## BUILDING DATA 2018 INTERNATIONAL BUILDING CODE, NEW JERSEY EDITION 2018 NATIONAL STANDARD PLUMBING CODE 2017 NATIONAL ELECTRICAL CODE (NFPA 70) BUILDING CODE: 2018 INTERNATIONAL MECHANICAL CODE REHABILITATION SUB CODE: NJUCC REHABILITATION SUBCODE CHAPTER 6, 5:23-6.6 ALTERATIONS B, BUSINESS CONSTRUCTION TYPE: FIRE ALARM: SPRINKLERS: NUMBER OF STORIES:

SQUARE FOOTAGE:	BASEMENT	1ST FLOOR	2ND FLOOR	BALCONY	TOTAL
EXISTING:	2,685 SF	8,295 SF	4,545 SF	272 SF	15,797 SF
PROPOSED:	50 SF	0 SF	0 SF	0 SF	50 SF
TOTAL:	2,735 SF	8,295 SF	4,545 SF	272 SF	15,847 SF

TABLE	OF CC	NTENTS
SHEET NO.	DWG. NO.	TITLE
1	T-1	TITLE SHEET
2	D-1	BASEMENT AND FIRST FLOOR DEMOLITION PLANS
3 4	D-2 A-0	SECOND FLOOR AND ROOF DEMOLITION PLANS  DOOR AND WINDOW SCHEDULES, DETAILS AND INTERIOR
5	A-01	ELEVATIONS INTERIOR ELEVATIONS
6	A-1	NEW FIRST FLOOR PLAN
7 8	A-2 A-3	NEW SECOND FLOOR PLAN NEW BASEMENT PLAN AND DETAILS
9	A-4	NEW REFLECTED CEILING PLANS
10	A-5	NEW ROOF PLAN AND DETAILS NEW EXTERIOR ELEVATIONS
11 12	A-6 A-7	SECTION
13	A-8	SECTION STRUCTURAL MOTES
14 15	S-01 S-02	GENERAL STRUCTURAL NOTES GENERAL STRUCTURAL NOTES
16	S-03	GENERAL STRUCTURAL NOTES
17 18	S-1 S-2	BASEMENT AND FIRST FLOOR FOUNDATION PLAN SECOND FLOOR AND ROOF FRAMING PLAN
19	S-3 S-4	SECTION AND DETAILS SECTION AND DETAILS
20 21	S-4 M-001	MECHANICAL COVER SHEET
22	M - 100	MECHANICAL DEMOLITION PLAN
23 24	M-101 M-200	MECHANICAL DEMOLITION PLANS MECHANICAL NEW WORK PLANS
25	M-201	MECHANICAL NEW WORK PLANS
26 27	M-300 M-301	MECHANICAL DETAILS MECHANICAL DIAGRAMS
28 29	M-400 M-401	MECHANICAL SCHEDULES MECHANICAL SCHEDULES
30	P-001	PLUMBING NOTES, SYMBOLS AND ABBREVIATIONS
31	P-100	PLUMBING PLANS — DEMOLITION STORM, SANITARY, WASTE AND VENT
32	P-101	PLUMBING PLANS — DEMOLITION STORM, SANITARY, WASTE AND VENT
33 34	P-102 P-200	PLUMBING PLANS — DEMOLITION WATER AND GAS PLUMBING PLANS — NEW WORK STORM, SANITARY, WASTE
35	P-201	AND VENT PLUMBING PLANS — NEW WORK STORM, SANITARY, SEWER
36	P-202	AND VENT PLUMBING PLANS — NEW WORK WATER AND GAS
37	P-203	PLUMBING PLANS - NEW WORK WATER AND GAS
38 39	P-300 P-301	PLUMBING DETAILS PLUMBING RISER DIAGRAMS
40 41	P-400 E-001	PLUMBING SCHEDULES ELECTRICAL NOTES
42	E-002	ELECTRICAL SYMBOLS AND ABBREVIATIONS
43 44	E-100 E-101	ELECTRICAL — DEMOLITION ELECTRICAL — DEMOLITION
45 46	E-200 E-201	ELECTRICAL — POWER NEW WORK ELECTRICAL — POWER NEW WORK
47	E - 300	ELECTRICAL — LIGHTING NEW WORK
48 49	E-301 E-400	ELECTRICAL — LIGHTING NEW WORK ELECTRICAL SCHEDULE AND DIAGRAMS
50 51	E-500 E-501	ELECTRICAL SCHEDULES ELECTRICAL SCHEDULES
52	CS0001	CIVIL COVER SHEET
53 54	CS0002 CS0201	GENERAL NOTES EXISTING CONDITIONS
55	CS0501	DEMOLITION PLAN
56 57	CS1001 CS1501	SITE PLAN GRADING PLAN
58 59	CS1701 CS6001	UTILITY PLAN CONSTRUCTION DETAILS
60 61	CS6002 CS6003	CONSTRUCTION DETAILS CONSTRUCTION DETAILS
62	CS8001	SOIL EROSION AND SEDIMENT CONTROL PLAN
63 64	CS8501 CS8502	SOIL EROSION AND SEDIMENT CONTROL NOTES SOIL EROSION AND SEDIMENT CONTROL DETAILS
65	V0401	TOPOGRAPHIC AND BOUNDARY SURVEY

**ABBREVIATIONS** 

ADHESIVE ADJACENT AGGREGATE AIR CONDITIONING

ALUMINUM

ANODIZED APPROXIMATE

BASEMENT

BETWEEN

BLOCK BLOCKING

BOARD BOTTOM OF

CAST STONE

CEILING CEILING HEIGHT CEMENT

CENTER LINE

CERAMIC TILE

CIRCLE CLEAN OUT

CONTRACT(OR)

CUBIC CUBIC FEET/MINUTE

DRY BULB TEMPERATURE

DEMOLISH/DEMOLITION

ORRIDOR

COLD WATER

COUNTER

DETAIL DIAGONAL DIAMETER

BUILDING

ACOUST ACT

ABOVE FINISHED FLOOR ACOUSTICAL ACOUSTICAL TILE

ANCHOR, ANCHORAGE

BRAKE HORSE POWER BITUMINOUS

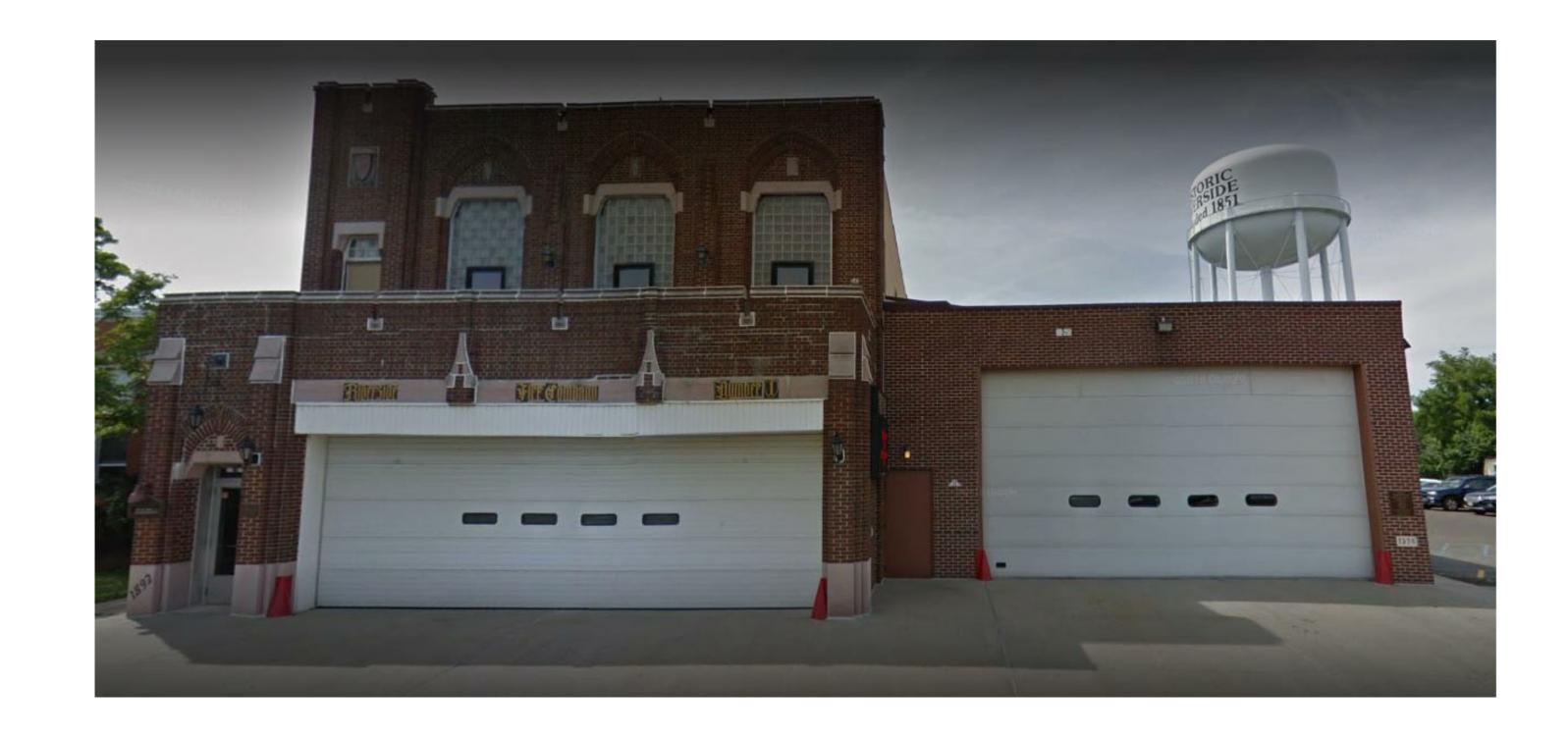
COIL CONDENSATE DRIP PIPING CASEMENT

CONCRETE
CONCRETE MASONRY UNIT
CONSTRUCTION

ONTINUOUS OR CONTINUE

ARCHITECT (URAL)

# ALTERATIONS RIVERSIDE FIRE COMPANY NO. 1 14 WEST SCOTT STREET RIVERSIDE, NJ 08075 BLOCK 904, LOTS 3, 4, 5, 6 & 9



INCH/INCHES
INCLUDE(D)/INCLUDING
INSIDE DIAMETER/DIMENSION
INSULATE(D)/INSULATION

LEAVING AIR TEMPERATURE

LAVATORY
LEFT HAND
LENGTH/LONG
REFRIGERANT LIQUID LINE

LOCKED ROTOR AMPS

JANITOR'S CLOSET

JOINT FILLER JOIST

KITCHEN KILOWATTS

LABEL LAMINATE(D)

LINEAL FOOT

MAXIMUM`

MINIMUM

MECHANIC(AL) METAL METER(S)

MISCELLANEOUS MOP RECEPTOR

ON CENTER(S)

PRESSURE DROP PAINT/PAINTED

PEDESTAL PERFORATE(ED) PERIMETER

PLASTER PLATE

MARBLE THRESHOLD

NEW NOISE REDUCTION COEFFICIENT

OPPOSITE
OUTSIDE DIAMETER/DIMENSION
OVERALL/OUTSIDE AIR

MANUFACTURE(R)

MASONRY MASONRY OPENING

INCL ID INSUL

PD PTD PNL PED PERF PERIM PLAS

RADIUS REFERENCE

ROOFING

SECTION

SANITARY DRAIN

SQUARE SQUARE INCH SQUARE FOOT SQUARE YARD SERVICE SINK

STANDARD

TYPICAL

URINAL

WNDW

YD

VOLUME DAMPER VERTICAL

WATER HEATER

WOOD WEATHERPROOF

WINDÓW

WITHOUT

YARD(S)

WASH FOUNTAIN WAINSCOT

SPECIFICATION(S)

EACH/EXHAUST AIR
ENTERING AIR TEMPERATURE
ELECTRIC (AL)
ELECTRICAL PANELBOARD

EXHAUST FAN
EXTERNAL STATIC PRESSURE
EXISTING

ELECTRIC WATER COOLER ELEVATION

EQUAL EQUIPMENT

EXPOSED EXTERIOR

FLSHG FLR FLUR

FTG FOUND FPM FRMG

HORIZ HP HTW HW HWH

FLOOR DRAIN FINISH/FINISHED FINISHED FLOOR FLASHING FLOOR/FLOORING

FOUNDATION

GAGE/GAUGE

HOSEBIB HARDWARE

HARDWOOD HEADER

HOLLOW METAL

HORIZONTAL HORSE POWER

FEET PER MINUTE FRAME/FRAMING FIELD VERIFY

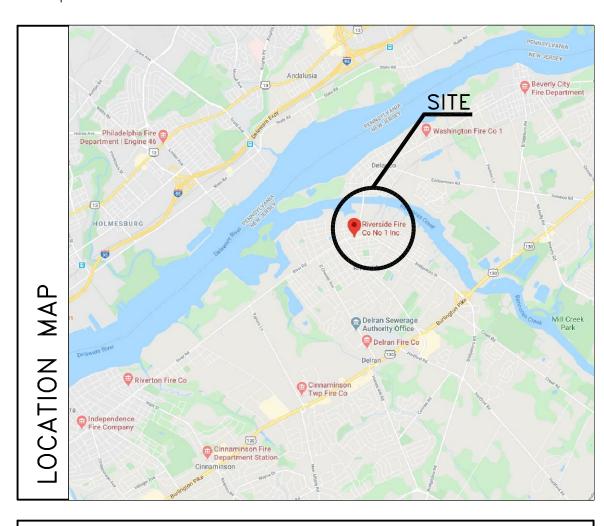
GLASS/GLAZING GALLONS PER MINUTE GRADE/GRADING

GALVÁNIZED
GENERAL CONTRACT/CONTRACTOR
GOVERNMENT FURNISHED PROPERTY

HEATING/VENTILATING/AIR COND. HEIGHT/HIGH

HIGH TEMPERATURE WATER HOT WATER HOT WATER HEATER

HOT WATER RETURN HOT WATER SUPPLY

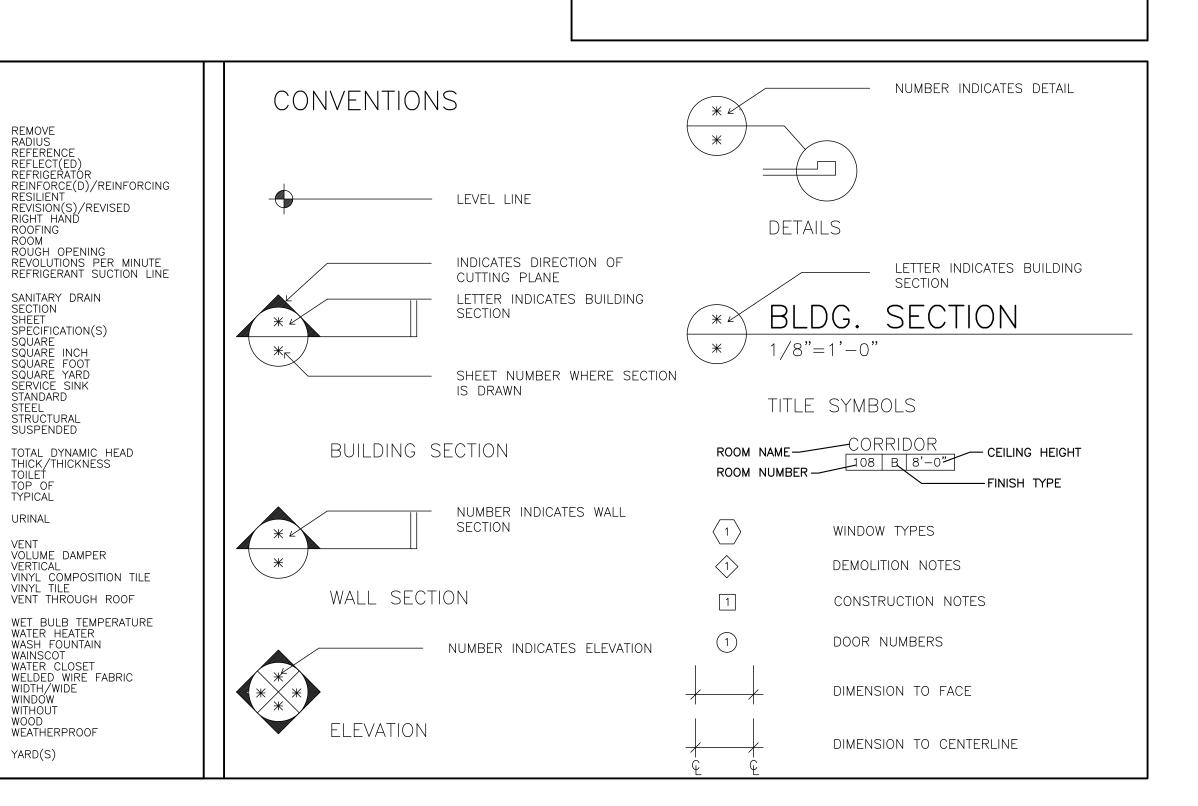


## GENERAL NOTES

- . A KEYNOTING SYSTEM IS USED ON THE DRAWINGS FOR MATERIALS REFERENCES AND NOTES. REFER TO THE KEYNOTE LEGEND ON THE DRAWING FOR THE INFORMATION WHICH RELATES TO EACH KEYNOTE ON THE RESPECTIVE DRAWING. THE ORGANIZATION OF THE KEYNOTING SYSTEM ON THE DRAWINGS, WITH THE KEYNOTE REFERENCE NUMBERS, SHALL NOT CONTROL THE CONTRACTOR IN
- DIVIDING THE WORK AMONG SUBCONTRACTOR'S OR IN ESTABLISHING THE EXTENT OF WORK TO BE PERFORMED BY ANY TRADE. . DO NOT SCALE DRAWINGS.
- . ALL WORK INDICATED ON THESE DOCUMENTS HAS BEEN DESIGNED TO MEET THE NEW JERSEY UNIFORM CONSTRUCTION CODE, INTERNATIONAL BUILDING CODE-2015 N.J EDITION AND I.C.C. ANSI A117.1-2009 AND ALL SUB-CODES. CONTRACTOR TO PERFORM ALL WORK IN ACCORDANCE WITH THE ABOVE MENTIONED CODES, THE NATIONAL STANDARD PLUMBING CODE, AND THE NATIONAL ELECTRICAL CODE.
- SCOPE: CONTRACTOR SHALL FURNISH TOOLS, EQUIPMENT, MATERIAL, AND LABOR TO PERFORM OPERATIONS NECESSARY AND REASONABLY INCIDENTAL FOR THE PROPER COMPLETION ON ALL WORK AS SHOWN ON THE DRAWINGS AND DIRECTED BY THE
- THE CONTRACTOR SHALL CHECK AND VERIFY ALL PLAN DIMENSIONS AND CONDITIONS AND ALL EXISTING CONDITIONS BEFORE PROCEEDING WITH CONSTRUCTION. HE SHALL REPORT ANY DISCREPANCIES TO THE ARCHITECT FOR CORRECTION PRIOR TO BEGINNING ANY WORK. THE DISCOVERY OF DISCREPANCIES AFTER THE BEGINNING OF WORK WILL BE EVIDENCE OF FAULTY WORK AND SHALL BE THE RESPONSIBILITY OF
- THE HEATING, VENTILATING AND AIR CONDITIONING WORK, THE PLUMBING WORK, AND THE ELECTRICAL WORK SHALL BE DESIGNED AND EXECUTED BY THE CONTRACTOR. THE ARCHITECT ASSUMES NO RESPONSIBILITY FOR THE DESIGN OF THIS WORK. THE CONSTRUCTION DETAILS REQUIRED BY THIS WORK, OR CODE COMPLIANCE REQUIRED
- . THESE DOCUMENTS ARE THE PROPERTY OF THE ARCHITECT AND SHALL NOT BE ALTERED OR USED FOR CONSTRUCTION UNLESS SIGNED AND SEALED BY THE

## COMPLIANCE NOTES

ALL WORK OF THESE DOCUMENTS, AS WELL AS THE SPECIFICATIONS, MEET OR EXCEED ALL ENVIRONMENTAL DESIGN (INCLUDING BARRIER FREE AND CONSTRUCTION REQUIREMENTS OF APPLICABLE FEDERAL, STATE AND LOCAL CODES, REGULATIONS, ORDINANCES, DIRECTIVES, HUD UFAS AS WELL AS ALL OTHER CODES AND STANDARDS REFERENCED THEREIN WHICH PERTAINS TO THE WORK).



**ALTERATIONS RIVERSIDE FIRE COMPANY NO. 1** 

RIVERSIDE FIRE COMPANY NO. 1 RIVERSIDE, NJ 08075

> PROJECT# 07/18/2020

> > Architect

Lammey + Giorgio Architecture + Design + GIORGIO 215 Highland Ave, Suite B Haddon Twp, NJ, 08108 p.856.833.0010

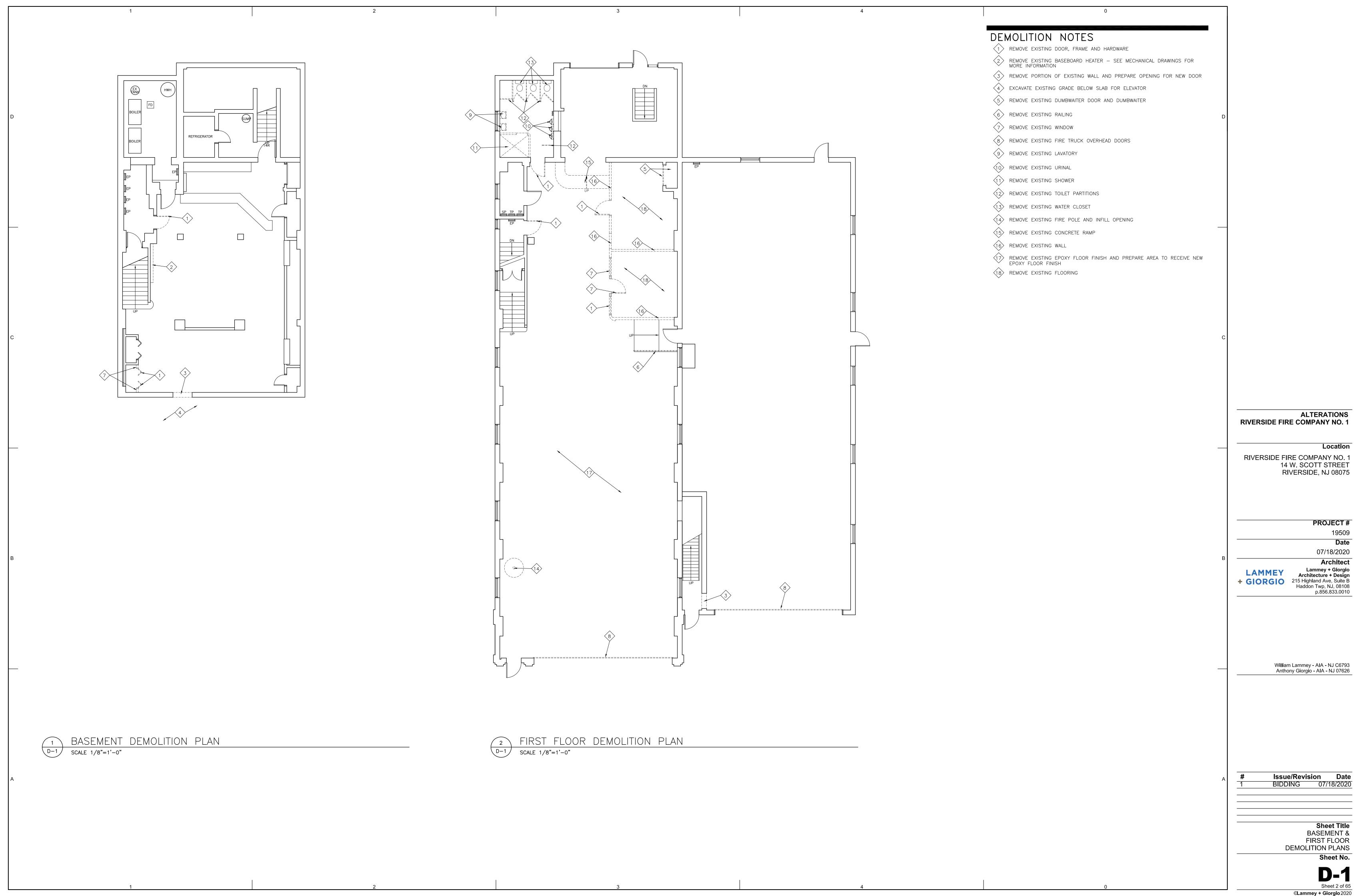
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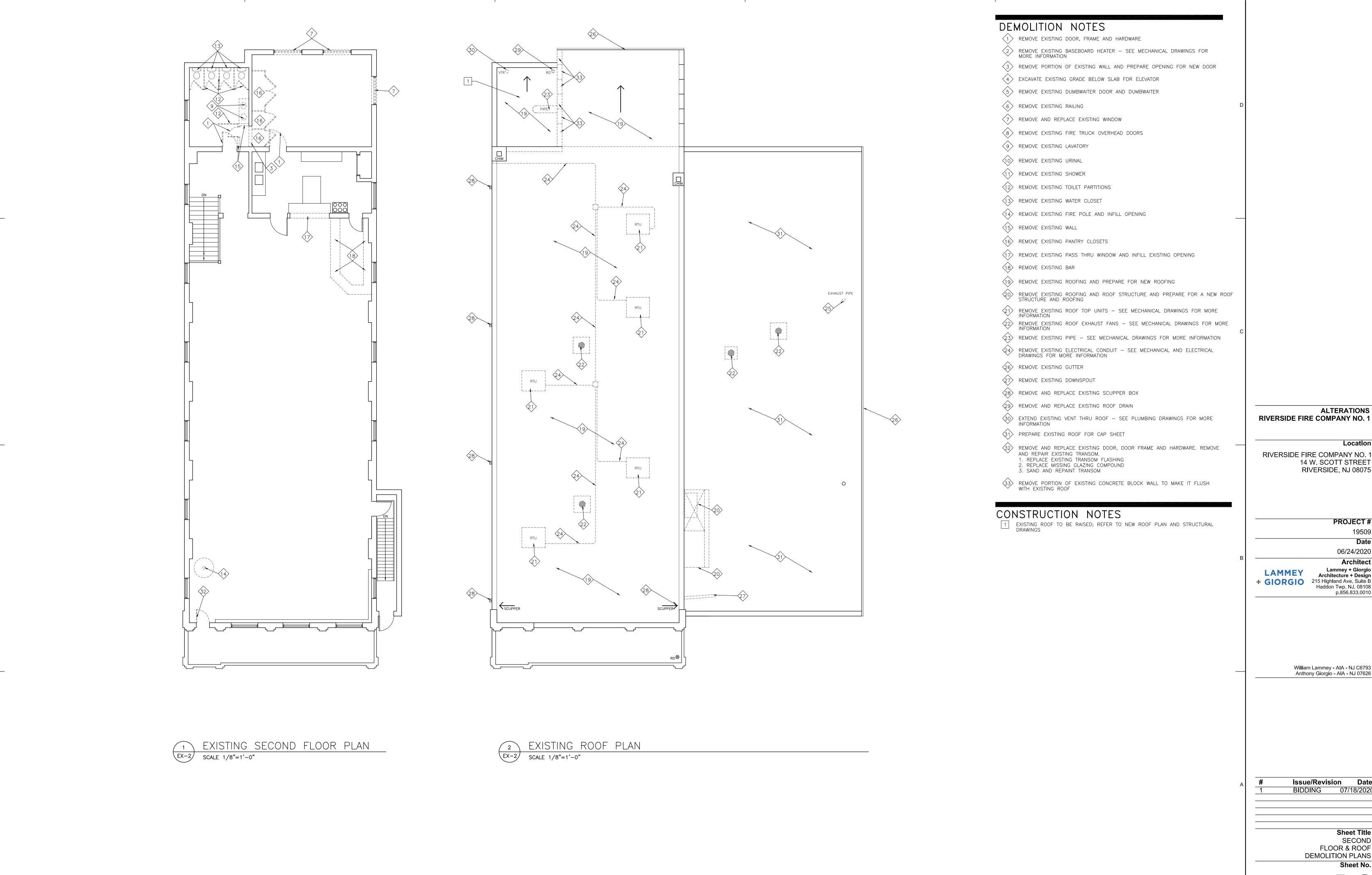
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> **Sheet Title** TITLE SHEET

> > Sheet No. **T-**1

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PROJECT#

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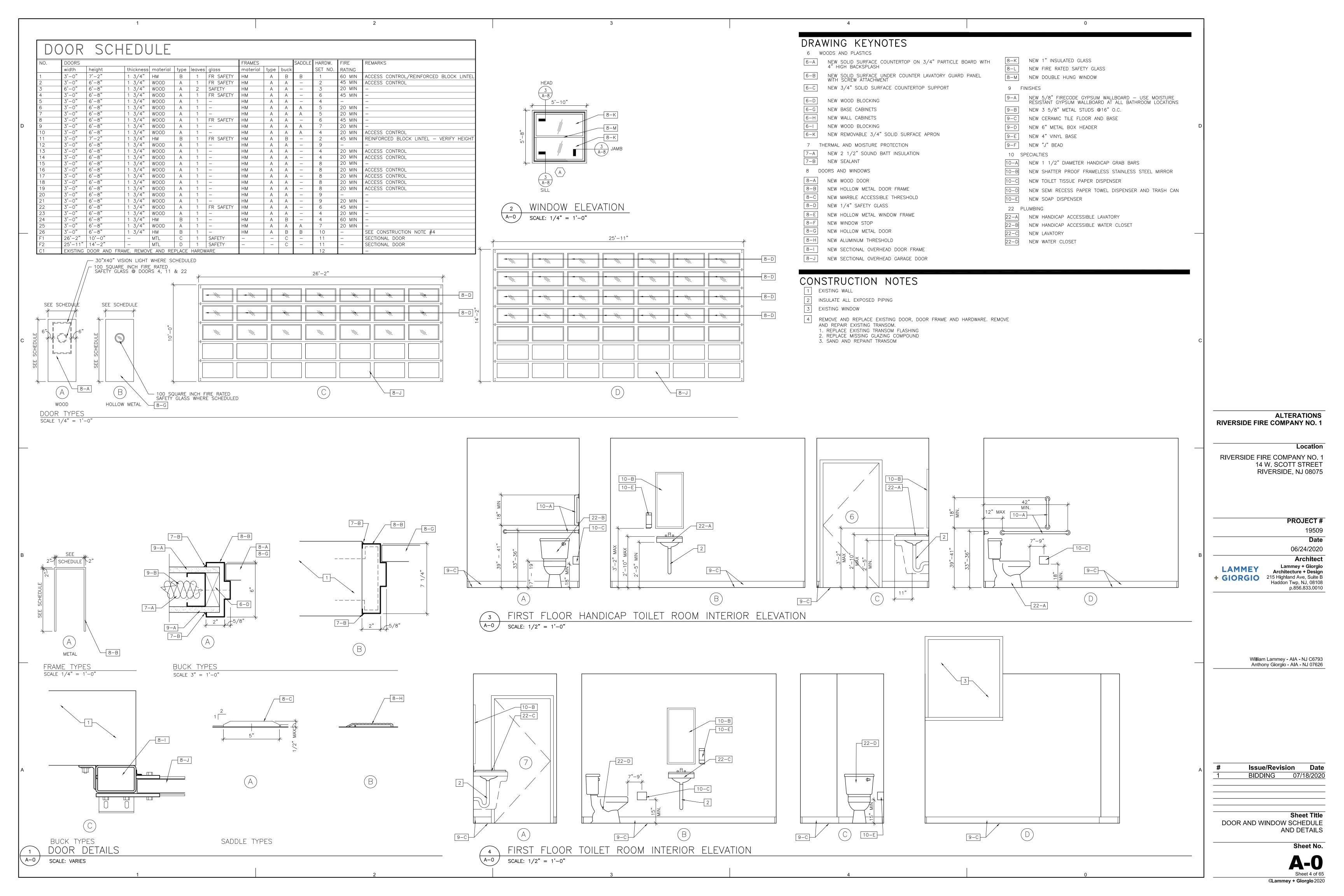
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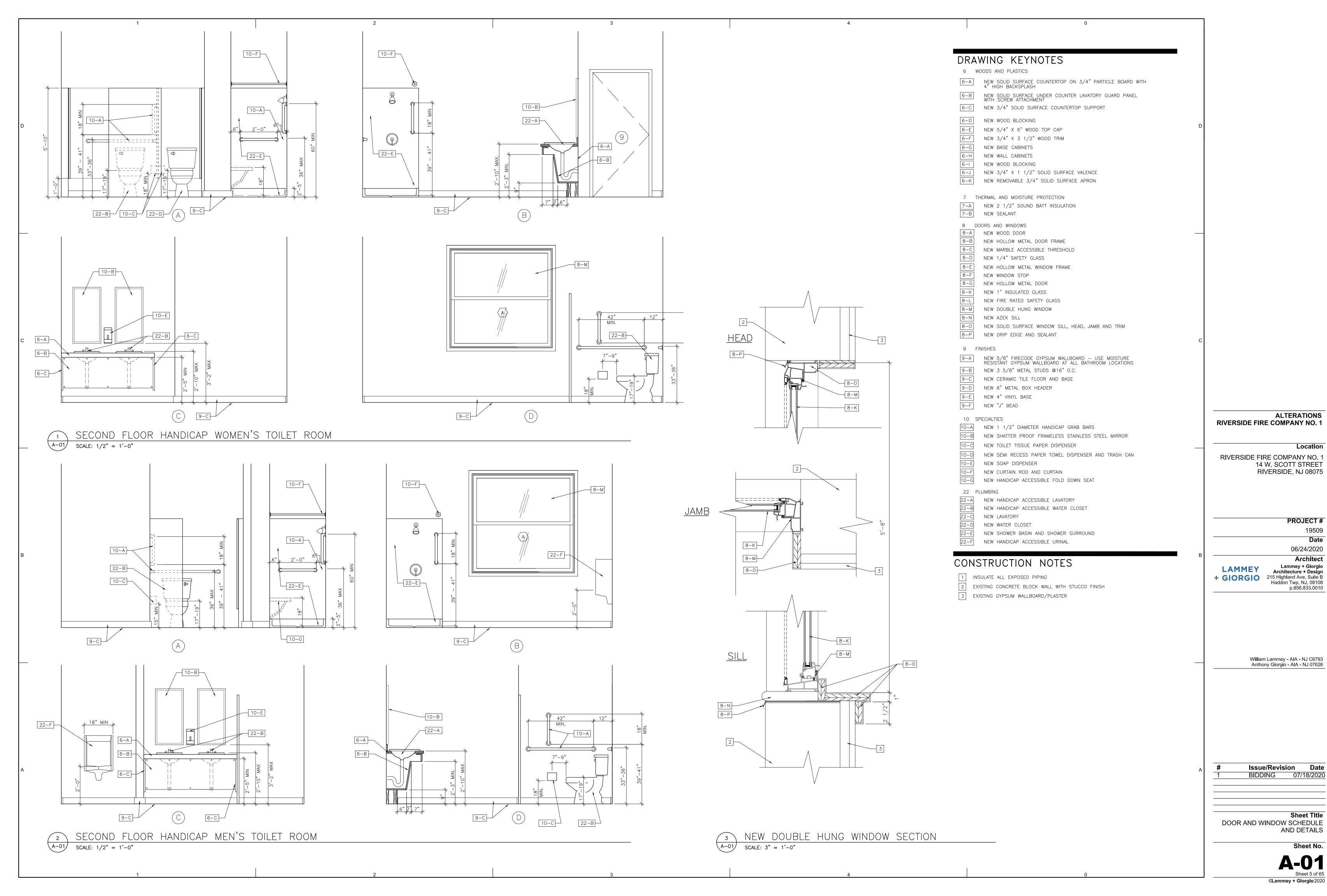
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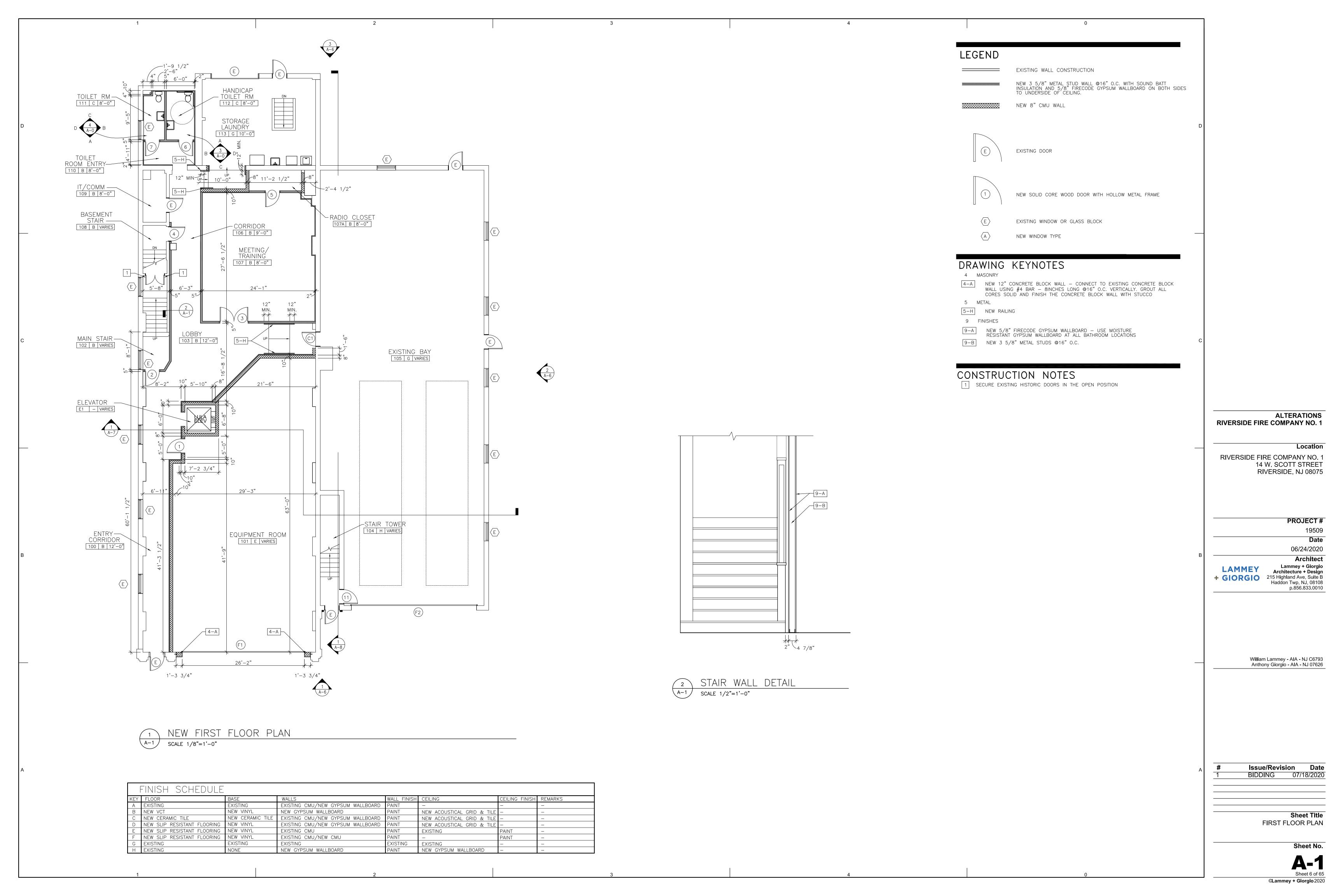
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> Sheet Title SECOND FLOOR & ROOF DEMOLITION PLANS Sheet No.

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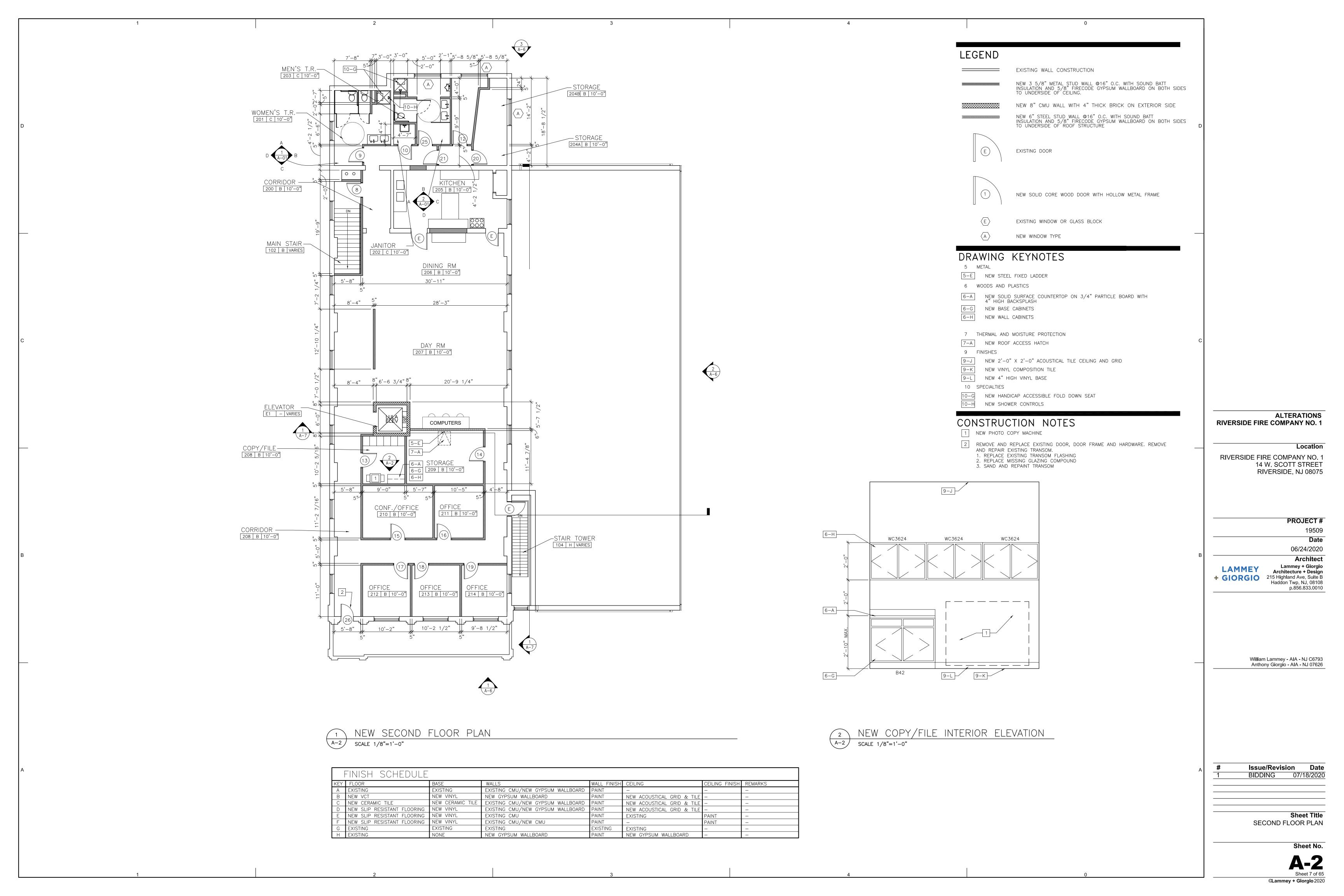


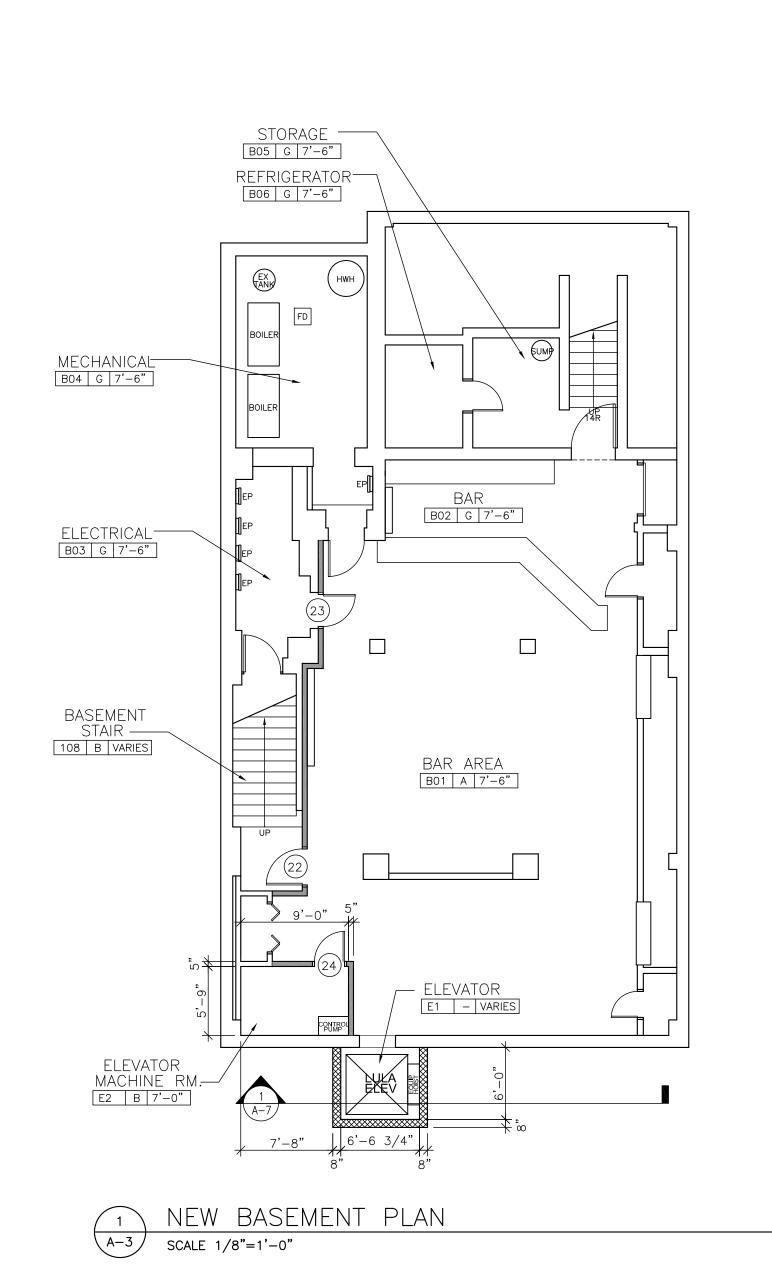


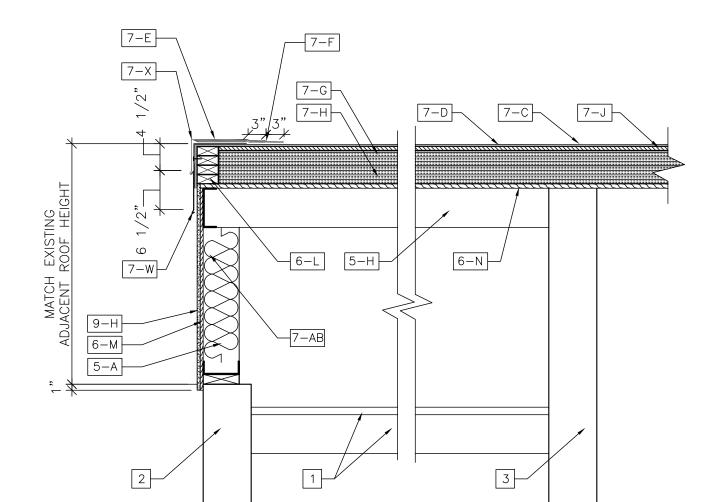
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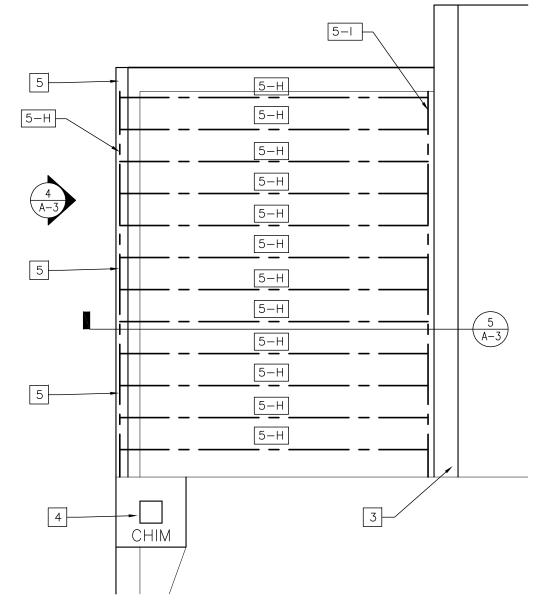




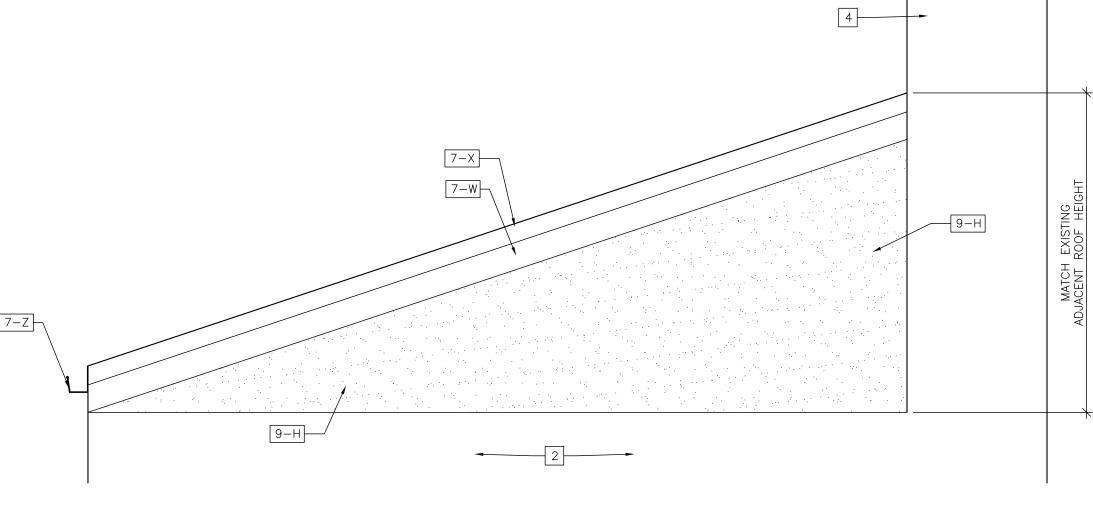


NEW RAISED ROOF FRAMING SECTION A-3 SCALE 1/8"=1'-0"

	FINISH SCHEDULE						
	THIST SOMEDOLL						
KEY	FLOOR	BASE	WALLS	WALL FINISH	CEILING	CEILING FINISH	REMARKS
Α	EXISTING	EXISTING	EXISTING CMU/NEW GYPSUM WALLBOARD	PAINT	_	_	_
В	NEW VCT	NEW VINYL	NEW GYPSUM WALLBOARD	PAINT	NEW ACOUSTICAL GRID & TILE	_	-
С	NEW CERAMIC TILE	NEW CERAMIC TILE	EXISTING CMU/NEW GYPSUM WALLBOARD	PAINT	NEW ACOUSTICAL GRID & TILE	_	-
D	NEW SLIP RESISTANT FLOORING	NEW VINYL	EXISTING CMU/NEW GYPSUM WALLBOARD	PAINT	NEW ACOUSTICAL GRID & TILE	_	-
Ε	NEW SLIP RESISTANT FLOORING	NEW VINYL	EXISTING CMU	PAINT	EXISTING	PAINT	ı
F	NEW SLIP RESISTANT FLOORING	NEW VINYL	EXISTING CMU/NEW CMU	PAINT	_	PAINT	_
G	EXISTING	EXISTING	EXISTING	EXISTING	EXISTING	_	_
Н	EXISTING	NONE	NEW GYPSUM WALLBOARD	PAINT	NEW GYPSUM WALLBOARD	_	_



NEW RAISED ROOF FRAMING PLAN SCALE 1/4"=1'-0"



DRAWING KEYNOTES

MORE INFORMATION

6 WOOD, PLASTIC AND COMPOSITES

OF NEW WOOD BLOCKING)

7 THERMAL AND MOISTURE PROTECTION

7-B NEW SEALANT

6-M NEW 1/2" EXTERIOR PLYWOOD SHEATHING

NEW 3/4" EXTERIOR PLYWOOD SHEATHING

NEW SBS MODIFIED BITUMINOUS BASE SHEET

NEW 3" THICK POLYISOCYANURATE INSULATION NEW 2 1/2" THICK POLYISOCYANURATE INSULATION

EXISTING CONCRETE BLOCK WALL WITH STUCCO FINISH

NEW 6" STEEL STUD WALL @16" O.C. WITH R-19 INSULATION AND 1/2" EXTERIOR GRADE PLYWOOD AND STUCCO FINISH ON EXTERIOR SIDE OF WALL

REMOVE PORTION OF EXISTING CONCRETE BLOCK WALL TO MAKE IT FLUSH

NEW 1/2" THICK RECOVERY BOARD

NEW EDGE METAL EXTENSION

NEW GUTTER AND DOWNSPOUT

NEW EDGE METAL

9 FINISHES

7-AB NEW R-19 BATT INSULATION

9-H NEW STUCCO EXTERIOR FINISH

CONSTRUCTION NOTES

1 EXISTING WOOD ROOF STRUCTURE

WITH EXISTING ROOF

4 EXISTING CHIMNEY

NEW 8-INCH STEEL JOIST @16" O.C. NEW 8-INCH STEEL LEDGER BOARD

5-A NEW 6-INCH STEEL STUD @16" O.C. - SEE STRUCTURAL DRAWINGS FOR

6-L NEW FIRE TREATED 2"X10" WOOD BLOCKING (FASTEN TO EXISTING WOOD BLOCKING USING (2)#10 SCREWS @ 36" O.C.. FASTEN

> FASTEN NEW WOOD BLOCKING TO EXISTING AND NEW WOOD BLOCKING BY STAGGERING (2)#10 SCREWS @36" O.C. EACH PIECE

NEW SBS MODIFIED BITUMINOUS GRANULE SURFACE CAP SHEET

NEW SBS MODIFIED BITUMINOUS FLASHING BASE SHEET

NEW SBS MODIFIED BITUMINOUS GRANULE SURFACE FLASHING CAP SHEET

POWDER-ACTUATED FASTENER 0.157" X-U STAGGERED @18" O.C..

EXISTING WOOD BLOCKING TO MASONRY USING (2)

NEW RAISED ROOF EXTERIOR ELEVATION SCALE 1/2"=1'-0"

**ALTERATIONS RIVERSIDE FIRE COMPANY NO. 1** 

RIVERSIDE, NJ 08075

RIVERSIDE FIRE COMPANY NO. 1 14 W. SCOTT STREET

PROJECT#

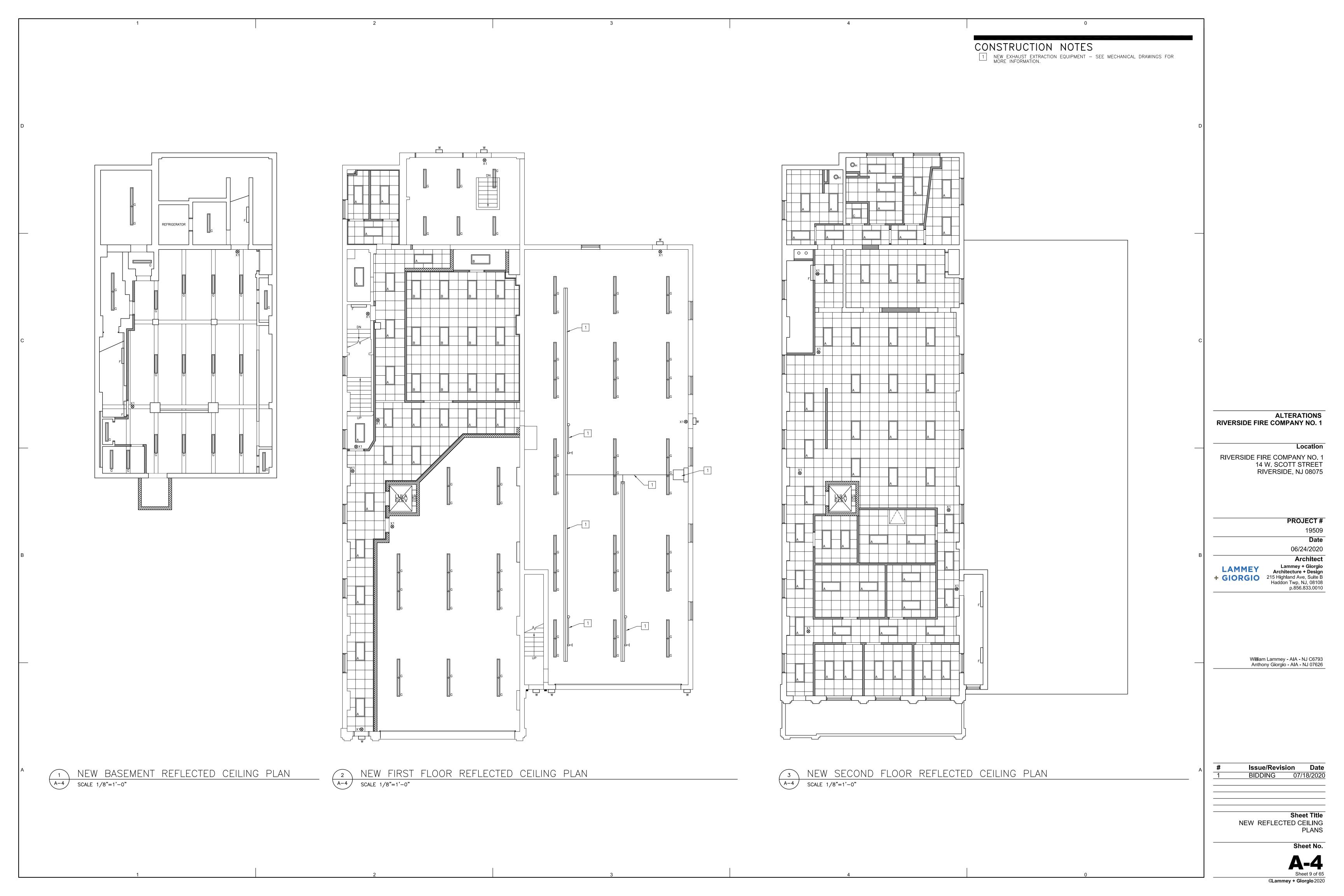
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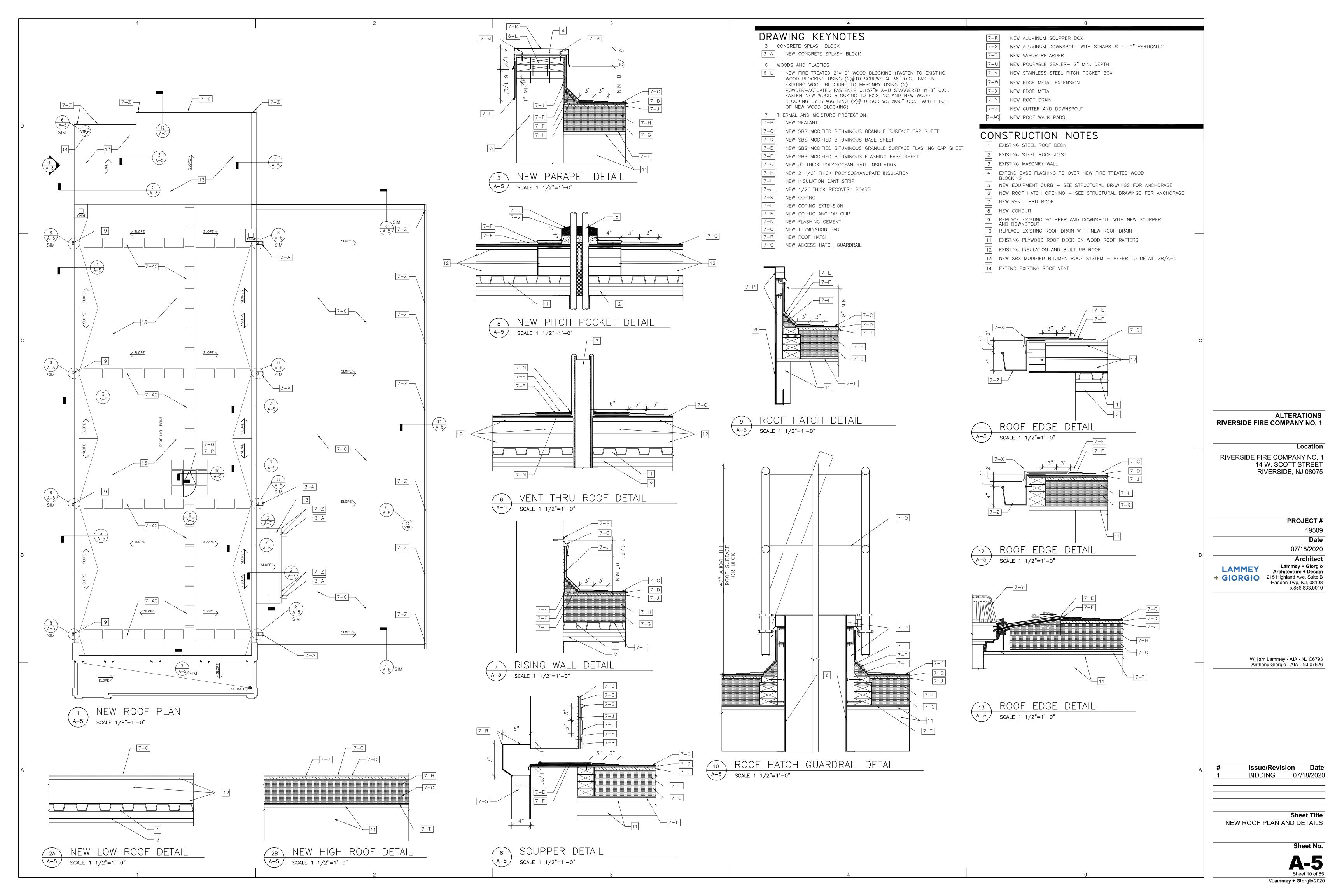
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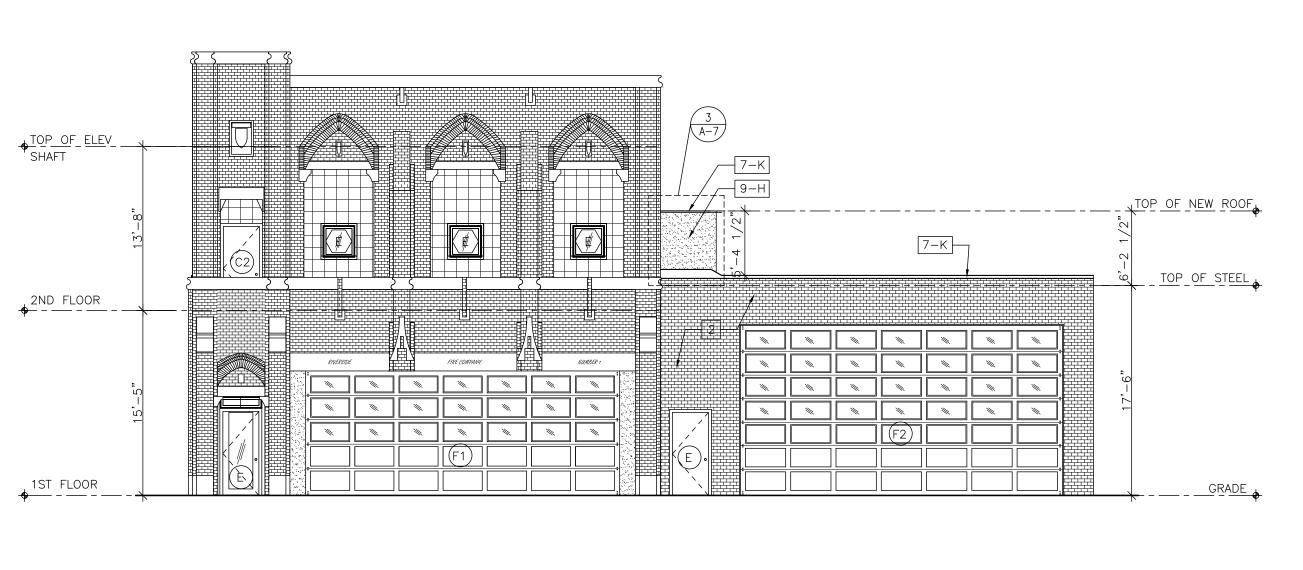
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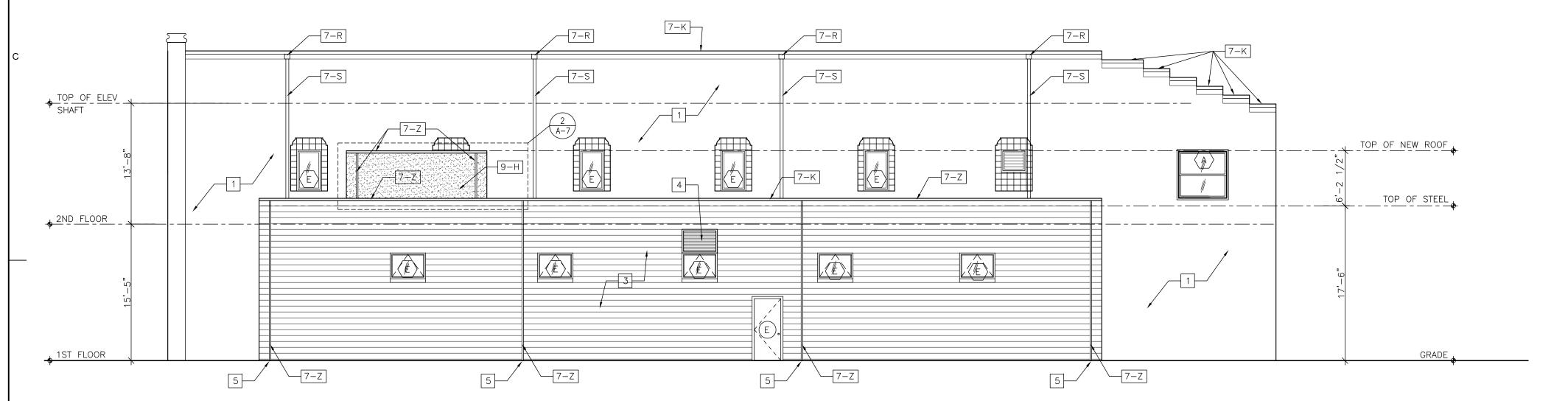
> Sheet Title NEW BASEMENT PLAN AND DETAILS



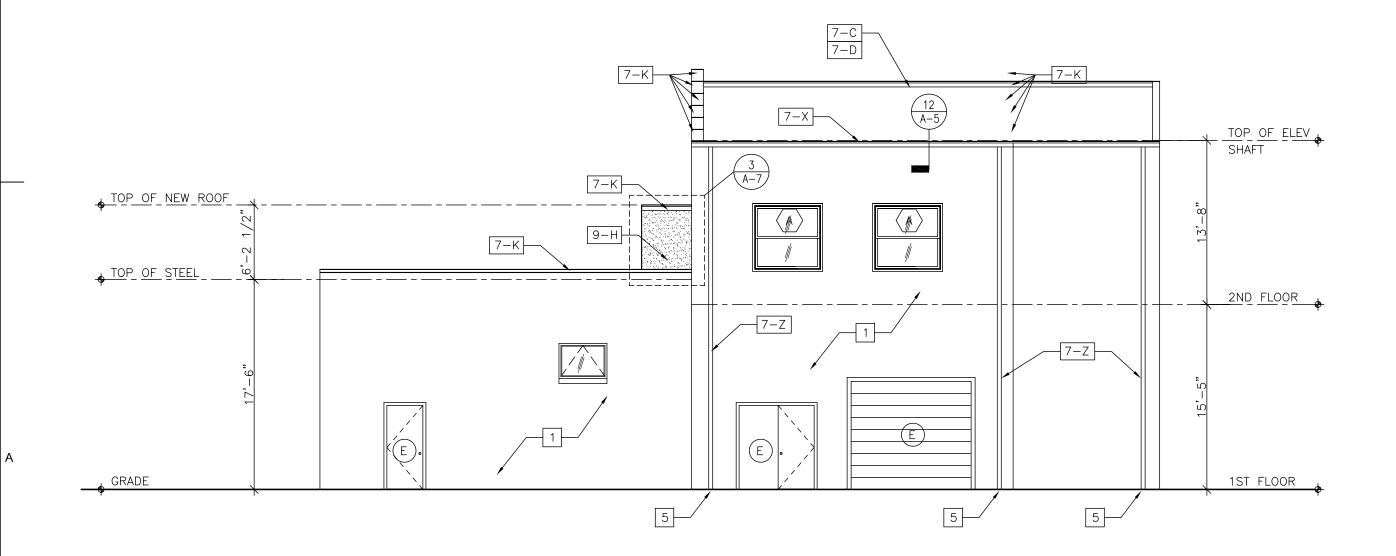








SIDE ELEVATION SCALE 1/8"=1'-0"



REAR ELEVATION 3 REAR ELEV A-6 SCALE 1/8"=1'-0"

## LEGEND

- EXISTING WINDOW OR GLASS BLOCK
- NEW WINDOW TYPE

## DRAWING KEYNOTES

- 7 THERMAL AND MOISTURE PROTECTION
- 7-C NEW SBS MODIFIED BITUMINOUS GRANULE SURFACE CAP SHEET
  - NEW SBS MODIFIED BITUMINOUS BASE SHEET
- 7-K NEW COPING
- NEW ALUMINUM SCUPPER BOX
- ALUMINUM DOWNSPOUT WITH STRAPS @ 4'-0" VERTICALLY
- NEW EDGE METAL
- NEW GUTTER AND DOWNSPOUT
- 9 FINISHES
- 9-H NEW STUCCO FINISH

## CONSTRUCTION NOTES

- 1 EXISTING CONCRETE BLOCK WITH STUCCO FINISH
- 2 EXISTING BRICK
- 3 EXISTING CONCRETE BLOCK
- 4 NEW EXHAUST EXTRACTION EQUIPMENT SEE MECHANICAL DRAWINGS FOR MORE INFORMATION INSTALL NEW 1/4" STEEL LINTEL ABOVE.
- 5 CONNECT TO EXISTING STORM DRAINS

**ALTERATIONS RIVERSIDE FIRE COMPANY NO. 1** 

RIVERSIDE FIRE COMPANY NO. 1 RIVERSIDE, NJ 08075

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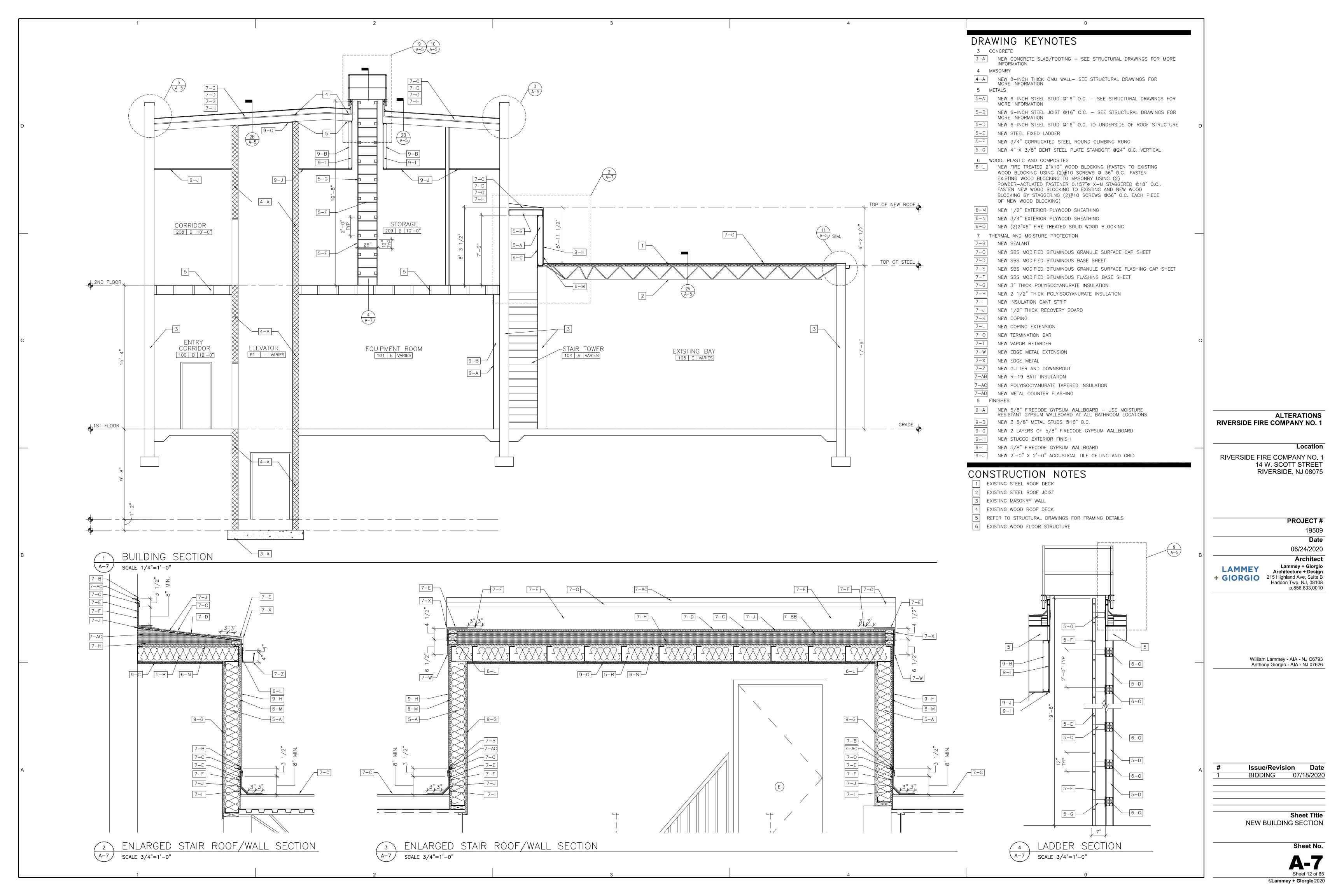
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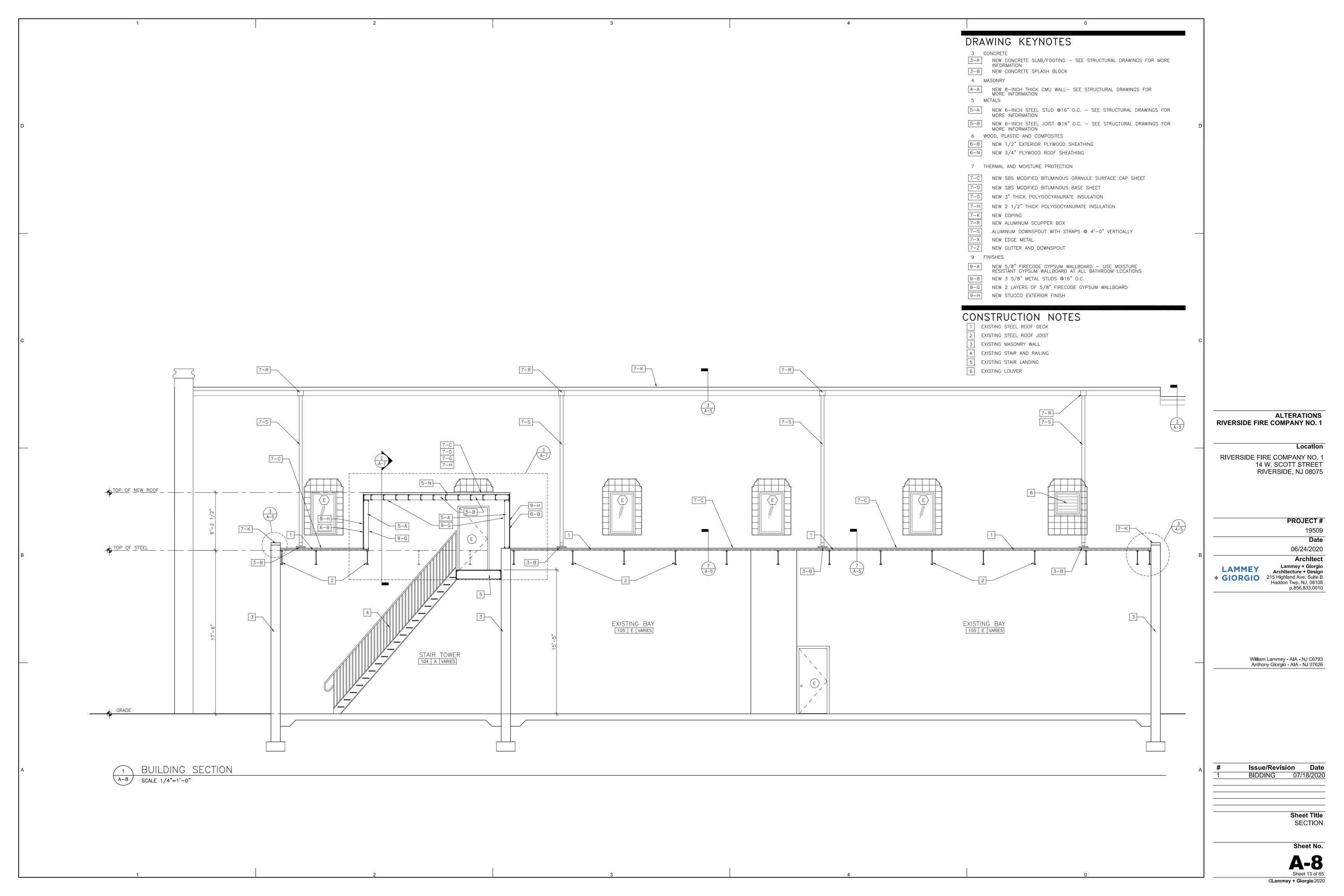
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> Sheet Title **EXTERIOR ELEVATIONS**





### DELEGATED DESIGN / DEFERRED SUBMITTALS

- ALL DESIGN REQUIREMENTS, LOADING, PERFORMANCE CRITERIA, SUBMISSION STANDARDS AND ANY OTHER APPLICABLE INFORMATION IS LOCATED IN THE GENERAL NOTES, DESIGN DATA, PLANS, SECTIONS, DETAILS AND SPECIFICATIONS (CONSTRUCTION DOCUMENTS) FOR THE DELEGATED DESIGN OF THE COMPONENTS NOTED. BY BIDDING ON THIS PROJECT, THE CONTRACTOR ACCEPTS RESPONSIBILITY FOR THE DESIGN OF THE COMPONENTS DELEGATED BY THESE CONTRACT DOCUMENTS AND ACCEPTS THAT THERE IS ADEQUATE INFORMATION SHOWN ON THE CONTRACT DOCUMENTS TO PERFORM THE DELEGATED DESIGN.
- 2. A BID SUBMISSION THAT DOES NOT INCLUDE THE REQUIRED DELEGATED DESIGN WILL RESULT IN THE REJECTION OF ANY AND ALL CONSTRUCTION PHASE SUBMISSIONS, RFI'S AND SHOP DRAWINGS.
- 3. THE ARCHITECTURAL AND STRUCTURAL DRAWINGS MAY SHOW DETAILS FOR DELEGATED DESIGN COMPONENTS, INCLUDING MINIMUM OR MAXIMUM ASSEMBLY REQUIREMENTS (I.E. DEPTH, GAGE, LENGTH, SPAN OR SPACING), OR SUGGESTED ATTACHMENT METHODS. THESE DETAILS AND INFORMATION ARE INTENDED TO BE SCHEMATIC IN NATURE, AND ARE NOT INTENDED TO BE USED FOR BID QUANTITIES. THE CONTRACTOR SHALL MAKE ALLOWANCES IN THEIR BID TO ACCOMMODATE THE COST OF THE ACTUAL ASSEMBLIES AFTER DELEGATED DESIGN IS COMPLETE.
- 4. THE DESIGN OF DELEGATED COMPONENTS IS THE RESPONSIBILITY OF THE CONTRACTOR'S ENGINEER, WHO MUST BE REGISTERED IN THE PROJECT'S JURISDICTION. ALL SUBMITTALS SHALL BEAR THIS ENGINEER'S SEAL AND SIGNATURE. THE ENGINEER MUST BE QUALIFIED TO DESIGN THE DESIGNATED ASSEMBLY AND MUST BE ABLE TO DEMONSTRATE PRIOR EXPERIENCE WITH THE DESIGN OF THE ASSEMBLY. REVIEW SHALL BE FOR GENERAL CONFORMANCE WITH THE PROJECT REQUIREMENTS AS INDICATED ON THE DRAWINGS AND IN THE GENERAL NOTES.
- 5. THE CONTRACTOR SHALL SUBMIT, FOR REVIEW, DRAWINGS AND CALCULATIONS FOR ALL PERFORMANCE ASSEMBLIES IDENTIFIED BELOW.
- 6. DELEGATED DESIGNS SHALL ALSO BE SUBMITTED TO THE AUTHORITY HAVING JURISDICTION AS DEFERRED SUBMITTALS AS PART OF THE PERMIT APPROVAL PROCESS.

