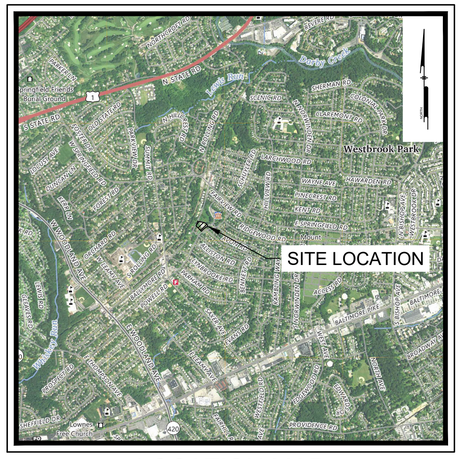
LIBRARY BUILDING RENOVATIONS

TOWNSHIP OF SPRINGFIELD
DELAWARE COUNTY, PA

PREPARED FOR:
OWNER/DEVELOPER

TOWNSHIP OF SPRINGFIELD

50 POWELL ROAD
SPRINGFIELD, PA 19064
(610) 544-1300



LOCATION MAP
Scale: 1" = 2000'

Sheet List Table		
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11	EROSION AND SEDIMENTATION CONTROL NOTES	CM8502

PREPARED BY:

PENNONI ASSOCIATES INC.

1900 Market Street, Suite 300
Philadelphia, PA 19103
T 215.222.3000
F 215.222.3588

CALL BEFORE YOU DIG
BEFORE YOU DIG ANYWHERE IN PENNSYLVANIA
CALL 1-800-242-1776
PA. ACT 287 OF 1974 REQUIRES THREE WORKING DAYS NOTICE TO UTILITIES BEFORE YOU EXCAVATE, DRILL OR BLAST PENNSYLVANIA ONE-CALL SYSTEM, INC.
SERIAL NUMBER(S): #20262035334

ISSUED FOR BID
DATE: 08/07/2026

PENNONI ASSOCIATES INC.
1900 Market Street, Suite 300
Philadelphia, PA 19103
T 215.222.3000 F 215.222.3588

ALL DIMENSIONS MUST BE VERIFIED BY CONTRACTOR AND OWNER MUST BE NOTIFIED OF ANY DISCREPANCIES BEFORE PROCEEDING WITH WORK

LIBRARY BUILDING RENOVATIONS
70 POWELL ROAD
SPRINGFIELD, PA 19064

COVER SHEET

TOWNSHIP OF SPRINGFIELD
50 POWELL ROAD
SPRINGFIELD, PA 19064

NO.	DATE	REVISIONS	BY
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PROJECT	SPFLD00611
DATE	2026-08-07
DRAWING SCALE	AS NOTED
DRAWN BY	AGS
APPROVED BY	EPJ

CM0001
SHEET 1 OF 11

U:\Accounts\SPFLD\SPFLD00611 - Library Building Renovation\DESIGN_SHEETS_MUNICIPAL\CM0001.dwg PLOTTED: 8/7/2026 1:48 PM, BY: Angel Salerno PLOTSTYLE: Pennoni NCS.ctb

GENERAL NOTES:

1. ALL CONTRACTORS WORKING ON THIS PROJECT SHALL COMPLY WITH REQUIREMENTS PROVIDED FOR IN PENNSYLVANIA'S UNDERGROUND UTILITY LINE PROTECTION ACT 287 (1974) AS AMENDED BY ACT 121 (2008).

2. THE CONTRACTOR MUST COMPLY WITH ALL US DEPARTMENT OF LABOR, OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION REGULATIONS AS REVISED 1995, (OSHA ALL CONSTRUCTION METHODS AND MATERIALS SHALL BE IN ACCORDANCE WITH PENNDOT SPECIFICATION PUBLICATION 408/2007, LATEST REVISION, AND SHALL MEET OR EXCEED THE LOCAL MUNICIPALITY'S STANDARD SPECIFICATIONS FOR CONSTRUCTION.

3. ALL CONSTRUCTION MATERIALS SHOULD BE SUPPLIED BY MANUFACTURERS LISTED IN PENNDOT PUBLICATION 35, BULLETIN 15.

4. THE EXISTING UTILITES ARE BASED ON INFORMATION PROVIDED BY THE UTILITY COMPANIES VIA PLANS AND SITE MARKOUT. VERTICAL INFORMATION IS PROVIDED VIA RESPONDING USER'S PLAN AND IS APPROXIMATE. THE LOCATIONS OF EXISTING UNDERGROUND UTILITIES ARE SHOWN IN AN APPROXIMATE WAY ONLY AND HAVE NOT BEEN INDEPENDENTLY VERIFIED BY THE OWNER OR ITS REPRESENTATIVE. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK AND AGREES TO BE RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE CAUSED BY THE CONTRACTOR'S FAILURE TO EXACTLY LOCATE AND PRESERVE ANY UNDERGROUND UTILITIES.

5. IT IS THE CONTRACTOR'S RESPONSIBILITY TO CONTACT THE PENNSYLVANIA ONE CALL SYSTEM (PHONE: 1-800-242-1776) THREE WORKING DAYS IN ADVANCE OF ANY EXCAVATION FOR THE MARK-OUT OF THE LOCATION OF UTILITIES AND NOTIFICATION OF COMMENCEMENT OF WORK. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO MAINTAIN ALL UTILITY MARKINGS WITHIN THE PROJECT LIMITS FOR THE DURATION OF THE PROJECT. IF UTILITY MARKINGS ARE OBLITERATED, THE CONTRACTOR IS RESPONSIBLE FOR CONTACTING PA ONE CALL FOR MARKOUT.

6. CONTRACTOR WILL MAKE EXPLORATION EXCAVATIONS AND LOCATE EXISTING UNDERGROUND FACILITIES SUFFICIENTLY AHEAD OF CONSTRUCTION TO PERMIT REVISIONS TO PLANS IF REVISIONS ARE NECESSARY. NOTIFY THE ENGINEER OF WORK IF ANY DISCREPANCIES IN UTILITY LINE LOCATIONS ARE FOUND.

7. CONTRACTOR IS REQUIRED TO TAKE PRECAUTIONARY MEASURES TO PROTECT THE UTILITY LINES SHOWN HEREON AND ANY OTHER EXISTING LINES NOT OF RECORD OR NOT SHOWN ON THESE PLANS.

8. PENNONI ASSOCIATES INC MAKES NO CLAIM AS TO THE ACCURACY OF THE UNDERGROUND UTILITIES SHOWN ON THESE PLANS. THE CONTRACTOR IS RESPONSIBLE FOR LOCATING AND VERIFYING THE DEPTH OF THE EXISTING UTILITIES; IN THE EVENT OF A UTILITY CONFLICT, THE ENGINEER OF WORK SHALL BE NOTIFIED.

9. IF IT IS NECESSARY TO RELOCATE OR CONNECT INTO EXISTING UTILITIES WITHIN TOWNSHIP RIGHT-OF-WAY, IT WILL BE THE RESPONSIBILITY OF THE UTILITY OR THEIR APPOINTED CONTRACTOR TO OBTAIN THE NECESSARY PERMITS FROM THE TOWNSHIP.

10. IT IS THE CONTRACTORS SOLE RESPONSIBILITY TO GRADE ADJUST/RELOCATE OR HAVE ADJUSTED OR RELOCATED BY THE APPROPRIATE UTILITY COMPANY, ALL MANHOLES, VALVE COVERS, ETC. WITHIN THE PROJECT LIMITS.

11. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROPERLY BACKFILLING AND COMPACTING ALL TRENCHES. NO TRENCHES ARE TO BE LEFT OPEN AFTER COMPLETION OF WORK FOR THE DAY. ALL CONSTRUCTION AREAS ARE TO BE KEPT IN A CONDITION THAT ALLOWS FOR SAFE MOVEMENT OF BOTH VEHICULAR AND PEDESTRIAN TRAFFIC. ANY EXCESS MATERIAL FROM TRENCHING SHALL BE DELIVERED TO A LAWFUL SITE LOCATION BY THE CONTRACTOR AT THEIR OWN EXPENSE.

12. A PRE-CONSTRUCTION MEETING SHALL BE HELD BETWEEN THE TOWNSHIP, THE CONTRACTOR, THE ENGINEER AND ALL UTILITY COMPANIES TO CLARIFY AND COORDINATE ALL CONSTRUCTION DETAILS.

13. THE EXISTING TOPOGRAPHIC INFORMATION AND BASE SURVEY INFORMATION WAS PROVIDED BY PENNONI ASSOCIATES INC. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR VERIFYING THE ACCURACY OF THE EXISTING TOPOGRAPHIC AND BASE SURVEY INFORMATION PROVIDED IN THESE PLANS. THE CONTRACTOR SHOULD CONTACT THE ENGINEER BEFORE PROCEEDING WITH CONSTRUCTION IF THERE ARE ANY DIFFERENCES BETWEEN THE FIELD CONDITIONS AND BASE SURVEY SHOWN ON THE PLANS.

14. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO REMOVE ANY DEBRIS AND FLUSH OUT ALL EXISTING AND PROPOSED STORM DRAINAGE FACILITIES WITHIN THE PROJECT LIMITS.

15. NO UNSUITABLE MATERIAL IS TO BE USED IN ANY PORTION OF THE ROADWAY CONSTRUCTION. REMOVE ANY SUBGRADE THAT CANNOT BE PROPERLY COMPACTED AND TREAT AS UNSUITABLE MATERIAL. UNDERCUTTING AND/OR STABILIZATION MAY BE REQUIRED. THE SUBGRADE MUST BE APPROVED BY A TOWNSHIP REPRESENTATIVE PRIOR TO PLACEMENT OF THE SUBBASE.

16. ALL EXISTING PAVEMENT MARKINGS WHICH ARE NO LONGER APPROPRIATE SHALL BE ERADICATED BY THE PERMITTEE USING AN ERADICATION METHOD APPROVED BY A TOWNSHIP FIELD REPRESENTATIVE. THE PERMITTEE SHALL PLACE ALL REQUIRED NEW PAVEMENT MARKINGS.

17. PEDESTRIANS MUST BE PROTECTED DURING ALL PHASES OF CONSTRUCTION. THE CONTRACTOR SHALL INSTALL FENCES OR OTHER APPROVED BARRIERS TO SEPARATE PEDESTRIANS FROM WORK ZONES. THE FENCE/BARRIER SHALL BE CLOSED AND SECURED DURING NON-WORKING HOURS.

18. ALL PROPOSED PEDESTRIAN FACILITIES REFLECTED ON THESE PLANS SHALL BE CONSTRUCTED TO COMPLY WITH THE REQUIREMENTS OF THE US ACCESS BOARD, PUBLIC RIGHT-OF-WAY ACCESSIBILITY GUIDELINES (PROWAG) OF THE ACCESSIBILITY GUIDELINES OF BUILDINGS AND FACILITIES (ADAAG). PENNDOT DESIGN MANUAL PART 2, CHAPTER 6, AND PENNDOT STANDARDS FOR ROADWAY CONSTRUCTION (PUBLICATION 72M, RC-67M) PROVIDE GUIDANCE ON ADA ACCESSIBLE DESIGN FOR PEDESTRIAN FACILITIES AND CAN BE UTILIZED FOR REFERENCE.

19. IN ALL AREAS THAT ARE TO RECEIVE PAVEMENT OR SIDEWALK, SUBBASE OR AGGREGATE BASE COURSE MUST BE PLACED AS SOON AS PRACTICAL AFTER SUBGRADE IS ACHIEVED. THIS REQUIRES THAT PAVING COURSES FOLLOW THE STONE PLACEMENT VERY CLOSELY OR CONTAMINATION OF THE SUBBASE OR STONE MAY OCCUR REQUIRING REMOVAL AND REPLACEMENT OF THE CONTAMINATED MATERIAL. THE COVERING OF BASE EARTH WITH STONE IS CONSIDERED STABILIZATION OF SAME.

20. EMPLOY CONSTRUCTION METHODS AND MEANS THAT KEEP DUST TO A MINIMUM. PROVIDE FOR THE DISTRIBUTION OF WATER ON THE PROJECT FOR THE PURPOSE OF LIMITING DUST. THE MATERIALS AND METHODS USED FOR WATER LAYING ARE SUBJECT TO THE APPROVAL OF THE ENGINEER. PROVIDE FOR THE PROMPT REMOVAL FROM EXISTING PAVING OF ALL DIRT AND OTHER MATERIALS THAT HAVE SPILLED, WASHED UPON, OR OTHERWISE DEPOSITED THEREON BY HAULING AND OTHER OPERATIONS. PROVIDE A STREET SWEEPER TO PICK UP ANY TRACKING FROM CONSTRUCTION VEHICLES FOR THIS PROJECT.

21. NO TRACKING OF MUD OR SEDIMENT SHALL BE PERMITTED ONTO PUBLIC ROADS AND OUTSIDE THE LIMITS OF CONSTRUCTION. REMOVE ANY SEDIMENT TRACKED ONTO PUBLIC ROADWAYS AND RETURN TO THE CONSTRUCTION SITE.

22. ALL SLOPE MEASUREMENTS WILL BE INSPECTED/VERIFIED WITH A 2-FOOT SMART LEVEL.

23. ALL STRUCTURES WITHIN ROADWAYS AND PARKING AREAS SHALL BE DESIGNED FOR HS-25 LOADING.

24. ALL LINES TO BE ABANDONED SHALL BE ABANDONED WITH A MINIMUM OF 12-INCH THICK MASONRY PLUG.

25. UNLESS OTHERWISE INDICATED ON THE PLANS, ALL BACKFILL WITHIN THE ROADWAY AND UNDER CURB, SIDEWALK, AND DRIVEWAYS SHALL CONSIST OF PENNDOT 2A STONE.

26. CONTRACTOR IS RESPONSIBLE FOR MAINTENANCE OF ALL STRUCTURES, FACILITIES AND DRAINAGE.

27. CONTRACTOR IS RESPONSIBLE FOR MAINTENANCE OF ALL SIGNS AND PAVEMENT MARKINGS.

28. THE PROPOSED PAVEMENT SECTION MUST BE AS INDICATED ON THE PLAN, OR MATCH THE EXISTING AS FOUND IN THE FIELD, WHICHEVER IS GREATER.

29. PRIOR TO AN OVERLAY, BITUMINOUS OR CONCRETE BASE REPAIR OF JOINT REPLACEMENT MAY BE REQUIRED. REPAIR/REPLACEMENT WILL BE AT THE DISCRETION OF THE INSPECTOR-IN-CHARGE.

30. ALL PAVEMENT MARKINGS OTHER THAN LONGITUDINAL LINES TO BE HOT THERMOPLASTIC (PENNDOT PUBLICATION 111, TC-8600).

31. MATCH EXISTING PAVEMENT MARKINGS AT THE LIMITS OF WORK.

32. THE CONTRACTOR IS RESPONSIBLE FOR THE COORDINATION OF RELOCATING ANY CONFLICTING UTILITIES WHICH ARE A RESULT OF THESE IMPROVEMENTS.

33. STRUCTURAL STEEL BICYCLE SAFE GRATES MUST BE PROVIDED FOR ALL INLETS WITHIN THE ROADWAY PAVEMENT OF THOSE THAT MAY RECEIVE BICYCLE TRAFFIC (PENNDOT PUBLICATION 72M, RC-45M).

34. THE CONTRACTOR(S) SHALL REVIEW THE LOCATION OF MATERIAL STORAGE AREAS WITH THE OWNER'S REPRESENTATIVE DURING PRE-CONSTRUCTION MEETING.

PA ACT 287 OF 1974 AS AMENDED BY ACT 121 OF 2008

THE CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING ALL UNDERGROUND STRUCTURES AND UTILITIES, SUCH AS WATER MAINS, SEWERS, TELEPHONE, GAS AND ELECTRIC CONDUITS, ETC. AND ABOVE GROUND UTILITIES, WHICH MAY BE ENCOUNTERED DURING CONSTRUCTION OPERATIONS. TEST HOLES SHALL BE DUG TO DETERMINE THE POSITION OF THE UNDERGROUND STRUCTURES AND UTILITIES, OR THE CONTRACTOR SHALL ARRANGE WITH THE OWNERS OF SUCH UNDERGROUND STRUCTURES AND UTILITIES TO ASSIGN A REPRESENTATIVE TO MARK THE LOCATIONS. THE CONTRACTOR SHALL PAY THE COST OF DIGGING TEST HOLES AND LIKEWISE HE SHALL PAY THE COST OF THE SERVICE OF THE REPRESENTATIVES OF THE OWNERS OF SUCH UTILITIES FOR LOCATING THE SAID UTILITIES. THE COST OF DETERMINING THE LOCATIONS IS TO BE INCLUDED IN THE PRICES BID. THE LOCATIONS AND DEPTH OF EXISTING STRUCTURES AND UTILITIES AS SHOWN IN THE CONTRACT DOCUMENTS IS SIMPLY FOR THE GUIDANCE OF THE CONTRACTOR AND HAVE NOT BEEN FIELD LOCATED. SINCE THE INFORMATION IS AS FURNISHED BY THE RESPECTIVE UTILITIES, OR TAKEN FROM NON-AS-BUILT PLANS, THE ENGINEER IS NOT RESPONSIBLE FOR THE ACCURACY OF THE PLANS IN THIS RESPECT.

PENNSYLVANIA ONE CALL SYSTEM, INC.
925 IRWIN RUN ROAD
WEST MIFFLIN, PENNSYLVANIA
15122-1078

BEFORE YOU DIG ANYWHERE IN PENNSYLVANIA! CALL 1-800-242-1776
NON-MEMBERS MUST BE CONTACTED DIRECTLY
PA LAW REQUIRES THREE WORKING DAYS NOTICE TO UTILITIES BEFORE YOU EXCAVATE, DRILL, BLAST OR DEMOLISH

UTILITY LIST:

ALL DESIGNERS AND CONTRACTORS UTILIZING THIS PLAN AND THE INFORMATION CONTAINED THEREON ARE CAUTIONED TO COMPLY WITH THE REQUIREMENTS OF PENNSYLVANIA ACT 287 OF 1974, AS AMENDED.

PECO ENERGY — PHONE #: 610-725-7160
BERWYN SERVICE BUILDING
1050 W. SWEDESFORD RD
BERWYN, PA 19132

AQUA PENNSYLVANIA — PHONE #: 610-328-9271
762 LANCASTER AVENUE
BRYN MAWR, PA 19010

VERIZON PENNSYLVANIA INC — PHONE #: 302-995-5440
1625 NEWPORT GAP PIKE, ROOM 1
MARSHALTON, DE 19808

SPRINGFIELD TOWNSHIP — PHONE #: 610-544-1300
50 POWELL ROAD
SPRINGFIELD, PA 19064

COMCAST CABLE COMMUNICATIONS — PHONE #: 800-266-2278
75 EAST LANCASTER AVENUE
ARDMORE, PA 19003

ISSUED FOR BID
DATE: 08/07/2026

PENNONI ASSOCIATES INC.
1900 Market Street, Suite 300
Philadelphia, PA 19103
T 215.222.3000 F 215.222.3588

ALL DIMENSIONS MUST BE VERIFIED BY CONTRACTOR AND OWNER MUST BE NOTIFIED OF ANY DISCREPANCIES BEFORE PROCEEDING WITH WORK

LIBRARY BUILDING RENOVATIONS
70 POWELL ROAD
SPRINGFIELD, PA 19064

PROJECT NOTES

TOWNSHIP OF SPRINGFIELD
50 POWELL ROAD
SPRINGFIELD, PA 19064

BY	REVISIONS	NO.	DATE
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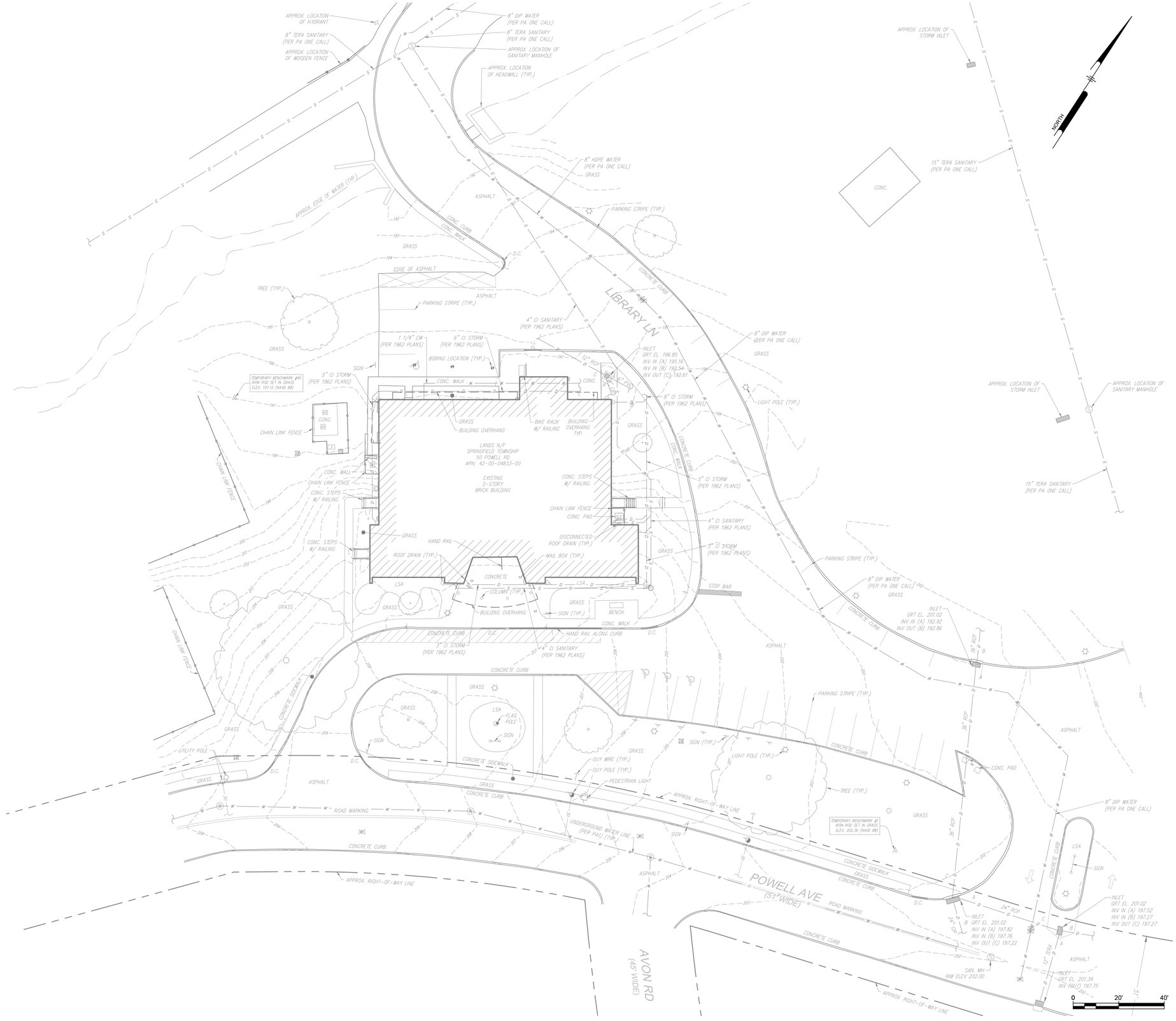
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PROJECT	SPFLD00611
DATE	2026-08-07
DRAWING SCALE	AS NOTED
DRAWN BY	AGS
APPROVED BY	EPJ

CM0002

SHEET 2 OF 11

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EXISTING LEGEND

- BUILDING
- CURB
- CURB DEPRESSION (DC)
- EDGE OF PAVEMENT
- EDGE OF GRAVEL
- CONCRETE PAVING
- GRAVEL SURFACE
- PAVERS
- FENCE, COMPOSTIE
- FENCE, WOOD
- FENCE, METAL
- AIR CONDITIONER (AC)
- BOLLARD
- POST
- SIGN POST AND BOARD
- SIGN
- UTILITY POLE
- FLAG POLE
- LIGHT
- SPOT LIGHT
- DECIDUOUS TREE
- CONIFEROUS TREE
- LANDSCAPED AREA (LSA)
- 101 MINOR CONTOUR
- 100 MAJOR CONTOUR
- S SANITARY SEWER, UNDERGROUND
- D STORM SEWER, UNDERGROUND
- OH UNIDENTIFIED, OVERHEAD
- UG APPROX. BURIED GAS LINE
- W APPROX. BURIED WATER LINE
- UE APPROX. BURIED POWER LINES
- MANHOLES (C, E, S, ST, T, W, U)
- VALVES
- SANITARY SEWER, CLEAN-OUT
- STORM SEWER, ROOF DRAIN
- STORM SEWER, INLET
- WATER, FIRE HYDRANT
- WATER, STAND PIPE CONNECTION
- UNIDENTIFIED, VENT

SURVEY NOTES:

1. A FIELD SURVEY OF THE SITE WAS PERFORMED BY PENNONI ASSOCIATES INC. IN APRIL 2026.
2. UNLESS SPECIFICALLY STATED OR SHOWN HEREON TO THE CONTRARY, THIS SURVEY IS MADE SUBJECT TO AND DOES NOT LOCATE OR DELINEATE:
   - § RIGHTS OR INTERESTS OF THE UNITED STATES OF AMERICA OR COMMONWEALTH OF PENNSYLVANIA OVER LANDS NOW OR FORMERLY FLOWED BY TIDEWATER BUT NO LONGER VISIBLE OR PHYSICALLY EVIDENT, OR LANDS CONTAINING ANY ANIMAL, MARINE, OR BOTANICAL SPECIES REGULATED BY OR UNDER THE JURISDICTION OF ANY FEDERAL, STATE, OR LOCAL AGENCY.
   - § ANY SUBSURFACE OR SUBTERRANEAN CONDITION, EASEMENTS OR RIGHTS INCLUDING BUT NOT LIMITED TO MINERAL OR MINING RIGHTS, OR THE LOCATION OF OR RIGHTS TO ANY SUBSURFACE STRUCTURES, CONTAINERS, OR FACILITIES OR ANY OTHER NATURAL OR MAN-MADE SUBSURFACE CONDITION WHICH MAY OR MAY NOT AFFECT THE USE OR DEVELOPMENT POTENTIAL OF THE SUBJECT PROPERTY.
3. ALL UNITS ARE SHOWN IN U.S. SURVEY FEET UNLESS OTHERWISE NOTED.
4. THE HORIZONTAL DATUM FOR THE PLANIMETRIC FEATURES AND COORDINATE VALUES INDICATED ON THIS PLAN REFERENCE THE "PENNSYLVANIA STATE PLANE COORDINATE SYSTEM, SOUTH ZONE AS REFERENCED TO THE NORTH AMERICAN DATUM OF 1983 (NAD 83)" WITH THE 2011 ADJUSTMENT (PASPCS-S NAD83-2011) AND WAS DETERMINED FROM GNSS OBSERVATIONS ON APRIL 2026.
5. THE VERTICAL DATUM FOR THE ELEVATIONS AND CONTOURS INDICATED ON THIS PLAN REFERENCE THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88) AND WAS DETERMINED FROM GNSS OBSERVATIONS ON APRIL 2026.
6. TEMPORARY SITE BENCHMARK NOTE:
   VERTICAL BENCHMARK #1
   DESCRIPTION: IRON ROD SET IN GRASS
   ELEVATION = 202.36 (NAVD 88)
   VERTICAL BENCHMARK #40
   DESCRIPTION: IRON ROD SET IN GRASS
   ELEVATION = 197.12 (NAVD 88)
7. BOUNDARY INFORMATION SHOWN REFERENCES DOCUMENTS PROVIDED BY THE DELAWARE COUNTY RECORDER OF DEEDS.
8. TITLE, BOUNDARY AND RIGHT-OF-WAY INFORMATION SHOWN ARE BASED ON AVAILABLE RECORD AND HISTORIC DOCUMENTS AND ARE APPROXIMATE. A BOUNDARY SURVEY WAS NOT COMPLETED AS PART OF THIS SURVEY.
9. THIS PLAN IS NOT INTENDED TO CONSTITUTE A BOUNDARY SURVEY AS IDENTIFIED IN SECTION E - STANDARDS FOR BOUNDARY SURVEYS IN THE "STANDARDS OF PRACTICE FOR PROFESSIONAL LAND SURVEYORS IN THE COMMONWEALTH OF PENNSYLVANIA" AS ADOPTED BY THE PENNSYLVANIA SOCIETY OF LAND SURVEYORS ON NOVEMBER 19, 2021"
10. LOCATIONS OF ON AND OFF-SITE UTILITIES AS SHOWN ARE APPROXIMATE AND MAY OR MAY NOT BE COMPLETE. THE NATURE AND EXACT LOCATION OF EXISTING UTILITIES SHOULD BE VERIFIED PRIOR TO INITIATING ANY ACTIVITY THAT MAY AFFECT THEIR USE OR LOCATION.
11. THE LOCATION OF THE EXISTING UNDERGROUND UTILITIES SHOWN ON THIS PLAN HAVE BEEN TAKEN FROM EXISTING UTILITY RECORDS AVAILABLE AT THE TIME THESE PLANS WERE PREPARED AND FROM SURFACE OBSERVATION OF THE SITE.
12. COMPLETENESS OR ACCURACY OF LOCATION AND DEPTH OF UNDERGROUND UTILITIES AND STRUCTURES IS NOT GUARANTEED.
13. IN ACCORDANCE WITH PA ACT 287 OF 1974 AS AMENDED BY PA ACT 127 OF 2024 ENTITLED "UNDERGROUND UTILITY LINE PROTECTION LAW". THE CONTRACTOR SHALL NOTIFY UTILITIES WITHIN THE WORK AREA VIA THE PENNSYLVANIA ONE CALL SYSTEM, INC. (800-242-1776) A MINIMUM OF 3 WORKING DAYS BEFORE THE START OF EXCAVATION.
14. THE CONTRACTOR SHALL VERIFY LOCATIONS AND DEPTHS OF UNDERGROUND UTILITIES AND STRUCTURES BEFORE THE START OF WORK.

FLOOD ZONE INFORMATION:

1. BY GRAPHIC PLOTTING ONLY, BASED UPON THE FLOOD INSURANCE RATE MAP, PANEL NO. 112 OF 250, COMMUNITY MAP NO. 42045C0112F, WHICH BEARS AN EFFECTIVE DATE OF NOVEMBER 18, 2009, THE SITE IS LOCATED IN THE FOLLOWING ZONE(S):

   ZONE X - AREAS DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOODPLAIN.

   NO FIELD SURVEYING WAS PERFORMED TO DETERMINE THIS ZONE AND AN ELEVATION CERTIFICATE MAY BE NEEDED TO VERIFY THIS DETERMINATION OR TO APPLY FOR A VARIANCE FROM THE FEDERAL EMERGENCY MANAGEMENT AGENCY.

ISSUED FOR BID

DATE: 08/07/2026

Pennoni

PENNONI ASSOCIATES INC.
1900 Market Street, Suite 300
Philadelphia, PA 19103
T 215.222.3000 F 215.222.3588

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LIBRARY BUILDING RENOVATIONS

70 POWELL ROAD
SPRINGFIELD, PA 19064

EXISTING CONDITIONS PLAN

TOWNSHIP OF SPRINGFIELD
50 POWELL ROAD
SPRINGFIELD, PA 19064

BY	REVISIONS	NO.	DATE
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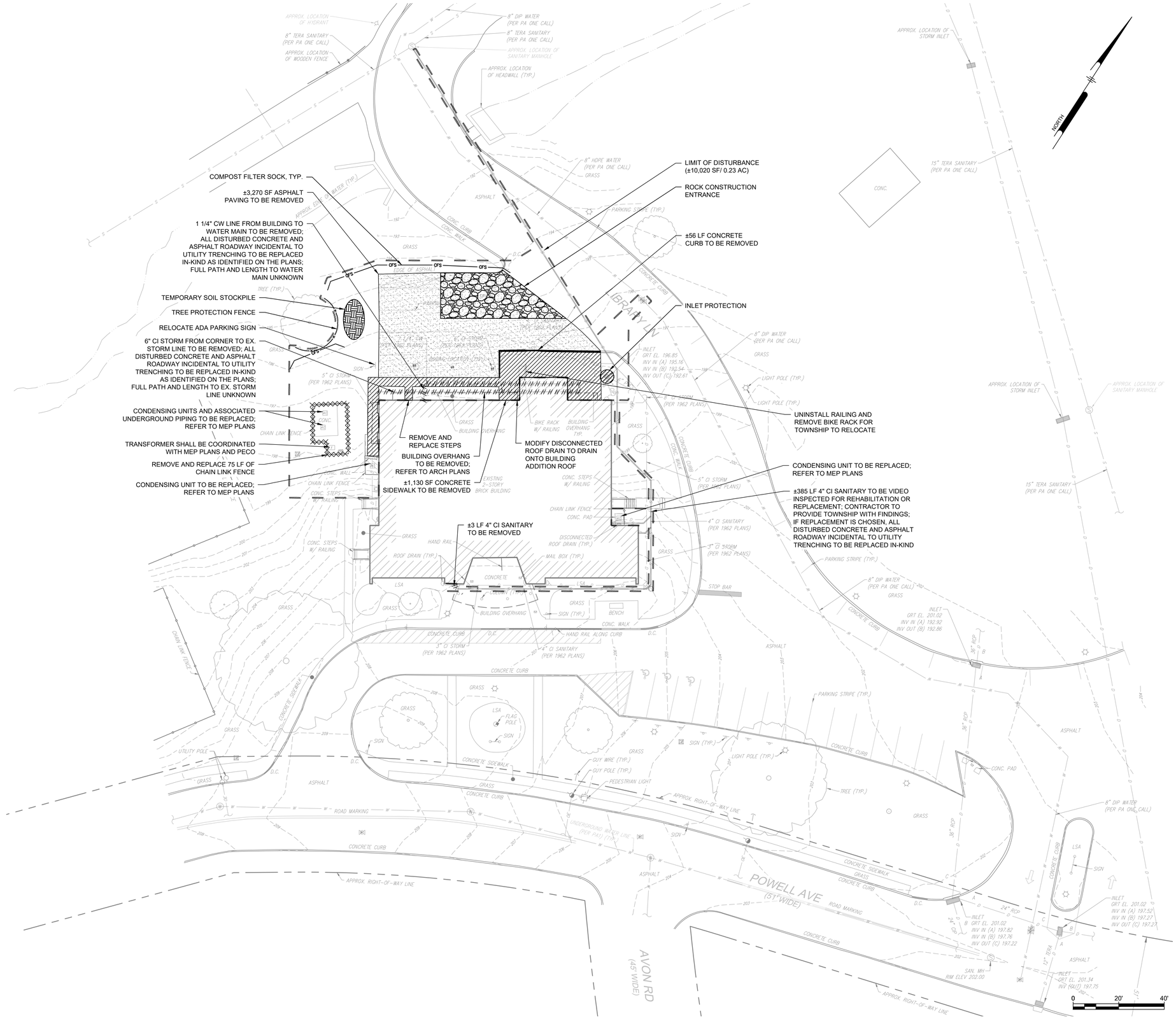
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PROJECT	SPFLD00611
DATE	2026-08-07
DRAWING SCALE	AS NOTED
DRAWN BY	AGS
APPROVED BY	EPJ

CM0201

SHEET 3 OF 11

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EXISTING LEGEND

- BUILDING
- CURB
- CURB DEPRESSION
- EDGE OF PAVEMENT
- EDGE OF GRAVEL
- CONCRETE PAVING
- GRAVEL SURFACE
- PAVERS
- FENCE, COMPOSTIE
- FENCE, WOOD
- FENCE, METAL
- AIR CONDITIONER
- BOLLARD
- POST
- SIGN POST AND BOARD
- SIGN
- UTILITY POLE
- FLAG POLE
- LIGHT
- SPOT LIGHT
- DECIDUOUS TREE
- CONIFEROUS TREE
- LANDSCAPED AREA
- MINOR CONTOUR
- MAJOR CONTOUR
- SANITARY SEWER, UNDERGROUND
- STORM SEWER, UNDERGROUND
- UNIDENTIFIED, OVERHEAD
- APPROX. BURIED GAS LINE
- APPROX. BURIED WATER LINE
- APPROX. BURIED POWER LINES
- MANHOLES
- VALVES
- SANITARY SEWER, CLEAN-OUT
- STORM SEWER, ROOF DRAIN
- STORM SEWER, INLET
- WATER, FIRE HYDRANT
- WATER, STAND PIPE CONNECTION
- UNIDENTIFIED, VENT

DEMOLITION AND E&S LEGEND

- ASPHALT PAVEMENT TO BE REMOVED
- CONCRETE SIDEWALK TO BE REMOVED
- CURB TO BE REMOVED
- UTILITY TO BE REMOVED
- FENCE TO BE REMOVED
- TREE PROTECTION FENCE
- ROCK CONSTRUCTION ENTRANCE
- INLET PROTECTION
- CFS — COMPOST FILTER SOCK
- LIMIT OF DISTURBANCE

ISSUED FOR BID

DATE: 08/07/2026

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LIBRARY BUILDING RENOVATIONS

70 POWELL ROAD
SPRINGFIELD, PA 19064

DEMOLITION AND E&S PLAN

TOWNSHIP OF SPRINGFIELD
50 POWELL ROAD
SPRINGFIELD, PA 19064

BY	REVISIONS	NO.	DATE
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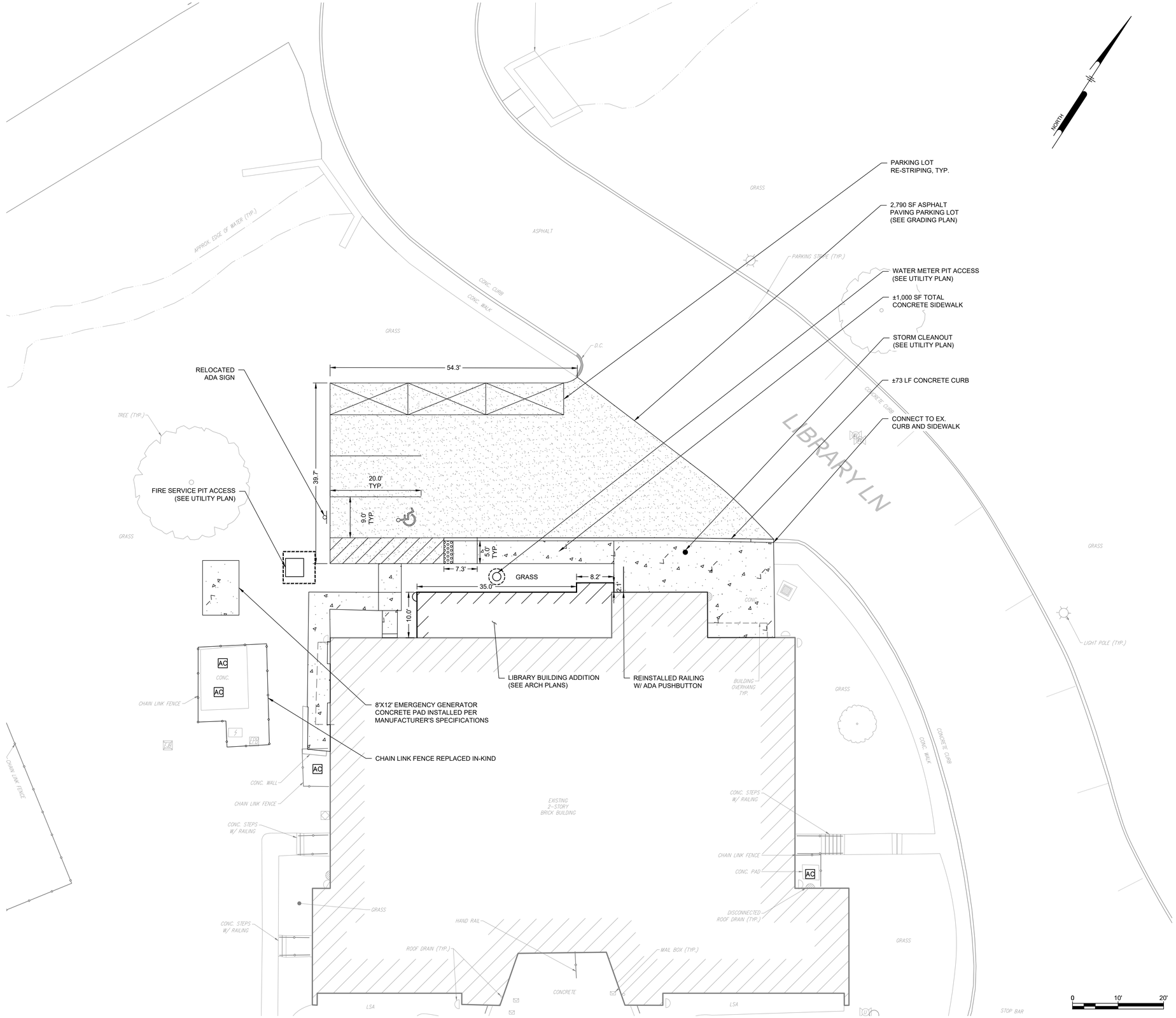
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PROJECT	SPFLD00611
DATE	2026-08-07
DRAWING SCALE	AS NOTED
DRAWN BY	AGS
APPROVED BY	EPJ

CM0501

SHEET 4 OF 11

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EXISTING LEGEND

- BUILDING
- CURB
- CURB DEPRESSION
- EDGE OF PAVEMENT
- EDGE OF GRAVEL
- CONCRETE PAVING
- GRAVEL SURFACE
- PAVERS
- FENCE, COMPOSTIE
- FENCE, WOOD
- FENCE, METAL
- AIR CONDITIONER
- BOLLARD
- POST
- SIGN POST AND BOARD
- SIGN
- UTILITY POLE
- FLAG POLE
- LIGHT
- SPOT LIGHT
- DECIDUOUS TREE
- CONIFEROUS TREE
- LANDSCAPED AREA
- MINOR CONTOUR
- MAJOR CONTOUR
- SANITARY SEWER, UNDERGROUND
- STORM SEWER, UNDERGROUND
- UNIDENTIFIED, OVERHEAD
- APPROX. BURIED GAS LINE
- APPROX. BURIED WATER LINE
- APPROX. BURIED POWER LINES
- MANHOLES
- VALVES
- SANITARY SEWER, CLEAN-OUT
- STORM SEWER, ROOF DRAIN
- STORM SEWER, INLET
- WATER, FIRE HYDRANT
- WATER, STAND PIPE CONNECTION
- UNIDENTIFIED, VENT

SITE PLAN LEGEND

- PROPOSED BUILDING FOOTPRINT
- PROPOSED CONCRETE SIDEWALK
- PROPOSED ASPHALT PARKING LOT
- PROPOSED CURB
- PROPOSED CHAIN LINK FENCE
- PROPOSED DETECTABLE WARNING SURFACE

ISSUED FOR BID

DATE: 08/07/2026

PENNONI ASSOCIATES INC.
1900 Market Street, Suite 300
Philadelphia, PA 19103
T 215.222.3000 F 215.222.3588

ALL DIMENSIONS MUST BE VERIFIED BY CONTRACTOR AND OWNER MUST BE NOTIFIED OF ANY DISCREPANCIES BEFORE PROCEEDING WITH WORK

LIBRARY BUILDING RENOVATIONS

70 POWELL ROAD
SPRINGFIELD, PA 19064

SITE PLAN

TOWNSHIP OF SPRINGFIELD
50 POWELL ROAD
SPRINGFIELD, PA 19064

NO.	DATE	REVISIONS	BY
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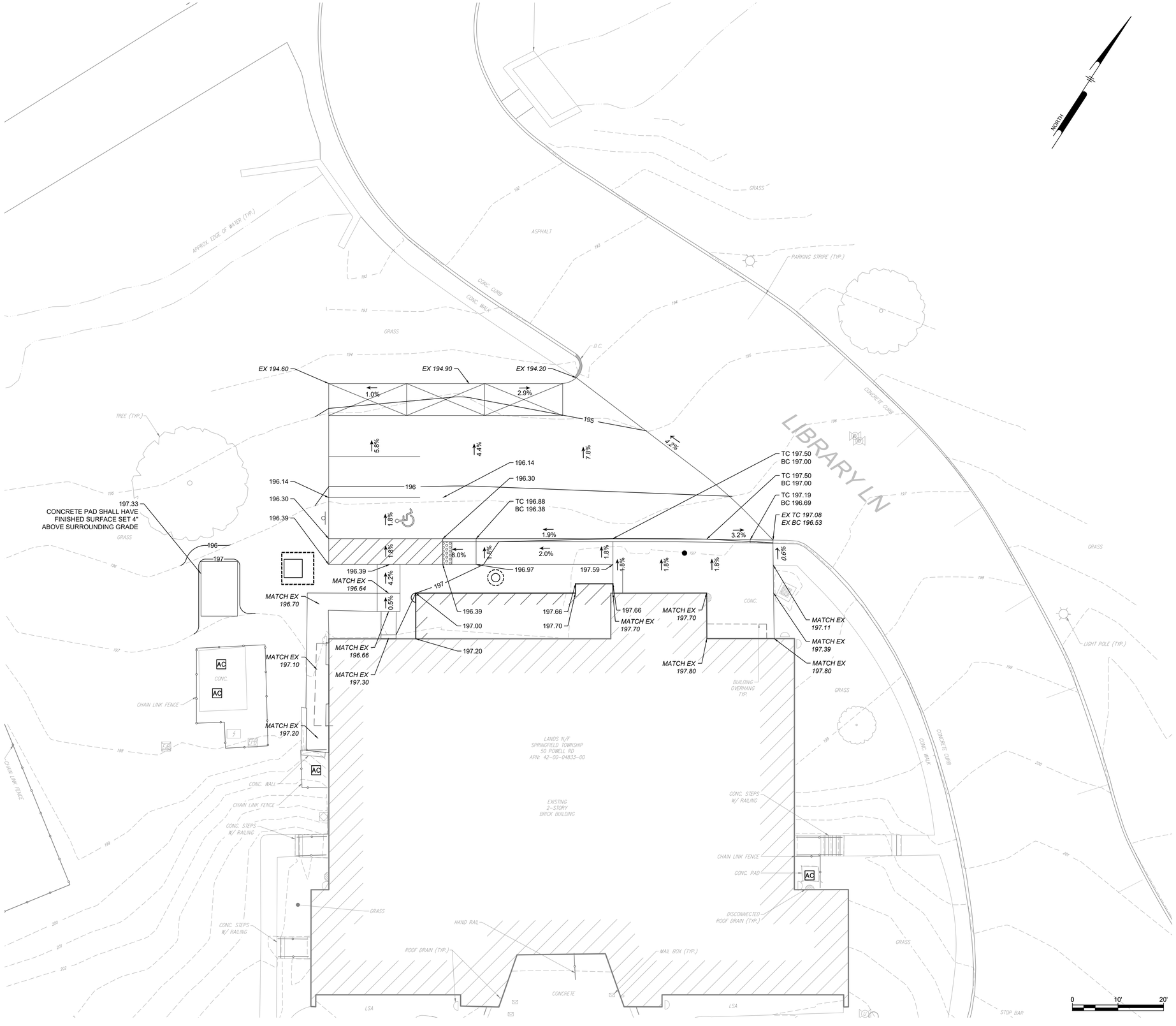
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PROJECT	SPFLD00611
DATE	2026-08-07
DRAWING SCALE	AS NOTED
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APPROVED BY	EPJ

CM1001

SHEET 5 OF 11

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EXISTING LEGEND

- BUILDING
- CURB
- CURB DEPRESSION
- EDGE OF PAVEMENT
- EDGE OF GRAVEL
- CONCRETE PAVING
- GRAVEL SURFACE
- PAVERS
- FENCE, COMPOSTIE
- FENCE, WOOD
- FENCE, METAL
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- APPROX. BURIED POWER LINES
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- VALVES
- SANITARY SEWER, CLEAN-OUT
- STORM SEWER, ROOF DRAIN
- STORM SEWER, INLET
- WATER, FIRE HYDRANT
- WATER, STAND PIPE CONNECTION
- UNIDENTIFIED, VENT

GRADING LEGEND

102.00	PROPOSED GRADE CONTOUR
102.00	PROPOSED SPOT GRADE
EX 102.00	EXISTING SPOT GRADE
1.8%	PROPOSED SLOPE
4.2%	EXISTING SLOPE

ISSUED FOR BID
DATE: 08/07/2026

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1900 Market Street, Suite 300
Philadelphia, PA 19103
T 215.222.3000 F 215.222.3588

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LIBRARY BUILDING RENOVATIONS

70 POWELL ROAD
SPRINGFIELD, PA 19064

GRADING PLAN

TOWNSHIP OF SPRINGFIELD
50 POWELL ROAD
SPRINGFIELD, PA 19064

NO.	DATE	REVISIONS	BY
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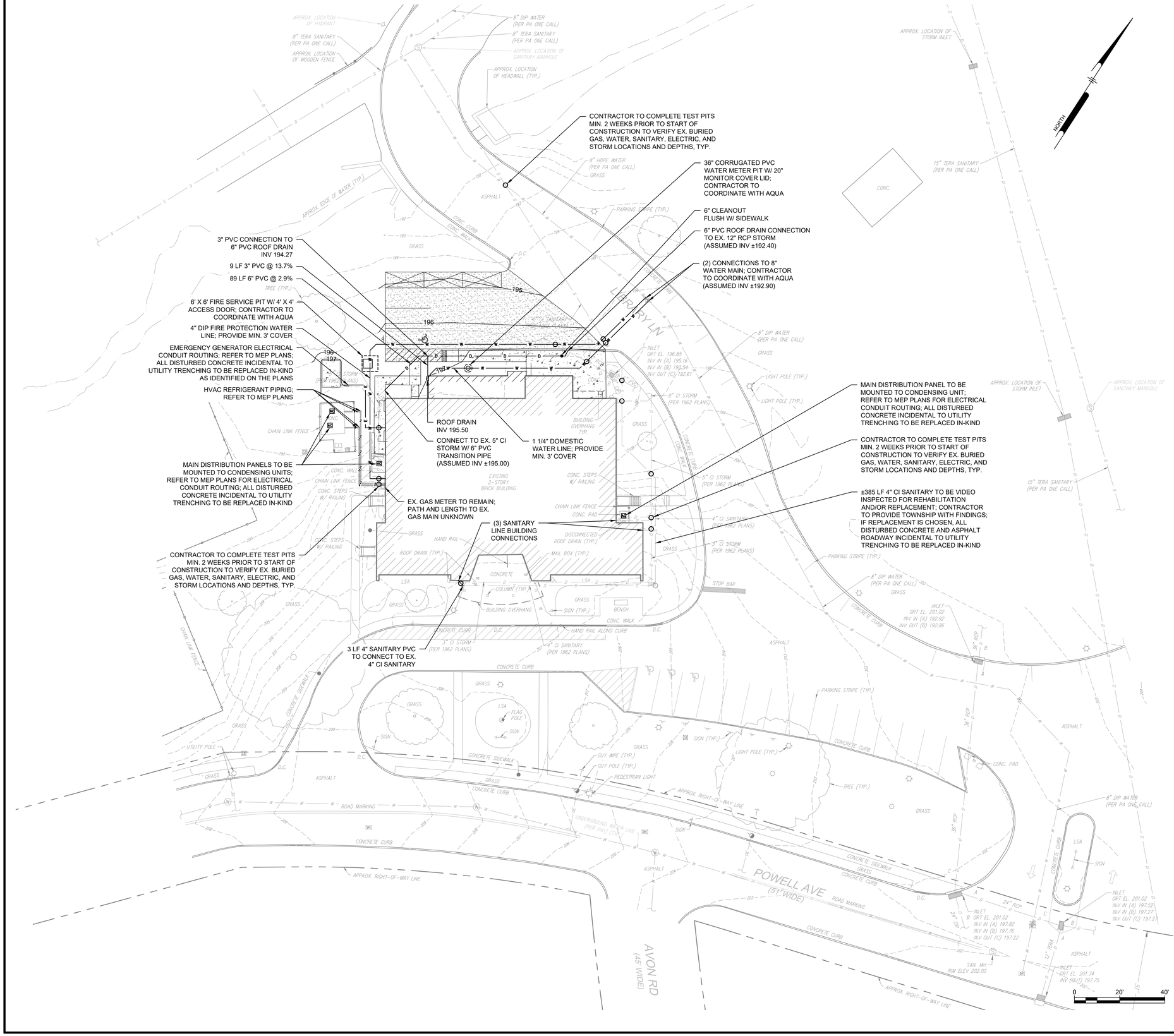
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PROJECT	SPFLD00611
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DRAWN BY	AGS
APPROVED BY	EPJ

CM1501

SHEET 6 OF 11

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EXISTING LEGEND

- BUILDING
- CURB
- CURB DEPRESSION
- EDGE OF PAVEMENT
- EDGE OF GRAVEL
- CONCRETE PAVING
- GRAVEL SURFACE
- PAVERS
- FENCE, COMPOSTIE
- FENCE, WOOD
- FENCE, METAL
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- BOLLARD
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- VALVES
- SANITARY SEWER, CLEAN-OUT
- STORM SEWER, ROOF DRAIN
- STORM SEWER, INLET
- WATER, FIRE HYDRANT
- WATER, STAND PIPE CONNECTION
- UNIDENTIFIED, VENT

UTILITY LEGEND

- PROPOSED STORM ROOF DRAIN PIPE
- PROPOSED WATER PIPE
- PROPOSED REFRIGERANT PIPE
- PROPOSED SANITARY PIPE
- PROPOSED ELECTRICAL LINE

ISSUED FOR BID
DATE: 08/07/2026

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1900 Market Street, Suite 300
Philadelphia, PA 19103
T 215.222.3000 F 215.222.3588

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LIBRARY BUILDING RENOVATIONS
70 POWELL ROAD
SPRINGFIELD, PA 19064

UTILITY PLAN

TOWNSHIP OF SPRINGFIELD
50 POWELL ROAD
SPRINGFIELD, PA 19064

BY	REVISIONS	NO.	DATE
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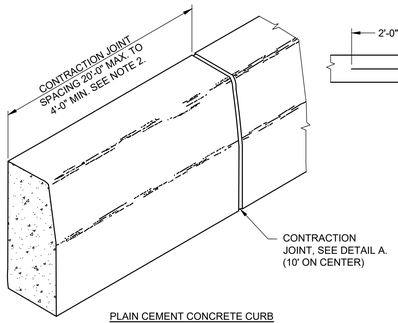
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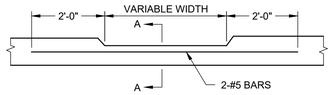
CM1601

SHEET 7 OF 11

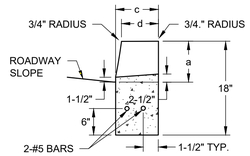
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PLAIN CEMENT CONCRETE CURB

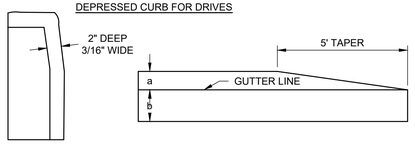


PLAN VIEW



SECTION A-A

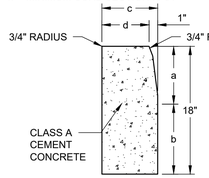
DEPRESSED CURB FOR DRIVES



DETAIL A
CONTRACTION JOINT

NOTES:

1. MATERIALS AND CONSTRUCTION SHALL MEET THE REQUIREMENTS OF PUBLICATION 408, SECTION 630 FOR PLAIN CEMENT CONCRETE CURB AND DEPRESSED CURB, SECTION 640 FOR PLAIN CEMENT CONCRETE CURB.
2. SPACE CONTRACTION JOINTS IN UNIFORM LENGTHS OR SECTIONS, A MINIMUM OF 10' ON CENTER.
3. PLACE 3/4-INCH PREMOLDED EXPANSION JOINT FILLER MATERIAL AT STRUCTURES AND AT THE END OF THE WORK DAY. CUT MATERIAL TO CONFORM TO AREA ADJACENT TO CURB OR TO CONFORM TO CROSS SECTIONAL AREA OF CURB.
4. MINIMUM CURB SECTION IS 5'.



