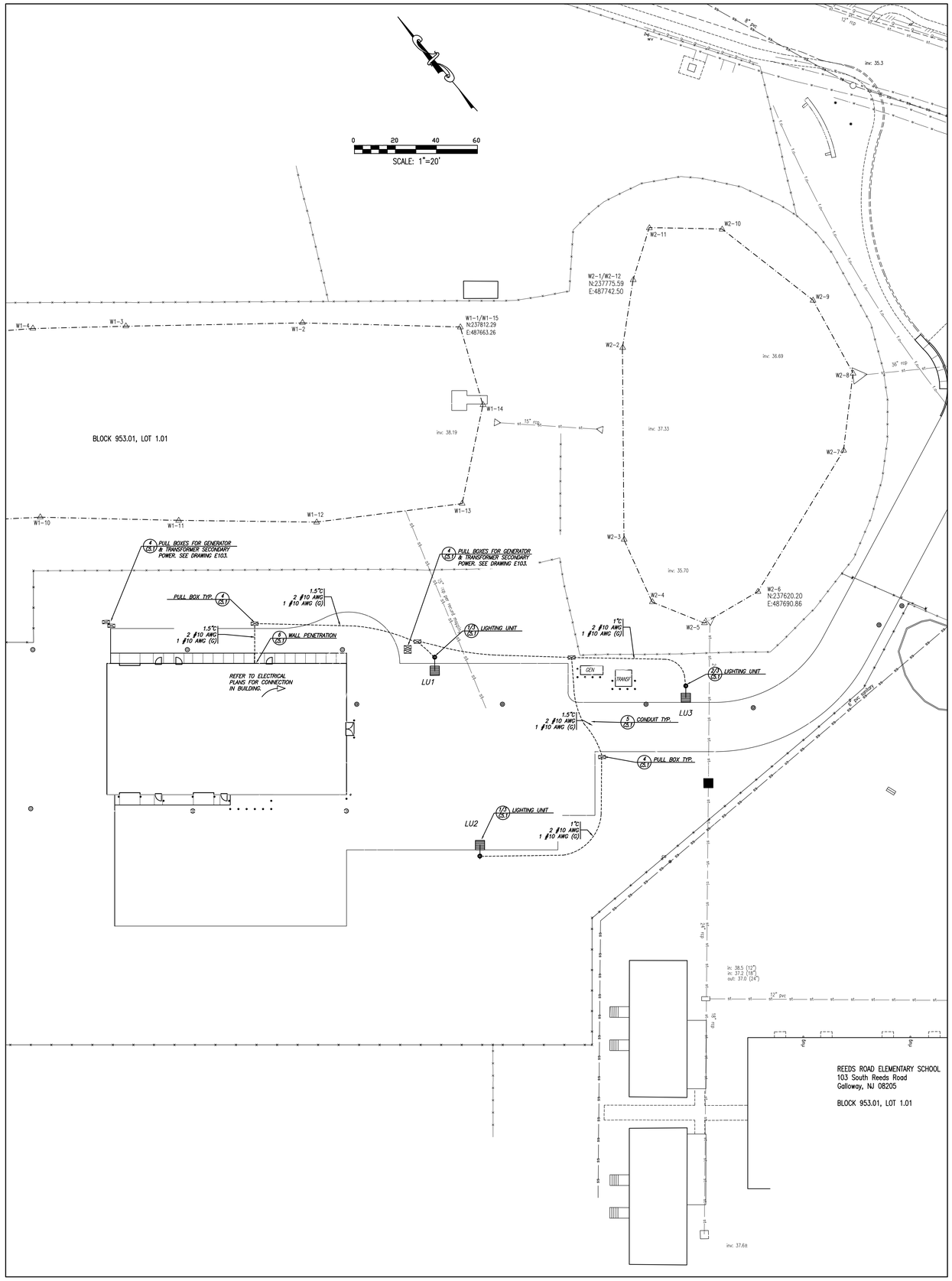
Project Number: 5195
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Drawn By: BEK
Scale: NOTED

Drawing Name
UTILITY PLAN

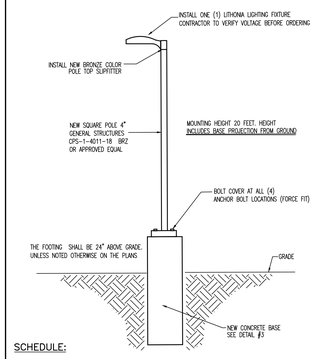
Revisions

No.	Date	Description

Drawing Number
C-5.0



GENERAL NOTE
A SUBMITTAL OF LIGHT FIXTURES, POLE, AND BASE IS REQUIRED.

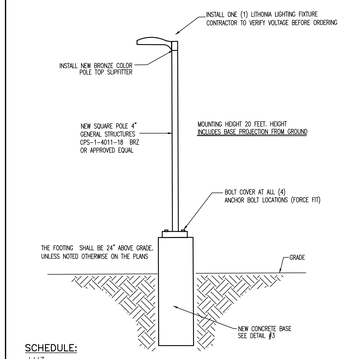


SCHEDULE:

LU1 LU2:
BASIS OF DESIGN IS LITHONIA LIGHTING, DSX1-30LED-P6-30K-TFTM-MVOLT*-SPA-DDBXD OR APPROVED EQUAL
*CONTRACTOR TO VERIFY VOLTAGE BEFORE ORDERING

1 NEW SINGLE LIGHTING UNIT LU1 & LU2
HEIGHT & CONFIGURATION WITH ONE NEW LED FIXTURE

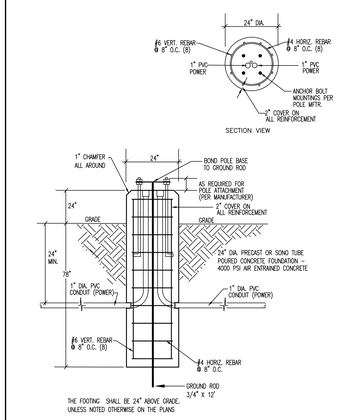
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A SUBMITTAL OF LIGHT FIXTURES, POLE, AND BASE IS REQUIRED.



SCHEDULE:
LU3:
BASIS OF DESIGN IS LITHONIA LIGHTING, DSX1-LED-P3-30K-T2M-MVOLT*-SPA-DDBXD OR APPROVED EQUAL
*CONTRACTOR TO VERIFY VOLTAGE BEFORE ORDERING

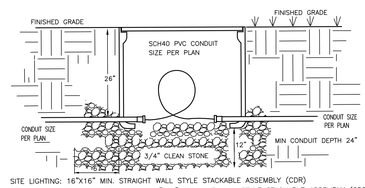
2 NEW SINGLE LIGHTING UNIT LU3
HEIGHT & CONFIGURATION WITH ONE NEW LED FIXTURE

GENERAL NOTES:
A SUBMITTAL OF LIGHT FIXTURES, POLE, AND BASE IS REQUIRED.



3 NEW LIGHT POLE BASE 24" DIA
NOT TO SCALE

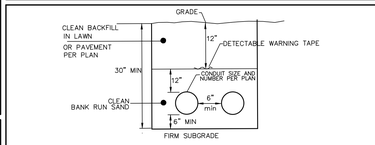
BASIS OF DESIGN HANDHOLE IS BY QUAZITE OR APPROVED EQUAL, OPEN BOTTOM WITH BOLT DOWN LID



SITE LIGHTING: 18"X16" MIN. STRAIGHT WALL STYLE STACKABLE ASSEMBLY (CDR)
GENERATOR & TRANSFORMER WIRING: 24"x24" STRAIGHT WALL STYLE STACKABLE ASSEMBLY (CDR)

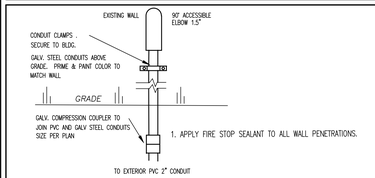
NOTES:
1. BOXES TO BE SET UPON 12" OF CLEAN 3/4" STONE BEDDING.
2. LOGO ON BOXES "LIGHTING", "ELECTRIC", OR "DATA" AS APPROPRIATE.
3. MINIMUM BOX DEPTH SHALL BE 26", UNLESS NOTED ON THE PLAN.
4. ALL BOXES AND LIDS SHALL BE BOLT DOWN, TIER 22 ON AND WITHIN 5 FEET OF PAVEMENT AREAS.
5. HANDHOLES SIZES SHALL BE INCREASED BY THE CONTRACTOR, BASED UPON NEC REQUIREMENTS AND AS NEEDED TO FACILITATE CONDUIT INSTALLATION BASED UPON FIELD CONDITIONS.
6. SUGGESTED HANDHOLE LOCATIONS AND CONDUIT ROUTES ARE SHOWN ON THE PLANS. THESE LOCATIONS MAY BE ADJUSTED TO SUIT FIELD CONDITIONS, WITH ENGINEER'S APPROVAL.

4 PULL BOX DETAIL
NOT TO SCALE



ALL CONDUIT SHALL BE SCH40 SOLVENT WELDED
ALL CONDUIT SPACING SHALL BE PER NEC.

5 CONDUIT TRENCH
FOR SITE LIGHTING AND DATA



6 WALL PENETRATION
NOT TO SCALE

LIGHTING NOTES:

1. ELECTRICAL BOXES SHOWN IN PAVEMENT AREAS SHALL BE AT LEAST 26 INCHES DEEP AND SHALL BE TIER 22 OR AASHTO H20, RATED FOR HIGHWAY LOADING. BOXES LOCATED IN LAWN AREAS MAY BE TIER 15. BOX DETAILS SHOWN ARE FOR GENERAL INFORMATION PURPOSES ONLY. INSTALL THE SURFACE OF BOXES FLUSH WITH FINAL GRADE.
2. ALL ELECTRICAL CONDUITS SHALL BURIED AT LEAST 24 INCHES DEEP AND SHALL HAVE A LOCATABLE TRACING WIRE OR MARKING TAPE INSTALLED 12 INCHES ABOVE THE CONDUIT. SEE DETAIL 9 DWG C-6.1
3. ALL CONDUITS ARE SHOWN SCHEMATICALLY AND THE CONTRACTOR IS RESPONSIBLE FOR DETERMINING THE ACTUAL NUMBER, SIZE, AND LOCATION OF CONDUITS NEEDED TO PROPERLY INSTALL AND INTERCONNECT ALL EQUIPMENT. CONDUITS SHALL BE SIZED PER THE NEC, LATEST EDITION.
4. A LIGHTING UNIT (LU) INCLUDES LUMINAIRES, MOUNTING HARDWARE, MASTS, POLE, FOUNDATION/BASE, GROUNDING ROD, WIRING, AND ALL CONDUITS NEEDED TO CONNECT THE LIGHTING UNIT TO AN OPERATIONAL AND CODE-COMPLIANT STATE.

GENERAL ELECTRICAL PERFORMANCE REQUIREMENTS:
1. THE WORK TO BE PERFORMED IN THIS PROJECT INCLUDES PROVIDING ALL EQUIPMENT, MATERIALS, LABOR AND SERVICES NEEDED TO INSTALL A FULLY OPERATIONAL AND CODE COMPLIANT LIGHTING SYSTEM. ANY WORK NOT SPECIFICALLY IDENTIFIED IN THE CONSTRUCTION DOCUMENTS, BUT THAT IS REQUIRED BY APPLICABLE CODES, SHALL BE PROVIDED. THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING THAT ALL WORK CONFORMS TO APPLICABLE CODES.
2. THE ENTIRE INSTALLATION, INCLUDING MATERIALS, EQUIPMENT, LABOR, AND WORKMANSHIP SHALL CONFORM TO THE NATIONAL ELECTRICAL CODE, LATEST EDITION.
3. THE TERM "FURNISH" SHALL MEAN TO OBTAIN AND SUPPLY TO THE JOB SITE. THE TERM "INSTALL" SHALL MEAN TO FIX IN POSITION AND CONNECT FOR OPERATION AND USE. THE TERM "PROVIDE" SHALL MEAN TO FURNISH AND INSTALL. THE TERM "CONTRACTOR" SHALL REFER TO A LICENSED ELECTRICAL CONTRACTOR, WITH NJ DEPT. OF TREASURY DPMC CLASSIFICATION, AND EXPERIENCE WITH INSTALLING THE TYPE(S) OF EQUIPMENT DESCRIBED IN THE PERFORMANCE SPECIFICATION.
4. THE WORK SHALL INCLUDE ALL CONDUCTORS, CONDUIT, GROUNDING CONDUCTORS, CIRCUIT PROTECTION, LIGHTING SYSTEM CONTROLS, AND ALL ELSE NECESSARY AND REQUIRED FOR THE INSTALLATION OF A FULLY OPERATING SITE LIGHTING SYSTEM AS DEPICTED ON THE PLANS AND DESCRIBED IN THE SPECIFICATIONS. REFER TO ELECTRICAL PLANS FOR CONTROLLER & CIRCUIT PROTECTION.
5. FURNISH AS-BUILT PLANS AND INSTRUCTION TO THE OWNER UPON COMPLETION OF THE INSTALLATION. INCLUDING 4 HOURS OF ON-SITE SUPPORT FOR OPERATING THE LIGHTING CONTROLLER(S).
6. ALL EQUIPMENT AND CONDUITS SHALL BE SECURELY FASTENED TO SUITABLE STRUCTURAL ELEMENTS USING UNI-STRUTS OR COMPARABLE MOUNTING HARDWARE.
7. SEE ELECTRICAL PLANS FOR SECONDARY & GENERATOR POWER CONDUCTORS & CONDUITS AND FOR ALL INTERIOR ELECTRICAL WORK.
8. SUGGESTED CONDUIT ROUTING AND LOCATION OF JUNCTION BOXES WHERE SHOWN ARE SCHEMATIC, AND SHALL BE ADJUSTED TO SUIT FIELD CONDITIONS.
9. THE CONTRACTOR SHALL VISIT THE SITE AND BE FAMILIAR WITH THE WORK AREA PRIOR TO SUBMITTING A BID.
10. CONFIRM THE LOCATION OF ALL UTILITIES PRIOR TO THE COMMENCEMENT OF WORK. DO NOT DISRUPT THE POWER SUPPLY WITHOUT COORDINATION SAME WITH THE OWNER. REPAIR ANY DAMAGE TO ANY UTILITY AFFECTED TO A "LIKE NEW" CONDITION AT NO COST TO THE OWNER.
11. SCHEDULE AND COORDINATE ALL WORK WITH THE OWNER.
12. ELECTRICAL WORK SHALL INCLUDE ALL CUTTING AND PATCHING AND THE FULL RESTORATION OF WALL AND FLOOR STRUCTURES AND SURFACES TO ORIGINAL OR BETTER CONDITION. RESTORE ALL FIRE RATINGS AFFECTED BY THE WORK.
13. AL WORK SHALL BE PERFORMED BY THOSE SKILLED IN THEIR PARTICULAR TRADE AND COMPLETED IN A NEAT AND WORKMANLIKE MANNER.
14. ALL ELECTRICAL MATERIALS SHALL BE LISTED BY UNDERWRITERS LABORATORIES AND SHALL BEAR THE UL LABEL.
15. WHENEVER POSSIBLE, MATERIALS AND EQUIPMENT SHALL BE FROM DOMESTIC MANUFACTURERS.
16. UPON COMPLETION OF THE WORK, ALL EQUIPMENT SHALL BE CLEANED, ADJUSTED AND TESTED TO INSURE THAT ALL SYSTEMS WORK AS INTENDED.
17. UPON COMPLETION OF THE WORK, THE CONTRACTOR SHALL TEST THE COMPLETE ELECTRICAL SYSTEM FOR SHORTS, GROUNDS, AND PROPER OPERATION, IN THE PRESENCE OF THE OWNER OR THE OWNER'S REPRESENTATIVE.
18. BOND ALL METAL WIREWAYS, CONDUITS, METAL BOXES, AND LIGHT POLES, PER NEC, LATEST EDITION.
19. THE CONDUCTOR SIZES AND CONDUIT SIZES SHALL BE VERIFIED BY THE LICENSED ELECTRICIAN TO MEET APPLICABLE CODES, BASED UPON THE FINAL LAYOUT OF WIRING PATHS.

ELECTRICAL SYMBOL LIST

- EXISTING ELECTRICAL HAND HOLE
- NEW ELECTRICAL PULL BOX PER DETAIL #4/DRAWING C-5.1
- INDICATES HOME RUN OF WIRING TO PANEL AND CIRCUIT INDICATED ON ELECTRICAL PLANS
- INDICATES NEW LIGHTING UNIT.
- INDICATES EXISTING LIGHTING UNIT.
- INDICATES NEW PVC SCH 40 PVC CONDUIT FOR POWER. SEE PLAN FOR # AND SIZES.
- EXISTING UNDERGROUND ELECTRICAL CONDUIT

NATIONAL ELECTRICAL CODE (NEC), LATEST ADOPTED EDITION

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5/15/20 Date
Architect
FVHD architects planners
ESTD 1915
F V H P C . C O M
Corporate: 1515 Lower Ferry Road - Trenton - New Jersey 08628
Pennsylvania: 140 Whitaker Ave - Mont Clare - Pennsylvania 19453

Project Name
NEW DISTRICT MAINTENANCE & OPERATIONS BUILDING

Project Owner Name
GALLOWAY TOWNSHIP PUBLIC SCHOOLS

Project Location
BLOCK 953.01, LOT 1.01
103 S. REEDS ROAD,
GALLOWAY TWP.,
ATLANTIC COUNTY,
NEW JERSEY

Project Number
5195
Project Date
06.19.20
Checked By
WBE
Drawn By
BEK
Scale
NOTED

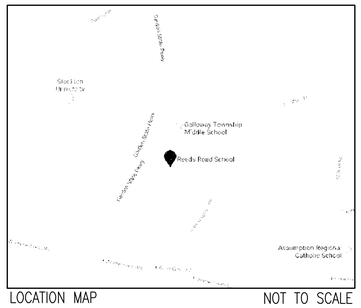
Drawing Name
SITE LIGHTING PLAN

Revisions

No.	Date	Description

Civil Engineering Consultant: EEG 1228C
EDWARDS
Engineering Group, Inc.
Certificate of Authorization: 24GA28008000
P.O. Box 8437 * Somerville, NJ * 08876-8437
908.231.9595 Fax 908.231.9696
William B. Edwards 06.19.2020
WILLIAM B. EDWARDS, P.E. Date
Professional Engineer N.J. Lic. No. GE36148

Drawing Number
C-5.1



LOCATION MAP NOT TO SCALE

LEGEND — SOIL EROSION

SYMBOL	DESCRIPTION
SLANTED TEXT	TEXT & NOTES
	SILTATION CONTROL FENCE
	INLET SEDIMENT FILTER
	CONTOUR LINE
x 22.75	SPOT ELEVATION
	DRAINAGE PATTERN
	LIMIT OF DISTURBANCE
	WHEEL CLEANING BLANKET
	TOPSOIL STOCKPILE

SEQUENCE OF CONSTRUCTION

TIME (WEEKS)	WORK DESCRIPTION
2	STRIP TOPSOIL & PLACE IN STOCKPILE
1	INSTALL PERIMETER SEDIMENT BARRIER, SILT FENCE, AND SOIL EROSION CONTROL MEASURES
4	CONSTRUCT FOREBAYS AND DETENTION BASIN EXPANSION. BASIN SHALL BE PERMANENTLY STABILIZED PRIOR TO THE ESTABLISHMENT OF IMPERVIOUS SURFACES.
1	SITE DEMOLITION ACTIVITIES.
2	ROUGH GRADE SITE.
2	CONSTRUCT STORM/SANITARY SEWER SYSTEMS. INSTALL INLET PROTECTION, CLEANOUTS AND FILTERS AS NEW STRUCTURES ARE CONSTRUCTED.
30	CONSTRUCT MAINTENANCE BUILDING
2	CONSTRUCT LIGHT POLES AND CONDUITS.
4	CONSTRUCT PAVEMENT FOR NEW MAINTENANCE BUILDING.
1	INSTALL LANDSCAPING AND PERMANENTLY STABILIZE AREAS PER SPECIFICATIONS.
1	WHEN SITE IS COMPLETELY AND PERMANENTLY STABILIZED, REMOVE ALL TEMPORARY EROSION CONTROLS.
CONTINUOUS	MAINTENANCE OF ALL SOIL EROSION CONTROLS. ie. TRACKING PADS, INLET FILTERS TO BE CLEANED. SILT FENCING TO BE CLEANED AND IN AN UPRIGHT POSITION.

THE ABOVE SEQUENCES MAY OVERLAP IN ACTUAL TIME. ACTUAL CONSTRUCTION TIMES MAY VARY. THE ESTIMATED CONSTRUCTION TIME FOR THIS PROJECT IS 5 MONTHS.

STABILIZATION SPECIFICATIONS

1. SEEDBED PREPARATION: UNIFORMLY APPLY GROUND LIMESTONE AND FERTILIZER TO TOPSOIL WHICH HAS BEEN SPREAD AND FIRMED, ACCORDING TO SOIL TEST RECOMMENDATIONS, SUCH AS OFFERED BY RUTGERS CO-OPERATIVE EXTENSION SOIL SAMPLE MAILERS ARE AVAILABLE FROM THE LOCAL RUTGERS COOPERATIVE EXTENSION OFFICES (HTTP://NJAES.RUTGERS.EDU/COUNTY).

2. WORK FERTILIZER AND LIME AND LIME INTO THE SOIL AS NEARLY AS PRACTICAL TO A DEPTH OF 4 INCHES.

3. TEMPORARY SEEDING AND MULCHING
   LIME — AS RECOMMENDED BY SOIL TESTING.
   FERTILIZER — 500 LBS PER ACRE OF 10-20-10 OR EQUAL, WITH 50% WATER INSOLUBLE NITROGEN, UNLESS SOIL TESTING INDICATES OTHERWISE.
   SEED — SPRING OATS AT 86 LBS PER ACRE (2 LBS PER 1,000 SQ.FT.)
   PLANTING DATES: FEBRUARY 15 THRU MAY 1
   AUGUST 15 THRU OCTOBER 15
   MULCH — SALT HAY OR SMALL GRAIN STRAW AT 70-90 LBS PER 1,000 SQ.FT.
   BINDER — LIQUID SYNTHETIC OR ORGANIC SUCH AS CURASOL DCA 70, PETRO SET, OR TERRA TACK AT RATES ESTABLISHED BY THE MANUFACTURER TO BIND THE MULCH BLANKET.

   PERMANENT SEEDING
   LIME — AS RECOMMENDED BY SOIL TESTING.
   FERTILIZER — 500 LBS PER ACRE 10-10-10 OR EQUAL, WITH 50% WATER INSOLUBLE NITROGEN, UNLESS SOIL TESTING INDICATES OTHERWISE.
   SEED — LITTLE BLUESTEM AT 5 LBS/ACRE
   DEERTONGUE AT 5 LBS/ACRE
   SWITCHGRASS AT 5 LBS/ACRE
   PARTRIDGE PEA AT 5 LBS/ACRE
   PLANTING DATES: FEBRUARY 1 THRU APRIL 30
   AUGUST 15 THRU OCTOBER 30 (OPTIMUM).
   MULCH — SEE NO. 1 ABOVE.

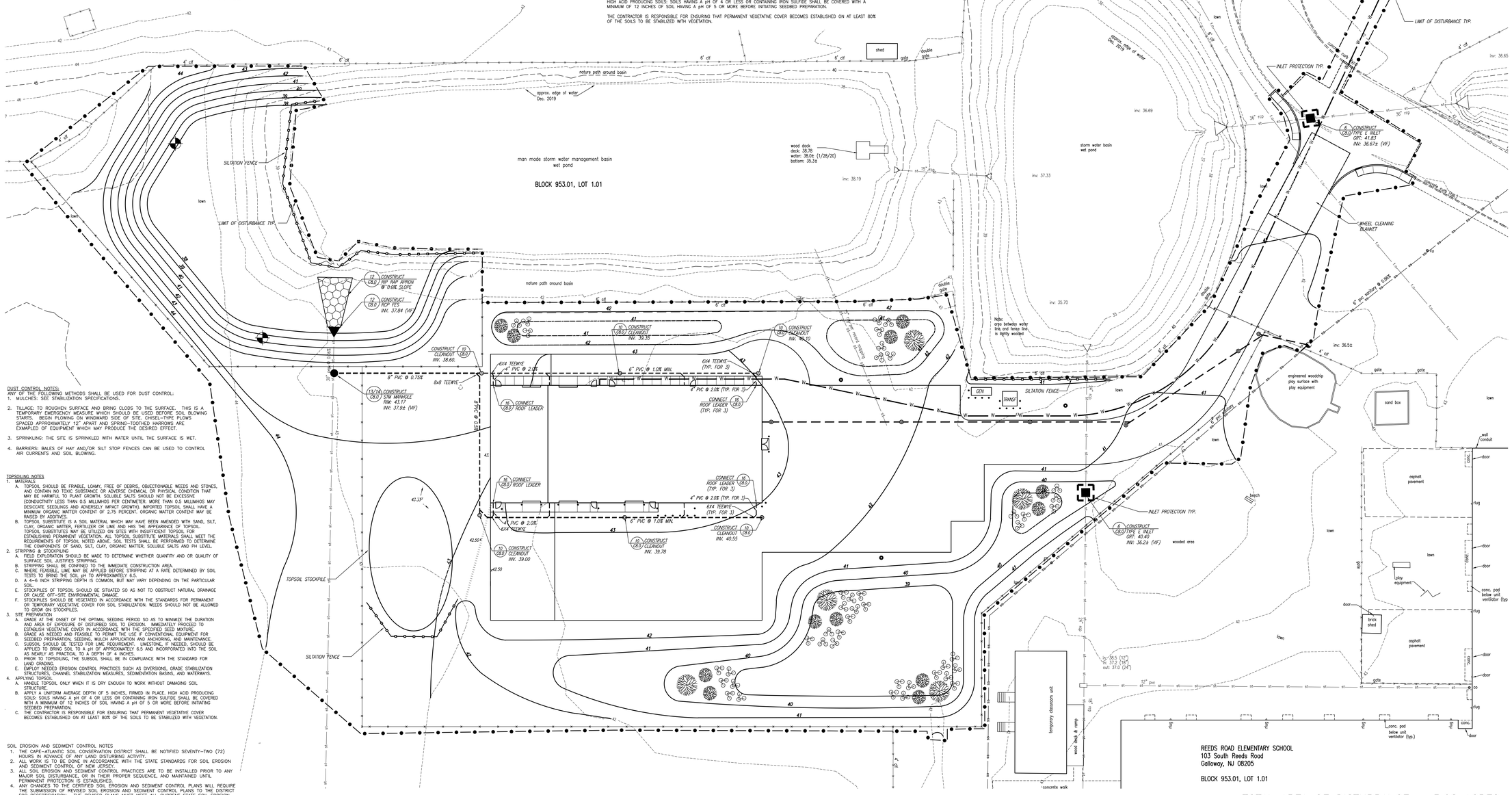
4. STABILIZATION WITH MULCH ONLY
   MULCH — UNROTTED SMALL-GRAIN STRAW, OR SALT HAY AT 2.0 TO 2.5 TONS PER ACRE. SPREAD UNIFORMLY AT 90 TO 115 LBS PER 1,000 SQUARE FEET, ANCHORED WITH LIQUID MULCH BINDERS.
   BINDER — LIQUID SYNTHETIC OR ORGANIC SUCH AS CURASOL DCA 70, PETRO SET, OR TERRA TACK AT RATES ESTABLISHED BY THE MANUFACTURER TO BIND THE MULCH BLANKET. APPLICATIONS SHOULD BE HEAVIER AT EDGES WHERE WIND CATCHES THE MULCH, IN VALLEYS, AND AT CRESTS OF BANKS. REMAINDER OF AREA SHOULD BE UNIFORM IN APPEARANCE.

HIGH ACID PRODUCING SOILS: 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 INITIATING SEEDBED PREPARATION.

THE CONTRACTOR IS RESPONSIBLE FOR ENSURING THAT PERMANENT VEGETATIVE COVER BECOMES ESTABLISHED ON AT LEAST 80% OF THE SOILS TO BE STABILIZED WITH VEGETATION.

NOTE:
THE HORIZONTAL DATUM IS BASED UPON THE NEW JERSEY STATE PLANE COORDINATE SYSTEM, NAD83 AND WAS ESTABLISHED BY TAKING STATIC GPS OBSERVATIONS ON KNOWN SURVEY CONTROL POINTS AND SUBMITTING THE DATA TO OPUS RS FOR POST-PROCESSING.
THE VERTICAL DATUM IS NAVD88 AND WAS ALSO ESTABLISHED BY TAKING STATIC GPS OBSERVATIONS

0 20 40 60
SCALE: 1"=20'



REEDS ROAD ELEMENTARY SCHOOL
103 South Reeds Road
Galloway, NJ 08205

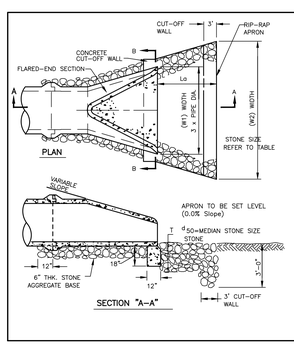
BLOCK 953.01, LOT 1.01

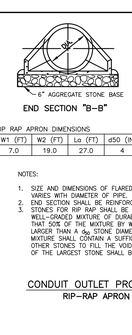
TOTAL AREA OF DISTURBANCE = 3.08 ACRES

DUST CONTROL NOTES:
ANY OF THE FOLLOWING METHODS SHALL BE USED FOR DUST CONTROL:
1. MULCHES: SEE STABILIZATION SPECIFICATIONS.
2. 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 APPROXIMATELY 12" APART AND SPRING-TOOTHED HARROWS ARE EXMAPLED OF EQUIPMENT WHICH MAY PRODUCE THE DESIRED EFFECT.
3. SPRINKLING: THE SITE IS SPRINKLED WITH WATER UNTIL THE SURFACE IS WET.
4. BARRIERS: BALES OF HAY AND/OR SILT STOP FENCES CAN BE USED TO CONTROL AIR CURRENTS AND SOIL BLOWING.

TOPSOILING NOTES
1. MATERIALS
   A. TOPSOIL SHOULD BE FRIABLE, LOAMY, FREE OF DEBRIS, OBJECTIONABLE WEEDS AND STONES, AND CONTAIN NO TOXIC SUBSTANCE OR ADVERSE CHEMICAL OR PHYSICAL CONDITION THAT MAY BE HARMFUL TO PLANT GROWTH. SOLUBLE SALTS SHOULD NOT BE EXCESSIVE (CONDUCTIVITY LESS THAN 0.5 MILLIMHOS PER CENTIMETER. MORE THAN 0.5 MILLIMHOS MAY DESICCATE SEEDLINGS AND ADVERSELY IMPACT GROWTH). IMPORTED TOPSOIL SHALL HAVE A MINIMUM ORGANIC MATTER CONTENT OF 2.75 PERCENT. ORGANIC MATTER CONTENT MAY BE RAISED BY ADDITIVES.
   B. TOPSOIL SUBSTITUTE IS A SOIL MATERIAL WHICH MAY HAVE BEEN AMENDED WITH SAND, SILT, CLAY, ORGANIC MATTER, FERTILIZER OR LIME AND HAS THE APPEARANCE OF TOPSOIL. TOPSOIL SUBSTITUTES MAY BE UTILIZED ON SITES WITH INSUFFICIENT TOPSOIL FOR ESTABLISHING PERMANENT VEGETATION. ALL TOPSOIL SUBSTITUTE MATERIALS SHALL MEET THE REQUIREMENTS OF TOPSOIL NOTED ABOVE. SOIL TESTS SHALL BE PERFORMED TO DETERMINE THE COMPONENTS OF SAND, SILT, CLAY, ORGANIC MATTER, SOLUBLE SALTS AND PH LEVEL.
2. STRIPPING & STOCKPILING
   A. FIELD EXPLORATION SHOULD BE MADE TO DETERMINE WHETHER QUANTITY AND OR QUALITY OF SURFACE SOIL JUSTIFIES STRIPPING.
   B. STRIPPING SHALL BE CONFINED TO THE IMMEDIATE CONSTRUCTION AREA.
   C. WHERE FEASIBLE, LIME MAY BE APPLIED BEFORE STRIPPING AT A RATE DETERMINED BY SOIL TESTS TO BRING THE SOIL pH TO APPROXIMATELY 6.5.
   D. A 4-6 INCH STRIPPING DEPTH IS COMMON, BUT MAY VARY DEPENDING ON THE PARTICULAR SOIL.
   E. STOCKPILES OF TOPSOIL SHOULD BE SITUATED SO AS NOT TO OBSTRUCT NATURAL DRAINAGE OR CAUSE OFF-SITE ENVIRONMENTAL DAMAGE.
   F. STOCKPILES SHOULD BE VEGETATED IN ACCORDANCE WITH THE STANDARDS FOR PERMANENT OR TEMPORARY VEGETATIVE COVER FOR SOIL STABILIZATION. WEEDS SHOULD NOT BE ALLOWED TO GROW ON STOCKPILES.
3. SITE PREPARATION
   A. GRADE AT THE ONSET OF THE OPTIMAL SEEDING PERIOD SO AS TO MINIMIZE THE DURATION AND AREA OF EXPOSURE OF DISTURBED SOIL TO EROSION. IMMEDIATELY PROCEED TO ESTABLISH VEGETATIVE COVER IN ACCORDANCE WITH THE SPECIFIED SEED MIXTURE.
   B. GRADE AS NEEDED AND FEASIBLE TO PERMIT THE USE IF CONVENTIONAL EQUIPMENT FOR SEEDBED PREPARATION, SEEDING, MULCH APPLICATION AND ANCHORING, AND MAINTENANCE.
   C. SUBSOIL SHOULD BE TESTED FOR LIME REQUIREMENT. LIMESTONE, IF NEEDED, SHOULD BE APPLIED TO BRING SOIL TO A pH OF APPROXIMATELY 6.5 AND INCORPORATED INTO THE SOIL AS NEARLY AS PRACTICAL TO A DEPTH OF 4 INCHES.
   D. PRIOR TO TOPSOILING, THE SUBSOIL SHALL BE IN COMPLIANCE WITH THE STANDARD FOR LAND GRADING.
   E. EMPLOY NEEDED EROSION CONTROL PRACTICES SUCH AS DIVERSIONS, GRADE STABILIZATION STRUCTURES, CHANNEL STABILIZATION MEASURES, SEDIMENTATION BASINS, AND WATERWAYS.
4. APPLYING TOPSOIL
   A. HANDLE TOPSOIL ONLY WHEN IT IS DRY ENOUGH TO WORK WITHOUT DAMAGING SOIL STRUCTURE.
   B. APPLY A UNIFORM AVERAGE DEPTH OF 5 INCHES, FIRMED IN PLACE. HIGH ACID PRODUCING SOILS: 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 INITIATING SEEDBED PREPARATION.
   C. THE CONTRACTOR IS RESPONSIBLE FOR ENSURING THAT PERMANENT VEGETATIVE COVER BECOMES ESTABLISHED ON AT LEAST 80% OF THE SOILS TO BE STABILIZED WITH VEGETATION.

SOIL EROSION AND SEDIMENT CONTROL NOTES
1. THE CAPE-ATLANTIC SOIL CONSERVATION DISTRICT SHALL BE NOTIFIED SEVENTY-TWO (72) HOURS IN ADVANCE OF ANY LAND DISTURBING ACTIVITY.
2. ALL WORK IS TO BE DONE IN ACCORDANCE WITH THE STATE STANDARDS FOR SOIL EROSION AND SEDIMENT CONTROL OF NEW JERSEY.
3. ALL SOIL EROSION AND SEDIMENT CONTROL PRACTICES ARE TO BE INSTALLED PRIOR TO ANY MAJOR SOIL DISTURBANCE, OR IN THEIR PROPER SEQUENCE, AND MAINTAINED UNTIL PERMANENT PROTECTION IS ESTABLISHED.
4. ANY CHANGES TO THE CERTIFIED SOIL EROSION AND SEDIMENT CONTROL PLANS WILL REQUIRE THE SUBMISSION OF REVISED SOIL EROSION AND SEDIMENT CONTROL PLANS TO THE DISTRICT FOR RECERTIFICATION. THE REVISED PLANS MUST MEET ALL CURRENT STATE SOIL EROSION AND SEDIMENT CONTROL STANDARDS.
5. ANY DISTURBED AREAS THAT WILL BE LEFT EXPOSED MORE THAN THIRTY (30) DAYS, AND NOT SUBJECT TO CONSTRUCTION TRAFFIC, WILL IMMEDIATELY RECEIVE A TEMPORARY SEEDING OF PERENNIAL RYEGRASS AT A RATE OF 100 LBS PER ACRE,IF THE SEASON PREVENTS THE ESTABLISHMENT OF TEMPORARY COVER, THE DISTURBED AREAS WILL BE MULCHED WITH STRAW, OR EQUIVALENT MATERIAL, AT A RATE OF 2 – 2 ½ TONS PER ACRE, ACCORDING TO THE STANDARD FOR STABILIZATION WITH MULCH ONLY.
6. IMMEDIATELY FOLLOWING INITIAL DISTURBANCE OR ROUGH GRADING, ALL CRITICAL AREAS SUBJECT TO EROSION (I.E. STEEP SLOPES AND ROADWAY EMBANKMENTS) WILL RECEIVE TEMPORARY SEEDING IN COMBINATION WITH STRAW MULCH OR A SUITABLE EQUIVALENT, AT A RATE OF 1 ½ – 2 TONS PER ACRE ACCORDING TO STATE STANDARDS.
7. ALL PAVED AREAS ADJACENT TO WORK AREAS SHALL BE SWEPT CLEAN ON A DAILY BASIS THROUGHOUT THE DURATION OF CONSTRUCTION.
8. ALL SOIL WASHED, DROPPED, SPILLED, OR TRACKED OUTSIDE THE LIMIT OF DISTURBANCE OR ONTO PUBLIC RIGHTS-OF-WAY WILL BE REMOVED IMMEDIATELY.
9. PERMANENT VEGETATION IS TO BE SEEDED OR SODDED ON ALL EXPOSED AREAS WITHIN TEN (10) DAYS AFTER FINAL GRADING.
10. AT THE TIME THE SITE PREPARATION FOR PERMANENT VEGETATIVE STABILIZATION IS GOING TO BE ACCOMPLISHED, ANY SOIL THAT WILL NOT PROVIDE A SUITABLE ENVIRONMENT TO SUPPORT ADEQUATE VEGETATIVE GROUND COVER SHALL BE REMOVED OR TREATED IN SUCH A WAY THAT IT WILL PERMANENTLY ADJUST THE SOIL CONDITIONS AND RENDER IT SUITABLE FOR VEGETATIVE GROUND COVER. IF THE REMOVAL OR TREATMENT OF THE SOIL WILL NOT PROVIDE SUITABLE CONDITIONS, NON-VEGETATIVE MEANS OF PERMANENT STABILIZATION WILL HAVE TO BE EMPLOYED.
11. IN ACCORDANCE WITH THE STANDARD FOR MANAGEMENT OF HIGH ACID PRODUCING SOILS, ANY SOIL HAVING A PH OF 4 OR LESS OF CONTAINING IRON SULFIDES SHALL BE COVERED WITH A MINIMUM OF TWELVE (12) INCHES OF SOIL HAVING A PH OF 5 OR MORE PRIOR TO SEEDBED PREPARATION. AREAS WHERE TREES OR SHRUBS ARE TO BE PLANTED SHALL BE COVERED WITH A MINIMUM OF TWENTY-FOUR (24) INCHES OF SOIL HAVING A PH OF 5 OR MORE.
12. CONDUIT OUTLET PROTECTION MUST BE INSTALLED AT ALL REQUIRED OUTFALLS PRIOR TO THE DRAINAGE SYSTEM BECOMING OPERATIONAL.
13. UNFILTERED DEWATERING IS NOT PERMITTED. NECESSARY PRECAUTIONS MUST BE TAKEN DURING ALL DEWATERING OPERATIONS TO MINIMIZE SEDIMENT TRANSFER. ANY DEWATERING METHODS USED MUST BE IN ACCORDANCE WITH STANDARD FOR DEWATERING.
14. SHOULD THE CONTROL OF DUST AT THE SITE BE NECESSARY, THE SITE WILL BE SPRINKLED UNTIL THE SURFACE IS WET. TEMPORARY VEGETATIVE COVER SHALL BE ESTABLISHED OR MULCH SHALL BE APPLIED AS REQUIRED BY THE STANDARD FOR DUST CONTROL.
15. STOCKPILE AND STAGING LOCATIONS DETERMINED IN THE FIELD SHALL BE PLACED WITHIN THE LIMIT OF DISTURBANCE ACCORDING TO THE CERTIFIED PLAN. STAGING AREAS AND STOCKPILES NOT LOCATED WITHIN THE LIMIT OF DISTURBANCE WILL REQUIRE CERTIFICATION OF A REVISED SOIL EROSION AND SEDIMENT CONTROL PLAN. CERTIFICATION OF A NEW SOIL EROSION AND SEDIMENT CONTROL PLAN MAY BE REQUIRED FOR THESE ACTIVITIES IF AN AREA GREATER THAN 5,000 SQUARE FEET IS DISTURBED.
16. ALL SOIL STOCKPILES ARE TO BE TEMPORARILY STABILIZED IN ACCORDANCE WITH SOIL EROSION AND SEDIMENT CONTROL NOTE #6.
17. A REPORT OF COMPLIANCE MUST BE OBTAINED FROM THE DISTRICT UPON COMPLETION OF THE PROJECT.
18. THE PROPERTY OWNER SHALL BE RESPONSIBLE FOR ANY EROSION OR SEDIMENTATION THAT MAY OCCUR BELOW STORMWATER OUTFALLS OR OFFSITE AS A RESULT OF CONSTRUCTION OF THE PROJECT.
19. THE SOIL EROSION INSPECTOR MAY REQUIRE ADDITIONAL SOIL EROSION MEASURES TO BE INSTALLED IN ACCORDANCE WITH THE STATE STANDARDS FOR SOIL EROSION AND SEDIMENT CONTROL IN NEW JERSEY.





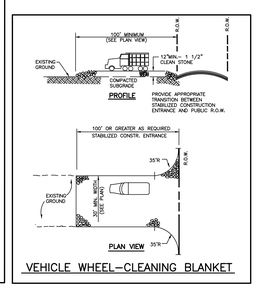
RIP RAP APRON DIMENSIONS

W1 (FT)	W2 (FT)	La (FT)	d50 (IN)	T (IN)
7.0	19.0	27.0	4	12

NOTES:
1. SIZE AND DIMENSIONS OF FLARED END SECTION VARIES WITH DIAMETER OF PIPE.
2. END SECTION SHALL BE REINFORCED CONCRETE.
3. STONES FOR RIP RAP SHALL BE COMPOSED OF A WELL-GRADED MIXTURE OF DURABLE ROCK SUCH THAT 50% OF THE MIXTURE BY WEIGHT SHALL BE LARGER THAN A d_{50} STONE DIAMETER. THE MIXTURE SHALL CONTAIN A SUFFICIENT MIXTURE OF OTHER STONES TO FILL THE VOIDS. THE DIAMETER OF THE LARGEST STONE SHALL BE $1.5d_{50}$

CONDUIT OUTLET PROTECTION
RIP-RAP APRON

THE SITE IS LOCATED WITHIN THE STATE DESIGNATED PLANNING AREA "WRANGLEBORO ESTATES", AND THEREFORE IS NOT SUBJECT TO SOIL DECOMPACTION TESTING REQUIREMENTS.



VEHICLE WHEEL-CLEANING BLANKET

DEWATERING

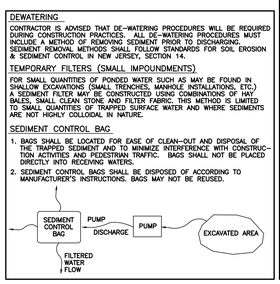
CONTRACTOR IS ADVISED THAT DE-WATERING PROCEDURES WILL BE REQUIRED DURING CONSTRUCTION PRACTICES. ALL DE-WATERING PROCEDURES MUST INCLUDE A METHOD OF REMOVING SEDIMENT PRIOR TO DISCHARGING. SEDIMENT REMOVAL METHODS SHALL FOLLOW STANDARDS FOR SOIL EROSION & SEDIMENT CONTROL IN NEW JERSEY, SECTION 19.

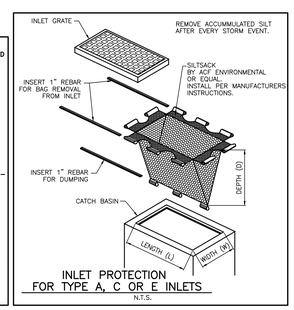
TEMPORARY FILTERS (SMALL IMPOUNDMENTS)

FOR SMALL QUANTITIES OF PONDED WATER SUCH AS MAY BE FOUND IN SHALLOW EXCAVATIONS (SMALL TRENCHES, MANHOLE INSTALLATIONS, ETC.) A SEDIMENT FILTER MAY BE CONSTRUCTED USING COMBINATIONS OF HAY BALES, SMALL CLEAN STONE AND FILTER FABRIC. THIS METHOD IS LIMITED TO SMALL QUANTITIES OF TRAPPED SURFACE WATER AND WHERE SEDIMENTS ARE NOT HIGHLY COLLOIDAL IN NATURE.

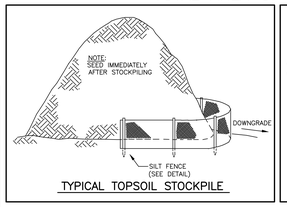
SEDIMENT CONTROL BAG

1. BAGS SHALL BE LOCATED FOR EASE OF CLEAN-OUT AND DISPOSAL OF THE TRAPPED SEDIMENT AND TO MINIMIZE INTERFERENCE WITH CONSTRUCTION ACTIVITY AND PEDESTRIAN TRAFFIC. BAGS SHALL NOT BE PLACED DIRECTLY INTO RECEIVING WATERS.
2. SEDIMENT CONTROL BAGS SHALL BE DISPOSED OF ACCORDING TO MANUFACTURER'S INSTRUCTIONS. BAGS MAY NOT BE REUSED.

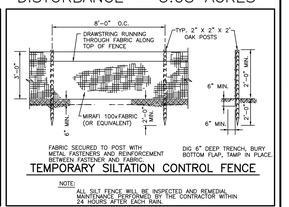




INLET PROTECTION FOR TYPE A, C OR E INLETS
N.T.S.

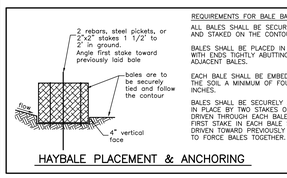


TYPICAL TOPSOIL STOCKPILE



TEMPORARY SILTATION CONTROL FENCE

NOTE:
ALL SILT FENCE WILL BE INSPECTED AND REMEDIAL MAINTENANCE PERFORMED BY THE CONTRACTOR WITHIN 24 HOURS AFTER EACH RAIN.



HAYBALE PLACEMENT & ANCHORING

REQUIREMENTS FOR BALE BARRIERS

ALL BALES SHALL BE SECURELY TIED AND STAKED ALONG CONTOUR.

BALES SHALL BE PLACED IN A ROW WITH ENDS TIGHTLY ABUTTING THE ADJACENT BALES.

EACH BALE SHALL BE EMBEDDED IN THE SOIL A MINIMUM OF FOUR (4) INCHES.

BALES SHALL BE SECURELY ANCHORED IN PLACE BY TWO STAKES OR REBARS DRIVEN THROUGH EACH BALE. THE FIRST STAKE IN EACH BALE SHALL BE DRIVEN TOWARD PREVIOUSLY LAID BALE TO FORCE BALES TOGETHER.

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Project Name
NEW DISTRICT MAINTENANCE & OPERATIONS BUILDING

Project Owner Name
GALLOWAY TOWNSHIP PUBLIC SCHOOLS

Project Location
BLOCK 953.01, LOT 1.01
103 S. REEDS ROAD, GALLOWAY TWP., ATLANTIC COUNTY, NEW JERSEY

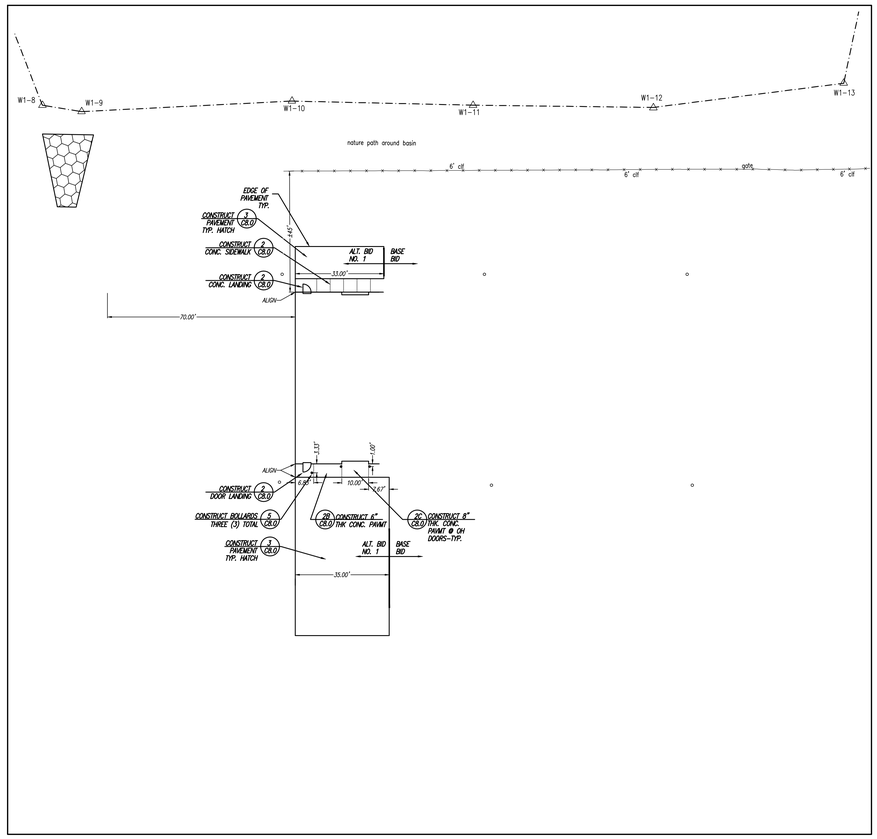
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Project Date: 06.19.20
Checked By: WBE
Drawn By: BEK
Scale: NOTED

Drawing Name
SOIL EROSION AND SEDIMENT CONTROL PLAN

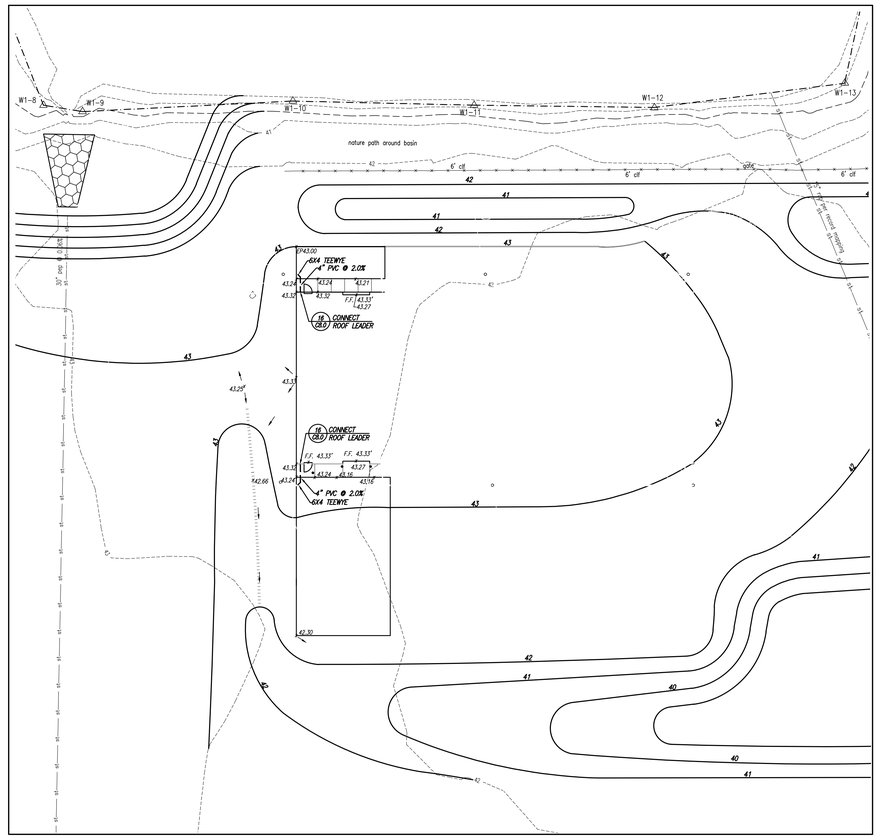
Revisions

No.	Date	Description

Drawing Number
C-6.0

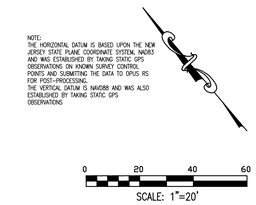


SITE PLAN – ALT. BID
SCALE: 1" = 20'



GRADING & DRAINAGE PLAN – ALT. BID
SCALE: 1" = 20'

NOTE: UTILITY AND DRAINAGE PIPES SHALL BE CONSTRUCTED PER BASE BID (SHEET C-5.0).