### DELEGATED DESIGNS:

- A. THE MEP CONTRACTOR SHALL PROVIDE PRE-FRABRICATED METAL OR WOOD ROOF CURBS, INCLUDING ANCHORAGE, BELOW ROOF TOP EQUIPMENT. WHERE EQUIPMENT SITS ON STEEL DUNNAGE, ALL ATTACHMENTS BETWEEN THE EQUIPMENT AND THE DUNNAGE SHALL BE PROVIDED BY THE MEP CONTRACTOR. ATTACHMENTS SHALL BE DESIGNED TO SUPPORT THE WEIGHT OF THE EQUIPMENT IN ADDITION TO ALL APPLICABLE LATERAL FORCES. REFER TO TYPICAL DETAILS FOR ADDITIONAL INFORMATION.
- B. <u>BRACING, SHEETING, SHORING, ETC.</u>; REQUIRED TO ENSURE THE STRUCTURAL INTEGRITY OF THE EXISTING BUILDINGS OR NEW CONSTRUCTION, SIDEWALKS, UTILITIES, ETC., SHALL BE DESIGNED BY A PROFESSIONAL ENGINEER ENGAGED BY THE CONTRACTOR. CONTRACTOR TO PROVIDE TEMPORARY SUPPORT OF EXPOSED UTILITIES WITHIN EXCAVATED AREAS. DETAILED SIGNED AND SEALED SHOP DRAWINGS SHALL BE PREPARED INDICATING ALL WORK TO BE PERFORMED. SUBMIT THE SHOP DRAWINGS IN ACCORDANCE WITH THE CONTRACT REQUIREMENTS.

#### GENERAL STRUCTURAL AND CONSTRUCTION NOTES

#### I.O <u>GENERAL</u>

- ALL WORK SHALL CONFORM TO THE "2018 NEW JERSEY UNIFORM CONSTRUCTION CODE" AND TO ALL OTHER APPLICABLE FEDERAL, STATE, AND LOCAL REGULATIONS.
- 2. IN CASE OF CONFLICT BETWEEN THE GENERAL NOTES, SPECIFICATIONS, AND DETAILS, THE MOST RIGID REQUIREMENTS SHALL GOVERN.
- WORK NOT INDICATED ON A PART OF THE DRAWINGS BUT REASONABLY IMPLIED TO BE SIMILAR TO THAT SHOWN AT CORRESPONDING PLACES SHALL BE REPEATED.
- 4. JOB SITE SAFETY AND CONSTRUCTION PROCEDURES ARE THE SOLE RESPONSIBILITY
- OF THE CONTRACTOR.
- 5. THE CONTRACTOR SHALL PROVIDE FOR DEWATERING AS REQUIRED DURING EXCAVATION AND CONSTRUCTION. REFER TO SPECIFICATIONS FOR ADDITIONAL
- THE CONTRACTOR SHALL COORDINATE OPENINGS, SLEEVES, CONCRETE HOUSEKEEPING PADS, INSERTS, AND DEPRESSIONS SHOWN ON THE ARCHITECTURAL, STRUCTURAL, MECHANICAL, ELECTRICAL, AND PLUMBING DRAWINGS.
- SEE ARCHITECTURAL DRAWINGS FOR LOCATIONS OF MASONRY AND DRYWALL NON-LOAD BEARING PARTITIONS. PROVIDE SLIP CONNECTIONS THAT ALLOW VERTICAL MOVEMENT AT THE HEADS OF ALL SUCH PARTITIONS. CONNECTIONS SHALL BE DESIGNED TO SUPPORT THE TOP OF THE WALLS LATERALLY FOR THE CODE-REQUIRED LATERAL LOAD.
- ALL COSTS OF INVESTIGATION AND/OR REDESIGN DUE TO CONTRACTOR IMPROPER INSTALLATION OF STRUCTURAL ELEMENTS OR OTHER ITEMS NOT IN CONFORMANCE WITH THE CONTRACT DOCUMENTS SHALL BE AT THE CONTRACTOR'S EXPENSE.
- 9. THE STRUCTURAL DRAWINGS SHALL BE USED IN CONJUNCTION WITH THE SPECIFICATIONS, ARCHITECTURAL AND MECHANICAL DRAWINGS. IF THERE IS A DISCREPANCY BETWEEN DRAWINGS, IT IS THE CONTRACTOR'S RESPONSIBILITY TO NOTIFY THE ARCHITECT PRIOR TO PERFORMING THE WORK
- 10. THE CONTRACTOR SHALL VERIFY ALL EXISTING BUILDING INFORMATION SHOWN (DIMENSIONS, ELEVATIONS, ETC.) AND NOTIFY THE ENGINEER OF ANY DISCREPANCIES PRIOR TO FABRICATION OF ANY STRUCTURAL COMPONENT.
- THE CONTRACTOR SHALL VERIFY AND/OR ESTABLISH ALL EXISTING CONDITIONS AND DIMENSIONS AT THE SITE. FAILURE TO NOTIFY ENGINEER OF UNSATISFACTORY CONDITIONS CONSTITUTES ACCEPTANCE OF UNSATISFACTORY CONDITIONS.
- 12. IF THE EXISTING FIELD CONDITIONS DO NOT PERMIT THE INSTALLATION OF THE WORK IN ACCORDANCE WITH THE DETAILS SHOWN, THE CONTRACTOR SHALL NOTIFY THE ENGINEER IMMEDIATELY AND PROVIDE A SKETCH OF THE CONDITION WITH HIS PROPOSED MODIFICATION OF THE DETAILS GIVEN ON THE CONTRACT DOCUMENTS. DO NOT COMMENCE WORK UNTIL CONDITION IS RESOLVED AND MODIFICATION IS APPROVED BY THE ARCHITECT.
- WHERE ALTERATIONS INVOLVE THE EXISTING SUPPORTING STRUCTURE, THE CONTRACTOR SHALL PROVIDE SHORING AND PROTECTION REQUIRED TO ENSURE THE STRUCTURAL INTEGRITY OF THE EXISTING STRUCTURE.
- 14. THE CONTRACTOR SHALL BE RESPONSIBLE TO DETERMINE ALLOWABLE CONSTRUCTION LOADS AND TO PROVIDE DESIGN AND CONSTRUCTION OF FALSEWORK, FORMWORK, STAGINGS, BRACING, SHEETING, AND SHORING, ETC.
- 15. CONTRACTOR TO PROVIDE SHEETING, BRACING, AND UNDERPINNING AS NECESSARY TO PREVENT ANY LATERAL OR VERTICAL MOVEMENTS OF EXISTING BUILDINGS, STREETS, AND ANY EXISTING UTILITY LINES.
- 16. IN NO CASE SHALL HEAVY EQUIPMENT BE PERMITTED CLOSER THAN 8'-O" FROM ANY FOUNDATION WALL. IF IT IS NECESSARY TO OPERATE SUCH EQUIPMENT CLOSER THAN 8'-0" TO THE WALL, THE CONTRACTOR SHALL BE THE SOLE RESPONSIBLE PARTY AND, AT HIS OWN EXPENSE, SHALL PROVIDE ADEQUATE SUPPORTS OR BRACE THE WALL TO WITHSTAND THE ADDITIONAL LOADS SUPERIMPOSED FROM SUCH EQUIPMENT.
- 17. SHOP DRAWINGS FOR ALL STRUCTURAL MATERIALS TO BE SUBMITTED TO ENGINEER FOR REVIEW PRIOR TO THE START OF FABRICATION OR COMMENCEMENT OF WORK. REVIEW PERIOD SHALL BE A MINIMUM OF TWO (2) WEEKS.
- REPRODUCTION OF ANY PORTION OF THE STRUCTURAL CONTRACT DRAWINGS FOR RESUBMITTAL AS SHOP DRAWINGS IS PROHIBITED. SHOP DRAWINGS PRODUCED IN SUCH A MANNER WILL BE REJECTED AND RETURNED.
- 19. SHOP DRAWINGS SHALL BEAR THE CONTRACTOR'S STAMP OF APPROVAL WHICH SHALL CONSTITUTE CERTIFICATION THAT THE CONTRACTOR HAS VERIFIED ALL CONSTRUCTION CRITERIA, MATERIALS, AND SIMILAR DATA AND HAS CHECKED EACH DRAWING FOR COMPLETENESS, COORDINATION, AND COMPLIANCE WITH THE CONTRACT DOCUMENTS.
- 20. THE SHOP DRAWINGS SHALL INCLUDE DIMENSIONED FLOOR AND ROOF EDGES, OPENINGS AND SLEEVES AT ALL FLOORS REQUIRED FOR ALL TRADES.
- 21. THE DRAWINGS HAVE BEEN PRODUCED ENTIRELY ON PENNONI CADD SYSTEM. ANY OTHER LETTERING, LINES OR SYMBOLS, OTHER THAN PROFESSIONAL STAMPS AND SIGNATURES, HAVE BEEN MADE WITHOUT THE AUTHORIZATION OF PENNONI ARE INVALID.
- 22. THE STRUCTURAL DRAWINGS SHALL GOVERN THE WORK FOR ALL STRUCTURAL FEATURES, UNLESS NOTED OTHERWISE. THE ARCHITECTURAL DRAWINGS SHALL GOVERN THE WORK FOR ALL DIMENSIONS.
- 23. INSPECTION IS REQUIRED OF ALL CONSTRUCTION DELINEATED ON THE STRUCTURAL DRAWINGS AND/OR SPECIFICATIONS. THE CONTRACTOR SHALL EMPLOY A TESTING/INSPECTION AGENCY WHICH SHALL PROVIDE PERSONNEL WITH THE FOLLOWING MINIMUM QUALIFICATIONS:
  - A. CERTIFIED BY INSTITUTE OF CERTIFIED ENGINEERING TECHNICIANS, OR OTHER RECOGNIZED COMPARABLE ORGANIZATION, AND,
    - FOR INSPECTION, SAMPLING, TESTING CONCRETE AND MASONRY: ACI CERTIFIED CONCRETE FIELD-TESTING TECHNICIAN, GRADE I; AND CONSTRUCTION INSPECTOR, LEVEL II.
- STRUCTURAL STEEL INSPECTION: AWS CERTIFIED WELDING INSPECTOR. 24. SUBMIT PERIODIC REPORTS WITHIN ONE BUSINESS DAY AFTER RECEIPT BY THE
- CONTRACTOR TO ENGINEER AND THE CONSTRUCTION CODE OFFICIAL DURING CONSTRUCTION. SUBMIT FINAL INSPECTION REPORT SUMMARY FOR EACH DIVISION OF WORK, CERTIFIED BY A LICENSED PROFESSIONAL ENGINEER, THAT INSPECTIONS WERE PERFORMED AND THAT WORK WAS PERFORMED IN ACCORDANCE WITH CONTRACT DOCUMENTS.
- 25. THE OWNER SHALL ENGAGE A TESTING AGENCY TO PROVIDE TESTING SERVICES AS INDICATED IN EACH SECTION OF THESE GENERAL NOTES.
- 26. ALL MATERIALS SHALL BE STORED TO PROTECT THEM FROM EXPOSURE TO THE ELEMENTS.

### 2.0 <u>EARTHWORK</u>

- ENGINEERED (CONTROLLED COMPACTED) FILL WITHIN THE BUILDING AREA SHALL BE CONSTRUCTED PRIOR TO FOOTING (OR PILE CAP) EXCAVATION. SEE SPECIFICATIONS FOR REQUIREMENTS OF CONTROLLED COMPACTED FILL.
- 2. EXCAVATION SHALL BE PERFORMED SO AS NOT TO DISTURB EXISTING ADJACENT BUILDINGS, STREETS, AND UTILITY LINES. VERIFY LOCATION OF ALL UTILITIES PRIOR TO COMMENCEMENT OF WORK. HAND EXCAYATE AROUND UTILITIES AS REQUIRED.
- 3. SEE THE SPECIFICATIONS AND GEOTECHNICAL REPORT FOR EXCAVATION, BACKFILL AND PREPARATION OF THE FOUNDATION AND SLAB-ON-GRADE SUBGRADE, INCLUDING COMPACTION REQUIREMENTS.
- 4. SATISFACTORY FILL MATERIALS ARE THOSE COMPLYING WITH ASTM D2487, GROUPS GW, GP, GM, SM, SW, AND SP. ON SITE BORROW MATERIAL SHALL BE TESTED TO DETERMINE SUITABILITY FOR USE AS FILL MATERIAL.
- 5. COMPACT SOIL TO NOT LESS THAN THE FOLLOWING PERCENTAGES OF MAXIMUM DENSITY OF MODIFIED PROCTOR (ASTM DI557):

## UNDER BUILDING FOUNDATIONS - 98%

UNDER BUILDING SLABS, STEPS, PAVEMENTS - 95%

- 6. REMOVE EXISTING VEGETATION, TOPSOIL, AND UNSATISFACTORY SOIL MATERIALS. PROOF ROLL SUBGRADE TO OBTAIN UNIFORMLY DENSIFIED SUBSTRATA PRIOR TO PLACING FILL MATERIAL EVENLY IN 8" THICK (MAXIMUM) LAYERS AND COMPACTING TO
- 7. THE OWNER SHALL RETAIN THE SERVICES OF A PROFESSIONAL GEOTECHNICAL ENGINEER, SUBJECT TO THE APPROVAL OF THE ARCHITECT, TO PERFORM SOIL TESTING AND INSPECTION. THE ENGINEER SHALL INSPECT THE SUBGRADE TO VERIFY BEARING LEVELS AND ENSURE THAT THE SAFE BEARING CAPACITY MEETS OR EXCEEDS THE DESIGN VALUE INDICATED BELOW. REPORTS SHALL BE SUBMITTED TO THE ARCHITECT OUTLINING THE WORK PERFORMED AND TEST RESULTS.
- BACKFILL SHALL BE BROUGHT UP SIMULTANEOUSLY ON EACH SIDE OF WALLS AND GRADE BEAMS, WITH A GRADE DIFFERENCE NOT TO EXCEED 2'-O" AT ANY TIME.

- FOUNDATIONS HAVE BEEN DESIGNED AND FOOTING ELEVATIONS ESTABLISHED IN ACCORDANCE WITH THE INFORMATION SHOWN ON THE EXISTING BUILDING DRAWINGS AND IN ACCORDANCE WITH IBC 2018 SECTION 1806. A NEW SUBSURFACE INVESTIGATION REPORT, WITH FOUNDATION RECOMMENDATIONS, HAS NOT BEEN PROVIDED BY THE OWNER FOR THIS PROJECT AT THIS TIME. THE SOIL INFORMATION AND BEARING CAPACITY SHALL BE VERIFIED BY A QUALIFIED GEOTECHNICAL ENGINEER DURING CONSTRUCTION.
- 2. FOOTINGS SHALL BEAR ON UNDISTURBED STRATUM OR ENGINEERED FILL WITH A MINIMUM BEARING CAPACITY OF 2,500 PSF USING TABLE 1806.2 AND ASSUMED SOIL TYPE OF SAND, SILTY SAND, CLAYEY SAND, SILTY GRAVEL AND CLAYEY GRAVEL (SW, SP, SM, SC, GM AND GC).
- 3. PRIOR TO FOOTING CONCRETE PLACEMENT, THE FOOTING SUBGRADE SHALL BE APPROVED BY THE INSPECTING GEOTECHNICAL ENGINEER. IF CONDITIONS PROVE TO BE UNACCEPTABLE AT ELEVATIONS SHOWN, FOOTING BOTTOMS SHALL BE LOWERED TO ACCEPTABLE SUBGRADE MATERIAL. FILL OVER-EXCAVATION WITH LEAN CONCRETE (2,500 PSI).
- 4. THE BEARING ELEVATIONS OF NEW FOOTINGS ADJACENT TO EXISTING FOOTINGS ARE TO MATCH THE ADJACENT EXISTING FOOTING BEARING ELEVATIONS UNLESS INDICATED
- 5. SLABS ON GRADE SHALL BEAR ON MECHANICALLY COMPACTED SOIL CAPABLE OF SUPPORTING 150 PSF. DRAINAGE FILL UNDER SLABS SHALL BE COMPACTED GRAVEL
- 6. CONCRETE FOR FOUNDATIONS SHALL BE POURED ON THE SAME DAY THE SUBGRADE IS APPROVED BY THE GEOTECHNICAL ENGINEER.
- 7. UTILITY LINES SHALL NOT BE PLACED THROUGH OR BELOW FOUNDATIONS WITHOUT THE STRUCTURAL ENGINEER'S APPROVAL.
- 8. THE CONTRACTOR SHALL OBSERVE WATER CONDITIONS AT THE SITE AND TAKE THE NECESSARY PRECAUTIONS TO ENSURE THAT THE FOUNDATION EXCAVATIONS REMAIN DRY DURING CONSTRUCTION. ANY SHEETING OR SHORING REQUIRED FOR DEWATERING SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING THE NEED TO USE FOUNDATION REBAR AS A GROUNDING ELECTRODE SYSTEM AND SHALL BE RESPONSIBLE FOR INSTALLING THE BONDING CLAMP PRIOR TO PLACEMENT OF THE CONCRETE AS PER NJUCC BULLETIN NO. 02-2.

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NJ COA NO. GA28033300

ARE INSTRUMENTS OF SERVICE IN RESPECT OF THE TO BE SUITABLE FOR REUSE BY OWNER OR OTHERS ON PROJECT. ANY REUSE WITHOUT WRITTEN VERIFICATION SPECIFIC PURPOSE INTENDED WILL BE AT OWNERS SOLE RISK AND WITHOUT LIABILITY OR LEGAL EXPOSURE TO PENNONI ASSOCIATE: AND OWNER SHALL INDEMNIFY AND HOLD HARMLESS PENNONI ASSOCIATES FROM ALL CLAIMS, DAMAGES, LOSSES AND EXPENSES ARISING OUT OF OR RESULTING THEREFROM.

**ALTERATIONS** RIVERSIDE FIRE COMPANY

RIVERSIDE FIRE COMPANY NO. 1 14 W. SCOTT STREET RIVERSIDE, NJ 08075

> PROJECT # 19509

> > 06/24/2020

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**Sheet Title GENERAL STRUCTURAL NOTES** 

### 4.0 CAST-IN-PLACE CONCRETE

- CONCRETE SHALL BE DESIGNED AND DETAILED IN ACCORDANCE WITH THE BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE (ACI-318), AND CONSTRUCTED IN ACCORDANCE WITH THE CRSI MANUAL OF STANDARD PRACTICE.
- CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE 28-DAY STRENGTH OF 4,000 PSI. AIR ENTRAINMENT 4% TO 6% IN ALL EXPOSED CONCRETE WORK. MAXIMUM WATER/CEMENT RATIO OF 0.45.
- 3. REINFORCING STEEL: ASTM A615 GRADE 60.
- 4. EPOXY COATED REINFORCING STEEL: ASTM A775.
- 5. WELDED WIRE REINFORCEMENT: (WWR) ASTM A-185.
- 6. LEVELING GROUT SHALL BE NON-SHRINK, NON-METALLIC TYPE, FACTORY PRE-MIXED GROUT IN ACCORDANCE WITH CE-CRD-C621 OR ASTM C109, WITH A MINIMUM COMPRESSIVE 28-DAY STRENGTH OF 5,000 PSI.
- 7. REINFORCING STEEL CLEAR COVER SHALL BE AS FOLLOWS UNLESS NOTED OTHERWISE:

REINFORCING STEEL IN CONCRETE CAST AGAINST SOIL	3"
REINFORCING STEEL IN CONCRETE EXPOSED TO SOIL OR WEATHER	
#5 BARS AND SMALLER	1 1/2"
#6 BARS AND LARGER	2"
SLAB AND WALL REINFORCING NOT EXPOSED TO SOIL OR WEATHER	3/4"

8. SPLICES IN REINFORCING STEEL SHALL BE MADE ONLY AT THOSE LOCATIONS WHERE SPLICES ARE SHOWN ON THE STRUCTURAL DRAWINGS AND AT THOSE LOCATIONS WHERE SPLICES HAVE BEEN DETAILED ON THE REINFORCING STEEL PLACING DRAWINGS THAT HAVE BEEN REVIEWED BY THE STRUCTURAL ENGINEER. ALL SPLICES SHALL BE CLASS "B" TENSION LAP SPLICES (SEE TABLES I AND 2 BELOW), EXCEPT WHERE INDICATED OTHERWISE ON THE STRUCTURAL DRAWINGS. MECHANICAL SPLICE COUPLERS CAPABLE OF DEVELOPING 125% OF THE TENSILE STRENGTH OF THE REINFORCING STEEL MAY BE USED INSTEAD OF TENSION LAP SPLICES AT THE CONTRACTOR'S OPTION AT ANY LOCATION. COMPRESSION LAP SPLICES PER TABLE 4 MAY BE USED ONLY AT THOSE LOCATIONS WHERE SUCH SPLICES ARE SPECIFICALLY INDICATED. STAGGER SPLICES WHERE REQUIRED TO PROVIDE I 1/2" CLEAR SPACING BETWEEN REINFORCING STEEL AT SPLICE LOCATIONS.

TABLE 1					
REINFORCING STEEL (FY)	BAR SIZE	BAR LOCATION	CONCRETE STRENGTH		
			4 KSI		
	#3	TOP BARS	2'-0"		
	#0	OTHER BARS	1'-6"		
	м. а	TOP BARS	2'-8"		
	#4	OTHER BARS	2'-1"		
	#5	TOP BARS	3'-4"		
		OTHER BARS	2'-7"		
60 KSI	#6	TOP BARS	4'-0"		
00 151		OTHER BARS	<b>3'-I"</b>		
	#7	TOP BARS	5'-10"		
		OTHER BARS	4'-6"		
	#0	TOP BARS	6'-8"		
	#8	OTHER BARS	5'-2"		
	#9	TOP BARS	7'-6"		
	#4	OTHER BARS	5'-10"		

- A. SPLICE LENGTHS SHOWN IN TABLE ABOVE ARE APPLICABLE FOR SPLICES: OCCURRING UNDER THE FOLLOWING CONDITIONS:
- GRADE 60 REINFORCING STEEL (U.N.O.)
- NORMAL WEIGHT CONCRETE
- MINIMUM BAR SPACING REQUIREMENTS:
- CLEAR SPACING BETWEEN BARS AT SPLICE LOCATION ≥ DIAMETER AND CLEAR COVER TO BARS OCCURRING PER CODE SPACING WITHIN LENGTH OF SPLICE
- CLEAR SPACING BETWEEN BARS AT SPLICE ≥ 2X BAR DIAMETER AND CLEAR COVER ≥ BAR DIAMETER.
- B. INDICATED SPLICE LENGTHS SHALL BE INCREASED BY THE FOLLOWING FACTORS WHERE THE FOLLOWING CONDITIONS OCCUR:

ACTORS MILERE THE TOLLOWING CONDITIONS COOL				
TABLE 2				
CONDITION	SPLICE LENGTH MULTIPLIER			
BAR SPACING OR CLEAR COVER LESS THAN REQUIRED PER NOTE #1	1.5			
LIGHTWEIGHT CONCRETE	1.3			
EPOXY COATED REINFORCING WITH COVER < 3X DIAMETER AND CLEAR SPACING < 6X DIAMETER	1.5			
ALL OTHER EPOXY COATED BARS	1.2			

\* WHERE MULTIPLE CONDITIONS OCCUR, APPLY EACH OF THE APPLICABLE FACTORS TO THE BASIC TENSION LAP SPLICE LENGTHS TO OBTAIN THE REQUIRED SPLICE LENGTH.

- "TOP BARS" ARE HORIZONTAL BARS LOCATED WHERE MORE THAN 12" OF FRESH CONCRETE IS CAST IN THE MEMBER BELOW THE BARS.
- 9. SUBMIT TO ENGINEER REINFORCING STEEL SHOP DRAWINGS FOR APPROVAL AND MIX

NECESSARY TO FABRICATE AND PLACE THE REINFORCING STEEL.

- DESIGNS FOR REVIEW PRIOR TO PLACING ANY CONCRETE. REINFORCING STEEL PLACING DRAWINGS SHALL BE PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF ACI 314-92, "DETAILS AND DETAILING OF CONCRETE REINFORCING". THE PLACING DRAWINGS SHALL SHOW ALL INFORMATION
- B. THE SPACING OF ALL REINFORCING STEEL MUST BE COMPUTED BY THE REINFORCING STEEL DETAILER AND MUST BE INDICATED ON THE PLACING DRAWINGS. EXTENT ARROWS MUST BE USED TO CLEARLY INDICATE THE LOCATIONS WHERE GROUPS OF REINFORCING BARS ARE TO BE INSTALLED.
- C. A LIST OF ALL APPLICABLE REINFORCING STEEL PLACEMENT TOLERANCES SHALL BE INDICATED ON ALL REINFORCING STEEL PLACING DRAWINGS. PLACING DRAWINGS THAT DO NOT SHOW SUFFICIENT INFORMATION NEEDED TO PLACE THE REINFORCING STEEL WILL BE REJECTED.
- 10. ALL REINFORCEMENT SHALL BE SECURELY HELD IN PLACE WHILE PLACING CONCRETE. IF REQUIRED, ADDITIONAL BARS, STIRRUPS OR CHAIRS SHALL BE PROVIDED BY THE CONTRACTOR TO FURNISH SUPPORT FOR ALL BARS.
- LAP WELDED WIRE REINFORCEMENT TWO (2) FULL WIRE SPACES AT SPLICES AND WIRE TOGETHER.

- 12. PROVIDE PLASTIC TIPPED BOLSTERS AND CHAIRS AT ALL LOCATIONS WHERE THE CONCRETE SURFACE IN CONTACT WITH THE BOLSTERS OR CHAIRS IS EXPOSED.
- 13. PLACING OF CONCRETE SHALL NOT START UNTIL THE PLACEMENT OF REINFORCING HAS BEEN APPROVED BY THE INSPECTION AGENCY.
- 14. BONDING AGENT SHALL BE USED WHERE NEW CONCRETE IS PLACED AGAINST EXISTING
- 15. EPOXY ADHESIVE SHALL BE USED WHERE DOWELS ARE TO BE INSTALLED INTO

EXISTING CONCRETE. SUBMIT MANUFACTURER INFORMATION FOR ENGINEER REVIEW.

- 16. NO SLEEVE SHALL BE PLACED THROUGH ANY CONCRETE ELEMENT UNLESS SHOWN ON THE APPROVED SHOP DRAWINGS OR SPECIFICALLY AUTHORIZED IN WRITING BY THE STRUCTURAL ENGINEER. THE CONTRACTOR SHALL VERIFY DIMENSIONS AND LOCATIONS OF ALL SLOTS, PIPE SLEEVES, ETC. AS REQUIRED FOR MECHANICAL TRADES BEFORE CONCRETE IS PLACED.
- 17. PIPES OR CONDUITS PLACED IN SLABS SHALL NOT HAVE AN OUTSIDE DIAMETER LARGER THAN 1/3 THE SLAB THICKNESS AND SHALL NOT BE SPACED CLOSER THAN 3 DIAMETERS ON CENTER. ALUMINUM CONDUITS SHALL NOT BE PLACED IN CONCRETE. NO CONDUITS SHALL BE PLACED IN SLABS WITHIN 12 INCHES OF COLUMN FACE OR FACE OF BEARING WALL. NO CONDUITS MAY BE PLACED IN EXTERIOR SLABS OR SLABS SUBJECTED TO FLUIDS.
- 18. PRIOR TO PLACING CONCRETE, THE CONTRACTOR SHALL SUBMIT FOR REVIEW BY THE STRUCTURAL ENGINEER, A CONCRETE POUR SCHEDULE SHOWING LOCATION OF ALL PROPOSED CONSTRUCTION JOINTS AND WATERSTOPS
- 19. PRIOR TO CONCRETE PLACEMENT, THE CONTRACTOR SHALL SUBMIT TO THE STRUCTURAL ENGINEER FOR REVIEW, CONCRETE MIX DESIGNS PREPARED IN ACCORDANCE WITH THE SPECIFICATIONS AND REQUIREMENTS INDICATED IN THE GENERAL NOTES.
- 20. CONCRETE SHALL NOT BE PUMPED THROUGH ALUMINUM PIPES AND SHALL NOT BE PLACED IN CONTACT WITH ALUMINUM FORMS, MIXING DRUMS, BUGGIES, CHUTES, CONVEYORS OR OTHER EQUIPMENT MADE OF ALUMINUM.
- 21. ALL INSERTS AND SLEEVES SHALL BE CAST-IN-PLACE WHENEVER FEASIBLE. DRILLED OR POWDER DRIVEN FASTENERS WILL BE PERMITTED WHEN PROVEN TO THE SATISFACTION OF THE STRUCTURAL ENGINEER THAT THE FASTENERS WILL NOT SPALL THE CONCRETE AND HAVE THE SAME CAPACITY AS CAST-IN-PLACE INSERTS.
- 22. WHEN INSTALLING EXPANSION BOLTS OR ADHESIVE ANCHORS, THE CONTRACTOR SHALL TAKE MEASURES TO AVOID DRILLING OR CUTTING OF ANY EXISTING REINFORCING AND DESTRUCTION OF CONCRETE. HOLES SHALL BE BLOWN CLEAN PRIOR TO PLACING BOLTS OR ADHESIVE ANCHORS.
- 23. CHAMFER ALL EXPOSED CONCRETE CORNERS UNLESS NOTED OTHERWISE ON ARCHITECTURAL DRAWINGS.
- 24. THE CONCRETE SLABS SHALL BE FINISHED FLAT AND LEVEL WITHIN TOLERANCE, TO THE ELEVATION INDICATED ON THE DRAWINGS. THE CONTRACTOR SHALL PROVIDE ADDITIONAL CONCRETE REQUIRED DUE TO FORMWORK, METAL DECK, AND FRAMING DEFLECTION TO ACHIEVE THIS FINISHED TOP OF SLAB ELEVATION. THE CONTRACTOR SHALL PROVIDE FOR A MINIMUM OF 5/8" AVERAGE THICKNESS FOR ADDITIONAL CONCRETE DURING PLACEMENT FOR ALL SLABS SUPPORTED AND FORMED ON STEEL DECK OVER THE ENTIRE FLOOR AREA. THE CONTRACTOR SHALL PROVIDE THE MEANS BY WHICH THE MAXIMUM AND MINIMUM CONCRETE SLAB THICKNESS CAN BE MONITORED AND VERIFIED DURING AND AFTER THE PLACING AND FINISHING OPERATIONS.
- 25. CONSTRUCTION JOINTS FOR MILD-REINFORCED CONCRETE SHALL BE LOCATED WITHIN THE MIDDLE THIRD OF SPAN. PROPOSED CONSTRUCTION JOINT LOCATIONS SHALL BE SHOWN ON REINFORCING STEEL SHOP DRAWINGS. ANY STOP IN CONCRETE WORK MUST BE MADE WITH VERTICAL BULKHEADS AND HORIZONTAL KEYS, UNLESS OTHERWISE SHOWN. ALL REINFORCING IS TO BE CONTINUOUS THROUGH JOINTS
- 26. EARLY DRYING OUT OF CONCRETE, ESPECIALLY DURING THE FIRST 24 HOURS, SHALL BE CAREFULLY GUARDED AGAINST. ALL SURFACES SHALL BE MOIST CURED OR PROTECTED USING A MEMBRANE CURING AGENT APPLIED AS SOON AS FORMS ARE REMOVED. IF MEMBRANE CURING AGENT IS USED, EXERCISE CARE NOT TO DAMAGE COATING.
- 27. COLD WEATHER CONCRETING SHALL BE IN ACCORDANCE WITH ACI-306. HOT WEATHER CONCRETING SHALL BE IN ACCORDANCE WITH ACI-305R.
- 28. THROUGHOUT CONSTRUCTION, THE CONCRETE WORK SHALL BE ADEQUATELY PROTECTED AGAINST DAMAGE DUE TO EXCESSIVE LOADING, CONSTRUCTION EQUIPMENT, MATERIALS OR METHODS, ICE, RAIN, SNOW, EXCESSIVE HEAT, AND FREEZING
- 29. PREPARE CONCRETE TEST CYLINDERS FROM EACH DAY'S POUR. CYLINDERS SHALL BE PROPERLY CURED AND STORED. SAMPLE FRESH CONCRETE IN ACCORDANCE WITH ASTM CI72.
- 30. RETAIN LABORATORY TO PROVIDE TESTING SERVICE. SLUMP PER ASTM 143 AIR CONTENT PER ASTM C231 OR C173, CYLINDER TESTS PER ASTM C31 AND C39. ONE SET OF SIX (6) CYLINDERS FOR EACH 50 CUBIC YARDS FOR EACH MIX USED. REPORTS OF ALL TESTS TO BE SUBMITTED TO THE ARCHITECT.

## 5.0 CONCRETE/MASONRY ANCHORS

### CAST IN PLACE ANCHORS

- ALL HEADED CONCRETE ANCHORS SHALL BE MANUFACTURED FROM MATERIAL WHICH CONFORMS TO ASTM AIOS FOR LOW CARBON STEEL
- 2. ALL WELDS SHALL BE MADE IN ACCORDANCE WITH THE STRUCTURAL WELDING CODE, ANSI/AWS DI.I, LATEST EDITION AND WITH THE RECOMMENDATIONS OF THE STUD MANUFACTURER
- 3. THE SPACING, MINIMUM EMBEDMENT, AND INSTALLATION OF THE ANCHORS SHALL BE IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDED PROCEDURES.
- 4. STUD ANCHORS SHALL CONFORM TO ASTM AIOS AND THE NUTS SHALL CONFORM TO ASTM A563.

### POST-INSTALLED ANCHORS

EXCEPT WHERE INDICATED ON THE DRAWINGS, POST-INSTALLED ANCHORS SHALL CONSIST OF THE FOLLOWING ANCHOR TYPES AS PROVIDED BY HILTI, INC. OR APPROVED EQUAL:

HILTI UNDERGUT
HILTI HSL-3
HILTI KWIK BOLT-TZ
HILTI KWIK HUS-EZ
HILTI HIT RE 500-SD OR HILTI HIT-HY 200 ADHESIVE ANCHORING SYSTEM WITH: SAFE SET HILTI HIT-Z ANCHORS OR HILTI HAS-E THREADED ROD INSTALLED IN HAMMER-DRILLED HOLES, DRY OR WATER SATURATED.
HILTI HIT-HY 200 ADHESIVE ANCHORING SYSTEM
HILTI HIT-HY 270 ADHESIVE ANCHORING SYSTEM WITH HILTI HAS-E THREADED ROD
HILTI HIT-HY 270 ADHESIVE ANCHORING SYSTEM WITH HILTI HAS-E THREADED ROD AND APPROPRIATE SIZE MESH SCREEN TUBE

- 2. ANCHOR CAPACITY USED IN DESIGN SHALL BE BASED ON THE TECHNICAL DATA PUBLISHED BY HILTI OR SUCH OTHER METHOD AS APPROVED BY THE STRUCTURAL ENGINEER OR RECORD. SUBSTITUTION REQUEST FOR ALTERNATE PRODUCTS MUST BE APPROVED IN WRITING BY THE STRUCTURAL ENGINEER OF RECORD PRIOR TO USE. CONTRACTOR SHALL PROVIDE SIGNED AND SEALED CALCULATIONS DEMONSTRATING THAT THE SUBSTITUTED PRODUCT IS CAPABLE OF ACHIEVING THE PERFORMANCE VALUES OF THE SPECIFIED PRODUCT. SUBSTITUTIONS WILL BE EVALUATED BY THEIR HAVING AN ICC ESR SHOWING COMPLIANCE WITH THE RELEVANT BUILDING CODE FOR SEISMIC USES, LOAD RESISTANCE, INSTALLATION CATEGORY AND AVAILABILITY OF COMPREHENSIVE INSTALLATION INSTRUCTIONS. ADHESIVE ANCHOR EVALUATION WILL ALSO CONSIDER CREEP, IN-SERVICE TEMPERATURE AND INSTALLATION TEMPERATURE.
- INSTALL ANCHORS PER THE MANUFACTURER INSTRUCTIONS, UNLESS NOTED OTHERWISE. 4. ANCHORING TO CONCRETE SHALL BE IN CONFORMANCE WITH ACI 318, APPENDIX D. POST INSTALLED ANCHORS ARE REQUIRED TO BE PRE-QUALIFIED PER ACI 355
- TESTING. DRILL AND GROUT REINFORGING BAR DOWELS AS SHOWN ON THE PLANS AND AS APPROVED. UNLESS NOTED OTHERWISE, EMBED BARS AS REQUIRED TO DEVELOP THE FULL TENSION CAPACITY OF THE BAR.
- 6. THE ANCHOR MANUFACTURER SHALL MAKE A REPRESENTATIVE AVAILABLE TO PROVIDE ONSITE INSTALLATION TRAINING FOR ALL OF THEIR ANCHORING PRODUCTS SPECIFIED ON THE STRUCTURAL DRAWINGS. TRAINING SHALL BE AT THE CONTRACTOR'S REQUEST AND AT NO ADDITIONAL CHARGE TO THE CONTRACTOR,
- 7. ANCHOR CAPACITY IS DEPENDENT UPON SPACING BETWEEN ADJACENT ANCHORS AND PROXIMITY OF ANCHORS TO THE EDGE OF CONCRETE OR MASONRY SURFACE. INSTALL ANCHORS IN ACCORDANCE WITH SPACING AND EDGE DISTANCE CLEARANCES INDICATED ON THE DRAWINGS.
- 8. EXISTING REINFORCING BARS IN THE CONCRETE OR MASONRY STRUCTURE MAY CONFLICT WITH SPECIFIC ANCHOR LOCATIONS INDICATED ON THE STRUCTURAL DRAWINGS. UNLESS NOTED OTHERWISE, THE REINFORCING BARS MAY NOT BE CUT. THE CONTRACTOR SHALL REVIEW THE EXISTING STRUCTURAL DRAWINGS (IF AVAILABLE) AND SHALL TAKE STEPS TO LOCATE THE POSITION OF THE REINFORCING BARS AT THE LOCATIONS OF THE CONCRETE ANCHORS USING NON-DESTRUCTIVE TESTING (FERROSCAN, GPR, X-RAY OR OTHER APPROVED METHOD).

### 6.0 <u>MASONRY</u>

- MASONRY HAS BEEN DESIGNED IN ACCORDANCE WITH THE BUILDING CODE REQUIREMENTS FOR MASONRY STRUCTURES (ACI 530-08/ASCE 5-08) AND SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE SPECIFICATIONS FOR MASONRY STRUCTURES (ACI 530.1/ASCE 6), EXCEPT WHERE OTHERWISE MODIFIED BY THESE GENERAL NOTES AND SPECIFICATIONS.
- MORTAR SHALL CONFORM TO ASTM C270, TYPE M OR S. ALL PORTLAND CEMENT SHALL CONFORM TO ASTM CI50, TYPE I. LIME SHALL CONFORM TO ASTM C207 AND MASONRY CEMENT SHALL CONFORM TO ASTM C91.
- GROUT SHALL CONFORM TO ASTM C476 AND SHALL HAVE A MINIMUM 28 DAY COMPRESSIVE STRENGTH OF 3000 PSI. SLUMP OF GROUT SHALL BE 8 TO 10 INCHES AND THE MAXIMUM AGGREGATE SIZE SHALL BE 3/8" (AGGREGATE GRADED TO PRODUCE FINE GROUT IN CONFORMANCE WITH ASTM C476 AND C404).
- CONCRETE BLOCK UNITS:
- A. SOLID AND HOLLOW LOAD BEARING UNITS PER ASTM C90, TYPE N-I, AS REQUIRED TO PROVIDE 28 DAY COMPRESSIVE STRENGTH, F'M AS NOTED BELOW.
- MINIMUM 28-DAY COMPRESSIVE STRENGTH OF MASONRY, F'M SHALL BE 1,500 PSI, UNLESS NOTED OTHERWISE.
- 6. FULL BED AND HEAD JOINTS SHALL BE PROVIDED.
- HORIZONTAL JOINT REINFORCING: ASTM A82; 9-GAGE TRUSS-TYPE, GALVANIZED.
- DEFORMED BAR REINFORCEMENT SHALL CONFORM TO ASTM A615, GRADE 60 AND SHALL BE FULL HEIGHT OF WALLS UNLESS OTHERWISE NOTED. PROVIDE BAR SPACERS AND POSITIONERS AS REQUIRED TO PROPERLY LOCATE AND STABILIZE REINFORCING DURING GROUTING OPERATIONS. GROUT ALL REINFORCED CELLS SOLID WITH GROUT.
- BUILD AND TEST MASONRY PRISMS DURING CONSTRUCTION TO VERIFY F'M FOR EACH CLASS OF MASONRY CONSTRUCTION. PRISM TESTS SHALL BE IN ACCORDANCE WITH ASTM E447, METHOD B.
- 10. HOLLOW CONCRETE UNITS BELOW GRADE AND SLAB ON GRADE SHALL BE NORMAL WEIGHT AND HAVE ALL CELLS GROUTED SOLID.
- PROVIDE AND INSTALL TEMPORARY BRACING REQUIRED INSURING STABILITY OF ALL WALLS DURING CONSTRUCTION AND UNTIL ERECTION OF ATTACHED STRUCTURAL FRAMING IS COMPLETED.
- 12. PROVIDE GALVANIZED HORIZONTAL JOINT REINFORGEMENT IN ALL WALLS AND PARTITIONS AT 16" O.C. UNLESS OTHERWISE SHOWN OR NOTED. PROVIDE ONE (1) PIECE PREFABRICATED UNITS AT 8"O.C. AT ALL WALL CORNERS AND INTERSECTIONS.
- 13. LAP SPLICES FOR DEFORMED REINFORCING BARS USED IN MASONRY CONSTRUCTION SHALL BE 50 BAR DIAMETERS.
- 14. SUBMIT GROUT MIX DESIGN AND MASONRY UNIT CERTIFICATIONS TO THE ARCHITECT
- GROUT PLACEMENT SHALL NOT START UNTIL THE PLACEMENT OF REINFORCING HAS BEEN APPROVED BY THE INSPECTION AGENCY.
- 16. FILL ALL CELLS IN TOP TWO COURSES BELOW FINISHED FLOOR, CMU LINTELS, BOND BEAMS, AND BEAM BEARINGS AND CELLS WITH REINFORCEMENT FULL HEIGHT SOLID
- 17. ALLOW GROUT IN REINFORCED CMU WALLS TO CURE A MINIMUM OF 48 HOURS BEFORE IMPOSING CONCENTRATED OR OTHER LOADS FROM ABOVE.
- PROVIDE MASONRY ANCHORS SET ON COURSING AND ATTACHED TO ALL BEAMS AT 32" O.C. HORIZONTAL, COLUMNS AT 24" O.C. VERTICAL, PARTITIONS AND WALLS AT 16" O.C AT ALL BEAMS, COLUMNS, PARTITIONS AND WALLS ABUTTING OR EMBEDDED IN MASONRY UNLESS NOTED OTHERWISE ON ARCHITECTURAL AND STRUCTURAL DRAWINGS.
- PROVIDE BOND BEAMS WITH TWO (2) #4 HORIZONTAL REINFORCEMENT CONTINUOUS IN ALL MASONRY WALLS AT EACH FRAMING LEVEL. PROVIDE A MINIMUM OF TWO (2) #4 BARS AT THE ENDS OF ALL WALLS AND ON EACH SIDE OF EACH OPENING.
- 20. ALL PIERS AND PARTITIONS SHALL BE BONDED OR ANCHORED TO ADJACENT MASONRY WALLS. PROVIDE TIES TO ADJACENT FLOOR AND ROOF CONSTRUCTION IN ACCORDANCE WITH DETAILS ON DRAWINGS.
- THE CONTRACTOR SHALL VERIFY ALL OPENINGS BELOW LINTELS INDICATED ARE ADEQUATE TO ACCEPT DOORFRAMES, LOUVERS, ETC. AS SHOWN ON THE ARCHITECTURAL AND MECHANICAL DRAWINGS. NOTIFY THE ARCHITECT AND STRUCTURAL ENGINEER OF ANY DISCREPANCIES PRIOR TO LINTEL INSTALLATION.
- 22. NO OPENINGS SHALL BE PLACED ABOVE ANY LINTEL WITHIN A HEIGHT LESS THAN OR EQUAL TO THE WIDTH OF THE CLEAR OPENING BELOW THE LINTEL, UNLESS SPECIFICALLY SHOWN OR APPROVED BY THE STRUCTURAL ENGINEER.
- 23. ALL MASONRY WORK TO BE EXECUTED IN COLD WEATHER SHALL BE IN CONFORMANCE WITH THE RECOMMENDATIONS FOR COLD WEATHER CONSTRUCTION FOUND IN THE BUILDING CODE REQUIREMENTS FOR MASONRY STRUCTURES (ACI 530-05/ASCE 5-05) AND SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE SPECIFICATIONS FOR MASONRY STRUCTURES (ACI 530.I-05/ASCE 6-05) WITH THE FOLLOWING ADDITIONS: FOR ALL CONDITIONS WHEN TEMPERATURES FALL BELOW 40 DEGREES F. THE TEMPERATURE OF THE NEWLY LAID MASONRY OR NEWLY GROUTED MASONRY SHALL BE MAINTAINED ABOVE 32 DEGREES F FOR A MINIMUM OF 24 HOURS USING THE METHODS DESCRIBED IN ACI 530.I.
- 24. THE TESTING AND INSPECTION AGENCY SHALL MONITOR THE PROPORTIONING, MIXING, AND CONSISTENCY OF MORTAR AND GROUT: THE PLACEMENT OF MORTAR, GROUT, AND MASONRY UNITS; AND THE PLACEMENT OF REINFORCING STEEL FOR COMPLIANCE WITH THE CONTRACT DOCUMENTS.
- 25. THE CONTRACTOR SHALL PREPARE ONE (1) SET OF PRISMS FOR TESTING AT SEVEN (7) DAYS AND ONE (I) SET FOR TESTING AT 28 DAYS. TESTS ARE TO BE CONDUCTED BY THE INSPECTION AND TESTING AGENCY FOR EACH 3,000 SQUARE FEET OF WALL INSTALLED, BUT NOT LESS THAN TWO (2) TESTS.
- 26. ALL WALL SECTIONS AND PIERS LESS THAN TWO SQUARE FEET IN CROSS-SECTIONAL AREA SHALL BE FULLY GROUTED.

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**ALTERATIONS** RIVERSIDE FIRE COMPANY

RIVERSIDE FIRE COMPANY NO. 1

14 W. SCOTT STREET

RIVERSIDE, NJ 08075

PROJECT #

19509 06/24/2020

Architect

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> **Sheet Title** GENERAL STRUCTURAL

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## 7.0 SPECIAL INSPECTIONS, TESTING AND OBSERVATIONS

### <u>GENERAL</u>

- ACTING AS THE SPECIAL INSPECTION COORDINATOR, THE STRUCTURAL ENGINEER OF RECORD (SER) WILL SUBMIT A STATEMENT OF SPECIAL INSPECTIONS (SSI) TO THE BUILDING OFFICIAL AS REQUIRED TO COMPLY WITH CHAPTER 17 (SPECIAL INSPECTIONS) OF THE 2018 INTERNATIONAL BUILDING CODE (IBC).
- INSPECTION AND MATERIAL TESTING WILL BE REQUIRED FOR THE FOLLOWING BUILDING SYSTEMS IN COMPLIANCE WITH THE APPLICABLE REFERENCED CODE SECTION. SUBMIT A STATEMENT OF RESPONSIBILITY FOR WIND OR SEISMIC SITES AND PROJECTS IF INDICATED BELOW.

BUILDING SYSTEM, ELEMENT OR	IBC 2018	INSPECTION
COMPONENT	SECTION	REQUIRED
INSPECTION OF FABRICATORS	1704.2.5	N/A
SOILS	1705.6	YES
VERTICAL MASONRY FOUNDATION	1705.4.2	YES
CONCRETE	1705.3	YES
MASONRY	1705.4	YES
STEEL	1705.2	N/A
WOOD	1705.5	N/A
MIND	1705.11	NO
SEISMIC	1705.12	NO

- SEE ARCHITECTURAL AND MEP DRAWINGS FOR SPECIAL INSPECTION REQUIREMENTS FOR EIFS AND SMOKE CONTROL DEVICES.
- UNLESS OTHERWISE NOTED, SPECIAL INSPECTIONS ARE OWNER FURNISHED AS REQUIRED BY CHAPTER IT OF THE IBC.
- COORDINATE AND PROVIDE ACCESS TO THE WORK FOR REQUIRED SPECIAL INSPECTIONS AND PROVIDE NOTICE OF REQUIRED SPECIAL INSPECTIONS AND STRUCTURAL OBSERVATIONS.
- THE SER IS NOT RESPONSIBLE FOR CONSTRUCTION SITE SAFETY AND IS NOT REQUIRED TO INSPECT THE WORK FOR COMPLIANCE WITH OSHA REGULATIONS. AFTER COMPLETION OF THE WORK.
- 7. SHOP INSPECTIONS OF ANY APPROVED FABRICATORS MAY BE WAIVED BY THE BUILDING OFFICIAL OR SER. IF SHOP INSPECTIONS ARE WAIVED A FABRICATOR'S CERTIFICATE OF COMPLIANCE SHALL BE SUBMITTED TO THE SER.

### SPECIAL INSPECTIONS AND TESTS

- SPECIAL INSPECTIONS AND TESTS WILL COMPLY WITH CHAPTER IT OF THE IBC TOGETHER WITH LOCAL AND STATE AMENDMENTS AND THE PROJECT SPECIFICATIONS.
- 2. SPECIAL INSPECTIONS WILL BE PROVIDED FOR EACH SYSTEM AND/OR MATERIAL. TESTING WILL BE PERFORMED BY AN APPROVED AND ACCREDITED AGENCY AND SUBJECT TO APPROVAL BY THE BUILDING OFFICIAL.
- UNLESS OTHERWISE NOTED THE OWNER WILL SECURE AND PAY FOR THE SERVICES OF THE AGENCY TO PERFORM ALL SPECIAL INSPECTION AND ASSOCIATED TESTS.
- THE SPECIAL INSPECTOR WILL OBSERVE THE INDICATED WORK FOR COMPLIANCE WITH THE APPROVED CONTRACT DOCUMENTS AND SUBMIT RECORDS OF INSPECTION. ALL DISCREPANCIES WILL BE BROUGHT TO THE ATTENTION OF THE CONTRACTOR
- SPECIAL INSPECTION AND ASSOCIATED TESTING REPORTS WILL BE SUBMITTED TO THE ENGINEER, CONTRACTOR, BUILDING OFFICIAL AND OWNER WITHIN ONE WEEK OF INSPECTION OR WITHIN ONE WEEK OF TEST COMPLETION.
- IN ADDITION TO THE SUBMISSION OF ONGOING INSPECTION REPORTS, THE APPROVED INSPECTION AND TESTING AGENCIES SHALL SUBMIT AN AGENT'S FINAL REPORT OF SPECIAL INSPECTIONS TO THE SER. THE SER WILL SUBMIT A FINAL REPORT OF VERIFICATION OF SPECIAL INSPECTIONS AFTER REVIEW AND APPROVAL OF THE AGENT'S FINAL REPORT OF SPECIAL INSPECTIONS AFTER COMPLETION OF THE WORK...
- PERIODIC INSPECTION IS DEFINED AS PART-TIME OR INTERMITTENT OBSERVATION OF WORK REQUIRING SPECIAL INSPECTION BY AN APPROVED SPECIAL INSPECTOR WHO IS PRESENT IN THE AREA WHERE THE WORK IS BEING PERFORMED.
- CONTINUOUS INSPECTION IS DEFINED AS FULL-TIME OBSERVATION OF WORK REQUIRING SPECIAL INSPECTION BY AN APPROVED SPECIAL INSPECTOR WHO IS PRESENT IN THE AREA WHERE THE WORK HAS BEEN OR IS BEING PERFORMED.

## STRUCTURAL OBSERVATIONS

THE PROJECT IS EXEMPT FROM THE REQUIREMENTS OF IBC SECTION 1710 FOR STRUCTURAL OBSERVATIONS.

LATERAL LOAD DESIGN					
2018 INTERNATIONAL BUILDING CODE / ASCE 7-16					
DESCRIPTION	SYMBOL	VALUE			
BASIC WIND SPEED (3 SEC. GUST)	<b>Y</b>	126 mph			
RISK CATEGORY		IV			
WIND EXPOSURE CATEGORY		C			
INTERNAL PRESSURE COEFFICIENT	GCPI	±0.l8			
SEE TABLE FOR C&C COMPONENTS AND CLADDING SERVICE LEVEL PRESSURES					
SEISMIC					
DESCRIPTION	SYMBOL	VALUE			
IMPORTANCE FACTOR	l <sub>E</sub>	1.50			
RISK CATEGORY		IV			
MAPPED SPECTRAL RESPONSE SHORT PERIOD ACCELERATION	Ss	0.1869			
MAPPED SPECTRAL RESPONSE I-SECOND ACCELERATION	Sı	0.0489			
LONG-PERIOD TRANSITION PERIOD	TL	65			
SITE CLASSIFICATION		D			
DESIGN SPECTRAL RESPONSE SHORT PERIOD ACCELERATION	Sps	0.199g			
DESIGN SPECTRAL RESPONSE I-SECOND ACCELERATION	Spi	0.077g			
SEISMIC DESIGN CATEGORY	SDC	C			

FLOOR DESIGN LOADS		
LIVE LOAD		
BASIC LIVE LOAD	100	
SIDEWALKS, VECHICULAR DRIVEWAYS AND YARDS SUBJECT TO TRUCKING	250	

(I) SELF WEIGHT OF STRUCTURAL COMPONENTS (BEAMS, SLABS, COLUMNS) ARE INCLUDED SEPARATELY, U.N.O. (2) REDUCED PER IBC CHAPTER I6. PARTITION LOAD IS NOT REDUCED

ROOF DESIGN LOADS				
DEAD LOAD (I)				
DESCRIPTION	VALUE (PSF)			
ROOFING	3			
ROOF INSULATION	5			
ROOF DECK	3			
JOIST	4			
SUSPENDED MECHANICAL / SPRINKLER	8			
MISCELLANEOUS	2			
TOTAL	25			
LIVE LOAD				
ROOF LIVE LOAD	20			

(I) SELF WEIGHT OF STRUCTURAL COMPONENTS (BEAMS, SLABS, COLUMNS) ARE INCLUDED SEPARATELY, U.N.O.

SNOW DESIGN LOADS				
DESCRIPTION	SYMBOL	VALUE		
GROUND SNOW LOAD	Pg	25 PSF		
SNOW EXPOSURE FACTOR	<b>()</b>	0.9		
SNOW LOAD IMPORTANCE FACTOR	ls	1.2		
THERMAL FACTOR	$C_{t}$	1.0		
SNOW SLOPE FACTOR	Cs	1.0		
ROOF SNOW LOAD (1)	P,	24 PSF		

(I) ACTUAL P. USED FOR DESIGN = 24 PSF. SNOW DRIFT LOADS OR UNBALANCED SNOW LOADS ARE SHOWN ON THE PLANS.

