ADDENDUM NO. 1

FOR THE

NEWBURGH RECREATION CENTER PROJECT

TOWN OF NEWBURGH
ORANGE COUNTY, NEW YORK

CLIENT:
Town of Newburgh
1496 Route 300
Newburgh, NY 12550

PREPARED BY:
MHE Engineering, D.P.C.
111 Wheatfield Drive, Suite 1
Milford, PA 18337

NOTE: ANY UNAUTHORIZED ALTERATION OR ADDITION TO THIS DOCUMENT IS A VIOLATION OF SECTION 7209(2) OF THE NEW YORK STATE EDUCATION LAW.

DATE: March 6, 2024
JOB#: 21-135

THIS ADDENDUM CONSISTS OF (2) PAGES, (2) ATTACHMENTS & (17) PLAN SHEETS

Prospective Bidders are advised of the following revisions, additions and/or deletions to the contract documents.

SPECIFICATIONS:

1. Add attached Specification 096568 Synthetic Athletic Flooring. This specification is for the basketball court area only.

2. Remove Specification 055000 Metal Fabrications from the Architectural and Structural folders and replace with the attached Specification 055000 Metal Fabrications in its entirety.

CONSTRUCTION BID PLANS:

1. Add the attached drawing sheets in their entirety:

   Structural Plan Sheets:
   Plan Sheet S-202
   Plan Sheet S-203

2. Replace the attached drawing sheets in their entirety:

   General Plan Sheets:
   Plan Sheet G-100

   Structural Plan Sheets:
   Plan Sheet S-001
   Plan Sheet S-102
   Plan Sheet S-105
   Plan Sheet S-501

   Civil Plan Sheets:
   Plan Sheet C-102
   Plan Sheet C-103
   Plan Sheet C-104
   Plan Sheet C-105
   Plan Sheet C-106
   Plan Sheet C-106A

   Electrical Plan Sheets
   Plan Sheet E-400
   Plan Sheet E-501
   Plan Sheet E-604
   Plan Sheet E-702

ADDITIONAL CLARIFICATIONS:

1. Alternate #2, Stone Veneer Deduct: The deduct is for the Stone Veneer on the building proper. The stone veneer on the columns at each entryway are not part of the deduct and will be included in the project and in the base price.

2. Alternate #3 Deduct: Remove the hardwood flooring system (11,405 SF) and the wood sleeper system and plywood subfloor (14,995 SF) in the gymnasium portion of the building including all associated details, required floor transitions between various gym athletic floor systems. The top of concrete floor slab at the gymnasium will be = +99'-11 ½". There will be no wood sleepers in the project if Alt #3 Deduct is selected. Alt #3 Deduct will remove all hardwood, resulting in synthetic floor throughout the gym space.

ALL BIDDERS MUST SUBMIT ACKNOWLEDGEMENT OF RECEIPT OF ALL ADDENDUMS WITH BID

ACKNOWLEDGEMENT OF RECEIPT OF ALL ADDENDUMS LISTED BELOW:

ADDENDUM 1 – 06 March 2024 **_____**

SUBMIT THIS SHEET WITH YOUR BID

(End of Addendum No. 1)

MHE Engineering, D.P.C.
111 Wheatfield Drive, Suite 1
Milford, PA 18337

SECTION 096568 - SYNTHETIC ATHLETIC FLOORING

PART 1 - GENERAL

1.1 SUMMARY

A. Scope

1. The complete installation of synthetic sports surfacing system including striping of all court lines and painting of logos, etc. as required.

B. Related work specified under other sections.

1. SECTION 033000 CAST-IN-PLACE CONCRETE. Relative to vapor barriers, membrane water proofing, floor flatness tolerances, and use of concrete curing, hardening or sealing agents where finish floor systems are installed.

1.2 REFERENCES

A. Physical Properties compiled using the following test standards:

1. ASTM 2772
2. ASTM C501
3. ASTM D1894
4. ASTM F 2170
5. ASTM 1745-97
6. ASTM F 3191
7. EN 12235
8. EN 14904
9. EN 14808
10. DIN 53505
11. DIN 18032-2

1.3 SUBMITTALS

A. Manufacturer’s flooring system specifications.

B. 12” x 12” sample of the specified system

C. Manufacturer’s Synthetic Care & Maintenance Guide.

D. Manufacturer’s Installation instructions.

E. Copy of manufacturer’s limited warranty.

F. Drawings indicating floor patterns, layout, colors, widths, dimensions of game lines and markers, and locations of floor inserts for athletic equipment & electrical receptacles.

1.4 QUALITY ASSURANCE

A. MATERIAL SUPPLIER: Shall be Manufacturer.

B. INSTALLER:

1. The complete installation of the flooring system, as described in these specifications, shall be carried out by an experienced installer with minimum 5 years experience working on project with the specified system, and the work shall be performed in accordance with current Manufacturer installation instructions.
2. Installer shall warranty the installation for a period of one year from the date of substantial completion.

1.5 DELIVERY, STORAGE AND HANDLING

A. Materials must be delivered in the Manufacturer's original, unopened and undamaged packaging with identification labels intact.

B. Store the material inside protected from exposure to harmful weather conditions on a clean, dry, flat surface protected from possible damage. Do not stack rolls of material.

C. Storage conditions shall be 60°F to 85°F. Ambient RH shall not exceed 70%.

1.6 SITE CONDITIONS

A. Installation of synthetic materials shall not commence until all other finishes and overhead mechanical trades have completed their work in the synthetic floor areas.

B. Permanent heat, light and ventilation shall be installed and operating during and after installation. Subfloors shall be clean, dry, and free from dirt, dust, oil, grease, paint, old adhesive residue, or other foreign materials.

C. Moderate room temperature of 65° F to 80° F, ambient RH shall be 70% or less which must be maintained for one week prior to, during and 72 hours after installation.

D. Flooring installation shall not begin until moisture vapor emissions, pH level, concrete porosity, and levelness of concrete subfloors have been met. The installation area shall be closed to all traffic and activity for a period to be set by the flooring contractor.

E. Environmental Limitations

1. Comply with requirements of Manufacturer.
2. Adhere to all SDS requirements for materials employed in the work. Protect all persons from exposure to hazardous materials at all times.

F. After the synthetic floors are installed and the game lines are painted, the area is to be closed to allow curing time for the system. No other trades or personnel are allowed on the floor until the owner has accepted it.

1.7 COORDINATION

A. Coordinate layout and installation of flooring with floor inserts for gym equipment and electrical receptacles.

1.8 WARRANTY

A. Manufacturer shall provide a limited warranty of one (1) year on the materials it has supplied. (A copy of the full warranty, with its Terms and Exclusions, is available from the authorized Manufacturer Dealer.) This warranty is expressly limited to the flooring materials (goods) supplied by manufacturer. This warranty does not cover floor damage caused (wholly or in part) by fire, winds, floods, moisture, other unfavorable atmospheric conditions or chemical action, nor does it apply to damage caused by ordinary wear, misuse, abuse, negligent or intentional misconduct, aging, faulty building construction, concrete slab separation, faulty or unsuitable subsurface or site preparation, settlement of the building walls or faulty or unprofessional installation of Manufacturer flooring systems.

B. Manufacturer shall not be liable for incidental or consequential losses, damages or expenses directly or indirectly arising from the sale, handling or use of the materials (goods) or from any other cause relating thereto, and their liability hereunder in any case is expressly limited to the replacement of materials (goods) not complying with this agreement or, at their election, to the repayment of, or crediting buyer with, an amount equal to the purchase price of such materials (goods), whether such claims are for breach of warranty or negligence. Any claim shall be deemed waived by buyer unless submitted to Manufacturer in writing within 30 days from the date buyer discovered, or should have discovered, any claimed breach.

1.9 CLOSE OUT SUBMITTALS

A. Manufacturer’s Care and Maintenance Guide and instructions.

B. Manufacturer’s warranty information.

PART 2 – PRODUCTS

2.1 MATERIALS

A. Basis of Design - All polyurethane components shall be non-hazardous, and shall not contain ANY lead, mercury, heavy metals, PCB, or formaldehyde, and shall be ElastiPlus synthetic

athletic floor system as manufactured by Connor Sports, A Titan Commercial Sports and Gym Flooring Company.

1. Physical Properties

i.	Standard for Indoor Sports System	P-1	ASTM 2772
ii.	Indoor Air Quality (IAQ)	Floorscore	California 01350
iii.	Total Volatile Organic Compounds	Compliant	CDPH/EHLB v1.2-2017
iv.	Shock Absorption 9mm basemat	27%	EN 14808
v.	Coefficient of Friction	1.45 +	ASTM D1894
vi.	Ball rebound	>90	EN 12235
vii.	Classification	P-1	EN 14904
viii.	Gloss	5-15%	
ix.	System Type	Point Elastic	EN 14904
x.	Tabor Abrasion	.06+ .01	ASTM C501
xi.	Resistance to rolling loads	1500 N	EN 1569
xii.	Tensile strength	1000-1400 psi	ASTM D412
xiii.	Elongation at break	100-140%	ASTM D412
xiv.	Tear strength	65-85 pli	ASTM D624
xv.	Surface Hardness	70-80 Shore A	DIN 53505
xvi.	Light (color) fastness	Excellent	DIN 54004

B. Manufacturers: Subject to compliance with requirements, available manufacturers offering projects that may be incorporated into the Work included, but are not limited to the following:

1. Robbins Sports Surfaces
2. Tarkett Commercial

C. Adhesive – Two-component polyurethane, solvent free.

D. Base Layer – Specially formulated prefabricated resilient basemat made of recycled rubber and foam granules bound with MDI polyurethane. Basemat layer shall be of 2 consistent thickness.

1. Basemat density: – 47.5 +5 lbs/ft^3
2. Basemat thickness:
    a. +/- 9mm

E. Scratch Coat (mat sealer) – Two-component, thixotropic polyurethane compound.

F. Wear Coat – To be two-component, pigmented, seamless self-leveling polyurethane. Average wear layer thickness – 2mm

G. Top Coat (matte finish) – To be three-component water-based urethane Top Coat. Colors to be selected by engineer from full range of colors.

H. Game Line Paint – Three-component water-based urethane. Colors to be selected by engineer from full range of colors.

I. Base – Vinyl wall base 4” high. Select from standard colors.

PART 3 – EXECUTION (This is not a complete guide to installation and should not be used as such)

3.1 INSPECTION

A. Inspect the concrete slab for proper flatness, levelness and any other conditions critical to proper installation. Report any discrepancies to the engineer prior to installation of any flooring.

B. Concrete slab shall be broom cleaned prior to installation.

3.2 EXAMINATION AND PREPARATION

A. Review moisture vapor emission and pH test results and comply with the following:

1. Moisture vapor emissions must not exceed 80% RH as per ASTM F2170.
2. pH level should be in the range of 7 to 8.5 per ASTM F710.
3. Slab porosity must be tested per ASTM F 3191

B. Installation shall not be carried out unless the concrete flatness, moisture vapor emissions, Concrete Porosity and pH requirements as specified are satisfied.

1. Concrete shall be smooth and level, NOT BURNISHED

3.3 INSTALLATION

A. Prepare the concrete to receive the flooring material in accordance with installation instructions.

B. Basemat

1. Unroll basemat, fold, and adhere to substrate or unroll directly into spread adhesive. Do not cut the base mat to final dimensions until it is laid into the adhesive.
2. Thoroughly mix the two-component polyurethane adhesive per Manufacturer's instructions and apply it directly to the concrete subfloor with a V-notched 3/32" X 3/32" X 3/32" trowel.
3. Install the base mat into the freshly applied adhesive. Do not allow a compression fit at any seam. Roll the base mat with a 100 lb segmented roller and repeat the rolling process on the entire mat 45 minutes after installation. Allow the adhesive to cure before proceeding to the next step.

C. Scratch Coat

1. Thoroughly mix the two-component Scratch Coat per Manufacturer's instructions.
2. Apply two layers of Scratch Coat to the base mat with a flat trowel. Allow each layer to cure a minimum of 8 hours before proceeding to the next application. Inspect for, and fill all gaps by applying additional material as needed. Sand down any ridges in the cured Scratch Coat with 100 grit sand paper.

D. Wear Coat

1. Thoroughly mix the two-component Wear Coat per Manufacturer's instructions.
2. Apply the mixed wear coat material using a notched squeegee in one layer. The Wear Coat must be applied wet-into-wet to create a seamless surface. Allow the Wear Coat to cure 12 hours before proceeding to the next application. Sand any imperfections in the finished surface with 100 grit sandpaper.

E. Top Coat

1. Thoroughly mix the three-component water-based urethane Top Coat per Manufacturer's instructions.

    a. Apply the mixed material with a paint roller at 250 to 300 square feet per gallon. Allow the Top Coat to cure a minimum of 18 hours before applying the game lines.

F. Game Lines

1. Use only high-quality masking tape approved by the Manufacturer.
2. Thoroughly mix the three-component game line paint per Manufacturer's instructions.
3. Provide game lines as indicated on drawings.

G. Remove all excess and waste materials from the work area. Dispose of empty containers in accordance with federal and local statutes.

END OF SECTION 096566

SECTION 055000 - METAL FABRICATIONS

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Miscellaneous steel framing and supports.
2. Shelf angles.
3. Metal ladders.
4. Metal Ships ladders.
5. Metal floor plate and supports.
6. Structural-steel door frames.
7. Miscellaneous steel trim.
8. Metal bollards.
9. Loose bearing and leveling plates.

B. Products furnished, but not installed, under this Section include the following:

1. Loose steel lintels.
2. Anchor bolts, steel pipe sleeves, slotted-channel inserts, and wedge-type inserts indicated to be cast into concrete or built into unit masonry.
3. Steel weld plates and angles for casting into concrete for applications where they are not specified in other Sections.

1.2 ACTION SUBMITTALS

A. Product Data: For the following:

1. Paint products.
2. Grout.

B. Shop Drawings: Show fabrication and installation details. Include plans, elevations, sections, and details of metal fabrications and their connections. Show anchorage and accessory items.

C. Delegated-Design Submittal: For ladders, including analysis data signed and sealed by the qualified professional engineer responsible for their preparation.

PART 2 - PRODUCTS

2.1 PERFORMANCE REQUIREMENTS

A. Delegated Design: Engage a qualified professional engineer, as defined in Section 014000 "Quality Requirements," to design ladders and stair cases.

B. Structural Performance of Aluminum Ladders: Aluminum ladders, including landings, shall withstand the effects of loads and stresses within limits and under conditions specified in ANSI A14.3.

C. Thermal Movements: Allow for thermal movements from ambient and surface temperature changes acting on exterior metal fabrications by preventing buckling, opening of joints, overstressing of components, failure of connections, and other detrimental effects.

1. Temperature Change: 120 deg F, ambient; 180 deg F, material surfaces.

2.2 METALS

A. Metal Surfaces, General: Provide materials with smooth, flat surfaces unless otherwise indicated. For metal fabrications exposed to view in the completed Work, provide materials without seam marks, roller marks, rolled trade names, or blemishes.

B. Steel Plates, Shapes, and Bars: ASTM A36/A36M.

C. Stainless-Steel Bars and Shapes: ASTM A276, Type 304.

D. Rolled-Steel Floor Plate: ASTM A786/A786M, rolled from plate complying with ASTM A36/A36M or ASTM A283/A283M, Grade C or D.

E. Rolled-Stainless-Steel Floor Plate: ASTM A793.

F. Steel Tubing: ASTM A500/A500M, cold-formed steel tubing.

G. Steel Pipe: ASTM A53/A53M, Standard Weight (Schedule 40) unless otherwise indicated.

H. Slotted Channel Framing: Cold-formed metal box channels (struts) complying with MFMA-4.

1. Size of Channels: 1-5/8 by 1-5/8 inches, or as indicated on the plans.
2. Material: Galvanized steel, ASTM A653/A653M, structural steel, Grade 33, with G90 coating; 0.079-inch nominal thickness.
3. Material: Cold-rolled steel, ASTM A1008/A1008M, structural steel, Grade 33; 0.0677-inch minimum thickness; coated with rust-inhibitive, baked-on, acrylic enamel, or hot-dip galvanized after fabrication.

I. Cast Iron: Either gray iron, ASTM A48/A48M, or malleable iron, ASTM A47/A47M, unless otherwise indicated.

J. Aluminum Extrusions: ASTM B221, Alloy 6063-T6.

K. Aluminum-Alloy Rolled Tread Plate: ASTM B632/B632M, Alloy 6061-T6.

L. Aluminum Castings: ASTM B26/B26M, Alloy 443.0-F.

M. Nickel Silver Castings: ASTM B584, Alloy UNS No. C97600 (20 percent leaded nickel bronze).

2.3 FASTENERS

A. General: Unless otherwise indicated, provide Type 304 stainless-steel fasteners for exterior use and zinc-plated fasteners with coating complying with ASTM B633 or ASTM F1941, Class Fe/Zn 5, at exterior walls. Select fasteners for type, grade, and class required.

1. Provide stainless-steel fasteners for fastening aluminum.
2. Provide stainless-steel fasteners for fastening stainless steel.
3. Provide stainless-steel fasteners for fastening nickel silver.
4. Provide bronze fasteners for fastening bronze.

B. Cast-in-Place Anchors in Concrete: Either threaded type or wedge type unless otherwise indicated; galvanized ferrous castings, either ASTM A47/A47M malleable iron or ASTM A27/A27M cast steel. Provide bolts, washers, and shims as needed, all hot-dip galvanized per ASTM F2329.

C. Post-Installed Anchors: Torque-controlled expansion anchors or epoxy anchors.

1. Material for Interior Locations: Carbon-steel components zinc plated to comply with ASTM B633 or ASTM F1941, Class Fe/Zn 5, unless otherwise indicated.
2. Material for Exterior Locations and Where Stainless Steel Is Indicated: Alloy Group 1 stainless-steel bolts, ASTM F593, and nuts, ASTM F594.

D. Slotted-Channel Inserts: Cold-formed, hot-dip galvanized-steel box channels (struts) complying with MFMA-4, 1-5/8 by 7/8 inches by length indicated with anchor straps or studs not less than 3 inches long at not more than 8 inches o.c. Provide with temporary filler and tee-head bolts, complete with washers and nuts, all zinc-plated to comply with ASTM B633, Class Fe/Zn 5, as needed for fastening to inserts.

2.4 MISCELLANEOUS MATERIALS

A. Shop Primers: Provide primers that comply with Section 099113 "Exterior Painting," Section 099123 Interior Painting,"

B. Universal Shop Primer: Fast-curing, lead- and chromate-free, universal modified-alkyd primer complying with MPI#79 and compatible with topcoat.

1. Use primer containing pigments that make it easily distinguishable from zinc-rich primer.

C. Epoxy Zinc-Rich Primer: Complying with MPI#20 and compatible with topcoat.

D. Galvanizing Repair Paint: High-zinc-dust-content paint complying with SSPC-Paint 20 and compatible with paints specified to be used over it.

E. Bituminous Paint: Cold-applied asphalt emulsion complying with ASTM D1187/D1187M.

F. Nonshrink, Nonmetallic Grout: Factory-packaged, nonstaining, noncorrosive, nongaseous grout complying with ASTM C1107/C1107M. Provide grout specifically recommended by manufacturer for interior and exterior applications.

G. Concrete: Comply with requirements in Section 033000 "Cast-in-Place Concrete" for normal-weight, air-entrained, concrete with a minimum 28-day compressive strength of 3000 psi.

2.5 FABRICATION, GENERAL

A. Shop Assembly: Preassemble items in the shop to greatest extent possible. Use connections that maintain structural value of joined pieces.

B. Cut, drill, and punch metals cleanly and accurately. Remove burrs and ease edges. Remove sharp or rough areas on exposed surfaces.

C. Weld corners and seams continuously to comply with the following:

1. Use materials and methods that minimize distortion and develop strength and corrosion resistance of base metals.
2. Obtain fusion without undercut or overlap.
3. Remove welding flux immediately.
4. At exposed connections, finish exposed welds and surfaces smooth and blended.

D. Form exposed connections with hairline joints, flush and smooth, using concealed fasteners or welds where possible. Locate joints where least conspicuous.

E. Fabricate seams and other connections that are exposed to weather in a manner to exclude water. Provide weep holes where water may accumulate.

F. Where units are indicated to be cast into concrete or built into masonry, equip with integrally welded steel strap anchors not less than 8 inches from ends and corners of units and 24 inches o.c.

2.6 MISCELLANEOUS FRAMING AND SUPPORTS

A. General: Provide steel framing and supports not specified in other Sections as needed to complete the Work.

B. Fabricate units from steel shapes, plates, and bars of welded construction unless otherwise indicated. Fabricate to sizes, shapes, and profiles indicated and as necessary to receive adjacent construction.

C. Fabricate steel girders for wood frame construction from continuous steel shapes of sizes indicated.

1. Where wood nailers are attached to girders with bolts or lag screws, drill or punch holes at 16 inches o.c.

D. Fabricate steel pipe columns for supporting wood frame construction from steel pipe with steel baseplates and top plates as indicated. Drill or punch baseplates and top plates for anchor and connection bolts and weld to pipe with fillet welds all around. Make welds the same size as pipe wall thickness unless otherwise indicated.

2.7 SHELF ANGLES

A. Fabricate shelf angles from steel angles of sizes indicated and for attachment to concrete framing. Provide horizontally slotted holes to receive 3/4-inch bolts, spaced not more than 6 inches from ends and 24 inches o.c., unless otherwise indicated.

B. For cavity walls, provide vertical channel brackets to support angles from backup masonry and concrete.

C. Galvanize and prime shelf angles located in exterior walls.

D. Prime shelf angles located in exterior walls with primer specified in Section 099113 “Exterior Painting.”

E. Furnish wedge-type concrete inserts, complete with fasteners, to attach shelf angles to cast-in-place concrete.

2.8 METAL LADDERS

A. General:

1. Comply with ANSI A14.3, except for elevator pit ladders.

B. Steel Ladders:

1. Space siderails 18 inches apart unless otherwise indicated.
2. Siderails: Continuous, 1/2-by-2-1/2-inch steel flat bars, with eased edges.
3. Rungs: 3/4-inch-diameter or 3/4-inch-square steel bars.
4. Fit rungs in centerline of siderails; plug-weld and grind smooth on outer rail faces.
5. Provide nonslip surfaces on top of each rung.
6. Galvanize and prime exterior ladders, including brackets.
7. Primeladders, including brackets and fasteners, with primer specified in Section 099113 “Exterior Painting.”

