

DESIGN CRITERIA

1. LIVE LOAD:

1. LIVE LOAD:
 - A. ROOF LIVE LOAD 20 PSF
 - B. FLOOR LIVE LOAD 125 PSF
 - C. MEZZANINE LIVE LOAD 125 PSF
2. DEAD LOAD:
 - A. STRUCTURAL AND BUILDING COMPONENTS SELF WEIGHT
3. WIND LOADING BY IBC 2021 – NEW JERSEY EDITION:
 - A. BASIC WIND VELOCITY (V): 125 MPH
 - B. EXPOSURE CATEGORY: C
 - C. RISK CATEGORY: III
4. SEISMIC LOADING BY IBC 2021 – NEW JERSEY EDITION:
 - A. RESPONSE ACCELERATOR:
 $S_s = 0.18$ $S_{ps} = 0.192$
 $S_1 = 0.047$ $S_{p1} = 0.075$
 - B. SEISMIC DESIGN CATEGORY: B
 - C. SEISMIC SITE CLASSIFICATION: D
 - D. IMPORTANCE FACTOR I_e : 1.25
5. SNOW LOADING BY IBC 2021 – NEW JERSEY EDITION:
 - A. GROUND SNOW LOAD: 25 PSF
 - B. IMPORTANCE FACTOR: 1.1
6. SPECIAL LOADS:
 - A. HANDRAILS/GUARDRAILS: IN COMPLIANCE WITH THE PROVISIONS OF IBC 2021 – NEW JERSEY EDITION SEE PROJECT SPECIFICATIONS.

FOUNDATIONS

1. ALL EXISTING FILL MATERIALS, CONSISTING OF GRAVEL, BRICK FRAGMENTS, CONCRETE CHIPS, WOOD CHIPS, AND DEMOLITION DEBRIS SHALL BE REMOVED IN THE REGIONS OF ALL FOUNDATIONS AND UNDER AREAS OF SLAB-ON-GRADE.
2. THE SLAB ON GRADE SHALL REST ON A MINIMUM OF 6 INCHES OF COMPACTED GRANULAR FILL.
3. PROOF ROLL SLAB SUBGRADE UNDER THE DIRECTION OF THE INSPECTION AGENCY. REMOVE ALL UNSUITABLE AREAS AND REPLACE WITH COMPACTED STRUCTURAL FILL MATERIALS. COMPACT FILL TO AT LEAST 95 PERCENT OF THE MAXIMUM DENSITY AS DETERMINED BY THE ASTM D 1557 MODIFIED PROCTOR TEST.
4. SHALLOW FOUNDATIONS SHALL BE FOOTINGS TO BEAR ON UNDISTURBED SOIL, HAVING A MINIMUM SAFE BEARING CAPACITY OF 3.0 KSF. THE TESTING AND INSPECTION AGENCY SHALL VERIFY SOIL BEARING CAPACITY AT EACH WALL FOOTING PRIOR TO INSTALLATION OF FOOTING. NOTIFY ENGINEER OF ANY VARIATION FROM ANTICIPATED BEARING CAPACITY FOR APPROPRIATE REDESIGN OF FOOTING.
5. THE BOTTOMS OF ALL EXTERIOR FOOTINGS SHALL BE 2'-6" MINIMUM BELOW FINISHED GRADE.
6. EDGES OF FOOTINGS SHALL NOT BE PLACED AT A GREATER THAN 1 (VERTICAL) TO 2 (HORIZONTAL) SLOPE WITH RESPECT TO ANY ADJACENT FOOTING OR EXCAVATION.
7. ALL ADJACENT COLUMN FOOTINGS THAT ABUT SHALL BE SEPARATED BY A PAPER JOINT.
8. BACKFILLING AGAINST WALLS SHALL NOT BE DONE UNTIL CONCRETE HAS BEEN CURED TO ATTAIN SUFFICIENT STRENGTH (7 DAYS MINIMUM) AND WALLS ARE PROPERLY SHORED AND/OR BRACED. BACKFILL FOUNDATION WALLS WITH EARTH ON BOTH SIDES OF THE WALL BY ALTERNATELY PLACING BACKFILL ON EACH SIDE SO THAT HEIGHT OF BACKFILL DOES NOT DIFFER BY MORE THAN 1'-6" FROM OTHER SIDE.
9. THE CONTRACTOR SHALL SAFEGUARD AND PROTECT ALL EXCAVATIONS AND ALL EXCAVATIONS SHALL BE KEPT FREE OF WATER.
10. NO HORIZONTAL JOINTS SHALL BE PLACED IN WALLS EXCEPT AS SHOWN ON THE DRAWINGS WITHOUT APPROVAL OF THE ENGINEER.
11. THE CONTRACTOR SHALL REFER TO THE ARCHITECTURAL, PLUMBING, MECHANICAL, AND ELECTRICAL DRAWINGS FOR ALL LOCATIONS OF TRENCHES, PITS, CONDUITS, ETC. NOT SHOWN ON THE STRUCTURAL DRAWINGS.