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**ALTERATIONS RIVERSIDE FIRE COMPANY 1** 

RIVERSIDE FIRE COMPANY NO. 1 14 W. SCOTT STREET RIVERSIDE, NJ 08075

> PROJECT# 06/24/2020

> > Architect

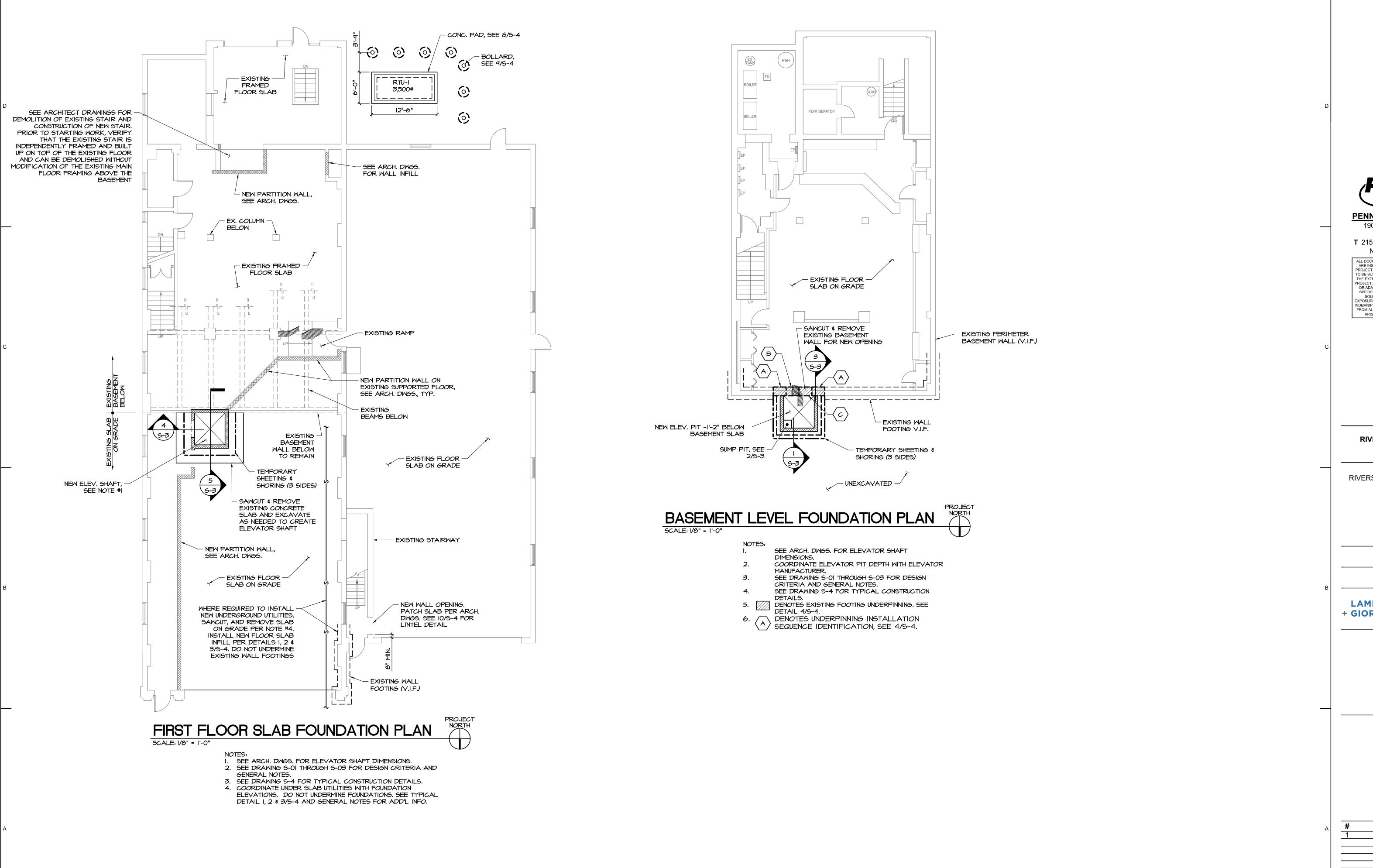
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Issue/Revision Date BID SET 07/17/2020

> Sheet Title GENERAL STRUCTURAL



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ROSS E. STUART, P.I PROFESSIONAL ENGINEER NEW JERSEY LICENSE NO. GE55120



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ALTERATIONS RIVERSIDE FIRE COMPANY 1

Location

RIVERSIDE FIRE COMPANY NO. 1 14 W. SCOTT STREET RIVERSIDE, NJ 08075

**PROJECT #** 19509

**Date** 06/24/2020

p.856.833.0010

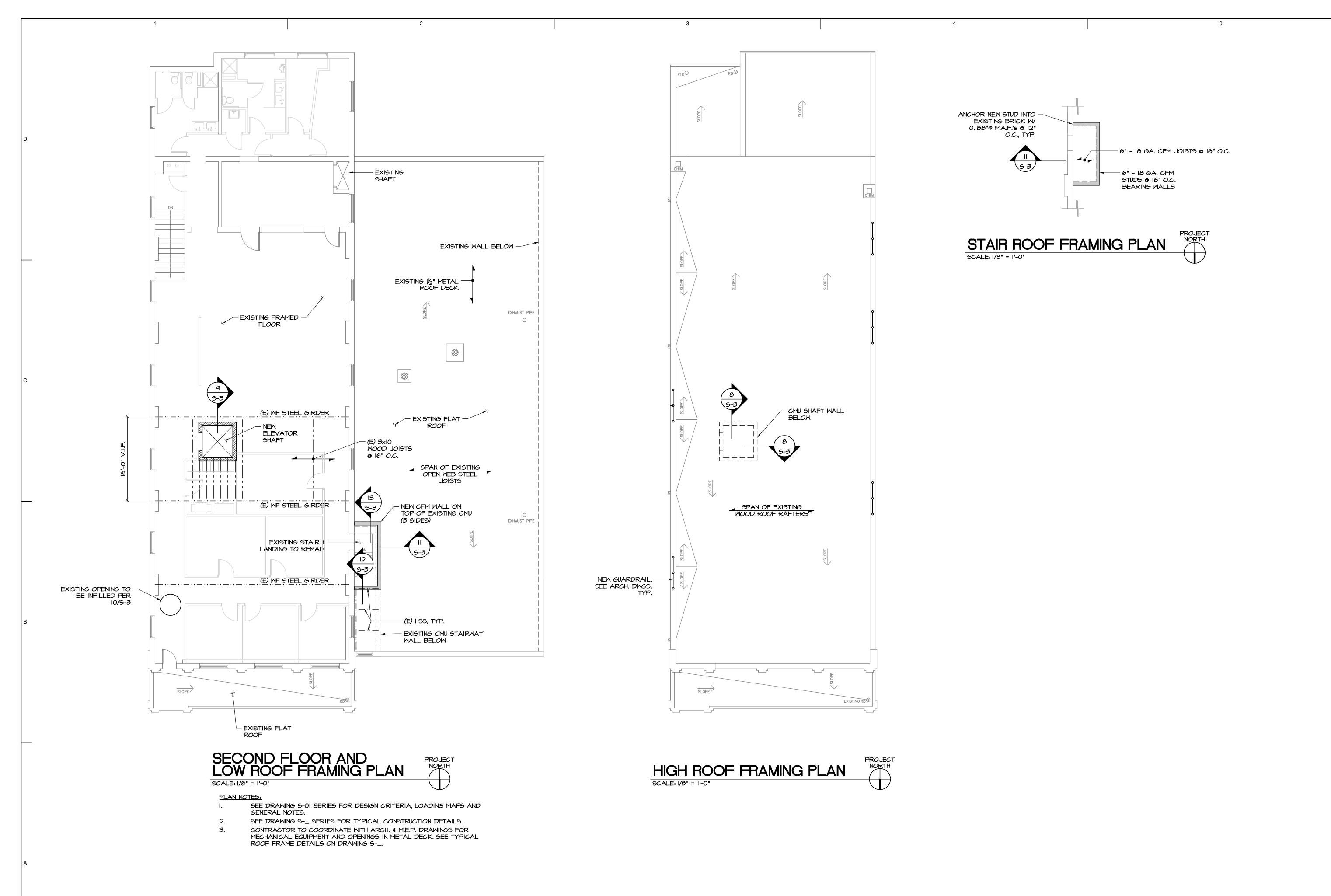
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Sheet Title BASEMENT AND FIRST FLOOR FOUNDATION PLAN



ROFESSIONAL ENGINEER
NEW JERSEY LICENSE NO. GE55120



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ALTERATIONS
RIVERSIDE FIRE COMPANY 1

Locatio

RIVERSIDE, NJ 08075

RIVERSIDE FIRE COMPANY NO. 1 14 W. SCOTT STREET

**PROJECT #** 19509

Date 06/24/2020 Architect

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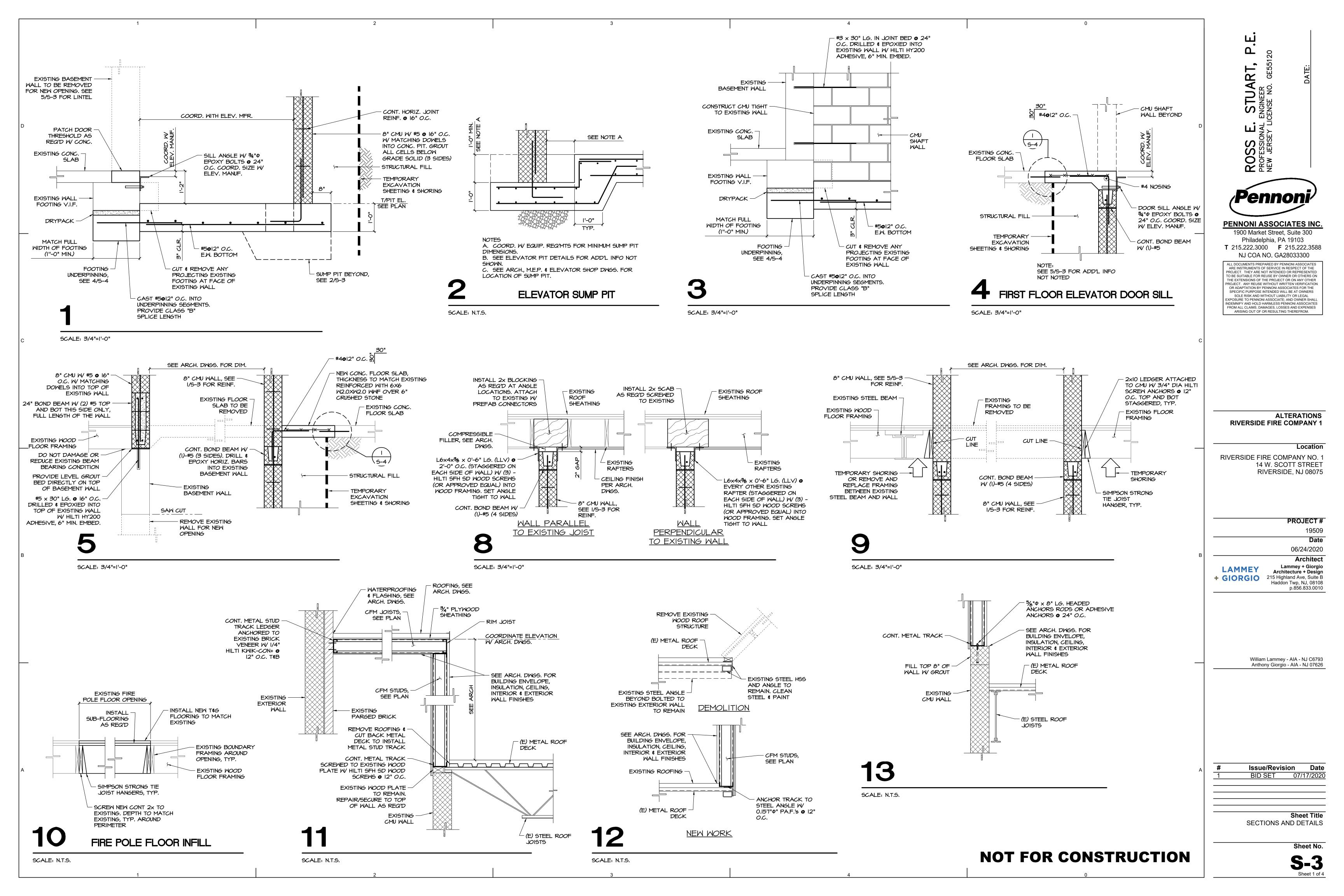
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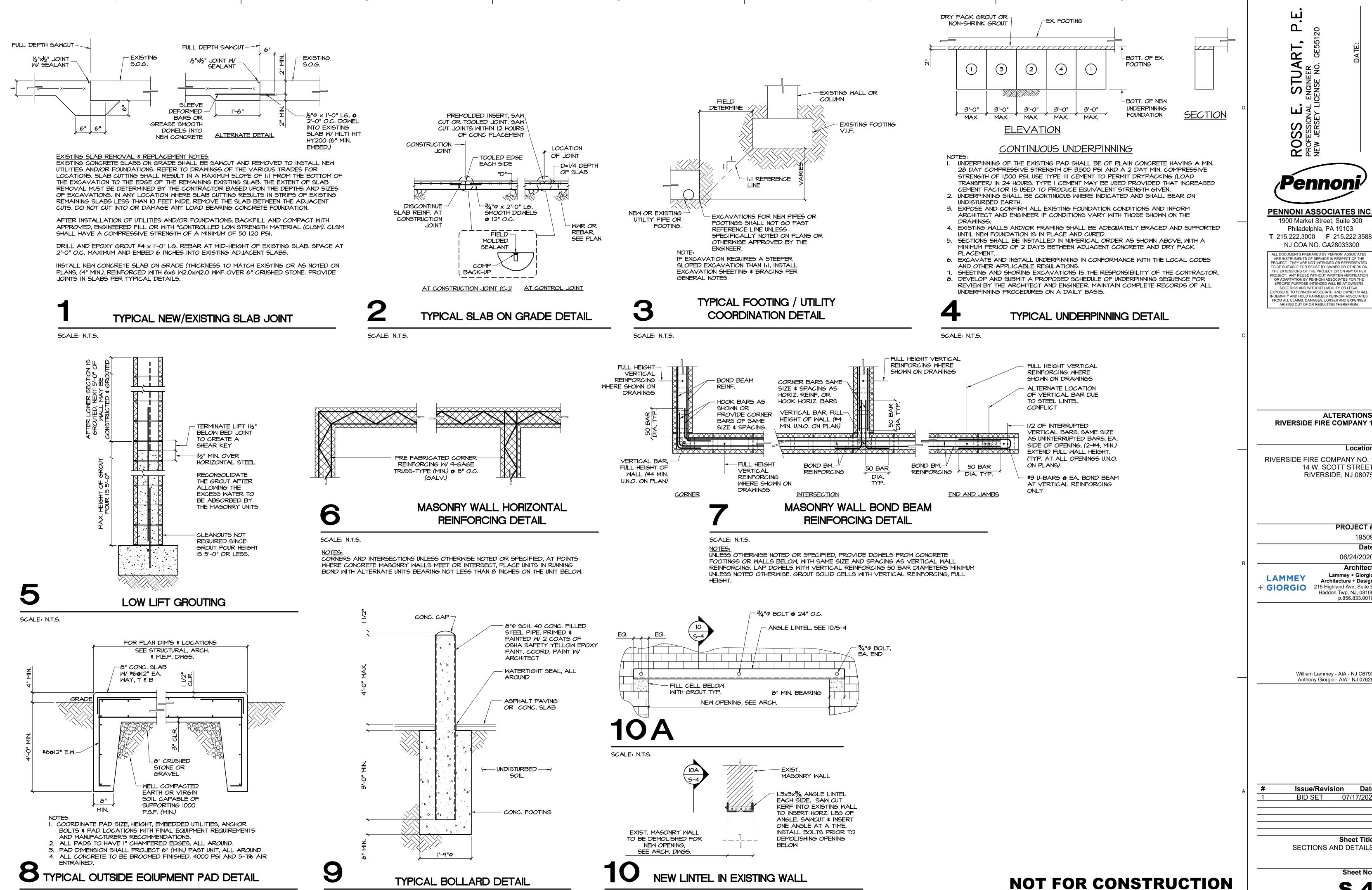
Sheet Title SECOND FLOOR AND ROOF FRAMING PLAN

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Sheet No.

**S-2** 





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**ALTERATIONS** RIVERSIDE FIRE COMPANY

RIVERSIDE FIRE COMPANY NO. 1

14 W. SCOTT STREET

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> **Sheet Title SECTIONS AND DETAILS**

## EXHAUST FAN EFFICIENCY EXHAUST GRILLE

## DOCUMENT COORDINATION

ALL CONTRACT DRAWINGS AND SPECIFICATIONS ISSUED BY PENNONI ASSOCIATES INC. ARE INTENDED TO BE UTILIZED BY ALL CONTRACTORS AS A COMPLETE SET. EACH DISCIPLINE SHALL REVIEW THE ENTIRE SET OF DRAWINGS AND SPECIFICATIONS FOR SCOPE OF WORK RELEVANT TO THEIR TRADE ANY DISCREPANCIES SHALL BE SUBMITTED DURING BIDDING AS A REQUEST FOR ADDITIONAL INFORMATION. CHANGES REQUIRED BY A SUBCONTRACTOR DURING CONSTRUCTION BASED ON A FAILURE TO COORDINATE WITH ALL DRAWINGS AND SPECIFICATIONS SHALL BE CORRECTED BY THE PRIME CONTRACTOR AT NO ADDITIONAL COSTS.

MECHANICAL ABBREVIATIONS DEMOLISH ELEC ELECTRIC EXISTING ELEV ELEVATION REFURBISH EMER EMERGENCY PROVIDED BY MANUFACTURER ENT ENTERING NEW EXHAUST REGISTER ERAD ELECTRIC RADIATION RELOCATE AIR CONDITIONING UNIT ERC EXHAUST ENERGY RECOVERY COIL AIR COOLED CONDENSER ENERGY RECOVERY UNIT ACTUAL CUBIC FEET PER MINUTE ESP EXTERNAL STATIC PRESSURE ACCESS DOOR EXPANSION TANK ELECTRIC UNIT HEATER ENTERING WET BULB TEMPERATURE ABOVE FINISHED FLOOR EWH ELECTRIC WATER HEATER AIR HANDLING UNIT EWT ENTERING WATER TEMPERATURE ANALOG INPUT EXH EXHAUS ACOUSTICAL LINING EXIST EXISTING EXT EXTERNAL AIR FLOW MEASURING STATION FILTER ANALOG OUTPUT F&T FLOAT AND THERMOSTATIC TRAP ACCESS PANEL FACE AREA OR FROM ABOVE AIR PRESSURE DROP FAS FIRE ALARM SYSTEM ARCHITECTURAL FROM BELOW AIR SEPARATOR FORWARD CURVED APPLICATION SPECIFIC CONTROLLER FCU FAN COIL UNIT AUTOMATIC TEMPERATURE CONTROL FD FIRE DAMPER OR FLOOR DRAIN FIN FINAL AVERAGE WATER TEMPERATURE FLA FULL LOAD AMPS BOILER FLEX FLEXIBLE BUILDING AUTOMATION SYSTEM FLR FLOOR BACKDRAFT DAMPER FLTR FILTER BLOWDOWN SEPARATOR FM FLOW METERING DEVICE BACK FLOW PREVENTOR OR BOILER FEED PUMP FO FUEL OIL FOR FLAT ON BOTTOM BOILER FEED UNIT FOF FUEL OIL FILL BRAKE HORSEPOWER OR BOILER HORSEPOWER FOO FUEL OIL OVERFLOW BACKWARD INCLINE OR BINARY INPUT FOP FUEL OIL PUMP BUILDING FOS FUEL OIL SUPPLY BINARY OUTPUT FOT FLAT ON TOP BOTTOM OF DUCT OR BASIS OF DESIGN FPB FAN POWERED BOX BOTTOM OF PIPE FEET PER MINUTE BOTTOM FEET PER SECOND BAROMETRIC RELIEF DAMPER FLASH TANK OR FOOT OR FEET BLOWDOWN TANK FTR FINNED TUBE RADIATION BRITISH THERMAL UNIT FUT FUTURE BTU PER HOUR GPH GALLONS PER HOUR CONVECTOR GPM GALLONS PER MINUTI CAPACITY GR GRILLE CONSTANT AIR VOLUME GRAVITY ROOF VENT COOLING COIL GRAVITY VFN CEILING DIFFUSER **HUMIDIFIER** CUBIC FEET PER HOUR HEAT ACTUATED SHUTOFF VALVE CFM CUBIC FEET PER MINUTE HEATING COIL CHEMICAL FEED TANK MERCURY HUB OUTLET CEILING HORSEPOWER CMPR COMPRESSOR HEATING CLEAN OUT **HEATING & VENTILATING UNIT** COL COLUMN HOT WATER GENERATOR CONC CONCRETE OR CONCENTRATION HEAT EXCHANGER COND CONDENSATE (STEAM OR COOLING COIL) INSIDE DIAMETER CONN CONNECTION **INCHES** CONTINUATION INTIAL CONDENSATE PUMP KILOWATT CRAC COMPUTER ROOM AIR CONDITIONING UNIT LEAVING AIR TEMPERATURE COOLING TOWER POUND CONDENSING UNIT LINEAR DIFFUSER CABINET UNIT HEATER LEAVING DRY BULB TEMPERATURE CONTROL VALVE STATION LINEAR FOOT DROP LINER GRILLE DEAERATOR PROPANE DRY BULB LRA LOCKED ROTOR AMPS DRY COOLER LVG LEAVING DIRECT DIGITAL CONTROL LWCO LOW WATER CUTOFF DEFLECTION LWT LEAVING WATER TEMPERATURE DETAIL DIAMETER MODULAR BUILDING CONTROLLER DISCONNECT 1000 BTU PER HOUF DISCHARGE MOTOR CONTROL CENTER DIGITAL INPUT MECH MECHANICAL MECHANICAL EQUIPMENT ROOM DIGITAL OUTPUT MFR MANUFACTURER DISCONNECT SWITCH MINIMUM OR MINUTE DRAWING MOCP MAX. OVER-CURRENT PROTECTION EXHAUST AIR OR EACH MOD MOTOR OPERATED DAMPER ENTERING AIR TEMPERATURE MODU MODULATING ELECTRIC CEILING HEATER MODULATING MIXING BOX ENTERING DRY BULB TEMPERATURE

## NOT IN CONTRACT NORMALLY OPEN OR NUMBER EXPANSION JOINT NOT TO SCALE OUTSIDE AIR

NEW

NORMALLY CLOSED

NATURAL GAS

1. IT IS THE INTENT THAT ALL EXISTING PIPING, DUCTWORK, FIXTURES, AND OTHER EQUIPMENT AND MATERIALS THAT INTERFERE WITH THE ALTERED EXISTING BUILDING ARRANGEMENTS AND NEW SYSTEMS BE REMOVED, RELOCATED, REROUTED, OR ABANDONED. THE DRAWINGS GENERALLY INDICATE MAJOR ITEMS OF EXISTING MATERIALS AND EQUIPMENT THAT ARE TO BE REMOVED, RELOCATED, REROUTED, OR ABANDONED BY EACH TRADE. IT IS NOT POSSIBLE TO INDICATE ALL RELATED ACCESSORIES, SPECIALTIES, AND OTHER MINOR ITEMS. HOWEVER, THEIR REMOVAL, RELOCATION, REROUTING, OR ABANDONMENT SHALL ALSO BE INCLUDED IN THIS CONTRACT AND SHALL BE DONE AT NO ADDITIONAL COST TO THE OWNER.

THE CONTRACTOR MUST SURVEY AND VERIFY LOCATIONS AND PHYSICAL SIZES OF ALL EXISTING ITEMS AND DETERMINE WHETHER RELOCATION OR REROUTING WILL BE REQUIRED. IF RELOCATION OR REROUTING IS REQUIRED, INCLUDING ALL THAT OF ALL RELATED ACCESSORIES, SPECIALTIES, AND OTHER MINOR ITEMS, THE CONTRACTOR SHALL INCLUDE ALL NECESSARY WORK AS PART OF HIS CONTRACT AND IT SHALL BE DONE AT NO ADDITIONAL COST TO THE OWNER.

3. SHOULD A CONTRACTOR REQUIRE REMOVAL, RELOCATION, OR REROUTING OF ANOTHER TRADE'S WORK THAT IS NOT INDICATED ON DRAWINGS, THE CONTRACTOR REQUIRING SUCH WORK SHALL BE RESPONSIBLE FOR THAT WORK, AND PAY ALL REQUIRED COSTS.

4. EXISTING CONCEALED AND EXPOSED EQUIPMENT AND MATERIALS THAT WILL BECOME ABANDONED DUE TO NEW WORK, SHALL BE REMOVED BACK TO RISER OR MAIN AND PROPERLY PLUGGED OR CAPPED BEHIND FINISHED

EXISTING CONCEALED EQUIPMENT AND MATERIALS THAT ARE TO REMAIN, BUT BECOME EXPOSED DUE TO NEW WORK, SHALL BE RELOCATED AND RECONNECTED AS DIRECTED BY ARCHITECT.

6. UNLESS INDICATED OTHERWISE, ABANDONED EXISTING PIPING AND SIMILAR 28. THE TERM "PROVIDE" MEANS "FURNISH AND INSTALL" MATERIALS CONCEALED WITHIN FINAL CONSTRUCTION, SUCH AS WITHIN WALLS AND UNDER FLOORS ON GRADE, NEED NOT BE REMOVED, BUT NEED ONLY TO BE PROPERLY SHUTOFF AND PLUGGED BEHIND FINISHED SURFACES, PROVIDED THEY DO NOT INTERFERE WITH THE NEW SYSTEMS, EQUIPMENT. AND BUILDING ARRANGEMENTS.

7. ALL WORK INVOLVING ALTERATIONS TO EXISTING SYSTEMS, EQUIPMENT, AND MATERIALS SHALL BE REVIEWED WITH THE ARCHITECT AND OWNER BEFORE BEGINNING WORK.

8. ALL REMOVED MATERIALS SHALL BE THE PROPERTY OF THE CONTRACTOR FOR REMOVAL FROM THE SITE AND PROPER DISPOSAL.

9. PROVIDE ALL CUTTING AND PATCHING NECESSARY FOR PERFORMANCE OF THIS WORK AS REQUIRED TO MATCH EXISTING CONSTRUCTION AND FINISHES.

GENERAL NOTES

OUTSIDE AIR ENTHALPY

OUTSIDE AIR HUMIDITY

OUTSIDE AIR INTAKE

OPEN ENDED DUCT

ON CENTER

OPENING

PUMP

OPER OPERATING

OBD

OED

OEM

OPNG

PFHX

PLN

POS

PRV

RCP

REQ

RET

RHW

RPM

SCU

SEC

SEER

SENS

SO

SPD

SRC

SSF

STBY

STM

SUP

SUT

TAD

TOD

TOP

TOT

TSP

TTS

TYP

VEL

VTR

SD

PRESS

OUTSIDE AIR TEMPERATURE

ORIGINAL EQUIPMENT MFR

PARALLEL BLADE DAMPER

PRESSURE REDUCING VALVE

POUNDS PER SQUARE INCH

POUNDS PER SQUARE

POUNDS PER SQUARE

RISE OR REFRIGERANT

RETURN OR RELIEF AIR

RETURN AIR ENTHALPY

RETURN AIR HUMIDITY

RETURN AIR TEMPERATURE

RELIEF HOOD, RELATIVE HUMIDITY

RADIANT CEILING PANEL

INCH-ABSOLUTE

INCH-GAUGE

QUANTITY

REQUIRED

RETURN

REVISION

RETURN FAN

REHEAT COIL

ROOM

ROTARY HEAT WHEEL

RECIRCULATION PUMP

SELF CONTAINED UNIT

EFFICIENCY RATING

SMOKE DAMPER OR DETECTOR

REVOLUTIONS PER MINUTE

RUN LOAD AMPS

RETURN REGISTER

ROOFTOP UNIT

RELIEF VALVE

SUPPLY AIR

SECOND

SENSIBLE

SUPPLY FAN

SUPPLY GRILLE

SCREENED OPENING

SUPPLY REGISTER

SAFETY RELIEF VALVE

SIDE-STREAM FILTER

SOUND ATTENUATOR

STANDBY

STEAM

SUPPLY

SURGE TANK

TRANSFER AIR

TRANSFER AIR DUCT

TRANSFER GRILLE

TRANSFER PUMP

TOTAL STATIC PRESSURE

UNLESS NOTED OTHERWISE

VARIABLE FREQUENCY DRIVE

VARIABLE VOLUME TEMPERATURE

WATER COOLED CONDENSING UNIT

WATER SOURCE HEAT PUMP

WIRE MESH SCREEN

WATER PRESSURE DROP

VARIABLE AIR VOLUME

VARIABLE INLET VALVES

VENT THROUGH ROOF

**VOLUME DAMPER** 

TIGHT TO STRUCTURE

TOP OF DUCT

TOP OF PIPE

TOTAL

TYPICAL

VELOCITY

VIBRATION

WITH

WITHOUT

WET BULB

WATER GAUGE

UNIT HEATER

TERMINAL EQUIPMENT CONTROLLER

STATIC PRESSURE IN WG

STEAM PRESSURE DROP

SUPPLY ENERGY RECOVERY COIL

RETURN GRILLE

PUMPED CONDENSATE

PLATE & FRAME HX

PRESSURE DROP

PREHEAT COIL

PLENUM

POSTION

PRESSURE

OPPOSED BLADE DAMPER

1. THE SUBMISSION OF A BID BY THE CONTRACTOR IS NOTIFICATION THAT THE CONTRACTOR HAS TOTALLY FAMILIARIZED HIMSELF WITH THE CONTRACT DOCUMENTS AND EXISTING SITE CONDITIONS AND HAS AGREED TO PROVIDE THE NECESSARY LABOR AND MATERIAL FOR THE COMPLETE INSTALLATION OF EACH SYSTEM IN A NEAT AND WORKMANLIKE MANNER IN ACCORDANCE WITH THE BEST PRACTICES OF THE INDUSTRY AND IN COMPLIANCE WITH ALL AUTHORITIES HAVING JURISDICTION.

THESE DRAWINGS ARE PRESENTED TO THE CONTRACTOR WITH THE UNDERSTANDING THAT THE CONTRACTOR IS AN EXPERT AND COMPETENT IN THE PREPARATION OF CONTRACT BID PRICES ON THE BASIS OF INFORMATION SUCH AS IS CONTAINED IN THESE DOCUMENTS. IT IS THE INTENT OF THE DRAWINGS AND SPECIFICATIONS TO CALL FOR FINISHED WORK, TESTED AND READY FOR OPERATION AND IN COMPLETE CONFORMANCE WITH ALL APPLICABLE CODES, RULES, AND REGULATIONS. MINOR ITEMS NOT USUALLY SHOWN OR SPECIFIED, BUT MANIFESTLY NECESSARY FOR THE PROPER INSTALLATION AND OPERATION OF THE VARIOUS SYSTEMS, SHALL BE INCLUDED IN THE WORK AND IN THE PROPOSAL THE SAME AS IF SPECIFIED OR SHOWN ON THE DRAWINGS. IF ANY DEPARTURES FROM THE DRAWINGS ARE DEEMED NECESSARY. DETAILS OF SUCH DEPARTURES AND THE REASONS THEREFORE SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL. CHANGES IN DUCT DIMENSIONS, ROUTING AND/OR LOCATIONS AS WELL AS PIPE ROUTING AND LOCATIONS SHALL BE MADE WHERE NECESSARY TO CONFORM TO THE SPACE CONDITIONS WITHOUT ADDITIONAL COST TO THE OWNER. NO OTHER DEPARTURES SHALL BE MADE WITHOUT PRIOR APPROVAL OF THE ENGINEER AND OWNER.

3. CONTRACTOR SHALL VISIT THE SITE AND VERIFY ALL DIMENSIONS IN THE FIELD, AND SHALL ADVISE THE ARCHITECT/ENGINEER AND THE OWNER OF ANY DISCREPANCIES BEFORE PERFORMING THE WORK.

4. THE DRAWINGS INDICATE ARRANGEMENTS AND APPROXIMATE SIZES AND RELATIVE LOCATIONS OF PRINCIPAL APPARATUS. EQUIPMENT, DEVICES, AND SERVICES TO BE PROVIDED. DRAWINGS ARE DIAGRAMMATIC AND ARE A GRAPHIC REPRESENTATION OF CONTRACT REQUIREMENTS TO THE BEST AVAILABLE STANDARDS AT THE SCALE INDICATED.

5. LAYOUT OF EQUIPMENT INDICATED ON THE DRAWINGS SHALL BE CHECKED AND COMPARED AGAINST ALL DRAWINGS AND SPECIFICATIONS OF ALL TRADES AND EXACT LOCATIONS DETERMINED USING APPROVED SHOP DRAWINGS OF SUCH EQUIPMENT. WHERE PHYSICAL INTERFERENCES OCCUR, CONSULT WITH ENGINEER AND PREPARE DATED, DIMENSIONED DRAWINGS COORDINATED WITH ALL OTHER TRADES WORKING IN THIS AREA AND CORRECTING SUCH INTERFERENCE.

6. CONTRACTOR SHALL SCHEDULE HIS WORK IN ACCORDANCE WITH THE CONSTRUCTION SCHEDULE SO THAT ALL OF HIS WORK CAN BE INSTALLED WITHOUT DELAYING THE PROJECT. ALL WORK RELATED TO SHUTDOWN OF EXISTING SERVICES SHALL BE PERFORMED AT THE HOURS DESIGNATED BY THE OWNER WITH ALL ASSOCIATED COSTS BORNE BY THE CONTRACTOR AT NO COST TO THE OWNER. PROVIDE ANY TEMPORARY FACILITIES REQUIRED TO PERMIT THE OWNER'S USE OF EXISTING FACILITIES AND SYSTEMS TO REMAIN UNDISTURBED. COORDINATE ALL WORK, INCLUDING ALL SHUTDOWNS THAT AFFECT SYSTEMS AND/OR PORTIONS OF THE BUILDING THAT MUST REMAIN IN OPERATION, WITH THE OWNER AND ALL OTHER CONTRACTORS.

7. CONTRACTOR SHALL SECURE AND PAY ALL FEES, LICENSES, INSPECTIONS, AND PERMITS PERTAINING TO THE CONTRACT. SUBMIT TO OWNER DUPLICATE CERTIFICATES OF INSPECTION FROM APPROVED INSPECTION AGENCY.

8. ALL EQUIPMENT SHALL BE INSTALLED IN STRICT COMPLIANCE WITH THE MANUFACTURER'S WRITTEN INSTRUCTIONS.

9. CONTRACTOR SHALL BE RESPONSIBLE FOR WORKMEN'S IDENTIFICATION AND BADGING, SAFETY AND FIRE PROTECTION, BARRICADES, WARNING SIGNS, TRASH REMOVAL, CUTTING AND PATCHING.

10. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL RIGGING, HANDLING, AND PROTECTION OF MATERIALS. ALL EQUIPMENT AND MATERIALS SHALL BE NEW AND WITHOUT BLEMISH OR DEFECT. ALL EQUIPMENT INSTALLED SHALL BEAR THE LABEL OF AN APPROVED AGENCY.

11. CONTRACTOR SHALL PROVIDE LABOR TO RECEIVE, UNLOAD, STORE, PROTECT, AND TRANSFER TO POINT OF INSTALLATION FOR ALL FURNISHED

12. WHERE CONDUIT, CABLES, DUCTWORK, OR PIPING PASSES THROUGH FIRE RATED FLOORS OR WALLS, THE PENETRATION SHALL BE COMPLETELY SEALED WITH A FIRE STOP MATERIAL THAT IS UL LISTED AND ACCEPTED BY THE BUILDING DEPARTMENT AND FIRE DEPARTMENT AS BEING SUITABLE FOR THIS SERVICE. THIS MATERIAL SHALL BE INSTALLED IN ACCORDANCE WITH THE REQUIREMENTS OF THE MANUFACTURER TO MAINTAIN THE UL LISTED FIRE RATING OF THE PENETRATED WALL OR FLOOR.

13. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL SLAB OPENINGS, WALL OPENINGS, BEAM PENETRATIONS, AND CORING AS IT RELATES TO HIS WORK. CONTRACTOR SHALL SUBMIT SIZE AND LOCATION FOR REVIEW AND APPROVAL.

14. ALL EXTERIOR WALL OPENINGS SHALL BE SLEEVED, PROPERLY CAULKED, AND SEALED WITH A HIGH QUALITY SEALANT TO PREVENT INFILTRATION OF MOISTURE AND OUTSIDE AIR.

15. CONTRACTOR SHALL SUBMIT A SCHEDULE OF SUBMITTALS PRIOR TO SUBMITTING ANY SHOP DRAWINGS, ETC. FOR THIS PROJECT, INCLUDING THE ANTICIPATED DATE OF EACH SUBMISSION UNLESS AN ELECTRONIC SUBMITTAL PROCESS HAS BEEN AGREED UPON. CONTRACTORS SHALL SUBMIT FOUR (4) SETS OF COMPLETE SHOP DRAWINGS AND CATALOG CUTS. WIRING DIAGRAMS AND ASSOCIATED DATA TO THE ENGINEER FOR APPROVAL PRIOR TO PURCHASING EQUIPMENT OR STARTING ANY WORK. CONTRACTOR SHALL SUBMIT FOUR (4) PRINTS OF ALL PIPING AND DUCTWORK FIELD INSTALLATION DRAWINGS FOR EACH SYSTEM TO BE INSTALLED, ENGINEER SHALL RETAIN TWO (2) COPIES FOR RECORD AND RETURN TWO (2) COPIES TO CONTRACTOR VIA CONTRACTUAL REQUIREMENTS. ANY WORK INSTALLED OR EQUIPMENT PURCHASED PRIOR TO RECEIPT OF ENGINEER APPROVED SHOP DRAWINGS THAT REQUIRES CHANGES SHALL BE REPLACED AT CONTRACTOR'S EXPENSE.

16. SUBMIT CATALOG INFORMATION. FACTORY ASSEMBLY DRAWINGS AND FIELD INSTALLATION DRAWINGS AS REQUIRED FOR A COMPLETE EXPLANATION AND DESCRIPTION OF ALL ITEMS TO BE PROVIDED. THE CONTRACTOR SHALL REVIEW AND APPROVE ALL SHOP DRAWINGS. NO SUBMISSION WILL BE ACCEPTED WITHOUT THE SIGNED APPROVAL OF THE CONTRACTOR. THE CONTRACTOR SHALL CHECK AND VERIFY ALL FIELD MEASUREMENTS.

17. UPON COMPLETION OF CONSTRUCTION, CONTRACTOR SHALL SUPPLY THE ENGINEER WITH ONE (1) COMPLETE SET OF CAD AS-BUILT DRAWINGS IN THE LATEST VERSION OF AUTOCAD AT CONTRACTOR'S EXPENSE AND THREE (3) COMPLETE BOUND COPIES OF OPERATION AND MAINTENANCE MANUALS. THESE SHALL BE PROVIDED TO THE OWNER AT CONTRACTOR'S EXPENSE. CONTRACTOR SHALL INSTRUCT THE OWNER'S PERSONNEL WITH REGARD TO THE PROPER OPERATION OF ALL SYSTEMS TO THE SATISFACTION OF THE OWNER.

18. UNLESS MORE STRINGENT REQUIREMENTS ARE SPECIFIED, ALL WORK FURNISHED UNDER THE CONTRACT SHALL BE GUARANTEED AGAINST ANY AND ALL DEFECTS IN WORKMANSHIP AND/OR MATERIALS FOR A PERIOD OF NOT LESS THAN ONE (1) YEAR FROM THE DATE OF FINAL ACCEPTANCE OF THE INSTALLATION. ANY DEFECTS OF WORKMANSHIP DEVELOPING DURING THIS PERIOD SHALL BE REMEDIED AND ANY DEFECTIVE MATERIAL REPLACED WITHOUT ADDITIONAL COST TO THE OWNER.

19. CONTRACTOR SHALL PREPARE FULLY DIMENSIONED FIELD INSTALLATION DRAWINGS. THESE DRAWINGS SHALL BE FORWARDED TO ALL CONTRACTORS. EACH CONTRACTOR SHALL SUBSEQUENTLY IN SUCCESSION DELINEATE HIS RESPECTIVE WORK ON THESE COORDINATION DRAWINGS. WHEN ALL WORK HAS BEEN PROPERLY SHOWN ON THE COORDINATION DRAWINGS, AND ALL CONTRACTORS AGREE THAT THEIR RESPECTIVE WORK CAN BE INSTALLED AND WILL PROPERLY FIT TOGETHER, THEY SHALL SO ACKNOWLEDGE BY ENDORSING THE DRAWING(S). ANY WORK DONE PRIOR TO COMPLETION OF ABOVE COORDINATION PROCESS FOUND IN CONFLICT SHALL BE REMOVED AND REPLACED AT THE RESPECTIVE CONTRACTOR'S EXPENSE.

20. INSTALLED SYSTEMS SHALL OPERATE UNDER ALL CONDITIONS OF LOAD WITHOUT SOUND OR VIBRATION THAT IS OBJECTABLE TO THE ENGINEER, OR THE OWNER. OBJECTABLE SOUND OR VIBRATION CONDITIONS DUE TO WORKMANSHIP SHALL BE CORRECTED IN APPROVED MANNER BY THE CONTRACTOR AT HIS EXPENSE.

21. CONTRACTOR SHALL SIMILARLY NOTIFY ENGINEER OF COMPLETION OF ALL WORK, INDICATING THE CONTRACTOR IS READY FOR THE ENGINEER TO PERFORM THE FINAL PUNCHLIST INSPECTION.

22. UPON COMPLETION OF ALL UNFINISHED OR FAULTY WORK NOTED IN ENGINEER FINAL PUNCH LIST, THE CONTRACTOR SHALL SUBMIT TO THE ENGINEER IN WRITING A LETTER OF COMPLETION CERTIFYING THAT ALL PUNCH LIST ITEMS HAVE BEEN COMPLETED AND ALL AS-BUILTS, MANUALS, ETC. HAVE BEEN SUBMITTED.

23. SHOULD A CONTRACTOR REQUIRE REMOVAL. RELOCATION, OR REPOUTING OF ANOTHER TRADE'S WORK THAT IS NOT INDICATED ON DRAWINGS. THE CONTRACTOR REQUIRING SUCH WORK SHALL BE RESPONSIBLE FOR THAT WORK, AND PAY ALL REQUIRED COSTS.

24. ALL WORK INVOLVING ALTERATIONS TO EXISTING SYSTEMS, EQUIPMENT, AND MATERIALS SHALL BE REVIEWED WITH THE ENGINEER AND THE OWNER BEFORE BEGINNING WORK.

25. MOUNT THERMOSTATS, HUMIDSTATS AND SWITCHES AT 4'-0" MAX ABOVE FINISHED FLOOR (2'-10" MAX ABOVE FINISHED FLOOR IN SIDE REACH ACCESSIBLE LOCATIONS). COORDINATE EXACT LOCATIONS W/ARCHITECT. UNLESS OTHERWISE SPECIFIED, CONTRACTOR SHALL PROVIDE CONTROL WIRING FROM THERMOSTAT, HUMIDSTAT OR SWITCH TO THE CORRESPONDING HVAC EQUIPMENT AND/OR CONTROL PANEL. ALL LOW VOLTAGE CONTROL WIRING SHALL BE INSTALLED IN A MANNER TO PREVENT PHYSICAL DAMAGE. CONTRACTOR SHALL PATCH WALL TO MATCH EXISTING FOR ALL RELOCATED THERMOSTATS.

26. UNLESS OTHERWISE SPECIFIED, CONTRACTOR SHALL PROVIDE ALL AUTOMATIC TEMPERATURE CONTROLS (ATC) INCLUDING WIRING, DDC SENSORS AND ALL MISCELLANEOUS APPURTENANCES TO MEET THE INTENT OF THESE DOCUMENTS.

27. UNLESS OTHERWISE INDICATED, THE RESPONSIBILITIES OF THE MECHANICAL AND ELECTRICAL CONTRACTORS SHALL BE AS FOLLOWS: MECHANICAL CONTRACTOR SHALL FURNISH COMBINATION MOTOR STARTERS / DISCONNECTS AND/OR DISCONNECT SWITCHES FOR ALL MECHANICAL EQUIPMENT FOR INSTALLATION BY ELECTRICAL CONTRACTOR. ALL CONTROL WIRING FOR ALL MECHANICAL EQUIPMENT SHALL BE FURNISHED BY THE MECHANICAL CONTRACTOR. ALL DUCT MOUNTED SMOKE DETECTORS SHALL BE LISTED, FURNISHED AND WIRED BY THE ELECTRICAL CONTRACTOR AND INSTALLED BY THE MECHANICAL CONTRACTOR. MECHANICAL CONTRACTOR SHALL ASSIST THE ELECTRICAL CONTRACTOR IN TESTING THE SMOKE DETECTION SYSTEM.

29. THE MECHANICAL EQUIPMENT SHOWN ON PLANS AND THE CORRESPONDING MANUFACTURER LISTED IN THE DRAWING SCHEDULES IS THE BASIS OF DESIGN FOR THIS PROJECT. IF THE CONTRACTOR CHOOSES TO SUBSTITUTE THE BASIS OF DESIGN WITH AN APPROVED ALTERNATE MANUFACTURER AS LISTED IN THE CONTRACT SPECIFICATIONS, THAT CONTRACTOR SHALL BE RESPONSIBLE FOR DESIGNING, VERIFYING AND COORDINATING ALL MODIFICATIONS TO ALL MECHANICAL. ELECTRICAL. PLUMBING AND FIRE PROTECTION SYSTEMS AS REQUIRED TO ACCOMMODATE PROPER INSTALLATION OF THE SUBSTITUTED EQUIPMENT AT NO ADDITIONAL COST TO OWNER, ARCHITECT OR ENGINEER.

CONTRACTOR SHALL BE RESPONSIBLE FOR DRAINING AND FILLING OF ANY PIPING SYSTEM AFFECTED BY THEIR SCOPE OF WORK. CONTRACTOR IS RESPONSIBLE FOR SAFE DISPOSAL OF ALL DRAINED LIQUID AS PERMITTED BY AUTHORITY HAVING JURISDICTION, INCLUDING THE REQUIREMENT TO HIRE A WASTE DISPOSAL COMPANY FOR GLYCOL, BRINE AND/OR OTHER CHEMICALLY TREATED SYSTEMS THAT IS NOT PERMITTED TO BE DRAINED TO THE BUILDING'S SEWER/SANITARY OR TO GRADE. CONTRACTOR SHALL RECOVER OR DISPOSE OF ALL REFRIGERANT IN ACCORDANCE WITH GOVERNMENT REGULATIONS. CONTRACTOR SHALL CLEAN AND REFILL SYSTEMS IN ACCORDANCE WITH SPECIFICATIONS, AND PROVIDE EQUIVALENT LEVELS OF GLYCOL, ANTIFREEZE, REFRIGERANT, OR BRINE AS REQUIRED TO MATCH EXISTING SYSTEM PERFORMANCE.

Architect

ndsc

Pla.

GLS

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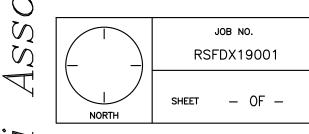
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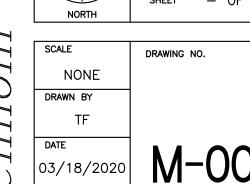
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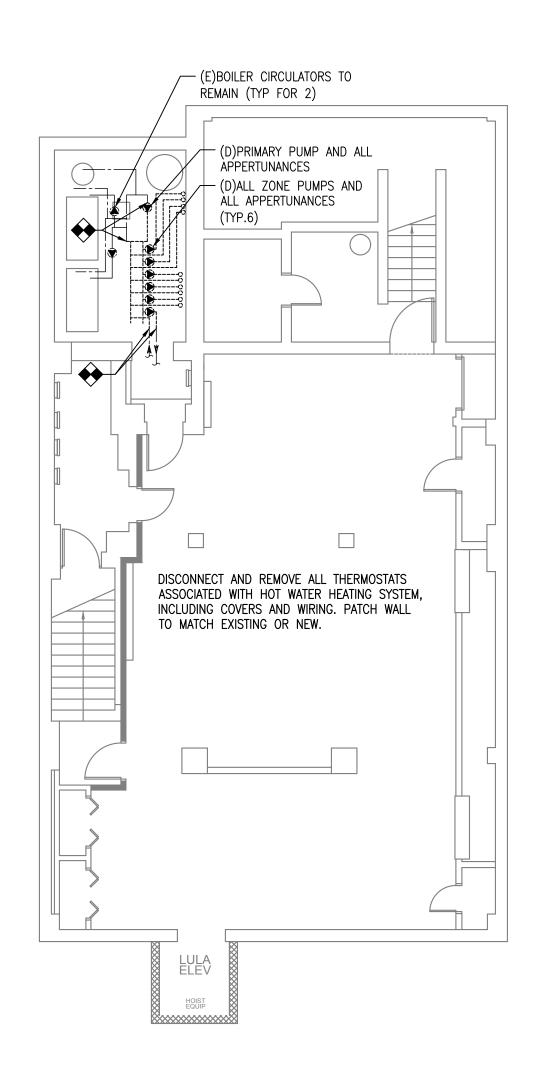
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INSTRUMENTS OF SERVICE IN RESPECT OF THE PROJECT THEY ARE NOT INTENDED OR REPRESENTED TO BE SUITABLE OR REUSE BY OWNER OR OTHERS ON EXTENSIONS ( THE PROJECT OR ON ANY OTHER PROJECT, ANY REUSE ASSOCIATES FOR THE SPECIFIC PURPOSE INTENDED WILL B OWNERS SOLE RISK AND WITHOUT LIABILITY OR LEGAL EXPOSURE TO PENNONI ASSOCIATES; AND OWNER SHAL INDEMNIFY AND HOLD HARMLESS PENNONI ASSOCIATE FROM ALL CLAIMS, DAMAGES, LOSSES AND EXPENSES ARISING OUT OF OR RESULTING THEREFROM



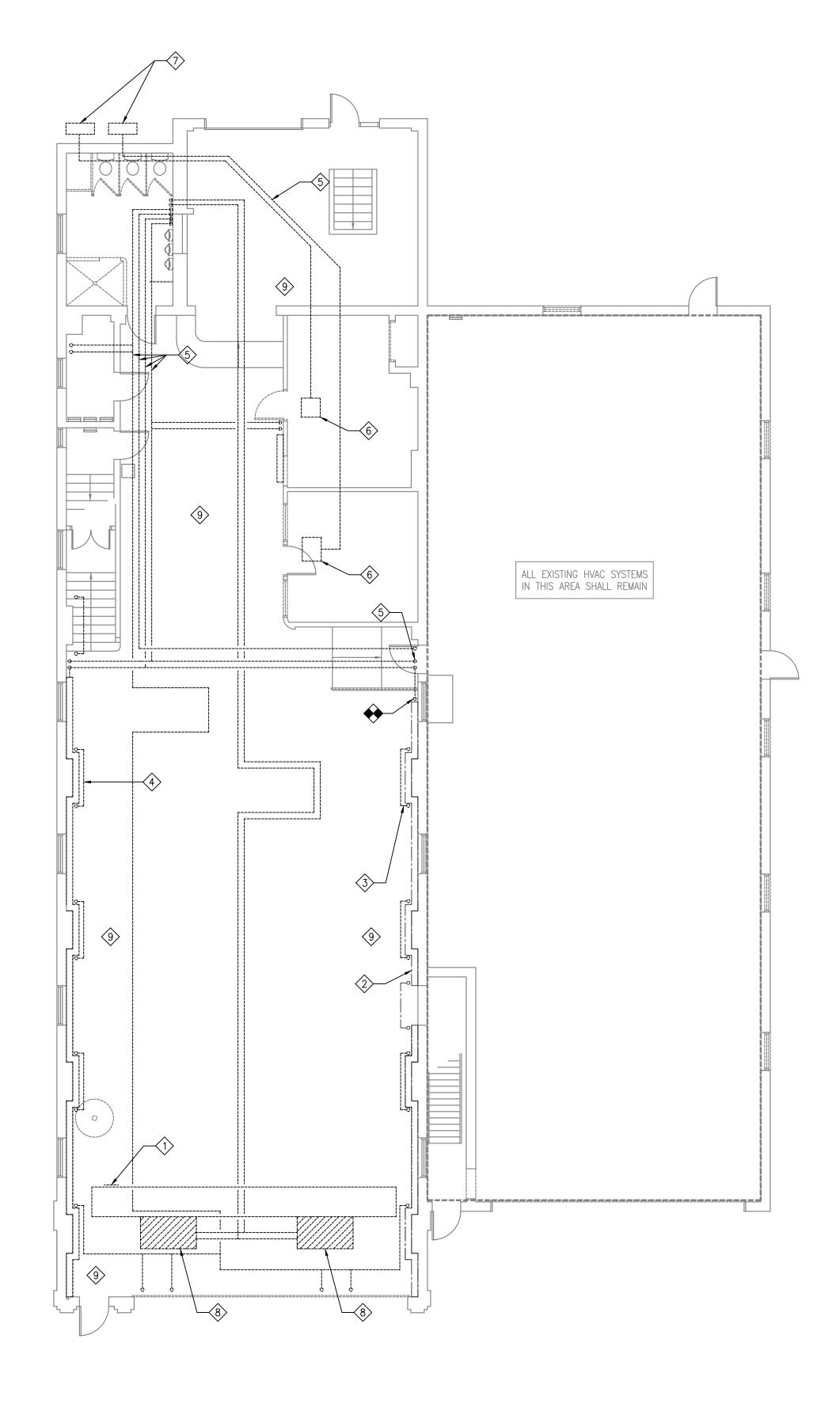


APPROVED



1 BASEMENT PLAN - DEMOLITION

M-100 SCALE: 1/8"=1'-0"



## FIRST FLOOR PLAN - DEMOLITION SCALE: 1/8"=1'-0"

## **GENERAL NOTES:**

SEE DRAWING M-001 FOR NOTES SYMBOLS AND ABBREVIATIONS.

- NOT ALL EXISTING EQUIPMENT, EXISTING PIPING, AND EXISTING PIPE CONNECTIONS ARE SHOWN.
- 2. REMOVE ALL INSULATION ON EXISTING PIPING AFFECTED BY SCOPE OF WORK AND REPLACE WITH NEW INSULATION PER SCHEDULES AND SPECIFICATIONS.
- 3. VERIFY ALL EQUIPMENT AND DIMENSIONS IN FIELD PRIOR TO ANY FABRICATION.
- 4. REFER TO MECHANICAL DETAILS FOR PROPER PIPING AND DUCTWORK INSTALLATION.
- 5. THE TERM "PATCH" SHALL MEAN TO SEAL AND INSULATE ANY OPENING WATERTIGHT, REPAIR THE EXISTING SURFACE USING MATERIALS SIMILAR TO THE EXISTING WALL OR FLOOR CONSTRUCTION, AND PAINT THE REPAIR WITH TWO (2) COATS TO MATCH COLOR AND TEXTURE OF EXISTING SURFACES.

## HVAC DEMOLITION NOTES:

- DEMOLISH DUCTWORK THAT EXTENDS BEYOND NEW WORK WALL. CAP AND SEAL. RELOCATE AND RE-INSTALL (E)GRILLE ONTO PLENUM.
- (E)RADIATION, PIPING, CONTROLS, AND ALL APPURTENANCES TO REMAIN ON THIS SIDE ONLY
- 3 DEMOLISH RADIATION, PIPING, CONTROLS, AND ALL APPURTENANCES SERVING SECOND FLOOR (TYPICAL THIS SIDE)
- 4 DEMOLISH RADIATION, PIPING, CONTROLS, AND ALL APPURTENANCES SERVING FIRST AND SECOND FLOORS (TYPICAL THIS SIDE)
- 5 DEMOLISH PIPING, CONTROLS, AND ALL APPURTENANCES BACK TO MECH
- 6 DEMOLISH SPLIT SYSTEM INDOOR UNIT, PIPING, CONTROLS, AND ALL APPURTENANCES
- DEMOLISH SPLIT SYSTEM OUTDOOR UNIT, PIPING, CONTROLS, AND ALL APPURTENANCES
- (8) DEMOLISH FAN COIL UNIT, DUCTWORK, PIPING, AND ALL APPURTENANCES
- 9 DISCONNECT AND REMOVE ALL THERMOSTATS ASSOCIATED WITH HOT WATER HEATING SYSTEM, INCLUDING COVERS AND WIRING. PATCH WALL TO MATCH

Architects *Pennoni/* Landscape

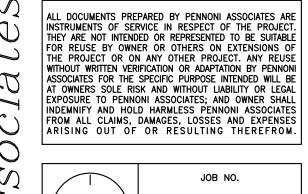
Planners

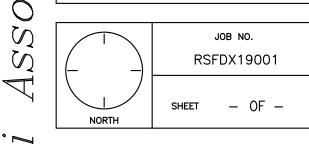
Engineers

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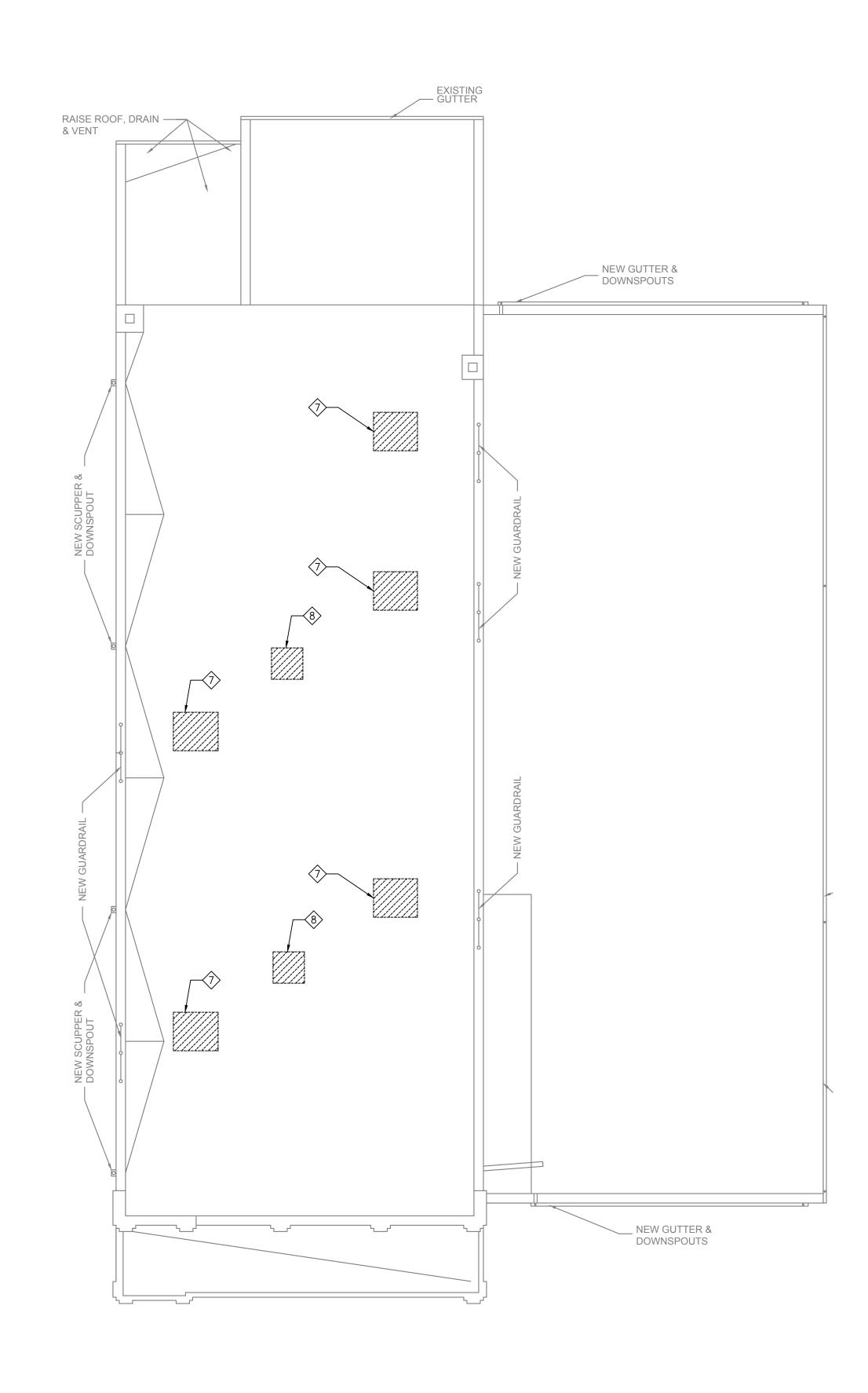
RIVERSIDE





DRAWING NO. NONE

M-100 APPROVED



## GENERAL NOTES:

SEE DRAWING M-001 FOR NOTES SYMBOLS AND ABBREVIATIONS.

- 1. NOT ALL EXISTING EQUIPMENT, EXISTING PIPING, AND EXISTING PIPE CONNECTIONS ARE SHOWN.
- 2. REMOVE ALL INSULATION ON EXISTING PIPING AFFECTED BY SCOPE OF WORK AND REPLACE WITH NEW INSULATION PER SCHEDULES AND SPECIFICATIONS.
- 3. VERIFY ALL EQUIPMENT AND DIMENSIONS IN FIELD PRIOR TO ANY FABRICATION.
- 4. REFER TO MECHANICAL DETAILS FOR PROPER PIPING AND DUCTWORK INSTALLATION.
- 5. THE TERM "PATCH" SHALL MEAN TO SEAL AND INSULATE ANY OPENING WATERTIGHT, REPAIR THE EXISTING SURFACE USING MATERIALS SIMILAR TO THE EXISTING WALL OR FLOOR CONSTRUCTION, AND PAINT THE REPAIR WITH TWO (2) COATS TO MATCH COLOR AND TEXTURE OF EXISTING SURFACES.

## HVAC DEMOLITION NOTES:

- 1> DEMOLISH CABINET UNIT HEATER, PIPING, CONTROLS, AND ALL APPURTENANCES (TYPICAL)
- 2 DEMOLISH CONCENTRIC DIFFUSER AND ASSOCIATED DUCTWORK BACK TO
- 3 DEMOLISH RADIATION, PIPING, CONTROLS, AND ALL APPURTENANCES
- DEMOLISH ALL DIFFUSERS, GRILLES, AND ASSOCIATED DUCTWORK BACK TO RTU. PATCH CEILING TO MATCH EXISTING.
- 5 DEMOLISH EXHAUST FAN INCLUDING POWER AND ALL APPURTENANCES. PATCH WALL TO MATCH EXISTING.
- DISCONNECT AND REMOVE ALL THERMOSTATS ASSOCIATED WITH HOT WATER HEATING SYSTEM, INCLUDING COVERS AND WIRING. PATCH WALL TO MATCH EXISTING OR NEW.
- DEMOLISH ROOFTOP AIR CONDITIONING UNIT AND ALL APPRUTENANCES. PATCH AND REPAIR ROOF TO MATCH EXISTING. COORDINATE WITH ROOF MANUFACTURER'S WARRANTY.
- 8 DEMOLISH EXHAUST FAN AND ALL APPRUTENANCES. PATCH AND REPAIR ROOF TO MATCH EXISTING. COORDINATE WITH ROOF MANUFACTURER'S WARRANTY.



Landscape

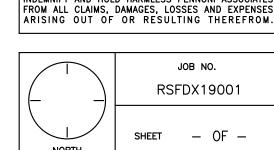
Engine

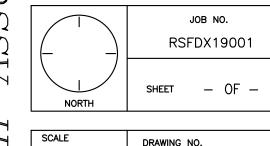
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OTT STREET
NJ 08075

RIVERSIDE

ALL DOCUMENTS PREPARED BY PENNONI ASSOCIATES ARE INSTRUMENTS OF SERVICE IN RESPECT OF THE PROJECT. THEY ARE NOT INTENDED OR REPRESENTED TO BE SUITABLE FOR REUSE BY OWNER OR OTHERS ON EXTENSIONS OF THE PROJECT OR ON ANY OTHER PROJECT. ANY REUSE WITHOUT WRITTEN VERIFICATION OR ADAPTATION BY PENNONI ASSOCIATES FOR THE SPECIFIC PURPOSE INTENDED WILL BE AT OWNERS SOLE RISK AND WITHOUT LIABILITY OR LEGAL EXPOSURE TO PENNONI ASSOCIATES; AND OWNER SHALL INDEMNIFY AND HOLD HARMLESS PENNONI ASSOCIATES FROM ALL CLAIMS, DAMAGES, LOSSES AND EXPENSES ARISING OUT OF OR RESULTING THEREFROM.

ALT FRSIDE





DRAWING NO. NONE

GENERAL NOTES:

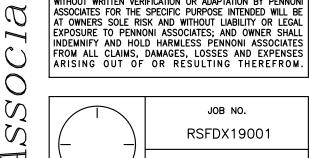
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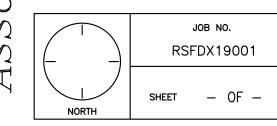
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ALL DOCUMENTS PREPARED BY PENNONI ASSOCIATES ARE INSTRUMENTS OF SERVICE IN RESPECT OF THE PROJECT. THEY ARE NOT INTENDED OR REPRESENTED TO BE SUITABLE FOR REUSE BY OWNER OR OTHERS ON EXTENSIONS OF THE PROJECT OR ON ANY OTHER PROJECT. ANY REUSE

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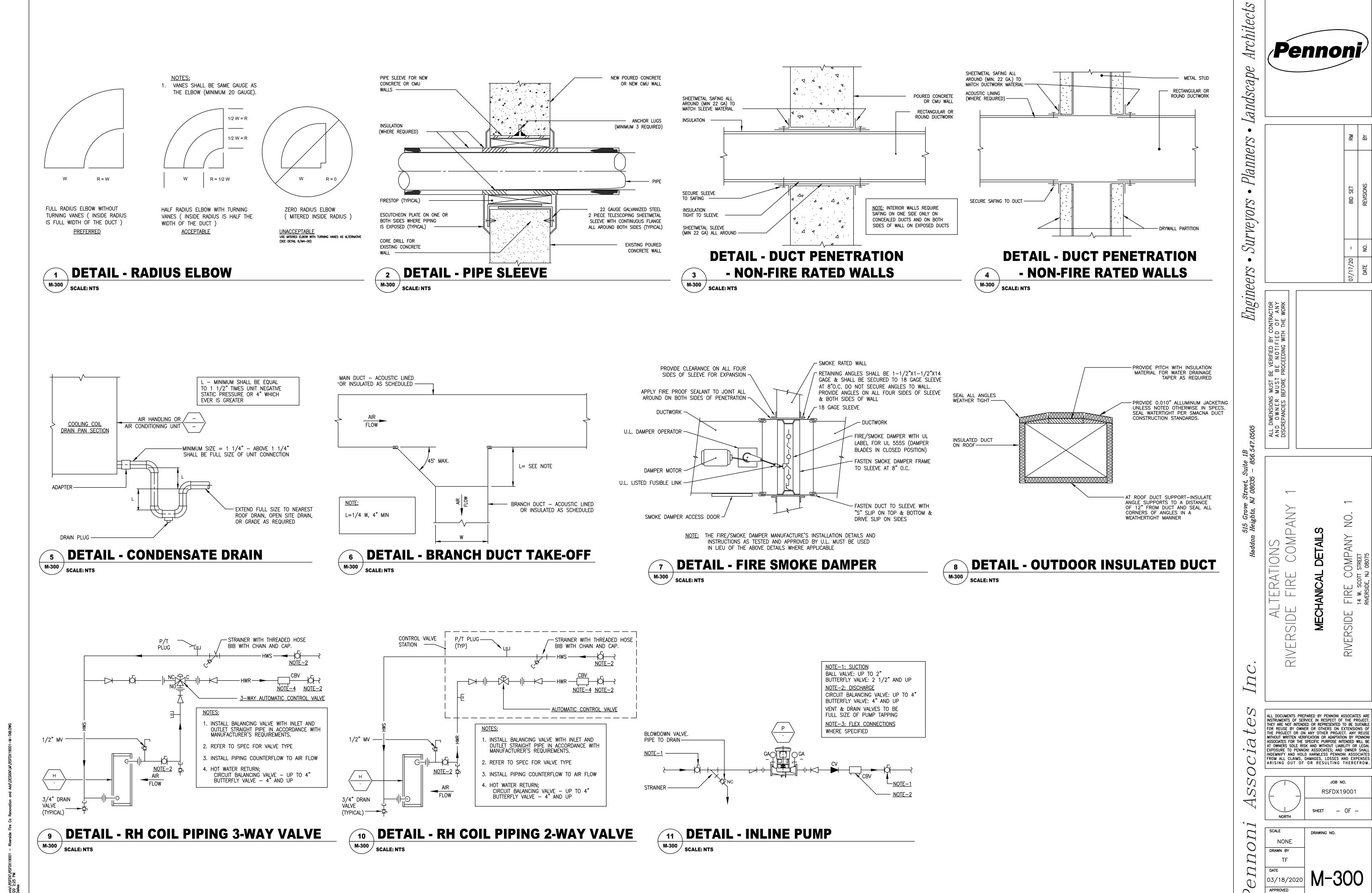
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APPROVED

EXISTING WALL OR FLOOR CONSTRUCTION, AND PAINT THE REPAIR WITH TWO (2)

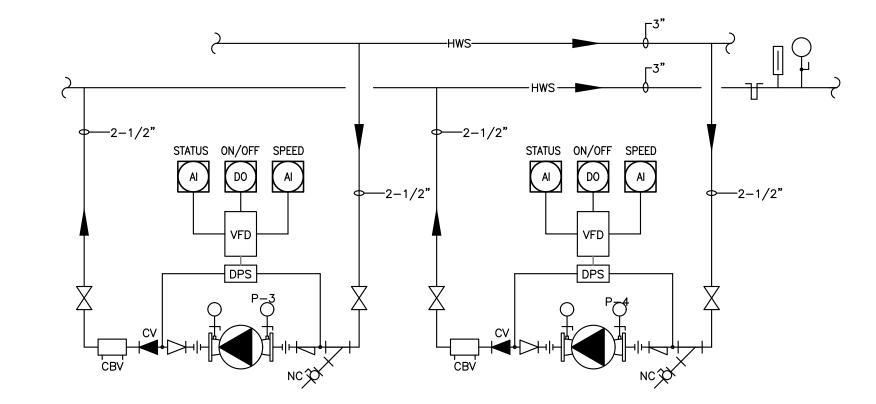
COATS TO MATCH COLOR AND TEXTURE OF EXISTING SURFACES.



## **CONTROL DIAGRAM - PACKAGED ROOFTOP UNIT** M-301 **SCALE: NONE**

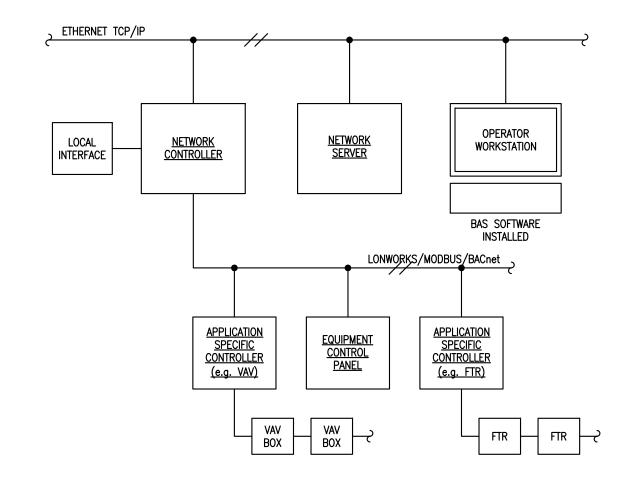
## SEQUENCE OF OPERATIONS

- 1. GENERAL: PROVIDE FACTORY MOUNTED AND WIRED MICROPROCESSOR BASED CONTROLS, INTERFACED WITH THE BUILDING AUTOMATION SYSTEM (BAS). PROVIDE ANY FIELD SUPPLIED DEVICES TO COMPLETE THIS SEQUENCE OF OPERATION. INSTALL ANY RTU MANUFACTURED SUPPLIED DEVICES TO COMPLETE THIS SEQUENCE OF OPERATION. COORDINATE WITH SPECIFICATIONS FOR RTU MANUFACTURER SUPPLIED DEVICES. THE BAS WILL DETERMINE OCCUPIED/UNOCCUPIED MODE FOR THE ROOFTOP UNIT FROM OWNER DEFINED SCHEDULE.
- a. UNOCCUPIED MODE: UNIT FANS, HEAT, AND REFRIGERATION WILL BE DE-ENERGIZED, AND THE OUTSIDE AIR DAMPER WILL BE CLOSED. WHEN THE TEMPERATURE FALLS OUTSIDE OF THE UNOCCUPIED MODE TEMPERATURE RANGE (60°F TO 85°F-ADJUSTABLE), THE UNIT FAN WILL BE ENERGIZED AND CONTROLLED AS DESCRIBED BELOW. THE UNIT OUTSIDE AIR DAMPER SHALL REMAIN CLOSED, UNLESS COOLING IS CALLED FOR AND ECONOMIZER OPERATION IS AVAILABLE. THE UNIT SHALL BE DE-ENERGIZED ONCE TEMPERATURE IS WITHIN THE UNOCCUPIED MODE TEMPERATURE RANGE.
- b. OCCUPIED HEATING MODE: IF THE TEMPERATURE IS BELOW THE OCCUPIED MODE RANGE, THE UNIT DISCHARGE AIR TEMPERATURE WILL BE CONTROLLED TO 95°F (ADJUSTABLE) BY MODULATING THE GAS FURNACE.
- c. OCCUPIED COOLING MODE: IF THE TEMPERATURE IS ABOVE THE RANGE, THE UNIT DISCHARGE AIR TEMPERATURE WILL BE CONTROLLED TO 55°F (ADJUSTABLE) BY STAGING ON DX COOLING AND ECONOMIZER. UNIT PACKAGED CONTROLS SHALL USE ECONOMIZER MODE FOR FIRST STAGE OF COOLING IF CONDITIONS ARE APPROPRIATE.
- d. UNOCCUPIED MODE OVERRIDE: IF THE OVERRIDE BUTTON ON THE TEMPERATURE TRANSMITTER AND THE UNIT IS IN UNOCCUPIED MODE, THE UNIT SHALL BE ENERGIZED AND CONTROLLED IN EITHER THE HEATING OR COOLING MODE FOR A SET TIME PERIOD OF 3 HOURS (ADJUSTABLE).
- 2. RTU MORNING START-UP: BAS SHALL USE AN OPTIMIZED MORNING START-UP ROUTINE, INCORPORATING OUTSIDE AIR TEMPERATURE AND PAST HISTORY OF BUILDING RESPONSE TO DETERMINE THE OPTIMUM TIME TO START THE ROOFTOP UNIT. UPON INITIATING MORNING START-UP, EITHER BY THE OPTIMIZED START-UP ROUTINE, OR FROM A REQUEST FOR UNOCCUPIED MODE OVERRIDE AT A ROOM SENSOR, THE TEMPERATURE SETPOINT RANGE SHALL BE RESET TO OCCUPIED MODE, AND THE UNIT FAN SHALL BE ENERGIZED AND CONTROL AS DESCRIBED FOR OCCUPIED MODE. THE UNIT OUTSIDE AIR DAMPERS SHALL REMAIN CLOSED UNLESS COOLING IS CALLED FOR AND ECONOMIZER OPERATION IS AVAILABLE. ONCE SCHEDULED BUILDING OCCUPANCY TIME IS REACHED, OUTSIDE AIR DAMPER IS ENABLED. IF START-UP WAS INITIATED BY AN UNOCCUPIED MODE OVERRIDE BUTTON, INITIATE OCCUPIED MODE AS SOON AS NEITHER MORNING WARM-UP NOR MORNING COOL-DOWN CONDITIONS APPLY. UNIT DISCHARGE AIR TEMPERATURE SHALL BE CONTROLLED AS DESCRIBED BELOW:
- a. MORNING WARM-UP: THE UNIT DISCHARGE AIR TEMPERATURE WILL BE CONTROLLED TO 95°F (ADJUSTABLE) BY MODULATING THE GAS FURNACE. MORNING WARM-UP IS TERMINATED WHEN THE TEMPERATURE IS NO LONGER BELOW SETPOINT. UPON TERMINATION, UNIT OPERATES TO MAINTAIN DISCHARGE AIR TEMPERATURE AS DESCRIBED FOR OCCUPIED MODE.
- b. MORNING COOL-DOWN: DX COOLING OR ECONOMIZER WILL OPERATE TO MAINTAIN DISCHARGE AIR TEMPERATURE SETPOINT AS DESCRIBED FOR OCCUPIED
- c. MORNING RECIRCULATION: IF NEITHER OF THE ABOVE TWO CONDITIONS APPLY, UNIT FAN SIMPLY RECIRCULATES BUILDING AIR UNTIL OCCUPIED TIME IS REACHED OR ONE OF THE ABOVE TWO CONDITIONS APPLY.
- d. CONFLICT RESOLUTION: IF CONDITIONS FOR BOTH MORNING WARM-UP AND COOL-DOWN APPLY, INITIATE WARM-UP MODE.
- 3. RELIEF DAMPER CONTROL: MODULATE THE RELIEF AIR DAMPER TO MAINTAIN BUILDING STATIC PRESSURE WITHIN A RANGE OF 0.05 TO 0.1 INCHES WATER COLUMN (ADJUSTABLE). LOCATE THE BUILDING STATIC PRESSURE SENSOR ABOVE THE CEILING OF THE GROUND FLOOR, OR IN THE LOBBY. LOCATE AS DETERMINED BY FIELD CONDITIONS, BEING CAREFUL TO FIND A REPRESENTATIVE CONDITION.