LEGEND OF SYMBOLS & ABBREVIATIONS

EXISTING	PROPOSED	ITEM
lowercase text	UPPERCASE TEXT	TEXT & NOTES
○	●/◑	MANHOLE– NEW/RECONSTRUCT
□	■/◪	INLET– NEW/RECONSTRUCT
c.o.	◉	CLEANOUT
rl plug	○	ROOF LEADER
gv wv	GV WV	VALVE–TYPE
		FIRE HYDRANT/FDC
		UTIL. POLE/W–LIGHT/W–TRANSF.
		STREET/TRAFFIC SIGNS:
		FREESTANDING LIGHT
		FENCE
x70.25	x70.25	SPOT ELEVATIONS
68	68	CONTOUR LINE
st		STORM SEWER >12" DIA.
		STORM SEWER <=12" DIA

EXISTING	PROPOSED	ITEM
		PAVEMENT EDGE
		HOT MIX ASPHALT (HMA) PAVEMENT
		CURB/DEPRESSED CURB (DC)
		PORTLAND CEMENT CONCRETE
		TREE/WOOD LINE
		BUSH/SHRUBS
		EVERGREEN/DECIDUOUS TREES
		FULL DEPTH DEMOLITION
g	G	GAS LINE
w	W	WATER LINE
//		OVERHEAD POWER LINE
ss	SAN	SANITARY SEWER

ABBREVIATIONS

ADA	AMERICAN DISABILITIES ACT	G	GAS PIPE LINE	RCP	REINFORCED CONC. PIPE
APPROX.	APPROXIMATE	GRT	GRATE (ELEVATION)	RL	ROOF LEADER
BF	BARRIER FREE	GV	GAS VALVE	RLUG	ROOF LEADER UNDERGROUND
BC	BOTTOM OF CURB REVEAL				
BIT	BITUMINOUS	HC	HANDICAPPED	SCD	SOIL CONSERVATION DISTRICT
BW	BOTTOM WALL (GRADE)	HP	HIGH POINT	ST	STORM SEWER PIPE
		HYD	FIRE HYDRANT	SS/SAN	SANITARY SEWER PIPE
C	CONDUIT				
COMM	DATA/COMMUNICATION CABLE	INV	INVERT (ELEV.)	TEL	TELEPHONE
CONFIG.	CONFIGURATION	IT	INSIDE TRACK EDGE	TB	TOP OF BORDER
CLF	CHAIN LINK FENCE			TBR	TO BE REMOVED
C.O.	CLEAN OUT	LF	LINEAR FEET	TC	TOP OF CURB
CONC	CONCRETE	LP	LOW POINT	TP	TEST PIT
				TRANSF	TRANSFORMER
DC/D.C.	DEPRESSED CURB	MH	MANHOLE	TW	TOP OF WALL
DEMO	DEMOLITION	NIC	NOT IN CONTRACT	TYP	TYPICAL
DIP	DUCTILE IRON PIPE				
DS	DOWN SPOUT	O/H	OVERHEAD		
		OT	OUTSIDE TRACK EDGE	U/G	UNDERGROUND
E	ELECTRIC			UP	UTILITY POLE
ELEV	ELEVATION (FT.)	PC	POINT OF CURVE		
EP	EDGE OF PAVEMENT	PCC	POINT OF COMPOUND CURVE	V.I.F.	VERIFY IN FIELD
EX	EXISTING	PEP	POLYETHYLENE PIPE (HDPE)		
				W	WATER
FDC	FIRE DEPT. CONN.	PROP	PROPOSED	WV	WATER VALVE
FM	FORCE MAIN (SEWAGE)	PT.	POINT OF TANGENT		
FO	FIBER OPTIC CABLE	PVC	POLYVINYL CHLORIDE PIPE		
FTG.	FOOTING				

CONTRACTOR NOTE: YOU MUST ENGAGE A CERTIFIED MATERIALS & INSPECTION COMPANY AND PROVIDE GEOTECHNICAL ENGINEERING OVERSIGHT IN THE PROJECT. REFER TO FIELD ENGINEERING NOTES & SPECIFICATIONS.

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Architect Date

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Checked By
WBE

Drawn By
BEK

Scale
NOTED

Drawing Name
ALTERNATE BID PLANS

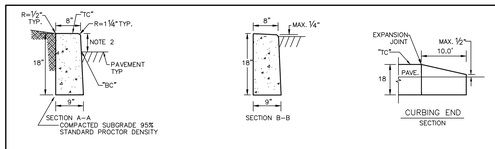
Revisions

No.	Date	Description

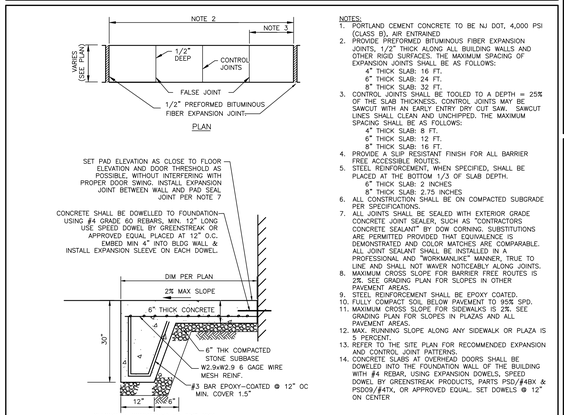
Civil Engineering Consultant: EEG 1228C
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Drawing Number
C–7.0



1 CONCRETE CURB
NOT TO SCALE

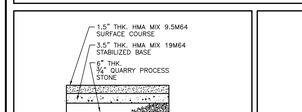


NOTES:
1. PORTLAND CEMENT CONCRETE TO BE NJ DOT, 4,000 PSI (CLASS B), AIR ENTRAINED
2. PROVIDE PREFORMED BITUMINOUS FIBER EXPANSION JOINTS, 1/2" THICK ALONG ALL BUILDING WALLS AND OTHER RIGID SURFACES. THE MAXIMUM SPACING OF EXPANSION JOINTS SHALL BE AS FOLLOWS:
4" THICK SLAB: 16 FT.
6" THICK SLAB: 24 FT.
8" THICK SLAB: 32 FT.
3. CONTROL JOINTS SHALL BE TOOLED TO A DEPTH = 25% OF THE SLAB THICKNESS. CONTROL JOINTS MAY BE SAWCUT WITH AN EARLY ENTRY DRY CUT SAW. SAWCUT LINES SHALL CLEAN AND UNCHIPPED. THE MAXIMUM SPACING SHALL BE AS FOLLOWS:
4" THICK SLAB: 8 FT.
6" THICK SLAB: 12 FT.
8" THICK SLAB: 16 FT.
4. PROVIDE A SLIP RESISTANT FINISH FOR ALL BARRIER FREE ACCESSIBLE ROUTES.
5. STEEL REINFORCEMENT, WHEN SPECIFIED, SHALL BE PLACED AT THE BOTTOM 1/3 OF SLAB DEPTH.
6" THICK SLAB: 2 INCHES
8" THICK SLAB: 2.75 INCHES
6. ALL CONSTRUCTION SHALL BE ON COMPACTED SUBGRADE PER SPECIFICATIONS.
7. ALL JOINTS SHALL BE SEALED WITH EXTERIOR GRADE CONCRETE JOINT SEALER, SUCH AS "CONTRACTORS CONCRETE SEALANT" BY DOW CORNING, SUBSTITUTIONS ARE PERMITTED PROVIDED THAT EQUIVALENCE IS DEMONSTRATED AND COLOR MATCHES ARE COMPARABLE. ALL JOINT SEALANT SHALL BE INSTALLED IN A PROFESSIONAL AND "WORKMANLIKE" MANNER. TRUE TO LINE AND SHALL NOT WAVER NOTICEABLY ALONG JOINTS.
8. MAXIMUM CROSS SLOPE FOR BARRIER FREE ROUTES IS 2%. SEE GRADING PLAN FOR SLOPES IN OTHER PAVEMENT AREAS.
9. STEEL REINFORCEMENT SHALL BE EPOXY COATED.
10. FULLY COMPACT SOIL BELOW PAVEMENT TO 95% SPD.
11. MAXIMUM CROSS SLOPE FOR SIDEWALKS IS 2%. SEE GRADING PLAN FOR SLOPES IN PLAZAS AND ALL PAVEMENT AREAS.
12. MAX. RUNNING SLOPE ALONG ANY SIDEWALK OR PLAZA IS 5 PERCENT.
13. REFER TO THE SITE PLAN FOR RECOMMENDED EXPANSION AND CONTROL JOINT PATTERNS.
14. CONCRETE SLABS AT OVERHEAD DOORS SHALL BE DOWELED INTO THE FOUNDATION WALL OF THE BUILDING WITH #4 REBAR, USING EXPANSION DOWELS, SPEED DOWEL BY GREENSTREAK PRODUCTS, PARTS PSD/#4BK & PSD09/#4TK, OR APPROVED EQUAL. SET DOWELS @ 12" ON CENTER

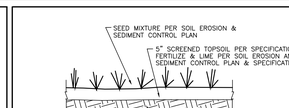
CONCRETE THICKNESS TABLE:

2A – 4" THICK
2B – 6" THICK REINF. WITH W2.9xW2.9 WWM
2C – 8" THICK REINF. WITH W2.9xW2.9 WWM (SEE NOTE #14)

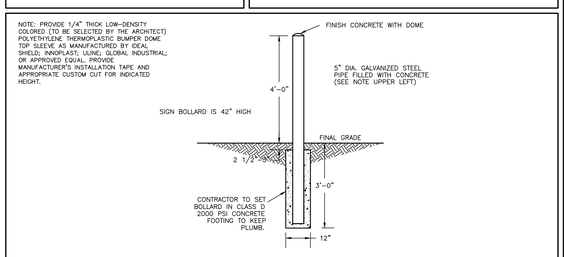
2 CONCRETE WALKWAY & LANDING
NOT TO SCALE



3 BITUMINOUS PAVEMENT
NOT TO SCALE



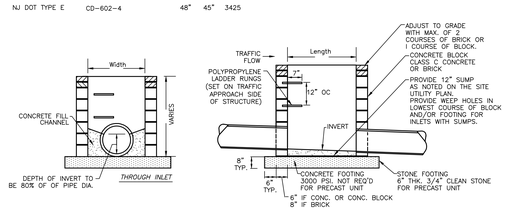
4 LAWN RESTORATION
NOT TO SCALE



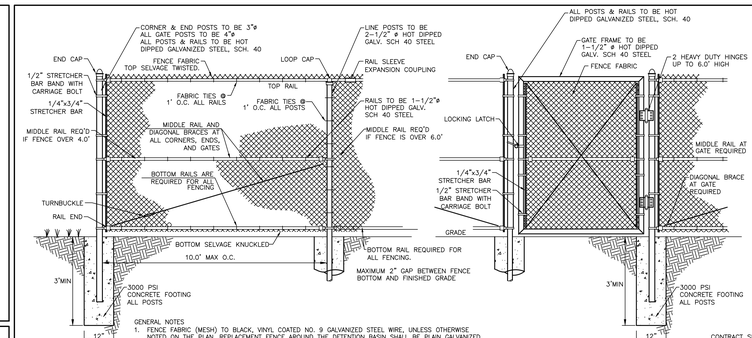
5 STANDARD BOLLARD
NOT TO SCALE

GENERAL NOTES:
1. FOOTING TO BE NJDOT CLASS 'C' CONCRETE, 3000 PSI. FOR PRECAST INLETS USE 6" OF 3/4" CLEAN STONE.
2. CONCRETE CHANNELS (INVERTS) TO BE NJDOT CLASS 'C' CONCRETE, 3000 PSI.
3. IF WALL CONSTRUCTION IS OTHER THAN CONCRETE, THEN THE WALLS SHALL BE PLASTERED INSIDE & OUT WITH A 1/2" THICK CEMENT PLASTER.
4. PROVIDE POLYPROPYLENE LADDER RUNGS AT 12" O.C. MAXIMUM.
5. ALL PRECAST STRUCTURES SHALL RECEIVE BITUMASTIC TAR COAT OUTSIDE ONLY.
6. CASTINGS SHALL BE CAMPBELL CASTING CO. OR AN APPROVED EQUAL. ALL CASTINGS SHALL HAVE BICYCLE SAFE GRATES.
7. PERFORM TEST PITS TO DETERMINE THE ALIGNMENT OF ALL EXISTING PIPES THAT CONNECT TO EACH INLET BEING CONSTRUCTED OR RE–CONSTRUCTED. INLETS BUILT IN PLACE MUST ALSO ACCOMMODATE EXISTING PIPES.
8. INSTALL PIPE SECTIONS TO EXISTING DRAINAGE PIPES AS NEEDED TO CONNECT PIPES INTO EACH NEW INLET. INCLUDE UP TO 8 FEET OF PIPE PER INLET. PIPE SIZE AND MATERIAL TO MATCH EXISTING.
9. ALL INLETS SHALL CONFORM TO NJ DOT SPECIFICATIONS AND DETAILS. INLETS WITH A NJ DOT DESIGNATION SHALL BE CONSTRUCTED IN ACCORDANCE WITH NJ DOT STANDARD DETAILS AS REFERENCED BELOW
10. ALL STRUCTURES AND CASTINGS SHALL BE RATED FOR H–20 LOADING.

TYPE	NJ DOT SHEET#	A	B	CASTING (CAMPBELL)
GENERAL DETAILS	CD–602–1			
NJ DOT TYPE A	CD–602–2	48"	22"	3405
NJ DOT TYPE B	CD–602–2	48"	42"	NO. 2618–B WITH TYPE J CURB (HEAD) "DUMP NO WASTE–DRAINS TO STREAM" CAST INTO IRON.
NJ DOT TYPE E	CD–602–4	48"	45"	3425



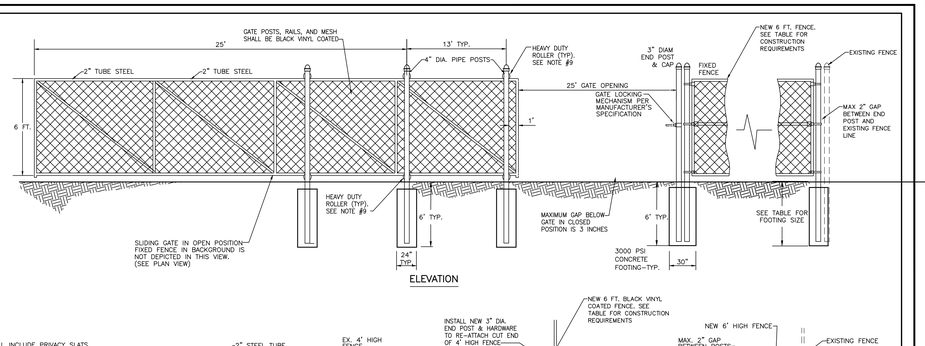
6 INLET CONSTRUCTION
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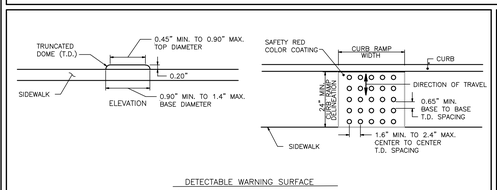
FENCE POST TABLE:

FENCE TYPE	POST MATERIAL	POST SIZE (IN.)	MAX. POST SPACING (FT.)	MIN. POST DEPTH (FT.)	MIN. FOOTING DIAMETER (FT.)
4 FEET	ASTM F1043 (30KSI)	2.375	10	3	1.25
6 FEET	ASTM F1043 (30KSI)	2.875	10	3.5	2
6 FEET (WS)	ASTM F1083 (50 KSI)	2.875	10	4.5	2.5

CONTRACT SHALL INCLUDE PRIVACY SLATS FOR FENCING AROUND THE EQUIPMENT PAD

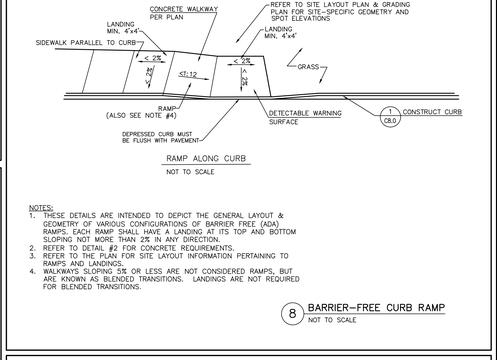


7 CHAIN LINK FENCE AND SLIDING GATE DETAIL

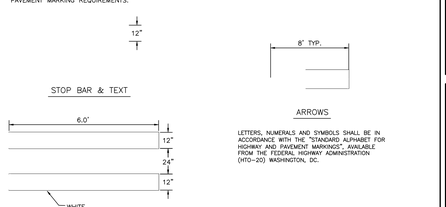


NOTES:
1. THESE DETAILS ARE INTENDED TO DEPICT THE GENERAL LAYOUT & GEOMETRY OF VARIOUS CONFIGURATIONS OF BARRIER FREE (ADA) RAMPS. EACH RAMP SHALL HAVE A LANDING AT ITS TOP AND BOTTOM SLOPING NOT MORE THAN 2% IN ANY DIRECTION.
2. REFER TO DETAIL #2 FOR CONCRETE REQUIREMENTS.
3. REFER TO THE PLAN FOR SITE LAYOUT INFORMATION PERTAINING TO RAMPS AND LANDINGS.
4. WALKWAYS SLOPING 5% OR LESS ARE NOT CONSIDERED RAMPS, BUT ARE KNOWN AS BLENDED TRANSITIONS. LANDINGS ARE NOT REQUIRED FOR BLENDED TRANSITIONS.

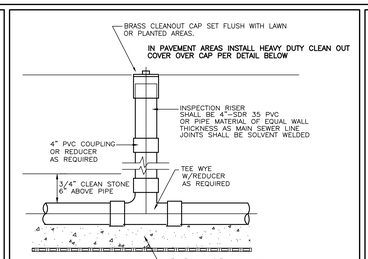
8 BARRIER–FREE CURB RAMP
NOT TO SCALE



1. A NORMAL WIDTH LINE SHALL BE 4"–6" WIDE. DOUBLE CENTERLINE SHALL BE 4" STRIPE, 4" GAP, 4" STRIPE.
2. BROKEN LINES IN THE FORM OF SEGMENTS AND GAPS SHALL BE IN THE RATIO OF 1:3. USE 5' LONG SEGMANT.
3. STOP BARS SHALL BE A MINIMUM 12" WIDE, WHITE, AND SHALL BE LOCATED 4' AHEAD OF A CROSS–WALK.
4. PARKING STALL LINES SHALL BE WHITE, EXCEPT BARRIER–FREE STALLS.
5. TRAFFIC LANE WORDS SHALL BE WHITE AND TYPICALLY 8 FT HIGH.
6. ALL PAVEMENT MARKINGS SHALL BE PER PART 3 OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD), LATEST EDITION.
7. ALL PAVEMENT MARKINGS SHALL BE THERMOPLASTIC PER NJDOT SPECIFICATIONS, COLOR WHITE, UNLESS NOTES OTHERWISE BY PLAN OR MUTCD.
8. THE PAVEMENT MARKING CONTRACTOR SHALL HAVE AT LEAST (3) YEARS EXPERIENCE WITH NJDOT AND FEDERAL PAVEMENT MARKING REQUIREMENTS.

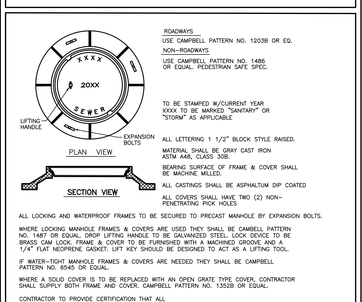


9 PAVEMENT MARKINGS
NOT TO SCALE

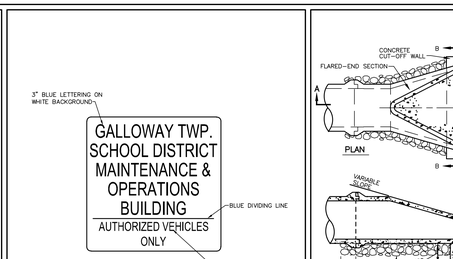


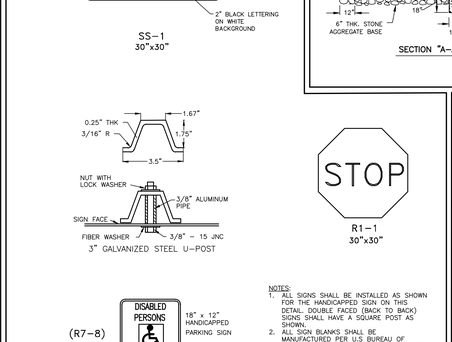
NOTES:
1. PORTLAND CEMENT CONCRETE TO BE NJ DOT, 4,000 PSI, AIR ENTRAINED

10 CLEANOUT & CLEANOUT COVER
NOT TO SCALE



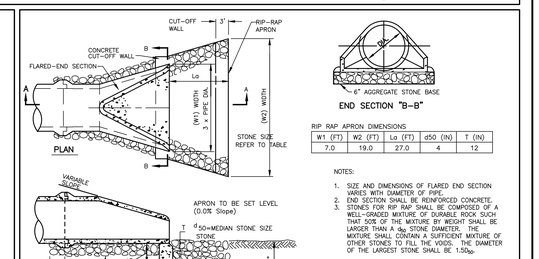
14 MANHOLE FRAME & GRATE
N.T.S.





NOTES:
1. ALL SIGNS SHALL BE INSTALLED AS SHOWN FOR THE HANDICAPPED SIGN ON THIS DETAIL. DOUBLE FACED (BACK TO BACK) SIGNS SHALL HAVE A SQUARE POST AS SHOWN.
2. ALL SIGN BLANKS SHALL BE MANUFACTURED PER U.S BUREAU OF PUBLIC ROADS STANDARDS AND SHALL BE TREATED PER ASTM B449.
3. THE SIGN FINISH SHALL BE ENGINEER GRADE.
4. ALL SIGN POSTS SHALL HAVE PRE–DRILLED HOLES, 7/16" ø 1" O.C.
5. SIGNS SHOWN ALONG DRIVEWAYS, ROADWAYS, AND PARKING LOTS SHALL BE POSITIONED TO THE NEAREST SIGN EDGE IS AT LEAST 2 FEET FROM THE TRAVELED WAY, WHENEVER POSSIBLE.
6. ALL SIGNS SHALL CONFORM TO THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES, LATEST EDITION.

11 TRAFFIC SIGNS W/HANDICAPPED SIGN
NOT TO SCALE

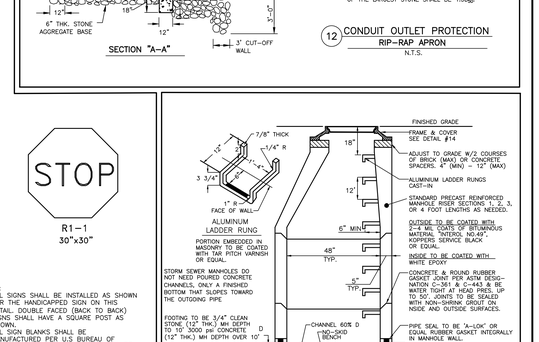


RIP RAP APRON DIMENSIONS

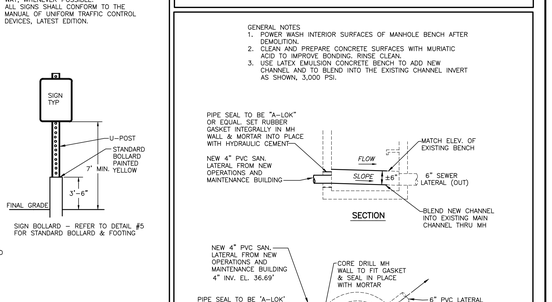
W1 (FT)	W2 (FT)	La (FT)	d50 (IN)	T (IN)
7.0	19.0	27.0	4	12

NOTES:
1. SIZE AND DIMENSIONS OF FLARED END SECTION VARIES WITH DIAMETER OF PIPE.
2. END SECTION SHALL BE REINFORCED CONCRETE.
3. STONES FOR RIP RAP SHALL BE COMPOSED OF A WELL–GRADED MIXTURE OF DURABLE ROCK SUCH THAT 50% OF THE MIXTURE BY WEIGHT SHALL BE LARGER THAN A d_{50} STONE DIAMETER. THE MIXTURE SHALL CONTAIN A SUFFICIENT MIXTURE OF OTHER STONES TO FILL THE VOIDS. THE DIAMETER OF THE LARGEST STONE SHALL BE $1.5d_{50}$

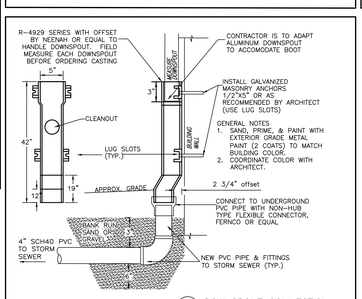
12 CONDUIT OUTLET PROTECTION
RIP–RAP APRON
N.T.S.

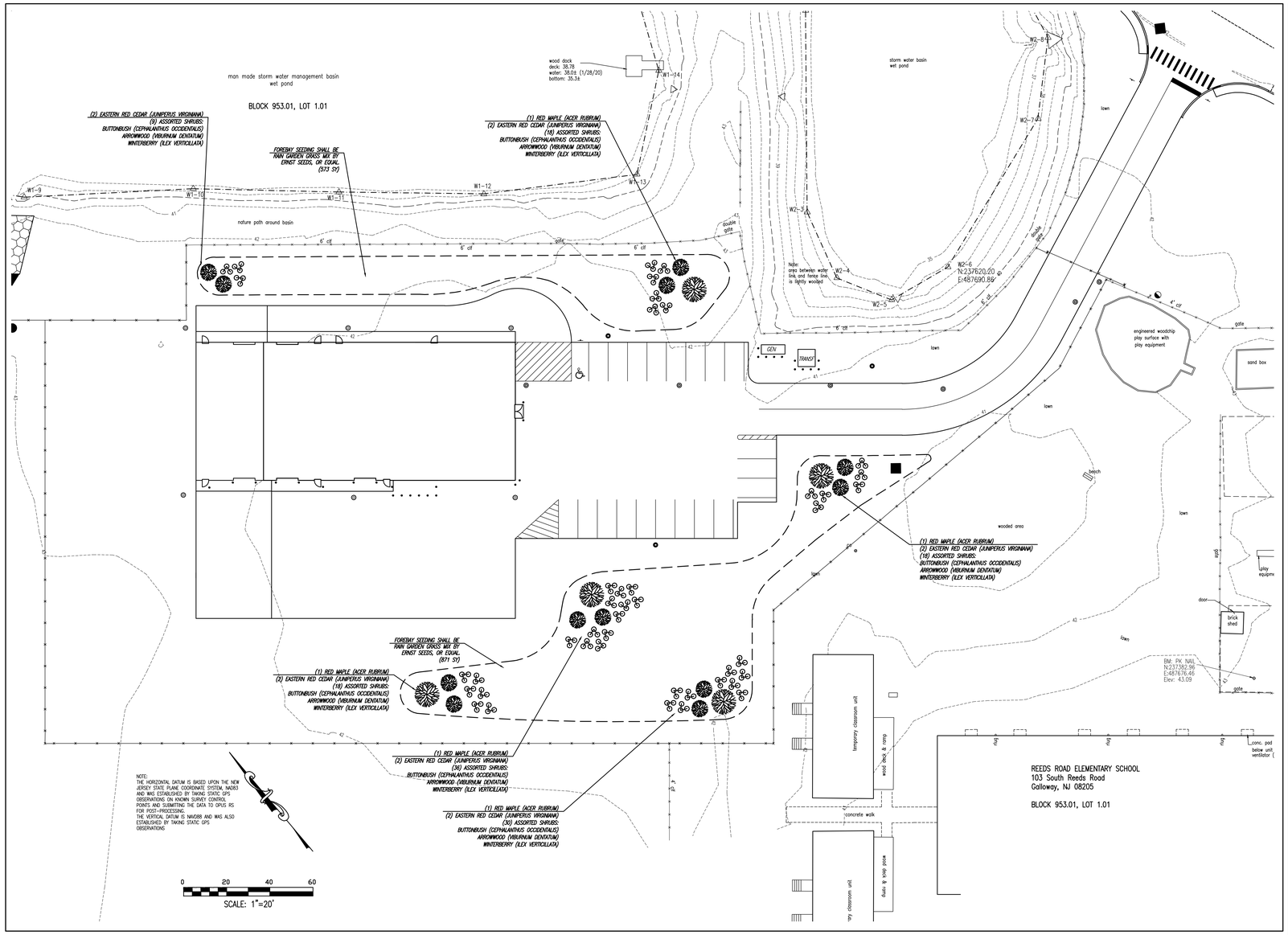


13 PRECAST MANHOLE
STORM SEWER



15 MANHOLE CONNECTION
NOT TO SCALE


R–4929 SERIES WITH OFFSET BY NEENAH OR EQUAL TO HANDLE DOWNSPOUT. FIELD MEASURE EACH DOWNSPOUT BEFORE ORDERING CASTING
5"
CONTRACTOR IS TO ADAPT ALUMINUM DOWNSPOUT TO ACCOMODATE BOOT
MASONRY WALL
3"
INSTALL GALVANIZED MASONRY ANCHORS 1/2"X5" OR AS RECOMMENDED BY ARCHITECT (USE LUG SLOTS)
CLEANOUT
42



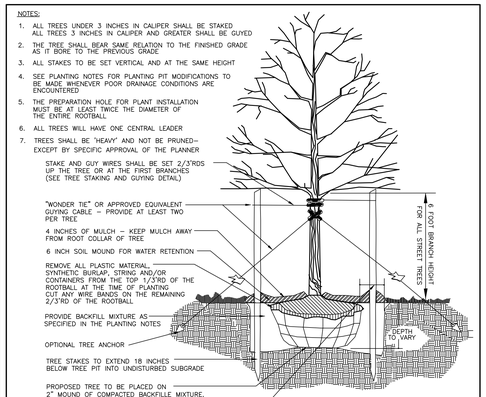
LANDSCAPING PLAN
SCALE: 1" = 20'

PLANTING SCHEDULE

QTY.	BOTANICAL NAME	COMMON NAME	INSTALLED SIZE	MATURE HGT.	SPACING
5	ACER RUBRUM	RED MAPLE	5' – 6' HIGH	25'–50'	15' O.C.
12	JUNIPERUS VIRGINIANA	EASTERN RED CEDAR	5' – 6' HIGH	20'–40'	10' O.C.
40	CEPHALANTHUS OCCIDENTALIS	BUTTONBUSH	1' – 2' HIGH	5'–10'	3' O.C.
40	VIBURNUM DENTATUM	ARROWWOOD	2' – 3' HIGH	5'–15'	3' O.C.
40	ILEX VERTICILLATA	WINTERBERRY	1' – 2' HIGH	3'–15'	3' O.C.

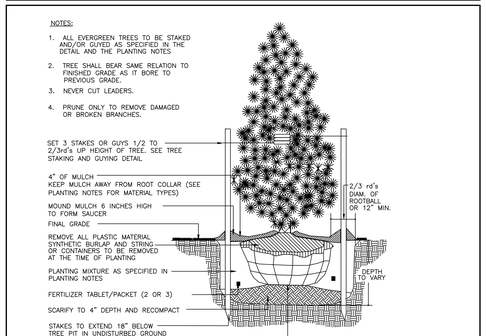
PLANTING NOTES:
1. ALL PLANT MATERIALS USED SHALL BE TRUE TO NAME AND SIZE IN CONFORMITY WITH THE CURRENT EDITION OF THE AMERICAN STANDARD OF NURSERY STOCK AND SHALL BE TYPICAL OF THEIR SPECIES OR VARIETY. ALL PLANTS SHALL HAVE NORMAL, WELL-DEVELOPED BRANCHES AND VIGOROUS ROOT SYSTEMS. THEY SHALL BE SOUND, HEALTHY, VIGOROUS, FREE FROM DEFECTS, DISFIGURING KNOTS, ABRASIONS OF THE BARK, SUN SCALD INJURIES, PLANT DISEASES, INSECT EGGS, BORERS, AND ALL OTHER FORMS OF INFECTION. ALL PLANTS SHALL BE NURSERY GROWN.
2. ALL PLANT MATERIAL SHALL BEAR THE SAME RELATION TO FINISHED GRADE AS IT BORE TO EXISTING GRADE AT THE NURSERY.
3. ALL PLANT MATERIAL IS TO BE GUARANTEED FOR A PERIOD OF TWELVE MONTHS FROM TIME OF FINAL ACCEPTANCE OF THE PROJECT OR AS REGULATED BY THE APPROVING AUTHORITY. IF ANY PLANTS ARE DEAD OR IN AN UNHEALTHY CONDITION BEFORE FINAL ACCEPTANCE OF THE PROJECT, THE LANDSCAPE CONTRACTOR SHALL REPLACE THEM AT HIS EXPENSE.
4. ANY SUBSTITUTIONS OF PLANT MATERIAL WITH REGARDS TO SIZE, SPECIES, VARIETY, ETC., SHALL BE SUBJECT TO APPROVAL BY THE PROJECT ENGINEER AND THE OWNER.
5. PRUNE NEWLY PLANTED TREES AS DIRECTED BY THE PROJECT ENGINEER.
6. UNDER NO CIRCUMSTANCES SHOULD THE MAIN LEADER OF A TREE BE TOPPED.
7. CUT AND REMOVE BURLAP FROM TOP ONE-THIRD OF BALL. ALL PLASTIC MATERIAL, SYNTHETIC BURLAP AND STRING OR CONTAINERS SHALL BE REMOVED AT THE TIME OF PLANTING. THE WIRE BASKETS AND PLASTIC LINERS OF CONTAINERS OF GROWN TREES AND SHRUBS MUST BE COMPLETELY REMOVED. NO CONTAINER GROWN MATERIAL WILL BE ACCEPTED IF IT IS ROOT BOUND.
8. THE DEPTH OF PLANT PITS SHALL BE INCREASED BY 12" THROUGH THE ADDITION OF LOOSE AGGREGATE (3/4" TO 1 1/2" DIAMETER) WHEREVER POOR DRAINAGE OCCURS OR WHERE DIRECTED BY THE PROJECT ENGINEER.
9. GUY WIRES SHALL BE LOCATED SO THAT THEY WILL NOT PULL CROTCH APART. GUY WIRES TO THE SECOND BRANCH (MINIMUM ONE-THIRD HEIGHT OF TREE). USE TWO GUYS PER TREE UNLESS OTHERWISE INDICATED. TREE STAKES AND GUY WIRES SHALL BE REMOVED AFTER ONE GROWING SEASON.
10. PLANTING BACKFILL MIXTURE SHALL CONSIST OF ONE PART TOPSOIL, ONE PART NATIVE SOIL AND ONE PART PEAT MOSS. NOTE THAT PLANTING MIXTURE MAY CHANGE BASED UPON SOIL CONDITIONS.
11. MULCH, MINIMUM 4" IN DEPTH, SHALL BE EITHER WOOD CHIPS, PINE BARK, OR SHREDDED HARDWOOD BARK NOT EXCEEDING 2" IN GREATEST DIMENSION. ALL MULCHED BEDS SHALL BE RETAINED BY AN ALUMINUM BORDER SUCH AS PERMALOC CLEANLINE XL OR APPROVED EQUAL, WHEREVER A MULCHED AREA ADJOINS A VEGETATED LAWN AREA (NOT RESTRAINED BY A HARD SURFACE).
12. ALL PLANT MATERIAL SHALL BE GIVEN A MINIMUM OF 5 GALLONS OF WATER AT THE TIME OF INSTALLATION AND SHALL BE WATERED AT INTERVALS DURING ESTABLISHMENT TO ENSURE ADAPTATION TO THE SITE PRIOR TO THE INSTALLATION OF THE PLANT MATERIAL. THE CONTRACTOR SHALL FILL EACH PLANTING PIT WITH WATER AND ALLOW IT TO FULLY PERCOLATE INTO THE GROUND PRIOR TO PLACEMENT OF THE PLANT. THE CONTRACTOR SHALL NOTIFY THE ENGINEER OF ANY PERCOLATION PROBLEMS PRIOR TO INSTALLATION.
13. NO PLANTING SHALL BE EXECUTED DURING ABNORMALLY HOT WEATHER NOR WHEN THE GROUND IS FROZEN.
14. THE CONTRACTOR SHALL REMOVE ALL DAMAGED BRANCHES AND NURSERY TAGS AT THE TIME OF INSTALLATION.
15. (3) SLOW RELEASE FERTILIZER TABLETS OR PACKETS OF 20-10-5 COMPOSITION SHALL BE ADDED TO ALL PLANTING PITS FOR TREES.

NOTES:
1. ALL TREES UNDER 3 INCHES IN CALIPER SHALL BE STAKED ALL TREES 3 INCHES IN CALIPER AND GREATER SHALL BE GUYED
2. THE TREE SHALL BEAR SAME RELATION TO THE FINISHED GRADE AS IT BORE TO THE PREVIOUS GRADE
3. ALL STAKES TO BE SET VERTICAL AND AT THE SAME HEIGHT
4. SEE PLANTING NOTES FOR PLANTING PIT MODIFICATIONS TO BE MADE WHENEVER POOR DRAINAGE CONDITIONS ARE ENCOUNTERED
5. THE PREPARATION HOLE FOR PLANT INSTALLATION MUST BE AT LEAST TWICE THE DIAMETER OF THE ENTIRE ROOTBALL
6. ALL TREES WILL HAVE ONE CENTRAL LEADER
7. TREES SHALL BE "HEAVY" AND NOT BE PRUNED– EXCEPT BY SPECIFIC APPROVAL OF THE PLANNER



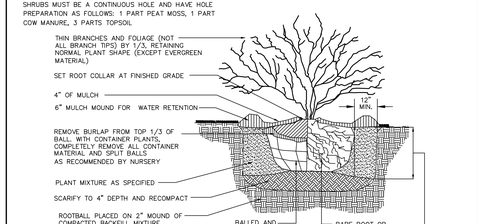
1 DECIDUOUS TREE PLANTING DETAIL
NOT TO SCALE

NOTES:
1. ALL EVERGREEN TREES TO BE STAKED AND/OR GUYED AS SPECIFIED IN THE DETAIL AND THE PLANTING NOTES
2. TREE SHALL BEAR SAME RELATION TO FINISHED GRADE AS IT BORE TO PREVIOUS GRADE.
3. NEVER CUT LEADERS.
4. PRUNE ONLY TO REMOVE DAMAGED OR BROKEN BRANCHES.

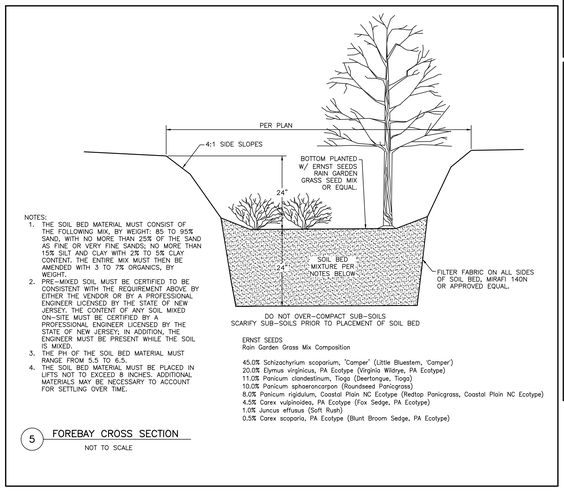


2 EVERGREEN TREE PLANTING DETAIL
NOT TO SCALE

NOTES:
1. MAINTAIN SAME GROUND LINE AS IN THE NURSERY
2. DO NOT PRUNE EVERGREEN SHRUBS EXCEPT TO REMOVE DEAD AND BROKEN BRANCHES
3. ALL SHRUBS ARE TO BE FULL AND HAVE GOOD CONFORMANCE
4. WHERE CLUSTERED IN A BED, THE PREPARATION HOLE FOR SHRUBS MUST BE A CONTINUOUS HOLE AND HAVE HOLE PREPARATION AS FOLLOWS: 1 PART PEAT MOSS, 1 PART COW MANURE, 3 PARTS TOPSOIL



3 SHRUB PLANTING DETAIL
NOT TO SCALE

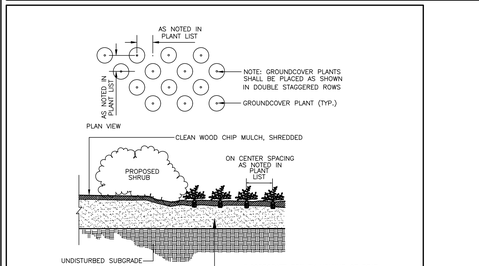


NOTES:
1. THE SOIL BED MATERIAL MUST CONSIST OF THE FOLLOWING MIX, BY WEIGHT: 85 TO 95% SAND, WITH NO MORE THAN 25% OF THE SAND AS FINE OR VERY FINE SANDS; NO MORE THAN 15% SILT AND CLAY WITH 2% TO 5% CLAY CONTENT. THE ENTIRE MIX MUST THEN BE AMENDED WITH 3 TO 7% ORGANICS, BY WEIGHT.
2. PRE-MIXED SOIL MUST BE CERTIFIED TO BE CONSISTENT WITH THE REQUIREMENT ABOVE BY EITHER THE VENDOR OR BY A PROFESSIONAL ENGINEER LICENSED BY THE STATE OF NEW JERSEY. THE CONTENT OF ANY SOIL MIXED ON-SITE MUST BE CERTIFIED BY A PROFESSIONAL ENGINEER LICENSED BY THE STATE OF NEW JERSEY; IN ADDITION, THE ENGINEER MUST BE PRESENT WHILE THE SOIL IS MIXED.
3. THE PH OF THE SOIL BED MATERIAL MUST RANGE FROM 5.5 TO 6.5.
4. THE SOIL BED MATERIAL MUST BE PLACED IN LIFTS NOT TO EXCEED 8 INCHES. ADDITIONAL MATERIALS MAY BE NECESSARY TO ACCOUNT FOR SETTLING OVER TIME.