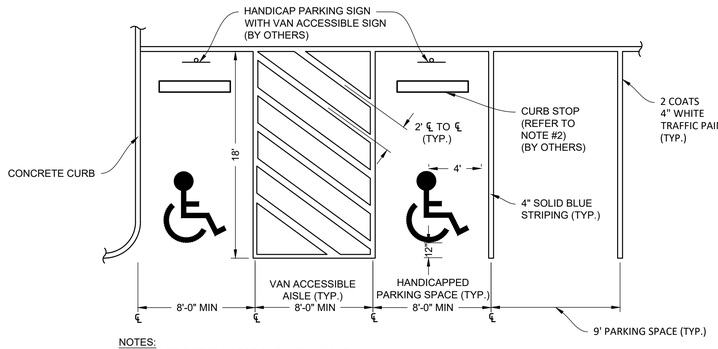
TYPICAL
CROSS SECTION

a	6"
b	12"
c	8"
d	6"

DETAIL - CONCRETE CURB PENNDOT RC-64

N.T.S.

1
CM6001

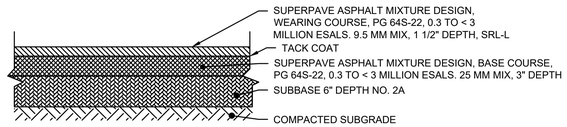


NOTES:
1. REFER TO SITE PLAN FOR PARKING LAYOUT
2. CURB STOPS TO BE 2.5' OFF OF STRIPING (TYP.)
3. REFER TO SITE PLAN FOR NUMBER AND LOCATION OF VAN ACCESSIBLE PARKING SPACES.
4. REFER TO HANDICAPPED PARKING SIGN DETAIL FOR HANDICAPPED PARKING SIGN AND VAN ACCESSIBLE SIGN

HANDICAPPED PARKING STRIPING DETAIL

N.T.S.

2
CM6001

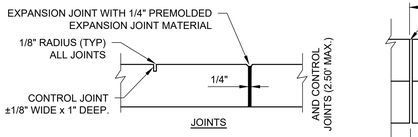


COMMENTS
1. EXPOSED VERTICAL AND HORIZONTAL SURFACES SHALL BE PREPARED AS PER PUB 408, SECT. 409.3(G)
2. MINIMUM 1' PAVEMENT CUTBACK, EXCAVATE OLD AND TEMPORARY MATERIAL. RECOMPACT SUB-GRADE, TACK COAT ALL VERTICAL EDGES. INSTALL ONLY BASE COURSE AND BINDER COURSE IN ONE DAY.
3. PERMANENT RESTORATION TO BE MINIMUM 90 DAYS UNLESS FLOWABLE FILL IS USED.
4. HOT SEAL ALL EDGES W/12" WIDE PG 64S-22

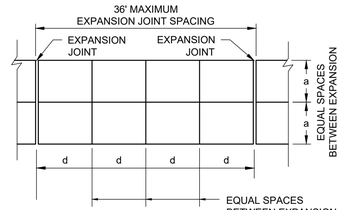
PARKING LOT BITUMINOUS PAVEMENT SECTION

N.T.S.

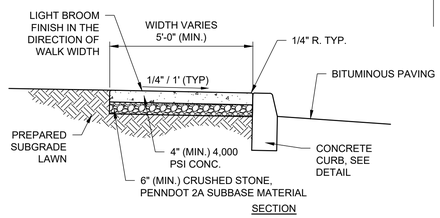
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CM6001



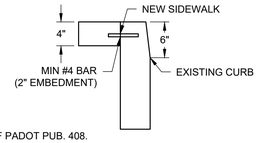
JOINTS



JOINT SPACING



SECTION



SIDEWALK CONSTRUCTION NOTES:

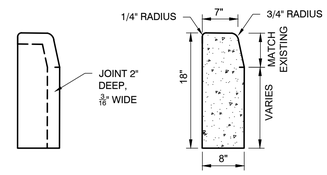
1. PROVIDE MATERIALS AND CONSTRUCTION METHODS MEETING THE REQUIREMENTS OF PADOT PUB. 408.
2. COORDINATE JOINT LOCATIONS TO MATCH EXISTING BLOCKS.
3. THE PRIMARY SURFACE OF THE CONCRETE SIDEWALK SHALL HAVE A BROOM FINISH AND AN AREA TWO (2) INCHES IN WIDTH, PARALLEL TO THE CONTROL JOINTS, SHALL HAVE A SMOOTH-TROWLED FINISH.

DETAIL - CONCRETE SIDEWALK

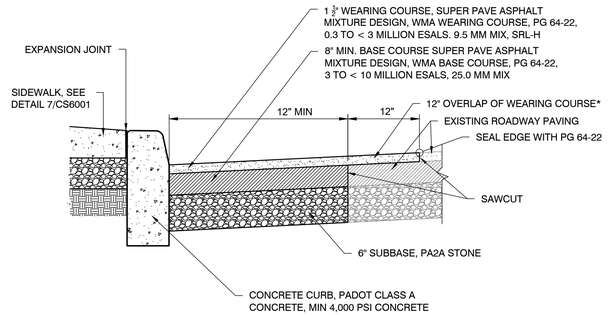
N.T.S.

4
CM6001

CURB NOTES:
1. CURB REVEAL TO MATCH EXISTING UNLESS NOTED OTHERWISE ON GRADING PLAN.
2. PROVIDE CONTRACTION JOINT AT 10' INTERVALS BETWEEN EXPANSION JOINTS.
3. PROVIDE EXPANSION JOINTS BETWEEN CURB SECTIONS AT 50' INTERVALS, AT POINTS OF CURVATURE/TANGENTS, AND WHERE CURB MEETS AN EXISTING OBJECT. JOINT MATERIAL TO BE CUT TO MATCH PROFILE OF CURB.



CONTRACTION JOINT TYPICAL CROSS SECTION



DETAIL - CONCRETE CURB AND ROADWAY RESTORATION

N.T.S.

5
CM6001

ISSUED FOR BID
DATE: 08/07/2026

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Philadelphia, PA 19103
T 215.222.3000 F 215.222.3588

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LIBRARY BUILDING RENOVATIONS
70 POWELL ROAD
SPRINGFIELD, PA 19064

CONSTRUCTION DETAILS

TOWNSHIP OF SPRINGFIELD
50 POWELL ROAD
SPRINGFIELD, PA 19064

NO.	DATE	REVISIONS	BY
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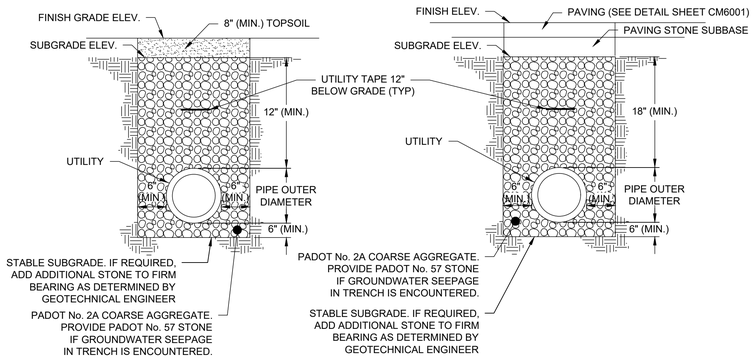
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CM6001

SHEET 8 OF 11

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NOTES:
1. REUSE OF EXCESS TRENCH MATERIALS FOR BACKFILLING SHALL BE APPROVED BY THE FIELD INSPECTOR.
2. RECYCLED CONCRETE, IF PROPOSED FOR BACKFILL, MUST BE APPROVED BY THE FIELD INSPECTOR.

GRASS AREAS

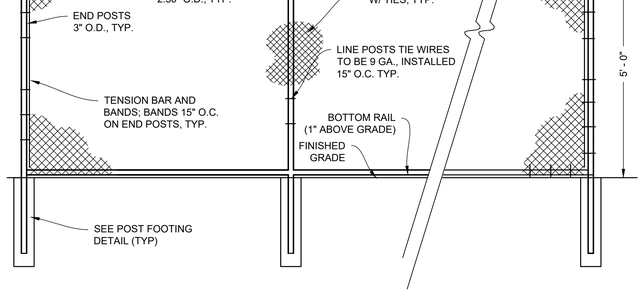
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PAVED AREAS

TYPICAL UTILITY TRENCH

N.T.S.

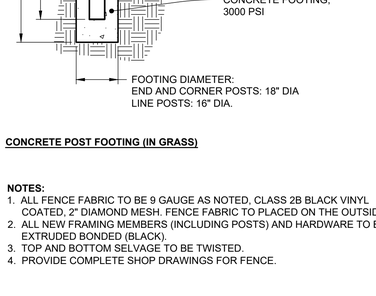
1 / CM6002



DETAIL - CHAIN LINK FENCE

N.T.S.

2 / CM6002



CONCRETE POST FOOTING (IN GRASS)

NOTES:
1. ALL FENCE FABRIC TO BE 9 GAUGE AS NOTED, CLASS 2B BLACK VINYL COATED, 2" DIAMOND MESH. FENCE FABRIC TO PLACED ON THE OUTSIDE
2. ALL NEW FRAMING MEMBERS (INCLUDING POSTS) AND HARDWARE TO BE EXTRUDED BONDED (BLACK).
3. TOP AND BOTTOM SELVAGE TO BE TWISTED.
4. PROVIDE COMPLETE SHOP DRAWINGS FOR FENCE.

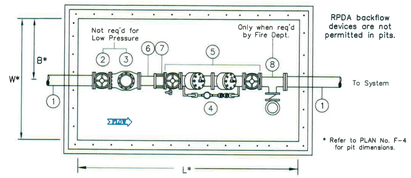
FIRE SERVICE LINES – 4", 6", 8", and 10"

"Closed System" has no fire hydrants

Residential — LOW PRESSURE (up to 100 psi) — HIGH PRESSURE (over 100 psi) See notes below.

Non-Residential — LOW PRESSURE (up to 150 psi) — HIGH PRESSURE (where pressure may exceed 150 psi) See note below.

RPZA for systems with chemical additives (anti-freeze systems)
DCVA for systems with no chemical additives



	ITEM			
1	Line Size (Cement-lined D.I.P.) as approved by Aqua	4"	6"	8"	10"
2	R.S. Gate Valve, O.S.&Y., Flanged	4"	6"	8"	10"
3	Pressure Reducing Valve (PRV)	SIZED BY CUSTOMER			
4	Meter (by Aqua)	5/8 x 3/4"	5/8 x 3/4"	5/8 x 3/4"	5/8 x 3/4"
5	Backflow Device Assembly – DCDA or RPDA	4"	6"	8"	10"
6	Spool Piece, Flg x Flg – Length = 12 in. (min.)	4"	6"	8"	10"
7	Flanged Coupling Adapter	Ford Style FFCA or Smith-Blair Style 913			
8	Tee for FDC, only if req'd by local Fire Dept.	4"	6"	8"	10"
	Branchline sized by local Fire Department if required.	SIZED BY LOCAL FIRE DEPARTMENT			

Notes:

A. It is the CUSTOMER's responsibility to address THERMAL EXPANSION before the installation of a PRV or backflow device. All Fire systems should have a Pressure Relief Valve.

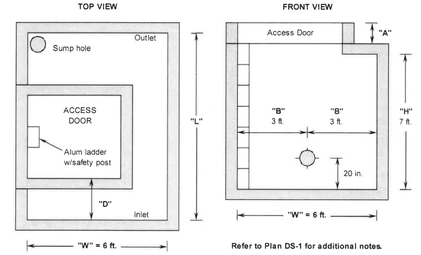
B. Water Company Rules & Regulations require that all of the specifications are met and a meter is set before water service is turned on.

C. It is the CUSTOMER's responsibility to size the pressure reducing valve(s) to fit their flow needs. Two-stage reduction may be needed where there is a wide variation between the initial pressure and the reduced pressure. Parallel installation may be needed where there is a wide variation of reduced pressure requirements, where it is vital to maintain a continuous water supply, or other reasons for improved performance.

D. Each part must be NSF/ANSI 61 (Annex F & G) compliant. Entire unit must be NSF/ANSI 372 compliant.

E. DCDA & RPDA Assemblies must be UL & FM approved.

SINGLE SERVICE PIT DIMENSIONS for FIRE Service



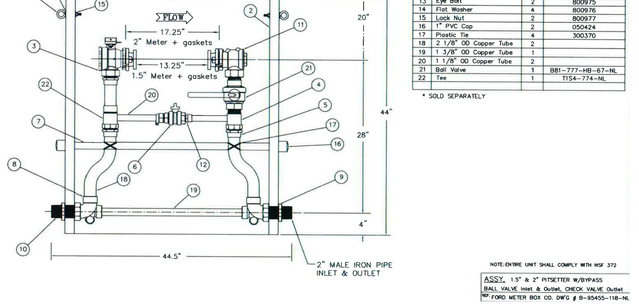
Refer to Plan DS-1 for additional notes.

Dim		Description	"Open System" 6"	8"	10"	"Closed System" 3"	4"	6"	8"	10"
L		Length - Low Pressure (LP)	12'	13'	14'	n/a	6'	7'	7'	8'
L		Length - Low Pressure w/ FDC	13'	14'	16'	n/a	7'	8'	9'	9'
L		Length - High Pressure (HP)	13'	15'	17'	n/a	8'	9'	10'	11'
L		Length - High Pressure w/ FDC	14	16	19'	n/a	9'	11'	12'	13'
W		Width	6 ft.			6 ft.				
H		Height	7 ft.			7 ft.				
B		Centerline of pipe to side wall	3 ft.			3 ft.				
D	*	Front of Door Opening to Inlet Wall - LP	1'	1'	1'	n/a	1'	2'	2'	2'
D	*	Front of Door Opening to Inlet Wall - HP	3'	3'	4'	n/a	2'	3'	3'	3'
		Centerline of pipe to floor	20" min - 24" max			20" min. to 24" max.				
		Backflow allowance (inc.both valves)	49"	53"	56"	n/a	40"	49"	53"	56"
A		Height of raised Access Door	6" min to 12" max			6" min. to 12" max.				
		Access Door Opening	4' x 4'			4' x 4'				

* Assumes inlet flange is 9 in. from inlet wall. Outlet flange must be 9 in. (min.) from outlet wall.

Pit dimensions are indide dimensions.

Pipe restrained with Omni Sleeve in each end of pit wall.



ITEM		DESCRIPTION	QTY.	DWG. or P/N
*	1	Monitor Cover w/Inner lid	1	MC-36-MB-T
	2	36" Corrugated PVC Pit	1	300253
	3	Angle Ball Valve	1	BFA13-777R-MSB-NL
	4	Tee	1	T184-774-NL
	5	Solder Bushing	3	CSB-77-NL
	6	Ball Valve	1	B41-444W-NL
	7	1" PVC Brace bar	1	PS-BB-36
	8	EJI	2	CSTEE-7-S-NL
	9	Lock Nut	2	800977
	10	Nipple	2	A-43908-09-NL
	11	Angle Dual Check Valve	1	HNFA31-777-MSB-NL
	12	Solder Bushing	1	CSB-44-NL
	13	Eye Bolt	2	800975
	14	Flat Washer	4	800976
	15	Lock Nut	2	800977
	16	1" PVC Cap	2	050424
	17	Plastic Tie	4	300370
	18	2 1/8" OD Copper Tube	2	
	19	1 3/8" OD Copper Tube	1	
	20	1 1/8" OD Copper Tube	2	
	21	Ball Valve	1	B81-777-HB-67-NL
	22	Tee	1	T154-774-NL

* SOLD SEPARATELY

NOTE:ENTIRE UNIT SHALL COMPLY WITH NSF 372

ASSY. 1.5" & 2" PITSETTER W/BYPASS
BALL VALVE Inlet & Outlet, CHECK VALVE Outlet
FORD METER BOX CO. DWG # B-95455-118-NL

Each part must be NSF/ANSI 61, Annex F & G compliant.
Entire unit must be NSF/ANSI 372 compliant.

NOTES:
1. CONTRACTOR TO COORDINATE WITH AQUA FOR PROPOSED WATER CONNECTIONS TO EXISTING WATER MAIN AND REQUIRED PIT STRUCTURES.

TYPICAL AQUA WATER METER AND FIRE PITS

N.T.S.

3 / CM6002

ISSUED FOR BID
DATE: 08/07/2026

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Philadelphia, PA 19103
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ALL DIMENSIONS MUST BE VERIFIED BY CONTRACTOR AND OWNER MUST BE NOTIFIED OF ANY DISCREPANCIES BEFORE PROCEEDING WITH WORK

LIBRARY BUILDING RENOVATIONS
70 POWELL ROAD
SPRINGFIELD, PA 19064

CONSTRUCTION DETAILS

TOWNSHIP OF SPRINGFIELD
50 POWELL ROAD
SPRINGFIELD, PA 19064

NO.	DATE	REVISIONS	BY
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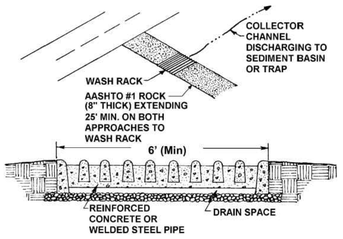
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PROJECT	SPFLD00611
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DRAWING SCALE	AS NOTED
DRAWN BY	AGS
APPROVED BY	EPJ

CM6002

SHEET 9 OF 11

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Modified from Smith Cattleguard Company

Wash rack shall be 20 feet (min.) wide or total width of access.

Wash rack shall be designed and constructed to accommodate anticipated construction vehicular traffic.

A water supply shall be made available to wash the wheels of all vehicles exiting the site.

MAINTENANCE: Rock construction entrance thickness shall be constantly maintained to the specified dimensions by adding rock. A stockpile of rock material shall be maintained on site for this purpose. Drain space under wash rack shall be kept open at all times. Damage to the wash rack shall be repaired prior to further use of the rack. All sediment deposited on roadways shall be removed and returned to the construction site immediately. Washing the roadway or sweeping the deposits into roadway ditches, sewers, culverts, or other drainage courses is not acceptable.

DETAIL- ROCK CONSTRUCTION ENTRANCE WITH WASH RACK — 1 / CM8501

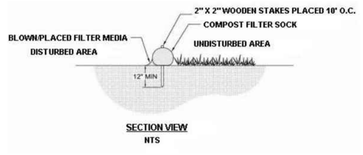
N.T.S.

NOTES:

1. COMPOST FILTER SOCK SHALL BE PLACED AROUND THE PERIMETER OF ALL STOCKPILES.
2. IMMEDIATELY APPLY TEMPORARY SEEDING TO ALL STOCKPILES WHICH WILL REMAIN IN PLACE 20 DAYS OR MORE. IMMEDIATELY APPLY TEMPORARY SEEDING TO ALL STOCKPILES WITH SOILS FOUND OR SUSPECTED TO BE COTAMINATED THAT ARE NOT IMMEDIATELY REMOVED FROM THE SITE. THE SOIL SHALL BE TREATED WITH SEEDING THROUGH THE USE OF HYDROSEEDING TECHNIQUES AND HAY OR STRAW MULCHING. TEMPORARY SEEDING SHALL BE PER PENNDOT FORM 408, SECTION 804(B)
3. PLASTIC LINER TO BE INSTALLED BELOW TEMPORARY TOPSOIL STOCKPILES FOR SOILS FOUND OR SUSPECTED TO BE CONTAMINATED.
4. STOCKPILES SHALL HAVE A TEMPORARY DAILY COVER.

DETAIL- TOPSOIL STOCKPILE — 4 / CM8501

N.T.S.



Filtrexx

Sock fabric shall meet standards of Table 4.1. Compost shall meet the standards of Table 4.2.

Compost filter sock shall be placed at existing level grade. Both ends of the sock shall be extended at least 8 feet up slope at 45 degrees to the main sock alignment (Figure 4.1). Maximum slope length above any sock shall not exceed that shown on Figure 4.2. Stakes may be installed immediately downslope of the sock if so specified by the manufacturer.

Traffic shall not be permitted to cross filter socks.

Accumulated sediment shall be removed when it reaches half the aboveground height of the sock and disposed in the manner described elsewhere in the plan.

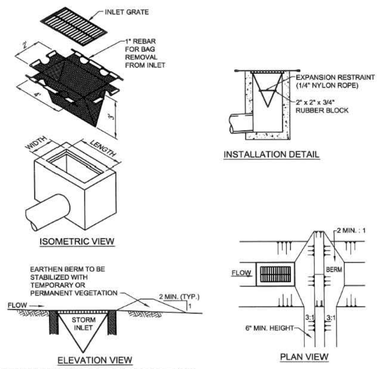
Socks shall be inspected weekly and after each runoff event. Damaged socks shall be repaired according to manufacturer's specifications or replaced within 24 hours of inspection.

Biodegradable filter socks shall be replaced after 6 months; photodegradable socks after 1 year. Polypropylene socks shall be replaced according to manufacturer's recommendations.

Upon stabilization of the area tributary to the sock, stakes shall be removed. The sock may be left in place and vegetated or removed. In the latter case, the mesh shall be cut open and the mulch spread as a soil supplement.

DETAIL- COMPOST FILTER SOCK — 2 / CM8501

N.T.S.



Adapted from PennDOT RC-70, 2008 Edition

Maximum drainage area =½ acre.

Inlet protection shall not be required for inlet tributary to sediment basin or trap. Berms shall be required for all installations.

Rolled earthen berm in roadway shall be maintained until roadway is stoned. Road subbase berm on roadway shall be maintained until roadway is paved. Earthen berm in channel shall be maintained until permanent stabilization is completed or remain permanently.

At a minimum, the fabric shall have a minimum grab tensile strength of 120 lbs., a minimum burst 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. Dispose accumulated sediment as well as all used bags according to the plan notes.

DO NOT USE ON MAJOR PAVED ROADWAYS WHERE PONDING MAY CAUSE TRAFFIC HAZARDS.

DETAIL- INLET PROTECTION - TYPE M INLET — 3 / CM8501

N.T.S.

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DATE: 08/07/2026

PENNONI ASSOCIATES INC.
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ALL DIMENSIONS MUST BE VERIFIED BY CONTRACTOR AND OWNER MUST BE NOTIFIED OF ANY DISCREPANCIES BEFORE PROCEEDING WITH WORK

LIBRARY BUILDING RENOVATIONS
70 POWELL ROAD
SPRINGFIELD, PA 19064

EROSION AND SEDIMENTATION CONTROL DETAILS

TOWNSHIP OF SPRINGFIELD
50 POWELL ROAD
SPRINGFIELD, PA 19064

BY	REVISIONS	NO.	DATE
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PROJECT	SPFLD00611
DATE	2026-08-07
DRAWING SCALE	AS NOTED
DRAWN BY	AGS
APPROVED BY	EPJ

CM8501

SHEET 10 OF 11

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TEMPORARY AND PERMANENT SEEDING SPECIFICATIONS :

SPECIFICATIONS: THE DEPARTMENT RECOMMENDS THE USE OF THE PENN STATE AGRONOMY GUIDE AS THE STANDARD TO USE FOR SELECTION OF SPECIES, SEED SPECIFICATIONS, MIXTURES, LIMING AND FERTILIZING, TIME OF SEEDING, AND SEEDING METHODS. SPECIFICATIONS FOR THESE ITEMS MAY ALSO BE OBTAINED FROM PENNDOT'S PUBLICATION #408, SECTION 80 OR BY CONTACTING THE TOWNSHIP ENGINEER. UPON SELECTION OF A REFERENCE, THAT REFERENCE MUST BE USED TO PROVIDE ALL SPECIFICATIONS FOR SEEDING, MULCHING, AND SOIL AMENDMENTS. THE FOLLOWING SPECIFICATION WILL BE USED FOR THIS PROJECT:

(TEMPORARY)	SEED MIX:	PENNDOT FORMULA E
	% PURE LIVE SEED:	98%
	APPLICATION RATE:	10 LBS/1000 SY
	FERTILIZER TYPE:	10-10-10
	FERTILIZER APP. RATE:	500 LBS/ACRE
	LIMING RATE:	1 TON/ACRE
	MULCH TYPE:	HAY OR STRAW
	MULCHING RATE:	3 TONS/ACRE
	ADDITIONAL SEEDING:	0.5LB/1000 SY INOCULATED RED/WHITE CLOVER MIX
(PERMANENT FLATTER THAN 3:1 SLOPE)	SEED MIX:	PENNDOT FORMULA B
	% PURE LIVE SEED:	98%
	APPLICATION RATE:	21 LBS/1000 SY
	FERTILIZER TYPE:	10-20-20
	FERTILIZER APP. RATE:	1000 LBS/ACRE
	LIMING RATE:	6 TONS/ACRE
	MULCH TYPE:	HAY OR STRAW
	MULCHING RATE:	3 TONS/ACRE
	ADDITIONAL SEEDING:	0.5 LB/1000 SY INOCULATED RED/WHITE CLOVER MIX
(PERMANENT 3:1 SLOPE OR STEEPER)	SEED MIX:	PENNDOT FORMULA D
	% PURE LIVE SEED:	98%
	APPLICATION RATE:	9 LBS/1000 SY
	FERTILIZER TYPE:	10-20-20
	FERTILIZER APP. RATE:	1000 LBS/ACRE
	LIMING RATE:	6 TONS/ACRE
	ANCHOR MATERIAL:	FLEXTERRA FLEXIBLE GROWTH MEDIUM (OR APPROVED EQUAL)
	ANCHOR METHOD:	HYDRAULICALLY
	RATE OF ANCHOR MATERIAL:	PER MATERIAL SUPPLIER

TEMPORARY SEEDING SITE PREPARATION :

TEMPORARY STABILIZATION OF ALL EXPOSED EARTH SURFACES WHERE CONSTRUCTION ACTIVITY HAS CEASED, SHALL BE STABILIZED IMMEDIATELY BY THE FOLLOWING METHODS AND MATERIALS.

1. APPLY ONE (1) TON OF AGRICULTURAL GRADE LIMESTONE PER ACRE PLUS FERTILIZER (10-10-10) AT THE RATE OF 1000 LBS PER ACRE AND WORK INTO SOIL WHEREVER POSSIBLE.
2. APPLY 100% ANNUAL RYEGRASS SEED AT A RATE OF 4 OR 5 LBS PER 1000 SQUARE FEET.
3. AFTER SEEDING MULCH WITH HAY OR STRAW AT A RATE OF THREE (3) TONS PER ACRE.

SEQUENCE OF CONSTRUCTION:

1. PRIOR TO ANY EARTH DISTURBANCE, THE CONTRACTOR MUST CALL SPRINGFIELD TOWNSHIP AND THE TOWNSHIP ENGINEER TO SCHEDULE A PRECONSTRUCTION MEETING. ALL EARTH DISTURBANCE ACTIVITIES SHALL PROCEED IN ACCORDANCE WITH THE FOLLOWING SEQUENCE.
2. A COPY OF THE EROSION AND SEDIMENT CONTROL PLAN MUST BE KEPT ON SITE AND AVAILABLE FOR REVIEW AT ALL TIMES.
3. THE OPERATOR SHALL ASSURE THAT AN EROSION AND SEDIMENT CONTROL PLAN HAS BEEN PREPARED, APPROVED BY THE APPROPRIATE AGENCIES, AND IS BEING IMPLEMENTED AND MAINTAINED FOR ALL SOIL AND/OR ROCK SPOIL AND BORROW AREAS, REGARDLESS OF THEIR LOCATIONS.
4. DISTURBANCE OF THE PROJECT SITE SHALL BE KEPT TO THE ABSOLUTE MINIMUM.
5. PRIOR TO PROCEEDING WITH CONSTRUCTION, CONFIRM LOCATION AND ELEVATION OF EXISTING UTILITIES. AS SHOWN ON THE PLANS, CONTRACTOR TO PERFORM TEST PITS MIN. 2 WEEKS PRIOR TO START OF CONSTRUCTION TO VERIFY EXISTING BURIED GAS, WATER, SANITARY, ELECTRIC, AND STORM LOCATIONS AND DEPTHS. MAINTAIN AND PROTECT EXISTING UTILITIES TO REMAIN.
6. EXISTING PEDESTRIAN TRAFFIC SHALL BE MAINTAINED OR PROPERLY DIRECTED AROUND THE SITE THROUGHOUT THE DURATION OF THE PROJECT.
7. THE CONTRACTOR SHALL INSTALL A ROCK CONSTRUCTION ENTRANCE WITH WASH RACK AT THE SITE ENTRANCE AS SHOWN ON THE PLANS AND PROVIDE GATED ACCESS.
8. INSTALL COMPOST FILTER SOCK AND INLET PROTECTION AS SHOWN ON THE PLAN. MAINTAIN AFTER EVERY STORM EVENT AND REPAIR AS NEEDED.
9. STRIP ALL TOP-SOIL FROM AREAS TO BE GRADED AND PLACE IN SOIL STOCKPILE AS SHOWN ON PLAN.
10. INSTALL INLET PROTECTION ON EXISTING INLET SPECIFIED ON THE PLANS.
11. BEGIN EARTH MOVING ACTIVITIES WITH TEMPORARY GRADING FOR THE STOCKPILE.
12. INSTALL PROPOSED STORM SEWER PIPES FROM THE PROPOSED STORM MANHOLE TO THE ROOF DRAIN CONNECTIONS.
13. INSTALL ROOF DRAIN STORMWATER PIPING FROM ROOF DRAIN CONNECTION TO PROPOSED LIBRARY BUILDING ROOF LEADER. COORDINATE WITH THE ARCH PLANS.
14. INSTALL NEW DOMESTIC AND FIRE WATER LINES AND ASSOCIATED PIT STRUCTURES FROM WATER MAIN CONNECTIONS TO LIBRARY BUILDING CONNECTIONS. CONTRACTOR TO COORDINATE WITH AQUA. ALL DISTURBED CONCRETE AND ROADWAY ASPHALT INCIDENTAL TO UTILITY TRENCHING SHALL BE REPLACED IN-KIND.
15. IF DEEMED NECESSARY BY TOWNSHIP AFTER SANITARY VIDEO INSPECTION FINDINGS:
    - 15.1. SPRAY REPAIR INSIDE SECTION(S) OF SANITARY PIPE(S) REQUIRING REHABILITATION, IF ANY;
    - 15.2. INSTALL REPLACEMENT SANITARY LINE(S) FROM EXISTING SANITARY MANHOLE CONNECTION TO LIBRARY BUILDING CONNECTIONS. ALL DISTURBED CONCRETE AND ROADWAY ASPHALT INCIDENTAL TO UTILITY TRENCHING SHALL BE REPLACED IN-KIND.
16. INSTALL HVAC REFRIGERANT LINES AND ELECTRICAL CONDUIT LINES AS SHOWN ON THE PLANS. COORDINATE WITH THE MEP PLANS. ALL DISTURBED CONCRETE AND ROADWAY ASPHALT INCIDENTAL TO UTILITY TRENCHING SHALL BE REPLACED IN-KIND.
17. FINAL GRADING FOR PARKING LOT AND CURB/SIDEWALK INSTALLATION.
18. ANY DISTURBED AREA ON WHICH ACTIVITY HAS CEASED MUST BE SEEDED AND MULCHED IMMEDIATELY OR HYDROSEEDED. DURING NON-GERMINATING PERIODS, MULCH MUST BE APPLIED AT THE RECOMMENDED RATES. DISTURBED AREAS WHICH ARE NOT AT FINISHED GRADE AND WHICH WILL BE RE-DISTURBED WITHIN ONE (1) YEAR MAY BE SEEDED AND MULCHED WITH A QUICK GROWING TEMPORARY SEEDING
19. UPON COMPLETION OF EARTH MOVING ACTIVITIES AND STABILIZATION (STABILIZATION REQUIRES VEGETATED AREAS TO HAVE A MINIMUM UNIFORM 70% PERENNIAL VEGETATIVE COVER OVER THE ENTIRE DISTURBED AREA) OF THE DISTURBED AREA TRIBUTARY TO EACH TEMPORARY BMP), REMOVE ALL EROSION CONTROL MEASURES AND DISPOSE IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS.

GENERAL NOTES:

1. STOCKPILE HEIGHTS MUST NOT EXCEED 35 FEET. STOCKPILE SLOPES MUST BE 2:1 OR FLATTER.
2. THE OPERATOR SHALL ASSURE THAT THE APPROVED EROSION AND SEDIMENT CONTROL PLAN IS PROPERLY AND COMPLETELY IMPLEMENTED.
3. UNTIL THE SITE ACHIEVES FINAL STABILIZATION, THE OPERATOR SHALL ASSURE THAT THE BEST MANAGEMENT PRACTICES ARE IMPLEMENTED, OPERATED, AND MAINTAINED PROPERLY AND COMPLETELY. MAINTENANCE SHALL INCLUDE INSPECTIONS OF ALL BEST MANAGEMENT PRACTICE FACILITIES. THE OPERATOR SHALL MAINTAIN AND MAKE AVAILABLE TO THE TOWNSHIP ENGINEER COMPLETE, WRITTEN INSPECTION LOGS OF ALL THOSE INSPECTIONS. ALL MAINTENANCE WORK, INCLUDING CLEANING, REPAIR, REPLACEMENT, REGRADING, AND RESTABILIZATION SHALL BE PERFORMED IMMEDIATELY.
4. IMMEDIATELY UPON DISCOVERING UNFORESEEN CIRCUMSTANCES POSING THE POTENTIAL FOR ACCELERATED EROSION AND/OR SEDIMENT POLLUTION, THE OPERATOR SHALL IMPLEMENT APPROPRIATE BEST MANAGEMENT PRACTICES TO ELIMINATE POTENTIAL FOR ACCELERATED EROSION AND/OR SEDIMENT POLLUTION.
5. BEFORE INITIATING ANY REVISIONS TO THE APPROVED EROSION AND SEDIMENT CONTROL PLAN OR REVISIONS TO OTHER PLANS WHICH MAY AFFECT THE EFFECTIVENESS OF THE APPROVED E&S CONTROL PLAN, THE OPERATOR MUST RECEIVE APPROVAL OF THE REVISIONS FROM THE TOWNSHIP ENGINEER.
6. THE OPERATOR SHALL ASSURE THAT AN EROSION AND SEDIMENT CONTROL PLAN HAS BEEN PREPARED, AND IS BEING IMPLEMENTED AND MAINTAINED FOR ALL SOIL AND/OR ROCK SPOIL AND BORROW AREAS, REGARDLESS OF THEIR LOCATIONS.
7. ALL PUMPING OF SEDIMENT LADEN WATER SHALL BE THROUGH A SEDIMENT CONTROL BMP, SUCH AS A PUMPED WATER FILTER BAG DISCHARGING OVER NON-DISTURBED AREAS.
8. THE OPERATOR IS ADVISED TO BECOME THOROUGHLY FAMILIAR WITH THE PROVISIONS OF THE APPENDIX 64, EROSION CONTROL RULES AND REGULATIONS, TITLE 25, PART 1, DEPARTMENT OF ENVIRONMENTAL PROTECTION, SUBPART C, PROTECTION OF NATURAL RESOURCES, ARTICLE III, WATER RESOURCES, CHAPTER 102, EROSION CONTROL.
9. A COPY OF THE APPROVED EROSION AND SEDIMENT CONTROL PLAN MUST BE AVAILABLE AT THE PROJECT SITE AT ALL TIMES.
10. THE E&S CONTROL PLAN MAPPING MUST DISPLAY A PA ONE CALL SYSTEM INCORPORATED SYMBOL INCLUDING THE SITE IDENTIFICATION NUMBER. (THIS IS A NUMBERED SYMBOL NOT A NOTE.)
11. EROSION AND SEDIMENT BMP'S MUST BE CONSTRUCTED, STABILIZED, AND FUNCTIONAL BEFORE SITE DISTURBANCE BEGINS WITHIN THE TRIBUTARY AREAS OF THOSE BMP'S.
12. AFTER FINAL SITE STABILIZATION HAS BEEN ACHIEVED, TEMPORARY EROSION AND SEDIMENT BMP CONTROLS MUST BE REMOVED. AREAS DISTURBED DURING REMOVAL OF THE BMP'S MUST BE STABILIZED IMMEDIATELY.
13. AT LEAST 7 DAYS BEFORE STARTING ANY EARTH DISTURBANCE ACTIVITIES, THE OPERATOR SHALL INVITE ALL CONTRACTORS INVOLVED IN THOSE ACTIVITIES, THE LANDOWNER, ALL APPROPRIATE MUNICIPAL OFFICIALS AND THE EROSION AND SEDIMENT CONTROL PLAN PREPARER TO AN ON-SITE MEETING. ALSO, AT LEAST 3 DAYS BEFORE STARTING ANY EARTH DISTURBANCE ACTIVITIES, ALL CONTRACTORS INVOLVED IN THOSE ACTIVITIES SHALL NOTIFY THE PENNSYLVANIA ONE CALL SYSTEM INCORPORATED AT 1-800-242-1776 FOR BURIED UTILITIES LOCATIONS.
14. ALL EARTH DISTURBANCE ACTIVITIES SHALL PROCEED IN ACCORDANCE WITH THE SEQUENCE OF CONSTRUCTION. EACH STAGE SHALL BE COMPLETED BEFORE ANY FOLLOWING STAGE IS INITIATED. CLEARING AND GRUBBING SHALL BE LIMITED ONLY TO THOSE AREAS DESCRIBED IN EACH STAGE.
15. IMMEDIATELY AFTER EARTH DISTURBANCE ACTIVITIES CEASE, THE OPERATOR SHALL STABILIZE ANY AREAS DISTURBED BY THE ACTIVITIES. DURING NON-GERMINATING PERIODS, MULCH MUST BE APPLIED AT THE SPECIFIED RATES. DISTURBED AREAS WHICH ARE NOT AT FINISHED GRADE AND WHICH WILL BE REDISTURBED WITHIN 1 YEAR MUST BE STABILIZED IN ACCORDANCE WITH THE PERMANENT VEGETATIVE STABILIZATION SPECIFICATIONS.
16. AN AREA SHALL BE CONSIDERED TO HAVE ACHIEVED FINAL STABILIZATION WHEN IT HAS A MINIMUM UNIFORM 70% PERENNIAL VEGETATIVE COVER OR OTHER PERMANENT NON-VEGETATIVE COVER WITH A DENSITY SUFFICIENT TO RESIST ACCELERATED SURFACE EROSION AND SUBSURFACE CHARACTERISTICS SUFFICIENT TO RESIST SLIDING AND OTHER MOVEMENTS.

TEMPORARY STABILIZATION & PERMANENT STABILIZATION

17. HAY OR STRAW MULCH MUST BE APPLIED AT 3.0 TONS PER ACRE.
18. MULCH WITH MULCH CONTROL NETTING OR EROSION CONTROL BLANKETS MUST BE INSTALLED ON ALL SLOPES 3:1 AND STEEPER.
19. STRAW MULCH SHALL BE APPLIED IN LONG STRANDS, NOT CHOPPED OR FINELY BROKEN.
20. UNTIL THE SITE IS STABILIZED, ALL EROSION AND SEDIMENT BMP'S MUST BE MAINTAINED PROPERLY. MAINTENANCE MUST INCLUDE INSPECTIONS OF ALL EROSION AND SEDIMENT CONTROL BMPS AFTER EACH RUNOFF EVENT AND ON A WEEKLY BASIS. ALL PREVENTATIVE AND REMEDIAL MAINTENANCE WORK, INCLUDING CLEAN OUT, REPAIR, REPLACEMENT, REGARDING, RESEEDING, REMULCHING, AND RENETTING, MUST BE PERFORMED IMMEDIATELY, IF EROSION AND SEDIMENT CONTROL BMPS FAIL TO PERFORM AS EXPECTED, REPLACEMENT BMPS, OR MODIFICATIONS OF THOSE INSTALLED WILL BE REQUIRED.
21. SEDIMENT REMOVED FROM BMPS SHALL BE DISPOSED OF IN LANDSCAPED AREAS OUTSIDE OF STEEP SLOPES, WETLANDS, FLOODPLAINS OR DRAINAGE SWALES AND IMMEDIATELY STABILIZED, OR PLACED IN TOPSOIL STOCKPILES.
22. THE OPERATOR SHALL REMOVE FROM THE SITE, RECYCLE, OR DISPOSE OF ALL BUILDING MATERIALS AND WASTE IN ACCORDANCE WITH THE DEPARTMENT'S SOLID WASTE MANAGEMENT REGULATIONS AT 25 PA. CODE 260.1 ET SEQ., 271.1 ET DEQ., AND 287.1 ET SEQ. THE CONTRACTOR SHALL NOT ILLEGALLY BURY, DUMP, OR DISCHARGE ANY BUILDING MATERIAL OR WASTES AT THE SITE.

MAINTENANCE :

1. UNTIL THE SITE IS STABILIZED, ALL EROSION AND SEDIMENTATION BMP'S MUST BE MAINTAINED PROPERLY. MAINTENANCE MUST INCLUDE INSPECTIONS OF ALL EROSION AND SEDIMENTATION BMP'S BEFORE AND AFTER EACH RUNOFF EVENT AND ON A WEEKLY BASIS. ALL SITE INSPECTIONS WILL BE DOCUMENTED IN AN INSPECTION LOG KEPT FOR THIS PURPOSE, INCLUDING THE COMPLIANCE ACTIONS AND THE DATE, TIME AND NAME OF THE PERSON CONDUCTING THE INSPECTION. THE INSPECTION LOG WILL BE KEPT ON SITE AT ALL TIMES AND MADE AVAILABLE TO MARPLE TOWNSHIP UPON REQUEST
2. ALL PREVENTATIVE AND REMEDIAL MAINTENANCE WORK, INCLUDING CLEAN OUT, REPAIR, REPLACEMENT, REGRADING, REMULCHING AND RENETTING, MUST BE PERFORMED IMMEDIATELY. IF EROSION AND SEDIMENTATION BMP'S FAIL TO PERFORM AS EXPECTED, REPLACEMENT BMP'S OR MODIFICATIONS OF THOSE INSTALLED WILL BE NEEDED
3. SEEDED AREAS THAT HAVE WASHED AWAY SHALL BE FILLED AND GRADED, AS NECESSARY, AND THEN RESEEDED. A STRAW COVER SHALL BE APPLIED TO RETAIN THE SEED ALONG WITH AN ANCHORING METHOD DESCRIBED ON THE ATTACHED MULCH ANCHORING GUIDE, UNTIL IT HAS A CHANCE TO ROOT PROPERLY.
4. WHERE BMP'S ARE FOUND TO FAIL TO ALLEVIATE EROSION OR SEDIMENT POLLUTION THE PERMITTEE OR CO-PERMITTEE SHALL INCLUDE THE FOLLOWING INFORMATION.
    - 4.1. THE LOCATION AND SEVERITY OF THE BMPS FAILURE AND ANY POLLUTION EVENTS.
    - 4.2. ALL STEPS TAKEN TO, REDUCE, ELIMINATE AND PREVENT THE RECURRENCE OF THE NON-COMPLIANCE.
    - 4.3. THE TIME FRAME TO CORRECT THE NON-COMPLIANCE, INCLUDING THE EXACT DATES WHEN THE ACTIVITY WILL RETURN TO COMPLIANCE.
5. AFTER FINAL SITE STABILIZATION HAS BEEN ACHIEVED, TEMPORARY EROSION AND SEDIMENT BMP'S MUST BE REMOVED. AREAS DISTURBED DURING REMOVAL OF THE BMP'S MUST BE STABILIZED IMMEDIATELY.
6. BEFORE INITIATING ANY REVISION TO THE APPROVED EROSION AND SEDIMENT CONTROL PLAN OR REVISIONS TO OTHER PLANS WHICH MAY EFFECT THE EFFECTIVENESS OF THE APPROVED E & S CONTROL PLAN, THE OPERATOR MUST RECEIVE APPROVAL OF THE REVISIONS FROM THE PA DEP. THE OPERATOR SHALL ASSURE THAT THE APPROVED EROSION AND SEDIMENT CONTROL PLAN IS PROPERLY AND COMPLETELY IMPLEMENTED. IMMEDIATELY UPON DISCOVERING UNFORESEEN CIRCUMSTANCES POSING THE POTENTIAL FOR ACCELERATED EROSION AND/OR SEDIMENT POLLUTION, THE OPERATOR SHALL IMPLEMENT APPROPRIATE BEST MANAGEMENT PRACTICES TO ELIMINATE POTENTIAL FOR ACCELERATED EROSION AND/OR SEDIMENT POLLUTION.
7. ALL PUMPING OF SEDIMENT LADEN WATER OR POTENTIALLY SEDIMENT LADEN WATER SHALL BE THROUGH A SEDIMENT CONTROL BMP, AND FILTRATION SYSTEM, SUCH AS A TIGG FILTRATION SYSTEM - CANSORB CP-2000 AND DISCHARGED OVER NON-DISTURBED AREAS.
8. IF CONTAMINATED SOILS ARE ENCOUNTERED DURING CONSTRUCTION, CONTACT OWNER.
9. DURING THE LIFE OF THE PROJECT, ALL EROSION AND SEDIMENTATION CONTROL DEVICES MUST BE PROPERLY MAINTAINED. MAINTENANCE SHALL INCLUDE THE INSPECTION OF EROSION CONTROL FACILITIES AFTER EACH STORM EVENT AND ON A WEEKLY BASIS. IMMEDIATELY PERFORM CLEANOUT, REPAIR AND REPLACEMENT OF THE FACILITIES AS NEEDED. (REGRADE, RESEED AND MULCH WASHED OUT AREAS AS THEY OCCUR).
10. SEEDED AREAS THAT HAVE WASHED AWAY SHALL BE FILLED AND GRADED, AS NECESSARY, AND THEN RESEEDED. A STRAW COVER SHALL BE APPLIED TO RETAIN THE SEED ALONG WITH AN ANCHORING METHOD DESCRIBED ON THE ATTACHED MULCH ANCHORING GUIDE, UNTIL IT HAS A CHANCE TO ROOT PROPERLY.

CLEAN FILL & ENVIRONMENTAL DUE DILIGENCE NOTE :

IF THE SITE WILL NEED TO IMPORT OR EXPORT MATERIAL FROM THE SITE, THE RESPONSIBILITY FOR PERFORMING ENVIRONMENTAL DUE DILIGENCE AND DETERMINATION OF CLEAN FILL WILL REST WITH THE CONTRACTOR.

CLEAN FILL IS DEFINED AS: UNCONTAMINATED, NON-WATER SOLUBLE, NON-DECOMPOSABLE, INERT, SOLID MATERIAL. THE TERM INCLUDES SOIL, ROCK, STONE, DREDGED MATERIAL, USED ASPHALT, AND BRICK, BLOCK OR CONCRETE FROM CONSTRUCTION AND DEMOLITION ACTIVITIES THAT IS SEPARATE FROM OTHER WASTE AND IS RECOGNIZABLE AS SUCH. THE TERM DOES NOT INCLUDE MATERIALS PLACED IN OR ON THE WATERS OF THE COMMONWEALTH UNLESS OTHERWISE AUTHORIZED. (THE TERM "USED ASPHALT" DOES NOT INCLUDE MILLED ASPHALT OR ASPHALT THAT HAS BEEN PROCESSED FOR RE-USE).
CLEAN FILL AFFECTED BY A SPILL OR RELEASE OF A REGULATED SUBSTANCE: FILL MATERIALS AFFECTED BY A SPILL OR RELEASE OF A REGULATED SUBSTANCE STILL QUALIFIES AS CLEAN FILL PROVIDED THE TESTING REVEALS THAT THE FILL MATERIAL CONTAINS CONCENTRATIONS OF REGULATED SUBSTANCES THAT ARE BELOW THE RESIDENTIAL LIMITS IN TABLES FP-1A AND FP-1B FOUND IN THE DEPARTMENT'S POLICY "MANAGEMENT OF FILL". ANY PERSON PLACING CLEAN FILL THAT HAS BEEN AFFECTED BY A SPILL OR RELEASE OF A REGULATED SUBSTANCE MUST USE FORM FP-001 TO CERTIFY THE ORIGIN OF THE FILL MATERIAL AND THE RESULTS OF THE ANALYTICAL TESTING TO QUALIFY THE MATERIAL AS CLEAN FILL. FORM FP-001 MUST BE RETAINED BY THE OWNER OF THE PROPERTY RECEIVING THE FILL. A COPY OF FORM FP-001 CAN BE FOUND AT THE END OF THESE INSTRUCTIONS.
ENVIRONMENTAL DUE DILIGENCE: THE APPLICANT MUST PERFORM ENVIRONMENTAL DUE DILIGENCE TO DETERMINE IF THE FILL MATERIALS ASSOCIATED WITH THE PROJECT QUALIFY AS CLEAN FILL. ENVIRONMENTAL DUE DILIGENCE IS DEFINED AS: INVESTIGATIVE TECHNIQUES, INCLUDING, BUT NOT LIMITED TO, VISUAL PROPERTY INSPECTIONS, ELECTRONIC DATA BASE SEARCHES, REVIEW OF PROPERTY OWNERSHIP, REVIEW OF PROPERTY USE HISTORY, SANBORN MAPS, ENVIRONMENTAL QUESTIONNAIRES, TRANSACTION SCREENS, ANALYTICAL TESTING, ENVIRONMENTAL ASSESSMENTS OR AUDITS. ANALYTICAL TESTING IS NOT A REQUIRED PART OF DUE DILIGENCE UNLESS VISUAL INSPECTION AND/OR REVIEW OF THE PAST LAND USE OF THE PROPERTY INDICATES THAT THE FILL MAY HAVE BEEN SUBJECTED TO A SPILL OR RELEASE OF REGULATED SUBSTANCE. IF THE FILL MAY HAVE BEEN AFFECTED BY A SPILL OR RELEASE OF A REGULATED SUBSTANCE, IT MUST BE TESTED TO DETERMINE IF IT QUALIFIES AS CLEAN FILL. TESTING SHOULD BE PERFORMED IN ACCORDANCE WITH APPENDIX A OF THE DEPARTMENT'S POLICY "MANAGEMENT OF FILL".

FILL MATERIAL THAT DOES NOT QUALIFY AS CLEAN FILL IS REGULATED FILL. REGULATED FILL IS WASTE AND MUST BE MANAGED IN ACCORDANCE WITH THE DEPARTMENT'S MUNICIPAL OR RESIDUAL WASTE REGULATIONS BASED ON 25 PA. CODE CHAPTERS 287 RESIDUAL WASTE MANAGEMENT OR 271 MUNICIPAL WASTE MANAGEMENT, WHICHEVER IS APPLICABLE. THESE REGULATIONS ARE AVAILABLE ON-LINE AT WWW.PACODE.COM.

TEMPORARY EROSION AND SEDIMENT CONTROL:

1. COMPOST FILTER SOCKS SHALL BE INSTALLED DOWNSLOPE OF ALL AREAS TO BE DISTURBED BEFORE ANY WORK BEGINS. COMPOST FILTER SOCKS SHALL BE INSTALLED AS NEAR AS POSSIBLE TO THE LOCATIONS SHOWN ON THE PLAN.
2. STOCKPILED TOPSOIL MOUNDS SHALL BE STABILIZED BY APPLYING TEMPORARY SEED AND A PERIMETER SILT FENCE SHALL BE INSTALLED AROUND EACH MOUND. TEMPORARY SEEDING SHALL BE PER PENNDOT FORM 408, SECTION 804(B).
3. ALL STABILIZED CONSTRUCTION ENTRANCES SHALL BE INSTALLED AS NEAR AS POSSIBLE TO THE LOCATION SHOWN ON THE PLAN. THE ROCK CONSTRUCTION ENTRANCE THICKNESS SHALL BE CONSTANTLY MAINTAINED ON SITE. A STOCKPILE SHALL BE MAINTAINED ON SITE FOR THIS PURPOSE. AT THE END OF EACH CONSTRUCTION DAY, ALL SEDIMENT DEPOSITED ON PAVED ROADWAYS SHALL BE REMOVED AND RETURNED TO THE CONSTRUCTION SITE.
4. FREQUENT INSPECTION SHALL BE MADE ON THE FILTER FABRIC FENCE. DAMAGED FENCES SHALL BE IMMEDIATELY REPLACED. SEDIMENT MUST BE REMOVED WHERE ACCUMULATIONS REACH 1/2 THE ABOVE GROUND HEIGHT'S OF FENCE. SILT FENCE WHICH HAS BEEN TOPPED OR UNDERMINED IS TO BE REPLACED WITH A ROCK FILTER OUTLET. SEDIMENT MUST BE REMOVED WHEN ACCUMULATIONS REACH 1/3 THE HEIGHT OF THE OUTLET.