2.9 METAL SHIPS LADDERS

A. General:

1. Comply with IBC Section 1011.15.

B. Steel Ship’s Ladders:

1. Treads to have a minimum depth of 5”
2. Risers to have a minimum height of 9 ½”
3. Handrails to be provided on both sides
4. The minimum clear width at handrails shall be 20”
5. Provide nonslip surfaces on all treads and platforms
6. Galvanize and prime exterior ladders, including brackets.
7. Primeladders, including brackets and fasteners, with primer specified in Section 099113 “Exterior Painting.”

2.10 METAL FLOOR PLATE

A. Fabricate from rolled-steel floor plate of thickness indicated below:

1. Thickness: 1/8 inch.

B. Provide steel angle supports as indicated.

C. Provide flush steel bar drop handles for lifting removable sections, one at each end of each section.

2.11 STRUCTURAL-STEEL DOOR FRAMES

A. Fabricate structural-steel door frames from steel shapes, plates, and bars of size and to dimensions indicated, fully welded together, with 5/8-by-1-1/2-inch steel channel stops. Plug-weld built-up members and continuously weld exposed joints. Reinforce frames and drill and tap as necessary to accept finish hardware.

1. Provide with integrally welded steel strap anchors for securing door frames into adjoining concrete or masonry.

B. Galvanize exterior steel frames.

C. Prime steel frames with primer specified in Section 099113 “Exterior Painting.”

2.12 MISCELLANEOUS STEEL TRIM

A. Unless otherwise indicated, fabricate units from steel shapes, plates, and bars of profiles shown with continuously welded joints and smooth exposed edges. Miter corners and use concealed field splices where possible.

B. Provide cutouts, fittings, and anchorages as needed to coordinate assembly and installation with other work.

C. Galvanize exterior miscellaneous steel trim.

D. Prime miscellaneous steel trim with primer specified in Section 099113 “Exterior Painting.”

2.13 METAL BOLLARDS

A. Fabricate metal bollards from Schedule 40 steel pipe or steel shapes, as indicated on plans.

1. If bollards are not indicated to be concrete filled, cap bollards with 1/4-inch-thick steel plate.

B. Fabricate sleeves for bollard anchorage from steel pipe or tubing with 1/4-inch-thick steel plate welded to bottom of sleeve.

C. Prime bollards with primer specified in Section 099113 “Exterior Painting.”

2.14 LOOSE BEARING AND LEVELING PLATES

A. Provide loose bearing and leveling plates for steel items bearing on masonry or concrete construction. Drill plates to receive anchor bolts and for grouting.

2.15 LOOSE STEEL LINTELS

A. Fabricate loose steel lintels from steel angles and shapes of size indicated for openings and recesses in masonry walls and partitions at locations indicated.

B. Galvanize loose steel lintels located in exterior walls.

C. Prime loose steel lintels located in exterior walls with primer specified in Section 099113 “Exterior Painting.”

2.16 STEEL WELD PLATES AND ANGLES

A. Provide steel weld plates and angles not specified in other Sections, for items supported from concrete construction as needed to complete the Work. Provide each unit with no fewer than two integrally welded steel strap anchors for embedding in concrete.

2.17 FINISHES, GENERAL

A. Finish metal fabrications after assembly.

2.18 STEEL AND IRON FINISHES

A. Galvanizing: Hot-dip galvanize items as indicated to comply with ASTM A153/A153M for steel and iron hardware and with ASTM A123/A123M for other steel and iron products.

B. Shop prime iron and steel items unless they are to be embedded in concrete, sprayed-on fireproofing, or masonry, or unless otherwise indicated.

1. Shop prime with primers specified in Section 099113 "Exterior Painting" primers or specified in Section 099123 "Interior Painting"

C. Preparation for Shop Priming: Prepare surfaces to comply with requirements indicated below:

1. Exterior Items: SSPC-SP 6/NACE No. 3, "Commercial Blast Cleaning."
2. Items Indicated to Receive Zinc-Rich Primer: SSPC-SP 6/NACE No. 3, "Commercial Blast Cleaning."
3. Items Indicated to Receive Primers Specified in Section 099113 “Exterior Painting”: SSPC-SP 6/NACE No. 3, "Commercial Blast Cleaning."
4. Other Items: SSPC-SP 3, "Power Tool Cleaning."

D. Shop Priming: Apply shop primer to comply with SSPC-PA 1, "Paint Application Specification No. 1: Shop, Field, and Maintenance Painting of Steel," for shop painting.

PART 3 - EXECUTION

3.1 INSTALLATION, GENERAL

A. Cutting, Fitting, and Placement: Perform cutting, drilling, and fitting required for installing metal fabrications. Set metal fabrications accurately in location, alignment, and elevation; with edges and surfaces level, plumb, true, and free of rack; and measured from established lines and levels.

B. Fit exposed connections accurately together to form hairline joints. Weld connections that are not to be left as exposed joints but cannot be shop welded because of shipping size limitations. Do not weld, cut, or abrade surfaces of exterior units that have been hot-dip galvanized after fabrication and are for bolted or screwed field connections.

C. Field Welding: Comply with the following requirements:

1. Use materials and methods that minimize distortion and develop strength and corrosion resistance of base metals.
2. Obtain fusion without undercut or overlap.
3. Remove welding flux immediately.
4. At exposed connections, finish exposed welds and surfaces smooth and blended so no roughness shows after finishing and contour of welded surface matches that of adjacent surface.

D. Fastening to In-Place Construction: Provide anchorage devices and fasteners where metal fabrications are required to be fastened to in-place construction.

E. Provide temporary bracing or anchors in formwork for items that are to be built into concrete, masonry, or similar construction.

3.2 INSTALLING METAL BOLLARDS

A. Fill metal-capped bollards solidly with concrete and allow concrete to cure seven days before installing, unless otherwise indicated.

B. Anchor bollards in concrete with pipe sleeves preset and anchored into concrete. Fill annular space around bollard solidly with nonshrink grout.

C. Anchor bollards in place with concrete footings. Place concrete and vibrate or tamp for consolidation. Support and brace bollards in position until concrete has cured.

D. Fill bollards solidly with concrete, mounding top surface to shed water.

3.3 INSTALLING BEARING AND LEVELING PLATES

A. Clean concrete and masonry bearing surfaces of bond-reducing materials, and roughen to improve bond to surfaces. Clean bottom surface of plates.

B. Set bearing and leveling plates on wedges, shims, or leveling nuts. After bearing members have been positioned and plumbed, tighten anchor bolts. Do not remove wedges or shims but, if protruding, cut off flush with edge of bearing plate before packing with nonshrink grout. Pack grout solidly between bearing surfaces and plates to ensure that no voids remain.

3.4 ADJUSTING AND CLEANING

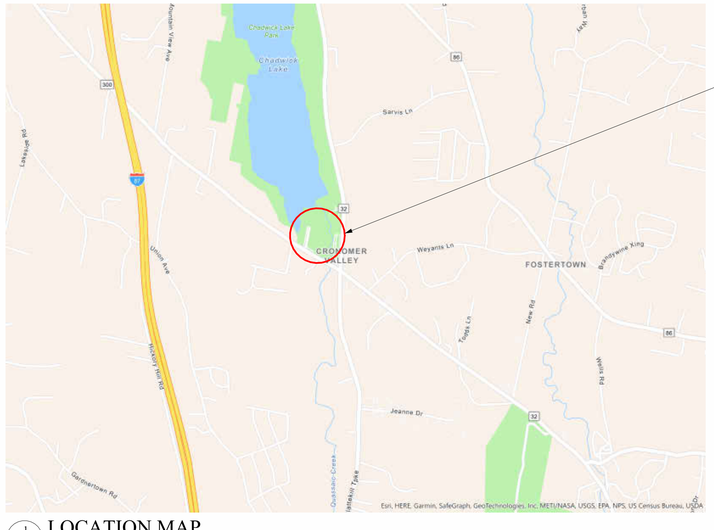
A. Touchup Painting: Immediately after erection, clean field welds, bolted connections, and abraded areas. Paint uncoated and abraded areas with the same material as used for shop painting to comply with SSPC-PA 1 for touching up shop-painted surfaces.

B. Galvanized Surfaces: Clean field welds, bolted connections, and abraded areas and repair galvanizing to comply with ASTM A780/A780M.

END OF SECTION 055000

NEWBURGH RECREATION CENTER
CHADWICK LAKE PARK

THE PROJECT IS BID AS A SINGLE PRIME CONSTRUCTION PROJECT DUE TO A WICKS LAW EXCEMPTION PERMITTED THROUGH THE TOWN'S PROJECT LABOR AGREEMENT. ALL WORK DEPICTED ON THE PLANS AND IN THE SPECIFICATIONS IS THE RESPONSIBILITY OF THE SUCCESSFUL BIDDER INCLUDING ANY WORK IDENTIFIED AS BY MECHANICAL, PLUMBING, OR ELECTRICAL CONTRACT.



BUILDING LOCATION

1 / G-100 LOCATION MAP
SCALE: N.T.S.

DRAWING LIST	
DWG No.	DESCRIPTION
G-100	COVER SHEET
G-101	BUILDING CODE ANALYSIS AND EGRESS PLAN
G-102	LEGEND, ADA CLEARANCES, AND NOTES
C-001	NOTES
C-002	NOTES
C-101	EXISTING CONDITIONS & DEMOLITION PLAN
C-102	OVERALL SITE PLAN
C-103	SITE DEVELOPMENT PLAN
C-104	SEPTIC SYSTEM PLAN
C-105	WATER MAIN PLAN & PROFILE
C-106	PARTIAL STORM WATER AND GRADING PLAN
C-106A	ALTERNATE PARTIAL STORM WATER AND GRADING PLAN
C-107	PARTIAL STORM WATER AND GRADING PLAN
C-108	EROSION AND SEDIMENT CONTROL PLAN
C-501	TYPICAL SEWAGE DISPOSAL SYSTEM DETAILS
C-502	TYPICAL SEWAGE DISPOSAL SYSTEM DETAILS
C-503	TYPICALWATER SYSTEM DETAILS
C-504	TYPICAL STORM WATER DETAILS
C-505	TYPICAL STORM WATER DETAILS
C-506	TYPICAL STORM WATER DETAILS
C-507	TYPICAL SITE DEVELOPMENT DETAILS
C-508	TYPICAL EROSION & SEDIMENT CONTROL DETAILS
C-509	TYPICAL EROSION & SEDIMENT CONTROL DETAILS
S-001	STRUCTURAL NOTES
S-101	FOUNDATION PLAN
S-102	SLAB PLAN
S-103	WALL FRAMING
S-104	ATTIC FRAMING PLAN
S-105	ROOF FRAMING
S-201	FOUNDATION ELEVATIONS
S-202	STRUCTURAL EXCAVATION & BACKFILL PROFILES
S-203	STRUCUTRAL EXCAVATION & BACKFILL PROFILES
S-301	SECTIONS
S-302	SECTIONS
S-501	FOUNDATION DETAILS
S-502	FOUNDATION DETAILS
A-101	FIRST FLOOR
A-102	PARTIAL FIRST FLOOR PLANS
A-103	PARTIAL MECH ATTIC PLANS
A-104	ROOF PLAN & DETAILS
A-105	DETAILS
A-106	GYMNASIUM COURT LINES PLAN
A-107	GYMNASIUM COURT LINES/FINISH PLAN
A-201	EXTERIOR ELEVATIONS
A-301	BUILDING SECTIONS
A-302	BUILDING SECTIONS
A-303	WALL SECTIONS
A-304	WALL SECTIONS & DETAILS
A-305	VESTIBULE SECTION & DETAILS
A-601	INTERIOR ELEVATIONS

DRAWING LIST	
DWG No.	DESCRIPTION
A-602	INTERIOR ELEVATIONS
A-701	DOOR AND WINDOW SCHEDULE & DETAILS
A-702	FINISH SCHEDULE & DETAILS
A-703	WINDOW TYPES, SCHEDULE, & DETAILS
A-801	REFLECTED CEILING PLAN
A-901	ALTERNATE #1
M-001	MECHANICAL LEGENDS, ABBREVIATIONS & NOTES
M-100	MECHANICAL DUCTWORK PARTIAL PLANS
M-101	MECHANICAL DUCTWORK GYMNASIUM PLAN
M-200	MECHANICAL HYDRONIC PARTIAL PLANS
M-201	MECHANICAL HYDRONIC GYMNASIUM PLAN
M-300	MECHANICAL ENLARGED DUCTWORK PARTIAL PLANS
M-500	MECHANICAL SCHEDULES
M-501	MECHANICAL SCHEDULES
M-600	MECHANICAL DETAILS
P-001	PLUMBING LEGENDS, ABBREVIATIONS & NOTES
P-100	PLUMBING SANITARY PARTIAL PLANS
P-101	PLUMBING SANITARY GYMNASIUM PLAN
P-200	PLUMBING DOMESTIC WATER PARTIAL PLANS
P-201	PLUMBING DOMESTIC WATER GYMNASIUM PLAN
P-400	PLUMBING ENLARGED PLANS
P-600	PLUMBING DETAILS
E-001	ELECTRICAL LEGENDS, ABBREVIATIONS & NOTES
E-100	ELECTRICAL POWER PARTIAL PLANS
E-101	ELECTRICAL PARTIAL POWER PLAN (A/C ALTERNATE)
E-200	ELECTRICAL LIGHTING PARTIAL PLANS
E-201	ELECTRICAL LIGHTING GYMNASIUM PLAN
E-300	ELECTRICAL SYSTEMS PARTIAL PLANS
E-301	ELECTRICAL PARTIAL SYSTEMS PLAN
E-400	ELECTRICAL ENLARGED PLANS
E-500	ELECTRICAL SCHEDULES
E-501	ELECTRICAL SCHEDULES
E-502	ELECTRICAL SCHEDULES
E-503	ELECTRICAL SCHEDULES
E-504	ELECTRICAL SCHEDULES
E-600	ELECTRICAL DETAILS
E-601	ELECTRICAL DETAILS
E-602	ELECTRICAL DETAILS
E-603	ELECTRICAL DETAILS
E-604	ELECTRICAL DETAILS
E-605	ELECTRICAL DETAILS
E-700	ELECTRICAL SINGLE LINE DIAGRAM
E-701	ELECTRICAL FIRE ALARM RISER DIAGRAM
E-702	ELECTRICAL RISER DIAGRAMS
FP-001	GENERAL NOTES & SYMBOL LIST
FP-100	PARTIAL ATTIC PLANS - FIRE PROTECTION
FP-101	FIRST FLOOR PLAN - FIRE PROTECTION
FP-500	DETAILS

MHE ENGINEERING
33 Airport Center Drive, Suite 202
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(845) 567-3100
111 Wheatfield Drive, Suite 1
Milford, PA 18337
(570) 296-2765

BID SET

UDIG·NY SAFE DIGGING STARTS HERE

NEW RECREATION CENTER
TOWN OF NEWBURGH

CHADWICK LAKE PARK
1702 NY-300, Newburgh, NY 12550

COVER SHEET

REVISIONS

NO.	DESCRIPTION	DATE
1	ADDENDUM 1	6 MAR, 2024

ISSUED DATE:	28 FEB, 2024
DESIGNED BY:	AW
DRAWN BY:	CH
CHECKED BY:	AW
REVIEWED BY:	ML

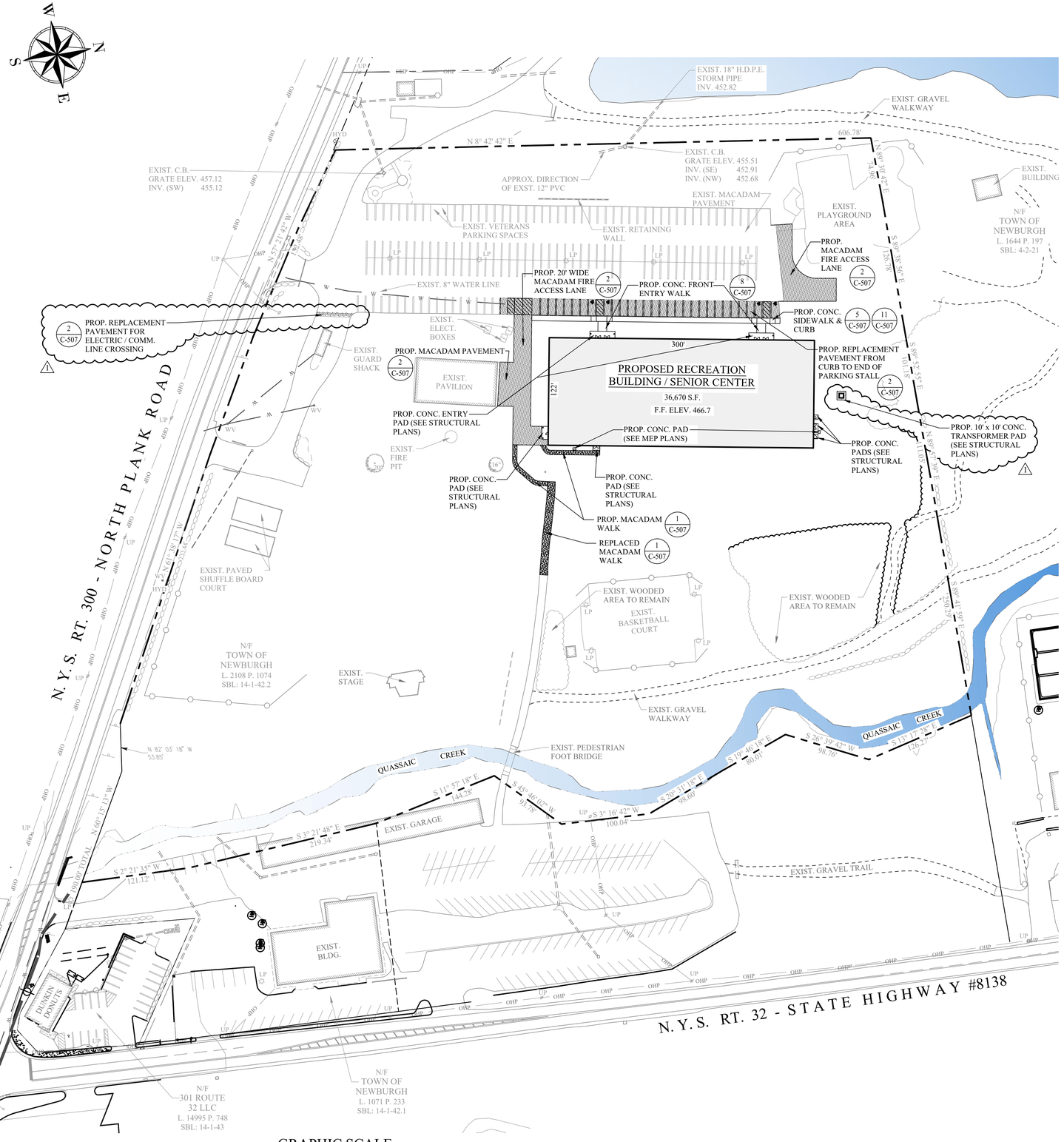
SHEET NO.

G-100

PROJECT # 21-135 PHASE # _

3/5/2024 9:41:58 AM

C:\Users\ryndos\Documents\21-135 Newburgh Rec Fall Site-MTL_ryndosYBVWS.rvt



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CHADWICK LAKE PARK
1702 ROUTE 300
NEWBURGH, N.Y. 12550

OVERALL SITE PLAN

REVISIONS

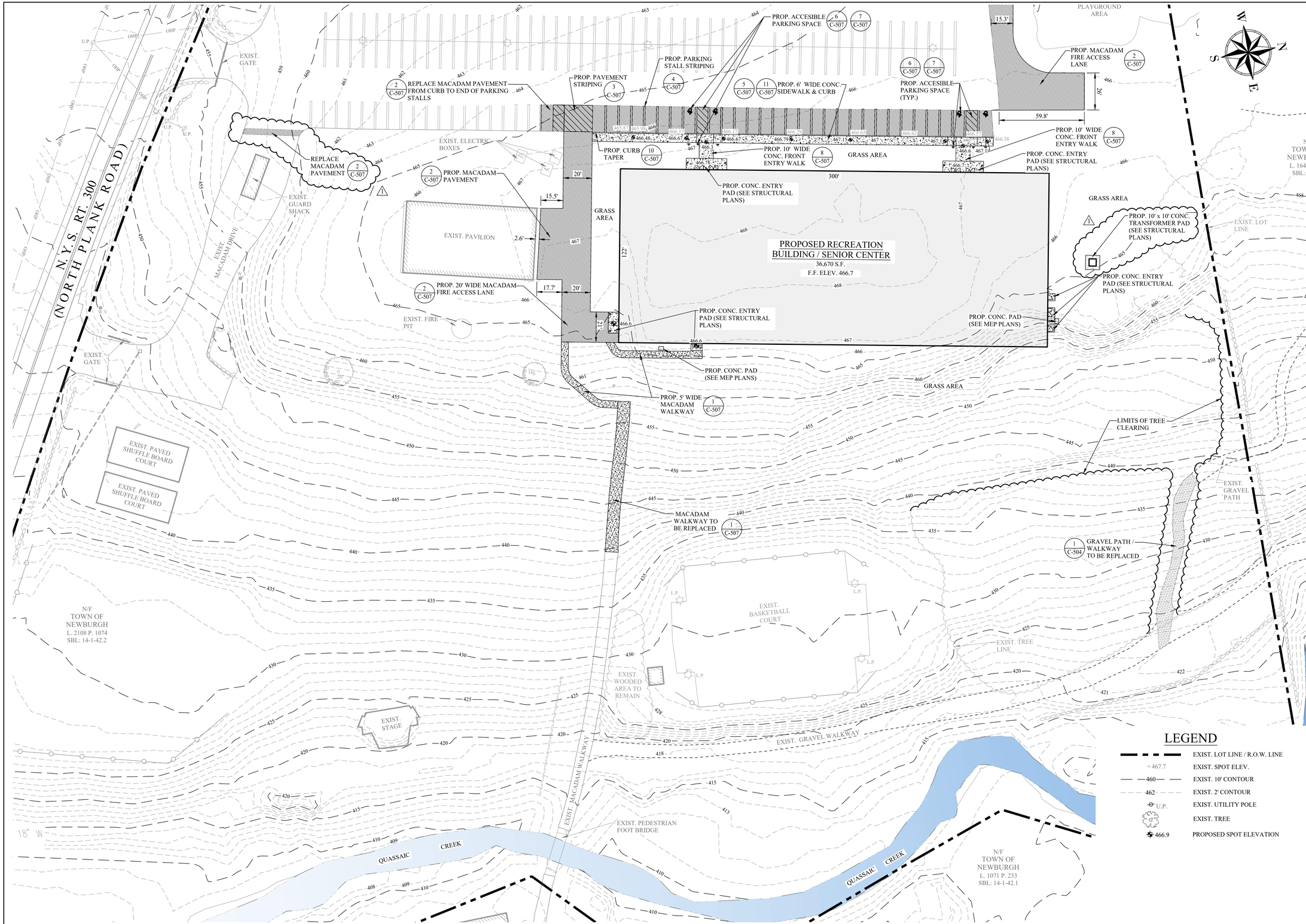
NO.	DESCRIPTION	DATE
1	ADDENDUM #1	3-6-2024

ISSUED DATE:	28 February, 2024
DESIGN BY:	A.P.M.
DRAWN BY:	J.R.J.
CHECKED BY:	S.E.A.
REVIEWED BY:	M.W.W.