5 FOREBAY CROSS SECTION
NOT TO SCALE

ERNST SEEDS
Rain Garden Grass Mix Composition

45.0% Schizachyrium scoparium, 'Camper' (Little Bluestem, 'Camper')
20.0% Elymus virginicus, PA Ecotype (Virginia Wildrye, PA Ecotype)
11.0% Panicum clandestinum, Tioga (Deertongue, Tioga)
10.0% Panicum sphaerocarpon (Roundseed Panicgrass)
8.0% Panicum rigidulum, Coastal Plain NC Ecotype (Redtop Panicgrass, Coastal Plain NC Ecotype)
4.5% Carex vulpinoidea, PA Ecotype (Fox Sedge, PA Ecotype)
1.0% Juncus effusus (Soft Rush)
0.5% Carex scoparia, PA Ecotype (Blunt Broom Sedge, PA Ecotype)



4 GROUNDCOVER PLANTING DETAIL
NOT TO SCALE

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5/15/20
Date
Architect
FVHD architects planners
FVHPC.COM
Corporate: 1515 Lower Ferry Road - Trenton - New Jersey 08628
Pennsylvania: 140 Whitaker Ave - Mont Clare - Pennsylvania 19453

Project Name
NEW DISTRICT MAINTENANCE & OPERATIONS BUILDING

Project Owner Name
GALLOWAY TOWNSHIP PUBLIC SCHOOLS

Project Location
BLOCK 953.01, LOT 1.01
103 S. REEDS ROAD, GALLOWAY TWP., ATLANTIC COUNTY, NEW JERSEY

Project Number
5195

Project Date
06.19.20

Checked By
WBE

Drawn By
BEK

Scale
NOTED

Drawing Name
LANDSCAPING PLAN

Revisions

No.	Date	Description

Civil Engineering Consultant: EEG 1228C
EDWARDS
Engineering Group, Inc.
Certificate of Authorization: 24GA28008000
P.O. Box 8437 * Somerville, NJ * 08876-8437
908.231.9595 Fax 908.231.9696
06.19.2020
WILLIAM B. EDWARDS, P.E. Date
Professional Engineer NJ. Lic. No. GE36148

Drawing Number
C-9.0

ABBREVIATIONS

AACB	Acrylic acoustical ceiling board	FA	Fire alarm	N	North	T	Tread
A/C	Air conditioning	FB	Face brick	NIC	Not in contract	TB	Top of bank
AB	Anchor bolt	FBRK	Fire brick	NO	Number	TC	Terra cotta
ACB	Acoustical ceiling board	FD	Floor drain	NOM	Nominal	TEL	Telephone
AD	Area drain	FE	Fire extinguisher	NRC	Noise reduction coefficient	T&G	Tongue and groove
ADJ	Adjacent	FEC	Fire extinguisher cabinet	NTS	Not to scale	TG	Top of grate
ADJT	Adjustable	FES	Flared end section			TGR	Top of grade
AFF	Above finished floor	FF	Finish floor			THK	Thick
AGG	Aggregate	FFE	Finished floor elevation	OA	Overall	THR	Threshold
AL	Aluminum	FGL	Fiberglass	OC	On center	TKS	Tackstrip
ALT	Alternating	FIN	Finish	OD	Outside diameter	TLT, TOIL	Toilet
ALT. BID	Alternate bid	FIX	Fixture	OH	Overhead	TOC	Top of curb
ANC	Anchor, Anchorage	FLG	Flashing	OP	Opaque	TOM	Top of masonry
ANOD	Anodized	FLR	Floor	OPG	Opening	TOP	Top of plank
AP	Access panel	FND	Foundation	OPP	Opposite	TOS	Top of steel
APX	Approximate	FR	Frame			TPD	Toilet paper dispenser
ARCH	Architect	FRP	Fiberglass reinforced polyester			TPG	Tempered plate glass
		FP	Fire proof	PAR	Parallel	TPTN	Toilet partition
BB	Bottom of bank	FRT	Fire retardant	PBD	Particleboard	TV	Television
BD	Board	FS	Floor sink	PC	Plumbing contractor	TYP	Typical
BIT	Bituminous	FT	Feet	PCC	Precast concrete	TZ	Terrazzo
BF	Barrier Free	FTG	Footing	PERI	Perimeter		
BLDG	Building	FUR	Furring	PG	Plate glass		
BLK	Block			PK	Parking	UC	Undercut
BLKG	Blocking	GA	Gauge	PL	Plate	UL	Underwriter's laboratory
BM	Bench mark	GB	Grab bar	P LAM	Plastic laminate	UNO	Unless noted otherwise
BOT	Bottom	GC	General contractor	PLAS	Plaster	UR	Urinal
BRG	Bearing	GCMU	Glazed concrete masonry unit	PNL	Panel		
BRK	Brick	GD	Grade, grading	PNT	Paint (ed)		
BRZ	Bronze	GFP	Gypsum wall board epoxy painted	PR	Pair	VAT	Vinyl asbestos tile
BS	Both sides	GF	Ground face	PTT	Precast Terrazzo Tile	VB	Vapor barrier
BUR	Built up roof	GL	Glass, Glazing	PRTT	Precast Resilient Terrazzo Tile	VCT	Vinyl composition tile
		GLB	Glass block	PSF	Pounds per square foot	VERT	Vertical
CAB	Cabinet	GP	Gypsum wall board painted	PSI	Pounds per square inch	VEST	Vestibule
CB	Catch basin	GPDW	Gypsum drywall	PTD	Paper towel dispenser	VIF	Verify in Field
CEM PLAS	Cement plaster	GR	Grade	PTN	Partition	VIN	Vinyl
CEP	CMU epoxy painted	GRD.F.BLK	Ground face block	PTR	Paper towel receptor	VNR	Veneer
CFL	Counter flashing	GSFT	Glazed structural facing tile	PVC	Polyvinyl chloride	VTR	Vent thru roof
CHT	Ceiling height	GST	Glazed structural tile	PVMT	Pavement		
CI	Cast iron	GT	Grout	PWD	Plywood		
CJ	Control joint	GV	Galvanized			W	West
CL	Centerline / closet	GVL	Gravel	QT	Quarry tile	W/	With
CLG	Ceiling	GWB	Gypsum Wall Board	QTY	Quantity	W/O	Without
CLR	Clear					WB	Wood base
CMU	Concrete masonry unit	HB	Hose bib	R	Riser	WC	Water closet
COL	Column	HD	Head	RA	Return air	WD	Wood
CONC	Concrete	HDW	Hardware	RAD	Radius	WDW	Window
COND	Condition	HM	Hollow metal	RBT	Rubber tile	WG	Wire glass
CONST	Construction	HOR	Horizontal	RCP	Reinforced concrete pipe	WH	Wall hung
CONT	Continuous	HP	Highpoint	RD	Roof drain	WIN	Window
CONTR	Contractor	HR	Hour	RE	Reinforce (d), (ing)	WM	Wire mesh
COOL	Cooling	HTR	Heater	REF	Reference (s)	WP	Waterproofing / Work point
CP	CMU Painted	HVC	Heating & ventilation contractor	REFL	Reflected	WPT	Work point
CPR	Copper			REG	Register	WR	Water repellent
CPT	Carpet	ID	Inside diameter	REM	Remove	WS	Waterstop
CPT - T	Carpet Tile	INL	Inlet	REQ	Required	WSCT	Wainscot
CRS	Course	INS	Insulate (d), (ion)	RES	Resilient	WTW	Wall to wall
CSMU	Calcium silicate masonry unit	INT	Interior	RET	Return	WWF	Welded wire fabric
CST	Cast stone	INV	Invert	RFG	Roofing		
CT	Ceramic tile			RFH	Roof hatch		
CTP	Clear tempered plate glass			RH	Right hand		
CTR	Counter	JC	Janitor's closet	RM	Room		
CWP	Clear wire plate	JT	Joint	RO	Rough opening		
				ROW	Right of way		
D	Drain (s)			RUB	Rubber, base		
DBL	Double	KCPL	Keene's cement plaster	RV	Radon vent		
DF	Drinking fountain	KIT	Kitchen	RWC	Rain water conductor		
DIM	Dimension	KPL	Kickplate				
DIAM	Diameter						
DK	Deck			S	South		
DMB	Dry marker board	L	Length	SBS	Styrene butadiene styrene		
DN	Down	LAB	Laboratory	SEC	Security		
DR	Door	LAM	Laminate (d)	SC	Solid core		
DS	Downspout	LAV	Lavitory	SCH	Schedule		
DW	Dumbwaiter	LDR	Leader	SCT	Structural clay tile		
		LF	Lineal foot/Linear feet	SD	Storm drain		
E	East	LH	Left-hand	SFGL	Safety glass		
EA	Each	LL	Livehead	SG	Security glazing		
EB	Exibition Board	LOC	Location	SHM	Security hollow metal		
EC	Electrical contractor	LPT	Low point	SHTH	Sheathing		
EF	Exhaust fan	LTL	Lintel	SIM	Similar		
EIFS	Exterior insulated finish system	LW	Lightweight	SKL	Skylight		
EJ. EXP JT	Expansion joint	LWC	Lightweight concrete	SL	Sleeve		
EL	Elevation			SNT	Sealant		
ELEC	Electrical	MAS	Masonry	SOG	Slab on grade		
ELEV	Elevator	MAT	Material	SP	Soundproof		
EMER	Emergency	MAX	Maximum	SPAC'G	Spacing		
ENC	Enclosure	MC	Mechanical contractor	SPEC	Specification		
ENTR	Entrance	MECH	Mechanical	SPF, BLK	Split face block		
EOP	Edge of paving	MED	Medium	SPK	Speaker		
EP	Epoxy paint	MET	Metal	SQ	Square		
EPDM	Ethylene propylene diene monomers	MFR	Manufacturer	SQ. FT.	Square foot / feet		
EQ	Equal	MH	Manhole	SST	Stainless steel		
EQP	Equipment	MIN	Minimum	STD	Standard		
ERF	Epoxy Resinous Flooring	MISC	Miscellaneous	STG	Seating		
ETR	Existing To Remain	MMB	Membrane	STR	Structural		
ETR-R	Existing To Remain - Refinished	MO	Masonry opening	SUS	Suspended		
ETZ	Epoxy Terrazzo	MOV	Movable	SWF	Security Window Film		
EWC	Electric water cooler	MR	Mop receptor	SYN	Synthetic		
EXB	Expansion bolt	MT	Marble threshold	SYS	System		
EXG	Existing	MTD	Mounted				
EXP	Exposed	MTFR	Metal furring				
EXT	Exterior	MULL	Mullion				

BUILDING EXIT CAPACITY

XX — OCCUPANT LOAD - NJ REHAB. SUBCODE

X X — UNITS OF EGRESS WIDTH PROVIDED

UNITS OF EGRESS WIDTH REQUIRED

XX — OCCUPANT LOAD - IBC 2015 NJ CHPT. 10

X X — NET CLEAR EGRESS WIDTH PROVIDED (IN INCHES)

NET CLEAR EGRESS WIDTH REQUIRED (IN INCHES)

EGRESS PLAN LEGEND

PATH OF EGRESS TRAVEL

BARRIER-FREE BUILDING ENTRANCE

(X) TRAVEL DISTANCE

(XXX) NET SQUARE FOOTAGE - NEW CONSTRUCTION

(X) OCCUPANT LOAD - NEW CONSTRUCTION - SEE ROOM CAPACITY NOTES

(X) POSTED OCCUPANT LOAD - EXISTING BUILDING - SEE ROOM CAPACITY NOTES

FE-1 NEW FIRE EXTINGUISHER IN CABINET

FE-2 NEW FIRE EXTINGUISHER (KITCHEN TYPE) IN CABINET

EX FE EXISTING FIRE EXTINGUISHER TO REMAIN (CABINET OR BRACKET)

APPLICABLE CODES:

THIS PROJECT WAS DESIGNED UNDER THE FOLLOWING CODES:

BUILDING SUBCODE -	INTERNATIONAL BUILDING CODE 2018 - NJ EDITION
BARRIER-FREE SUBCODE -	N.J.A.C. 5:23-7 AND ICC-ANSI A117.1-2009
PLUMBING SUBCODE -	NATIONAL STANDARD PLUMBING SUBCODE 2018
MECHANICAL SUBCODE -	INTERNATIONAL MECHANICAL CODE 2018
ELECTRICAL SUBCODE -	NATIONAL ELECTRICAL CODE 2017
FUEL GAS SUBCODE -	INTERNATIONAL FUEL GAS CODE 2018
ENERGY CONSERVATION SUBCODE -	ASHRAE 90.1 2016

TABULATION OF PLUMBING FIXTURES - STAFF

(FROM 2015 NATIONAL STANDARD PLUMBING CODE)

USE GROUP S1' (STORAGE) - MODERATE HAZARD STORAGE — FUNCTIONAL CAPACITY = 67 STAFF

67 X 50% = 34 MALES
67 X 50% = 34 FEMALES

FIXTURES REQUIRED (MALES)		FIXTURES PROVIDED (MALES)	
WATER CLOSETS	1	WATER CLOSETS	1
LAVATORIES	1	LAVATORIES	2
		URINALS	1

FIXTURES REQUIRED (FEMALES)		FIXTURES PROVIDED (FEMALES)	
WATER CLOSETS	1	WATER CLOSETS	2
LAVATORIES	1	LAVATORIES	2

TABULATION OF PLUMBING FIXTURES - COMBINED

(FROM 2015 NATIONAL STANDARD PLUMBING CODE)

USE GROUP 'S' (MODERATE HAZARD STORAGE) — FUNCTIONAL CAPACITY = 67 STAFF

DRINKING FOUNTAINS (COMBINED STUDENTS AND STAFF)
REQUIRED: 1PER 500
PROVIDED: 1 FOUNTAIN BARRIER FREE

CODE ANALYSIS - HEIGHT AND AREA LIMITATIONS:

BUILDING 1 — MIXED USE OCCUPANCY
B (BUSINESS)

USE GROUP: S1 (MODERATE HAZARD STORAGE)
IBC 508.4 - NO SEPARATION REQUIREMENT

CONSTRUCTION TYPE: IIB
TABULAR ALLOWABLE AREA: 17,500 S.F.
ACTUAL AREA: 7,552 S.F.
MEZZANINE AREA: 607 S.F.

ALLOWABLE HEIGHT: 2 STORY / 55 FT.
ACTUAL HEIGHT: 1 STORY / 23'-6"

BUILDING 1 (ALTERNATE BID) (STORAGE) — MIXED USE OCCUPANCY
B (BUSINESS)

USE GROUP: S1 (MODERATE HAZARD STORAGE)
IBC 508.4 - NO SEPARATION REQUIREMENT

CONSTRUCTION TYPE: IIB
TABULAR ALLOWABLE AREA: 17,500 S.F.
ACTUAL AREA: 9,472 S.F.
MEZZANINE AREA: 607 S.F.

ALLOWABLE HEIGHT: 2 STORY / 55 FT.
ACTUAL HEIGHT: 1 STORY / 23'-10"

ROOM CAPACITY NOTES:

OCCUPANT LOADS - OCCUPANT LOADS IN ALL ROOMS IN NEW BUILDINGS 'I', HAVE BEEN DESIGNED IN ACCORDANCE WITH IBC 2015 NJ CHPT. 10.

FIRE EXTINGUISHER SCHEDULE

(FROM NATIONAL FIRE PROTECTION ASSOCIATION CODES)

FIRE EXTINGUISHER TYPES

1. MULTI-PURPOSE DRY CHEMICAL TYPE UL RATED 2A:10B:C 5lb FOR TYPE A,B,C FIRES
2. PROVIDE A MINIMUM 2-A RATING FOR EACH 6000 S.F. AREA AND A TRAVEL DISTANCE OF NOT MORE THAN 75' IN EACH DIRECTION.
3. ALL EXISTING FIRE EXTINGUISHERS SHALL EITHER REMAIN IN PLACE OR SHALL BE REPLACED WITH NEW FIRE EXTINGUISHERS DURING THE PERIOD OF BUILDING RENOVATION.

BUILDING 1	AREA	NO. OF FE'S REQUIRED	NO. OF FE'S PROVIDED
MAINTENANCE AND OPERATION BUILDING	7,552	2	7

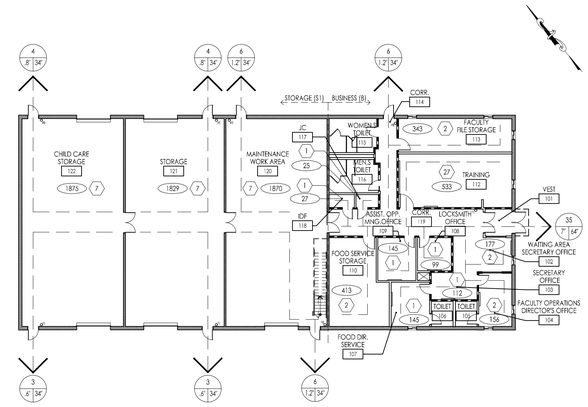
BUILDING (ALTERNATE BID)	AREA	NO. OF FE'S REQUIRED	NO. OF FE'S PROVIDED
MAINTENANCE AND OPERATION BUILDING	9,472	2	9

SPECIAL INSPECTION NOTES:

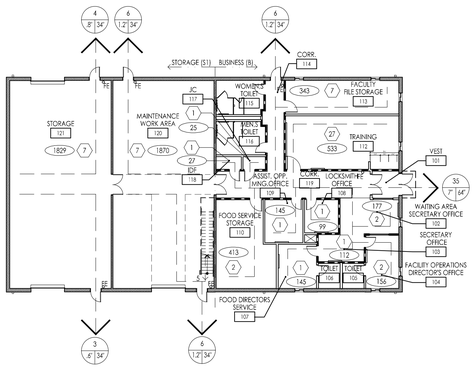
THE FOLLOWING "SPECIAL INSPECTIONS" SHALL APPLY TO THIS PROJECT, AS DEFINED IN IBC-2015 NJ EDITION, CHAPTER 17, SECTION 1705. SEE SPECIFICATION SECTION 01410.

1705. 2 - STEEL CONSTRUCTION - SEE SPECIFICATION SECTIONS 05120, 05210 & 05300
1705. 3 - CONCRETE CONSTRUCTION - SEE SPECIFICATION SECTION 03300
1705. 4 - MASONRY CONSTRUCTION
1705. 5 - Deleted
1705. 6 - SOIL CONDITIONS, FILL PLACEMENT AND LOAD-BEARING REQUIREMENTS - SEE SPECIFICATION SECTION 02200
1705. 7 - DRIVEN DEEP FOUNDATIONS
1705. 8 - CAST-IN-PLACE DEEP FOUNDATIONS
1705. 9 - HELICAL PILE FOUNDATIONS
1705. 10 - FABRICATIONS - SEE SPECIFICATION SECTIONS 05120, 05210 & 05300
1705. 11 - Deleted
1705. 12 - SEISMIC RESISTANCE
1705. 13 - TESTING FOR SEISMIC RESISTANCE
1705. 14 - SPRAYED FIRE-RESISTANT MATERIALS - SEE SPECIFICATION SECTION 07250
1705. 15 - MASTIC AND INTUMESCENT FIRE-RESISTANT COATINGS - SEE SPECIFICATION SECTION 07260
1705-16 - EXTERIOR INSULATION AND FINISH SYSTEMS (EIFS)
1705. 17 - FIRE-RESISTANCE PENETRATIONS AND JOINTS - SEE SPECIFICATION SECTIONS 07840 AND 07900.
1705. 18 - SMOKE CONTROL

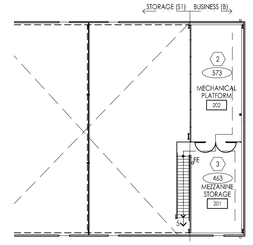
THE INSPECTION FIRM(S) SHALL SUBMIT CERTIFICATIONS TO NJ DCA PRIOR TO PERMIT RELEASE.



1 ALT BID - EGRESS PLAN - FIRST FLOOR
1/16" = 1'-0"



2 EGRESS PLAN - FIRST FLOOR
1/16" = 1'-0"



3 EGRESS PLAN - MEZZANINE & EQUIPMENT PLATFORM
1/16" = 1'-0"

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5/15/20
Date
William D. Hopkins
Architect

- FVHD architects planners
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Corporate: 1515 Lower Ferry Road - Trenton - New Jersey 08628
Pennsylvania: 140 Whitaker Ave - Mont Clare - Pennsylvania 19453

Project Name
NEW DISTRICT MAINTENANCE & OPERATIONS BUILDING

Project Owner Name
GALLOWAY TOWNSHIP PUBLIC SCHOOLS

Project Location
REEDS ROAD
GALLOWAY TOWNSHIP NJ

Project Number
5195

Project Date
5.15.2020

Checked By
WDH

Drawn By
TTH

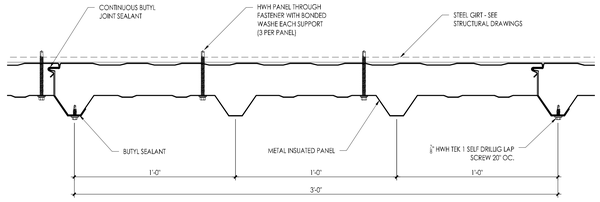
Scale

Drawing Name
EGRESS PLAN
CODE ANALYSIS
& ABBREVIATIONS

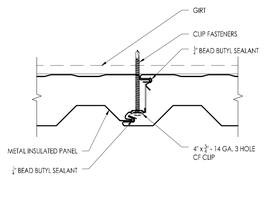
Revisions

No.	Date	Description
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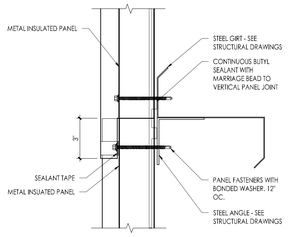
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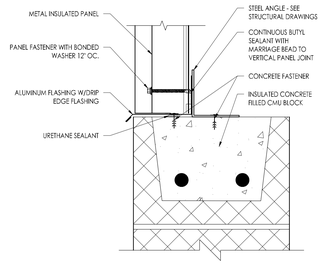
5 TYPICAL PANEL DETAIL
3"=1'-0"



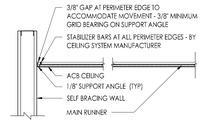
6 LAP JOINT DETAIL
3"=1'-0"



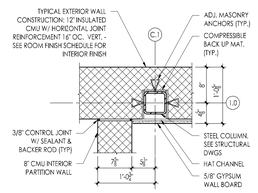
7 SECTION DETAIL - LAP JOINT AT WALL GIRT
3"=1'-0"



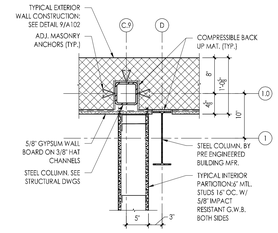
8 SECTION DETAIL -METAL PANEL BASE FLASHING
3"=1'-0"



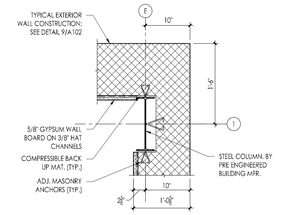
ACB SEISMIC BRACING DETAIL
1"=1'-0"



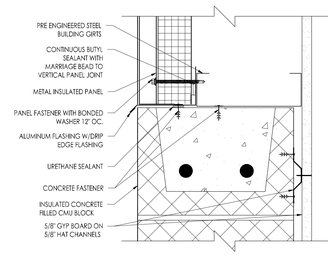
9 PLAN DETAIL
1"=1'-0"



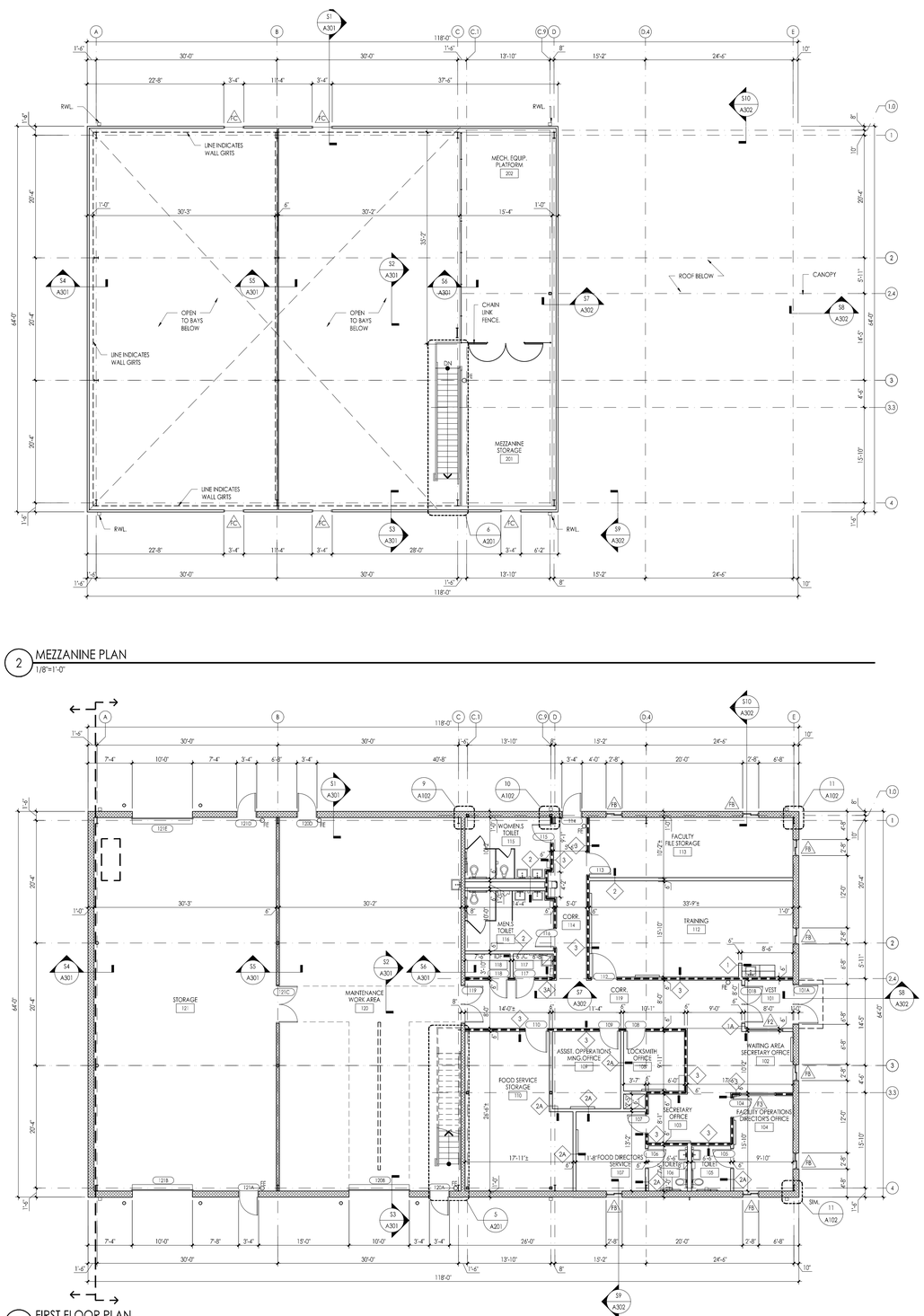
10 PLAN DETAIL
1"=1'-0"



11 PLAN DETAIL
1"=1'-0"

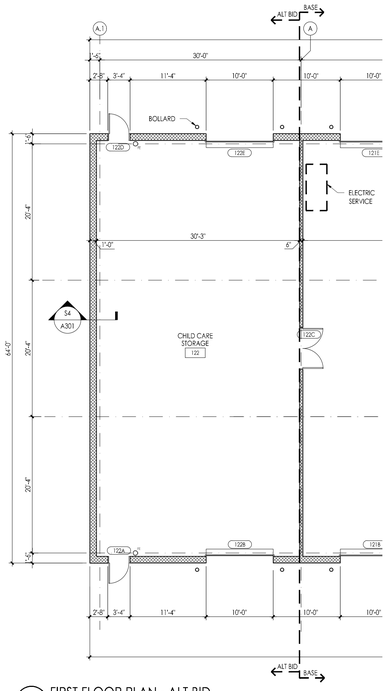


12 SECTION DETAIL -METAL PANEL BASE FLASHING
3"=1'-0"

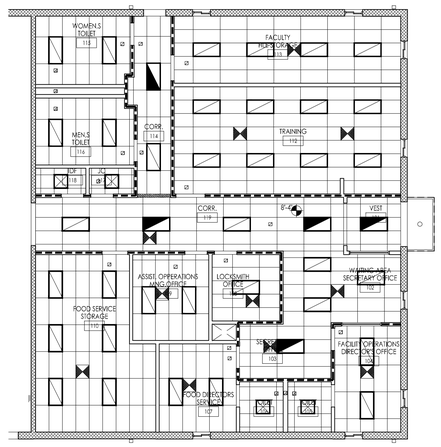


2 MEZZANINE PLAN
1/8"=1'-0"

1 FIRST FLOOR PLAN
1/8"=1'-0"

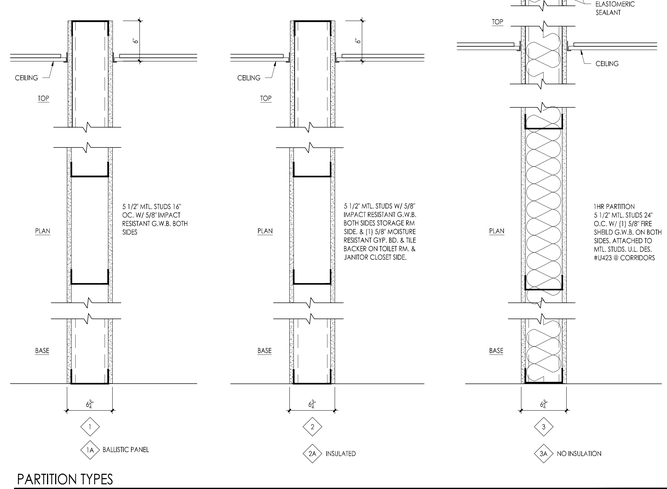


4 FIRST FLOOR PLAN - ALT BID
1/8"=1'-0"



3 REFLECTED CEILING PLAN
1/8"=1'-0"

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



PLAN LEGEND

- CMU PARTITION
- GYPSUM BOARD PARTITION - MTL. STUDS (SEE PLAN FOR DEPTH) @ 16" O.C. W/ SOUND ATTENUATION BLANKET AND 5/8" GYPSUM BOARD EACH SIDE (TYP. U.N.O.)
- 1 HR GYPSUM BOARD PARTITION - MTL. STUDS (SEE PLAN FOR DEPTH) @ 24" O.C. W/ SOUND ATTENUATION BLANKET AND 5/8" GYPSUM BOARD EACH SIDE (TYP. U.N.O.) U.L. DES. #U465 SEE DETAIL 5/G002
- FE-1 FIRE EXTINGUISHER IN CABINET - SEE DETAIL 5 / G002
- FE-2 NEW FIRE EXTINGUISHER (KITCHEN TYPE) IN CABINET
- EX FE EXISTING FIRE EXTINGUISHER TO REMAIN
- EJ EXPANSION JOINT - SEE DETAIL 4 / G002
- CJ INTERIOR CONTROL JOINT - SEE DETAILS 1 & 2 / G002
- DMB DRYWARKER BOARD - SEE SPECIFICATIONS AND DETAIL ON A502

PLAN NOTES

1. ALL NEW WALLS SHALL EXTEND TO UNDERSIDE OF STEEL DECK UNLESS NOTED OTHERWISE.
2. REFER TO EXTERIOR ELEVATIONS FOR LOCATIONS OF EXTERIOR CONTROL JOINTS - SEE ALSO DTL. 3 / G002
3. IN ALL LOCATIONS WHERE NEW STEEL STUD AND GYPSUM BOARD WALL CONSTRUCTION IS INDICATED, PROVIDE CONTROL JOINTS AT SPACING NOT TO EXCEED 24'-0" O.C. FINAL LOCATIONS OF CONTROL JOINTS TO BE SUBMITTED TO ARCHITECT FOR REVIEW AND APPROVAL.
4. SEE STRUCTURAL DRAWINGS FOR SEISMIC REINFORCEMENT DETAILS AND REQUIREMENTS FOR ALL INTERIOR AND EXTERIOR MASONRY WALLS.
5. ALL EXPOSED EXTERIOR STEEL LINTELS SHALL BE PAINTED GALVANIZED STEEL.
6. ALL BIDDERS MUST VISIT THE SITE AND VERIFY ALL DIMENSIONS AND CONDITIONS PRIOR TO SUBMITTING A BID. IF ANY DISCREPANCIES OR OMISSIONS ARE FOUND, THE BIDDER(S) MUST NOTIFY THE ARCHITECT OF THESE IN WRITING, AT LEAST TEN (10) WORKING DAYS PRIOR TO RECEIPT OF BIDS. IF THEY DO NOT DO SO, ANY MODIFICATION OR CORRECTION SHALL BE PERFORMED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER.

REFLECTED CEILING PLAN LEGEND

- ACB #1 -2' X 4' ACOUSTICAL CEILING BOARD - SEE FINISH SCHEDULE FOR LOCATION
- AACB - 2' X 2' ACOUSTICAL CEILING BOARD - SEE FINISH SCHEDULE FOR LOCATION
- SUPPLY / RETURN / EXHAUST DIFFUSER (SEE HVAC DRAWINGS)
- LIGHTS (SEE ELECTRICAL DRAWINGS)

NOTES:

1. SEE HVAC, PLUMBING AND/OR ELECTRICAL DRAWINGS FOR TYPES AND SIZES OF DEVICES AND FOR ADDITIONAL INFORMATION.
2. ALL DIFFUSERS AND LIGHTS TO BE CENTERED IN THE GWB OR ACB CEILING UNLESS NOTED OTHERWISE.
3. GENERAL CONTRACTOR AND HVAC, PLUMBING AND/OR ELECTRICAL SUBCONTRACTORS SHALL COORDINATE LOCATIONS OF DIFFUSERS AND LIGHTS.
4. SEE ROOM FINISH SCHEDULE FOR CEILING HEIGHTS
5. A.F.F. = ABOVE FINISH FLOOR

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Architect
5/15/20
Date

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Project Name
NEW DISTRICT MAINTENANCE & OPERATIONS BUILDING

Project Owner Name
GALLOWAY TOWNSHIP PUBLIC SCHOOLS

Project Location
REEDS ROAD
GALLOWAY TOWNSHIP NJ

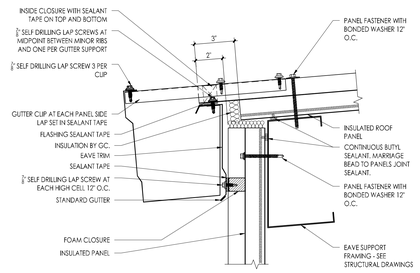
Project Number	5195
Project Date	5.15.2020
Checked By	WDH
Drawn By	TTH
Scale	AS NOTED

Drawing Name
FIRST FLOOR PLAN, MEZZANINE PLAN & DETAILS

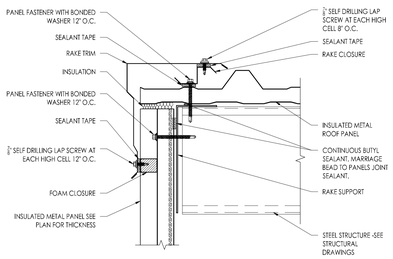
Revisions

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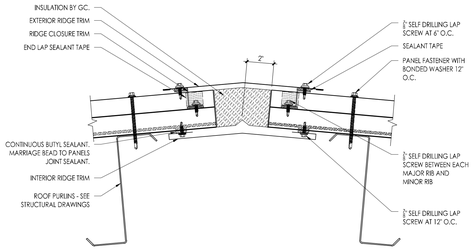
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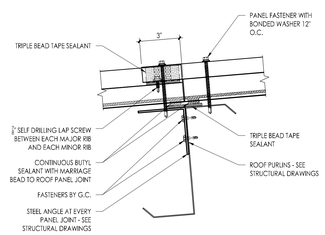
3 GUTTER DETAIL
3"=1'-0"



4 RAKE DETAIL
3"=1'-0"



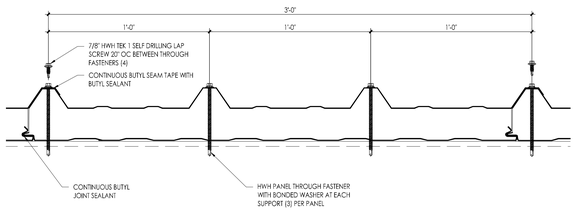
5 PEAK DETAIL
3"=1'-0"



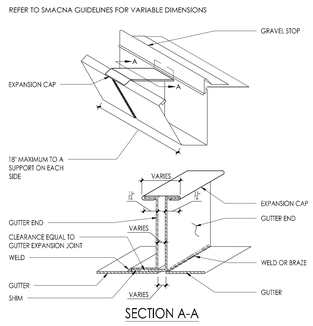
6 LAP JOINT ROOF DETAIL
3"=1'-0"

GENERAL ROOF CONSTRUCTION NOTES

A. PROVIDE ROOFING MATERIALS THAT COMPLY WITH A CLASS "A" SYSTEM.
B. THE TERM 'TYP' FOLLOWING A NOTE, TAG, OR DETAIL FLAG INDICATED THAT ALL LIKE, SIMILAR, OR INDICATED ITEMS SHALL BE PROVIDED WITH THE SPECIFIED DETAIL, NOTE, OR SPECIFICATION.
C. FIT WOOD BLOCKING SHOWN ON DRAWINGS IS DIAGRAMMATIC. PROVIDE FIRE RETARDANT TREATED WOOD BLOCKING IN THICKNESS AND HEIGHT TO MATCH THICKNESS OF INSULATION AND/OR TAPERED INSTALLATION AS RECOMMENDED BY ROOFING MANUFACTURER.
D. ALL WORK PERTAINING TO THESE DRAWINGS SHALL BE PERFORMED IN ACCORDANCE WITH ALL APPLICABLE STATE AND LOCAL CODES AND WITH ALL AGENCIES HAVING JURISDICTION.
E. ALL CONDITIONS MEETING THE ROOF SURFACE PERPENDICULAR MUST HAVE A MINIMUM 8" FLASHING HEIGHT.
F. DO NOT SCALE THE DRAWINGS.
G. ALL LOW SLOPED ROOF AREAS THAT ARE 1/4" PER FOOT IN THE FIELD PROVIDE 1/2" PER FOOT AT THE CRICKETS, ALL LOW SLOPED ROOF AREAS THAT ARE 1 1/2" PER FOOT IN THE FIELD PROVIDE 3" PER FOOT AT THE CRICKETS, ALL LOW SLOPED ROOF AREAS THAT ARE 2 1/2" PER FOOT IN THE FIELD PROVIDE 5" PER FOOT AT THE CRICKETS, ALL LOW SLOPED ROOF AREAS THAT ARE 3" PER FOOT IN THE FIELD PROVIDE 6" PER FOOT AT THE CRICKETS. SLOPE OF CRICKET IS PERPENDICULAR TO CRICKET VALLEY LINE.
H. THE ROOFING (SUB)CONTRACTOR IS RESPONSIBLE FOR FOLLOWING ALL GOOD ROOFING PRACTICES INCLUDING THOSE SET FORTH BY THE ROOFING MATERIALS MANUFACTURER, THE SMACNA SHEET METAL MANUAL, FACTORY MUTUAL, UNDERWRITERS LABORATORIES, AND THE NRCA'S ROOFING AND WATERPROOFING MANUAL.
I. THE ROOFING (SUB)CONTRACTOR IS RESPONSIBLE FOR FLASHING ALL ROOF TOP PENETRATIONS, UNITS, AND CURBS ON THE ROOFS TO A WATERTIGHT CONDITION TO BE INCLUDED IN THE MANUFACTURER'S WARRANTY. REVIEW ALL DRAWINGS INCLUDED IN THIS SET FOR ROOFTOP PENETRATIONS.
J. ALL CRICKETS AND SADDLES SHALL HAVE A 3:5 RATIO. WHERE THIS CONDITION CANNOT BE ACHIEVED DUE TO VALLEY LINE OF CRICKET INTERSECTING MECH. EQUIPMENT, PENETRATION AND A HIGH POINT GREATER THAN THE THRU-WALL COUNTERFLASHING. PROVIDE MAXIMUM CRICKET WIDTH TO PROMOTE POSITIVE DRAINAGE TO ALL ROOF DRAINS AND SCUPPERS.
K. ALL WOOD BLOCKING TO BE FRT. (FIRE RETARDANT LUMBER).
L. HIGH POINTS INDICATED ON DRAWINGS ARE SHOWN FOR GUIDANCE ONLY. THE ROOFING CONTRACTOR IS RESPONSIBLE FOR FINAL TAPERED INSULATION DESIGN. ANY REQUIRED ADJUSTMENTS MADE BY THE ROOFING CONTRACTOR TO THE INDICATED DESIGN GUIDELINES ARE AT NO ADDITIONAL COST TO THE OWNER.
M. CONTRACTOR SHALL MAKE NECESSARY TIE-INS AND ALTERATIONS TO EXISTING ROOF IN ACCORDANCE WITH ORIGINAL ROOF MANUFACTURERS REQUIREMENTS, SO AS TO MAINTAIN ORIGINAL WARRANTY ON EXISTING ROOF.

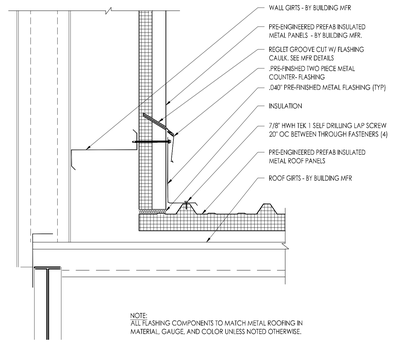


7 ROOF PANEL DETAIL
3"=1'-0"

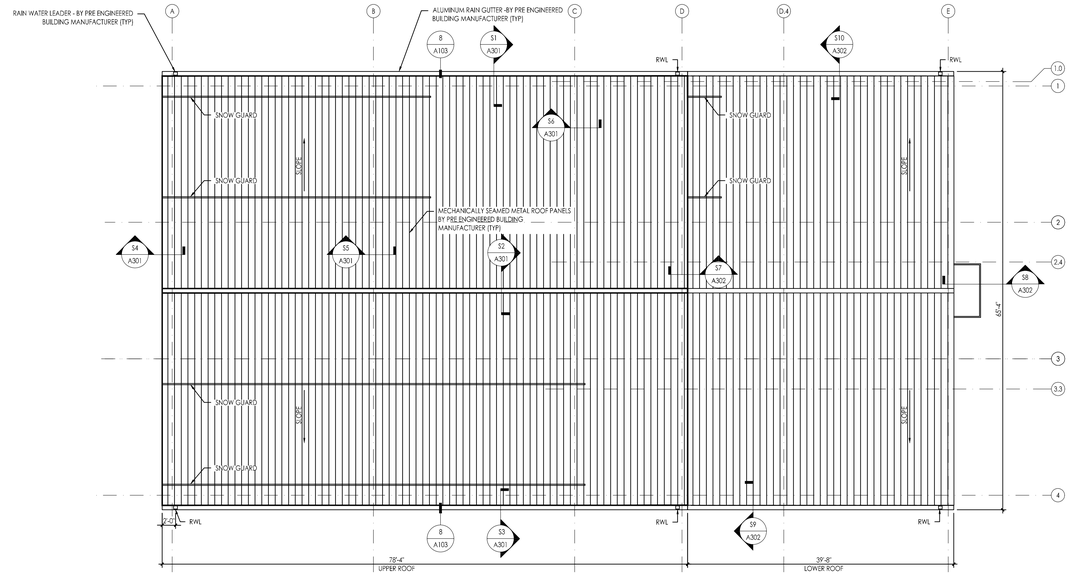


SECTION A-A

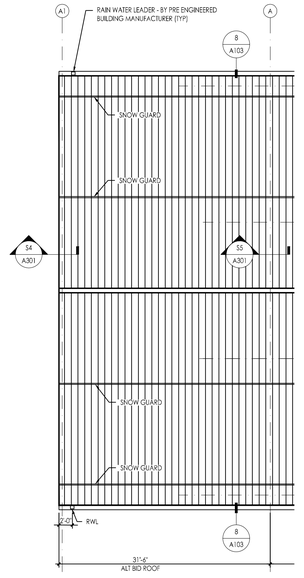
8 BUILT IN GUTTER EXPANSION JOINT
1-1/2"=1'-0"



9 TYPICAL STEP FLASHING DETAIL
1-1/2"=1'-0"



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



2 ROOF PLAN - ALT BID
1/8"=1'-0"

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WILLIAM D. HOPKINS III, AIA, LEED AP
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GEORGE R. DUTHIE JR., AIA, PP
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William D. Hopkins 5/15/20
Architect Date
- FVHD architects planners
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Corporate: 1515 Lower Ferry Road - Trenton - New Jersey 08628
Pennsylvania: 140 Whitaker Ave - Mont Clare - Pennsylvania 19453

Project Name
NEW DISTRICT MAINTENANCE & OPERATIONS BUILDING

Project Owner Name
GALLOWAY TOWNSHIP PUBLIC SCHOOLS

Project Location
REEDS ROAD
GALLOWAY TOWNSHIP NJ

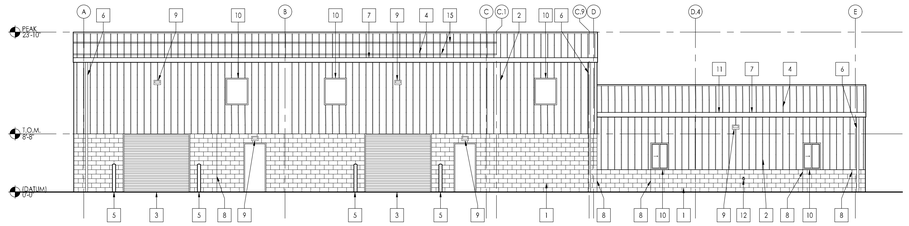
Project Number
5195
Project Date
5.15.2020
Checked By
WDH
Drawn By
TTH
Scale
AS NOTED

Drawing Name
ROOF PLAN & DETAILS

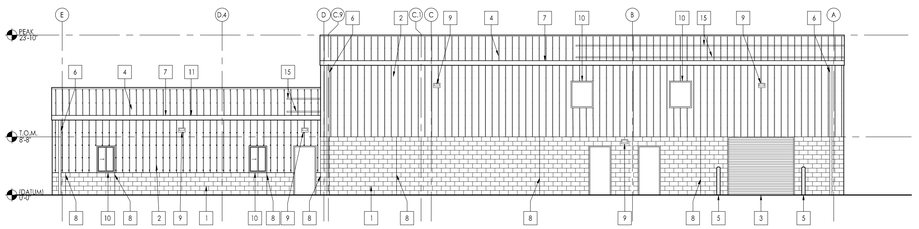
Revisions

No.	Date	Description
	4.15.20	FOR BIDDING

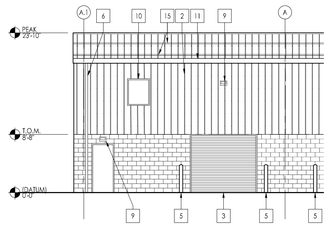
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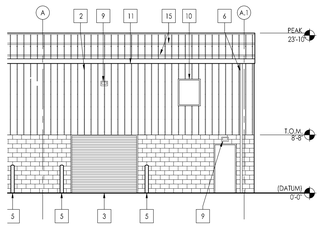
1 NORTH ELEVATION
1/8"=1'-0"



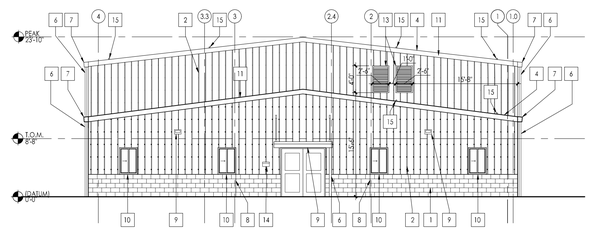
2 SOUTH ELEVATION
1/8"=1'-0"



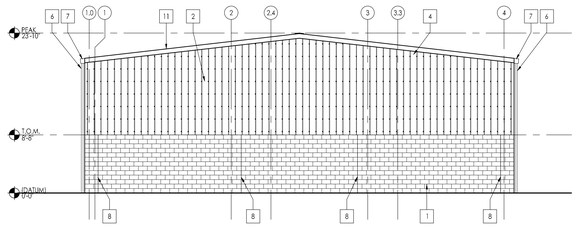
3 NORTH ELEVATION - ALT BID
1/8"=1'-0"



4 SOUTH ELEVATION - ALT BID
1/8"=1'-0"



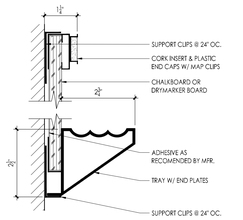
5 EAST ELEVATION
1/8"=1'-0"



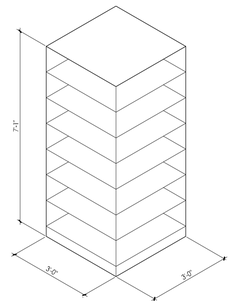
6 WEST ELEVATION
1/8"=1'-0"

ELEVATION LEGEND

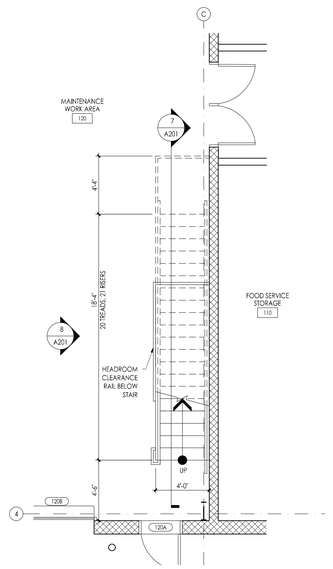
1	GROUND FACE ARCHITECTURAL CMU
2	METAL PANEL
3	OVERHEAD DOOR
4	METAL PANEL ROOF
5	BOLLARD
6	RAIN WATER LEADER
7	GUTTER
8	CONTROL JOINT
9	EXTERIOR LIGHT FIXTURE. SEE ELEC. DWGS
10	ALUMINUM FRAMED WINDOW
11	FASCIA
12	HOSE BIB
13	LOUVER - TO BE SUPPLIED AND INSTALLED BY GC. COORDINATE WITH HVAC DRAWINGS AND HVAC CONTRACTOR
14	HIGH SECURITY KEY LOCKBOX
15	SNOW GUARD



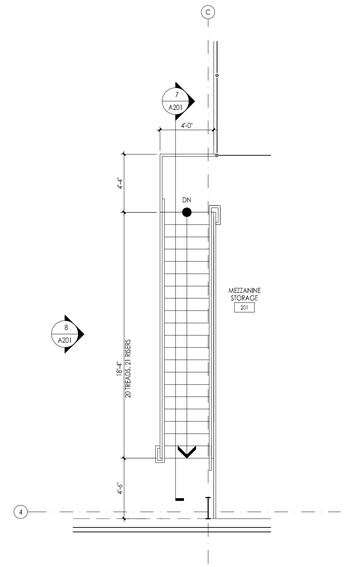
DRY MARKER BOARD DETAIL
6"=1'-0"



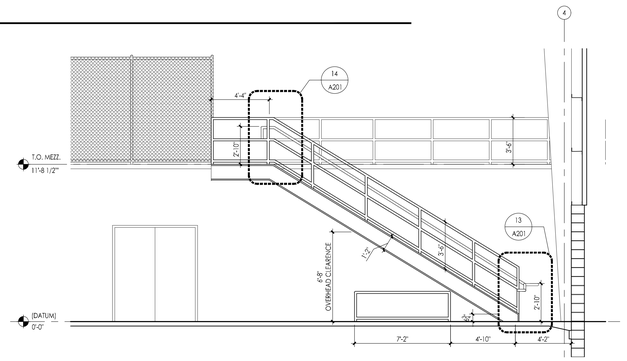
METAL SHELVING DETAIL
1/2"=1'-0"



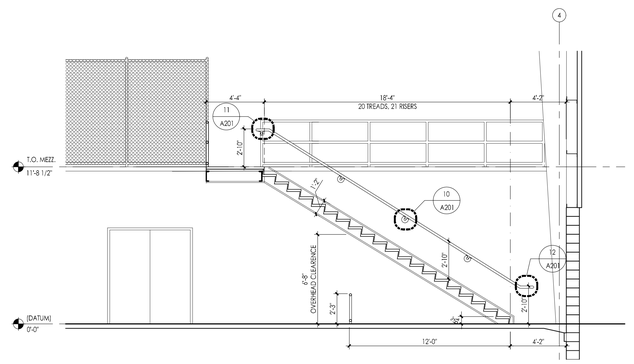
5 FIRST FLOOR - STAIR PLAN
1/4"=1'-0"



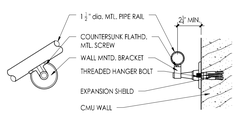
6 MEZZANINE - STAIR PLAN
1/4"=1'-0"



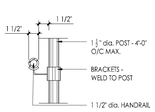
8 STAIR ELEVATION
1/4"=1'-0"



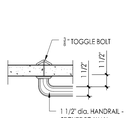
7 STAIR SECTION
1/4"=1'-0"



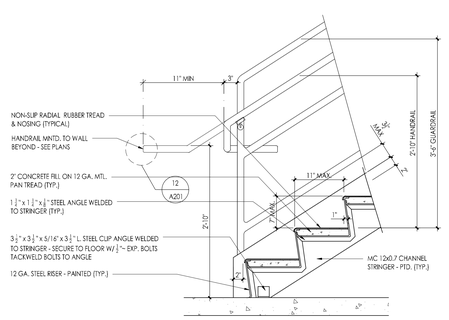
10 RAIL DETAILS
1"=1'-0"



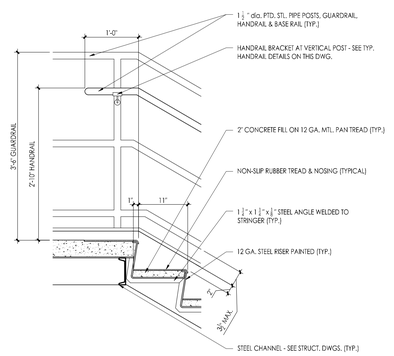
11 HANDRAIL AT GUARDRAIL
1"=1'-0"



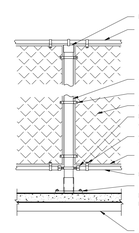
12 WALL RETURN
1"=1'-0"



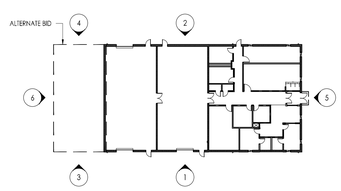
13 STAIR DETAIL - BASE
1"=1'-0"



14 STAIR DETAIL - TOP
1"=1'-0"



15 CHAINLINK FENCE DETAIL
1"=1'-0"



KEYPLAN
NTS

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NJ - 21A01399520
5/15/20
Date
Architect
FVHDPC.COM
FVHD architects planners
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Pennsylvania: 140 Whitaker Ave - Mont Clare - Pennsylvania 19453

Project Name
NEW DISTRICT MAINTENANCE & OPERATIONS BUILDING

Project Owner Name
GALLOWAY TOWNSHIP PUBLIC SCHOOLS

Project Location
REEDS ROAD
GALLOWAY
TOWNSHIP NJ

Project Number
5195

Project Date
5.15.2020

Checked By
WDH

Drawn By
TTH

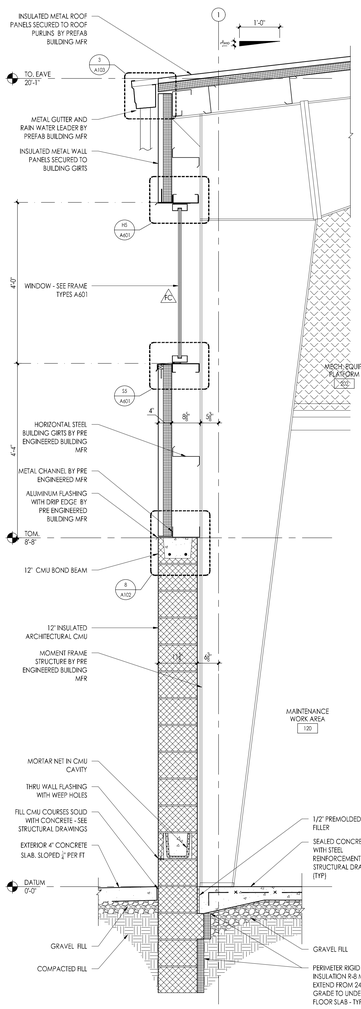
Scale
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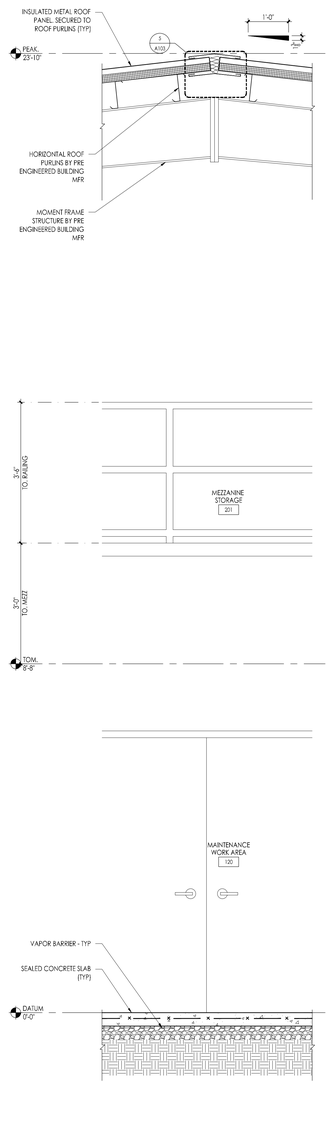
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ELEVATIONS & STAIR DETAILS