RECYCLE & DISPOSAL OF MATERIALS :

THE OPERATOR SHALL REMOVE FROM THE SITE, RECYCLE, OR DISPOSE OF ALL BUILDING MATERIALS AND WASTES IN ACCORDANCE WITH THE DEPARTMENT'S SOLID WASTE MANAGEMENT REGULATIONS AT 25 PA CODE 260.1 et seq. AND 287.1 et seq.

BEFORE DISPOSING OF SOIL OR RECEIVING BORROW FOR THE SITE, THE OPERATOR MUST ASSURE THAT EACH SPOIL OR BORROW AREA HAS AN EROSION AND SEDIMENT CONTROL PLAN APPROVED BY THE TOWNSHIP ENGINEER, AND WHICH IS BEING IMPLEMENTED AND MAINTAINED ACCORDING TO CHAPTER 102 REGULATIONS. THE OPERATOR SHALL ALSO NOTIFY THE TOWNSHIP ENGINEER IN WRITING OF ALL RECEIVING SPOIL AND BORROW AREAS WHEN THEY HAVE BEEN IDENTIFIED. ALL RECEIVING SOILS SHALL BE CLEAN MATERIAL.

THE SELECTED CONTRACTOR WILL BE RESPONSIBLE FOR PROPER RECYCLING AND/OR DISPOSAL OF MATERIALS GENERATED BY THE SITE CONSTRUCTION ACTIVITIES AND EXCESS OR SCRAP MATERIALS USED DURING THE DEVELOPMENT OF THE PROJECT.

THE FOLLOWING MAINTENANCE ACTIVITIES ARE RECOMMENDED:

1. WOODY MATERIALS TO BE SHREDDED FOR USE AS MULCH FOR TEMPORARY AND PERMANENT EROSION CONTROL.
2. TOPSOIL TO BE STOCKPILED FOR REUSE ON THE SITE.
3. CEMENT CONCRETE AND BITUMINOUS CONCRETE MATERIALS THAT ARE GENERATED DURING SITE CLEARING OPERATIONS TO BE SEGREGATED AND RECYCLED.
4. CONSTRUCTION MATERIALS AND TRASH AND/OR RUBBISH GENERATED DURING CONSTRUCTION ACTIVITIES, INCLUDING THE INSTALLATION OF THE POST CONSTRUCTION STORMWATER MANAGEMENT BMPs, IS TO BE PROPERLY SEGREGATED AND RECYCLED TO THE EXTENT PRACTICAL.
5. ALL MATERIALS THAT ARE NOT SUITABLE FOR REUSE AND/OR RECYCLING TO BE DISPOSED OF AT THE APPROXIMATE LEGALLY OPERATED LANDFILL.
6. NO BURNING SHALL BE PERMITTED ON THE SITE.
7. NO BURYING OF DELETERIOUS MATERIALS, TRASH OR RUBBISH WILL BE PERMITTED ON THE SITE.

THE FOLLOWING IS A LIST OF POTENTIOAL CONSTRUCTION WASTES THAT WILL BE GENERATED DURING THE BMP INSTALLATION
- E&S BMP - REGULATED FILL MATERIAL
- E&S BMP - SILT MATERIAL

UNFORSEEN EROSIVE CONDITIONS NOTES :

1. SHOULD UNFORESEEN EROSIVE CONDITIONS DEVELOP DURING CONSTRUCTION, THE CONTRACTOR SHALL TAKE ACTION TO REMEDY SUCH CONDITIONS AND TO PREVENT DAMAGE TO ADJACENT PROPERTIES AS A RESULT OF INCREASED RUNOFF AND/OR SEDIMENT DISPLACEMENT. STOCKPILES OF WOOD CHIPS, HAY BALES, CRUSHED STONE AND OTHER MULCHES SHALL BE HELD IN READINESS TO DEAL IMMEDIATELY WITH EMERGENCY PROBLEMS OF EROSION.
2. THE CONTRACTOR IS ADVISED TO BECOME THOROUGHLY FAMILIAR WITH THE PROVISIONS OF APPENDIX 64, EROSION CONTROL RULES AND REGULATIONS, TITLE 25,PART 1, D.E.P., SUB-PART C, PROTECTION OF NATURAL RESOURCES, ARTICLE III, WATER RESOURCES, CHAPTER 102, EROSION CONTROL.
3. PROTECTION TO EXISTING TREES AND SHRUBS TO REMAIN SHALL BE TAKEN BY THE CONTRACTOR TO ELIMINATE UNNECESSARY DAMAGE.

ISSUED FOR BID
DATE: 08/07/2026

Pennoni
PENNONI ASSOCIATES INC.
1900 Market Street, Suite 300
Philadelphia, PA 19103
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ALL DIMENSIONS MUST BE VERIFIED BY CONTRACTOR AND OWNER MUST BE NOTIFIED OF ANY DISCREPANCIES BEFORE PROCEEDING WITH WORK

LIBRARY BUILDING RENOVATIONS
70 POWELL ROAD
SPRINGFIELD, PA 19064

EROSION AND SEDIMENTATION CONTROL NOTES

TOWNSHIP OF SPRINGFIELD
50 POWELL ROAD
SPRINGFIELD, PA 19064

NO.	DATE	REVISIONS	BY
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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 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 AND EXPENSES ARISING OUT OF OR RESULTING THEREFROM.

PROJECT	SPFLD00611
DATE	2026-08-07
DRAWING SCALE	AS NOTED
DRAWN BY	AGS
APPROVED BY	EPJ

CM8502

SHEET 11 OF 11

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BUILDING ADDITION & RENOVATION

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LIST OF DRAWINGS

CIVIL

CM0001	COVER SHEET
CM0002	PROJECT NOTES
CM0201	EXISTING CONDITIONS PLAN
CM0501	DEMOLITION AND E&S PLAN
CM1001	SITE PLAN
CM1501	GRADING PLAN
CM1601	UTILITY PLAN
CM6001	CONSTRUCTION PLAN
CM6002	CONSTRUCTION PLAN
CM8501	EROSION AND SEDIMENTATION CONTROL DETAILS
CM8502	EROSION AND SEDIMENTATION CONTROL NOTES

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S-104	ROOFING FRAMING PLAN
S-300	ROOFING DETAILS
S-301	ROOFING DETAILS

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S0.01	GENERAL STRUCTURAL NOTES
S0.03	ISOMETRIC VIEW
S1.00	FOUNDATION PLAN
S1.01	UNDERPINNING PLAN
S1.10	FRAMING PLANS
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S4.00	FOUNDATION SECTIONS
S5.00	FRAMING SECTIONS
S6.01	TYPICAL FRAMING DETAILS

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E002	ELECTRICAL INDEX SHEET
E100	ELECTRICAL DEMOLITION POWER PLAN – LOWER LEVEL
E101	ELECTRICAL DEMOLITION POWER PLAN – UPPER LEVEL
E102	ELECTRICAL DEMOLITION POWER PLAN – ROOF
E103	ELECTRICAL DEMOLITION LIGHTING PLAN – LOWER LEVEL
E104	ELECTRICAL DEMOLITION LIGHTING PLAN – UPPER LEVEL
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E201	ELECTRICAL POWER PLAN – UPPER LEVEL
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E500	ELECTRICAL SINGLE LINE DIAGRAM
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FIRE ALARM

FA001	FIRE ALARM INDEX SHEET
FA100	FIRE ALARM DEMOLITION PLAN – LOWER LEVEL
FA101	FIRE ALARM DEMOLITION PLAN – UPPER LEVEL
FA200	FIRE ALARM PLAN – LOWER LEVEL
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FP002	FIRE PROTECTION NOTES
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FP201	FIRE PROTECTION PLAN – UPPER LEVEL
FP300	FIRE PROTECTION RISER DIAGRAM

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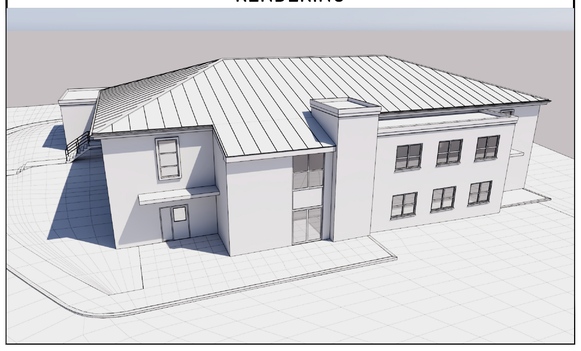
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SITE PLAN



RENDERING



CODE INFORMATION

2018 INTERNATIONAL BUILDING CODE

CHAPTER 3 USE AND OCCUPANCY CLASSIFICATION
CURRENT USE: (A-3) – LIBRARY
PROPOSED USE: (A-3) – LIBRARY

CHAPTER 5 BUILDING HEIGHTS AND AREAS
SECTION 504 TABLE 504.3:

ALLOWABLE HEIGHT:	75 FT.
ACTUAL HEIGHT:	32 FT.

SECTION 504 TABLE 504.4:

ALLOWABLE STORIES:	3 STORY
ACTUAL STORIES:	2 STORY

SECTION 506 TABLE 506.2:

ALLOWABLE AREA (SF):	28,500 SF
1ST FLOOR AREA (SF):	6,405 SF
2ND FLOOR AREA (SF):	8,810 SF
TOTAL:	15,215 SF

CHAPTER 6 TYPES OF CONSTRUCTION
SECTION 601, TABLE 601:
TYPE OF CONSTRUCTION: IIB
FIRE RESISTANT RATING REQ'D: 0 HR REQ'D

CHAPTER 7 FIRE AND SMOKE PROTECTION FEATURES
FIRE AND SMOKE PROTECTION FEATURES PROVIDED

CHAPTER 8 INTERIOR FINISHES
TABLE 803.13 FINISH REQUIREMENTS (NOT SPRINKLED)
EXIT ENCLOSURES & PASSAGEWAYS: A
CORRIDORS: B
ROOMS & ENCLOSED SPACES: C

CHAPTER 9 FIRE PROTECTION SYSTEMS
SECTION 903.2.9 SPRINKLERS REQUIRED

CHAPTER 10 MEANS OF EGRESS
SECTION 1004, TABLE 1004.5
OCCUPANT LOAD CALCULATION:
ASSEMBLY AREAS 15 NET
READING ROOMS 50 NET
EDUCATIONAL AREAS 20 NET
STACK AREAS 100 GROSS
OFFICE AREAS 150 GROSS
FLOOR AREA:
LOWER LEVERL:

1,350 SF /15	=	90 OCCUPANTS
290 SF / 50	=	5 OCCUPANTS
760 SF / 20	=	38 OCCUPANTS
900 SF / 100	=	9 OCCUPANTS
320 SF / 150	=	2 OCCUPANTS

UPPER LEVEL:

1,200 SF / 15	=	80 OCCUPANTS
290 SF / 50	=	5 OCCUPANTS
4,000 SF / 100	=	40 OCCUPANTS
1,000 SF / 150	=	6 OCCUPANTS
TOTAL:		275 OCCUPANTS

SECTION 1006.2.1 MAX COMMON PATH OF EGRESS – 75 FT.
SECTION 1006.3.3 NUMBER OF EXITS 2 REQUIRED – 7 PROVIDED
SECTION 1008.1 MEANS OF EGRESS ILLUMINATION – REQUIRED
SECTION 1013 EXIT SIGNS – REQUIRED
SECTION 1013.4 TACTILE EXIT SIGNS – REQUIRED AT ALL EXITS
SECTION 1017.2 EXIT TRAVEL DISTANCE – 250 FT. MAX

CHAPTER 11 ACCESSIBILITY
BUILDING SHALL COMPLY WITH 2021 IBC CHAPTER 11 AND ANSI A117.1–2017

CODES APPLICABLE TO THE PROJECT:
- 2021 INTERNATIONAL BUILDING CODE
- 2018 INTERNATIONAL BUILDING CODE – CHAPTER 11 FOR ACCESSIBILITY
- 2021 INTERNATIONAL MECHANICAL CODE
- 2021 INTERNATIONAL ELECTRICAL CODE
- 2021 INTERNATIONAL PLUMBING CODE
- 2009 ICC A117.1
- 2021 INTERNATIONAL ENERGY CONSERVATION CODE
- PENNSYLVANIA UNIFORM CONSTRUCTION CODE

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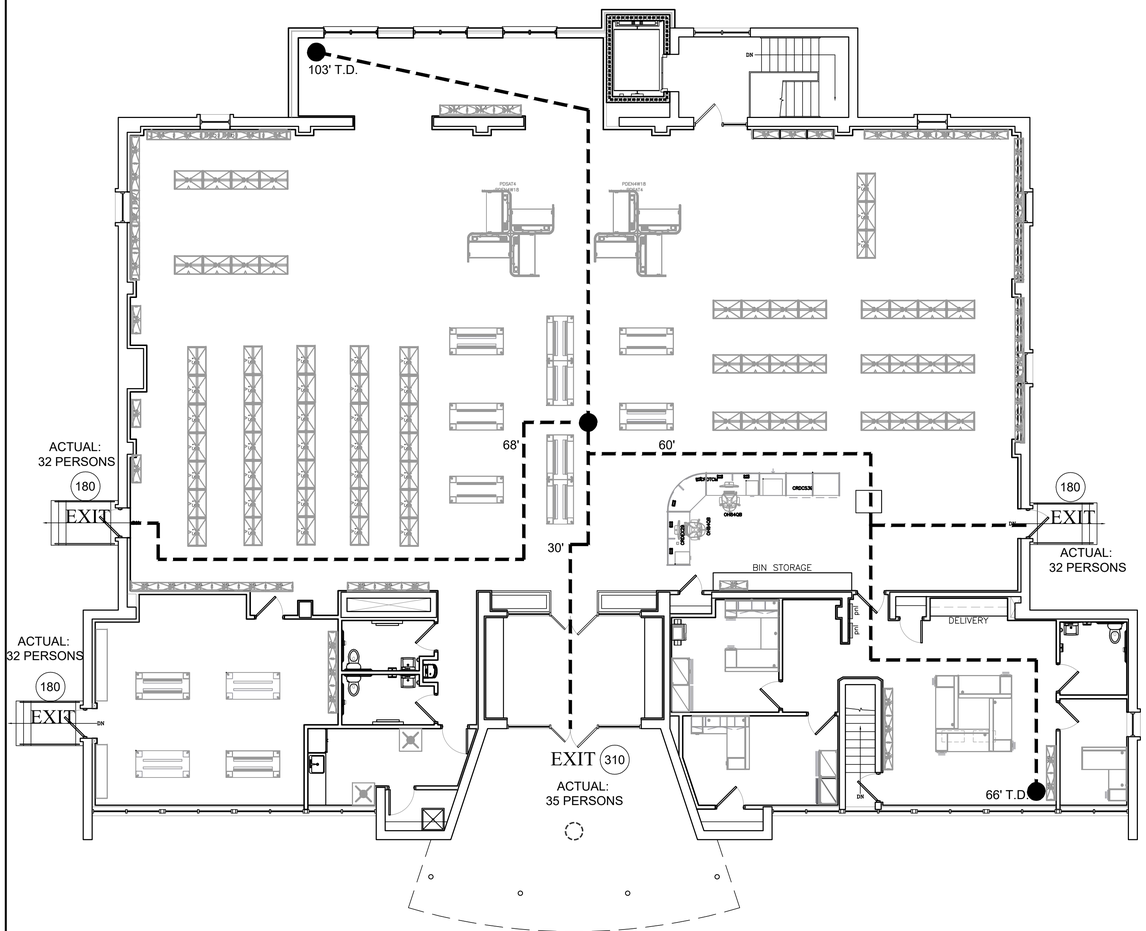
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PROJ. NO.: 25254

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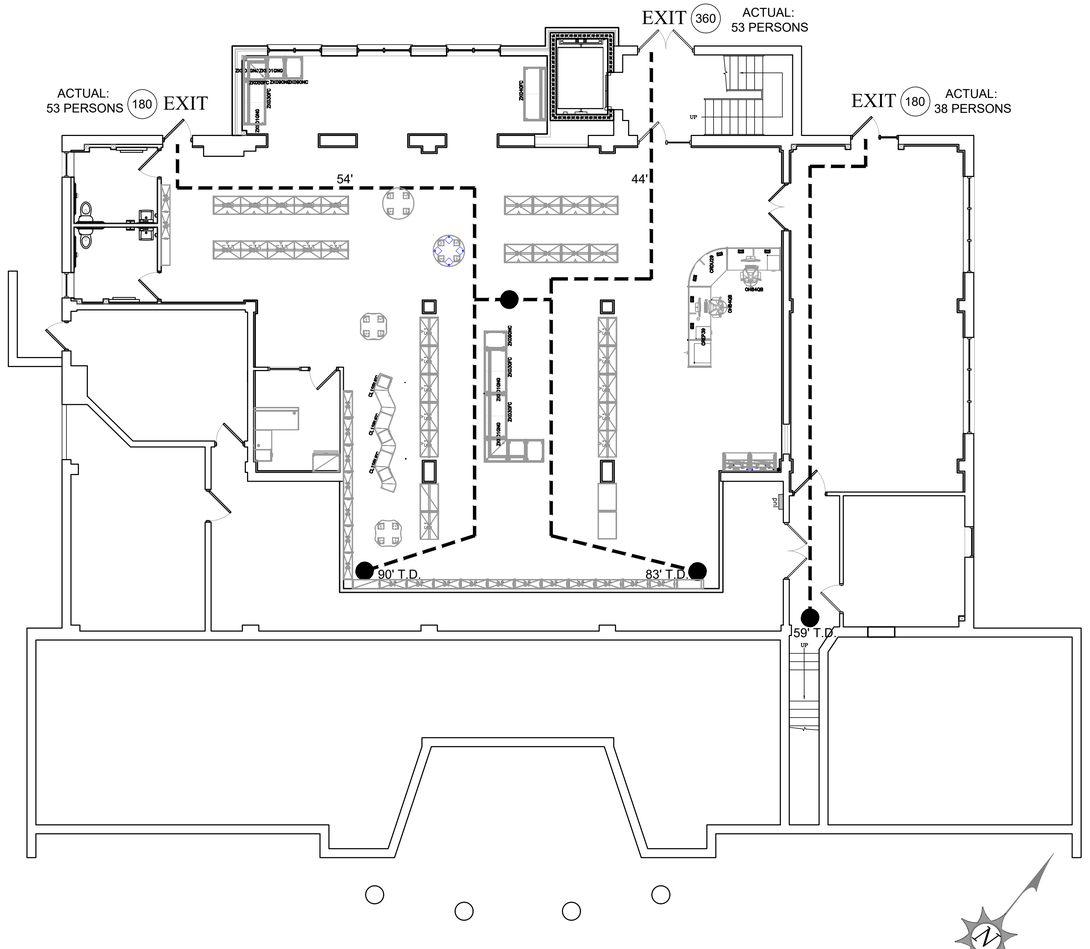
LIFE SAFETY PLAN LEGEND

XXX	DOOR EGRESS CAPACITY
EXIT	EXTERIOR EGRESS DOOR
----------	2-HOUR FIRE RATED WALL
XX' T.D.	PATH OF EGRESS WITH TOTAL TRAVEL DISTANCE (T.D.)BETWEEN POINTS TO EXIT OR STAIR DOOR
XX'	COMMON PATH OF EGRESS BETWEEN POINTS UNTIL 2 SEPARATE PATHS

SECTION 1005.3.2 OTHER EGRESS COMPONENTS:
MEANS OF EGRESS CAPACITY FACTOR OF 0.2



2 C-2 UPPER LEVEL LIFE SAFETY PLAN
SCALE: 1/8"=1'-0"



1 C-2 LOWER LEVEL LIFE SAFETY PLAN
SCALE: 1/8"=1'-0"

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LIFE SAFETY PLANS

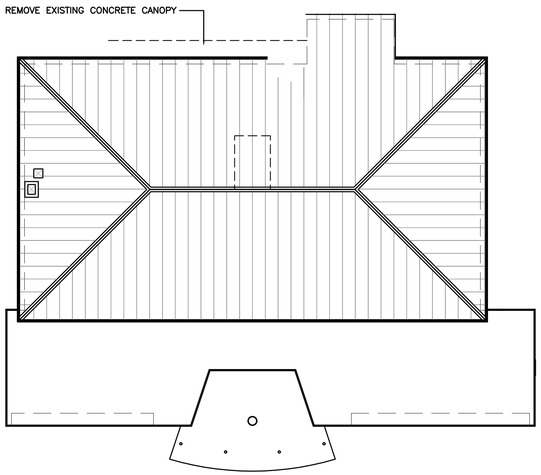
BUILDING ADDITION & RENOVATION
SPRINGFIELD TOWNSHIP LIBRARY

70 POWELL ROAD
SPRINGFIELD, PA 19064

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SHEET NO. C-2
SHEET x OF x



PLEASE NOTE:
REFERENCE PENNONI ROOF DEMOLITION PLAN
FOR FURTHER INFORMATION ON ROOF SCOPE

3 / D-1 **ROOF DEMOLITION PLAN**

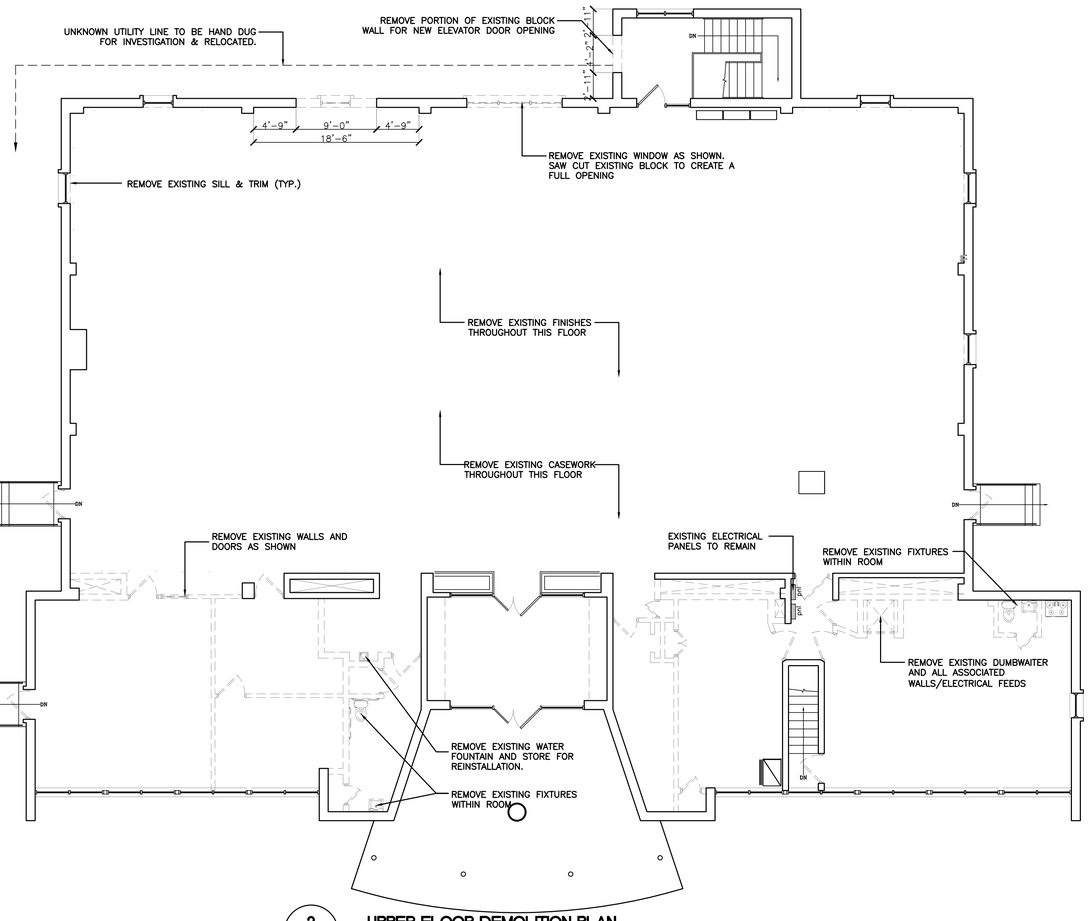
SCALE: 1/16"=1'-0"

DEMO NOTES:

1) REMOVE ALL LIGHTS, RECEPTACLES, SWITCH PANELS, WIRING.
2) REMOVE ALL CONDUITS, PIPING, SUPPORTS AND ALL FIXTURES.
3) REMOVE ALL FLOOR & WALL FINISHES FOR ITEMS TO REMAIN.
4) REMOVE ALL EXISTING MECHANICAL DEVICES, UNIT HEATERS, AC UNITS & ALL ASSOCIATED WIRING & PIPIING.
5) REMOVE EXISTING BOILER AND ALL EXISTING RADIATORS, PIPING, VALVES AND ALL ASSOCIATED HARDWARE IN THEIR ENTIRETY.
6) REMOVE ALL EXISTING PLUMBING FIXTURES, SUPPLY LINES & & SANITARY PIPING. CUTBACK CAP & ABANDON ANY PIPING NOT BE REUSED. REMOVE ANY PIPING THAT CONFLICTS WITH NEW CONSTRUCTION.
7) REMOVE ANY PIPING THAT CONFLICTS WITH NEW CONSTRUCTION.
8) REMOVE & DISPOSE OF ALL DEBRIS IN A LEGAL MANNER.
9) ALL CONTRACTORS SHALL KEEP THE SITE & BUILDING BROOM CLEAN ON A DAILY BASIS.

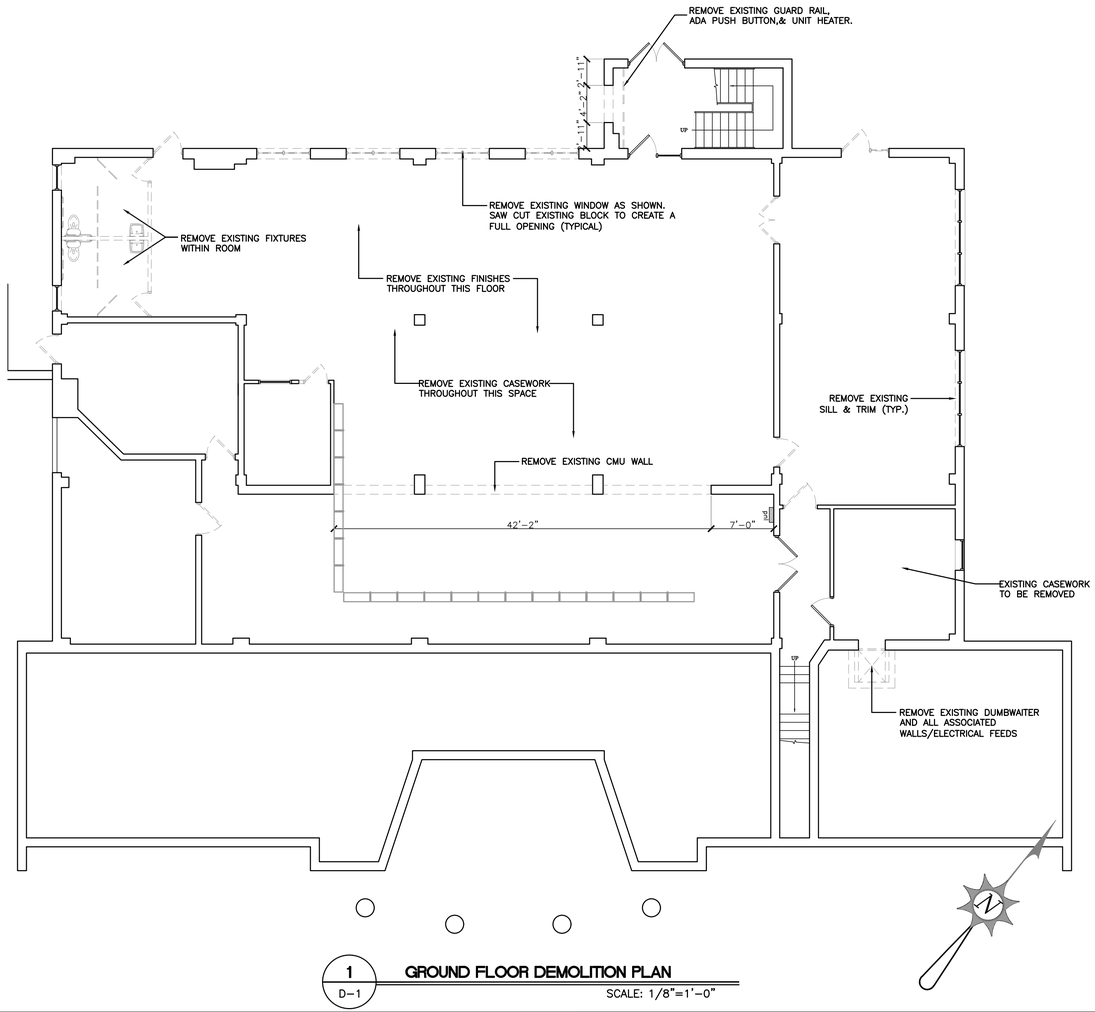
DEMO LEGEND:

EXISTING WALL TO REMAIN	EXISTING WALL TO BE REMOVED
EXISTING DOOR TO REMAIN	EXISTING DOOR TO BE REMOVED
EXISTING WINDOW TO REMAIN	EXISTING WINDOW TO BE REMOVED



2 / D-1 **UPPER FLOOR DEMOLITION PLAN**

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



1 / D-1 **GROUND FLOOR DEMOLITION PLAN**

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

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DEMOLITION PLANS

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SHEET NO. D-1

SHEET x OF x

WALL LEGEND

INTERIOR/EXTERIOR WALL – EXISTING MASONRY WALL TO REMAIN. CLEAN SCRAPE AND PAINT ANY EXPOSED INTERIOR SURFACE

FOUNDATION WALL – 12" CMU WALL ON CONTINUOUS CONCRETE FOOTING. PROVIDE 2" RIGID INSULATION (R–10) @ EXTERIOR WALLS. SEE STRUCTURAL DWGS. FOR MORE INFO ON REINFORCING.

FOUNDATION WALL – 12" CMU WALL ON CONTINUOUS CONCRETE FOOTING. SEE STRUCTURAL DWGS. FOR MORE INFO ON REINFORCING.

FOUNDATION WALL – 8" CMU WALL ON CONTINUOUS CONCRETE FOOTING. SEE STRUCTURAL DWGS. FOR MORE INFO ON REINFORCING.

EXTERIOR WALL – 6" MTL STUDS @ 16" O.C. w/ 5 ½"(R21) KRAFT FACE BATT INSULATION & ⅝" GYP. BD. @ INTERIOR. ½" DENSGLASS FIREGUARD SHEATHING, CCW 705 AIR BARRIER, 2" RIGID FOAM INSULATION, 2" AIR SPACE & 4" BRICK VENEER.

INTERIOR WALL – 3 ⅝" MTL STUDS @ 16" O.C. w/ 3 ½" SOUND ATTENUATION BATT INSULATION AND ⅝" GYP. BD. BOTH SIDES, RUN WALL TO BOTTOM OF STRUCTURE PROVIDE M.R. GYP. BD. @ ALL RESTROOM/KITCHEN WET WALLS

INTERIOR WALL – 3 ⅝" MTL STUDS @ 16" O.C. w/ 3 ½" SOUND ATTENUATION BATT INSULATION AND ⅝" GYP. BD. ONE SIDE, RUN WALL TO BOTTOM OF STRUCTURE. PROVIDE M.R. GYP. BD. @ ALL RESTROOM/KITCHEN WET WALLS

INTERIOR WALL – 2" MTL STUDS @ 16" O.C., ⅝" GYP. BD. RUN WALL TO 6" ABOVE FINISHED CEILING UNLESS LOCATED IN EXPOSED CEILING AREA PROVIDE M.R. GYP. BD. @ ALL RESTROOM/KITCHEN WET WALLS

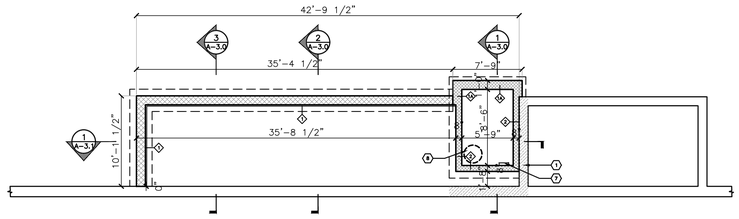
KEY NOTES:

1. UNDER PIN EXISTING WALLS & FOOTINGS. SEE STRUCTURAL DWGS. FOR MORE INFO.
2. SCHINDLER 3300 MRL TRACTION COMMERCIAL ELEVATOR – 2500 LBS CAPACITY OR APPROVED EQUAL BY OWNER AND ARCHITECT. ELEVATOR TO BE IN COMPLIANCE WITH ICC A117.1–2009
3. PROVIDE 4x8x⅝" F.R.T. PLYWOOD, BEHIND GYPSUM BOARD FOR MOUNTING OF EQUIPMENT.
4. EXISTING WATER FOUNTAIN TO BE REUSED
5. PROVIDE 6"x6" WALL BUMP OUT FOR BASE BOARD HEATER PIPES (TYP.)
6. ABUSIVE RESISTANCE GYP. BD. THROUGHOUT SPACE
7. PROVIDE ELEVATOR PIT LADDER.
8. PROVIDE ELEVATOR PIT SUMP PUMP (24" DIA x 36" DEEP) w/ OIL MINDER. SEE MEP FOR MORE INFO.

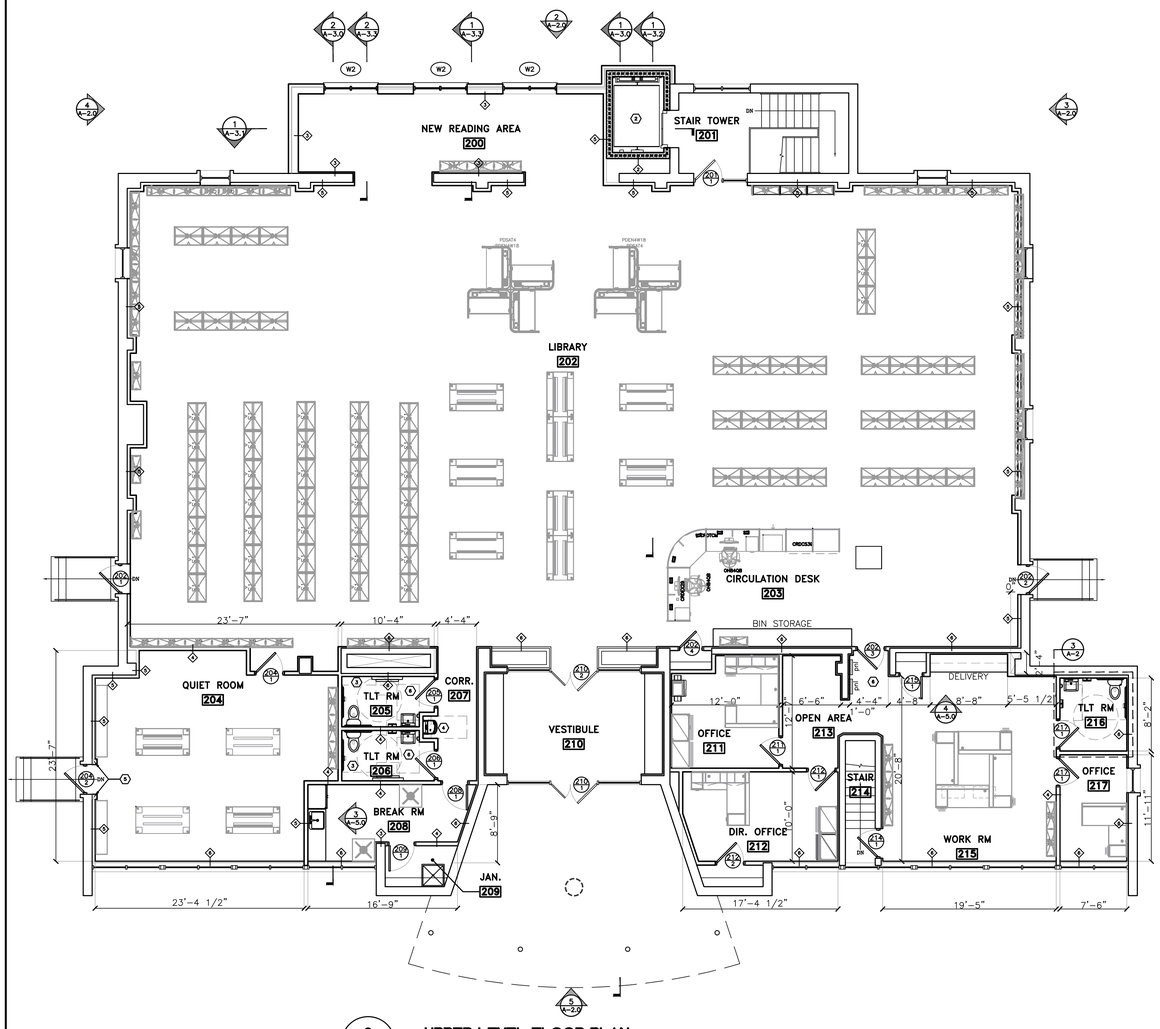
GENERAL NOTE:

ALL FURNITURE IS N.I.C. ALL FURNITURE IS BY OWNER.

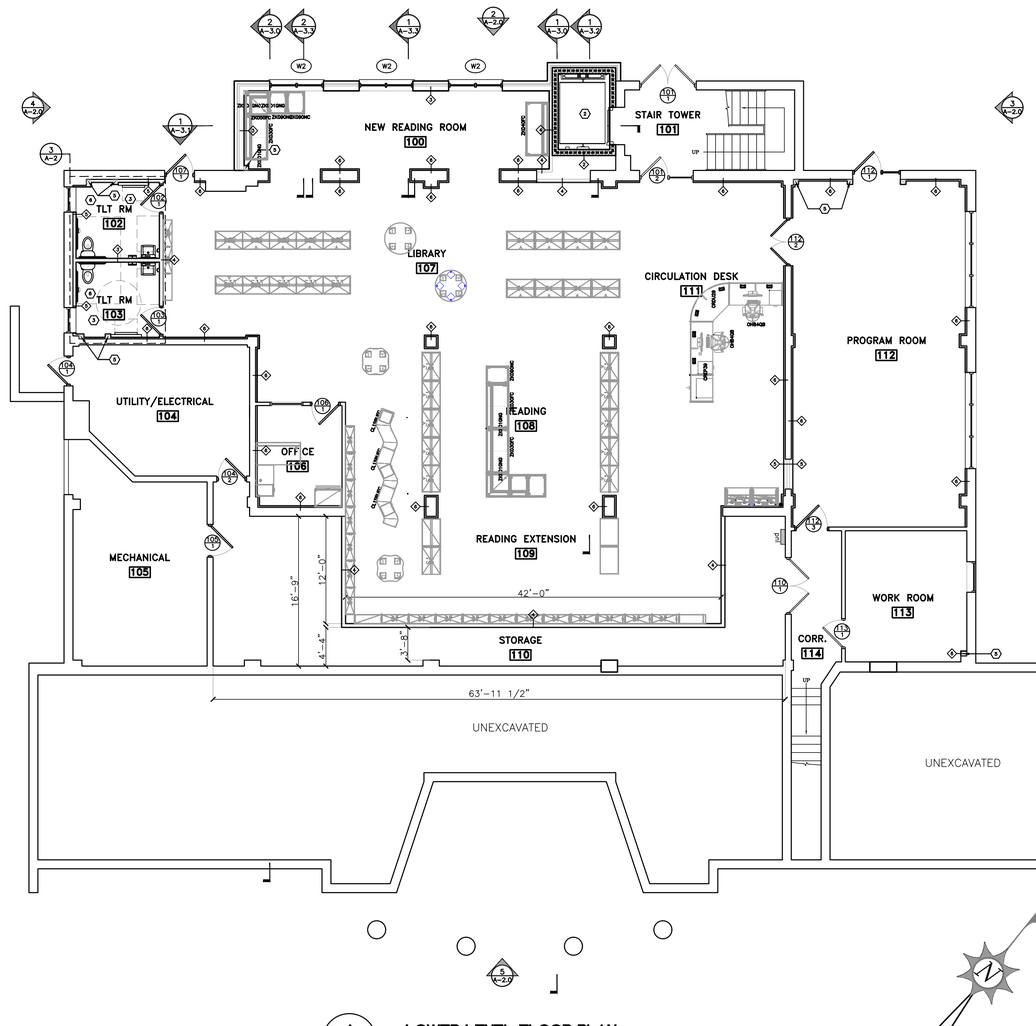
ALL REFRIGERATORS TO BE IN COMPLIANCE WITH ICC A117.1–2009



3 / A–1.0 **BUILDING ADDITION FOUNDATION PLAN**
SCALE: 1/8"=1'–0"



2 / A–1.0 **UPPER LEVEL FLOOR PLAN**
SCALE: 1/8"=1'–0"



1 / A–1.0 **LOWER LEVEL FLOOR PLAN**
SCALE: 1/8"=1'–0"

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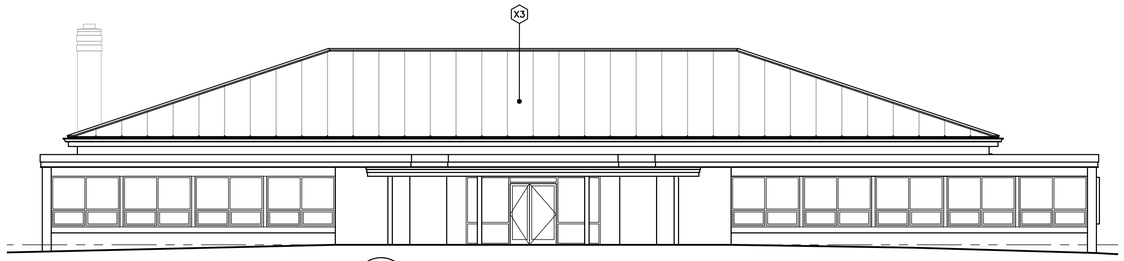
FLOOR PLANS

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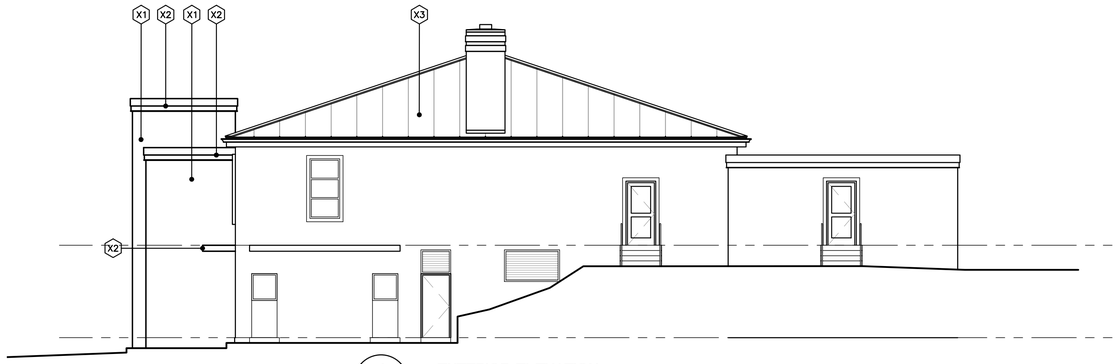
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SHEET NO. A–1.0
SHEET × OF ×

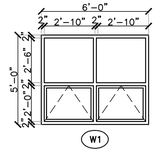


5 EXTERIOR ELEVATION
A-2.0
SCALE: 1/8"=1'-0"



4 EXTERIOR ELEVATION
A-2.0
SCALE: 1/8"=1'-0"

EXTERIOR WINDOW TYPES



NOTES:
1.) WINDOW SCHEDULE FOR BUDGETARY PURPOSES ONLY. ALL FINAL WINDOWS TO BE SELECTED & APPROVED BY OWNER.

2.) WINDOWS TO BE SPECIFIED AROUND PRODUCTS MANUFACTURED BY KAWNEER 5500 THERMAL WINDOWS

3.)VENTING AWNING WINDOWS SHALL INCLUDE SASH LOCKS & SCREENS

4.) GLASS ADJACENT TO DOORS AND WITHIN 18" OF FLOOR TO BE TEMPERED SAFETY GLASS.

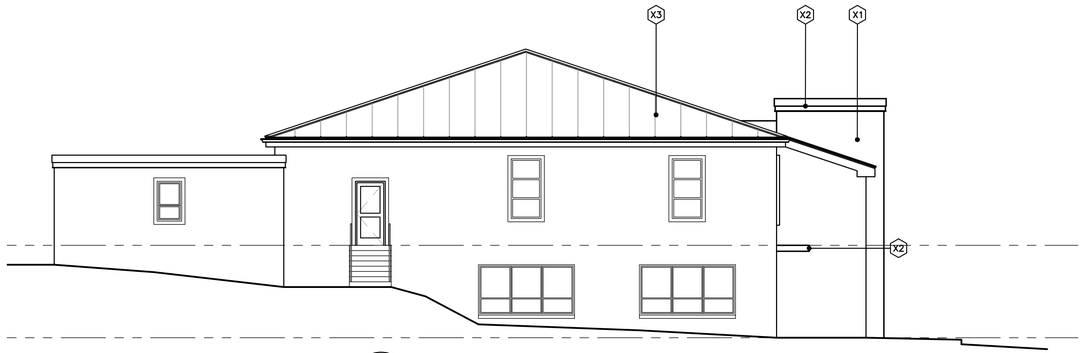
5.) EXTERIOR AND INTERIOR FRAME COLOR TO BE DETERMINED.