SHEET NO.

C-102

PROJECT # 21-135 PHASE #



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SITE DEVELOPMENT PLAN

REVISIONS

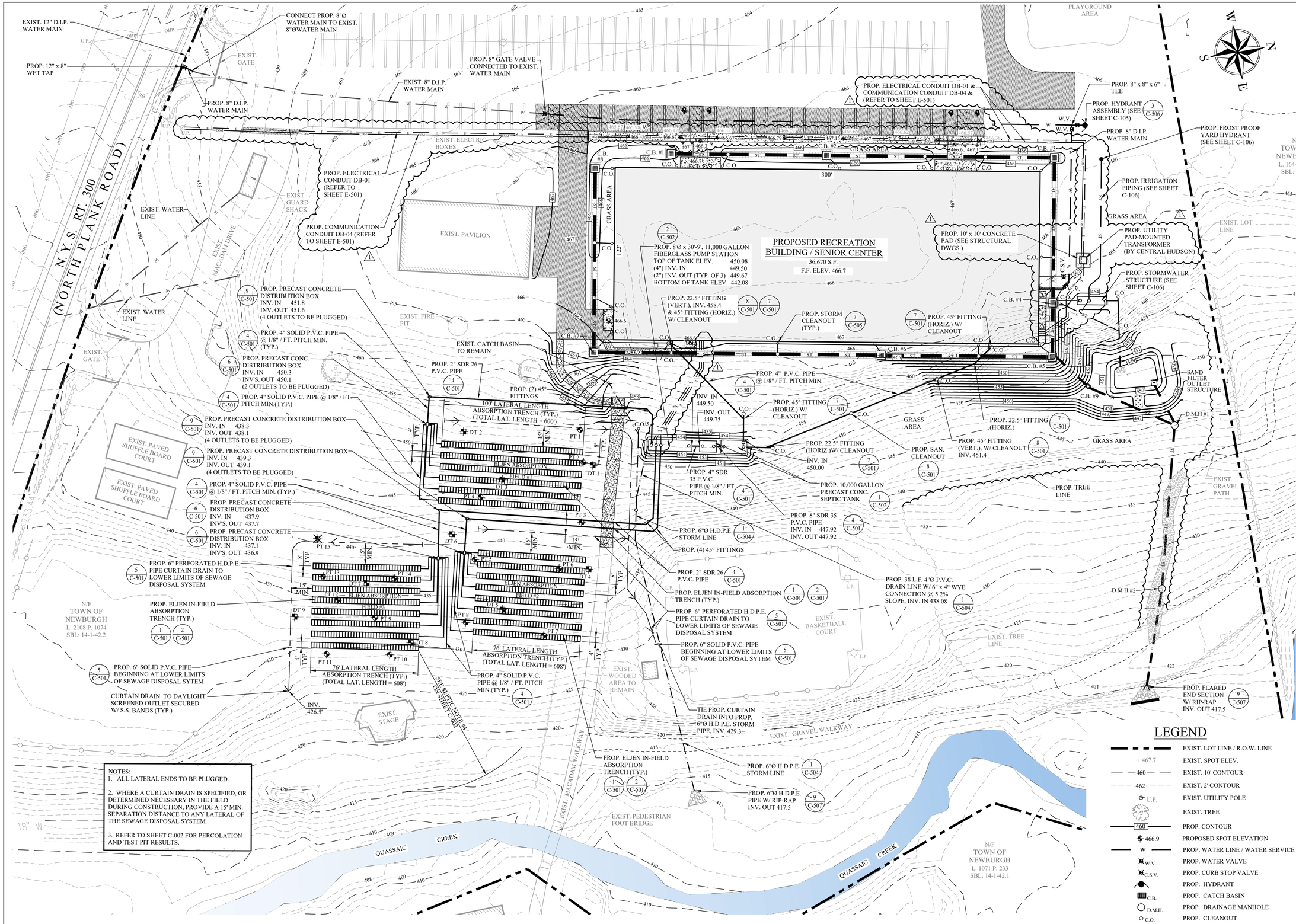
NO.	DESCRIPTION	DATE
1	ADDENDUM #1	3-6-2024

ISSUED DATE:	28 February, 2024
DESIGN BY:	A.P.M.
DRAWN BY:	J.R.J.
CHECKED BY:	S.E.A.
REVIEWED BY:	M.W.W.

SHEET NO.

C-103

PROJECT # 21-135 PHASE #



GRAPHIC SCALE
30 0 15 30 60 120
1 inch = 30 feet

1 C-104 SEPTIC SYSTEM PLAN
SCALE: 1" = 30'

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New Windsor, NY 12553
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Milford, PA 18337
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CHADWICK LAKE PARK
1702 ROUTE 300
NEWBURGH, N.Y. 12550

SEPTIC SYSTEM PLAN

REVISIONS

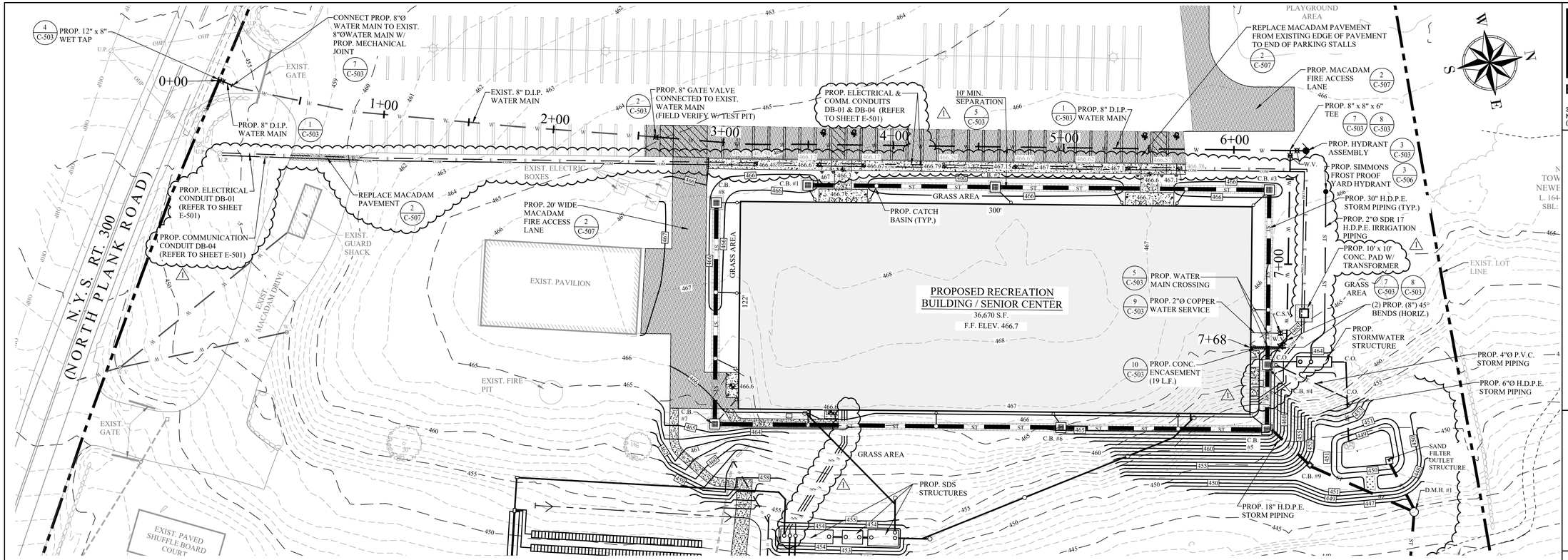
NO.	DESCRIPTION	DATE
1	ADDENDUM #1	3-6-2024

ISSUED DATE:	28 February, 2024
DESIGN BY:	A.P.M.
DRAWN BY:	J.R.J.
CHECKED BY:	S.E.A.
REVIEWED BY:	M.W.W.

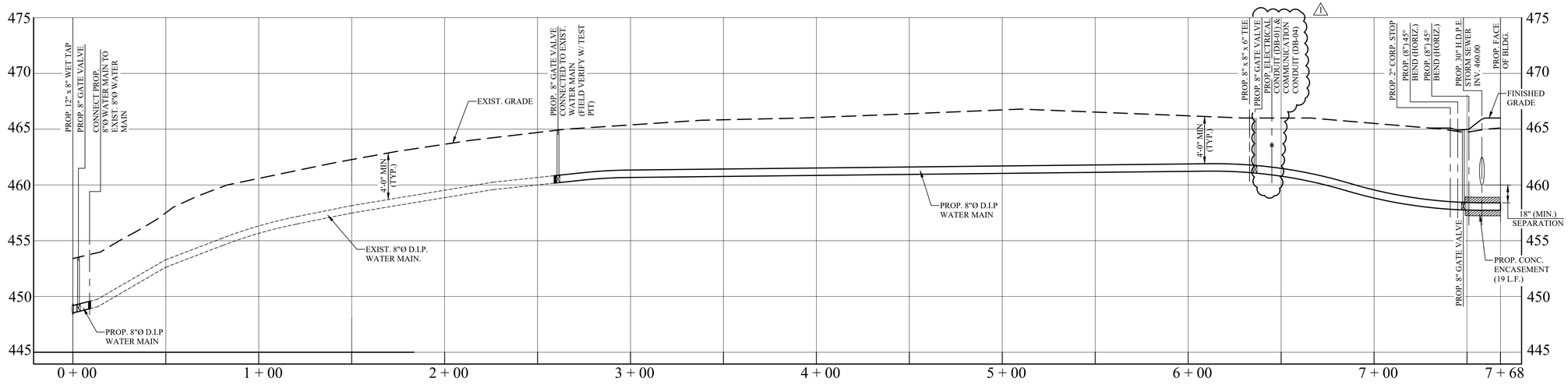
SHEET NO.
C-104

PROJECT # 21-135 PHASE #

T:\2021\21-135 Newburgh Recreation Center\Drafting\21-135 Newburgh Recreation Center - Civil.dwg, C-104, 3/5/2024 11:55:46 AM



1 C-105 WATER MAIN PLAN
SCALE: 1" = 30'



2 C-105 WATER MAIN PROFILE
SCALE: HORIZ. 1" = 30'
VERT. 1" = 6'

LEGEND

EXIST. LOT LINE / R.O.W. LINE	PROP. CONTOUR
+467.7 EXIST. SPOT ELEV.	466.9 PROPOSED SPOT ELEVATION
460 EXIST. 10' CONTOUR	W PROP. WATER LINE / WATER SERVICE
462 EXIST. 2' CONTOUR	W.V. PROP. WATER VALVE
U.P. EXIST. UTILITY POLE	C.S.V. PROP. CURB STOP VALVE
EXIST. TREE	PROP. HYDRANT
W EXIST. WATER MAIN	C.B PROP. CATCH BASIN
	D.M.H. PROP. DRAINAGE MANHOLE
	C.O. PROP. CLEANOUT
	PROP. STORM SEWER PIPE
	E PROP. ELECTRICAL CONDUIT
	COMM PROP. COMMUNICATION CONDUIT

GRAPHIC SCALE
30 0 15 30 60 120
1 inch = 30 feet

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WATER MAIN PLAN & PROFILE

REVISIONS

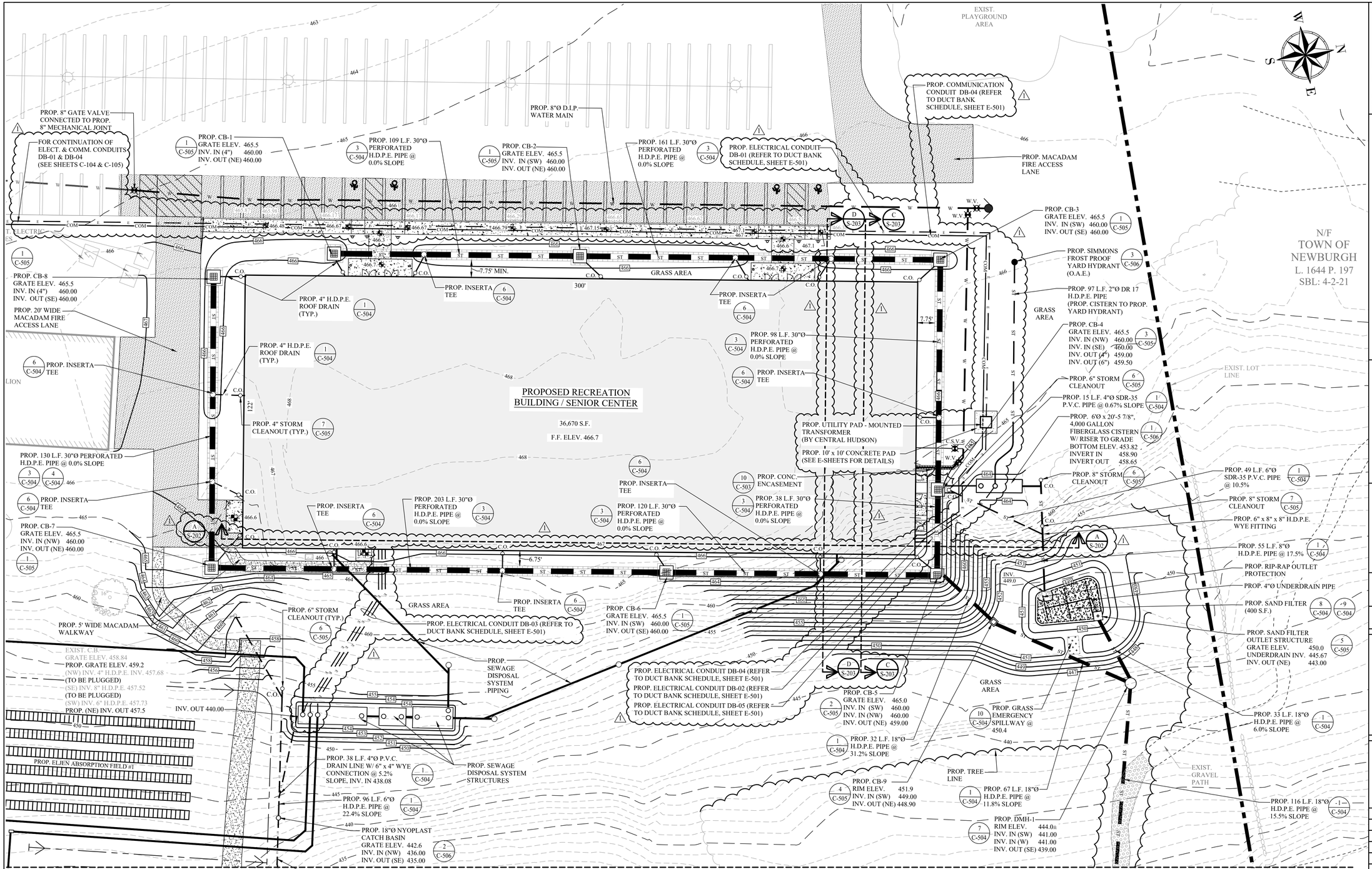
NO.	DESCRIPTION	DATE
1	ADDENDUM #1	3-6-2024

ISSUED DATE:	28 February, 2024
DESIGN BY:	A.P.M.
DRAWN BY:	J.R.J.
CHECKED BY:	S.E.A.
REVIEWED BY:	M.W.W.

SHEET NO.

C-105

PROJECT # 21-135 PHASE #



1 C-106 PARTIAL STORM WATER AND GRADING PLAN
SCALE: 1" = 20'

LEGEND

EXIST. LOT LINE / R.O.W. LINE	PROP. CONTOUR
+467.7 EXIST. SPOT ELEV.	466.9 PROPOSED SPOT ELEVATION
460 EXIST. 10' CONTOUR	W PROP. WATER LINE / WATER SERVICE
462 EXIST. 2' CONTOUR	W.V. PROP. WATER VALVE
U.P. EXIST. UTILITY POLE	C.S.V. PROP. CURB STOP VALVE
EXIST. TREE	PROP. HYDRANT
	C.B. PROP. CATCH BASIN
	D.M.H. PROP. DRAINAGE MANHOLE
	C.O. PROP. CLEANOUT
	PROP. STORM SEWER PIPE
	E PROP. ELECTRIC CONDUIT
	COMM PROP. COMMUNICATION CONDUIT

GRAPHIC SCALE
20 0 10 20 40 80
1 inch = 20 feet

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TOWN OF NEWBURGH RECREATION CENTER

CHADWICK LAKE PARK
1702 ROUTE 300
NEWBURGH, N.Y. 12550

PARTIAL STORM WATER AND GRADING PLAN

REVISIONS

NO.	DESCRIPTION	DATE
1	ADDENDUM #1	3-6-2024

ISSUED DATE:	28 February, 2024
DESIGN BY:	A.P.M.
DRAWN BY:	J.R.J.
CHECKED BY:	S.E.A.
REVIEWED BY:	M.W.W.

SHEET NO.

C-106

PROJECT # 21-135 PHASE #

T:\2021\21-135 Newburgh Recreation Center\Drafting\21-135 Newburgh Recreation Center - Civil.dwg, C-106, 3/5/2024 11:55:59 AM

PROP. 8" GATE VALVE CONNECTED TO PROP. 8" MECHANICAL JOINT

FOR CONTINUATION OF ELECT. & COMM. CONDUITS DB-01 & DB-04 (SEE SHEETS C-104 & C-105)

PROP. CB-1
GRATE ELEV. 465.5
INV. IN (4") 460.00
INV. OUT (NE) 460.00

PROP. 109 L.F. 30"Ø PERFORATED H.D.P.E. PIPE @ 0.0% SLOPE

PROP. CB-2
GRATE ELEV. 465.5
INV. IN (SW) 460.00
INV. OUT (NE) 460.00

PROP. 8"Ø D.I.P. WATER MAIN

PROP. 161 L.F. 30"Ø PERFORATED H.D.P.E. PIPE @ 0.0% SLOPE

PROP. ELECTRICAL CONDUIT DB-01 (REFER TO DUCT BANK SCHEDULE, SHEET E-501)

PROP. COMMUNICATION CONDUIT DB-04 (REFER TO DUCT BANK SCHEDULE, SHEET E-501)

EXIST. PLAYGROUND AREA

PROP. MACADAM FIRE ACCESS LANE

PROP. CB-3
GRATE ELEV. 465.5
INV. IN (SW) 460.00
INV. OUT (SE) 460.00

N/F
TOWN OF NEWBURGH
L. 1644 P. 197
SBL: 4-2-21

PROP. SIMMONS FROST PROOF YARD HYDRANT (O.A.E.)

PROP. 97 L.F. 2"Ø DR 17 H.D.P.E. PIPE
PROP. CISTERN TO PROP. YARD HYDRANT

PROP. CB-4
GRATE ELEV. 465.5
INV. IN (NW) 460.00
INV. IN (SE) 460.00
INV. OUT (4") 459.00
INV. OUT (6") 459.50

PROP. 6" STORM CLEANOUT

PROP. 15 L.F. 4"Ø SDR-35 P.V.C. PIPE @ 0.67% SLOPE

PROP. 6'Ø x 20'-5 7/8", 4,000 GALLON FIBERGLASS CISTERN W/ RISER TO GRADE
BOTTOM ELEV. 453.82
INVERT IN 458.90
INVERT OUT 458.65

PROP. 8" STORM CLEANOUT

PROP. 49 L.F. 6"Ø SDR-35 P.V.C. PIPE @ 10.5%

PROP. 8" STORM CLEANOUT

PROP. 6" x 8" x 8" H.D.P.E. WYE FITTING

PROP. 55 L.F. 8"Ø H.D.P.E. PIPE @ 17.5%

PROP. RIP-RAP OUTLET PROTECTION

PROP. 4"Ø UNDERDRAIN PIPE

PROP. SAND FILTER (400 S.F.)

PROP. SAND FILTER OUTLET STRUCTURE
GRATE ELEV. 450.0
UNDERDRAIN INV. 445.67
INV. OUT (NE) 443.00

PROP. 33 L.F. 18"Ø H.D.P.E. PIPE @ 6.0% SLOPE

PROP. 116 L.F. 18"Ø H.D.P.E. PIPE @ 14.2% SLOPE

EXIST. LOT LINE

EXIST. GRAVEL PATH

PROP. CB-8
GRATE ELEV. 465.5
INV. IN (4") 460.00
INV. OUT (SE) 460.00

PROP. 20' WIDE MACADAM FIRE ACCESS LANE

PROP. INSERTA TEE

PROP. 4" H.D.P.E. ROOF DRAIN (TYP.)

PROP. STORM CLEANOUT (TYP.)