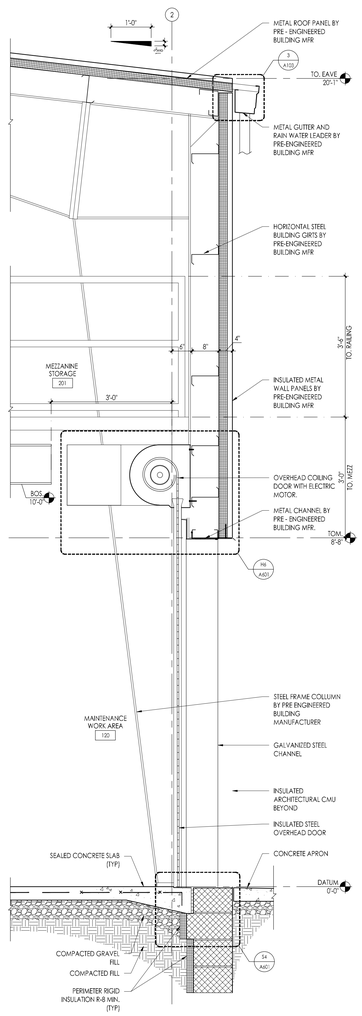
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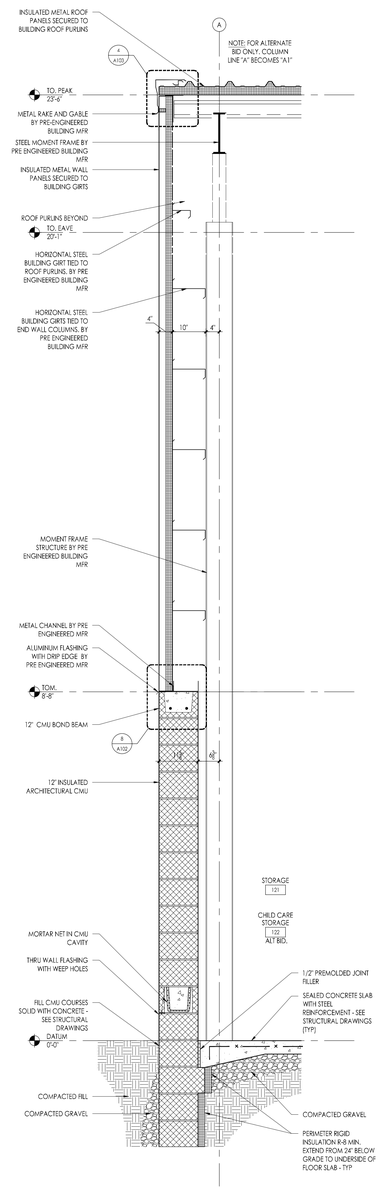
No.	Date	Description
	4.15.20	FOR BIDDING

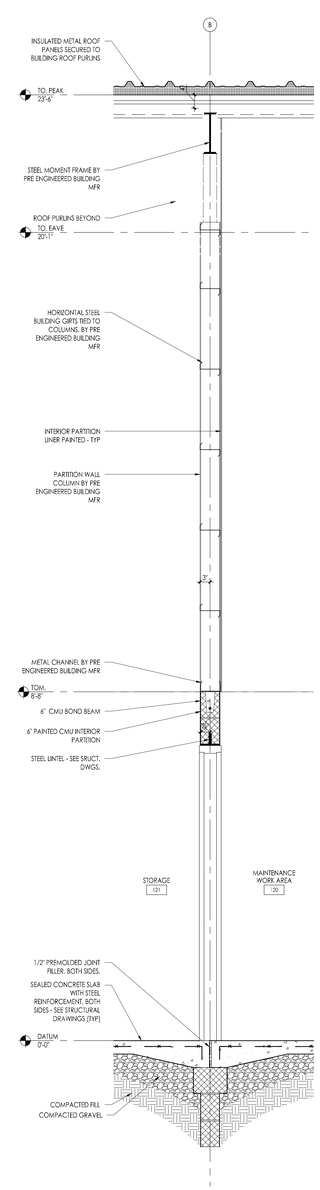
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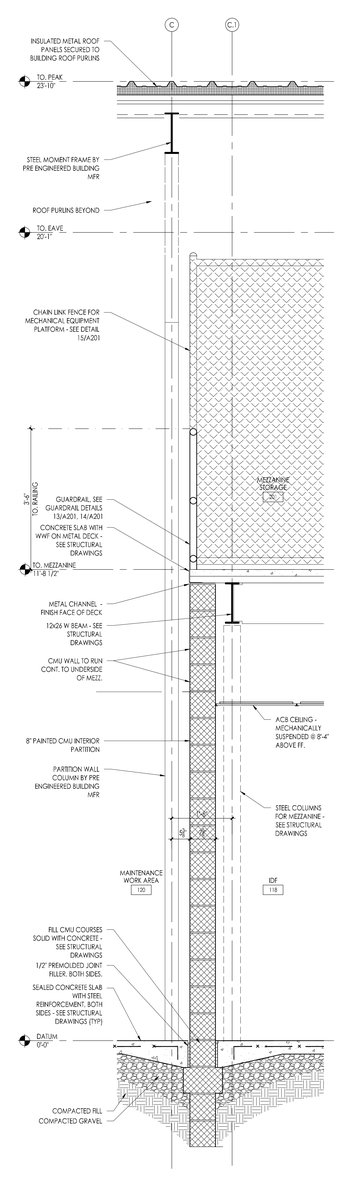












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William D. Hopkins 5/15/20
Architect Date

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Project Name
NEW DISTRICT MAINTENANCE & OPERATIONS BUILDING

Project Owner Name
GALLOWAY TOWNSHIP PUBLIC SCHOOLS

Project Location
REEDS ROAD
GALLOWAY TOWNSHIP NJ

Project Number
5195

Project Date
5.15.2020

Checked By
WDH

Drawn By
TTH

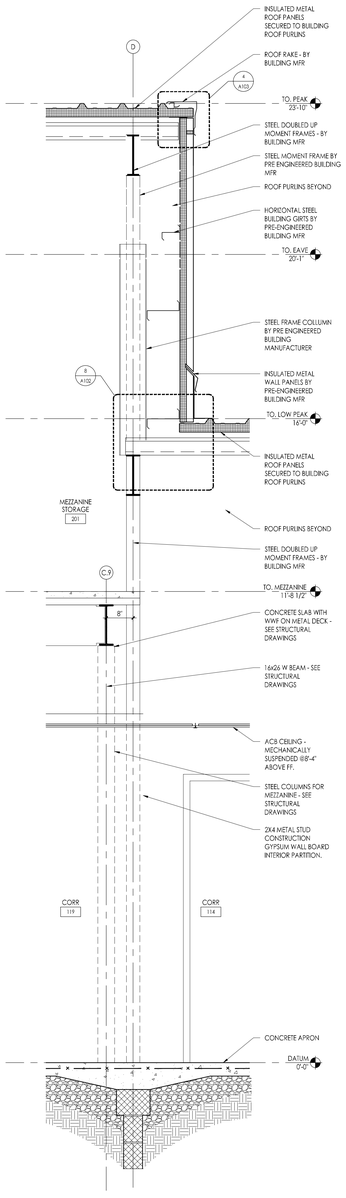
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Drawing Name
WALL SECTIONS

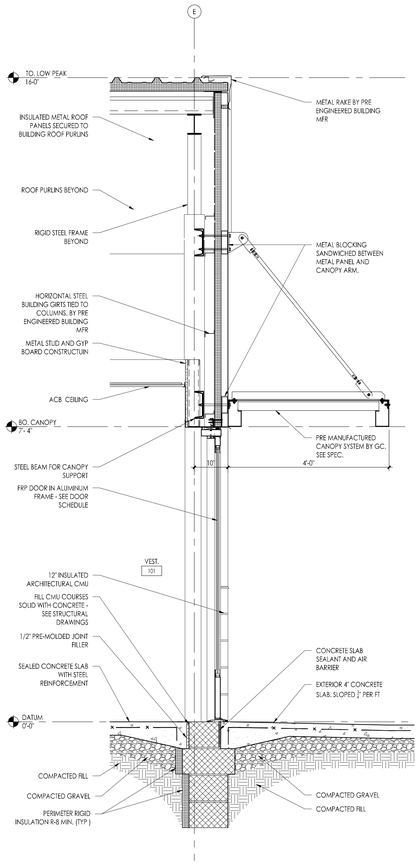
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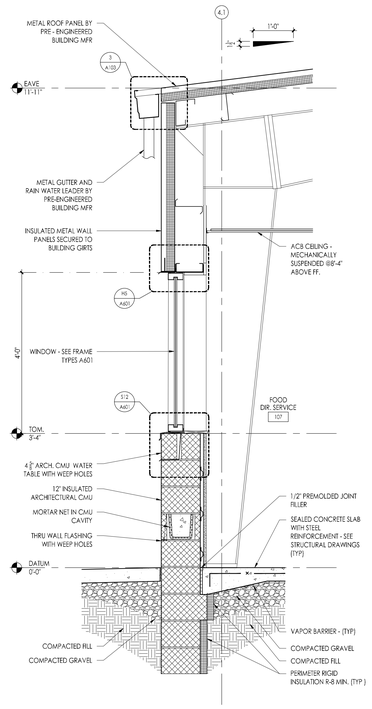
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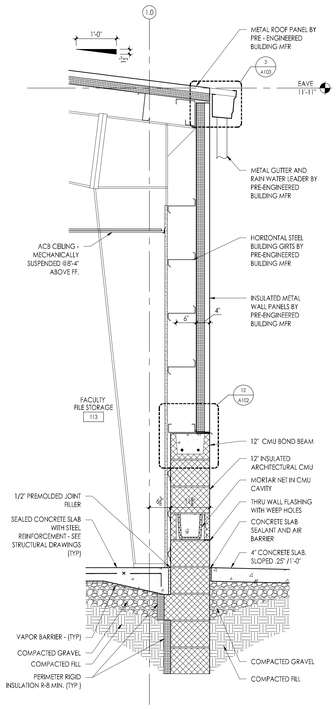
S7



S8



S9



S10

JOHN J. VESZ, AIA, CSBA
NJ - 21A00086690 | PA: RA018198
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NJ - 21A01709001 | PA: RA018206
GEORGE R. DUTHIE JR., AIA, PP
NJ - 21A01399201
William D. Hopkins 5/15/20
Architect Date

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Project Name
NEW DISTRICT MAINTENANCE & OPERATIONS BUILDING

Project Owner Name
GALLOWAY TOWNSHIP PUBLIC SCHOOLS

Project Location
REEDS ROAD
GALLOWAY TOWNSHIP NJ

Project Number
5195

Project Date
5.15.2020

Checked By
WDH

Drawn By
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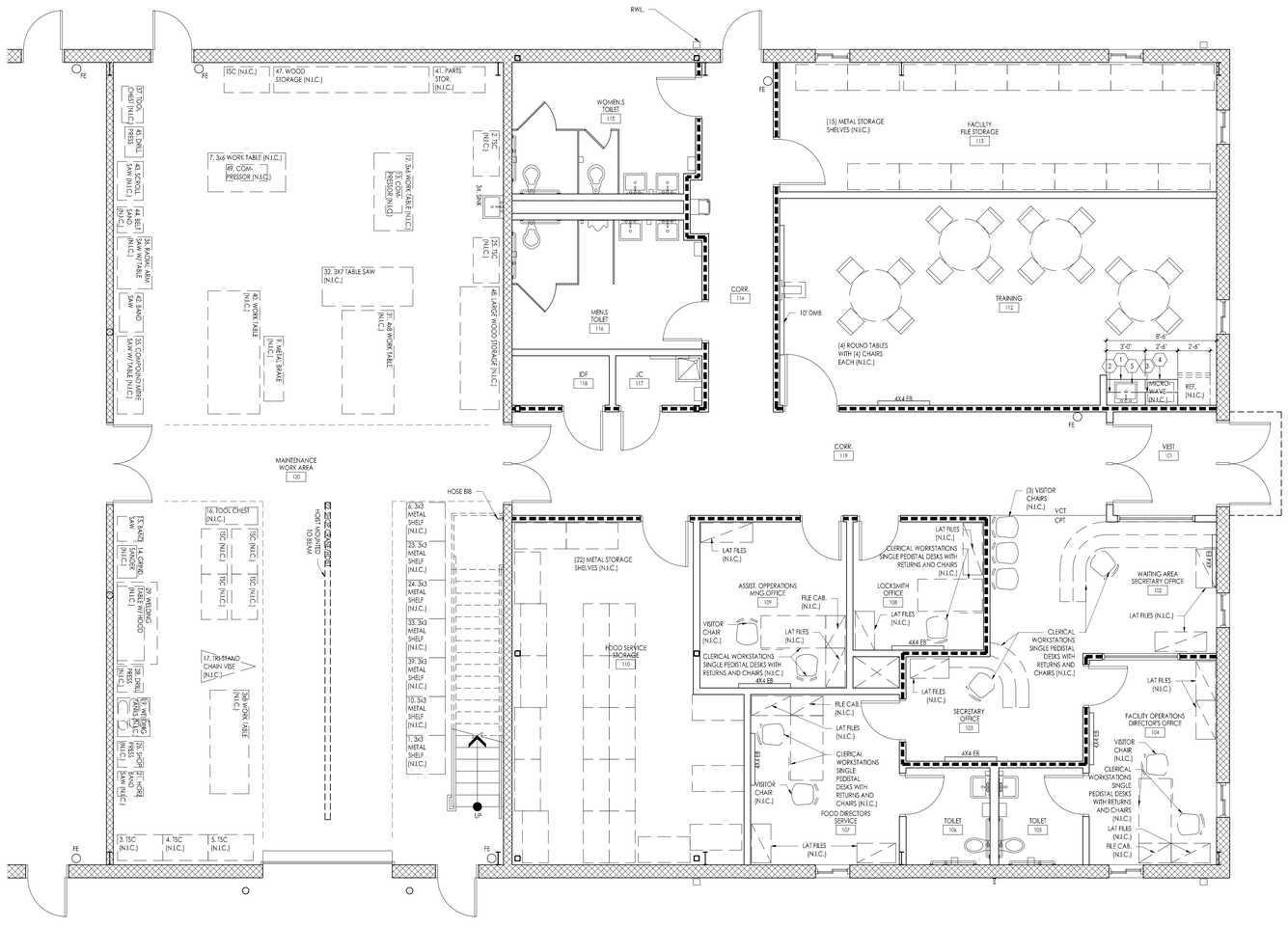
Scale

Drawing Name
WALL SECTIONS

Revisions

No.	Date	Description
	4.15.20	FOR BIDDING

Drawing Number
A302



GENERAL CASEWORK NOTES:

1. CATALOG NUMBERS REFER TO MOST CURRENT CAMPBELL RHEA CASEWORK CATALOG UNLESS OTHERWISE NOTED. FOR REFERENCE ONLY.
2. ALL CASEWORK DOORS AND DRAWERS TO HAVE LOCKS KEYED ALIKE PER ROOM AND MASTER KEYED.
3. ALL TOPS SHALL BE PLYWOOD 1 1/2" TOTAL THICKNESS. WITH PLASTIC LAMINATE COVERING ON ALL EXPOSED SURFACES (UNLESS NOTED OTHERWISE)
4. ALL BACKSPLASHES SHALL BE 3/4" PLYWOOD WITH PLASTIC LAMINATE COVERING ON ALL EXPOSED SURFACES (UNLESS NOTED OTHERWISE)
5. ALL FURNITURE AND EQUIPMENT SHOWN DOTTED AND/OR INDICATED AS (N.I.C.) IS NOT IN CONTRACT.
6. THE CASEWORK & EQUIPMENT SUB-CONTRACTOR(S) SHALL TURN OVER TO THE PLUMBING AND ELECTRICAL CONTRACTOR(S) IN A PACKAGE, ALL SINKS, FIXTURES, FAUCETS, TAILPIECES, STRAINERS, GAS COCKS, ETC., AND ELECTRICAL DEVICES, NIPPLES AND LOCKNUTS, ETC., FOR INSTALLATION AND FINAL CONNECTION.
7. THE CASEWORK AND EQUIPMENT SUB-CONTRACTOR SHALL PROVIDE AN ITEMIZED LIST AND A DESIGNATED SITE LOCATION FOR THE TRANSFER OF THE MATERIALS REFERENCED IN NOTE 6 TO THE PLUMBING AND ELECTRICAL CONTRACTORS. THE LIST SHALL HAVE A DESCRIPTION OF THE ITEMS AND QUANTITY ALONG WITH A SIGN-OFF LINE FOR THE PLUMBING AND ELECTRICAL CONTRACTORS. A COPY OF THE SIGNED LIST IS TO BE SUBMITTED TO THE ARCHITECT/OWNER PRIOR TO BILLING FOR THIS EQUIPMENT.
8. EQUIPMENT SUB-CONTRACTOR SHALL MAKE SINK CUT-OUTS.
9. ALL DUPLEX OUTLETS SHALL BE G.F.C.I. UNLESS NOTED OTHERWISE.
10. SINK CABINETS SHALL BE INSTALLED BEFORE THE INSTALLATION OF ADJACENT CABINETS.
11. ALL CONTRACTORS TO FIELD VERIFY ALL EXISTING CONDITIONS PRIOR TO CONSTRUCTION AND NOTIFY ARCHITECT IN WRITTEN FORM OF ANY DISCREPANCIES.
12. PROVIDE ALL FILLERS AS REQUIRED. FILLERS AT BASE CABINETS SHALL BE AT FRONT OF CABINET AND COUNTERTOP SHALL BE CONTINUOUS OVER FILLER PANEL. FILLERS AT TALL CABINETS SHALL BE AT FRONT AND TOP OF CABINET. FILLERS AT WALL CASES SHALL BE AT FRONT, TOP AND BOTTOM OF CABINET. FINISH TO MATCH CASEWORK.
13. GENERAL CONTRACTOR TO PROVIDE, AND PLUMBING CONTRACTOR TO INSTALL CLAY TRAPS ON SINKS IN ART CLASSROOM AND SHALL MAKE FINAL CONNECTIONS TO ALL WASTE/VENTS, WATER LINES ETC. AS REQUIRED TO MAKE SYSTEM FULLY FUNCTIONAL. NOTE THERE WILL BE ONE CLAY TRAP PER EACH DOUBLE-SINK PENINSULA.
14. ALL PRINTERS AND COMPUTERS ARE N.I.C. (TYPICAL)
15. RUBBER BASE ON ALL CASEWORK BY G.C. (TYPICAL)

ROOM FINISH SCHEDULE

NUMBER	ROOM NAME	FLOOR	BASE MAT.	BASE HT.	WAINSCOT MAT.	WAINSCOT HT.	WALL FINISH	CEILING MAT.	CEILING HT.	NOTES
101	VEST	VCT	RUB	4"	--	--	GWB	ACB-1	8'-4"	--
102	WAITING AREA SECRETARY OFFICE	CPT-T	RUB	4"	--	--	GWB	ACB-1	8'-4"	--
103	SECRETARY OFFICE	CPT-T	RUB	4"	--	--	GWB	ACB-1	8'-4"	--
104	FACILITY OPERATIONS DIRECTOR'S OFFICE	CPT-T	RUB	4"	--	--	GWB	ACB-1	8'-4"	--
105	TOILET	CT	CT	5"	--	--	GWB	AACB	8'-4"	--
106	TOILET	CT	CT	5"	--	--	GWB	AACB	8'-4"	--
107	FOOD DIRECTOR SERVICE	CPT-T	RUB	4"	--	--	GWB	ACB-1	8'-4"	--
108	LOCKSMITH OFFICE	CPT-T	RUB	4"	--	--	GWB	ACB-1	8'-4"	--
109	ASSIST OPERATIONS MANAGERS OFFICE	CPT-T	RUB	4"	--	--	GWB	ACB-1	8'-4"	--
110	FOOD SERVICE STORAGE	VCT	RUB	4"	--	--	GWB, CP	ACB-1	8'-4"	--
112	TRAINING	VCT	RUB	4"	--	--	GWB	ACB-1	8'-4"	--
113	FACILITY FILE STORAGE	VCT	RUB	4"	--	--	GWB	ACB-1	8'-4"	--
114	CORRIDOR	VCT	RUB	4"	--	--	GWB	ACB-1	8'-4"	--
115	WOMENS TOILET	CT	CT	5"	--	--	GWB, CP	ACB-1	8'-4"	--
116	MENS TOILET	CT	CT	5"	--	--	GWB, CP	ACB-1	8'-4"	--
117	JANITORS CLOSET	VCT	--	--	--	--	GWB	AACB	8'-4"	--
118	INTERMEDIATE DISTRIBUTION FRAME	VCT	--	--	--	--	GWB, CP	AACB	8'-4"	--
119	CORRIDOR	VCT	--	--	--	--	GWB, CP	ACB-1	8'-4"	--
120	MAINTENANCE WORK AREA	CONC-S	--	--	--	--	CP	EXP-P	--	--
121	STORAGE	CONC-S	--	--	--	--	CP	EXP-P	--	--
122	CHILD CARE STORAGE	CONC-S	--	--	--	--	CP	EXP-P	--	ALTERNATE BID
201	MEZZANINE STORAGE	CONC-S	--	--	--	--	EXP-P	EXP-P	--	--
202	MECHANICAL EQUIPMENT PLATFORM	CONC-S	--	--	--	--	EXP-P	EXP-P	--	--

ROOM FINISH SCHEDULE NOTES

1. SEE CERAMIC TILE DETAIL ON A601
2. HEIGHT INDICATED IS TO LONGEST POINT OF STRUCTURE ABOVE
3. SEE ACB SEISMIC BRACING DETAIL ON DWG A102

ABBREVIATIONS

ACB-1	ACOUSTIC CEILING BOARD TYPE 1 (2x4)
AACB	ACRYLIC ACOUSTIC CEILING BOARD (2X4)
CP	CONCRETE MASONRY UNIT - PAINTED
CONC-S	CONCRETE SEALED
CT	CERAMIC TILE
RUB	RUBBER BASE
VCT	VINYL COMPOSITION TILE
CPT-T	CARPET TILE
GWB	GYPSUM WALL BOARD - PAINTED
EXP-P	EXPOSED TO STRUCTURE - PAINTED

GENERAL FINISH NOTES

A. SEE SPECIFICATIONS FOR ADDITIONAL INFORMATION ON MATERIALS/MANUFACTURER PERFORMANCE AND WARRANTY INFORMATION

B. MATERIALS LISTED ON THE FINISH SCHEDULE REFER TO THE MAJORITY OF WALLS FLOOR AND CEILING OF ROOMS SCHEDULED REFER TO PLANS, DETAILS INTERIOR ELEVATIONS CEILING PLANS, AND NOTES FOR THOSE MATERIALS NOT INDICATED ON THE SCHEDULE BUT WHICH ARE STILL REQUIRED IN THE ROOM.

NOTE:
ALL FURNITURE AND EQUIPMENT WITHOUT THE SYMBOL ◯ OR MARKED (N.I.C.) IS NOT IN CONTRACT UNLESS NOTED OTHERWISE. SEE EQUIPMENT SCHEDULE FOR EQUIPMENT MARKED WITH THE SYMBOL

NOTE:
PROVIDE A MINIMUM 18" BARRIER-FREE MANEUVERING CLEARANCE AT THE PULL SIDE OF ALL DOORS ADJACENT TO CABINETS, SHELVING, CORRIDOR LOCKERS, ETC.

EQUIPMENT CONTRACT NOTE:
THE EQUIPMENT SUB-CONTRACTOR(S) SHALL BE (A) SUBCONTRACTOR(S) OF THE GENERAL CONSTRUCTION WORK CONTRACTOR.

SINK NOTE "A": (ITEM #101)

SL-ADA-1921-A-GR JUST STAINLESS STEEL SINK, THE STYLIST GROUP A" SERIES, TYPE 304, WHEELCHAIR ACCESSIBLE SINK, SINGLE COMPARTMENT, SELF-RIM, 18 GAUGE STAINLESS STEEL. 19" x 21" x 6 7/8" DEEP, DRAIN CENTER, SINK UNDERCOATED W/ SOUND DEADENING MATERIAL. FURNISH COMPLETE WITH JUST FAUCET (#J-1174-AS) CONCEALED HOT & COLD WATER MIXING FAUCET WITH SWIVEL GOOSENECK SPOUT, AERATOR AND WRIST BLADE HANDLES, INCLUDE ONE JUST OFFSET DRAIN ASSEMBLY (#J-ADA-35-PS) W/ DRAIN INSULATING KIT (#J-ADA-150) W/ STAINLESS STEEL FLAT STRAINER & 4" LONG STAINLESS STEEL TAILPIECE (#J-35-SSF).

SINK, FAUCET, STRAINER AND TAILPIECE TO BE SUPPLIED BY EQUIPMENT CONTRACTOR. THE PLUMBING CONTRACTOR SHALL PROVIDE AND INSTALL ALL TRAPS, VALVES, WASTE LINES, ETC. AS REQUIRED TO MAKE THE SYSTEM FULLY FUNCTIONAL. THE PLUMBING CONTRACTOR SHALL MAKE THE FINAL PLUMBING CONNECTIONS REQUIRED TO MAKE THE SYSTEM FULLY FUNCTIONAL. SEE GENERAL CASEWORK NOTES # 6 & 7.

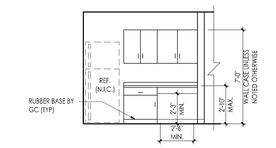
TOILET ROOM ACCESSORIES

NO.	CAT. NO.	DESCRIPTION	SIZE W	SIZE H	SIZE D	
A	780-1630	MIRROR	16"	30"		1/4" TEMPERED GLASS MIRROR
B	800-001-36"	GRAB BAR	36"	"	"	SAFETY-GRIP FINISH
C	800-001-42"	GRAB BAR	42"	"	"	SAFETY-GRIP FINISH
D	800-001-18"	GRAB BAR	18"	"	"	SAFETY-GRIP FINISH, MOUNT VERTICAL
E	PAP306389	TOILET TISSUE DISPENSER	5 1/2"	2 3/8"	4 1/4"	MANUFACTURER - HILLYARD
F	PAP306489	PAPER TOWEL DISPENSER	10 1/2"	15 3/4"	8 3/4"	MANUFACTURER - HILLYARD
G	AFFINITY	SOAP DISPENSER	4 13/16"	8 3/16"	2 7/8"	
H	9953	MOP AND BROOM HOLDER	24"	4"	2-3/4"	
J	--	BARRIER FREE PLACARD	"	"	"	SEE SIGN TYPE 2 IN DWG A601

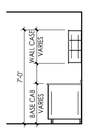
NOTES:
1. ALL CATALOG NUMBERS REFER TO BRADLEY WASHROOM ACCESSORIES UNLESS NOTED OTHERWISE.
2. INSTALL HANDICAP SIGNAGE ON FRONT OF ALL ADA TOILET STALLS. SEE SIGNAGE TYPE XV ON A601.

EQUIPMENT SCHEDULE

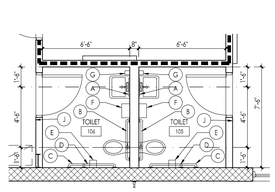
ITEM NO.	MANUFACTURER	CAT. NO.	DESCRIPTION	WIDTH	DEPTH	HEIGHT	REMARKS
1	CAMPBELL RHEA	7075B	B/F KNEESPACE RAIL	33-1/4"	22-1/2"	--	TOP PF RAIL 33" AFF, MIN. 29" H. KNEE CLEARANCE, INCL. 8760 CLOSURE PANEL
2	CAMPBELL RHEA	4694	WALL CASE - DBL DOORS	35-1/4"	12"	23-3/4"	
3	CAMPBELL RHEA	4692	WALL CASE - DBL DOORS	30"	12"	23-3/4"	
4	CAMPBELL RHEA	3688C	BASE CAB - 2 DWRS, TOP, DBL. DRS, BOTTOM	30"	22-1/2"	33"	
5	JUST	--	STAINLESS STEEL SINK	19"	21"	7 1/2"	SEE SINK NOTE "A"



A TYPICAL CABINET MOUNTING HEIGHTS
1/4"=1'-0"



B TYPICAL WALL CASE MOUNTIG
1/4"=1'-0"

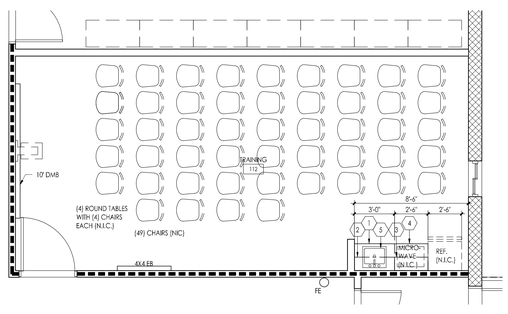


4 TOILET ROOM LAYOUTS
1/4"=1'-0"

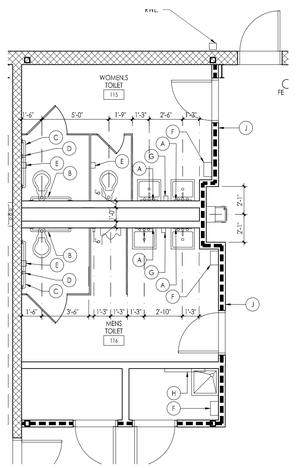
6 TOILET ROOM ACCESIBILITY LAYOUT
1/4"=1'-0"



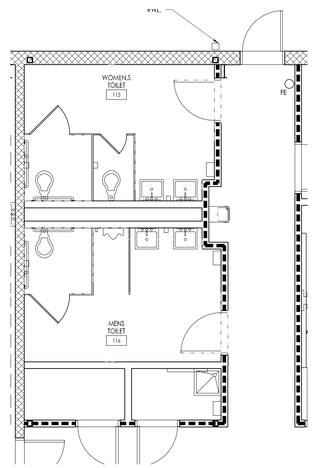
C TYPICAL EQUIPMENT HEIGHTS
1/4"=1'-0"



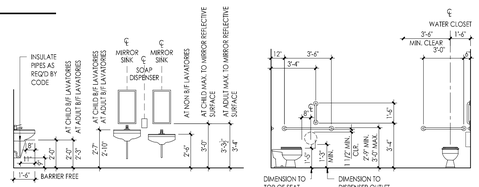
2 ALTERNATE LAYOUT - TRAINING ROOM
1/4"=1'-0"

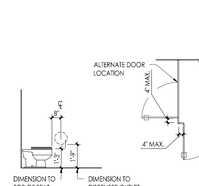


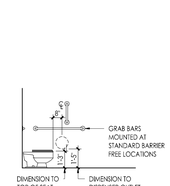
3 TOILET ROOM LAYOUTS
1/4"=1'-0"



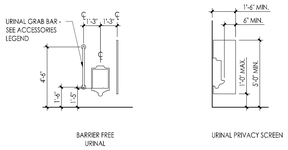
5 TOILET ROOMS ACCESIBILITY LAYOUT
1/4"=1'-0"





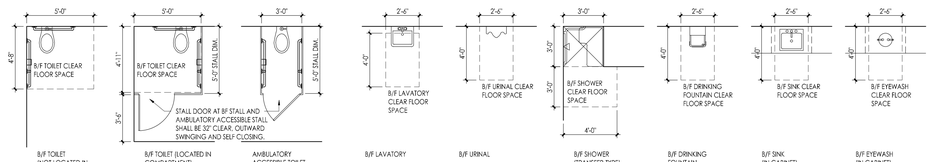


URINAL PRIVACY SCREEN SHALL BE OF THE SAME CONSTRUCTION AS TOILET PARTITIONS. DEPTH OF SCREEN FROM WALL SHALL BE 1'-6" MIN. OR 4" PAST OUTER-MOST FRONT LIP OF URINAL, WHICHEVER IS GREATER.



PLUMBING FIXTURES AND ACCESORIES MOUNTING HEIGHTS

1/4"=1'-0"



NOTES:
1. DIMENSIONS SHALL BE NET CLEAR DISTANCES MEASURED TO WALL FINISHES (EG CERAMIC TILE). TO FACE OF TOILET PARTITIONS AND TO EDGES OF ADJACENT FIXTURES, CABINETS, ETC.
2. ALL DIMENSIONS ARE MINIMUM UNLESS NOTED OTHERWISE.
3. INSTALLATIONS SHALL COMPLY WITH ALL PROVISIONS OF ICC-ANSI A117 . 1 - 2009, INCLUDING BUT NOT LIMITED TO:
   - 3.1. SECTION 602 (DRINKING FOUNTAINS)
   - 3.2. SECTION 603 (TOILET AND BATHING ROOMS)
   - 3.3. SECTION 604 (WATER CLOSETS AND TOILET COMPARTMENTS)
   - 3.4. SECTION 605 (URINALS)
   - 3.5. SECTION 606 (LAVATORIES AND SINKS)
   - 3.6. SECTION 608 (SHOWER COMPARTMENTS)
   - 3.7. SECTION 609 (GRAB BARS)
   - 3.8. SECTION 610 (SEATS)
4. CLEAR FLOOR SPACES MAY OVERLAP WHERE SPECIFICALLY PERMITTED IN ICC-ANSI A117 . 1 - 2009 CHAPTER 6.

CLEAR FLOOR SPACE REQUIREMENTS AT PLUMBING FIXTURES

1/4"=1'-0"

JOHN J. VESZ, AIA, CSBA
NJ - 21A000868900 | PA - 60108198
WILLIAM D. HOPKINS III, AIA, LEED AP
NJ - 21A001700001 | PA - 400122200
GEORGER. DUTHIE JR., AIA, PP
NJ - 21A01399500
Architect
5/15/20
Date
- FVHD architects planners
Corporate: 1515 Lower Ferry Road - Trenton - New Jersey 08628
Pennsylvania: 140 Whitaker Ave - Mont Clare - Pennsylvania 19453
F V H D P C . C O M

Project Name
NEW DISTRICT MAINTENANCE & OPERATIONS BUILDING

Project Owner Name
GALLOWAY TOWNSHIP PUBLIC SCHOOLS

Project Location
REEDS ROAD
GALLOWAY TOWNSHIP NJ

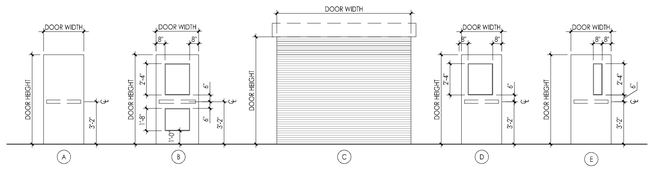
Project Number	5195
Project Date	5.15.2020
Checked By	WDH
Drawn By	TTH
Scale	

Drawing Name
ROOM LAYOUTS AND DETAILS

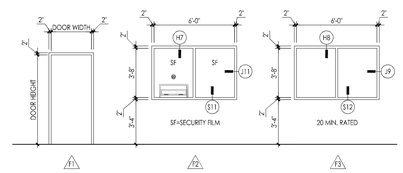
Revisions

No.	Date	Description
	4.15.20	FOR BIDDING

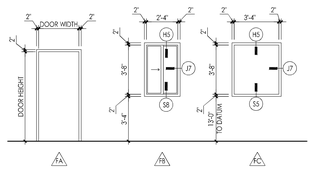
Drawing Number
A401



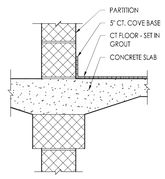
DOOR TYPES
1/4" = 1'-0"



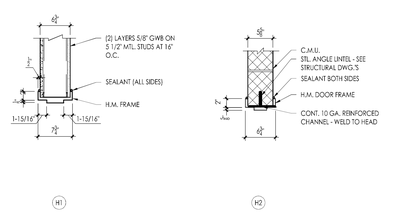
HOLLOW METAL FRAME TYPES
1/4" = 1'-0"

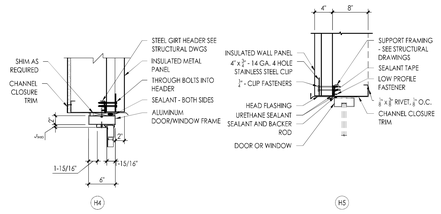


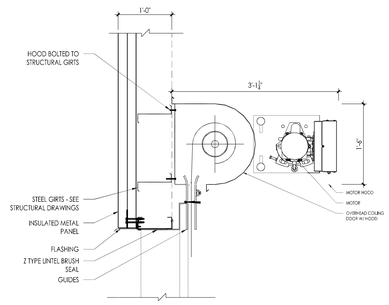
ALUMINUM FRAME TYPES
1/4" = 1'-0"

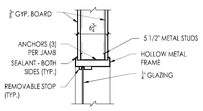


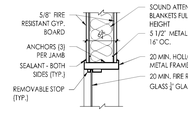
CERAMIC TILE FLOORING DETAIL
1" = 1'-0"

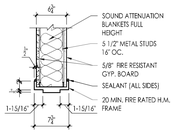




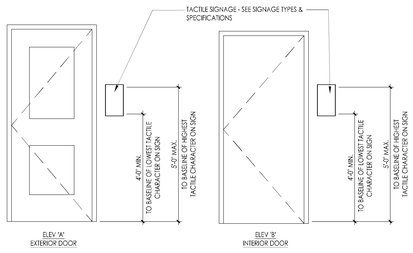


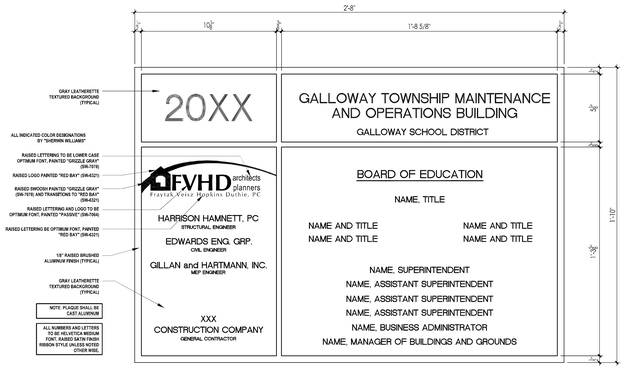


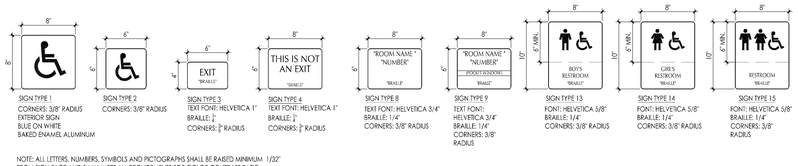




HEAD DETAILS
1" = 1'-0"







NOTE: ALL LETTERS, NUMBERS, SYMBOLS AND PICTOGRAPHS SHALL BE RAISED MINIMUM 1/32" FROM SIGN FACE AND SHALL MEET ALL REQUIREMENTS FOR COLOR CONTRAST RATIO.

DOOR SCHEDULE ABBREVIATIONS

AL -	ALUMINUM
FRP -	FIBERGLASS REINFORCED POLYESTER
HM -	HOLLOW METAL
LG -	LAMINATED GLASS
INSUL -	INSULATED TEMPERED GLASS
WD -	WOOD
TPG -	TEMPERED PLATE GLASS
FRIG-1 -	FIRE RATED IMPACT GLAZING

GENERAL DOOR NOTES

A. ALL NEW DOORS IN NEW FRAMES TO BE 1¾" THICK, U.O.N.
B. ALL WIRING FOR DOOR SECURITY TO BE CONCEALED IN NEW FRAME

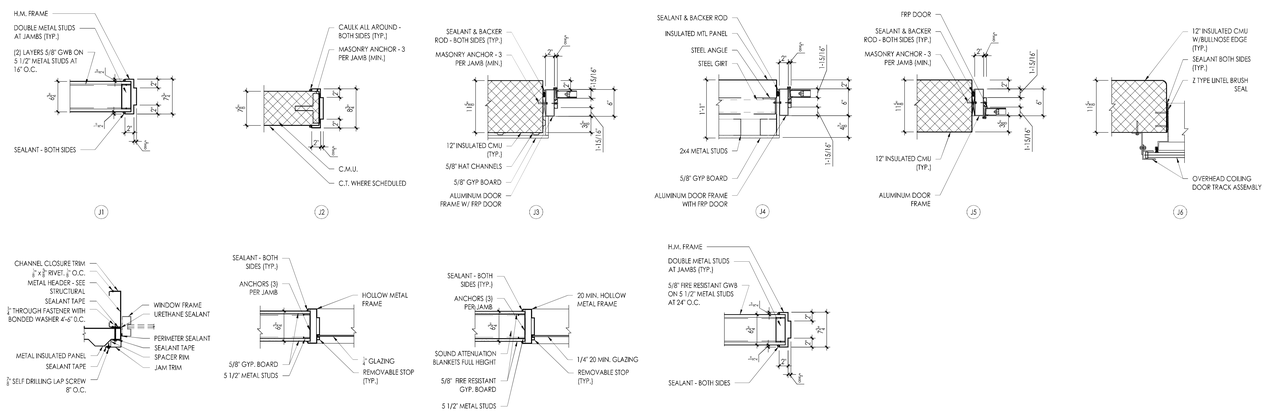
DOOR SCHEDULE NOTES

1. SECURITY FILM

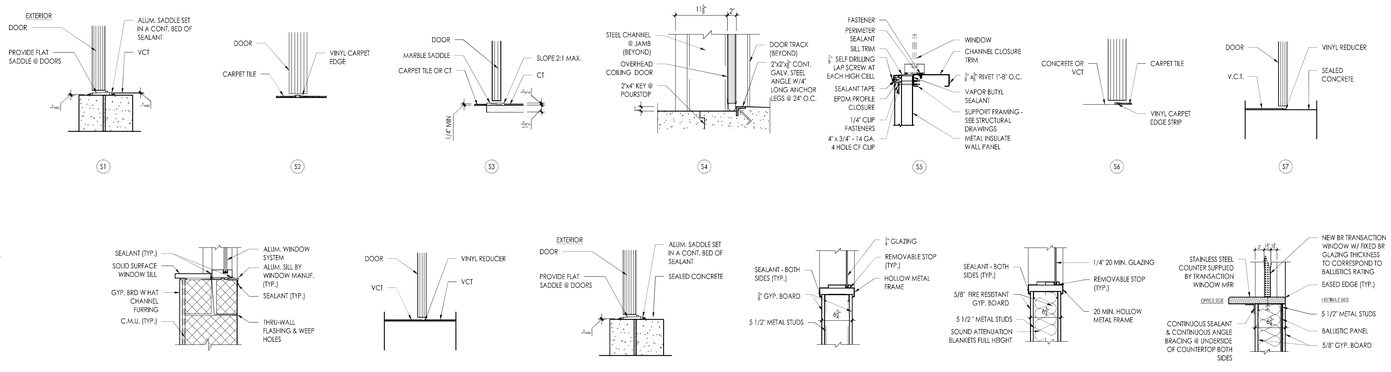
DOOR AND FRAME SCHEDULE

DR NO	DOOR LOCATION	DOOR SIZE	DOOR TYPE	DOOR MATL	DOOR GLAZING	FRAME TYPE	FRAME MATL	FRAME DETAIL HEAD	FRAME DETAIL JAMB	FRAME DETAIL SADDLE	HARDWARE	RATING	SIGN TYPE	NOTES
101A	VEST. - 101	2 @ 3'-2" x 7'-2"	B	FRP	INSUL	FA	AL	H4	J3,J4	S1	2.0	--	--	1
101B	VEST. - 101	2 @ 3'-0" x 7'-0"	B	FRP	--	F1	HM	H1	J1	S10	4.0	--	--	1
104	FACILITY OPERATIONS DIRECTOR'S OFFICE - 104	3'-0" x 7'-0"	E	WD	TPG	F1	HM	H1	J1	S2	9.0	--	--	--
105	TOILET - 105	3'-0" x 7'-0"	A	WD	--	F1	HM	H1	J1	S3	12.0	--	--	--
106	TOILET - 106	3'-0" x 7'-0"	A	WD	--	F1	HM	H1	J1	S3	12.0	--	--	--
107	FOOD DIRECTORS SERVICE. - 107	3'-0" x 7'-0"	D	WD	FRIG-1	F1	HM	H9	J1	S2	9.0	20	--	--
108	LOCKSMITH OFFICE - 108	3'-0" x 7'-0"	E	WD	FRIG-1	F1	HM	H9	J1	S6	9.0	20	--	--
109	ASS. OPERATIONS MNG. OFFICE - 109	3'-0" x 7'-0"	E	WD	FRIG-1	F1	HM	H9	J1	S6	9.0	20	--	--
110	FOOD SERVICE STORAGE - 110	3'-0" x 7'-0"	A	WD	--	F1	HM	H9	J1	S9	6.0	20	--	--
112	TRAINING - 112	4'-0" x 7'-0"	E	WD	FRIG-1	F1	HM	H9	J1	S9	10.0	20	--	--
113	FACILITY FILE STORAGE - 113	3'-0" x 7'-0"	A	WD	--	F1	HM	H9	J1	S7	5.0	20	--	--
114	CORRIDOR - 114	3'-0" x 7'-0"	E	FRP	FRIG-1	FA	AL	H1	J3,J4	S9	3.0	--	--	--
115	WOMEN'S TOILET - 115	3'-0" x 7'-0"	A	WD	--	F1	HM	H9	J1	S3	13.0	20	--	--
116	MEN'S TOILET - 116	3'-0" x 7'-0"	A	WD	--	F1	HM	H9	J1	S3	13.0	20	--	--
117	JANITORS CLOSET - 117	3'-0" x 7'-0"	A	WD	--	F1	HM	H9	J1	S9	11.0	20	--	--
118	INTERMEDIATE DIST. FRAME - 118	3'-0" x 7'-0"	A	WD	--	F1	HM	H1	J1	S9	7.0	--	--	--
119	CORRIDOR - 119	2 @ 3'-0" x 7'-0"	E	WD	TPG	F1	HM	H2	J2	S7	8.0	--	--	--
120A	MAINTENANCE WORK AREA - 120	3'-0" x 7'-0"	E	FRP	TPG	FA	AL	H3	J5	S10	3.0	--	--	1
120B	MAINTENANCE WORK AREA - 120	10'-0" x 8'-8"	C	MTL	--	FA	AL	H6	J6	S4	1.0	--	--	1
120C	MAINTENANCE WORK AREA - 120	2 @ 3'-0" x 7'-0"	E	WD	TPG	F1	HM	H2	J2	S1	8.0	--	--	--
120D	MAINTENANCE WORK AREA - 120	3'-0" x 7'-0"	E	FRP	TPG	FA	AL	H3	J5	S10	3.0	--	--	1
121A	STORAGE - 121	3'-0" x 7'-0"	E	FRP	TPG	FA	AL	H3	J5	S10	3.0	--	--	1
121B	STORAGE - 121	10'-0" x 8'-8"	C	MTL	--	FA	AL	H6	J6	S4	1.0	--	--	--
121C	STORAGE - 121	2 @ 3'-0" x 7'-0"	E	WD	TPG	F1	HM	H2	J2	--	8.0	--	--	--
121D	STORAGE - 121	3'-0" x 7'-0"	E	FRP	TPG	FA	AL	H3	J5	S10	3.0	--	--	1
121E	STORAGE - 121	10'-0" x 8'-8"	C	MTL	--	FA	AL	H6	J6	S4	1.0	--	--	--
122A	CHILD CARE STORAGE - 122	3'-0" x 7'-0"	E	FRP	TPG	FA	AL	H3	J5	S10	3.0	--	--	ALTERNATE BID, 1
122B	CHILD CARE STORAGE - 122	10'-0" x 8'-8"	C	MTL	--	FA	AL	H6	J6	S4	1.0	--	--	ALTERNATE BID
122C	CHILD CARE STORAGE - 122	2 @ 3'-0" x 7'-0"	E	WD	TPG	F1	HM	H2	J2	--	8.0	--	--	ALTERNATE BID, 1
122D	CHILD CARE STORAGE - 122	3'-0" x 7'-0"	E	FRP	TPG	FA	AL	H3	J5	S10	3.0	--	--	ALTERNATE BID, 1
122E	CHILD CARE STORAGE - 122	10'-0" x 8'-8"	C	MTL	--	FA	AL	H6	J6	S4	1.0	--	--	ALTERNATE BID

JAMB DETAILS
1" = 1'-0"



SILL & SADDLE TYPES
1" = 1'-0"



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5/15/20 Date
Architect
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FVHD architects planners
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Project Name
NEW DISTRICT MAINTENANCE & OPERATIONS BUILDING

Project Owner Name
GALLOWAY TOWNSHIP PUBLIC SCHOOLS

Project Location
REEDS ROAD
GALLOWAY TOWNSHIP NJ

Project Number
5195

Project Date
5.15.2020

Checked By
WDH

Drawn By
TTH

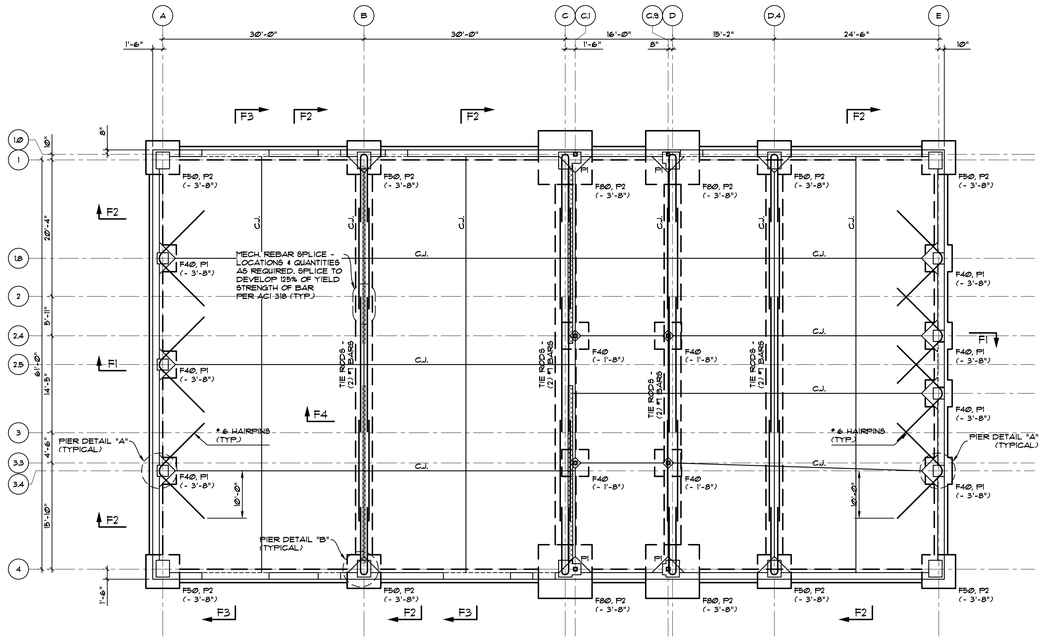
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Drawing Name
DOOR & WINDOW DETAILS

Revisions

No.	Date	Description
	4.15.20	FOR BIDDING

Drawing Number
A601



FOUNDATION PLAN

1/8" = 1'-Ø"

ELEVATION TOP OF FINISHED FLOOR SLAB: = 43.33' REFERRED TO AS DATUM EL. Ø'-Ø" UNLESS OTHERWISE NOTED ON PLAN.
FLOOR SLAB: 6" CONC. SLAB + (2) LAYERS OF 6x6-W1.4xW1.4 WWF. ON A VAPOR BARRIER OVER 4" MIN. DRAINAGE FILL UNLESS OTHERWISE NOTED.
ELEVATION BOTTOM OF FOOTINGS NOTED THUS ( ) ON PLAN BELOW FINISHED FLOOR DATUM EL. Ø'-Ø".
C.J. - INDICATES SLAB CONSTRUCTION OR CONTROL JOINT.
SLAB DEPRESSIONS NOTED THUS [ ] ON PLAN FROM TOP OF FLOOR SLAB - SEE ARCH. DWGS. FOR LOCATION & EXTENT.
|B.B. | - INDICATES BOTTOM OF BASE PLATE ABOVE OR BELOW DATUM.
ANY PENETRATIONS IN SLAB FROM ALL TRADES TO BE FILLED WITH POLYURETHANE CAULK.