6.) GLAZING TO BE 1" INSULATED GLASS WITH LOW E GLAZING

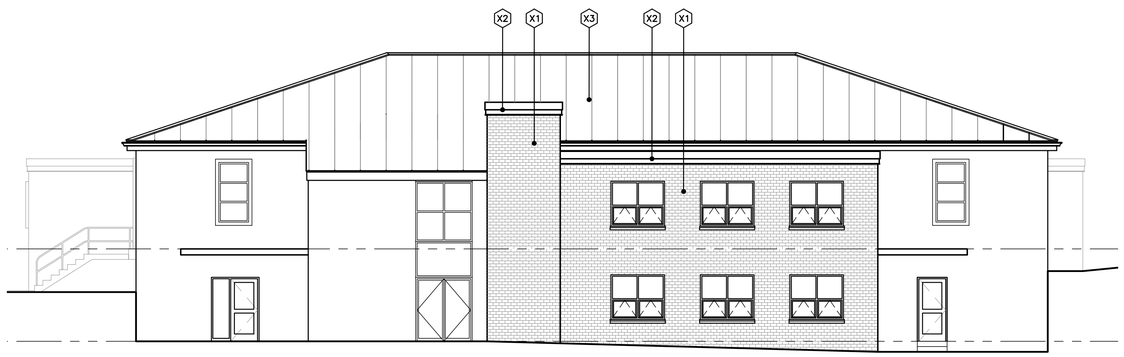
EXTERIOR FINISH SCHEDULE

TAG	MATERIAL/ MANUF.	STYLE/COLOR	REMARKS
X1	4" BRICK VENEER	250 – M (MODULAR)	CONTRACTOR TO PROVIDE SAMPLES, CONTACT MIKE CLEMENT @ DIENER BRICK COMPANY 856.858.2000
X2	CONTINUOUS CLEAT METAL COPING	COLOR TBD	
X3	STANDING SEAM METAL ROOF SYSTEM ATAS	DUTCH SEAM 15" – COLOR TBD	
X4	ALUMINUM GUTTERS / DOWNSPOUTS	"K" GUTTERS, & WHITE FINISH	

NOTES:
1.) CONTRACTOR TO SUBMIT SAMPLES FOR APPROVAL

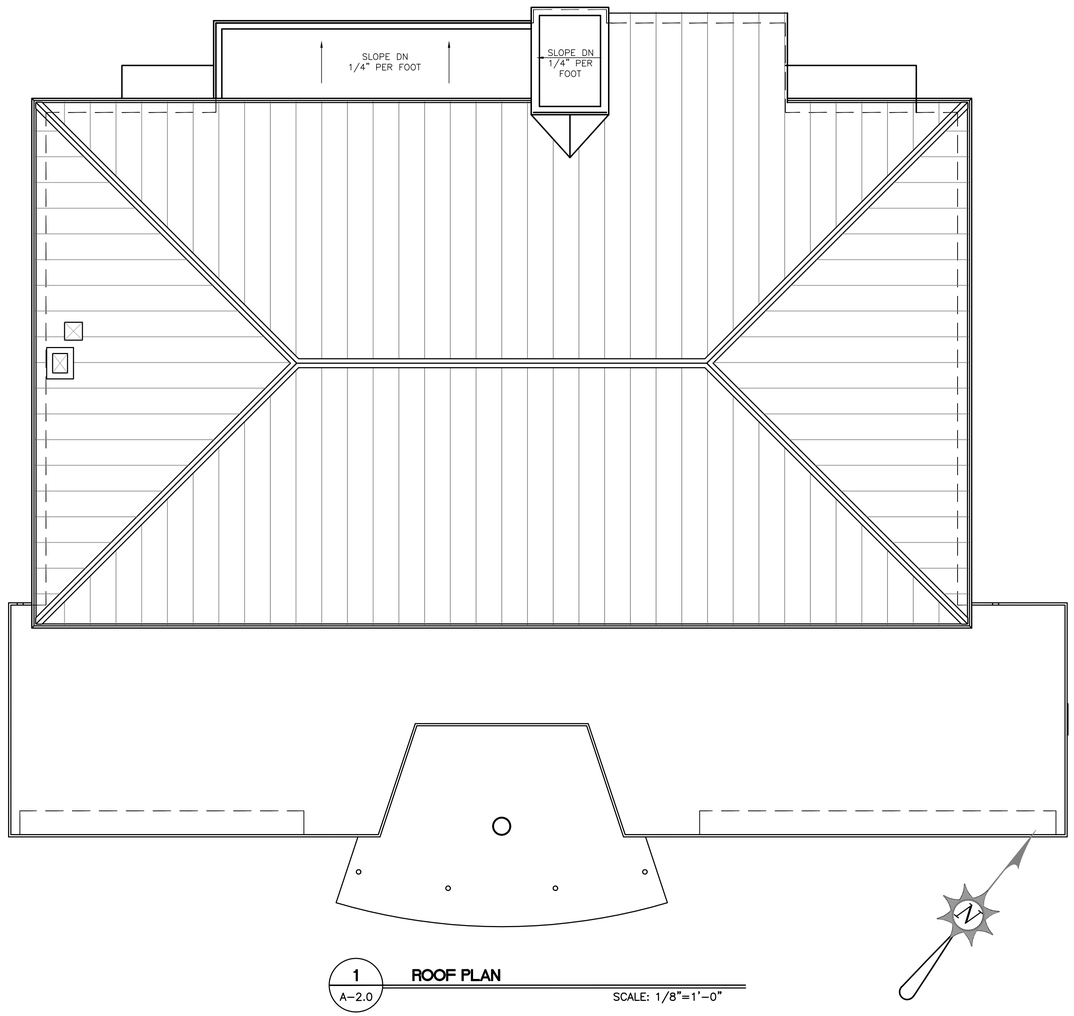


3 EXTERIOR ELEVATION
A-2.0
SCALE: 1/8"=1'-0"



2 EXTERIOR ELEVATION
A-2.0
SCALE: 1/8"=1'-0"

PLEASE NOTE:
REFERENCE PENNONI ROOF PLAN FOR FURTHER INFORMATION ON EXISTING &NEW ROOF SCOPE



1 ROOF PLAN
A-2.0
SCALE: 1/8"=1'-0"

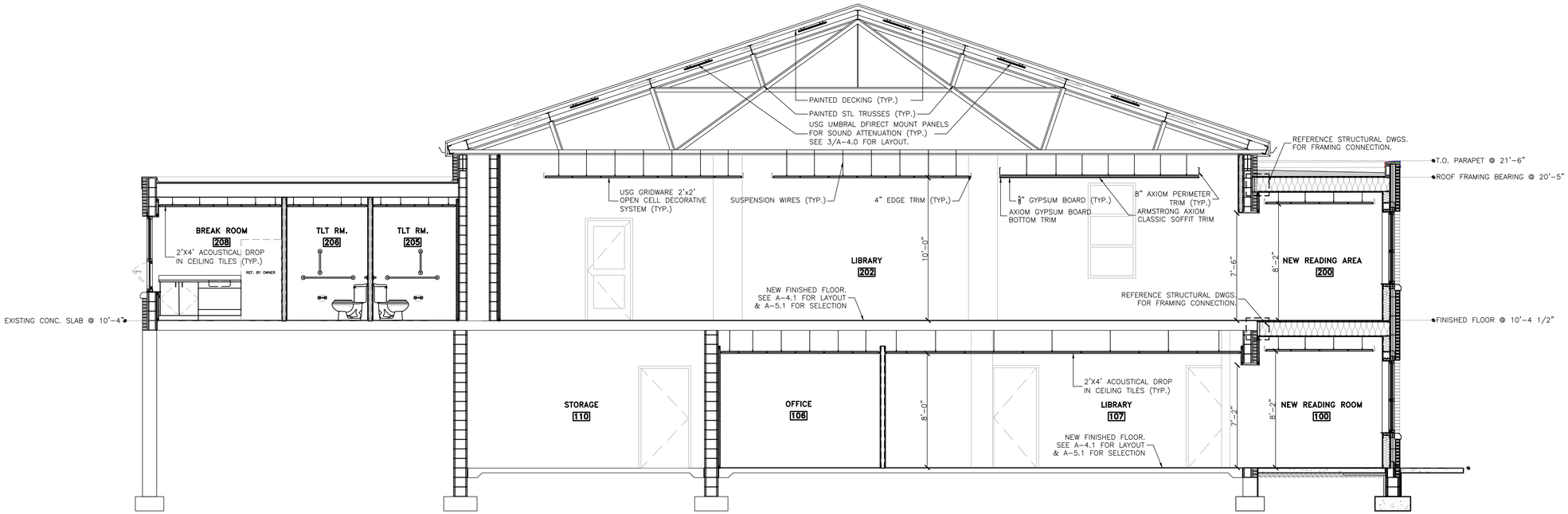
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ROOF PLAN & EXTERIOR ELEVATIONS
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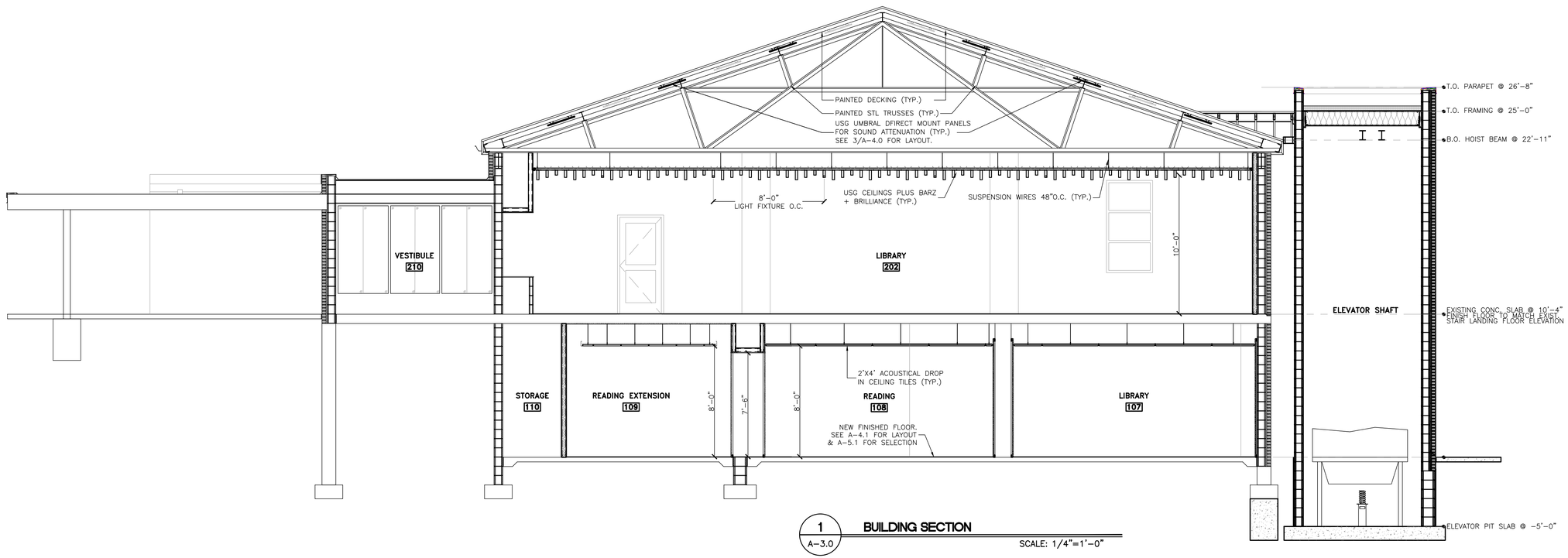
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SHEET NO.
A-2.0
SHEET x OF x



2 A-3.0 **BUILDING SECTION**

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



1 A-3.0 **BUILDING SECTION**

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

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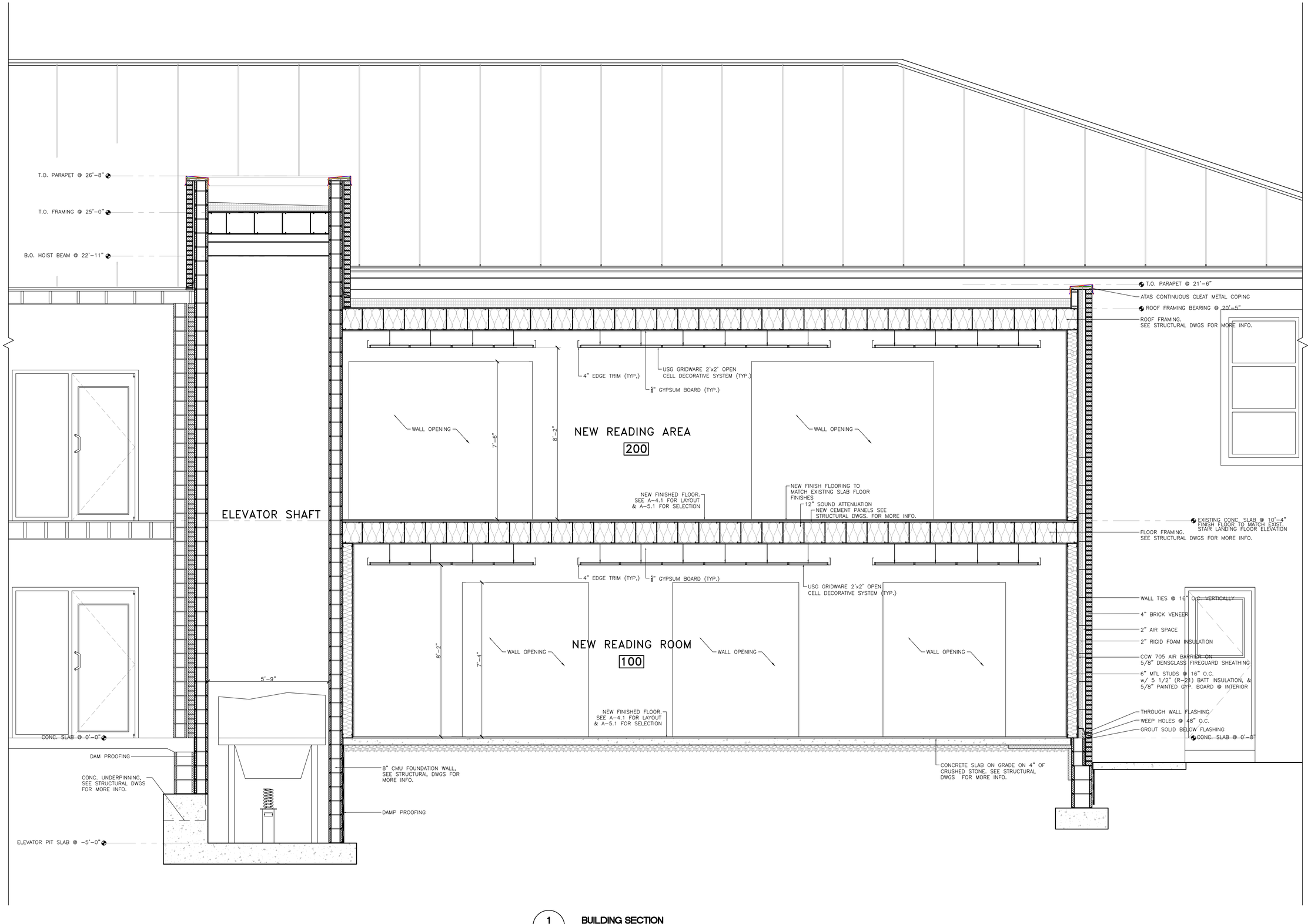
BUILDING SECTIONS

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SHEET OF



1 / A-3.1 **BUILDING SECTION**

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

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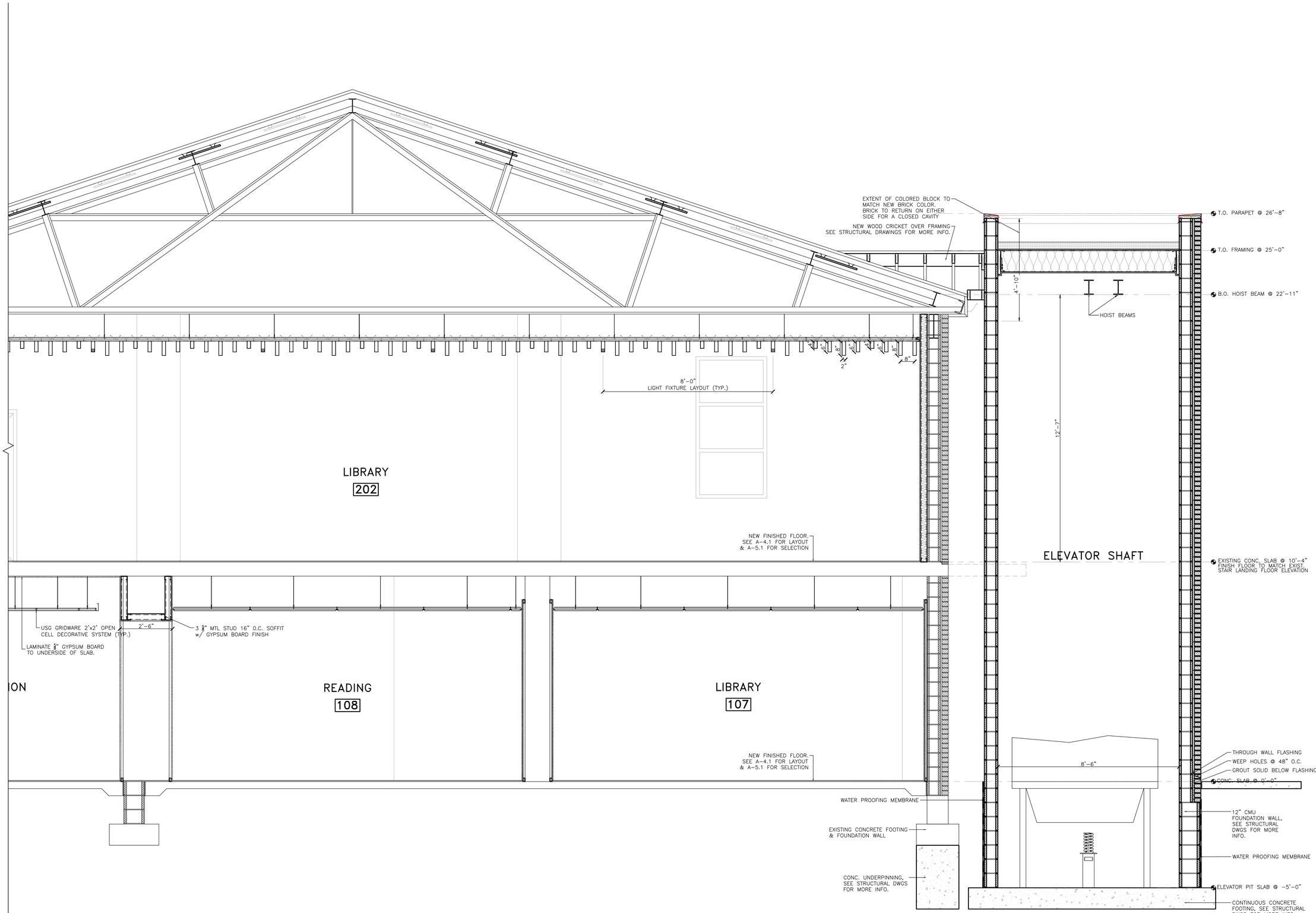
BUILDING SECTIONS

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1 / A-3.2 **BUILDING SECTION**

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

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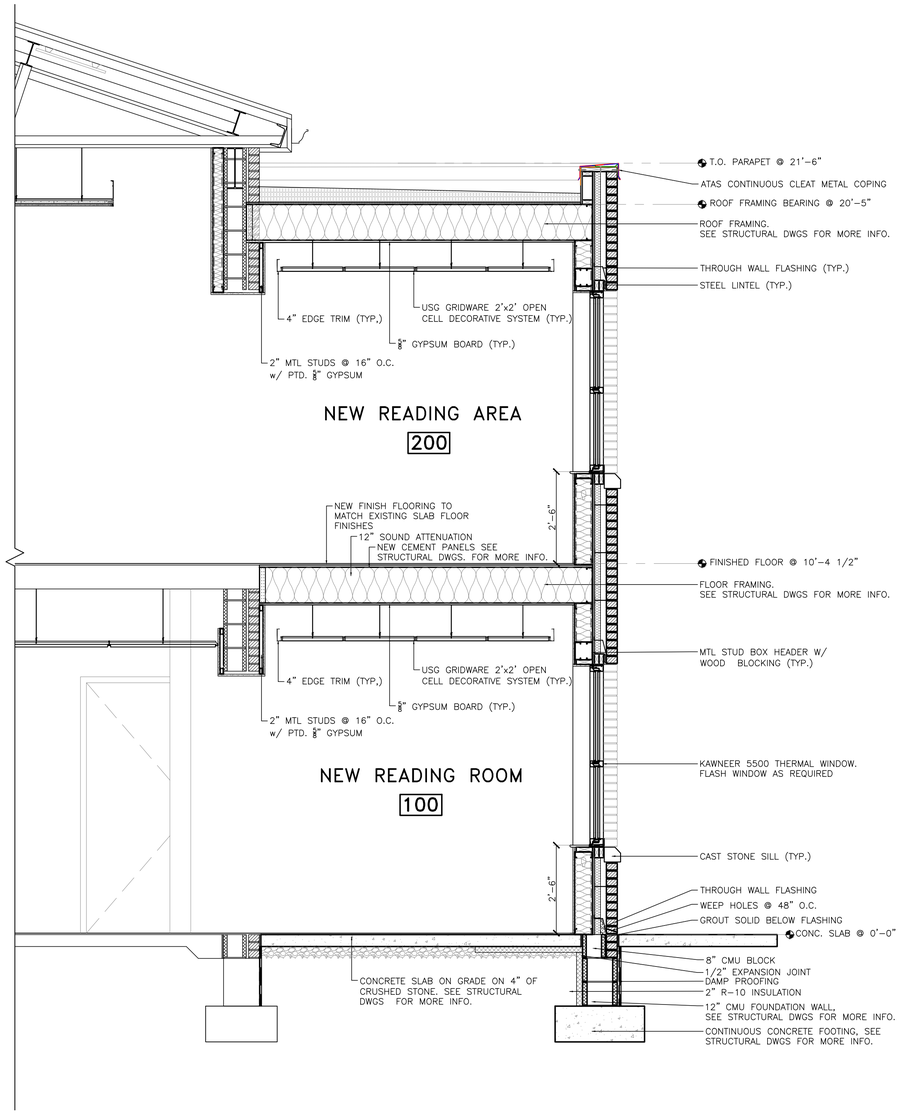
BUILDING SECTIONS

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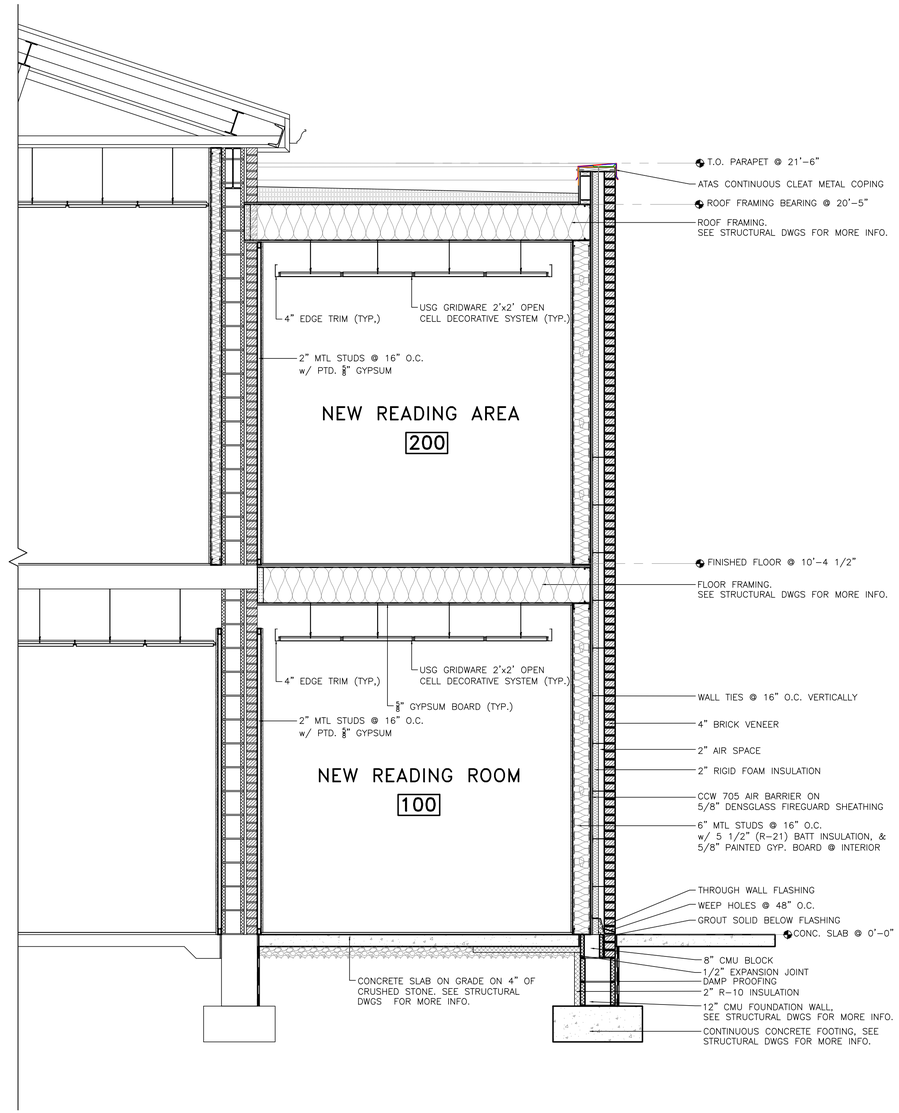
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SHEET NO. A-3.2
SHEET x OF x



2 / A-3.3 **BUILDING SECTION**

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



1 / A-3.3 **BUILDING SECTION**

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

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BUILDING SECTIONS

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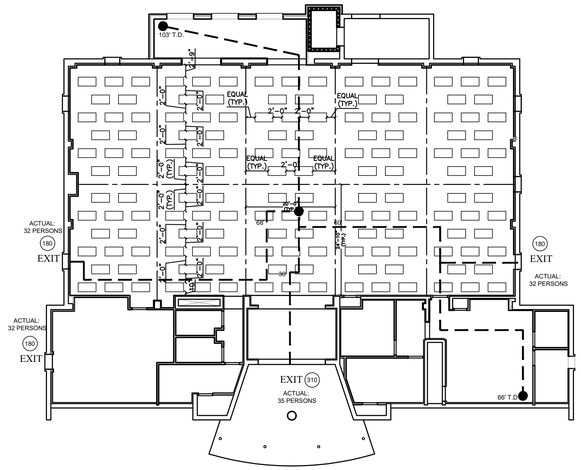
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A-3.3
SHEET × OF ×

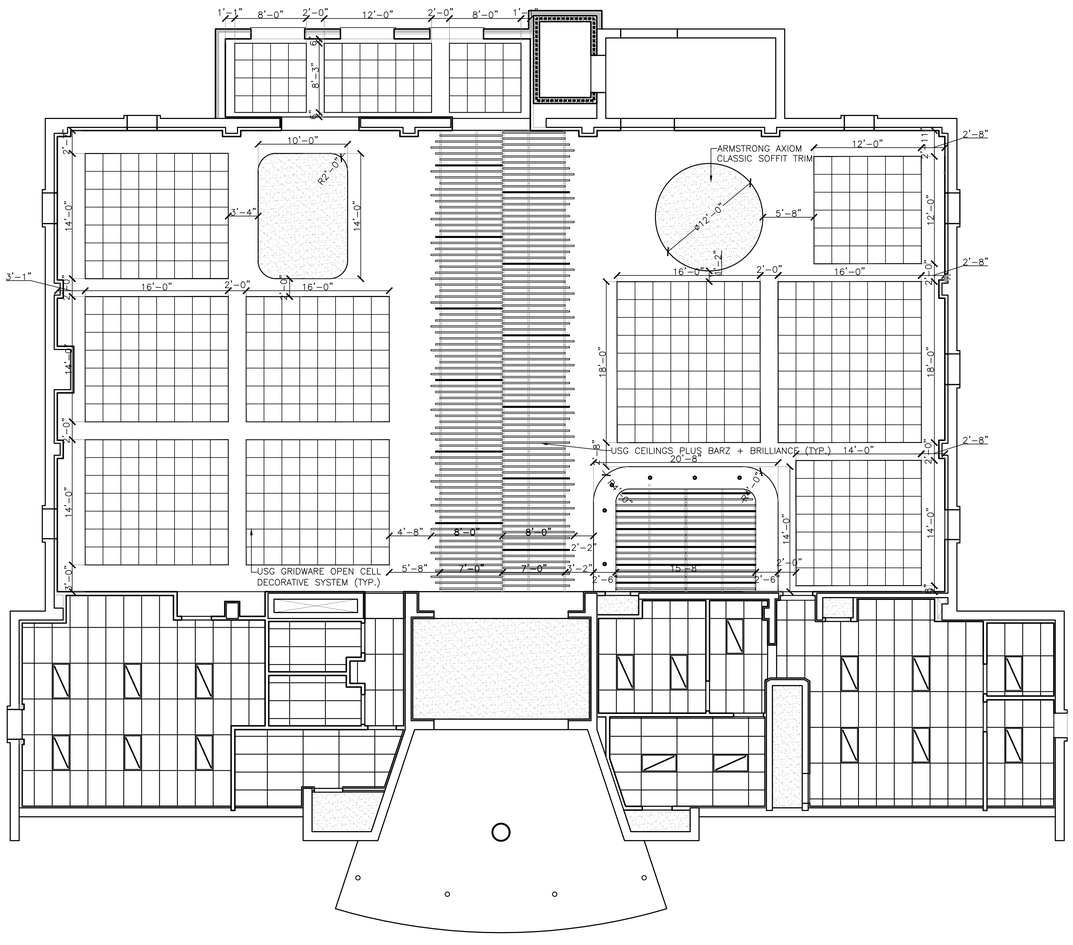
RCP LEGEND

- 4" LED RECESSED PUCK LIGHT FIXTURE
- PENDANT LIGHT FIXTURE
- 2'x4' LED LIGHT FIXTURE
- 4' LED LINEAR LIGHT FIXTURE IN BAFFLE SYSTEM
- REMOTE HEADS
- EMERGENCY BATTERY PACK
- ILLUMINATED EXIT SIGN W/ DIRECTIONAL ARROW IF INDICATED

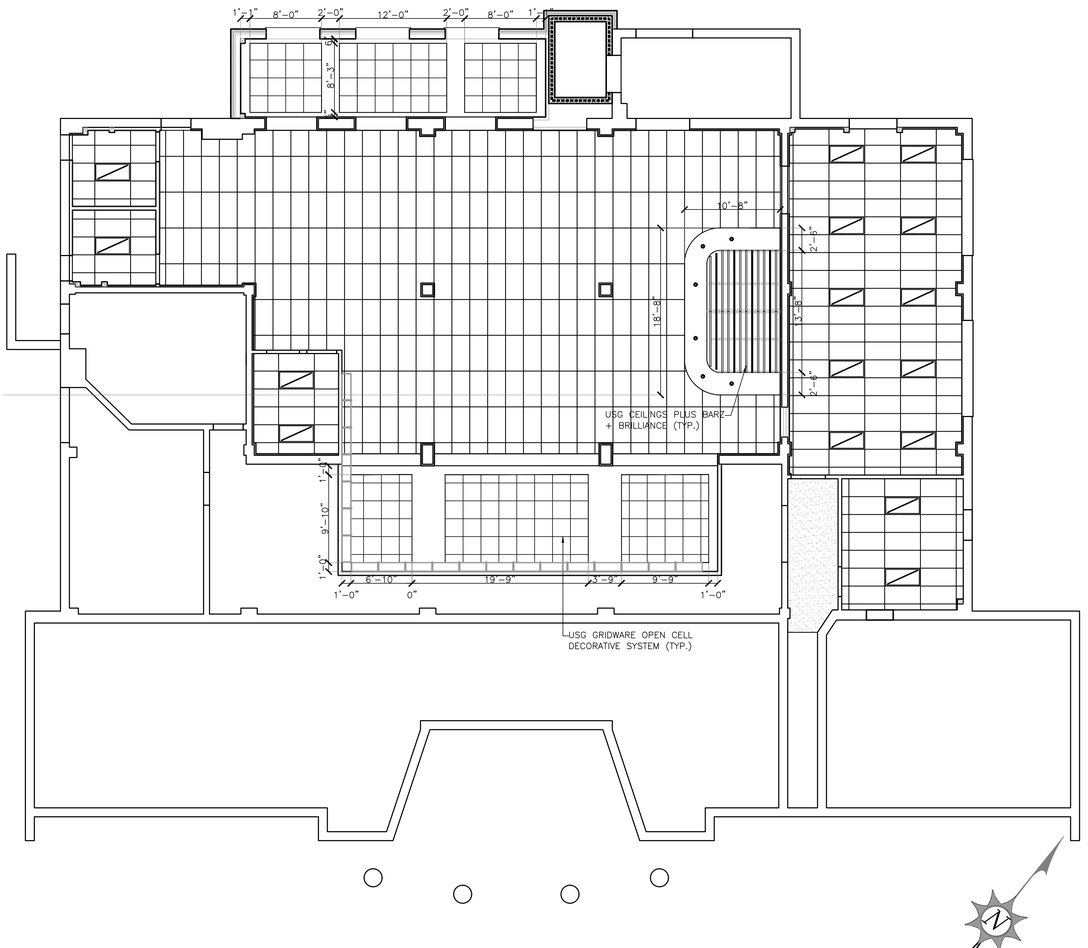
NOTE: COORDINATE RCP w/ MECHANICAL & ELECTRICAL DWGS FOR FIXTURE LAYOUT / SPECIFICATION.



3 SOUND ATTENUATION ABOVE CEILING LAYOUT
A-4.0 — SCALE: 1/16"=1'-0"



2 UPPER FLOOR REFLECTED CEILING PLAN
A-4.0 — SCALE: 1/8"=1'-0"



1 GROUND FLOOR REFLECTED CEILING PLAN
A-4.0 — SCALE: 1/8"=1'-0"

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REFLECTED CEILING PLANS

BUILDING ADDITION & RENOVATION

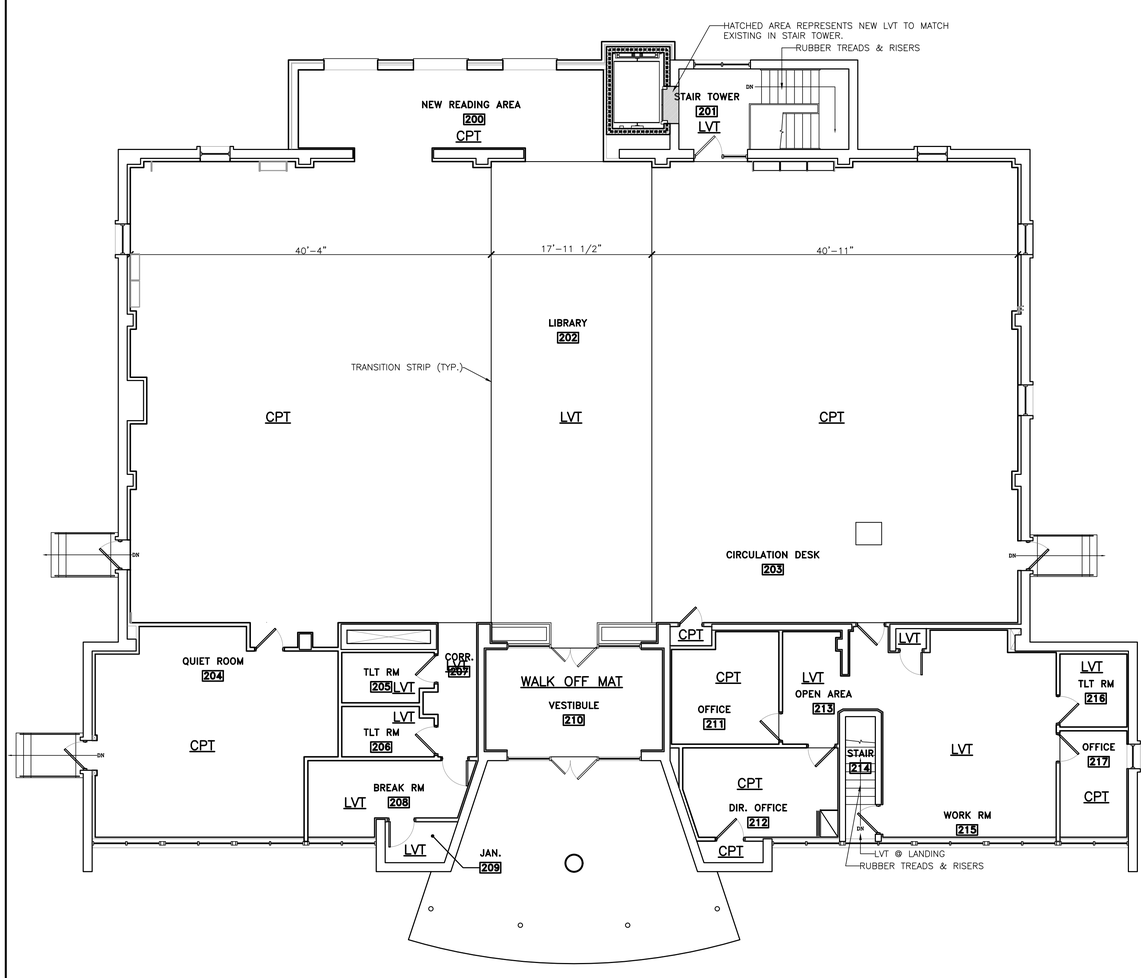
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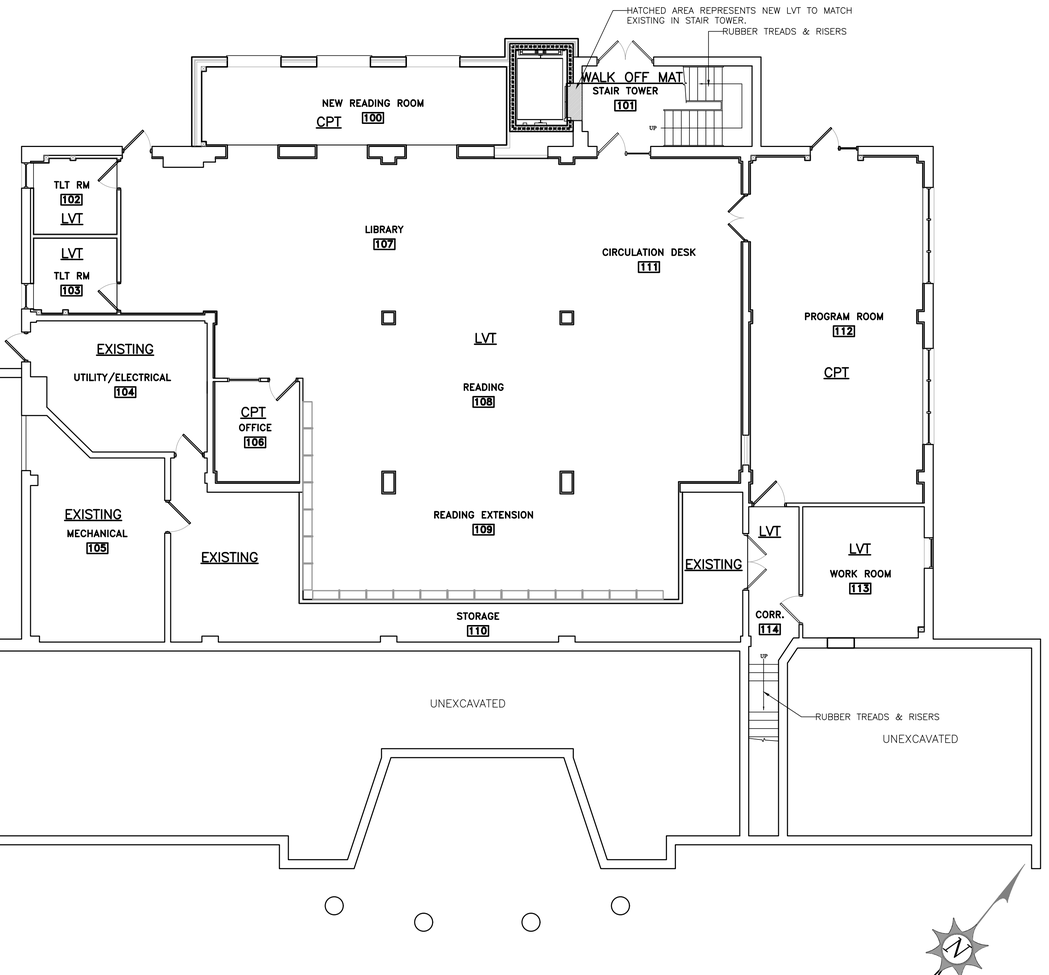
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SHEET NO. A-4.0
SHEET x OF x



2 A-4.1 **UPPER FLOOR FINISH PLAN**

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



1 A-4.1 **GROUND FLOOR FINISH PLAN**

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

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FINISH FLOOR PLANS

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A-4.1
SHEET x OF x

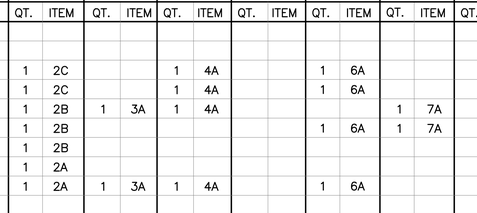
DOOR AND FRAME SCHEDULE

	DOOR								FRAME			FIRE RATING	HINGES		LOCKS		PANIC DEVICES		CLOSERS		PUSH/PULL		BUMPER		KICK PLATE		BOLTS		THRESHOLD		WEATHER STRIPPING		DOOR	REMARKS
	SIZE			TYPE	MAT.	CORE	GLASS	FOB	TYPE	MAT.	DETAILS HEAD & JAMB	LAB.	QT.	ITEM	QT.	ITEM	QT.	ITEM	QT.	ITEM	QT.	ITEM	QT.	ITEM	QT.	ITEM	QT.	ITEM	QT.	ITEM	QT.	ITEM	NO.	
NO.	W	H	T																														
101-1	(2) 3'0"	7'0"	1¾	D	ALUM.		TEMP.		3	ALUM.																							101-1	EXISTING DOOR TO REMAIN
101-2	3'0"	7'0"	1¾	D	ALUM.		TEMP.		1	ALUM.																							101-2	EXISTING DOOR TO REMAIN
102-1	3'0"	7'0"	1¾	A	WD	SC			1	HM			3	1A	1	2C			1	4A			1	6A									102-1	
103-1	3'0"	7'0"	1¾	A	WD	SC			1	HM			3	1A	1	2C			1	4A			1	6A									103-1	
104-1	3'0"	7'0"	1¾	A	HM	INSUL			2	HM			3	1B	1	2B	1	3A	1	4A					1	7A			1	9A	1	10A	104-1	
104-2	3'0"	7'0"	1¾	A	HM	INSUL			1	HM			3	1A	1	2B							1	6A	1	7A							104-2	
105-1	3'4"	7'0"	1¾	A	HM	INSUL			3	HM			3	1A	1	2B																	105-1	
106-1	3'0"	7'0"	1¾	C	WD	SC			1	HM			3	1A	1	2A																	106-1	
107-1	3'0"	7	1¾	D	ALUM.		TEMP.		2	HM			3	1B	1	2A	1	3A	1	4A			1	6A					1	9A	1	10A	107-1	
110-1	(2) 3'0"	7'0"	1¾	A	HM	INSUL			3	HM																							110-1	EXISTING DOOR TO REMAIN
112-1	3'0"	7'0"	1¾	D	ALUM.		TEMP.		2	ALUM.			3	1B	1	2A	1	3A	1	4A			1	6A					1	9A	1	10A	112-1	
112-2	(2) 3'0"	7'0"	1¾	C	WD	SC			3	HM			6	1A	2	2D			1	4A													112-2	
112-3	3'6"	7'0"	1¾	A	WD	SC			1	HM			3	1A	1	2A			1	4A			1	6A									112-3	
113-1	3'0"	7'0"	1¾	A	WD	SC			1	HM																							113-1	EXISTING DOOR TO REMAIN
201-1	3'0"	7'0"	1¾	D	ALUM.		TEMP.		1	HM																							201-1	EXISTING DOOR TO REMAIN
202-1	3'0"	7'0"	1¾	D	ALUM.		TEMP.		2	ALUM.			3	1B	1	2A	1	3A	1	4A			1	6A					1	9A	1	10A	202-1	
202-2	3'0"	7'0"	1¾	D	ALUM.		TEMP.		2	ALUM.			3	1B	1	2A	1	3A	1	4A			1	6A					1	9A	1	10A	202-2	
202-3	3'0"	7'0"	1¾	B	WD	SC	TEMP		1	HM			3	1A	1	2A							1	6A	1	7A							202-3	
202-4	2'6"	7'0"	1¾	C	WD	SC			1	HM			3	1A	1	2A																	202-4	
204-1	3'0"	7	1¾	B	WD	SC			1	HM			3	1A	1	2D							1	6A									204-1	
204-2	3'0"	7'0"	1¾	A	ALUM.		TEMP.		2	ALUM.			3	1B	1	2A	1	3A	1	4A			1	6A					1	9A	1	10A	204-2	
205-1	3'0"	7'0"	1¾	A	WD	SC			1	HM			3	1A	1	2C							1	6A	1	7A							205-1	
206-1	3'0"	7'0"	1¾	A	WD	SC			1	HM			3	1A	1	2C							1	6A	1	7A							206-1	
208-1	3'0"	7'0"	1¾	A	WD	SC			3	HM			3	1A	1	2A							1	6A	1	7A							208-1	
209-1	3'0"	7'0"	1¾	A	WD	SC			1	HM			3	1A	1	2E							1	6A									209-1	
210-1	3'0"x2'0"	7'0"	1¾	D	ALUM.		TEMP.		3	HM			3	1A																			210-1	EXISTING DOOR TO REMAIN
210-2	3'0"x2'0"	7'0"	1¾	D	ALUM.		TEMP.		3	HM			3	1A																			210-2	EXISTING DOOR TO REMAIN
211-1	3'0"	7'0"	1¾	A	WD	SC			1	HM			3	1A	1	2A							1	6A									211-1	
212-1	3'0"	7'0"	1¾	A	WD	SC			1	HM			3	1A	1	2A							1	6A									212-1	
212-2	3'0"	7'0"	1¾	A	WD	SC			1	HM			3	1A	1	2B							1	6A									212-2	
214-1	3'0"	7'0"	1¾	A	WD	SC			1	HM			3	1A	1	2D							1	6A									214-1	
215-1	2'6"	7'0"	1¾	A	WD	SC			1	HM			3	1A	1	2B							1	6A									215-1	
216-1	3'0"	7'0"	1¾	A	WD	SC			1	HM			3	1A	1	2A							1	6A									216-1	
217-1	3'0"	7'0"	1¾	A	WD	SC			1	HM			3	1A	1	2A							1	6A									217-1	

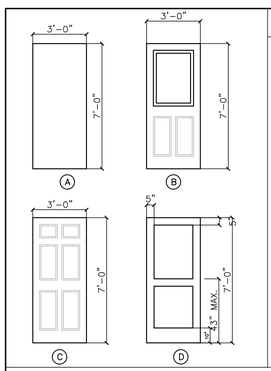
GENERAL NOTE:
DOOR. FRAME, & HARDWARE SCHEDULE FOR BUDGETARY PURPOSES ONLY.
ALL FINAL DOORS,FRAMES, & HARDWARE TO BE SELECTED & APPROVED BY OWNER.

HARDWARE ITEM SCHEDULE

ITEM NUMBER	DESCRIPTION	FINISH	MANUFACTURER
1A	5BB1-NRP- 4.5"x4.5"-BALL BEARING HINGE	US26D	IVES
1B	5BB1-NRP-SEC 4.5"x4.5"-NON FERROUS BALL BEARING HINGE	US32D	IVES
2A	AL50PD-SAT-626 (OFFICE FUNCTION) w/ INTERCHANGEABLE CORE	626	SCHLAGE
2B	AL80PD-SAT-626 (STOREROOM FUNCTION) w/ INTERCHANGEABLE CORE	626	SCHLAGE
2C	AL40S-SAT-626 (RESTROOM FUNCTION)	626	SCHLAGE
2D	AL10S-SAT-626 (PASSAGE FUNCTION)	626	SCHLAGE
2E	AL170-SAT-626 (DUMMY TRIM)	626	SCHLAGE
2F	B600-626 DEADBOLT w/ THUMBTURN	626	SCHLAGE
2G	D9336 MAXI MORTISE - INMATE KEYED LOCK		FOLGER ADAM
3A	99-27-L-06 SURFACE	US26D	VON DUPRIN
3B	99-47-L-06 CONCEALED	US26D	VON DUPRIN
3C	99-47-L-BE-06 BLANK (PASSAGE)	US26D	VON DUPRIN
4A	4040 SERIES	AL	LCN
5A	8200 PUSH PLATE 4x16/8302 PULL PLATE 4x16	US32D	IVES
6A	#409 CONCAVE WALL BUMPER	626	ROCKWOOD
6B	#441CU FLOOR BUMPER	626	ROCKWOOD
7A	8"x34"x.050 - KICKPLATE	US32D	HAGER
8A	292-D - AUTO-LATCHING FLUSH BOLT SET	US26D	HAGER
8B	318-D - ROLLER LATCH	US26D	HAGER
9A	413 S SADDLE THRESHOLD	MIL	HAGER
9B	477 S BUMPER THRESHOLD w VINYL INSERT	MIL	HAGER
10A	PEMKO 3030S GASKETING PEMKO 346 DOOR TOP	MIL	PEMKO



FRAME TYPES



DOOR NOTES:

1) ALL DOORS TO BE PROVIDED WITH LEVER HANDLES

2) ALL HOLLOW METAL DOORS TO BE 18 GAUGE. ALL EXTERIOR HOLLOW METAL FRAMES TO BE 16 GAUGE. ALL HOLLOW METAL FRAMES SHALL BE PROVIDED WITH REINFORCING AT THE HINGE, JAMB, STRIKE, AND CLOSER LOCATIONS. HOLLOW METAL FRAMES IN GYP. BD. OPENINGS SHALL BE KNOCKDOWN FRAMES.

3) ALL HOLLOW METAL DOORS AND FRAMES SHALL BE PAINTED - SEE FINISH SCHEDULE. ALL WOOD DOORS TO BE STAIN GRADE.

4) ALL DOORS SHALL RECEIVE SILENCER PADS AT HM FRAME. PROVIDE ROCKWOOD #608 OR #609

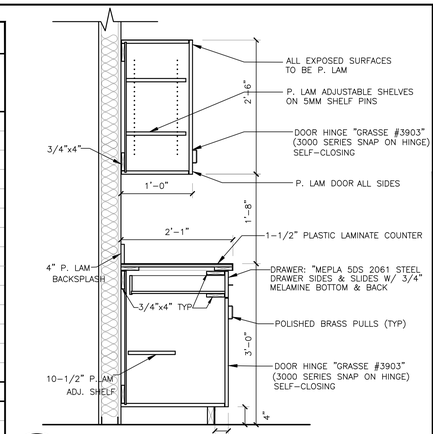
5) ALL EXTERIOR HM DOORS AND FRAMES SHALL RECEIVE FACTORY APPLIED A60 GALVANIZED FINISH. PROVIDE FIELD APPLIED GALVANIZED FINISH AS A RESULT OF FIELD PREPARATION AND/OR HARDWARE INSTALLATION.

6) ALL RATED DOORS TO HAVE UL LABELS

7) THRESHOLDS, WEATHERSTRIPPING & SWEEPS TO BE INSTALLED PER MANF. INSTRUCTIONS

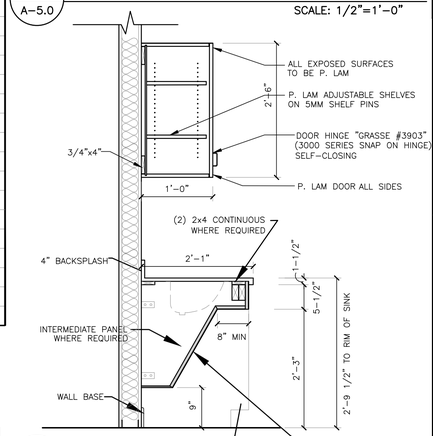
8) DOOR TYPE "D" - THERMALLY BROKEN, 1" INSULATING TEMPERED GLASS, WITH 10" BOTTOM RAIL. PROVIDE DOR-O-MATIC 1390 MID RAIL PANIC, INTERNATIONAL RIM LOCK CYLINDER, & LCN 4041 SUPER SMOOTHIE SURFACE MOUNTED CLOSER

DOOR TYPES



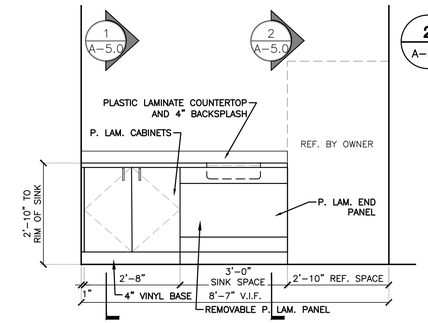
1 A-5.0 **CASEWORK SECTION**

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



2 A-5.0 **CASEWORK SECTION**

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



3 A-5.0 **CASEWORK ELEVATION**

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

LINN ARCHITECTS
ARCHITECTURE
ENGINEERING
SITE PLANNING
CODE SERVICES
1140 N. PROVIDENCE ROAD
MEDIA, PENNSYLVANIA 19063
TEL: 610-566-7044
FAX: 610-566-3258

DOOR - FRAME - HARDWARE SCHEDULE

BUILDING ADDITION & RENOVATION
SPRINGFIELD TOWNSHIP LIBRARY
70 POWELL ROAD
SPRINGFIELD, PA 19064

REVISIONS NO.	DESCRIPTION	DATE
1	BID SET	7.14.26

DATE: 7.2.2026
SCALE: AS NOTED
DRAWN BY: JJ
CHECKED BY: MC
PROJ. NO.: 25254

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A-5.0
SHEET OF

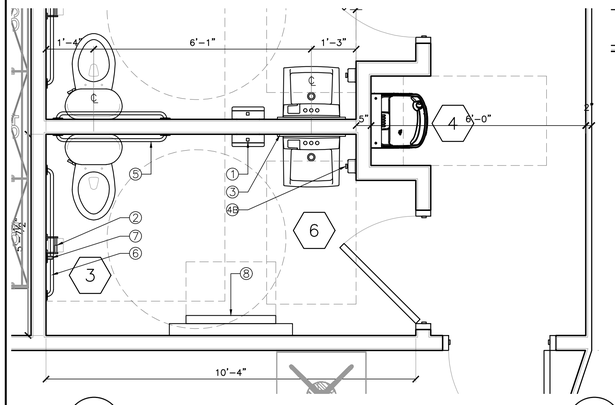
INTERIOR ROOM FINISH SCHEDULE

ROOM			FLOORS											BASES			WALLS				CEILINGS					NUMBER	REMARKS
	NUMBER	ROOM NAME	MATERIALS											MATERIALS			MATERIALS			MTG.	MATERIALS				MTG.		
LOCATION (FLOOR)			CARPET TILE	LVT	VCT 1	VCT 2	WALK OFF CARPET	SEALED CONCRETE	CERAMIC TILE	EPOXY	EXISTING			4" VINYL COVE	CERAMIC 1	NOINE	G.W.B. PAINTED	CMU PAINTED	CERAMIC TILE		2X2 ACT 1	PAINTED STRUCTURE	GYP. BD. PTD	EXISTING	SUSPENSION HEIGHT		
1st	100	NEW READING AREA	●											●			●				●				8'-0"	100	
1st	101	STAIR TOWER		●			●							●			●				●				8'-0"	101	
1st	102	TOILET ROOM		●										●			●				●				8'-0"	102	
1st	103	TOILET ROOM		●										●			●				●				8'-0"	103	
1st	104	UTILITY / ELECTRICAL									●			●			●				●				8'-0"	104	
1st	105	MECHANICAL									●			●			●				●				8'-0"	105	
1st	106	OFFICE		●										●			●				●				8'-0"	106	
1st	107	LIBRARY		●										●			●				●				8'-0"	107	
1st	108	READING		●										●			●				●				8'-0"	108	
1st	109	READING EXTENSION		●										●			●				●				8'-0"	109	
1st	110	STORAGE									●			●			●				●				8'-0"	110	
1st	111	CIRCULATION DESK		●										●			●				●				8'-0"	111	
1st	112	PROGRAM ROOM	●											●			●				●				8'-0"	112	
1st	113	WORK ROOM		●										●			●								8'-0"	113	
1st	114	CORRIDOR / STAIR					●							●				●					●			114	
2nd	200	NEW READING AREA	●											●				●			●				8'-0"	200	
2nd	201	STAIR TOWER		●			●							●				●			●				8'-0"	201	
2nd	202	LIBRARY	●	●										●				●			●				10'-0"	202	
2nd	203	CIRCULATION DESK		●										●				●			●				8'-0"	203	
2nd	204	QUIET ROOM	●											●				●			●				8'-0"	204	
2nd	205	TOILET ROOM		●										●				●			●				8'-0"	205	
2nd	206	TOILET ROOM		●										●				●			●				8'-0"	206	
2nd	207	CORRIDOR		●										●				●			●				8'-0"	207	
2nd	208	BREAK ROOM		●										●				●			●				8'-0"	208	
2nd	209	JANITORS CLOSET		●										●				●			●				8'-0"	209	
2nd	210	VESTIBULE					●							●				●			●				8'-0"	210	
2nd	211	OFFICE	●											●				●			●				8'-0"	211	
2nd	212	DIRECTOR OFFICE	●											●				●			●				8'-0"	212	
2nd	213	OPEN AREA		●										●				●			●				8'-0"	213	
2nd	214	STAIR		●										●				●			●				8'-0"	214	
2nd	215	WORK ROOM		●										●				●			●				8'-0"	215	
2nd	216	TOILET ROOM		●										●				●			●				8'-0"	216	
2nd	217	OFFICE	●											●				●			●				8'-0"	217	

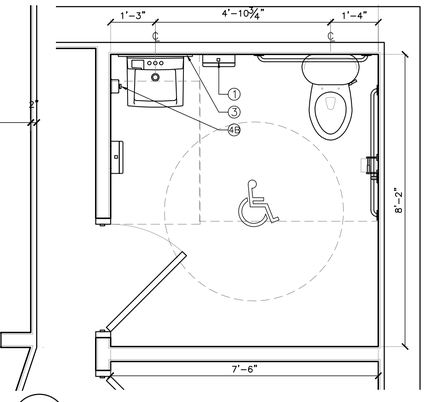
MATERIAL SPECIFICATIONS

ITEM	MANUFACTURER	STYLE OR CATALOG #	COLOR	REMARKS
FLOORS				
CARPET TILE	SHAW	SURROUND TILE-5T125	LIMESTONE 17530	
LVT	DURATO	AZUL TORTUGA	REHOBOTH AT-04	
VCT 1	ARMSTRONG	VINYL - 5C803	PEARL WHITE	
WALK OFF CARPET	SHAW	ENTRYWAY TILE - 5T032	STERLING 31557	
CONCRETE SEALER	BASF	TO BE SELECTED	GRAY	
CERAMIC TILE	GARDEN STATE TILE	12" X 24" UNPOLISHED	STONE FICTION TRAVERTINE BEIGE	
EPOXY	SHERWIN WILLIAMS	ARMOSEAL 650 SL/RC	HAZE GRAY	MODERATE GRIT
BASE				
VINYL	ROPPE	4" VINYL COVE	175 SLATE	INSTALL IN ROLLS
CERAMIC TILE	GARDEN STATE TILE	6" X 12" COVE BASE	STONE FICTION TRAVERTINE BEIGE	
WALLS				
PAINT WALLS	SHERWIN WILLIAMS	TO BE SELECTED	TO BE SELECTED	
PAINT DOOR FRAMES	SHERWIN WILLIAMS	TO BE SELECTED	TO BE SELECTED	
CERAMIC TILE	GARDEN STATE TILE	12" X 12" UNPOLISHED	FEATHERSTONE	FINISH w/ BULLNOSE
CEILING				
2x2 ACOUSTICAL TILE 1	ARMSTRONG	CLASSIC FINE TEXTURE	#954 WHITE	w/ PRELUDE XL 15/16 GRID

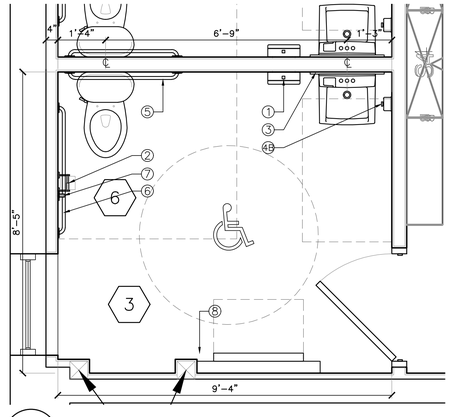
GENERAL NOTE:
FINISH SCHEDULE FOR BUDGETARY PURPOSES ONLY.
ALL FINAL FINISHES TO BE SELECTED & APPROVED BY OWNER.