PROP. 130 L.F. 30"Ø PERFORATED H.D.P.E. PIPE @ 0.0% SLOPE

PROP. CB-7
GRATE ELEV. 465.5
INV. IN (NW) 460.00
INV. OUT (NE) 460.00

PROPOSED RECREATION BUILDING / SENIOR CENTER
36,670 S.F.
F.F. ELEV. 466.7

GRASS AREA

PROP. 98 L.F. 30"Ø PERFORATED H.D.P.E. PIPE @ 0.0% SLOPE

PROP. UTILITY PAD - MOUNTED TRANSFORMER (BY CENTRAL HUDSON)

PROP. 9' x 10' CONCRETE PAD (SEE E-SHEETS FOR DETAILS)

PROP. CONC. ENCASEMENT

PROP. 120 L.F. 30"Ø PERFORATED H.D.P.E. PIPE @ 0.0% SLOPE

PROP. 38 L.F. 30"Ø PERFORATED H.D.P.E. PIPE @ 0.0% SLOPE

PROP. 203 L.F. 30"Ø PERFORATED H.D.P.E. PIPE @ 0.0% SLOPE

PROP. 12' WIDE GRASS EQUIPMENT PAD ACCESS AREA

PROP. ELECTRICAL CONDUIT DB-03 (REFER TO DUCT BANK SCHEDULE, SHEET E-501)

PROP. 12' WIDE GRASS EQUIPMENT PAD ACCESS AREA

PROP. 5' WIDE MACADAM WALKWAY

EXIST. C.B.
GRATE ELEV. 458.84
PROP. GRATE ELEV. 463.0
(NW) INV. 4" H.D.P.E. INV. 457.68
(TO BE PLUGGED)
(SE) INV. 8" H.D.P.E. 457.52
(TO BE PLUGGED)
(SW) INV. 6" H.D.P.E. 457.73
PROP. (NE) INV. OUT 457.5

PROP. STORM CLEANOUT (TYP.)

INV. OUT 440.00

PROP. EIJEN ABSORPTION FIELD #1

PROP. SEWAGE DISPOSAL SYSTEM PIPING

PROP. SEWAGE DISPOSAL SYSTEM STRUCTURES

PROP. 38 L.F. 4"Ø P.V.C. DRAIN LINE W/ 6" x 4" WYE CONNECTION @ 5.2% SLOPE, INV. IN 438.08

PROP. 96 L.F. 6"Ø H.D.P.E. PIPE @ 22.4% SLOPE

PROP. 18"Ø NYOPLAST CATCH BASIN
GRATE ELEV. 442.6
INV. IN (NW) 436.00
INV. OUT (SE) 435.00

PROP. 202 L.F. 6"Ø H.D.P.E. PIPE @ 10.9% SLOPE

PROP. CB-6
GRATE ELEV. 465.0
INV. IN (SW) 460.00
INV. OUT (SE) 460.00

PROP. CONC. EQUIPMENT PAD (15' x 60') (SEE STRUCTURAL PLANS)

PROP. ELECTRICAL CONDUIT DB-04 (REFER TO DUCT BANK SCHEDULE, SHEET E-501)

PROP. ELECTRICAL CONDUIT DB-02 (REFER TO DUCT BANK SCHEDULE, SHEET E-501)

PROP. ELECTRICAL CONDUIT DB-05 (REFER TO DUCT BANK SCHEDULE, SHEET E-501)

PROP. CB-5
GRATE ELEV. 465.0
INV. IN (SW) 460.00
INV. IN (NW) 460.00
INV. OUT (NE) 459.00

PROP. 32 L.F. 18"Ø H.D.P.E. PIPE @ 31.2% SLOPE

PROP. CB-9
RIM ELEV. 451.9
INV. IN (SW) 449.00
INV. OUT (NE) 448.90

PROP. GRASS EMERGENCY SPILLWAY @ 450.4

PROP. TREE LINE

PROP. DMH-1
RIM ELEV. 444.0±
INV. IN (SW) 441.00
INV. IN (W) 441.00
INV. OUT (SE) 439.00

MATCH LINE TO SHEET C-107

MATCH LINE TO SHEET C-107

1 C-106A ALTERNATE PARTIAL STORM WATER AND GRADING PLAN
SCALE: 1" = 20'

GRAPHIC SCALE
20 0 10 20 40 80
1 inch = 20 feet

LEGEND

EXIST. LOT LINE / R.O.W. LINE	PROP. CONTOUR
EXIST. SPOT ELEV.	PROPOSED SPOT ELEVATION
EXIST. 10' CONTOUR	PROP. WATER LINE / WATER SERVICE
EXIST. 2' CONTOUR	PROP. WATER VALVE
EXIST. UTILITY POLE	PROP. CURB STOP VALVE
EXIST. TREE	PROP. HYDRANT
	PROP. CATCH BASIN
	PROP. DRAINAGE MANHOLE
	PROP. CLEANOUT
	PROP. STORM SEWER PIPE
	PROP. ELECTRIC CONDUIT
	PROP. COMMUNICATION CONDUIT

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111 Wheatfield Drive, Suite 1
Milford, PA 18337
(570) 296-2765

BID SET

UDIG·NY SAFE DIGGING STARTS HERE CALL 811

TOWN OF NEWBURGH RECREATION CENTER

CHADWICK LAKE PARK
1702 ROUTE 300
NEWBURGH, N.Y. 12550

ALTERNATE PARTIAL STORM WATER AND GRADING PLAN

REVISIONS

NO.	DESCRIPTION	DATE
1	ADDENDUM #1	3-6-2024

ISSUED DATE:	28 February, 2024
DESIGN BY:	A.P.M.
DRAWN BY:	J.R.J.
CHECKED BY:	S.E.A.
REVIEWED BY:	M.W.W.

SHEET NO.

C-106A

PROJECT # 21-135 PHASE #

CONCRETE NOTES:

1. CONCRETE SHALL CONFORM TO ACI 211.1, ACI 301, ACI 304R (WHEN PUMPING), AND ACI 318-14 WITH THE FOLLOWING PROPERTIES: COMPRESSIVE STRENGTH SHALL BE MINIMUM 4000 PSI AT 28 DAYS FOR ALL STRUCTURAL CONCRETE, AGGREGATE SHALL CONFORM TO ASTM C33. RANGE OF SLUMP, WATER-TO-CEMENT RATIO, AND AIR ENTRAINMENT SHALL BE IN ACCORDANCE WITH CAST-IN-PLACE CONCRETE SPECIFICATION 033000. SUBMIT COPIES OF TEST REPORTS SHOWING THAT THE MIX HAS BEEN SUCCESSFULLY TESTED TO PRODUCE CONCRETE WITH THE PROPERTIES SPECIFIED. TEST REPORTS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PRIOR TO CONCRETE PLACEMENT.

2. CEMENT SHALL CONFORM TO ASTM C150, TYPE I/II AND SHALL HAVE A CURING PERIOD OF NOT LESS THAN 7 DAYS.

3. CONCRETE SHALL BE WET CURED, USING BURLAP OR COTTON CURING MATS, OR CURED USING ASTM D4397 POLYETHYLENE SHEETING IN ACCORDANCE WITH ASTM C171. WET THE ENTIRE EXPOSED SURFACE OF THE CONCRETE THOROUGHLY WITH A FINE SPRAY OF WATER AND COVER WITH SHEETING THROUGHOUT THE CURING PERIOD. LAY SHEETING DIRECTLY ON CONCRETE SURFACE. PROVIDE SHEETING NOT LESS THAN 18 INCHES WIDER THAN CONCRETE SURFACE. OVERLAP EDGES 12 INCHES AND CONTINUOUSLY TAPE JOINTS.

4. PUMPING SHALL NOT RESULT IN SEPARATION OR LOSS OF MATERIALS NOR CAUSE INTERRUPTIONS SUFFICIENT TO PERMIT LOSS OF PLASTICITY BETWEEN SUCCESSIVE INCREMENTS. LOSS OF SLUMP IN PUMPING EQUIPMENT SHALL NOT EXCEED 2 INCHES. CONCRETE SHALL NOT BE CONVEYED THROUGH PIPE MADE OF ALUMINUM OR ALUMINUM ALLOY. RAPID CHANGES IN PIPE SIZES SHALL BE AVOIDED. MAXIMUM SIZE OF COURSE AGGREGATE SHALL BE LIMITED TO 33 PERCENT OF THE DIAMETER OF THE PIPE. MAXIMUM SIZE OF WELL ROUNDED AGGREGATE SHALL BE LIMITED TO 40 PERCENT OF THE PIPE DIAMETER. SAMPLES FOR TESTING SHALL BE TAKEN AT BOTH THE POINT OF DELIVERY TO THE PUMP AND AT THE DISCHARGE END.

5. CONCRETE SHALL NOT BE PLACED WHEN WEATHER CONDITIONS PREVENT PROPER PLACEMENT AND CONSOLIDATION INCLUDING PERIODS OF PRECIPITATION. TRANSPORT CONCRETE AS RAPIDLY AS PRACTICABLE TAKING PRECAUTION TO PREVENT SEGREGATION OR LOSS OF INGREDIENTS. PUMPING IN ACCORDANCE WITH ACI 304 SHALL BE PERMITTED. DO NOT EXCEED A FREE VERTICAL DROP OF 3 FEET FROM THE POINT OF DISCHARGE. PLACE CONCRETE IN ONE CONTINUOUS OPERATIONS FROM ONE SIDE OF SLAB TO THE OTHER. POSITION GRADE STAKES AT 12 FEET ON CENTER MAXIMUM IN EACH DIRECTION.

6. REINFORCING BARS SHALL CONFORM TO ASTM A615 AND SHALL HAVE A MINIMUM YIELD STRENGTH OF 60 KSI. WELDED WIRE FABRIC REINFORCEMENT SHALL CONFORM TO ASTM A1064. REINFORCEMENT SHALL NOT CONTAIN RUST, SCALE, OIL, GREASE, CLAY, OR FOREIGN SUBSTANCES THAT WOULD REDUCE THE CONCRETE BONDING STRENGTH. REMOVE LOOSE RUST PRIOR TO PLACEMENT OF REINFORCEMENT.

7. REINFORCEMENT SPLICES SHALL BE KEPT TO A PRACTICAL MINIMUM. UNLESS OTHERWISE INDICATED, MINIMUM LAP SPLICE LENGTH PER LAP SPLICE TABLE ON SHEET S-501.

8. PROVIDE MINIMUM 2" OF CONCRETE COVER FOR ALL REINFORCING STEEL UNLESS OTHERWISE INDICATED.

9. CONCRETE FOOTINGS AND MAT FOUNDATIONS SHALL BE PLACED MONOLITHICALLY WITH THE EXCEPTION THAT VERTICAL CONSTRUCTION JOINTS WILL BE ALLOWED IF EPOXY BONDING COMPOUND IS APPLIED TO THE ROUGHENED SURFACE OF THE HARDENED CONCRETE.

10. INTERIOR SLABS: THE CONTRACTOR SHALL PROVIDE CONTRACTION JOINTS AS INDICATED. JOINTS MAY BE SAWCUT OR CUT WITH A JOINTING TOOL. SAWED JOINTS SHALL BE COMPLETED WITHIN 4 TO 12 HOURS AFTER PLACEMENT OF CONCRETE. JOINTS SHALL INTERSECT WITH THE CORNERS OF ISOLATION JOINT AT COLUMN LOCATIONS, IF ANY ARE PRESENT, AND BE SPACED A MAXIMUM OF 15 FEET ON CENTER, UNLESS NOTED OTHERWISE.

11. REINFORCEMENT SUPPORTS SHALL BE CONCRETE OR OTHER NON-CORRODIBLE MATERIAL HAVING A COMPRESSIVE STRENGTH EQUAL TO OR GREATER THAN THE COMPRESSIVE STRENGTH OF THE CONCRETE BEING PLACED.

12. PROVIDE A 3/4" CHAMFER ON ALL EXPOSED CONCRETE CORNERS.

13. EPOXY BONDING COMPOUND SHALL BE USED ON ALL CONTACTING SURFACES BETWEEN EXISTING CONCRETE AND NEW CONCRETE. EPOXY BONDING COMPOUND SHALL CONFORM TO ASTM C881 TYPE II, CLASS C, GRADE 1 OR 2 FOR HORIZONTAL SURFACES, GRADE 3 FOR VERTICAL SURFACES. THOROUGHLY CLEAN AND ROUGHEN EXISTING SURFACES PRIOR TO PLACEMENT. DO NOT ALLOW COMPOUND TO HARDEN PRIOR TO CONCRETE PLACEMENT.

14. PLACE, CONSOLIDATE AND IMMEDIATELY STRIKE OFF CONCRETE TO OBTAIN PROPER CONTOUR GRADE AND ELEVATION BEFORE BLEEDWATER APPEARS. PERMIT CONCRETE TO ATTAIN A SET SUFFICIENT FOR FLOATING AND SUPPORTING THE WEIGHT OF THE FINISHER AND EQUIPMENT. IF BLEEDWATER IS PRESENT PRIOR TO FLOATING THE SURFACE, DRAG THE EXCESS WATER OFF OR REMOVE BY ABSORPTION WITH POROUS MATERIALS. DO NOT USE DRY CEMENT TO ABSORB BLEEDWATER.

15. THE REQUIREMENTS OF ACI 302.1R SHALL BE IN EFFECT FOR THE CONSTRUCTION OF ALL SLABS ON GROUND.
    A. GYMNASIUMN FLOOR SLAB SHALL MEET THE REQUIREMENTS OF A CLASS 9 FLOOR AND HAVE A COMPOSITE OVERALL FLATNESS (F) OF 45 AND A COMPOSITE OVERALL LEVELNESS (E) OF 35 MEASURED IN ACCORDANCE WITH ASTM E1155.

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16. UNLESS OTHERWISE NOTED, ALL CONCRETE CONSTRUCTION SHALL MEET THE SPECIFIED TOLERANCES OF ACI 117. TOP ELEVATIONS SHALL MATCH THE SPECIFIED ELEVATIONS WITHIN A TOLERANCE OF ±1/4"

17. NO CONCRETE SHALL BE PLACED UNTIL ALL EMBEDDED ITEMS (I.E. PROCESS, ELECTRICAL, MECHANICAL, ETC) HAVE BEEN SET. CONTRACTOR IS RESPONSIBLE FOR COORDINATING ALL TRADES.

18. ALL BAR PLACING AND BENDING SHALL BE IN ACCORDANCE WITH ACI 315.

19. PERFORM COMPRESSIVE TESTS IN ACCORDANCE WITH ASTM C39. OBTAIN ONE COMPOSITE SAMPLE FOR EACH DAY'S POUR OF EACH CONCRETE MIXTURE EXCEEDING 5 CU. YD., BUT LESS THAN 25 CU. YD., PLUS ONE SET FOR EACH ADDITIONAL 50 CU. YD. OR FRACTION THEREOF. TAKE PRECAUTIONS TO PREVENT EVAPORATION AND LOSS OF WATER FROM SPECIMENS. TEST ONE CYLINDER AT 3 DAYS, ONE CYLINDER AT 7 DAYS, AND TWO (THREE FOR 4"x8" CYLINDERS) CYLINDERS AT 28 DAYS AND HOLD ONE IN RESERVE. PERFORM SLUMP TESTS IN ACCORDANCE WITH ASTM C143. PERFORM AIR CONTENT TESTS IN ACCORDANCE WITH ASTM C173 OR ASTM C231. SUBMIT ALL TEST DATA TO THE ENGINEER.

20. CONSOLIDATE CONCRETE WITH HIGH FREQUENCY, INTERNAL, MECHANICAL VIBRATING EQUIPMENT SUPPLEMENTED BY HAND SPADING AND TAMPING. FURNISH A SPARE VIBRATOR ON THE JOB SITE WHENEVER CONCRETE IS PLACED. OPERATE VIBRATORS WITH VIBRATORY ELEMENT SUBMERGED IN THE CONCRETE, WITH A MINIMUM FREQUENCY OF NOT LESS THAN 6000 IMPULSES PER MINUTE WHEN SUBMERGED. INSERT AND WITHDRAW VIBRATORS AT INTERVALS APPROXIMATELY 18 INCHES APART.

21. ELASTOMERIC JOINT SEALANT SHALL CONFORM TO ASTM C920, TYPE S, GRADE P, CLASS 25.

AISI COLD FORMED FRAMING NOTES:

1. METAL STUD SIZES SHOWN ON PLANS AND DETAILS ARE BASED ON CLARKDIETRICH GALVANIZED STEEL STUDS. ALL FRAMING MATERIALS AND CONNECTIONS SHALL BE EQUIVALENT TO THOSE MANUFACTURED BY CLARKDIETRICH. ALL STUDS AND THEIR CONNECTIONS SHALL BE GALVANIZED AND SHALL COMPLY WITH THE REQUIREMENTS OF AISI SPECIFICATION FOR THE DESIGN OF COLD FORM STEEL STRUCTURAL MEMBERS, LATEST EDITION.

2. ALL METAL STUDS SHALL HAVE A MIN. YIELD STRENGTH OF 50 KSI.

3. STEEL STUDS: MANUFACTURER'S STANDARD C-SHAPED STEEL STUDS, OF WEB DEPTHS INDICATED, PUNCHED, WITH STIFFENED FLANGES, AND AS FOLLOWS:
   A. MINIMUM BASE-METAL THICKNESS: 20 GA. (33 MILS), U.N.O.
   B. FLANGE WIDTH: 1-5/8 INCHES, U.N.O.

4. INSTALL CONTINUOUS TRACKS SIZED TO MATCH STUDS. ALIGN TRACKS ACCURATELY AND SECURELY ANCHOR TO SUPPORTING STRUCTURE AT EACH STUD LOCATION.

5. FASTEN BOTH FLANGES OF STUDS TO BOTTOM TRACK UNLESS OTHERWISE INDICATED. SPACE STUDS AS FOLLOWS:
   A. STUD SPACING: 16" O.C. MAX.

6. SET STUDS PLUMB, EXCEPT AS NEEDED FOR DIAGONAL BRACING OR REQUIRED FOR NON-PLUMB WALLS OR WARPED SURFACES AND SIMILAR REQUIREMENTS.

7. ISOLATE NON-LOAD-BEARING STEEL FRAMING FROM BUILDING STRUCTURE TO PREVENT TRANSFER OF VERTICAL LOADS WHILE PROVIDING LATERAL SUPPORT.

8. BRIDGE ALL JOISTS, RAFTERS AND WALL STUDS WITH BRIDGING CHANNEL AT 4'-0" ON CENTER MAXIMUM. SCREW OR WELD BOTTOM OF BRIDGING AFTER SHEATHING IS IN PLACE.

9. ALL CLIP AND UTILITY ANGLES SHALL BE THE SAME GAUGE AS THE MEMBERS BEING CONNECTED. IF THE MEMBERS BEING CONNECTED ARE DIFFERENT GAUGES, ANGLES SHALL BE A MINIMUM OF THE THINNER GAUGE.

10. FOR ALL OPENINGS LARGER THAN JOIST FRAMING, FRAME WITH DOUBLE-HEADERS AND TRIMMERS AROUND OPENINGS. PROVIDE DOUBLE BOX JOISTS AROUND PARTITION WALLS PARALLEL TO JOISTS.

11. SHOP DRAWINGS OF ALL LIGHT GAUGE METAL FRAMING SHALL BE SUBMITTED TO THE ARCHITECT/ENGINEER PRIOR TO MANUFACTURING.

12. IF BASIS OF DESIGN MANUFACTURER'S LIGHT GAUGE FRAMING IS NOT USED, CONTRACTOR SHALL PROVIDE ALL SPECIFICATIONS AND MATERIAL PROPERTIES FOR THE SELECTED LIGHT GAUGE MANUFACTURER FOR APPROVAL PRIOR TO THE COMMENCEMENT OF CONSTRUCTION.

WELDING NOTES:

1. ALL WELDING SHALL BE CONDUCTED BY CERTIFIED WELDERS IN ACCORDANCE WITH AWS D1.1, LATEST EDITION FOR STRUCTURAL STEEL AND AWS D1.3, LATEST EDITION FOR STRUCTURAL SHEET STEEL.

2. THE CONTRACTOR SHALL BEAR FULL RESPONSIBILITY FOR PROTECTING EXISTING EQUIPMENT, MATERIAL, BUILDING STRUCTURE, AND BUILDING COMPONENTS DURING ANY FIELD WELDING OPERATIONS.

3. WELDS OF HEADED STUDS SHALL MATCH STRENGTH OF STUDS.

STRUCTURAL STEEL NOTES:

1. STRUCTURAL STEEL SYSTEMS INCLUDING MATERIALS, INSTALLATION, WORKMANSHIP, FABRICATION, ASSEMBLY, ERECTION, INSPECTION, QUALITY CONTROL, AND TESTING SHALL BE PROVIDED IN ACCORDANCE WITH AISC MANUAL OF STEEL CONSTRUCTION, LATEST EDITION.

2. UNLESS OTHERWISE NOTED, ALL STEEL SHALL CONFORM TO ASTM A992 WITH A MINIMUM YIELD STRENGTH OF 50 KSI. STRUCTURAL TUBING SHALL CONFORM TO ASTM A500, GRADE C, WITH A MINIMUM YIELD STRENGTH OF 46 KSI. ANGLES, CHANNELS SHALL CONFORM TO ASTM A36 WITH A MINIMUM YIELD STRENGTH OF 36 KSI.

3. ALL HOLES IN STEEL SHALL BE STANDARD SIZE 1/16" LARGER THAN BOLT DIAMETER UNLESS OTHERWISE NOTED. ALL HOLES SHALL BE DRILLED OR PUNCHED. BURNING IS NOT ALLOWED COLUMN ANCHOR BOLT HOLES MAY BE OVERSIZED.

4. COPES SHALL BE PROVIDED WITH 1/2" RADIUS MINIMUM, SMOOTH CORNERS, AND FREE OF NOTCHES. DEPTH AND LENGTH OF COPES SHALL BE AS INDICATED OR SPECIFIED BY DETAILER.

5. UNLESS OTHERWISE INDICATED, ALL BOLTS SHALL CONFORM TO ASTM A325, EXCEPT ANCHOR BOLTS SHALL CONFORM TO ASTM F1554 GR. 36. ALL NUTS SHALL CONFORM TO ASTM A563, GRADE AND STYLE FOR APPLICABLE ASTM BOLT STANDARD. ALL WASHERS SHALL CONFORM TO ASTM F844 FOR ASTM A307 BOLTS, AND ASTM F436 FOR ASTM A325 BOLTS.

6. INSTALL 1/4" WEB STIFFENERS ON BOTH SIDES THE BEAM WEB FOR ALL BEAMS RECEIVING A COLUMN OR BEAM FROM ABOVE OR CONTINUING OVER A COLUMN BELOW. WEB STIFFENERS SHALL BE PLACED DIRECTLY ABOVE / BELOW THE COLUMN.

7. STEEL DETAILER SHALL PROVIDE CONNECTION DESIGN IN ACCORDANCE WITH ANSI/AISC 303. DETAILER SHALL SELECT AND COMPLETE CONNECTIONS USING SCHEMATIC DETAILS INDICATED ON PLANS AND ANSI/AISC 360.