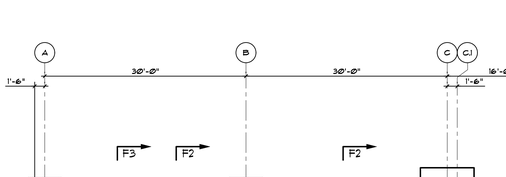
FOOTING SCHEDULE		
MARK	SIZE	REINFORCEMENT
F4Ø	4'-Ø" x 4'-Ø" x 12"	(4) - #5's E.W. BOT.
F5Ø	5'-Ø" x 5'-Ø" x 14"	(5) - #6's E.W. BOT.
F8Ø	8'-Ø" x 8'-Ø" x 28"	(9) - #6's E.W. T&B

PIER SCHEDULE			
MARK	SIZE	REINFORCEMENT	REMARKS
P1	28" x 28"	(4) - #6's VERT.	
P2	24" x 30"	(10) - #6's VERT.	

NOTE:
ALL PIERS TO HAVE # 3 TIES @ 12" O.C. (TYPICAL).

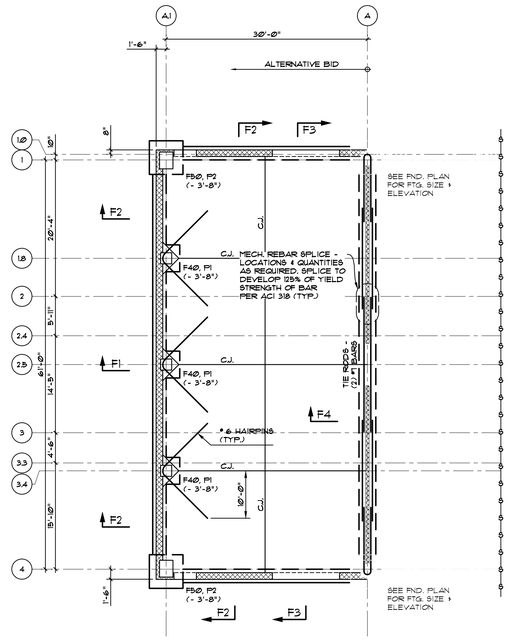


TIE ARRANGEMENTS



PIER DETAIL A
1/2"=1'-Ø"

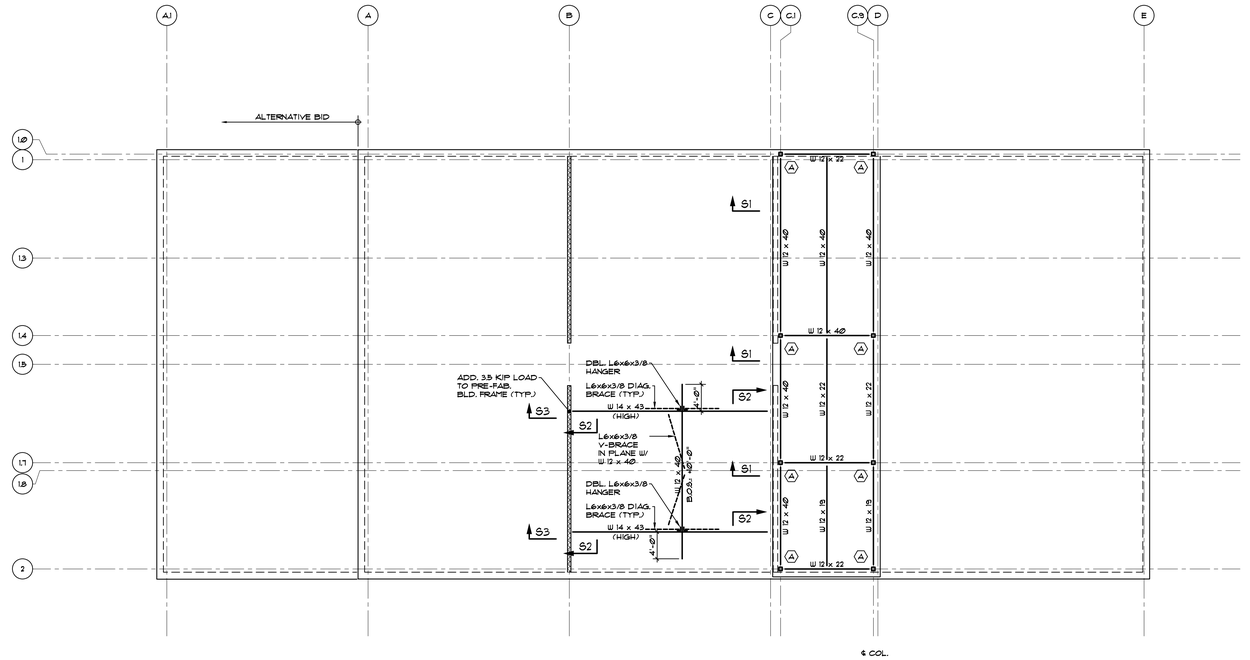
PIER DETAIL B
1/2"=1'-Ø"



ALTERNATIVE BID FOUNDATION PLAN

1/8" = 1'-Ø"

ELEVATION TOP OF FINISHED FLOOR SLAB: = 43.33' REFERRED TO AS DATUM EL. Ø'-Ø" UNLESS OTHERWISE NOTED ON PLAN.
FLOOR SLAB: 6" CONC. SLAB + (2) LAYERS OF 6x6-W1.4xW1.4 WWF. ON A VAPOR BARRIER OVER 4" MIN. DRAINAGE FILL UNLESS OTHERWISE NOTED.
ELEVATION BOTTOM OF FOOTINGS NOTED THUS ( ) ON PLAN BELOW FINISHED FLOOR DATUM EL. Ø'-Ø".
C.J. - INDICATES SLAB CONSTRUCTION OR CONTROL JOINT.
SLAB DEPRESSIONS NOTED THUS [ ] ON PLAN FROM TOP OF FLOOR SLAB - SEE ARCH. DWGS. FOR LOCATION & EXTENT.
|B.B. | - INDICATES BOTTOM OF BASE PLATE ABOVE OR BELOW DATUM.
ANY PENETRATIONS IN SLAB FROM ALL TRADES TO BE FILLED WITH POLYURETHANE CAULK.



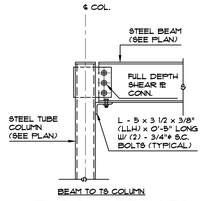
MEZZANINE FRAMING PLAN

1/8" = 1'-Ø"

ELEVATION TOP OF FINISHED FLOOR SLAB: = 11'-8 1/2" ABOVE DATUM EL. Ø'-Ø" UNLESS OTHERWISE NOTED ON PLAN.
FLOOR SLAB: 4 1/2" CONC. SLAB + 6x6-W1.4xW1.4 WWF. ON 2"-20 GA. COMPOSITE METAL FLOOR DECK (GALVANIZED).
ELEVATION TOP OF STEEL BEAMS -4 1/2" BELOW TOP OF SLAB UNLESS OTHERWISE NOTED THUS (+) ON PLAN ABOVE DATUM.
SPACE ALL STEEL MEMBERS EQUALLY UNLESS OTHERWISE NOTED ON PLAN.

COLUMN SCHEDULE			
MARK	SIZE	BASE PLATE	ANCHOR BOLTS
(A)	HSS 5 x 5 x 3/8	3/4" x 12" x 1'-Ø"	(4) 3/4" Ø
(B)			

NOTES:
1. BOTTOM OF BASE PLATES TO BE -1" BELOW DATUM ELEVATION UNLESS OTHERWISE NOTED THUS |B.B. | ON PLAN FROM DATUM.
2. ALL COLUMNS TO HAVE (4) 3/4" Ø ANCHOR BOLTS WITH 9" MIN. EMBEDMENT + 3" HOOK UNLESS OTHERWISE NOTED.
3. ALL HSS COLUMNS TO BE Fy = 46 K.S.I.
4. ALL HSS COLUMNS TO HAVE CAP PLATES: 3/4" THICK @ BEAM BEARING 1/2" THICK @ JOIST BEARING ALL OTHERS 1/4" THICK U.O.N.
5. WHERE ANY FACE OF COLUMN ABUTS MASONRY WALLS, PROVIDE ADJUSTABLE MASONRY ANCHORS @ 24" O.C. VERTICALLY. OMIT MASONRY ANCHORS AT FIRE WALLS.
6. ALL STEEL COLUMNS SUPPORTING CANTILEVER MEMBERS TO HAVE 3/4" TOP PLATES W/ (4) 3/4"Ø A325 BOLTS U.O.N.



BEAM TO TS COLUMN

TYPICAL BEAM TO COLUMN CONNECTION

Harrison – Hamnett, P.C.
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JOHN H. HARRISON N.J. P.E. #31198 DATE

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Architect Date

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Pennsylvania: 140 Whitaker Ave. - Mont Clare - Pennsylvania 19453

Project Name
NEW DISTRICT MAINTENANCE & OPERATIONS BUILDING

Project Owner Name
GALLOWAY TOWNSHIP PUBLIC SCHOOLS

Project Location
REEDS ROAD
GALLOWAY TOWNSHIP NJ

Project Number
5195
Project Date
05.15.2020
Checked By
JNH
Drawn By
KFH
Scale
AS NOTED

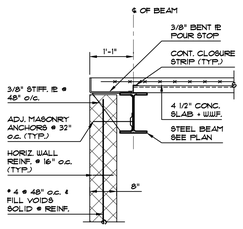
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FOUNDATION & MEZZANINE PLAN

Revisions

No.	Date	Description
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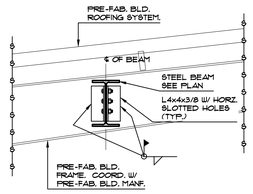
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Date: Jun 18, 2020 - 8:24am



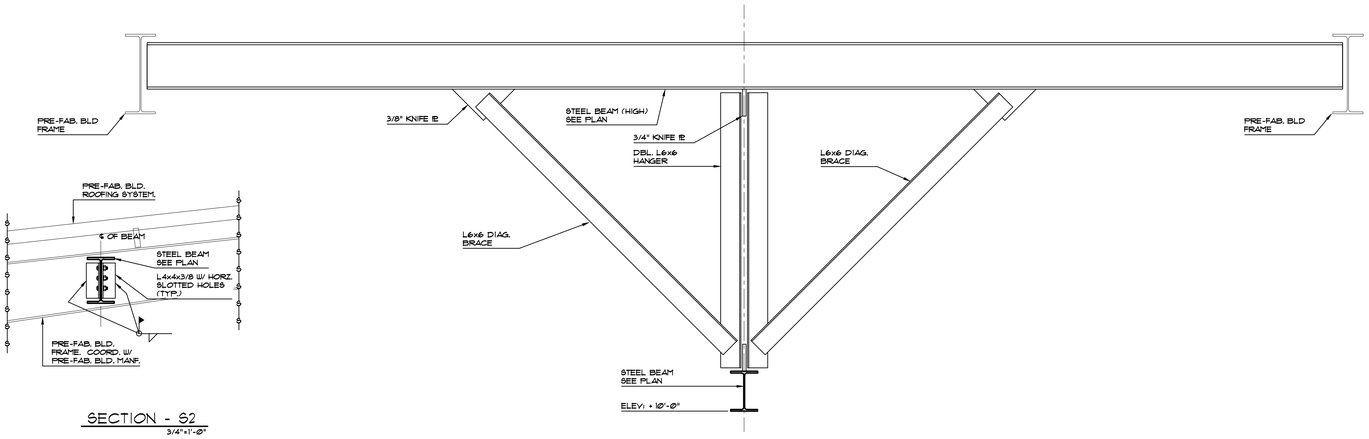
SECTION - S1

3/4"=1'-0"



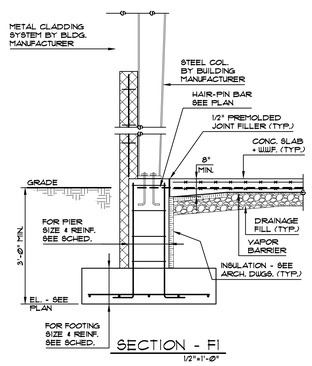
SECTION - S2

3/4"=1'-0"



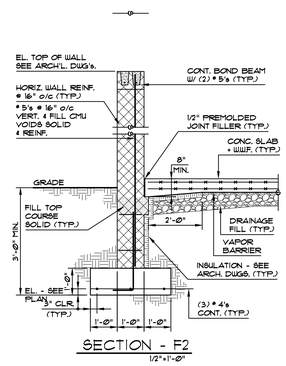
SECTION - S3

3/4"=1'-0"



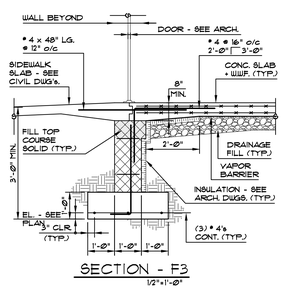
SECTION - F1

1/2"=1'-0"



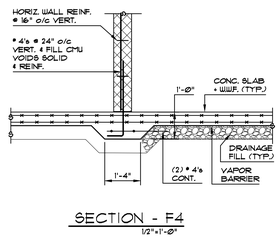
SECTION - F2

1/2"=1'-0"



SECTION - F3

1/2"=1'-0"



SECTION - F4

1/2"=1'-0"

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Date
Architect

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Project Name
NEW DISTRICT MAINTENANCE & OPERATIONS BUILDING

Project Owner Name
GALLOWAY TOWNSHIP PUBLIC SCHOOLS

Project Location
REEDS ROAD
GALLOWAY
TOWNSHIP NJ

Project Number
5195

Project Date
05.15.2020

Checked By
JNH

Drawn By
KFH

Scale
AS NOTED

Drawing Name
SECTIONS

Revisions

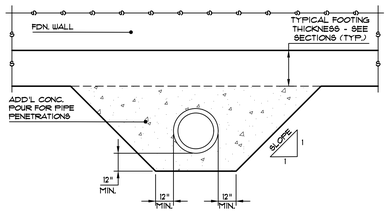
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Drawing Number
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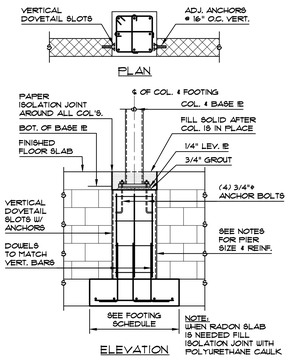
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JOHN H. HARRISON N.J. P.E. #31198 DATE

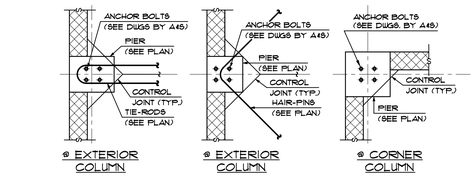
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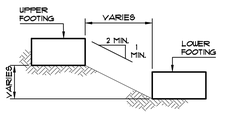
ALT. STEPPED FTG. DETAIL



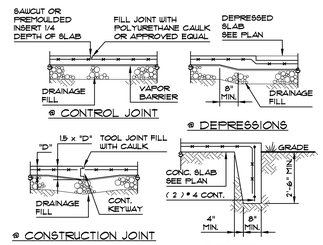
TYPICAL PIER & FOOTING DETAIL



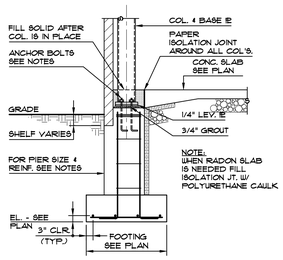
TYPICAL ISOLATION JOINT DETAILS



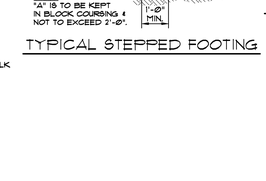
TYPICAL SLOPE BETWEEN FOOTINGS



RADON
TYPICAL SLAB ON GRADE DETAILS



BRICK SHELF @ COLUMNS



TYPICAL STEPPED FOOTING

NOTES:
UNLESS OTHERWISE SPECIFIED ON DRAWINGS PROVIDE # INSTALL LINTELS FOR ALL SQUARE HEAD MASONRY OPENINGS IN ALL MASONRY WALLS IN ACCORDANCE WITH THE FOLLOWING SCHEDULES # COMMENTS.

LOOSE LINTEL SCHEDULE

(FOR 4", 8", 12", # 16" WALLS)

MASONRY OPENING	LINTEL SIZE	REMARKS
UP TO 4'-Ø"	L - 3 1/2" x 3 1/2" x 1/4"	
4'-1" TO 6'-Ø"	L - 5" x 3 1/2" x 5/16"	
6'-1" TO 8'-Ø"	L - 6" x 3 1/2" x 5/16"	
OVER 8'-Ø"	W 8 x 18 + IE	

LOOSE LINTEL SCHEDULE

(FOR 6" WALLS)

MASONRY OPENING	LINTEL SIZE	REMARKS
2'-Ø" TO 6'-Ø"	WT 7 x 11	
6'-1" TO 8'-Ø"	WT 8 x 13	

NOTES:
1. PROVIDE ONE (1) ANGLE FOR EACH 4" OF MASONRY WIDTH.
2. BEAR LINTELS 6" MINIMUM EACH SIDE OF OPENING.
3. ALL LINTELS IN EXTERIOR WALLS TO BE GALVANIZED.
4. WHERE OPENINGS LOCATED NEXT TO COLUMNS OR BEAMS, ATTACH TO STRUCTURAL STEEL. CONNECTION NOT TO PROTRUDE INTO OPENING.
5. CONSULT ARCHITECTURAL, MECHANICAL # ELECTRICAL DRAWINGS FOR OPENING SIZE # LOCATION.

GENERAL NOTES

FOUNDATION

1. All footings shall bear on soil having a minimum safe bearing capacity of 1.5 tons per square foot. Confirm in field prior to placing footings.
2. Elevations given correspond to the computed bottom of footings and are minimum depths which are not to be construed as limiting in any way the depth required to reach good bearing.
3. No footings shall be placed in water or on frozen ground. After footings are placed they shall be protected against frost.
4. Fill and backfill material shall be free of deleterious organic matter.
5. All footing excavations are to be finished by hand.
6. Fill and backfill shall be clean bank run material conforming to the following gradation: 100% smaller than 4 inch sieve; maximum 15% smaller than #200 sieve, and approved as acceptable by a testing laboratory.
7. No fill or backfill shall be placed over or against work at such time or in such a manner would endanger it or otherwise damage such work.
8. See soil report prepared by Underwood Engineering Company, Dated December 30, 2019 - Revised January 24, 2020 for remaining concerning preparation of soil for foundations.

CAST-IN-PLACE CONCRETE

1. All concrete work shall conform to the latest edition of the ACI Building Code.
2. All concrete, except slabs on grade, shall attain 3000 PSI compressive strength at 28 days. All concrete for slabs on grade shall attain 3500 PSI compressive strength at 28 days.
3. Ready Mix.
   A. Comply with ACI-301, ACI-304 and ASTM C-94.
   B. Maximum time between introduction of water and placing to be 1-1/2 hours.
   C. Minimum cement content shall be 470 pounds per cubic yard for 3000 PSI concrete, and 520 pounds per cubic yard for 3500 PSI concrete.
   D. Maximum water cement ratio shall be 0.51 for 3000 PSI concrete, and 0.47 for 3500 PSI concrete.
   E. Maximum slump of concrete shall be 4 inches as determined by ASTM C-143. Maximum slump of concrete shall be 3 inches and 8" after addition of HRWR to site verified 3" slump for concrete containing HRWR admixture as determined by ASTM C-143.
   F. All concrete exposed to the ground or weather shall be air entrained between 4-5% as determined by ASTM C-231 or C-173.
   G. Do not load trucks above rated capacity.
   H. High-Range Water-Reducing Admixture (Super Plasticizer) shall conform to ASTM C-494, Type F or G and contain not more than .01 percent chloride ions.
4. Cold weather concreting shall be in accordance with ACI-306.
5. Prepare concrete test cylinders from each day's pour. Cylinders shall be properly cured, stored and tested. Submit results to Architect.
6. Throughout construction the concrete work shall be adequately protected against damage due to excessive loading, construction equipment, materials or methods, ice, rain, snow, excessive heat and freezing temperatures.
7. Early drying out of concrete, especially during the first 24 hours, shall be carefully guarded against. All surfaces shall be moist cured or protected using a membrane curing agent applied as soon as forms are removed. If membrane curing agent is used, exercise care not to damage coating.
8. Bending, tack welding, cutting or substitute reinforcing other than as shown on the contract drawing is prohibited unless specific approval for each case is given by architect.
9. Concrete shall be conveyed, placed and finished in a workmanlike manner.
10. Prior to making repairs, contractor shall obtain permission from architect to make patches for other than minor honeycombing.
11. Contractor to coordinate requirements of structural, architectural, mechanical and electrical drawings.
12. All materials shall be stored to protect them against the elements.

REINFORCING

1. All reinforcing bar details shall conform to the latest ACI code and detailing manual.
2. All bars shall be ASTM A-615, Grade 60.
3. Welded wire fabric shall be ASTM A-185.
4. Provide and schedule with the shop drawings all necessary accessories to hold reinforcing securely in position.
5. Clearance of main reinforcing from adjacent surfaces unless shown otherwise shall be:
   A. Unformed surfaces in contact with ground or exposed to the weather: 3"
   B. Bottom surfaces of slabs on grade: 3"
   C. Formed surfaces in contact with ground or exposed to weather:
      1. #5 bars or smaller: 1-1/2"
      2. Bars larger than #5: 2"
   D. Exterior wall surfaces: 2"
   E. In all cases not less than the diameter of the bar.
6. All reinforcement shall be inspected and approved by architect or his designate before concrete is poured.
7. Tolerances for placing reinforcing shall be:
   A. +or- 1/4 inch for members with an effective depth of 24 inches or less.
   B. +or- 1/2 inch for members with an effective depth of more than 24 inches.
8. Where continuous bars are called for, they shall be run continuously around corners and lapped at necessary splices or hooked at discontinuous ends. Laps shall be 40 bar diameters. Bar laps may be offset to avoid control or construction joints.
9. Provide #5 top and bottom in slabs and #5 each face in walls at all four sides of an opening, unless otherwise noted. Extend bars 2'-Ø" beyond opening or hook where 2'-Ø" not possible.
10. Electrical Contractor to provide grounding electrode system as required by NEC section 250-52(a). Coordinate location and schedule with General Contractor.

GENERAL NOTES

MASONRY REQUIREMENTS

1. All block work shall be in accordance with IBC2015 w/ NJ Modification and other applicable codes.
2. All block shall be lightweight aggregate and conform to ASTM C 90.
3. Mortar shall be ASTM C 270, Type M for below grade and Type M or S for above grade work.
4. Where block fill is called for on drawings, use Type M mortar or concrete with a compressive strength of 2500 PSI in accordance with ASTM C 476, and installed in accordance with ACI-531 for high or low lift procedures.
5. All masonry walls are to have a #4 vertical reinforcing bars at ends, at intersections at corners and at a maximum spacing of 10' feet on centers. These reinforcing bars are to be full height and grouted solid. These bars may be spliced provided that a 40 bar diameter lap is maintained.
6. All openings are to have two #4 vertical reinforcing bars within 16 inches of each side and a bond beam top and bottom with two #5 bars (unless noted otherwise on plan). All reinforcing is to extend past the opening a minimum of 24 inches.
7. All masonry walls are to have a bond beam with two #5 bars within 16 inches of the top of the wall.
8. All running bond masonry walls are to have horizontal reinforcing at every other course. Where masonry is laid in other than running bond, horizontal joint reinforcement is to be provided at every horizontal joint. The horizontal wall reinforcing shall be No. 9 gage "Dur-o-wall" or equivalent. Provide fabricated corner sections at all corners.
9. All wall bearing beams are to have the masonry wall grouted solid a minimum of 8 inches each side of bearing location and two #4 vertical reinforcing bars full height at each grouted cell (maximum of four bars).
10. Coordinate masonry with all trades requiring items to be built-in.

STRUCTURAL STEEL

1. All structural steel details shall be designed in accordance with the latest issue of the American Institute of Steel Construction (AISC), "Specification for Structural Steel Buildings - Allowable Stress and Plastic Design".
2. Connections shall be designed to develop the full strength of the member over the required span, 1 1/2 times for composite members. All shop connections are to be welded or bolted.
3. Provide double angle connections at all beam to wide flange columns and beam to beam connections wherever possible. The steel fabricator must notify the Structural Engineer if there are to be any changes. See Typical Thru-PI Detail for beam to tube column connections.
4. Field connections shall be made by high strength bolts 3/4" minimum in diameter or welded as shown on drawings.
5. High strength bolts shall be tightened to a bolt tension not less than the proof load given in ASTM A-325 Specifications.
6. Welding shall be done in conformity with the latest code for Arc and Gas Welding in Building Construction of the American Welding Society. All welds shall develop the full strength of the material being welded, unless otherwise noted.
7. All structural steel shall receive one shop coat of paint except contact surfaces, within 4 inches of field weld.
8. All structural steel shall be accurately set and properly held in position with suitable temporary braces and stays until permanently secured. The building shall be true and plumb before connections may be finally welded or bolted.
9. Anchor bolts, base plates, bearing plates and weld plates shall be located and built into connecting work, preset by templates or similar methods.
10. Shop drawings of all structural steel shall be submitted to the Architect for approval.
11. All pipe shapes shall be ASTM A53, Gr. B, Fy 35 KSI.
12. All tubes shapes shall be ASTM A500, Grade B, Fy 46 KSI.
13. All structural angle flange shapes to be ASTM A-992/A572, Grade 50.
14. All steel plates, angles, channels are to be ASTM A-36 unless indicated otherwise.

STEEL FLOOR DECK

1. Deck shall be 20 gage galvanized equal to 2" Lok-2 Floor by Roof Deck, Inc. or P-3623 by Canam Steel with respect to load carrying capacity, deflection, slab weight and U.L. label. Submit data to Structural Engineer.
2. Deck shall be 20 gage minimum.
3. Deck installation to be in strict accordance with manufacturer's recommendations.
4. All beams to have puddle welds at 12" O.C. (max.)
5. Installation to be 3 span continuous.
6. Floor construction is unshored composite design. The steel will deflect under the weight of the concrete placed. The general contractor is to pour sufficient concrete, over and above the specified depth, to provide a level floor.

MISCELLANEOUS

1. Contractor shall verify all dimensions, sections and elevations on the job.
2. Consult the Architectural, Mechanical and Electrical drawings for verification of location and dimensions of chases, inserts, openings, sleeves, sashes, drips, reveals, depressions, equipment pads and other product requirements.
3. All foundation walls shall be braced during the operations of backfilling and compaction. Bracing shall be left in position until permanent restraints have been installed.
4. All masonry walls are to be braced during construction until permanently restrained at the top.
5. Reproductions of contract documents are not acceptable as shop drawings and will be rejected.
6. See specifications for additional requirements. In the case of conflict between specifications and general notes, more stringent requirements shall govern.

DESIGN LOADS

PRELIMINARY LOADS USED FOR THE FOUNDATION DESIGN WERE SUPPLIED BY BRAEMER BUILDING SYSTEMS. FINAL DESIGN AND COORDINATION WILL OCCUR AFTER FINAL LOADS ARE SUBMITTED BY THE BUILDING MANUFACTURER. BUILDING MANUFACTURER TO SUBMIT PLANS AND LOADS SIGNED AND SEALED BY A REGISTERED ENGINEER IN THE STATE OF NEW JERSEY.

ROOF LOADING SCHEDULE

LIVE LOAD:

DESIGN LOAD	20.0	P.S.F.
GROUND SNOW LOAD (Pg)	20.0	P.S.F.

FLOOR LOADING SCHEDULE

LIVE LOAD:

SLAB ON GRADE	250.0	P.S.F.
EQUIPMENT PLATFORM	125.0	P.S.F.

LATERAL LOADING SCHEDULE

WIND LOAD: IBC 2018 - ASCE 7-16

BASIC WIND SPEED = 121 M.P.H.
IMPORTANCE FACTOR (I) = 1.00, EXPOSURE B

SEISMIC LOADING: IBC 2018 - ASCE 7-16

SEISMIC USE GROUP - II
IMPORTANCE FACTOR (I_E) = 1.00
S_S = Ø.138 S1 = Ø.041
SITE CLASS - D
S_{DS} = Ø.139 S_{D1} = Ø.066
SEISMIC DESIGN CATEGORY - A

NOTE:
GENERAL CONTRACTOR TO LAYOUT DIMENSIONS OF COLUMN CENTERLINES AT THE BEGINNING OF THE PROJECT AND IS TO NOTIFY THE ARCHITECT AND STEEL CONTRACTOR OF ANY DEVIATIONS FROM THE CONTRACT DRAWINGS. SEE S-1 FOR FOOTING AND PIER SCHEDULES.

NOTE:
ELECTRICAL CONTRACTOR TO PROVIDE GROUNDING ELECTRODE SYSTEM AS REQUIRED BY NEC SECTION 250-52.a. COORDINATE LOCATION WITH GENERAL CONTRACTOR.

NOTE:
G.C. TO VERIFY DIMENSIONS WITH ARCHITECTURAL DRAWINGS. COLUMN LINE TO OUTSIDE FACE OF WALL MAY DIFFER FROM BUILDING MANUF.

NOTE:
GENERAL CONTRACTOR IS TO PREPARE SITE AS PER RECOMENDATIONS BY GEOTECHNICAL REPORT BY BOR CONSULTING ENGINEERS, DATED 10/9/19. G.C. IS TO VERIFY A SOIL BEARING CAPACITY OF 4,000 PSF PRIOR TO PLACEMENT OF FOOTINGS. G.C. IS TO CONTACT ARCH / ENG. WITH ANY VARIATIONS.

NOTE:
1. STEP ALL FOOTINGS AT ALL PIPES # CONDUITS, SEE TYPICAL DETAIL.
2. G.C. TO CONFIRM ALL LOCATIONS AND INVERTS OF PIPES WITH MECHANICAL # ELECTRICAL CONTRACTORS.
3. THE FOUNDATION DRAWINGS SHOW ONLY GENERAL LOCATIONS AND MAY NOT INCLUDE ALL PENETRATIONS. G.C. TO SEE MECHANICAL DRAWINGS FOR FULL EXTENT OF PIPE PENETRATIONS.
4. G.C. TO VERIFY DIMENSIONS WITH ARCHITECTURAL DRAWINGS. COLUMN LINE TO OUTSIDE FACE OF WALL MAY DIFFER FROM BUILDING MANUF.

ANCHOR BOLT EMBEDMENT

MINIMUM ANCHOR BOLT DIAMETERS # LOCATIONS TO BE DESIGNED BY BUILDING MANUFACTURER. ANCHOR BOLT EMBEDMENT FOR TO BE AS FOLLOWS:
- 3/4"ø A.B. - 9" EMBED. W/ 3/8" x 3" x 3" IE WASHER
- 1"ø A.B. - 12" EMBED. W/ 3/8" x 4" x 4" IE WASHER

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Consulting Engineers
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JOHN M. HARRISON N.J. P.E. #31196 DATE

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Architect

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Project Name
NEW DISTRICT MAINTENANCE & OPERATIONS BUILDING

Project Owner Name
GALLOWAY TOWNSHIP PUBLIC SCHOOLS

Project Location
REEDS ROAD
GALLOWAY TOWNSHIP NJ

Project Number
5195

Project Date
05.15.2020

Checked By
JNH

Drawn By
KFH

Scale
AS NOTED

Drawing Name
GENERAL NOTES & TYPICAL DETAILS

Revisions

No.	Date	Description
	04.15.20	FOR BIDDING

Drawing Number
S300

Drawing name: D:\Jobs\2020\20076 - Galloway DMR Bid - FVHD\ACAD\20076 - Plans.dwg
Date: Jun 08, 2020 - 8:54am

GENERAL SYMBOLS

XXX/XX — EQUIPMENT ABBREVIATION

TAG NUMBER

EXTENT OF REMOVAL TO THIS POINT

CONNECT TO EXISTING AT THIS POINT

REMOVAL NOTE DESIGNATION

NEW WORK NOTE DESIGNATION

NUMBER / SHEET NUMBER — X / X-X — PLAN, SECTION, OR DETAIL
SCALE: 1/4" = 1'-0"

NUMBER / SHEET NUMBER — DWG# / SHEET# — SECTION OR DETAIL

NUMBER / SHEET NUMBER — DWG# / SHEET# — ELEVATION

N — NORTH ARROW

DATUM POINT

X — REVISION

PLUMBING LEGEND

EXISTING TO REMAIN

NEW WORK OR REMOVAL. REFER TO PLAN TITLE.

SANITARY PIPING

STORM WATER PIPING — ST

VENT PIPING

DOMESTIC COLD WATER PIPING

DOMESTIC HOT WATER PIPING

DOMESTIC HOT WATER RETURN PIPING

DOMESTIC HOT WATER (140°) — 140°

DOMESTIC HOT WATER RETURN (140°) — 140°

GAS PIPING — G

ACID WASTE — AW

FORCED SANITARY / STORM MAIN — FS

SPRINKLER PIPING — SP

INDIRECT WASTE PIPING — IW

VALVE ON RISE

FLEXIBLE CONNECTION

BACK FLOW PREVENTER VALVE ASSEMBLY

BALL VALVE

BUTTERFLY VALVE

CHECK VALVE

CIRCULATING PUMP

GAS COCK VALVE

GATE VALVE

METER

BALANCING VALVE

MIXING VALVE

OS&Y VALVE

PIPE BREAK

PIPE CAP

PIPE TEE DOWN

PIPE TEE UP

PIPE TEE OFF TOP

PIPE TURNING DOWN

PIPE TURNING UP

PIPE DROP AND RUN

PIPE DROP AND TURN

DIRECTION OF PIPE FLOW

PRESSURE GAUGE

PRESSURE REGULATOR VALVE

RELIEF OR SAFETY VALVE

ANGLE GATE VALVE

FS — FLOW SWITCH

UNION

STRAINER

PIPE GUIDE

PIPE ANCHOR

SOLENOID VALVE

STRAINER

TEMPERATURE GAUGE

SHOCK ABSORBER

UNION

PIPE SLEEVE

PLAIN ROUND FLOOR DRAIN

PLAIN SQUARE FLOOR DRAIN

ABBREVIATIONS

ABV.	ABOVE
AD	AREA DRAIN
A.F.F.	ABOVE FINISHED FLOOR
BFP	BACK FLOW PREVENTER
BLW.	BELOW
C.D.	CONDENSATE DRAIN
CO	CLEANOUT
CONT.	CONTINUATION
CP	CIRCULATING PUMP
CW	DOMESTIC COLD WATER
DF	DRINKING FOUNTAIN
DFU	DRAINAGE FIXTURE UNIT
DN.	DOWN
DW	DOMESTIC WATER
(E)	EXISTING
E.C.	ELECTRICAL CONTRACTOR
ENT.	ENTERING
EW	EYE WASH
EWC	ELECTRIC WATER COOLER
EWH	ELECTRIC WATER HEATER
FCO	FLOOR CLEANOUT
FD	FLOOR DRAIN
FDC	FIRE DEPARTMENT CONNECTION
FP	FIRE PROTECTION
FPC	FIRE PROTECTION CONTRACTOR
FR.	FROM
FS	FLOW SWITCH
F.S.E.C.	FOOD SERVICE EQUIPMENT CONTRACTOR
G.C.	GENERAL CONSTRUCTION CONTRACTOR
GWH	GAS WATER HEATER
HB	HOSE BIBB
H.C.	HVAC CONTRACTOR
HW	DOMESTIC HOT WATER
HWH	HOT WATER HEATER
HWR	DOMESTIC HOT WATER RETURN
IN.	INCH
INV.	INVERT
I.W.	INDIRECT WASTE
LAV	LAVATORY
LVG.	LEAVING
LWT	LEAVING WATER TEMPERATURE
OS&Y	OUTSIDE SCREW & YOKE
MAX	MAXIMUM
MECH.	MECHANICAL
MIN.	MINIMUM
MR	MOP RECEPTOR
MV	MIXING VALVE
N.C.	NORMALLY CLOSED
N.O.	NORMALLY OPEN
OD	OVERFLOW DRAIN
P.C.	PLUMBING CONTRACTOR
PDI	PLUMBING AND DRAINAGE INSTITUTE
PRESS.	PRESSURE
PRV	PRESSURE REDUCING VALVE
PSI	POUNDS PER SQUARE INCH
(R)	REMOVE
RD	ROOF DRAIN
REF.	REFERENCE
RWC	RAINWATER CONDUCTOR
S	SANITARY
SAN.	SANITARY
SF	SQUARE FEET
SH	SHOWER
SK	SINK
SS	SERVICE SINK
TEMP.	TEMPERATURE
TS	TAMPER SWITCH
TYP.	TYPICAL
UR	URINAL
V	VENT
VB	VACUUM BREAKER
VTR	VENT THRU ROOF
W	WASTE
W/	WITH
WC	WATER CLOSET
WCO	WALL CLEANOUT
W.C.	WATER COLUMN
WH	WALL HYDRANT

PLUMBING GENERAL NOTES

1. GENERAL NOTES APPLY TO ALL PLUMBING DRAWINGS.
2. COORDINATE AND FIELD VERIFY ALL DIMENSIONS, SIZES, CLEARANCES, AND LOCATIONS PRIOR TO THE START OF CONSTRUCTION. WHEN CONFLICT ARISES, MAKE ANY NECESSARY CHANGES TO ROUTING OF PIPING WITHOUT COMPROMISING THE INTEGRITY AND PERFORMANCE OF THE SYSTEM, AND AT NO ADDITIONAL COST TO THE OWNER.
3. PROVIDE ALL ASSOCIATED LIFE SAFETY DEVICES FOR ALL PIPING PENETRATIONS.
4. PLUMBING PIPING LAYOUTS ARE SCHEMATIC IN NATURE. PROVIDE OFFSETS AND FITTINGS AS REQUIRED TO ACCOMMODATE FIELD CONDITIONS.
5. COORDINATE CONSTRUCTION OF ALL PLUMBING WORK WITH ARCHITECTURAL, STRUCTURAL, ELECTRICAL, HVAC, ETC. SHOWN ON OTHER CONTRACT DOCUMENT DRAWINGS.
6. EQUIPMENT INSULATION SHALL BE INSTALLED AS NOT TO CONCEAL THE EQUIPMENT NAME PLATE.
7. ENSURE ALL WORK IS IN CONFORMANCE WITH ALL APPLICABLE BUILDING CODES. WORK SHALL BE COMPLETED IN STRICT ACCORDANCE WITH THE LATEST EDITIONS OF THE APPLICABLE CONSTRUCTION CODE, AND ALL OTHER FEDERAL, STATE, AND LOCAL AGENCY REGULATIONS HAVING JURISDICTION OVER THIS PROJECT. IN THE EVENT OF ANY DISCREPANCIES BETWEEN AGENCY REQUIREMENTS, OBSERVE THE MORE STRINGENT OF REQUIREMENTS.
8. ALL WORK SHALL COMPLY WITH THE STANDARDS OF THE NATIONAL BOARD OF FIRE UNDERWRITERS (NBFU), INDUSTRIAL RISK INSURANCE UNDERWRITERS (IRI), FACTORY MUTUAL (FW), OR THE APPLICABLE RATING BUREAU, THE NATIONAL ELECTRIC CODE (NEC), THE AMERICAN GAS ASSOCIATION (AGA), AND THE AMERICAN SOCIETY OF HEATING AND AIR CONDITIONING ENGINEERS (ASHRAE), OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA), AND ALL OTHER APPLICABLE FEDERAL, STATE AND LOCAL BUILDING CODES AND THE REQUIREMENTS OF ALL PUBLIC UTILITY COMPANIES SERVING THE PROJECT SITE.
9. COORDINATE LOCATION OF ALL HVAC, PLUMBING, AND ELECTRICAL EQUIPMENT WITH THE RESPECTIVE TRADE CONTRACTORS.
10. ALL EQUIPMENT AND OR MATERIAL BEING REMOVED IS THE RESPONSIBILITY OF THE PLUMBING CONTRACTOR AND WILL BE RETAINED, DISPOSED OF, AND REMOVED FROM THE SITE AT THE DIRECTION OF THE OWNER.
11. IDENTIFICATION LABELS TO BE USED/MADE FOR ALL SYSTEMS MUST USE THE OWNER'S ROOM NUMBERS AND ROOM NAMES; NOT THE NUMBERS OR NAMES ON THE CONSTRUCTION DOCUMENTS. MEET WITH THE OWNER TO REVIEW AND CONFIRM ROOM NUMBERS AND NAMES PRIOR TO LABELING SYSTEMS.
12. PERFORM ALL CUTTING AND PATCHING NECESSARY TO PERFORM ABOVE SLAB WORK. MATCH EXISTING MATERIALS, FINISHES, FIRE RATINGS, PAINT COLORS, ETC. IN ALL AREAS OF PATCHING.
13. ALL PIPING TO BE CONCEALED UNLESS OTHERWISE INDICATED.
14. PROVIDE ALL NECESSARY HANGERS AND/OR SUPPORTS TO FACILITATE INSTALLATION OF ALL PIPING, EQUIPMENT, ETC.
15. COORDINATE ALL PLUMBING VALVE ACCESS DOORS & PANELS WITH G.C.
16. PERFORM SAW CUTTING, EXCAVATION, AND BACKFILL FOR ALL BELOW SLAB PIPING. FINAL FLOOR FINISH IS BY G.C. COORDINATE WORK WITH G.C.
17. PROVIDE HANGERS AND SUPPORTS PER THE SPECIFICATIONS FOR ALL PIPING AND PLUMBING EQUIPMENT TO FACILITATE INSTALLATION OF THE WORK.
18. SCHEDULE AND OBTAIN APPROVAL FOR ALL SYSTEM SHUTDOWNS WITH THE OWNER PRIOR TO COMMENCING WITH REMOVAL AND NEW WORK.
19. COORDINATE REQUIREMENTS FOR LOSS OF PHASE PROTECTION ON ALL THREE PHASE MOTORS SERVING EQUIPMENT ON THIS CONTRACT.
20. PROVIDE FLEXIBLE CONNECTORS FOR ALL PIPING AT BUILDING EXPANSION JOINTS.
21. INSTALL ALL EQUIPMENT TO MAINTAIN ADEQUATE CLEARANCES PER MANUFACTURER'S REQUIREMENTS. PROVIDE OFFSETS AS NECESSARY TO FACILITATE.

REFERENCE DIMENSION

0 — 1

INDICATED DIMENSION IS MEASURED AT ONE (1) INCH IN LENGTH AND PROVIDED FOR REFERENCE/VERIFICATION ONLY.

06/19/2020
ISSUED FOR BID

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G&H Project No. 2019-187

ENGINEER — DATE
MICHAEL S. GILLAN, PE — NO. PE051587E

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Project Name
NEW DISTRICT MAINTENANCE & OPERATIONS BUILDING

Project Owner Name
GALLOWAY TOWNSHIP PUBLIC SCHOOLS

Project Location
REEDS ROAD
GALLOWAY TOWNSHIP NJ

Project Number
5195

Project Date
6.19.2020

Checked By
TJB

Drawn By
DTS

Scale
AS NOTED

Drawing Name
PLUMBING GENERAL NOTES, LEGEND, & ABBREVIATIONS

Revisions

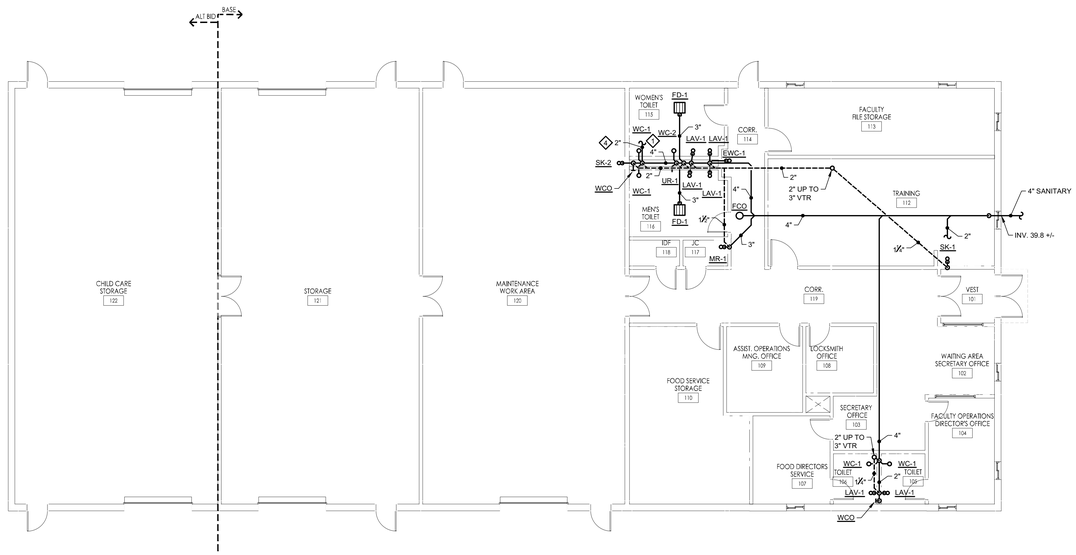
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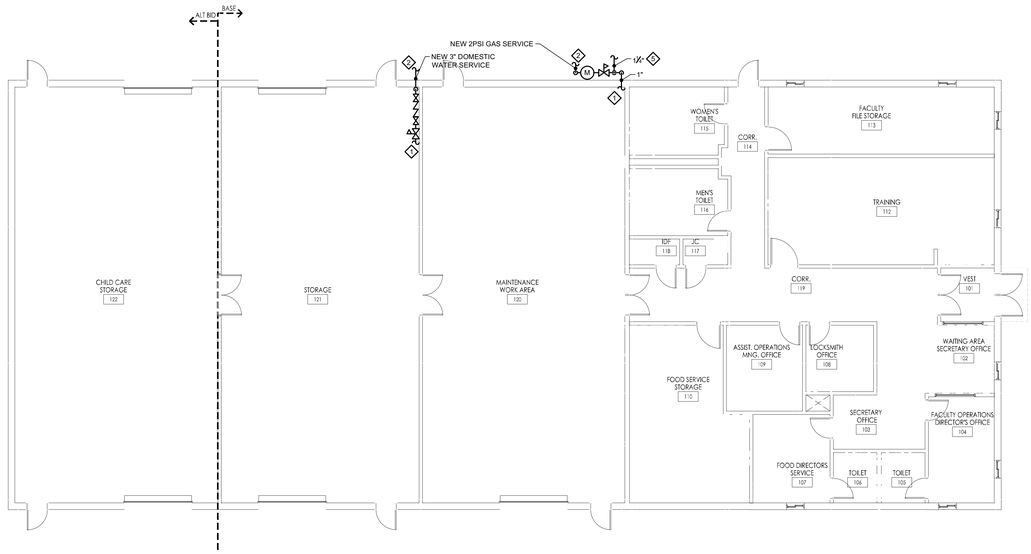
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PLOTTED: 2020.06.12 09:22 AM

NEW WORK NOTES:

1. REFER TO ENLARGED PLAN FOR CONTINUATION.
2. REFER TO CIVIL DOCUMENTS FOR CONTINUATION.
3. PROVIDE VALVES, APPURTENANCES AND OTHER ACCESSORIES PER THE GAS-FIRED APPLIANCE INLET CONNECTION DETAIL.
4. PROVIDE COMBINATION WASTE AND VENT SYSTEM.
5. REFER TO SITE PLAN FOR CONTINUATION.



1 / P101 FIRST FLOOR PLAN - SANITARY NEW WORK
SCALE: 1/8" = 1'-0"



2 / P101 FIRST FLOOR PLAN - DOMESTIC NEW WORK
SCALE: 1/8" = 1'-0"

06/19/2020
ISSUED FOR BID

REFERENCE DIMENSION
0 1
INDICATED DIMENSION IS MEASURED AT ONE (1) INCH IN LENGTH AND PROVIDED FOR REFERENCE/VERIFICATION ONLY.