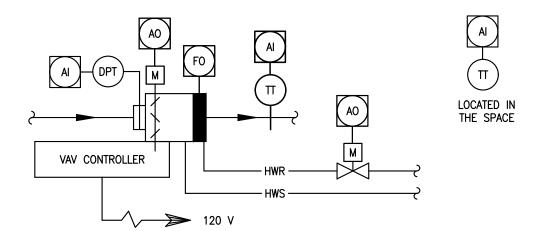


**CONTROL DIAGRAM - MAIN HEATING HOT WATER PUMPS** 

- 4. SUPPLY FAN SPEED CONTROL: MODULATE THE SUPPLY FAN VARIABLE FREQUENCY DRIVE TO MAINTAIN DISCHARGE STATIC PRESSURE SET POINT AS DETERMINED BY TAB CONTRACTOR AND SENSED AT THE SENSOR LOCATED 2/3 DOWNSTREAM OF THE FAN.
- 5. MINIMUM OUTSIDE AIR DAMPER CONTROL: ONCE THE FANS ARE PROVEN ON, THE MINIMUM OUTDOOR AIR DAMPER WILL MODULATE TO MAINTAIN A CONSTANT OUTSIDE AIR QUANTITY AS MEASURED BY UNIT'S OUTSIDE AIR SENSOR.
- 6. SUPPLY AIR TEMPERATURE SETPOINT OPTIMIZED: THE CONTROLLER SHALL MONITOR THE SUPPLY AIR TEMPERATURE AND SHALL MODULATE THE GAS FIRED FURNACE, OR STAGE ON DX COOLING TO MAINTAIN A SUPPLY AIR TEMPERATURE SETPOINT RESET BASED ON COOLING REQUIREMENTS. THE SUPPLY AIR TEMPERATURE SETPOINT SHALL BE RESET BASED ON COOLING REQUIREMENTS AS FOLLOWS:
- i. THE INITIAL SUPPLY AIR TEMPERATURE SETPOINT SHALL BE 55°F (ADJ.).
- ii. AS COOLING DEMAND INCREASES, THE SETPOINT SHALL INCREMENTALLY RESET DOWN TO A MINIMUM OF 52°F (ADJ.).
- iii.AS COOLING DEMAND DECREASES, THE SETPOINT SHALL INCREMENTALLY RESET UP TO A MAXIMUM OF 62°F (ADJ.).
- b. SUPPLY AIR TEMP ALARMS: IF THE SUPPLY AIR TEMPERATURE IS GREATER THAN 110°F (ADJ.) OR LESS THAN 45°F (ADJ.) SEND AN ALARM TO THE BAS. 8. ECONOMIZER CONTROL: IF THE OUTDOOR AIR ENTHALPY IS BELOW THE RETURN AIR ENTHALPY, THE MIXED AIR DAMPERS WILL MODULATE TO MAINTAIN DISCHARGE AIR TEMPERATURE SET POINT. DX COOLING SHALL BE ALLOWED TO OPERATE DURING ECONOMIZER OPERATION, ONCE THE OUTSIDE AIR DAMPERS HAVE OPENED
- 9. DEMAND CONTROLLED VENTILATION: DURING OCCUPIED PERIODS, RESET OUTDOOR AIR RATIO DOWN TO MINIMUM 10% TO MAINTAIN MAXIMUM 1000-PPM CONCENTRATION OF CARBON DIOXIDE.
- 10. LOW TEMPERATURE PROTECTION CONTROL: WHEN AIR TEMPERATURE DOWNSTREAM OF THE HEATING COIL DROPS BELOW 40 DEG F (ADJUSTABLE, AS SENSED BY
- LOW LIMIT THERMOSTAT), THE FOLLOWING WILL OCCUR:
- a. THE SUPPLY FAN WILL SHUT DOWN
- b. THE OUTDOOR AIR AND RELIEF AIR DAMPERS WILL CLOSE
- c. THE RETURN AIR DAMPER WILL OPEN
- d. AN ALARM WILL BE SENT TO THE BAS. e. THE LOW LIMIT THERMOSTAT WILL NEED TO BE MANUALLY RESET FOR NORMAL OPERATION TO RESUME.
- 10. HIGH STATIC PRESSURE DETECTION CONTROL: UPON DETECTION OF HIGH STATIC PRESSURE FROM THE SUPPLY STATIC PRESSURE SWITCH, THE FAN WILL CYCLE
- OFF, THE OUTDOOR AIR AND RELIEF DAMPERS WILL CLOSE, AND AN ALARM WILL BE SENT TO THE BAS. ONCE THE STATIC PRESSURE SWITCHES ARE RESET, THE UNIT WILL RETURN TO NORMAL CONTROL.
- 11. FILTER STATUS: MONITOR PRESSURE SWITCH AT FILTER BANK, AND ALARM WHEN △P INCREASES ABOVE 0.80" WG (ADJUSTABLE)
- 12. UPON ACTIVATION OF DUCT-MOUNTED SMOKE DETECTOR LOCATED IN THE RETURN AIR DUCTWORK, THE FOLLOWING WILL OCCUR:
- a. THE SUPPLY FAN WILL SHUT DOWN
- b. ALL DAMPERS SHALL CLOSE
- c. AN ALARM WILL BE SENT TO THE BAS AND FIRE ALARM SYSTEM.



## **CONTROL DIAGRAM - BAS ARCHITECTURE** M-301 **SCALE: NONE**



## CONTROL DIAGRAM - VAV BOX

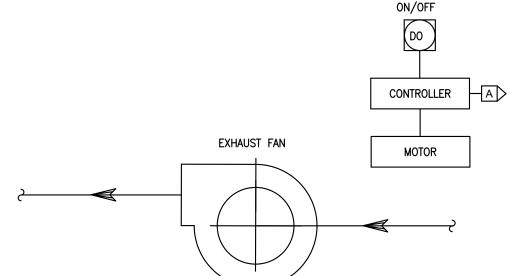
## **SCALE: NONE**

SEQUENCE OF OPERATIONS

- 1. ON A CALL FOR COOLING, THE FOLLOWING SHALL OCCUR: 1.1. VAV BOX CONTROLLER SHALL MODULATE THE DAMPER TO MAINTAIN SPACE TEMPERATURE
- THE HEATING HOT WATER CONTROL VALVE SHALL REMAIN FULLY CLOSED. ON A DROP IN TEMPERATURE, THE REVERSE SHALL OCCUR.

2.4. IN A RISE IN TEMPERATURE, THE REVERSE SHALL OCCUR.

- 2. ON A CALL FOR HEATING, THE FOLLOWING SHALL OCCUR: 2.1. THE VAV BOX CONTROLLER SHALL MODULATE THE DAMPER TOWARDS THE MINIMUM AIRFLOW
- SETPOINT TO MAINTAIN SPACE TEMPERATURE SETPOINT(ADJ). 2.2. UPON A CONTINUED DROP IN SPACE TEMPERATURE AFTER REACHING THE MINIMUM AIRFLOW
- SETPOINT, THE VAV BOX CONTROLLER SHAL MODULATE THE HEATING HOT WATER CONTROL VALVE TO MAINTAIN SPACE TEMPERATURE SETPOINT.
- 2.3. ONCE THE VAV BOX IS OPERATING AT ITS MINIMUM AIRFLOW SETTING AND THE HEATING COIL HAS BEEN ENGAGED, THE VAV BOX CONTROLLER SHALL INCREASE AIRFLOW TO THE MINIMUM HEATING AIRFLOW SETPONT TO AVOID STRATIFICATION, IF REQUIRED. SEE SCHEDULES.



## **CONTROL DIAGRAM - EXHAUST FAN** M-301 **SCALE: NONE**

FROM ALL CLAIMS, DAMAGES, LOSSES AND EXPENSES ARISING OUT OF OR RESULTING THEREFROM. egthanking

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RSFDX19001 SHEET – OF – NORTH DRAWING NO. NONE

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THEY ARE NOT INTENDED OR REPRESENTED TO BE SUITABLE
FOR REUSE BY OWNER OR OTHERS ON EXTENSIONS OF THE PROJECT OR ON ANY OTHER PROJECT, ANY REUSE

ASSOCIATES FOR THE SPECIFIC PURPOSE INTENDED WILL BE AT OWNERS SOLE RISK AND WITHOUT LIABILITY OR LEGAL EXPOSURE TO PENNONI ASSOCIATES; AND OWNER SHALL INDEMNIFY AND HOLD HARMLESS PENNONI ASSOCIATES

JOB NO.

M-301

SEQUENCE OF OPERATIONS

BE INDICATED.

**SCALE: NONE** 

 PUMP CONTROL 1.1. VFD SHALL MODULATE LEAD PUMP SPEED TO MAINTAIN PRESSURE SETPOINT (ADJ) AS INDICATED

BY DIFFERENTIAL PRESSURE TRANSMITTER.

1.2. ON A FAILURE OF LEAD PUMP TO START, STANDBY PUMP SHALL BE ENERGIZED. 1.3. LEAD AND STANDBY PUMPS SHALL ROTATE DUTIES EVERY SIX (6) MONTHS (ADJ) AS APPLICABLE. 1.4. IF HIGH PRESSURE CONDITIONS OCCUR AS INDICATED BY THE DIFFERENTIAL PRESSURE SENSOR ACROSS THE PUMP INLET AND OUTLET, PUMP SHALL BE DE-ENERGIZED AND AN ALARM SHALL

					SUPPL	Y FAN DAT	Ā				D	( COOLII	NG COIL								GAS FIRE	D HEATING C	OIL					SINGLE PO	INT ELEC	CTRICAL		ACCESSORIES				
UNIT NO. LOCATION	AREA SERVED	AIRFLOW CONTROL SCHEME	TOTAL MIN C	• •	MAX	TYPE		, MIN EER	REFR.	M	1BH	EAT F	LAT	F COM	MPRESSOR	COND	ENSER	AT LAT	MAX PD	TOTAL	TOTAL	TURN G	AS	GAS CO	ONNECTI						CO2	ECONOMIZER SECTION	SMOKE	BASIS OF DESIGN	WEIGHT (LBS)	NOTES
				WG.)	TSP (IN WG.)	TYPE	RPM H	EFF	TYPE	TOTAL	SENSIBLE	DB V	VB DB V	NB QT	TY RIA	QTY	FIA	F   F	(FT) W.G.	MBH INPUT	MBH OUTPUT	DOWN TY	PE	QTY F	PRESS (IN	NWC)	EFF % V	PH	HZ   MC	CA MOCP	MONITOR	(ENTHALPY CONTROL)	DETECTOR			
											00						, .								MIN	MAX										
RTU-1 GRADE	1ST & 2ND LEVELS	VAV	6,425 1,5	00 1.25	4.0	AF	1750 7.	12	R410A	220	175	80.0 6	5.0 54 5	64.0 2	2 30.1	2	7.0 1	1 55	0.5	270	220	4.3:1 N	IG	1	7	10	80 208	3 3	60 10	06 125	YES	YES	YES	AAON MODEL RNA-020	3,500	SEE NOTES

1. PROVIDE LOW AMBIENT KIT AND SINGLE POINT POWER CONNECTION WITH SUPPLY FAN VFD, DISCONNECT SWITCH, CONTROL TRANSFORMER AND 120V OUTLET.

2. PROVIDE VARIABLE CAPACITY COMPRESSORS.

		SUPPLY & RETURN AIR	SUPPLY & RETURN AIR	SUPPLY & RETURN AIR	EXHAUST AIR
		DUCT MAINS	DUCT MAINS	BRANCH DUCTS	DUCTWORK
DUOT	FROM				
DUCT	FROM:	PACKAGED ROOFTOP UNIT	EXTERIOR WALL PENETRATION	ALL INDOOR DUCTWORK	INTAKE
SECTION	TO:	EXTERIOR WALL PENETRATION	FIRE/SMOKE DAMPER	AIR DEVICE	DISCHARGE
DUCT	INDOORS EXPOSED:				X
SECTION	INDOORS CONCEALED:		X	X	X
	OUTDOORS:	X			
PRESSURE CLAS	SSIFICATION (USE GREATER VALUE):	+/- 4.0" H20	+/- 4.0" H20	+/- 2.0" H20	+/- 2.0" H2O
SMACNA CLASS	IFICATION:	В	В	В	В
OUTER WALL MA	ATERIAL:	GALV. STEEL	GALV. STEEL	GALV. STEEL	GALV. STEEL
INNER WALL MA	TERIAL:	PERFORATED STAINLESS	PERFORATED STAINLESS	PERFORATED STAINLESS	NONE
DUCT AIR TEMP	ERATURE:	>52 DEG F	>52 DEG F	>52 DEG F	ALL TEMPS.
EXTERIOR	TYPE:	FIBERGLASS BOARD	FIBERGLASS BOARD	FIBERGLASS BOARD	NONE
INSULATION	MINIMUM R-VALUE:	R-8	R-5	R-5	NONE
INTERNAL	THICKNESS:	NONE	NONE	NONE	NONE
LINER	DENSITY:	NONE	NONE	NONE	NONE
REMARKS:		1. PROVIDE INTERNAL LINER FOR FIRST 10'-0" OF DUCTWORK SUPPLY AND RETURN FROM RTU.  2. PAINT ALL VISIBLE INTERNAL SURFACES BLACK (INSIDE OF AIR DEVICE, INSIDE OF BRANCH DUCT CONNECTION).  3. PROVIDE WEATHERPROOF DUCT JACKETING ON ALL EXPOSED DUCTWORK.	1. PROVIDE INTERNAL LINER FOR FIRST 10'-0" OF DUCTWORK SUPPLY AND RETURN FROM RTU.  2. PAINT ALL VISIBLE INTERNAL SURFACES BLACK (INSIDE OF AIR DEVICE, INSIDE OF BRANCH DUCT CONNECTION).	1. PROVIDE INTERNAL LINER FOR FIRST 10'-0" OF DUCTWORK SUPPLY AND RETURN FROM RTU.	

1. IF DUCT CONSTRUCTION CONDITION EXISTS THAT IS NOT LISTED ON THE ABOVE SCHEDULE, CONSULT ENGINEER IMMEDIATELY PRIOR TO DUCT FABRICATION.

PUMF	PUMP SCHEDULE												
NO.	TYPE	SERVICE	GPM	HEAD FT.	RPM	ELECTRICAL	-			BASIS OF DESIGN	REMARKS		
NO.	IIFL	SERVICE	GFIVI	TILADIT.	IXF IVI	HP	V	PH	Hz	BASIS OF DESIGN	KLWAKKO		
P-1	INLINE	SECONDARY LOOP	50	50	1800	2	208	3	60	TACO MODEL SCI1207D	SEE NOTE 1		
P-2	INLINE	SECONDARY LOOP	50	50	1800	2	208	3	60	TACO MODEL SCI1207D	SEE NOTE 1		

1. PROVIDE SELF-SENSING PUMP WITH VFD, DISCONNECT SWITCH, INVERTER DUTY RATED MOTOR, AND SPRING VIBRATION ISOLATORS. INTEGRATE VFD WITH BAS.

SYSTEM		PIPE SIZE	PIPE				VALVES (NOTE 4)				INSULATION				HANGERS
		(NOTE 1)	MATERIAL	JOINTS	FITTINGS	CONNECTIONS	SHUT-OFF	GLOBE	CHECK	BALANCE	TYPE	THICKNESS INCHES	JACKET	HEAT	
											(NOTE 1)	(NOTE 2)	(NOTE 3)	TRACE	
REFRIGERANT		ALL SIZES	COPPER-TYPE ACR	SOLDER	WROUGHT COPPER	UNION - BRONZE	BALL - 2 PIECE	NA	NA	NA	FLEX	1	PAINT	NA	STANDARD
HOT WATER 120 - 200°F	OT WATER 120 - 200°F		COPPER-TYPE L	SOLDER	WROUGHT COPPER	UNION - BRONZE	BALL - 2 PIECE	BRONZE	BRONZE - SWING	CIRCUIT SETTER	FIBER	1.5	ALUM	YES	STANDARD
		2-1/2" TO 10"	STEEL SCH 40	BUTT-WELD	STEEL SCH 40	FLANGE - STEEL 150 PSI	BUTTERFLY - STD	IRON	IRON - SILENT	BUTTERFLY - HP w/ VENTURI	FIBER	2	ALUM	YES	ROLLER
CONDENSATE OR DRAIN	LOCATED IN PLENUM	3/4" TO 2"	COPPER-TYPE L	SOLDER	WROUGHT COPPER	UNION - BRONZE	NA	NA	NA	NA	FIBER	1 (INDOORS ONLY)	NA	NA	STANDARD
	OUTSIDE OF PLENUM	3/4" TO 2"	PVC SCH 40	SOLVENT WELD	PVC	PVC	NA	NA	NA	NA	FIBER	1 (INDOORS ONLY)	NA	NA	STANDARD

- 1. INSULATION TYPES: "FLEX" MEANS FLEXIBLE ELASTOMETRIC; "FIBER" MEANS PRE-FORMED MINERAL-FIBER; SEE SPECIFICATIONS FOR PRODUCT DESCRIPTIONS
- 2. ADD 1 INCH WHEN LOCATED OUTDOORS
- 3. APPLY WHEN LOCATED OUTDOORS
- 4. NOT ALL PIPE SIZES OR VALVE TYPES ARE USED. REFER TO PLANS AND SPECIFICATIONS FOR PROPER APPLICATION.

AIR	DEVICE SCI	HEDULE	•							
TAG	TYPE	FACE SIZE	MODULE SIZE	AIRFLOW RANGE	NECK SIZE	MAX SP	MAX NC	MATERIAL	MANUFACTURER	REMARKS
No.		(IN)	(IN)	(CFM)	(INCHES)	(IN. WG)			& MODEL NO.	
CD1	SQUARE LOUVERED FACE	18 x 18	24 x 24	0-120	6 x 6	0.1	25	ALUMINUM	KRUEGER MODEL 5SHV	THROW INDICATED ON DRAWINGS;
	(CEILING MOUNTED)			125-245	9 x 9	]				SEE NOTES
				250-415	12 x 12					
				420-615	15 x 15					
				620-850	18 x 18					
SG1	LOUVERED SUPPLY GRILLE	NECK SIZE + 2"	SAME AS FACE	0-295	12 x 6	0.1	25	ALUMINUM	KRUEGER MODEL S880	DOUBLE DEFLECTION; SEE NOTES
	(DUCT MOUNTED)			300-430	18 x 6					
RG1	LOUVER RETURN GRILLE	NECK SIZE + 2"	SAME AS FACE	0-330	8 x 8	0.1	25	ALUMINUM	KRUEGER MODEL S580	0° DEFLECTION; PROVIDE MOUNTING
				335-725	12 x 12					PANEL FOR 24x24 CEILING GRID IF
				730-1800	22 x 22					REQUIRED; SEE NOTES
EG1	LOUVER EXHAUST GRILLE	NECK SIZE + 2"	SAME AS FACE	0-330	8 x 8	0.1	25	ALUMINUM	KRUEGER MODEL S580	0° DEFLECTION; PROVIDE MOUNTING
				335-725	12 x 12					PANEL FOR 24x24 CEILING GRID IF
				730-1325	24 x 12					REQUIRED; SEE NOTES

- 1. FLEXIBLE DUCT SIZE TO MATCH NECK SIZE.
- 2. ADJUST AIR DEVICE SIZE OR DESIGNATION WHERE AIR FLOW INDICATED ON THE DRAWINGS EXCEEDS SCHEDULED FLOW RANGE, MAX. P.D. OR MAX. N.C. PROVIDE SQUARE TO ROUND ADAPTERS AS REQUIRED. PROVIDE FIELD FABRICATED PLENUMS WHERE FACTORY PLENUMS WILL NOT FIT DUE TO FIELD
- 3. PROVIDE PLASTER FRAMES FOR ALL AIR DEVICES MOUNTED IN PLASTER CEILINGS. SEE ARCHITECTURAL REFLECTED CEILING PLANS.
- 4. PROVIDE 24x24 DROP PANEL FOR LAY-IN CEILING.
- 5. ALL SIZES INDICATED FOR T-BAR CEILINGS ARE NOMINAL EXACT SIZE TO BE LESS TO ALLOW DEVICES TO LAY IN CEILING.
- 6. EACH SLOT TO BE INDEPENDENTLY ADJUSTABLE FOR BLOW DIRECTION & AIR VOLUME.
- 7. WITH PLASTER MOUNTING FRAME, FLANGED BORDER & FIELD FABRICATED INSULATED PLENUM. PART OF A LONGER SLOT ASSEMBLY THAT IS TO HAVE CONTINUOUS APPEARANCE. PROVIDE ALIGNMENT PINS AND END CAPS. SEE FLOOR PLANS FOR TOTAL LENGTH.
- 8. WITH PLASTER MOUNTING FRAME, FLANGED BORDER & FIELD FABRICATED AIRTIGHT BLANK OFF PLENUM. PART OF A LONGER SLOT ASSEMBLY THAT IS TO HAVE A CONTINUOUS APPEARANCE. PROVIDE ALIGNMENT PINS AND END CAPS. SEE FLOOR PLANS FOR TOTAL LENGTH.
- 9. ALL EXPOSED AIR DEVICES IN FINISHED SPACES SHALL HAVE THE INSIDES OF AIR DEVICE, NECK AND VERTICAL DUCT RISER BACK TO HORIZONTAL CONNECTION PAINTED BLACK.

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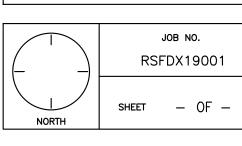
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DRAWING NO. NONE

AIR C	IR CONTROL TERMINAL BOX SCHEDULE - SINGLE DUCT																	
				INLET	AIRF	LOW	ZONE HEAT	MAX PRESS.				HOT WATER	HEATING CO	DIL				
UNIT NO.		SERVING	TYPE	SIZE (IN)	MIN (CFM)	MAX (CFM)	LOSS MBH	DROP (IN.W.C.)	MIN HEAT (CFM)	EAT (DEG.F)	LAT (DEG.F)	TOTAL MBH	GPM	EWT (DEG.F)	LWT (DEG.F)	CONTROL VALVE	BASIS OF DESIGN	REMARKS
VAV-1	RTU-1	MEETING/TRAINING	VAV	7	135	450	2.2	0.1	135	55	89	5	0.5	180	160	2-WAY	KRUEGER MODEL LMHS	SEE NOTES
VAV-2	RTU-1	1ST FLR LOBBY/STORAGE/CORRIDOR	VAV	10	280	925	20.2	0.1	580	55	95	25	2.5	180	160	2-WAY	KRUEGER MODEL LMHS	SEE NOTES
VAV-3	RTU-1	2ND FLR TOILET RMS/KITCHEN	VAV	8	235	775	11.1	0.1	350	55	95	15	1.5	180	160	2-WAY	KRUEGER MODEL LMHS	SEE NOTES
VAV-4	RTU-1	DAYROOM/DINING RM	VAV	14	585	1950	19.9	0.1	695	55	95	30	3.0	180	160	2-WAY	KRUEGER MODEL LMHS	SEE NOTES
VAV-5	RTU-1	2ND FLR CORRIDOR	VAV	8	180	600	10.1	0.1	325	55	95	14	1.5	180	160	2-WAY	KRUEGER MODEL LMHS	SEE NOTES
VAV-6	RTU-1	CONFERENCE RM/COPY	VAV	6	85	275	2.0	0.1	95	55	95	4	0.5	180	160	2-WAY	KRUEGER MODEL LMHS	SEE NOTES
VAV-7	RTU-1	OFFICE 211/STORAGE	VAV	5	70	225	2.4	0.1	95	55	95	4	0.5	180	160	3-WAY	KRUEGER MODEL LMHS	SEE NOTES
VAV-8	RTU-1	OFFICE 214	VAV	5	40	130	2.5	0.1	95	55	95	4	0.5	180	160	2-WAY	KRUEGER MODEL LMHS	SEE NOTES
VAV-9	RTU-1	OFFICES 212 & 213	VAV	6	80	260	5.0	0.1	165	55	95	7	1.0	180	160	2-WAY	KRUEGER MODEL LMHS	SEE NOTES

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### **NOTES**

1. PROVIDE REMOTE TEMPERATURE TRANSMITTER.

RTU-1

2. CONTRACTOR SHALL PROVIDE 120 VOLT POWER TO VAV BOX CONTROL PANEL.

2ND FLR STORAGE RMS

3. MIN. HEATING CFM IS DESIGNED TO LIMIT MAX LAT FROM EXCEEDING 95 DEGREES TO PREVENT STRATIFICATION.

FA	FAN SCHEDULE												
UNIT	FAN TYPE	SERVICE	CFM	EXT.	DRIVE		ELECTRI	CAL		WEIGHT	BASIS OF DESIGN	REMARKS	
No.	TANTIFL	SERVICE	CIWI	S.P.	DIXIVL	HP	V	PH	Hz	(LBS.)	BASIS OF BESIGN	KLIVIAKKO	
EF-1	CEILING CABINET	TOILET ROOM	70	0.25	DIRECT	30 WATTS	115	1	60	25	COOK MODEL GC-148	SEE NOTES 1,3,4	
EF-2	CEILING CABINET	TOILET ROOM	70	0.25	DIRECT	30 WATTS	115	1	60	25	COOK MODEL GC-148	SEE NOTES 1,3,4	
EF-3	INLINE CENTRIFUGAL	SECOND FLOOR	925	0.75	DIRECT	1/3	115	1	60	200	COOK MODEL 120SQ17D	SEE NOTES 1,2,4	

### NOTES:

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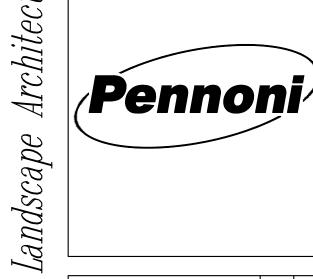
- 1. PROVIDE GRAVITY BACKDRAFT DAMPER, BIRDSCREEN, AND DISCONNECT SWITCH.
- 2. EXHAUST FAN SHALL RUN CONTINUOUSLY DURING OCCUPIED HOURS AND SHALL BE INTERLOCKED WITH THE RTU-1 SERVING THE SPACE.
- 3. EXHAUST FAN SHALL BE INTERLOCKED WITH LIGHT SWITCH. PROVIDE RELAY IF REQUIRED.
- 4. EXHAUST FAN SHALL BE PROVIDED WITH VARIABLE SPEED CONTROLLER.

HO	IOT WATER CABINET UNIT HEATER SCHEDULE															
UNIT No.	TYPE	LOCATION		FAN (HIGH SPEED)					HOT WAT	TER COIL			RUNG	OUTS	BASIS OF DESIGN	REMARKS
			CFM	MOTORS	MOTOR AMPS	V/PH/HZ	CAPACITY MBH	EAT	GPM	EWT	LWT	ROWS	SUPPLY	RETURN		
CUH-1	EXPOSED WALL	FRONT ENTRANCE	330	1	1.7	115/1/60	14.2	60	1.5	180	160	1	3/4"	3/4"	MODINE MODEL CW SIZE 003	SEE NOTES
CUH-2	EXPOSED WALL	BACK ENTRANCE	330	1	1.7	115/1/60	14.2	60	1.5	180	160	1	3/4"	3/4"	MODINE MODEL CW SIZE 003	SEE NOTES
CUH-3	EXPOSED WALL	2ND FLR WOMENS RM	330	1	1.7	115/1/60	14.2	60	1.5	180	160	1	3/4"	3/4"	MODINE MODEL CW SIZE 003	SEE NOTES

1. PROVIDE UNIT MOUNTED THERMOSTAT AND MODULATING CONTROL VALVES.

ELECT	ELECTRIC UNIT HEATER SCHEDULE											
UNIT						ELECT	RICAL					
NO.	LOCATION	TYPE	CFM	МВН	KW	V	PH	HZ	BASIS OF DESIGN	NOTES		
EUH-1	TOILET RM	RECESSED	160	5.1	1.50	115	1	60	REZNOR MODEL EHC SIZE 1	1, 2		
EUH-2	HANDICAP TOILET RM	RECESSED	160	5.1	1.50	115	1	60	REZNOR MODEL EHC SIZE 1	1, 2		
EUH-3	MENS TOILET RM	RECESSED	160	5.1	1.50	115	1	60	REZNOR MODEL EHC SIZE 1	1, 2		

- 1. ALL UNIT HEATERS SHALL BE PROVIDED WITH FACTORY INSTALLED BUILT-IN THERMOSTAT AND DISCONNECT SWITCH.
- 2. PROVIDE RECESSED MOUNTING KIT.



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Planners

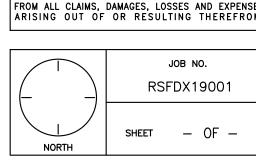
KRUEGER MODEL LMHS SEE NOTES

Engineers

 $\overline{\phantom{a}}$ COMPANY COMPANY ott street nj 08075 RATIONS

ALRSIDE

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NONE

ABBREVIATIONS	
	· <del> · · · · · · · · · · · · · · · · ·</del>
SYMBOL  AD  AFF  ARCH  ABV  AC  BFP  BF  BLDG  BLW  BWV	DESCRIPTION  AREA DRAIN  ABOVE FINISHED FLOOR  ARCHITECTURAL  ABOVE  ABOVE CEILING  BACKFLOW PREVENTER  BELOW FINISHED FLOOR  BUILDING  BELOW  BACKWATER VALVE
CLG CND CONN CONT CW	CEILING CONDENSATE NEUTRALIZING DEVICE CONNECTION CONTINUATION COLD WATER
DF DIA DFU DN	DRINKING FOUNTAIN DIAMETER DRAINAGE FIXTURE UNIT DOWN
EA EL EQ EWC (E) EXIST EX	EACH ELEVATION EQUAL ELECTRIC WATER COOLER EXISTING EXISTING EXISTING
FCO FD FF FLR FPWH FW	FLOOR CLEANOUT FLOOR DRAIN FINISHED FLOOR FLOOR FREEZE PROOF WALL HYDRANT FILTERED WATER
G GC GPM GW GCO	GAS GENERAL CONTRACTOR GALLONS PER MINUTE GREASE WASTE GRADE CLEANOUT
HB HW HWR	HOSE BIBB HOT WATER HOT WATER RETURN
INV IW I.E.	INVERT INDIRECT WASTE INVERT ELEVATION
LAV LDR	LAVATORY LEADER
MAX MGAP MGZV MIN MR MS MV	MAXIMUM MEDICAL GAS ALARM PANEL MEDICAL GAS ZONE VALVE BOX MINIMUM MOP RECEPTOR MOP SINK MIXING VALVE
NC NO NTS NIC	NORMALLY CLOSED NORMALLY OPEN NOT TO SCALE NOT IN CONTRACT
OFD	OVER FLOW ROOF DRAIN
PC PRV	PLUMBING CONTRACTOR PRESSURE REDUCING VALVE
RD REC RPZV (R) (RE) RWC S SH SK SP SS	ROOF DRAIN RECOVERY REDUCED PRESSURE ZONE VALVE REMOVE RELOCATE EXISTING RAIN WATER CONDUCTOR SANITARY SHOWER SINK SUMP PUMP SOIL STACK
SSK ST	SERVICE SINK STORM WATER

STORM WATER

SOFT WATER

TRAP PRIMER

VENT

WASTE

WITHOUT

VTR

WCO

TEMPERED WATER

VENT THRU ROOF

VENT STACK

WATER CLOSET

WALL HYDRANT

WASTE STACK

WALL CLEAN OUT

WATER SUPPLY FIXTURE UNITS

## GENERAL NOTES:

- PLUMBING SYMBOLS, ABBREVIATIONS, AND GENERAL NOTES INDICATED ON THIS DRAWING ARE TYPICAL PLUMBING DRAWINGS MAY NOT INDICATE ALL SYMBOLS AND ABBREVIATIONS SHOWN ON THIS DRAWING.
- CONTRACTOR SHALL COORDINATE ALL ADA FIXTURE LOCATIONS AND HEIGHTS WITH ARCHITECTURAL

## SAFETY REQUIREMENTS

- THE CONTRACTOR SHALL ABIDE AND ENFORCE ALL SAFETY RULES AND REGULATIONS SET FOURTH BY THE OWNER. ALL WORKERS AND SUPERVISORS MUST ATTAIN SAFETY TRAINING CLASSES (IF APPLICABLE). THE CONTRACTOR SHALL BE RESPONSE TO FOLLOW ALL VERBAL INSTRUCTIONS GIVEN BY OWNERS REPRESENTATIVES.
- THE PLUMBING CONTRACTOR SHALL BE RESPONSIBLE FOR ALL WARNING SIGNS, RIGGING, HANDLING AND PROTECTION OF MATERIAL. ALL EQUIPMENT MATERIALS SHALL BE NEW AND WITHOUT BLEMISHES OR DEFECTS. ALL EQUIPMENT INSTALLED SHALL BEAR THE LABEL OF THE

## **GENERAL REQUIREMENTS**

FOR HANDICAPPED.

- WHEN "PROVIDE" IS STATED, THIS SHALL MEAN FURNISH AND INSTALL.
- PLUMBING SYSTEMS SHALL NOT BE LOCATED IN ELEVATOR SHAFTS AND ELEVATOR PIT ROOMS EXCEPT FLOOR DRAINS, SUMP PUMPS AND SUMP PUMP DISCHARGE PIPING DEDICATED TO THE SHAFT AND LOCATED AT THE BASE OF THE SHAFT.
- PLUMBING SYSTEMS SHALL NOT BE LOCATED IN ELECTRICAL EQUIPMENT ROOMS, TRANSFORMER VAULT, ELECTRICAL CLOSETS, TELEX DATA ROOMS OR SIMILAR AREAS CONTAINING ELECTRICAL EQUIPMENT.
- DO NOT INSTALL PIPING OVER, AROUND, IN FRONT OF, BEHIND OR DIRECTLY BELOW ELECTRICAL EQUIPMENT, SWITCHES, TERMINALS OR SIMILAR ELECTRICAL EQUIPMENT. MAINTAIN 42" IN FRONT OF 480VAC EQUIPMENT. 36" IN FRONT OF 240VAC EQUIPMENT. CONFORM TO NC.
- NO PLUMBING SYSTEMS SHALL PENETRATE INTO OR PASS THROUGH STAIRWAYS UNLESS IT IS REQUIRED BY CODE FOR SERVICING THE STAIRWAY.
- INSTALL PIPING IN A CONCEALED MANNER, STRAIGHT, PLUMB AND DIRECT AS POSSIBLE. FORM RIGHT ANGLES PARALLEL WITH BUILDING WALLS. LOCATE GROUPS OF PIPES PARALLEL TO EACH OTHER. PIPE WILL BE LOCATED TO PERMIT ACCESS FOR SERVICE VALVES.
- CONCRETE PADS AND PITS FOR PLUMBING EQUIPMENT SHALL BE AS INDICATED ON THE STRUCTURAL AND ARCHITECTURAL PLANS.
- COORDINATE ALL BELOW GRADE PLUMBING PIPING WITH FOUNDATION ELEVATIONS AND SITE UTILITY INVERTS. VERIFY EXISTING ELEVATIONS AND INVERTS PRIOR TO CONSTRUCTION.
- PROVIDE PIPING PENETRATIONS WITH FIRE RATINGS EQUAL TO OR GREATER THAN, THE FIRE RATING OF THE WALL OR FLOOR PENETRATED. COORDINATE PIPE PENETRATIONS WITH CONCRETE CONSTRUCTION. PROVIDE CORE DRILLED PENETRATIONS AT ALL LOCATIONS WHERE CONCRETE OR MASONRY WALLS OR FLOORS HAVE BEEN CONSTRUCTED PRIOR TO PLUMBING PIPING INSTALLATION. CORING SIZES AND LOCATIONS SHALL BE APPROVED BY THE ARCHITECT/ENGINEER. EXTEND SLEEVES

2" ABOVE FLOOR SLAB IN ALL WET AREAS SUCH AS MECHANICAL ROOMS AND WASH AREA.

- PROVIDE FLUSH TYPE ACCESS DOORS OR PANELS FOR ALL VALVES OR APPARATUS LOCATED IN CHASES, WALLS, NON ACCESSIBLE CEILINGS OR FLOOR.
- PROVIDE CLEANOUTS FOR ALL HORIZONTAL STORM AND SANITARY PIPING AT EVERY CHANGE IN DIRECTION AND AT THE BASE OF ALL WASTE STACKS.
- PROVIDE PIPE IDENTIFICATION LABELS WITH DIRECTIONAL FLOW ARROWS ON ALL HORIZONTAL RUNS EVERY 20ft.
- SUPPORT ALL PIPING IN CONFORMANCE WITH SPECIFICATIONS AND THE PLUMBING CODE. SEE PLUMBING CODE FOR SPACING REQUIREMENTS. CONFORM TO THE BUILDING CODE AND MSS SP-127 FOR SEISMIC, WIND AND DYNAMIC FORCES.
- PROVIDE BACKFLOW PREVENTION DEVICES ON ALL WATER CONNECTIONS TO HVAC EQUIPMENT AND IRRIGATION SYSTEMS.
- PROVIDE WATER HAMMER ARRESTORS ON SUPPLY LINES TO FLUSH VALVES, SOLENOID VALVES AND AUTOMATIC VALVES, IN CONFORMANCE WITH PD AND LOCAL ORDINANCES. INSTALL IN ACCESSIBLE LOCATIONS FOR MAINTENANCE.
- PROVIDE SHUT-OFF VALVES WITH-IN 2ft. OF MAINS ON ALL BRANCH PIPING SERVING PLUMBING FIXTURES, EQUIPMENT OR CASEWORK, CONNECT SERVICE BRANCHES TO TOP OF MAINS.
- PROVIDE DRAIN VALVES AND HOSE CONNECTIONS AT ALL LOW POINTS IN SERVICE PIPING SYSTEM.
- SLOPE ALL PIPING IN CONFORMANCE WITH SPECIFICATIONS AND THE PLUMBING CODE.
- PROVIDE CLOSED CELL MOLDED VINYL INSULATION ON EXPOSED LAVATORY DRAINS AND SUPPLIES
- PROVIDE PIPING MATERIAL IN CONFORMANCE WITH THE SPECIFICATIONS AND THE PLUMBING CODE.
- TEST ALL PLUMBING SYSTEMS IN CONFORMANCE WITH THE SPECIFICATIONS AND THE PLUMBING CODE.
- DISINFECT DOMESTIC WATER SYSTEM IN CONFORMANCE WITH THE SPECIFICATIONS AND THE PLUMBING CODE.
- INSTALL PLUMBING FIXTURES AND EQUIPMENT IN CONFORMANCE WITH MANUFACTURER'S RECOMMENDATIONS AND THE PLUMBING CODE.
- PROVIDE PIPE SLEEVES THROUGH CONCRETE BEAMS WHERE REQUIRED, COORDINATE WITH THE ARCHITECTURAL AND STRUCTURAL DRAWINGS.
- 25. PROVIDE HEAT TRACING FOR PIPING LOCATED IN UNHEATED AREAS. PROVIDE 1" INSULATION AND JACKET AROUND ALL HEAT TRACING.
- PROVIDE RETENTION STRAPS ON ALL ABOVE GROUND CAST IRON NO-HUB FITTINGS AT CHANGE OF DIRECTION IN PIPES OF 5" AND LARGER AS REQUIRED BY CRISP 301

## GENERAL COMPLIANCE - NJ

DESIGN AND PERFORMANCE OF COMPONENTS AND METHODS SPECIFIED HEREIN SHALL COMPLY WITH THE LATEST ADOPTED VERSIONS OF THE STATE CODES, STANDARDS, AND MANUFACTURER'S RECOMMENDATIONS OF THE ENTITIES LISTED BELOW BUT NOT LIMITED TO:

2018 INTERNATIONAL BUILDING CODE - NJ EDITION

2018 INTERNATIONAL FUEL GAS CODE 2018 INTERNATIONAL ENERGY CONSERVATION CODE (LOW-RISE RESIDENTIAL

AMERICAN SÓCIETY OF HEATING, REFRIGERATION AND AIR CONDITIONING ASHRAE

**ENGINEERS** AMERICAN SOCIETY FOR TESTING MATERIALS AMERICAN NATIONAL STANDARDS INSTITUTE UNDERWRITER'S LABORATORIES, INC.

NATIONAL FIRE PROTECTION ASSOCIATION SHEET METAL AND AIR CONDITIONING CONTRACTOR'S NATIONAL ASSOCIATION AMERICAN SOCIETY OF MECHANICAL ENGINEERS

AIR MOVING AND CONDITIONING ASSOCIATION AMERICAN REFRIGERATION INSTITUTE MANUFACTURER'S STANDARDIZATION SOCIETY OF THE VALVE AND

FITTING INDUSTRY NEW JERSEY ADMINISTRATIVE CODE

2017 NATIONAL ELECTRICAL CODE 2018 NATIONAL STANDARD PLUMBING CODE

FACTORY MUTUAL (IF REQUIRED)

## PROJECT COORDINATION

- THE PLUMBING CONTRACTOR IS RESPONSIBLE FOR REVIEWING AND COORDINATING ALL WORK WITH ALL TRADES.
- COORDINATE THE INSTALLATION OF ALL WORK WITH THE LOCAL UTILITIES AND OTHER BUILDING TRADES. THE CONTRACTOR SHALL INFORM THE OWNER IN WRITING WHEN HE INTENDS TO SCHEDULE WORK WHICH INVOLVES EXISTING SYSTEMS AND/OR UTILITIES. NOTICE SHALL BE GIVEN ONE WEEK PRIOR TO THE ANTICIPATED WORK. THE CONTRACTOR MUST RECEIVE
- APPROVAL FROM THE OWNER PRIOR TO PERFORMING SUCH WORK. PLUMBING WORK SHALL BE DONE AT SUCH A TIME AND MANNER THAT WILL LEAST INTERFERE WITH THE MAINTENANCE AND OPERATION OF THE SITE AND OR BUILDING ACTIVITIES. PROVISIONS SHALL BE MADE TO PERMIT THE USE OF ALL EXISTING PIPING SYSTEMS AT ALL TIMES. PROVIDE TEMPORARY FACILITIES TO SECURE THESE CONDITIONS AND REMOVE SUCH TEMPORARY
- FACILITIES WHEN NO LONGER REQUIRED. COORDINATE PLUMBING SYSTEM SHUT DOWN REQUIREMENTS WITH OWNER.
- WHERE SHUTDOWN PERIODS CANNOT BE OF A DURATION TO ACCOMMODATE THE NEW WORK. THE CONTRACTOR SHALL PERFORM THE WORK IN A SERIES OF PRE-PLANNED STAGES OF MINIMAL ALLOWABLE SHUTDOWN PERIODS. PROVIDE TEMPORARY FACILITIES TO ALLOW REUSE OF
- SERVICES BETWEEN WORKING STAGES.
  THE CONTRACTOR SHALL FURNISH A SCHEDULE INDICATING HIS PORTION OF TIME, WITHIN OVER ALL SCHEDULE, REQUIRED TO COMPLETE THE WORK IN CONJUNCTION WITH ALL TRADES.
- DURING THE CONSTRUCTION OF THIS PROJECT, THE CONTRACTOR SHALL COORDINATE WITH BUILDING REPRESENTATIVES THE TEMPORARY SHUTDOWN OR CAPPING OF ANY PLUMBING
- SYSTEMS.
  CONTRACTOR SHALL PROVIDE THE LABOR TO RECEIVE, UNLOAD, STORE, PROTECT AND TRANSFER TO POINT OF INSTALLATION OWNER FURNISHED ITEMS.
- CONTRACTOR SHALL BE RESPONSIBLE FOR ALL SLAB AND WALL OPENINGS, BEAM PENETRATIONS AND CORING DRILLING AS IT RELATES TO HIS WORK. PLUMBING CONTRACTOR SHALL SUBMIT SIZE AND LOCATION TO THE STRUCTURAL ENGINEER FOR REVIEW AND APPROVAL.

## REFERENCED STANDARDS

- ALL PLUMBING MATERIAL, FIXTURES AND EQUIPMENT SHALL BE LISTED BY THE FOLLOWING APPLICABLE STANDARDS.
- AMERICAN NATIONAL STANDARDS INSTITUTE (ANSI)
- AMERICAN SOCIETY OF MECHANICAL ENGINEERS (AMSE)
- AMERICAN SOCIETY FOR TESTING MATERIAL (ASTM) AMERICAN WATER WORKS ASSOCIATION (AWWA)
- CAST IRON SOIL PIPE (CISPI)
- MANUFACTURING STANDARDIZATION SOCIETY (MSS)
- NATIONAL FIRE ASSOCIATION (NFPA)
- NATIONAL SANITATION FOUNDATION (NSF) UNDERWRITERS LABORATORIES (UL)

## PROTECTION OF WORK

EFFECTIVELY PROTECT ALL MATERIAL AND EQUIPMENT FROM ENVIRONMENTAL AND PHYSICAL DAMAGE UNTIL FINAL ACCEPTANCE. CLOSE AND PROTECT ALL OPENINGS DURING CONSTRUCTION. PROVIDE NEW MATERIALS AND EQUIPMENT TO REPLACE DAMAGED ITEMS AT NO ADDITIONAL LOST

## REFERENCED MANUFACTURERS NOTE

REFERENCED MANUFACTURES DENOTES A MINIMUM ACCEPTABLE LEVEL OF QUALITY AND IS NOT INTENDED TO PREVENT SUBMISSION OF EQUIVALENT EQUIPMENT.

## PLENUM RATED MATERIAL NOTE:

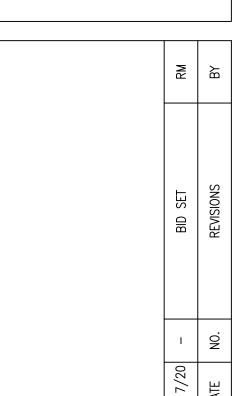
ALL PLUMBING WORK BEING INSTALLED IN PLENUM SPACES MUST BE INSTALLED WITH PLENUM RATED MATERIAL. COORDINATE WITH MECHANICAL SYSTEMS TO LOCATE ALL PLENUM RATED

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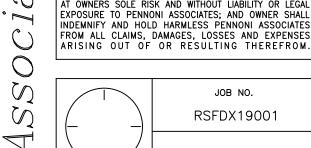


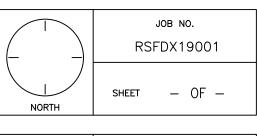
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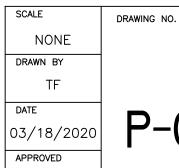
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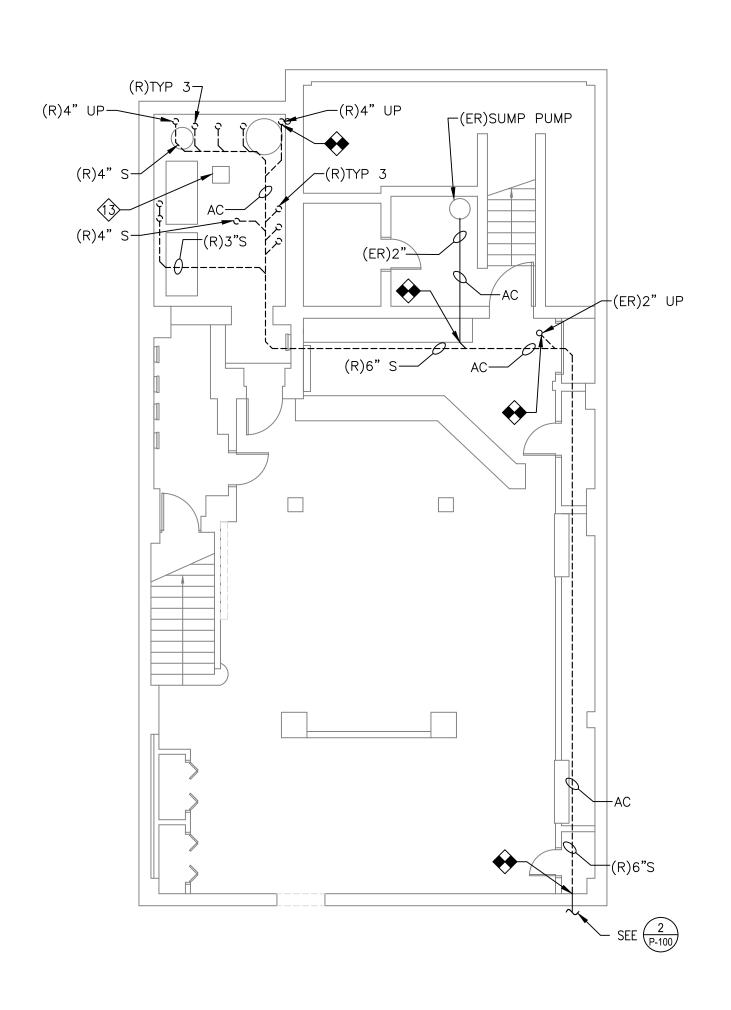
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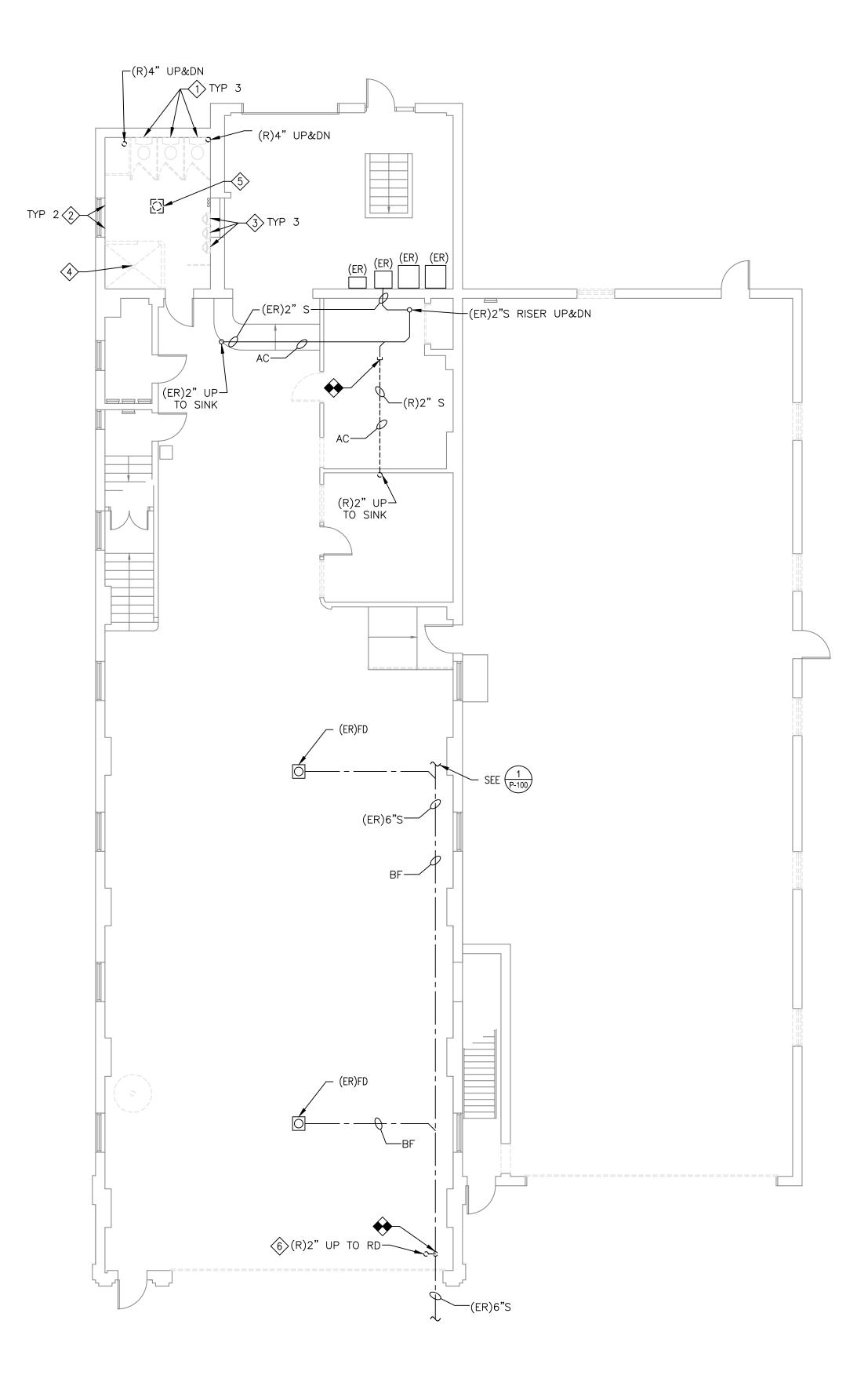




KEYNOTE



1 BASEMENT PLAN - DEMOLITION
P-100 SCALE: 1/8"=1'-0"





## **DEMOLITION NOTES:**

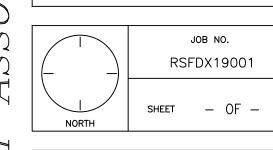
- 1 REMOVE TOILET
- 2 REMOVE LAVATORY
- (3) REMOVE URINAL
- 4 REMOVE SHOWER HEAD PIPING, VALVES, AND DRAIN
- (5) REMOVE FLOOR DRAIN
- (6) REMOVE PIPE UP TO ROOF DRAIN. PREPARE ROOF DRAIN FOR NEW CONNECTION.
- (7) REMOVE SINK
- (8) NOTE NOT USED
- (9) NOTE NOT USED
- TYPICAL FOR ALL REMOVED PLUMBING FIXTURES. REMOVE ALL SANITARY, VENT, WASTE, WATER, OR GAS PIPING BACK TO ACTIVE MAIN AND CAP
- REMOVE ALL ABANDONED GAS, VENT, WASTE, AND WATER PIPING TO A POINT BELOW FINISHED FLOOR OR BEHIND FINISHED WALL AND CAP.
- REMOVE ROOF DRAIN. PREPARE PIPE TO CONNECT NEW ROOF DRAIN.
- EXISTING FLOOR GRATE, SUMP PIT, AND EXPOSED INDIRECT WASTE LINE TO REMAIN. CONTRACTOR SHALL PROTECT ALL INDIRECT WASTE LINES DISCHARGING INTO FLOOR DRAIN FROM DAMAGE AND REPLACE IF DAMAGED.
- (4) NOTE NOT USED
- 15 NOTE NOT USED
- (6) DISCONNECT WATER SUPPLY TO KITCHEN ABOVE.



Engineers

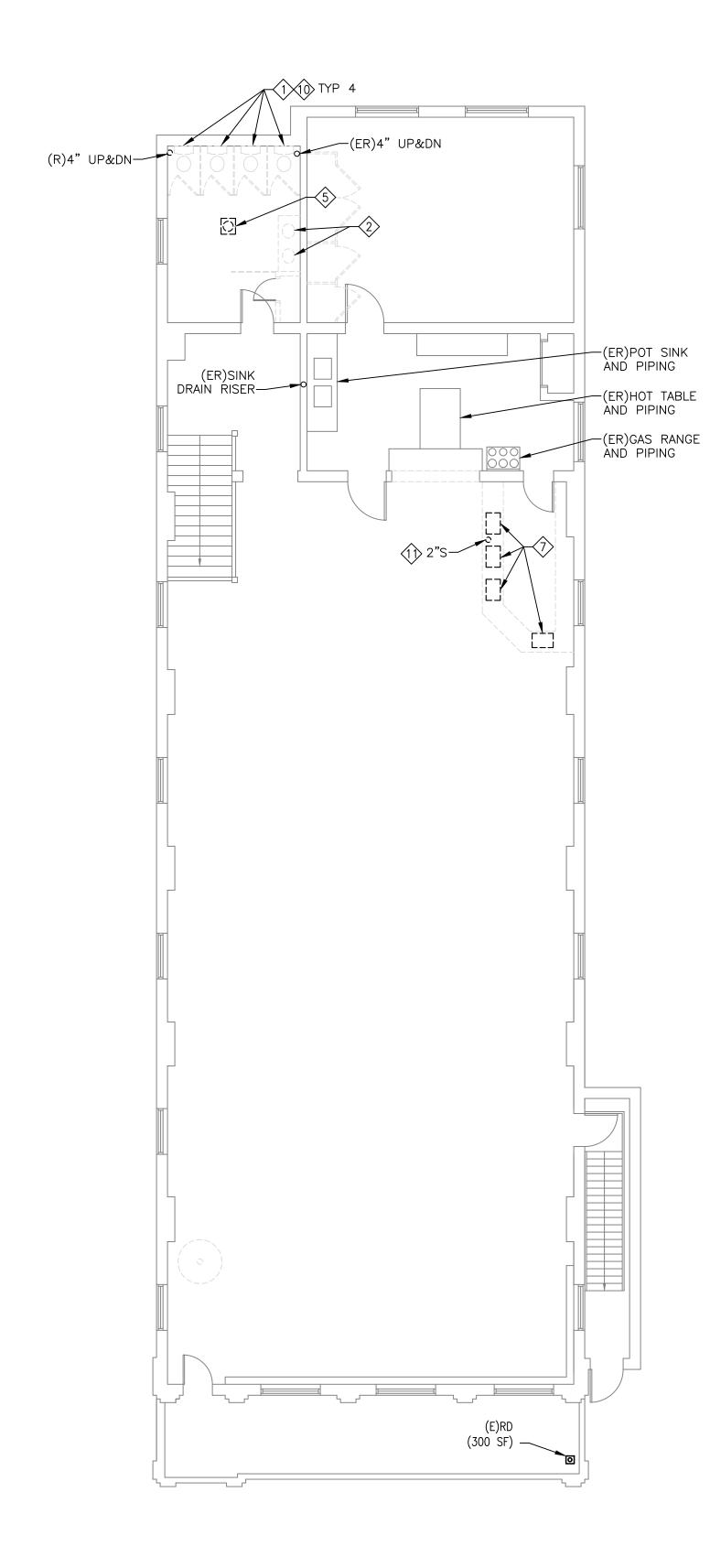
ALTERATIONS RIVERSIDE FIRE COMPANY PLUMBING PLANS -STORM, SANITARY, V RIVERSIDE FIRE CC

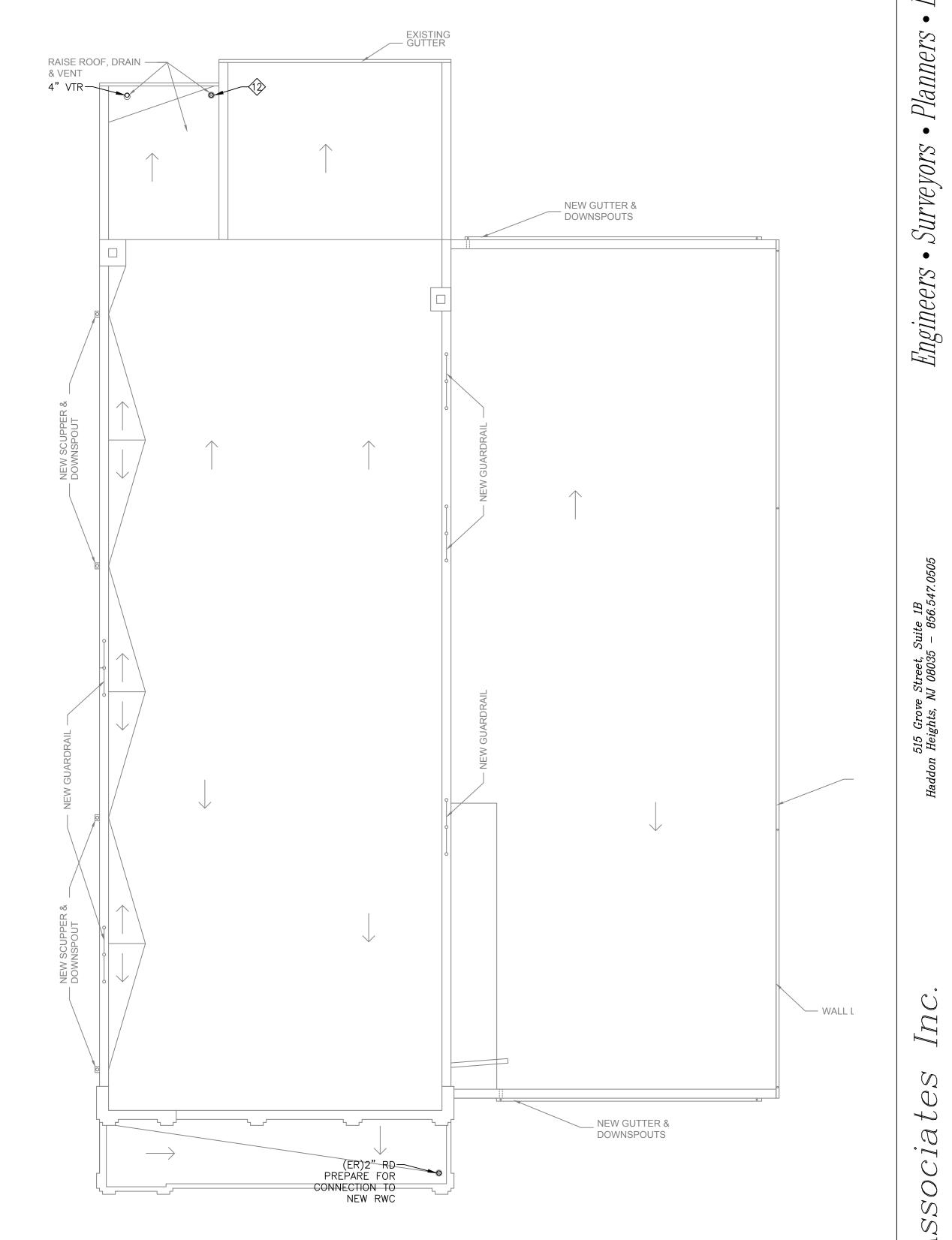
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DRAWING NO. AS NOTED

- 1 REMOVE TOILET
- 2 REMOVE LAVATORY
- 3 REMOVE URINAL
- 4 REMOVE SHOWER HEAD PIPING, VALVES, AND DRAIN
- 5 REMOVE FLOOR DRAIN
- 6 REMOVE ICE MACHINE, WATER AND WASTE PIPE
- ⟨7⟩ REMOVE SINK
- (8) NOTE NOT USED
- 9 NOTE NOT USED
- 10 NOTE NOT USED
- REMOVE ALL ABANDONED GAS, VENT, WASTE, AND WATER PIPING TO A POINT BELOW FINISHED FLOOR OR BEHIND FINISHED WALL AND CAP.
- REMOVE ROOF DRAIN. PREPARE PIPE TO CONNECT NEW ROOF DRAIN.
- EXISTING FLOOR GRATE, SUMP PIT, AND EXPOSED INDIRECT WASTE LINE TO REMAIN. CONTRACTOR SHALL PROTECT ALL INDIRECT WASTE LINES DISCHARGING INTO FLOOR DRAIN FROM DAMAGE AND REPLACE IF DAMAGED.
- REMOVE GAS WATER HEATER, EXPANSION TANK, INTAKE AND EXHAUST VENT.
- 15 NOTE NOT USED.
- (6) DISCONNECT WATER SUPPLY TO KITCHEN ABOVE







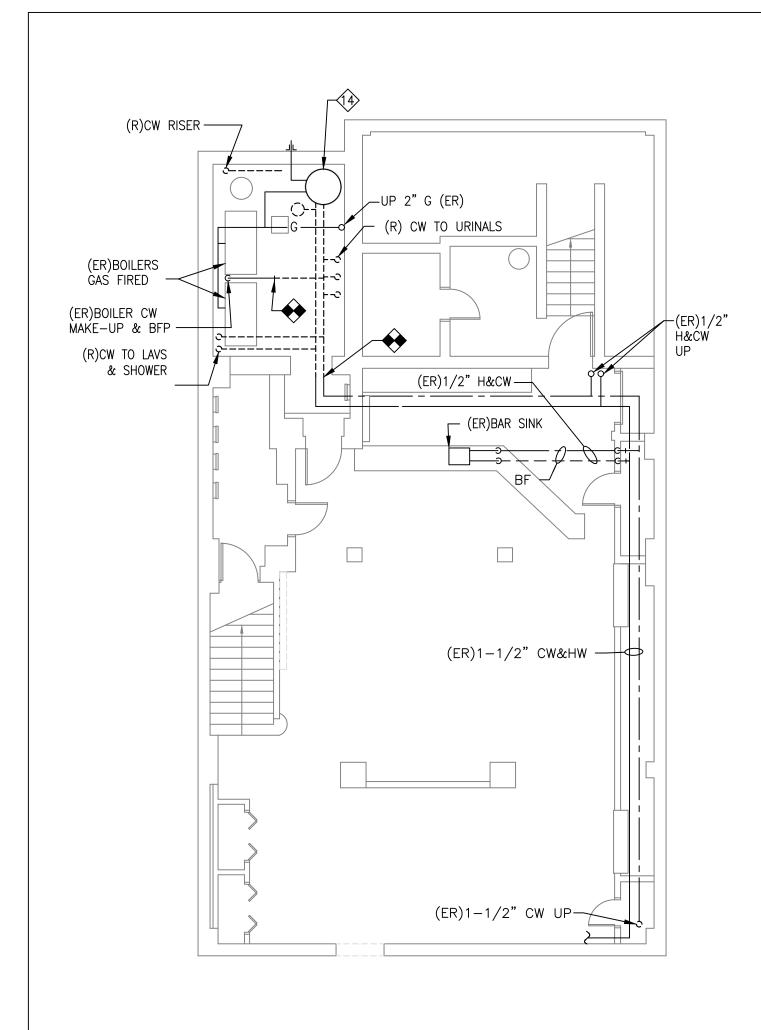


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JOB NO. RSFDX19001 SHEET - OF -NORTH DRAWING NO. AS NOTED

ALTERATIONS RIVERSIDE FIRE COMPANY

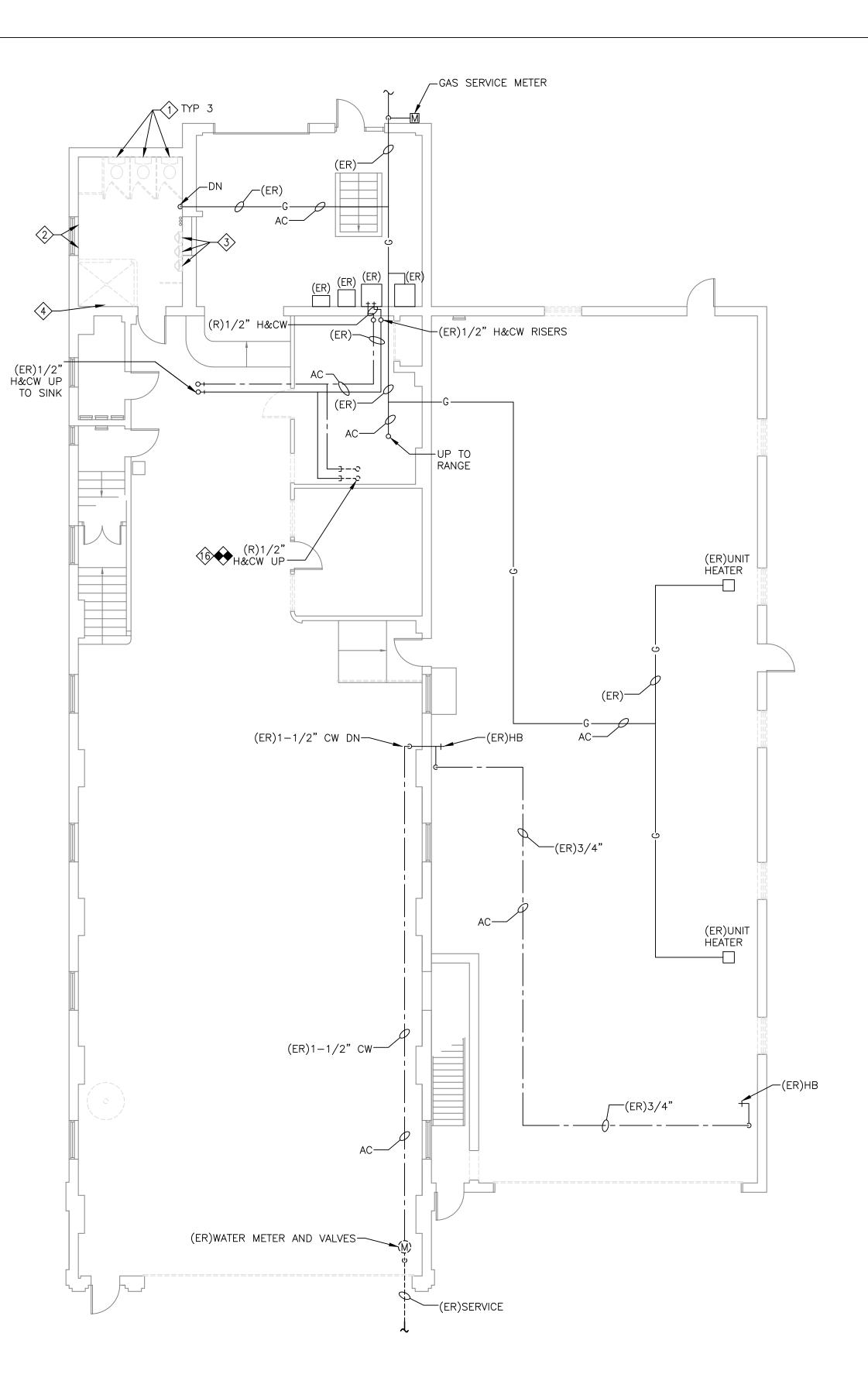
APPROVED

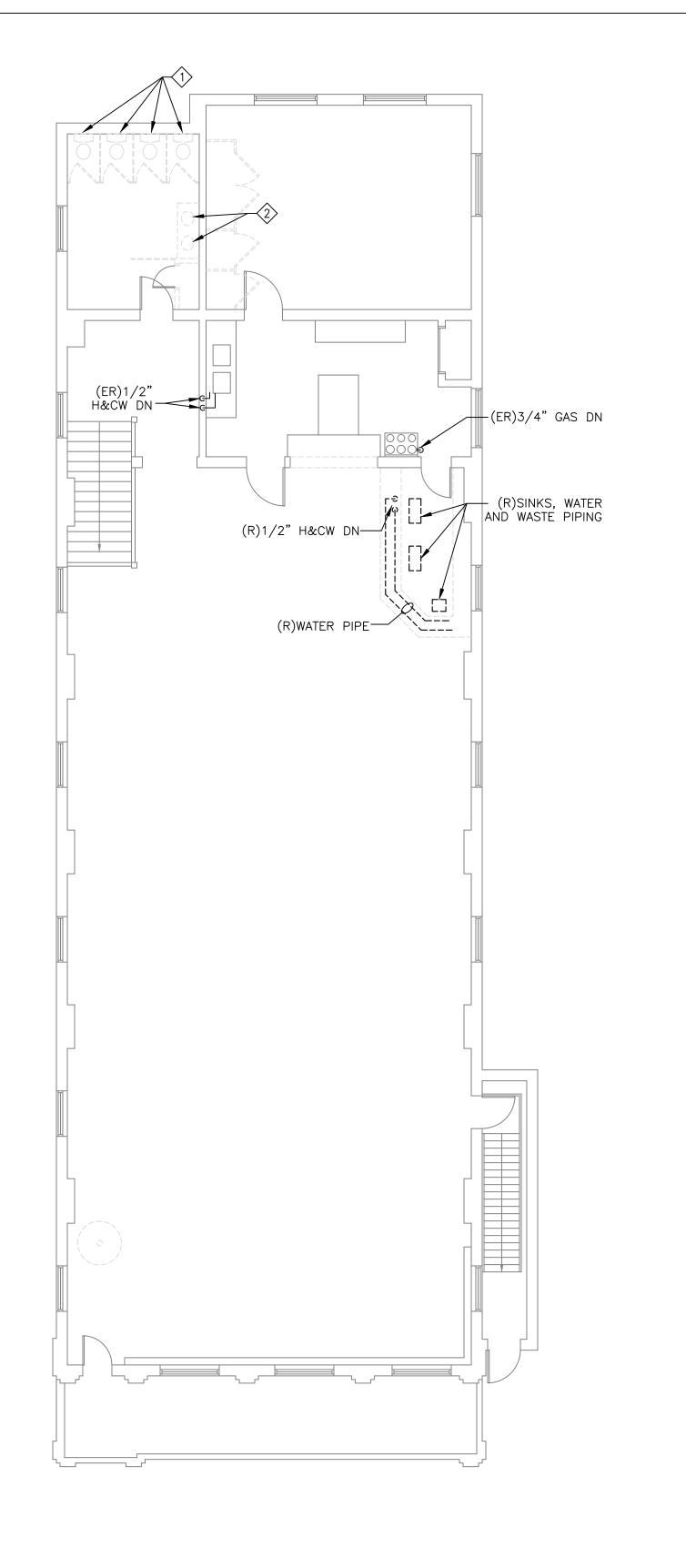




## **DEMOLITION NOTES:**

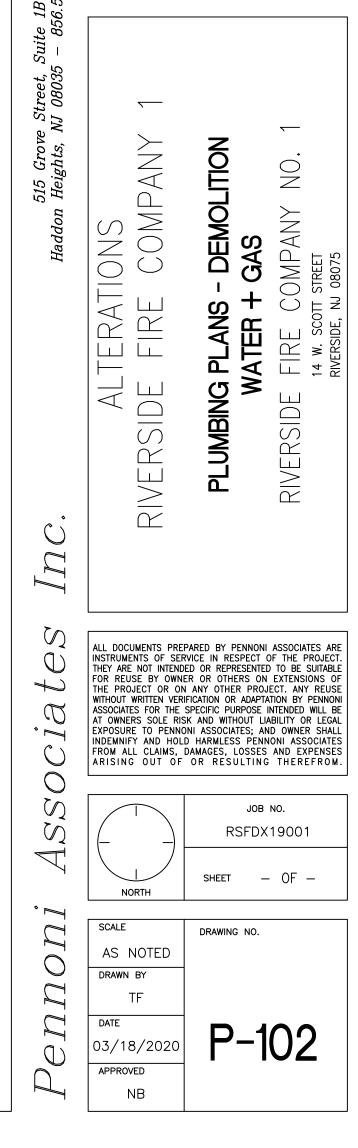
- 1 REMOVE TOILET
- 2 REMOVE LAVATORY
- 3 REMOVE URINAL
- 4 REMOVE SHOWER HEAD PIPING, VALVES, AND DRAIN
- (5) REMOVE FLOOR DRAIN 6 REMOVE ICE MACHINE, WATER AND WASTE PIPE
- (7) REMOVE SINK
- (8) NOTE NOT USED (9) NOTE NOT USED
- √0 NOTE NOT USED
- REMOVE ALL ABANDONED GAS, VENT, WASTE, AND WATER PIPING TO A POINT BELOW FINISHED FLOOR OR BEHIND FINISHED WALL AND CAP.
- (2) REMOVE ROOF DRAIN. PREPARE PIPE TO CONNECT NEW ROOF DRAIN.
- EXISTING FLOOR GRATE, SUMP PIT, AND EXPOSED INDIRECT WASTE LINE TO REMAIN. CONTRACTOR SHALL PROTECT ALL INDIRECT WASTE LINES DISCHARGING INTO FLOOR DRAIN FROM DAMAGE AND REPLACE IF DAMAGED.
- REMOVE ALL WATER PIPING IN THE MECHANICAL ROOM UP TO THE WATER HEATER. DISCONNECT WATER HEATER PIPING AND PREPARE WATER HEATER FOR CONNECTIONS TO NEW WATER PIPING SYSTEMS.
- (15) NOTE NOT USED.
- DISCONNECT WATER SUPPLY TO KITCHEN ABOVE