SPECIAL INSPECTIONS:

ALL SPECIAL INSPECTIONS LISTED ARE IN ADDITION TO ALL INSPECTION REQUIRED BY STATE AND LOCAL BUILDING CODES. ALL SPECIAL INSPECTIONS SHALL BE PERFORMED BY AN AGENCY RETAINED AND PAID BY THE OWNER OR OWNER'S REPRESENTATIVE. THE APPROVED AGENCY SHALL PROVIDE ALL INFORMATION AS NECESSARY FOR THE BUILDING OFFICIAL TO DETERMINE THAT THE AGENCY MEETS THE APPLICABLE REQUIREMENTS. COPIES OF NECESSARY TEST AND INSPECTION RECORDS SHALL BE FILED WITH THE BUILDING OFFICIAL AND REGISTERED DESIGN PROFESSIONAL. ALL SPECIAL INSPECTIONS AND REPORTS SHALL BE IN ACCORDANCE WITH CHAPTER 17 OF THE 2020 NEW YORK STATE BUILDING CODE LATEST REVISION.

CONTRACTOR IS RESPONSIBLE FOR COORDINATION WITH OWNER'S DESIGNATED INSPECTOR FOR SCHEDULING OF ALL SPECIAL INSPECTIONS. CONTRACTOR SHALL NOTIFY INSPECTOR MINIMUM 24 HOURS PRIOR TO NEED OF INSPECTION.

THE OWNER RESERVES THE RIGHT TO BACK CHARGE THE CONTRACTOR FOR ANY COSTS ASSOCIATED WITH ADDITIONAL SPECIAL INSPECTIONS REQUIRED DUE TO CANCELLATION OF SCHEDULED INSPECTIONS AND RE-INSPECTION OF PREVIOUSLY FAILED INSPECTIONS.

SPECIAL INSPECTIONS REQUIRED INCLUDE BUT ARE NOT LIMITED TO:

STEEL:
1. STRUCTURAL STEEL:
   A. SPECIAL INSPECTIONS AND NONDESTRUCTIVE TESTING OF STRUCTURAL STEEL ELEMENTS IN BUILDINGS, STRUCTURES AND PORTIONS THEREOF SHALL BE IN ACCORDANCE WITH THE QUALITY ASSURANCE INSPECTION REQUIREMENTS OF AISC 360-16.
2. COLD-FORMED STEEL DECK:
   A. SPECIAL INSPECTIONS AND QUALIFICATION OF WELDING SPECIAL INSPECTORS FOR COLD-FORMED STEEL FLOOR AND ROOF DECK SHALL BE IN ACCORDANCE WITH THE QUALITY ASSURANCE INSPECTION REQUIREMENTS OF SDI QA/QC.

CONCRETE:
1. PERIODIC INSPECTION OF REINFORCING STEEL.
2. PERIODIC INSPECTION OF ANCHORS CAST IN CONCRETE.
3. INSPECTION OF ANCHORS POST-INSTALLED IN HARDENED CONCRETE.
   A. CONTINUOUS INSPECTION OF ADHESIVE ANCHORS INSTALLED IN HORIZONTALLY OR UPWARDLY INCLINED ORIENTATIONS TO RESIST SUSTAINED TENSION LOADS.
   B. PERIODIC INSPECTION OF MECHANICAL ANCHORS AND ADHESIVE ANCHORS NO DEFINED IN 3.1.
4. PERIODIC VERIFICATION OF DESIGN MIX.
5. PRIOR TO CONCRETE PLACEMENT, FABRICATE SPECIMENS FOR STRENGTH TESTS, PERFORM SLUMP, AIR, AND TEMPERATURE TESTS; CONTINUOUS.
6. CONTINUOUS INSPECTION OF PLACEMENT & FOR PROPER APPLICATION TECHNIQUES.
7. PERIODIC INSPECTION FOR MAINTENANCE OF SPECIFIED CURING TEMPERATURE AND TECHNIQUES.
8. PERIODIC INSPECTION OF FORMWORK FOR SHAPE, LOCATION AND DIMENSIONS, OF THE CONCRETE MEMBER BEING FORMED.

SOILS:
1. CONTINUOUS INSPECTION OF
   A. PROPER MATERIALS
   B. DENSITIES
   C. LIFT THICKNESS DURING PLACEMENT
   D. COMPACTION OF CONTROLLED FILL
2. PERIODIC INSPECTION OF
   A. MATERIALS BELOW FOOTINGS ADEQUATE TO ACHIEVE THE DESIGN BEARING CAPACITY
   B. EXCAVATIONS ARE EXTENDED TO PROPER DEPTH AND HAVE REACHED PROPER MATERIAL
   C. CLASSIFICATION AND TESTING OF CONTROLLED FILL MATERIALS
   D. SUBGRADE PRIOR TO PLACEMENT OF COMPACTED FILL
3. THE APPROVED SOILS REPORT, IF ANY EXISTS, SHALL BE USED TO DETERMINE COMPLIANCE. IF NONE EXIST, THE ALLOWABLE DESIGN BEARING CAPACITY SHALL BE ASSUMED TO BE 3000 PSF.

NYSBC 2020 STRUCTURAL PROVISIONS:

THE STRUCTURE SHOWN HEREON HAS/SHALL BE DESIGNED FOR THE FOLLOWING IN ACCORDANCE WITH NYSBC 2020:

** PER PRE-ENGINEERED METAL BUILDING MFG.

FLOOR LIVE LOAD:
ATTIC/MECANICAL = 100 PSF
SIDE AREAS = SLAB ON GRADE (N/A)
GYMNASIUM = SLAB ON GRADE (N/A)

ROOF DEAD LOAD:

ROOF LIVE LOAD:
DISTRIBUTED LOAD = 20 PSF (SNOW LOAD GOVERNS)
CONCENTRATED LOAD = 300 LBS AT ANY POINT ON ROOF SURFACE
ROOF FRAMING COLLATERAL LOAD: 15 PSF

ROOF SNOW LOAD:
GROUND SNOW LOAD (P/g) = 35 PSF
FLAT ROOF SNOW LOAD (P/f) = 24.26 PSF
SNOW EXPOSURE FACTOR (C/e) = 1.00
SNOW IMPORTANCE FACTOR (I) = 1.10
THERMAL FACTOR (C/t) = 1.1
SLOPE FACTOR (C/s) = .97
DRIFT SURCHARGE (P/d) = 101.62 PSF
WIDTH OF DRIFT (w) = 21.91 FT

WIND LOAD:
BASIC WIND SPEED = 120 MPH
BUILDING CATEGORY = RISK CATEGORY III
WIND EXPOSURE = C
WIND DIRECTIONALITY FACTOR = Kd=0.85
TOPOGRAPHIC FACTOR = Kzt=1.0
GUST FACTOR = 0.85
ENCLOSURE CLASSIFICATION = ENCLOSED
APPLICABLE: INTERNAL PRESSURE COEFF. = ±0.18
COMPONENTS & CLADDING PRESSURES (ASSUMING A 10SF AREA):

ZONE:	POS./NEG. (PSF)	ZONE:	POS./NEG. (PSF)
ROOF	ZONE 1: +19.00/-58.00	OVERHANG	ZONE 1: -66.43
	ZONE 2E: +19.00/-58.00		ZONE 2E: -92.93
	ZONE 2N/R: +19.00/-84.46		ZONE 2N/R: -92.93
	ZONE 3E: +19.00/-84.46		ZONE 3E: -108.900
	ZONE 3R: +19.00/-100.43		ZONE 3R: -127.53
WALL	ZONE 4: +31.34/-34.00		
	ZONE 5: +31.34/-42.00		

SEISMIC DESIGN DATA:
OCCUPANCY RISK CATEGORY = III
SEISMIC IMPORTANCE FACTOR = 1.25
SITE CLASS = D (ASSUMED)
MAPPED SPECTRAL RESPONSE ACCELERATIONS: S/s = 0.213 AND S/1 = 0.056
SPECTRAL RESPONSE PARAMETERS: S/DS = 0.243 AND S/D1 = 0.089
SEISMIC DESIGN CATEGORY = B
SEISMIC RESPONSE COEFFICIENT: C/S = **
RESPONSE MODIFICATION COEFFICIENT: R = **
ANALYSIS PROCEDURE = **
DESIGN BASE SHEAR = N**
BASIC SEISMIC FORCE RESIST. SYS. = **

GEOTECHNICAL DESIGN DATA:
ALLOWABLE BEARING STRENGTH = 4000 PSF
GEOTECHNICAL REPORT PREPARED BY KEVIN PATTON, P.E. DATED DECEMBER 21, 2023

ROOF RAIN LOAD DATA:
RAIN INTENSITY (i) = 2.82 IN./HR.

METAL BUILDING NOTES:

1. FOUNDATIONS SHOWN HEREON ARE TO SUPPORT A PRE-ENGINEERED BUILDING DESIGNED BY OTHERS. DESIGN LOADS TO THE FOUNDATION SHALL BE PROVIDED TO THE ENGINEER AND APPROVED BY THE ENGINEER PRIOR TO COMMENCEMENT OF CONCRETE WORK.
2. SUBMIT SHOP DRAWINGS AND DESIGN CALCULATIONS PREPARED BY A LICENSED PROFESSIONAL ENGINEER IN NEW YOURK STATE TO ENGINEER OF RECORD PRIOR TO FABRICATION OF METAL BUILDING.

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3. METAL BUILDING SHALL BE DESIGNED IN ACCORDANCE WITH APPLICABLE INDUSTRY STANDARDS, THE 2020 NEW YORK STATE BUILDING CODE AND ALL OTHER APPLICABLE STATE AND LOCAL CODES. DRIFTING AND SLIDING SNOW LOADS SHALL ALSO BE CONSIDERED IN THE DESIGN OF THE METAL BUILDING.
4. CONTRACTOR SHALL VERIFY ALL ANCHOR BOLT LOCATIONS WITH THE PRE-ENGINEERED BUILDING MANUFACTURER PRIOR TO THE PLACEMENT OF ANY CONCRETE. IF DISCREPANCIES BETWEEN THE FOUNDATION PLANS AND THE ANCHOR BOLT PLACEMENT SHOWN ON THE BUILDING PLANS EXIST, DO NOT PLACE CONCRETE AND NOTIFY THE ENGINEER IMMEDIATELY.
5. CONTRACTOR SHALL VERIFY ALL FOUNDATION DIMENSIONS WITH THOSE PROVIDED BY THE PRE-ENGINEERED BUILDING MANUFACTURER. NOTIFY ENGINEER IMMEDIATELY IF DISCREPANCIES ARE FOUND BETWEEN THE PRE-ENGINEERED DRAWINGS AND THESE FOUNDATION PLANS.
6. ALL ANCHOR BOLTS AS IDENTIFIED AND SPECIFIED ON THE PRE-ENGINEERED BUILDING PLANS SHALL BE HEADED AND SHALL BE EMBEDDED INTO THE CONCRETE A MINIMUM OF 18 INCHES, UNLESS NOTED OTHERWISE.
7. ENGINEER OF RECORD IS RESPONSIBLE ONLY FOR THE DESIGN OF THE FOUNDATION. DESIGN LOADS FOR THE FOUNDATION SHALL BE PROVIDED BY THE BUILDING MANUFACTURER IDENTIFIED ABOVE AND NOT DEVELOPED BY ENGINEER OF RECORD. ONCE THE DESIGN LOADS HAVE BEEN PROVIDED, THE FOUNDATION DESIGN SHALL BE VERIFIED BY ENGINEER OF RECORD.

GENERAL NOTES: (STRUCTURAL)

1. THE FOUNDATION DESIGN SHOWN HEREIN IS FOR A TYPICAL PRE-ENGINEERED METAL BUILDING SUPPORTING THE REQUIRED DIMENSIONS AND FLOOR PLAN. THE CONTRACTOR SHALL SUPPLY THE PRE-ENGINEERED BUILDING DESIGN DRAWINGS, WITH ALL DESIGN LOADS, INCLUDING LOAD COMBINATIONS IN ACCORDANCE WITH THE 2020 NEW YORK STATE BUILDING CODE AND ASCE 7-16, TO THE FOUNDATION ENGINEER FOR VERIFICATION OF FOUNDATION DESIGN.
2.
3. ALL ITEMS NOT INDICATED TO BE EXISTING OR SUPPLIED BY OTHERS SHALL BE PROVIDED AND INSTALLED UNDER THE REQUIREMENTS OF THIS CONTRACT.
4.
5. THE STRUCTURAL DRAWINGS SHALL BE USED IN CONJUNCTION WITH THE ARCHITECTURAL, CIVIL, MECHANICAL, PLUMBING, AND ELECTRICAL DRAWINGS. THE CONTRACTOR SHALL VERIFY THE REQUIREMENTS OF OTHER TRADES REGARDING SLEEVES, CHASES, HANGERS, INSERTS, ANCHORS, HOLES, AND ADDITIONAL ITEMS TO BE PLACED OR SET IN STRUCTURAL WORK.
6.
7. THE CONTRACTOR SHALL FIELD VERIFY ALL EXISTING DIMENSIONS AND CONDITIONS PRIOR TO BEGINNING CONSTRUCTION. ANY DISCREPANCIES BETWEEN FIELD CONDITIONS AND THE CONTRACT DRAWINGS SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER.
8.
9. IF INDICATED, ANY ITEMS REPLACING EXISTING ITEMS SHALL BE INSTALLED TO MATCH EXISTING LOCATIONS, CONFIGURATIONS, AND ELEVATIONS UNLESS OTHERWISE NOTED.
10.
11. ALL MATERIALS SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURERS' SPECIFICATIONS. IF MANUFACTURERS' SPECIFICATIONS CONFLICT WITH CONTRACT DRAWINGS OR SPECIFICATIONS, THE ENGINEER SHALL BE NOTIFIED IMMEDIATELY.
12.
13. THE CONTRACTOR SHALL PROVIDE TEMPORARY SHORING AND BRACING REQUIRED TO ERECT AND HOLD THE STRUCTURE IN PROPER ALIGNMENT. NEITHER THE STRUCTURE NOR INDIVIDUAL STRUCTURAL ELEMENTS SUCH AS WALLS, BEAMS, PURLINS, GIRTS, AND COLUMNS WILL BE LATERALLY STABLE UNTIL ALL ALL PRIMARY AND SECONDARY FRAMING MEMBERS INDICATED ON THE METAL BUILDING DRAWINGS IS INSTALLED AND COMPLETE.
14.
15. THE CONTRACTOR SHALL VERIFY THE LOCATION AND DEPTH OF ALL UNDERGROUND UTILITIES PRIOR TO COMMENCEMENT OF CONSTRUCTION.
16.
17. NO BACKFILLING OF THE STRUCTURE SHALL OCCUR UNTIL CONCRETE BREAKS SATISFACTORY TO THE ENGINEER ARE OBTAINED.
18.
19. CONTRACTOR SHALL PROVIDE BEARING MATERIAL BELOW ALL CONCRETE FOOTING AND AND FOUNDATIONS CAPABLE OF PROVIDING A 3,000 PSF (MIN) BEARING CAPACITY. PROVIDE CERTIFICATE FROM TESTING AGENCY.

MHE ENGINEERING
33 Airport Center Drive, Suite 202
New Windsor, NY 12553
(845) 567-3100
111 Wheatfield Drive, Suite 1
Milford, PA 18337
(570) 296-2765

BID SET

UDIG·NY SAFE DIGGING STARTS HERE

NEW RECREATION CENTER
TOWN OF NEWBURGH

CHADWICK LAKE PARK
1702 NY-300, Newburgh, NY 12550

STRUCTURAL NOTES

REVISIONS

NO.	DESCRIPTION	DATE
1	ADDENDUM #1	3-6-2024

ISSUED DATE:	28 FEB, 2024
DESIGNED BY:	WRB
DRAWN BY:	WRB
CHECKED BY:	JSS
REVIEWED BY:	ML

SHEET NO.

S-001

PROJECT # 21-135 PHASE # _

3/5/2024 3:05:39 PM

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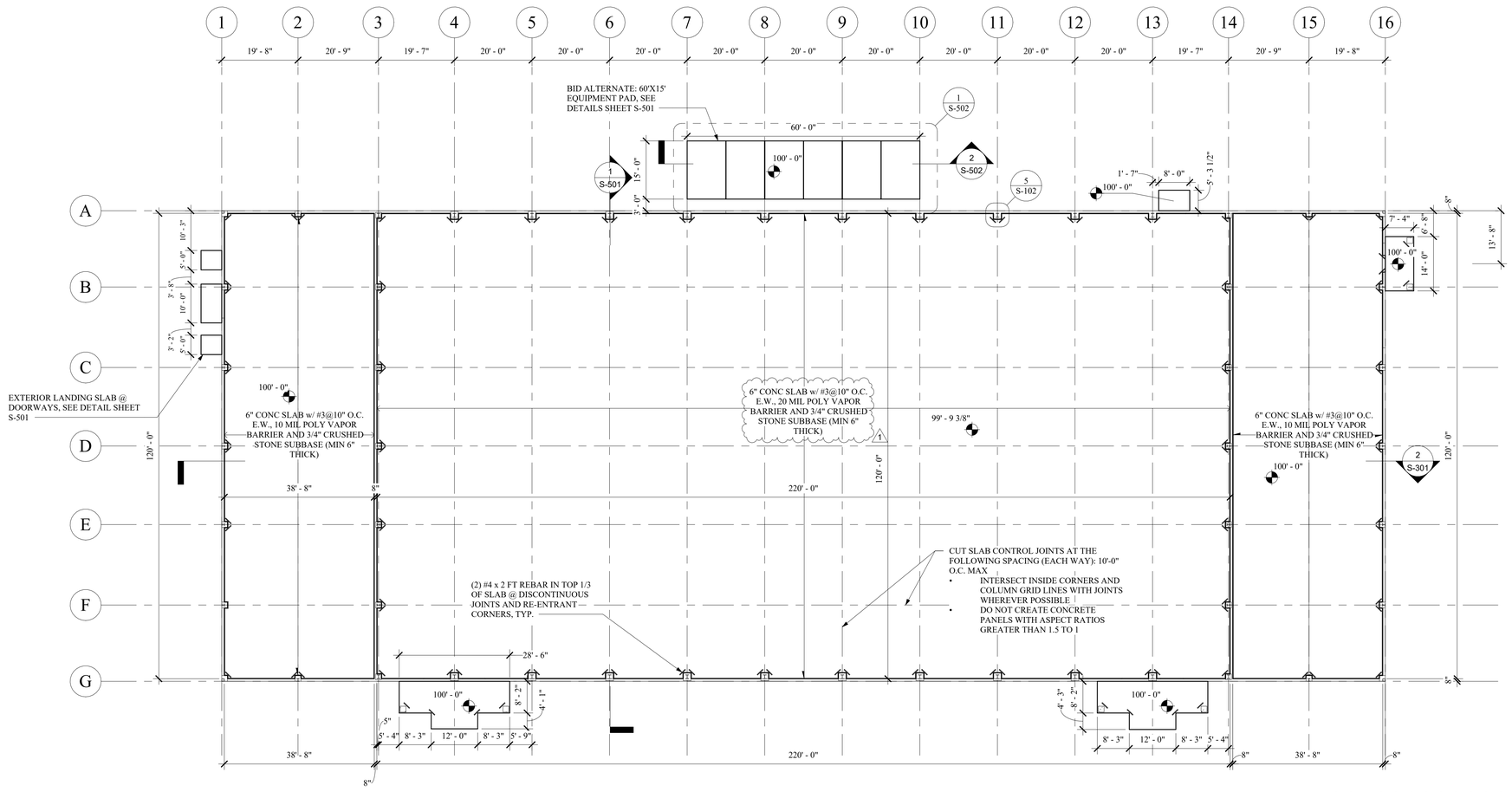
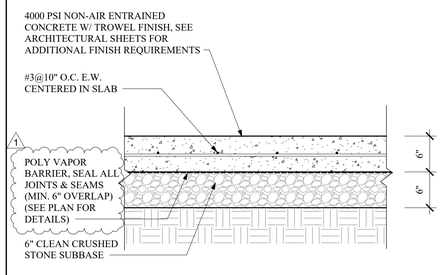
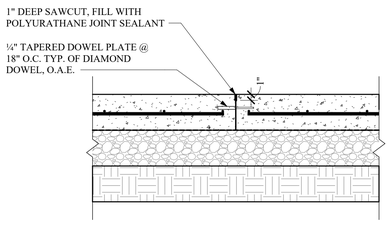


NOTE: CONCRETE SLAB FINISH TOLERANCES, CURING REQUIREMENTS, AND SEALANT RESRICTIONS TO BE COORDINATED WITH FLOORING MANUFACTURER 1

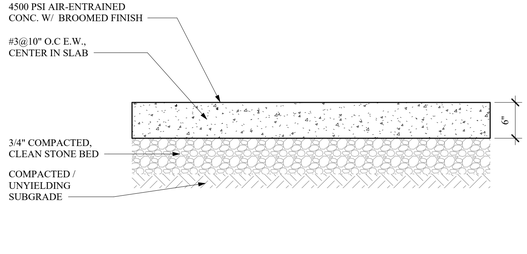
1 S-102 SLAB PLAN
SCALE: 1/16" = 1'-0"



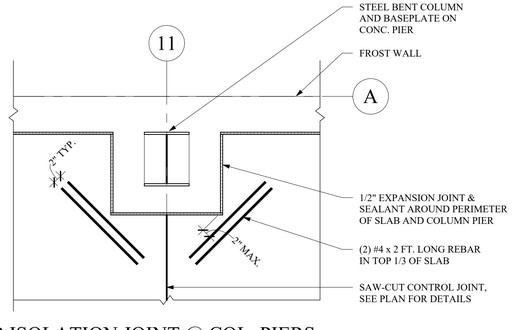
2 S-102 INTERIOR SLAB ON GRADE DETAIL
SCALE: 1" = 1'-0"



3 S-102 TYP. CONSTRUCTION JOINT DETAIL
SCALE: 1" = 1'-0"



4 S-102 TYP. EXTERIOR LANDING SLAB DETAIL
SCALE: 1" = 1'-0"



5 S-102 SLAB ISOLATION JOINT @ COL. PIERS
SCALE: 3/4" = 1'-0"

MHE ENGINEERING
33 Airport Center Drive, Suite 202
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BID SET

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NEW RECREATION CENTER TOWN OF NEWBURGH

CHADWICK LAKE PARK
1702 NY-300, Newburgh, NY 12550

SLAB PLAN

REVISIONS

NO.	DESCRIPTION	DATE
1	ADDENDUM #1	3-6-2024

ISSUED DATE:	28 FEB, 2024
DESIGNED BY:	WRB
DRAWN BY:	WRB
CHECKED BY:	JSS
REVIEWED BY:	ML

SHEET NO.