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Project Name
NEW DISTRICT MAINTENANCE & OPERATIONS BUILDING

Project Owner Name
GALLOWAY TOWNSHIP PUBLIC SCHOOLS

Project Location
REEDS ROAD
GALLOWAY TOWNSHIP NJ

Project Number
5195

Project Date
6.19.2020

Checked By
TJB

Drawn By
DTS

Scale
AS NOTED

Drawing Name
PLUMBING FLOOR PLAN NEW WORK

Revisions

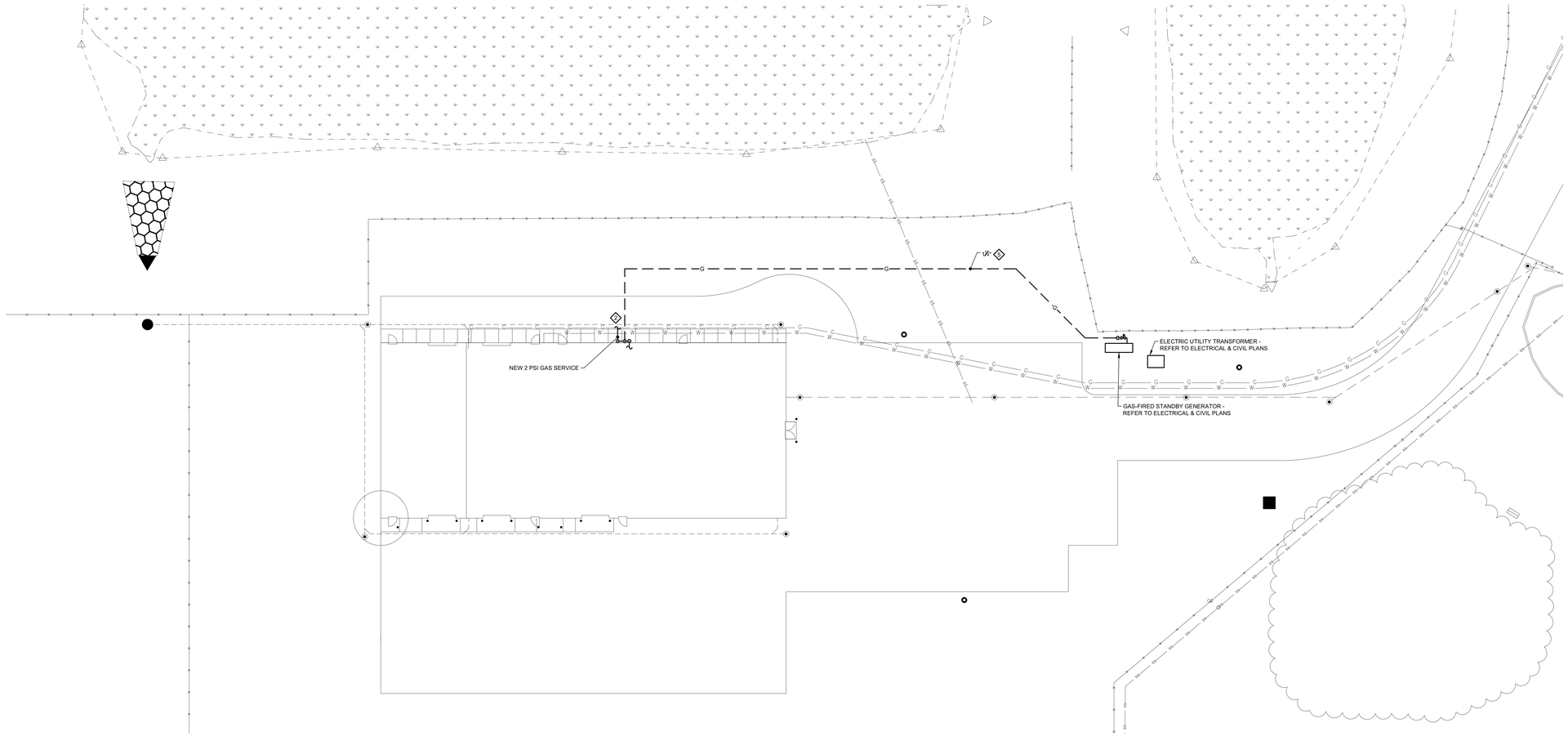
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Drawing Number
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NEW WORK NOTES:

1. NOT USED.
2. REFER TO CIVIL DOCUMENTS FOR CONTINUATION.
3. NOT USED.
4. NOT USED.
5. REFER TO CIVIL DOCUMENTS FOR EXACT ROUTINGS.



1 / P111 SITE PLAN - PLUMBING NEW WORK
SCALE: 1/8" = 1'-0"

06/19/2020
ISSUED FOR BID

REFERENCE DIMENSION
0 1
INDICATED DIMENSION IS MEASURED AT ONE (1) INCH IN LENGTH AND PROVIDED FOR REFERENCE/VERIFICATION ONLY.

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G&H Project No. 2019-187

ENGINEER: MICHAEL S. GILLAN, PE
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Project Name
NEW DISTRICT MAINTENANCE & OPERATIONS BUILDING

Project Owner Name
GALLOWAY TOWNSHIP PUBLIC SCHOOLS

Project Location
REEDS ROAD
GALLOWAY TOWNSHIP NJ

Project Number: 5195
Project Date: 6.19.2020
Checked By: TJB
Drawn By: DTS
Scale: AS NOTED

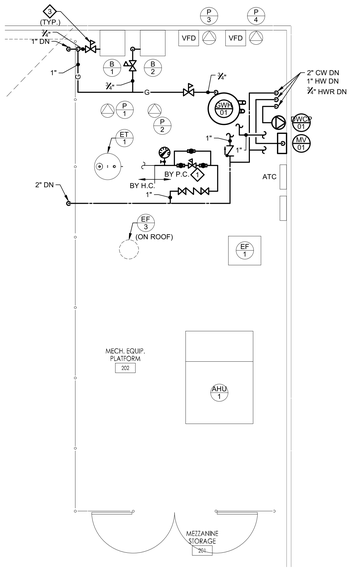
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PLUMBING SITE PLAN

Revisions

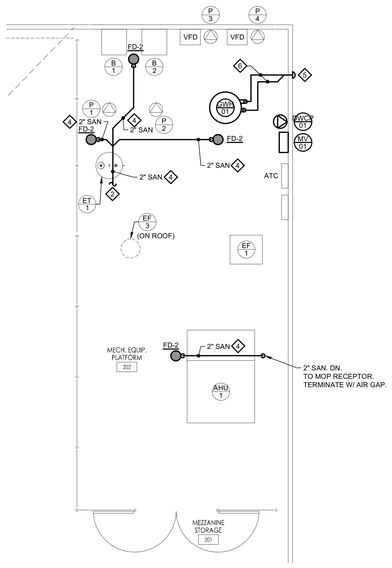
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Drawing Number
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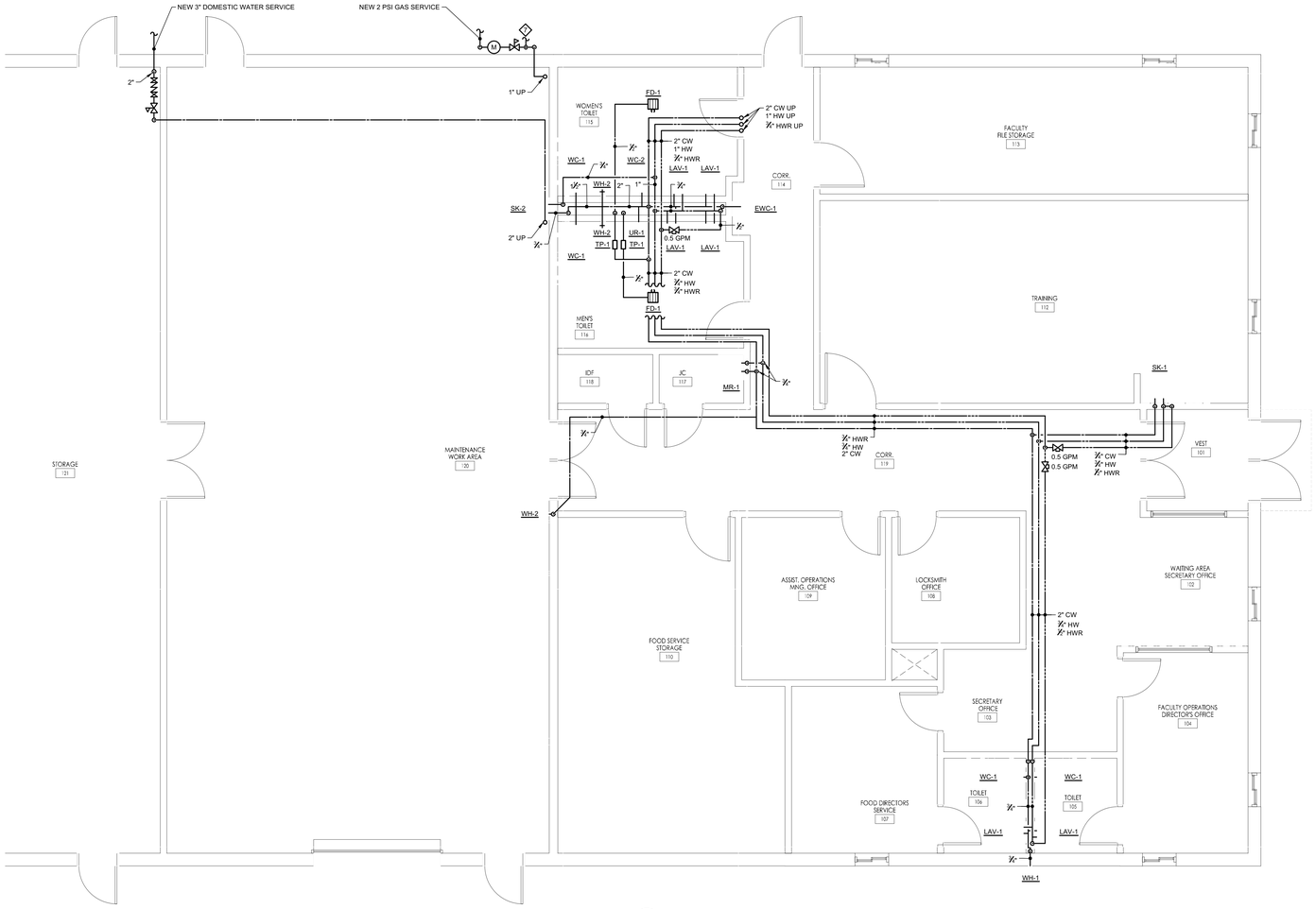
2 P401 ENLARGED MEZZANINE PLAN - DOMESTIC NEW WORK
SCALE: 1/4" = 1'-0"



3 P401 ENLARGED MEZZANINE PLAN - SANITARY NEW WORK
SCALE: 1/4" = 1'-0"

NEW WORK NOTES:

1. COORDINATE PRESSURE REDUCING VALVE DISCHARGE PRESSURE WITH THE HVAC CONTRACTOR.
2. REFER TO FLOOR PLANS FOR CONTINUATION.
3. PROVIDE VALVES, APPURTENANCES AND OTHER ACCESSORIES PER THE GAS-FIRED APPLIANCE INLET CONNECTION DETAIL.
4. PROVIDE COMBINATION WASTE AND VENT SYSTEM.
5. PROVIDE WATER HEATER MANUFACTURER'S CONCENTRIC VENT TERMINATION KIT AND INSTALL PER THE DIRECT CONCENTRIC VENT DETAIL.
6. PROVIDE INTAKE AND VENT PIPING PER THE WATER HEATER MANUFACTURER'S RECOMMENDATIONS. SIZE PIPING PER THE WATER HEATER MANUFACTURER'S RECOMMENDATIONS.
7. REFER TO SITE PLAN FOR CONTINUATION.



1 P401 ENLARGED FLOOR PLAN - DOMESTIC NEW WORK
SCALE: 1/4" = 1'-0"

06/19/2020
ISSUED FOR BID

REFERENCE DIMENSION
0 1
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G&H Project No. 2019-187

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DATE: NO. PE051587E

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Project Name
NEW DISTRICT MAINTENANCE & OPERATIONS BUILDING

Project Owner Name
GALLOWAY TOWNSHIP PUBLIC SCHOOLS

Project Location
REEDS ROAD
GALLOWAY
TOWNSHIP NJ

Project Number: 5195
Project Date: 6.19.2020
Checked By: TJB
Drawn By: DTS
Scale: AS NOTED

Drawing Name
PLUMBING FLOOR PLAN NEW WORK

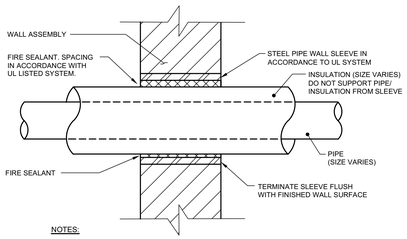
Revisions

No.	Date	Description

Drawing Number
P401

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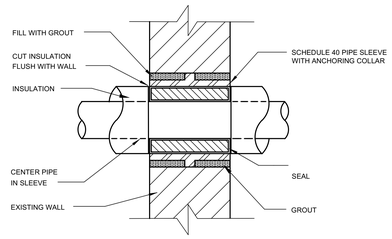
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NOTES:

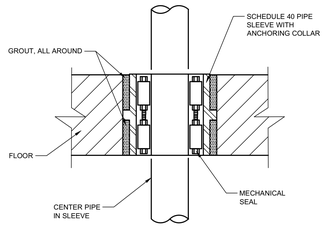
1. PROVIDE UL LISTED FIRE RATED THRU WALL SYSTEM IN ACCORDANCE WITH WALL TYPE, AND SCHEDULED PIPING AND INSULATION.
2. ALL PENETRATIONS INTERIOR TO BUILDING TO BE PROVIDED BY ASSOCIATED TRADE CONTRACTOR.
3. FOR NON-FIRE RATED WALL ASSEMBLIES: UTILIZE STANDARD CAULK IN LIEU OF FIRE CAULK.

1 P501 DETAIL - TYPICAL PIPE THRU WALL
NO SCALE

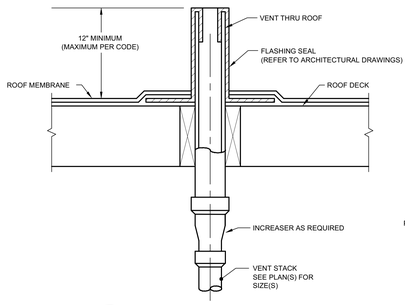


NOTE: ALL PENETRATIONS INTERIOR TO BUILDING TO BE PROVIDED BY ASSOCIATED TRADE CONTRACTOR.

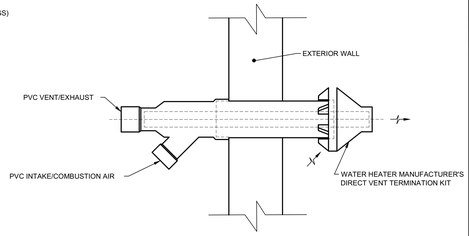
2 P501 DETAIL - PIPE THRU EXTERIOR WALL
NO SCALE



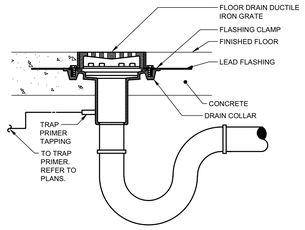
3 P501 DETAIL - TYPICAL PIPE THRU FLOOR
NO SCALE



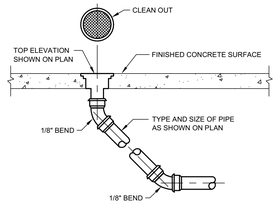
4 P501 DETAIL - VENT THRU ROOF
NO SCALE



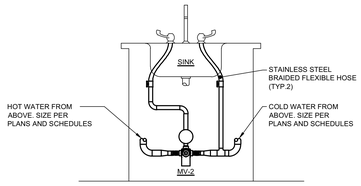
5 P501 DETAIL - DIRECT CONCENTRIC VENT
NO SCALE



6 P501 DETAIL - FLOOR DRAIN
NO SCALE

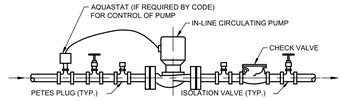


7 P501 DETAIL - CLEANOUT
NO SCALE

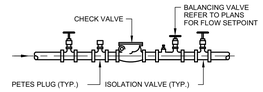


NOTES:
1. SET MIXING VALVE OUTLET TO MAXIMUM 110 DEG F.
2. COORDINATE VALVE AND PIPING WITH FIELD CONDITIONS.

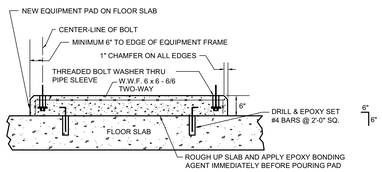
DETAIL - UNDER COUNTER
8 P501 MIXING VALVE INSTALLATION
NO SCALE



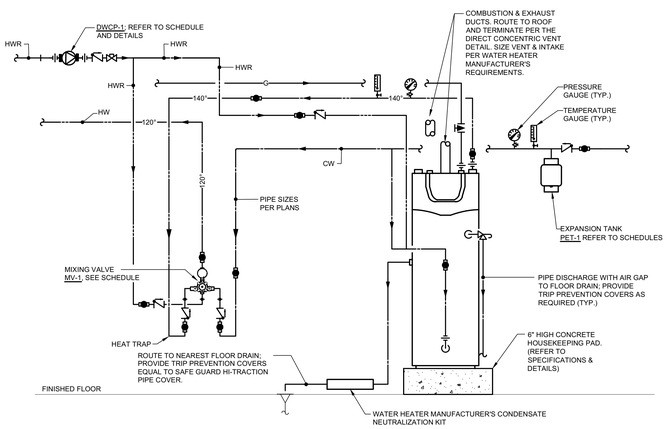
9 P501 DETAIL - CIRCULATING PUMP
NO SCALE



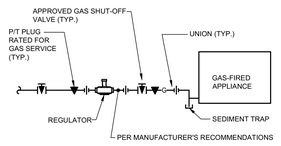
10 P501 DETAIL - BALANCING VALVE
NO SCALE



11 P501 DETAIL - TYPICAL EQUIPMENT BASE ON FLOOR
NO SCALE



12 P501 DETAIL - GAS FIRED STORAGE TYPE WATER HEATER
NO SCALE



NOTE:
1. REGULATOR AND PIPING DOWNSTREAM OF REGULATOR TO BE SIZED IN ACCORDANCE TO GAS-FIRED APPLIANCE MANUFACTURER'S RECOMMENDATION. COORDINATE REGULATOR LOCATION TO BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S REQUIREMENTS.
2. VERIFY UPSTREAM PRESSURE WITH FIELD CONDITIONS.

13 P501 DETAIL - GAS-FIRED APPLIANCE GAS PIPING
NO SCALE

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ENGINEER
MICHAEL S. GILLAN, PE

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Scale
AS NOTED

Drawing Name
PLUMBING DETAILS

Revisions

No.	Date	Description

Drawing Number
P501

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LAST SAVED: 2020.04.22 02:51 PM PLOTTED: 2020.06.12 08:22 AM PLOTTED BY: TJB

PLUMBING FIXTURE SCHEDULE

REF. NO.	DESCRIPTION	MANUFACTURER AND MODEL NUMBER	FAUCET AND FLUSH VALVE	TRAP AND DRAIN	SUPPLIES	REMARKS/ACCESSORIES
WC-1	WATER CLOSET - FLOOR MOUNTED - FLOOR DISCHARGE - B.F.	AMERICAN STANDARD - 3043.001 "MADERA"	SLOAN 1.6 GPF - G2 8111-1.6	-	-	BATTERY POWERED FLUSH VALVE. PROVIDE OPEN FRONT TOILET SEAT WITH INTEGRAL ANTI-MICROBIAL COATING AND CLOSET FLANGE TO SUIT. REFER TO ARCHITECTURAL DOCUMENTS FOR BARRIER FREE REQUIREMENTS.
WC-2	WATER CLOSET - FLOOR MOUNTED - FLOOR DISCHARGE	AMERICAN STANDARD - 2234.001 "MADERA"	SLOAN 1.6 GPF - G2 8111-1.6	-	-	BATTERY POWERED FLUSH VALVE. PROVIDE OPEN FRONT TOILET SEAT WITH INTEGRAL ANTI-MICROBIAL COATING AND CLOSET FLANGE TO SUIT.
UR-1	URINAL - WALL MOUNTED - B.F.	AMERICAN STANDARD - 6590.001 "WASHBROOK"	SLOAN 0.125 GPF - 8186-0.125	-	-	BATTERY POWERED FLUSH VALVE. PROVIDE WALL CARRIER TO SUIT. REFER ARCHITECTURAL DOCUMENTS FOR EXACT MOUNTING HEIGHT.
LAV-1	LAVATORY - WALL MOUNT - SINGLE STATION - B.F.	AMERICAN STANDARD - 0355.012 "LUCERNE"	SLOAN 0.5 GPM - "OPTIMA" EBF-650 SERIES FAUCET	P-TRAP TO SUIT	½" ANGLE SUPPLIES TO SUIT	PROVIDE BATTERY POWERED, SPRAYHEAD W/ INFRARED CONTROL, THERMOSTATIC MIXING ASSEMBLY, & WALL CARRIER TO SUIT. REFER TO ARCHITECTURAL DOCUMENTS FOR EXACT MOUNTING HEIGHT, COLOR SELECTIONS, ETC. SET THERMOSTATIC MIXING VALVE TO A MAXIMUM DISCHARGE TEMPERATURE OF 110°.
SK-1	SINK - SINGLE BOWL - TOP MOUNT - B.F.	REFER TO ARCHITECTURAL DOCUMENTS	REFER TO ARCHITECTURAL DOCUMENTS	P-TRAP TO SUIT	½" ANGLE SUPPLIES TO SUIT	PROVIDE SUPPLY PIPING AND STOPS, TRAP AND SANITARY PIPING. G.C. TO PROVIDE FAUCET WITH 1.5 GPM AERATOR. COORDINATE WITH ARCHITECTURAL DOCUMENTS FOR MOUNTING HEIGHTS AND COORDINATE SIZE WITH THE G.C. PROVIDE WITH MIXING VALVE MV-2. SET MIXING VALVE TO A MAXIMUM DISCHARGE TEMPERATURE OF 110°F. G.C. TO FURNISH BASIN AND FAUCET, AND INSTALL BASIN. P.C. TO INSTALL FAUCET. PROVIDE MIXING VALVE, STOPS, ROUGH-INS, AND FINAL CONNECTIONS.
SK-2	SINK - SINGLE BOWL - WALL MOUNT - B.F.	REFER TO ARCHITECTURAL DOCUMENTS	REFER TO ARCHITECTURAL DOCUMENTS	P-TRAP TO SUIT	½" ANGLE SUPPLIES TO SUIT	PROVIDE SUPPLY PIPING AND STOPS, TRAP AND SANITARY PIPING. G.C. TO PROVIDE FAUCET WITH 1.5 GPM AERATOR. COORDINATE WITH ARCHITECTURAL DOCUMENTS FOR MOUNTING HEIGHTS AND COORDINATE SIZE WITH THE G.C. PROVIDE WITH MIXING VALVE MV-2. SET MIXING VALVE TO A MAXIMUM DISCHARGE TEMPERATURE OF 110°F. G.C. TO FURNISH BASIN AND FAUCET, AND INSTALL BASIN. P.C. TO INSTALL FAUCET. PROVIDE MIXING VALVE, STOPS, ROUGH-INS, AND FINAL CONNECTIONS.
MR-1	MOP RECEPTOR - 24"x24"x6"	FIAT - SB2424	T&S BRASS & BRONZE WORKS - B-0665-CR-BSTR	P-TRAP TO SUIT	½" ANGLE SUPPLIES TO SUIT	PROVIDE STAINLESS STEEL CAPS ON CURBS, RIGID SPOUT WITH INTEGRAL VACUUM BREAKER, ¾" MALE HOSE THREAD, STRAINER TO SUIT, AND WALL GUARDS.
EWC-1	ELECTRIC WATER COOLER W/ BOTTLE FILLING STATION - B.F.	ELKAY - LVRCGRN8WSK WATER COOLER & BOTTLE FILLER	-	P-TRAP TO SUIT	½" SUPPLY	PROVIDE WALL CARRIER TO SUIT. PROVIDE MANUFACTURER'S FILTER KIT. REFER TO ARCHITECTURAL DOCUMENTS FOR EXACT MOUNTING HEIGHT.
TP-1	TRAP PRIMER	WATTS LFTP300	-	-	-	IN-LINE TRAP PRIMER WITH INTEGRAL VACUUM BREAKER.
WH-1	FREEZE PROOF WALL HYDRANT	WATTS - HY-725	-	-	¾" SUPPLY	NON-FREEZE WALL HYDRANT WITH NICKEL BRONZE BOX AND LOCKABLE DOOR. PROVIDE WITH ¾" HOSE CONNECTION AND INTEGRAL VACUUM BREAKER.
WH-2	MILD CLIMATE - INTERIOR WALL HYDRANT	WATTS - HY-450	-	-	¾" SUPPLY	MILD CLIMATE WALL HYDRANT WITH NICKEL BRONZE BOX AND LOCKABLE DOOR. PROVIDE WITH INTEGRAL VACUUM BREAKER.

B.F. = BARRIER FREE

PLUMBING FIXTURE CONNECTION SCHEDULE

REF. NO.	DESCRIPTION	DOMESTIC WATER			SANITARY			REMARKS
		TOTAL WSFU	CW SUPPLY	HW SUPPLY	DFU	DRAIN SIZE	VENT SIZE	
WC-1	WATER CLOSET - FLOOR MOUNTED - FLOOR DISCHARGE - B.F.	5	1"	-	4	4"	2"	SENSOR ACTIVATED FLUSHOMETER VALVE
WC-2	WATER CLOSET - FLOOR MOUNTED - FLOOR DISCHARGE	5	1"	-	4	4"	2"	SENSOR ACTIVATED FLUSHOMETER VALVE
UR-1	URINAL - WALL MOUNTED - B.F.	4	¾"	-	4	2"	1½"	SENSOR ACTIVATED FLUSHOMETER VALVE
LAV-1	LAVATORY - WALL MOUNT - SINGLE STATION - B.F.	1	½"	½"	1	1¼"	1¼"	-
SK-1	SINK - SINGLE BOWL - TOP MOUNT - B.F.	1.5	½"	½"	2	1½"	1½"	-
SK-2	SINK - SINGLE BOWL - WALL MOUNT - B.F.	1.5	½"	½"	2	1½"	1½"	-
MR-1	MOP RECEPTOR - 24"x24"x6"	3	½"	½"	3	3"	1½"	-
FD-1	FLOOR DRAIN	-	-	-	0	(1)	(1)	FINAL OUTLET SIZES PER PLANS
FD-2	FLOOR DRAIN	-	-	-	0	(1)	(1)	FINAL OUTLET SIZES PER PLANS
EWC-1	ELECTRIC WATER COOLER W/ BOTTLE FILLING STATION - B.F.	0.5	½"		0.5	1¼"	1¼"	-
WH-1	FREEZE PROOF WALL HYDRANT	2.5	¾"	-	-	-	-	FINAL OUTLET SIZES PER PLANS
WH-2	MILD CLIMATE - INTERIOR WALL HYDRANT	1	¾"	-	-	-	-	FINAL OUTLET SIZES PER PLANS

NOTES:
1) REFER TO PLANS AND RISER DIAGRAMS FOR DRAIN AND VENT SIZES.
2) B.F. = BARRIER FREE.

FLOOR/ROOF DRAIN SCHEDULE

REF. NO.	DRAIN SPECIFICATION	REMARKS
FD-1	JOSAM 30000-S 6"x6" NICKEL ALLOY STRAINER TOP	SQUARE FLOOR DRAIN. SIZE PER PLANS. REFER TO ARCHITECTURAL DOCUMENTS FOR LOCATIONS. PROVIDE WITH INTEGRAL PRIMER TAP.
FD-2	JOSAM 30000-A 5" DIA. MIN. NICKEL ALLOY STRAINER TOP	ROUND FLOOR DRAIN. SIZE PER PLANS. REFER TO ARCHITECTURAL DOCUMENTS FOR LOCATIONS. PROVIDE WITH DEEP SEAL TRAP.

CLEANOUT SCHEDULE

REF. NO.	CLEANOUT SPECIFICATION	LOCATIONS
FCO	JOSAM #57000-12 SERIES "LEVELEZE KLEENATRON"	IN VINYL AND CERAMIC TILED FLOOR AREAS
FCO	JOSAM #57000-14 SERIES "LEVELEZE KLEENATRON"	IN CARPETED FLOOR AREAS.
FCO	JOSAM #57000-CI SERIES "LEVELEZE KLEENATRON"	IN CONCRETE FLOOR AREAS.
WCO	JOSAM #58600 SERIES CLEANOUT TEE / ACCESS COVER	BASE OF STACK WITH WALL ACCESS COVER PLATE.
CO	JOSAM #58900 SERIES CLEANOUT FERRULE	ABOVE CEILING AREAS.

MIXING VALVE SCHEDULE

BASIS OF DESIGN: LEONARD VALVE

REF. NO.	LOCATION	PAIRED WATER HEATER	MIN. GPM	DESIGN GPM	PD @ DESIGN FLOW (PSI)	CW INLET TEMP	HW INLET TEMP	OUTLET TEMP	INLET SIZE	OUTLET SIZE	MODEL	REMARKS
MV-1	MECH EQUIP PLATFORM 202	GWH-1	1.0	1.8	5	40°F	140°F	120°F	½"	½"	TM-322-26-LF	BI-METAL THERMOSTATIC MASTER MIXING VALVE. PROVIDE SURFACE MOUNT CABINET, PIPED ASSEMBLY W/ INLET AND OUTLET SHUTOFF. PROVIDE THERMOMETER AT OUTLET. COORDINATE MIXING VALVE PIPING CONFIGURATION WITH THE MIXING VALVE MANUFACTURER'S REQUIREMENTS.
MV-2	POINT OF USE	N/A	0.25	1.5	2.5	40°F	120°F	110°F	½"	½"	270-LF	POINT OF USE MIXING VALVE. SET MAXIMUM MIXING WATER TEMPERATURE TO 110°F. MIXING VALVE SHALL BE CERTIFIED IN ACCORDANCE WITH ASSE 1070. COORDINATE UNDERCOUNTER LOCATION WITH FIELD CONDITIONS. COORDINATE MIXING VALVE PIPING CONFIGURATION WITH THE MIXING VALVE MANUFACTURER REQUIREMENTS

DOMESTIC HOT WATER CIRCULATING PUMP SCHEDULE

BASIS OF DESIGN: BELL & GOSSETT

REF. NO.	LOCATION	PAIRED WATER HEATER	GPM	PRESSURE (FT. HD)	MOTOR (1)				MODEL	REMARKS/ACCESSORIES
					HP	VOLTS	PHASE	RPM		
DWCP-1	MECH EQUIP PLATFORM 202	GWH-1	1.5	8.0	60 WATTS	120	1	1838	ECOCIRC 19-16	(2)

(1) COORDINATE ELECTRICAL REQUIREMENTS WITH ELECTRICAL CONTRACTOR.
(2) PROVIDE WALL BRACKET SUITABLE FOR MOUNTING PUMP TO WALL.

GAS-FIRED WATER HEATER SCHEDULE

BASIS OF DESIGN: BRADFORD WHITE

REF. NO.	LOCATION	INPUT (MBH)	OUTPUT (MBH)	RECOVERY (GPH)	STORAGE (GAL)	WATER TEMP (°F)		CONNECTION SIZE		VENT SIZE IN.	MIN. GAS PRESS. IN. WC.	ELECTRICAL DATA (1)			MODEL	REMARKS
						INLET	OUTLET	INLET	OUTLET			VOLTS	PHASE	HZ		
GWH-1	MECH EQUIP PLATFORM 202	125.0	120.0	145.0	60	40.0	140.0	1-1/2" NPT	1-1/2" NPT	3	4.5	120	1	60	EF SERIES	(2)(3)(4)

(1) COORDINATE ELECTRICAL REQUIREMENTS WITH ELECTRICAL CONTRACTOR.
(2) PROVIDE MANUFACTURER'S LOW WATER CUT-OFF, & NEUTRALIZATION KIT AND FIELD MOUNTED LOW WATER CUTOFF SWITCH.
(3) PROVIDE WITH MANUFACTURER'S INTAKE AND VENT TERMINAL KIT.
(4) PROVIDE VENT AND INTAKE PER THE SPECIFICATIONS AND MANUFACTURERS INSTALLATION RECOMMENDATIONS.

EXPANSION TANK SCHEDULE

BASIS OF DESIGN: BELL & GOSSETT

REF. NO.	LOCATION	SERVICE	PAIRED WATER HEATER	NOMINAL TANK SIZE (GALLONS)	MINIMUM REQUIRED TANK ACCEPT. VOLUME (GALLONS)	MINIMUM OPERATING TEMP. (°F)	MINIMUM OPERATING PRESS. (PSIG.)	MAXIMUM OPERATING TEMP. (°F)	MAXIMUM OPERATING PRESS. (PSIG.)	MODEL	REMARKS
PET-1	MECH EQUIP PLATFORM 202	DOMESTIC WATER	GWH-1	5.0	1.6	40	12	140	80	PTA-12	(1)(2)(3)

(1) TANK SHALL BE RATED FOR USE WITH POTABLE WATER.
(2) SUPPORT TANK VIA WALL BRACKET.
(3) PROVIDE EXPANSION TANK AS PART OF THE WATER HEATER SYSTEM.

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Scale
AS NOTED

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PLUMBING SCHEDULES

Revisions

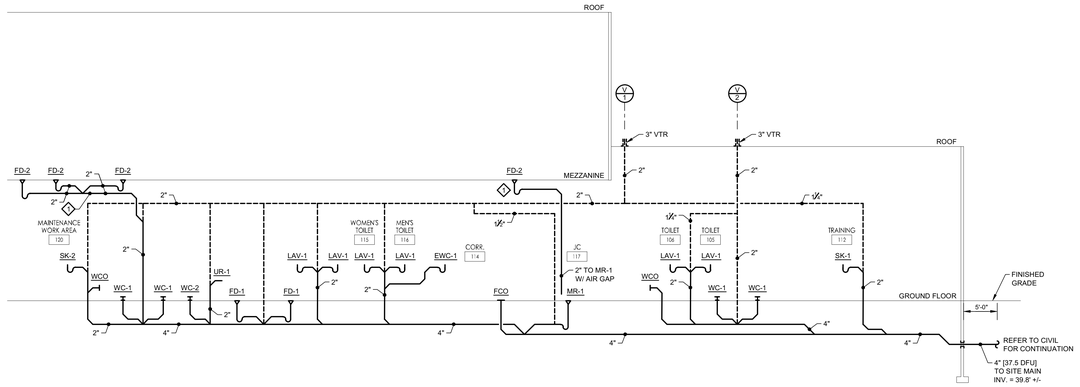
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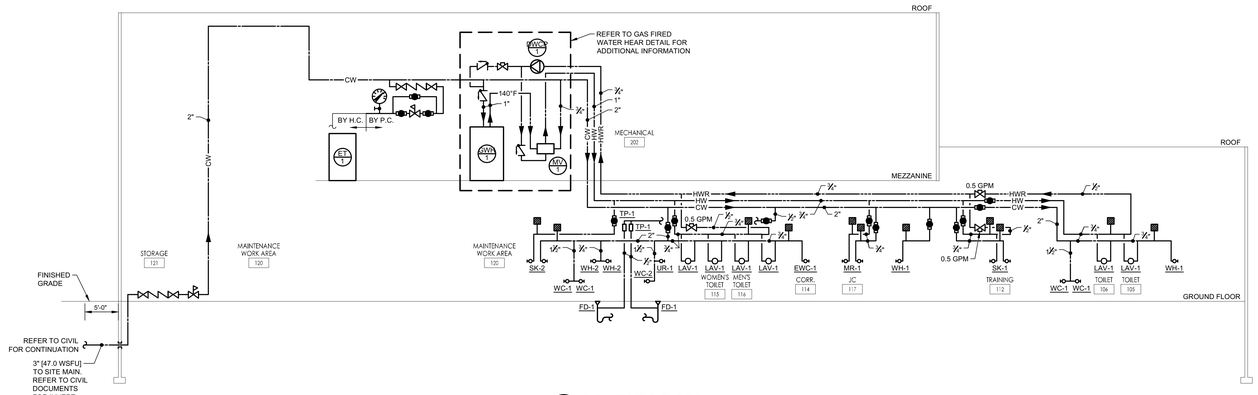
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NEW WORK NOTES:

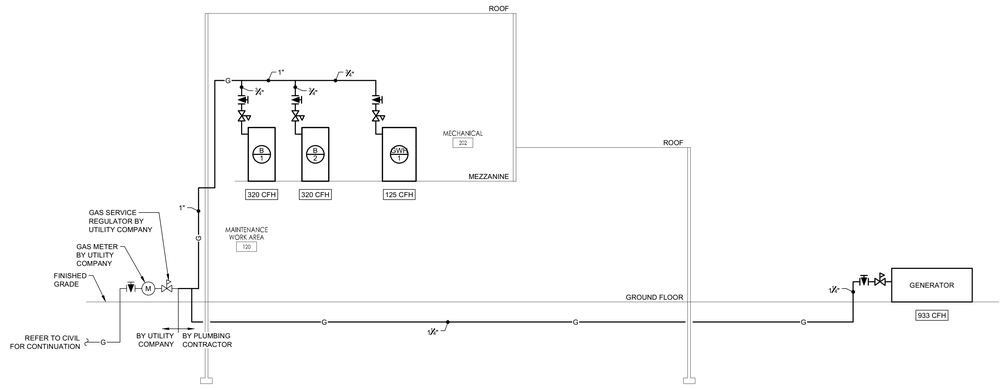
1. COMBINATION DRAIN AND VENT SYSTEM. INSTALL PER PLUMBING SUB-CODE REQUIREMENTS.



1 P602 **SANITARY RISER**
NO SCALE



2 P602 **DOMESTIC RISER**
NO SCALE



3 P602 **NATURAL GAS RISER**
NO SCALE

GAS RISER NOTES:

1. DEVELOPED RUN TO GENERATOR APPLIANCE (2.0 PSI SYSTEM) < 300'.
2. DEVELOPED RUN TO BUILDING INSTALLED APPLIANCE (2.0 PSI SYSTEM) < 80'.
3. PIPE SIZING BASED ON 2018 INTERNATIONAL FUEL GAS CODE; TABLE 402.4(5); 2.0 PSI WITH 1.0 PSI DROP.

REFERENCE DIMENSION

0 1

INDICATED DIMENSION IS MEASURED AT ONE (1) INCH IN LENGTH AND PROVIDED FOR REFERENCE/VERIFICATION ONLY.

06/19/2020
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Project Name
NEW DISTRICT MAINTENANCE & OPERATIONS BUILDING

Project Owner Name
GALLOWAY TOWNSHIP PUBLIC SCHOOLS

Project Location
REEDS ROAD
GALLOWAY TOWNSHIP NJ

Project Number
5195

Project Date
6.19.2020

Checked By
TJB

Drawn By
DTS

Scale
AS NOTED

Drawing Name
PLUMBING RISERS

Revisions

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P602

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HVAC LEGEND:

SUPPLY AIR UP

SUPPLY AIR DOWN

EXHAUST AIR UP

EXHAUST AIR DOWN

RETURN AIR UP

RETURN AIR DOWN

24x36 — DUCT SIZE (FIRST FIGURE-SIDE SHOWN)

DIRECTION OF FLOW-SUPPLY

DIRECTION OF FLOW-EXHAUST OR RETURN AIR

RISE — DUCT INCLINED RISE (RESPECT TO AIR)

DROP — DUCT INCLINED DROP (RESPECT TO AIR)

BREAK IN RECTANGULAR DUCT

BREAK IN ROUND DUCT

MOD — MOTORIZED CONTROL DAMPER

BALANCING DAMPER

FD — HORIZONTAL FIRE DAMPER

FD — VERTICAL FIRE DAMPER

ROUND DUCT DOWN

ROUND DUCT UP

SUPPLY DIFFUSER

EXHAUST/RETURN REGISTER OR GRILLE

45° BOOT CONNECTION

FLEXIBLE CONNECTION/FLEXIBLE DUCTWORK

ROUND TO RECTANGULAR TRANSITION

90° ELBOW WITH TURNING VANES

90° RADIUS ELBOW (NO VANES)

45° ELBOW (NO VANES)

SIDE WALL DIFFUSER, REGISTER OR GRILLE

20° MAX — TRANSITION (DIVERGING FLOW)

30° MAX — TRANSITION (CONVERGING FLOW)

SD — DUCT MOUNTED SMOKE DETECTOR

LOWER DUCT

LINED DUCTWORK

NEW OR REMOVAL WORK (REFER TO PLAN)

EXISTING

PRESSURE REDUCING VALVE

VALVE ON RISE

APPROVED GAS VALVE

VALVE ON RISE

THREE-WAY CONTROL VALVE

TWO-WAY CONTROL VALVE

RELIEF OR SAFETY VALVE

ANGLE GATE VALVE

GATE VALVE

GLOBE VALVE

CHECK VALVE

BALANCING/ISOLATION VALVE

BALL VALVE

BUTTERFLY VALVE

UNION

STRAINER

STRAINER W/ BLOW-DOWN VALVE

BACK FLOW PREVENTER

THERMOMETER

PRESSURE GAUGE W/ COCK

AIR VENT W/ COCK

PIPE TURNING DOWN

PIPE TURNING UP

TEE UP

TEE DOWN

DROP AND RUN

DROP AND TURN

TEE OFF TOP

HWS — HOT WATER SUPPLY

HWR — HOT WATER RETURN

FLOW - IN DIRECTION OF ARROW

FLEXIBLE CONNECTION

PIPE GUIDE

PIPE ANCHOR

ATV — ATMOSPHERIC VENT

D — DRAIN

T — THERMOSTAT

PT — DIFFERENTIAL PRESSURE TRANSMITTER

H — HUMIDISTAT

CO — CARBON MONOXIDE SENSOR

CO2 — CARBON DIOXIDE SENSOR

TS — TEMPERATURE SENSOR

HS — HUMIDITY SENSOR

OS — OCCUPANCY SENSOR

SD — DUCT MOUNTED SMOKE DETECTOR

DP — DIFFERENTIAL PRESSURE SENSOR

FS — FLOW SENSOR

FM — FLOW METER

D — FLOOR DRAIN

L — LINED DUCTWORK

DC — DOOR CONTACT

CLEARANCE AREA

CCC — COOLING COIL CONDENSATE

XXX / YY — EQUIPMENT ABBREVIATION / TAG NUMBER

DIFFUSER TYPE (SEE SCHEDULE) — 6x6 / 100 — AIR DEVICE SIZE / AIRFLOW CFM — AIR DEVICE NOTE

NEW WORK NOTE DESIGNATION

REMOVAL WORK NOTE DESIGNATION

CONNECT TO EXISTING

EXTENT OF REMOVAL

NUMBER / SHEET NUMBER — X / X-X — PLAN, SECTION, OR DETAIL
SCALE: 1/4" = 1'-0"

NUMBER / SHEET NUMBER — DWG# / SHEET# — SECTION OR DETAIL

NUMBER / SHEET NUMBER — DWG# / SHEET# — ELEVATION

N — NORTH ARROW

HVAC GENERAL NOTES:

1. GENERAL NOTES APPLY TO ALL HEATING, VENTILATING AND AIR-CONDITIONING (HVAC) DRAWINGS.
2. COORDINATE THE ROOF SUPPORT SYSTEM, STRUCTURAL STEEL, CROSS BRACING, PENETRATIONS, BUILDING ACCESS, BUILDING EQUIPMENT REINFORCEMENT/SUPPORTS, ETC. TO FACILITATE THE INSTALLATION OF HVAC EQUIPMENT AND ROUTING/LOCATION OF DUCTWORK, PIPING, HV'S, AND THE LIKE.
3. COORDINATE AND FIELD VERIFY ALL DIMENSIONS, SIZES, CLEARANCES AND LOCATION PRIOR TO THE START OF CONSTRUCTION. WHEN CONFLICTS ARISE, MAKE ANY NECESSARY CHANGES TO ROUTING OF PIPING AND/OR DUCTWORK WITHOUT COMPROMISING THE INTEGRITY AND PERFORMANCE OF THE SYSTEM, AND AT NO ADDITIONAL COST TO THE SCHOOL DISTRICT.
4. PROVIDE FIRE DAMPERS, SMOKE DAMPERS, AND ALL ASSOCIATED LIFE SAFETY DEVICES FOR ALL DUCTWORK/PIPING PENETRATIONS THRU RATED ASSEMBLIES. REFER TO HVAC AND ARCHITECTURAL DRAWINGS FOR REQUIRED RATINGS AND LOCATIONS.
5. HVAC PIPING AND DUCTWORK AND PIPING LAYOUTS ARE SCHEMATIC IN NATURE, PROVIDE OFFSETS AND FITTINGS AS REQUIRED TO ACCOMMODATE FIELD CONDITIONS AND ALL TRADE WORK BY OTHERS.
6. GENERAL LOCATION OF DIFFUSERS AND REGISTERS AS SHOWN ON HVAC DRAWINGS ARE SCHEMATIC IN NATURE, REFER TO ARCHITECTURAL REFLECTED CEILING PLAN FOR EXACT LOCATIONS.
7. FLEXIBLE DUCTWORK SHALL NOT EXCEED 7'-0" IN LENGTH, OR BE INSTALLED WITH BEND RADIUS GREATER THAN 1 TIMES THE DIAMETER AND 90°.
8. COORDINATE CONSTRUCTION OF ALL HVAC WORK WITH ARCHITECTURAL, STRUCTURAL, ELECTRICAL, PLUMBING, ETC. SHOWN ON OTHER CONTRACT DOCUMENT DRAWINGS.
9. ALL PIPING AND CONTROL WIRING TO BE CONCEALED IN WALLS, CEILINGS AND CHASES.
10. COORDINATE THE LOADING REQUIREMENTS FOR THE SUPPORT OF ALL HVAC SYSTEMS INCLUDING, BUT NOT LIMITED TO ROOFTOP UNITS, PIPING AND DUCTWORK.
11. PROVIDE HANGERS AND SUPPORTS PER THE SPECIFICATIONS FOR ALL PIPING, DUCTWORK AND HVAC EQUIPMENT TO FACILITATE INSTALLATION OF THE WORK.
12. PROVIDE VIBRATION ISOLATION DEVICES FOR ALL HVAC EQUIPMENT AND SYSTEMS. REFER TO DETAIL SHEET FOR TYPICAL CONSTRUCTION.
13. ALL MATERIALS EXPOSED WITHIN RETURN AIR PLENUMS SHALL BE RATED FOR USE IN PLENUMS. PROVIDE MATERIALS THAT ARE NON COMBUSTIBLE OR HAVE A FLAME SPREAD INDEX OF NOT MORE THAN 25 AND A SMOKE DEVELOPED INDEX OF NOT MORE THAN 50 WHEN TESTED IN ACCORDANCE WITH ASTM E-84.
14. SCHEDULE AND OBTAIN APPROVAL FOR ALL SYSTEM SHUTDOWNS WITH OWNER PRIOR TO COMMENCING WITH REMOVAL AND NEW WORK.
15. PERFORM ALL CUTTING AND PATCHING NECESSARY TO PERFORM WORK. MATCH MATERIALS, FINISHES, FIRE RATINGS, PAINT COLORS, ETC. IN ALL AREAS OF PATCHING.
16. NOTE THAT THE IDENTIFICATION LABELS TO BE USED/MADE FOR ALL SYSTEMS MUST USE THE OWNER'S ROOM NUMBERS AND ROOM NAMES, NOT THE NUMBERS OR NAMES ON THE CONSTRUCTION DOCUMENTS. MEET WITH OWNER TO REVIEW AND CONFIRM ROOM NUMBERS AND NAMES PRIOR TO LABELING SYSTEMS.
17. THOROUGHLY COORDINATE ALL CONSTRUCTION, PRIOR TO COMMENCEMENT OF INSTALLATION OF HVAC SYSTEMS.
18. COORDINATE REQUIREMENTS FOR LOSS OF PHASE PROTECTION ON ALL THREE PHASE MOTORS SERVING EQUIPMENT ON THIS CONTRACT.
19. ALL EQUIPMENT AND/OR MATERIAL BEING REMOVED DURING REMOVAL SHALL BE THE RESPONSIBILITY OF THE HVAC CONTRACTOR AND SHALL BE RETAINED OR DISPOSED OF AND REMOVED FROM THE SITE AT THE DIRECTION OF THE OWNER.
20. ASPECT RATIO OF DUCTWORK SIZING CAN BE CHANGED TO SUIT FIELD CONDITIONS AT THE APPROVAL OF THE OWNER'S REPRESENTATIVE.
21. PROVIDE FLEXIBLE CONNECTIONS AT ALL DUCTWORK TO EQUIPMENT CONNECTIONS.
22. PROVIDE TURNING VANES IN ALL DUCT ELBOWS.
23. PROVIDE VOLUME DAMPERS AT BOOT CONNECTIONS AND BRANCHES OF MAINS FOR ALL SUPPLY, RETURN, AND EXHAUST AIR SYSTEMS.
24. DUCTWORK DIMENSIONS INDICATE INTERNAL CLEAR DIMENSIONS.
25. EQUIPMENT INSULATION SHALL BE INSTALLED AS NOT TO CONCEAL THE EQUIPMENT NAME PLATE.
26. ENSURE ALL WORK IS IN CONFORMANCE WITH ALL APPLICABLE BUILDING CODES. WORK SHALL BE COMPLETED IN STRICT ACCORDANCE WITH THE LATEST EDITIONS OF THE APPLICABLE CONSTRUCTION CODE, AND ALL OTHER FEDERAL, STATE AND LOCAL AGENCY REGULATIONS HAVING JURISDICTION OVER THIS PROJECT. IN THE EVENT OF ANY DISCREPANCIES BETWEEN AGENCY REQUIREMENTS, OBSERVE THE MORE STRINGENT OF REQUIREMENTS.
27. ALL WORK SHALL COMPLY WITH THE STANDARDS OF THE NATIONAL BOARD OF FIRE UNDERWRITERS (NBFU), INDUSTRIAL RISK INSURANCE UNDERWRITERS (IRI), FACTORY MUTUAL (FW), OR THE APPLICABLE RATING BUREAU, THE NATIONAL ELECTRIC CODE (NEC), THE AMERICAN GAS ASSOCIATION (AGA), AND THE AMERICAN SOCIETY OF HEATING AND AIR CONDITIONING ENGINEERS (ASHRAE), OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA), AND ALL OTHER APPLICABLE FEDERAL, STATE AND LOCAL BUILDING CODES AND THE REQUIREMENTS OF ALL PUBLIC UTILITY COMPANIES SERVING THE PROJECT SITE.
28. COORDINATE LOCATION AND SIZE OF ALL WALL PENETRATIONS WITH STRUCTURAL FOR FRAMING AND ADDITIONAL SUPPORTS REQUIRED PRIOR TO BEGINNING WORK.
29. INSTALL ALL EQUIPMENT TO MAINTAIN ADEQUATE CLEARANCES PER MANUFACTURER'S REQUIREMENTS. PROVIDE OFFSETS AS NECESSARY TO FACILITATE.