FOUNDATION CONCRETE

1. ALL CONCRETE SHALL BE NORMAL WEIGHT STRUCTURAL CONCRETE HAVING A DESIGN COMPRESSIVE STRENGTH AT 28 DAYS AS FOLLOWS:

| | |
|--------------------|-----------|
| A. FOOTINGS | 4,000 PSI |
| B. WALLS AND PIERS | 4,000 PSI |
| C. SLAB-ON-GRADE | 4,000 PSI |
2. NO CONCRETE SHALL BE PLACED UNTIL CONCRETE DESIGN MIXES HAVE BEEN SUBMITTED FOR EACH CLASS OF CONCRETE NOTED ABOVE AND HAVE BEEN APPROVED BY THE ENGINEER.
3. REINFORCING STEEL SHALL BE DEFORMED BARS OF INTERMEDIATE GRADE NEW BILLET STEEL CONFORMING TO CURRENT REQUIREMENTS OF ASTM A 615, GRADE 60. LAP BARS 40 DIAMETER UNLESS OTHERWISE SHOWN. ALL HOOKS SHALL BE STANDARD HOOKS, UNLESS OTHERWISE NOTED.
4. WELDED WIRE FABRIC SHALL CONFORM TO ASTM A 185.
5. ALL MESH SHALL BE SPLICED SO THAT THE OVERLAP OF THE OUTERMOST CROSS WIRES OF EACH ADJOINING SHEET IS NOT LESS THAN THE SPACING OF THE CROSS WIRES PLUS 2 INCHES, UNLESS NOTED OTHERWISE.
6. FOR ALL SLABS ON GRADE WHERE NOT OTHERWISE SPECIFIED, USE 6x6-W2.9xW2.9 W.W.F.
7. MINIMUM STEEL PROTECTION, UNLESS OTHERWISE SHOWN, SHALL BE 1-INCH FOR INTERIOR FACE OF WALLS, 2 INCHES FOR EXTERIOR FACE OF WALLS, 3 INCHES FOR FOOTING AND OTHER STRUCTURAL CONCRETE DEPOSITED AGAINST GROUND, 2 INCHES FOR CONCRETE PERMANENTLY EXPOSED TO EARTH OR WEATHER.
8. ALL STRUCTURAL MEMBERS SHALL BE POURED FOR THEIR FULL DEPTHS IN ONE OPERATION. CONSTRUCTION JOINTS, SUCH AS DAY'S POUR JOINTS, SHALL BE LOCATED IN THE MIDDLE THIRD OF THE SPAN. MAIN REINFORCING TO RUN THROUGH THE JOINT, AND REINFORCE JOINTS TO EXPOSE AGGREGATE. CONTRACTOR SHALL SUBMIT DRAWING INDICATING CONSTRUCTION JOINT LOCATIONS FOR APPROVAL.
9. NO CONCRETE SHALL BE PLACED IN WATER.
10. ALL SLABS ON GRADE SHALL HAVE THICKENINGS, DEPRESSIONS, OPENINGS, ETC. AS SHOWN ON OR AS REQUIRED BY VARIOUS TRADES.
11. REFER TO ARCHITECTURAL DRAWINGS AND/OR SPECIFICATIONS FOR CONCRETE FINISHES.
12. FOR ADDITIONAL CONCRETE WORK NOT SHOWN ON STRUCTURAL DRAWINGS, SEE ARCHITECTURAL DRAWINGS.

PRE-ENGINEERED BUILDING

1. PRE-ENGINEERED BUILDING SHALL BE PROVIDED AS SHOWN ON THE DRAWINGS AND DETAILED IN THE SPECIFICATIONS.
2. THE PRE-ENGINEERED BUILDING SHALL BE DESIGNED BY A LICENSED PROFESSIONAL ENGINEER IN THE STATE OF NEW JERSEY. SIGNED AND SEALED CALCULATIONS SHALL BE SUBMITTED FOR REVIEW AND APPROVAL.
3. BUILDING DESIGN SHALL INCLUDE ALL MECHANICAL, ELECTRICAL, PLUMBING, AND MISCELLANEOUS LOADING.
4. BUILDING DESIGN SHALL ALSO INCLUDE ALL ADDITIONAL LOADS FROM FLOORS AND ADJACENT STRUCTURE AS SHOWN ON THE PLANS.
5. RIDGE VENTS SHALL BE COORDINATED WITH THE PRE-FABRICATED BUILDING MANUFACTURER.
6. NECESSARY CURB DETAILS AND EAVE DETAIL SHALL BE COORDINATED BY THE CONTRACTOR WITH THE PRE-FABRICATED BUILDING MANUFACTURER.