S-102

PROJECT # 21-135 PHASE # _

3/5/2024 3:03:39 PM

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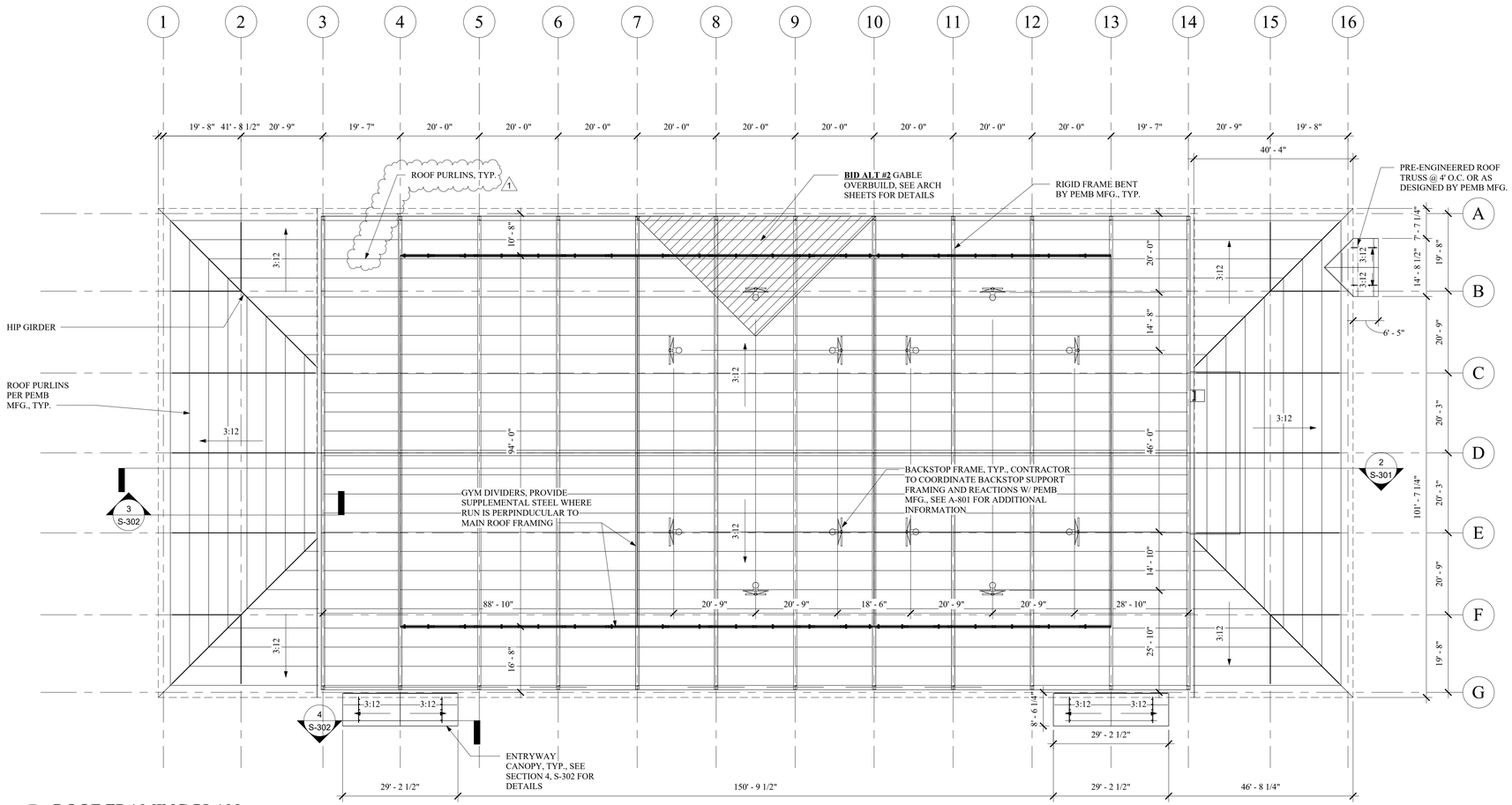

1 S-105 ROOF FRAMING PLAN
SCALE: 1/16" = 1'-0"

GYM DIVIDER NOTES:
1. BASIS OF DESIGN SHALL BE DRAPER, INC.
2. RIGID DIVIDER:
   A. WEIGHT = 14 PLF
   B. ATTACHEMENT POINTS SHALL BE MAX 8'-0" O.C.
3. FOLD UP DIVIDER:
   A. WEIGHT = 10 PLF
   B. ATTACHMENT POINTS SHALL BE MAX 8'-0" O.C.

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TOWN OF NEWBURGH

CHADWICK LAKE PARK
1702 NY-300, Newburgh, NY 12550

ROOF FRAMING

REVISIONS

NO.	DESCRIPTION	DATE
1	ADDENDUM #1	3-6-2024

ISSUED DATE:	28 FEB, 2024
DESIGNED BY:	WRB
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REVIEWED BY:	ML

SHEET NO.

S-105

PROJECT # 21-135 PHASE # _

3/5/2024 3:05:40 PM

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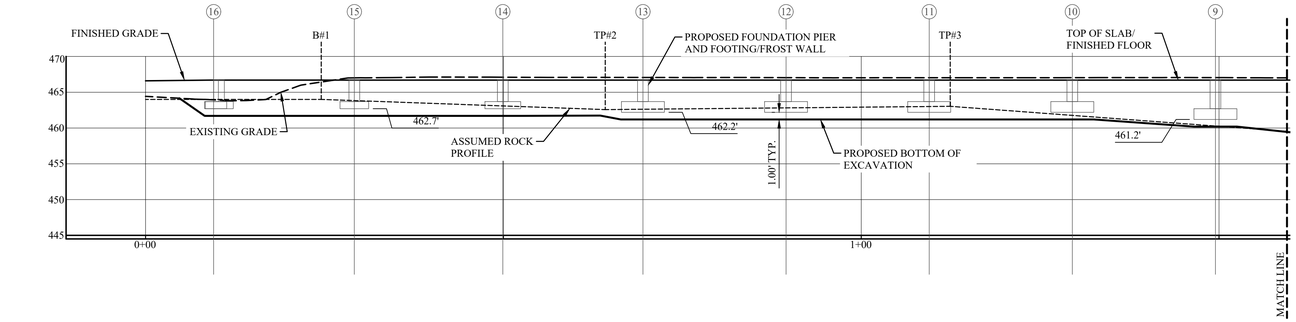

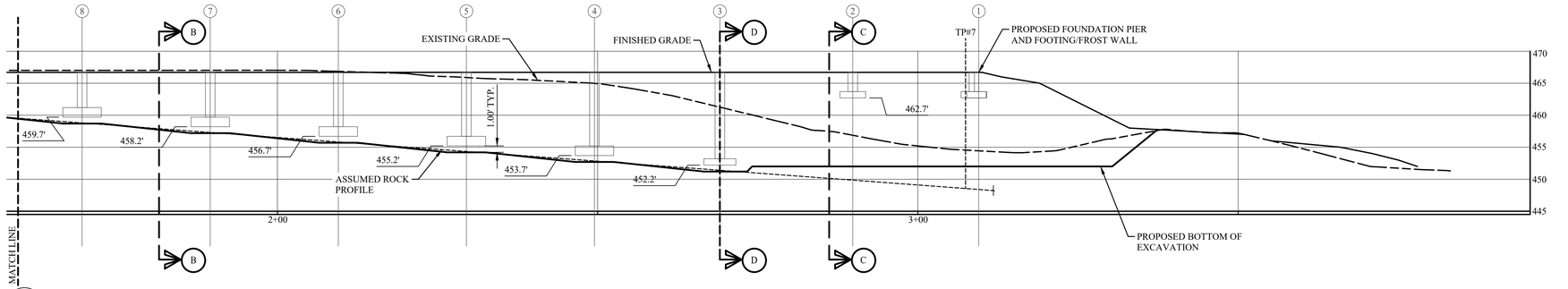

1 S-202 BACKFILL PROFILE SECTION A-A

SCALE: 1" = 10'

ENGINEERING

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CALL 811

TOWN OF NEWBURGH
RECREATION
CENTER

CHADWICK LAKE PARK
1702 ROUTE 300
NEWBURGH, N.Y. 12550

STRUCTURAL
EXCAVATION &
BACKFILL PROFILES

REVISIONS

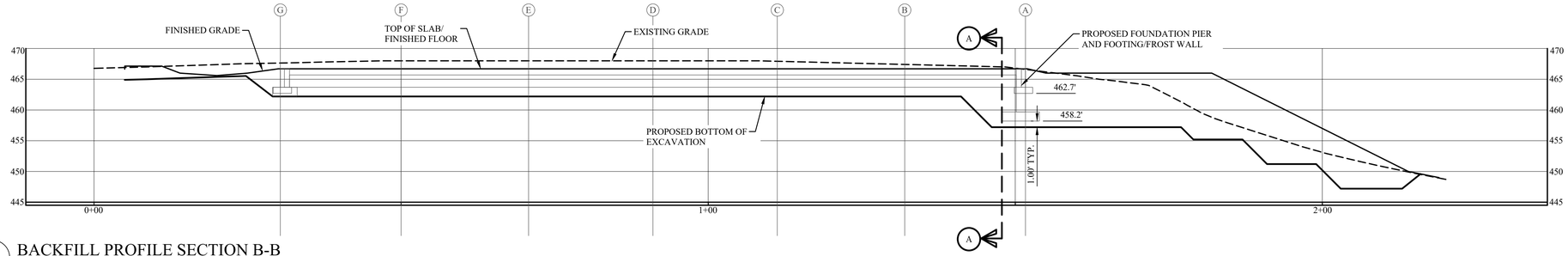
NO.	DESCRIPTION	DATE
1	ADDENDUM #1	3-6-2024

ISSUED DATE:	28 February, 2024
DESIGN BY:	WRB
DRAWN BY:	WRB
CHECKED BY:	JSS
REVIEWED BY:	ML

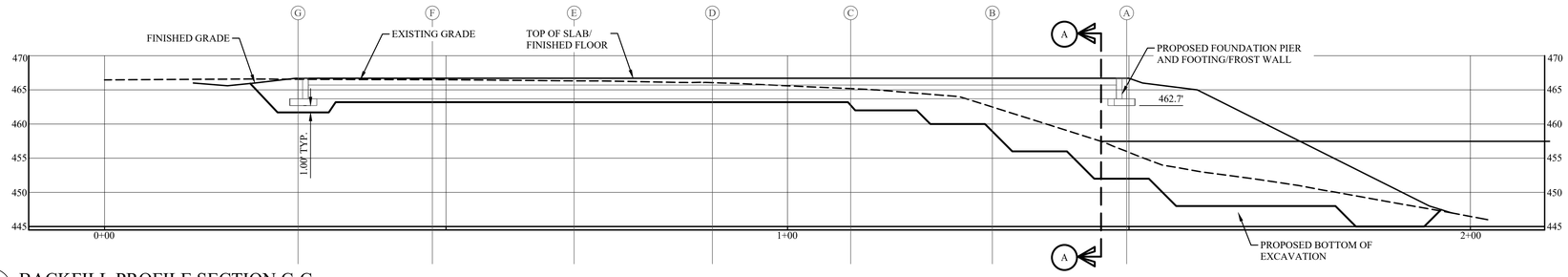
SHEET NO.

S-202

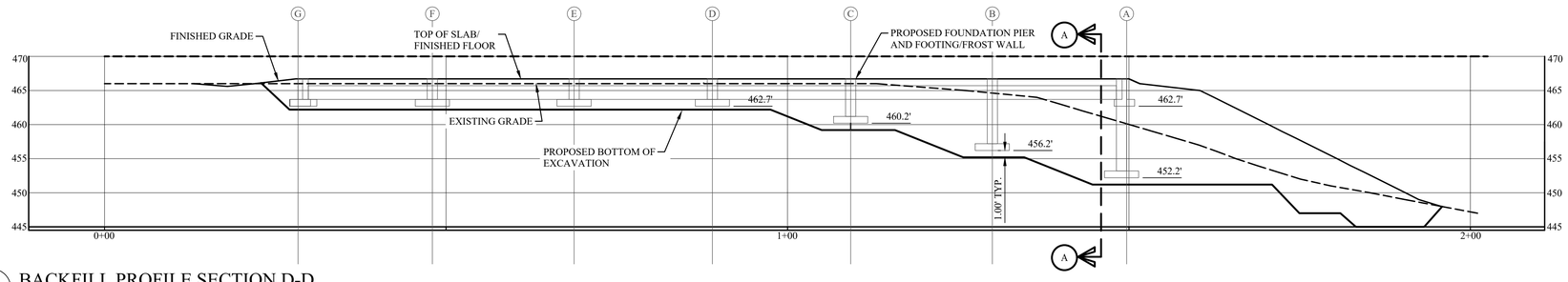
PROJECT # 21-135 PHASE #



1 S-203 BACKFILL PROFILE SECTION B-B
SCALE: 1" = 10'



2 S-203 BACKFILL PROFILE SECTION C-C
SCALE: 1" = 10'



3 S-203 BACKFILL PROFILE SECTION D-D
SCALE: 1" = 10'

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NEWBURGH, N.Y. 12550

STRUCTURAL EXCAVATION & BACKFILL PROFILES

REVISIONS

NO.	DESCRIPTION	DATE
1	ADDENDUM #1	3-6-2024

ISSUED DATE:	28 February, 2024
DESIGN BY:	WRB
DRAWN BY:	WRB
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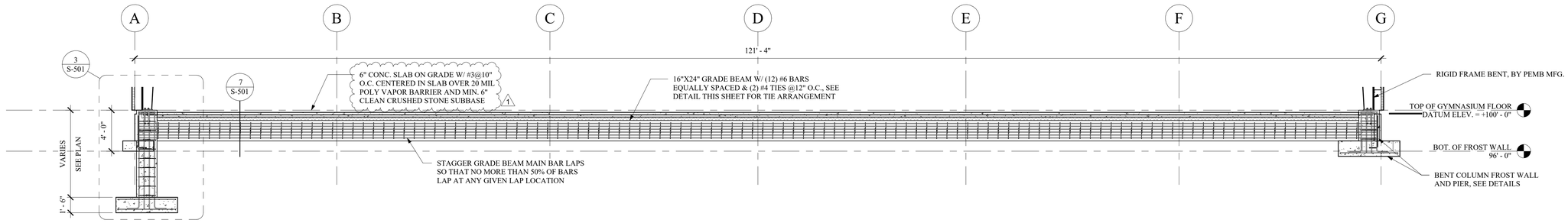
REVIEWED BY:	ML

SHEET NO.

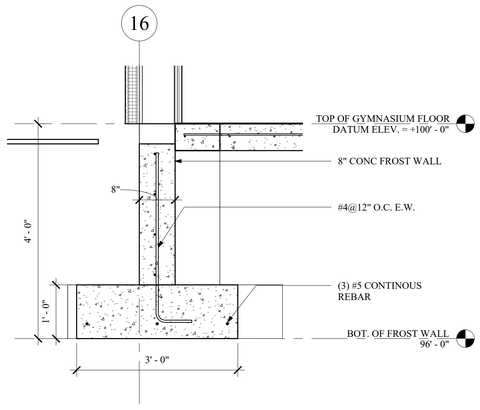
S-203

PROJECT # 21-135 PHASE #



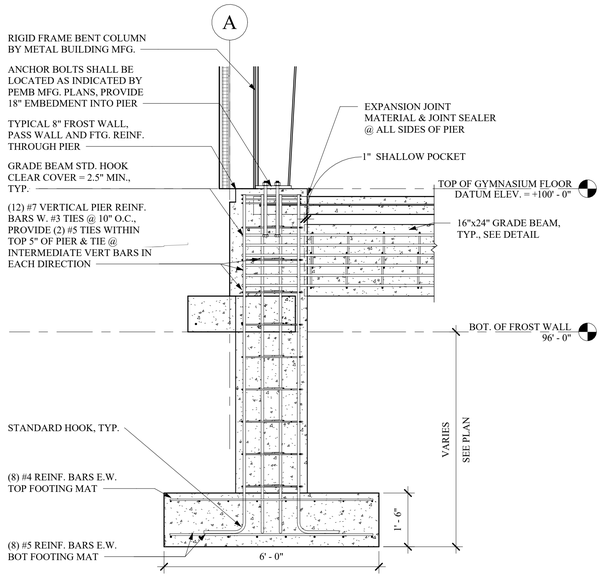
1 S-501 TYPICAL FOUNDATION SECTION @ BENT FRAME

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



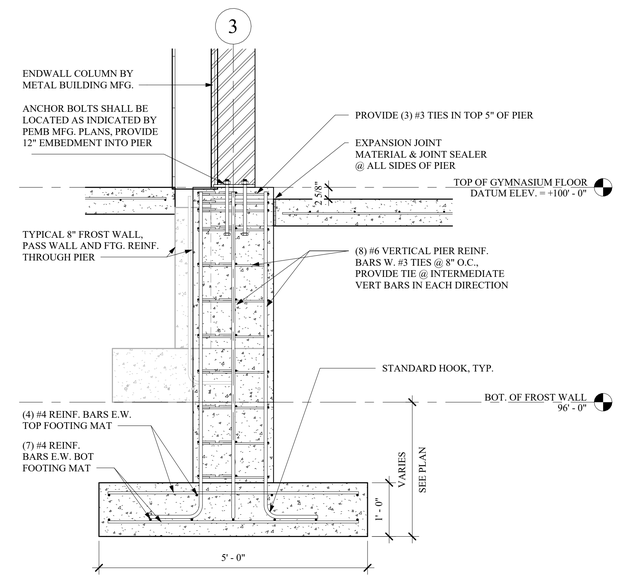
2 S-501 FROST WALL DETAIL (TYP.)

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



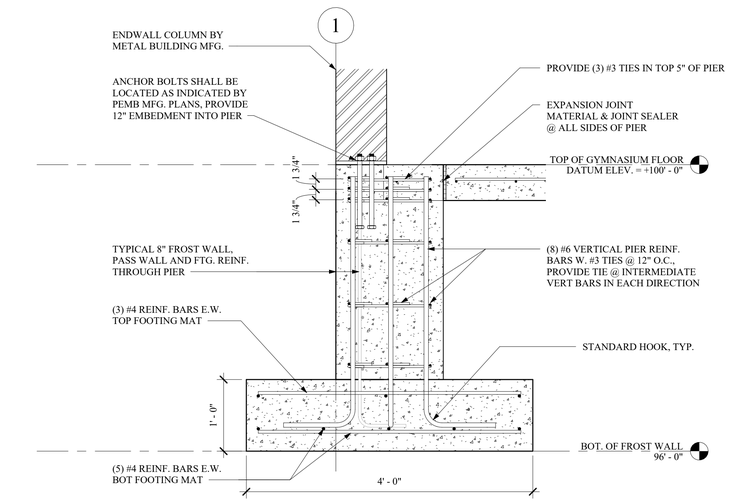
3 S-501 F1 - BENT COLUMN FOOTING AND PIER DETAIL

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



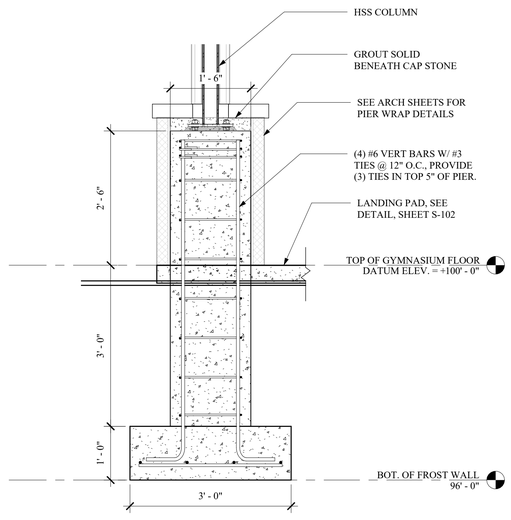
4 S-501 F2- ENDWALL GYM COL. PIER DETAIL

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



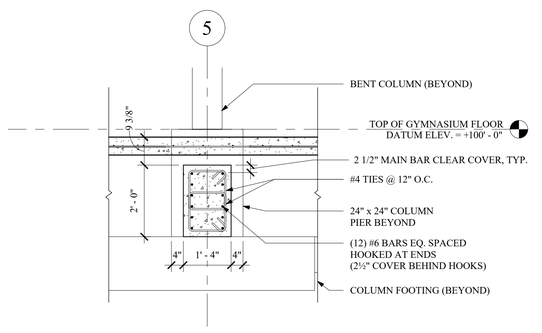
5 S-501 F3 - COLUMN PIER AND FOOTING DETAIL

SCALE: 1" = 1'-0"



6 S-501 F4 - ENTRYWAY PIER DETAIL

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



7 S-501 GRADE BEAM DETAIL

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

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NEW RECREATION CENTER TOWN OF NEWBURGH

CHADWICK LAKE PARK
1702 NY-300, Newburgh, NY 12550

FOUNDATION DETAILS

REVISIONS

NO.	DESCRIPTION	DATE
1	ADDENDUM #1	3-6-2024

ISSUED DATE:	28 FEB, 2024
DESIGNED BY:	WRB
DRAWN BY:	WRB
CHECKED BY:	JSS
REVIEWED BY:	ML

SHEET NO.