HVAC ABBREVIATIONS:

ABS	ABSOLUTE
AD	ACCESS DOOR
AF	AIR FILTER
AFD	ADJUSTABLE FREQUENCY DRIVE
AFF	ABOVE FINISHED FLOOR
AFMS	AIR FLOW MONITORING STATION
AHU	AIR HANDLING UNIT
AMB	AMBIENT
AP	ACCESS PANEL
APD	AIR PRESSURE DROP
ARCH	ARCHITECT OR ARCHITECTURAL
ATC	AUTOMATIC TEMPERATURE CONTROL
ATM	ATMOSPHERIC
ATV	ATMOSPHERIC VENT
AUTO	AUTOMATIC
A/C	AIR CONDITION (ER) (ING)
B	BOILER
BBD	BOILER BLOW DOWN
BC	BOTTOM CONNECTION
BDD	BACK DRAFT DAMPER
BFW	BOILER FEED WATER
BFP	BACK FLOW PREVENTER
BHP	BRAKE HORSEPOWER
BOD	BOTTOM OF DUCT
BTU	BRITISH THERMAL UNIT
C	CONDENSER
CA	COMPRESSED AIR
CAB	CABINET
CC	COOLING COIL
CCC	COOLING COIL CONDENSATE
CD	CEILING DIFFUSER
CFM	CUBIC FEET PER MINUTE
CI	CAST IRON
CO	CLEANOUT
COND	CONDENSATE
CONN	CONNECTION
COP	COEFFICIENT OF PERFORMANCE
CU	CONDENSING UNIT
CUH	CABINET UNIT HEATER
CV	CONSTANT VOLUME
CW	COLD WATER (DOMESTIC)
D	DRAIN
DB	DECIBEL
D.b.	DRY BULB
DC	DUCT COIL
DD	DUAL DUCT
DEG	DEGREE
DIA	DIAMETER
DIV	DIVISION
DN	DOWN
DP	DIFFERENTIAL PRESSURE SENSOR
DPR	DAMPER
DPT	DEW POINT TEMPERATURE
DTL	DETAIL
DTR	DUAL TEMPERATURE RETURN
DTS	DUAL TEMPERATURE SUPPLY
DWG.	DRAWING
DX	DIRECT EXPANSION
(E)	EXISTING
EAT	ENTERING AIR TEMPERATURE
E.C.	ELECTRICAL CONTRACTOR
EDH	ELECTRIC DUCT HEATER
EER	ENERGY EFFICIENCY RATIO
EF	EXHAUST FAN
EFF	EFFICIENCY
ENT	ENTERING
ER	EXHAUST REGISTER
ESP	EXTERNAL STATIC PRESSURE
ET	EXPANSION TANK
EWT	ENTERING WATER TEMPERATURE
F	FAN
F&T	FLOAT & THERMOSTATIC
FC	FAN COIL
FD	FIRE DAMPER
FLA	FULL LOAD AMPS
FPM	FEET PER MINUTE
FTR	FINNED TUBE RADIATION
FPS	FEET PER SECOND
FT	FEET
F&BP	FACE & BY-PASS
GAL	GALLONS
G.C.	GENERAL CONTRACTOR
GPM	GALLONS PER MINUTE
GRV	GRAVITY ROOF VENTILATOR
GVR	GAS VENT RELIEF
H	HOOD
HC	HEATING COIL
H.C.	HVAC CONTRACTOR
HD	HEAD
HP	HORSEPOWER
HPC	HIGH PRESSURE CONDENSATE
HPS	HIGH PRESSURE STEAM
HRU	HEAT RECOVERY UNIT
HT	HEIGHT
HTG	HEATING
HUMID	HUMIDIFIER
HW	HOT WATER
HWC	HOT WATER COIL
HWR	HOT WATER RETURN
HWS	HOT WATER SUPPLY
HX	HEAT EXCHANGER
HZ	HERTZ
ID	INSIDE DIAMETER
IN	INCHES
INTL	INTERLOCK
KW	KILOWATT
L	LENGTH
LAT	LEAVING AIR TEMPERATURE
LBS	POUNDS
LH	LATENT HEAT
LIQ	LIQUID
LPC	LOW PRESSURE CONDENSATE
LPS	LOW PRESSURE STEAM
LVG	LEAVING
LWT	LEAVING WATER TEMPERATURE
MAX	MAXIMUM
MB	MIXING BOX
MBH	THOUSANDS BTU/HR
MCA	MINIMUM CIRCUIT AMPACITY
MD	MODULATING
MIN	MINIMUM
MOD	MOTOR OPERATED DAMPER
MOP	MAXIMUM OVER CURRENT PROTECTION
MPC	MEDIUM PRESSURE CONDENSATE
MPS	MEDIUM PRESSURE STEAM
MU	MAKE-UP WATER
MWT	MEAN WATER TEMPERATURE
M/A	MAKE-UP AIR
N/A	NOT APPLICABLE
NC	NOISE CRITERIA
NEC	NATIONAL ELECTRICAL CODE
NFPA	NATIONAL FIRE PROTECTION ASSOCIATION
N.I.C.	NOT IN CONTRACT
NTS	NOT TO SCALE
N/C	NORMALLY CLOSED
N/O	NORMALLY OPEN
OBD	OPPOSED BLADE DAMPER
OED	OPEN ENDED DUCT
OD	OUTSIDE DIAMETER
O/A	OUTSIDE AIR
P	PUMP
PBD	PARALLEL BLADE DAMPER
P.C.	PLUMBING CONTRACTOR
PD	PRESSURE DROP
PNEU	PNEUMATIC
PNL	PANEL
POS	POSITION
PRESS	PRESSURE
PRV	PRESSURE RELIEF VALVE
PSI	POUNDS PER SQUARE INCH
PSIA	POUNDS PER SQUARE INCH ABSOLUTE
(R)	REMOVE
RAF	RETURN AIR FAN
RBF	RUN BELOW FLOOR
RD	ROOF DRAIN
RF	RELIEF AIR FAN
RH	RELATIVE HUMIDITY
RL	REFRIGERANT LIQUID
RLA	RATED LOAD AMPS
RPM	REVOLUTIONS PER MINUTE
RRP	REFRIGERANT RELIEF PIPING
RS	REFRIGERANT SUCTION
RTU	ROOF TOP UNIT
R/A	RETURN AIR
SAN	SANITARY
SD	SMOKE DETECTOR
SENS	SENSIBLE
SF	SUPPLY AIR FAN
SH	SENSIBLE HEAT
SL	SOUND LINING
SP	STATIC PRESSURE
SPEC	SPECIFICATION
SS	STAINLESS STEEL
STD	STANDARD
STM	STEAM
SYS	SYSTEM
S/A	SUPPLY AIR
TEMP	TEMPERATURE
TOS	TOP OF STEEL
TSP	TOTAL STATIC PRESSURE
T STAT	THERMOSTAT
TYP.	TYPICAL
UCD	UNDER CUT DOOR
UH	UNIT HEATER
UL	UNDERWRITERS LABORATORIES
U.N.O	UNLESS NOTED OTHERWISE
UV	UNIT VENTILATORS
V	VALVE
VAC	VACUUM
VAV	VARIABLE AIR VOLUME
VD	VOLUME DAMPER
VEL	VELOCITY
VOL	VOLUME
W	WIDTH
WAC	WINDOW AIR CONDITIONER
W.b.	WET BULB
WC	WATER COLUMN
WG	WATER GAUGE
WPD	WATER PRESSURE DROP
WT	WEIGHT
W/	WITH
W/O	WITHOUT

REFERENCE DIMENSION

0 — 1

INDICATED DIMENSION IS MEASURED AT ONE (1) INCH IN LENGTH AND PROVIDED FOR REFERENCE/VERIFICATION ONLY.

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Project Name
NEW DISTRICT MAINTENANCE & OPERATIONS BUILDING

Project Owner Name
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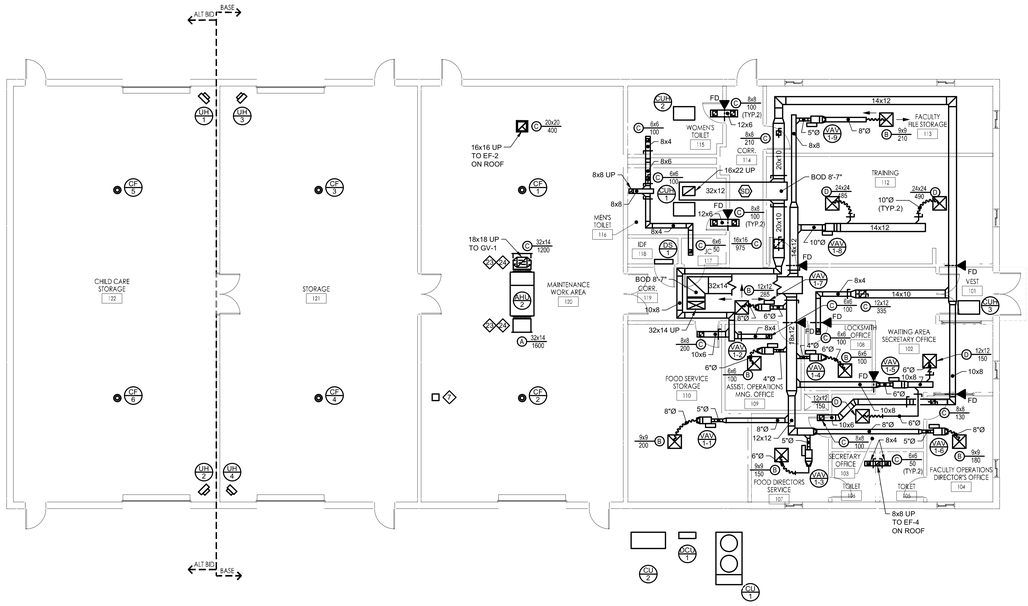
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HVAC GENERAL NOTES, LEGEND, & ABBREVIATIONS

Revisions

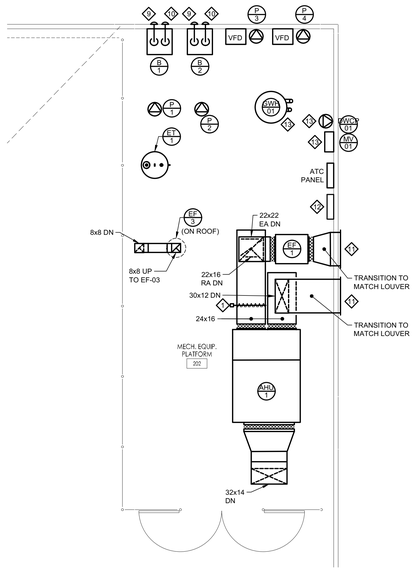
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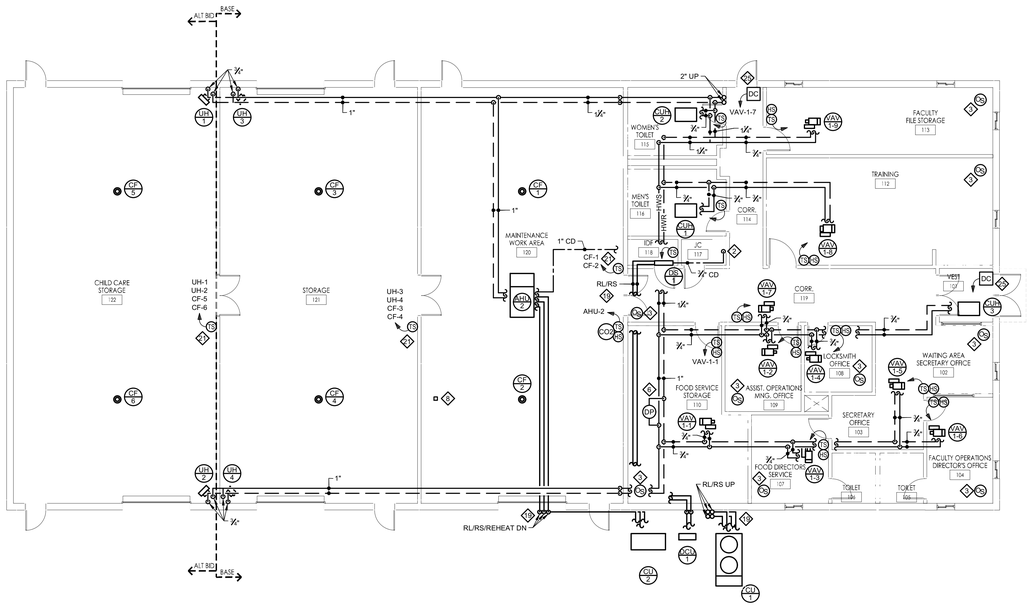
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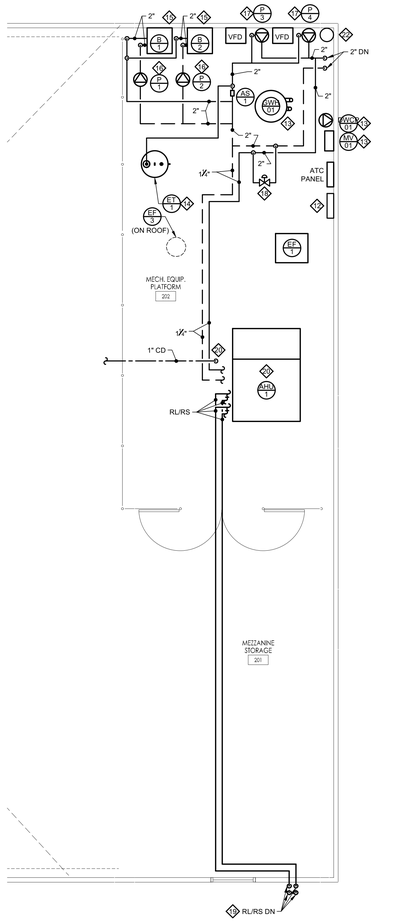
1 H101 FIRST FLOOR PLAN - HVAC NEW WORK - DUCTWORK
SCALE: 1/8" = 1'-0"



2 H101 MEZZANINE PLAN - HVAC NEW WORK - DUCTWORK
SCALE: 1/4" = 1'-0"



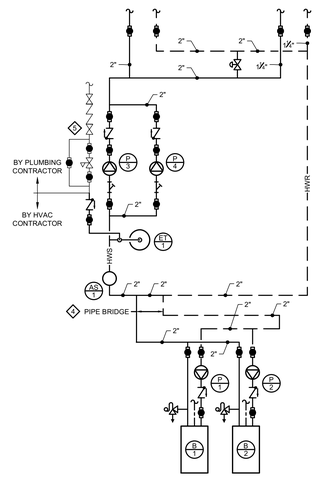
3 H101 FIRST FLOOR PLAN - HVAC NEW WORK - PIPING
SCALE: 1/8" = 1'-0"



4 H101 MEZZANINE PLAN - HVAC NEW WORK - PIPING
SCALE: 1/4" = 1'-0"

NEW WORK NOTES:

1. PROVIDE BACKDRAFT DAMPER PER THE SPECIFICATIONS.
2. TERMINATE COOLING COIL CONDENSATE PIPING AT THE MOP RECEPTOR WITH AN AIR GAP.
3. NEW OCCUPANCY SENSOR PROVIDED BY THE ELECTRICAL CONTRACTOR WITH A DRY CONTACT AND RELAY FOR ATC CONNECTION. REFER TO THE ELECTRICAL DRAWINGS.
4. PIPING BRIDGE FOR PRIMARY/SECONDARY PIPING INTERFACE. INSTALL PER THE BOILER MANUFACTURER'S RECOMMENDATIONS.
5. CONNECT THE COLD-WATER MAKEUP PER THE FLOOR EXPANSION TANK PIPING DETAIL. REFER TO DETAIL FROM PLUMBING/HVAC CONTRACTOR SCOPE REQUIREMENTS.
6. PROVIDE DIFFERENTIAL PRESSURE TRANSMITTER. COORDINATE LOCATION TO BE FULLY ACCESSIBLE. REFER TO DIFFERENTIAL PRESSURE TRANSMITTER DETAIL.
7. PROVIDE NEW DUCT CURB SUITABLE FOR A FOR 12x12 FUTURE DUCT PENETRATION & CAP WITH AN INSULATED CAP. REFER TO THE DUCT CURB ASSEMBLY & FLASHING DETAIL AND CURB CAPPING DETAIL.
8. PROVIDE NEW PIPE CURB SUITABLE FOR A FOR FUTURE PIPE PENETRATION & CAP. COORDINATE QUANTITIES OF OPENINGS WITH THE OWNER. REFER TO THE PIPE CURB ASSEMBLY & FLASHING DETAIL.
9. PROVIDE COMBUSTION AIR INTAKE FROM NEW BOILER TO THE WALL PENETRATION AS INDICATED. TERMINATE WITH WALL CAP. REFER TO SPECIFICATIONS. PRIOR TO PERFORMING WORK, COORDINATE LOCATION WITH STRUCTURAL SUPPORTS AND ALL ADJACENT NEW TRADE SYSTEMS. PROVIDE ALL NECESSARY OFFSETS AND FITTINGS TO FACILITATE COMPLETE CONNECTION TO BOILER. SIZE COMBUSTION AIR INTAKE PER BOILER MANUFACTURER'S RECOMMENDATIONS. INSULATE PER THE SPECIFICATIONS. REFER TO THE BOILER COMBUSTION AIR INTAKE DETAIL.
10. PROVIDE NEW BOILER EXHAUST VENT FROM NEW BOILER TO THE WALL PENETRATION AS INDICATED. TERMINATE WITH WALL CAP. PRIOR TO PERFORMING WORK, COORDINATE LOCATION WITH STRUCTURAL SUPPORTS AND ALL ADJACENT NEW TRADE SYSTEMS. PROVIDE ALL NECESSARY OFFSETS AND FITTINGS TO FACILITATE COMPLETE CONNECTION TO BOILER. SIZE EXHAUST VENT PER BOILER MANUFACTURER'S RECOMMENDATIONS. REFER TO THE BOILER STACK DETAIL.
11. NEW LOUVER. REFER TO ARCHITECTURAL DOCUMENTS FOR ADDITIONAL INFORMATION.
12. ELECTRICAL EQUIPMENT. REFER TO ELECTRICAL DOCUMENTS FOR ADDITIONAL INFORMATION.
13. PLUMBING EQUIPMENT. REFER TO PLUMBING DOCUMENTS FOR ADDITIONAL INFORMATION.
14. PROVIDE NEW FLOOR MOUNTED EXPANSION TANK AND NEW HOUSEKEEPING PAD. INSTALL EXPANSION TANK ON HOUSEKEEPING PAD. REFER TO THE FLOOR EXPANSION TANK PIPING AND TYPICAL EQUIPMENT BASE ON FLOOR DETAILS.
15. PROVIDE NEW BOILER. BOILER CONDENSATE NEUTRALIZATION KIT. INSTALL PIPING TO NEAREST FLOOR DRAIN. PROVIDE EQUIPMENT SUPPORT STEEL FOR CROSSBRACING AND SUPPORT FOR THE BOILER INSTALLATION. REFER TO THE HEATING WATER BOILER PIPING AND BOILER CONDENSATE NEUTRALIZATION DETAILS.
16. PROVIDE HORIZONTAL MOUNTED, IN-LINE PUMP, AND ALL APPURTENANCES. REFER TO THE TYPICAL IN-LINE PUMP PIPING HORIZONTAL DETAIL.
17. PROVIDE VERTICAL MOUNTED, IN-LINE PUMP, AND ALL APPURTENANCES TO MOUNT THE PUMP ON THE WALL. REFER TO THE TYPICAL IN-LINE PUMP PIPING VERTICAL DETAIL.
18. PROVIDE NEW BYPASS, SIZE AS INDICATED. COORDINATE WITH MEZZANINE SERVICES. PROVIDE BYPASS PIPING AND MODULATING 2-WAY CONTROL VALVE SIZED FOR MINIMUM FLOW REQUIREMENTS. COORDINATE REQUIREMENTS WITH SECONDARY PUMPS.
19. PROVIDE NEW REFRIGERANT PIPING TO CORRESPONDING CONDENSING UNIT. REFRIGERANT PIPE SIZE PER MANUFACTURER'S INSTALLATION INSTRUCTIONS. COORDINATE WALL PENETRATION AND SEAL PIPING PER THE PIPE THRU EXTERIOR WALL DETAIL.
20. EXTEND CONDENSATE PIPING DOWN TO FLOOR DRAIN. REFER TO PLUMBING DOCUMENTS FOR FLOOR DRAIN LOCATIONS.
21. PROVIDE (1) TEMPERATURE SENSOR NOT LESS THAN 6-INCHES UNDER FAN NOZZLE ELEVATION AND (1) TEMPERATURE SENSOR INSTALLED AT HEIGHT INDICATED BY THE SPECIFICATIONS. COORDINATE FAN MINIMUM SPEED WITH FAN MANUFACTURER.
22. PROVIDE CHEMICAL BYPASS FEEDER, MODEL DBF AS MANUFACTURED BY 'NEPTUNE'. REFER TO SPECIFICATIONS FOR ADDITIONAL INFORMATION. SEE BYPASS FEEDER DETAIL.
23. PROVIDE DUCT LINER FOR ALL EXPOSED DUCTWORK PER THE SPECIFICATIONS.
24. PAINT DUCTWORK PER THE SPECIFICATIONS.
25. COORDINATE DOOR CONTACT REQUIREMENTS WITH THE DOOR HARDWARE.



5 H101 HEATING HYDRONIC PIPING SCHEMATIC
NO SCALE

REFERENCE DIMENSION
0 1
INDICATED DIMENSION IS MEASURED AT ONE (1) INCH IN LENGTH AND PROVIDED FOR REFERENCE/VERIFICATION ONLY.

06/19/2020
ISSUED FOR BID

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G&H Project No. 2019-187

ENGINEER: MICHAEL S. GILLAN, PE
DATE: NO. PE051587E

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6/19/20 Date
Architect

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Corporate: 1515 Lower Ferry Road - Trenton - New Jersey 08628
Pennsylvania: 140 Whitaker Ave - Mont Clare - Pennsylvania 19453
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Project Name
NEW DISTRICT MAINTENANCE & OPERATIONS BUILDING

Project Owner Name
GALLOWAY TOWNSHIP PUBLIC SCHOOLS

Project Location
REEDS ROAD
GALLOWAY TOWNSHIP NJ

Project Number: 5195
Project Date: 6.19.2020
Checked By: TJB
Drawn By: DTS
Scale: AS NOTED

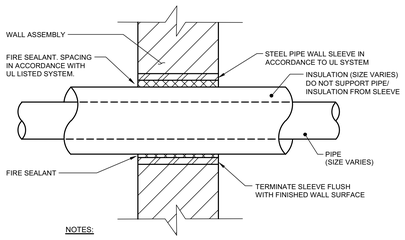
Drawing Name
HVAC FLOOR PLAN NEW WORK

Revisions

No.	Date	Description

Drawing Number
H101

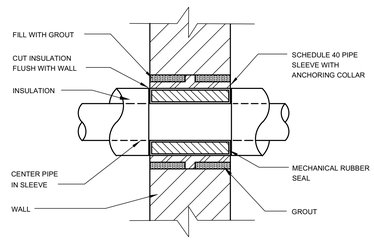
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LAST SAVED: 2020.06.12 08:21 AM
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PLOTTED: 2020.06.12 09:23 AM



NOTES:

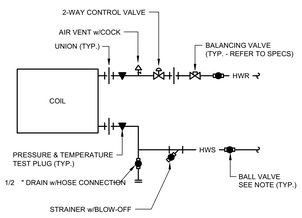
1. PROVIDE UL LISTED FIRE RATED THRU WALL SYSTEM IN ACCORDANCE WITH WALL TYPE, AND SCHEDULED PIPING AND INSULATION.
2. ALL PENETRATIONS INTERIOR TO BUILDING TO BE PROVIDED BY ASSOCIATED TRADE CONTRACTOR.
3. FOR NON-FIRE RATED WALL ASSEMBLIES: UTILIZE STANDARD CAULK IN LIEU OF FIRE CAULK.

1 H501 DETAIL - TYPICAL PIPE THRU WALL
NO SCALE



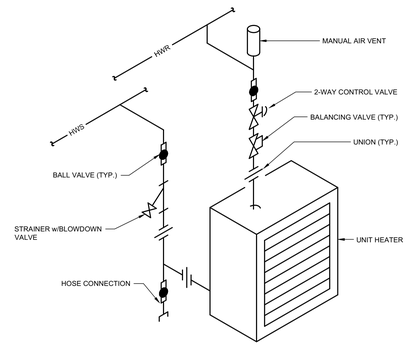
NOTE: ALL PENETRATIONS INTERIOR TO BUILDING TO BE PROVIDED BY ASSOCIATED TRADE CONTRACTOR.

2 H501 DETAIL - PIPE THRU EXTERIOR WALL
NO SCALE

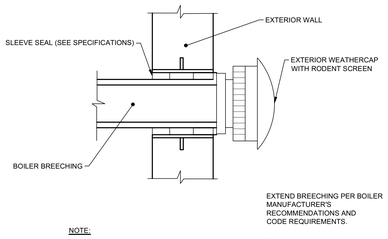


NOTE:
PROVIDE BUTTERFLY VALVE FOR PIPING 2 " OR LARGER.

3 H501 DETAIL - 2-WAY CONTROL VALVE COIL PIPING
NO SCALE

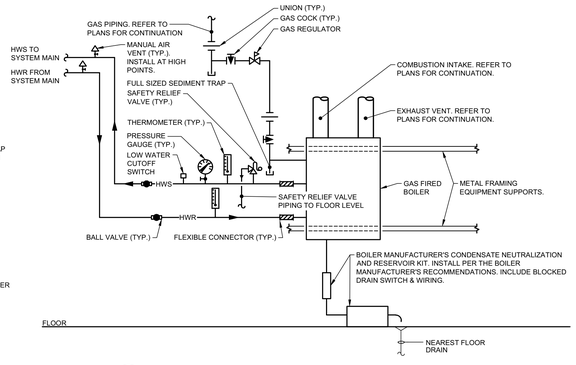


4 H501 DETAIL - UNIT HEATER PIPING
NO SCALE

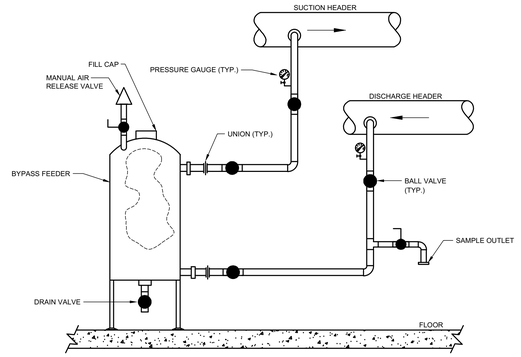


NOTE:
1. COORDINATE BREECHING TERMINATION WITH THE BOILER MANUFACTURER'S RECOMMENDATIONS.

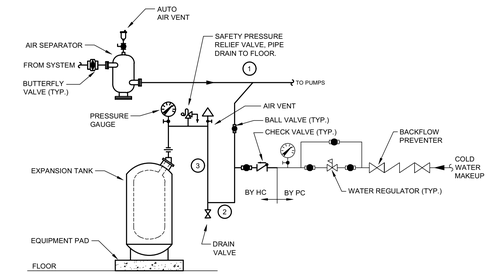
5 H501 DETAIL - BOILER VENT TERMINATION
NO SCALE



6 H501 DETAIL - HEATING WATER BOILER PIPING
NO SCALE

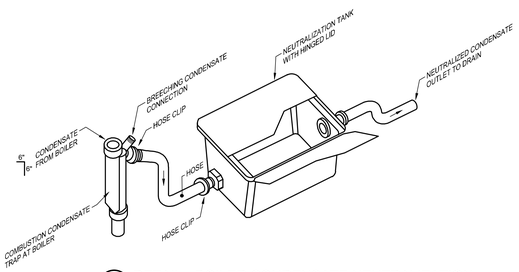


7 H501 DETAIL - BYPASS FEEDER
NO SCALE

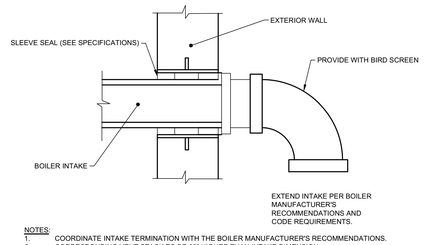


1. CONNECT TO SIDE OF MAIN. AVOID TOP OR BOTTOM CONNECTION TO PREVENT AIR OR DEBRIS FROM ENTERING PIPE TO TANK.
2. PROVIDE PIPE SIZING IN ACCORDANCE TO MANUFACTURER'S PUBLISHED LITERATURE AND RECOMMENDATIONS.
3. PROVIDE ANTI-THERMOSYPHON LOOP TO PREVENT GRAVITY HEATING OF TANK. 12" MIN DROP.
4. PROVIDE PIPE SIZE PER MANUFACTURER'S RECOMMENDATIONS AND PUBLISHED LITERATURE.

8 H501 DETAIL - FLOOR EXPANSION TANK PIPING
NO SCALE

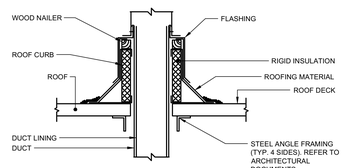


9 H501 DETAIL - BOILER CONDENSATE NEUTRALIZATION
NO SCALE



NOTES:
1. COORDINATE INTAKE TERMINATION WITH THE BOILER MANUFACTURER'S RECOMMENDATIONS.
2. CORRESPONDING VENT STACK TO BE 36" HIGHER THAN INTAKE DIMENSION.
3. REFER TO ARCHITECTURAL DOCUMENTS FOR ROOF DETAILS.

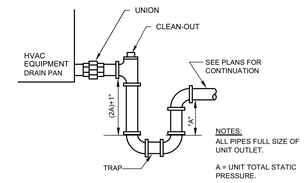
10 H501 DETAIL - BOILER COMBUSTION AIR INTAKE
NO SCALE



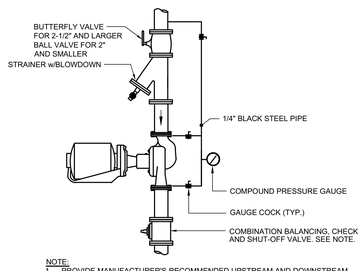
NOTES:

1. REFER TO ARCHITECTURAL DOCUMENTS FOR ROOF DETAILS.
2. PROVIDE ROOF CURB AND COUNTER FLASHING. PROVIDE ALL NECESSARY WOOD BLOCKING FOR INSTALLATION AND COORDINATION WITH BUILDING STRUCTURE. PROVIDE BASE FLASHING AND MAKE FINAL CONNECTIONS INTO ROOF ASSEMBLY FOR A COMPLETE WEATHER TIGHT SEAL.

11 H501 DETAIL - DUCT CURB ASSEMBLY & FLASHING
NO SCALE

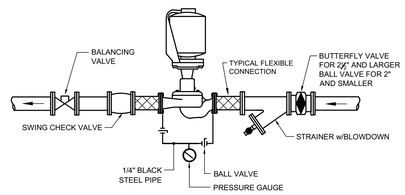


12 H501 DETAIL - CONDENSATE TRAP
NO SCALE

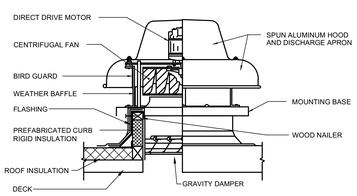


NOTE:
1. PROVIDE MANUFACTURER'S RECOMMENDED UPSTREAM AND DOWNSTREAM CLEARANCES.
2. PROVIDE STRAINER RATED FOR VERTICAL APPLICATION.

13 H501 DETAIL - TYPICAL IN-LINE PUMP PIPING - VERTICAL
NO SCALE

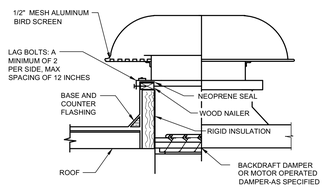


14 H501 DETAIL - TYPICAL IN-LINE PUMP PIPING - HORIZONTAL
NO SCALE



NOTE:
1. REFER TO ARCHITECTURAL DOCUMENTS FOR ROOF DETAILS.
2. PROVIDE ROOF CURB AND COUNTER FLASHING. PROVIDE ALL NECESSARY WOOD BLOCKING FOR INSTALLATION AND COORDINATION WITH BUILDING STRUCTURE. PROVIDE BASE FLASHING AND MAKE FINAL CONNECTIONS INTO ROOF ASSEMBLY FOR A COMPLETE WEATHER TIGHT SEAL.

15 H501 DETAIL - NEW EXHAUST FAN & CURB
NO SCALE



NOTES:

1. REFER TO ARCHITECTURAL DOCUMENTS FOR ROOF DETAILS.
2. PROVIDE ROOF CURB AND COUNTER FLASHING. PROVIDE ALL NECESSARY WOOD BLOCKING FOR INSTALLATION AND COORDINATION WITH BUILDING STRUCTURE. PROVIDE BASE FLASHING AND MAKE FINAL CONNECTIONS INTO ROOF ASSEMBLY FOR A COMPLETE WEATHER TIGHT SEAL.

16 H501 DETAIL - GRAVITY ROOF VENTILATOR
NO SCALE

REFERENCE DIMENSION
0 1
INDICATED DIMENSION IS MEASURED AT ONE (1) INCH IN LENGTH AND PROVIDED FOR REFERENCE/VERIFICATION ONLY.

06/19/2020
ISSUED FOR BID

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G&H Project No. 2019-187

ENGINEER
MICHAEL S. GILLAN, PE
DATE
NO. PE051587E

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GEORGE R. DUTHIE JR., AIA, PP
NJ - 21A01299300
6/19/20
Date
Architect

FVHD architects planners
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Corporate: 1515 Lower Ferry Road - Trenton - New Jersey 08628
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FVHDPC.COM

Project Name
NEW DISTRICT MAINTENANCE & OPERATIONS BUILDING

Project Owner Name
GALLOWAY TOWNSHIP PUBLIC SCHOOLS

Project Location
REEDS ROAD
GALLOWAY TOWNSHIP NJ

Project Number
5195
Project Date
6.19.2020
Checked By
TJB
Drawn By
DTS
Scale
AS NOTED

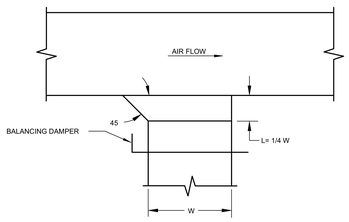
Drawing Name
HVAC DETAILS

Revisions

No.	Date	Description

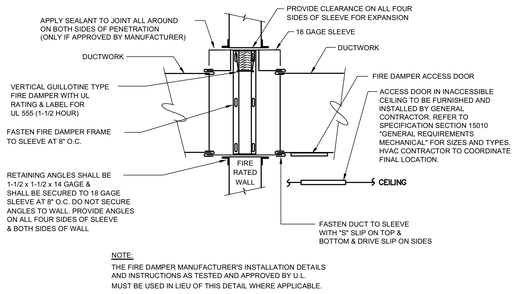
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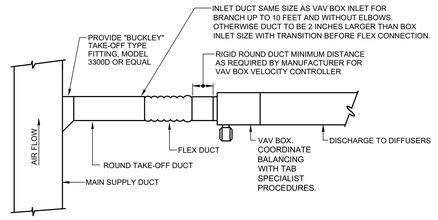
NOTE:
TAKE-OFF TYPICAL FOR ALL DROPS & BRANCHES

1 H502 DETAIL - TYPICAL TAKE OFF
NO SCALE

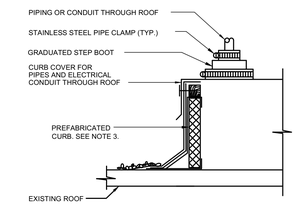


NOTE:
THE FIRE DAMPER MANUFACTURER'S INSTALLATION DETAILS AND INSTRUCTIONS AS TESTED AND APPROVED BY U.L. MUST BE USED IN LIEU OF THIS DETAIL WHERE APPLICABLE.

2 H502 DETAIL - VERTICAL FIRE DAMPER
NO SCALE

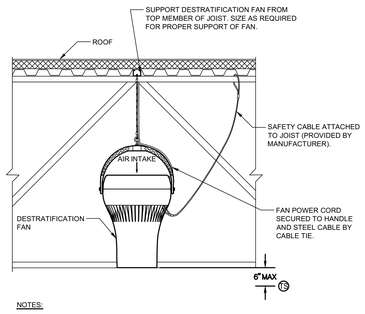


3 H502 DETAIL - VAV BOX DUCT CONNECTION
NO SCALE



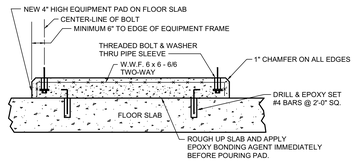
NOTES:
1. PROVIDE CURB IN ACCORDANCE TO ROOF SYSTEM.
2. PROVIDE INSULATED ROOF CURB.
3. REFER TO ARCHITECTURAL DRAWINGS FOR ROOF DETAILS.

4 H502 DETAIL - PIPE CURB ASSEMBLY & FLASHING
NO SCALE

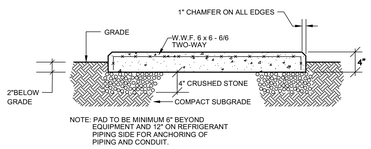


NOTES:
1. INSTALL FAN AS CLOSE AS POSSIBLE TO ROOF DECK.
2. INSTALL PER DESTRATIFICATION FAN MANUFACTURER'S RECOMMENDATIONS.

5 H502 DETAIL - DESTRATIFICATION FAN
NO SCALE

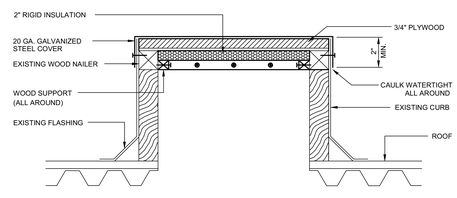


6 H502 DETAIL - TYPICAL EQUIPMENT BASE ON FLOOR
NO SCALE



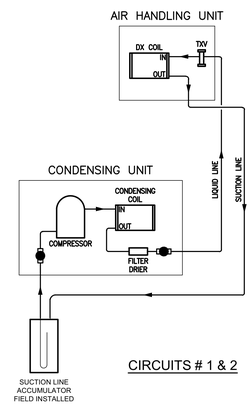
NOTE: PAD TO BE MINIMUM 6" BEYOND EQUIPMENT AND 12" ON REFRIGERANT PIPING SIDE FOR ANCHORING OF PIPING AND CONDUIT.

7 H502 DETAIL - EXTERIOR CONDENSER PAD
NO SCALE



NOTE:
1. REFER TO ARCHITECTURAL DRAWINGS FOR ADDITIONAL CAPPING DETAIL INFORMATION.

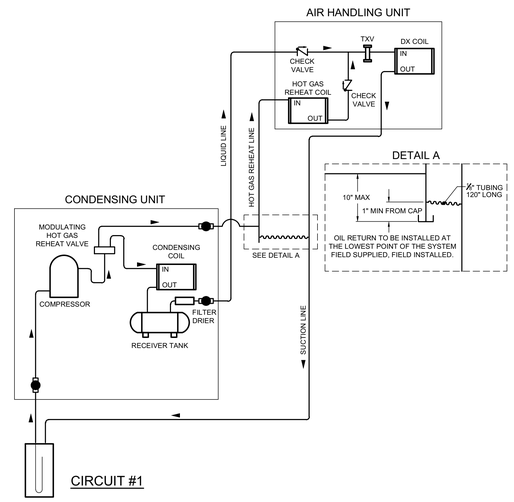
8 H502 DETAIL - CURB CAPPING
NO SCALE



CIRCUITS # 1 & 2

NOTE:
PIPING CONFIGURATION IS FOR THE BASIS OF DESIGN CONDENSING UNIT AND AIR HANDLING UNIT. PROVIDE ALL ASSOCIATED VALVES AND ACCESSORIES PER THE MANUFACTURER'S REQUIREMENTS.

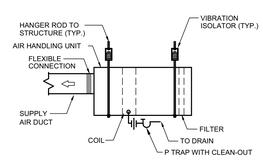
9 H502 DETAIL - PIPING SCHEMATIC FOR SPLIT AHU/CU-1
NO SCALE



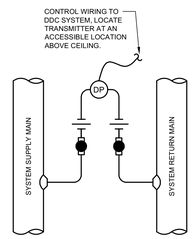
CIRCUIT #1

NOTE:
PIPING CONFIGURATION IS FOR THE BASIS OF DESIGN CONDENSING UNIT AND AIR HANDLING UNIT. PROVIDE HOT GAS REHEAT AND ALL ASSOCIATED VALVES AND ACCESSORIES PER THE MANUFACTURER'S REQUIREMENTS.

10 H502 DETAIL - REHEAT/COOLING COIL SCHEMATIC FOR SPLIT AHU/CU-2
NO SCALE



DETAIL - AIR HANDLING EQUIPMENT SUSPENDED FROM OVERHEAD STRUCTURE
11 H502
NO SCALE



NOTE: REFER TO PLANS FOR LOCATIONS

DETAIL - DIFFERENTIAL PRESSURE TRANSMITTER
12 H502
NO SCALE

REFERENCE DIMENSION
0 — 1
INDICATED DIMENSION IS MEASURED AT ONE (1) INCH IN LENGTH AND PROVIDED FOR REFERENCE/VERIFICATION ONLY.

06/19/2020
ISSUED FOR BID

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Project Name
NEW DISTRICT MAINTENANCE & OPERATIONS BUILDING

Project Owner Name
GALLOWAY TOWNSHIP PUBLIC SCHOOLS

Project Location
REEDS ROAD
GALLOWAY
TOWNSHIP NJ

Project Number: 5195
Project Date: 6.19.2020
Checked By: TJB
Drawn By: DTS
Scale: AS NOTED

Drawing Name
HVAC DETAILS

Revisions

No.	Date	Description

Drawing Number
H502

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LAST SAVED: 2020.06.12 09:21 AM PLOTTED: 2020.06.12 09:23 AM PLOTTED BY: TJB

AIR HANDLING UNIT SCHEDULE

BASIS OF DESIGN: AAON

REF. NO.	AREA SERVED	UNIT RATING				SUPPLY FAN					OUTSIDE AIR				COOLING COIL					HEATING COIL									MODEL	REMARKS
		CFM	MIN O/A	MAX O/A	ECON O/A	STATIC PRESS. IN. WG		# OF MOTORS	RPM	OPER. HP	HP	CFM	SUMMER TEMP. °F		WINTER TEMP. °F	SOURCE	TOTAL MBH	SENS. MBH	ENTERING AIR TEMP °F		LEAVING AIR TEMP °F		SOURCE	TOTAL MBH	EAT °F	LAT °F	WATER TEMP °F		GPM	PRESS. DROP FT. HD.	ELECTRICAL CHARACTERISTICS (1)						
						TOT	EXT						D.B.	W.B.					D.B.	W.B.	D.B.	W.B.			D.B.	D.B.	ENT.	LVG.			VOLTS	PHASE	FLA	MCA	MOCP		
AHU-1	OFFICES 102-119	2,500	600	2,500	2,500	2.48	1.60	2	2,233	0.86	1.34	600	95.0	75.0	10.0	DX SPLIT	92.9	68.2	79.8	66.2	55.8	54.1	HOT WATER	114.1	55.6	96.8	180.0	153.9	9	1.3	208	3	6	7	15	H3	(2)(3)(4)(5)(6)(7)(8)
AHU-2	MAINTENANCE 120	1,600	400	1,600	1,600	2.16	1.00	1	2,271	0.92	1.34	400	95.0	75.0	10.0	DX SPLIT	61.8	44.4	80.0	66.3	55.3	53.6	HOT WATER	57.7	55.0	87.5	180.0	160.2	6	1.0	208	3	3	4	15	H3	(2)(3)(4)(5)(6)(7)(8)(9)

(1) COORDINATE ELECTRICAL REQUIREMENTS WITH ELECTRICAL CONTRACTOR.
(2) PROVIDE CONDENSATE DRAIN PIPING AND P-TRAP PER CONDENSATE TRAP DETAIL.
(3) PROVIDE PREMIUM EFFICIENCY MOTORS WITH VFD.
(4) PROVIDE EQUIPMENT BASE CURB AND VIBRATION ISOLATION PER THE SPECIFICATIONS.
(5) PROVIDE WITH 2" MERV 8 FILTER.
(6) PROVIDE LOSS OF PHASE PROTECTION PER THE SPECIFICATIONS.
(7) PROVIDE WITH MANUFACTURER'S MIXING BOX.
(8) PROVIDE SINGLE POINT POWER CONNECTION AND NON-FUSED DISCONNECT.
(9) PROVIDE VIBRATION ISOLATION PER THE SPECIFICATIONS AND HANG FROM OVERHEAD. REFER TO THE AIR HANDLING EQUIPMENT SUSPENDED FROM OVERHEAD STRUCTURE DETAIL.

CONDENSING UNIT SCHEDULE

BASIS OF DESIGN: AAON

REF. NO.	TOTAL COOLING (TONS)	AMBIENT TEMP. °F	EER @ OP. CONDITIONS	STAGES	REFRIG.	ELECTRIC CHARACTERISTICS (3)					PAIRED INDOOR UNIT	MODEL	REMARKS
						VOLTS	PHASE	FLA	MCA	MOP			
CU-1	9	95.0	10.0	1-VARIABLE, 1-ON/OFF	R-410A	208	3	35	39	50	AHU-1	CFA-009	-
CU-2	7	95.0	9.6	1-VARIABLE	R-410A	208	3	23	28	45	AHU-2	CFA-007	-

(1) PROVIDE THE FOLLOWING REFRIGERANT SPECIALTIES IN ACCORDANCE TO THE MANUFACTURERS RECOMMENDATIONS: LIQUID LINE SOLENOID VALVE, CRANKCASE HEATER, THERMOSTATIC EXPANSION VALVE (TXV), & SHORT CYCLE PROTECTION CONTROL.
(2) PROVIDE COOLING CAPACITY BASED ON MATCHED COIL RATINGS WITH INDOOR UNIT AND ACTUAL PIPING LAYOUT.
(3) COORDINATE ELECTRICAL REQUIREMENTS WITH ELECTRICAL CONTRACTOR.
(4) PROVIDE SINGLE POINT POWER CONNECTION AND NON-FUSED DISCONNECT.
(5) PROVIDE LOSS OF PHASE PROTECTION PER THE SPECIFICATIONS.
(6) PROVIDE UNIT WITH SHORT CIRCUIT RATING OF 10kAIC.

SUPPLY AIR VAV BOX SCHEDULE

BASIS OF DESIGN: TITUS

REF. NO.	AREA SERVED	SIZE	CFM		MAX. STATIC PRESS. IN. W.C.	HEATING COIL									RADIATED SOUND POWER (DB)						DISCHARGE SOUND POWER (DB)						MODEL	REMARKS
			MAX.	MIN. (3)		CFM	MBH	GPM	MAX. WATER P.D. FT.HD.	EWT °F	LWT °F	EAT °F	LAT °F	ROWS	FPI	125 HZ	250 HZ	500 HZ	1K HZ	2K HZ	4K HZ	125 HZ	250 HZ	500 HZ	1K HZ	2K HZ	4K HZ		
VAV-1-1	FOOD STORAGE 110	05	200	40	0.05	100	4.5	0.4	0.13	180.0	159.3	55.0	96.7	1	10	54	48	37	33	31	25	72	60	53	49	47	40	DESV	(1)(2)(4)
VAV-1-2	ASST. OPER. MANAGER 109	04	100	20	0.03	50	2.9	0.3	0.07	180.0	160.5	55.0	108.4	1	10	49	44	34	31	28	24	70	58	50	45	44	38	DESV	(1)(2)(4)
VAV-1-3	FOOD SERVICE DIR. 107	05	150	30	0.03	75	3.6	0.3	0.08	180.0	156.2	55.0	98.6	1	10	50	44	35	30	29	23	69	56	50	45	44	38	DESV	(1)(2)(4)
VAV-1-4	LOCKSMITH 108	04	100	20	0.03	50	2.9	0.3	0.07	180.0	160.5	55.0	108.4	1	10	49	44	34	31	28	24	70	58	50	45	44	38	DESV	(1)(2)(4)
VAV-1-5	SECRETARY 102,103	06	300	60	0.13	150	6.5	1.5	0.9	180.0	170.9	55.0	94.9	1	10	56	49	39	33	29	25	69	63	56	52	48	42	DESV	(1)(2)(4)
VAV-1-6	FACULTY OPER. DIR. 104	05	180	36	0.05	90	5.5	1.3	0.73	180.0	171.4	55.0	111.6	1	12	52	46	36	32	30	24	71	58	52	47	46	39	DESV	(1)(2)(4)
VAV-1-7	CORRIDOR 114,119	06	285	57	0.13	142	6.0	0.9	0.34	180.0	165.9	55.0	93.9	1	10	56	48	38	32	29	25	69	62	56	52	47	41	DESV	(1)(2)(4)
VAV-1-8	TRAINING 112	10	975	195	0.29	488	20.0	0.9	0.11	180.0	136.3	55.0	92.8	2	10	59	48	44	42	37	25	75	63	58	56	50	44	DESV	(1)(2)(4)
VAV-1-9	FACULTY FILE STORAGE 113	05	210	42	0.09	105	7.4	0.7	0.09	180.0	157.9	55.0	120.0	2	10	54	48	38	33	31	25	72	60	53	49	46	40	DESV	(1)(2)(4)

(1) COORDINATE COIL RIGHT HAND/LEFT HAND CONFIGURATION WITH ACCESS CLEARANCE REQUIREMENTS.
(2) PROVIDE POWER FOR DAMPER ACTUATOR FROM THE ATC PANEL.
(3) MINIMUM CFM INDICATED IS CODE-REQUIRED DEADBAND AIRFLOW. REFER TO SEQUENCES OF OPERATION.
(4) PROVIDE WITH MANUFACTURER'S AVERAGING VELOCITY SENSOR.

DIFFUSER, REGISTER & GRILLE SCHEDULE

BASIS OF DESIGN: TITUS

REF. NO.	TYPE	CFM	NECK SIZE	MAX. PRESS. DROP IN. W.G	MAX. NECK VELOCITY FPM	MAX. NC	BLOW PATTERN	REMARKS
A	SUPPLY REGISTER - 300RL	SEE PLANS	SEE PLANS	0.08	600	20	22.5-DEG DEFLECTION	(1)(3)(4)
B	SUPPLY DIFFUSER - TDC	SEE PLANS	SEE PLANS	0.10	500	20	(2)	(3)(5)
C	RETURN/EXHAUST GRILLE - 350RL	SEE PLANS	SEE PLANS	0.07	500	20	-	(3)
D	SUPPLY DIFFUSER - TMS	SEE PLANS	SEE PLANS	0.10	500	25	-	(3)(5)

(1) DOUBLE DEFLECTION
(2) UNLESS INDICATED OTHERWISE ON THE PLANS ALL BLOW PATTERNS ARE TO BE 4-WAY.
(3) COLOR TO BE SELECTED BY THE PROFESSIONAL.
(4) PROVIDE OPPOSED BLADE BALANCING DAMPER IN DEVICE. DAMPER SHALL BE ADJUSTABLE FROM THE FRONT FACE.
(5) PROVIDE 24"x24" LAY-IN PANEL FOR CEILING GRID.