SUPERSTRUCTURE CONCRETE

3. ALL CONCRETE SHALL BE NORMAL WEIGHT STRUCTURAL CONCRETE HAVING A DESIGN COMPRESSIVE STRENGTH AS FOLLOWS:

| | |
|----------------|-----------|
| A. COLUMNS | 4,000 PSI |
| B. SLABS, BEAM | 4,000 PSI |
| C. WALLS | 4,000 PSI |
2. NO CONCRETE SHALL BE PLACED UNTIL CONCRETE DESIGN MIXES HAVE BEEN SUBMITTED FOR EACH CLASS OF CONCRETE NOTED ABOVE AND HAVE BEEN APPROVED BY THE ENGINEER.
3. REINFORCING STEEL SHALL BE DEFORMED BARS OF INTERMEDIATE GRADE NEW BILLIT STEEL CONFORMING TO CURRENT REQUIREMENTS OF ASTM A 615, GRADE 60. LAP BARS 40 DIAMETER UNLESS OTHERWISE SHOWN. ALL HOOKS SHALL BE STANDARD HOOKS, UNLESS OTHERWISE NOTED.
4. MINIMUM STEEL PROTECTION, UNLESS OTHERWISE SHOWN, SHALL BE 3/4-INCH FOR SLABS, 1-INCH FOR INTERIOR FACE OF WALLS, 2-INCH FOR EXTERIOR FACE OF WALLS, 1 1/2-INCH FOR BEAM STIRRUPS AND COLUMN TIES, 2-INCH FOR VERTICAL COLUMN REINFORCING.
5. ALL STRUCTURAL MEMBERS SHALL BE POURED FOR THEIR FULL DEPTHS IN ONE OPERATION. CONSTRUCTION JOINTS, SUCH AS DAY'S POUR JOINTS, SHALL BE LOCATED IN THE MIDDLE THIRD OF THE SPAN, MAIN REINFORCING TO RUN THROUGH THE JOINT, KEY AND ROUGHEN JOINTS TO EXPOSE AGGREGATE. CONTRACTOR SHALL SUBMIT DRAWING INDICATING CONSTRUCTION JOINT LOCATIONS FOR APPROVAL.
6. NO OPENINGS SHALL BE MADE IN ANY STRUCTURAL MEMBER, UNLESS SPECIFICALLY SHOWN ON THE STRUCTURAL DRAWINGS, WITHOUT APPROVAL FROM THE ENGINEER. NO SLEEVES SHALL BE PLACED HORIZONTALLY OR VERTICALLY IN BEAMS OR JOISTS, UNLESS SPECIFICALLY SHOWN ON THE STRUCTURAL DRAWINGS, WITHOUT APPROVAL FROM THE ENGINEER.
7. CONTRACTOR SHALL SUBMIT A COORDINATED DRAWING SHOWING ALL SLEEVES, OPENINGS, BLOCKOUTS, ETC., AS REQUIRED BY ALL TRADES, FOR APPROVAL, PRIOR TO PLACING CONCRETE IN THAT AREA.
8. ALL SLABS SHALL HAVE THICKENINGS, DEPRESSIONS, OPENINGS, ETC. AS SHOWN HEREIN OR ON ARCHITECTURAL, MECHANICAL, ELECTRICAL, AND PLUMBING DRAWINGS.
9. WELDED WIRE FABRIC SHALL CONFORM TO ASTM A 185.
10. ALL MESH SHALL BE SPLICED SO THAT THE OVERLAP BETWEEN OUTERMOST CROSS WIRES OF EACH SHEET IS NOT LESS THAN THE SPACING OF THE CROSS WIRES PLUS 2 INCHES, UNLESS OTHERWISE SHOWN ON DRAWINGS.
11. FOR ALL SLABS WHERE NOT OTHERWISE SPECIFIED USE STYLE 6x6-W2.9xW2.9 W.W.F.
12. FOR ADDITIONAL CONCRETE WORK NOT SHOWN ON STRUCTURAL DRAWINGS, SEE ARCHITECTURAL DRAWINGS.
13. REFER TO ARCHITECTURAL DRAWINGS AND/OR SPECIFICATIONS FOR CONCRETE FINISHES.

SUPERSTRUCTURE CONCRETE (SUPPORTED BY METAL DECK)

1. ALL CONCRETE ON METAL DECK SHALL BE NORMAL WEIGHT CONCRETE HAVING A DESIGN COMPRESSIVE STRENGTH OF 3,000 PSI AT 28 DAYS.
2. NO CONCRETE SHALL BE PLACED UNTIL CONCRETE DESIGN MIXES HAVE BEEN SUBMITTED FOR EACH CLASS OF CONCRETE AND HAVE BEEN APPROVED BY THE ENGINEER.
3. WELDED WIRE FABRIC SHALL CONFORM TO ASTM A 185.
4. PROVIDE 6x6-W2.9xW2.9 WELDED WIRE FABRIC IN ALL CONCRETE SLABS ON METAL DECK UNLESS NOTED OTHERWISE.
5. ALL WELDED WIRE FABRIC SHALL BE SPLICED SO THAT THE OVERLAP BETWEEN OUTERMOST CROSS WIRES OF EACH SHEET IS NOT LESS THAN THE SPACING OF THE CROSS WIRES PLUS 2 INCHES, UNLESS OTHERWISE SHOWN ON DRAWINGS.
6. THE CONTRACTOR SHALL CALCULATE AND INCLUDE ALL ADDITIONAL CONCRETE THAT MAY BE REQUIRED DURING PLACING DUE TO DEFLECTION OF STRUCTURE.
7. THE CONTRACTOR SHALL DEPOSIT ALL CONCRETE, DURING PLACING, IN SUCH A MANNER AS NOT TO OVERLOAD THE METAL DECK.
8. CONCRETE THICKNESS INDICATED ARE MINIMUM THICKNESS OVER METAL DECK.