2 A-5.1 **ADA TOILET ROOM 206 PLAN DETAILS**
TLT RM 205 IS OPP. HAND SCALE: 1/2"=1'-0"



3 A-5.1 **ADA TOILET ROOM 216 PLAN DETAILS**
SCALE: 1/2"=1'-0"

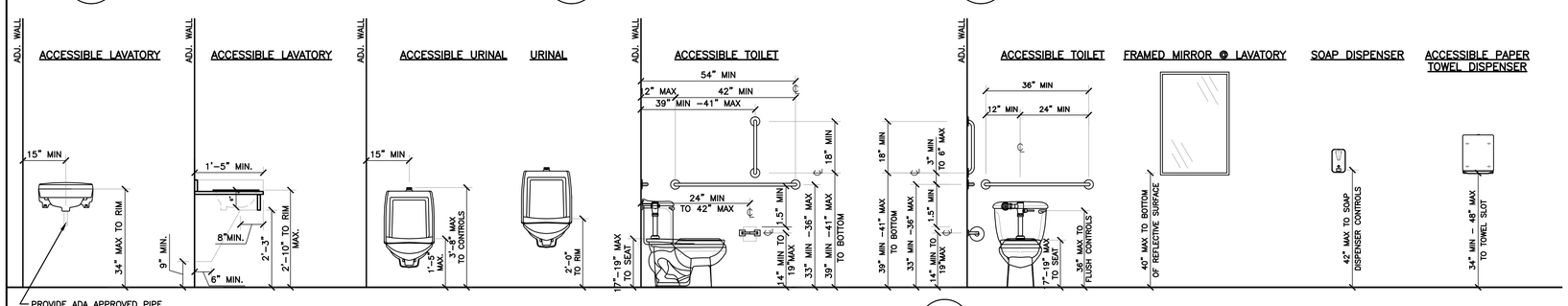


4 A-5.1 **ADA TOILET ROOM 206 PLAN DETAILS**
TLT RM 205 IS OPP. HAND SCALE: 1/2"=1'-0"

TOILET ROOM ACCESSORY SCHEDULE

DESIG.	MANUF.	CAT. #	ITEM	MTG.	FINISH	MTG. HEIGHT	QTY.
1	BOBRICK	B-262 ♿	P. TOWEL DISPENSER	SURFACE	STAIN. STL.	34" MIN TO 48" MAX TO TOWEL SLOT	5
2	BOBRICK	B-7685 ♿	TOIL. PAPER DISPENSER	SURFACE	STAIN. STL.	15" MIN TO 48" MAX A.F.F TO OUTLET	5
3	BRADLEY	781-024360 2436	MIRROR	SURFACE	STAIN. STL.	40" MAX TO BOTTOM OF REFLECTIVE SURFACE	5
4A	BOBRICK	B-8221 ♿	SOAP DISPENSER	SURFACE	STAIN. STL.	48" MAX TO CONTROLS (REACH RANGE: VARIES)	5
4B	BOBRICK	B-2111	SOAP DISPENSER	SURFACE	STAIN. STL.	48" MAX TO CONTROLS (REACH RANGE: VARIES)	5
5	BOBRICK	B-6806 x 36	REAR GRAB BAR	SURFACE	STAIN. STL.	33" MIN TO 36" MAX A.F.F	5
6	BOBRICK	B-6806 x 42	SIDE GRAB BAR	SURFACE	STAIN. STL.	33" MIN TO 36" MAX A.F.F	5
7	BOBRICK	B-6806 x 18	VERT GRAB BAR	SURFACE	STAIN. STL.	39" MIN TO 41" MAX A.F.F TO BOTTOM	5
8	KOALA KARE	KB310	BABY CHANGING STATION	SURFACE	STAIN. STL.	48" MAX TO CONTROLS A.F.F TO BOTTOM	4

NOTES:
1. PROVIDE WOOD BLOCKING AS REQUIRED FOR ALL ACCESSORIES
2. PROVIDE ADA APPROVED INSULATION ON ALL EXPOSED PLUMBING



1 A-5.1 **TYP. TLT RM ACCESSORY MOUNTING HEIGHTS**
SCALE: 1/2"=1'-0"

LINN ARCHITECTS
ARCHITECTURE
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SITE PLANNING
CODE SERVICES
1140 N. PROVIDENCE ROAD
MEDIA, PENNSYLVANIA 19063
TEL: 610-566-7044
FAX: 610-566-3258

ADA TOILET ROOM DETAILS & FINISH SCHEDULE
BUILDING ADDITION & RENOVATION
SPRINGFIELD TOWNSHIP LIBRARY
70 POWELL ROAD
SPRINGFIELD, PA 19064

REVISIONS NO.	DESCRIPTION	DATE
1	BID SET	7.14.26

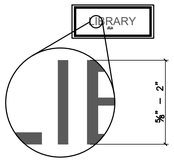
DATE: 7.2.2026
SCALE: AS NOTED
DRAWN BY: JJ
CHECKED BY: MC
PROJ. NO.: 25254

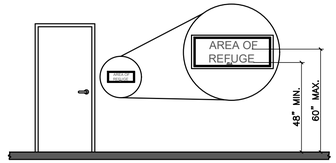
SHEET NO. A-5.1
SHEET x OF x

ADA REQ'D BRAILLE SIGNS
MOUNT BETWEEN 48" & 60" A.F.F.
PRODUCT # BASED ON 'COMPLIANCE SIGNS' CATALOG

X

1 EXIT — RRE-655
2 EMERGENCY EXIT — RSME-28041
3 ACCESSIBLE UNISEX TOILET ROOM — RRE-14845
4 ELEVATOR — RSME-305
5 STAIRWAY — RSME-575
6 OFFICE — RSME-485
7 AUTHORIZED PERSONNEL ONLY — RSME-260
8 CUSTOM – QUIET ROOM
9 STORAGE — RSME – 583
10 MECHANICAL ROOM — RSME-426
11 ELECTRICAL ROOM — RSME-302

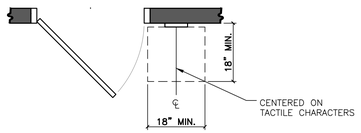




ICC/ANSI A117.1–2003 TABLE 703.2.4 – VISUAL CHARACTER HEIGHT

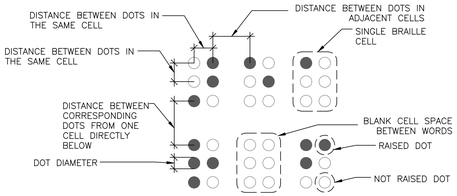
HEIGHT ABOVE FLOOR TO BASELINE OF CHARACTER	HORIZONTAL VIEWING DISTANCE	MINIMUM CHARACTER HEIGHT
40 INCHES (1015mm) TO LESS THAN OR EQUAL TO 70 INCHES (1780mm)	LESS THAN 6 FEET (1830mm)	⅝" (16mm)
	6 FEET (1830mm) AND GREATER	⅝" (16mm), PLUS ⅛" (3.2mm) PER FOOT (305mm) OF VIEWING DISTANCE ABOVE 6 FEET (1830mm)
GREATER THAN 70 INCHES (1780mm) TO LESS THAN OR EQUAL TO 120 INCHES (3050mm)	LESS THAN 15 FEET (4570mm)	2 INCHES (51mm)
	15 FEET (4570mm) AND GREATER	2 INCHES (51mm), PLUS ⅛" INCH (3.2mm) PER FOOT (305mm) OF VIEWING DISTANCE ABOVE 15 FEET (4570mm)
GREATER THAN 120 INCHES (3050mm)	LESS THAN 21 FEET (6400mm)	3 INCHES (75mm)
	21 FEET (6400mm) AND GREATER	3 INCHES (76mm), PLUS ⅛" (3.2mm) PER FOOT (305mm) OF VIEWING DISTANCE ABOVE 21 FEET (6400mm)

NOTE:
ALL COMMUNICATION ELEMENTS AND FEATURES TO COMPLY WITH CHAPTER 7 OF THE ICC/ANSI A117.1–2003







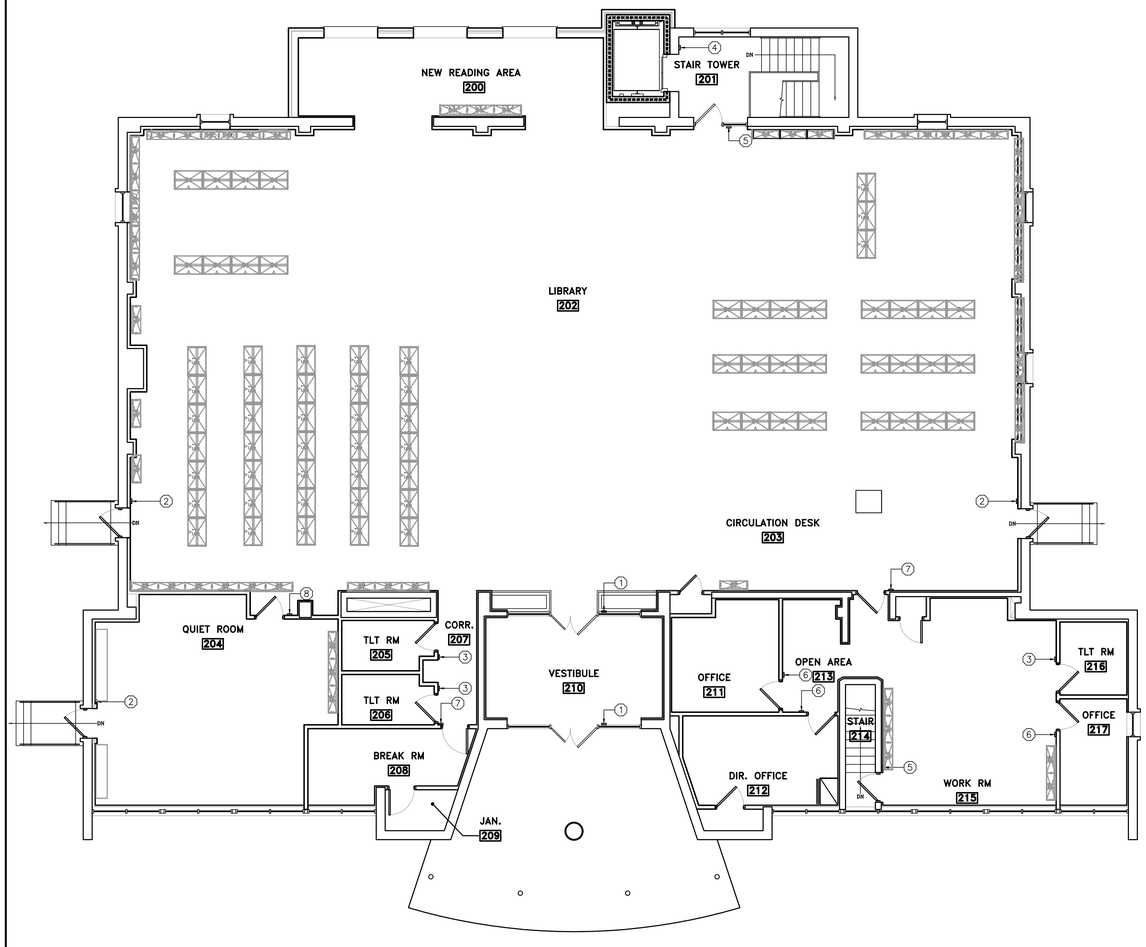


ICC/ANSI A117.1–2003 TABLE 703.4.3 – BRAILLE DIMENSIONS

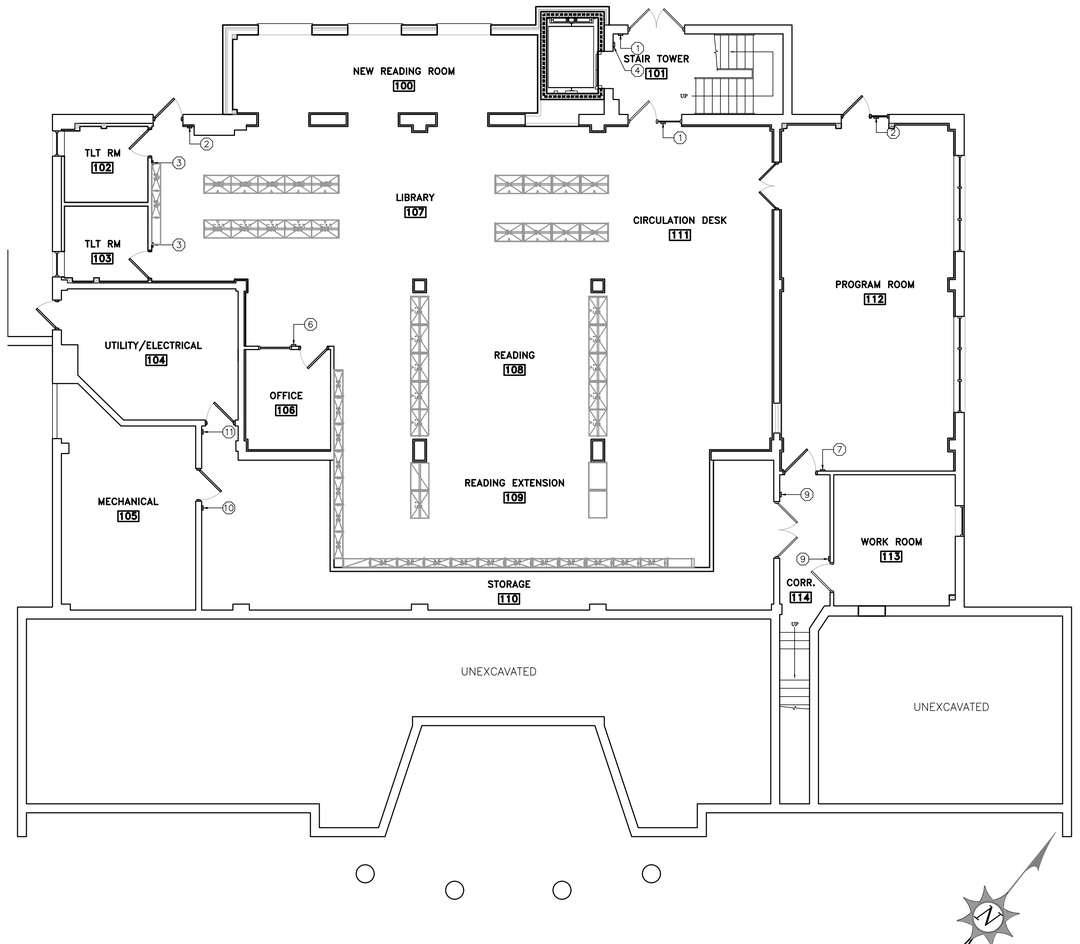
MEASUREMENT RANGE	MINIMUM IN INCHES MAXIMUM IN INCHES
DOT BASE DIAMETER	0.059 (1.5mm) TO 0.063 (1.6mm)
DISTANCE BETWEEN TWO DOTS IN THE SAME CELL	0.090 (2.3mm) TO 0.100 (2.5mm)
DISTANCE BETWEEN CORRESPONDING DOTS IN ADJACENT CELLS[1]	0.241 (6.1mm) TO 0.300 (7.6mm)
DOT HEIGHT	0.025 (0.6mm) TO 0.037 (0.9mm)
DISTANCE BETWEEN CORRESPONDING DOTS FROM ONE CELL DIRECTLY BELOW[1]	0.395 (10.0mm) TO 0.400 (10.2mm)

[1] MEASURED CENTER TO CENTER

3 A–5.2 **ADA SIGNAGE DETAILS**
SCALE: N.T.S.



2 A–5.2 **SECOND FLOOR FINISH PLAN**
SCALE: 1/8"=1'–0"



1 A–5.2 **FIRST FLOOR SIGNAGE PLAN**
SCALE: 1/8"=1'–0"

LINN ARCHITECTS
ARCHITECTURE
ENGINEERING
SITE PLANNING
CODE SERVICES
1140 N. PROVIDENCE ROAD
MEDIA, PENNSYLVANIA 19063
TEL: 610-566-7044
FAX: 610-566-3258

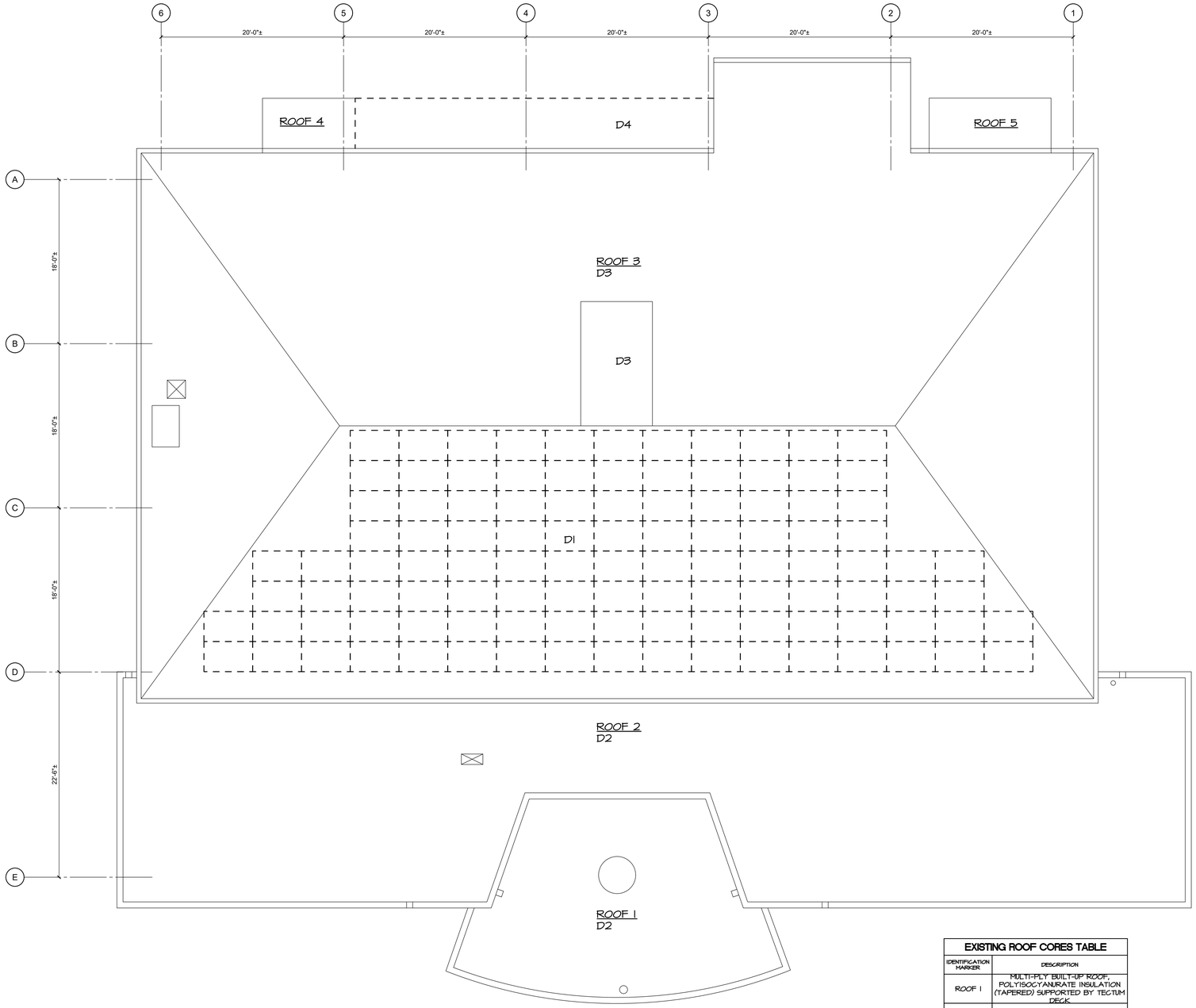
SIGNAGE PLANS

BUILDING ADDITION & RENOVATION
SPRINGFIELD TOWNSHIP LIBRARY
70 POWELL ROAD
SPRINGFIELD, PA 19064

REVISIONS NO.	DESCRIPTION	DATE
1	BID SET	7.14.26

DATE: 7.2.2026
SCALE: AS NOTED
DRAWN BY: JJ
CHECKED BY: MC
PROJ. NO.: 25254

SHEET NO.
A-5.2
SHEET × OF ×



ROOFING DEMOLITION PLAN

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

PROJECT NORTH

ROOFING DEMOLITION TABLE

IDENTIFICATION MARKER	DESCRIPTION	DETAIL REFERENCE
D1	REMOVE EXISTING SOLAR PANEL SYSTEM, DISPOSE OF THEM LEGALLY	N/A
D2	REMOVE EXISTING ROOFING SYSTEM, INSULATION AND FLASHINGS DOWN TO DECK, ENGINEER TO INSPECT DECK. REPAIR ANY DAMAGED DECK WHERE DIRECTED. SEE CORE INFORMATION IN ADJACENT CHART.	5/S-301
D3	REMOVE EXISTING COPPER ROOF DOWN TO DECK. COPPER TO BE DISPOSED OF AS SALVAGE, WITH CREDIT BACK TO OWNER.	N/A
D4	REMOVE EXISTING CANOPY (SEE ARCHITECTURAL FOR EXTENT)	N/A

EXISTING ROOF CORES TABLE

IDENTIFICATION MARKER	DESCRIPTION
ROOF 1	MULTI-PLY BUILT-UP ROOF, POLYISOCYANURATE INSULATION (TAPERED) SUPPORTED BY TECTUM DECK.
ROOF 2	MULTI-PLY BUILT-UP ROOFING, POLYISOCYANURATE INSULATION (TAPERED) SUPPORTED BY CONCRETE DECK
ROOF 3	COPPER STANDING SEAM METAL ROOF SUPPORTED BY WOOD PLANK DECK AND BATTEN STRIPS - A PORTION OF THE ROOF HAS BEEN COVERED WITH EPDM
ROOF 4	NO EXISTING ROOFING SYSTEM
ROOF 5	NO EXISTING ROOFING SYSTEM

ISSUED FOR BID
DATE: 08/07/2026

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Philadelphia, PA 19103
T 215.222.3000 F 215.222.3588

ALL DIMENSIONS MUST BE VERIFIED BY CONTRACTOR AND OWNER MUST BE NOTIFIED OF ANY DISCREPANCIES BEFORE PROCEEDING WITH WORK

SPRINGFIELD LIBRARY BUILDING RENOVATION
POWELL ROAD
SPRINGFIELD, PA

FIRST FLOOR PLAN

TOWNSHIP OF SPRINGFIELD

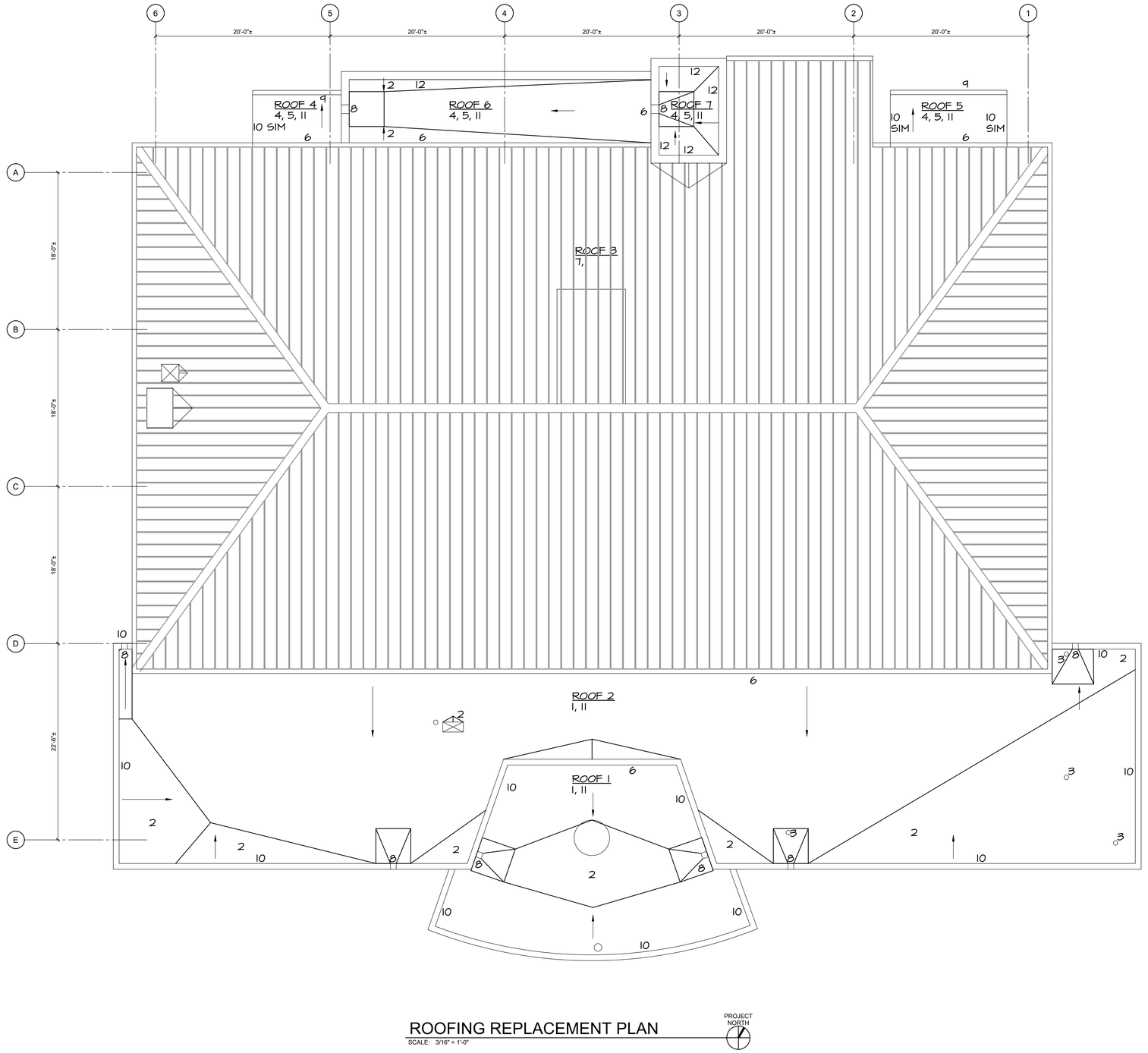
NO.	DATE	REVISIONS	BY

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PROJECT	SPFLD00611
DATE	08/07/2026
DRAWING SCALE	AS NOTED
DRAWN BY	RK
APPROVED BY	DM

S-103
SHEET 1 OF 4

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ROOFING REPLACEMENT TABLE

IDENTIFICATION MARKER	DESCRIPTION	DETAIL REFERENCE
1	INSTALL INSULATION (R-30 TOTAL) AND NEW MODIFIED BITUMINOUS ROOFING AND FLASHING SYSTEM	1/S-300
2	INSTALL CRICKETS AS REQUIRED TO ACHIEVE POSITIVE DRAINAGE. MIN. SLOPE TO BE ¼"/1'-0"	PER SPECIFICATION 07 55 10
3	EXISTING STACKS TO REMAIN. INCREASE HEIGHT AS REQUIRED PER DETAIL. PROVIDE NEW FLASHING	5/S-300
4	INSTALL TAPERED INSULATION TO ACHIEVE ¼"/1'-0" SLOPE AND NEW MODIFIED BITUMINOUS ROOFING AND FLASHING SYSTEM. INSTALL NEW WOOD BLOCKING AS REQUIRED.	PER SPECIFICATION 07 55 10
5	IF FLASHING HEIGHTS ARE TOO LOW TO USE COUNTERFLASHING, INSTALL LIQUID FLASHING PER MANUF. INSTRUCTIONS.	PER SPECIFICATION 07 55 10
6	INSTALL NEW REGLET COUNTERFLASHING. IF CONSTRUCTION DOES NOT PERMIT A REGLET TO BE INSTALLED, CONGTRACTOR MAY SUBSTITYTE WITH A SURFACE MOUNTED COUNTERFLASHING APPROVED BY MANUF.	3/S-300
7	INSTALL NEW STANDING SEAM METAL ROOF PROVIDE METAL DIVERTERS WHERE REQUIRED	PER METAL DETAILS ON S-300 AND S-301 AND SPECIFICATION 07 41 31
8	INSTALL NEW THRU-WALL SCUPPERS. CONTRACTOR TO VERIFY ALL DRAINS ARE FREE OF ALL DEBRIS BEFORE, DURING AND AFTER CONSTRUCTION AND THAT DRAINS AND PIPES ARE IN WORKING ORDER. DRAIN TEST REQUIRED. SUMP SQUARE AREA AROUND EXISTING LOCATION WHERE PERMITTED. IF NO ROOM EXISTS, SUMP AREA AS LARGE AS POSSIBLE.	4/S-300
9	INSTALL NEW ROOF GUTTER AND DOWNSPOUTS TO DISCHARGE EITHER A A PRE-CAST CONCRETE SPLASH BLOCK OR TO THE EXISTING UNDERGROUND SYSTEM.	
10	INSTALL NEW RAISED METAL EDGE	2/S-300
11	CONSTRACTOR TO PERFORM AND INFRA-RED SCAN AT THE CONCLUSION OF THE PROJECT BY AN INDEPENDANT SUBCONTRACTOR.	SEE SPECIFICATION 07 55 11
12	INSTALL NEW COPING CAP	12/S-300

ROOFING REPLACEMENT PLAN

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

PROJECT NORTH

ISSUED FOR BID

DATE: 08/07/2026

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SPRINGFIELD LIBRARY BUILDING RENOVATION
POWELL ROAD
SPRINGFIELD, PA

ROOF FRAMING PLAN

TOWNSHIP OF SPRINGFIELD

NO.	DATE	REVISIONS	BY

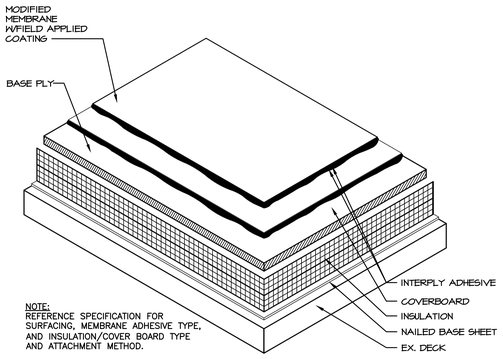
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PROJECT	SPFLD00611
DATE	08/07/2026
DRAWING SCALE	AS NOTED
DRAWN BY	RK
APPROVED BY	DM

S-104

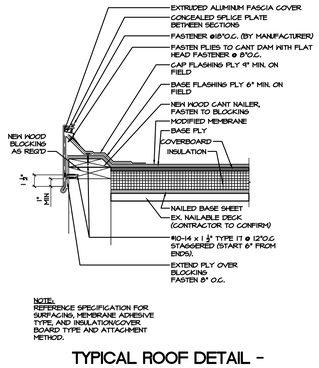
SHEET 2 OF 4

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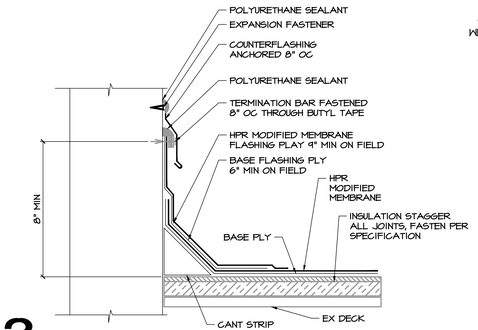
1 TYPICAL ROOF DETAIL - ROOF ASSEMBLY

SCALE: N.T.S.



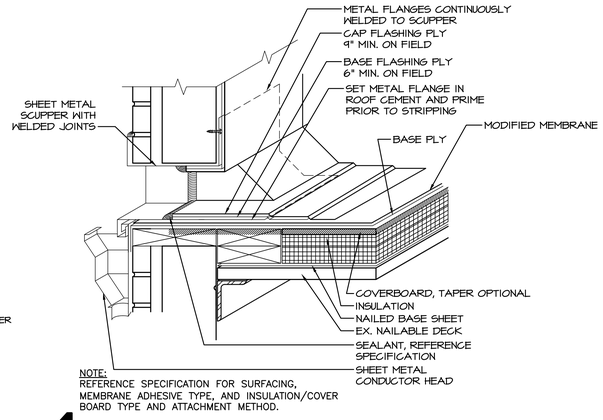
2 TYPICAL ROOF DETAIL - METAL EDGE

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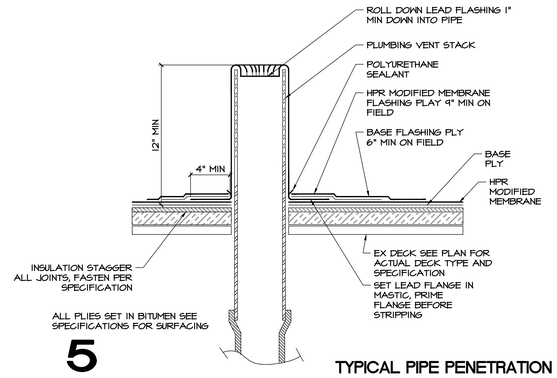
3 TYPICAL DETAIL REGLET COUNTERFLASHING

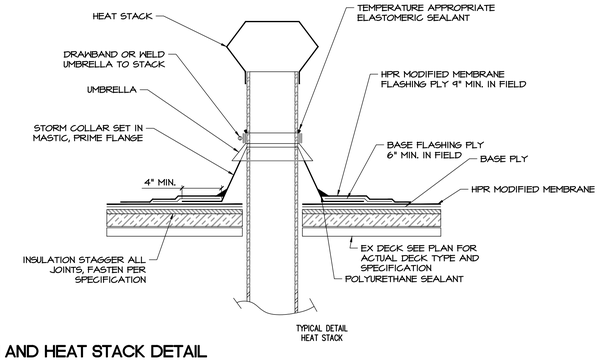
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4 TYPICAL DETAIL SCUPPER THROUGHWALL

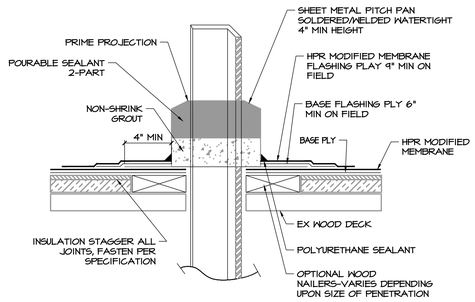
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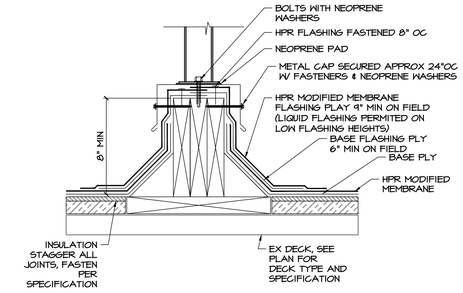
5 TYPICAL PIPE PENETRATION AND HEAT STACK DETAIL

SCALE: N.T.S.



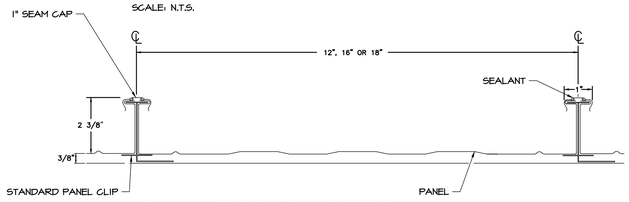
6 TYPICAL ROOF DETAIL - PITCH POCKET

SCALE: N.T.S.



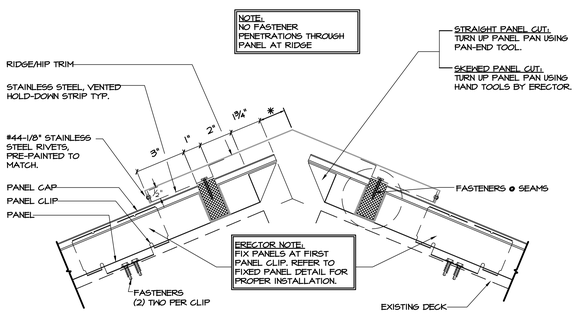
7 TYPICAL ROOF DETAIL - EQUIPMENT SUPPORT

SCALE: N.T.S.



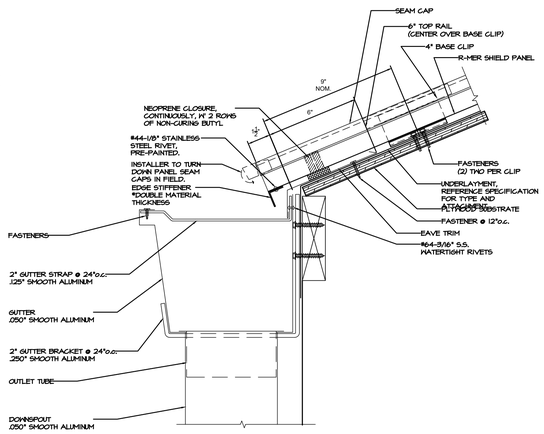
8 TYPICAL ROOF DETAIL - METAL PANEL PROFILE

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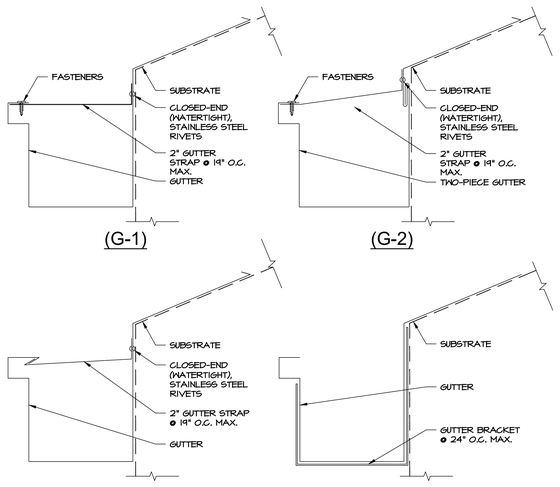
9 TYPICAL ROOF DETAIL - RIDGE VENTED

SCALE: N.T.S.



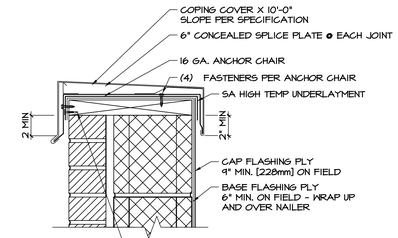
10 TYPICAL ROOF DETAIL - EAVE WITH GUTTER

SCALE: N.T.S.



11 TYPICAL ROOF DETAIL - GUTTER DETAIL

SCALE: N.T.S.



12 TYPICAL ROOF DETAIL - COPING CAP

SCALE: N.T.S.

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SPRINGFIELD LIBRARY BUILDING RENOVATION
POWELL ROAD
SPRINGFIELD, PA

ROOFING DETAILS

TOWNSHIP OF SPRINGFIELD

								BY
								REVISIONS
								NO.
								DATE

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PROJECT	SPFLD00611
DATE	08/07/2026
DRAWING SCALE	AS NOTED
DRAWN BY	RK
APPROVED BY	DM

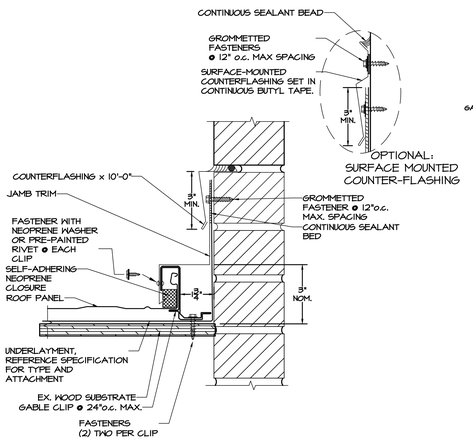
S-300

SHEET 3 OF 4

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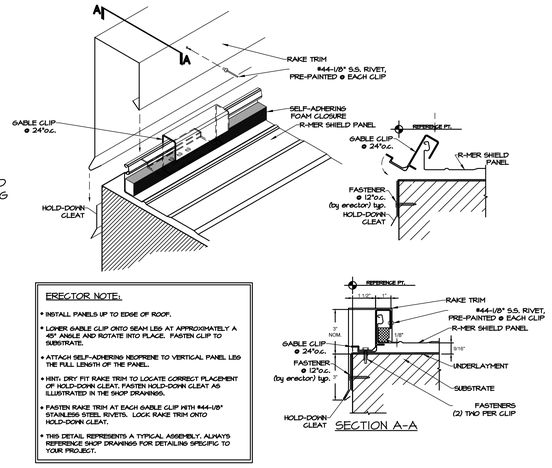
DATE: 08/07/2026

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1 TYPICAL ROOF DETAIL - JAMB AT RISING WALL

SCALE: N.T.S.

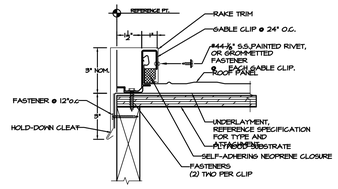


ERECTOR NOTE:

- INSTALL PANELS UP TO EDGE OF ROOF.
- LOWER GABLE CLIP ONTO SEAM LEG AT APPROXIMATELY A 45° ANGLE AND ROTATE INTO PLACE. FASTEN CLIP TO SUBSTRATE.
- ATTACH SELF-ADHERING NEOPRENE TO VERTICAL PANEL LEG THE FULL LENGTH OF THE PANEL.
- HINT: DRY FIT RAKE TRIM TO LOCATE CORRECT PLACEMENT OF HOLD-DOWN CLEAT. FASTEN HOLD-DOWN CLEAT AS ILLUSTRATED IN THE SHOP DRAWINGS.
- FASTEN RAKE TRIM AT EACH GABLE CLIP WITH #44-1/8" STAINLESS STEEL RIVETS. LOCK RAKE TRIM ONTO HOLD-DOWN CLEAT.
- THIS DETAIL REPRESENTS A TYPICAL ASSEMBLY. ALWAYS REFERENCE SHOP DRAWINGS FOR DETAILING SPECIFIC TO YOUR PROJECT.

2 TYPICAL ROOF DETAIL - RAKE CLOSURE

SCALE: N.T.S.



3 TYPICAL ROOF DETAIL - RAKE DETAIL

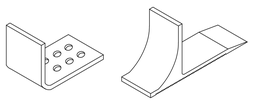
SCALE: N.T.S.

CURB & COLLAR SEALS

ROOF PENETRATIONS SUCH AS SKYLIGHTS, VENT-FANS, ETC., CAN BE COLLARED. THIS SYSTEM WORKS WELL IN HEAVY SNOW LOAD AREAS AND CAN BE ADAPTED TO MANY DIFFERENT CONDITIONS. SMALLER PENETRATIONS OR PROTRUSIONS CAN BE SEALED WITH A VARIATION OF THE SEALED JAMB DETAILS SHOWN ON PG 22. THIS DETAIL ALLOWS FOR PANEL MOVEMENT WHILE SEALING AGAINST SNOW DRIFT AND ICE BUILD UP.

SNOW MOVEMENT

SNOW MOVEMENT ON ALL STANDING SEAM ROOFS IS CHANNELED BY THE RIBS. IN HEAVY SNOW AREAS, THE IDEAL ROOF WOULD AVOID CONDITIONS SUCH AS WRAP AROUND EAVES, PENETRATIONS, VALLEYS, DROPS TO LOWER ELEVATIONS OR CHANGES OF DIRECTION. ENTRIES AND UTILITY ACCESS WOULD BE AT GABLE END CONDITIONS; VENTS AND CHIMNEY STACKS WOULD BE AT THE RIDGE OR OUT A SIDE WALL. DEVIATIONS FROM THESE DESIGN PARAMETERS SHOULD BE CONSIDERED A SNOW CONDITION RISK AND APPROPRIATE MEASURES TAKEN TO ENSURE THE INTEGRITY OF THE METAL ROOF. THERE IS LITTLE ENGINEERING DATA ON THE FORCES DEVELOPED IN SNOW MOVEMENT AND ARCHITECTS SHOULD PREPARE GUIDE-LINES FOR SPECIFIC PROJECTS FROM LOCAL EXPERIENCE. MANUFACTURER CAN PROVIDE INFORMATION ON THE CAPACITY OF RIBS AND STIFFENERS TO RESIST FORCES TENDING TO DRAG PANELS FROM THE ROOF. DESIGN VALUES, ESTABLISHED BY THE PROJECT ENGINEER, SHOULD BE BASED UPON CODE OR LOCAL EXPERIENCE.



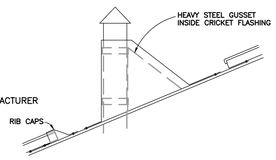
TYP. SNOW GUARDS

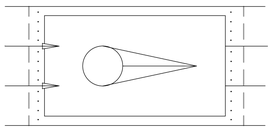
ADHESIVE APPLIED SNOW GUARDS

SNOW GUARDS SHALL BE USED TO PROTECT GUTTERS OR ENTRY WAYS FROM MASSIVE FALLING SNOW. SOME ARE SMALL PROTRUSIONS CLOSELY SPACED TO HOLD SNOW IN PLACE UNTIL IT MELTS OR EVAPORATES. THESE OPERATE ON THE PRINCIPLE THAT IT IS EASIER TO HOLD SNOW IN PLACE THAN TO STOP IT ONCE IT STARTS TO MOVE. OTHERS ARE MASSIVE BRACED UNITS LOCATED AT THE EAVES TO DIVERT OR STOP A SNOW SLIDE. ROOF EXPANSION AND CONTRACTION MUST BE CONSIDERED; SMALL SNOW GUARDS ARE USUALLY BONDED TO THE PANELS SO THAT THE WEIGHT OF THE RETAINED SNOW IS SUPPORTED AT THE THERMAL FIXED LOCATION.

SNOW DIVERSION

IGNORING THE FRICTIONAL RESISTANCE BETWEEN ROOF AND DECK, WEIGHT OF THE TOTAL SNOW DESIGN LOAD ON THE FULL LENGTH OF EACH ROOF PANEL CAN PRODUCE A COMPONENT OF FORCE PARALLEL TO THE ROOF OF SEVERAL THOUSAND LBS. IF PENETRATIONS MUST BE MADE ON ROOF SLOPES SUBJECT TO HEAVY COMPACTED SNOW SLIDES, THEY SHOULD BE AS NARROW AS POSSIBLE AND WELL ANCHORED TO THE STRUCTURE BELOW. ORDINARY SHEETMETAL CRICKETS SHOULD BE REINFORCED TO PERFORM LIKE A SNOW PLOW. THERE SHOULD BE SUFFICIENT AREA AROUND THE PENETRA-TION CLEAR OF RIBS SO THAT PACKED SNOW CAN MOVE LATERALLY TO PASS AROUND THE OBSTRUCTION.





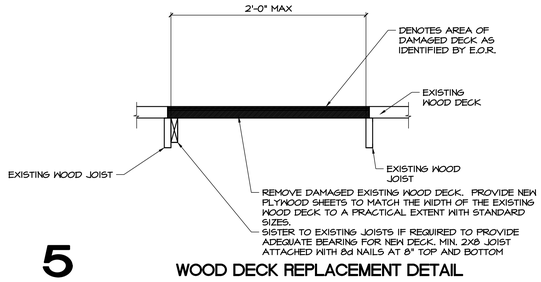
REINFORCED CRICKET

ON SIDEWALLS ABOVE SLOPING ROOFS, DEEP MOVING SNOW MASSES CAN DEFORM RIBS OR BATTENS AND CORNER TRIM. VERTICAL SIDING OF ANY TYPE IS SUBJECT TO SIDEWAYS SCRAPES AND PANELS ARE NOT RECOMMENDED FOR USE ON SIDEWALLS IN SUCH INSTANCES. ANY WALL PROJECTIONS IN THE FLOW PATH, SUCH AS FOR CHIMNEYS, ARCHITECTURAL FEATURES OR TRIM, SHOULD BE CONSIDERED THE SAME AS A PENETRATION - AVOID, IF POSSIBLE. FAILING THAT, MINIMIZE NECESSARY PROJECTIONS, REINFORCE AND PROVIDE FOR LATERAL MOVEMENT OF SNOW TO CLEAR THE OBSTRUCTION.

DESIGNERS SHOULD GIVE SPECIAL ATTENTION TO THE EFFECT OF SNOW CASCADING FROM A ROOF TO A LOWER LEVEL. LIGHT SNOW CAN FLOW LIKE A LIQUID, TURN CORNERS AND FILL COVERED WALKWAYS TO BLOCK EXITS. PILES OF SNOW ON THE GROUND CAN DIVERT PRESSURE TO IMPACT ON WALLS OR WINDOWS SHELTERED BY AN OVERHANG. WHERE IMPACT FROM SNOW CAN DAMAGE SHEET METAL PROFILES, RIBS CAN BE REINFORCED TO PROVIDE MORE RESISTANCE. HOWEVER, EXCESSIVE HEAT ESCAPING THROUGH THE ROOF CAN TURN A SOFT MASS OF SNOW INTO AN ICE PACK RIGID ENOUGH TO BREAK THROUGH ORDINARY ROOF AND DECK MATERIALS.

4 METAL PANEL NOTES

SCALE: N.T.S.

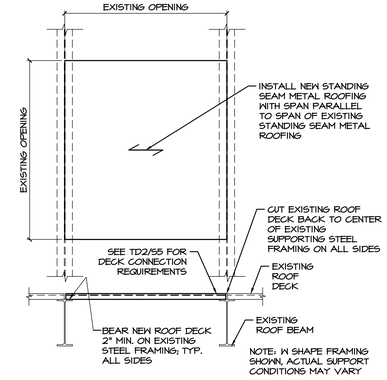


5 WOOD DECK REPLACEMENT DETAIL

SCALE: N.T.S.

STRUCTURAL WOOD

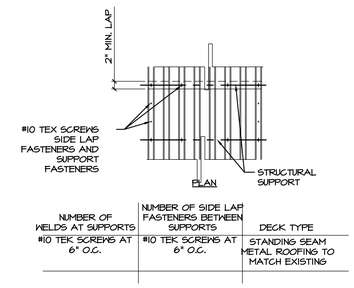
1. DESIGN, FABRICATION, AND CONSTRUCTION OF WOOD FRAMING SHALL CONFORM WITH THE FOLLOWING CODES AND STANDARDS.
   - A. "NATIONAL DESIGN SPECIFICATIONS FOR WOOD CONSTRUCTION", 2005 EDITION. (WITH SUPPLEMENT), AMERICAN FOREST AND PAPER ASSOCIATION.
   - B. "TIMBER CONSTRUCTION MANUAL", FOURTH EDITION, AS ADOPTED BY THE AMERICAN INSTITUTE OF TIMBER CONSTRUCTION, INCLUDING THE 'CODE OF STANDARD PRACTICE', AITC 106.
   - C. BASE DESIGN VALUES FOR ROOF/FLOOR JOIST FRAMING: DOUG-FIR NO. 1 AND NO.2 (FB = 850 PSI, FV = 180 PSI, E = 1,600,000 PSI) MINIMUM.
2. BASE DESIGN VALUE FOR ROOF JOIST FRAMING: DOUG-FIR NO.1 (FB=850 PSI, FV= 75 PSI, E=1,500,000 PSI) NO. 2 (FB=450 PSI, FV= 75 PSI, E=1,500,000 PSI) MINIMUM.
3. ALL PLYWOOD SHEATHING SHALL COMPLY WITH APA. PLYWOOD SHALL MEET C-D INTERIOR APA, STRUCTURAL I AND II C-D INTERIOR APA, OR STRUCTURAL I AND II C-C EXTERIOR APA. ATTACHMENT TO BE IN ACCORDANCE WITH IBC REQUIREMENTS. ALL PLYWOOD TO HAVE EXTERIOR GLUE.
4. ROOF SHEATHING SHALL BE APA RATED SHEATHING, 5/8" THICK, 42/20.
5. PROVIDE NAILING PATTERN IN COMPLIANCE WITH IBC RECOMMENDED FASTENING SCHEDULE WHEN JOINING TWO OR MORE FRAMING MEMBERS.
6. SEE INTERNATIONAL BUILDING CODE FOR MINIMUM BRACING AND FASTENING REQUIREMENTS.
7. MEMBERS SHALL BE SET WITH CROWN UP AND HAVE A MINIMUM OF 3" BEARING.
8. ALL JOISTS AND RAFTERS SHALL BE RIGIDLY BRIDGED AT INTERVALS NOT EXCEEDING 8'-0".
9. GUYS AND OTHER BRACING REQUIRED TO PROVIDE LATERAL STABILITY TO WOOD FRAMES SHALL BE ADEQUATELY SIZED AND ANCHORED. THIS BRACING SHALL REMAIN UNTIL PERMANENT BRACING ELEMENTS AND ATTACHED CONSTRUCTION IS INSTALLED.
10. ALL BOLTS AND LAG BOLTS SHALL BE FITTED WITH GALVANIZED, MALLEABLE IRON OR STEEL PLATE WASHERS.
11. NO FIELD ALTERATION OF PRE-FABRICATED TRUSSES IS PERMITTED UNLESS DONE IN ACCORDANCE WITH TRUSS MANUFACTURER'S APPROVED MODIFICATION DETAILS.