EXHAUST FAN SCHEDULE

BASIS OF DESIGN: GREENHECK

REF. NO.	AREA SERVED	VOLUME (CFM)	EXTERNAL STATIC PRESSURE IN. WC	TOTAL STATIC PRESSURE IN. WC (7)	DRIVE	MOTOR INFORMATION (6)				TYPE	SONES	MODEL	REMARKS
						OPERATING HP	SIZE (HP)	V/C/P	FAN RPM				
EF-1	OFFICES 102-119	2,500	0.5	0.789	DIRECT	0.63	1	115/60/1	1,181	INLINE	12.2	SQ-160-VG	(1)(2)(4)(8)(9)
EF-2	MAINTENANCE WORK AREA 120	1,600	0.4	0.479	DIRECT	0.29	1/2	115/60/1	1,106	ROOF	9.1	G-143-VG	(1)(2)(4)(5)(9)
EF-3	TOILETS 115-117	250	0.15	0.316	DIRECT	0.03	1/15	115/60/1	1,591	ROOF	4.8	G-070-VG	(1)(2)(3)(4)(5)
EF-4	TOILETS 105-106	100	0.1	0.178	DIRECT	0.01	1/15	115/60/1	1,029	ROOF	1.4	G-070-VG	(1)(2)(3)(4)(5)

(1) PROVIDE MANUFACTURER'S OSHA APPROVED GUARD HOUSING.
(2) PROVIDE MANUFACTURER'S PRE-WIRED DISCONNECT SWITCH.
(3) PROVIDE MANUFACTURER'S SPEED CONTROL.
(4) PROVIDE WITH BIRD SCREEN.
(5) PROVIDE WITH ROOF CURB.
(6) COORDINATE ELECTRICAL REQUIREMENTS WITH THE ELECTRICAL CONTRACTOR.
(7) STATIC PRESSURE VALUE INCLUDES LOSS FROM FAN MANUFACTURER'S BACKDRAFT/CONTROL DAMPER.
(8) PROVIDE WITH VIBRATION ISOLATION PER THE SPECIFICATIONS, AND PROVIDE WITH MANUFACTURER'S MOTOR COVER.
(9) PROVIDE WITH MANUFACTURER'S SPEED CONTROLLER WITH 0-10VDC CONTROL FROM THE ATC SYSTEM.

CIRCULATION FAN (DESTRATIFICATION) SCHEDULE

BASIS OF DESIGN: AIRIUS

REF. NO.	AREA SERVED	VOLUME (CFM)	AREA COVERED (SQ. FT)	MAXIMUM MOUNTING HEIGHT (FT)	DRIVE	MOTOR INFORMATION (5)			TYPE	DECIBEL(A)	MODEL	REMARKS
						WATTS	V/C/P	MOTOR RPM				
CF-1	MAINTENANCE AREA 120	620	1,200	25	DIRECT	31.3	115/60/1	1,640	DESTRATIFICATION	69.1	AIR PEAR FREE HANGING: A-25-EC	(1)(2)(3)(4)(6)
CF-2	MAINTENANCE AREA 120	620	1,200	25	DIRECT	31.3	115/60/1	1,640	DESTRATIFICATION	69.1	AIR PEAR FREE HANGING: A-25-EC	(1)(2)(3)(4)(6)
CF-3	STORAGE 121	620	1,200	25	DIRECT	31.3	115/60/1	1,640	DESTRATIFICATION	69.1	AIR PEAR FREE HANGING: A-25-EC	(1)(2)(3)(4)(6)
CF-4	STORAGE 121	620	1,200	25	DIRECT	31.3	115/60/1	1,640	DESTRATIFICATION	69.1	AIR PEAR FREE HANGING: A-25-EC	(1)(2)(3)(4)(6)
CF-5	CHILD CARE STORAGE 122	620	1,200	25	DIRECT	31.3	115/60/1	1,640	DESTRATIFICATION	69.1	AIR PEAR FREE HANGING: A-25-EC	(1)(2)(3)(4)(6)
CF-6	CHILD CARE STORAGE 122	620	1,200	25	DIRECT	31.3	115/60/1	1,640	DESTRATIFICATION	69.1	AIR PEAR FREE HANGING: A-25-EC	(1)(2)(3)(4)(6)

(1) PROVIDE MANUFACTURER'S OSHA APPROVED GUARD HOUSING.
(2) PROVIDE WITH MANUFACTURER'S PLUG CONNECTION FOR EXPOSED SPACES.
(3) PROVIDE MANUFACTURER'S SPEED CONTROL.
(4) PROVIDE WITH MANUFACTURER'S CONNECTION TO THE DDC SYSTEM. REFER TO PLANS AND SPECIFICATIONS.
(5) COORDINATE ELECTRICAL REQUIREMENTS WITH THE ELECTRICAL CONTRACTOR.
(6) PROVIDE MANUFACTURER'S MOUNTING KIT FOR EXPOSED SPACES.

UNIT HEATER SCHEDULE

BASIS OF DESIGN: RITTLING

REF. NO.	AREA SERVING	SUPPLY FAN				COIL						MODEL	REMARKS
		CFM	HP	RPM	ELECTRICAL DATA (3)	MBH	EAT °F	LAT °F	EWT °F	LWT °F	GPM	WATER P.D. FT. HD.	
UH-1	CHILD CARE STORAGE 122	630	1/15	-	115/60/1	22.5	55.0	87.0	180.0	2.5	0.1	RH-33	(1)(2)(4)
UH-2	CHILD CARE STORAGE 122	630	1/15	-	115/60/1	22.5	55.0	87.0	180.0	2.5	0.1	RH-33	(1)(2)(4)
UH-3	STORAGE 121	450	1/30	-	115/60/1	15.4	55.0	85.7	180.0	1.5	0.6	RH-24	(1)(2)(4)
UH-4	STORAGE 121	450	1/30	-	115/60/1	15.4	55.0	85.7	180.0	1.5	0.6	RH-24	(1)(2)(4)

(1) PROVIDE WITH 2 WAY VALVE ASSEMBLY PER THE 2-WAY VALVE DETAIL.
(2) PROVIDE MANUFACTURER'S CONTACTS & PRE-WIRED DISCONNECT SWITCH.
(3) COORDINATE ELECTRICAL REQUIREMENTS WITH ELECTRICAL CONTRACTOR.
(4) PROVIDE WALL MOUNTED THERMOSTAT & MANUFACTURER'S UNIT HEATER MOUNTING BRACKET.

BOILER SCHEDULE (CONDENSING/GAS FIRED)

BASIS OF DESIGN: BURNHAM:US BOILER CO.

REF. NO.	LOCATION	GAS INPUT MBH	NOMINAL OUTPUT MBH @ 95% (4)	FLOWRATE (GPM)	WATER TEMP °F		FLUE CONN. DIA. IN.	SUPPLY CONN. SIZE	RETURN CONN.SIZE	FUEL	MAX.INLET GAS PR.	MIN. INLET GAS PR.	ELECTRICAL CHARACTERISTICS (1)			MODEL	REMARKS
					EWT	LWT (5)							VOLTS	PHASE	HZ		
B-1	MECH EQUIP PLATFORM 202	320	304	30	160	180	4	1-1/2	1-1/2	NAT. GAS	14.0	3.5	120	1	60	ASPEN ASPN-320	(2)(3)
B-2	MECH EQUIP PLATFORM 202	320	304	30	160	180	4	1-1/2	1-1/2	NAT. GAS	14.0	3.5	120	1	60	ASPEN ASPN-320	(2)(3)

(1) COORDINATE ELECTRICAL REQUIREMENTS WITH ELECTRICAL CONTRACTOR.
(2) PRIMARY HEATING HOT WATER SYSTEM DESIGN IS 180°F SUPPLY WATER & 160°F RETURN WATER TEMPERATURE.
(3) PROVIDE MANUFACTURER'S LOW WATER CUT-OFF, & NEUTRALIZATION KIT AND FIELD MOUNTED LOW WATER CUTOFF SWITCH.
(4) CAPACITY IS RATED AT FULL FIRE.
(5) LWT BASED OF 95% EFFICIENCY FIRING CAPACITY.

CABINET UNIT HEATER SCHEDULE

BASIS OF DESIGN: RITTLING

REF. NO.	AREA SERVING	TYPE	SUPPLY FAN				COIL							UNIT SIZE	MODEL	REMARKS
			SPEED	CFM	HP	ELECTRICAL DATA (3)	MBH	EAT °F	LAT °F	EWT °F	LWT °F	GPM	ROWS			
CUH-1	MENS TOILET 116	CEILING - FULLY RECESSED	LOW	125	1/5	120/1/60	7.0	70.0	121.6	180.0	152.1	0.5	0.1	02	RFRC-420	(1)(2)(4)
CUH-2	WOMENS TOILET 115	CEILING - FULLY RECESSED	LOW	125	1/5	120/1/60	7.0	70.0	121.6	180.0	152.1	0.5	0.1	02	RFRC-420	(1)(2)(4)
CUH-3	VESTIBULE 101	CEILING - FULLY RECESSED	MED	150	1/5	120/1/60	9.2	70.0	127.0	180.0	161.5	1.0	0.1	02	RFRC-420	(1)(2)(4)(5)

(1) PROVIDE WITH INLET FILTER AND 2 WAY VALVE ASSEMBLY PER THE 2-WAY VALVE DETAIL.
(2) PROVIDE MANUFACTURER'S SINGLE POINT CONNECTION AND PRE-WIRED DISCONNECT SWITCH.
(3) COORDINATE ELECTRICAL REQUIREMENTS WITH ELECTRICAL CONTRACTOR.
(4) PROVIDE WITH ECM MOTOR.
(5) PROVIDE WITH DOOR CONTACT INTERLOCK TO RESET TEMPERATURE. REFER TO SPECIFICATIONS.

PUMP SCHEDULE

BASIS OF DESIGN: BELL & GOSSETT

REF. NO.	SYSTEM SERVED	PUMP LOCATION	GPM	HEAD LOSS FT.	OPERATING OR STANDBY	EFF.	FRAME SIZE	MOTOR(1)					TYPE	MODEL	REMARKS
								HP	OPER. HP	RPM	VOLTS	PHASE			
P-1	PRIMARY HEATING WATER	MECH EQUIP PLATFORM 202	30	10	OPERATING	62.6	56J	1/4	0.125	1750	120	1	IN-LINE	E-90 1.25AAB	(2)(4)(7)
P-2	PRIMARY HEATING WATER	MECH EQUIP PLATFORM 202	30	10	OPERATING	62.6	56J	1/4	0.125	1750	120	1	IN-LINE	E-90 1.25AAB	(2)(4)(7)
P-3	SECONDARY HEATING WATER	MECH EQUIP PLATFORM 202	35	45	OPERATING	56.4	56J	1.5	0.669	3600	208	3	IN-LINE	E-90 1AAB	(2)(3)(4)(5)(6)
P-4	SECONDARY HEATING WATER	MECH EQUIP PLATFORM 202	35	45	OPERATING	56.4	56J	1.5	0.669	3600	208	3	IN-LINE	E-90 1AAB	(2)(3)(4)(5)(6)

(1) COORDINATE ELECTRICAL REQUIREMENTS WITH ELECTRICAL CONTRACTOR.
(2) PROVIDE PREMIUM EFFICIENCY MOTOR.
(3) INVERTED DUTY MOTORS.
(4) PROVIDE NON-OVERLOADING MOTOR.
(5) PROVIDE WITH VFD WITH INTEGRAL DISCONNECT.
(6) PROVIDE LOSS OF PHASE PROTECTION PER THE SPECIFICATIONS.
(7) PROVIDE WITH STARTER AND DISCONNECT.

DUCTLESS SPLIT SYSTEM

BASIS OF DESIGN: LG

REF. NO.	AREA SERVED	TYPE	FAN SECTION				HEATING				COOLING COIL						MODEL	REMARKS
			CFM	MOTORS (3)			ENT. AIR TEMP. °F	OUTDOOR AIR TEMP.	UNIT CAPACITY MBH	REQUIRED CAPACITY MBH	NOMINAL MBH	ENT. AIR TEMP. °F		OUTDOOR AIR TEMP. °F	TOTAL MBH	SENSIBLE MBH	REFRIG. TYPE	
				VOLTS	PHASE	HZ						D.B.	W.B	D.B.				
DS-1	IDF 118	HIGH WALL	195	208	1	60	75	10.0	9.5	6.3	9.0	75.0	63.0	95.0	8.0	6.7	R-410A	LSN090	(1)(2)(4)(5)

(1) PROVIDE MANUFACTURERS PROGRAMMABLE ELECTRONIC THERMOSTAT & INDOOR GUARD AND INSTALL AS PER MANUFACTURER'S RECOMMENDATIONS.
(2) INSTALL IN ACCORDANCE WITH MANUFACTURER'S INSTALLATION INSTRUCTIONS. PROVIDE ALL COMPONENTS REQUIRED BY TO PROVIDE A COMPLETE WORKING SYSTEM.
(3) COORDINATE ELECTRICAL REQUIREMENTS WITH ELECTRICAL CONTRACTOR.
(4) PROVIDE SINGLE POINT POWER CONNECTION AND NON-FUSED DISCONNECT.
(5) POWER FOR DUCTLESS SPLIT SYSTEM BASIS OF DESIGN IS PROVIDED THROUGH THE CORRESPONDING CONDENSING UNIT.

AIR SEPARATOR SCHEDULE

BASIS OF DESIGN: BELL & GOSSETT

REF. NO.	LOCATION	SERVICE	PIPE SIZE (IN.)	GPM	OPERATING PRESS. (PSIG.)	MODEL	REMARKS
AS-1	MECH EQUIP PLATFORM 202	HEATING HOT WATER	2	31.6	150	EASB-2 JR	(1)

(1) PROVIDE 1-INCH, BALL TYPE BLOWDOWN VALVE

CONDENSING UNIT SCHEDULE-DUCTLESS SPLIT

BASIS OF DESIGN: LG

REF. NO	COUPLED INDOOR UNIT	COOLING			HEATING			REFRIG.	ELECTRIC CHARACTERISTICS (4)				MODEL	REMARKS
		TOTAL BTUH COOLING	AMBIENT TEMP. °F	SEER	TOTAL BTUH HEATING	AMBIENT TEMP. °F	HSPF		VOLTS	PHASE	MCA	MOP		
DCU-1	DS-1	9,000	95	23.5	9,570	6.0	11.3	R-410A	208	1	10	15	LSU090	(1)(2)(3)(5)

(1) PROVIDE THE FOLLOWING REFRIGERANT SPECIALTIES: LIQUID LINE SOLENOID VALVE, CRANKCASE HEATER, THERMOSTATIC EXPANSION VALVE (TXV), & SHORT CYCLE PROTECTION CONTROL.
(2) PROVIDE COOLING CAPACITY BASED ON MATCHED COIL RATINGS WITH SPECIFIED INDOOR UNIT AND ACTUAL PIPING LAYOUT.
(3) PROVIDE LOW AMBIENT ACCESSORY KIT (DOWN TO MINIMUM 0°F) INCLUDING ALL ACCESSORIES REQUIRED FOR INDICATED TEMPERATURE OPERATION.
(4) COORDINATE ELECTRICAL REQUIREMENTS WITH ELECTRICAL CONTRACTOR.
(5) PROVIDE SINGLE POINT POWER CONNECTION AND NON-FUSED DISCONNECT.

EXPANSION TANK SCHEDULE

BASIS OF DESIGN: BELL & GOSSETT

REF. NO.	LOCATION	SERVICE	NOMINAL TANK SIZE (GALLONS)	MINIMUM REQUIRED TANK ACCEPT. VOLUME (GALLONS)	MINIMUM OPERATING TEMP. (°F)	MINIMUM OPERATING PRESS. (PSIG.)	MAXIMUM OPERATING TEMP. (°F)	MAXIMUM OPERATING PRESS. (PSIG.)	SYSTEM VOLUME (GALLONS)	ORIENTATION	MODEL	REMARKS
ET-1	MECH EQUIP PLATFORM 202	HEATING HOT WATER	10	2.5	45	12	180	41	85	VERTICAL	B-35LA	(1)

(1) PROVIDE WITH 6" CONCRETE HOUSEKEEPING PAD PER THE APPLICABLE DETAIL.

GRAVITY ROOF VENTILATOR SCHEDULE

BASIS OF DESIGN: GREENHECK

REF. NO.	AREA SERVED	VOLUME (CFM)	EXTERNAL STATIC PRESSURE IN. WC.	THROAT VELOCITY FPM	THROAT SIZE	OVERALL SIZE	INTAKE OR RELIEF	MODEL	REMARKS
GV-1	MAINTENANCE WORK AREA 120	1,600	0.07	711	18x18	28x36	INTAKE	FGI	(1)(2)

(1) PROVIDE MANUFACTURER'S ROOF CURB AND BIRDSCREEN.
(2) PROVIDE WITH MOTOR OPERATED DAMPER RATED FOR 24V AND POWERED FROM THE ATC PANEL IN GV THROAT.

NATURAL VENTILATION SCHEDULE

ROOM NO.	ROOM NAME	ROOM SQ FT.	MINIMUM PERCENTAGE OF OPENING AREA TO FLOOR AREA	REQUIRED OPENING AREA SQ FT.	OPENING AREA PROVIDED SQ FT.
121	STORAGE	1,829	4%	73.2	206.4
122	CHILD CARE STORAGE	1,875	4%	75.0	206.4

HVAC VENTILATION SCHEDULE - GALLOWAY MAINTENANCE & OPERATIONS BUILDING

VENTILATION SYSTEM NUMBER	SECONDARY VENTILATION SYSTEM NO.	ROOM NO.	ROOM NAME	ROOM SQ. FT	IMC 2015 VENTILATION REQUIREMENTS										SUPPLY AIR (CFM)	REQUIRED OA FOR SINGLE ZONE SPACE (CFM)	REQUIRED EA FOR SINGLE ZONE SPACE (CFM)	REQUIRED CFM FOR MULTIPLE ZONE SPACES			CFM QUANTITIES PROVIDED			
					OA/SQFT (CFM)	SQFT OA (CFM)	OCCUPANTS			EXHAUST								OUTDOOR AIR %	SYSTEM EFFECTIVENESS	OUTDOOR AIR	OUTDOOR AIR (CFM)(2)	RETURN AIR (CFM)	XFER AIR (CFM)(1)	EXHAUST AIR (CFM)
							NO. OF OCCUPANTS	OA/OCCUPANTS (CFM)	OCCUPANT OA (CFM)	NO. OF FIXTURES	EA/FIXTURE (CFM)	FIXTURE EA (CFM)	EA/SQFT (CFM)	SF EA (CFM)										
AHU-1	VAV-1-1	110	FOOD SERVICE STORAGE	414	0.12	49.7	0	5	0	-	-	-	-	-	200	63	-	31.3%	0.84	595	600	200	0	0
AHU-1	VAV-1-2	109	ASST. OPERATIONS MNG. OFFICE	145	0.06	8.7	1	5	5	-	-	-	-	-	100	19	-	18.8%				100	0	0
AHU-1	VAV-1-3	107	FOOD SERVICE DIRECTOR	151	0.06	9.1	1	5	5	-	-	-	-	-	150	19	-	12.5%				100	-50	0
AHU-1	VAV-1-4	108	LOCKSMITH OFFICE	100	0.06	6.0	1	5	5	-	-	-	-	-	100	19	-	18.8%				100	0	0
AHU-1	VAV-1-5	102	SECRETARY OFFICE	295	0.06	17.7	5	5	25	-	-	-	-	-	300	56	-	18.8%				130	-50	0
AHU-1	VAV-1-6	104	FACULTY OPERATIONS DIRECTOR	156	0.06	9.4	1	5	5	-	-	-	-	-	180	19	-	10.4%				335	50	0
AHU-1	VAV-1-7	114/119	CORRIDOR	500	0.06	30.0	0	0	0	-	-	-	-	-	285	38	-	13.2%				975	0	0
AHU-1	VAV-1-8	112	TRAINING	533	0.06	32.0	50	5	250	-	-	-	-	-	975	356	-	36.5%				210	0	0
AHU-1	VAV-1-9	113	FACULTY FILE STORAGE	343	0.12	41.2	0	5	0	-	-	-	-	-	210	56	-	26.8%				0	100	100
AHU-1	EF-3	115	WOMEN'S TOILET	146	0	0.0	0	0	0	2	50	100	-	-	0	0	100	-	-	-	0	0	100	100
AHU-1	EF-3	116	MEN'S TOILET	143	0	0.0	0	0	0	2	50	100	-	-	0	0	100	-	-	-	0	0	100	100
AHU-1	EF-3	117	JANITOR CLOSET	26	0	0.0	0	0	0	-	-	-	-	-	0	0	-	-	-	-	0	0	50	50
AHU-1	EF-4	105	TOILET	49	0	0.0	0	0	0	1	50	50	-	-	0	0	50	-	-	-	0	0	50	50
AHU-1	EF-4	106	TOILET	49	0	0.0	0	0	0	1	50	50	-	-	0	0	50	-	-	-	0	0	50	50
AHU-2	-	120	MAINTENANCE WORK AREA	1870	0.06	112.2	20	10	200	-	-	-	-	-	1600	394	-	-	-	-	400	1200	0	400

(1) NEGATIVE INDICATES AIR IS BEING TRANSFERRED FROM THE SPACE. POSITIVE INDICATES AIR BEING TRANSFERRED TO THE SPACE.
(2) OUTDOOR AIR PRESSURIZATION CONTROL IS BY THE ITEMIZED EXHAUST FANS OR THE SPECIFIC AHU EXHAUST FAN FOR ECONOMIZER CONTROL.

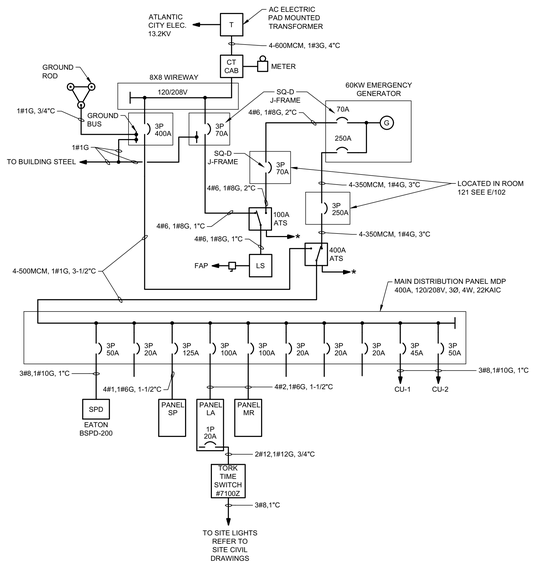
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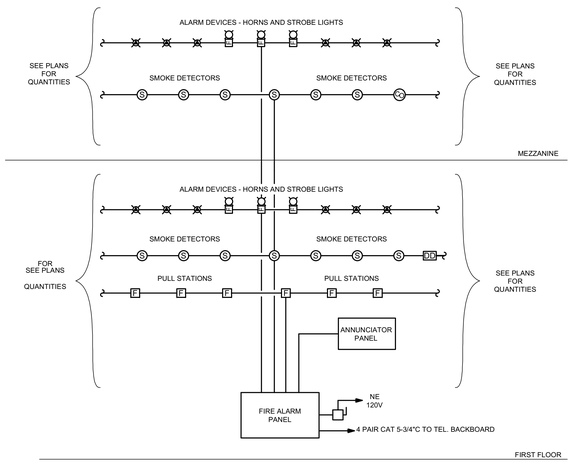
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1 E001 SINGLE LINE DIAGRAM
NO SCALE
★ 3#12, 3/4"C TO ENGINE START CIRCUIT



NOTE:
ALL ITEMS ARE NEW UNLESS NOTED OTHERWISE AND ALL INITIATING DEVICES SHALL BE ADDRESSABLE.

2 E001 FIRE ALARM RISER DIAGRAM
NO SCALE

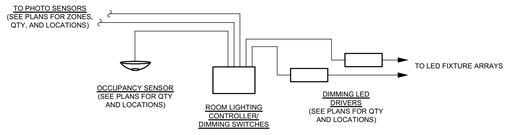
LEGEND

	LED FIXTURE ON NORMAL/EMERGENCY CIRCUIT
	EXIT LIGHT ON NORMAL/EMERGENCY CIRCUIT - TYPE "X" FIXTURE
	LED 1'X4' FIXTURE - TYPE "L3" U.N.O.
	LED 2' x 4' FIXTURE - TYPE "L2" U.N.O.
	LED 2' x 2' FIXTURE - TYPE "L1" FIXTURE U.N.O
	WALL MOUNTED FIXTURE - TYPE "W2" U.N.O
	EXIT LIGHT WITH TWO HEADS, BATTERY BACK-UP - LITHONIA #LHQM-LED-R HO REMOTE TWIN HEAD - LITHONIA #ELA-T-QWP-LO309
	FLOOD LIGHT
SS_3 S_4	SINGLE POLE, THREE WAY SWITCH AND FOUR WAY SWITCH- MH 44"
S_K	KEY OPERATED SWITCH PASS AND SEYMOUR 20AC
	DUPLEX CONVENIENCE OUTLET 20A - MH 18" AFF & 6" ABOVE COUNTERS U.N.O.
	DUPLEX OUTLET W/GROUND FAULT INTERRUPTER
J	JUNCTION BOX
	QUADRUPLEX OUTLET MH 18" ABOVE FINISHED FLOOR
	QUADRUPLEX OUTLET MH 48" FROM FINISHED FLOOR
W	DEDICATED QUADRUPLEX OUTLET FOR WELDING HOOD.
R	CEILING MOUNTED RETRACTABLE REEL WITH 25 FOOT CORD AND (1) QUADRUPLEX OUTLET KH INDUSTRIES # RTAG3LW-WDD520-J12F
	SPECIAL PURPOSE OUTLET
	TELEPHONE/WALL OUTLET - SIMPLEX MODULAR PROVIDE 3/4"C TO ABOVE CEILING
	TEL/DATA WALL OUTLET - QUAD MODULAR PROVIDE 1"C TO ABOVE CEILING
	HOME RUN
	BRANCH CIRCUIT RUN CONCEALED IN CEILING AND WALLS
	DISCONNECT SWITCH
	MOTOR STARTER
	MOTOR
F	FIRE ALARM STATION - MH 44"
	FIRE ALARM HORN W/ADA STROBE LIGHT - MH 80"
	ADA STROBE LIGHT - MH 80"
DD	DUCT DETECTOR
	NEW ASCO EMERGENCY SHUT DOWN SWITCH
	CCTV CAMERA. PROVIDE JUNCTION BOX AND 3/4" CONDUIT TO IDF ROOM

WP	WEATHER PROOF
GFI	GROUND FAULT INTERRUPTER
UNO	UNLESS NOTED OTHERWISE
	PUSHBUTTON AND DOOR BELL - EDWARDS #C212
CR	CARD READER - PROVIDE JUNCTION BOX AND 3/4"C TO ABOVE CEILING
DP	DOOR POWER SUPPLY
W	PLUG IN STRIP (WIREMOLD 4000 DS W/ DUPLEX OUTLETS ON 18" CTRS, AND DIVIDER & DUPLEX DATA OUTLETS ON 18" CTRS) PROVIDE 1"C TO ABOVE CLG AND 8,4 PAIR CAT 6 TO TEL/DATA ROOM
FAP	FIRE ALARM PANEL
S	SMOKE DETECTOR
H	HEAT DETECTOR
I	INTERCOM STATION WITH PUSH BUTTON DOOR RELEASE , PROVIDE JUNCTION BOX AND ¾ IN CONDUIT TO ABOVE CEILING.
S_{OS}	SWITCH WITH OCCUPANCY SENSOR
P_{20}	OCCUPANCY SENSOR WITH POWER PACK (SHEET NOTE 1)
S_D	ON/OFF AND RAISE LOWER DIMMER (SHEET NOTE 1)
P_{10}	AUTO DIMMING PHOTO CELL WITH DIMMING POWER PACK (SHEET NOTE 1)
	ELECTRIC STRIKE - PROVIDE BOX AND 3/4"C TO ACCESSIBLE CEILING
P	PHOTO CELL
	DAMPER MOTOR
ER	EMERGENCY RELAY - BODINE #GTD20
C_O	CARBON MONOXIDE DETECTOR
	PUSH BUTTON STATION

GENERAL NOTES:

1. WIRING DEVICE
   - .1 COORDINATE LOCATION OF ALL SWITCHES AND OUTLETS WITH OWNER AND ARCHITECT.
   - .2 REFER TO ARCHITECTURAL DRAWINGS FOR EXACT LOCATION, ELEVATIONS AND DIMENSIONS OF ALL WALL MOUNTED DEVICES.
   - .3 THE LOCATION OF SWITCHES AND OUTLETS IS APPROXIMATE. THE ARCHITECT RESERVES THE RIGHT TO MOVE OUTLETS FIVE FEET IN EITHER DIRECTION PRIOR TO ROUGHING-IN WITHOUT ADDITIONAL COST TO THE OWNER.
2. LIGHTING FIXTURES
   - .1 REFER TO ARCHITECTURAL REFLECTED CEILING PLANS FOR EXACT LOCATION OF LIGHTING FIXTURES.
   - .2 PROVIDE FIXTURE MOUNTING ACCESSORIES AND COORDINATE WITH CEILING SYSTEMS AND ARCHITECTURAL DETAILS.
   - .3 CONNECT EMERGENCY LIGHTING UNITS AND EMERGENCY BALLAST AHEAD OF ANY SWITCHES.
3. WIRING METHOD
   - .1 ALL BRANCH CIRCUIT WIRING SHALL BE RUN CONCEALED WHEREVER POSSIBLE ANY EXPOSED WIRING SHALL BE RUN IN WIREMOLD WHERE DIRECTED BY ARCHITECT.
   - .2 ALL WIRING SHALL BE RUN IN CONDUIT UNLESS OTHERWISE SPECIFIED. MINIMUM SIZE WIRE SHALL BE #12 AWG TYPE "THWN" INSULATION. MINIMUM SIZE CONDUIT SHALL BE 3/4"C.
   - .3 ALL TERMINATIONS SHALL BE RATED 75 DEGREE "C".
   - .4 ALL DEVICE BOXES SHALL BE FLUSH MOUNTED IN WALLS INCLUDING CMU WALLS.



NOTE:
PROVIDE CAT 5E CABLE AND INTERCONNECT EACH DEVICE FOR LIGHTING CONTROL, DIMMING, AND DAYLIGHT HARVESTING.

SEQUENCE OF OPERATION:

THE NEW LIGHTING CONTROL SYSTEM SHALL BE CAPABLE OF EXECUTING THE FOLLOWING CONTROLS. PROVIDE ALL REQUIRED DEVICES, WIRING, CONTROLLERS, AND SENSORS FOR A COMPLETE AND OPERATIONAL SYSTEM.

- MANUAL DIMMING: THE DIMMING CONTROL SWITCH WILL BE CAPABLE OF DIMMING THE LIGHTING LEVELS BASED ON THE MANUAL INPUT.
- OCCUPANCY CONTROL: AFTER 30 MINUTES (ADJ.) THE LIGHTS WILL BE TURNED OFF. WHEN THE OCCUPANCY SENSOR DETECTS MOVEMENT, THE LIGHTS WILL BE ENERGIZED AND RESTORED TO THE PRIOR LIGHTING LEVELS.
- DAYLIGHT HARVESTING: THE LIGHT FIXTURES WILL AUTOMATICALLY DIM IN RESPONSE TO THE DAYLIGHT SENSED BY THE PHOTO-SENSORS IN ORDER TO MAINTAIN A CONSTANT LIGHTING LEVEL.

3 E001 ROOM LIGHTING CONTROLS
SCALE: NONE

LIGHTING FIXTURE SCHEDULE

TYPE	MANUFACTURER	CATALOG NUMBER	LAMP	WATT	FIXTURE TYPE FLUOR	INCAN	LED	MOUNTING	REMARKS
L1	LITHONIA	2GTL-2-40L-EZ1 LP840	LED	40			X	RECESS	2X2
L2	LITHONIA	2GTL-4-48L-EZ1 LP840	LED	47			X	RECESS	2X4
L3	LITHONIA	LBL4-48L-EZ1 LP840-LSXR10	LED	48			X	PENDANT	1X4
X	SURE LITES	LPX6	LED				X	SURFACE	EXIT LT
W1	LITHONIA	TWP-LED-20C-50K-T3M-120-PE-DDBXD	LED	48			X	WALL	
D1	GREENCREATIVE	58255-20SMPR9DIM/930	LED	20			X	RECESS	9" DOWNLIGHT
W2	LITHONIA	TWS-LED-P1-50K-120-PE-DDB	LED	18			X	WALL	
L4	LITHONIA	2GTL-4-72L-EZ1-LP840	LED	71			X	RECESS	2X4

SCHEDULE FOR NEW POWER PANEL: LS
General Panel Data: 120/208V, 3Ø, 4W, 22kAIC; 100A MLO

Circuit Number	LOAD SERVED Type of Load	KVA	Ø	Volts	CIRCUIT PROTECTOR Quan.	Amps	Poles	Frame	WIRING DATA
1	LTG - CHILD STOR.	.5			1	20	1		#12
2	SPARE	-			1	20	1		-
3	LTG - STOR., MAINT.	.5			1	20	1		#12
4	SPARE	-			1	20	1		-
5	LTG - ADMIN	.5			1	20	1		#12
6	FA PANEL	1.0			1	20	1		#12
7-8	SPARE	-			2	20	1		-

SCHEDULE FOR NEW POWER PANEL: LA
General Panel Data: 120/208V, 3Ø, 4W, 22kAIC; 100A MLO

Circuit Number	LOAD SERVED Type of Load	KVA	Ø	Volts	CIRCUIT PROTECTOR Quan.	Amps	Poles	Frame	WIRING DATA
1-4	RECEPT	5.0			4	20	1		#12
5-6	RECEPT - KITCHEN	2.0			2	20	1		#12
7-9	LTG	2.4			3	20	1		#12
10	RECP. - DF	.6			1	20	1		#12
11-12	I.T. RECP.	2.0			2	20	1		#12
13	EF - 3,4	.5			1	20	1		#12
14	LTG - MEZZ.	.7			1	20	1		#12
15	DCU	2.0			1	15	2		#12
16-18	CUH-1 TO CUH-3	1.5			3	20	1		#12
19	EXTERIOR GFI OUTLET	.1			1	20	1		#12
20	ROOM 102 PRINTER	.1			1	20	1		#12
21	SITE LIGHTS	.5			1	20	1		#12
22	101 DOOR POWER	.1			1	20	1		#12
23-27	SPARE	-			5	20	1		-

SCHEDULE FOR NEW POWER PANEL: SP
General Panel Data: 120/208V, 3Ø, 4W, 22kAIC; 125A MLO

Circuit Number	LOAD SERVED Type of Load	KVA	Ø	Volts	CIRCUIT PROTECTOR Quan.	Amps	Poles	Frame	WIRING DATA
1-2	RECEPT - STORAGE	2.6			2	20	1		#12
3	UH - STORAGE	1.2			1	20	1		#12
4	LTG - STORAGE	1.2			1	20	1		#12
5-6	LTG - MAINTENANCE	1.8			2	20	1		#12
7	TABLE SAW RECEPT	2.5			1	30	2		#10
8-17	MAINTENANCE QUAD RECEPT	10.2			10	20	1		#12
18-21	MAINTENANCE REEL RECEPT	2.4			4	20	1		#12
22-26	MOTOR-OPERATED DOORS	3			5	20	1		#12
27-29	CF-1 TO CF-6	.5			3	20	1		#12
30	EF-2	.8			1	20	1		#12
31	DOOR POWER	.2			1	20	1		#12
32-36	SPARE	-			5	20	1		-

SCHEDULE FOR NEW POWER PANEL: MR
General Panel Data: 120/208V, 3Ø, 4W, 22 KAIC; 100A MLO

Circuit Number	LOAD SERVED Type of Load	KVA	Ø	Volts	CIRCUIT PROTECTOR Quan.	Amps	Poles	Frame	WIRING DATA
1	AHU-2	1.1			1	15	3		#12
2	AHU-1	2.2			1	15	3		#12
3	B-1 & B-2	1.0			1	20	1		#12
4	CIRC. PUMP	0.5			1	20	1		#12
5	SPARE	-			1	20			#12
6	GEN BLOCK HEATER	1.5			1	20	1		#10
7	P-1	.7			1	15	1		#12
8	P-2	.7			1	15	1		#12
9	P-3	2.5			1	15	3		#12
10	P-4	STB			1	15	3		#12
11	EF-1	1.5			1	20	2		#12
12	ATC PANEL	.1			1	20	1		#12
13	MEZZANINE RECEPT	.5			1	20	1		#12
14	GWH-01 & DWCP-01	1.0			1	20	1		#12
15-18	SPARE	-			4	20	1		-

REFERENCE DIMENSION
0 — 1
INDICATED DIMENSION IS MEASURED AT ONE (1) INCH IN LENGTH AND PROVIDED FOR REFERENCE/VERIFICATION ONLY.

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Project Name
NEW DISTRICT MAINTENANCE & OPERATIONS BUILDING

Project Owner Name
GALLOWAY TOWNSHIP PUBLIC SCHOOLS

Project Location
REEDS ROAD
GALLOWAY TOWNSHIP NJ

Project Number: 5195
Project Date: 6.19.2020
Checked By: ROB
Drawn By: TMH / JTM
Scale: AS NOTED

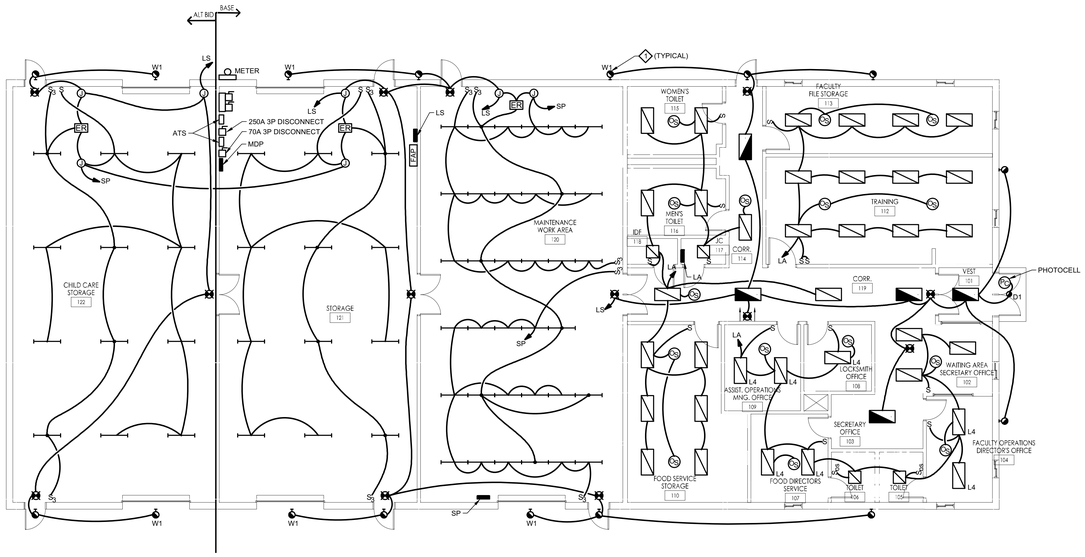
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ELECTRICAL ABBREVIATIONS, LEGENDS, SINGLE LINE DIAGRAMS, AND NOTES

Revisions

No.	Date	Description

Drawing Number
E001

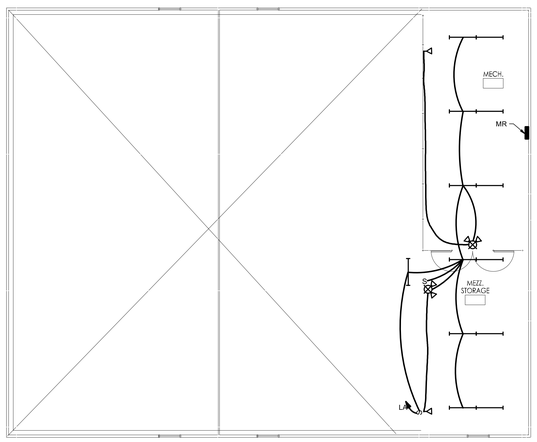
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1 / E101 FIRST FLOOR PLAN - LIGHTING NEW WORK
SCALE: 1/8" = 1'-0"

NEW WORK NOTES:

1. REFER TO ARCHITECTURAL DRAWING FOR EXTERIOR WALL MOUNTED LIGHT LOCATIONS AND ELEVATIONS.



2 / E101 MEZZANINE PLAN - LIGHTING NEW WORK
SCALE: 1/8" = 1'-0"

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Scale
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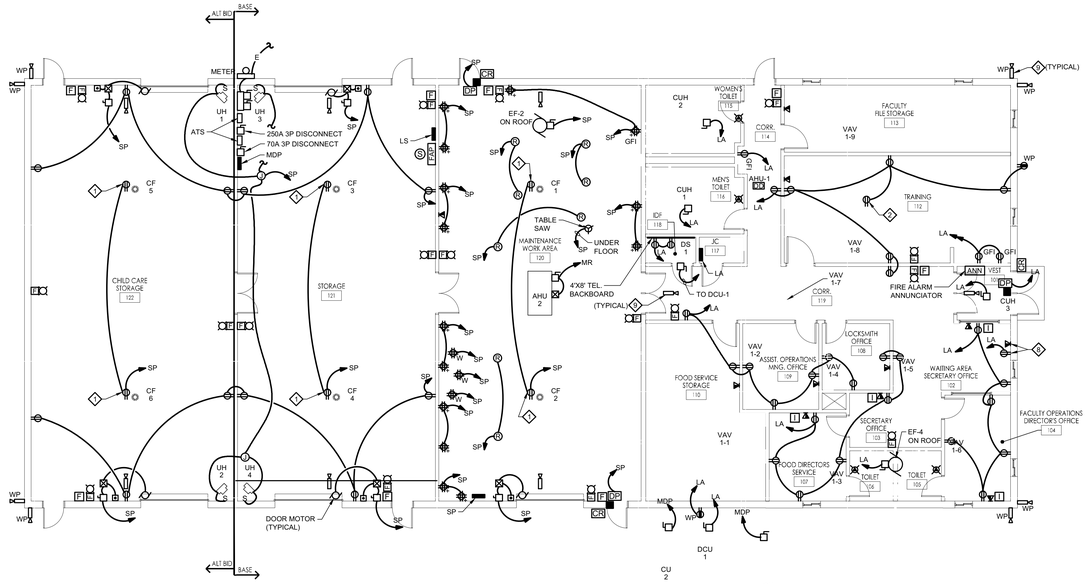
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Revisions

No.	Date	Description

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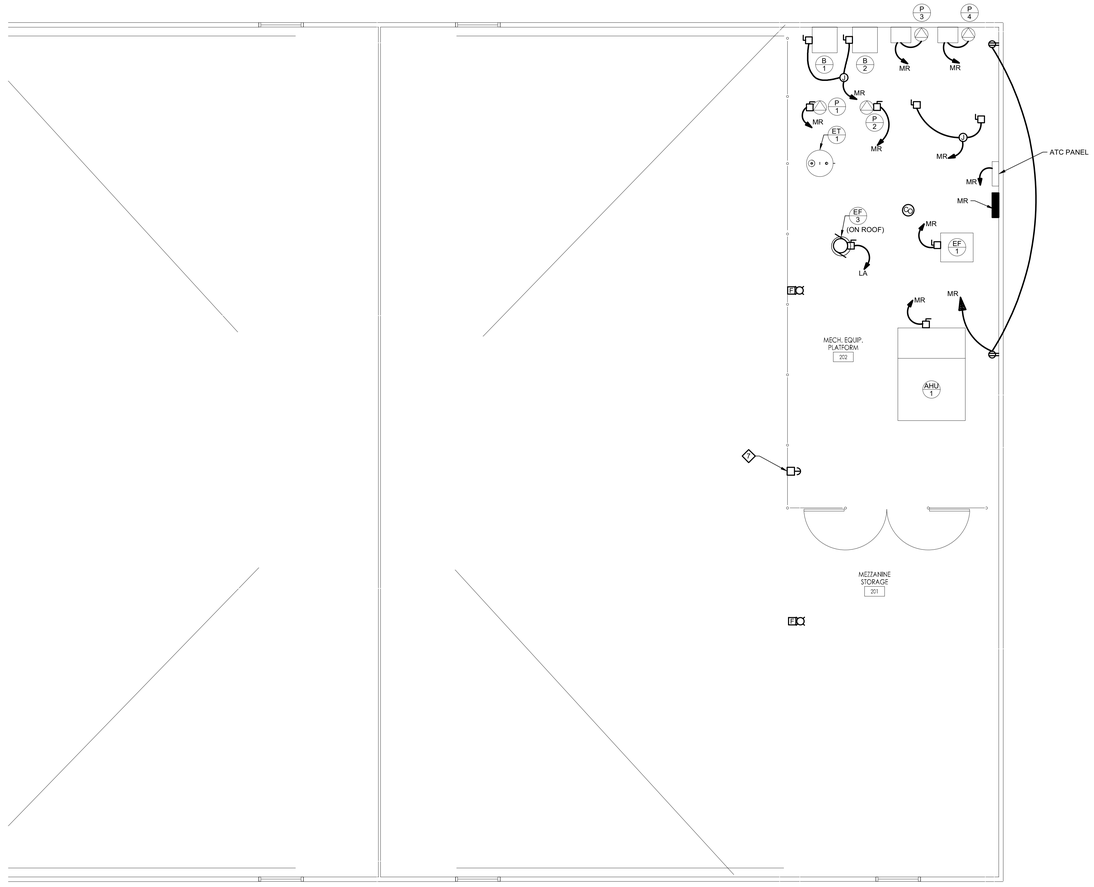
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1 E102 FIRST FLOOR PLAN
POWER, DATA, & SYSTEMS NEW WORK
SCALE: 1/8" = 1'-0"

NEW WORK NOTES:

1. MOUNT DUPLEX RECEPTACLE ADJACENT TO CIRCULATION FAN.
2. PROVIDE DUPLEX RECEPTACLE, FLUSH-MOUNTED ON CEILING FOR CEILING MOUNTED PROJECTOR. COORDINATE WITH OWNER FOR EXACT LOCATION BEFORE ROUGH IN.
3. NOTE NOT USED.
4. PROVIDE SITE LIGHT FIXTURES, POLES, HAND HOLES, AND WIRING PER SITE CIVIL DRAWING AND CONNECT TO PANEL "LA" VIA TIME SWITCH.
5. NOTE NOT USED.
6. NOTE NOT USED.
7. PROVIDE BOILER EMERGENCY SHUT OFF SWITCH AT ENTRANCE TO MECHANICAL ROOM AND WIRE TO BOILERS.
8. PROVIDE DUPLEX RECEPTACLE AND TELE / DATA OUTLET FOR PRINTER. COORDINATE WITH OWNER FOR EXACT LOCATION BEFORE ROUGH IN.
9. COORDINATE WITH OWNER FOR THE EXACT LOCATION AND AIMING OF ALL CCTV CAMERAS BEFORE ROUGH IN.



2 E102 MEZZANINE FLOOR PLAN
POWER, DATA, & SYSTEMS NEW WORK
SCALE: 1/4" = 1'-0"

06/19/2020
ISSUED FOR BID

REFERENCE DIMENSION
0 1
INDICATED DIMENSION IS MEASURED AT ONE (1) INCH IN LENGTH AND PROVIDED FOR REFERENCE/VERIFICATION ONLY.

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G&H Project No. 2019-187

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6/19/20 Date
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Project Name
NEW DISTRICT MAINTENANCE & OPERATIONS BUILDING

Project Owner Name
GALLOWAY TOWNSHIP PUBLIC SCHOOLS

Project Location
REEDS ROAD
GALLOWAY TOWNSHIP NJ

Project Number: 5195
Project Date: 6.19.2020
Checked By: ROB
Drawn By: TMH / JTM
Scale: AS NOTED

Drawing Name
ELECTRICAL NEW WORK POWER, DATA, & SYSTEMS FLOOR PLANS

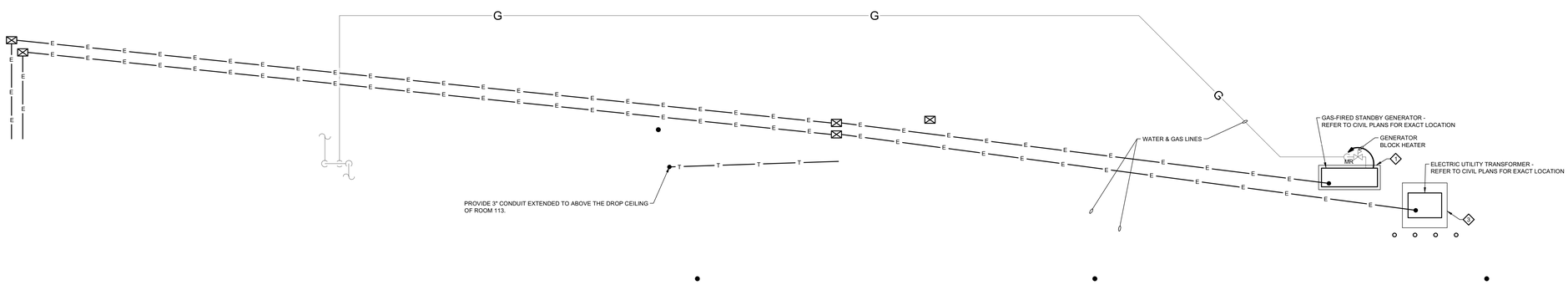
Revisions

No.	Date	Description

Drawing Number
E102

FILE PATH: O:\projects\2019\2019187 Galloway Reeds Rd Maintenance Bldg_drawings\Electrical New Work 2019-187.dwg
LAST SAVED: 2020.06.12 09:15 AM PLOTTED: 2020.06.12 09:23 AM PLOTTED BY: TJB

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1 / E103 ELECTRICAL SITE PLAN
SCALE: 1/8" = 1'-0"

NEW WORK NOTES:

1. PROVIDE 8 INCH THICK REINFORCED CONCRETE PAD UNDER GENERATOR.
2. PROVIDE SITE LIGHT FIXTURES, POLES, HAND HOLES, AND WIRING PER SITE CIVIL DRAWING AND CONNECT TO PANEL "LA" VIA TIME SWITCH.
3. PROVIDE TRANSFORMER PAD AND SERVICE CONDUITS AS REQUIRED BY ATLANTIC CITY ELECTRIC.

SYMBOL LEGEND:

—E——E— NEW UNDERGROUND ELECTRIC LINE.
—T——T— NEW UNDERGROUND TELE/DATA LINE.
NEW PULLBOX, SEE SITE CIVIL DRAWINGS FOR DETAILS.
NEW BOLLARD, SEE SITE CIVIL DRAWINGS FOR DETAILS.

REFERENCE DIMENSION
0 — 1
INDICATED DIMENSION IS MEASURED AT ONE (1) INCH IN LENGTH AND PROVIDED FOR REFERENCE/VERIFICATION ONLY.

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Drawn By
TMH / JTM
Scale
AS NOTED

Drawing Name
ELECTRICAL SITE PLAN

Revisions

No.	Date	Description

Drawing Number
E103

FILE PATH: G:\projects\2019\2019187 Galloway Reeds Rd Maintenance Bldg_drawings\Electrical New Work 2019-187.dwg
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