MASONRY

1. HOLLOW CONCRETE MASONRY UNITS ASTM C90, GRADE N, TYPE 1 NORMAL WEIGHT 1900 PSI NET AREA COMPRESSIVE.
2. MORTAR SHALL BE ASTM C270, TYPE S FOR ALL REINFORCED MASONRY, EXTERIOR WALLS AND WALLS BELOW GRADE.
3. GROUT SHALL BE ASTM C476, 28 DAY COMPRESSIVE STRENGTH OF 3,000 PSI.
4. REINFORCING STEEL GRADE 60 REINFORCING BARS.
5. HORIZONTAL JOINT REINFORCEMENT ASTM A951.
6. STRENGTH OF MASONRY ASSEMBLY $f_m = 1,500$ PSI.
7. CONSTRUCTION SHALL CONFORM TO SPECIFICATIONS FOR MASONRY STRUCTURES, ACI 530.1
8. REINFORCING METAL TIES AND ANCHORS SHALL BE PROTECTED FROM CONTACT WITH SOIL AND BEFORE BEING PLACED SHALL BE FREE FROM LOOSE RUST AND OTHER COATINGS THAT WILL DESTROY OR REDUCE THE BOND. MINIMUM LAP SHALL BE 48 BAR DIAMETERS FOR REBAR AND 6" FOR JOINT REINFORCEMENT.
9. SHOP DRAWINGS SHOWING ALL BAR REINFORCING IN ELEVATION (1/8" TO 1'-0" MINIMUM SCALE) SHALL BE SUBMITTED AND REVIEWED PRIOR TO CONSTRUCTION.
10. ALL MASONRY WALLS TO HAVE 9 GAGE TRUSS TYPE HORIZONTAL REINFORCEMENT AT 16 INCHES ON CENTER.
11. MASONRY UNITS SHALL BE STEAM CURED, A MINIMUM OF 28 DAYS AT THE TIME OF DELIVERY AND CONTINUOUSLY PROTECTED FROM EXPOSURE TO RAIN OR OTHER SOURCES OF WATER FROM TIME OF CASTING TO FINAL PLACEMENT IN WALL. MASONRY UNITS SHALL BE DRY, FREE FROM FOG ICE AND FROST WHEN LAID IN WALL. SEE ACI 530.1 FOR COLD AND HOT WEATHER CONSTRUCTION AND WALL PROTECTION REQUIREMENTS.

PRECAST HOLLOW CORE SLABS

1. THE DESIGN, FABRICATION & ERECTION OF PRECAST CONCRETE SLABS SHALL CONFORM TO THE REQUIREMENTS OF ACI 328 & THE LATEST PCI CODE. PRECAST MANUFACTURER SHALL BE PCI APPROVED. PRECAST MANUFACTURER SHALL SUBMIT SHOP DRAWINGS & CALCULATIONS, BOTH WHICH MUST BE SIGNED AND SEALED BY A LICENSED PROFESSIONAL ENGINEER IN THE STATE OF NEW JERSEY.
2. PRECAST CONCRETE PLANK SHALL BE DESIGNED TO SUPPORT ALL SUPERIMPOSED LOADS INCLUDING PARTITION LOADS. FOR LOCATION OF PARTITIONS, SEE ARCHITECTURAL DRAWINGS.
3. IF SHIMS ARE REQUIRED AT PRECAST PLANK BEARING, THEY MUST BE CONTINUOUS FOR THE FULL WIDTH OF THE PLANK. POINT SHIMMING IS NOT ACCEPTABLE. USE OF KORALATH SHIMS OR APPROVED EQUAL.
4. PRECAST CONCRETE MEMBERS SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 5,000 PSI.
5. PRECAST MANUFACTURER SHALL COORDINATE WITH OTHER TRADES & ALL CONTRACT DRAWINGS FOR SIZE & LOCATION OF ALL OPENINGS. PRECAST MANUFACTURER SHALL DESIGN, PROVIDE, & INSTALL ALL HANGERS, INSERTS, ATTACHMENTS & APPURTENANCES AS REQUIRED.
6. ALL OPENINGS IN PRECAST CONCRETE MUST BE PROVIDED BY OR APPROVED IN WRITING BY THE PRECAST MANUFACTURER. NO REINFORCING IN PRECAST CONCRETE IS TO BE CUT WITHOUT PRIOR APPROVAL OR PRECAST MANUFACTURER. ANY OPENINGS SHOWN ON STRUCTURAL DRAWINGS ARE FOR ILLUSTRATIVE PURPOSES ONLY. QUANTITIES, SIZES, & LOCATIONS OF ALL PROPOSED CORES/OPENINGS, INCLUDING BUT NOT LIMITED TO OPENINGS FOR SHAFTS & PIPES, ARE TO BE OBTAINED FROM OTHER DOCUMENTS.
7. PRECAST MANUFACTURER IS TO OBTAIN ALL PRECAST CONCRETE DIMENSIONS FROM ARCHITECTURAL DOCUMENTS.
8. PRECAST MANUFACTURER TO COORDINATE QUANTITIES & LOCATIONS OF ALL CONNECTIONS (GRAVITY & LATERAL) FOR PRECAST CONCRETE WITH MANUFACTURER OF SUPPORT MATERIAL (STEEL, CONCRETE, ETC.), BASED ON GENERAL GUIDELINES AS SHOWN ON STRUCTURAL DOCUMENTS.
9. WELD PLATES AND OTHER EMBEDDED ITEMS AS SHOWN ON STRUCTURAL DRAWINGS ARE FOR DESIGN INTENT ONLY. PRECAST MANUFACTURER IS RESPONSIBILITY FOR QUANTITY & LOCATION OF THEIR ITEMS.