TD1 S-301 NEW ROOF DECK OVER EXISTING OPENING IN EXISTING ROOF FRAMING

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

NOTE: SEE TD2/S-301 FOR ADDITIONAL ATTACHMENT INFORMATION



NUMBER OF WELDS AT SUPPORTS	NUMBER OF SIDE LAP FASTENERS BETWEEN SUPPORTS	DECK TYPE
#10 TEK SCREWS AT 6" O.C.	#10 TEK SCREWS AT 6" O.C.	STANDING SEAM METAL ROOFING TO MATCH EXISTING

TD2 S-301 TYPICAL DETAIL ROOF DECK ATTACHMENT SHEDULE & KEY PLAN

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

ISSUED FOR BID

DATE: 08/07/2026

PENNONI ASSOCIATES INC.
1900 Market Street, Suite 300
Philadelphia, PA 19103
T 215.222.3000 F 215.222.3588

ALL DIMENSIONS MUST BE VERIFIED BY CONTRACTOR AND ANY DISCREPANCIES MUST BE REPORTED TO OWNER BEFORE PROCEEDING WITH WORK

SPRINGFIELD LIBRARY BUILDING RENOVATION
POWELL ROAD
SPRINGFIELD, PA

ROOFING DETAILS

TOWNSHIP OF SPRINGFIELD

BY	NO	DATE	REVISIONS

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 ASSOCIATE, AND OWNER SHALL INDEMNIFY AND HOLD HARMLESS PENNONI ASSOCIATES FROM ALL CLAIMS, DAMAGES, LOSSES AND EXPENSES ARISING OUT OF OR RESULTING THEREFROM.

PROJECT	SPFLD00611
DATE	08/07/2026
DRAWING SCALE	AS NOTED
DRAWN BY	RK
APPROVED BY	DM

S-301

SHEET 4 OF 4

U:\Accounts\SPFLD\SPFLD00611 - Library Building Renovation\DESIGN_SHEETS_STRUCTURAL\SPFLD00611_Roofing details.dwg PLOTTED: 8/7/2026 2:53 PM BY: Angel Solares PLOTSTYLE: PABrtscrub.ctb PROJECT STATUS: —

GENERAL NOTES

CODES & STANDARDS

1. INTERNATIONAL BUILDING CODE - 2018 IBC
2. AMERICAN SOCIETY OF CIVIL ENGINEERS - ASCE 7-16
3. AMERICAN CONCRETE INSTITUTE - ACI 318-14
4. AMERICAN INSTITUTE OF STEEL CONSTRUCTION - AISC 360-16
5. SEISMIC PROVISIONS FOR STRUCTURAL STEEL BUILDINGS - AISC 341-16
6. AMERICAN WELDING SOCIETY - AWS D1.4/D1.4M-2017
7. NATIONAL DESIGN SPECIFICATION FOR WOOD CONSTRUCTION - NDS 2018
8. INTERNATIONAL MASONRY INSTITUTE - TMS 402-16/TMS 602-16
9. ASTM STANDARDS FOR THE MATERIALS SPECIFIED

DESIGN & STRUCTURAL CRITERIA

PROJECT LOCATION/LOCAL JURISDICTION	SPRINGFIELD, PA
RISK CATEGORY	CATEGORY III

WIND DESIGN DATA

BASIC WIND SPEED, V	125 MPH
ALLOWABLE STRESS WIND SPEED, Vasd	96.25 MPH
EXPOSURE CATEGORY	C
WIND DIRECTION	ALL
INTERNAL PRESSURE COEFFICIENT	+/- 0.18
COMPONENTS & CLADDING WALL PRESSURES	SEE TABLE
COMPONENTS & CLADDING ROOF PRESSURES	SEE TABLE

SEISMIC DESIGN DATA

SEISMIC IMPORTANCE FACTORE, I_e	1.0
MAPPED SPECTRAL RESPONSE ACCELERATIONS:	
FOR SHORT PERIODS	S_S=0.181 g
FOR 1-SECOND PERIODS	S_1=0.0.047 g
SPECTRAL RESPONSE PARAMETERS:	
FOR SHORT PERIODS	S_{DS}=0.193 g
FOR 1-SECOND PERIODS	S_{D1}=0.075 g
SEISMIC DESIGN CATEGORY	
SITE CLASS	B
SEISMIC RESPONSE COEFFICIENT, C_S	0.08125
RESPONSE MODIFICATION FACTOR, R	2.0
DESIGN BASE SHEAR, V	N/A
BASIC SEISMIC-FORCE-RESISTING SYSTEM	ORDINARY REINFORCED MASONRY SHEAR WALL

SNOW DESIGN DATA

GROUND SNOW LOAD, P_g	25 PSF
MINIMUM LOW-SLOPE ROOF SNOW LOAD, P_m	17 PSF
SNOW EXPOSURE FACTOR, C_e	1.0
SNOW LOAD IMPORTANCE FACTOR, I_s	1.0
THERMAL FACTOR, C_t	1.0

GEOTECHNICAL DESIGN DATA

FROST DEPTH	36 IN
ALLOWABLE SOIL BEARING PRESSURE	1500 PSF (ASSUMED)
SOIL COEFFICIENT OF FRICTION	0.35 (ASSUMED)
ACTIVE EARTH PRESSURE	30 PSF/FT (ASSUMED)
AT-REST EARTH PRESSURE	60 PSF/FT (ASSUMED)
PASSIVE EARTH PRESSURE	250 PSF/FT (ASSUMED)

DEFLECTION DESIGN CRITERIA

ROOF TOTAL LOAD	L/240
ROOF LIVE LOAD	L/360
FLOOR TOTAL LOAD	L/240
FLOOR LIVE LOAD	L/480
LATERAL SYSTEMS	L/180

GRAVITY DESIGN LOADS

LEVEL	DEAD	LIVE	TOTAL
ROOF	20 PSF	25 PSF	45 PSF
UPPER FLOOR	20 PSF	150 PSF	170 PSF

NOTES:
1. STRUCTURAL DESIGN IS BASED ON THE CODE CRITERIA/DESIGN GUIDELINE VALUES ABOVE THAT PRODUCE THE GREATEST LOADING CONDITION.
2. GRAVITY DESIGN DEAD LOAD DOES NOT INCLUDE STEEL SELF WEIGHT.
3. GRAVITY DESIGN LOADS PROVIDED ARE SERVICE LEVEL LOADS.

COMPONENTS & CLADDING WIND PRESSURE (PSF)

TRIB AREA (SF)	ROOF ZONES				WALL ZONES		
	1, 2, & 3	1	2	3	4 & 5	4	5
	POS.	NEG.	NEG.	NEG.	POS.	NEG.	NEG.
10	12.5	-32	-38.5	-66.6	25.5	-27.7	-34.2
50	11.9	-29.0	-35.9	-60.8	22.9	-25.0	-28.8
200	10.4	-27.7	-32.5	-53.0	20.6	-22.7	-24.2
500	10.4	-27.7	-29.9	-47.2	19.0	-21.2	-21.2

MISCELLANEOUS

1. THE QUALITY OF WORKMANSHIP SHOULD BE SET AND SUPERVISED BY THE CONTRACTOR TO PASS BUILDING DEPT. OR ENGINEER INSPECTION FOR ROUGH CONSTRUCTION. THE LEVEL OF QUALITY AND TOLERANCE SHOULD BE APPROPRIATE FOR THE INSTALLED ELEMENT TO RECEIVE THE NEXT IN-LINE FINISH ASPECT OF CONSTRUCTION.

2. THE PURPOSE OF PROJECT DRAWINGS IS TO DEPICT THE OVERALL SCOPE OF THE PROJECT. THE PROJECT DRAWINGS HAVE BEEN DEVELOPED TO SHOW A LEVEL OF DETAIL WITH THE OBJECTIVE OF PLAN CHECK APPROVAL AND ISSUANCE OF A BUILDING PERMIT. THIS MODERATE LEVEL OF DETAIL SHOULD ALLOW FOR A VARIETY OF STANDARD CONSTRUCTION METHODS AND SEQUENCES. THE PROJECT DRAWINGS ARE INTENDED TO COMPLY WITH THE ORDINANCES, RULES AND REGULATIONS OF THE JURISDICTION IN WHICH THE BUILDING IS LOCATED.

3. THE CONTRACT STRUCTURAL DRAWINGS AND SPECIFICATIONS REPRESENT THE FINISHED STRUCTURE. THEY DO NOT INDICATE THE METHOD OF CONSTRUCTION. THE CONTRACTOR IS RESPONSIBLE FOR CONSTRUCTION MEANS, METHODS, TECHNOLOGIES, SEQUENCES AND PROCEDURES.

GENERAL NOTES

5. CONSTRUCTION MATERIAL SHALL BE SPREAD OUT IF PLACED ON FRAMED FLOORS OR ROOF. LOAD SHALL NOT EXCEED THE DESIGN LIVE LOAD PER SQUARE FOOT.

6. WHERE REFERENCE IS MADE TO VARIOUS TEST STANDARDS FOR MATERIALS, SUCH STANDARDS SHALL BE THE LATEST EDITION AND/OR ADDENDUM.

7. OPTIONS ARE FOR CONTRACTOR'S CONVENIENCE. THEY SHALL BE RESPONSIBLE FOR ALL CHANGES NECESSARY IF THEY CHOOSE AN OPTION AND THEY SHALL COORDINATE ALL DETAILS.

8. NOTES AND DETAILS ON DRAWINGS SHALL TAKE PRECEDENCE OVER GENERAL STRUCTURAL NOTES AND TYPICAL DETAILS. WHERE NO SPECIFIC DETAILS ARE SHOWN, CONSTRUCTION SHALL CONFORM TO SIMILAR WORK ON THE PROJECT.

9. TYPICAL DETAILS ARE NOT CUT ON DRAWINGS, BUT APPLY UNLESS NOTED OTHERWISE.

10. IN THE CASE OF DISCREPANCIES BETWEEN THE GENERAL NOTES, SPECIFICATIONS, PLANS/DETAILS OR REFERENCE STANDARDS, THE ARCHITECT/ENGINEER SHALL DETERMINE WHICH SHALL GOVERN. DISCREPANCIES SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE ARCHITECT/ENGINEER BEFORE PROCEEDING WITH THE WORK. SHOULD ANY DISCREPANCY BE FOUND IN THE CONTRACT DOCUMENTS, THE CONTRACTOR WILL BE DEEMED TO HAVE INCLUDED IN THE PRICE THE MOST EXPENSIVE WAY OF COMPLETING THE WORK, UNLESS PRIOR TO THE SUBMISSION OF THE PRICE, THE CONTRACTOR ASKS FOR A DECISION FROM THE ARCHITECT AS TO WHICH SHALL GOVERN. ACCORDINGLY, ANY CONFLICT IN OR BETWEEN THE CONTRACT DOCUMENTS SHALL NOT BE A BASIS FOR ADJUSTMENT IN THE CONTRACT PRICE.

11. VISITS TO THE JOBSITE BY THE ENGINEER TO OBSERVE CONSTRUCTION DO NOT IN ANY WAY MEAN THAT THEY ARE THE GUARANTORS OF THE CONTRACTOR'S WORK, NOR SUPERVISION, NOR SAFETY AT THE JOBSITE.

12. THE CONTRACTOR IS RESPONSIBLE FOR SAFETY PRECAUTIONS AND PROGRAMS IN CONNECTION WITH THE WORK THAT CONFORMS TO THE REGULATIONS OF THE OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA) SAFETY AND HEALTH STANDARDS FOR THE CONSTRUCTION INDUSTRY.

13. ESTABLISH AND VERIFY ALL OPENINGS AND INSERTS FOR ARCHITECTURAL, MECHANICAL, ELECTRICAL AND PLUMBING WITH APPROPRIATE TRADES, DRAWINGS AND SUBCONTRACTORS PRIOR TO CONSTRUCTION. DO NOT PENETRATE ANY STRUCTURAL ELEMENTS (BEAMS, COLUMNS, WALLS, SLABS, STEEL DECKS, ETC.) WITHOUT PRIOR WRITTEN APPROVAL OF STRUCTURAL ENGINEER THROUGH ARCHITECT.

14. ANY ENGINEERING DESIGN PROVIDED BY OTHERS AND SUBMITTED FOR REVIEW SHALL BEAR THE SEAL OF A CIVIL OR STRUCTURAL ENGINEER REGISTERED IN THE STATE IN WHICH THE PROJECT IS LOCATED.

15. CONTRACTOR SHALL COORDINATE ALL DIMENSIONS AND ELEVATIONS SHOWN ON STRUCTURAL DRAWINGS WITH ARCHITECTURAL, MECHANICAL AND ELECTRICAL DRAWINGS. NOTED SCALES ARE INTENDED FOR FULL SIZE PLANS. DO NOT SCALE DRAWINGS, USE FIGURED DIMENSIONS ONLY.

16. THE CONTRACTOR SHALL PROVIDE ALL TEMPORARY SUPPORTS REQUIRED FOR STABILITY AND FOR RESISTANCE TO WIND AND SEISMIC FORCES UNTIL STRUCTURE IS CAPABLE OF PROVIDING THIS SUPPORT.CONTRACTOR TO REFER TO AISC STEEL DESIGN GUIDE #10 "ERECTION BRACING OF LOW RISE STRUCTURAL STEEL BUILDINGS" AND TO THE NATIONAL CONCRETE MASONRY ASSOCIATION TECHNICAL GUIDE #3-4 "BRACING CONCRETE MASONRY WALLS DURING CONSTRUCTION".

17. UNLESS OTHERWISE INDICATED, ALL ITEMS NOTED TO BE DEMOLISHED SHALL BECOME THE CONTRACTOR'S PROPERTY AND BE REMOVED FROM THE SITE.

18. CONTRACTORS SHALL VISIT THE SITE PRIOR TO BID TO ASCERTAIN CONDITIONS WHICH MAY ADVERSELY AFFECT THE WORK OR COST THEREOF.

MATERIALS

STRUCTURAL STEEL	W & WT	ASTM A992, Fy = 50 KSI
	CHANNEL & ANGLE	ASTM A36, Fy = 36 KSI
	PLATES	ASTM A36, Fy = 36 KSI
	HSS SQ OR RECT	ASTM A500 GR C, Fy = 50 KSI
	HSS ROUND	ASTM A500 GR C, Fy = 46 KSI
	HSS PIPE	ASTM A53 GR B, Fy = 35 KSI
CONCRETE	ALL (U.N.O.)	PORTLAND CEMENT ASTM C150 TYPE II W/C RATIO = 0.45 MAXIMUM 28 DAY F'c = 4,000 PSI SLUMP RANGE = 3-5 INCHES AIR CONTENT = 4.5 - 7.5% 3/4" MAXIMUM NORMAL WEIGHT AGGREGATE
REINFORCING BARS		ASTM A615, GRADE 60 (NON-WELDABLE) ASTM A706, GRADE 60 (WELDABLE) ASTM A-185 (WELDED WIRE FABRIC)
ANCHOR RODS		ASTM F1554, GRADE 36
HIGH STRENGTH BOLTS		ASTM A325N
BOLTS		ASTM A307, GALVANIZED PER ASTM A153 (ONLY WHERE NOTED ON PLANS)
HEADED STUD ANCHORS		ASTM A108
ADHESIVE ANCHORS	MASONRY	HILTI HIT HY 270 OR SIMPSON STRONG-TIE SET ANCHORING ADHESIVE
	CONCRETE	HILTI HIT RE 500v3
	ALL	ASTM A36 ALL-THREAD WITH CHISEL POINT
WOOD		WALL SHEATHING, 24/16 OSB, EXPOSURE 1. ROOF AND FLOOR SHEATHING, 48/24 CDX PLYWOOD
MASONRY		CMU BLOCK: NORMAL WEIGHT, F'c = 1900 PSI MORTAR: PORTLAND CEMENT/LIME, TYPE M OR S GROUT: F'c = 2000 PSI (28 DAYS) WALL COMPRESSIVE STRENGTH = F'M = 2000 PSI (28 DAYS)

SHOP DRAWING SUBMITTAL REQUIREMENTS

			SUBMITTAL REQUIRED	SIGNED & SEALED
			YES	YES
SECTION 1 - CONCRETE				
	1	CONCRETE MIX DESIGN	X	
	2	CONCRETE REINFORCING SHOP DRAWINGS	X	
	3	ADMIXTURES/MATERIALS/ACCESSORIES	X	
SECTION 2 - MASONRY				
	1	MASONRY REINFORCING DRAWINGS	X	
	2	MASONRY MATERIALS; GROUT, MORTAR, CMU BLOCK & BOND BEAMS	X	
	3	PRECAST CONCRETE LINTEL SUBMITTAL	X	

DELEGATED DESIGN

1	TEMPORARY SHORING OF EXCAVATIONS & BUILDING STRUCTURE DURING CONSTRUCTION. OTHER CONTRACTOR MEANS & METHODS COMPONENTS (e.g. SCAFFOLDING, FALL PROTECTION, ETC.
2	METAL STAIRS, RAILINGS, GUARDRAILS, & LADDERS
3	PRE FABRICATED AWNINGS/CANOPIES

DELEGATED DESIGN SCHEDULE NOTES:
1. THE ITEMS LISTED IN THIS SCHEDULE HAVE NOT BEEN DESIGNED BY THE STRUCTURAL ENGINEER OF RECORD FOR THIS PROJECT. A SPECIALTY ENGINEER SHALL BE RETAINED BY THE CONTRACTOR TO PERFORM THE REQUIRED DESIGNS.
2. THE SPECIALTY ENGINEER SHALL BE A LICENSED PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF THE PROJECT.
3. CALCULATIONS AND/OR SHOP DRAWINGS SHALL BE SUBMITTED FOR REVIEW AND APPROVAL TO THE STRUCTURAL ENGINEER OF RECORD PRIOR TO CONSTRUCTION.

LEGEND AND ABBREVIATIONS

AB	ANCHOR BOLT	HORIZ	HORIZONTAL
ACI	AMERICAN CONCRETE INSTITUTE	HSA	HEADED STUD ANCHOR
		HSS	HOLLOW STRUCT STEEL
AISC	AMERICAN INSTITUTE OF STEEL CONSTRUCTION	IBC	INTERNATIONAL BUILDING CODE
ALT	ALTERNATE	INT	INTERIOR
APPROX	APPROXIMATE	L	STEEL ANGLE
ARCH	ARCHITECTURAL	LG	LIGHT GAUGE
ASTM	AMERICAN SOCIETY FOR TESTING MATERIAL	LLV	LONG LEG VERTICAL
		LONG	LONGITUDINAL
AWS	AMERICAN WELDING SOCIETY	MAX	MAXIMUM
		MCJ	MASONRY CONTROL JOINT
@	AT	MECH	MECHANICAL
BLDG	BUILDING	MANUF OR MFR	MANUFACTURER
BLK'G	BLOCKING	MIN	MINIMUM
BM	BEAM	MISC	MISCELLANEOUS
BOC	BOTTOM OF CONCRETE	NO. OR #	NUMBER
BOF	BOTTOM OF FOOTING	(N)	NEW
BOS	BOTTOM OF STEEL/SLAB	NTS	NOT TO SCALE
BOT	BOTTOM OF	OC	ON CENTER
BRG	BEARING	OCEF	ON CENTER EACH FACE
BTB	BACK TO BACK	OCEW	ON CENTER EACH WAY
BTWN	BETWEEN	OPP	OPPOSITE
C	STEEL CHANNEL	OWJ	OPEN WEB JOIST
CFS	COLD FORMED STEEL	PEMB	PRE-ENGINEERED METAL BUILDING
CIP	CAST IN PLACE		PLACES
CJ	CONTROL JOINT	PLCS	PLATE
℄ OR CL	CENTER LINE	PL	PREFABRICATED
CLR	CLEAR	PREFAB	POUNDS PER SQUARE FOOT
CMU	CONCRETE MASONRY UNIT	PSF	POUNDS PER SQUARE INCH
		PSI	PRESSURE TREATED
COL	COLUMN	PT	REFERENCE
CONC	CONCRETE	REF	REINFORCEMENT
CONN OR CXN	CONNECTION	REINF	REQUIRED
CONT	CONTINUOUS	REQ'D	REVISION/REVISED
DEMO	DEMOLISH	REV	SCHEDULE
DET	DETAIL	SCH OR SCHED	SUBFLOOR ELEVATION
DF	DOUGLAS FIR	SFE	SHEET
ø OR DIA	DIAMETER	SHT	SIMILAR
DIM	DIMENSION	SIM	SLAB-ON-GRADE
DJ	DOUBLE JOIST	SOG	SPACE(S)
DWG	DRAWING	SPCS OR SPA	SPECIFICATION(S)
EA	EACH	SPEC	SQUARE
EA WAY OR EW	EACH WAY	SQ	STANDARD
EF	EACH FACE	STD	STRUCTURAL
EJ	EXPANSION JOINT	STRUCT	SYMMETRICAL
EL OR ELEV	ELEVATION	SYM	TOP & BOTTOM
EMBED	EMBEDMENT	T&B	THROUGH
ENG	ENGINEER	THRU	TOP OF BEAM
EOR	ENGINEER OF RECORD	TOB	TOP OF CONCRETE
EQ	EQUAL	TOC	TOP OF FOOTING
EXIST OR (E)	EXISTING	TOF	TOP OF STEEL/SLAB
EXP	EXPANSION	TOS	TOP OF WALL
EXT	EXTERIOR	TOW	TRANSVERSE
FDT OR FND	FOUNDATION	TRANS	TYPICAL
FF	FINISH FLOOR	TYP	VERIFY IN FIELD
FLR	FLOOR	VIF	VERTICAL
FTG	FOOTING	VERT	UNLESS NOTED OTHERWISE
GA	GAUGE	UNO	WITH
GALV	GALVANIZED	W/	WIDE FLANGE
GC	GENERAL CONTRACTOR	WF	WORKING POINT
GEN	GENERAL	WP	WEIGHT
GLB	GLULAM BEAM	WT	
GR	GRADE		
GSN	GENERAL STRUCTURAL NOTES		

CONCRETE

CONCRETE MASONRY UNIT

STEEL IN SECTION

ELEVATION NOTED

X — FLAG NOTE

1 — REVISION SPECIFIED

TAG LEGEND

1 / S1.0 — SECTION OR DETAIL DESIGNATION SYMBOL; SHEET NUMBER WHERE SECTION OR DETAIL IS SHOWN

WX / X — WX INDICATES WALL TAG; X INDICATES NOMINAL WALL THICKNESS

UP OR DOWN — STAIR IDENTIFICATION

CX | PX / FX | BPX — CX INDICATES COLUMN TAG; PX INDICATES PIER TAG; FX INDICATES FOUNDATION TAG; BPX INDICATES BASEPLATE TAG

SWX — INDICATES SHEAR WALL, SEE SHEAR WALL SCHEDULE

DRAWING SCHEDULE

DRAWING NUMBER NOMENCLATURE

S0.01
- DRAWING NUMBER IN SERIES
- DRAWING SERIES
- DISCIPLINE

X = SHEET SUBMITTED REVISED
O = SHEET SUBMITTED UNREVISED
* = SHEET OMITTED FROM SET

DRAWING NUMBER	DRAWING NAME	ISSUE DATE 07/14/26 — BID SET	ISSUE DESCRIPTION
S0.00	GENERAL STRUCTURAL NOTES	X	
S0.01	GENERAL STRUCTURAL NOTES	X	
S0.02	SPECIAL INSPECTIONS	X	
S0.03	ISOMETRIC VIEW	X	
S1.00	EXISTING AND DEMO PLANS	X	
S1.01	UNDERPINNING PLAN	X	
S2.00	FOUNDATION PLANS	X	
S2.10	FRAMING PLANS	X	
S3.00	BUILDING SECTIONS	X	
S4.00	FOUNDATION SECTIONS	X	
S5.00	FRAMING SECTIONS	X	
S6.01	TYPICAL FRAMING DETAILS	X	

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GENERAL STRUCTURAL NOTES

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FOUNDATION AND SOIL PREPARATION

SITE GRADING AND EXCAVATIONS

1. A GEOTECHNICAL ENGINEERING EVALUATION REPORT HAS NOT BEEN CONDUCTED FOR THIS PROJECT. THE CONTRACTOR IS THEREFORE RESPONSIBLE THAT ALL BUILDING CODE REQUIREMENTS ARE MET AND IN COMPLIANCE WITH THE LOCAL JURISDICTION. THE FOLLOWING NOTES ARE TYPICAL AND SHALL NOT GOVERN SITE SPECIFIC REQUIREMENTS.

2. CONFORM TO IBC CHAPTER 18 "SOILS AND FOUNDATIONS".

3. ALL TOPSOIL AND ORGANIC MATERIAL, ASPHALT, CONCRETE AND RELATED CONSTRUCTION DEBRIS SHALL BE REMOVED FROM THE PROPOSED BUILDING AND PAVEMENT AREAS AND ANY AREAS TO RECEIVE SITE GRADING FILL. FOR PLANNING PURPOSES, A MINIMUM STRIPPING THICKNESS OF 6 INCHES IS RECOMMENDED. THICKER STRIPPING DEPTHS MAY BE WARRANTED TO REMOVE ALL DETRIMENTAL ORGANICS AS DETERMINED ONCE ACTUAL STRIPPING OPERATIONS ARE PERFORMED.

4. ALL FILL AND BACKFILL SHALL BE NON-EXPANSIVE, FREE OF ORGANICS AND DEBRIS AND SHALL BE APPROVED BY THE PROJECT GEOTECHNICAL ENGINEER. ALL FILL SHALL BE PLACED IN UNIFORM LIFTS NOT EXCEEDING 8 INCHES IN THICKNESS FOR FINE-GRAINED SOILS AND NOT EXCEEDING 12 INCHES FOR GRANULAR SOILS. ALL FILL AND BACKFILL SHALL BE COMPACTED TO THE FOLLOWING PERCENTAGES OF THE MAXIMUM DRY DENSITY AS DETERMINED BY ASTM D698 OR EQUIVALENT (E.G. ASTM D4253-D4254).

5.1.	BELOW FOUNDATIONS OR SPREAD FOOTINGS.....	95%
5.2.	BELOW SLAB-ON-GRADE CONSTRUCTION.....	95%
5.3.	BELOW STREETS, PARKING LOTS, OR OTHER PAVED AREAS.....	95%
5.4.	GENERAL LANDSCAPING OR NONSTRUCTURAL AREAS.....	92%
5.5.	UTILITY TRENCH BACKFILL, TO WITHIN 2 FEET OF SURFACE.....	95%

SCREEN OR SIEVE SIZE	PERCENT PASSING BY WEIGHT
3-INCH	100
1 1/2-INCH	80-100
3/4-INCH	60-100
No. 4	25-60
No. 200	12 MAXIMUM

6. IMPORTED STRUCTURAL FILL SHOULD BE NON-EXPANSIVE, FREE OF ORGANICS AND DEBRIS, AND SELECTED PER THE FOLLOWING GRADATION REQUIREMENTS:

7. TOP OF FOOTING ELEVATION SHALL BE AS SHOWN ON THE FOUNDATION PLAN. THESE ELEVATIONS SHALL BE LOWERED AS REQUIRED TO OBTAIN THE REQUIRED DESIGN BEARING PRESSURE OR LOWERED BELOW NEW OR EXISTING UTILITIES PER TYPICAL DETAILS.

8. UNLESS OTHERWISE NOTED, THE FOLLOWING CONCRETE COVER SHALL BE PROVIDED FOR REINFORCEMENT.
   A. CONCRETE CAST AGAINST AND PERMANANTLY EXPOSED TO EARTH: 3"
   B. CONCRETE EXPOSED TO EARTH OR WEATHER:
      a. #6 THROUGH #18 BARS: 2"
      b. #5 BAR OR SMALLER: 1-1/2"

9. NO UNBALANCED BACKFILLING SHALL BE PLACED AGAINST FOUNDATION WALLS UNLESS WALLS ARE SECURELY BRACED AGAINST OVERTURNING.

10. ALL RETAINING WALLS SHALL HAVE AT LEAST 12" OF FREE-DRAINING GRANULAR BACKFILL, FULL HEIGHT OF WALL. PROVIDE CONTROL JOINTS IN RETAINING WALLS NOT TO EXCEED 25 FEET NOR 3 TIMES THE WALL HEIGHT. PROVIDE EXPANSION JOINTS AT EVERY FOURTH CONTROL JOINT, UNLESS OTHERWISE INDICATED.

SPREAD FOOTING FOUNDATIONS

1. BOTH INTERIOR AND EXTERIOR FOOTINGS SHALL BEAR ON THE PROPERLY COMPACTED NATIVE SOILS. AN ALLOWABLE SOIL BEARING PRESSURE OF 1500 PSF WAS USED FOR ALL FOOTINGS.

2. SOILS DISTURBED BELOW THE PLANNED DEPTHS OF FOOTING EXCAVATIONS SHALL EITHER BE RECOMPACTED OR BE REPLACED WITH SUITABLE COMPACTED BACKFILL APPROVED BY THE GEOTECHNICAL ENGINEER.

3. THE BOTTOM OF THE FOOTING EXCAVATIONS SHALL BE FREE OF COBBLES AND BOULDERS TO AVOID STRESS CONCENTRATIONS ACTING ON THE BASE OF THE FOOTINGS.

4. A REPRESENTATIVE OF THE PROJECT GEOTECHNICAL ENGINEER SHALL OBSERVE ALL FOOTING EXCAVATIONS AND BACKFILL PHASES PRIOR TO THE PLACEMENT OF CONCRETE FORMWORK.

5. ALL FOUNDATIONS SHALL BEAR AT OR BELOW THE FROST DEPTH SPECIFIED.

6. NEW FOUNDATION BEARING ELEVATIONS SHALL MATCH ADJACENT EXISTING FOUNDATION BEARING ELEVATIONS, UNLESS SPECIFICALLY INDICATED OTHERWISE.

FLOOR SLABS AND EXTERIOR FLATWORK

1. FOR NORMALLY LOADED, SLAB-ON-GRADE CONSTRUCTION, A MINIMUM 6-INCH CUSHION COURSE CONSISTING OF FREE-DRAINING, CRUSHED GRAVEL SHOULD BE PLACED BENEATH THE SLABS AND COMPACTED TO A MINIMUM OF 95 PERCENT DENSITY PER ASTM D698 (OR EQUIVALENT PER ASTM D4253-D4254). THIS MATERIAL SHOULD CONFORM TO SECTION 02235 OF MPWSS AND INCORPORATE A MAXIMUM PARTICLES SIZE OF 3/4-INCH. PRIOR TO PLACING THE CUSHION COURSE, THE UPPER SIX INCHES OF SUBGRADE SHOULD BE COMPACTED TO 95 PERCENT OF MAXIMUM DENSITY PER ASTM D698.

2. SLAB-ON-GRADE CONSTRUCTION SHALL CONFORM TO THE REQUIREMENTS OF ACI 301 "SPECIFICATION FOR STRUCTURAL CONCRETE BUILDINGS".

3. ALL WELDED WIRE FABRIC SHALL BE IN ACCORDANCE WITH ASTM A-185. LAP ADJOINING PIECES AT LEAST ONE FULL MESH.

4. UNLESS OTHERWISE APPROVED, ALL WELDED WIRE FABRIC SHALL BE BLOCKED INTO THE POSITION INDICATED WITH PRECAST CONCRETE BLOCKS HAVING A COMPRESSIVE STRENGTH EQUAL TO THAT OF THE SLAB.

5. SLAB JOINTS SHOULD BE FILLED WITH APPROVED MATERIAL. THIS SHOULD TAKE PLACE AS LATE AS POSSIBLE, PREFERABLY 4-6 WEEKS AFTER THE SLAB HAS BEEN CAST. PRIOR TO FILLING, REMOVE ALL DEBRIS FROM THE SLAB JOINTS. FILL IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS AS FOLLOWS: FILL WITH FIELD MOLDED OR ELASTOMERIC SEALANT.

6. IN ORDER TO AVOID CONCRETE SHRINKAGE CRACKING, PLACE SLABS IN AN ALTERNATING LANE (CHECKERBOARD) PATTERN. THE MAXIMUM LENGTH OF SLAB CAST IN ANY ONE CONTINUOUS POUR IS RECOMMENDED TO BE LESS THAN 100 FEET. THE MAXIMUM SPACING OF JOINTS SHALL BE 12'.

7. THE ALTERNATE WIRES OF THE WELDED WIRE FABRIC MUST BE PRECUT AT THE SLAB CONTRACTION JOINT LOCATIONS.

8. THE USE OF POLYPROPYLENE FIBERS IN LIEU OF WELDED WIRE FABRIC IS PROHIBITED WITHOUT THE WRITTEN AUTHORIZATION OF THE ENGINEER.

9. THE FINISH TOLERANCE OF SLABS SHALL BE IN ACCORDANCE WITH ACI 302 SECTION 8.4.

10. FLOOR FLATNESS AND LEVELNESS TESTS SHALL BE CONDUCTED BY THE OWNER IN ACCORDNACE WITH ASTM E 1155. RESULTS SHALL BE PROVIDED TO THE CONTRACTOR WITHIN 48 HOURS AFTER DATA COLLECTION. REMEDIES FOR OUT OF TOLERANCE WORK SHALL BE IN ACCORDANCE WITH THE SPECIFICATIONS.

11. SEE ARCHITECTURAL DRAWINGS FOR EXACT LOCATIONS OF DRAINS. SLOPE SLAB TO DRAINS WHERE SHOWN.

CONCRETE

1. CONCRETE WORK SHALL CONFORM TO ALL REQUIREMENTS OF ACI 301, "STANDARD SPECIFICATIONS FOR STRUCTURAL CONCRETE" AND ACI 318, "BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE". ALL REINFORCING SHALL CONFORM TO THE CRSI SPECIFICATIONS & HANDBOOK. CONCRETE PLACEMENT SHALL MEET ALL COLD WEATHER AND HOT WEATHER REQUIREMENTS OUTLINED IN ACI 306 & 305 RESPECTIVELY.

2. ADDITION OF WATER TO THE BATCH FOR MATERIAL WITH INSUFFICIENT SLUMP WILL NOT BE PERMITTED, UNLESS THE SUPPLIER HAS SPECIFICALLY WITHHELD WATER FROM THE BATCH AT THE PLANT. IN SUCH CASE THE MIX DESIGN AND TRUCK TICKET MUST CLEARLY STATE THE MAXIMUM AMOUNT OF WATER THAT CAN BE ADDED TO THE BATCH ON SITE. IN NO CASE SHALL THE DESIGN WATER TO CEMENTITIOUS MATERIAL RATIO BE EXCEEDED.

3. CONCRETE CONTAINING SUPERPLASTICIZING ADMIXTURE SHALL HAVE A SLUMP OF 4" +/- 1", TO BE FIELD VERIFIED, PRIOR TO ADDING ADMIXTURE, AND NOT EXCEEDING 8" AT PLACEMENT.

4. MECHANICALLY VIBRATE ALL CONCRETE WHEN PLACED, INCLUDING SLABS ON GRADE AT 2'-0" O.C. AROUND UNDER-FLOOR DUCTS AND SLAB EDGES, REINFORCING, KEYS, ETC.

5. IF CONCRETE IS PLACED BY THE PUMP METHOD, SUPPORTS SHALL BE PRODUCED FOR THE HOSE. THE HOSE SHALL NOT BE ALLOWED TO CONTACT THE REBAR OR TENDONS. THIS REQUIREMENT IS MANDATORY. DISCHARGE SHALL BE DIRECTED SO AS TO PREVENT DISPLACEMENT OF REBAR, TENDONS, OR ACCESSORIES.

6. REINFORCING SHALL BE CONTINUOUS AROUND ALL CORNERS AND THROUGH CONSTRUCTION JOINTS UNLESS SHOWN OTHERWISE.

7. REINFORCING STEEL SHALL NOT BE BENT OR STRAIGHTENED IN A MANNER INJURIOUS TO THE CONCRETE OR STEEL.

8. ALL REINFORCING TO BE WELDED SHALL BE WELDED IN ACCORDANCE WITH AWS D1.4. NO TACK WELDING OF REINFORCING BARS IS ALLOWED WITHOUT PRIOR REVIEW OF PROCEDURE BY STRUCTURAL ENGINEER.

9. ALL CONDUITS, GROUND WIRES, DRAINS, ANCHOR BOLTS, OTHER EMBEDDED ITEMS, ETC. SHALL BE IN PLACE BEFORE CONCRETE PLACEMENT.

10. REINFORCING LAP SPLICES IN CONCRETE SHALL BE PER TYPICAL DETAIL UNLESS NOTED OTHERWISE. ALL SPLICE LOCATIONS ARE SUBJECT TO APPROVAL. PROVIDE BENT CORNER BARS TO MATCH AND LAP WITH HORIZONTAL BARS AT CORNERS AND INTERSECTIONS OF FOOTINGS AND WALLS.

11. ALL FIELD BENDING OF REINFORCING SHALL BE STANDARD 90 DEGREE HOOKS AS DEFINED IN CURRENT ACI 318 UNLESS NOTED OR DETAILED OTHERWISE.

12. WHEN TOTAL NUMBER OF REINFORCING BARS IS SHOWN ON DESIGN DRAWINGS AND SPACING IS NOT SPECIFIED, BARS SHALL BE EQUALLY SPACED.

13. DETAILS OF REINFORCING NOT SHOWN IN THESE PLANS SHALL BE DONE IN ACCORDANCE WITH ACI 315 AND ACI 318.

14. ALL REINFORCING STEEL SHALL BE SET AND TIED IN PLACE PRIOR TO POURING OF CONCRETE, EXCEPT THAT VERTICAL DOWELS FOR MASONRY WALL REINFORCING MAY BE "FLOATED" IN PLACE. DO NOT FIELD BEND BARS PARTIALLY EMBEDDED IN HARDENED CONCRETE UNLESS SPECIFICALLY INDICATED OR APPROVED BY THE ENGINEER.

15. BAR SUPPORTS AND HOLDING BARS SHALL BE PROVIDED FOR ALL REINFORCING STEEL TO INSURE MINIMUM CONCRETE COVER. BAR SUPPORTS SHALL BE PLASTIC TIPPED OR STAINLESS STEEL.

16. ALL SLABS-ON-GRADE SHALL HAVE CONTROL JOINTS CUT IN CONCRETE WITHIN 8 HOURS OF PLACEMENT AT A SPACING NO GREATER THAN 10' O.C.E.W. (U.N.O. ON PLANS).

17. FORMWORK SHALL REMAIN IN PLACE UNTIL CONCRETE HAS OBTAINED AT LEAST 90% OF ITS 28 DAY COMPRESSIVE STRENGTH.

18. ALL EDGES OF PERMANENTLY EXPOSED CONCRETE SURFACES SHALL BE CHAMFERED 3/4" UNLESS OTHERWISE NOTED.

19. CONCRETE PROPERTIES (SEE SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS):

CONCRETE MATERIAL SCHEDULE

USAGE	UNIT WEIGHT	f'c (PSI)	MAX W/C	AIR CONTENT	EXPOSURE CLASS
FOUNDATION CONCRETE	145 PCF	4500	0.45	6%	F2
EXTERIOR SITE WORK	145 PCF	4500	0.45	6%	F2
INTERIOR SLAB ON GRADE	145 PCF	4000	0.50	3%	F0

NOTES:
1. FOUNDATION CONCRETE INCLUDES FOOTINGS, WALLS & PIERS
2. TOLERANCE FOR UNIT WEIGHT IS ±3 PCF
3. TOLERANCE FOR AIR CONTENT IS ±1.5% (ASTM C567) WHERE A RANGE IS NOT PROVIDED

MASONRY

1. MASONRY WORK SHALL CONFORM TO ALL REQUIREMENTS OF TMS 402-16, "BUILDING CODE REQUIREMENTS FOR MASONRY STRUCTURES".

2. HOLLOW CONCRETE MASONRY UNITS SHALL CONFORM TO ASTM C90, GRADE N, TYPE I. F'm FOR DESIGN IS 2000 PSI.

3. FILL ALL BOND BEAMS AND REINFORCED CELLS SOLIDLY WITH GROUT. GROUT SHALL CONFORM TO ASTM C-476 AND SHALL OBTAIN MINIMUM 28 DAY COMPRESSIVE STRENGTH OF 2500 PSI.

4. THE USE OF MASONRY-CEMENT MORTAR IS STRICTLY PROHIBITED. MORTAR SHALL CONFORM TO ASTM C-270, TYPE S. ALL MORTAR SHALL MEET THE "PROPORTION SPECIFICATION" OF ASTM C-270 AND BE MADE WITH PORTLAND CEMENT/LIME (NON AIR-ENTRAINED).

5. ALL UNITS SHALL BE LAID IN RUNNING BOND UNLESS NOTED OTHERWISE. BOND CORNERS AND INTERSECTIONS OF LOAD-BEARING WALLS.

6. VERTICAL REINFORCING (UNLESS NOTED OTHERWISE):

   PLACE #5 (8" WALL) BAR IN CENTER OF GROUT AT CENTER OF WALL, CONTINUOUS FULL HEIGHT OF WALL, WITH ONE BAR AT ALL CORNERS, INTERSECTIONS, WALL ENDS, BEAM BEARING, JAMBS AND EACH SIDE OF CONTROL JOINTS AND AT INTERVALS NOT TO EXCEED 48" O.C.. TIE AT 8'-0" VERTICALLY, WITH SINGLE WIRE LOOP TIE BY AMERICAN WIRE TIE PRODUCTS COMPANY (OR EQUAL). DOWEL ALL VERTICAL REINFORCING TO FOUNDATION WITH STANDARD 90 DEGREE HOOKED DOWELS TO MATCH VERTICAL REINFORCING.

7. HORIZONTAL REINFORCING (UNLESS NOTED OTHERWISE):

   PLACE (2) #5 (8" WALL) BARS IN MINIMUM 8" DEEP GROUTED CONTINUOUS BOND BEAM AT ROOF AND ELEVATED FLOOR LINES AND AT 4'-0" O.C. VERTICALLY. PLACE #5 (8" WALL) BAR IN MINIMUM 8" DEEP GROUTED CONTINUOUS BOND BEAM AT TOP OF PARAPET OR TOP OF FREE-STANDING WALL. PLACE THESE BARS CONTINUOUS THROUGH CONTROL JOINTS. WRAP MASTIC TAPE FOR 1'-6" EACH SIDE OF CONTROL JOINT. PROVIDE BENT BARS, TO MATCH HORIZONTAL BOND BEAM REINFORCING, AT CORNERS AND WALL INTERSECTIONS TO MAINTAIN BOND BEAM CONTINUITY. STAGGER ALTERNATE SPLICES A MINIMUM OF 4'-0". PROVIDE STANDARD WEIGHT (NO. 9 GAUGE WIRE) DUR-O-WALL OR DUR-O-WIRE LADDER TYPE JOINT REINFORCING AT 16" O.C. IN MASONRY WALLS. LAP JOINT REINFORCING 6" MINIMUM.

8. MECHANICALLY VIBRATE GROUT IN VERTICAL SPACES IMMEDIATELY AFTER POURING. PROVIDE CLEANOUTS IF GROUT POUR EXCEEDS 5'-0" IN HEIGHT. IF CLEANOUTS ARE PROVIDED, GROUT POUR MAXIMUM HEIGHT = 12'-0", IN LIFTS NOT TO EXCEED 6'-0".

9. PROVIDE CMU CONTROL JOINTS AS INDICATED ON THE ARCHITECTURAL DRAWINGS, WITH ADDITIONAL JOINTS SUCH THAT THE SPACING BETWEEN JOINTS DOES NOT EXCEED 3 X WALL HEIGHT (20' MAXIMUM).

10. THE MASONRY CONTRACTOR SHALL PROVIDE ALL REQUIRED TEMPORARY WALL BRACING DURING CONSTRUCTION.

11. (2) #4 HORIZONTAL BARS SHALL BE PLACED AT THE BOTTOM OF ALL MASONRY OPENINGS GREATER THAN 9" WIDE IN FULLY GROUTED CELLS WITH HORIZONTAL LINTEL REINFORCING AT THE TOP OF ALL OPENINGS (AS INDICATED IN THE LINTEL SCHEDULE). REBAR SHALL EXTEND 24" MINIMUM BEYOND OPENINGS.

12. (1) #5 VERTICAL REBAR SHALL BE PLACED IN FULLY GROUTED CELLS ON EACH SIDE OF OPENINGS GREATER THAN 9" WIDE. REBAR AND GROUTED CELLS SHALL EXTEND THE FULL HEIGHT OF THE WALL FROM DIAPHRAGM TO DIAPHRAGM.

13. PROVIDE REBAR DOWELS FROM FOUNDATIONS TO MATCH VERTICAL REINFORCING SIZE AND SPACING. DOWELS SHALL HAVE STANDARD 90 DEGREE HOOKS AND LAP WITH THE FIRST LIFT OF REINFORCING.

14. PROVIDE STANDARD, GALVANIZED 9 GAUGE HORIZONTAL JOINT REINFORCING AT 16" O.C. IN ALL WALLS. PROVIDE TRUSS TYPE JOINT REINFORCING FOR ALL CONCRETE MASONRY. UNLESS OTHERWISE NOTED STOP HORIZONTAL JOINT REINFORCING AT CONTROL JOINTS.

15. PROVIDE 3 COURSES OF SOLIDLY GROUTED CMU BELOW ALL BEAM/JOIST BEARINGS OVER A WIDTH OF 2'-8" CENTERED ON THE BEAM/JOIST.

16. REBAR SPLICE LENGTHS SHALL BE 64 BAR DIAMETERS.

17. HOT AND COLD WEATHER MASONRY WORK SHALL BE IN ACCORDANCE WITH ACI 530.1.

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GENERAL STRUCTURAL NOTES

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STATEMENT OF SPECIAL INSPECTIONS

1. SPECIAL INSPECTION AND TESTING SHALL BE PROVIDED BY THE OWNER IN ACCORDANCE WITH CHAPTER 17 OF THE IBC.
2. ALL SPECIAL INSPECTORS SHALL BE UNDER THE SUPERVISION OF A REGISTERED CIVIL OR STRUCTURAL ENGINEER LICENSED IN THE STATE IN WHICH THE WORK IS TO BE PERFORMED. ALL INSPECTIONS SHALL BE PERFORMED BY EXPERIENCED PERSONNEL MEETING THE REQUIREMENTS OF THE IBC AND AC291 "ACCREDITATION CRITERIA FOR SPECIAL INSPECTION AGENCIES" AND SHALL BE APPROVED BY THE LICENSED ENGINEER OF RECORD.
3. SPECIAL INSPECTIONS ARE NOT REQUIRED FOR WORK OF A MINOR NATURE AS APPROVED BY THE BUILDING OFFICIAL, NOR ARE THEY REQUIRED FOR GROUP U OCCUPANCIES.
4. EACH CONTRACTOR RESPONSIBLE FOR THE CONSTRUCTION OF A MAIN WIND OR SEISMIC FORCE RESISTING SYSTEM SHALL SUBMIT A WRITTEN STATEMENT OF RESPONSIBILITY TO THE BUILDING OFFICIAL AND THE OWNER PRIOR TO THE COMMENCEMENT OF WORK AS OUTLINED IN 1704.4 OF THE IBC.
5. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO NOTIFY THE SPECIAL INSPECTOR OR SPECIAL INSPECTION AGENCY AT LEAST TWO WORKING DAYS PRIOR TO PERFORMING ANY WORK THAT REQUIRES SPECIAL INSPECTION. ALL WORK PERFORMED WITHOUT THE REQUIRED SPECIAL INSPECTION IS SUBJECT TO REMOVAL.
6. SPECIAL INSPECTIONS SHALL BE REQUIRED FOR PROPOSED WORK THAT IS, IN THE OPINION OF THE BUILDING OFFICIAL, UNUSUAL IN ITS NATURE, SUCH AS, BUT NOT LIMITED TO THE FOLLOWING EXAMPLES: CONSTRUCTION MATERIALS AND SYSTEMS THAT ARE ALTERNATIVES TO MATERIALS AND SYSTEMS PRESCRIBED BY THE IBC, UNUSUAL DESIGN APPLICATIONS OF MATERIALS PRESCRIBED IN THE IBC, AND MATERIALS AND SYSTEMS REQUIRED TO BE INSTALLED IN ACCORDANCE WITH ADDITIONAL MANUFACTURER'S INSTRUCTIONS THAT PRESCRIBE REQUIREMENTS NOT CONTAINED IN THE IBC OR IN STANDARDS REFERENCED BY THE IBC.

SPECIAL INSPECTIONS FOR MASONRY

1. MASONRY CONSTRUCTION SHALL BE INSPECTED AND VERIFIED IN ACCORDANCE WITH TMS 402 AND TMS 602 QUALITY ASSURANCE PROGRAM REQUIREMENTS.

SPECIAL INSPECTIONS FOR STEEL CONSTRUCTION

1. SPECIAL INSPECTIONS OF THE STEEL FABRICATION PROCESS SHALL NOT BE REQUIRED WHERE THE FABRICATOR DOES NOT PERFORM ANY WELDING, THERMAL CUTTING OR HEATING OPERATION OF ANY KIND AS PART OF THE FABRICATION PROCESS. IN SUCH CASES, THE FABRICATOR SHALL BE REQUIRED TO SUBMIT A DETAILED PROCEDURE FOR MATERIAL CONTROL THAT DEMONSTRATES THE FABRICATOR'S ABILITY TO MAINTAIN SUITABLE RECORDS AND PROCEDURES SUCH THAT, AT ANY TIME DURING THE FABRICATION PROCESS, THE MATERIAL SPECIFICATION, AND GRADE FOR THE MAIN STRESS-CARRYING ELEMENTS ARE CAPABLE OF BEING DETERMINED. MILL TEST REPORTS SHALL BE IDENTIFIABLE TO THE MAIN STRESS-CARRYING ELEMENTS WHEN REQUIRED BY THE APPROVED CONSTRUCTION DOCUMENTS.
2. STRUCTURAL STEEL - SPECIAL INSPECTION FOR STRUCTURAL STEEL SHALL BE IN ACCORDANCE WITH THE QUALITY ASSURANCE INSPECTION REQUIREMENTS OF AISC 360.
3. STEEL CONSTRUCTION OTHER THAN STRUCTURAL STEEL - SPECIAL INSPECTION FOR STEEL CONSTRUCTION OTHER THAN STRUCTURAL STEEL SHALL BE IN ACCORDANCE WITH THE TABLE SHOWN.

TABLE 1705.6
REQUIRED SPECIAL INSPECTIONS AND TESTS OF SOILS

APPLIES	TYPE	CONT	PERIODIC
X	1. VERIFY MATERIALS BELOW SHALLOW FOUNDATIONS ARE ADEQUATE TO ACHIEVE THE DESIGN BEARING CAPACITY.	-	X
X	2. VERIFY EXCAVATIONS ARE EXTENDED TO PROPER DEPTH AND HAVE REACHED PROPER MATERIAL.	-	X
X	3. PERFORM CLASSIFICATION AND TESTING OF COMPACTED FILL MATERIALS.	-	X
X	4. VERIFY USE OF PROPER MATERIALS, DENSITIES AND LIFT THICKNESSES DURING PLACEMENT AND COMPACTION OF COMPACTED FILL.	X	-
X	5. PRIOR TO PLACEMENT OF COMPACTED FILL, INSPECT SUBGRADE AND VERIFY THAT SITE HAS BEEN PREPARED PROPERLY.	-	X

SPECIAL INSPECTIONS FOR MASONRY

MINIMUM SPECIAL INSPECTION REQUIREMENTS

APPLIES	INSPECTION TASK	FREQUENCY (a)			REFERENCE FOR CRITERIA	
		LEVEL 1	LEVEL 2	LEVEL 3	TMS 402	TMS 602
	1. AS MASONRY CONSTRUCTION BEGINS, VERIFY THAT THE FOLLOWING ARE IN COMPLIANCE:					
X	a. PROPORTIONS OF SITE-PREPARED MORTAR	NR	P	P		Art. 2.1, 2.6 A, & 2.6 C
X	b. GRADE AND SIZE OF PRESTRESSING TENDONS AND ANCHORAGES	NR	P	P		Art. 2.4 B & 2.4 H
X	c. GRADE, TYPE AND SIZE OF REINFORCEMENT, CONNECTORS, ANCHOR BOLTS, AND PRESTRESSING TENDONS AND ANCHORAGES	NR	P	P		Art. 3.4 & 3.6 A
	d. PRESTRESSING TECHNIQUE	NR	P	P		Art. 3.6 B
X	e. PROPERTIES OF THIN-BED MORTAR FOR AAC MASONRY	NR	C[b]/P[c]	C		Art. 2.1 C.1
X	f. SAMPLE PANEL CONSTRUCTION	NR	P	C		Art. 1.6 D
	2. PRIOR TO GROUTING, VERIFY THAT THE FOLLOWING ARE IN COMPLIANCE:					
X	a. GROUT SPACE	NR	P	C		Art. 3.2 D & 3.2 F
	b. PLACEMENT OF PRESTRESSING TENDONS AND ANCHORAGES	NR	P	P	SEC. 10.8 & 10.9	Art. 2.4 & 3.6
X	c. PLACEMENT OF REINFORCEMENT, CONNECTORS, AND ANCHOR BOLTS	NR	P	C	SEC. 6.1, 6.3.1, 6.3.6 & 6.3.7	Art. 3.2 E & 3.4
X	d. PROPORTIONS OF SITE-PREPARED GROUT AND PRESTRESSING GROUT FOR BONDED TENDONS	NR	P	P		Art. 2.6 B & 2.4 G.1.b
	3. VERIFY COMPLIANCE OF THE FOLLOWING DURING CONSTRUCTION:					
X	a. MATERIALS AND PROCEDURES WITH THE APPROVED SUBMITTALS	NR	P	P		Art. 1.5
X	b. PLACEMENT OF MASONRY UNITS AND MORTAR JOINT CONSTRUCTION	NR	P	P		Art. 3.3 B
X	c. SIZE AND LOCATION OF STRUCTURAL MEMBERS	NR	P	P		Art. 3.3 F
X	d. TYPE, SIZE, AND LOCATION OF ANCHORS, INCLUDING OTHER DETAILS OF ANCHORAGE OF MASONRY TO STRUCTURAL MEMBERS, FRAMES OR OTHER CONSTRUCTION.	NR	P	C	SEC. 1.2.1 (e), 6.2.1 & 6.3.1	
X	e. WELDING OF REINFORCEMENT	NR	C	C	SEC. 6.1.6.1.2	
X	f. PREPARATION, CONSTRUCTION, AND PROTECTION OF MASONRY DURING COLD WEATHER (TEMPERATURE BELOW 40° F (4.4° C)) OR HOT WEATHER (TEMPERATURE ABOVE 90° F (32.2° C))	NR	P	P		Art. 1.8 C & 1.8 D
	g. APPLICATION AND MEASUREMENT OF PRESTRESSING FORCE	NR	C	C		Art. 3.6 B
X	h. PLACEMENT OF GROUT AND PRESTRESSING GROUT FOR BONDED TENDONS IS IN COMPLIANCE	NR	C	C		Art. 3.5 & 3.6 C
X	i. PLACEMENT OF AAC MASONRY UNITS AND CONSTRUCTION OF THIN-BED MORTAR JOINTS	NR	C[b]/P[c]	C		Art. 3.3 B.9 & 3.3 F.1.b
X	4. OBSERVE PREPARATION OF GROUT SPECIMENS, MORTAR SPECIMENS, AND/OR PRISMS	NR	P	C		Art. 1.4 B.2.a.3, 1.4 B.2.b.3, 1.4 B.2.c.3, 1.4 B.3, & 1.4 B.4

a. FREQUENCY REFERS TO THE FREQUENCY OF INSPECTION, WHICH MAY BE CONTINUOUS DURING THE LISTED TASK OR PERIODICALLY DURING THE LISTED TASK, AS DEFINED IN THE TABLE.
NR = NOT REQUIRED, P = PERIODIC, C = CONTINUOUS
b. REQUIRED FOR THE FIRST 5000 SQUARE FEET (465 SQUARE METERS) OF AAC MASONRY.
c. REQUIRED AFTER THE FIRST 5000 SQUARE FEET (465 SQUARE METERS) OF AAC MASONRY.