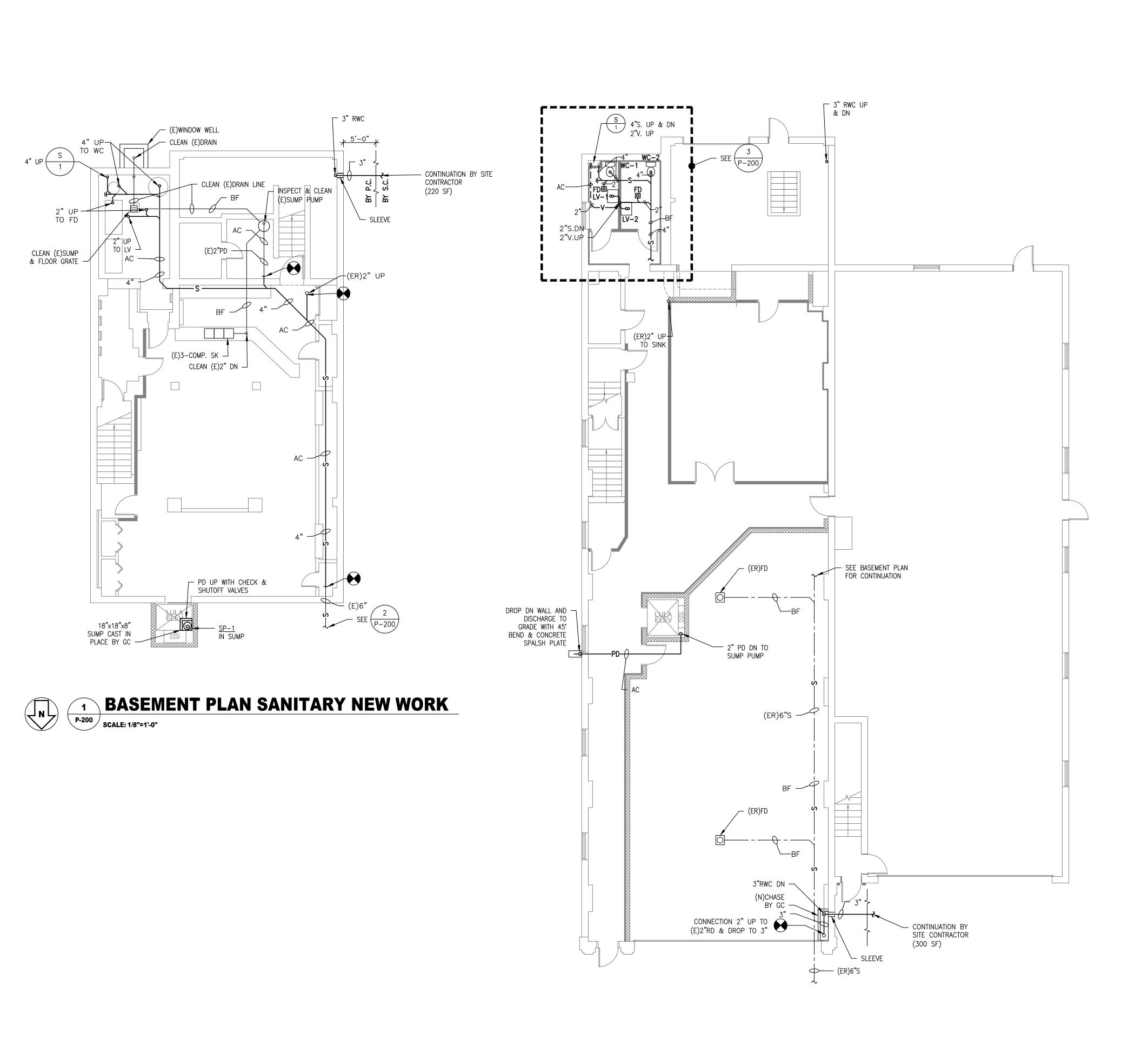


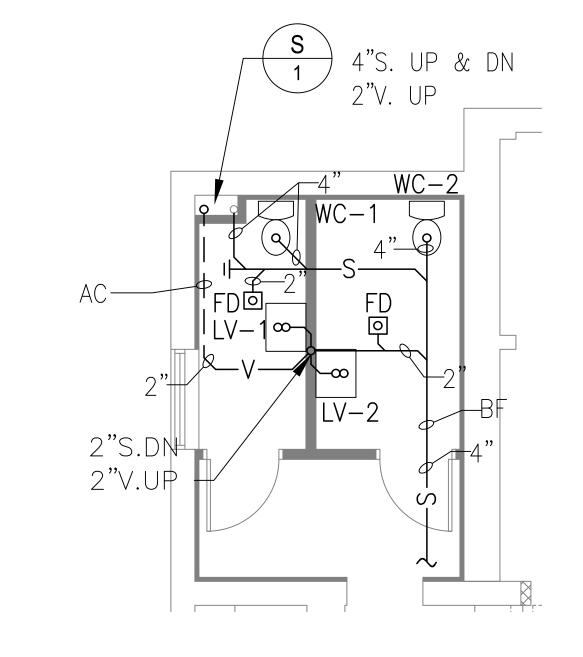




Landscape

Engineers





3 PARTIAL PLAN - NEW WORK
SCALE: 1/4"=1'-0"

COMPANY PLUMBING PLANS - NEW WO Storm, Sanitary, Waste + Riverside fire company i ALTERATION RIVERSIDE FIRE CO

/Pennoni/

Planners

Engineers

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

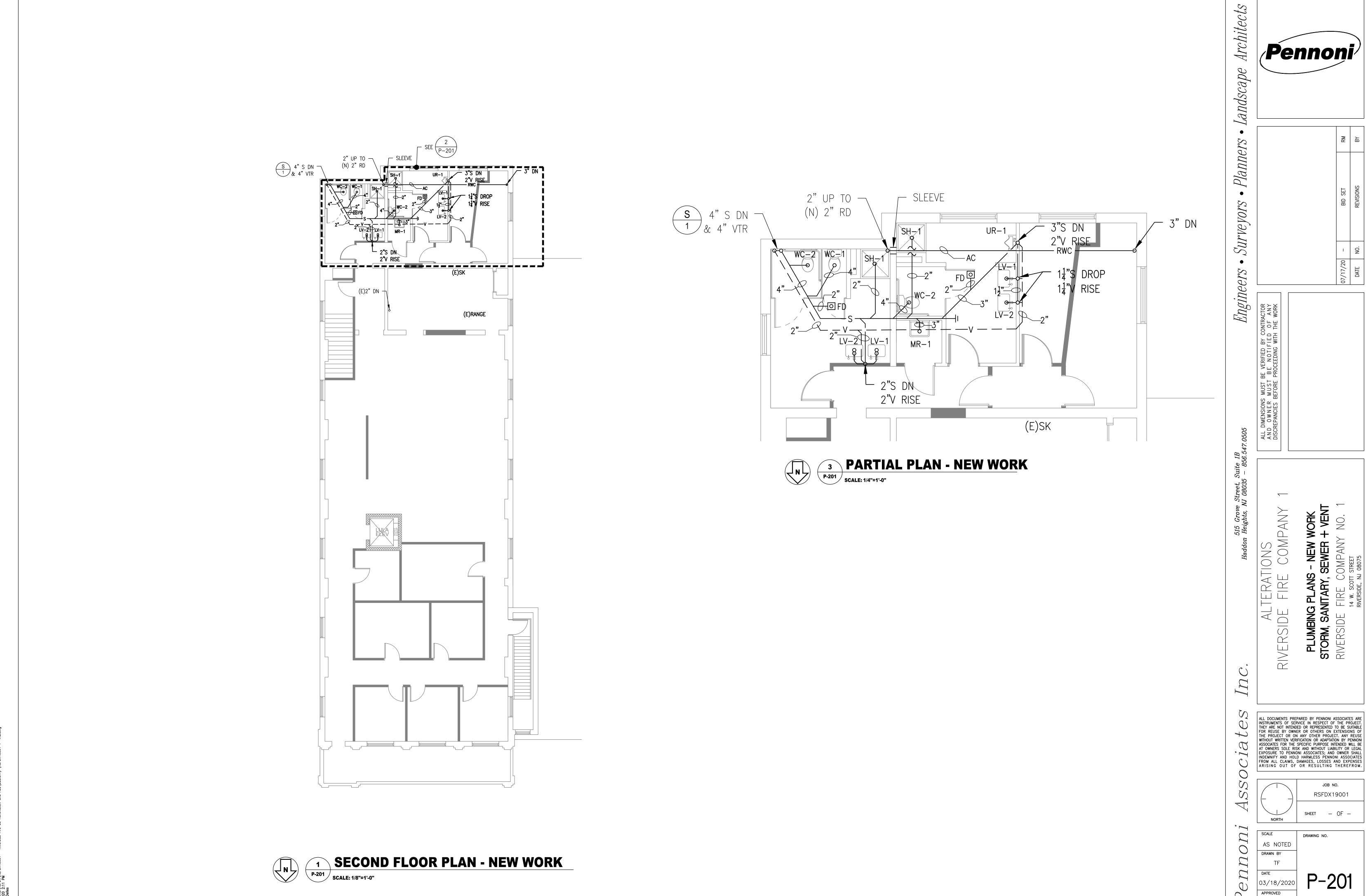
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NORTH

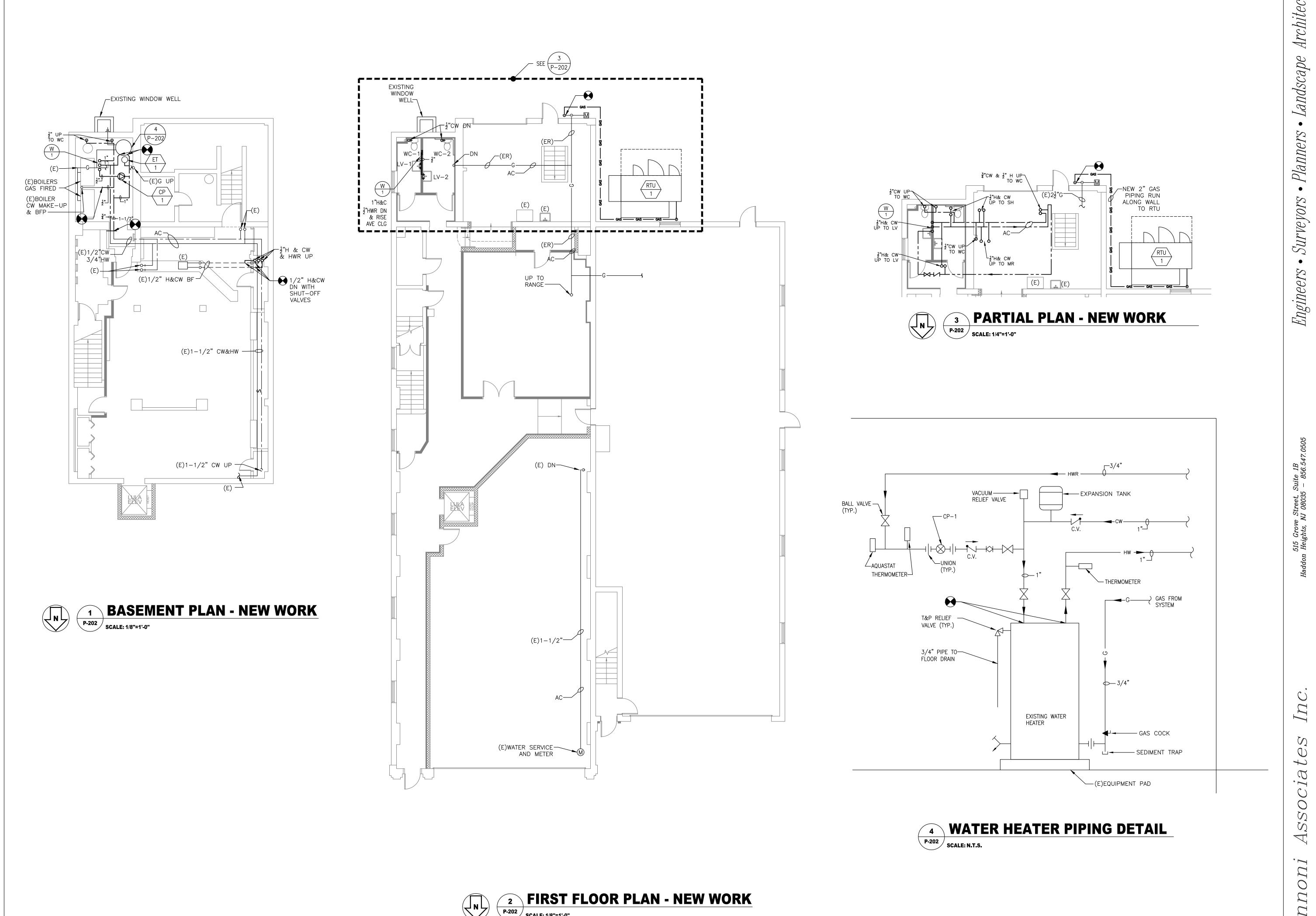
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COMPANY

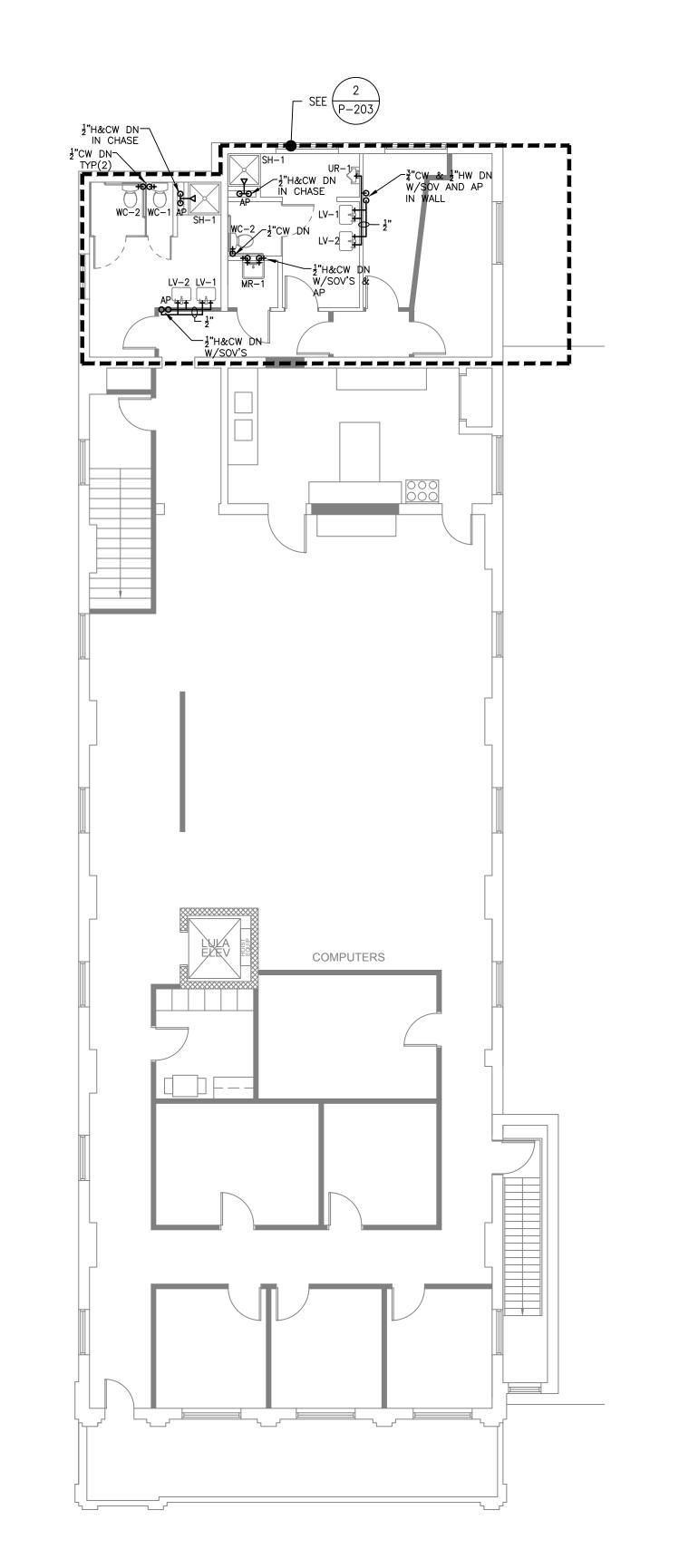
ALTERATION RIVERSIDE FIRE

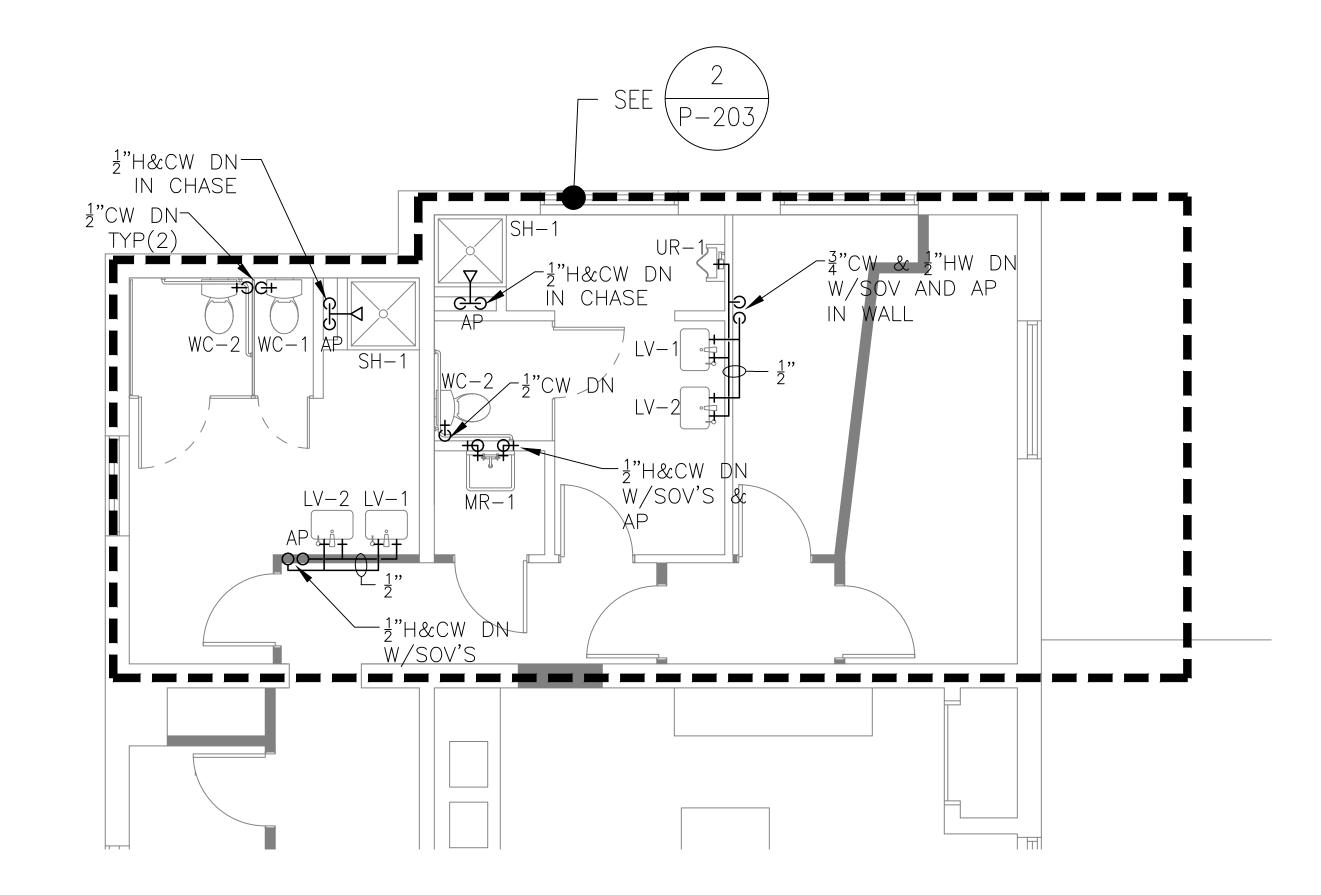
JOB NO. NORTH

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RSFDX19001 SHEET - OF -DRAWING NO. NONE







NORTH DRAWING NO. NONE

**SECOND FLOOR PLAN - NEW WORK** P-203

SCALE: 1/8"=1'-0"

Architects

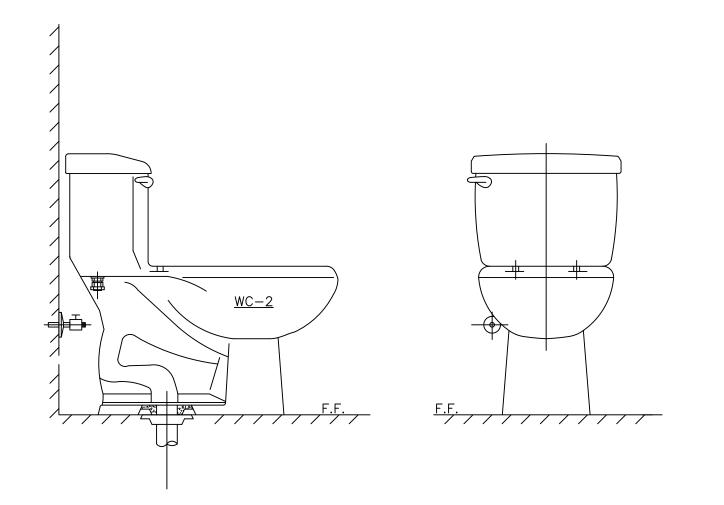
Engineers

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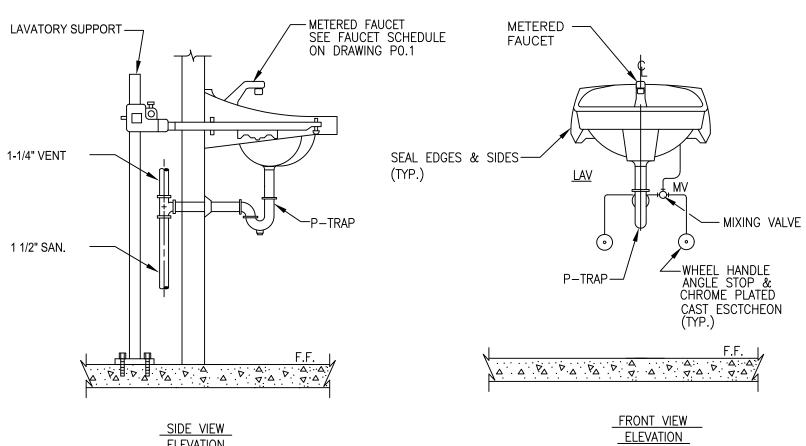
ALTERATIONS RIVERSIDE FIRE COMPANY

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DOR-MOUNTED WATER CLOSET FIXTURE DETAIL

INSTALL ADA COMPLIANT



SIDE VIEW ELEVATION

\_AVATORY (P-300) SCALE: NONE

- 1. PLUMBING CONTRACTOR SHALL COORDINATE LOCATIONS OF ALL ADA COMPLIANT FIXTURES WITH ARCHITECTURAL DRAWINGS.
- 2. ALL ADA COMPLIANT LAVATORY TO BE INSTALLED WITH RIM OF BOWL A MAX. OF 34" FROM FINISHED FLOOR. 3. CONTRACTOR SHALL INSTALL A "UNDER THE COUNTER" THERMOSTATIC

| | INSTALL ADA COMPLIANT

TEMPERING VALVE (MV) AT ALL LAVATORY LOCATIONS. MANUFACTURER SHALL BE: WATTS CO. - #LFUSG-B OR APPROVED EQUAL.

URINAL FIXTURE DETAIL P-300 | SCALE: NONE

-SHOWER HEADS

S.S. SHROUD —

BALANCING VALVE

~8" IPS CONNECTIONS SEE NOTE 1&2.

HYDROPANEL II --

<u>SHOWER</u>

-CHROME PLATED LEVER STYLE HANDLE

-SOAP DISH

| | INSTALL ADA COMPLIANT

←TILED SURROUND SEE ARCH. DWG'S

1. PLUMBING CONTRACTOR SHALL COORDINATE LOCATIONS OF ALL ADA COMPLIANT FIXTURES WITH ARCHITECTURAL DRAWINGS.

2. ALL ADA COMPLIANT URINALS SHALL BE INSTALLED WITH A MAXIMUM DISTANCE OF 17" FROM LIP OF URINAL TO FINISHED FLOOR.

1. PLUMBING CONTRACTOR SHALL COORDINATE LOCATIONS OF ALL ADA COMPLIANT

P-300 SCALE: NONE

FIXTURES WITH ARCHITECTURAL DRAWINGS. 2. ALL ADA COMPLIANT WATER CLOSETS TO BE INSTALLED WITH SEAT HEIGHT SET AT 17" TO 19" FROM FINISHED FLOOR.

1 1/4" VENT— COUNTERTOPL S.S. SINK -STRAINER P-TRAP -CAST SETSCREW ESCUTCHEON -ESCUTCHEON —— 1 1/2" SANITARY WASTE

SHOWER UNIT DETAIL P-300 SCALE: NONE INSTALL ADA COMPLIANT

NOTES:

1. PRESSURE BALANCING VALVE TO CONFORM TO ASSE 1016 OR CSA B125.

2. WATER TEMPERATURE NOT TO EXCEED 120° F. FIELD ADJUST IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.

(P-300) SCALE: NONE

FRONT VIEW

**ELEVATION** 

1. ELKAY #LR2219C SINK PACKAGE COMES WITH A HI-ARC TWO HANDLE FAUCET #LK406GN04T4C & LK500 DRAIN.

2. CONTRACTOR SHALL INSTALL A "UNDER THE COUNTER" THERMOSTATIC TEMPERING VALVE (MV) AT ALL SINK LOCATIONS.

MANUFACTURER SHALL BE: LAWLER VALVE CO. #516 OR APPROVED EQUAL.

EACH CLEVIS HANGER

1. HANGERS AND ANCHORS SHALL BE SECURELY ATTACHED TO THE BUILDING CONSTRUCTION. CONTRACTOR TO COMPLY TO ALL HANGER AND SUPPORT REQUIREMENTS AS STATED IN THE 2015 NATIONAL PLUMBING CODE; CHAPTER 8 "HANGERS AND SUPPORT".

2. GALVANIZED METAL SHIELDS SHALL BE APPLIED BETWEEN HANGER OR SUPPORT AND THE PIPE INSULATION. SHIELDS SHALL BE FORMED TO FIT THE INSULATION AND SHALL EXTEND UP TO THE CENTERLINE OF THE PIPE AND THE LENGTH SPECIFIED FOR THE INSULATION HANGER INSERT LESS 4" TO ALLOW FOR VAPOR RETARDING BUTT JOINTS ON EACH SIDE OF THE SHIELDS.

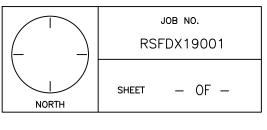
ALL-THREAD ROD (SEE SCHEDULE) —#13 U.S. GAUGE x %" - ADJUSTABLE CLEVIS INSTALL A SECTION OF CALCIUM SILICATE INSULATION SHEET METAL SHIELD UNDER INSULATION EQUAL IN THICKNESS TO PIPE COVERING 12" ALONG AT

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DETAIL

SCALE DRAWING NO. AS NOTED

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Architects

Landscape

Planners

Surveyors

Engineers

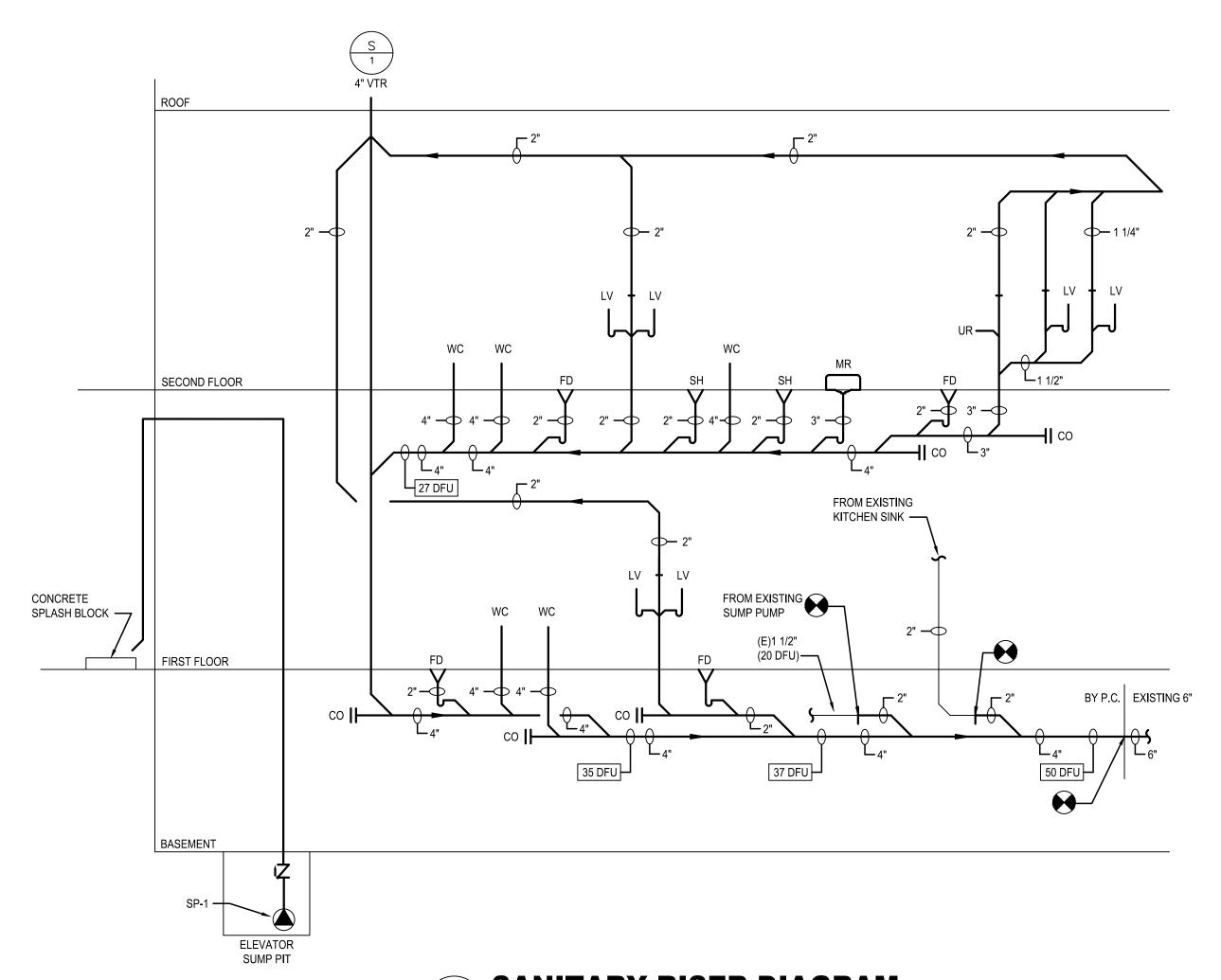
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INSTALL ADA COMPLIANT

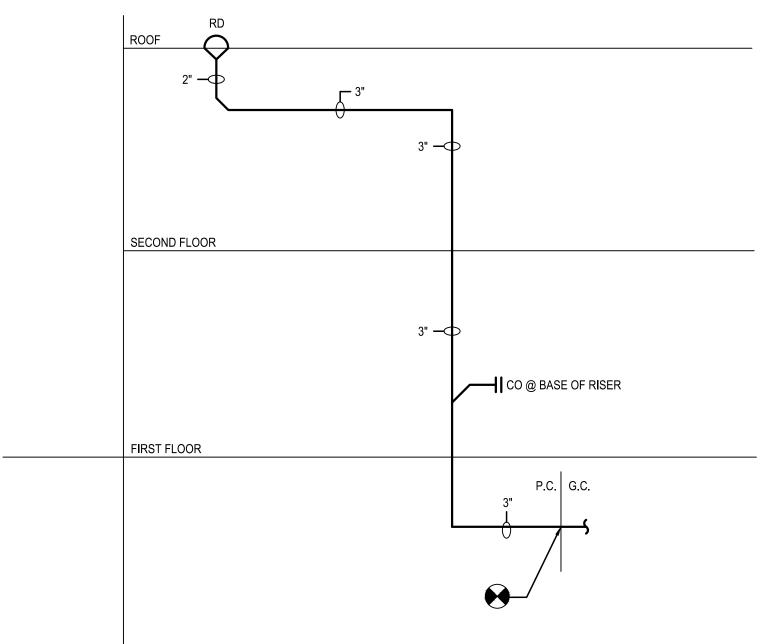
<u>SIDE VIEW</u>

**ELEVATION** 

SHOWER DRAIN - RECEPTOR (SEE ARCHITECTURAL DWG'S FOR MORE INFORMATION) —1~8" P−TRAP AND WASTE



SECOND FLOOR 13.5 WSFU 10 GPM CW 10.5 WSFU 8 GPM HW LOCATE VALVES ON FIRST FLOOR WITH ACCESS PANEL FIRST FLOOR 1/2" — 1/2" — 31 WSFU 24 GPM 31 DFU 24 GPM TO BOILERS > 4 SEE WATER HEATER — PIPING DETAIL BASEMENT



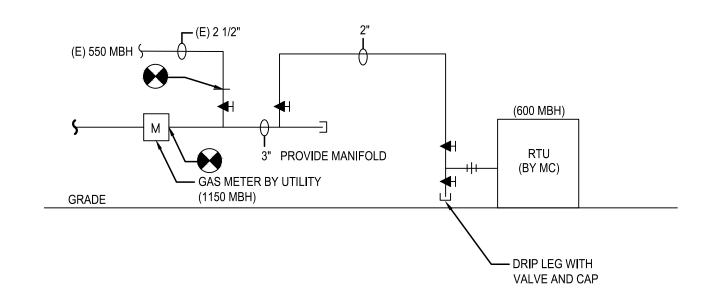
### 3 STORM WATER RISER DIAGRAM $\setminus$ P-301 /

SCALE: NONE NOTES:

BASEMENT

1. RISER DIAGRAM TYPICAL FOR (1) NEW ROOF DRAIN AND (1) EXISTING

# **DOMESTIC WATER RISER DIAGRAM**



### **NATURAL GAS RISER DIAGRAM** SCALE: NONE

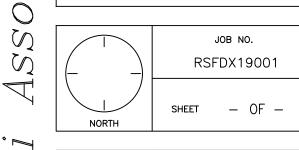
## GAS PIPE SIZING NOTE:

1. BASED ON TABLE 402.4(1) 2015 IFG. TOTAL DEVELOPED PIPE LENGTH 125 FT PRESSURE DROP 0.3" WC 0.60 SPECIFIC GRAVITY INLET PRESSURE LESS THAN 2 PSI.

## GAS REGULATOR NOTES:

- PROVIDE ALL REQUIRED GAS PRESSURE REGULATORS NECESSARY TO MEET GAS FIRED EQUIPMENT MANUFACTURER'S RATED INLET PRESSURE REQUIREMENTS.
- 2. WHERE INLET GAS PRESSURE CAN EXCEED 14" WC AT ANY TIME PROVIDE A 100% LOCK-UP GAS PRESSURE REGULATOR ANSI Z21.80 IN THE GAS SUPPLY LINE. ADJUST INLET PRESSURE TO GAS FIRED EQUIPMENT MANUFACTURER'S RECOMMENDATIONS.

ALT



DRAWING NO. AS NOTED

**SANITARY RISER DIAGRAM** P-301 SCALE: NONE NOTES: 1. ALL SANITARY PIPING TO BE SLOPED AT 1/8" PER 1'-00".

Planners

*Pennoņi/* 

Landscape

Engineers

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RIVERSIDE

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ALL MANUFACTURERS AND MODELS ARE BASIS OF DESIGN PRODUCTS ONLY . SIMILAR PRODUCTS AND MANUFACTURERS ARE ACCEPABLE WHEN OF EQUAL PERFORMANCE AND QUALITY.

FIXTUR	RES				ROUGH	INS			SUPPORTS, CARRIERS	ACCESSORIES AND OR NOTES
NO.	DESCRIPTION	MANUFACTURER	MODEL NO.	COLOR	DRAIN	VENT	CW	HW	MFR & MODEL NO.	SUPPLIES, DRAINS, TRAPS, TOILET SEATS ETC.
WC-1	WATER CLOSET	AMERICAN STANDARD	2462.016 CADET ELONGATED PRESSURE ASSISTED	WHITE	4"	2"	1/2"	-	FLOOR MOUNT	VITREOUS CHINA WATER CLOSET W/#5901.100 OPEN FRONT SEAT; FLUSHOMETER TANK.
WC-2	WATER CLOSET	AMERICAN STANDARD	2467.016 CADET RIGHT HEIGHT ELONGATED PRESSURE ASSISTED	WHITE	4"	2"	1/2"	_	FLOOR MOUNT	VITREOUS CHINA WATER CLOSET W/#5901.100 OPEN FRONT SEAT; FLUSHOMETER TANK.
UR	URINAL	AMERICAN STANDARD	6590.001EC — WASHBROOK FLO WISE WITH EVER CLEAN — LOW CONSUMPTION	WHITE	2"	1 1/2"	3/4"	_	WALL HUNG JR. SMITH 0616	VITREOUS CHINA, 1.0 GPF, ¾ TOP SPUD. SEE FLUSH VALVE SCHEDULE ON THIS DRAWING.
L1	LAVATORY	AMERICAN STANDARD	COMRADE - 0124.131	WHITE	1 1/4"	1 1/4"	1/2"	1/2"	WALL HUNG JR. SMITH 0710	VITREOUS CHINA WALL-HUNG LAVATORY.WITH ACRYLIC SHROUD/KNEE GAURD SEE FAUCET SCHEDULE & LAVATORY ASSEMBLY NOTE
MS & MR	MOP SINK	FIAT	MSB-2424	WHITE	3"	1 1/2"	1/2"	1/2"	FLOOR MOUNT	ONE PIECE, MOLDED STONE MOP BASIN, 10" HIGH WALLS, STAINLEES STEEL FACTORY INSTALLED DRAIN BODY & 3" CONNECTOR. SEE NOTES BELOW FOR ACCESSORIES. SEE FAUCET SCHEDULE.
FD-1	TOILET ROOM	JR. SMITH	2350-NB	NIC. BRZ		_	_	_	FLOOR MOUNT	ROUND 8 1/2" NICKEL BRONZE, SEDIMENT BUCKET, DEEP SEAL TRAP
FD-2	SHOWER DRAIN	JR. SMITH	220–11	CHROME		_	_	_	FLOOR MOUNT	ROUND 4" CHROME TOP, DEEP SEAL TRAP
SA-A	SHOCK ABSORBER	JOSAM	#75001-A	COPPER	_	AS NOTED	_	_	-	— SHOCK ABSORBER WITH WROUGHT COPPER SHELL, HYDRO-PNEUMATIC
SA-B	SHOCK ABSORBER	JOSAM	#75002-B	COPPER	_	AS NOTED	_	_	-	AIR CUSHION, TRIPLE O-RING SEALED PISTON, WROUGHT COPPER ADAPTER AND MALE THREADED CONNECTION
SA-C	SHOCK ABSORBER	JOSAM	#75003-C	COPPER	_	AS NOTED	_	_	-	
SH-1	SHOWER	POWERS	HYDROPANEL II SHOWER SYSTEM WITH METERING VALVE	S.S.	-	_	1/2"	1/2"	WALL MOUNT	BRUSHED 18 GAUGE, 304 S.S. ½' PIPE CONNECTIONS, CHROME PLATED BRASS SHOWERHEAD, 2.5 GPM, SELF-CLOSING METERING VALVE. ASSE 1016
SH-2	SHOWER ADA	POWERS	450-7108 HYDROPANEL II SYSTEM	S.S.	2"	_	1/2"	1/2"	-	FIXED AND HAND HELD SHOWER, PROFESSIONAL GRADE, GLIDE RAIL, VB, SOAP DIS ASSE 1016 MIXING VALVE.

			PIPE MATERI	AL SCHE	EDULE			
SYMBOL	SYSTEM DESCRIPTION	PIPING SIZE	PIPING MATERIAL	FITTINGS	PIPING JOINTS	MFR & MODEL NO.	INSULATION	NOTES
SAN	SANITARY WASTE BELOW GRADE	2" & LARGER	SCH 40 PVC DWV	DWV	SOLVENT SOCKET WELD	CHARLOTTE	NO	
V	SANITARY VENT BELOW GRADE	2" & LARGER	SCH 40 PVC DWV	DWV	SOLVENT SOCKET WELD	CHARLOTTE	NO	
SAN	SANITARY WASTE ABOVE GRADE	1 1/2" & LARGER	SCH 40 PVC DWV	DWV	SOLVENT SOCKET WELD	CHARLOTTE	NO	
٧	SANITARY VENT ABOVE GRADE	1 1/2" & LARGER	SCH 40 PVC DWV	DWV	SOLVENT SOCKET WELD	CHARLOTTE	NO	
CW	DOMESTIC COLD WATER ABOVE GRADE	3" & SMALLER	HARD DRAWN TYPE "L" CU TUBE	WROUGHT SOCKET	LEAD FREE SOLDER	MUELLER INDUSTRIES	YES	ASTM B88, SEE NOTE
HW & HWR	DOMESTIC HOT WATER ABOVE GRADE	3" & SMALLER	HARD DRAWN TYPE "L" CU TUBE	WROUGHT SOCKET	LEAD FREE SOLDER	MUELLER INDUSTRIES	YES	ASTM B88, SEE NOTE
G	NATURAL GAS	ALL	BLACK STEEL SCH. 40		SEE SPECIFICATIONS	MUELLER INDUSTRIES	NO	ASTM A53
ST	STORM WATER ABOVE GRADE	1 1/2" & LARGER	SCH 40 PVC DWV	DWV	SOLVENT SOCKET WELD	CHARLOTTE	NO	
ST	STORM WATER BELOW GRADE	1 1/2" & LARGER	SCH 40 PVC DWV	DWV	SOLVENT SOCKET WELD	CHARLOTTE	NO	

NOTE:			
ALTERNATE DOMESTIC WATER PIPE IN	NSTALLATION SYSTEM: VIEGA PROP	PRESS SYSTEM WITH PROPRESS	XL-C FITTINGS AND BALL VALVES

HOSE AND BRACKET: PROFLO PF245

1453 BB: FLAT STAINLESS STEEL STRAINER

MSG 2424: STAINLESS STEEL HEAVY GAUGE WALL GUARDS

## OIL MINDER SUMP PUMP (SIMPLEX)

50 GPM, 20 FTHD, HI FLOAT, ON FLOAT, OIL SENSOR PROBE, NEMA 4X CONTROL ENCLOSURE, 1/2 HP, 115V, DIRECT PLUG-IN POWER SOURCE. SYSYEM SHALL AUTOMATICALLY START ON A PRE-SET RISE OF WATER LEVEL THEN STOP ON A PRE-SET LOW WATER LEVEL OR WHEN OIL IS DETECTED BY THE OIL SENSOR. LED INDICATOR LIMIT FOR OIL SPILL, POWER, HIGH LIQUID LEVEL, OVERLOAD, PUMP RUN, ASME A17.1.

STANCOR #SE50 WITH J-BOX DISCONNECT AND OM 300 FLOATS. LOCATED CONTROLS WHERE DIRECTED BY THE ARCHITECT IN FIELD.

MOP SINK (MS1) ACCESSORIES SHALL BE:

1453 BB: FLAT STAINLESS STEEL STRAINER

889 CC: 24" LONG MOP BRACKET

E-77-AA: VINYL BUMPER GUARDS

CP 1			CIRCU	JLATING	PUMPS					
PUMP	LOCATION	QUANTITY	MANUFACTURER	MODEL	BODY MATERIAL	WATTS	VOLTAGE	GPM	FT. HD.	NOTES
CP-1	HOT WATER RETURN	1	BELL & GOSSET	LR-15 BWR	BRONZE/LEAD FREE	125	120	_	_	

ET 1		EXP	ANSION	TANK	
FIXTURE	QUANTITY	MANUFACTURER	MODEL	ACCEPTANCE	NOTES
ET	1	AMTROL	THERM-X-TROL	5 GALLONS	ASME

## SINK & LAVATORY ASSEMBLY NOTE

ALL SINKS & LAVATORIES TO BE SUPPLIED WITH NEW SUPPLIES, COMPRESSION STOPS, STRAINERS, TAILPIECES, P-TRAPS & INSULATION COVERS (ADA COMPLIANT LAV OR SINK) FOR A FULLY FUNCTIONAL SYSTEM. MANUFACTURER SHALL BE: PROFLO PRODUCTS, BRASSCRAFT OR APPROVED EQUAL

F/	AUCET	& FLU	SH VAI	_VE SCHEDULE
FIXTURE	ITEM	MANUFACTURER	MODEL NO.	DESCRIPTION
UR	FLUSH VALVE	SLOAN	ROYAL 186	
LV1	FAUCET	AMERICAN STANDARD	6114.111.002	SINGLE LEVER
MS	FAUCET	T&S BRASS	B-0665-BSTR	8" CENTERS, WALL MOUNTED, RIGID SPOUT, SUPPORT ROD, MALE GARDEN HOSE OUTLET W/ PAIL HOOK
NOTES:				

2.PLUMBING CONTRACTOR SHALL SUPPLY 3/8" COMPRESSION STOPS, 3/8" SUPPLY TUBING TO SOLENOID VALVE & 3/8" SUPPLY TUBING FROM SOLENOID TO FAUCET CONNECTION.

1.SLOAN "OPTIMA SYSTEMS" FLUSH VALVES ARE LOW CONSUMPTION TYPE.

MANUFACTURER	SYSTEM	INSULATION SYSTEM DESCRIPTION
JOHNS MANSVILLE OR APPROVED EQUAL	DOMESTIC WATER	"MICRO-LOK" HP ALL SERVICE (ASJ) VAPOR-RETARDER JACKET WITH A SELF-SEALING LOGITUDINAL CLOSURE LAP (SSL) AND BUTT STRIPS & "ZESTON 2000" PVC INSULATED FITTING COVERS AND "HI-LOW TEMPERATURE" FIBER GLASS INSULATED INSERTS WITH PVC "Z-TAPE" PER MANUFACTURER'S RECOMMENDATIONS.



Engineers

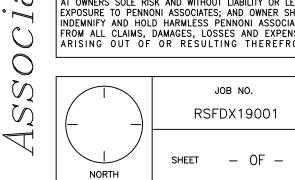
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AS NOTED

## GENERAL NOTES

- 1. DEFINITION: UNLESS OTHERWISE NOTED, ALL WORK SPECIFIED HEREIN OR NOTED ON DRAWINGS, SHALL BE BY THE ELECTRICAL CONTRACTOR. ALL REFERENCES TO "CONTRACTOR" OR "THIS CONTRACTOR" ON DRAWINGS OR SPECIFICATIONS ARE ADDRESSED TO THE ELECTRICAL CONTRACTOR. THE TERM "PROVIDE" WHENEVER ENCOUNTERED ON DRAWINGS OR IN THESE SPECIFICATIONS, SHALL MEAN "FURNISH AND INSTALL."
- DRAWINGS ARE DIAGRAMMATIC AND INDICATE GENERAL ARRANGEMENT OF SYSTEMS AND WORK. CONDUIT ROUTING IS SHOWN DIAGRAMMATICALLY AND DOES NOT SHOW ALL BENDS. OFFSETS. DROPS AND RISES OF RUNS. THE CONTRACTOR SHALL ALLOW IN HIS PRICE FOR ROUTING OF CONDUIT TO AVOID OBSTRUCTIONS. COORDINATE WITH OTHER TRADES, AS REQUIRED. MAINTAIN HEADROOM AND KEEP OPENINGS AND PASSAGEWAYS CLEAR. THE EXACT LOCATIONS OF DEVICES AND EQUIPMENT ARE SUBJECT TO THE APPROVAL OF THE OWNER, WHO RESERVES THE RIGHT TO MAKE ANY REASONABLE CHANGES IN LOCATION WITHOUT EXTRA COST.
- SECURE ALL SUPPORTS TO BUILDING STRUCTURE UTILIZING TOGGLE BOLTS (HOLLOW MASONRY), EXPANSION SHIELDS OR INSERTS (CONCRETE AND BRICK), MACHINE SCREWS (METAL), BEAM CLAMPS (FRAMEWORK), WOOD SCREWS (WOOD) OR PAN HEAD SHEET METAL SCREWS THRU STRAPS (METAL DECK). NAILS, RAWL PLUGS AND WOOD PLUGS ARE NOT PERMITTED. WHERE REQUIRED BY STRUCTURE, PROVIDE THRU BOLTS AND FISH PLATES. SUPPORT HORIZONTAL RUNS OF METALLIC RACEWAYS NOT MORE THAN 10' APART. SUPPORT RACEWAY RISERS AT EACH FLOOR LEVEL. RUN EXPOSED RACEWAYS PARALLEL WITH OR AT RIGHT ANGLES TO WALLS.
- 4. PROVIDE TEMPORARY LIGHT AND POWER SYSTEMS AT EARLIEST POSSIBLE DATE WITHIN THE CONSTRUCTION AREAS FOR THE REQUIREMENTS OF ALL TRADES AS HEREIN DESCRIBED. EXTEND SYSTEMS TO NEW CONSTRUCTION AS SOON AS PHYSICALLY POSSIBLE. MAINTAIN SYSTEM DURING WORKING HOURS OF ALL TRADES. OWNER WILL PAY FOR COST OF ENERGY. PROVIDE ALL REQUIRED MAINTENANCE, INCLUDING LAMPS AND SOCKETS.
- 5. IN LOCATING BOXES AND OUTLETS TO AVOID INACCESSIBLITY. ALLOW FOR OVERHEAD PIPES. DUCTS AND MECHANICAL EQUIPMENT, VARIATIONS IN FIREPROOFING AND PLASTERING, WINDOW AND DOOR TRIM, PANELING, HUNG CEILINGS AND THE LIKE. CORRECT ANY INACCURACY RESULTING FROM FAILURE TO DO SO WITHOUT EXPENSE TO OWNER.
- 6. PASS RACEWAYS OVER WATER, STEAM OR OTHER PIPING WHEN PULL BOXES ARE NOT REQUIRED. NO RACEWAY WITHIN 3" OF STEAM OR HOT WATER PIPES OR APPLIANCES (EXCEPT PIPE CROSSINGS WHERE RACEWAY IS AT LEAST 1" FROM PIPE COVERS AND PARALLEL RUNS WHERE RACEWAY IS AT
- 7. CUT CONDUIT ENDS SQUARE. REAM SMOOTH. PAINT MALE THREAD OF FIELD THREADED RACEWAYS WITH GRAPHITE BASE PIPE COMPOUND. DRAW UP TIGHT WITH RACEWAY COUPLING.
- 8. HORIZONTAL OR CROSS RUNS IN PARTITIONS AND WALLS ARE NOT PERMITTED. DO NOT RUN CONDUIT IN PRECAST ROOF SLABS, IN 2" SLABS OR IN TERRAZZO FLOOR FINISH.
- 9. MINIMUM CONDUIT SIZE SHALL BE 3/4".
- 10. LEAVE WIRES WITH SUFFICIENT SLACK TO PERMIT MAKING FINAL CONNECTIONS. RACEWAYS OVER 10' LONG IN WHICH WIRING IS NOT INSTALLED: FURNISH NYLON PULL STRING. FOR ANY RACEWAY OVER 25' PROVIDE PULL STRING WITH CONDUIT MEASURING TAPE AND INDICATE DESIGNATION OF THE RACEWAY ON EACH END.
- 11. COVERS OF JUNCTION AND PULLBOXES SHALL BE ACCESSIBLE.
- 12. PROVIDE PULLBOXES WHERE INDICATED, REQUIRED BY CODE AND WHEREVER NECESSARY TO FACILITATE PULLING OF WIRE. COORDINATE PULLBOX LOCATIONS WITH OTHER TRADES. BOXES SHALL BE ACCESSIBLE AND GENERALLY NOT EXPOSED IN FINISHED SPACES. WHERE NECESSARY, REROUTE RACEWAYS OR MAKE OTHER ARRANGEMENTS FOR CONCEALMENT.
- 13. EMPTY RACEWAY RUNS: PROVIDE PULLBOXES EVERY 100' AND AS INDICATED. COORDINATE LOCATIONS WITH OTHER TRADES. A PULLBOX SHALL BE INSTALLED EVERY 270° OF TOTAL CONDUIT
- 14. PULL NO THERMOPLASTIC WIRES AT AMBIENT TEMPERATURES LOWER THAN 32°F (0°C). PROVIDE CABLE SUPPORTS FOR WIRE IN RISER CONDUITS AS REQUIRED BY CODE.
- 15. PROVIDE SEPARATE SYSTEMS AND ENCLOSURES FOR 208/120V AND 480/277V POWER AND CONTROL WIRING AND SEPARATE SYSTEMS FOR EMERGENCY AND NORMAL POWER. THE EMERGENCY AND NORMAL SYSTEMS SHALL NOT BE INSTALLED IN THE SAME RACEWAYS, ENCLOSURES, JUNCTION BOXES, PULLBOXES, TERMINATION CABINETS, EXCEPT IN EQUIPMENT ENCLOSURES DESIGNED TO ACCEPT BOTH SYSTEMS SUCH AS AUTOMATIC TRANSFER SWITCH OR EMERGENCY LIGHTING.
- 16. CORE BORING OF CONCRETE FLOORS AND/OR WALLS IF REQUIRED. IS THE RESPONSIBILITY OF THE ELECTRICAL CONTRACTOR. ALL PENETRATIONS THROUGH CONCRETE STRUCTURAL FLOORING SHALL BE SCANNED WITH GROUND PENETRATING RADAR (GPR). SUBMIT FINDINGS TO ENGINEER FOR APPROVAL PRIOR TO PENETRATION.
- 17. WIRE COLOR CODING: AS PER CODE. WHERE COLOR-CODED CABLE IS NOT AVAILABLE, CERTIFY IN WRITING AND REQUEST PERMISSION FOR OVERLAP COLOR TAPING OF CONDUCTORS (MINIMUM LENGTH 6") IN ALL ACCESSIBLE LOCATIONS. COLOR CODING, ONCE SELECTED, MUST BE USED CONSISTENTLY FOR THE ENTIRE PROJECT. 480/277V - WYE SYSTEM:
- PHASES A = BROWN, B = ORANGE, C = YELLOW, NEUTRAL = GRAY, GROUNDING = GREEN WITH YELLOW STRIPES.
- 208/120V WYE SYSTEM:
- PHASES A = BLACK, B = RED, C = BLUE, NEUTRAL = WHITE, GROUNDING = GREEN. 240/120V - DELTA SYSTEM WITH HIGH LEG:
- PHASES A = BLACK, B (HIGH LEG)= ORANGE, C = RED, NEUTRAL = WHITE, GROUNDING = GREEN. 240/120 V SINGLE PHASE:
- PHASES A = BLACK, B = RED, NEUTRAL = WHITE, GROUNDING = GREEN. DC SYSTEM:
- POSITIVE = RED, MID-WIRE = WHITE, NEGATIVE = BLACK,
- 18. FIRESTOPPING SHALL BE INSTALLED WHENEVER WIRING OR RACEWAYS CROSS FIRE RATED CONSTRUCTION AND IN ACCORDANCE WITH THE REQUIREMENTS OF THE MANUFACTURER TO MAINTAIN THE UL LISTED FIRE RATING OF THE PENETRATED WALL OR FLOOR ASSEMBLY.
- 24. THE CONTRACTOR IS RESPONSIBLE FOR COORDINATING WORK BETWEEN THE TRADES. ANY WORK RESULTING FROM THE LACK OF COORDINATION SHALL BE CORRECTED WITH NO ADDITIONAL COST TO THE OWNER.
- 25. THE CONTRACTOR IS RESPONSIBLE FOR REPORTING INCONSISTENCIES TO THE ENGINEER IN FORM OF "RFI" REQUEST FOR INFORMATION BEFORE ANY INACCURATE WORK IS EXECUTED.
- 26. CODES AND STANDARDS: ALL MATERIALS AND WORKMANSHIP SHALL COMPLY WITH THE NATIONAL ELECTRICAL CODE, ALL APPLICABLE CODES, SPECIFICATIONS, LOCAL ORDINANCES, INDUSTRY STANDARDS, UTILITY COMPANY REGULATIONS AND FIRE INSURANCE CARRIER'S REQUIREMENTS.
- 27. WIRING OF BRANCH CIRCUITS SHALL BE TYPE THHN/THWN IN CONDUIT. WIRES SHALL BE COPPER AND SHALL BE MIN. #12AWG, 600V, 75°C. ALL RACEWAYS ARE SHOWN DIAGRAMMATICALLY, EXACT LOCATION TO BE DETËRMINED ON THE JOB. ELECTRICIAN SHALL ARRANGE ALL NEW CIRCUITS IN PANELS SO AS TO BALANCE THE LOAD ON ALL PHASES. EMT SHALL BE USED AT THE INTERIOR. SET SCREW FITTINGS ARE ACCEPTABLE. PVC SCHEDULE 80 SHALL BE USED AT THE EXTERIOR.
- 28. THIS DRAWING IS DIAGRAMMATIC IN NATURE AND INDICATES THE GENERAL ARRANGEMENT OF THE VARIOUS SYSTEMS AND APPROXIMATE LOCATIONS OF THE EQUIPMENT. IT SHALL BE THE RESPONSIBILITY OF THE ELECTRICIAN TO DETERMINE THAT THERE IS ADEQUATE SPACE AT THE LOCATIONS INDICATED FOR ALL EQUIPMENT PRIOR TO INSTALLATION OF SAME. THE ELECTRICIAN SHALL BE RESPONSIBLE TO VERIFY ALL DIMENSIONS IN THE FIELD, PRIOR TO THE COMMENCEMENT OF CONSTRUCTION.
- 29. CODES AND STANDARDS: ALL MATERIALS AND WORKMANSHIP SHALL COMPLY WITH THE NATIONAL ELECTRICAL CODE, ALL APPLICABLE CODES, SPECIFICATIONS, LOCAL ORDINANCES, INDUSTRY STANDARDS. UTILITY COMPANY REGULATIONS AND FIRE INSURANCE CARRIER'S REQUIREMENTS.

- 1. THE CONTRACTOR SHALL INCLUDE IN HIS BID ALL COSTS ASSOCIATED WITH REMOVAL AND RELOCATION OF ELECTRICAL WORK AS DESCRIBED IN THE SPECIFICATIONS WITH ALLOWANCES FOR EXPECTED OR UNFORESEEN DIFFICULTIES WHEN CONCEALED WORK HAS BEEN OPENED. NO CLAIMS FOR ADDITIONAL WORK ASSOCIATED WITH DEMOLITION WILL BE ACCEPTED, EXCEPT IN CERTAIN CASES CONSIDERED JUSTIFIABLE BY THE ARCHITECT.
- 2. THE CONTRACTOR SHALL REMOVE AND/OR RELOCATE ALL EXISTING ELECTRICAL WORK WHICH INTERFERES WITH THE NEW ELECTRICAL LAYOUTS IN FULL COORDINATION WITH THE DEMOLITION PLANS. ALL SYSTEMS WHICH ARE NO LONGER REQUIRED TO FUNCTION SHALL BE DE-ENERGIZED AND DISCONNECTED AT THE SOURCE OF POWER SUPPLY.
- 3. DEMOLITION AND REMOVAL WORK SHALL BE PERFORMED IN A NEAT AND WORKMANLIKE MANNER. THE CONTRACTOR SHALL PATCH, REPAIR OR OTHERWISE RESTORE ANY DAMAGED INTERIOR OR EXTERIOR BUILDING SURFACE TO ITS ORIGINAL CONDITION. ALL PATCHING SHALL BE OF THE SAME MATERIALS, WORKMANSHIP, AND FINISH, AND SHALL ACCURATELY MATCH ALL SURROUNDING
- 4. THE CONTRACTOR SHALL REMOVE ALL ELECTRICAL OUTLETS, SWITCHES AND OTHER DEVICES, COMPLETE WITH ASSOCIATED WIRING AND CONDUITS BACK TO NEAREST JUNCTION BOX THAT IS TO REMAIN OR TO PANELBOARD. WHERE THE REMOVAL OF THESE ITEMS DISRUPTS EXISTING WIRING TO REMAIN, THE CONTRACTOR SHALL INSTALL JUNCTION BOXES AND EXTEND FEEDER WITH MATCHING CABLE TYPE, CONDUCTOR AMPACITY AND CONDUIT SIZES.
- 5. WHERE IT IS IMPRACTICAL TO REMOVE RACEWAY BACK TO SOURCE, DISCONNECT WIRING AT LOAD (EQUIPMENT) AND AT LINE SIDE, CUT AND CAP, FLUSH TO SURFACE, REMOVE CONDUCTORS FROM EXISTING RACEWAYS TO BE REWIRED. CLEAN RACEWAY AS REQUIRED PRIOR TO REWIRING.
- 6. ALL RACEWAYS WHICH BECOME EXPOSED DURING THE ALTERATION WORK SHALL BE REMOVED AND REROUTED CONCEALED BEHIND FINISHED SURFACES.
- 7. ALL UNUSED OUTLET BOXES OR CAPPED FLOOR OUTLETS SHALL BE PROVIDED WITH MATCHING BLANK COVERS.
- 8. EXISTING PANEL DIRECTORIES AFFECTED BY THE ALTERATION WORK SHALL BE MODIFIED TO REFLECT THE BRANCH CIRCUIT WIRING CHANGES.
- 9. INSTALL NEW WORK AND CONNECT TO EXISTING WORK WITH MINIMUM INTERFERENCE TO EXISTING FACILITIES. TEMPORARY SHUTDOWNS OF EXISTING SERVICES SHALL BE PERFORMED AT NO ADDITIONAL CHARGES, AT TIMES NOT TO INTERFERE WITH NORMAL OPERATION OF EXISTING FACILITIES AND ONLY WITH WRITTEN CONSENT OF OWNER. NOTIFICATION MUST BE GIVEN AT LEAST 5 DAYS PRIOR TO SHUT DOWN. ALARM AND EMERGENCY SYSTEMS SHALL NOT BE INTERRUPTED. MAINTAIN CONTINUOUS OPERATION OF EXISTING FACILITIES AS REQUIRED WITH NECESSARY TEMPORARY CONNECTIONS BETWEEN NEW AND EXISTING WORK. CONNECT NEW WORK TO EXISTING WORK IN NEAT AND ACCEPTABLE MANNER. RESTORE EXISTING DISTURBED WORK TO ORIGINAL CONDITION, INCLUDING MAINTENANCE OF WIRING CONTINUITY AS REQUIRED.
- 10. THE CONTRACTOR SHALL NOTIFY THE OWNER AT THE APPROPRIATE TIME OF THE PROJECTED DEMOLITION AND PHASING SCHEDULE SO THAT REMOVAL OR RELOCATION OF AFFECTED UTILITIES MAY BE CARRIED OUT IN COORDINATION WITH THE PROJECT REQUIREMENTS. THE CONTRACTOR SHALL FOLLOW CLOSELY THE DEMOLITION AND PHASING SCHEDULE AND PROCEED IN THE SPECIFIED SEQUENCE.
- 11. ALL EXISTING MATERIAL AND EQUIPMENT IN USABLE CONDITION, WHICH IS TO BE REMOVED UNDER THIS CONTRACT, SHALL REMAIN THE PROPERTY OF THE OWNER OR SHALL BE DISPOSED OF IN A LEGAL MANNER BY THE ELECTRICAL CONTRACTOR, AS DIRECTED BY THE OWNER. ITEMS OF SALVAGE SHALL BE CAREFULLY REMOVED AND STORED AT LOCATIONS DIRECTED BY THE OWNER.
- 12. ARRANGE TO WORK CONTINUOUSLY, INCLUDING OVERTIME, IF REQUIRED, TO ASSURE THAT SYSTEMS WILL BE SHUT DOWN ONLY DURING THE TIME ACTUALLY REQUIRED TO MAKE THE NECESSARY CONNECTIONS TO THE EXISTING SYSTEMS.
- 13. PATCH AND PAINTING OF EXISTING WALLS TO REMAIN AFFECTED BY ELECTRICAL DEMOLITION. THERE SHALL BE NO BLANK COVER-PLATES. THE ELECTRICAL WORK SHALL BE ENTIRELY COMPLETED BEFORE PATCHING AND PAINTING.
- 14. THE CONTRACTOR SHALL SURVEY AND RECORD THE CONDITION OF EXISTING FACILITIES TO REMAIN IN PLACE THAT MAY BE AFFECTED BY DEMOLITION OPERATIONS. THE CONTRACTOR SHALL VERIFY ALL EXISTING SOURCES OF POWER TO EQUIPMENT PRIOR TO FINAL REMOVAL.
- 15. IF WORK REQUIRES THE INTERRUPTION FIRE ALARM AND FIRE PROTECTION SYSTEMS. ARRANGE WITH OWNER TO CONDUCT A FIRE WATCH WHILE THESE SYSTEMS ARE OUT OF SERVICE. CONSULT WITH FIRE MARSHALL PRIOR TO FIRE WATCH.



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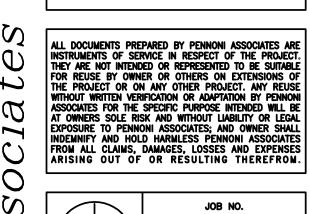
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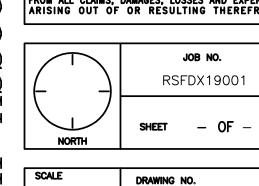
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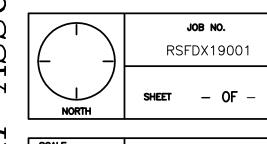
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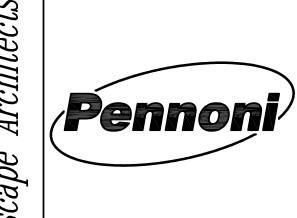
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## **GENERAL NOTES:**

- 1. SEE DRAWING E-001 FOR NOTES.
- 2. SEE DRAWING E-002 FOR SYMBOLS AND ABBREVIATIONS.
- 3. CONTRACTOR SHALL COORDINATE THE PHASING OF ALL SYSTEMS SHUTDOWN AND REMOVAL WITH OTHER CONTRACTORS AND THE OWNER PRIOR TO THE START OF WORK.
- 4. ALL EXISTING INFORMATION IS TAKEN FROM FIELD OBSERVATIONS AND EXISTING DRAWINGS. CONTRACTOR SHALL VERIFY ALL EXISTING INFORMATION PRIOR TO THE START OF WORK.

## ELECTRICAL DEMOLITION NOTES:

- TURN OFF AND DISCONNECT ELECTRICAL SERVICES TO MECHANICAL EQUIPMENT TO BE DEMOLISHED. COORDINATE LOCATION AND REMOVAL WITH MECHANICAL DRAWINGS.
- EXISTING LIGHTING AND RECEPTACLES IN THIS AREA SHALL BE REMOVED. EXITING CIRCUITS SHALL BE SAFED OFF TO BE REUSED WHERE POSSIBLE. NO CIRCUITS WITHOUT GROUNDS ARE TO REMAIN CIRCUITS FEEDING EXISTING EQUIPMENT TO REMAIN.
- (3) EXISTING PANEL BOARD TO BE REMOVED. LEAVE FEEDER IN GOOD CONDITION FOR EXTENSION/RECONNECTION. CIRCUITS FEEDING EXISTING EQUIPMENT TO REMAIN.
- REMOVE ALL ROOFTOP HVAC EQUIPMENT FEEDERS BACK TO SOURCE.
- 5 ADD/ALTERNATE#1: REMOVE AND REPLACE IN KIND THE EXISTING 45KW, 120/208V EMERGENCY GENSET LOCATED IN THE OUTSIDE SHED (APPROXIMATE LOCATION SHOWN).
- 6 REFER TO SINGLE LINE 1/E-400 DIAGRAM FOR EQUIPMENT AND DEMOLITION REQUIREMENTS.
- EXISTING FIRE ALARM PANEL TO BE REMOVED KEEP IN SERVICE UNTIL NEW FIRE ALARM PANEL IS INSTALLED AND TESTED.
- 8 EXISTING PANEL TO REMAIN. KEEP ALL EXISTING CIRCUITS TO BE REUSED IN OPERATION. REFER TO MECHANICAL DRAWINGS FOR EQUIPMENT TO BE DEMOLISHED.