STRUCTURAL STEEL

1. STRUCTURAL STEEL SHALL CONFORM TO THE FOLLOWING ASTM DESIGNATIONS, LATEST EDITION:
 - A. STRUCTURAL STEEL SHAPES ASTM A992 HAVING A MINIMUM YIELD STRENGTH OF 50 KSI.
 - B. MIS C SHAPES, BARS, AND PLATES - A 36 HAVING A MINIMUM YIELD STRENGTH OF 36 KSI.
 - C. ROUND PIPE - A 53, GRADE B HAVING A MINIMUM YIELD STRENGTH OF 35 KSI.
 - D. SQUARE AND RECTANGULAR TUBING - A 500, GRADE B HAVING A MINIMUM YIELD STRENGTH OF 46 KSI.
2. BOLTS SHALL CONFORM TO THE FOLLOWING ASTM DESIGNATIONS: HIGH STRENGTH BOLTS-A 325 OR A 490; ANCHOR BOLTS-F1554; STANDARD FASTENERS-A 307.
3. ALL WELDING ELECTRODES SHALL CONFORM TO THE E-70 SERIES OF THE SPECIFICATION FOR MILD STEEL ARC WELDING ELECTRODES ASTM A 233.
4. ALL BOLTS SHALL BE 3/4-INCH DIAMETER, OPEN HOLES 13/16-INCH DIAMETER, UNLESS OTHERWISE SHOWN OR NOTED.
5. ALL SHOP CONNECTIONS MAY BE HIGH STRENGTH BOLTED OR WELDED.
6. ALL FIELD CONNECTIONS MAY BE HIGH STRENGTH BOLTED EXCEPT WHERE DETAILS INDICATE WELDING.
7. ALL HIGH STRENGTH BOLTED CONNECTIONS SHALL BE INSTALLED IN ACCORDANCE WITH SPECIFICATION FOR STRUCTURAL JOINTS USING ASTM A 325 OR A 490 BOLTS.
8. ALL HIGH STRENGTH BOLTED CONNECTIONS SHALL BE FULLY PRE-TENSIONED UNLESS NOTED OTHERWISE.
9. ALL HIGH STRENGTH BOLTS IN OVERSIZED HOLES SHALL BE SLIP CRITICAL.
10. ALL HIGH STRENGTH BOLTED CONNECTIONS USED FOR KICKERS AND BRACING MEMBERS WHICH ARE FABRICATED WITH SLOTTED HOLES SHALL USE SLIP-CRITICAL BOLTS. IF STANDARD HOLES ARE USED, BOLTS SHALL BE FULLY PRE-TENSIONED.
11. NO PENETRATIONS ARE PERMITTED THROUGH STRUCTURAL STEEL MEMBERS UNLESS INDICATED ON STRUCTURAL DRAWINGS OR APPROVED BY ENGINEER.
12. APPROVAL OF THE ENGINEER SHALL BE MANDATORY FOR THE USE OF CUTTING TORCH IN THE FIELD.
13. DURING ERECTION, STRUCTURAL STEEL FRAME SHALL BE ADEQUATELY BRACED IN ALL LINES, TWO WAYS.
14. CONNECTIONS SHALL BE DESIGNED PER AISC TO CARRY FULL CAPACITY OF UNIFORMLY LOADED MEMBER, UNLESS NOTED OTHERWISE. REACTIONS GREATER THAN FULL MEMBER CAPACITY ARE INDICATED THUS (60K) ON PLAN.
15. ALL GROUT UNDER STEEL PLATES SHALL BE NON-SHRINK "PRE-MIX" TYPE AND SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 5,000 PSI.
16. FOR ALL MISCELLANEOUS STEEL CONSTRUCTION NOT SHOWN ON STRUCTURAL DRAWINGS, SEE ARCHITECTURAL DRAWINGS.
17. EXPANSION BOLTS SHALL BE 3/4-INCH DIAMETER KWIK BOLT ANCHORS AS MANUFACTURED BY HILTI OR APPROVED EQUIVALENT AS APPROVED BY THE ENGINEER AND INSTALLED IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.
18. ALL STEEL COLUMN BASE PLATES SHALL INCLUDE LEVELLING PLATES AS REQUIRED FOR CONSTRUCTION.
19. ALL EXPOSED / EXTERIOR STEEL SHALL BE HOT DIPPED GALVANIZED OR STAINLESS STEEL, UNLESS OTHERWISE SHOWN ON THE DRAWINGS.

WOOD FRAMING

1. PROVIDE ALL WOOD FRAMING MATERIALS AS SHOWN ON THE PLANS FOR COMPLETE CONSTRUCTION.
2. PROVIDE ALL MISCELLANEOUS WOOD FRAMING AND/OR BRACING AS REQUIRED FOR SUPPORT OF MECHANICAL, ELECTRICAL, PLUMBING OR MISCELLANEOUS APPURTENANCES.
3. ALL WOOD SHALL BE MINIMUM OF GRADE NO. 2 OR BETTER UNLESS OTHERWISE SHOWN.
4. ALL ROOF SHEATHING SHALL BE INSTALLED WITH PANEL CLIPS.
5. PRE-MANUFACTURED WOOD ROOF TRUSSES SHALL BE PROVIDED AS SHOWN ON THE DRAWINGS TO MEET REQUIRED OPENINGS FOR MISCELLANEOUS EQUIPMENT. TRUSS MANUFACTURER SHALL SUBMIT DESIGN DRAWINGS AND CALCULATIONS THAT COMPLY WITH REQUIRED DESIGN LOADS FOR APPROVAL PRIOR TO CONSTRUCTION PLANS AND CALCULATIONS SHALL BE SIGNED AND SEALED BY LICENSED NEW JERSEY PROFESSIONAL ENGINEER.