TABLE 1705.3
REQUIRED SPECIAL INSPECTIONS AND TESTS OF CONCRETE CONSTRUCTION

APPLIES	TYPE	CONT	PERIODIC	REFERENCED STANDARD	IBC REFERENCE
X	1. INSPECT REINFORCEMENT, INCLUDING PRESTRESSING TENDONS, AND VERIFY PLACEMENT	-	X	ACI 318: CH, 20, 25.2, 25.3, 26.6.1-26.6.3	1908.4
X	2. REINFORCING BAR WELDING: a. VERIFY WELDABILITY OF REINFORCING BARS OTHER THAN ASTM A706; b. INSPECT SINGLE-PASS FILLET WELDS, MAXIMUM 5/16"; AND c. INSPECT ALL OTHER WELDS.	- - X	X X	AWS D1.4 ACI 318: 26.6.4	-
X	3. INSPECT ANCHORS CAST IN CONCRETE.	-	X	ACI 318: 17.8.2	-
X	4. INSPECT ANCHORS POST-INSTALLED IN HARDENED CONCRETE MEMBERS. a. ADHESIVE ANCHORS INSTALLED IN HORIZONTALLY OR UPWARDLY INCLINED ORIENTATIONS TO RESIST SUSTAINED TENSION LOADS. b. MECHANICAL ANCHORS AND ADHESIVE ANCHORS NOT DEFINED IN 4.a.	X	 X	ACI 318: 17.8.2.4 ACI 318: 17.8.2	-
X	5. VERIFY USE OF REQUIRED DESIGN MIX.	-	X	ACI 318: CH. 19, 26.4.3, 26.4.4	1904.1, 1904.2, 1908.2, 1908.3
X	6. PRIOR TO CONCRETE PLACEMENT, FABRICATE SPECIMENS FOR STRENGTH TESTS, PERFORM SLUMP AND AIR CONTENT TESTS, AND DETERMINE THE TEMPERATURE OF THE CONCRETE.	X	-	ASTM C172 ASTM C31 ACI 318: 26.5, 26.12	1908.10
X	7. INSPECT CONCRETE AND SHOTCRETE PLACEMENT FOR PROPER APPLICATION TECHNIQUES.	X	-	ACI 318: 26.5	1908.6, 1908.7, 1908.8
X	8. VERIFY MAINTENANCE OF SPECIFIED CURING TEMPERATURE AND TECHNIQUES.	-	X	ACI 318: 26.5.3-26.5.5	1908.9
	9. INSPECT PRESTRESSED CONCRETE FOR: a. APPLICATION OF PRESTRESSING FORCES; AND b. GROUTING OF BONDED PRESTRESSING TENDONS.	X X	- -	ACI 318: 26.10	-
	10. INSPECT ERECTION OF PRECAST CONCRETE MEMBERS.	-	X	ACI 318: 26.9	-
	11. VERIFY IN-SITU CONCRETE STRENGTH, PRIOR TO STRESSING OF TENDONS IN POST-TENSIONED CONCRETE AND PRIOR TO REMOVAL OF SHORES AND FORMS FROM BEAMS AND STRUCTURAL SLABS.	-	X	ACI 318: 26.11.2	-
X	12. INSPECT FORMWORK FOR SHAPE, LOCATION AND DIMENSIONS OF THE CONCRETE MEMBER BEING FORMED.	-	X	ACI 318: 26.11.1.2(b)	-

BID SET

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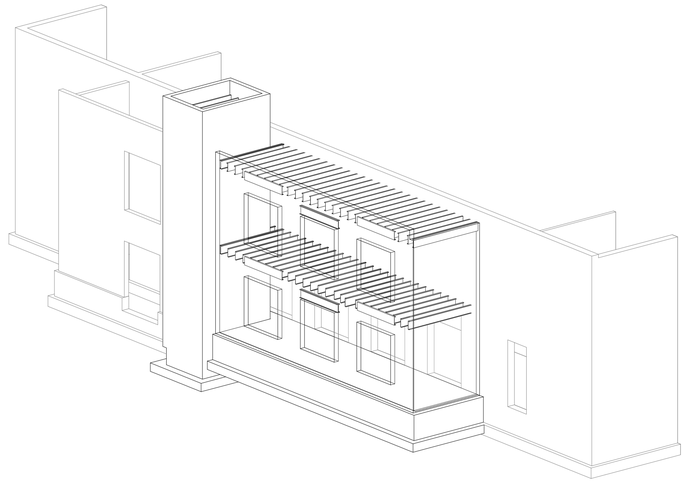
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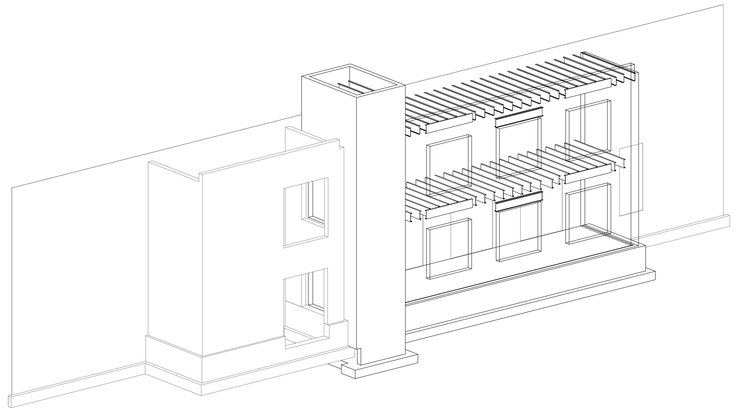
SPECIAL INSPECTIONS

SHEET S0.02

BID SET



1 / S0.03 ISOMETRIC VIEW
SCALE:



2 / S0.03 ISOMETRIC VIEW
SCALE:

ISOMETRIC VIEWS ARE FOR REPRESENTATION ONLY
AND MAY NOT BE ENTIRELY ACCURATE OR TO SCALE

REV	DATE	REVISION
0	07/14/26	BID SET

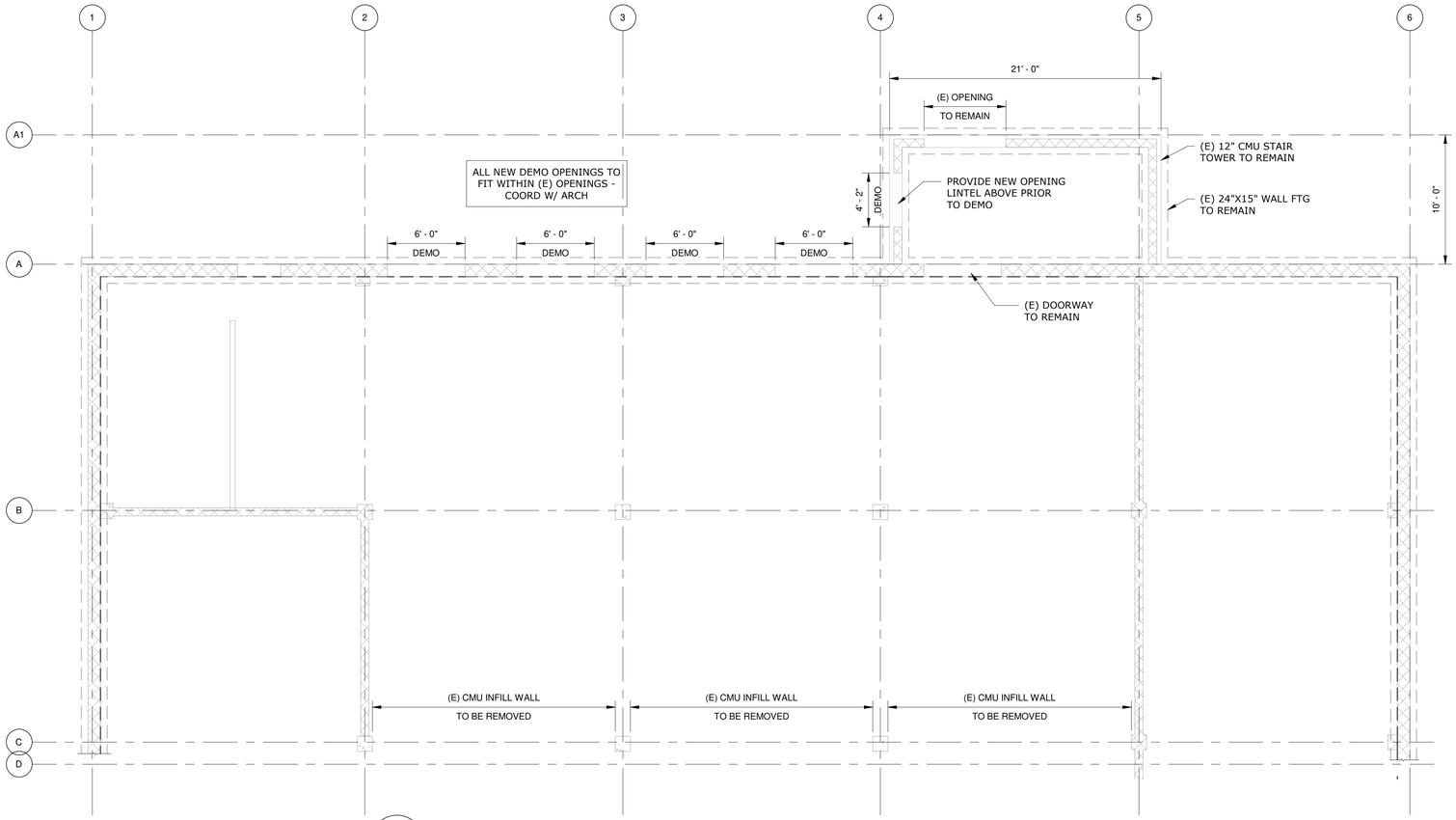
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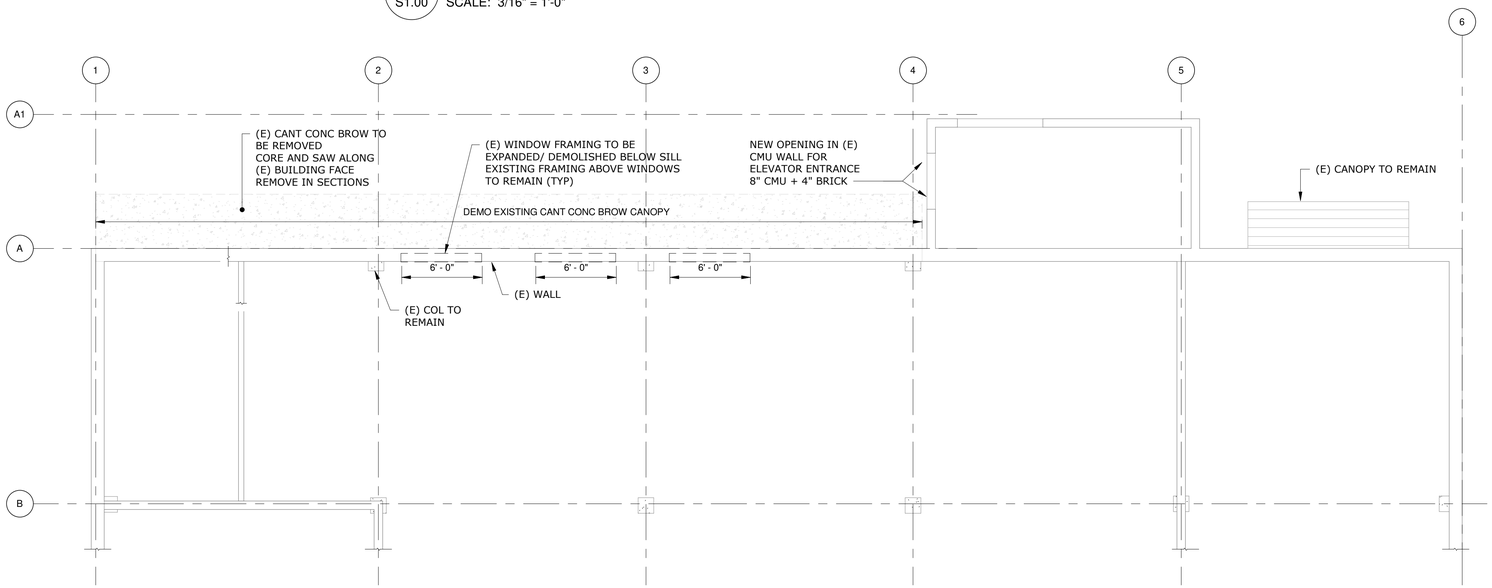
ISOMETRIC VIEW

SHEET **S0.03**



1 / S1.00 STRUCTURAL 1ST FLOOR PLAN - EXISTING AND DEMO

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



4 / S1.00 STRUCTURAL 2ND FLOOR PLAN - EXISTING AND DEMO

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

BID SET

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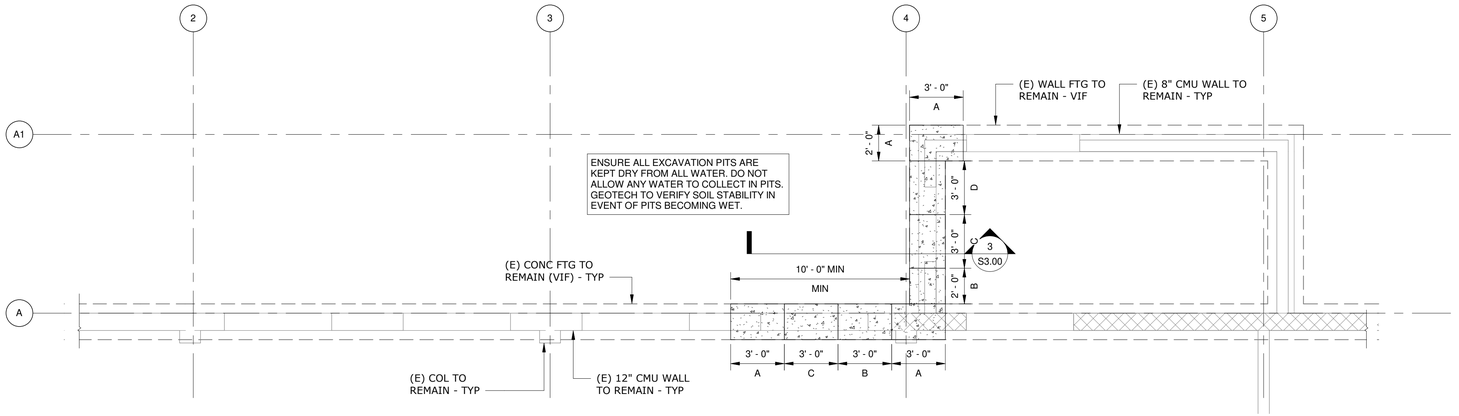
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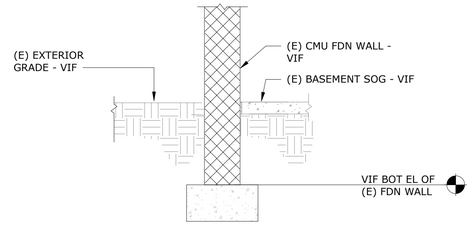
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EXISTING AND DEMO PLANS

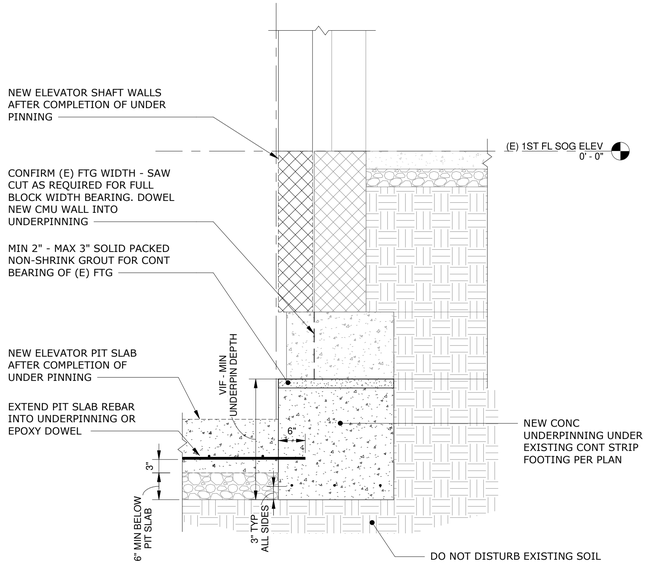
SHEET **S1.00**



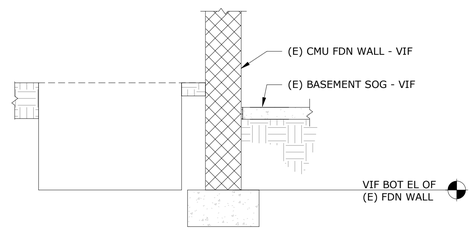
A S1.01 STRUCTURAL UNDERPINNING FOUNDATION PLAN
SCALE: 1/4" = 1'-0"



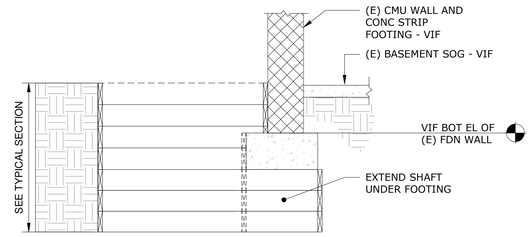
2 S1.01 STEP 1 - LOCALLY EXCAVATE FOR PIT WIDTH
SCALE: 1/2" = 1'-0"



1 S1.01 TYPICAL DETAIL UNDERPINNING SECTION
SCALE: 3/4" = 1'-0"



3 S1.01 STEP 2 - START APPROACH PIT
SCALE: 1/2" = 1'-0"



4 S1.01 STEP 3 - INSTALL LAGGING
SCALE: 1/2" = 1'-0"

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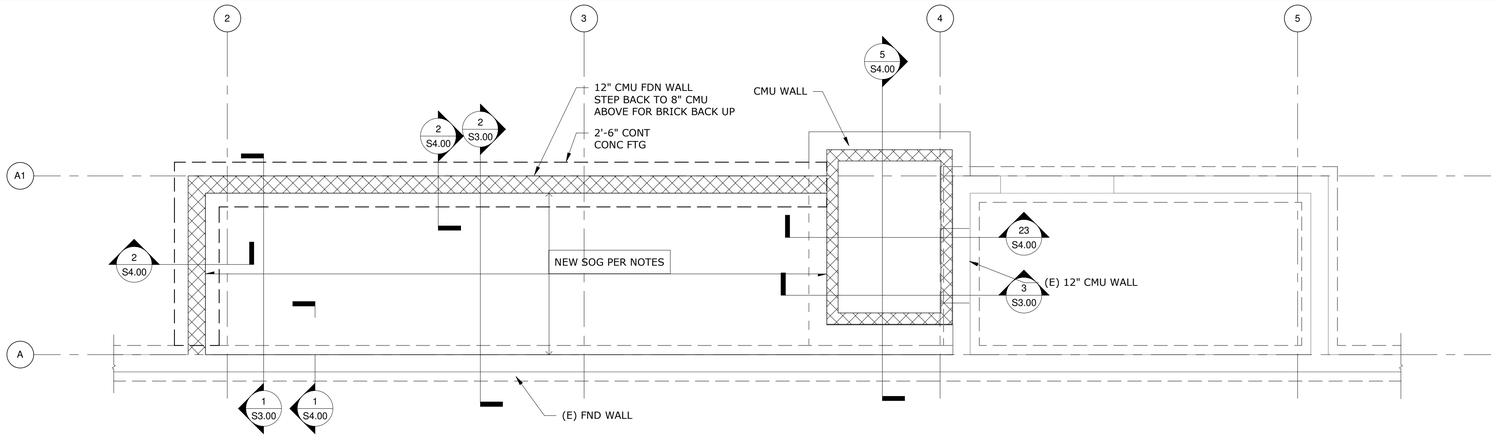
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UNDERPINNING PLAN

SHEET S1.01



1 / S2.00 STRUCTURAL FOUNDATION PLAN - NEW

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

FOUNDATION PLAN NOTES:

1. TOP OF SLAB ON GRADE ELEVATION = 0'-0", UNLESS OTHERWISE NOTED.
2. SLAB ON GRADE CONSTRUCTION CONSISTS OF 4 INCH CONCRETE SLAB REINFORCED WITH 6 x 6 - W2.4 x W2.4 WWF ON 6 INCHES OF COMPACTED AGGREGATE AND 10 MIL VAPOR BARRIER. FOR ADDITIONAL INFORMATION, SEE TYPICAL DETAILS.
3. TOP OF EXISTING FOOTING ELEVATION INDICATED THUS [ ] IN PLAN.
4. TOP OF PROPOSED FOOTING ELEVATION INDICATED THUS ( ) IN PLAN.
5. TOP OF EXISTING PIER ELEVATION INDICATED THUS P( ) IN PLAN.
6. FOR LOCATION AND SIZE OF ALL OPENINGS, CONCRETE PADS, SLAB DEPRESSIONS AND PITS, SEE ARCHITECTURAL DRAWINGS. REFER TO TYPICAL DETAIL DRAWINGS, FOR ADDITIONAL INFORMATION.
7. REFER TO TYPICAL DETAIL DRAWINGS, FOR TYPICAL DETAILS NOT REFERENCED IN PLAN.
8. REFER TO GENERAL NOTES AND SCHEDULES, FOR ADDITIONAL INFORMATION.
9. THE GENERAL CONTRACTOR/CONSTRUCTION MANAGER SHALL OBTAIN CERTIFIED MANUFACTURER'S DRAWINGS FOR ALL EQUIPMENT SHOWN. ALL EQUIPMENT RECESSES AND DIMENSIONS SHALL BE VERIFIED PRIOR TO THE COMMENCEMENT OF WORK.

BID SET

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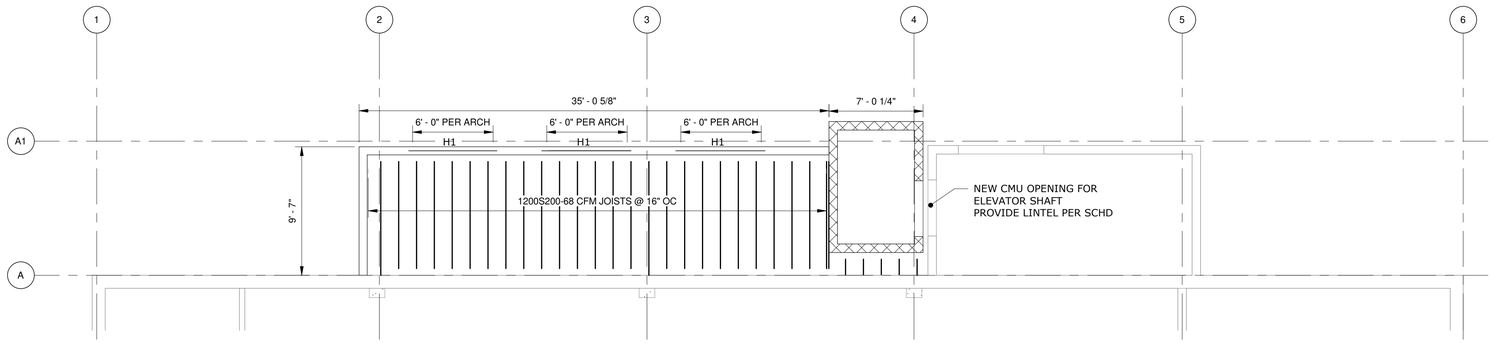
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FOUNDATION PLANS

SHEET S2.00

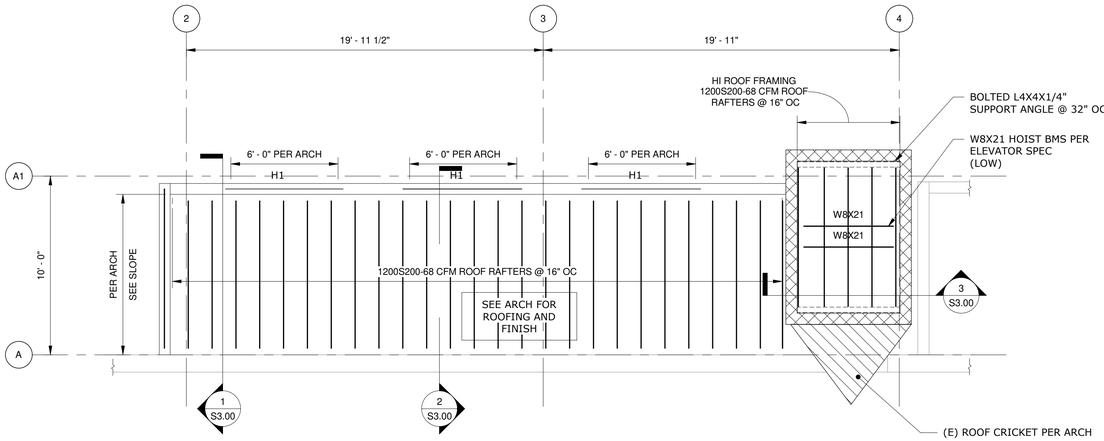


1 / S2.10 OVERALL UPPER LEVEL PLAN

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

FLOOR FRAMING PLAN NOTES:

1. TOP OF FLOOR FINISH ELEVATION TO MATCH EXISTING.
2. TOP OF CFM ELEVATION = (-0' -1"). ELEVATIONS INDICATED THUS (+/-)ARE RELATIVE TO TOP OF EXISTING FINISH FLOOR ELEVATION.
3. S1 INDICATES SPAN OF 3/4" USG STRUCTIO-CRETE SUBFLOOR PANELS OR APPROVED EQUIVALENT.
4. MILL CAMBER INDICATED THUS (C=) IN PLAN.
5. STRUCTURAL STEEL SHAPES INDICATED THUS (E) IN PLAN ARE EXISTING TO REMAIN.
6. STRUCTURAL STEEL SHAPES INDICATED THUS (D) IN PLAN ARE EXISTING TO BE DEMOLISHED.
7. STRUCTURAL STEEL SHAPES INDICATED THUS (R) IN PLAN ARE EXISTING TO BE REINFORCED.
8. THE GENERAL CONTRACTOR/CONSTRUCTION MANAGER SHALL COORDINATE SIZE AND LOCATION OF ALL OPENINGS SHOWN ON THE ARCHITECTURAL, MECHANICAL, ELECTRICAL AND PLUMBING DRAWINGS AND TYPICAL DETAILS.
9. SEE TYPICAL DETAIL DRAWINGS FOR TYPICAL DETAILS NOT REFERENCED IN PLAN.
10. FOR ADDITIONAL INFORMATION, SEE GENERAL NOTES.



2 / S2.10 TO ROOF FRAMING

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

ROOF FRAMING PLAN NOTES:

1. TOP OF ROOF FRAMING ELEVATION PER ARCH.
2. TOP OF PARAPET ELEVATION PER ARCH. ELEVATIONS INDICATED THUS (+/-) ARE RELATIVE TO TOP OF STEEL SLAB ON GRADE ELEVATION.
3. SEE PLAN AND ARCHITECTURE FOR ROOF SLOPE.
4. S1 INDICATES SPAN OF 3/4" PT ROOF SHEATHING PER GENERAL NOTES.
5. STRUCTURAL STEEL SHAPES INDICATED THUS (E) IN PLAN ARE EXISTING TO REMAIN.
6. STRUCTURAL STEEL SHAPES INDICATED THUS (D) IN PLAN ARE EXISTING TO BE DEMOLISHED.
7. STRUCTURAL STEEL SHAPES INDICATED THUS (R) IN PLAN ARE EXISTING TO BE REINFORCED.
8. THE GENERAL CONTRACTOR/CONSTRUCTION MANAGER SHALL COORDINATE SIZE AND LOCATION OF ALL OPENINGS SHOWN ON THE ARCHITECTURAL, MECHANICAL, ELECTRICAL AND PLUMBING DRAWINGS AND TYPICAL DETAILS.
9. SEE TYPICAL DETAIL DRAWINGS FOR TYPICAL DETAILS NOT REFERENCED IN PLAN.
10. FOR ADDITIONAL INFORMATION, SEE GENERAL NOTES.

HEADER (H) SCHEDULE

MARK	SIZE	REMARKS
H1	MIN (2) 1200S200-68 BOXED	SEE DETAILS

BID SET

REV	DATE	REVISION
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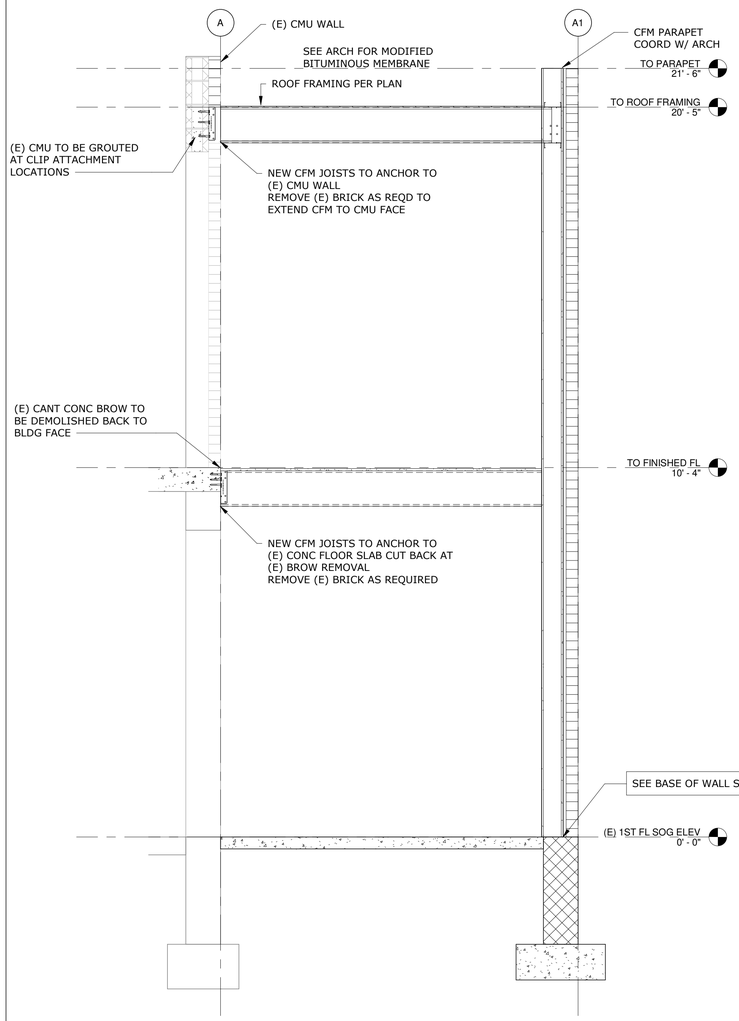
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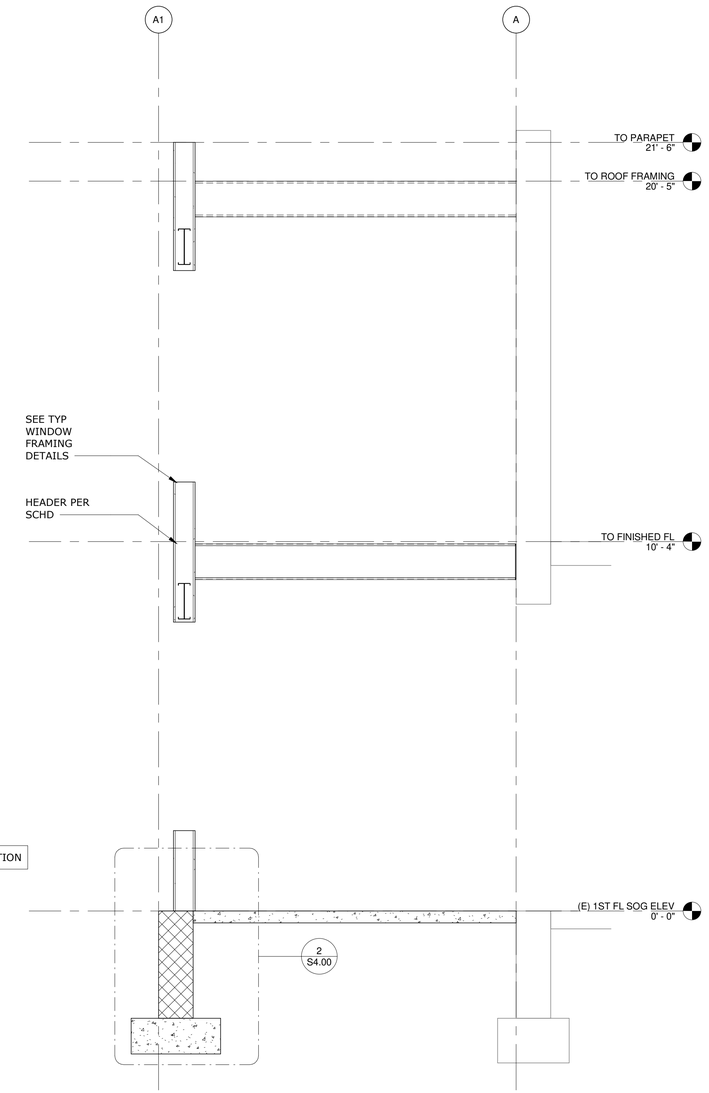
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FRAMING PLANS

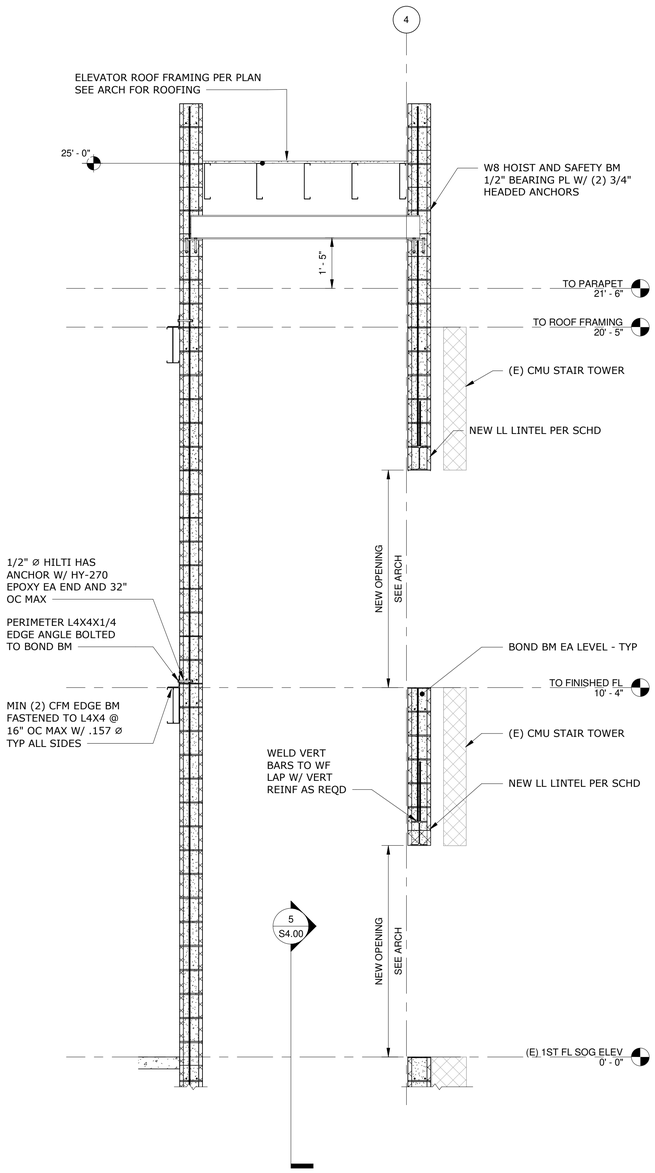
SHEET S2.10



1 / S3.00 TYPICAL SECTION THRU ADDITION
SCALE: 1/2" = 1'-0"



2 / S3.00 TYPICAL SECTION AT WINDOW OPENINGS
SCALE: 1/2" = 1'-0"



3 / S3.00 SECTION AT NEW ELEVATOR CMU OPENINGS
SCALE: 1/2" = 1'-0"

BID SET

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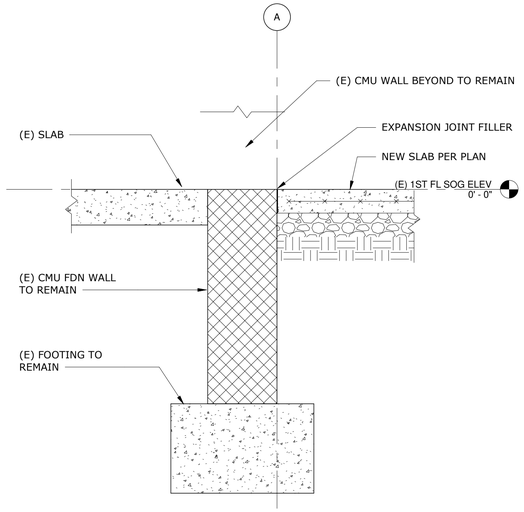
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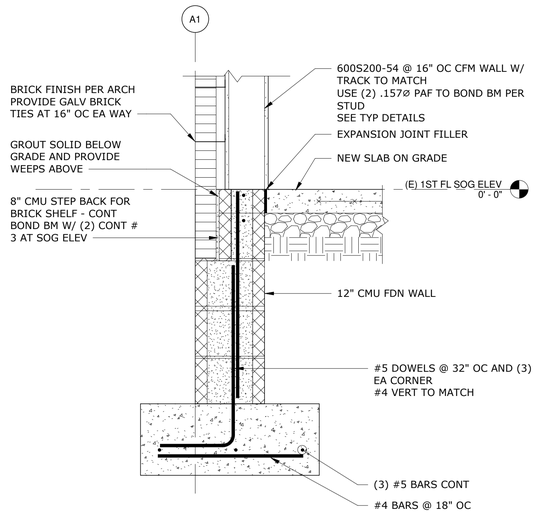
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BUILDING SECTIONS

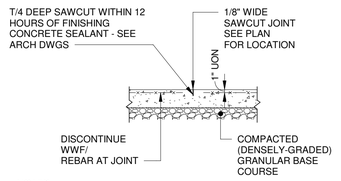
SHEET **S3.00**



1 S4.00 **WINDOW DEMOLITION**
SCALE: 1" = 1'-0"



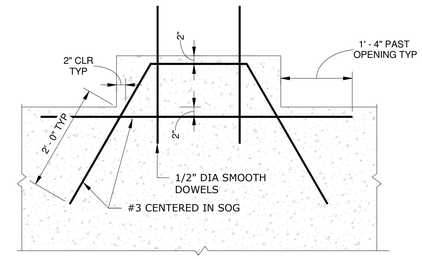
2 S4.00 **NEW EXT FOUNDATION WALL**
SCALE: 1" = 1'-0"



NOTES:

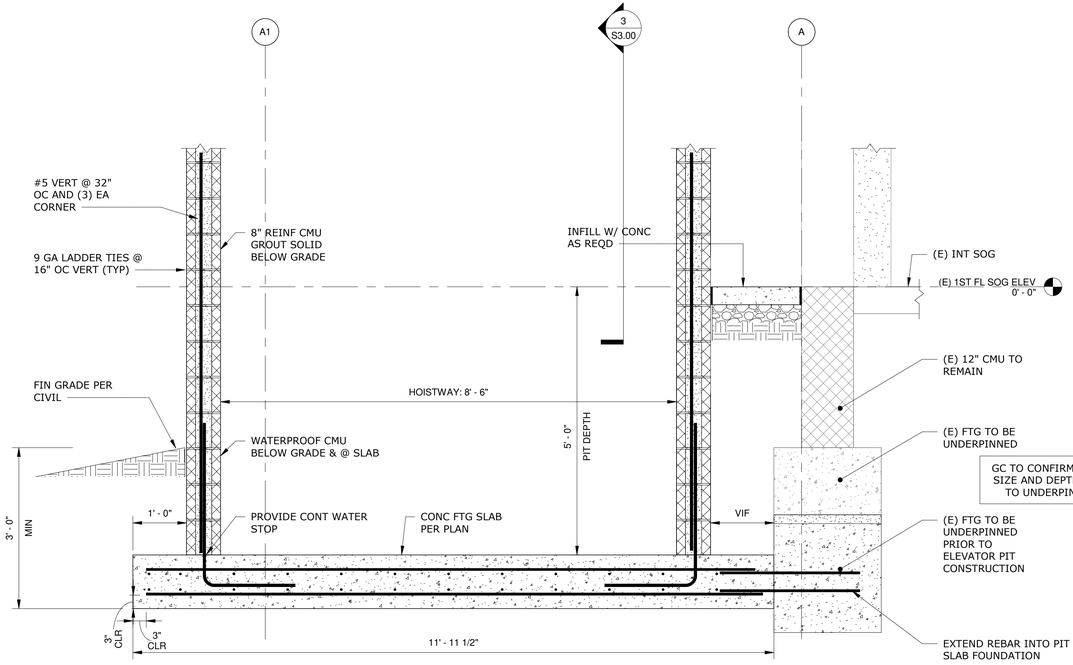
1. SEE PLAN AND DETAIL FOR SLAB CONSTRUCTION

3 S4.00 **TYPICAL DETAIL**
SLAB ON GRADE CONTROL JOINT
SCALE: NTS

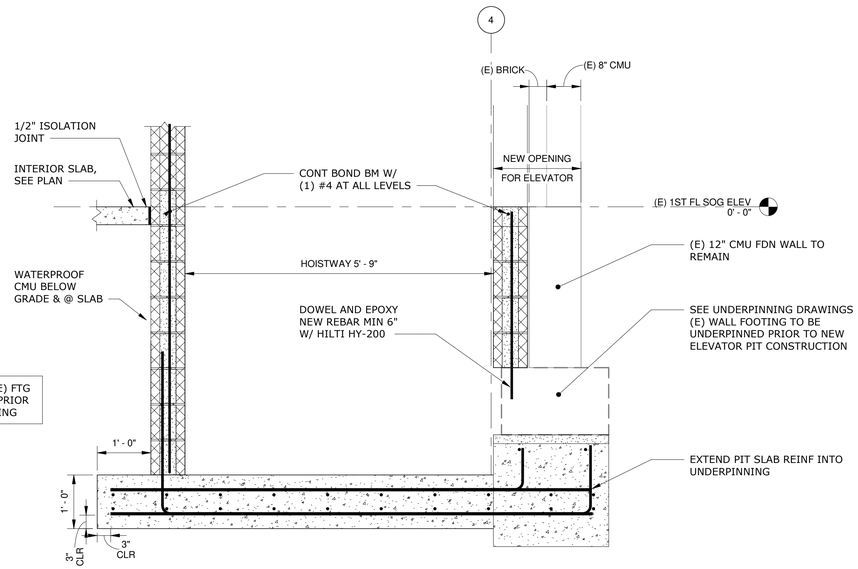


PLAN VIEW

4 S4.00 **TYPICAL DETAIL**
SLAB AT POUR THRU
SCALE: 3/4" = 1'-0"



5 S4.00 **ELEVATOR SHAFT**
SCALE: 3/4" = 1'-0"



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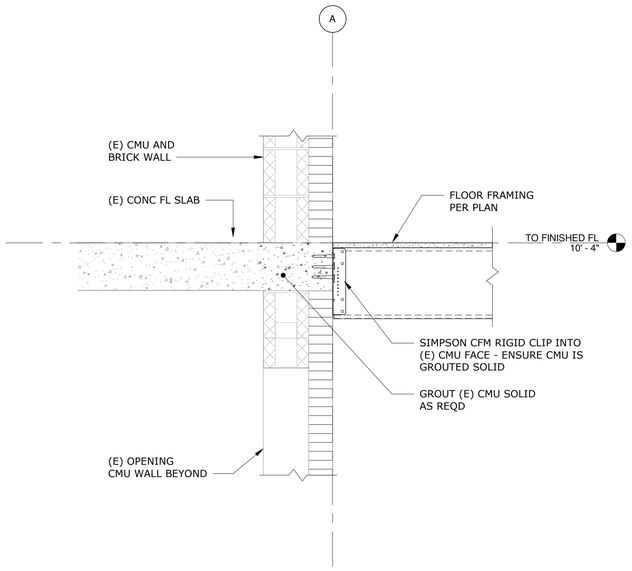
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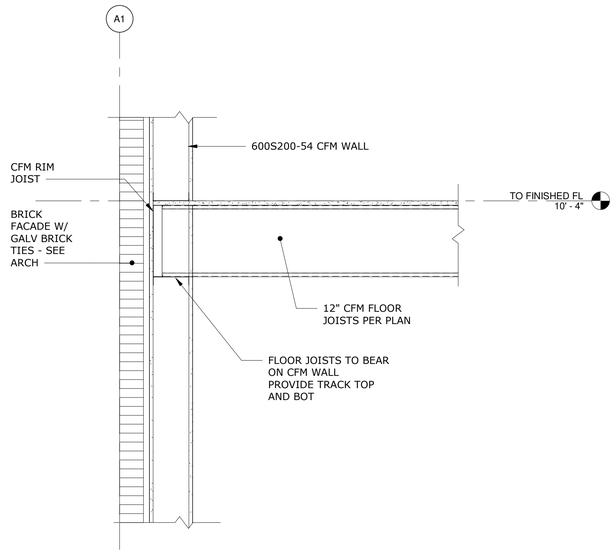
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FOUNDATION SECTIONS

SHEET **S4.00**



1 / S5.00 NEW FRAMING AT (E) WINDOW
SCALE: 1" = 1'-0"



2 / S5.00 FLOOR FRAMING AT NEW EXTERIOR WALL
SCALE: 1" = 1'-0"

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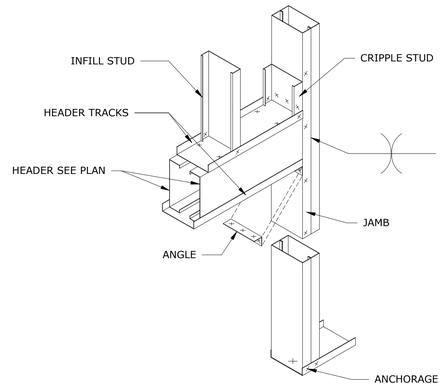
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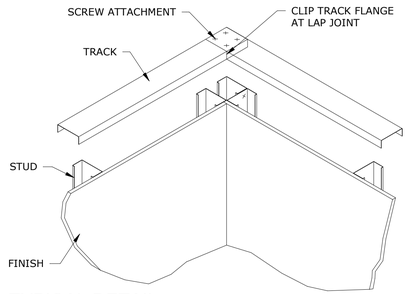
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FRAMING SECTIONS

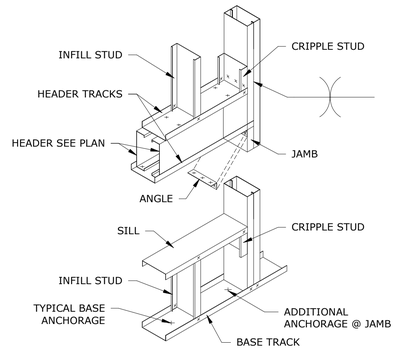
SHEET S5.00



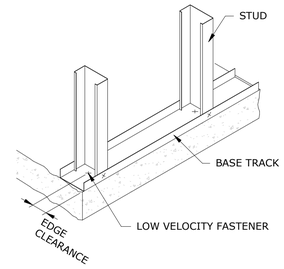
1 / S6.01 TYPICAL DETAIL
DOOR LOAD BEARING BOXED HEADER
SCALE: 1" = 1'-0"



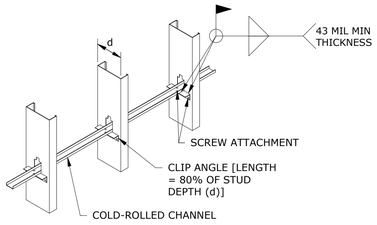
2 / S6.01 TYPICAL DETAIL
WALL FRAMING AT CORNER TRACK LAP CONNECTION
SCALE: 1" = 1'-0"



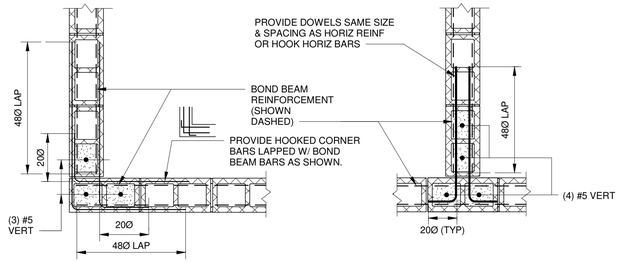
3 / S6.01 TYPICAL DETAIL
WINDOW LOAD BEARING BOXED HEADER
SCALE: 3/4" = 1'-0"



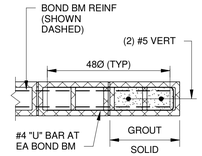
4 / S6.01 TYPICAL DETAIL
BOT TRACK ANCHORAGE
SCALE: 3/4" = 1'-0"

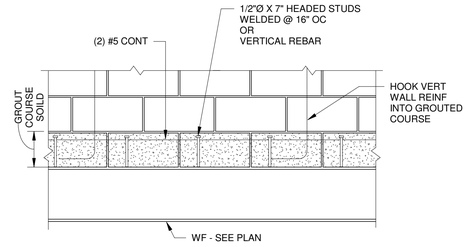


5 / S6.01 TYPICAL DETAIL
BRIDGING COLD-ROLLED CHANNEL
SCALE: 3/4" = 1'-0"

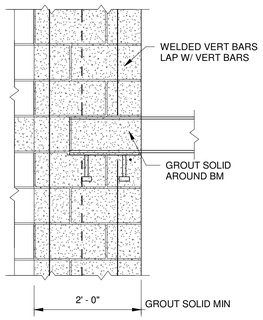


6 / S6.01 TYPICAL DETAIL
8 INCH CMU WALL CONSTRUCTION
SCALE: 3/4" = 1'-0"

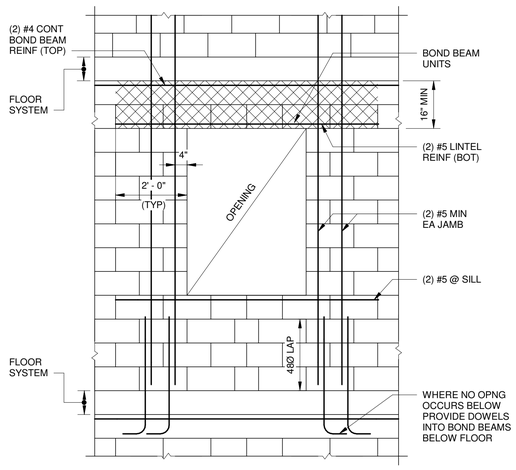




7 / S6.01 TYPICAL DETAIL
CMU SUPPORTED ON STEEL BEAM
SCALE: 3/4" = 1'-0"



8 / S6.01 TYPICAL DETAIL
BEAM BEARING PARALLEL TO WALL
SCALE: 3/4" = 1'-0"



9 / S6.01 TYPICAL DETAIL
REINFORCEMENT AROUND WALL OPENINGS
SCALE: 1/2" = 1'-0"