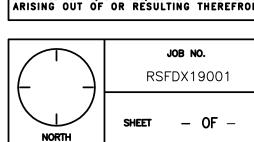
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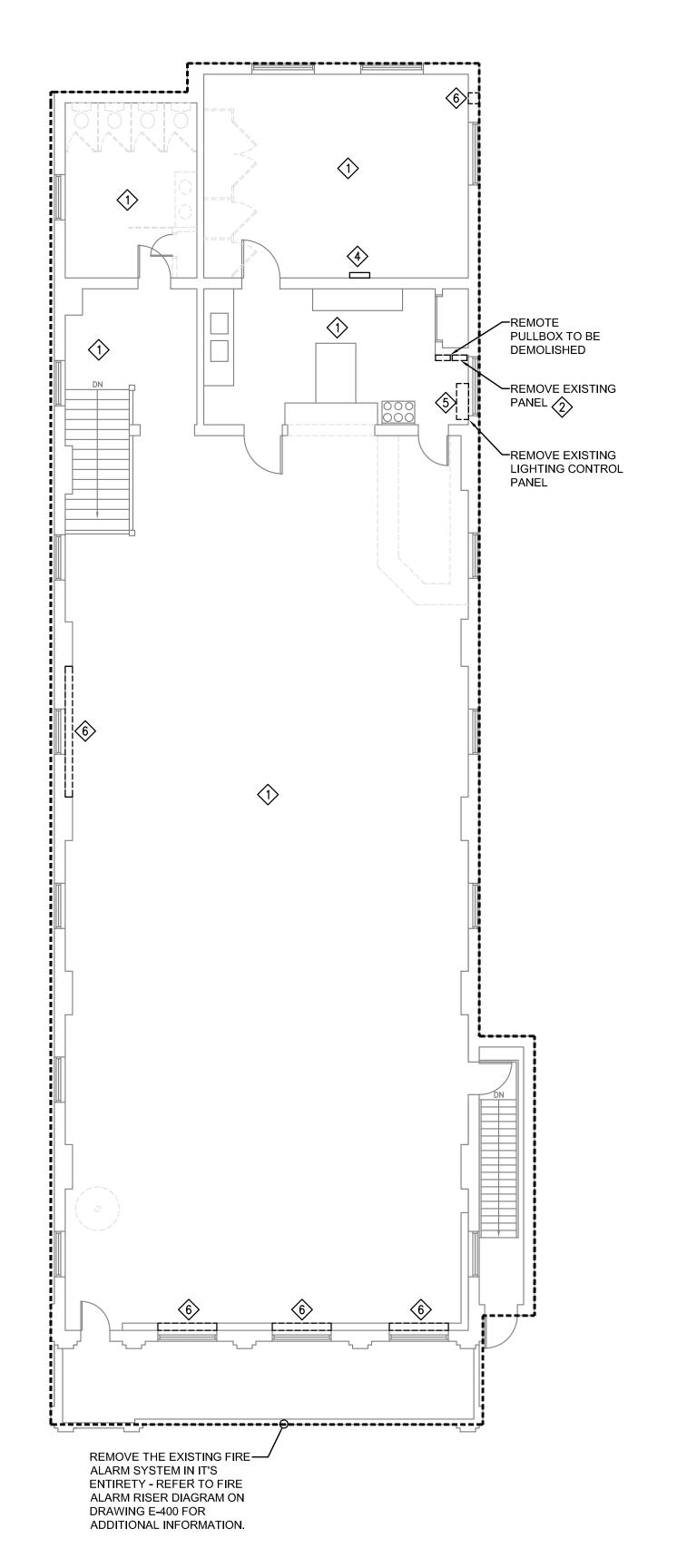
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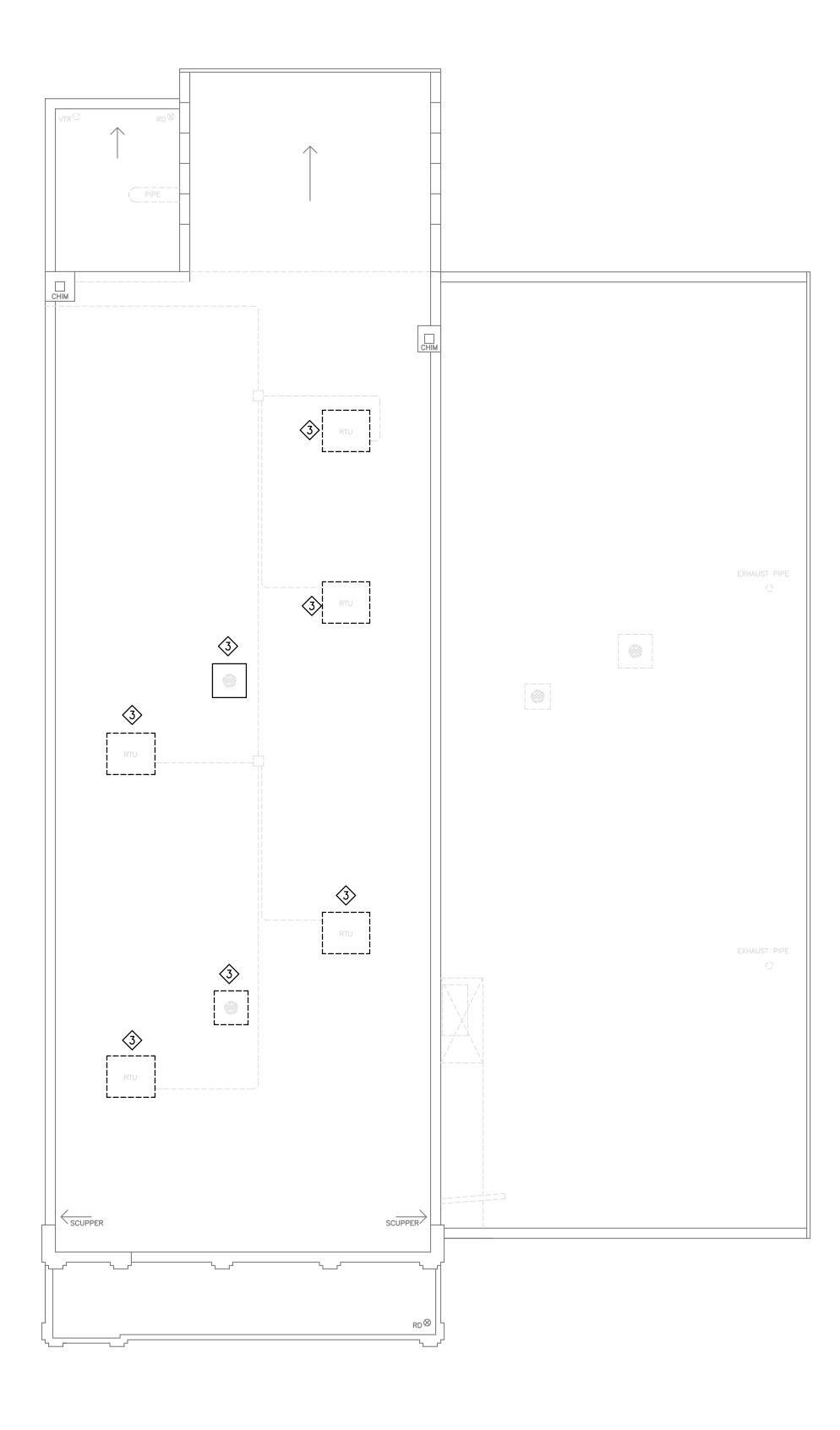
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# **ROOF PLAN - DEMOLITION** SCALE: 1/8"=1'-0"

## **GENERAL NOTES:**

- 1. SEE DRAWING E-001 FOR NOTES.
- 2. SEE DRAWING E-002 FOR SYMBOLS AND ABBREVIATIONS.
- CONTRACTOR SHALL COORDINATE THE PHASING OF ALL SYSTEMS SHUTDOWN AND REMOVAL WITH OTHER CONTRACTORS AND THE OWNER PRIOR TO THE START OF WORK.
- 4. ALL EXISTING INFORMATION IS TAKEN FROM FIELD OBSERVATIONS AND EXISTING DRAWINGS. CONTRACTOR SHALL VERIFY ALL EXISTING INFORMATION PRIOR TO THE START OF WORK.

## ELECTRICAL DEMOLITION NOTES:

- (1) EXISTING LIGHTING AND RECEPTACLES IN THIS AREA SHALL BE REMOVED. EXITING CIRCUITS SHALL BE SAFED OFF TO BE REUSED WHERE POSSIBLE. NO CIRCUITS WITHOUT GROUNDS ARE TO REMAIN.
- 2 EXISTING PANELBOARD TO BE REMOVED LEAVE FEEDERS IN GOOD CONDITION FOR EXTENSION/RECONNECTION.
- REMOVE ALL ROOFTOP HVAC EQUIPMENT FEEDERS BACK TO SOURCE.
- REMOVE EXISTING PANEL AND FEEDER BACK TO SOURCE.
- REMOVE EXISTING LIGHTING CONTROL PANEL AND ALL WIRING IN ITS ENTIRETY.
- TURN OFF AND DISCONNECT ELECTRICAL SERVICES TO MECHANICAL EQUIPMENT TO BE DEMOLISHED. COORDINATE LOCATION AND REMOVAL WITH MECHANICAL DRAWINGS.

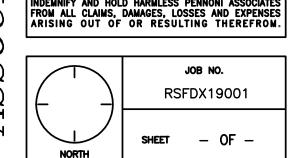
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**SECOND FLOOR PLAN - DEMOLITION** 

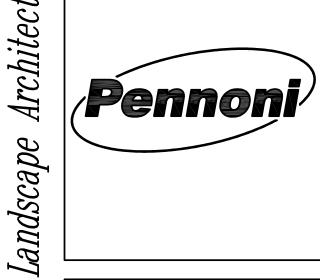


## GENERAL NOTES:

- 1. SEE DRAWING E-001 FOR NOTES.
- 2. SEE DRAWING E-002 FOR SYMBOLS AN ABBREVIATIONS.
- 3. SEE DRAWING E-400 FOR ADDITIONAL FIRE ALARM INFORMATION.
- 4. THE CONTRACTOR SHALL COORDINATE THE PHASING OF ALL SYSTEMS SHUTDOWN AND REMOVAL WITH OTHER CONTRACTORS AND THE OWNER PRIOR TO THE START OF WORK.
- 5. UPDATE EXISTING PANEL DIRECTORY WITH ALL NEW CONNECTED EQUIPMENT.
- 6. ALL FINAL EQUIPMENT LOCATIONS AND MOUNTING HEIGHTS ARE TO BE COORDINATED WITH ALL TRADES INVOLVED IN THE INSTALLATION AND OWNER.
- 7. ALL EXTERIOR CONDUITS SHALL BE RGS RIGID GALVANIZED STEEL WITH THREADED FITTINGS.

## ELECTRICAL NEW WORK NOTES:

- 1 PROVIDE NEW PANEL RP-1 MODIFY/EXTEND EXISTING FEEDER.
- (2) CONNECT TO ELEVATOR MANUFACTURER SUPPLIED SHUNT TRIP CIRCUIT BREAKER. REFER TO SINGLE LINE DIAGRAM 2/E-400.
- (3) COORDINATE RECEPTACLE NEMA CONFIGURATION WITH MANUFACTURER'S EQUIPMENT.
- 4 PROVIDE NEW PANEL RP-2. MODIFY/EXTEND EXISTING FEEDER.
- 5 PROVIDE NEW PANEL RP-4. MODIFY/EXTEND EXISTING FEEDER.



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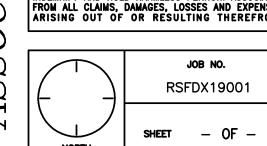
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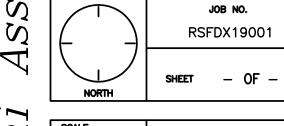
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FIRST FLOOR PLAN - POWER NEW WORK E-200

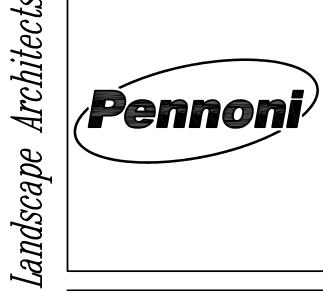
/ SCALE: 1/8"=1'-0"



- 1. SEE DRAWING E-001 FOR NOTES.
- 2. SEE DRAWING E-002 FOR SYMBOLS AN ABBREVIATIONS.
- 3. REFER TO DRAWING E-400 FOR ADDITIONAL FIRE ALARM INFORMATION.
- 4. THE CONTRACTOR SHALL COORDINATE THE PHASING OF ALL SYSTEMS SHUTDOWN AND REMOVAL WITH OTHER CONTRACTORS AND THE OWNER PRIOR TO THE START OF WORK.
- 5. UPDATE EXISTING PANEL DIRECTORY WITH ALL NEW CONNECTED EQUIPMENT.
- 6. ALL FINAL EQUIPMENT LOCATIONS AND MOUNTING HEIGHTS ARE TO BE COORDINATED WITH ALL TRADES INVOLVED IN THE INSTALLATION AND OWNER.
- 7. ALL EXTERIOR CONDUITS SHALL BE RGS RIGID GALVANIZED STEEL WITH THREADED FITTINGS.

## ELECTRICAL NEW WORK NOTES:

PROVIDE NEW 100A/208/120V, 3ø, 4W MLO PANEL. MODIFY/EXTEND EXISTING FEEDER.



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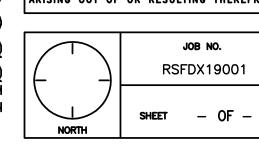
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**SECOND FLOOR PLAN - POWER NEW WORK** 



FIXTURE ON SECOND FLOOR

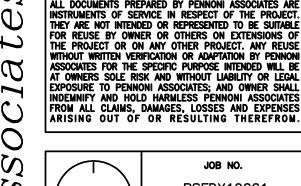
## GENERAL NOTES:

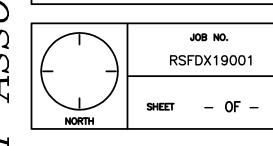
- 1. SEE DRAWING E-001 FOR NOTES.
- 2. SEE DRAWING E-002 FOR SYMBOLS AN ABBREVIATIONS.
- 3. THE CONTRACTOR SHALL COORDINATE THE PHASING OF ALL SYSTEMS SHUTDOWN AND REMOVAL WITH OTHER CONTRACTORS AND THE OWNER PRIOR TO THE START OF WORK.
- 4. UPDATE EXISTING PANEL DIRECTORY WITH ALL NEW CONNECTED EQUIPMENT.
- 5. ALL FINAL EQUIPMENT LOCATIONS AND MOUNTING HEIGHTS ARE TO BE COORDINATED WITH ALL TRADES INVOLVED IN THE INSTALLATION
- 6. ALL EXTERIOR CONDUITS SHALL BE RGS RIGID GALVANIZED STEEL WITH THREADED FITTINGS.
- 7. CONNECT ALL EXIT SIGNS AND BATTERY UNITS IN LIGHT FIXTURES AHEAD OF SWITCH.
- 8. COORDINATE LIGHTING WITH ARCHITECTURAL REFLECTED CEILING



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E-300 03/10/20

**BASEMENT PLAN - LIGHTING NEW WORK** 

SCALE: 1/8"=1'-0"

BASEMENT AND UP TO

SECOND FLOOR LIGHT FIXTURES.

2 E-300 SCALE: 1/8"=1'-0"

LIGHT FIXTURE IN BASEMENT



- 1. SEE DRAWING E-001 FOR NOTES.
- 2. SEE DRAWING E-002 FOR SYMBOLS AN ABBREVIATIONS.
- 3. THE CONTRACTOR SHALL COORDINATE THE PHASING OF ALL SYSTEMS SHUTDOWN AND REMOVAL WITH OTHER CONTRACTORS AND THE OWNER PRIOR TO THE START OF WORK.
- UPDATE EXISTING PANEL DIRECTORY WITH ALL NEW CONNECTED EQUIPMENT.
- 5. ALL FINAL EQUIPMENT LOCATIONS AND MOUNTING HEIGHTS ARE TO BE COORDINATED WITH ALL TRADES INVOLVED IN THE INSTALLATION AND OWNER.
- 6. ALL EXTERIOR CONDUITS SHALL BE RGS RIGID GALVANIZED STEEL WITH THREADED FITTINGS
- 7. COORDINATE LIGHTING WITH ARCHITECTURAL REFLECTED CEILING

Landscape

Planners • Surveyors

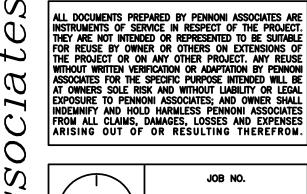
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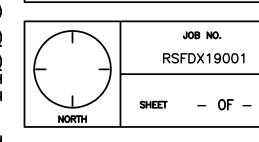
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**SECOND FLOOR PLAN - LIGHTING NEW WORK** 

PARTIAL EXISTING SINGLE LINE DIAGRAM - ELECTRIC ROOM

**ROOF** EXISTING BUILDING 15 110 30 PP PP <del>(B-(S-(D-|E</del> SECOND MECHANICAL SHUTDOWN **ELEVATOR** RECALL 15 30 30 135 75 PPPPPP LOCATED IN CORRIDOR ADJACENT TO MEETING/TRAINING RM FAAP NEW SIMPLEX 4010ES FIRE ALARM CONTROL PANEL (FACP) WITH PROVIDE 2 NEW ← PHONE LINES FIRST FLOOR

## NEW FIRE ALARM SYSTEM PANEL SINGLE LINE DIAGRAM

BASEMENT

**SCALE: NONE** 

E-400

SCALE: NONE

#### **FIRE ALARM NOTES:**

- PROVIDE 3/4" METAL CONDUIT EMT WITH COMPRESSION FITTINGS FROM THE MAIN FIRE ALARM CONTROL PANEL TO EVERY ANNUNCIATOR PANEL, EXTENDER PANEL AND NAC AS REQUIRED.
- 2. DEVICES SHOWN REPRESENT TYPICAL DEVICES, REFER TO FLOOR PLANS FOR EXACT QUANTITY OF DEVICES AND EQUIPMENT
- 3. REMOVE (E)FIRE ALARM PANEL AND REPLACE WITH SIMPLEX 4010ES FIRE ALARM PANEL. CONNECT NEW AND EXISTING F/A DEVICES TO REMAIN IN EXISTING BUILDING TO NEW F/A PANEL

BREAKERS AC PANEL REPLACEMENT ADD/ALT NO. 1 TO RTU-1 NEW 100A FUSED DISC SW TO INCOMING SERVICE PANEL FIRE SIREN GENERATOR **EXISTING** EXISTING -4#1/0 & 1#6G, (E) 45 KW RP-2 ALARM MAIN BLDG **PANELS** PANEL HP \_ 1-1/2" C 208/120 VOLT 3 PHASE 4 WIRE 125 208/120V, AF 3Ø, 4W GENERATOR 100A/3 100A/3 100A/3 EXISTING 600A MDP 208/120V, 3Ø, 4W 200A 125AF —M PSE&G EXISTING C/T AND UTILITY METER CABINET (E) WIRE TROUGH (E) ATS 200A/3 200A/3 )100A/3 SPACE **EXISTING** LOADS AC PANEL

ADD/ALT NO. 2

REPLACE 4 (E) ENCLOSED

CIRCUIT

## PARTIAL REVISED SINGLE LINE DIAGRAM - ELECTRIC ROOM

## **SCALE: NONE** SINGLE LINE DIAGRAM NOTES:

- 1 REMOVE PANEL 'HP' DISCONNECT SWITCH. KEEP WIRING IN GOOD CONDITION FOR EXTENSION/RECONNECTION.
- (2) REMOVE EXISTING 'AC' PANEL. KEEP WIRING IN GOOD CONDITION FOR EXTENSION/RECONNECTION.
- $\langle 3 \rangle$  NOT USED.

E-400

- (4) PROVIDE NEW 100A FUSED DISCONNECT SWITCH FUSED AT 100AMPS. MODIFY/EXTEND EXISTING WIRING AS REQUIRED.
- (5) PROVIDE NEW 200A FUSED DISCONNECT SWITCH FUSE AT 125 AMPS FOR RTU-1. MODIFY/EXTEND WIRING AS REQUIRED.

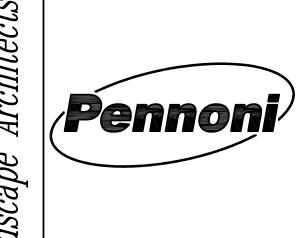
# GENERAL FIRE ALARM NOTES:

GENERAL NOTES:

2. SEE DRAWING E-002 FOR SYMBOLS AN ABBREVIATIONS.

1. SEE DRAWING E-001 FOR NOTES.

- THESE PLANS HAVE BEEN PROVIDED AS A GUIDE ONLY AND SHALL BE CONSIDERED FOR SCHEMATIC PURPOSES ONLY - QUANTITIES, CAPACITIES. LOCATIONS AND DIMENSIONS OF EQUIPMENT THAT ARE SHOWN ARE APPROXIMATE. THE EQUIPMENT AND CONDUIT LAYOUT THAT IS INCLUDED ON THESE PLANS WAS SELECTED AND SHOWN FOR THE PURPOSE OF PROVIDING A GENERAL UNDERSTANDING OF THE FIRE ALARM SYSTEMS.
- 2. REFER TO DRAWINGS E-200 & E-201 FOR FIRE ALARM DEVICES AND EQUIPMENT LOCATIONS.
- 3. REFER TO DRAWING E-002 FIRE ALARM SYMBOLS.
- 4. REFER TO DRAWING E-400 FOR FIRE ALARM RISER AND NOTES.
- 5. REFER TO THE ARCHITECTURAL, MECHANICAL AND PLUMBING DRAWINGS FOR
- 6. CONTRACTOR SHALL COORDINATE WORK SEQUENCE WITH GENERAL CONTRACTOR AND OTHER CONTRACTORS EMPLOYED ON THE PROJECT PRIOR TO START OF WORK.
- 7. CONTRACTOR TO CONFIRM ALL ELECTRICAL REQUIREMENTS FOR APPROVED EQUIPMENT AND DEVICES WITH ALL OTHER CONTRACTORS AND OWNER PRIOR TO PURCHASE AND START OF WORK.
- 8. CONTRACTOR TO COORDINATE AND CONFIRM ALL EXACT INSTALLATION LOCATIONS, MOUNTING HEIGHTS AND INTERCONNECTION REQUIREMENTS FOR DEVICES AND EQUIPMENT WITH ALL OTHER CONTRACTORS PRIOR TO ROUGH-IN.
- 9. REFER TO FLOOR PLANS FOR PROPOSED ANTICIPATED QUANTITIES AND LOCATIONS OF INITIATING AND NOTIFICATION DEVICES AND EQUIPMENT. EXACT QUANTITIES OF FIRE ALARM DEVICES FOR THE COMPLETE SYSTEM SHALL BE AS REQUIRED BY LOCAL AHJ.
- 10. PROVIDE STROBE CANDELA RATING AS SHOWN ON FLOOR PLAN.
- 11. REFER TO MECHANICAL CONTRACTOR DRAWINGS FOR LOCATIONS AND QUANTITIES OF MONITORED DUCT-MOUNTED SMOKE DETECTORS AND SMOKE DAMPERS. COORDINATE CONNECTION OF THESE DEVICES TO THE FIRE ALARM SYSTEM WITH THE MECHANICAL CONTRACTOR.
- 12. EACH DUCT DETECTOR SHALL HAVE REMOTE TEST/INDICATOR LOCATED IN CEILING TILE DIRECTLY ABOVE. COORDINATE WITH THE ARCHITECTURAL REFLECTED CEILING PLAN.
- 13. FOR ALL BRANCH CIRCUITS WHICH DO NOT CROSS FIRE ALARM ZONE USE RED MC CABLE.
- 14. REFER TO FLOOR PLAN E-200 &E-201 FOR ALL FA DEVICES TO BE CONNECTED TO THE FA SYSTEM.
- 15. THE FIRE ALARM RISER IS DIAGRAMMATIC AND IT MAY NOT SHOW ALL REQUIRED FA APPLIANCES. CONTRACTOR SHALL PROVIDE ALL CONTROL, ANNUNCIATION AND MONITORING AND INITIATING DEVICES REQUIRED TO PROVIDE A COMPLETE OPERATIONAL SYSTEM.
- 16. FIRE ALARM DEVICE MOUNTING HEIGHTS SHALL COMPLY WITH ANSI 117 AND NFPA 72 REQUIREMENTS.
- 17. PROVIDE ALL EQUIPMENT CLEARANCES IN ACCORDANCE WITH NEC REQUIREMENTS.
- 18. COORDINATE LOCATION OF ALL CEILING MOUNTED DEVICES WITH REFLECTED CEILING PLAN AND AFFECTED TRADES PRIOR TO INSTALLATION. SMOKE DETECTORS SHALL BE KEPT AWAY FROM SUPPLY DUCTS, BUT CO SENSORS SHALL BE PLACED CLOSE TO OUTPUT.
- 19. PROTECTIVE ANIT-DUST COVERS SHALL BE INSTALLED AND MAINTAINED ON ALL SYSTEM DETECTORS UNTIL FINAL ACCEPTANCE BY THE AHJ.
- 20. ALL FIRE ALARM DEVICES SHALL BE LABELED WITH A UNIQUE IDENTIFICATION NUMBER CORRESPONDING WITH THE NUMBERING SEQUENCE AS SUBMITTED ON THE PROJECT PRODUCT SUBMITTALS.
- 21. THE FIRE ALARM ANNUNCIATION PANEL SHALL DEPICT FLOOR PLAN, EXIT DOORS. IT SHALL ALSO SHOW LOCATION OF FACP AND FAAP WITH INDICATOR "YOU ARE HERE". THE FLOOR PLAN DISPLAY SHALL BE ORIENTATED WITH ACTUAL LAYOUT OF THE BUILDING AT LOCATION OF THE ANNUNCIATOR PANEL.



**BID SE**: 07/17/20

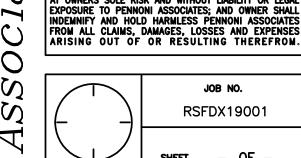
Surveyors

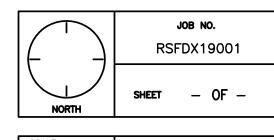
GELS BE VERIFIED BY CC BE NOTIFIED PROCEEDING WITH

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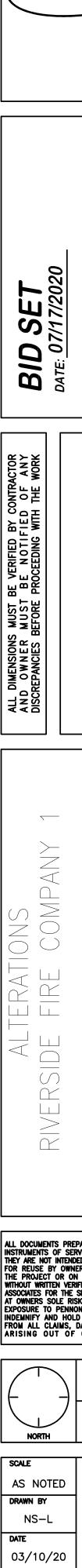
DRAWING NO. AS NOTED NS-L 03/10/20

			LIGHT FIXTURE SCH		Τ		LAMPS			
TYPE	DESCRIPTION	MANUFACTURER	CATALOG NO.	MOUNTING	TYPE	NO.	LUMENS	WATTS	VOLTS	REMARKS
<b>A1</b>	2'X4' RECESSED LED TROFFER WITH 0-10V DIMMING TO 1%. ACRYLIC FROSTED ACRYLIC PRISMATIC LENS AND STEEL HOUSING.	METALUX	24-G-R-LD5-64-F1-UNV-L835-CD-1-U	RECESSED	3500K LED	1	6462	48	120	*COORDINATE CEILING TYPE WITH ARCHITECTURAL REFLECTED CEILING PLANS.
A1E	SAME AS FIXTURE TYPE A1 EXCEPT WITH INTEGRAL BATTERY UNIT.	METALUX	24-G-R-LD5-64-F1-UNV-EL7W-L835-CD-1-U	RECESSED	3500K LED	1	6462	48	120	*COORDINATE CEILING TYPE WITH ARCHITECTURAL REFLECTED CEILING PLANS.
A2	2'X4' RECESSED LED TROFFER WITH 0-10V DIMMING TO 1%. ACRYLIC FROSTED ACRYLIC PRISMATIC LENS AND STEEL HOUSING.	METALUX	24-G-R-LD5-56-F1-UNV-L835-CD-1-U	RECESSED	3500K LED	1	5618	45.1	120	*COORDINATE CEILING TYPE WITH ARCHITECTURAL REFLECTED CEILING PLANS.
A2E	SAME AS FIXTURE TYPE A2 EXCEPT WITH INTEGRAL BATTERY UNIT.	METALUX	24-G-R-LD5-56-F1-UNV-EL7W-L835-CD-1-U	RECESSED	3500K LED	1	5618	45.1	120	*COORDINATE CEILING TYPE WITH ARCHITECTURAL REFLECTED CEILING PLANS.
B1	2'X4' RECESSED LED TROFFER WITH ANGLE SIDE LENS AND DIFFUSED CENTER LENS AND STEEL HOUSING.	FINELITE	HPR LED-A-2X4-DCO-S-835-120V-SC-C*	RECESSED	3500K LED	1	3772	27	120	*COORDINATE CEILING TYPE WITH ARCHITECTURAL REFLECTED CEILING PLANS.
B1E	SAME AS FIXTURE TYPE B EXCEPT WITH INTEGRAL BATTERY UNIT.	FINELITE	HPR LED-A-2X4-DCO-S-835-120V-SC-C* PROVIDE WITH 7 WATT EMERGENCY BATTERY PACK	RECESSED	3500K LED	1	3772	27	120	*COORDINATE CEILING TYPE WITH ARCHITECTURAL REFLECTED CEILING PLANS.
В2	2'X4' RECESSED LED TROFFER WITH ANGLE SIDE LENS AND DIFFUSED CENTER LENS AND STEEL HOUSING.	FINELITE	HPR LED-A-2X4-DCO-HO-835-120V-SC-C*	RECESSED	3500K LED	1	5416	41	120	*COORDINATE CEILING TYPE WITH ARCHITECTURAL REFLECTED CEILING PLANS.
B2E	SAME AS FIXTURE TYPE B EXCEPT WITH INTEGRAL BATTERY UNIT.	FINELITE	HPR LED-A-2X4-DCO-HO-835-120V-SC-C* PROVIDE WITH 7 WATT EMERGENCY BATTERY PACK	RECESSED	3500K LED	1	5416	41	120	*COORDINATE CEILING TYPE WITH ARCHITECTURAL REFLECTED CEILING PLANS.
С	2'X2' RECESSED LED TROFFER WITH 0-10V DIMMING TO 1%. ACRYLIC FROSTED ACRYLIC PRISMATIC LENS AND STEEL HOUSING.	METALUX	22-G-R-LD5-32-F1-UNV-L835-CD-1-U	RECESSED	3500K LED	1	3268	29.9	120	*COORDINATE CEILING TYPE WITH ARCHITECTURAL REFLECTED CEILING PLANS.
CE	SAME AS FIXTURE TYPE C EXCEPT WITH INTEGRAL BATTERY UNIT.	METALUX	22-G-R-LD5-32-F1-UNV-L835-CD-1-U	RECESSED	3500K LED	1	3268	29.9	120	*COORDINATE CEILING TYPE WITH ARCHITECTURAL REFLECTED CEILING PLANS.
D	LED WALL MOUNTED VAPORPROOF LIGHT WITH DIE CAST ALUMINUM HOUSING AND GUARD	E-CONOLIGHT	E-VTB02A-WM401G	SURFACE	4000K LED	1	1900	22	120	
FE	1'X4' LINEAR WRAPAROUND LED WITH FROSTED ACRYLIC DIFFUSER LENS	DAY-BRITE	FSW-4-XXX-835-120-SDIM-EMLED	SURFACE	3500K LED	1	4000	31	120	
G1	3"X4' SQUARE LENSED PENDANT LED STRIP WITH 0-10V DIMMING TO 10%. FULL FROST LENS AND STEEL CHANNEL.	COOPER LIGHTING SOLUTIONS	4SNLED-LD5-**SL-SLW-UNV-L835-CD1-U-SCF	PENDANT	3500K LED	1	6376	70	120	BAY - MOUNTING HEIGHT = 16'-0" AFF EQUIP RM - MOUNTIN HEIGHT = 12'-0" AFF
G1E	SAME AS FIXTURE TYPE G1 EXCEPT WITH INTEGRAL BATTERY UNIT.	COOPER LIGHTING SOLUTIONS	4SNLED-LD5-64-SL-SLW-UNV-EL72-L835-CD1-U-SCF	PENDANT	3500K LED	1	6376	70	120	BAY - MOUNTING HEIGHT = 16'-0" AFF EQUIP RM - MOUNTIN HEIGHT = 12'-0" AFF
G2	3"X2' SQUARE LENSED PENDANT LED STRIP WITH 0-10V DIMMING TO 10%. FULL FROST LENS AND STEEL CHANNEL.	COOPER LIGHTING SOLUTIONS	2SNLED-LD5-64-SL-SLW-UNV-L835-CD1-U-SCF	PENDANT	3500K LED	1	5203	36	120	MOUNTING HEIGHT = 8'-0" AFF TO BOTTOM
G3	3"X4' SQUARE LENSED PENDANT LED STRIP WITH 0-10V DIMMING TO 10%. FULL FROST LENS AND STEEL CHANNEL.	COOPER LIGHTING SOLUTIONS	4SNLED-LD5-52-SL-SLW-UNV-L835-CD1-U-SCF	PENDANT	3500K LED	1	5203	52	120	MOUNTING HEIGHT = 8'-0" AFF TO BOTTOM
G3E	SAME AS FIXTURE TYPE G3 EXCEPT WITH INTEGRAL BATTERY UNIT.	COOPER LIGHTING SOLUTIONS	4SNLED-LD5-52-SL-SLW-UNV-EL72-L835-CD1-U-SCF	PENDANT	3500K LED	1	5203	52	120	MOUNTING HEIGHT = 8'-0" AFF TO BOTTOM
н	5" RECESSED LED SHOWER DOWNLIGHT	PRESCOLITE	LF6ML-277-6LFML30L-35K-8-DL	RECESSED	3500K LED	1	3061	32.7	120	SHOWER LOCATION
W1E	MINI TRAPEZOID SHAPE LED WALL PACK WITH INTEGRAL BATTERY UNIT. DIE CAST ALUMINUM HOUSING AND TYPE 3 OPTIC DISTRIBUTION. IP66 RATED.	GARDCO	111L-16L-550-NW-G2-4-EBPC-120-DD-F1-*  * COLOR AND FINISH SELECTED BY ARCHITECT	SURFACE	4000K LED	16	2688	29		MOUNTING HEIGHT OVER DOORS AT 10' O.C. COORDINATE ALL FINAL LOCATIONS WITH ARCHITECTURAL ELEVATIONS.
W2E	TRAPEZOID SHAPE LED WALL PACK WITH INTEGRAL BATTERY UNIT. DIE CAST ALUMINUM HOUSING AND TYPE 4 OPTIC DISTRIBUTION. IP66 RATED.	GARDCO	101L-16L-700-NW-G1-3-EBPC-120-DD-F1-*  * COLOR AND FINISH SELECTED BY ARCHITECT	SURFACE	4000K LED	16	3594	37		MOUNTING HEIGHT ON BUILDING AT 12' O.C. COORDINATE ALL FINAL LOCATIONS WITH ARCHITECTURAL ELEVATIONS.
Х1	SINGLE FACE LED EXIT SIGN WITH RED LETTERS WITH WHITE DIE CAST ALUMINUM HOUSING.	EATON	CX-7-1-WH-R	UNIVERSAL	N/A	N/A	N/A	.98		CONNECT TO NEARBY EMERGENCY LIGHTING CIRCUIT WITHIN SAME SPACE. UNIVERSAL MOUNTING (COORDINATI MOUNTING WITH ARCHITECTURAL DRAWINGS). PROVIDE DIRECTIONAL ARROWS AS PER DWGS.
<b>X2</b>	DOUBLE FACE LED EXIT SIGN WITH RED LETTERS WITH WHITE DIE CAST ALUMINUM HOUSING.	EATON	CX-7-2-WH-R	UNIVERSAL	N/A	N/A	N/A	.98		CONNECT TO NEARBY EMERGENCY LIGHTING CIRCUIT WITHIN SAME SPACE. UNIVERSAL MOUNTING (COORDINATE MOUNTING WITH ARCHITECTURAL DRAWINGS). PROVIDE DIRECTIONAL ARROWS AS PER DWGS.

## **NOTES:**

- 1. COORDINATE ALL LIGHT FIXTURE MOUNTING WITH ARCHITECTURAL REFLECTED CEILING PLANS. AND ALL
- CEILING MOUNTED DEVICES AND EQUIPMENT.

  2. ALL FINAL FINISHES AND COLORS WILL BE DETERMINED BY THE ARCHITECT.



iuite 1B – 856.547.0505

Architects

Landscape

• Planners

Engineers • Surveyors

COMPANY OTT STREET NU 08075 RIVERSIDE

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RSFDX19001

							PA	NEL S	CHEDU	LE							
	PANEL:	RP-1	INTERRUPT	ΓINC	3 RA	TING:	22kAIC	;						MOUNTING:	SURFACE		_
	VOLTAGE:	208Y/120V	PHASE:	;	3Ø			WIRE:	4W		AMP:	100	4	MAIN:	MLO		
NOTES	DES	CRIPTION	WIRE	POLES	SIZE			VA/P	HASE			SIZE	POLES	WIRE	DESCRIPTION	NOTES	CIRCUIT
19		01111 11011	\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	В	BKR	,	4		В	(	С	BKR	l B	*****	BEGGIAII FIGIT	19	18
					В	LEFT	RIGHT	LEFT	RIGHT	LEFT	RIGHT	<u> </u>					
1	N	/ASHER	2#12G	1	20	1200	720					20	1	2#12G	POKE THRU RECEPTACLES (4)		2
3	1	DRYER	2#10 G	2	30			2500	720			20	1	2#12G	POKE THRU RECEPTACLES (4)		4
5										2500	720	20	1	2#12G	CORRIDOR RECEPTACLES (4)		6
7	RECE	PTACLES (5)	2#12G	1	20	900	900					20	1	2#12G	CORRIDOR (5)		8
9	RECE	PTACLES (4)	2#12G	1	20			720	360			20	1	2#12G	LIGHTS		10
1	EXTER	RIOR LIGHTS	2#12G	1	20					320	360	20	1	2#12G	LIGHTS		1:
3	L	JIGHTS	2#12G	1	20	440	360					20	1	2#12G	LIGHTS		14
5	l	LIGHTS	2#12G	1	20			580	100			20	1	2#12G	STAIR LIGHTS		10
7	l	LIGHTS	2#12G	1	20					660	0	20	1		SPARE		18
9	RECE	PTACLES (6)	2#12G	1	20	1080	0					20	1		SPARE		20
21	:	SPARE		1	20			0	0			20	1		SPARE		22
23	;	SPARE		1	20					0	0				SPACE		24
25		SPARE		1	20	0	0								SPACE		20
27		SPARE		1	20			0	0						SPACE		28
29	,	SPARE		1	20					0	0				SPACE		30
								LOAD	TOTALS								
						56	00	49	980	45	60	_					
								15	140			1					

							PA	NEL S	CHEDU	LE							
Π		PANEL: RP-2	INTERRUP	TIN	G RA	ΓING:	22kAIC	,						MOUNTING:	SURFACE		$\neg$
		VOLTAGE: 208Y/120V	PHASE:		3Ø			WIRE:	4W		AMP:	100	4	MAIN:	MLO		
ΤÜ	ES	DECODINE	MIDE	ES	SIZE			VA/P	HASE			SIZE	ES.	WIDE	DECODIDATION	ES	CIRCUIT
CIRCUIT	NOTES	DESCRIPTION	WIRE	POLES	BKR		A		В	(	С	BKR	POLES	WIRE	DESCRIPTION	NOTES	SIRC
_					В	LEFT	RIGHT	LEFT	RIGHT	LEFT	RIGHT	] "					
1		EF-1	2#12G	1	20	830	500					20	1	2#12G	VAV-1 & VAV-2		2
3		EF-2	2#12G	1	20			510	200			20	1	2#12G	CUH-1		4
5		EUH-2	2#12G	1	20					1500	0	20	1		SPARE		6
7		CUH-2	2#12G	1	20	200	0					20	1		SPARE		8
9		FACP	2#12G	1	20			500	0			20	1		SPARE		10
11		SPARE		1	20					0	0	20	1		SPARE		12
13		SPARE		1	20	0	0								SPACE		14
15		SPARE		1	20			0	0						SPACE		16
17		SPARE		1	20					0	0				SPACE		18
19		SPACE				0	0								SPACE		20
21		SPACE						0	0				П		SPACE		22
23		SPACE								0	0		П		SPACE		24
25		SPACE				0	0								SPACE		26
27		SPACE						0	0				П		SPACE		28
29		SPACE								0	0				SPACE		30
_			•					LOAD	TOTALS						•		
						15	530	12	210	15	500						
								42	240			1					

## **ELECTRICAL PANEL SCHEDULE NOTES:**

Architects

ALL NEW PANEL(S) AND CIRCUIT BREAKERS SHALL MATCH THE EXISTING EQUIPMENT IN MANUFACTURER AND MODEL, NOT LIMITED TO, SHORT CIRCUIT RATING.

PANEL: RP-3 INTERRUPTING RATING: 22kAIC WIRE: 4W AMP: 100A MOUNTING: SURFACE VOLTAGE: 208Y/120V PHASE: 3Ø WIRE: 4W AMP: 100A MAIN: MLO    Description   Wire   O									PA	NEL S	CHEDU	LE							
DESCRIPTION			PANEL:	RP-3	INTERRUP1	ΓIN	G RA	TING:	22kAIC	;						MOUNTING:	SURFACE		
Name			VOLTAGE:	208Y/120V	PHASE:		3Ø			WIRE:	4W		AMP:	100/	4	MAIN:	MLO		
No.   No.	SUIT	res	DESC	PDIDTION	WIDE	ES	SIZE			VA/F	PHASE			SIZE	ES	WIDE	DESCRIPTION	n n	CIRCUIT
The control of the	IK K		DESC	CRIFTION	WIKE	POL			Α		В		С	줐	NO.	VVIKE	DESCRIPTION	2	Ž Ķ
Section   Sect							<u> </u>	LEFT	RIGHT	LEFT	RIGHT	LEFT	RIGHT	1 🖷					
CU-3	1		E	UH-5	2#12G	1	20	1500	1000					20	1	2#12G	HAND DRYER		2
Tolerand	3			EF-3	2#12G	1	20			830	1000			20	1	2#12G	HAND DRYER		4
9	5		(	CU-3	2#12G	1	20					200	720	20	1	2#12G	RECEPTACLES (4)		6
11	7		VAV-	3 & VAV-4	2#12G	1	20	500	720					20	1	2#12G	RECEPTACLES (4)		8
13	9		VAV-	6 & VAV-4	2#12G	1	20			500	1080			20	1	2#12G	RECEPTACLES (6)		10
15	11		VAV-	7 & VAV-8	2#12G	1	20					500	1080	20	1	2#12G	RECEPTACLES (6)		12
17			\	/AV-9	2#12G	1	20	250	0					20	1		SPARE		14
19	15		LI	GHTS	2#12G	1	20			330	0			20	1		SPARE		16
21	17		LI	GHTS	2#12G	1	20					360	0	20	1		SPARE		18
23			CORRIE	OOR LIGHTS	2#12G	1	20	410	0					20	1		SPARE		20
25			OFFIC	E LIGHTS	2#12G	1	20			440	0						SPACE		22
27			S	PARE		1	20					0	0				SPACE		24
29 SPARE 1 20 0 0 SPACE  LOAD TOTALS  4380 4180 2860	25		S	PARE		1	20	0	0								SPACE		26
LOAD TOTALS 4380 4180 2860			S	PARE		1	20			0	0						SPACE		28
4380 4180 2860	29		S	PARE		1	20					0	0				SPACE		30
										LOAD	TOTALS								
11420								4	380	4	180	28	360						
11:==										11	1420								

							PA	NEL SO	CHEDU	LE							
		PANEL: RP-4	INTERRUP <sup>*</sup>	TIN	G RA	TING:	22kAIC							MOUNTING:	SURFACE		
		VOLTAGE: 208Y/120V	PHASE:		3Ø			WIRE:	4W		AMP:	100 <i>A</i>	١.	MAIN:	MLO		
CIRCUIT	NOTES	DESCRIPTION	WIRE	POLES	SIZE				HASE	I		SIZE	POLES	WIRE	DESCRIPTION	NOTES	
5				P	BKR	,	A		В	(	0	BKR	Ы			2	١
					В	LEFT	RIGHT	LEFT	RIGHT	LEFT	RIGHT	]					
1		KITCHEN RECEPTACLES (3)	2#12G	1	20	540	730					20	1	2#12G	LIGHTS		
3		RECEPTACLES (4)	2#12G	1	20			720	190			20	1	2#12G	LIGHTS		
5		RECEPTACLES (4)	2#12G	1	20					720	1070	20	1	2#12G	STAIR LIGHTS		
7		SPARE		1	20	0	0					20	1		SPARE		
9		SPARE		1	20			0	0			20	1		SPARE		I
11		SPARE		1	20					0	0	20	1		SPARE		
13		SPARE		1	20	0	0					20	1		SPARE		
15		SPACE						0	0						SPACE		
7		SPACE								0	0				SPACE		
9		SPACE				0	0								SPACE		
21		SPACE						0	0						SPACE		
23		SPACE								0	0				SPACE		
25		SPACE				0	0								SPACE		
27		SPACE						0	0						SPACE		
9		SPACE								0	0				SPACE		Τ
								LOAD	TOTALS						•		•
						12	270	9	10	17	'90	I					

	F	PANEL:	GP-1	INTERRUP	TIN	G RA	TING:	22kAIC							MOUNTING:	SURFACE		_
	VC	DLTAGE:	208Y/120V	PHASE:		3Ø			WIRE:	4W		AMP:	150	4	MAIN:	MLO		
CIRCUIT		DESC	CRIPTION	WIRE	POLES	SIZE	VA/PHASE				0	KR SIZE POLES		WIRE	DESCRIPTION	NOTES	11.00	
히	ž				M	BKR	LEFT	A RIGHT	LEFT	B RIGHT	LEFT	C Tright	BKR	M			Ž	2
1		EXIST	ING LOAD	EXISTING	1	20	0	0					20	1	EXISTING	EXISTING LOAD		1
3		EXIST	ING LOAD	EXISTING	1	20	edicide name	a ka a ka a ka ka a	0	0	1		20	1	EXISTING	EXISTING LOAD		4
5		EXIST	ING LOAD	EXISTING	1	20					0	0	20	1	EXISTING	EXISTING LOAD		1
7		EXIST	ING LOAD	EXISTING	1	20	0	0					20	1	EXISTING	EXISTING LOAD		7
9		EXIST	ING LOAD	EXISTING	1	20			0	0			20	1	EXISTING	EXISTING LOAD		1
11		EXIST	ING LOAD	EXISTING	1	20					0	0	20	1	EXISTING	EXISTING LOAD		1
13		EXIST	ING LOAD	EXISTING	2	20	0	900					20	1	1#12&1#12G	RECEPTACLES (5)		1
15									0	0						SPACE		1
17		S	PACE								0	0				SPACE		1
19		S	PACE				0	0								SPACE		2
21		S	PACE						0	0						SPACE		2
23		S	PACE								0	0				SPACE		2
25		S	PACE				0	0								SPACE		2
27		S	PACE						0	0						SPACE		2
29		S	PACE								0	0				SPACE		3
										TOTALS	1							
							9	00		0		0	1					

REVISED PANEL SCHEDULE																
PANEL:	HP	INTERRUPT	INC	3 RA	TING:	22kAIC							MOUNTING:	SURFACE		
VOLTAGE:	208Y/120V	PHASE:	;	3Ø			WIRE:	4W		AMP:	100	4	MAIN:	MLO		
DESCRIPTION		WIDE	ES_	SIZE			VA/P	HASE			SIZE	-ES	WIDE	DESCRIPTION	TES	CIRCUIT
						Α		В		С	줐	POI	VVIIXE	DESCRIPTION	9	18
			-	8	LEFT	RIGHT	LEFT	RIGHT	LEFT	RIGHT	<u> </u>					$\perp$
EXISTIN	G BOILER B-1	EXISTING	1	25	0	0					25	1	EXISTING	EXISTING BOILER B-2		2
NEW 3 I	HP PUMP P-1	3#12&1#12G	3	20			1330	1330			20	3	3#12&1#12G	NEW 3 HP PUMP P-2		4
									1330	1330						(
					1330	1330										8
EXIS	TING LOAD	EXISTING	1	20			0	600			20	1	EXISTING	NEW GAS WH-1 (ADD/ALT)		1
EXISTING BOIL	ER CONTROL PANEL	EXISTING	1	15					0	130	20	1	2#12&1#12G	NEW CIRC PUMP CP-1		1
SPARE		EXISTING	1	20	0	3120					30	2	2#10&1#10G	ELEVATOR CONTROLLER		1
EXISTING LOAD		EXISTING	1	20			0	3120								1
EXIS	TING LOAD	EXISTING	1	20					0	500	20	1	2#12&1#12G	ELEVATOR CAB LIGHTS		1
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27 0 0 0	28
29 0 0 0	30
TOTAL LOAD ADDED	
0	



JOB NO. RSFDX19001

ALL DOCUMENTS PREPARED BY PENNONI ASSOCIATES ARE INSTRUMENTS OF SERVICE IN RESPECT OF THE PROJECT. THEY ARE NOT INTENDED OR REPRESENTED TO BE SUITABLE FOR REUSE BY OWNER OR OTHERS ON EXTENSIONS OF THE PROJECT OR ON ANY OTHER PROJECT. ANY REUSE WITHOUT WRITTEN VERIFICATION OR ADAPTATION BY PENNONI ASSOCIATES FOR THE SPECIFIC PURPOSE INTENDED WILL BE AT OWNERS SOLE RISK AND WITHOUT LIABILITY OR LEGAL EXPOSURE TO PENNONI ASSOCIATES; AND OWNER SHALL INDEMNIFY AND HOLD HARMLESS PENNONI ASSOCIATES FROM ALL CLAIMS, DAMAGES, LOSSES AND EXPENSES ARISING OUT OF OR RESULTING THEREFROM.

# RIVERSIDE FIRE COMPANY EXPANSION

# PRELIMINARY AND FINAL SITE PLANS

BLOCK 904, LOTS 3, 4, 5, 6, & 9

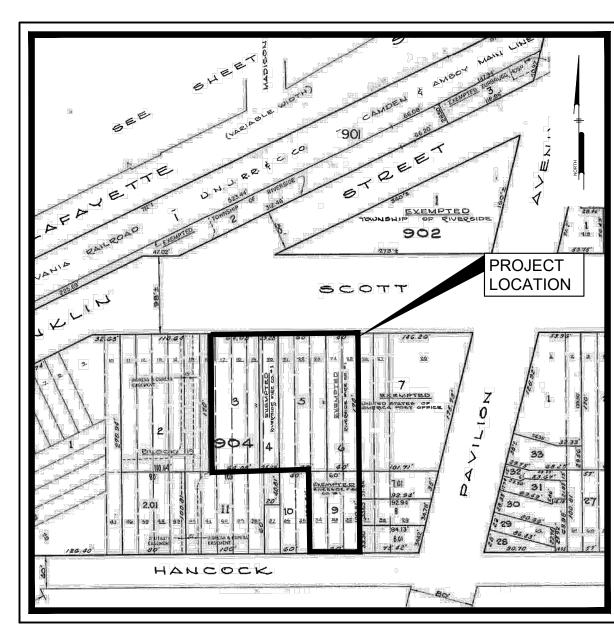
RIVERSIDE TOWNSHIP, BURLINGTON COUNTY, NJ

PREPARED FOR: OWNER/DEVELOPER

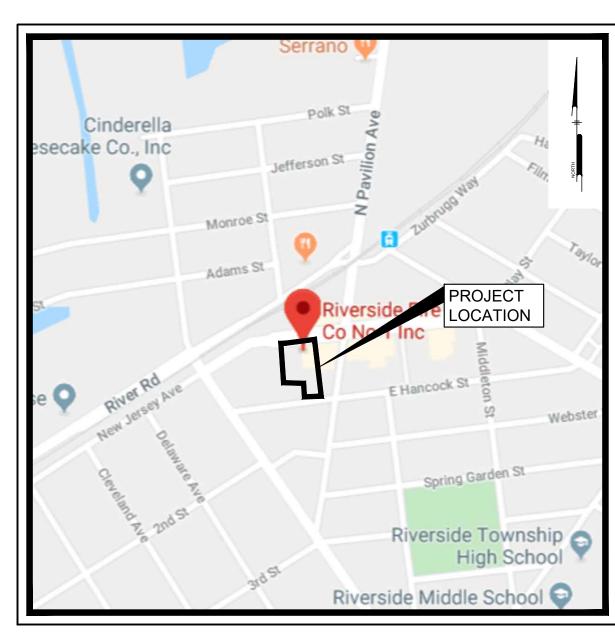
# RIVERSIDE FIRE COMPANY

14 W SCOTT ST RIVERSIDE TOWNSHIP, NJ 08075

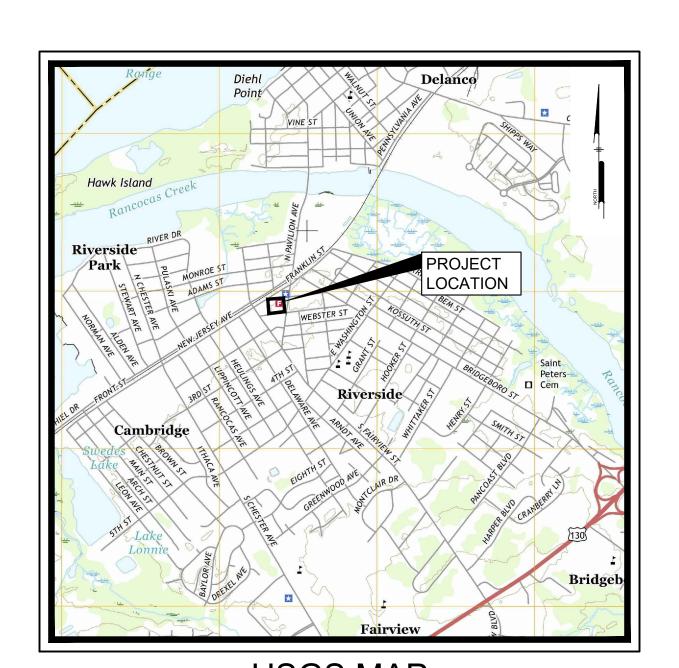
Sheet List Table							
SHEET NUMBER	DWG TITLE	SHEET TITLE	DRAWING DATE				
1	CS0001	COVER SHEET	JULY 17, 2020				
2	CS0002	GENERAL NOTES	JULY 17, 2020				
3	CS0201	EXISTING CONDITION	JULY 17, 2020				
4	CS0501	DEMOLITION PLAN	JULY 17, 2020				
5	CS1001	SITE PLAN	JULY 17, 2020				
6	CS1501	GRADING PLAN	JULY 17, 2020				
7	CS1701	UTILITY PLAN	JULY 17, 2020				
8	CS6001	CONSTRUCTION DETAILS	JULY 17, 2020				
9	CS6002	CONSTRUCTION DETAILS	JULY 17, 2020				
10	CS6003	CONSTRUCTION DETAILS	JULY 17, 2020				
11	CS8001	SOIL EROSION AND SEDIMENT CONTROL PLAN	JULY 17, 2020				
12	CS8501	SOIL EROSION AND SEDIMENT CONTROL NOTES	JULY 17, 2020				
13	CS8502	SOIL EROSION AND SEDIMENT CONTROL DETAILS	JULY 17, 2020				
1	V0401	TOPOGRAPHY AND BOUNDARY SURVEY	DECEMBER 3, 2019				



TAX MAP SHEET #9
Scale: N.T.S.



LOCATION MAP
Scale: 1" = 500'



USGS MAP
Scale: 1" = 2000'

# PREPARED BY: PENNONI ASSOCIATES INC.



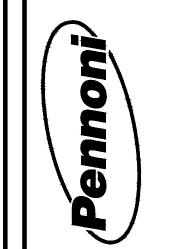
515 Grove Street, Suite 1B Haddon Heights, NJ 08035 **T** 856.547.0505 **F** 856.547.9174

CALL BEFORE YOU DIG 1-800-272-1000

**NEW JERSEY** 

CONTRACTOR SHALL BE RESPONSIBLE TO COMPLY WITH THE REQUIREMENTS OF THE NEW JERSEY ONE-CALL DAMAGE PREVENTION SYSTEM AS STATED IN THE "UNDERGROUND FACILITY PROTECTION ACT". TICKET NUMBER(S):

BID SET NOT FOR CONSTRUCTION



PENNONI ASSOCIA	515 Grove Street, St	Haddon Heights, NJ	T 856.547.0505 F 85	
			္ပါ	

ANDREW T. BANFF

PROFESSIONAL ENGINEER

NEW JERSEY LICENSE NO. GE 45121

OVER SHEET

DATE NO. REVISIONS BY

ALL DOCUMENTS PREPARED BY PENNONI ASSOCIATES
ARE INSTRUMENTS OF SERVICE IN RESPECT OF THE
PROJECT. THEY ARE NOT INTENDED OR REPRESENTE
TO BE SUITABLE FOR REUSE BY OWNER OR OTHERS O
THE EXTENSIONS OF THE PROJECT OR ON ANY OTHEF
PROJECT. ANY REUSE WITHOUT WRITTEN VERIFICATIO
OR ADAPTATION BY PENNONI ASSOCIATES FOR THE
SPECIFIC PURPOSE INTENDED WILL BE AT OWNERS
SOLE RISK AND WITHOUT LIABILITY OR LEGAL
EXPOSURE TO PENNONI ASSOCIATE; AND OWNER SHAI
INDEMNIFY AND HOLD HARMLESS PENNONI ASSOCIATE
FROM ALL CLAIMS, DAMAGES, LOSSES AND EXPENSES
ARISING OUT OF OR RESULTING THEREFROM.

PROJECT RSFDX19001

DATE JULY 17, 2020

DRAWING SCALE AS NOTED

APPROVED BY

CS0001

- G-2. THE CONTRACTOR SHALL IMMEDIATELY INFORM THE OWNER AND OWNER'S REPRESENTATIVE OF ANY DISCREPANCIES OR ERRORS DISCOVERED ON THE PLAN. APPARENT CONTRADICTIONS IN CONTRACT DOCUMENTS SHALL BE RESOLVED WITH THE OWNER AND ENGINEER BEFORE AFFECTED WORK PROCEEDS.
- G-3. DEVIATION FROM THESE PLANS AND NOTES WITHOUT THE PRIOR CONSENT OF THE OWNER, OWNER'S REPRESENTATIVE AND/OR THE DESIGN ENGINEER MAY BE CAUSE FOR THE WORK TO BE UNACCEPTABLE.
- G-4. UTILIZE A MOBILE SWEEPER AND WATER TRUCK DAILY FOR DUST CONTROL ALONG HAUL ROUTES AND IN AREAS MADE AVAILABLE FOR CONSTRUCTION.
- G-5. PREVENT WATER PONDING RESULTING FROM CONSTRUCTION OPERATIONS. PROMPTLY REMOVE ANY PONDED WATER TO THE SATISFACTION OF THE ENGINEER.
- G-6. CONTRACTOR SHALL WORK TO MINIMIZE EXCESS SOIL GENERATED. IF IT IS NECESSARY TO REMOVE SOIL FROM THE SITE, IT SHOULD BE DISPOSED OF AT A PERMITTED DISPOSAL FACILITY. PROVIDE THE NAME OF THE DISPOSAL FACILITY AND SOIL SAMPLE RESULTS 7 DAYS PRIOR TO HAULING SOIL. COPIES OF ALL BILLS-OF-LADING SHALL BE PROVIDED TO THE ENGINEER WITHIN 24 HOURS OF SOIL LEAVING THE SITE. CONTRACTOR SHALL ASSUME OWNERSHIP/RESPONSIBILITY OF EARTH OR CONCRETE SPOILS AND/OR DEBRIS GENERATED DURING CONSTRUCTION.
- G-7. ALL AREAS OUTSIDE THE LIMITS OF CONSTRUCTION WHICH ARE DAMAGED BY THE CONTRACTOR SHALL BE RESTORED TO THEIR ORIGINAL CONDITION TO THE SATISFACTION OF THE ENGINEER AND OWNER.
- G-8. VERIFY ALL INDICATED CONDITIONS AND DIMENSIONS IN THE FIELD BEFORE PERFORMING ANY WORK. NOTIFY THE ENGINEER OF ANY CONDITIONS OR DIMENSIONS THAT WOULD PREVENT OR HAMPER THE PERFORMANCE OF THE WORK IN C-5. ACCORDANCE WITH THE CONTRACT DRAWINGS AND SPECIFICATIONS.
- G-9. SOILS TESTING AND ON-SITE INSPECTION SHALL BE PERFORMED BY GEOTECHNICAL ENGINEER. THE SOILS ENGINEER SHALL PROVIDE COPIES OF TEST REPORTS TO THE CONTRACTOR, AND THE OWNER, AND SHALL PROMPTLY NOTIFY THE OWNER AND THE CONTRACTOR SHOULD WORK PERFORMED BY THE CONTRACTOR FAIL TO MEET THESE SPECIFICATIONS.
- G-10. THE BOTTOM OF ALL EXCAVATIONS AND COMPACTED EARTHWORK SHALL BE INSPECTED AND APPROVED BY A REGISTERED GEOTECHNICAL ENGINEER PRIOR TO PLACING CONCRETE STRUCTURES AND/OR BACKFILLING. APPROVAL BY THE GEOTECHNICAL ENGINEER, IN WRITING, SHALL INDICATE THAT THE SOIL IS ADEQUATE TO SAFELY SUPPORT A FOUNDATION PRESSURE OF 2,000 PSF. EXCAVATION BELOW THE ANTICIPATED BOTTOMS OF FOOTINGS ALONG WITH PLACEMENT OF COMPACTED BACKFILL MAY BE REQUIRED. A GEOTECHNICAL ENGINEER IS REQUIRED TO INSPECT, TEST, AND CERTIFY TO THE COMPACTION OF ALL LOAD BEARING FILLS.
- G-11. THE CONTRACTOR SHALL PROVIDE ANY AND ALL EXCAVATION AND MATERIAL SAMPLES C-7. NECESSARY TO CONDUCT REQUIRED SOIL TESTS. ALL ARRANGEMENTS AND SCHEDULING FOR THE TESTING SHALL BE THE CONTRACTOR'S RESPONSIBILITY.
- G-12. THE CONTRACTOR WILL INSURE THAT POSITIVE AND ADEQUATE DRAINAGE IS MAINTAINED AT ALL TIMES WITHIN THE PROJECT LIMITS. THIS MAY INCLUDE, BUT NOT BE LIMITED TO, REPLACEMENT OR RECONSTRUCTION OF EXISTING DRAINAGE STRUCTURES THAT HAVE BEEN DAMAGED OR REMOVED, OR REGRADING AS REQUIRED BY THE ENGINEER, EXCEPT FOR THOSE DRAINAGE ITEMS SHOWN AT SPECIFIC LOCATIONS. NO SEPARATE PAYMENT WILL BE MADE FOR ANY COSTS INCURRED TO COMPLY WITH THIS REQUIREMENT.
- G-13. CONTRACTOR SHALL FURNISH AND MAINTAIN ALL NECESSARY BARRICADES AROUND THE WORK AREA AND SHALL PROVIDE PROTECTION AGAINST WATER DAMAGE AND
- G-14. ALL TRAFFIC CONTROL DEVICES TO BE CONSTRUCTED AND INSTALLED IN ACCORDANCE WITH "THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES", LATEST EDITION. SIGN POSTS SHALL BE GALVANIZED STEEL AND ALL SIGN MATERIALS SHALL BE MADE OF REFLECTIVE SHEETING ON ALUMINUM BLANKS IN ACCORDANCE WITH NJDOT STANDARD SPECIFICATIONS.
- G-15. ALL DIMENSIONING IS TO CURB OR BUILDING FACE, UNLESS OTHERWISE NOTED
- G-16. UNLESS OTHERWISE INDICATED, ALL MATERIALS AND METHODS OF CONSTRUCTION SHALL CONFORM TO THE NEW JERSEY DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATION FOR ROAD AND BRIDGE CONSTRUCTION, 2007, AS AMENDED AND SUPPLEMENTED TO DATE.
- G-17. ALL CONCRETE SHALL HAVE A MINIMUM 28-DAY COMPRESSIVE STRENGTH OF 4,000 PSI, UNLESS OTHERWISE NOTED.
- G-18. ALL NEW CONCRETE PAVING AND CURBING SHALL MEET FLUSH WITH EXISTING.
- G-19 SHOP DRAWINGS FOR PROPOSED CAST-IN-PLACE AND/OR PRECAST CONCRETE STRUCTURES SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW PRIOR TO C-13. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DEWATERING AND PRECLUDING ANY FABRICATION OR PROCUREMENT.
- G-20. THE CONTRACTOR SHALL NOTIFY THE SOIL CONSERVATION DISTRICT A MINIMUM OF 72 HOURS BEFORE THE BEGINNING OF CONSTRUCTION.
- G-21. ALL WORK SHALL COMPLY WITH APPLICABLE STATE, FEDERAL, AND LOCAL CODES, AND ALL NECESSARY LICENSES AND PERMITS SHALL BE OBTAINED BY THE CONTRACTOR

AT HIS EXPENSE UNLESS PREVIOUSLY OBTAINED BY THE OWNER/DEVELOPER.

- MATERIALS FROM OWNER PROPERTY AND RESTORE THE AREAS TO THEIR ORIGINAL CONDITION, AS APPROVED BY THE ENGINEER.
- G-23. BID QUANTITIES SHOWN HEREIN ARE ALL INCLUSIVE TO THE PAY ITEM TO BE CONSTRUCTED. THERE SHALL BE NO SEPARATE PAYMENT FOR ANY ITEM SHOWN WITHIN THE CONTRACT DOCUMENTS THAT ARE NOT SPECIFICALLY IDENTIFIED AS A PAY ITEM. THERE SHALL BE NO SEPARATE PAYMENTS TO CONSTRUCT ANY INCIDENTAL SITE FEATURE REQUIRED TO FINISH SITE CONSTRUCTION. THE COSTS OF ALL IMPROVEMENTS SHALL BE INCLUDED WITHIN THE VARIOUS PAY ITEMS UNIT COST.
- G-24. THE OWNER RETAINS THE RIGHT TO INCREASE, DECREASE AND/OR ELIMINATE ANY PAY ITEM QUANTITY. PAYMENT SHALL BE BASED UPON THE INSTALLED PAY ITEM QUANTITY. THERE SHALL NOT BE ANY ADDITIONAL PAYMENT DUE TO CHANGES IN PAY ITEM QUANTITIES.
- G-25. THE CONTRACTOR IS REQUIRED TO PROVIDE ALL TRAFFIC CONTROL DEVICES IN ACCORDANCE WITH THE MUTCD. THE COSTS OF TRAFFIC CONTROL DEVICES SHALL BE C-19. ALL PRECAST CONCRETE INLETS SHALL CONFORM TO ASTMC-913 "PRECAST INCLUDED WITHIN THE VARIOUS BID ITEMS UNIT COST. THERE SHALL BE NO SEPARATE PAYMENT.

#### HIGH VOLTAGE PROXIMITY ACT

THE CONTRACTOR IS NOTIFIED THAT ALL PROVISIONS OF THE HIGH-VOLTAGE PROXIMITY ACT, P.L. 1948, c. 249 AS AMENDED THROUGH MAY 20, 1987 SHALL BE STRICTLY ADHERED TO. THE THE FEDERAL OCCUPATIONAL SAFETY AND HEALTH ACT OF DECEMBER, 1970. PARTICULAR ATTENTION IS DIRECTED TO THE PROVISIONS OF THE ABOVE ACT REQUIRED WARNING SIGNS, NOTIFICATION TO POWER COMPANY AND RESPONSIBILITY FOR SAFEGUARDS AND ALSO PROHIBITED ACTIVITY.

ENGINEER OR MAY BE OBTAINED FROM THE NEW JERSEY DEPARTMENT OF LABOR, DIVISION OF WORKPLACE STANDARDS, OFFICE OF SAFETY COMPLIANCE, TRENTON, NJ 08625 PURSUANT TO NJAC 5:23-2.21(e) OF THE NEW JERSEY UNIFORM CONSTRUCTION CODE AND CFR 1926.32 (f) (OSHA COMPETENT PERSON). THE GENERAL CONTRACTOR IS DESIGNATED AS THE "RESPONSIBLE PERSON IN CHARGE OF CONSTRUCTION" AND THE SITE SUPERVISOR RESPONSIBLE FOR CONSTRUCTION SITE SAFETY DURING THE COURSE OF SITE IMPROVEMENTS.

THE CONTRACTOR AND/OR OWNER SHALL PROVIDE FULL-TIME GEOTECHNICAL OBSERVATION DURING FARTHWORK AND FOUNDATION CONSTRUCTION

#### **UTILITY NOTES:**

- SCHEDULE TO RIVERSIDE TOWNSHIP, ALL UTILITY COMPANIES AND INTERESTED PARTIES AND THE OWNER PRIOR TO CONSTRUCTION. THE SCHEDULE SHALL DETAIL ALL ITEMS ASSOCIATED WITH CARRYING OUT THE CONTRACT ON A DAILY BASIS. CONSTRUCTION SHALL BE SEQUENCED SUCH THAT NO MORE THAN ONE HYDRANT IS OUT OF SERVICE AT ANY GIVEN TIME. CONTRACTOR SHALL COORDINATE DIRECTLY WITH THE FIRE MARSHALL WITH REGARD TO HYDRANT SERVICE INTERRUPTIONS NOT LESS THAN 3 DAYS PRIOR TO INTERRUPTION.
- C-2. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO DETERMINE THE LOCATION OF ALL EXISTING UNDERGROUND UTILITIES AND TO TAKE WHATEVER STEPS NECESSARY TO PROVIDE FOR THEIR PROTECTION. THE ENGINEER HAS ATTEMPTED TO LOCATE AND INDICATE EXISTING FACILITIES ON THESE PLANS; HOWEVER, THIS INFORMATION IS SHOWN FOR THE CONTRACTOR'S CONVENIENCE ONLY. THE ENGINEER ASSUMES NO RESPONSIBILITY FOR THE LOCATIONS OF UTILITIES SHOWN OR NOT SHOWN. THE CONTRACTOR SHALL CONTACT THE UTILITY COMPANIES FOR EXACT LOCATION OF THEIR UTILITIES PRIOR TO STARTING CONSTRUCTION. IT SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR TO REPAIR AND REPLACE ANY AND ALL DAMAGE MADE TO UTILITIES.
- BEFORE EXCAVATING THE PROJECT AREA THE CONTRACTOR IS TO VERIFY THE LOCATION OF ANY UNDERGROUND UTILITY (GAS MAINS, WATER MAINS, SEWER LINES, TELEPHONE LINES, ETC.). SHOULD ANY UNDERGROUND UTILITY INTERFERE WITH PROJECT CONSTRUCTION THE ENGINEER SHALL BE NOTIFIED BEFORE PROCEEDING WITH WORK. CONTRACTOR SHALL NOTIFY ALL UTILITY COMPANIES THREE (3) DAYS PRIOR TO COMMENCEMENT OF ANY EXCAVATION FOR ACCURATE FIELD LOCATIONS. FOR UTILITY MARKOUT CALL 1-800-272-1000.
- C-4. TREES SHALL BE PLANTED A MINIMUM OF 10' FROM FIRE HYDRANTS AND WATER LINES AND SANITARY LINES.
- SEWERS AND WATER MAINS GENERALLY SHALL BE SEPARATED A DISTANCE OF AT LEAST 10 FEET HORIZONTALLY. IF SUCH LATERAL SEPARATION IS NOT POSSIBLE, THE PIPES SHALL BE IN SEPARATE TRENCHES WITH THE SEWER AT LEAST 18 INCHES BELOW THE BOTTOM OF THE WATER MAIN: OR SUCH OTHER SEPARATION AS APPROVED BY THE WATER AND SEWER ENTITY SHALL BE MADE. IN GENERAL, THE VERTICAL SEPARATION AT A CROSSING OF SEWER AND WATER LINE SHALL SHALL BE AT LEAST 18 INCHES. WHERE THIS IS NOT POSSIBLE, THE SEWER SHALL BE CONSTRUCTED OF DUCTILE IRON PIPE USING MECHANICAL OR SLIP-ON JOINTS FOR A DISTANCE OF AT LEAST 10FT ON EITHER SIDE OF THE CROSSING OR OTHER SUITABLE PROTECTION SHALL BE PROVIDED.
- C-6. PIPE BEDDING REQUIREMENTS SPECIFIED HEREIN ARE TO BE CONSIDERED AS D-4. WHERE A PIPE BEING REMOVED IS CONNECTED TO AN EXISTING STRUCTURE, EITHER REMOVE MINIMUMS FOR RELATIVELY DRY, STABLE EARTH CONDITIONS. ADDITIONAL BEDDING SHALL BE REQUIRED FOR ROCK TRENCHES AND WET AREAS. CONTRACTOR SHALL HAVE THE RESPONSIBILITY TO PROVIDE SUCH ADDITIONAL BEDDING AS MAY BE REQUIRED TO PROPERLY CONSTRUCT THE WORK
- BACKFILL IN THE TRENCHES SHALL BE COMPACTED TO THE DENSITY OF 95% OF THEORETICAL MAXIMUM DRY DENSITY (ASTM D698). BACKFILL MATERIAL SHALL BE FREE FROM ROOTS, STUMPS, OR OTHER FOREIGN DEBRIS AND SHALL BE PLACED IN D-6. ALL EXISTING CATCH BASINS AND MANHOLES SHALL BE FIELD LOCATED PRIOR TO WORK AND LIFTS NOT TO EXCEED 6 INCHES IN COMPACTED FILL THICKNESS. A REPORT FROM A GEOTECHNICAL ENGINEER MAY BE REQUIRED BY THE MUNICIPALITY'S INSPECTOR. CORRECTION OF ANY TRENCH SETTLEMENT WITHIN A YEAR FROM THE DATE OF APPROVAL WILL BE THE RESPONSIBILITY OF THE CONTRACTOR.
- C-8. CONTRACTOR SHALL EXCAVATE ONLY ENOUGH TRENCH TO INSTALL NEW UTILITY AND BACKFILL BY THE END OF EACH WORK DAY. OPEN TRENCH SHALL NOT BE PERMITTED AT ANY TIME CONTRACTOR IS NOT ACTIVELY WORKING ON PORTION OF UTILITY REQUIRING OPEN EXCAVATION.
- EXISTING MAINS TO BE ABANDONED IN PLACE SHALL BE CAPPED AND FILLED WITH AN
- APPROVED CONTROLLED LOW STRENGTH MATERIAL (CLSM). C-10. ALL SANITARY SEWER FORCEMAIN PIPING SHALL BE PVC CLASS 150 (DR18) AWWA C900 UNLESS OTHERWISE NOTED. ALL GRAVITY SANITARY SEWER SHALL BE SDR 26

#### C-11. STORM SEWER PIPING:

UNLESS OTHERWISE NOTED.