MISCELLANEOUS

1. CONTRACTOR SHALL VERIFY CONDITIONS IN THE FIELD AND IMMEDIATELY NOTIFY ENGINEER OF ANY CONDITIONS NOT AS ASSUMED; HE SHALL TAKE FIELD MEASUREMENTS AS REQUIRED AND BE RESPONSIBLE FOR SAME.
2. CONTRACTOR SHALL COORDINATE WITH ALL RELATED TRADES FOR DETAILING, FABRICATION, AND ERECTION PRIOR TO SUBMITTING SHOP DRAWINGS FOR APPROVAL.
3. ALL STRUCTURAL WORK SHALL BE COORDINATED WITH ARCHITECTURAL, MECHANICAL, ELECTRICAL, PLUMBING, ETC. REQUIREMENTS. DISCREPANCIES AND/OR INTERFERENCE SHALL BE REPORTED TO THE ENGINEER IMMEDIATELY.
4. GENERAL CONTRACTOR TO PROVIDE APPROPRIATE NUMBER OF COPIES OF ONE COMPLETE COORDINATED DRAWING SHOWING ALL SLEEVES, CONDUIT BOXOUT, DUCT OPENINGS, ETC. AS REQUIRED FOR ALL TRADES FOR ENGINEER'S APPROVAL. THIS SHALL BE DONE A MINIMUM OF TWO WEEKS PRIOR TO POURING AFFECTED SLABS, COLUMNS, OR FOOTINGS.
5. NO OPENINGS SHALL BE MADE IN ANY STRUCTURAL MEMBER UNLESS SPECIFICALLY SHOWN ON THE STRUCTURAL DRAWINGS OR OTHER APPROVAL FROM THE ENGINEER.
6. SUPPORT DETAILS FOR ARCHITECTURAL, MECHANICAL, ELECTRICAL, AND PLUMBING EQUIPMENT IS BASED UPON AVAILABLE INFORMATION OF MANUFACTURER. CONTRACTOR SHALL COORDINATE REQUIREMENTS OF ACTUAL EQUIPMENT AND SHALL PROVIDE ANY ADDITIONAL REQUIRED FRAMING.



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WEB ADDRESS : RVE.COM

Certification of Authorization: 24 GA 28003300
Excellence • Innovation • Service

DATE _____

DENNIS K. YODER
NJ PROFESSIONAL ENGINEER LIC. No. 31866

Kenneth C. Ruck

DATE: 09-04-2024

KENNETH C. RESSLER
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PLANS WHICH DO NOT BEAR
AN EMBOSSED SEAL ARE NOT VALID.

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[illegible]

STRUCTURAL COVER SHEET

MERCHANTVILLE PENNSAUKEN WATER COMMISSION

BROWNING ROAD

BOROUGH OF MERCHANTVILLE CAMDEN COUNTY

| | | |
|-------|--------------------------|---------------|
| FILE: | BOROUGH OF MERCHANTVILLE | CAMDEN COUNTY |
| NOTED | | |

| | | | |
|-----------------------------|-------------------------|---------------------------------------|---------------------------|
| <u>DRAWN BY:</u> JG | <u>DESIGN BY:</u> RC | <u>CHECKED BY:</u> JT | <u>SCALE:</u> AS NOTED |
| <u>DATE:</u> 3/24 | | <u>SHEET No.:</u> S-1.0 | |
| <u>JOB No.:</u> 0424M081 | | | |



Kenneth C. Ressler
DATE: 09-04-2024
KENNETH C. RESSLER
N.J. PROFESSIONAL ENGINEER I.C. No. 34559

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[illegible]

FOUNDATION FLOOR PLAN

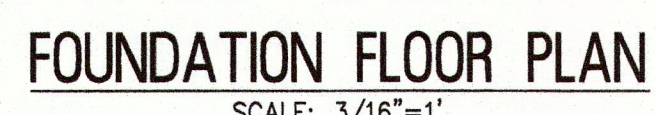
MERCHANTVILLE PENNSAUKEN WATER COMMISSION

BROWNING ROAD

WATER TREATMENT PLANT IMPROVEMENTS

BOROUGH OF MERCHANTVILLE CAMDEN COUNTY NEW JERSEY

| | | | |
|------------------------------|--------------------------|--------------------------------|----------------------------|
| <u>DRAWN BY :</u> JG | <u>DESIGN BY :</u> RC | <u>CHECKED BY :</u> JT | <u>SCALE :</u> AS NOTED |
| <u>DATE :</u> 3/24 | | <u>SHEET No. :</u> S-11 | |
| <u>JOB NO. :</u> 0424M081 | | | |

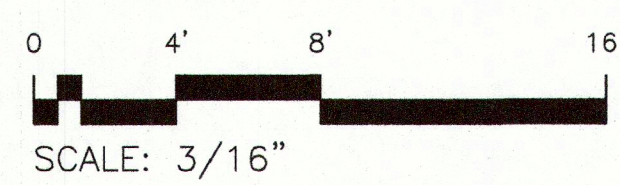


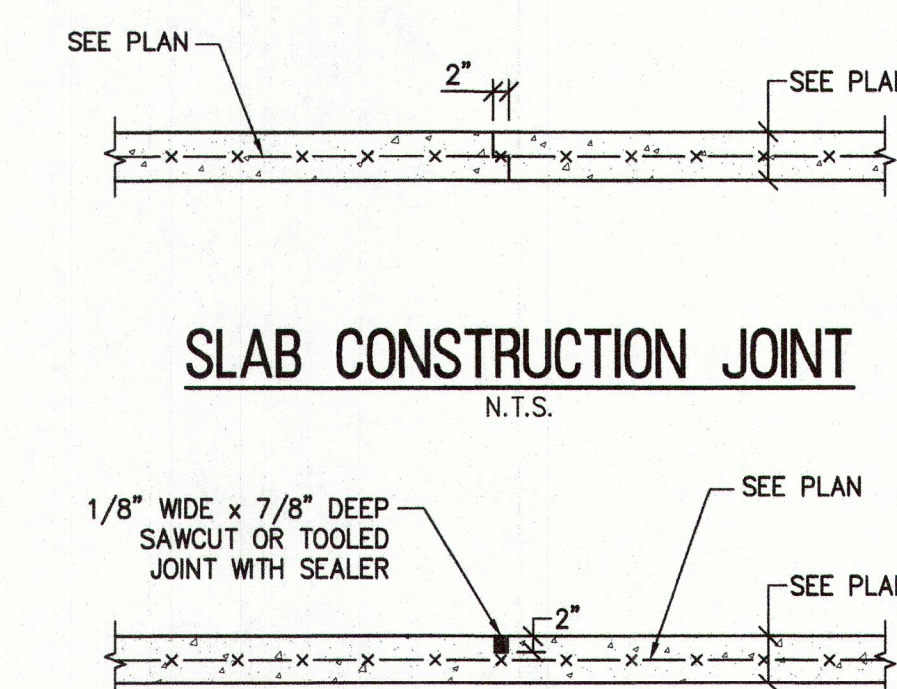
SECTIONS SHOWN IN PLAN APPLY TO SIMILAR
CONDITIONS THROUGHOUT THE BLDG.