S-501

PROJECT # 21-135 PHASE # _

3/5/2024 3:03:40 PM

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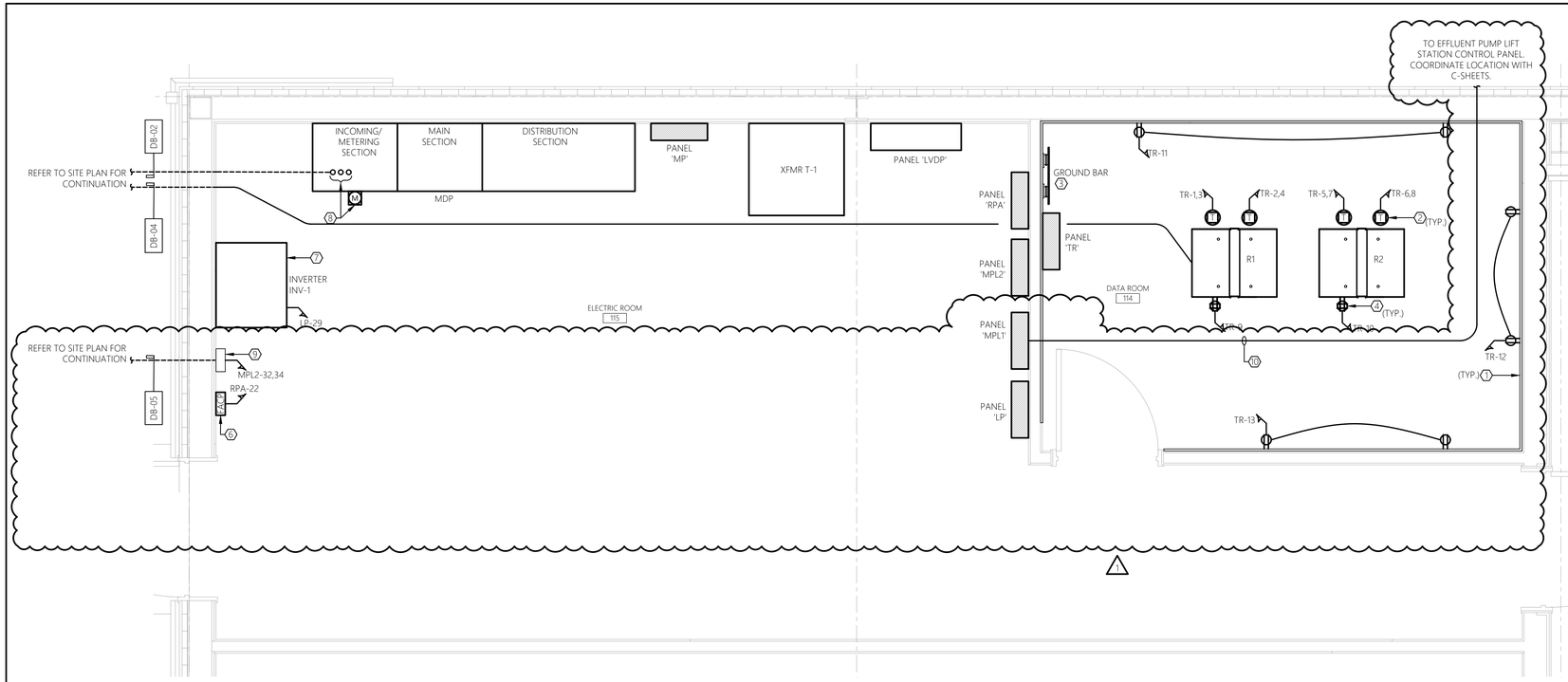
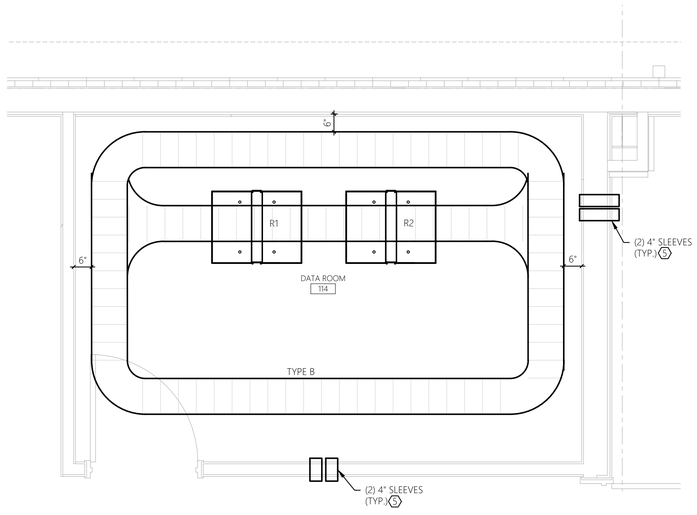


1 ELECTRICAL ENLARGED POWER PLAN
SCALE: 1/2" = 1'-0"



2 ENLARGED SYSTEMS PLAN
SCALE: 1/2" = 1'-0"

GENERAL SHEET NOTES:

1. REFER TO E-001 FOR ELECTRICAL LEGENDS, ABBREVIATIONS AND GENERAL PROJECT NOTES.
2. REFER TO E-500 FOR RACEWAY SCHEDULE FOR APPROVED RACEWAY USAGE.
3. REFER TO E-503/E-504 FOR PANEL SCHEDULES FOR CIRCUIT CHARACTERISTICS.
4. REFER TO E-500 FOR BRANCH CIRCUIT SCHEDULE (BCS) FOR CIRCUIT REQUIREMENTS.
5. ALL CONDUCTORS SHALL BE THHN/THWN-2.
6. INSTALLATION SHALL BE PER NECA1 GUIDELINES.
7. PROVIDE HANGERS & SUPPORTS AS REQUIRED.
8. PROVIDE GROUNDING PER NEC FOR ALL ELECTRICAL EQUIPMENT AND ASSOCIATED EQUIPMENT.
9. PROVIDE SUBMITTAL DATA FOR ALL PROPOSED HARDWARE, DEVICES, CONDUIT, HANGERS, ETC. FOR ENGINEER REVIEW & APPROVAL PRIOR TO ORDERING.
10. ALL CONDUCTORS AND EQUIPMENT NOT SHOWN FOR CLARITY. COORDINATE WITH ALL TRADES AND PROVIDE COMPLETE ELECTRICAL CIRCUITING FOR ALL INSTALLED EQUIPMENT. ALL REQUIREMENTS TO BE PER NEC.

SHEET KEY NOTES:

1. PROVIDE 4'X 8'X 3/4" BCX, FIRE RATED PLYWOOD BACKBOARDS ON EACH WALL. PAINT WITH ACRYLIC, INTERIOR, FIRE RETARDANT PAINT (2 COATS- COORDINATE COLOR WITH OWNER).
2. PROVIDE (2) DEDICATED L6-30R RECEPTACLES WITH TWIST LOCK ON TOP OF EACH RACK. COORDINATE LOCATION IN FIELD WITH OWNER IT REPRESENTATIVE.
3. PROVIDE GROUND BAR IN ACCORDANCE WITH DETAIL, SHEET E-602, COORDINATE GROUND BAR LOCATION IN FIELD PRIOR TO ROUGH-IN.
4. PROVIDE DEDICATED 120V, 20A CIRCUIT AND QUAD RECEPTACLE FIXED TO CABLE TRAY TO RECEIVE RACK POWER STRIP. COORDINATE LOCATION IN FIELD WITH OWNER IT REPRESENTATIVE.
5. PROVIDE 4" HILITI SPEED SLEEVES (OR APPROVED EQUAL). REFER TO DETAIL, SHEET E602, FOR ADDITIONAL INFORMATION.
6. COORDINATE FIRE ALARM CONTROL PANEL LOCATION IN FIELD WITH OWNER AND FIRE ALARM VENDOR PRIOR TO ROUGH-IN.
7. REFER TO GYM EMERGENCY LIGHTING RISER DIAGRAM, SHEET E-605 AND LIGHTING INVERTER SCHEDULE, SHEET E-502 FOR ADDITIONAL INVERTER INFORMATION.
8. TURN UP UNDERGROUND SERVICE CONDUITS INTO INCOMING/METERING SECTION OF SWITCHBOARD MDP. COORDINATE ELECTRICAL SERVICE ENTRANCE AND ALL REQUIREMENTS WITH CENTRAL HUDSON. PROVIDE SERVICE ENTRANCE IN ACCORDANCE WITH UTILITY STANDARDS PERTAINING TO PAD-MOUNTED TRANSFORMER, CT CABINET, METERING, HOT VS. COLD SEQUENCE, UNDERGROUND PRIMARY CONDUCTORS, BACKFILL, TRENCHING, ETC.
9. COORDINATE CISTERN HOA/CONTROL PANEL LOCATION IN FIELD WITH OWNER AND C-SHEETS. REFER TO SPECIFICATION 333200 AND RISER DIAGRAM, SHEET E-702, FOR ADDITIONAL INFORMATION.
10. REFER POWER CIRCUIT TO EFFLUENT PUMP LIFT STATION CONTROL PANEL. COORDINATE CONTROL PANEL LOCATION WITH C-SHEETS. FEEDER ROUTE SHOWN IS DIAGRAMMATIC. COORDINATE PATH IN FIELD WITH C-SHEETS PRIOR TO ROUGH-IN. REFER TO RISER DIAGRAM, SHEET E-702 FOR FEEDER SIZE/CHARACTERISTICS.

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JADE STONE ENGINEERING
mechanical, electrical, plumbing

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NEW RECREATION CENTER
TOWN OF NEWBURGH

CHADWICK LAKE PARK
1702 NY-300, NEWBURGH, NY 12550

ELECTRICAL ENLARGED PLANS

REVISIONS

NO.	DESCRIPTION	DATE
1	Addendum 1	3/6/2024

ISSUED DATE:	28 FEBRUARY, 2024
DESIGNED BY:	BCW
DRAWN BY:	SAG
CHECKED BY:	BCW
REVIEWED BY:	BCW

SHEET NO.

E-400

PROJECT # 21-135 PHASE #

INDICATED BY (5) ON PLAN SHEETS

MECHANICAL EQUIPMENT CONNECTION SCHEDULE CONTINUED

EQUIPMENT

SPECIFIC NOTES:

1. WHEN LOCATION IS NOT REFERENCED ON 'E' SHEETS, REFER TO 'M' SHEETS.
2. LOCATIONS SHOWN ARE GENERAL IN NATURE. COORDINATE WITH DIV. 23 PRIOR TO ROUGH-IN.

ELECTRICAL LOAD

POWER CONNECTION

FIRE ALARM CONNECTIONS

SPECIFIC NOTES:

1. DETECTORS & REMOTE ANNUNCIATORS PROVIDED BY ELECTRICAL CONTRACTOR
2. COORDINATE INSTALLATION IN DUCTS WITH DIVISION 23.
3. ALL CABLING BY DIVISION 26/28

DISCONNECT/SAFETY SWITCH

TYPES:
A: NON-FUSED
B: FUSED
M: MOTOR RATED SWITCH
R: RECEPTACLE/CORD/PLUG
N: NOT REQUIRED
C: CKT BREAKER WITHIN SIGHT
FM: FACTORY MOUNTED DISC.

SIZES:
AF: AMPERE FRAME
AT: FUSE SIZE (RK5, UON)

STARTER

TYPES:
VFD: VARIABLE FREQUENCY DRIVE W/ INTEGRAL DISC.
AQUA: AQUA STAT
24T: 24V THERMOSTAT
M: MOTOR RATED SWITCH - MANUAL STARTER
ECM: ECM MOTOR
N: NOT REQUIRED
P: PACKAGED CONTROLLER BY MANUFACTURER
LVT: LINE VOLT T-STAT ('R' INDICATES REVERSE TYPE)

REMARKS

EQUIPMENT TAG	EQUIPMENT TYPE	LOCATION ON PLAN	FLA	KVA	V	PH	HOMERUN TO	CKT BKR	CONDUCTORS & CONDUIT	CONNECTION BY DIVISION:	SUPPLY DUCT SMOKE	RETURN DUCT SMOKE	UNIT SHUTDOWN BY DUCT SMOKE	DISCONNECT TYPE/SIZE	NEMA ENCLOSURE TYPE	FURNISHED BY DIVISION:	INSTALLED BY DIVISION:	STARTER TYPE	NEMA ENCLOSURE TYPE	FURNISHED BY DIVISION:	FINAL CONNECTION BY DIVISION:	REMARKS
ECUH-1	CABINET UNIT HEATER	GYMNASIUM - 125	13 MCA	10.0	480	3	PANEL MP	20/3	(3)#12 & #12G, 3/4"C	26	NO	NO	NO	FM	1	23	26	24T	-	23	26	
ECUH-2	CABINET UNIT HEATER	GYMNASIUM - 125	13 MCA	10.0	480	3	PANEL MP	20/3	(3)#12 & #12G, 3/4"C	26	NO	NO	NO	FM	1	23	26	24T	-	23	26	
ECUH-3	CABINET UNIT HEATER	GYMNASIUM - 125	13 MCA	10.0	480	3	PANEL MP	20/3	(3)#12 & #12G, 3/4"C	26	NO	NO	NO	FM	1	23	26	24T	-	23	26	
ECUH-4	CABINET UNIT HEATER	GYMNASIUM - 125	13 MCA	10.0	480	3	PANEL MP	20/3	(3)#12 & #12G, 3/4"C	26	NO	NO	NO	FM	1	23	26	24T	-	23	26	
ECUH-5	CABINET UNIT HEATER	GYMNASIUM - 125	13 MCA	10.0	480	3	PANEL MP	20/3	(3)#12 & #12G, 3/4"C	26	NO	NO	NO	FM	1	23	26	24T	-	23	26	
ECUH-6	CABINET UNIT HEATER	GYMNASIUM - 125	13 MCA	10.0	480	3	PANEL MP	20/3	(3)#12 & #12G, 3/4"C	26	NO	NO	NO	FM	1	23	26	24T	-	23	26	
ECUH-7	CABINET UNIT HEATER	VESTIBULE 124	19.2 MCA	4.0	208	1	PANEL MPL1	30/2	(2)#10 & #10G, 3/4"C	26	NO	NO	NO	FM	1	23	26	LVT	-	23	26	
ECUH-8	CABINET UNIT HEATER	VESTIBULE 126	19.2 MCA	4.0	208	1	PANEL MPL1	30/2	(2)#10 & #10G, 3/4"C	26	NO	NO	NO	FM	1	23	26	LVT	-	23	26	
ECUH-9	CABINET UNIT HEATER	VESTIBULE 137	12.5 MCA	1.5	120	1	PANEL MPL1	20/1	(2)#12 & #12G, 3/4"C	26	NO	NO	NO	FM	1	23	26	LVT	-	23	26	
EUH-1	UNIT HEATER	SPRINKLER RM - 116	12.5	3.0	208	1	PANEL MPL2	20/2	(2)#12 & #12G, 3/4"C	26	NO	NO	NO	FM	1	23	26	24T	-	23	26	
EUH-2	UNIT HEATER	STORAGE - 113	12.5	3.0	208	1	PANEL MPL2	20/2	(2)#12 & #12G, 3/4"C	26	NO	NO	NO	FM	1	23	26	24T	-	23	26	
EUH-3	UNIT HEATER	ELECTRIC RM - 115	12.5	3.0	208	1	PANEL MPL2	20/2	(2)#12 & #12G, 3/4"C	26	NO	NO	NO	FM	1	23	26	24T	-	23	26	
EUH-4	UNIT HEATER	MECH ATTIC - 201	12.5	3.0	208	1	PANEL MPL2	20/2	(2)#12 & #12G, 3/4"C	26	NO	NO	NO	FM	1	23	26	24T	-	23	26	
EUH-5	UNIT HEATER	MECH ATTIC - 202	12.5	3.0	208	1	PANEL MPL2	20/2	(2)#12 & #12G, 3/4"C	26	NO	NO	NO	FM	1	23	26	24T	-	23	26	
EUH-6	UNIT HEATER	STORAGE-138	12.5	3.0	208	1	PANEL MPL2	20/2	(2)#12 & #12G, 3/4"C	26	NO	NO	NO	FM	1	23	26	24T	-	23	26	
EF-1	EXHAUST FAN	ROOF	-	1/4 HP	120	1	PANEL MPL2	20/1	(2)#12 & #12G, 3/4"C	26	NO	NO	NO	FM	3R	23	26	ECM	-	23	26	(4)
ACCU-1	AIR COOLED CONDENSING UNIT	OUTSIDE	21.1 MCA	-	480	3	PANEL MDP	30/3	(3)#10 & #10G, 3/4"C	26	NO	NO	YES	A	3R	26	26	P	-	23	26	
ACCU-2	AIR COOLED CONDENSING UNIT	OUTSIDE	21.1 MCA	-	480	3	PANEL MDP	30/3	(3)#10 & #10G, 3/4"C	26	NO	NO	YES	A	3R	26	26	P	-	23	26	
BS-1	BRANCH SELECTOR	STORAGE - 113	1.0 MCA	-	208	1	PANEL MPL2	20/2	(2)#12 & #12G, 3/4"C	26	NO	NO	NO	N	-	-	-	N	-	-	-	
BS-2	BRANCH SELECTOR	CORRIDOR - 133	0.4 MCA	-	208	1			(2)#12 & #12G, 3/4"C	26	NO	NO	NO	N	-	-	-	N	-	-	-	
FCU-1	FAN COIL UNIT	CHILDERN'S RM - 128	1.5 MCA	-	208	1	PANEL MPL1	20/2	(2)#12 & #12G, 3/4"C	26	NO	NO	NO	M	1	26	26	24T	-	23	26	
FCU-2	FAN COIL UNIT	EXERCISE - 131	1.8 MCA	-	208	1			(2)#12 & #12G, 3/4"C	26	NO	NO	NO	M	1	26	26	24T	-	23	26	
FCU-3	FAN COIL UNIT	MULTI-PURPOSE - 132	9.0 MCA	-	208	1	PANEL MPL2	20/2	(2)#12 & #12G, 3/4"C	26	NO	NO	NO	A	1	26	26	24T	-	23	26	
RCP-1	RECIRC. PUMP	JAN. CLOSET - 110	1/6HP	-	120	1	PANEL MPL1	20/1	(2)#12 & #12G, 3/4"C	26	NO	NO	NO	M	1	26	26	AQUA	-	22	26	
RCP-2	RECIRC. PUMP	JAN. CLOSET - 136	1/6HP	-	120	1	PANEL MPL1	20/1	(2)#12 & #12G, 3/4"C	26	NO	NO	NO	M	1	26	26	AQUA	-	22	26	
WH-1	WATER HEATER	JAN. CLOSET - 110	-	4.5	208	3	PANEL MPL1	20/3	(3)#12 & #12G, 3/4"C	26	NO	NO	NO	A	1	26	26	P	-	22	26	
WH-2	WATER HEATER	JAN. CLOSET - 136	-	4.5	208	3	PANEL MPL1	20/3	(3)#12 & #12G, 3/4"C	26	NO	NO	NO	A	1	26	26	P	-	22	26	

GENERAL SCHEDULE NOTES:

1. CONTRACTOR TO INSTALL STARTER/DISCONNECT ADJACENT TO UNIT. INSTALLATION TO COMPLY WITH NEC ARTICLE 110.26.
2. EQUIPMENT FURNISHED BY OTHERS. COORDINATE WITH ASSOCIATED TRADE CONTRACTOR.
3. CONFIRM HP, VOLTAGE AND PHASE CONNECTIONS PRIOR TO ROUGH-IN OF EQUIPMENT. COORDINATION REQUIRED BETWEEN TRADES.
4. STARTERS SHALL BE NEMA STYLE AND SIZED BASED ON ELECTRICAL LOAD DATA LISTED ON SCHEDULE.
5. MOTOR RATED SWITCHES SHALL BE EQUIPPED WITH HEATERS, WHICH SHALL BE SIZED BASED ON NAMEPLATE DATA (TO BE OBTAINED IN FIELD), NOT ON ELECTRICAL LOAD DATA ON SCHEDULE
6. CIRCUIT BREAKERS INDICATED ON SCHEDULE ABOVE SHALL BE PROVIDED BY THE CONTRACTOR IN THE PROPOSED PANEL (THEY ARE NOT EXISTING BREAKERS, UNLESS INDICATED ON THE PANELBOARD SCHEDULE).
7. FOR THIS PROJECT, THE FOLLOWING HAS BEEN ASSUMED BY THE ENGINEER:
   - DIVISION 26: ELECTRICAL SUB
   - DIVISION 23: MECHANICAL SUB AND/OR CONTROLS SUB
   - DIVISION 22: PLUMBING SUB

REMARKS:

(4) EXHAUST FAN TO BE ENABLED BY TOILET ROOM LIGHTING OCCUPANCY/VACANCY SENSOR. PROVIDE ALL NECESSARY FIELD WIRING/CONNECTIONS. COORDINATE WITH M.C.

DUCT BANK SCHEDULE

DESIGNATION (DB-01)	TYPE	ORIGIN	DESTINATION	CIRCUIT			REMARKS
				CONDUCTORS/CONDUIT	ORIGIN	DESTINATION	
DB-01	FLOWABLE FILL	UTILITY POLE	PROPOSED UTILITY PAD-MOUNTED TRANSFORMER	(4)#2 , 4"C 15KV FEEDER	UTILITY	PROPOSED UTILITY PAD-MOUNTED TRANSFORMER	
				SPARE 4" CONDUIT	EXISTING RISER POSE		
DB-02 (1)	FLOWABLE FILL	PROPOSED UTILITY PAD-MOUNTED TRANSFORMER	BUILDING	(3) SETS OF [(4)#300, EACH IN 3"C]	PROPOSED UTILITY PAD-MOUNTED TRANSFORMER	MDP (ELECTRIC ROOM)	
				SPARE 4" CONDUIT	PROPOSED UTILITY PAD-MOUNTED TRANSFORMER	ELECTRIC ROOM	
DB-03	FLOWABLE FILL	EFFLUENT PUMP LIFT STATION CONTROL PANEL	EFFLUENT PUMP LIFT STATION	REFER TO RISER DIAGRAM- SHEET E702	CONTROL PANEL	SUBMERSIBLE PUMPS	
DB-04	FLOWABLE FILL	BUILDING	DATA ROOM	4" CONDUIT, CABLING BY INTERNET SERVICE PROVIDER	UTILITY POLE	DATA RACK	
DB-05	FLOWABLE FILL	BUILDING	CISTERN	REFER TO RISER DIAGRAM- SHEET E702	HOA SWITCH CONTROL PANEL	CISTERN PUMP	

GENERAL SCHEDULE NOTES:

1. VERIFY CIRCUIT REQUIREMENTS WITH APPLICABLE EQUIPMENT MANUFACTURERS. PROVIDE CONDUCTORS AND CONDUIT AS REQUIRED.
2. DUCT BANK SWEEPS SHALL NOT HAVE LESS THAN 20'-0" RADIUS UNLESS OTHERWISE NOTED.
3. COORDINATE DUCT BANK LOCATIONS AND INSTALLATIONS WITH EXISTING AND PROPOSED STRUCTURES, EQUIPMENT, AND PIPING SYSTEMS.