MINIMUM CLASS III RCP, WALL B IN ACCORDANCE WITH CURRENT N.J.D.O.T. STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION UNLESS OTHERWISE NOTED.

- C-12. TRENCH DETAILS ARE INTENDED TO PROVIDE INFORMATION REGARDING BACKFILLING MATERIALS AND GENERAL MATERIAL DEPTHS AND PAVEMENT LIMITS ONLY. THE D-11. CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING THE DISCONNECTION AND/OR CONTRACTOR SHALL BE RESPONSIBLE FOR THE MEANS AND METHODS OF CONSTRUCTION AND SHALL PROVIDE APPROPRIATE SAFETY MEASURES, SHEETING, AND BRACING AS MAY BE REQUIRED DUE TO FIELD CONDITIONS. THE CONTRACTOR SHALL COMPLY WITH ALL APPLICABLE OSHA STANDARDS AND DETAILS FOR TRENCH FIELD CONDITIONS, TRENCHING OR BACKFILLING OPERATIONS DURING CONSTRUCTION.
- PONDING OF WATER IN ALL AREAS. EXCEPTING REASONABLE AND SAFE DEPTHS WITHIN THE SEDIMENTATION BASIN.
- RESPECTIVE UTILITY. THE EXACT LOCATION OF EACH MAIN SHALL BE COORDINATED BY THE OWNER/GENERAL CONTRACTOR AND SUBMITTED TO THE DESIGN ENGINEER FOR REVIEW PRIOR TO INSTALLATION.
- G-22. UPON COMPLETION OF THE WORK, REMOVE ALL DEBRIS, EQUIPMENT AND UNUSED C-15. EXISTING STREET SURFACES AND OTHER SURFACES DISTURBED BY THE CONTRACTOR IN ACCORDANCE WITH THE REQUIREMENTS OF THE COUNTY ENGINEER.
  - C-16. RESET ALL WATER VALVES BOXES, HYDRANTS, SANITARY CLEANOUTS OR VENTS, GAS VALVES, METERS, SANITARY RIMS, INLET GRATES AND ALL OTHER UTILITY BOXES OR RIMS TO NEW GRADES AS REQUIRED. THE COST SHALL BE INCLUDED WITHIN THE VARIOUS PAY ITEMS. THERE SHALL BE NO SEPARATE PAYMENT.
  - C-17. ALL WATER PIPES, FITTINGS AND VALVES SHALL BE DISINFECTED IN ACCORDANCE WITH AWWA REQUIREMENTS.
  - C-18. THE MUNICIPALITY'S ENGINEER MUST BE GIVEN 48 HOURS ADVANCE NOTICE OF SANITARY SEWER/WATERMAIN WORK AND THE REPRESENTATIVES MUST WITNESS THE WORK/CONNECTION.
  - CONCRETE WATER AND WASTEWATER STRUCTURES".
  - OR APPROVED EQUAL. C-21. WATER MAIN APPURTENANCES, SUCH AS BUT NOT LIMITED TO: FITTINGS AND VALVES
  - SHALL BE BLOCKED WITH CONCRETE AS DETAILED HEREIN. C-22. THRUST BLOCKS AND RESTRAINTS SHALL BE INSTALLED AT ALL BENDS AND FITTINGS.

THRUST BLOCKS SHALL HAVE TWENTY-EIGHT (28) DAY STRENGTH OF 4,000 P.S.I.

- CONTRACTOR SHALL ALSO ADHERE TO ALL PROVISIONS OF PART 1926.550, SUBPART N OF C-23. EXISTING SANITARY SEWERS THAT ARE TO REMAIN IN SERVICE SHALL REMAIN IN ACTIVE OPERATION AT ALL TIMES. EXISTING WATER MAINS SHALL REMAIN IN ACTIVE OPERATION EXCEPT AS NECESSARY FOR CONNECTIONS. PROVIDE A MINIMUM OF TWO WEEKS NOTICE TO THE ENGINEER AND OWNER PRIOR TO SERVICE DISRUPTIONS.
- A COPY OF THE HIGH-VOLTAGE PROXIMITY ACT IS AVAILABLE IN THE OFFICE OF THE COUNTY C-24. ALL UTILITIES TO BE INSTALLED UNDERGROUND EXCEPT WHERE NOTED.
  - C-25. ALL SANITARY SEWER, WATER, ELECTRIC, COMMUNICATION LINES SHALL BE INSTALLED WITH DETECTABLE WARNING TAPE WITH THE WORDING "CAUTION BURIED LINE BELOW" THE NAME OF THE TYPE OF UTILITY SHALL BE PROVIDED ON THE DETECTABLE WARNING TAPE.

## 200 FT PROPERTY OWNERS LIST

**EXISTING** 

**CONIFEROUS TREE** 

DECIDUOUS TREE

STUMP

FIRE HYDRANT

WATER MANHOLE

WATER POST INDICATOR VALVE

SIAMESE CONNECTION

WATER STUB OUT

WATER VALVE

WATER METER

UNIDENTIFIED HANDHOLE

JNIDENTIFIED JUNCTION BOX

UNIDENTIFIED MANHOLE

STORM DRAIN CLEANOUT

STORM DRAIN MANHOLF

STORM DRAIN FLARED END SECTION

STORM DRAIN HEADWALL

STORM DRAIN INLET

STORM ROOF DRAIN

STORM STAND PIPE

STORM DRAIN WING WALL

TELEPHONE HANDHOLE

TELEPHONE JUNCTION BOX

TELEPHONE MANHOLE

TELEPHONE PANEL BOX

TELEPHONE PEDESTAL

SEPTIC TANK

UTILITY POLE

UNIDENTIFIED PANEL BOX

				Mailing Add	ress		
Block	<u>Lot</u>	Property Owner	No	Street	Town	<u>State</u>	Zip Code
901	9	New Jersey Transit Corp	ONE	Penn Plaza E	Newark	NJ	07105
902	4	Township of Riverside, Township Clerk	P.O.	Box 188	Riverside	NJ	08075
904	1	McCormick 111 LLC	11350	MCCormick Rd #902	<b>Hunt Valley</b>	MD	21031
20200 00	2	Nunzio Canducci	P.O.	Box 407	Riverside	NJ	08075
	2.01	McCormick 111 LLC	11350	MCCormick Rd #902	<b>Hunt Valley</b>	MD	21031
	7	Unites States Post Office	6	Scott Street	Riverside	NJ	08075
	7.01	Luis G & Liana Ordonez	7	Quall Drive	Edgewater Park	NJ	08010
	8	Dhrumant J Modi	34	Inverness Dr	Delran	NJ	08075
	8.01	ELUMR LLC	116	S Pavilion Street	Riverside	NJ	08075
	10	NJ American Water & American Water	P.O.	Box 2738 tax Dept	Camden	NJ	08101
905	1	Jake Ryan Properties	2	E Scott Street suite 200	Riverside	NJ	08075
400.0000	28	123 South Pavilion Property LLC	344	Salem Road	Moorestown	NJ	08057
	29	Paul Ciarrocco	2	Prince street	Bordentown	NJ	08505
	30	Digna LLC	119	S Pavilion Avenue	Riverside	NJ	08075
	31	Wilson Lu & Hong Nhung tang	117	S Pavilion Avenue	Riverside	NJ	08075
	32	Carlos Gonzalez	115	S Pavilion Avenue	Riverside	NJ	08075
1301	3	lasina Kelly & Dorran Burnett	34	W Hancock St	Riverside	NJ	08075
2000000	3.01	Dan & Julie Schulin	30	W Hancock St	Riverside	NJ	08075
	4	Penny O'Neill	18	W Hancock St	Riverside	NJ	08075
	4.01	Ronald Conard	24	W Hancock St	Riverside	NJ	08075
	5	Robert O'Neill	P.O.	Box 122	Rosemont	NJ	08856
	5.01	Penny O'Neill	18	W Hancock St	Riverside	NJ	08075
	6	Kevin Ivanov	57	Birch avenue	Princeton	NJ	08542
	7	Carlos & Sharon Beltran	48	Serendipity Drive	Jackson	NJ	08527
	8	Robert & Denise Cobligh	2	Lenape Trail	Medford	NJ	08055
	9	Sabag Investment	20	Trainor Circle	Bordentown	NJ	08505
	10	N J Bell c/o Duff & Phelps	P.O.	Box 2749	Addison	TX	75001
	11	Janet Figueroa	133	S Fairview st	Riverside	NJ	08075
1303	2	Jose & Maria Cepa	1116	Fairview st	Delran	NJ	08075
25 10 18414	_ 3	Jose & Maria Cepa	1116	Fairview st	Delran	NJ	08075
	4	Agnaldo Evangelista Nunes	639	Unruh	Philadelphia	PA	19111
	5	Eas investments LLC	1411	Route 130 South #333	Cinnaminson	NJ	08077
	6	Carloz Gonzalez	P.O.	Box 46827	Philadelphia	PA	19160

#### DEMOLITION NOTES

- D-1. ANY WATER METERS DISCOVERED DURING THE COURSE OF DEMOLITION SHALL BE IDENTIFIED AND DOCUMENTED PRIOR TO REMOVAL.
- D-2. ALL DEMOLITION WORK SHALL BE PERFORMED IN ACCORDANCE WITH NFPA 241 AND OSHA
- D-3. ALL HOLES AND TRENCH AREAS REMAINING AFTER DEMOLITION SHALL BE BACKFILLED TO MATCH EXISTING GRADE. A GEOTECHNICAL ENGINEER IS REQUIRED TO INSPECT, TEST, AND CERTIFY TO THE COMPACTION OF ALL LOAD BEARING FILLS.
- THE PIPE AND FILL THE WALL OPENING WITH CONCRETE, OR CUT THE PIPE WITHOUT PERCUSSION NOT MORE THAN 6" FROM THE OUTSIDE FACE OF THE STRUCTURE AND FILL THE REMAINING LENGTH OF PIPE WITH CONCRETE.
- D-5. THE REMOVAL OF EXISTING BOLLARDS, FENCE POSTS & FOOTINGS SHALL INCLUDE THE PIPE/ POST AND CONCRETE FOOTING IN ITS ENTIRETY.
- THE ENGINEER SHALL BE NOTIFIED OF ANY DISCREPANCIES PERTAINING TO LOCATIONS SHOWN ON THE CONTRACT DRAWINGS.
- D-7. CONTRACTOR SHALL NOTIFY OWNER AND THE ENGINEER 72 HRS. PRIOR TO INITIATING UTILITY
- IF FIELD CONDITIONS DIFFER FROM THOSE SHOWN ON THIS PLAN THE CONTRACTOR SHALL NOTIFY THE DESIGN ENGINEER IMMEDIATELY. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY THE LOCATION OF ALL UNDERGROUND UTILITIES PRIOR TO CONSTRUCTION AND DIG TEST PITS AS NECESSARY TO VERIFY LOCATION
- D-9. ALL UTILITIES SHALL BE REMOVED TO A MINIMUM OF FOUR (4) FT BELOW EXISTING GROUND SURFACE. DEMOLISH FIRE HYDRANT THRUST BLOCKS IF ENCOUNTERED.
- D-10. ELECTRICAL UTILITIES SHALL BE DISCONNECTED PRIOR TO BEGINNING ANY DEMOLITION WORK. DEMOLITION SHALL INCLUDE THE REMOVAL OF BURIED AND EXPOSED CONDUIT IN THE AREA DESIGNATED FOR DEMOLITION, SEALING ENDS OF ALL BURIED CONDUIT ABANDONED IN PLACE AND REMOVING ALL POWER AND CONTROL WIRING BETWEEN THE DEMOLISHED FACILITY AND THE TERMINAL JUNCTION BOX, CIRCUIT BREAKER, OR METER CONTROL CENTER SUPPLYING POWER TO THE FACILITY.
- REMOVAL OF ANY SERVICE UTILITIES ATTACHED/CONNECTED/RECIEVING/ SUPPLYING, ETC. TO ANY BUILDING AND/OR STRUCTURE NOTED HEREIN TO BE DEMOLISHED. CONTRACTOR SHALL OBTAIN ANY NECESSARY PERMITS OR APPROVALS ASSOCIATED WITH SAME.
- EXCAVATION. THE DESIGN ENGINEER ASSUMES NO RESPONSIBILITY OR LIABILITY FOR D-12. ALL ACTIVE CONSTRUCTION SITES AND LOCATIONS SHALL BE PROVIDED WITH NON-COMBUSTIBLE REFUSE CONTAINER(S) IN SUCH NUMBERS AS SHALL BE NECESSARY TO CONTAIN ALL COMBUSTIBLE REFUSE GENERATED BY THE CONSTRUCTION ACTIVITIES.ALL COMBUSTIBLE REFUSE, RUBBISH AND DEBRIS SHALL BE COLLECTED UP AND DEPOSITED IN THE CONTAINER(S) ON A DAILY BASIS. REFUSE CONTAINER(S) SHALL BE LOCATED A MINIMUM OF 20 FEET AWAY FROM ANY BUILDING, STRUCTURE, LOT LINE OR COMBUSTIBLE MATERIAL STORAGE LOCATION.
- C-14. GAS, ELECTRIC, TELEPHONE AND CABLE TV LINES MAY BE INSTALLED BY THE D-13. WHILE CONSTRUCTION ACTIVITIES ARE IN PROGRESS, AT LEAST FOUR(4) PORTABLE FIRE EXTINGUISHERS HAVING A RATING OF AT LEAST 10-A. 60-BC SHALL BE PROVIDED. AND SHALL BE MAINTAINED IN A LOCATION APPROVED BY THE FIRE OFFICIAL. PERSONNEL NORMALLY ON THE CONSTRUCTION SITE SHALL BE INSTRUCTED IN THE USE OF THE FIRE EXTINGUISHERS PROVIDED.
  - CONSTRUCTION OF FACILITIES FOR THIS PROJECT SHALL BE RESTORED BY THE D-14. CONTRACTOR IS RESPONSIBLE FOR MAINTAINING AND PROTECTING EXISTING STRUCTURES AS IDENTIFIED ON THE DEMOLITION PLAN, CS0501. THE CONTRACTOR MUST NOTIFY THE ENGINEER IF ANY DAMAGE OCCURS TO THESE ITEMS. THE ENGINEER/ OWNER WILL DETERMINE WHETHER THE DAMAGED ITEMS CAN BE REPAIRED, OR SHALL BE REPLACED AT NO ADDITIONAL COST TO THE OWNER.
    - D-15. PRIOR TO REMOVAL OF EXISTING FULL-DEPTH ASPHALTIC AND/OR CONCRETE PAVEMENT, CONTRACTOR SHALL SAWCUT TO FULL DEPTH TO PROVIDE A CLEAN STRAIGHT EDGE. CONCRETE SIDEWALK AND/OR CURB SHALL BE REMOVED TO THE NEAREST CONTROL JOINT.
    - D-16. ALL TREES/SHRUBS/BRUSH WITHIN THE LIMITS OF DISTURBANCE SHOWN AND/OR AS DIRECTED BY THE ENGINEER SHALL BE COMPLETELY REMOVED, INCLUDING GRUBBING.
    - D-17. EXISTING SHED TO BE RELOCATED AS INDICATED SHALL BE DIRECTED PER THE OWNER. RELOCATING COST SHALL INCLUDE FULL DEMOLITION.

#### **ENVIRONMENTAL NOTES:**

ALL MATERIAL BROUGHT ON SITE SHALL BE CLEAN FILL, SAMPLED, AND ANALYZED IN C-20. ALL INLET AND MANHOLE PIPE OPENINGS SHALL BE SEALED WITH NON-SHRINK GROUT E-1. ACCORDANCE WITH STANDARD NJDEP QUALITY ASSURANCE STANDARDS AND PRACTICES AT A MINIMUM, AS SPECIFIED IN N.J.A.C. 7:26E, TO FULLY CHARACTERIZE THE CONTAMINANTS IN THE LATEST SOIL CLEANUP CRITERIA (SCC). THE CONTRACTOR SHALL SUBMIT TO THE OWNER WRITTEN DOCUMENTATION FROM A LABORATORY CERTIFIED IN NEW JERSEY ENVIRONMENTAL LABORATORY CERTIFICATION PROGRAM (ELCP) AND IN ACCORDANCE WITH N.J.A.C. 7:18 PRIOR TO PLACEMENT OF THE MATERIAL ON SITE. THE MATERIAL MUST NOT CONTAIN CONTAMINANTS ABOVE THE MOST RESTRICTIVE DIRECT CONTACT OR IMPACT TO GROUNDWATER (IGW) SCC.

E-2. BY GENERAL SITE OBSERVATION, NO FRESHWATER WETLANDS EXIST ON SITE.

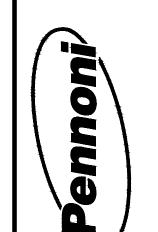
#### SITE SAFETY

- 1. THE OWNER, OR HIS REPRESENTATIVE, IS TO DESIGNATE AN INDIVIDUAL RESPONSIBLE FOR CONSTRUCTION SITE SAFETY DURING THE COURSE OF SITE IMPROVEMENTS PURSUANT TO N.J.A.C. 5:23-2.21 (E) OF THE NEW JERSEY UNIFORM CONSTRUCTION CODE AND CFR 1926.32 (F) (OSHA COMPETENT PERSON).
- 2. THE CONTRACTOR SHALL INSTALL CONSTRUCTION FENCE AROUND THE PROPOSED
- 3. THE CONTRACTOR SHALL OBTAIN ROAD OPENING PERMITS IF REQUIRED BY THE LOCAL COMMUNITY AND/OR STATE AGENCY AND FOLLOW ALL TRAFFIC PROVISIONS CONTAINED WITHIN THE PERMIT WHICH WILL INCLUDE FOLLOWING THE REQUIREMENTS OF THE MUTCD.

## **LEGEND**

	BUILDING	
	PROPERTY LINE	
	ADJACENT PROPERTY LINE	
	SETBACK LINE	
	RIGHT-OF-WAY LINE ROADWAY CENTERLINE	
	FENCE	xx_
	CURB	
	CONCRETE SIDEWALK	
	VEHICULAR CONCRETE	4 4 4 4
	HEAVY DUTY ASPHALT PAVING	
46.34 x	SPOT ELEVATION	46.34 x
\$	LIGHT POLE	•-
•	BOLLARD SIGN	•
-0-0	SIGN POST AND BOARD	<del>-0-0-</del>
50	CONTOUR	50
w w	WATER LINE DOMESTIC	ww
	WATER LINE FIRE	F F
ss	SANITARY SEWER	ss
	STORM SEWER ROOF DRAIN	
D D	STORM SEWER	D D
	OVERHEAD ELECTRIC	——— OE ——— OE -
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×××	GUIDERAIL  CHAINLINK FENCE	ĪĪ
	CONCRETE WHEEL STOP	
	TREE PROTECTION FENCE	
	CABLE TV JUNCTION BOX	<b>T</b>
(D)	CABLE TV MANHOLE  COMMUNICATIONS MANHOLE	(IV)
	COMMUNICATIONS HANDHOLE	
<b>©</b>	FIBER HANDHOLE	<b>©</b>
FOJE	FIBER JUNCTION BOX	<u>F0.8</u>
FO	FIBER MANHOLE	<b>(10)</b>
(G)	GAS MANHOLE	<b>©</b>
	GAS METER	
<b>©</b>	GAS STUB OUT	<b>©</b>
	GAS VALVE	<u> </u>
	ELECTRICAL HANDHOLE	
	ELECTRICAL METER	
<b>(</b> )		③ (5)
	ELECTRICAL MANHOLE	
EPB	ELECTRICAL PANEL BOX	<u>EPB</u>
E	ELECTRICAL PEDESTAL	E
	ELECTRICAL STUB OUT	<b>©</b>
7	ELECTRICAL STUB OUT	4
(MV)	MONITORING WELL	(MW)
0	SANITARY SEWER CLEANOUT	•
(FM)	SANITARY SEWER CLEANOUT	(FM)
(S)	SANITARY MANHOLE	(S)
	STEAM MANHOLE	ST
ST		
	UNIDENTIFIED PEDESTAL	

**BID SET NOT FOR CONSTRUCTION** 

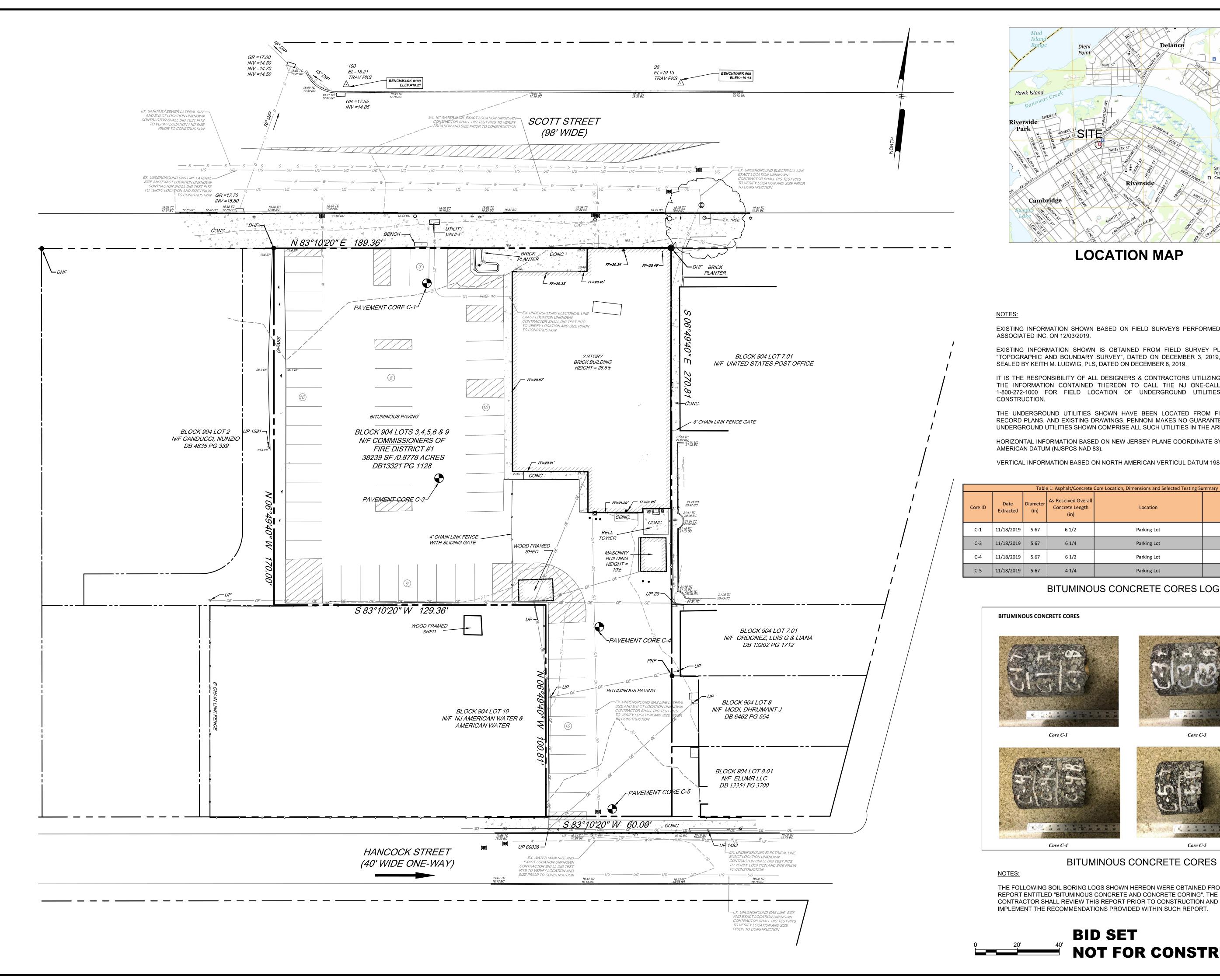


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ALL DOCUMENTS PREPARED BY PENNONI ASSOCIATE ARE INSTRUMENTS OF SERVICE IN RESPECT OF THE ROJECT. THEY ARE NOT INTENDED OR REPRESEN TO BE SUITABLE FOR REUSE BY OWNER OR OTHERS ( THE EXTENSIONS OF THE PROJECT OR ON ANY OTHE PROJECT. ANY REUSE WITHOUT WRITTEN VERIFICATION OR ADAPTATION BY PENNONI ASSOCIATES FOR THE SPECIFIC PURPOSE INTENDED WILL BE AT OWNER SOLE RISK AND WITHOUT LIABILITY OR LEGAL EXPOSURE TO PENNONI ASSOCIATES; AND OWNE SHALL INDEMNIFY AND HOLD HARMLESS PENNONI ASSOCIATES FROM ALL CLAIMS, DAMAGES, LOSSES A EXPENSES ARISING OUT OF OR RESULTING THEREFRO

RSFDX1900<sup>2</sup> JULY 17, 2020 RAWING SCALE

DRAWN BY





EXISTING INFORMATION SHOWN BASED ON FIELD SURVEYS PERFORMED BY PENNONI

EXISTING INFORMATION SHOWN IS OBTAINED FROM FIELD SURVEY PLAN ENTITLED "TOPOGRAPHIC AND BOUNDARY SURVEY", DATED ON DECEMBER 3, 2019, SIGNED AND

IT IS THE RESPONSIBILITY OF ALL DESIGNERS & CONTRACTORS UTILIZING THIS PLAN & THE INFORMATION CONTAINED THEREON TO CALL THE NJ ONE-CALL SYSTEM AT 1-800-272-1000 FOR FIELD LOCATION OF UNDERGROUND UTILITIES PRIOR TO

THE UNDERGROUND UTILITIES SHOWN HAVE BEEN LOCATED FROM FIELD SURVEY, RECORD PLANS, AND EXISTING DRAWINGS. PENNONI MAKES NO GUARANTEES THAT THE UNDERGROUND UTILITIES SHOWN COMPRISE ALL SUCH UTILITIES IN THE AREA.

HORIZONTAL INFORMATION BASED ON NEW JERSEY PLANE COORDINATE SYSTEM NORTH

VERTICAL INFORMATION BASED ON NORTH AMERICAN VERTICUL DATUM 1988 (NAVD88).

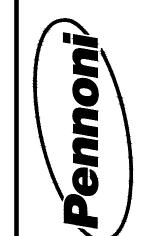
		Table	e 1: Asphalt/Concrete	Core Location, Dimensions and Selected Testing Su	ımmary
Core ID	Date Extracted	Diameter (in)	As-Received Overall Concrete Length (in)	Location	Testing Performed
C-1	11/18/2019	5.67	6 1/2	Parking Lot	Thickness
C-3	11/18/2019	5.67	6 1/4	Parking Lot	Thickness
C-4	11/18/2019	5.67	6 1/2	Parking Lot	Thickness
C-5	11/18/2019	5.67	4 1/4	Parking Lot	Thickness

### **BITUMINOUS CONCRETE CORES LOG**



THE FOLLOWING SOIL BORING LOGS SHOWN HEREON WERE OBTAINED FROM A REPORT ENTITLED "BITUMINOUS CONCRETE AND CONCRETE CORING". THE CONTRACTOR SHALL REVIEW THIS REPORT PRIOR TO CONSTRUCTION AND

NOT FOR CONSTRUCTION



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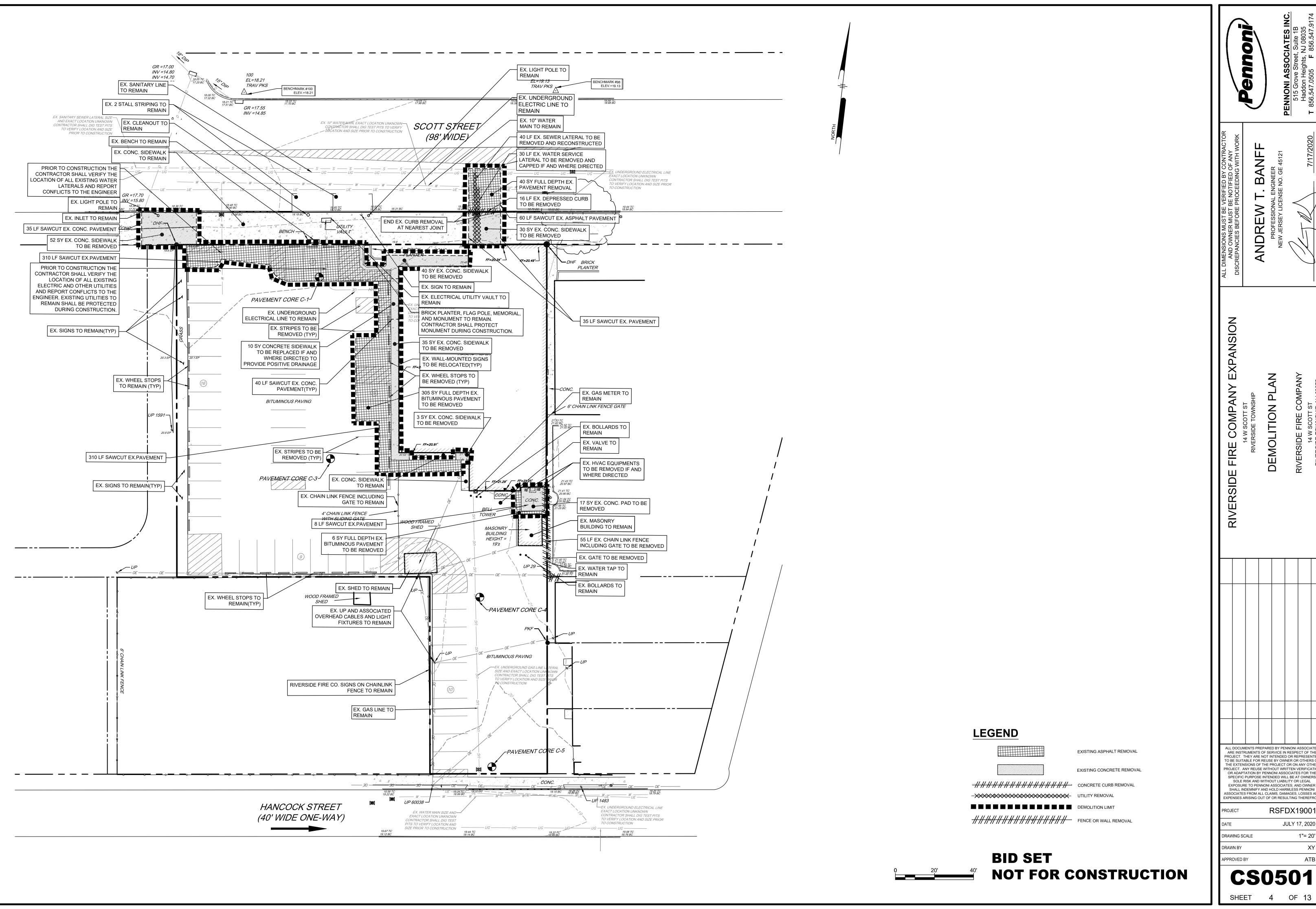
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1"= 20' DRAWN BY

**CS0201** 



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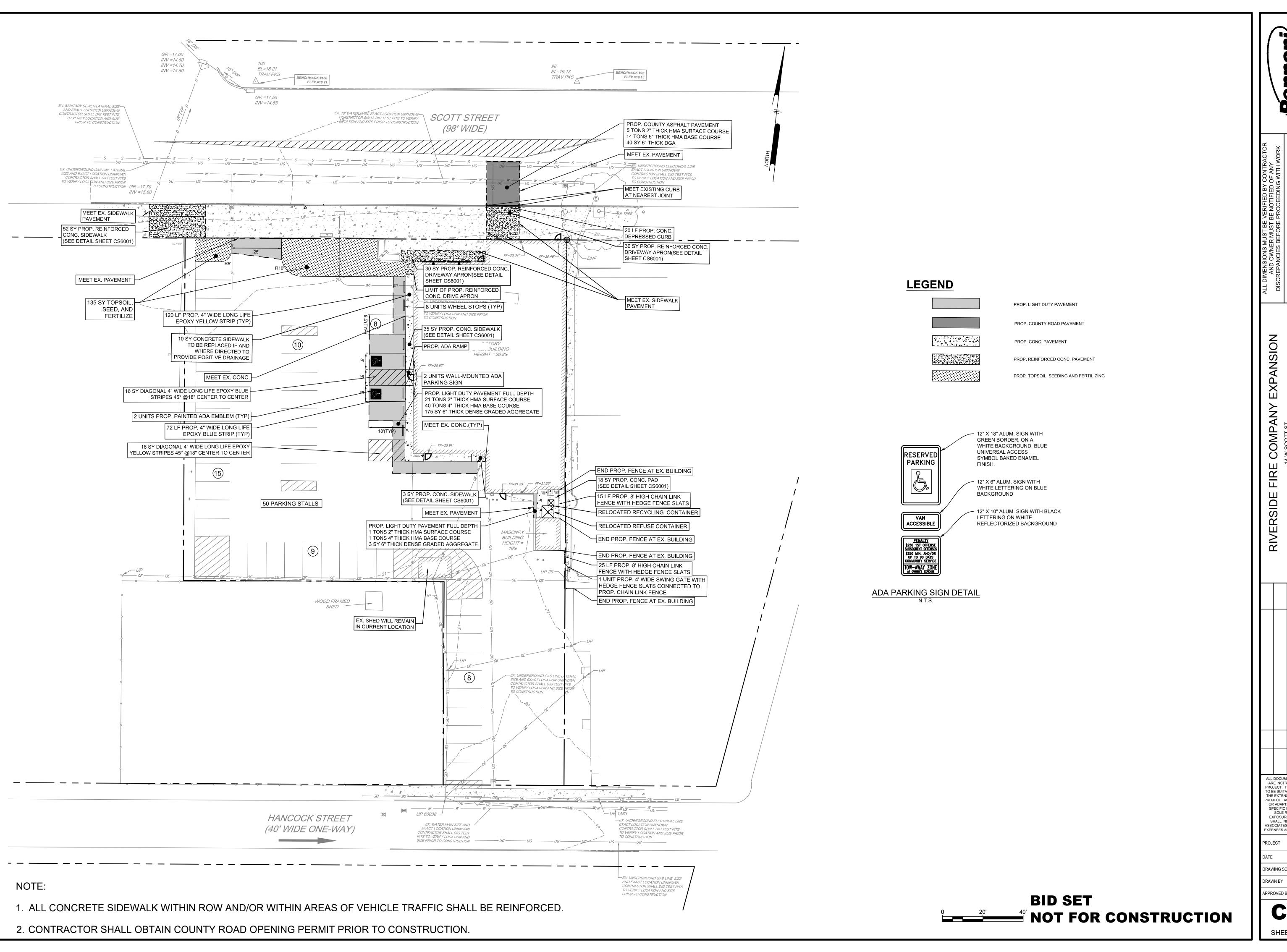
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RSFDX1900<sup>2</sup> JULY 17, 2020 1"= 20'

DRAWING SCALE DRAWN BY

**CS0501** 

SHEET 4 OF 13



BANF ANDREW

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SOLE RISK AND WITHOUT LIBBILITY OR LEGAL

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EXPENSES ARISING OUT OF OR RESULTING THEREFROM
PROJECT

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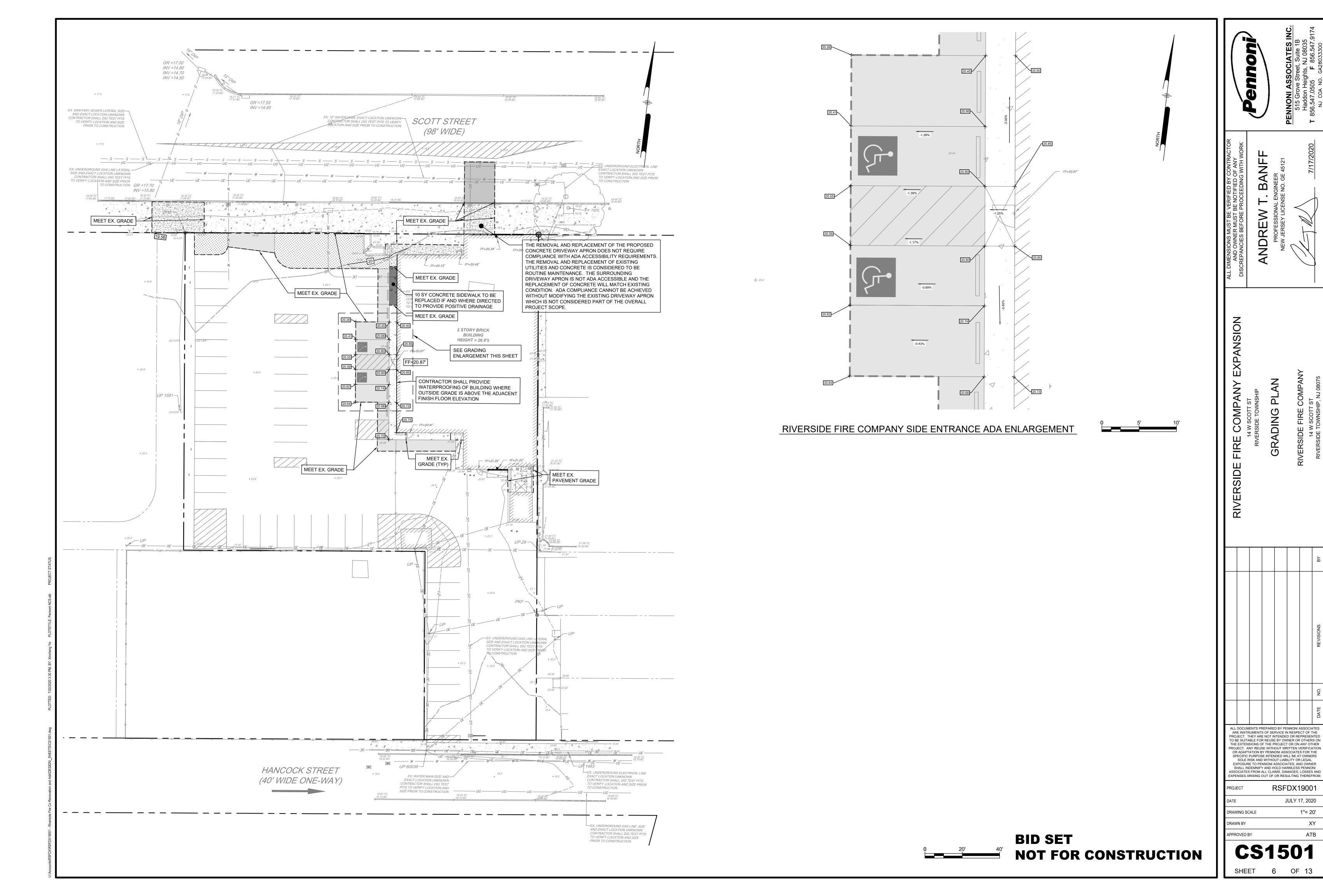
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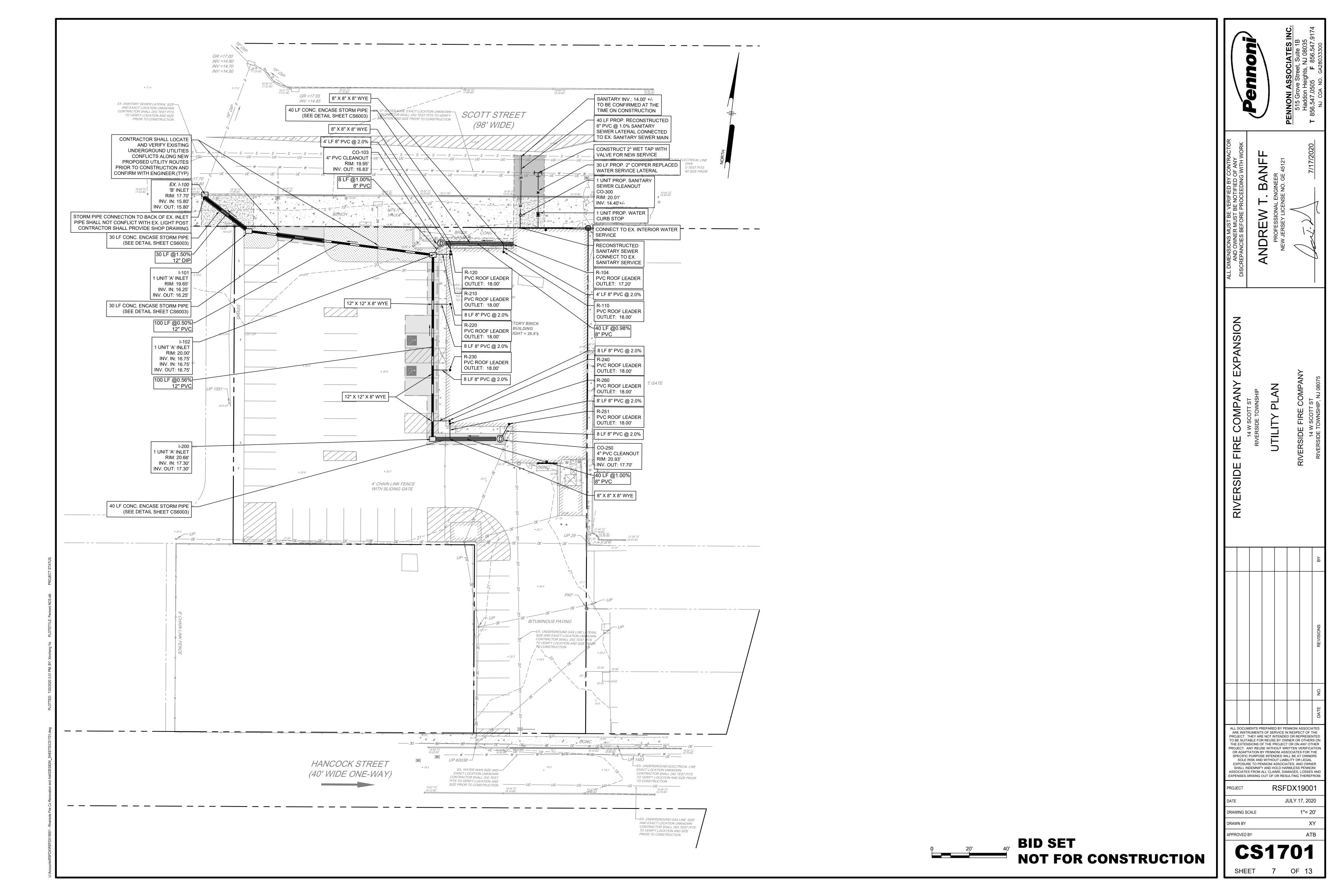
JULY 17, 2020

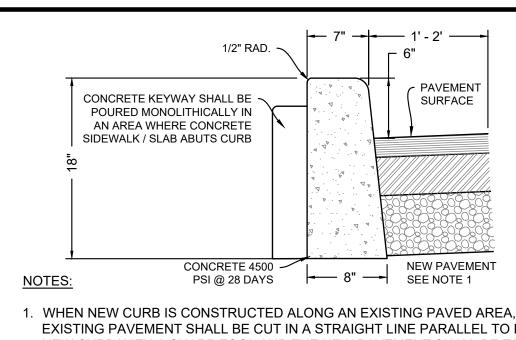
DRAWING SCALE 1"= 20'

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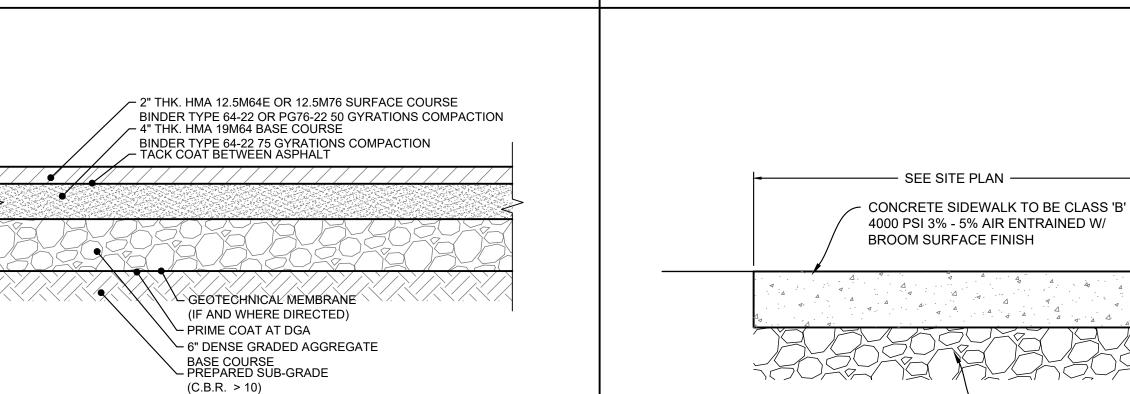






- . WHEN NEW CURB IS CONSTRUCTED ALONG AN EXISTING PAVED AREA, THE EXISTING PAVEMENT SHALL BE CUT IN A STRAIGHT LINE PARALLEL TO FACE OF NEW CURB WITH A SHARP TOOL AND THE NEW PAVEMENT SHALL BE TACKED AND BUTTED TO EXISTING PAVEMENT.
- 2. EXPANSION JOINTS  $\frac{1}{2}$ " WIDE SHALL BE INSTALLED IN THE CURB 20' APART AND FILLED WITH CELLULAR COMPRESSION MATERIAL AS SPECIFIED AND RECESSED 1 FROM FACE AND TOP OF CURB. EXPANSION JOINTS TO BE INCLUDED IN PRICE BID FOR CURB. EXPANSION JOINTS TO BE INCLUDED IN PRICE BID FOR CURB. CONSTRUCTION JOINT SHALL BE CUT MID-POINT BETWEEN EXP. JOINTS.
- \* WHERE NO ELEVATIONS ARE GIVEN ON THE PLAN, MATCH THE PROJECTED TOP OF EXISTING CURB. THE PROJECTED TOP OF CURB SHALL BE DETERMINED BY A STRING LINE.

#### VERTICAL CONCRETE CURB DETAIL N.T.S.



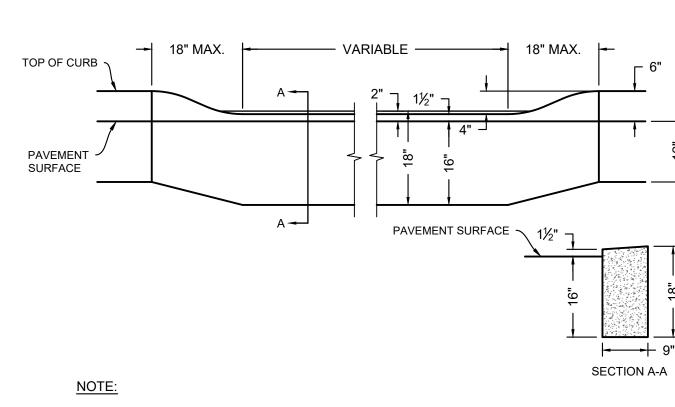
- THE ABOVE PAVING SPECIFICATION SHALL ONLY BE VALID FOR ADT < 3,500 AND EAL < 200,000. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL VERIFY THE LOCATION OF THE PROPOSED PAVING CROSS-SECTION WITH THE ENGINEER. THE CONTRACTOR SHALL PROVIDE CBR TESTING PRIOR TO PLACEMENT OF DGA TO CONFIRM CBR > 10.
- THE CONTRACTOR SHALL OBTAIN FROM THE ENGINEER THE FINAL STRUCTURAL DESIGN CALCULATIONS FOR THE PROPOSED PAVEMENT INSTALLATION PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL SUBMIT FINAL SHOP DRAWINGS FOR APPROVAL BY THE ENGINEER FOR ALL COMPONENTS PROPOSED FOR THE PAVEMENT INSTALLATION.
- THE CONTRACTOR SHALL PROVIDE UPON ACCEPTANCE BY THE OWNER A MINIMUM 2 YEAR WARRANTY ON THE PAVEMENT SURFACE. ANY AND ALL DEFECTS IN THE PAVEMENT SURFACES SHALL BE REMEDIED BY THE CONTRACTOR AT THE
- MATERIALS FOR THE HOT MIX ASPHALT (HMA) SURFACE COURSE SHALL BE HMA 9.5L64 OR HMA 9.5M64, CONFORMING TO SECTION 401 OF THE NEW JERSEY DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION. MATERIALS FOR THE HOT MIX ASPHALT (HMA) BASE COURSE SHALL BE HMA 19.5L64 OR HMA 19.5M64, CONFORMING TO SECTION 401 OF THE NEW JERSEY DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION.
- THICKNESS MAY HAVE TO BE CONSTRUCTED IN MULTIPLE LIFTS, BASED ON EQUIPMENT CAPABILITIES.
- THE DENSE GRADED AGGREGATE BASE SHALL CONFIRM TO SECTION 302 OF THE NEW JERSEY DEPARTMENT OF TRANSPORTATION'S STANDARD SPECIFICATION FOR ROAD AND BRIDGE CONSTRUCTION
- ALL SUB-GRADES SHALL BE CONSIDERED "POOR" UNTIL THE CONTRACTOR PROVES OTHERWISE THROUGH CBR TESTING OR APPROVED FIELD EVALUATION OF SOIL CLASSIFICATION. TEST RESULTS SHALL BE REVIEWED AND APPROVED BY THE
- SUBGRADE COMPACTION SHALL BE APPROVED BY THE ENGINEER. SUB-GRADE SHALL BE PROOF-ROLLED PRIOR TO INSTALLATION OF DGA. SUBGRADE MATERIALS SHALL BE DRY PRIOR TO PLACEMENT OF DGA. UNSUITABLE SUB-GRADE MATERIALS SHALL BE REMOVED AND REPLACED WITH SUITABLE BACKFILL AS APPROVED BY THE ENGINEER AND/OR PROVIDE AN 8 OZ. NON-VOVEN GEOTEXTILE FABRIC BETWEEN SUB-GRADE & STONE SUB-BASE AS DIRECTED BY ENGINEER AND AS WARRANTED FROM RESULTS OF PROOF-ROLLING SUBGRADE AREAS. RECOMMENDED FABRIC-GOETEX 801 AS MANUFACTURED BY S.I. GEOSOLUTIONS OR FOUAL
- PAVEMENT THICKNESS DESIGNS ASSUMES STAGED CONSTRUCTION PROCESS. THE LIFE OF THE PAVEMENT IS 20 YEARS. THE PAVEMENT COURSE IS DESIGNED TO WITHSTAND CONSTRUCTION TRAFFIC DURING AN ASSUMED THREE-YEAR CONSTRUCTION PERIOD. THROUGHOUT WHICH TIME THE HOT ASPHALT SURFACE COURSE HAS NOT BEEN PLACED. AT THE END OF THE CONSTRUCTION PERIOD. THE BASE COURSE WILL HAVE AN EXPECTED REMAINING LIFE OF 17 YEARS. DURING THE TIME WHEN THE SURFACE COURSE IS NOT IN PLACE, THE BASE COURSE MUST CARRY THE ENTIRE IMPOSED TRAFFIC
- 0. A PRIME COAT (EMULSIFIED ASPHALT) TO BE APPLIED AT A RATE 0F 0.25 GAL./S,Y. AT DGA SURFACE. A TACK COAT (EMULSIFIED ASPHALT) SHALL BE APPLIÉD AT A RATE OF 0.10 GAL./S.Y. BETWEEN ASPHALT LAYERS. PRIOR TO PAVEMENT CONSTRUCTION, THE CONTRACTOR SHALL PROVIDE THE OWNER WITH A SCHEDULE OF VALUES OF EACH SEPARATE MATERIAL BY UNIT COSTS. INCLUDING BUT NOT LIMITED TO GEOGRID. BASE AND SURFACE PAVEMENT

(TON), PAVEMENT, TACK COAT, DGA AND UNSUITABLE MATERIAL EXCAVATION. TOTAL CONSTRUCTION COST SHALL BE

12. PAVING SPECIFICATIONS ARE SUBJECT TO FIELD CBR TESTING.

ADJUSTED BASED UPON INSTALLED QUANTITIES.

## LIGHT DUTY ASPHALT PAVING SECTION DETAIL



THERE SHALL BE NO SEPARATE PAYMENT FOR THIS DETAIL. PAYMENT FOR THIS

DETAIL SHALL BE BASED UPON THE CONCRETE CURB PAY ITEM..

### DEPRESSED CURB DETAIL

1. PRE MOLDED BITUMINOUS EXPANSION JOINT MATERIAL (OR EQUAL) SHALL

BE INSTALLED EVERY TWENTY (20) FEET AND CONTRACTION JOINTS

2. CONCRETE PLACE WITHIN AREA SUBJECT TO VEHICLE LOADS SHALL BE

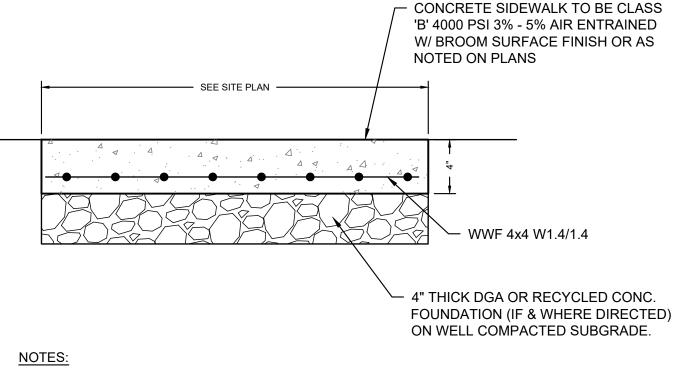
3. PAYMENT OF REINFORCED CONCRETE SHALL BE BASED ON THE

STANDARD CONCRETE SIDEWALK

N.T.S.

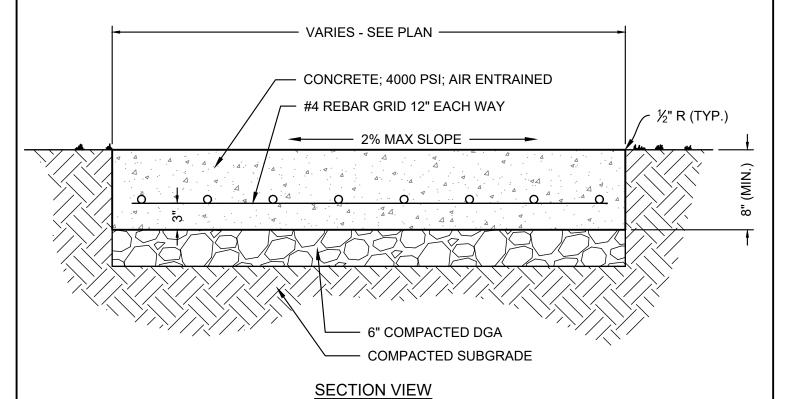
REINFORCED CONCRETE DRIVEWAY PAY ITEM.

INSTALLED EVERY FOUR (4) FEET.



- 1. PAYMENT OF REINFORCED CONCRETE SHALL BE BASED ON THE REINFORCED CONCRETE DRIVEWAY PAY ITEM.
- 2. PRE MOLDED BITUMINOUS EXPANSION JOINT MATERIAL (OR EQUAL) SHALL BE INSTALLED EVERY TWENTY (20) FEET AND CONTRACTION JOINTS INSTALLED EVERY FOUR (4) FEET.

## REINFORCED CONCRETE SIDEWALK DETAIL



#### **SPECIFICATIONS**

 $\sim \frac{1}{4}$ " RADIUS

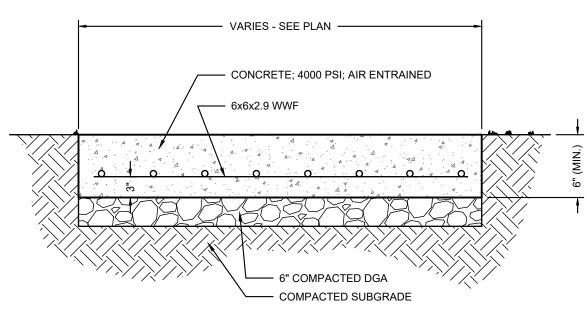
- 4" THICK DGA OR RECYCLED CONCRETE

ON WELL COMPACTED SUBGRADE.

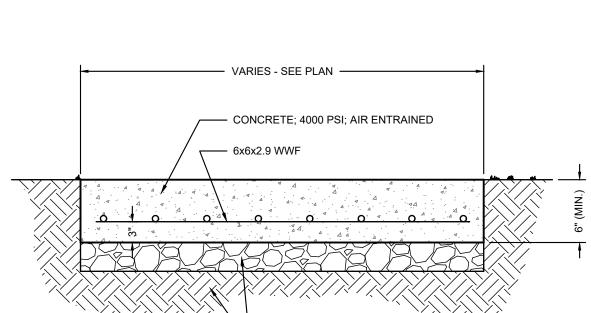
EDGE (TYP.)

- 1. EXPANSION JOINTS SHALL BE AT 15 FT C.C. MAXIMUM. EXPANSION JOINT LOCATIONS SHALL APPROVED BY ENGINEER/OWNER.
- 2. EXPANSION JOINT SHALL BE 1/2" MASTIC MATERIAL OR APPROVED EQUAL
- 3. ALL EXPANSION JOINTS SHALL RECEIVE A BACKER ROD AND COLORED NON-SHRINK SEALER TO MATCH CONCRETE; SIKA OR EQUAL.

## REINF. CONC. DRIVEWAY APRON



- 1. EXPANSION JOINTS SHALL BE AT 15 FT C.C. MAXIMUM. EXPANSION JOINT LOCATIONS SHALL APPROVED BY ENGINEER/OWNER.
- 2. EXPANSION JOINT SHALL BE 1/2" MASTIC MATERIAL OR APPROVED EQUAL.
- 4. PAYMENT OF THE CONCRETE PAD SHALL BE BASED ON THE REINFORCED CONCRETE DRIVEWAY PAY ITEM.



· 2" M.A.B.C.-1. MIX I-4

A. MAXIMUM LIFT THICKNESS FOR MABC SHALL BE TWO (2) INCHES.

B. MAXIMUM LIFT THICKNESS FOR BITUMINOUS STABILIZED BASE SHALL BE THEE

C. REFER TO NJDOT SPECIFICATIONS AND ADDENDA FOR SPECIFIC MIXTURE

BURLINGTON COUNTY ASPHALT PAVING SECTION DETAIL

- 6" SUBBASE, TYPE5, CLASS 'A'

BINDER TYPE 64-22 OR PG76-22 50 GYRATIONS COMPACTION

— 6" BITUMINOUS STABLIZED BASE, STONE MIX, MIX I-1

BINDER TYPE 64-22 75 GYRATIONS COMPACTION

### SECTION VIEW

### **SPECIFICATIONS**

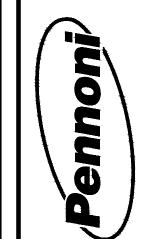
(3) INCHES.

**DETAILS** 

- 3. ALL EXPANSION JOINTS SHALL RECEIVE A BACKER ROD AND COLORED NON-SHRINK SEALER TO MATCH CONCRETE; SIKA OR EQUAL

## **CONCRETE PAD**

## **BID SET NOT FOR CONSTRUCTION**



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ALL DOCUMENTS PREPARED BY PENNONI ASSOCIATES ARE INSTRUMENTS OF SERVICE IN RESPECT OF THE PROJECT. THEY ARE NOT INTENDED OR REPRESENTE TO BE SUITABLE FOR REUSE BY OWNER OR OTHERS ON THE EXTENSIONS OF THE PROJECT OR ON ANY OTHER

SOLE RISK AND WITHOUT LIABILITY OR LEGAL EXPOSURE TO PENNONI ASSOCIATES; AND OWNER SHALL INDEMNIFY AND HOLD HARMLESS PENNONI ASSOCIATES FROM ALL CLAIMS, DAMAGES, LOSSES AN EXPENSES ARISING OUT OF OR RESULTING THEREFRO PROJECT RSFDX19001 JULY 17, 2020

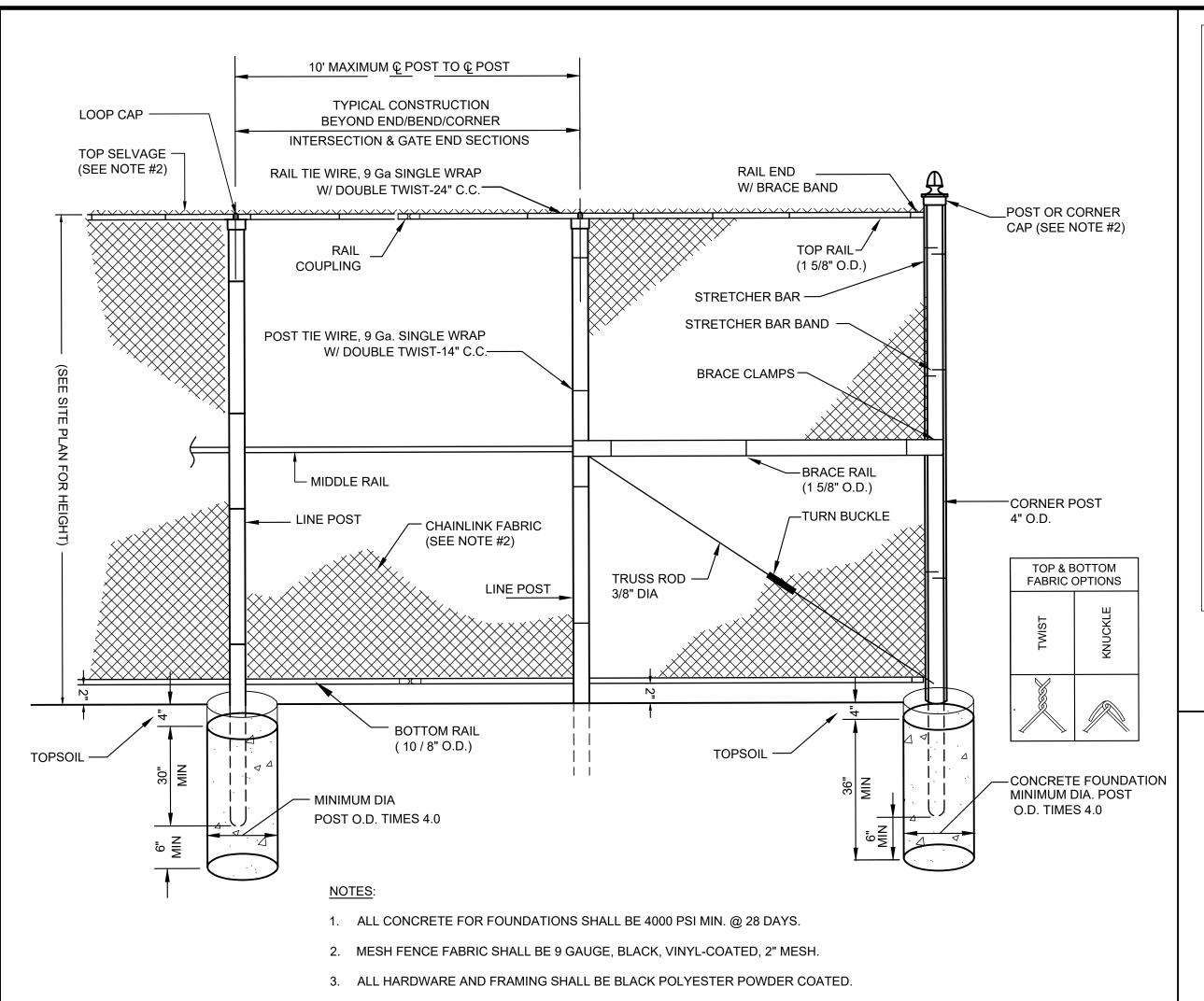
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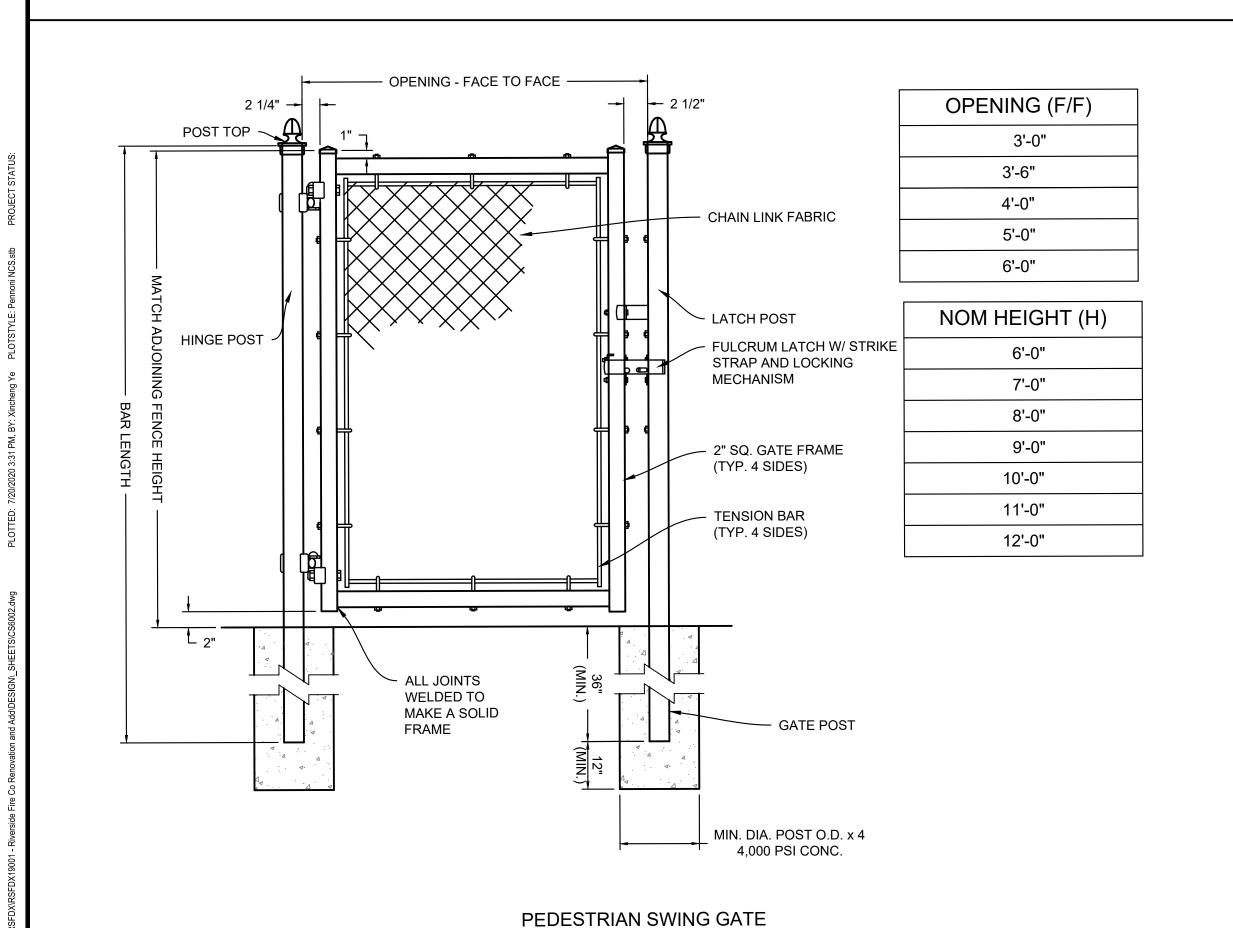
PROJECT. ANY REUSE WITHOUT WRITTEN VERIFICATION OR ADAPTATION BY PENNONI ASSOCIATES FOR THE SPECIFIC PURPOSE INTENDED WILL BE AT OWNERS

PPROVED BY **CS6001** 

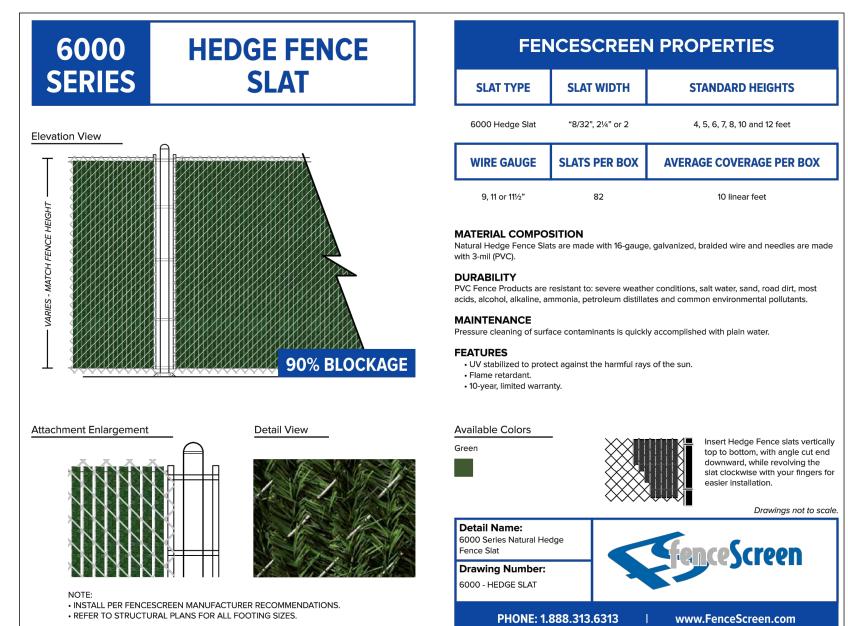
DRAWING SCALE

DRAWN BY

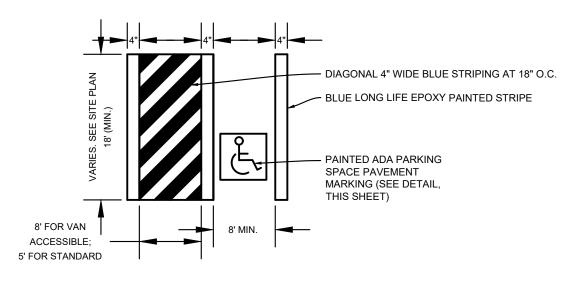




CHAINLINK FENCE DETAIL

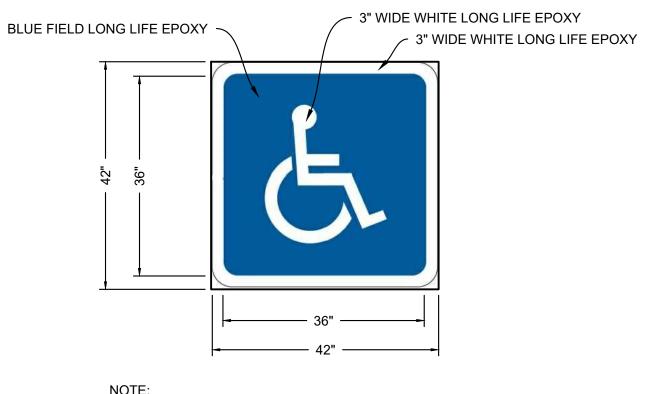


## HEDGE FENCE SLATS DETAIL



- 1. PAINT FOR ALL STRIPING SHALL BE BLUE PER ADA SPECIFICATIONS.
- 2. PAINT SHALL BE LONG LIFE EPOXY, THERMOPLASTIC AND/OR EQUAL.