| PIER SCHEDULE | | | | |
|---------------|-------|-------|-----------|------------------|
| PIER TYPE | A | B | VERT BARS | TIES OR TIE SETS |
| P10 | 1'-4" | 1'-4" | (6) #6 | #4@12 |

| |
|---|
| COLUMN FOOTING SCHEDULE |
| FLO |
| 4'-6" x 4'-6" x 12" THICK W/ #5 @ 12" O.C. E.W. T&B |

| WALL FOOTING SCHEDULE | |
|---|---|
| WF10 | WF20 |
| 3'-0"W x 12" THICK W/ #5 @ 12" O.C. EACH WAY T&B | 2'-0"W x 12" THICK W/ #4 @ 12" O.C. EACH WAY |





SLAB CONTROL JOINT

1/8" WIDE x 7/8" DEEP SAWCUT OR TOOLED JOINT WITH SEALER

2"

SEE PLAN

SEE PLAN

This diagram shows a cross-section of a concrete slab with a central joint. A vertical line indicates a 1/8" wide by 7/8" deep sawcut or tooled joint with sealer. A 2" dimension is shown for the joint width. The slab is divided into sections by vertical lines, with 'SEE PLAN' labels pointing to the top and bottom views.

SLAB EXPANSION JOINT

1/2" EXP. JT.
WALL
JOINT SEALANT
MAT'L WITH SEALER
3"