REMARKS:

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ELECTRICAL SCHEDULES

REVISIONS

NO.	DESCRIPTION	DATE
1	Addendum 1	3/6/2024

ISSUED DATE:	28 FEBRUARY, 2024
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DRAWN BY:	JTR
CHECKED BY:	BCW
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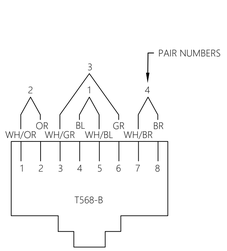
SHEET NO.	E-501
PROJECT # 21-135	PHASE #

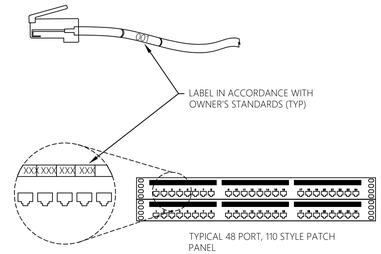
HORIZONTAL UTP CABLING SCHEDULE

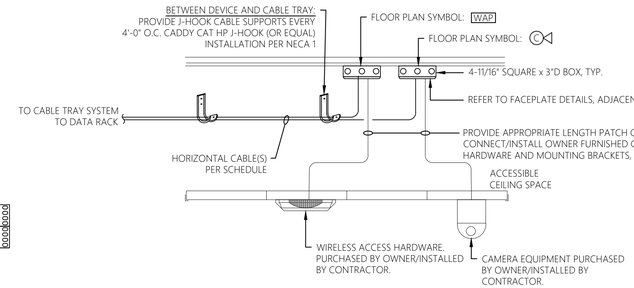
	CABLE COLOR					UTP TYPE				INSULATION			RJ45 JACK COLOR					CONFIG.		HOMERUN LOCATION
	BLUE	WHITE	PURPLE	RED	GREEN	CAT 5e	CAT 6	CAT 6a	CAT 3 4-PR.	RG-6	PLENUM	RISER	GENERAL	RED	BLACK	WHITE	BLUE	GREEN	T568A	T568B	
DATA					●		●				●							●		●	DATA ROOM 116
BMS		●					●				●							●		●	DATA ROOM 116
WAP	●						●				●							●		●	DATA ROOM 116
CAMERA				●			●				●							●		●	DATA ROOM 116

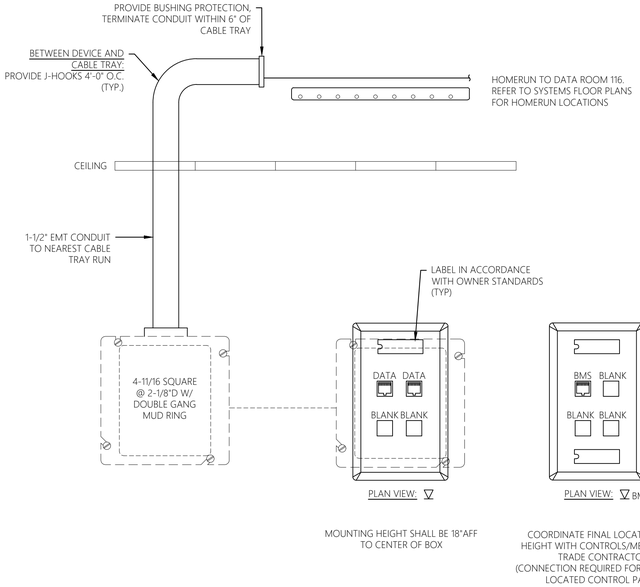
GENERAL SCHEDULE NOTES:

1. PROVIDE A DEDICATED CABLE FOR EACH JACK IDENTIFIED ON THE PLANS/DETAILS.
2. PROVIDE 10' OF CABLE SLACK AT THE TR LOCATION AND 3-1/2" IN THE SUSPENDED CEILING ABOVE THE DROP.









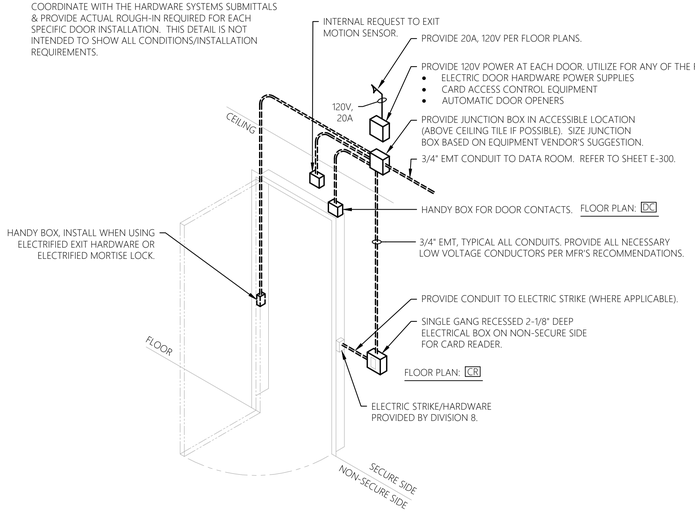
1 T568-B PUNCHDOWN & LABELING REQUIREMENTS
SCALE: NTS

3 CEILING AREAS WIRELESS ACCESS POINT AND CAMERA ROUGH-IN
SCALE: NOT TO SCALE

2 DATA WIRING DEVICE CONFIGURATIONS
SCALE: NTS

CARD ACCESS CONTROL PROJECT REQUIREMENTS:

1. GENERIC ROUGH-IN REQUIREMENTS ARE ILLUSTRATED IN THE ADJACENT DETAIL. CONTRACTOR SHALL COORDINATE WITH THE HARDWARE SYSTEMS SUBMITTALS & PROVIDE ACTUAL ROUGH-IN REQUIRED FOR EACH SPECIFIC DOOR INSTALLATION. THIS DETAIL IS NOT INTENDED TO SHOW ALL CONDITIONS/INSTALLATION REQUIREMENTS.

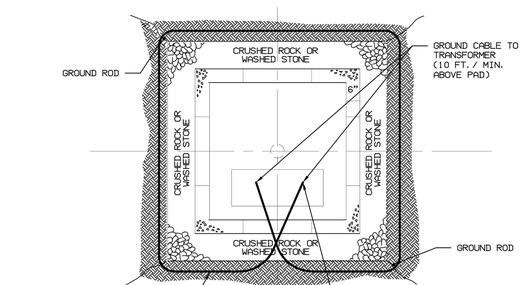


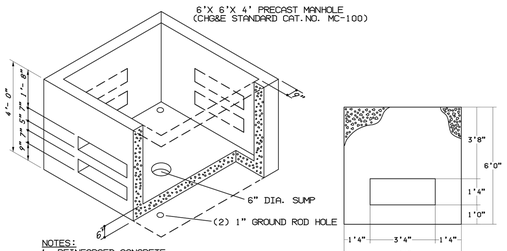
4 TYPICAL ACCESS CONTROL DOOR ROUGH-IN
SCALE: NOT TO SCALE

NOTES:

1. THE CUSTOMER WILL NORMALLY PROVIDE THE PAD FOR THREE PHASE PAD-MOUNTED TRANSFORMERS. THE STANDARD IS INTENDED AS A GUIDE FOR PROVIDING THE SPECIFICATIONS FOR PAD INSTALLATIONS APPLICABLE TO PAD-MOUNTED TRANSFORMERS OF VARIOUS KVA SIZE AND DIMENSIONS. THE STANDARD INSTALLATION USES A PRE-CAST CONCRETE BASE AND COVER. THE CONCRETE BASE IS OF UNIFORM SIZE AND UTILIZES COVERS WITH DIFFERENT SIZED WINDOW OPENINGS TO ACCOMMODATE THE KVA SIZE OF THE PAD-MOUNTED TRANSFORMER. DETAILED SPECIFICATIONS AND INSTALLATION REQUIREMENTS ARE PROVIDED IN PAGES 1 TO 3 OF THIS STANDARD.
2. THE SIDES AND REAR OF THE PAD SHALL BE A MINIMUM OF TEN (10) FEET FROM THE WINDOWS AND FIRE ESCAPES AND A MINIMUM OF THREE (3) FEET (TEN (10) FEET PREFERRED) FROM ALL BUILDINGS, FENCES, OR OTHER OBSTRUCTIONS WHICH WILL IMPEDE THE FREE FLOW OF COOLING AIR AROUND THE TRANSFORMER. THE FRONT OF THE PAD (WINDOW SIDE) SHALL HAVE A MINIMUM OF TEN (10) FEET OF UNOBSTRUCTED WORKING SPACE.
3. ACCESS TO PAD AREA BY VEHICLE MUST BE POSSIBLE AT ALL TIMES TO INSURE PROPER OPERATION AND MAINTENANCE FUNCTIONS.
4. STONE FOR BASE AND SIDES OF THE BOX PAD SHALL BE 3/4" MINIMUM TO 1-1/2" MAXIMUM CRUSHED ROCK OR WASHED STONE. 1/2" CRUSHED ROCK OR WASHED STONE MAY BE USED FOR TOP 6" IN LOCATIONS WHERE WINDOW BREAKAGE MAY BE A PROBLEM. FOR THE BASE, STONE SHALL BE PLACED ON UNDISTURBED OR WELL TAMPED EARTH.
5. AREA AROUND THE BOX PAD SHALL BE GRADED SO THAT SURFACE WATER WILL DRAIN AWAY FROM CRUSHED STONE OIL CONTAINMENT.
6. THE BOX PAD SHALL BE INSTALLED SUCH THAT THE TOP SURFACE IS LEVEL TO WITHIN 1/4" HIGH TO LOW.
7. IN GENERAL, 5" CONDUIT SHOULD BE USED FOR BOTH PRIMARY AND SECONDARY CONDUCTORS. HOWEVER, THE SECONDARY CONDUIT SHOULD BE SIZED ACCORDING TO THE SECONDARY CONDUCTORS BEING INSTALLED.
8. PERMANENT SUPPORT SHALL BE PROVIDED FOR THE SECONDARY CONDUCTORS SUCH THAT THE TOTAL WEIGHT SUPPORTED BY EACH TRANSFORMER BUSHING SHALL NOT EXCEED TEN POUNDS. THUS SINGLE RUNS OF 500 MCM COPPER AND LARGER, 1000 MCM AL AND LARGER AND PRACTICALLY ALL MULTIPLE CONDUCTOR RUNS NEED TO BE SUPPORTED TO LIMIT THE STRESS ON THE BUSHINGS.
9. CENTRAL HUDSON RESERVES THE RIGHT TO REQUIRE SUITABLE BARRIERS IN TRAFFIC AREAS TO REDUCE THE PROBABILITY OF DAMAGE DUE TO TRUCKS, AUTOMOBILES, CONSTRUCTION EQUIPMENT, AND THE LIKE. SUITABLE BARRIERS MIGHT BE 4" (MINIMUM) STEEL PIPE, FILLED WITH CONCRETE, SET 4 FT. DEEP AND EXTENDING 3 TO 4 FEET ABOVE GROUND. BARRIERS SHOULD BE SET BEYOND THE OIL CONTAINMENT IN LOCATIONS WHICH WILL INTERCEPT VEHICLES YET NOT INTERFERE WITH THE INSTALLATION OR REMOVAL OF THE TRANSFORMER.
10. ALL GROUNDING MUST BE IN ACCORDANCE WITH COMPANY SPECIFICATIONS.
11. SIZE THE GROUNDING ELECTRODE CONDUCTOR AS FOLLOWS:
    A. 200A AND SMALLER SECONDARY SERVICES: #4 AWG COPPER
    B. 400A SECONDARY SERVICES: #1/0 AWG COPPER
    C. LARGER THAN 400A SECONDARY SERVICES: #3/0 AWG COPPER

FIGURE 1





4 UTILITY TRANSFORMER PAD DETAILS
SCALE: NOT TO SCALE

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ELECTRICAL DETAILS

REVISIONS

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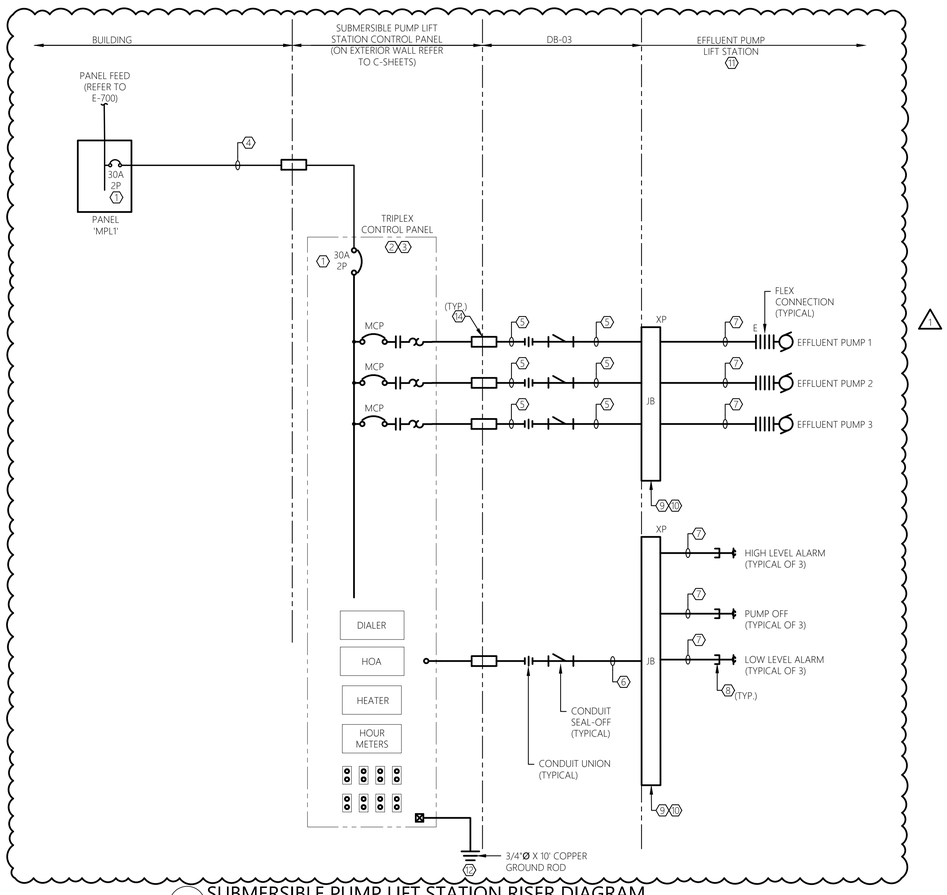
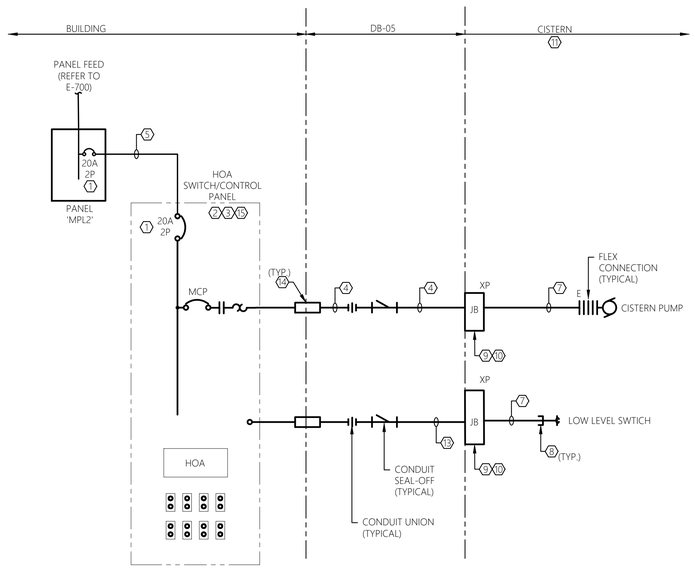
PROJECT # 21-135 PHASE #



1 SUBMERSIBLE PUMP LIFT STATION RISER DIAGRAM
SCALE: NTS



2 CISTERN PUMP RISER DIAGRAM
SCALE: NTS

GENERAL SHEET NOTES:

1. REFER TO E001 FOR ELECTRICAL LEGENDS, ABBREVIATIONS AND GENERAL PROJECT NOTES.
2. REFER TO E500 FOR RACEWAY SCHEDULE FOR APPROVED RACEWAY USAGE.
3. REFER TO E500 SERIES FOR PANEL SCHEDULES FOR CIRCUIT CHARACTERISTICS.
4. REFER TO E500 FOR BRANCH CIRCUIT SCHEDULE (BCS) FOR CIRCUIT REQUIREMENTS.
5. ALL CONDUCTORS SHALL BE THHN/THWN-2.
6. INSTALLATION SHALL BE PER NECA1 GUIDELINES.
7. PROVIDE HANGERS & SUPPORTS AS REQUIRED.
8. PROVIDE GROUNDING PER NEC FOR ALL ELECTRICAL EQUIPMENT AND ASSOCIATED EQUIPMENT.
9. PROVIDE SUBMITTAL DATA FOR ALL PROPOSED HARDWARE, DEVICES, CONDUIT, HANGERS, ETC. FOR ENGINEER REVIEW & APPROVAL PRIOR TO ORDERING.
10. ALL CONDUCTORS AND EQUIPMENT NOT SHOWN FOR CLARITY. COORDINATE WITH ALL TRADES AND PROVIDE COMPLETE ELECTRICAL CIRCUITING FOR ALL INSTALLED EQUIPMENT. ALL REQUIREMENTS TO BE PER NEC.

SHEET KEY NOTES:

(1) DISCONNECT SIZE SHOWN FOR BIDDING PURPOSES ONLY. COORDINATE DISCONNECT SIZE WITH EQUIPMENT MANUFACTURERS RECOMMENDATIONS. COORDINATE CONDUCTOR/CONDUIT SIZE WITH MANUFACTURERS RECOMMENDED DISCONNECT SIZE. ALL REQUIREMENTS TO BE PER NEC.

(2) NOT ALL INTERNAL COMPONENTS SHOWN FOR CLARITY. DIAGRAM IS INTENDED TO SHOW ALL REQUIRED FILED CIRCUITING AND TERMINATIONS REQUIRED UNDER THIS CONTRACT. REFERENCE SUBMITTAL DOCUMENTATION FOR ALL PANEL INTERNAL COMPONENTS. CONTRACTOR TO PROVIDE ADDITIONAL INTERNAL CONTACTS AND JUMPERS PER CONTROL PANEL MANUFACTURERS RECOMMENDATIONS FOR AN OVERALL COMPLETE AND OPERABLE SYSTEM. CLOSELY COORDINATE ALL REQUIREMENTS WITH C-CONTRACT AND OWNER.

(3) CONTROL PANEL AND ALL INTERNAL COMPONENTS ARE SPECIFIED IN SPECIFICATION 333200. PROVIDE ALL FIELD WIRING BETWEEN DEVICES, TERMINATIONS, AND MOUNTING OF PANEL AS SHOWN/INDICATED. REFER TO SUBMITTAL DOCUMENTATION AND COORDINATE WITH OWNER AND C-DRAWINGS/SPECS TO PROVIDE COMPLETE SYSTEM FIELD CIRCUITRY AND TERMINATIONS.

(4) PROVIDE (2)#10 & #10G, 3/4"C.

(5) PROVIDE (2)#12 & #12G, 3/4"C.

(6) PROVIDE (18)#14 & (2)#18STP, 1"C.

(7) FACTORY CABLE BY MANUFACTURER. PROVIDE 2" CONDUIT WHERE EXPOSED TO PHYSICAL DAMAGE AND RECOMMENDED BY EQUIPMENT MANUFACTURER. COORDINATE FINAL INSTALLATION REQUIREMENTS WITH MANUFACTURER/OWNER.

(8) PROVIDE CONDUIT BUSHING, FITTING, OR FLEX CONNECTION AS REQUIRED FOR PROPER CONNECTION OF DEVICE. ALL BUSHINGS, FITTINGS, OR FLEX CONNECTIONS TO BE SUITED FOR ENVIRONMENT INSTALLED WITHIN. COORDINATE FINAL REQUIREMENTS WITH C-CONTRACT AND OWNER. TYPICAL

(9) CONTRACTOR TO PROVIDE EXPLOSION PROOF (NEMA 7) JUNCTION BOX FOR SPLICING FACTORY CABLE AND EXTENDING FACTORY CABLE AS SHOWN. CONTRACTOR TO FIELD VERIFY AND COORDINATE CONDUIT ARRANGEMENT ENTERING/LEAVING PROPOSED JUNCTION BOX. CONTRACTOR TO ASSUME A 16"W X 16"L X 6"D (INSIDE DIMENSIONS) BOX IS REQUIRED FOR BIDDING PURPOSES. FINAL BOX SIZE TO COMPLY WITH NEC ARTICLE 314. JUNCTION BOX TO BE 'EJB' SERIES AS MANUFACTURED BY EATON OR APPROVED EQUAL.

(10) CONTRACTOR TO PROVIDE NECESSARY TERMINAL STRIPS AND SPLICE KITS WITHIN JUNCTION BOX TO EXTEND FACTORY CABLE AS SHOWN.

(11) SPACE INTERIOR IS A CLASS I DIVISION I GROUP D SPACE. ALL WIRING METHODS TO COMPLY WITH NEC ARTICLE 501. ALL ELECTRICAL EQUIPMENT AND DEVICES INTERIOR TO THIS SPACE TO BE EXPLOSION PROOF RATED FOR USE IN A CLASS I DIVISION I GROUP D ENVIRONMENT.

(12) CONTRACTOR TO PROVIDE TWO (2) 3/4"Ø x 10' COPPER GROUND RODS. PROVIDE GROUNDING ELECTRODE FOR CONTROL PANEL PER NEC. GROUND RODS TO BE PLACED AT MINIMUM OF 10 FEET APART. BOND GROUND RODS TOGETHER WITH A LOOPED #4 COPPER CONDUCTOR.

(13) PROVIDE (6)#14 & (2)#18STP, 1"C.

(14) PROVIDE WATERIGHT PENETRATION.

(15) COORDINATE CISTERN HOA/CONTROL PANEL LOCATION IN FIELD WITH OWNER AND C-SHEETS. REFER TO SPECIFICATION 333200 AND RISER DIAGRAM, SHEET E-702, FOR ADDITIONAL INFORMATION.

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ELECTRICAL RISER DIAGRAMS

REVISIONS

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E-702

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