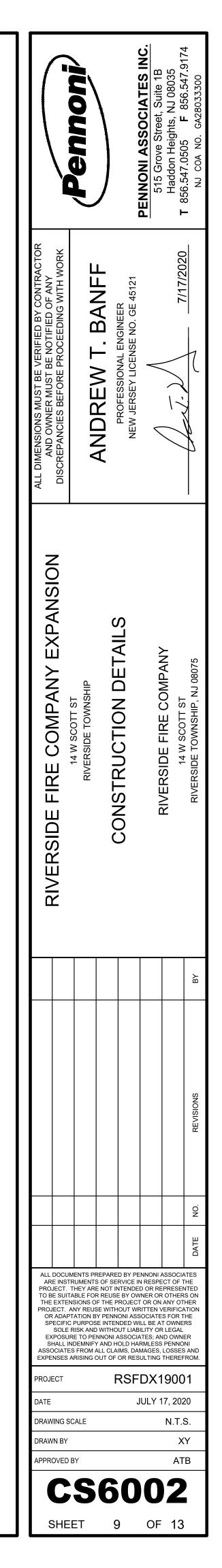
## PAINTED PARKING STALL STRIPING DETAIL

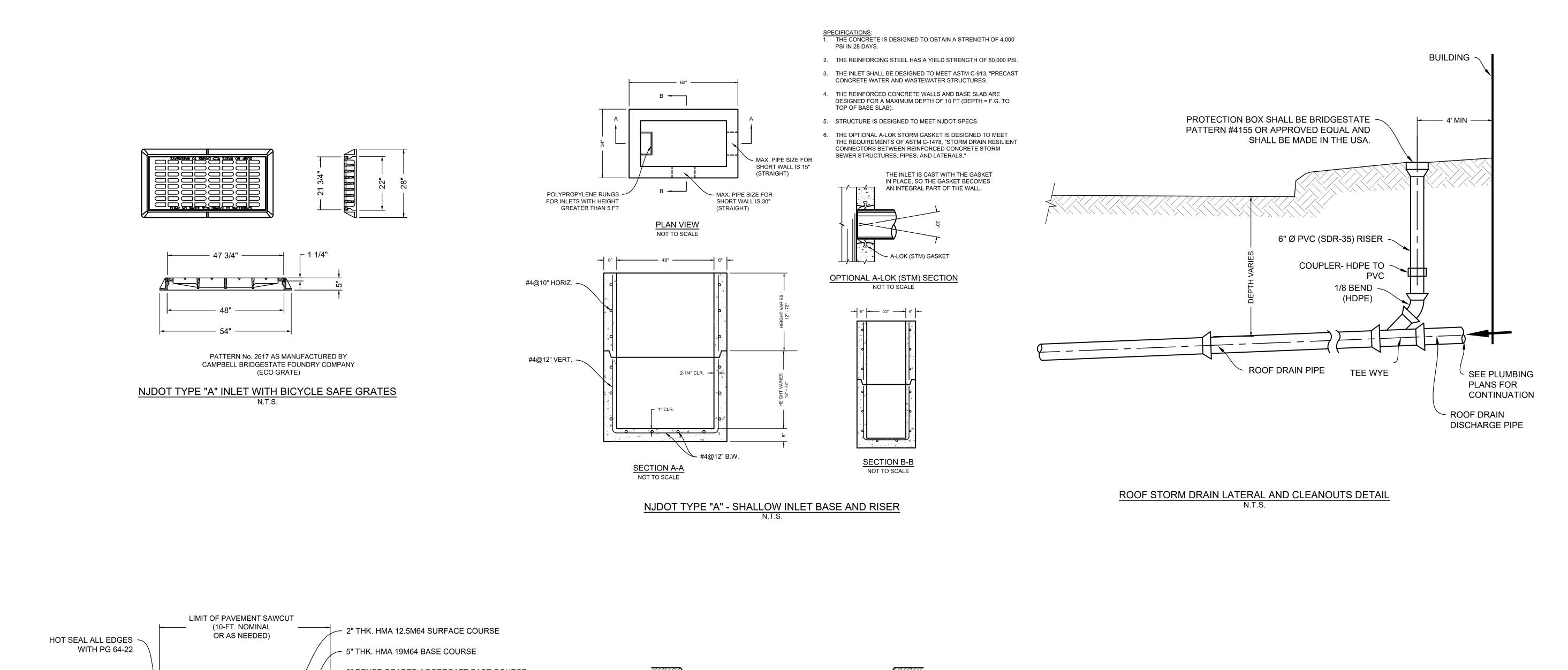


PAINT SHALL BE LONG LIFE EPOXY, THERMOPLASTIC AND/OR EQUAL.

ADA PARKING SPACE PAVEMENT MARKING DETAIL

**BID SET NOT FOR CONSTRUCTION** 





 $^{f L}$  1/8H 6" MIN.

─ 1/6 BC MIN.

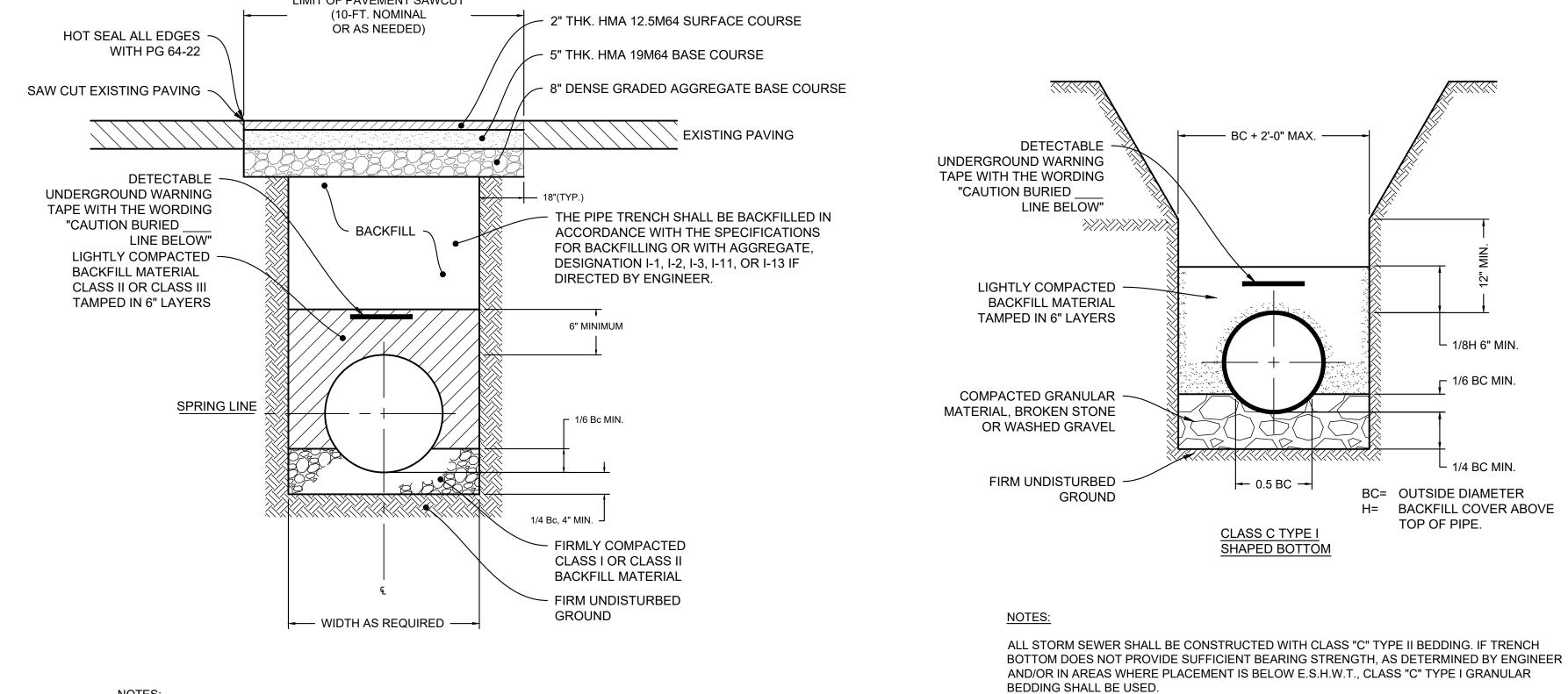
└ 1/4 BC MIN.

BC= OUTSIDE DIAMETER

TOP OF PIPE.

PVC STORM SEWER BEDDING DETAIL

H= BACKFILL COVER ABOVE

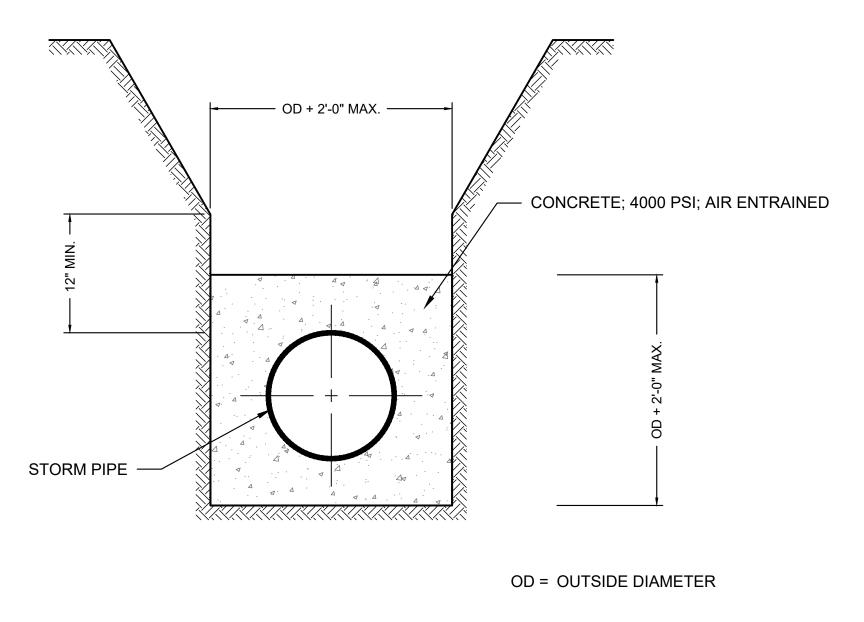


NOTES:

ACCORDANCE WITH CS8501.

IN GRASS AREAS, BACKFILL AS NOTED, AND PROVIDE A MIN. 4" THICK LAYER OF TOPSOIL AND SEED IN

UTILITY TRENCH RESTORATION (PAVED AREAS)

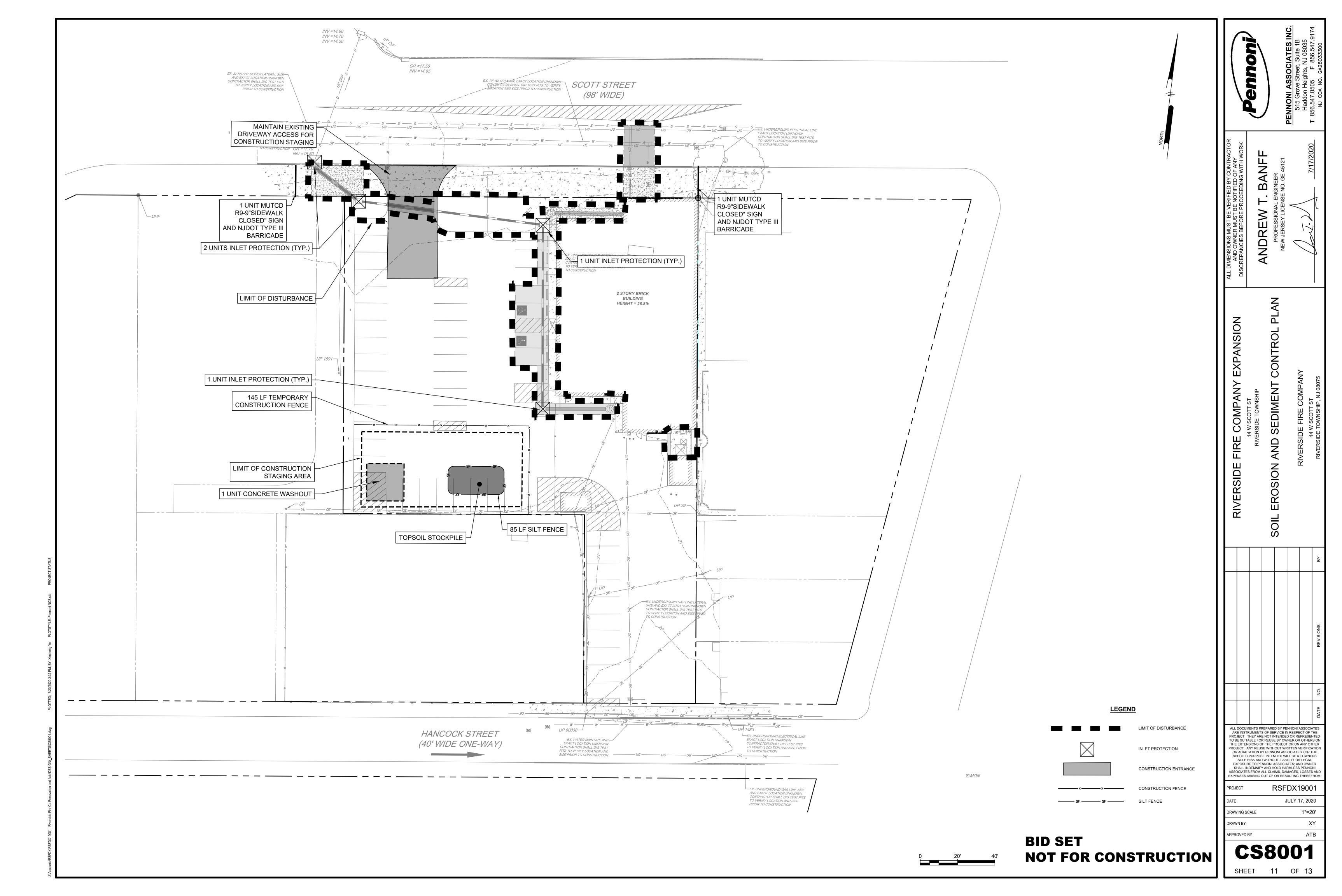


CONCRETE ENCASEMENT DETAIL

N.T.S.

**BID SET NOT FOR CONSTRUCTION** 

BANF ANDREW ANSION RUCTION Ö ALL DOCUMENTS PREPARED BY PENNONI ASSOCIATES ARE INSTRUMENTS OF SERVICE IN RESPECT OF THE PROJECT. THEY ARE NOT INTENDED OR REPRESENTE TO BE SUITABLE FOR REUSE BY OWNER OR OTHERS ON THE EXTENSIONS OF THE PROJECT OR ON ANY OTHER PROJECT. ANY REUSE WITHOUT WRITTEN VERIFICATION OR ADAPTATION BY PENNONI ASSOCIATES FOR THE SPECIFIC PURPOSE INTENDED WILL BE AT OWNERS SOLE RISK AND WITHOUT LIABILITY OR LEGAL EXPOSURE TO PENNONI ASSOCIATES; AND OWNER SHALL INDEMNIFY AND HOLD HARMLESS PENNONI ASSOCIATES FROM ALL CLAIMS, DAMAGES, LOSSES AN EXPENSES ARISING OUT OF OR RESULTING THEREFRO RSFDX19001 JULY 17, 2020 DRAWING SCALE 1"= 20' DRAWN BY **CS6003** SHEET 10 OF 13



#### SOIL EROSION AND SEDIMENT CONTROL NOTES

- 1. ALL APPLICABLE EROSION AND SEDIMENT CONTROL PRACTICES SHALL BE IN PLACE PRIOR TO ANY GRADING OPERATION AND/OR INSTALLATION OF PROPOSED STRUCTURES OR UTILITIES.
- 2. SOIL EROSION AND SEDIMENT CONTROL PRACTICES ON THE PLAN SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE STANDARDS FOR SOIL EROSION AND SEDIMENT CONTROL IN NEW JERSEY.
- 3. ALL APPLICABLE EROSION AND SEDIMENT CONTROL PRACTICES SHALL BE LEFT IN PLACE UNTIL CONSTRUCTION IS COMPLETED AND/OR THE AREA IS STABILIZED.
- 4. ANY DISTURBED AREA THAT WILL BE LEFT EXPOSED FOR MORE THAN SIXTY (60) DAYS AND NOT SUBJECT TO CONSTRUCTION TRAFFIC SHALL IMMEDIATELY RECEIVE A TEMPORARY SEEDING AND FERTILIZATION IN ACCORDANCE WITH THE STANDARDS. IF THE SEASON PROHIBITS TEMPORARY SEEDING, THE DISTURBED AREAS WILL BE MULCHED WITH SALT HAY OR EQUIVALENT AND ANCHORED IN ACCORDANCE WITH THE STANDARDS.
- 5. ALL CRITICAL AREAS SUBJECT TO EROSION WILL RECEIVE A TEMPORARY SEEDING IN COMBINATION WITH STRAW MULCH IN ACCORDANCE WITH THE STANDARDS IMMEDIATELY FOLLOWING ROUGH GRADING.
- 6. THE SITE SHALL AT ALL TIMES BE GRADED AND MAINTAINED SUCH THAT ALL STORMWATER RUNOFF IS DIVERTED TO SOIL EROSION AND SEDIMENT CONTROL FACILITIES.
- 7. ALL SOIL EROSION AND SEDIMENT CONTROL STRUCTURES WILL BE INSPECTED AND MAINTAINED ON A REGULAR BASIS AND AFTER EVERY STORM EVENT.
- 3. SOIL STOCKPILES ARE NOT TO BE LOCATED WITHIN FIFTY (50) FEET OF A FLOODPLAIN, SLOPE, ROADWAY OR DRAINAGE FACILITY. THE BASE OF ALL STOCKPILES SHOULD BE PROTECTED BY A HAY BALE BARRIER OR SEDIMENT FENCE. PROPOSED LOCATIONS MUST BE DELINEATED ON THE PLANS.
- A CRUSHED STONE TIRE CLEANING PAD WILL BE INSTALLED WHEREVER A CONSTRUCTION ACCESS EXISTS. THE RIP RAP PAD MUST BE 100 FEET IN LENGTH AND THE STONE MUST BE 1.5" 4" IN SIZE, PLACED 12" THICK AND THE FULL WIDTH OF THE ENTRANCE. IT SHOULD BE UNDERLAIN WITH A SUITABLE SYNTHETIC FILTER FABRIC AND MAINTAINED. THE STRUCTURE MUST BE DELINEATED AND DETAILED ON THE PLANS.
- 10. IF A STONE CONSTRUCTION ACCESS IS TO BE USED AS AN EXIT ONTO A MAJOR HIGHWAY, A THIRTY (30) FOOT PAVED TRANSITION AREA SHALL BE INSTALLED.
- 11. ALL DRIVEWAYS MUST BE STABILIZED WITH 2 ½" CRUSHED STONE OR SUB BASE PRIOR TO INDIVIDUAL LOT CONSTRUCTION.
- 12. PAVED ROADWAYS MUST BE KEPT CLEAN AT ALL TIMES.
- 13. ALL CATCH BASIN INLETS WILL BE PROTECTED DURING CONSTRUCTION (FILTER DETAILS APPEAR ON PLAN).
- 14. ALL STORM DRAINAGE OUTLETS WILL BE STABILIZED BEFORE THE DISCHARGE POINTS BECOME OPERATIONAL.
- 15. ALL DEWATERING OPERATIONS MUST DISCHARGE DIRECTLY INTO A SEDIMENT FILTRATION DEVICE. THE SEDIMENT FILTER MUST BE PLACED SO AS NOT TO CAUSE EROSION OF THE DOWNSTREAM AREA. FIELD PLACEMENT AND USE OF THE STRUCTURE MUST BE APPROVED BY THE DISTRICT EROSION CONTROL INSPECTOR PRIOR TO COMMENCEMENT OF DEWATERING ACTIVITIES.
- 16. THE BURLINGTON COUNTY SOIL CONSERVATION DISTRICT SHALL BE NOTIFIED 72 HOURS PRIOR TO ANY LAND DISTURBANCE.
- 17. SOIL HAVING A PH OF 4.0 OR LESS OR CONTAINING IRON SULFIDE MUST BE COVERED WITH A MINIMUM OF 12 INCHES OF SOIL HAVING A PH OF 5.0 OR MORE BEFORE SEEDBED PREPARATION.
- 18. IT SHALL BE THE RESPONSIBILITY OF THE DEVELOPER TO PROVIDE CONFIRMATION OF LIME, FERTILIZER AND SEED APPLICATION RATES AT THE REQUEST OF THE BURLINGTON COUNTY SOIL CONSERVATION DISTRICT.
- 19. NJSA 4:24-39, ET SEQ. REQUIRES THAT NO CERTIFICATE OF OCCUPANCY BE ISSUED BEFORE ALL THE PROVISIONS OF THE CERTIFIED SOIL EROSION AND SEDIMENT CONTROL PLAN HAVE BEEN COMPLIED WITH FOR PERMANENT MEASURES. ALL SITE WORK FOR THE PROJECT MUST BE COMPLETED PRIOR TO THE DISTRICT ISSUING A REPORT OF COMPLIANCE AS A PREREQUISITE TO THE ISSUANCE OF A CERTIFICATE OF OCCUPANCY BY THE MUNICIPALITY.
- 20. NJSA 4:24-39, ET SEQ. REQUIRES THAT UPON PERMANENT SITE STABILIZATION AND COMPLETION OF CONSTRUCTION THE CONTRACTOR SHALL APPLY TO THE SOIL CONSERVATION DISTRICT FOR A FINAL COMPLIANCE INSPECTION TO CHECK THAT ALL THE PROVISIONS OF THE CERTIFIED SOIL
- EROSION AND SEDIMENT CONTROL PLAN HAVE BEEN COMPLIED WITH FOR PERMANENT MEASURES.

  21. OFF-SITE SEDIMENT DISTURBANCE MAY REQUIRE ADDITIONAL CONTROL MEASURES TO BE
- DETERMINED BY THE DISTRICT EROSION CONTROL INSPECTOR.

  22. A COPY OF THE CERTIFIED SOIL EROSION AND SEDIMENT CONTROL PLAN MUST BE MAINTAINED ON
- THE PROJECT SITE DURING CONSTRUCTION.
- 23. ANY CONVEYANCE OF THIS PROJECT PRIOR TO ITS COMPLETION WILL TRANSFER FULL RESPONSIBILITY FOR COMPLIANCE WITH THE CERTIFIED PLAN TO ALL SUBSEQUENT OWNERS.
- 24. IMMEDIATELY AFTER THE COMPLETION OF STRIPPING AND STOCKPILING TOPSOIL, THE STOCKPILE SHALL BE SEEDED WITH TEMPORARY VEGETATION. STABILIZE TOPSOIL STOCKPILES WITH STRAW MULCH FOR PROTECTION IF THE SEASON DOES NOT PERMIT THE ESTABLISHMENT OF TEMPORARY
- 25. ANY CHANGES TO THE SITE PLAN WILL REQUIRE THE SUBMISSION OF A REVISED SOIL EROSION AND SEDIMENT CONTROL PLAN TO THE BURLINGTON COUNTY SOIL CONSERVATION DISTRICT. THE REVISED PLAN MUST BE IN ACCORDANCE WITH THE CURRENT STANDARDS FOR SOIL EROSION AND SEDIMENT CONTROL IN NEW JERSEY.
- 26. MAXIMUM SIDE SLOPES OF ALL EXPOSED SURFACES SHALL NOT BE CONSTRUCTED STEEPER THAN
- 27. THE DISTRICT EROSION CONTROL INSPECTOR MAY REQUIRE ADDITIONAL MEASURES TO BE
- INSTALLED.

  28. IMMEDIATELY PRIOR TO TOPSOIL APPLICATION, THE SUBSOIL SHALL BE EVALUATED FOR
- COMPACTION IN ACCORDANCE WITH THE STANDARD FOR LAND GRADING. SEE DETAILS.

  29. NJSA 4:24-39 ET SEQ. REQUIRES THAT NO CERTIFICATE OF OCCUPANCY BE ISSUED BEFORE THE COMPLETION OF A SOIL COMPACTION MITIGATION VERIFICATION FORM AND CONFIRMATION BY THE DISTRICT INSPECTOR THAT THE COMPACTION MITIGATION REQUIREMENTS IN THE STANDARD FOR
- 30. THE RESPONSIBILITY FOR EROSION CONTROLS FOR INDIVIDUAL LOTS WILL TRANSFER TO SUBSEQUENT OWNERS OF THE LOT. THIS RESPONSIBILITY WILL BE DESCRIBED IN THE DEED, AND A SINGLE FAMILY HOME PLAN CONTAINING ALL NECESSARY EROSION CONTROLS WILL BE PROVIDED TO THE OWNER.
- 31. CONCRETE TRUCK WASHOUT AREAS WILL BE MAINTAINED ON A CONTINUAL BASIS AND AS NEEDED.
   32. THE STORMWATER POLLUTION PREVENTION PLAN AND THE SPILL RESPONSE PLAN SHALL BE AVAILABLE ON SITE FOR REVIEW BY THE SCD INSPECTOR AND/OR THE NJDEP INSPECTOR.
- 33. THE SCD INSPECTOR OR NJDEP INSPECTOR MAY REQUIRE ADDITIONAL MEASURES FOR STORMWATER POLLUTION PREVENTION TO BE INSTALLED.
- 34. INSPECTIONS OF ALL STORMWATER POLLUTION PREVENTION PLAN MEASURES WILL BE CONDUCTED AND DOCUMENTED ON A REGULAR BASIS AND AFTER EVERY STORM EVENT.
- 35. WASTE COLLECTION CONTAINERS WILL NOT BE PERMITTED TO OVERFLOW.

LAND GRADING HAVE BEEN SUFFICIENTLY ADDRESSED.

- 36. ANY SPILLS OF HAZARDOUS OR SANITARY WASTES WILL BE CLEANED UP IMMEDIATELY, AND IN ACCORDANCE WITH THE SPILL RESPONSE PLAN. SPILL KITS MUST BE AVAILABLE ONSITE OR ADJACENT TO THE SITE.
- 7. ANY HAZARDOUS SUBSTANCE RELEASES IN EXCESS OF REPORTABLE QUANTITIES (RQ)
  ESTABLISHED UNDER 40 C.F.R. 110, 117 AND 302 THAT OCCUR WITHIN A 24-HOUR PERIOD MUST BE
  REPORTED THE NATIONAL RESPONSE CENTER (800 424-8802).

#### SEEDING NOTES

- 1. TOPSOIL STRIPPING AND STOCKPILING
- A. FIELD EXPLORATION SHOULD BE MADE TO DETERMINE WHETHER QUANTITY AND/OR QUALITY OF SURFACE SOIL JUSTIFIES STRIPPING.
- B. A 6-INCH STRIPPING DEPTH IS TYPICAL, BUT MAY VARY DEPENDING ON THE PARTICULAR
- SOIL STRUCTURE OR PRE-EXISTING USE.

  C. STOCKPILES SHOULD BE LOCATED SO AS NOT TO OBSTRUCT NATURAL DRAINAGE OR CAUSE OFF-SITE ENVIRONMENTAL DAMAGE, AND SHALL BE DELINEATED ON THE CERTIFIED

SOIL EROSION AND SEDIMENT CONTROL PLAN AND BE CONSTRUCTED IN ACCORDANCE

- WITH THE TOPSOIL STOCKPILE DETAIL.

  D. STOCKPILES SHOULD BE TEMPORARILY STABILIZED ACCORDING TO THE CURRENT STANDARDS FOR SOIL EROSION AND SEDIMENT CONTROL IN NEW JERSEY (STANDARDS).
- 2. <u>SITE PREPARATION</u>
- A. INSTALL EROSION CONTROL MEASURES AND FACILITIES SUCH AS SILT FENCE, DIVERSIONS, SEDIMENT BASINS, AND CHANNEL STABILIZATION.
- B. GRADE AS NEEDED AND FEASIBLE TO PERMIT THE USE OF CONVENTIONAL EQUIPMENT FOR SEEDBED PREPARATION, SEEDING, MULCH APPLICATION, TACKING, AND MAINTENANCE. ALL GRADING SHOULD BE DONE IN ACCORDANCE WITH THE STANDARD FOR LAND GRADING, STANDARDS PG. 19-1.
- 3. SEEDBED PREPARATION
  - A. TOPSOIL REQUIRED
    - MIN. DEPTH: 6" (UNSETTLED)
    - PH: 6.0 TO 8.0 ORGANIC MATTER CONTENT: 2.75% MIN.
    - NITRATE N2: 50 LBS/ACRE (50% WATER INSOLUBLE) PHOSPHOROUS: 100 LBS/ACRE
  - POTASSIUM: 50 LBS/ACRE

    B. THE CONTRACTOR SHOULD BE AWARE OF THE POSSIBILITY, DEPENDING UPON THE SITE
  - CONDITIONS, THAT ALL TOPSOIL MAY HAVE TO BE PROVIDED FROM AN OFF-SITE SOURCE.

    C. TOPSOIL SHOULD BE HANDLED ONLY WHEN DRY ENOUGH TO WORK WITHOUT DAMAGING
- SOIL STRUCTURE.

  D. APPLY A UNIFORM 6 INCHES (UNSETTLED) OF TOPSOIL ON ALL DISTURBED AREAS. SOILS WITH A PH OF 4.0 OR LESS OR CONTAINING IRON SULFIDE SHALL BE COVERED WITH A MINIMUM DEPTH OF 12 INCHES OF SOIL HAVING A PH OF 5.0 OR MORE AND THE TOP 5 INCHES SHALL CONFORM TO THE TOPSOIL STANDARD AND SHALL BE LIMED ACCORDING TO
- THE SPECIFICATIONS.

  E. IF THE TOPSOIL BECOMES COMPACTED, THE SURFACE MUST BE SCARIFIED 6" TO 12" TO PROVIDE GOOD SEED-TO-SOIL BOND.
- F. APPLY LIMESTONE AND FERTILIZER ACCORDING TO SOIL TEST RECOMMENDATIONS SUCH AS THOSE OFFERED BY RUTGERS UNIVERSITY COOPERATIVE EXTENSION. IF SOIL TESTING IS NOT FEASIBLE, FERTILIZER (10-20-10) WITH 50% WATER INSOLUBLE NITROGEN SHOULD BE APPLIED AT THE TYPICAL RATE OF 500 LBS/ACRE OR 11 LBS/1,000 SQUARE FEET.
- G. APPLY LIMESTONE EQUIVALENT TO 50% CALCIUM PLUS MAGNESIUM OXIDES (PULVERIZEDDOLOMITIC LIMESTONE IS PREFERRED FOR MOST SOILS SOUTH OF THE NEW BRUNSWICK TRENTON FALL LINE) AS FOLLOWS:
  - SOIL TEXTURE: TONS/ACRÉ OR LBS/1,000 SQ. FT. CLAY, CLAY LOAM, HIGH ORGANIC: 3 TONS OR 135 LBS
  - SANDY LOAM, LOAM, SILT LOAM: 2 TONS OR 90 LBS. LOAMY SAND, SAND: 1 TON OR 45 LBS.
- H. WORK LIME AND FERTILIZER INTO THE SOIL TO A DEPTH OF 4 INCHES. THE FINAL HARROWING OR DISC OPERATION SHOULD BE ON THE GENERAL CONTOUR. CONTINUE TILLAGE UNTIL A UNIFORM, FINE SEEDBED IS PREPARED.
- I. REMOVE FROM THE SURFACE ALL STONES 2 INCHES OR LARGER IN ANY DIMENSION, AND OTHER OBJECTIONABLE STONES OR DEBRIS SUCH AS WIRE, TREE ROOTS, PIECES OF CONCRETE, CLODS, LUMPS, OR OTHER UNSUITABLE MATERIAL.

#### 1 SEEDING

- A. SELECT A SEED MIXTURE APPROVED BY THE BURLINGTON COUNTY SOIL CONSERVATION DISTRICT.
- B. APPLY SEED UNIFORMLY BY HAND, CYCLONES, DROP SEEDER, DRILL CULTIPACKER, OR HYDROSEEDER\*. THE LATTER MAY BE JUSTIFIABLE FOR LARGE, STEEP AREAS WHERE CONVENTIONAL APPLICATIONS ARE NOT FEASIBLE. HYDROSEEDING SHALL BE A TWO STEP PROCESS: MULCH SHALL NOT BE MIXED WITH THE SEED; THE SEED MUST BE APPLIED FIRST TO ASSURE PROPER SEED TO SOIL CONTACT. THE HYDROMULCH IS THEN SPRAYED OVER THE SEEDING. FOR OPTIMUM RESULTS, THE SEED SHOULD BE INCORPORATED INTO THE SOIL TO ADEPTH OF ½ TO ½ INCH DEPENDING UPON SPECIES.
- \*THE USE OF HYDRO-MULCH, AS OPPOSED TO STRAW, IS LIMITED TO OPTIMUM SEEDING DATES AS LISTED IN THE STANDARDS.
- C. AFTER SEEDING, THE SOIL SHOULD BE PACKED WITH A CORRUGATED ROLLER. WHEN PERFORMED ON THE CONTOUR, ROLLING WILL MINIMIZE SHEET EROSION AND MAXIMIZE WATER CONSERVATION.

#### 5. <u>MULCHING</u>

- A. UNROTTED STRAW, HAY FREE OF SEEDS, OR SALT HAY IS REQUIRED ON ALL SEEDING AT A RATE OF 2 TO 2.5 TONS/ACRE, (90 TO 100 LBS./1,000 SQUARE FEET), EXCEPT WHERE A CRIMPER IS USED INSTEAD OF A LIQUID MULCH-BINDER, THEN THE RATE OF APPLICATION IS 3 TONS PER ACRE.
- B. MULCH ANCHORING SHOULD BE ACCOMPLISHED IMMEDIATELY AFTER PLACEMENT TO
- MINIMIZE LOSS DUE TO WIND OR WATER.

  THIS MAY BE DONE ACCORDING TO THE FOLLOWING METHODS:

  1. WOOD-FIBER OR PAPER-FIBER MULCH AT THE RATE OF 1,500 LBS/ACRE APPLIED
  - BY THE HYDROSEEDER. USE IS LIMITED TO ONLY THE OPTIMUM SEEDING SEASON.

    2. SYNTHETIC OR ORGANIC BINDERS
  - 3. PEG AND TWINE, MULCH NETTING, AND MECHANICAL CRIMPING 4. CRIMPING REQUIRES A HIGHER MULCH RATE (3 TONS/ACRE).
  - 4. CRIMPING REQUIRES A HIGHER MULCH RATE (3 TONS/ACRE). 5. WOODCHIPS AT A MINIMUM DEPTH OF 2 INCHES
  - 6. GRAVEL, CRUSHED STONE, OR SLAG AT THE RATE OF 9 CY/1000 SQUARE FEET TO
- A MINIMUM DEPTH OF 3 INCHES.

## OTES: 1. ONE BALE OF HAY WEIGHS 40-60 LBS DEPENDING ON HOW IT WAS BALED.

2. 1,500 GALLON TANK OF HYDROMULCH COVERS .5 ACRES.
PLEASE NOTE: THE QUALITY OF PERMANENT VEGETATION RESTS WITH THE
CONTRACTOR. THE TIMING OF SEEDING, PREPARING THE SEEDBED, APPLYING
NUTRIENTS, MULCH AND OTHER MANAGEMENT ARE ESSENTIAL. THE SEED
APPLICATION RATES IN TABLE 4-3 OF THE STANDARDS ARE REQUIRED WHEN A
REPORT OF COMPLIANCE IS REQUESTED PRIOR TO ACTUAL ESTABLISHMENT OF
PERMANENT VEGETATION. (UP TO 50% REDUCTION IS APPLICATION RATES MAY BE
USED WHEN PERMANENT VEGETATION IS ESTABLISHED PRIOR TO REQUESTING A
REPORT OF COMPLIANCE FROM THE DISTRICT. THESE RATES APPLY TO ALL
METHODS OF SEEDING. ESTABLISHING PERMANENT VEGETATION MEANS 80%
EVENLY DISTRIBUTED VEGETATIVE COVER (OF THE SEEDED SPECIES) AND MOWED

#### TEMPORARY SEED MIXTURE

ONCE.)

MIX: EARLY SPRING/LATE SUMMER TO EARLY FALL
 100% PERENNIAL RYEGRASS

100 LB./ACRE

**112 LB./ACRE** 

 MIX: LATE FALL 100% CEREAL RYE
 MIX: MID-SUMMER

40% PEARL MILLET 40% MILLET (GERMAN OR HUNGARIAN) 20% WEEPING LOVEGRASS 30 LB./ACRE

### STANDARDS FOR DUST CONTROL

DEFINITION: THE CONTROL OF DUST ON CONSTRUCTION SITES AND ROADS.

PURPOSE: TO PREVENT BLOWING AND MOVEMENT OF DUST FROM EXPOSED SOIL SURFACES, REDUCED ON-SITE

REDUCED ON-SITE
ANDOFF-SITEDAMAGEANDHEALTHHAZARDS, ANDIMPROVETRAFFICSAFETY.

CONDITION WHERE PRACTICE APPLIES: THIS PRACTICE IS APPLICABLE TO AREAS SUBJECT TO DUST BLOWING AND MOVEMENT WHERE ON-SITE AND OFF-SITE DAMAGE IS LIKELY WITHOUT TREATMENT. CONSULT WITH LOCAL

WATER QUALITY ENHANCEMENT: SEDIMENTS DEPOSITED AS "DUST" ARE OFTEN FINE COLLOIDAL

MUNICIPAL ORDINANCES ON ANY RESTRICTIONS.

MATERIAL WHICH
IS EXTREMELY DIFFICULT TO REMOVE FROM WATER ONCE IT BECOMES SUSPENDED USE OF THIS
STANDARD WILL

HELP TO CONTROL THE GENERATION OF DUST FROM CONSTRUCTION SITES AND SUBSEQUENT BLOWING AND DEPOSITION INTO LOCAL SURFACE WATER RESOURCES.

#### PLANNING CRITERIA:

THE FOLLOWING METHODS SHOULD BE CONSIDERED FOR CONTROLLING DUST:

 $\underline{\text{MULCHES}}$  -SEE THE CURRENT STANDARDS FOR SOIL EROSION AND SEDIMENT CONTROL IN NEW JERSEY (STANDARDS) FOR STABILIZATION WITH MULCHES ONLY, PG. 5-1.

<u>VEGETATIVE COVER</u> -SEE STANDARDS FOR: TEMPORARY VEGETATIVE COVER, PG. 7-1, PERMANENT VEGETATIVE
COVERFORSOILSTABILIZATIONPG. 4-1, AND PERMANENT STABILIZATION WITH SOD, PG. 6-1

<u>SPRAY-ON ADHESIVES</u> -ON MINERAL SOILS (NOT EFFECTIVE ON MUCK SOILS). KEEP TRAFFIC OFF THESE AREAS DUST.

#### **TOPSOIL NOTES**

- 1. TOPSOIL SHOULD BE FRIABLE, LOAMY, FREE OF DEBRIS, OBJECTIONABLE WEEDS AND STONES, AND CONTAIN NO TOXIC SUBSTANCE OR ADVERSE CHEMICAL OR PHYSICAL CONDITION THAT MAY BE HARMFUL TO PLANT GROWTH. SOLUBLE SALTS SHOULD NOT BE EXCESSIVE (CONDUCTIVITY LESS THAN 0.5 MILLIMHOS PER CENTIMETER. MORE THAN 0.5 MILLIMHOS MAY DESICATE SEEDLINGS AND ADVERSELY IMPACT GROWTH). TOPSOIL HAULED IN FROM OFFSITE SHOULD HAVE A ORGANIC MATTER CONTENT RANGE OF 3 PERCENT MIN. TO 8 MAX. PERCENT. ORGANIC MATTER CONTENT MAY BE RAISED BY ADDITIVES.
- 2. TOPSOIL SUBSTITUTE IS A SOIL MATERIAL WHICH MAY HAVE BEEN AMENDED WITH SAND, SILT, CLAY, ORGANIC MATTER FERTILIZER OR LIME AND HAS THE APPEARANCE OF TOPSOIL TOPSOIL SUBSTITUTES MAY BE UTILIZED ON SITES WITH INSUFFICIENT TOPSOIL FOR ESTABLISHING PERMANENT VEGETATION. ALL TOPSOIL SUBSTITUTE MATERIALS SHALL MEET THE REQUIREMENTS OF TOPSOIL NOTED ABOVE. SOIL TESTS SHALL BE PERFORMED TO DETERMINE THE COMPONENTS OF SAND, SILT, CLAY, ORGANIC MATTER, SOLUBLE SALTS AND PH LEVEL.

#### STRIPPING AND STOCKPILING

- A. FIELD EXPLORATION SHOULD BE MADE TO DETERMINE WHETHER QUANTITY AND OR QUALITY OF SURFACE SOIL JUSTIFIES STRIPPING.
- B. STRIPPING SHOULD BE CONFINED TO THE IMMEDIATE CONSTRUCTION AREA.
- C. WHERE FEASIBLE, LIME MAY BE APPLIED BEFORE STRIPPING AT A RATE DETERMINED BY SOIL TESTS TO BRING THE SOIL PH TO APPROXIMATELY 6.5. IN LIEU OF SOIL TESTS, SEE LIME RATE GUIDE IN SEEDBED PREPARATION FOR PERMANENT VEGETATIVE COVER FOR SOIL STABILIZATION, PG. 4-1.
- D. A 4-6 INCH STRIPPING DEPTH IS COMMON, BUT MAY VARY DEPENDING ON THE
- PARTICULAR SOIL.

  E. STOCKPILES OF TOPSOIL SHOULD BE SITUATED SO AS NOT TO OBSTRUCT NATURAL
- DRAINAGE OR CAUSE OFFSITE ENVIRONMENTAL DAMAGE.

  F. STOCKPILES SHOULD BE VEGETATED IN ACCORDANCE WITH STANDARDS PREVIOUSLY DESCRIBED HEREIN; SEE STANDARDS FOR PERMANENT (PG. 4-1) OR TEMPORARY (PG.7-1) VEGETATIVE COVER FOR SOIL STABILIZATION. WEEDS SHOULD NOT BE ALLOWED TO GROW ON STOCKPILES.

#### SITE PREPARATIO

- A. GRADE AT THE ONSET OF THE OPTIMAL SEEDING PERIOD SO AS TO MINIMIZE THE DURATION AND AREA OF EXPOSURE OF DISTURBED SOIL TO EROSION. IMMEDIATELY PROCEED TO ESTABLISH VEGETATIVE COVER IN ACCORDANCE WITH THE SPECIFIED
- SEED MIXTURE. TIME IS OF THE ESSENCE.

  B. GRADE AS NEEDED AND FEASIBLE TO PERMIT THE USE OF CONVENTIONAL EQUIPMENT FOR SEEDBED PREPARATION, SEEDING, MULCH APPLICATION AND ANCHORING, AND MAINTENANCE. SEE THE STANDARD FOR LAND GRADING. PG. 19-1.
- C. AS GUIDANCE FOR IDEAL CONDITIONS, SUBSOIL SHOULD BE TESTED FOR LIME REQUIREMENT. LIMESTONE, IF NEEDED, SHOULD BE APPLIED TO BRING SOIL TO A PH OF APPROXIMATELY 6.5 AND INCORPORATED INTO THE SOIL AS NEARLY AS PRACTICAL TO A DEPTH OF 4 INCHES.
- D. IMMEDIATELY PRIOR TO TOPSOILING, THE SURFACE SHOULD BE SCARIFIED 6" TO 12" WHERE THERE HAS BEEN SOIL COMPACTION. THIS WILL HELP INSURE A GOOD BOND BETWEEN THE TOPSOIL AND SUBSOIL. THIS PRACTICE IS PERMISSIBLE ONLY WHERE THERE IS NO DANGER TO UNDERGROUND UTILITIES (CABLES, IRRIGATION SYSTEMS,
- E. EMPLOY NEEDED EROSION CONTROL PRACTICES SUCH AS DIVERSIONS, GRADE STABILIZATION STRUCTURES, CHANNEL STABILIZATION MEASURES, SEDIMENTATION BASINS, AND WATERWAYS. SEE STANDARDS 11 THROUGH 42.

#### APPLYING TOPSOIL

- A. TOPSOIL SHOULD BE HANDLED ONLY WHEN IT IS DRY ENOUGH TO WORK WITHOUT DAMAGING SOIL STRUCTURE; I.E., LESS THAN FIELD CAPACITY.
- B. A UNIFORM APPLICATION TO A DEPTH OF 5 INCHES (UNSETTLED) IS REQUIRED (REFER TO PERMANENT VEGETATIVE STANDARDS). SOILS WITH A PH OF 4.0 OR LESS OR CONTAINING IRON SULFIDE SHALL BE COVERED WITH A MINIMUM DEPTH OF 12 INCHES OF SOIL HAVING A PH OF 5.0 OR MORE, IN ACCORDANCE WITH THE STANDARD FOR MANAGEMENT OF HIGH ACID PRODUCING SOIL.

## PERMANENT SEED MIXTURE

OPTIMUM SEEDING DATES: FEBRUARY 15 TO MARCH 30 AND AUGUST 15

10% KENTUCKY BLUE GRASS- 10% BY WEIGHT;

1. SEED MIXES :

TO OCTOBER 30

1.1. LAWN SEED MIX

LB./ACRE

70% TURF TYPE TALL FESCUE - 80% BY WEIGHT; 208
LB./ACRE
20% PERENNIAL RYE- 10% BY WEIGHT; 26
LB./ACRE

#### SEQUENCE OF CONSTRUCTION:

LOCAL SOIL CONSERVATION DISTRICT.

1. INSTALL FLAGGING TO DELINEATE THE PROJECT AREA LIMITS OF DISTURBANCE AS SHOWN ON PLAN.

2. INSTALL TEMPORARY CONSTRUCTION FENCE, ENTRANCE, AND SOIL EROSION 1 DAY MEASURES.

3. REMOVE SITE AMENITIES, UTILITIES, CONCRETE PAD AND ASPHALT PAVEMENT AS 7 DAYS NOTED ON DEMOLITION PLAN.

4. GRADE THE SITE WITHIN THE PROPOSED LIMIT OF DISTURBANCE AREA.

5. DAYS

5. INSTALL UNDERGROUND UTILITIES INCLUDING STORMWATER PIPES AND 10 DAYS STRUCTURES, WATER SERVICE LATERAL AND SANITARY SEWER LATERAL.

6. INSTALL CONCRETE CURBING, PADS AND SIDEWALKS.

5. DAYS

INSTALL CONCRETE CURBING, PADS AND SIDEWALKS.
 INSTALL SUBBASE AND BASE COURSE, ASPHALT SURFACE.
 INSTALL BITUMINOUS ASPHALT TOP COURSE.
 LANDSCAPE, TOPSOIL AND SEED AS NECESSARY FOR STABILIZATION.
 DAYS

10. AFTER SITE CONSTRUCTION IS COMPLETE AND THE AREA STABILIZED, REMOVE ALL 3 DAYS

TEMPORARY SOIL EROSION CONTROL MEASURES UPON NOTIFICATION TO THE

**BID SET** 

NOT FOR CONSTRUCTION

Sennoni

PENNONI ASSOCIA 515 Grove Street, Si Haddon Heights, NJ

T. BANFF
AL ENGINEER
SENSE NO. GE 45121

ANDREW T. BA

RIVERSIDE FIRE COMPANY EXPANSION

14 W SCOTT ST
RIVERSIDE TOWNSHIP

EROSION AND SEDIMENT CONTROL N

ALL DOCUMENTS PREPARED BY PENNONI ASSOCIATES
ARE INSTRUMENTS OF SERVICE IN RESPECT OF THE
PROJECT. THEY ARE NOT INTENDED OR REPRESENTED

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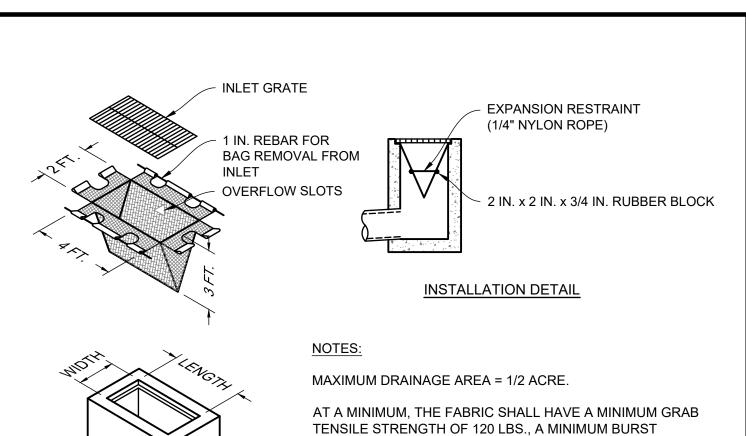
PROJECT RSFDX19001

DATE JULY 17, 2020

DRAWING SCALE N.T.S.

APPROVED BY AT

DRAWN BY

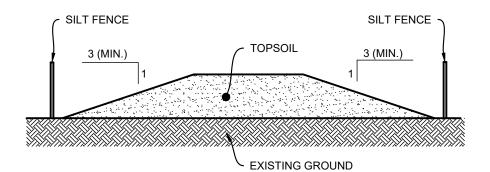


ISOMETRIC VIEW

STRENGTH OF 200 PSI, AND A MINIMUM TRAPEZOIDAL TEAR STRENGTH OF 50 LBS. FILTER BAGS SHALL BE CAPABLE OF TRAPPING ALL PARTICLES NOT PASSING A NO. 40 SIEVE.

INLET FILTER BAGS SHALL BE INSPECTED ON A WEEKLY BASIS AND AFTER EACH RUNOFF EVENT. BAGS SHALL BE EMPTIED AND RINSED OR REPLACED WHEN HALF FULL OR WHEN FLOW CAPACITY HAS BEEN REDUCED SO AS TO CAUSE FLOODING OR BYPASSING OF THE INLET. DAMAGED OR CLOGGED BAGS SHALL BE REPLACED. A SUPPLY SHALL BE MAINTAINED ON SITE FOR REPLACEMENT OF BAGS. ALL NEEDED REPAIRS SHALL BE INITIATED IMMEDIATELY AFTER THE INSPECTION.

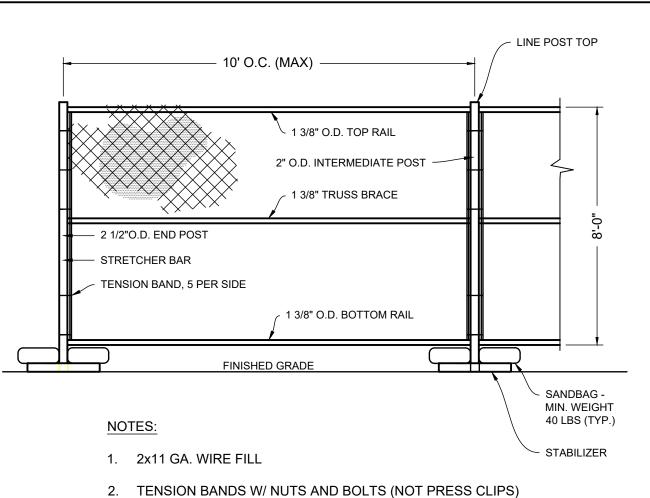
#### INLET FILTER BAG PROTECTION DETAIL N.T.S.



#### NOTES:

- 1. TOPSOIL STOCKPILE SHALL BE SURROUNDED BY SILT FENCE.
- 2. STOCKPILE SHALL RECEIVE TEMPORARY VEGETATIVE STABILIZATION IN ACCORDANCE WITH THE STANDARDS FOR SOIL EROSION AND SEDIMENT CONTROL IN NEW JERSEY IMMEDIATELY AFTER COMPLETION OF STOCKPILE.

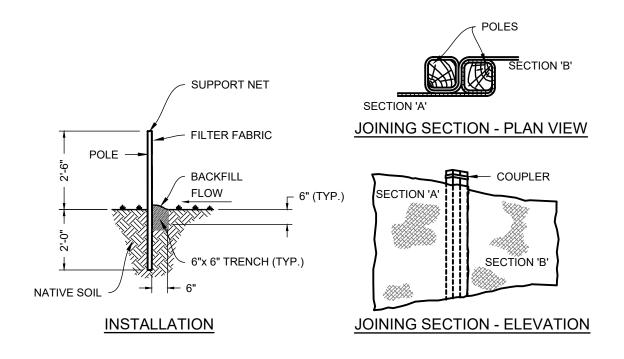
TOPSOIL STOCKPILE DETAIL



3. WIRE TIES EVERY 12"

4. ALL PIPE AND WIRE TO BE HAND DIPPED GALVANIZED

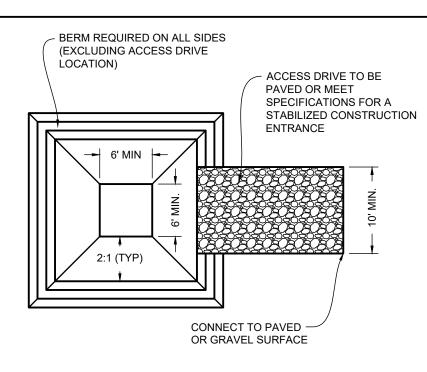
CONSTRUCTION FENCE DETAIL

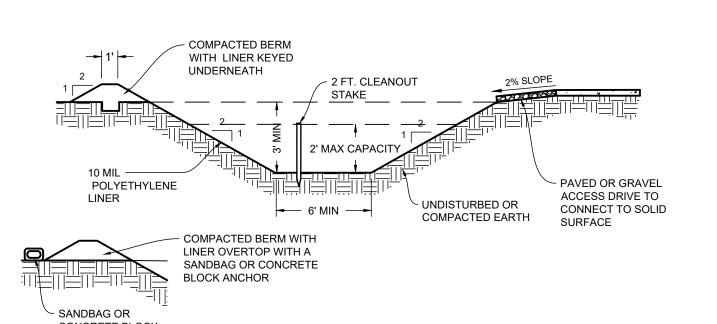


SILT FENCE TO BE USED ON SITE SHALL BE "ENVIROFENCE" PRECONSTRUCTED SILT FENCE OR EQUAL.

SPECIFICATIONS ARE: LENGTH: 100 FT. FABRIC WIDTH: 3 FT. POLE LENGTH: 4.5 FT. POLE SPACING: 7.7 FT. INSTALLED HEIGHT: 2.5 FT. SEDIMENT FABRIC: MIRAFI 100.

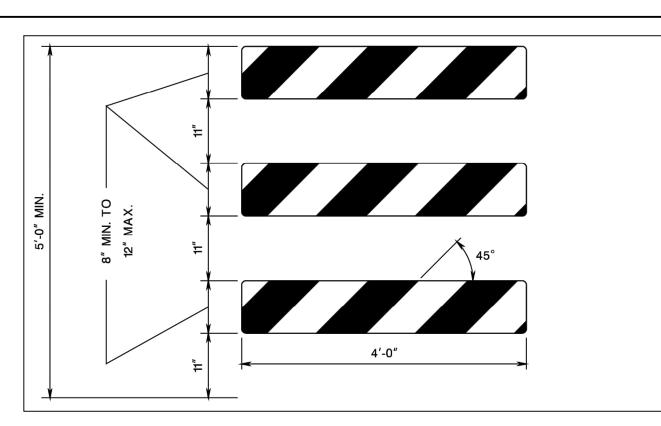
SILT FENCE DETAIL





- 1. LOCATE WASHOUT AREA A MINIMUM OF 50 FEET FROM OPEN CHANNELS, STORMDRAIN INLETS, WETLANDS OR WATERBODIES
- 2. LOCATE WASHOUT AREA SO THAT IT IS ACCESSIBLE TO CONCRETE EQUIPMENT (SERVICE A MINIMUM 10 FOOT WIDE GRAVEL ACCESSWAY), BUT SO IT IS NOT IN A HIGHLY ACTIVE CONSTRUCTION AREA CAUSING ACCIDENTAL DAMAGE.
- 3. MINIMUM DIMENSIONS FOR PREFABRICATED UNITS ARE 4 FEET BY 4 FEET BY 1 FOOT DEEP WITH A MINIMUM 4 MIL POLYETHYLENE PLASTIC LINER. MINIMUM DIMENSIONS FOR CONSTRUCTED CONCRETE WASHOUT AREAS ARE 6 FEET BY 6 FEET BY 3 FEET DEEP, WITH A MINIMUM 10 MIL POLYETHYLENE LINER, 2:1 SIDE SLOPES, AND A 1 FOOT HIGH BY 1 FOOT WIDE COMPACTED FILL BERM.
- 4. THE LINER MUST BE FREE OF TEARS OR HOLES AND PLACED OVER SMOOTH SURFACES TO PREVENT PUNCTURING. FOR EXCAVATED WASHOUTS, ANCHOR THE LINER UNDERNEATH THE BERM OR OVERTOP WITH SANDBAGS OR CONCRETE BLOCKS TO HOLD IN PLACE.
- 5. PROVIDE A SIGN DESIGNATING THE WASHOUT AREA, AND FOR LARGE CONSTRUCTION SITES, PROVIDE SIGNS THROUGHOUT DIRECTING TRAFFIC TO ITS LOCATION.
- 6. ALLOW WASHED OUT CONCRETE MIXTURE TO HARDEN THROUGH EVAPORATION OF THE WASTEWATER. ONCE THE FACILITY HAS REACHED 75 PERCENT OF ITS CAPACITY, REMOVE THE HARDENED CONCRETE BY REUSING THE BROKEN AGGREGATE ONSITE, RECYCLING, OR DISPOSING OF OFFSITE. THE HARDENED MATERIAL CAN BE BURIED ON SITE WITH MINIMUM OF 1 FOOT OF CLEAN, COMPACTED FILL.
- 7. APPLY A NEW LINER BEFORE REUSING THE STATION FOR ADDITIONAL WASHOUTS AFTER MAINTENANCE HAS OCCURRED.
- 8. THE USE OF A MANUFACTURED WASHOUT IS PERMITTED SUBJECT TO APPROVAL BY THE UNDERSIGNED ENGINEER. CONTRACTOR SHALL SUBMIT A SHOP DRAWING FOR AUTHORIZATION.

CONCRETE WASHOUT DETAIL N.T.S.



#### NOTES:

- 1. ENSURE THE 8"MIN. x 48" TO 12"MAX. x 48" BARRICADE RAILS TO BE ATTACHED ACCORDING TO THE MANUFACTURERS' RECOMMENDATION.
- 2. ENSURE ORANGE AND SILVER (WHITE) STRIPES TO BE RESTROREFLECTIVE SHEETING, ASTM D4958 TYPE III. ALTERNATE ORANGE AND SILVER (WHITE) STRIPES 8" WIDE SLOPING DOWNWARD THE ANGEL OF 45 DEGREES IN THE DIRECTION TRAFFIC IS TO PASS
- 3. THE FRAMING, RAILS, AND BALLAST FOR BREAKAWAY BARRICADE TO BE NCHRP-350 CRASHED TESTED AND FHWA APPROVED.
- 4. IF NECESSARY, FABRICATE THE BALLAST AND PLACE ACCORDING TO THE MANUFACTURER'S RECOMMENDATION.

BREAKAWAY TYPE III BARRICADE DETAIL

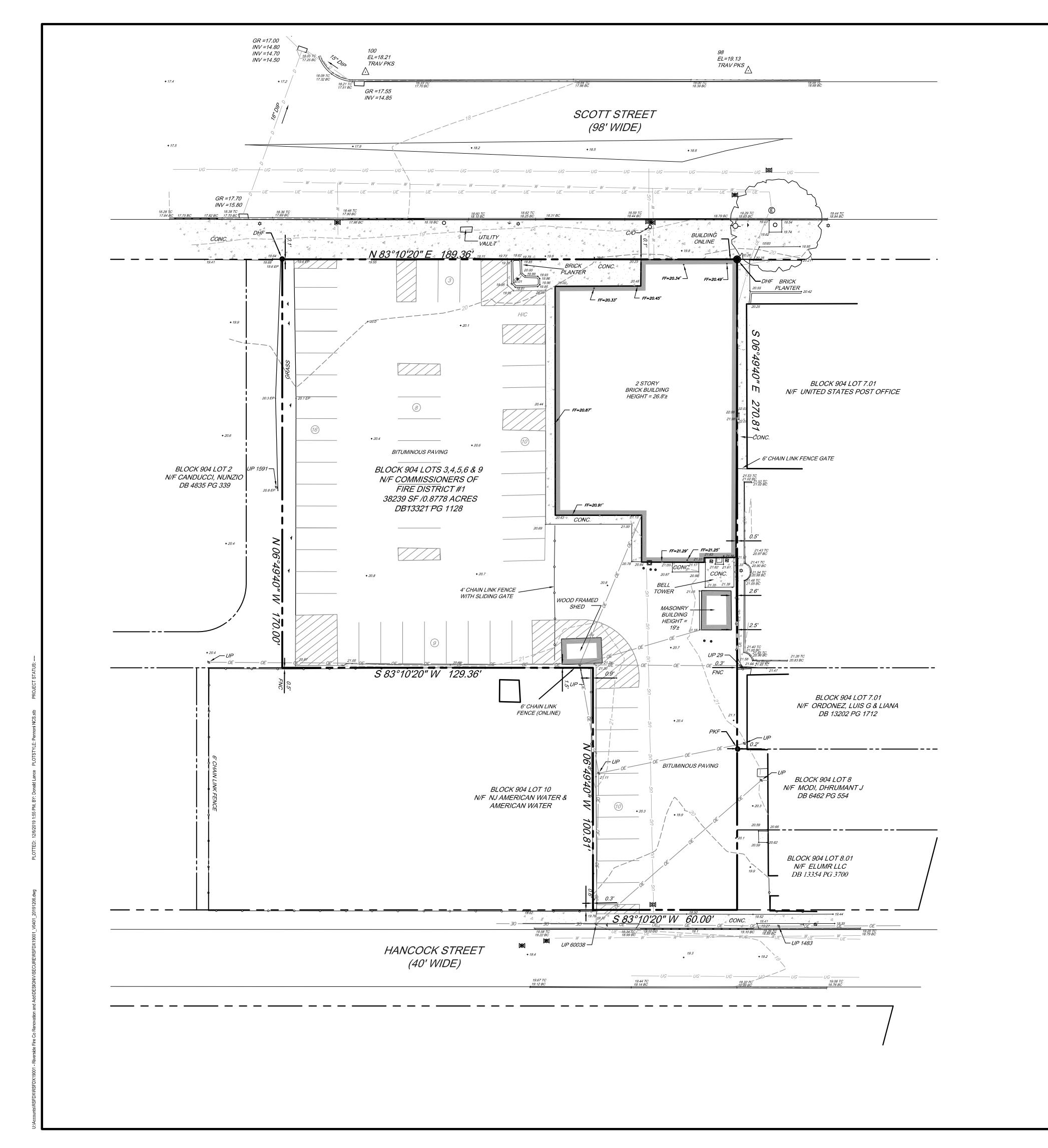
**BID SET NOT FOR CONSTRUCTION** 

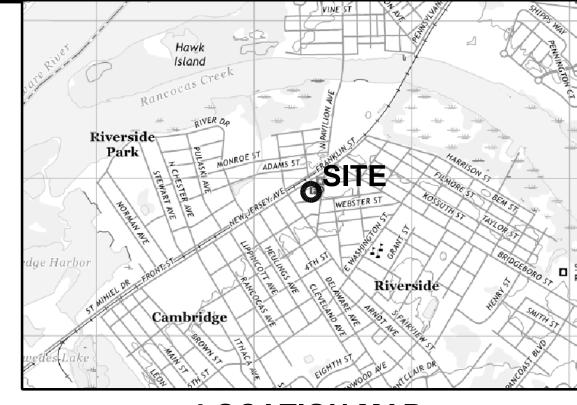
ANE ANDREW Ш ALL DOCUMENTS PREPARED BY PENNONI ASSOCIATE ARE INSTRUMENTS OF SERVICE IN RESPECT OF THE PROJECT. THEY ARE NOT INTENDED OR REPRESENT TO BE SUITABLE FOR REUSE BY OWNER OR OTHERS O THE EXTENSIONS OF THE PROJECT OR ON ANY OTHER PROJECT. ANY REUSE WITHOUT WRITTEN VERIFICATION OR ADAPTATION BY PENNONI ASSOCIATES FOR THE SPECIFIC PURPOSE INTENDED WILL BE AT OWNERS SOLE RISK AND WITHOUT LIABILITY OR LEGAL EXPOSURE TO PENNONI ASSOCIATES; AND OWNER SHALL INDEMNIFY AND HOLD HARMLESS PENNONI ASSOCIATES FROM ALL CLAIMS, DAMAGES, LOSSES AN EXPENSES ARISING OUT OF OR RESULTING THEREFRO RSFDX1900<sup>2</sup> JULY 17, 2020 DRAWING SCALE N.T.S.

**CS8502** 

DRAWN BY

SHEET 13 OF 13





### **LOCATION MAP**

N 40-02-14 W 74-57-38 BEVERLY - QUAD 1" = 2000'

### **NOTES:**

1. THIS SURVEY WAS PREPARED WITHOUT THE BENEFIT OF A TITLE REPORT AND IS SUBJECT TO ANY EASEMENT, RESTRICTION AND/OR COVENANTS THAT A CURRENT REPORT OF TITLE, OR COMPLETE SEARCH OF THE PUBLIC RECORD, MAY DISCLOSE.

- 2. THIS SURVEY WAS PREPARED IN ACCORDANCE WITH THE FOLLOWING SOURCES OF INFORMATION A-DEEDS OF RECORD
- B -AN ACTUAL FIELD SURVEY PERFORMED BY PENNONI ASSOCIATES
- C -THE "NATIONAL FLOOD INSURANCE PROGRAM, FIRM, FLOOD INSURANCE RATE MAP, TOWNSHIP OF RIVERSIDE, NEW JERSEY, BURLINGTON COUNTY, PANEL 112 OF 641,"
  COMMUNITY PANEL NUMBER 340113, EFFECTIVE DATE: 12/21/2017, PARCEL IS LOCATED IN SPECIAL FLOOD HAZARD ZONE X (AREAS OF MINIMAL FLOOD HAZARD).

3. BLOCK AND LOT NUMBERS REFER TO THE OFFICIAL TAX MAPS OF THE TOWNSHIP OF RIVERSIDE BURLINGTON COUNTY, NEW JERSEY, PLATE #9.

4. PLANIMETRIC & TOPOGRAPHIC FEATURES SHOWN ARE TAKEN FROM AN ACTUAL FIELD SURVEY PERFORMED BY PENNONI ASSOCIATES ON 12/03/19.

5. THIS SURVEY IS NOT INTENDED TO GUARANTEE OWNERSHIP.

- 6. SURVEY BASED ON N.J.S.P.C.S. NAD '83 (2011). SURVEY SCALED TO GROUND AT POINT XXXX
- GROUND SCALE FACTOR: 0.9999190420
- GROUND COORDINATES: N:439,041.127 E:363,070.514 Z:18.21 VERTICAL DATUM: NAVD 1988

7. IT IS BEYOND THE SCOPE OF THIS SURVEY TO DETERMINE THE EXISTENCE OR NON-EXISTENCE OF ANY REGULATED ENVIRONMENTAL CONDITION ON OR NEAR THE SUBJECT PARCEL(S). UNDERGROUND EXPLORATIONS WERE NOT CONDUCTED OR UTILIZED DURING THE PREPARATION OF THIS SURVEY. CONCERNED PARTIES SHOULD PURSUE ANY ENVIRONMENTAL MATTERS SEPARATE AND APART FROM

8. IT SHOULD NOT BE ASSUMED THAT ANY COPY OF THIS DRAWING WITHOUT A RAISED IMPRESSION OF THE SURVEYOR'S SEAL IS A TRUE COPY OF THE ORIGINAL AS ISSUED BY THE SURVEYOR.

9. THE LOCATION OF UNDERGROUND UTILITIES ARE APPROXIMATE. ALL LOCATIONS ILLUSTRATED ARE BASED UPON UTILITY MARKOUT AND ABOVE GROUND STRUCTURES THAT WERE VISIBLE & ACCESSIBLE IN THE FIELD. THE STATE OF NEW JERSEY REQUIRES NOTIFICATION PRIOR TO ANY EXCAVATION BY UTILIZING THE NEW JERSEY ONE-CALL SYSTEM (1-800-272-1000).

### LEGEND

	PROPERTY LINE
	RIGHT OF WAY LINE
	CURB
	CURB DEPRESSION
	EDGE OF PAVEMENT
	EDGE OF GRAVEL
	FENCE
OE OE	OVERHEAD ELECTRIC
W W	WATER LINE
	UNDERGROUND GAS
ss	SANITARY SEWER LINE
D D	STORM SEWER LINE
UCUC	UNDERGROUND CATV
UE	UNDERGROUND ELECTRIC
$\triangle$	CONTROL POINT
	NATURAL GAS,METER
	NATURAL GAS, VALVE
Ø	POWER, UTILITY POLE
<del>-0-</del>	SITE, TRAFFIC SIGN
0	SANITARY SEWER, CLEAN-OUT
S	SANITARY SEWER, MANHOLE
	STORM SEWER, INLET
0	STORM SEWER, MANHOLE
$\triangleright$	ROOF DRAIN
	MINOR CONTOUR
	MAJOR CONTOUR
x 100.5	SPOT ELEVATION
<b>~</b>	WATER, FIRE HYDRANT
<b>DEC</b>	WATER, VALVE