SEE PLAN

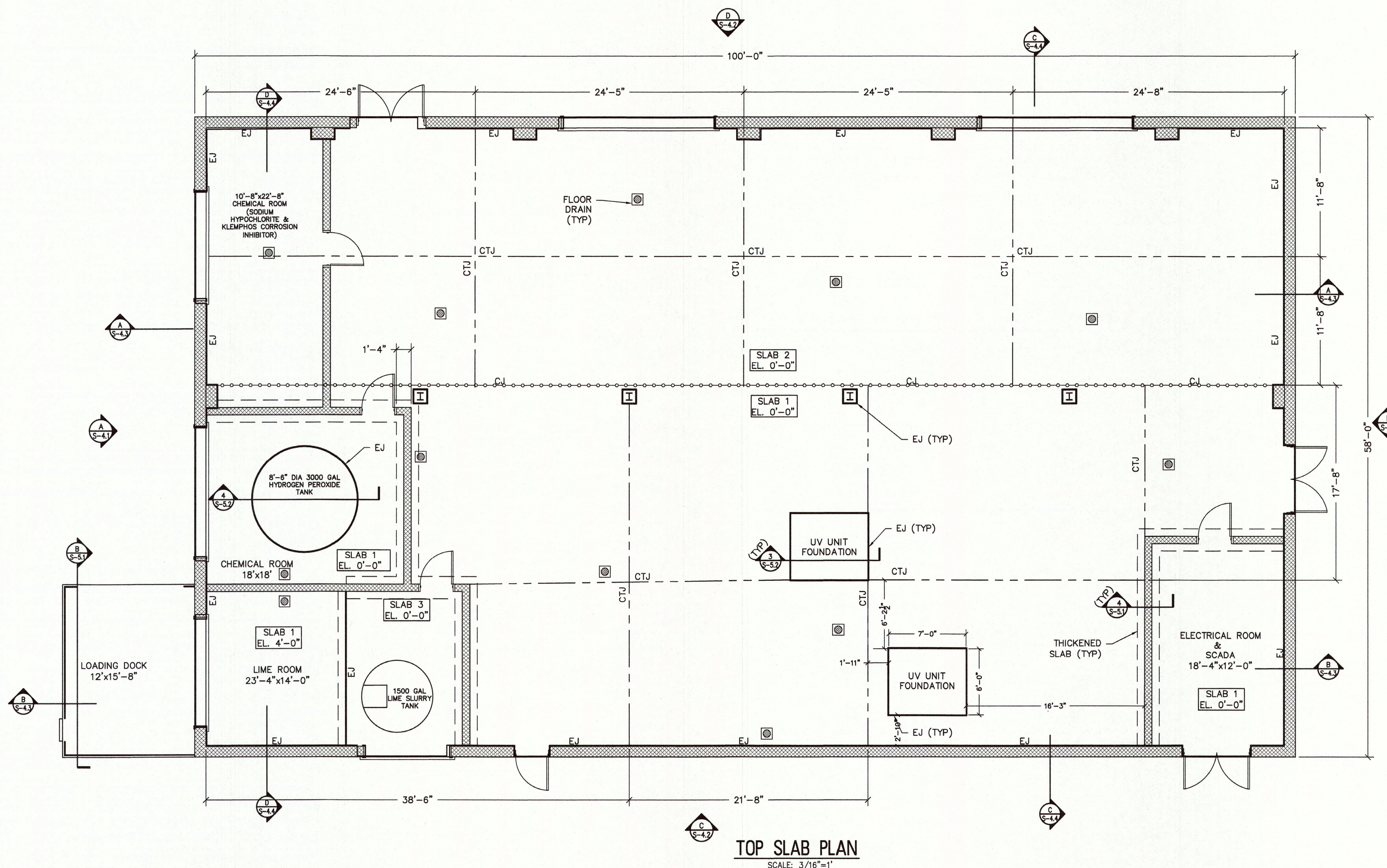
SLAB EXPANSION JOINT

LEGEND

EXPANSION JOINT= EJ

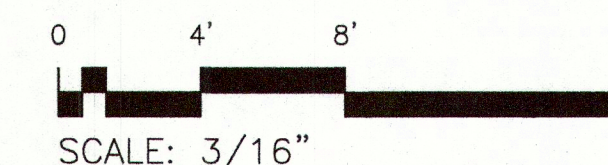
CONTROL JOINT= CTJ

CONSTRUCTION JOINT= CJ



TOP SLAB PLAN
SCALE: 3/16"=1'

| SLAB ON GRADE SCHEDULE | | |
|---|--|---|
| SLAB-1 * | SLAB-2 * | SLAB-3 * |
| 8" THICK S.O.G. W/ #4@12" O.C. E.W. ON 10 MIL VAPOR BARRIER AND 4" CRUSHED STONE | 12" THICK S.O.G. W/ #6@9" O.C. BOTH WAYS T&B ON 10 MIL VAPOR BARRIER AND 4" CRUSHED STONE | 12" THICK S.O.G. W/ #5@12" O.C. E.W., T&B ON 10 MIL VAPOR BARRIER AND 4" CRUSHED STONE |



DATE: _____

DENNIS K. YODER

NJ PROFESSIONAL ENGINEER LIC. No. 31866

DATE: 09-04-2024
KENNETH C. RESSLER
NJ PROFESSIONAL ENGINEER LIC. No. 34559

PLANS WHICH DO NOT BEAR
AN EMBOSSED SEAL ARE NOT VALID

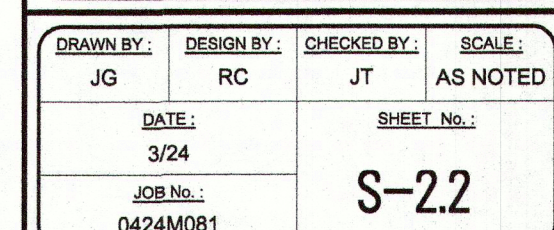
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[illegible]

TOP SLAB PLAN

MERCHANTVILLE PENNSAUKEN WATER COMMISSION
 BROWNING ROAD
 WATER TREATMENT PLANT IMPROVEMENTS
 BOROUGH OF MERCHANTVILLE CAMDEN COUNTY NEW JERSEY

| | | | |
|-----------------------------|-------------------------|----------------------------|---------------------------|
| <u>DRAWN BY:</u> JG | <u>DESIGN BY:</u> RC | <u>CHECKED BY:</u> JT | <u>SCALE:</u> AS NOTED |
| <u>DATE:</u> 3/24 | | <u>SHEET No.:</u> S-2.1 | |
| <u>JOB No.:</u> 0424M081 | | | |





DENNIS K. YODER
NJ PROFESSIONAL ENGINEER LIC. No. 31866

DATE: 09-04-2024
KENNETH C. RESSLER
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[illegible]

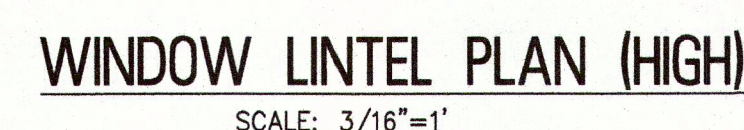
WINDOW LINTEL PLAN (HIGH)

MERCHANTVILLE PENNSAUKEN WATER COMMISSION

BROWNING ROAD
WATER TREATMENT PLANT IMPROVEMENTS

| | | |
|--------------------------|---------------|------------|
| BOROUGH OF MERCHANTVILLE | CAMDEN COUNTY | NEW JERSEY |
|--------------------------|---------------|------------|

| | | | |
|-----------------------------|-------------------------|--------------------------|---------------------------|
| <u>DRAWN BY:</u> JG | <u>DESIGN BY:</u> RC | <u>CHECKED BY:</u> JT | <u>SCALE:</u> AS NOTED |
| <u>DATE:</u> 3/24 | | <u>SHEET No.:</u> | |
| <u>JOB No.:</u> 0424M081 | | S-23 | |
| | | | |



| WINDOW SCHEDULE | | | | | |
|-----------------|-------------------|--------------------------|-----------------|----------------|---|
| WINDOW NO. | WINDOW LOCATION | WINDOW SIZE WIDTHxHEIGHT | WINDOW MATERIAL | FRAME MATERIAL | REMARKS |
| W1 | VARIOUS LOCATIONS | 6'-0" x 3'-4" | GLASS BLOCK | ALUM. | 12 REQ'D. 8x8x4 PITTSBURGH CORNING CORP OR APPROVED EQUAL HOLLOW GLASS BLOCK. SAMPLE TO B APPROVED BY CLIENT PRIOR TO CONSTRUCTION. |