BID SET

REV	DATE	REVISION
0	07/14/26	BID SET

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TYPICAL FRAMING DETAILS

SHEET S6.01

MECHANICAL SYMBOL LEGEND

MECHANICAL SYMBOLS

Ø	DIAMETER
M	MOTOR OPERATED DAMPER W/ ACCESS DOOR
FS	FLOW SWITCH
TT	TEMPERATURE TRANSMITTER
PT	PRESSURE TRANSMITTER
PS	PRESSURE SWITCH
	THERMOMETER
	GAUGE
	AQUASTAT
	BASKET STRAINER
	STEAM TRAP
VB	VACUUM BREAKER
T	THERMOSTAT
CO	CARBON MONOXIDE SENSOR/ALARM
S	SENSOR
H	HUMIDISTAT
	PIPE/DUCT CAP
M	MOTOR OPERATOR
	PUMP - INLINE
	FAN - SINGLE LINE
	GATE VALVE
	GLOBE VALVE
	PLUG VALVE
	BUTTERFLY VALVE
	BALL VALVE
	CHECK VALVE
	LIFT CHECK VALVE
	GATE VALVE, ANGLE
	GLOBE VALVE, ANGLE
	BALANCING VALVE
CBV	CIRCUIT SETTING BALANCING VALVE
	THREE WAY CONTROL VALVE
	TWO WAY CONTROL VALVE
	SOLENOID VALVE
	PRESSURE REDUCING VALVE
	TEMP/PRESS RELIEF VALVE
	SAFETY RELIEF VALVE
	FLEXIBLE CONNECTION
	GAS COCK
	FUSIBLE LINK VALVE - QUICK CLOSING
	FUSIBLE LINK VALVE - QUICK OPENING
MV	MANUAL AIR VENT
	AUTO AIR VENT
	FLOW METER - VENTURI
	FLOW METER - ORIFICE
	STRAINER
	STRAINER WITH BLOW OFF VALVE
	PIPE RISING
	PIPE DROPPING DOWN
	TEE OUTLET DOWN
	CONCENTRIC REDUCER
	ECCENTRIC REDUCER
	UNION - SCREWED OR FLANGED
	ANCHOR
	GUIDE
S	DUCT SMOKE DETECTOR

GENERAL SYMBOLS

(D) 18" x 18" XX	DUCT TO BE DEMOLISHED
(E) 18" x 18" XX	EXISTING DUCT
18" x 18" SA	SUPPLY AIR
18" x 18" OA	OUTSIDE AIR
18" x 18" RA	RETURN AIR
18" x 18" TA	TRANSFER AIR
18" x 18" EA	EXHAUST AIR
18" x 18" REL	RELIEF AIR
DROP	RECTANGULAR SUPPLY/OUTSIDE AIR DUCT RISE
DROP	ROUND SUPPLY/OUTSIDE AIR DUCT RISE
DROP	RECTANGULAR RETURN/TRANSFER AIR DUCT RISE
DROP	ROUND RETURN/TRANSFER AIR DUCT RISE
DROP	RECTANGULAR EXHAUST/RELIEF AIR DUCT RISE
DROP	ROUND EXAHUST/RELIEF AIR DUCT RISE
	DEMOLISHED WORK
	EXISTING WORK
	NEW WORK
	POINT OF CONNECTION (NEW TO EXISTING)
	EXTENT OF DEMOLITION
	POINT OF CONNECTION TO EQUIPMENT SUPPLIED BY CONTRACTOR
? ?	SECTION CUT ARROW: 1 = DENOTES SECTION IDENTIFICATION # = DENOTES DRAWING NUMBER OF SECTION DETAIL
	BREAK LINE (DOUBLE LINE DUCTWORK)
	BREAK LINE (DOUBLE LINE PIPING)
	BREAK LINE (SINGLE LINE)
	FLOW ARROW
EQPM #	EQUIPMENT TAG (REFER TO SCHEDULES AND/OR SPECS) EQPM = EQUIPMENT ABBREVIATION # = EQUIPMENT NUMBER
TAG XXX	EQUIPMENT TAG (REFER TO SCHEDULES AND/OR SPECS) TAG = AIR DEVICE ABBREVIATION CFM = AIR DEVICE FLOW
CD	CONDENSATE DRAINAGE
HWR	HEATING WATER RETURN
HWS	HEATING WATER SUPPLY
G	NATURAL GAS
REF-L	REFRIGERANT-LIQUID
REF-S	REFRIGERANT-SUCTION

GENERAL COMPLIANCE - PA

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

IBC	2021 INTERNATIONAL BUILDING CODE
IFGC	2021 INTERNATIONAL FUEL GAS CODE
IMC	2021 INTERNATIONAL MECHANICAL CODE
IECC	2021 INTERNATIONAL ENERGY CONSERVATION CODE
ASHRAE	AMERICAN SOCIETY OF HEATING, REFRIGERATION AND AIR CONDITIONING ENGINEERS
ASTM	AMERICAN SOCIETY FOR TESTING MATERIALS
ANSI	AMERICAN NATIONAL STANDARDS INSTITUTE
UL	UNDERWRITER'S LABORATORIES, INC.
FM	FACTORY MUTUAL
NFPA	NATIONAL FIRE PROTECTION ASSOCIATION
SMACNA	SHEET METAL AND AIR CONDITIONING CONTRACTOR'S NATIONAL ASSOCIATION
ASME	AMERICAN SOCIETY OF MECHANICAL ENGINEERS
AMCA	AIR MOVING AND CONDITIONING ASSOCIATION
ARI	AMERICAN REFRIGERATION INSTITUTE
MSS	MANUFACTURER'S STANDARDIZATION SOCIETY OF THE VALVE AND FITTING INDUSTRY

MECHANICAL ABBREVIATIONS

(D)	DEMOLISH
(E)	EXISTING
(F)	REFURBISH
(M)	PROVIDED BY MANUFACTURER
(N)	NEW
(R)	RELOCATE
AC	AIR CONDITIONING UNIT
ACC	AIR COOLED CONDENSER
ACCU	AIR COOLED CONDENSING UNIT
ACFM	ACTUAL CUBIC FEET PER MINUTE
AD	ACCESS DOOR
ADJ	ADJUSTABLE
AF	AIRFOIL
AFF	ABOVE FINISHED FLOOR
AHU	AIR HANDLING UNIT
AI	AIR INTAKE
AL	ACOUSTICAL LINING
AMB	AMBIENT
AMS	AIR FLOW MEASURING STATION
AO	ANALOG OUTPUT
AP	ACCESS PANEL
APD	AIR PRESSURE DROP
ARCH	ARCHITECTURAL
AS	AIR SEPARATOR
ASC	APPLICATION SPECIFIC CONTROLLER
ATC	AUTOMATIC TEMPERATURE CONTROL
AVG	AVERAGE
AWT	AVERAGE WATER TEMPERATURE
B	BOILER
BAS	BUILDING AUTOMATION SYSTEM
BDD	BACKDRAFT DAMPER
BDS	BLOWDOWN SEPARATOR
BFP	BACK FLOW PREVENTER OR BOILER FEED PUMP
BFU	BOILER FEED UNIT
BHP	BRAKE HORSEPOWER OR BOILER HORSEPOWER
BI	BACKWARD INCLINED OR BINARY INPUT
BLD	BUILDING
BO	BINARY OUTPUT
BOD	BOTTOM OF DUCT OR BASIS OF DESIGN
BOP	BOTTOM OF PIPE
BOT	BOTTOM
BRD	BAROMETRIC RELIEF DAMPER
BT	BLOWDOWN TANK
BTU	BRITISH THERMAL UNIT
BTUH	BTU PER HOUR
CA	COMBUSTION AIR
CAP	CAPACITY
CAV	CONSTANT AIR VOLUME
CB	CONCRETE BASE
CC	COOLING COIL
CCO	CAPPED CURB OPENING
CD	CEILING DIFFUSER
CFH	CUBIC FEET PER HOUR
CFM	CUBIC FEET PER MINUTE
CH	CHILLER
CL	COOLING
CLG	CEILING
CMPR	COMPRESSOR
CO	CLEAN OUT
COL	COLUMN
CONC	CONCENTRATION OR CONCRETE
COND	CONDENSATE (STEAM/ COOLING COIL)
CONN	CONNECTION
CONT	CONTINUATION
CP	CONDENSATE PUMP
CRAC	COMPUTER ROOM AIR CONDITIONING UNIT
CT	COOLING TOWER
CU	CONDENSING UNIT
CUH	CABINET UNIT HEATER
CV	COEFFICIENT OF CAPACITY
D	DROP
DA	DEAERATOR
DB	DRY BULB
DC	DRY COOLER
DDC	DIRECT DIGITAL CONTROL
DEFL	DEFLECTION
DET	DETAIL
DIA	DIAMETER
DISC	DISCONNECT
DISCH	DISCHARGE
DI	DIGITAL INPUT
DN	DOWN
DO	DIGITAL OUTPUT
DR	DRAIN
DS	DISCONNECT SWITCH
DWG	DRAWING
EA	EXHAUST AIR OR EACH
EAT	ENTERING AIR TEMPERATURE
EC	ELECTRICAL CONTRACTOR
ECH	ELECTRIC CEILING HEATER
EDB	ENTERING DRY BULB TEMPERATURE
EDH	ELECTRIC DUCT HEATER
EF	EXHAUST FAN
EFF	EFFICIENCY
EG	EXHAUST GRILLE
EJ	EXPANSION JOINT
ELEC	ELECTRIC
ELEV	ELEVATION
EM	EQUIPMENT MANUFACTURER
EMER	EMERGENCY
ENT	ENTERING
ER	EXHAUST REGISTER
ERAD	ELECTRIC RADIATION
ERC	EXHAUST ENERGY RECOVERY COIL
ERU	ENERGY RECOVERY UNIT
ESP	EXTERNAL STATIC PRESSURE
ET	EXPANSION TANK
EVC	EVAPORATIVE COOLER
EWB	ENTERING WET BULB TEMPERATURE
EWH	ELECTRIC WATER HEATER
EWT	ENTERING WATER TEMPERATURE
EXH	EXHAUST
EXIST	EXISTING
EXT	EXTERNAL
F	FILTER
F&T	FLOAT AND THERMOSTATIC STEAM TRAP
FA	FACE AREA
FA	FROM ABOVE
FAS	FIRE ALARM SYSTEM
FB	FROM BELOW
FC	FLEXIBLE CONNECTION
FCU	FAN COIL UNIT
FD	FIRE DAMPER OR FLOOR DRAIN
FIN	FINAL
FLA	FULL LOAD AMPS
FLEX	FLEXIBLE
FLR	FLOOR
FLTR	FILTER
FM	FLOW METERING DEVICE
FO	FUEL OIL
FOB	FLAT ON BOTTOM
FOF	FUEL OIL FILL
FOO	FUEL OIL OVERFLOW
FOP	FUEL OIL PUMP
FOS	FUEL OIL SUPPLY
FOT	FLAT ON TOP
FPB	FAN POWERED BOX
FPM	FEET PER MINUTE
FPS	FEET PER SECOND
FT	FLASH TANK OR FOOT OR FEET
FTR	FINNED TUBE RADIATION
FUT	FUTURE
GF	GAS FURNACE
GPH	GALLONS PER HOUR
GPM	GALLONS PER MINUTE
GR	GRILLE
GRV	GRAVITY ROOF VENT
GV	GRAVITY VENT
H	HUMIDIFIER
HAV	HEAT ACTUATED SHUTOFF VALVE
HC	HEATING COIL
HG	MERCURY
HO	HUB OUTLET
HP	HORSEPOWER
HTG	HEATING
HV	HEATING & VENTILATING UNIT
HWG	HOT WATER GENERATOR
HX	HEAT EXCHANGER
ID	INSIDE DIAMETER
IN	INCHES
INIT	INITIAL
KW	KILOWATT
LAT	LEAVING AIR TEMPERATURE
LB	POUND
LD	LINEAR DIFFUSER
LDB	LEAVING DRY BULB TEMPERATURE
LF	LINEAR FOOT
LG	LINEAR GRILLE
LOC	LOCATION
LP	PROPANE
LRA	LOCKED ROTOR AMPS
LVG	LEAVING
LWB	LEAVING WET BULB TEMPERATURE
LWT	LEAVING WATER TEMPERATURE
MAX	MAXIMUM
MBC	MODULAR BUILDING CONTROLLER
MBH	1000 BTU PER HOUR
MC	MECHANICAL CONTRACTOR
MCC	MOTOR CONTROL CENTER
MECH	MECHANICAL
MER	MECHANICAL EQUIPMENT ROOM
MFR	MANUFACTURER
MH	MANHOLE
MIN	MINIMUM OR MINUTE
MOCP	MAXIMUM OVER-CURRENT PROTECTION
MOD	MOTOR OPERATED DAMPER
MODU	MODULATING
MXB	MIXING BOX
N	NEW
NC	NORMALLY CLOSED
NG	NATURAL GAS
NIC	NOT IN CONTRACT
NO	NORMALLY OPEN OR NUMBER
NTS	NOT TO SCALE
OA	OUTSIDE AIR
OAE	OUTSIDE AIR ENTHALPY
OAH	OUTSIDE AIR HUMIDITY
OAI	OUTSIDE AIR INTAKE
OAT	OUTSIDE AIR TEMPERATURE
OBD	OPPOSED BLADE DAMPER
OC	ON CENTER
OED	OPEN ENDED DUCT
OEM	ORIGINAL EQUIPMENT MANUFACTURER
OPER	OPERATING
OPNG	OPENING
P	PUMP
PBD	PARALLEL BLADE DAMPER
PC	PUMPED CONDENSATE
PD	PRESSURE DROP
PFHX	PLATE & FRAME HEAT EXCHANGER
PHC	PREHEAT COIL
PLN	PLENUM
POS	POSITION
PRESS	PRESSURE
PRV	PRESSURE REDUCING VALVE
PSI	POUNDS PER SQUARE INCH
PSIA	POUNDS PER SQUARE INCH- ABSOLUTE
PSIG	POUNDS PER SQUARE INCH- GAUGE
QTY	QUANTITY
R	RISE
RA	RETURN AIR
RAE	RETURN AIR ENTHALPY
RAH	RETURN AIR HUMIDITY
RAT	RETURN AIR TEMPERATURE
RCP	RADIANT CEILING PANEL
REL	RELIEF AIR
REQ	REQUIRED
RET	RETURN
REV	REVISION
RF	RETURN FAN
RG	RETURN GRILLE
RH	RELIEF HOOD OR RELATIVE HUMIDITY
RHC	REHEAT COIL
RHW	ROTARY HEAT WHEEL
RLA	RUN LOAD AMPS
RM	ROOM
RP	RECIRCULATION PUMP
RPM	REVOLUTIONS PER MINUTE
RR	RETURN REGISTER
RTU	ROOFTOP UNIT
RV	RELIEF VALVE
SA	SUPPLY AIR
SB	STRUCTURAL BASE
SCU	SELF CONTAINED UNIT
SD	SMOKE DAMPER OR DETECTOR
SEC	SECOND
SEER	EFFICIENCY RATING
SENS	SENSIBLE
SF	SUPPLY FAN
SG	SUPPLY GRILLE
SI	SPRING HANGER
SO	SCREENED OPENING
SP	STATIC PRESSURE IN WG
SPD	STEAM PRESSURE DROP
SR	SUPPLY REGISTER
SRC	SUPPLY ENERGY RECOVERY COIL
SRV	SAFETY RELIEF VALVE
SSF	SIDE-STREAM FILTER
ST	SOUND ATTENUATOR
STBY	STANDBY
STM	STEAM
SUP	SUPPLY
SUT	SURGE TANK
TA	TRANSFER AIR
TAD	TRANSFER AIR DUCT
TEC	TERMINAL EQUIPMENT CONTROLLER
TG	TRANSFER GRILLE
TOD	TOP OF DUCT
TOP	TOP OF PIPE
TOT	TOTAL
TP	TRANSFER PUMP
TSP	TOTAL STATIC PRESSURE
TTS	TIGHT TO STRUCTURE
TYP	TYPICAL
UH	UNIT HEATER
UNO	UNLESS NOTED OTHERWISE
VAV	VARIABLE AIR VOLUME
VD	VOLUME DAMPER
VEL	VELOCITY
VFD	VARIABLE FREQUENCY DRIVE
VIB	VIBRATION
VIV	VARIABLE INLET VALVES
VTR	VENT THROUGH ROOF
VVT	VARIABLE VOLUME AND TEMPERATURE
W/	WITH
W/O	WITHOUT
WB	WET BULB
WCU	WATER COOLED CONDENSING UNIT
WG	WATER GAUGE
WHP	WATER SOURCE HEAT PUMP
WMS	WIRE MESH SCREEN
WPD	WATER PRESSURE DROP

MECHANICAL SHEET LIST

Sheet No.	Sheet Name
M001	MECHANICAL SYMBOLS AND ABBREVIATIONS
M002	MECHANICAL NOTES
M100	MECHANICAL DEMOLITION PLAN - LOWER LEVEL
M101	MECHANICAL DEMOLITION PLAN - UPPER LEVEL
M102	MECHANICAL DEMOLITION PLAN - ROOF
M200	MECHANICAL HVAC PLAN - LOWER LEVEL
M201	MECHANICAL HVAC PLAN - UPPER LEVEL
M202	MECHANICAL HVAC PLAN - ROOF
M300	MECHANICAL PIPING PLAN - LOWER LEVEL
M301	MECHANICAL PIPING PLAN - UPPER LEVEL
M302	MECHANICAL PIPING PLAN - ROOF
M400	MECHANICAL - PARTIAL PLANS & SECTIONS
M500	MECHANICAL CONTROLS SEQUENCES
M600	MECHANICAL DIAGRAMS
M700	MECHANICAL SCHEDULES
M701	MECHANICAL SCHEDULES
M800	MECHANICAL DETAILS
M801	MECHANICAL DETAILS

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SPFLD00611 - LIBRARY BUILDING RENOVATIONS
70 POWELL ROAD, SPRINGFIELD, PA 19064

MECHANICAL SYMBOLS AND ABBREVIATIONS

SPRINGFIELD TOWNSHIP
50 POWELL ROAD, SPRINGFIELD, PA 19064

NO.	DATE	REVISIONS	BY

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M001

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GENERAL NOTES:

1. SYMBOLS, ABBREVIATIONS, AND GENERAL NOTES INDICATED ON THIS DRAWING ARE TYPICAL. DRAWINGS MAY NOT INDICATE ALL SYMBOLS AND ABBREVIATIONS SHOWN ON THIS DRAWING.
2. GENERAL NOTES, SYMBOL LIST AND DETAILS ARE APPLICABLE TO ALL DRAWINGS.
3. PROVIDE SUPPLEMENTARY OR MISCELLANEOUS ITEMS, APPURTURANCES, DEVICES, AND MATERIALS OBVIOUSLY NECESSARY FOR A SOUND, SECURE, AND COMPLETE INSTALLATION.
4. ABIDE AND ENFORCE ALL SAFETY RULES AND REGULATIONS SET FORTH BY THE OWNER. ALL WORKERS AND SUPERVISORS MUST ATTAIN SAFETY TRAINING CLASSES (IF APPLICABLE). BE RESPONSIBLE TO FOLLOW ALL VERBAL INSTRUCTIONS GIVEN BY OWNERS REPRESENTATIVES.
5. 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.
6. 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. NO DEPARTURES SHALL BE MADE WITHOUT PRIOR APPROVAL OF THE ENGINEER AND OWNER.
7. VISIT THE SITE AND ADJOINING AREAS AND EXAMINE THE EXISTING CONDITIONS TO BECOME FAMILIAR WITH THEM AND TO DETERMINE THE DIFFICULTIES WHICH WILL AFFECT THE EXECUTION OF THE WORK OF THIS CONTRACT. THIS CONTRACTOR SHALL PERFORM THIS PRIOR TO THE SUBMISSION OF HIS PROPOSAL. SUBMISSION OF A PROPOSAL WILL BE CONSTRUED AS EVIDENCE THAT SUCH AN EXAMINATION HAS BEEN MADE AND LATER CLAIMS WILL NOT BE RECOGNIZED FOR EXTRA LABOR, EQUIPMENT OR MATERIALS REQUIRED BECAUSE OF DIFFICULTIES ENCOUNTERED WHICH COULD HAVE BEEN FORESEEN HAD SUCH AN EXAMINATION BEEN MADE.
8. 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.
9. 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.
10. 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.
11. SCHEDULE WORK IN ACCORDANCE WITH THE CONSTRUCTION SCHEDULE SO THAT ALL 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.
12. SECURE AND PAY ALL FEES, LICENSES, INSPECTIONS, AND PERMITS PERTAINING TO THE CONTRACT. SUBMIT TO OWNER DUPLICATE CERTIFICATES OF INSPECTION FROM APPROVED INSPECTION AGENCY.
13. ALL EQUIPMENT SHALL BE INSTALLED IN STRICT COMPLIANCE WITH THE MANUFACTURER'S WRITTEN INSTRUCTIONS.
14. BE RESPONSIBLE FOR WORKMEN'S IDENTIFICATION AND BADGING, SAFETY AND FIRE PROTECTION, BARRICADES, WARNING SIGNS, TRASH REMOVAL, CUTTING AND PATCHING.
15. 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.
16. PROVIDE LABOR TO RECEIVE, UNLOAD, STORE, PROTECT, AND TRANSFER TO POINT OF INSTALLATION FOR ALL FURNISHED ITEMS.
17. 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.
18. BE RESPONSIBLE FOR ALL SLAB OPENINGS, WALL OPENINGS, BEAM PENETRATIONS, AND CORING AS IT RELATES TO HIS WORK. SUBMIT SIZE AND LOCATION FOR REVIEW AND APPROVAL.
19. ALL EXTERIOR WALL OPENINGS SHALL BE SLEEVED, PROPERLY CAULKED, AND SEALED WITH A HIGH QUALITY SEALANT TO PREVENT INFILTRATION OF MOISTURE AND OUTSIDE AIR.
20. COORDINATE ROOF PENETRATIONS WITH WORK OF OTHER SECTIONS AND WITH FLASHING REQUIREMENTS. CONTRACTOR TO NOTIFY OWNER PRIOR TO STARTING WORK TO VERIFY COMPLIANCE WITH BOND AND WARRANTY OF EXISTING ROOF.
21. RESTORE EXISTING SYSTEMS, DEVICES, FINISHED, ETC. DAMAGED OR ALTERED BY WORK TO ACCEPTABLE CONDITIONS AS DETERMINED BY THE OWNER, ARCHITECT, AND/OR ENGINEER. EXISTING SYSTEMS AND SERVICES THAT ARE TEMPORARILY DISCONNECTED BUT ARE TO REMAIN IN USE SHALL BE PERMANENTLY RECONNECTED AND RETURNED TO PROPER OPERATION.
22. SUBMIT A SCHEDULE OF SUBMITTALS PRIOR TO SUBMITTING ANY SHOP DRAWINGS, ETC. FOR THIS PROJECT, INCLUDING THE ANTICIPATED DATE OF EACH SUBMISSION. CONTRACTORS SHALL SUBMIT 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 ALL PIPING AND DUCTWORK FIELD INSTALLATION DRAWINGS FOR EACH SYSTEM TO BE INSTALLED. ANY WORK INSTALLED OR EQUIPMENT PURCHASED PRIOR TO RECEIPT OF ENGINEER APPROVED SHOP DRAWINGS THAT REQUIRES CHANGES SHALL BE REPLACED AT CONTRACTOR'S EXPENSE.
23. SUBMIT CATALOG INFORMATION, FACTORY ASSEMBLY DRAWINGS AND FIELD INSTALLATION DRAWINGS AS REQUIRED FOR A COMPLETE EXPLANATION AND DESCRIPTION OF ALL ITEMS TO BE PROVIDED. REVIEW AND APPROVE ALL SHOP DRAWINGS. NO SUBMISSION WILL BE ACCEPTED WITHOUT THE SIGNED APPROVAL OF THE CONTRACTOR. CHECK AND VERIFY ALL FIELD MEASUREMENTS.
24. UPON COMPLETION OF CONSTRUCTION, CONTRACTOR SHALL SUPPLY THE ENGINEER WITH ONE (1) COMPLETE SET OF AS-BUILT DRAWINGS IN ELECTRONIC AUTOCAD SOFTWARE FORMAT 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.
25. NOTIFY ENGINEER OF COMPLETION OF ALL WORK, INDICATING THE CONTRACTOR IS READY FOR THE ENGINEER TO PERFORM THE FINAL PUNCHLIST INSPECTION.
26. 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.
27. PREPARE FULLY DIMENSIONED FIELD SHEET METAL AND PIPING INSTALLATION DRAWINGS (MIN. 1/4"=1'-0" SCALE). 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.
28. INSTALLED SYSTEMS SHALL OPERATE UNDER ALL CONDITIONS OF LOAD WITHOUT SOUND OR VIBRATION THAT IS OBJECTABLE TO THE ENGINEER, ARCHITECT, OR THE OWNER. OBJECTABLE SOUND OR VIBRATION CONDITIONS DUE TO WORKMANSHIP SHALL BE CORRECTED IN APPROVED MANNER BY THE CONTRACTOR AT HIS EXPENSE.
29. UPON COMPLETION OF ALL UNFINISHED OR FAULTY WORK NOTED IN ENGINEER FINAL PUNCH LIST, 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.
30. 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 OF ALL SLAB AND WALL OPENINGS AND BEAM PENETRATIONS, AND COR DRILLING TO THE STRUCTURAL ENGINEER FOR REVIEW AND APPROVAL.
31. 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 TO OWNER.
32. REFERENCED MANUFACTURES DENOTES A MINIMUM ACCEPTABLE LEVEL OF QUALITY AND IS NOT INTENDED TO PREVENT SUBMISSION OF EQUIVALENT EQUIPMENT.
33. ALL WORK BEING INSTALLED IN AIR PLENUM SPACES MUST BE INSTALLED WITH PLENUM RATED MATERIAL. ANY EXISTING NON-PLENUM RATED PLUMBING PIPE LOCATED WITHIN THESE PLENUM RATED AREAS SHALL BE WRAPPED WITH A PLENUM RATED PIPE WRAPPING MATERIAL.

GENERAL MECHANICAL NOTES:

1. MOUNT SENSORS AND SWITCHES AT 4'-0" MAX ABOVE FINISHED FLOOR (2'-10" MAX ABOVE FINISHED FLOOR INSIDE REACH ACCESSIBLE LOCATIONS). COORDINATE EXACT LOCATIONS W/ARCHITECT. UNLESS OTHERWISE SPECIFIED, CONTRACTOR SHALL PROVIDE CONTROL WIRING FROM SENSORS 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.
2. UNLESS OTHERWISE SPECIFIED, PROVIDE ALL AUTOMATIC TEMPERATURE CONTROLS (ATC) INCLUDING WIRING, DDC SENSORS AND ALL MISCELLANEOUS APPURTENANCES TO MEET THE INTENT OF THESE DOCUMENTS.
3. PROVIDE ACCESS PANELS FOR EQUIPMENT THAT REQUIRES PERIODIC SERVICE.
4. PROVIDE HANGERS, INSERTS, ANCHORS, SUPPLEMENTAL STEEL & SUPPORTS AS REQUIRED TO SUPPORT DUCTWORK, PIPING AND EQUIPMENT FROM STRUCTURE.
5. RUN DUCTS AND PIPING CONCEALED, UNLESS OTHERWISE SPECIFIED AND CLEAR OF CEILING INSERTS.
6. STRUCTURAL WELDING SHALL BE CONTINUOUS 1/4" FILLET UNLESS REQUIRED OTHERWISE.
7. REFER TO ARCHITECTURAL REFLECTED CEILING PLANS FOR EXACT LOCATIONS OF AIR DEVICES.
8. INTERNAL AIRFLOW DIMENSIONS ARE SHOWN FOR DUCTS. INCREASE DUCT SIZE AS NECESSARY TO MAINTAIN FREE FLOW AREA INDICATED.
9. USE FLAT TRANSVERSE SEAM FOR DUCTWORK WHERE SPACE AVAILABLE DICTATES.
10. PROVIDE TURNING VANES AN ALL DUCTWORK 90° AND 45° ELBOWS.
11. PROVIDE VOLUME DAMPERS OR OTHER APPROVED BALANCING DEVICES AT DUCT BRANCHES AND RUN OUTS, AND AT REGISTER GRILLE AND DIFFUSER NECKS IN SUPPLY, RETURN AND EXHAUST DUCTWORK WHETHER SHOWN OR NOT.
12. LOCATE VOLUME DAMPERS OVER ACCESSIBLE AREAS. WHERE THEY CANNOT BE MAINTAINED VIA REMOVAL OF CEILING OR ACCESS PANEL, PROVIDE REMOTE OPERATED DAMPER.
13. PROVIDE 36" CLEARANCE IN FRONT OF ALL ELECTRIC CONTROL PANELS PER N.E.C. AND MFG. REQUIREMENTS.
14. VAV DUCT INLET SIZE SHALL BE AS SCHEDULED OR AS INDICATED ON THE FLOOR PLANS. PROVIDE TRANSITION FROM DUCT SIZE INDICATED ON THE FLOOR PLANS TO SCHEDULED SIZE MINIMUM 2'-0" FROM VAV BOX INLETS.
15. PITCH PIPING 1" IN 20' IN DIRECTION OF FLOW FOR PRESSURE PIPE.
16. PROVIDE MIN 1% SLOPE FOR ALL GRAVITY DRAIN PIPE.
17. PROVIDE TRAPS IN CONDENSATE LINES THAT EXTEND OVER 2".
18. COORDINATE WORK SO TRAP OUTLET IS ABOVE DRAIN/PUMP RECEIVER INLET WITH SUFFICIENT ELEVATION TO ALLEVIATE HORIZONTAL OFFSET.
19. OBTAIN THE SERVICES OF AN INDEPENDENT AABC OR NEBB CERTIFIED BALANCING CONTRACTOR TO ADJUST EQUIPMENT TO ACHIEVE DESIGN AIR AND WATER FLOWS. ALL REQUIRED MEASURED PARAMETERS SHALL BE PRESENTED IN THE BALANCING REPORTS IN ORDER TO PROPERLY EVALUATE THE PERFORMANCE AND CAPACITY AT THE EQUIPMENT. BELTS AND SHEAVES SHALL BE REPLACED AS REQUIRED.
20. SUBMIT THE BALANCE REPORT TO THE ENGINEER FOR APPROVAL. UPON APPROVAL, COPIES SHALL BE TURNED OVER TO THE OWNER AND TO THE TOWNSHIP INSPECTOR AT OR PRIOR TO FINAL INSPECTION.

GENERAL DEMOLITION NOTES:

1. INCLUDE IN BID ALL COSTS ASSOCIATED WITH REMOVAL AND RELOCATION OF 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. REMOVE AND/OR RELOCATE ALL EXISTING WORK WHICH INTERFERES WITH THE NEW ARCHITECTURAL AND ELECTRICAL LAYOUTS IN FULL COORDINATION WITH THE ARCHITECT'S 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. 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 WORK.
4. ALL EXISTING SYSTEMS WHICH BECOME EXPOSED DURING THE ALTERATION WORK SHALL BE REMOVED AND REROUTED CONCEALED BEHIND FINISHED SURFACES.
5. ALL UNUSED OUTLET BOXES OR CAPPED FLOOR OUTLETS SHALL BE PROVIDED WITH MATCHING BLANK COVERS.
6. 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. FOLLOW CLOSELY THE ARCHITECT'S DEMOLITION AND PHASING SCHEDULE AND PROCEED IN THE SPECIFIED SEQUENCE.
7. 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 CONTRACTOR, AS DIRECTED BY THE OWNER. ITEMS OF SALVAGE SHALL BE CAREFULLY REMOVED AND STORED AT LOCATIONS DIRECTED BY THE OWNER.
8. 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.
9. 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.
10. PATCH AND PAINTING OF EXISTING WALLS TO REMAIN WHICH ARE AFFECTED BY ELECTRICAL DEMOLITION, ARE TO BE COMPLETED UNDER GENERAL CONSTRUCTION SPECIFICATION.
11. 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.
12. EXISTING WORK THAT IS TO BE REMOVED SHALL BE LEGALLY DISPOSED OF. ALL WORK TO BE DISPOSED OF SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL BE PROMPTLY REMOVED FROM THE SITE.

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ALL DIMENSIONS MUST BE VERIFIED BY CONTRACTOR AND OWNER MUST BE NOTIFIED OF ANY DISCREPANCIES BEFORE PROCEEDING WITH WORK

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MECHANICAL NOTES

SPRINGFIELD TOWNSHIP
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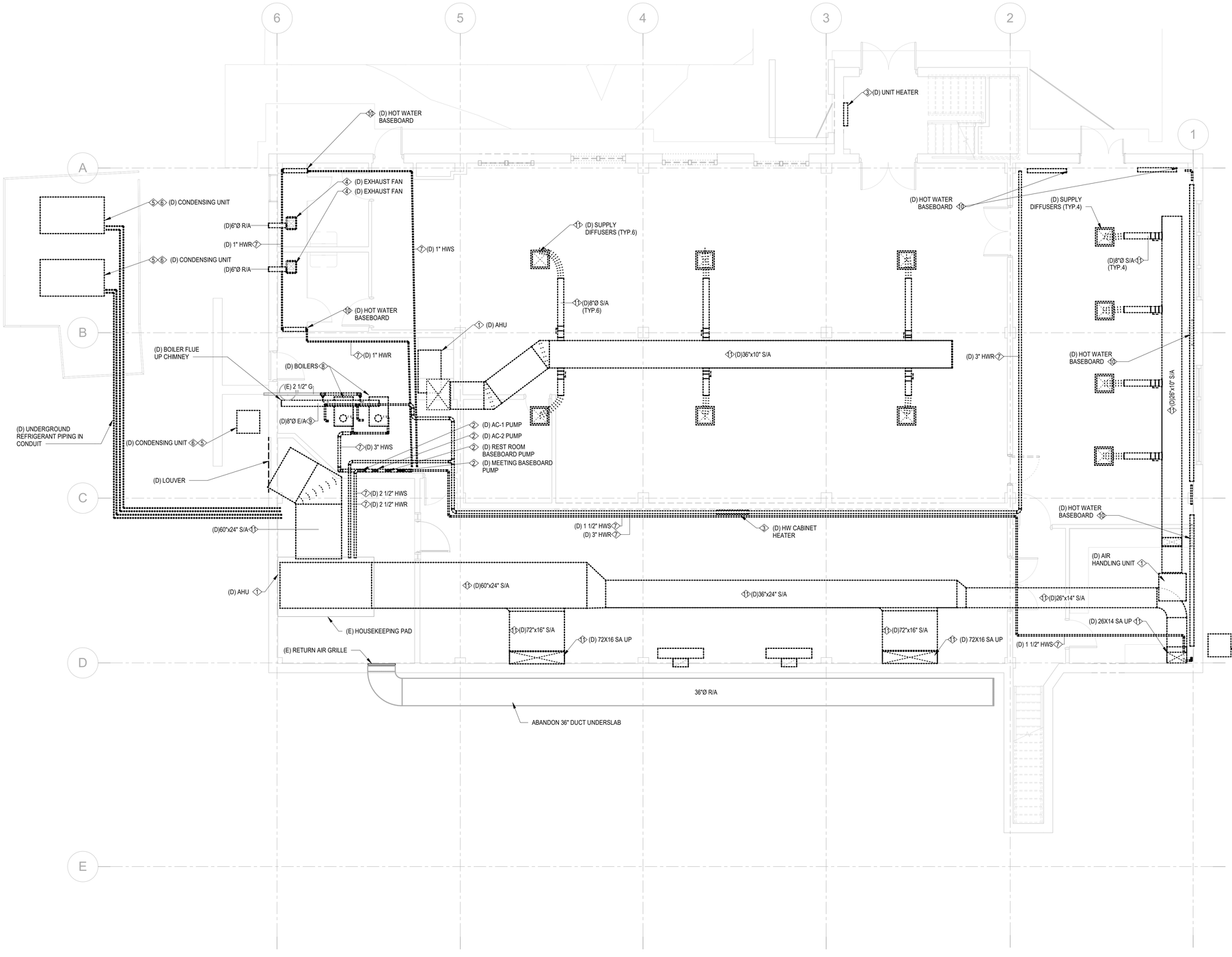
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1 / M100 MECHANICAL DEMOLITION PLAN - LOWER LEVEL
3/16" = 1'-0"

GENERAL SHEET NOTES

1. PHASE CONSTRUCTION TO MAINTAIN FACILITY OPERATIONS. COORDINATE WITH OTHER TRADES AND BUILDING.
2. VERIFY ALL DIMENSIONS IN THE FIELD, AND ADVISE THE ARCHITECT/ENGINEER AND THE OWNER OF ANY DISCREPANCIES BEFORE PERFORMING THE WORK.
3. CONTRACTOR TO PROVIDE TEMPORARY HEATING AND COOLING DURING CONSTRUCTION TO MAINTAIN OCCUPANT AND EMPLOYEE COMFORT. REQUIREMENTS SHALL BE COORDINATED WITH THE OWNER.

KEYNOTES

1 DISCONNECT AND REMOVE EXISTING AIR HANDLING UNITS IN ITS ENTIRETY INCLUDING, BUT NOT LIMITED TO, AIR HANDLING UNIT,CURBS, FLEXIBLE DUCTWORK, DAMPERS, CONTROLS, VALVES, PIPING, AND WIRING.

2 DISCONNECT AND REMOVE EXISTING PUMP IN ITS ENTIRETY INCLUDING, BUT NOT LIMITED TO, PUMP AND CONTROLS.

3 DISCONNECT AND REMOVE EXISTING CABINET UNIT HEATER WHERE INDICATED INCLUDING, BUT NOT LIMITED TO HEATER, WIRING AND CONTROLS, VALVES, AND PIPING.

4 DISCONNECT AND REMOVE EXISTING EXHAUST FAN IN ITS ENTIRETY, BUT NOT LIMITED TO, FAN, CURBS, DAMPERS, CONTROLS, AND WIRING.

5 DISCONNECT AND REMOVE EXISTING AIR COOLED CONDENSING UNIT IN ITS ENTIRETY INCLUDING, BUT NOT LIMITED TO, CONDENSING UNIT, CURBS, REFRIGERANT PIPING, CONTROLS, AND WIRING.

6 DISCONNECT AND REMOVE EXISTING UNIT AND EVACUATE REFRIGERANT PER EPA GUIDELINES AND REGULATIONS FROM THE UNIT AND ASSOCIATED REFRIGERANT PIPING.

7 DISCONNECT AND REMOVE EXISTING PIPING IN ITS ENTIRETY INCLUDING, BUT NOT LIMITED TO, PIPING, INSULATION, VALVES, HANGERS, AND SUPPORTS.

8 DISCONNECT AND REMOVE EXISTING BOILER IN ITS ENTIRETY INCLUDING, BUT NOT LIMITED TO, BOILER, CONTROLS, WIRING, VALVES, AND PIPING.

9 DISCONNECT AND REMOVE EXISTING FLUE VENT IN ITS ENTIRETY INCLUDING, BUT NOT LIMITED TO, DUCTWORK, INSULATION, VOLUME DAMPERS, HANGERS, AND SUPPORTS.

10 DISCONNECT AND REMOVE EXISTING FIN TUBE BASEBOARD HEATER WHERE INDICATED INCLUDING, BUT NOT LIMITED TO HEATER, WIRING AND CONTROLS, VALVES, AND PIPING.

11 DISCONNECT AND REMOVE EXISTING DUCTWORK IN ITS ENTIRETY INCLUDING, BUT NOT LIMITED TO, DUCTWORK, INSULATION, DAMPERS, HANGERS, AND SUPPORTS.

ASBESTOS ABATEMENT

1. DUE TO THE POTENTIAL OF ASBESTOS CONTAINING MATERIALS ON THIS PROJECT, THE CONTRACTOR SHALL BE RESPONSIBLE FOR ASBESTOS TESTING, INCLUDING BUT NOT LIMITED TO, PIPE INSULATION, DUCTWORK INSULATION, AND CEILING TILES.
2. RESULTS OF ASBESTOS TESTING SHALL BE PROVIDED TO THE ENGINEER, OWNER, AND ARCHITECT.
3. IF ASBESTOS CONTAINING MATERIALS ARE PRESENT ON SITE, CONTRACTOR IS RESPONSIBLE FOR THE ABATEMENT AND REMOVAL OF THESE MATERIALS FOLLOWING ALL STATE, LOCAL, AND ENVIRONMENTAL GUIDELINES. ALL ASBESTOS CONTAINING MATERIAL SHALL BE REMOVED FROM SITE.

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MECHANICAL DEMOLITION PLAN - LOWER LEVEL

SPRINGFIELD TOWNSHIP
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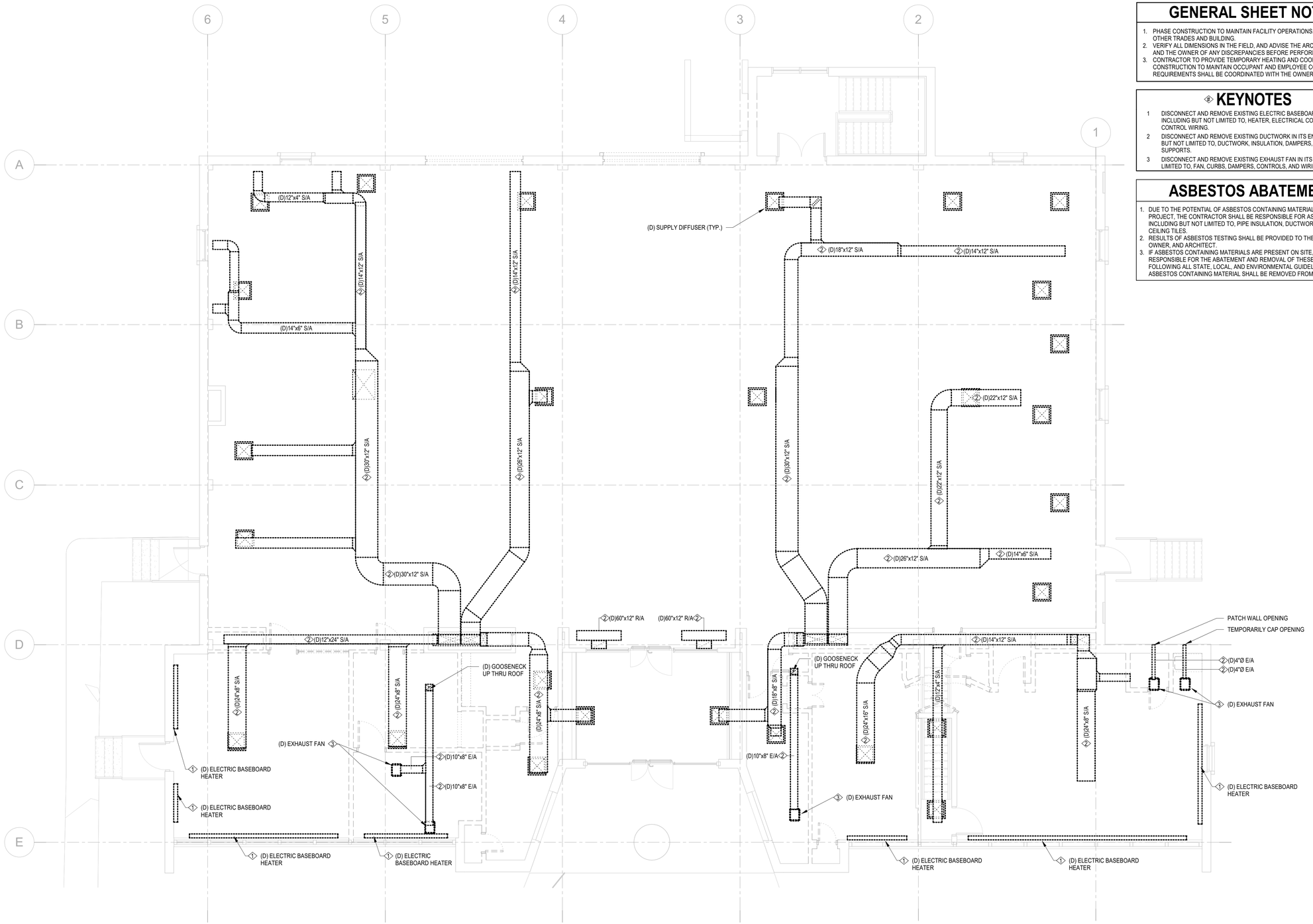
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1 / M101 MECHANICAL DEMOLITION PLAN - UPPER LEVEL
3/16" = 1'-0"

GENERAL SHEET NOTES

1. PHASE CONSTRUCTION TO MAINTAIN FACILITY OPERATIONS. COORDINATE WITH OTHER TRADES AND BUILDING.
2. VERIFY ALL DIMENSIONS IN THE FIELD, AND ADVISE THE ARCHITECT/ENGINEER AND THE OWNER OF ANY DISCREPANCIES BEFORE PERFORMING THE WORK.
3. CONTRACTOR TO PROVIDE TEMPORARY HEATING AND COOLING DURING CONSTRUCTION TO MAINTAIN OCCUPANT AND EMPLOYEE COMFORT. REQUIREMENTS SHALL BE COORDINATED WITH THE OWNER.

KEYNOTES

1 DISCONNECT AND REMOVE EXISTING ELECTRIC BASEBOARD HEATER, INCLUDING BUT NOT LIMITED TO, HEATER, ELECTRICAL CONNECTIONS, AND CONTROL WIRING.

2 DISCONNECT AND REMOVE EXISTING DUCTWORK IN ITS ENTIRETY INCLUDING, BUT NOT LIMITED TO, DUCTWORK, INSULATION, DAMPERS, HANGERS, AND SUPPORTS.

3 DISCONNECT AND REMOVE EXISTING EXHAUST FAN IN ITS ENTIRETY, BUT NOT LIMITED TO, FAN, CURBS, DAMPERS, CONTROLS, AND WIRING.

ASBESTOS ABATEMENT

1. DUE TO THE POTENTIAL OF ASBESTOS CONTAINING MATERIALS ON THIS PROJECT, THE CONTRACTOR SHALL BE RESPONSIBLE FOR ASBESTOS TESTING, INCLUDING BUT NOT LIMITED TO, PIPE INSULATION, DUCTWORK INSULATION, AND CEILING TILES.
2. RESULTS OF ASBESTOS TESTING SHALL BE PROVIDED TO THE ENGINEER, OWNER, AND ARCHITECT.
3. IF ASBESTOS CONTAINING MATERIALS ARE PRESENT ON SITE, CONTRACTOR IS RESPONSIBLE FOR THE ABATEMENT AND REMOVAL OF THESE MATERIALS FOLLOWING ALL STATE, LOCAL, AND ENVIRONMENTAL GUIDELINES. ALL ASBESTOS CONTAINING MATERIAL SHALL BE REMOVED FROM SITE.

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MECHANICAL DEMOLITION PLAN - UPPER LEVEL

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GENERAL SHEET NOTES

1. PHASE CONSTRUCTION TO MAINTAIN FACILITY OPERATIONS. COORDINATE WITH OTHER TRADES AND BUILDING.
2. VERIFY ALL DIMENSIONS IN THE FIELD, AND ADVISE THE ARCHITECT/ENGINEER AND THE OWNER OF ANY DISCREPANCIES BEFORE PERFORMING THE WORK.

KEYNOTES

1 DISCONNECT AND REMOVE EXISTING EXHAUST FAN IN ITS ENTIRETY, BUT NOT LIMITED TO, FAN, CURBS, DAMPERS, CONTROLS, AND WIRING.

2 PATCH ROOF OPENING. COORDINATE WITH ROOF REPLACEMENT.



1 M102 MECHANICAL DUCTWORK PLAN - ROOF
3/16" = 1'-0"

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MECHANICAL DEMOLITION PLAN - ROOF

SPRINGFIELD TOWNSHIP
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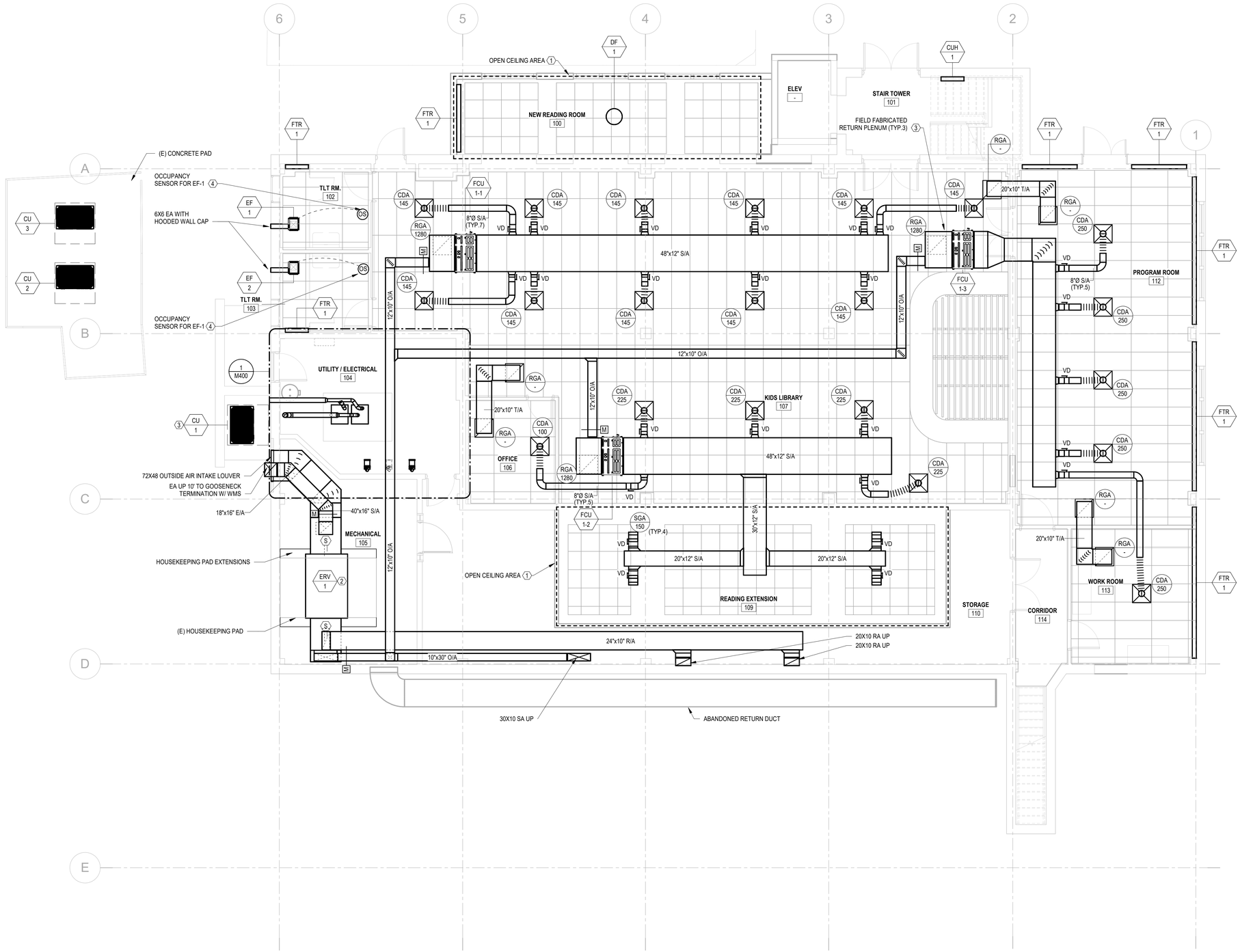
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1 M200 MECHANICAL DUCTWORK PLAN - LOWER LEVEL
3/16" = 1'-0"

GENERAL SHEET NOTES

1. COORDINATE MECHANICAL WORK WITH ALL OTHER TRADES. PROVIDE COORDINATED SHOP DRAWINGS PRIOR TO COMMENCEMENT OF WORK.
2. PHASE CONSTRUCTION TO MAINTAIN FACILITY OPERATIONS. COORDINATE WITH OTHER TRADES AND BUILDING.
3. VERIFY ALL DIMENSIONS IN THE FIELD, AND ADVISE THE ARCHITECT/ENGINEER AND THE OWNER OF ANY DISCREPANCIES BEFORE PERFORMING THE WORK.
4. PROVIDE VOLUME DAMPER ON ALL BRANCH DUCTWORK TO AIR DEVICES. DAMPER SHALL BE IMMEDIATELY AFTER BRANCH TAKEOFF.
5. PROVIDE FIRE DAMPERS AT ALL DUCT PENETRATIONS OF 2-HR RATED WALLS.
6. PROVIDE 3/4" PUMPED CONDENSATE FROM THE AC UNIT TO THE CONDENSATE HEADER FOR EACH AC UNIT UNLESS NOTED OTHERWISE.
7. PROVIDE 1" GRAVITY CONDENSATE PIPING FROM THE AC UNIT TO THE CONDENSATE HEADER FOR EACH AC UNIT UNLESS NOTED OTHERWISE.
8. CONTRACTOR TO PROVIDE TEMPORARY HEATING AND COOLING DURING CONSTRUCTION TO MAINTAIN OCCUPANT AND EMPLOYEE COMFORT. REQUIREMENTS SHALL BE COORDINATED WITH THE OWNER.

KEYNOTES

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2 INSTALL ERV-1 ON EXISTING HOUSEKEEPING PAD. EXTEND PAD TO ACCOMODATE NEW EQUIPMENT. EQUIPMENT SHALL HAVE MINIMUM 4" TO EDGE OF CONCRETE PAD IN ANY DIRECTION.

3 PROVIDE FIELD INSTALLED RETURN PLENUM. PLENUM SHALL BE MINIMUM OF 36" LONG AND ACCOMODATE OUTSIDE AIR CONNECTION AND DIRECT DUCTED RETURN CONNECTION FROM RGA IN CEILING GRID BELOW.

4 PROVIDE OCCUPANCY SENSOR WITH PROTECTIVE LOCKABLE COVER.

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T 215.222.3000 F 215.222.3588

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SPFLD00611 - LIBRARY BUILDING RENOVATIONS
70 POWELL ROAD, SPRINGFIELD, PA 19064

MECHANICAL HVAC PLAN - LOWER LEVEL

SPRINGFIELD TOWNSHIP
50 POWELL ROAD, SPRINGFIELD, PA 19064

NO.	DATE	REVISIONS	BY

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DRAWN BY	TFC
APPROVED BY	RHG

M200

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GENERAL SHEET NOTES

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PROVIDE 3KW UNIT HEATER AT 208V/1PH/60HZ AND 500 CFM ROOF MOUNTED EXHAUST FAN AT 208V/1PH/60HZ. COORDINATE WITH ELECTRICAL CONTRACTOR AND ELEVATOR VENDOR.

ELEV. -

STAIR TOWER 201

NEW READING AREA 200

OPEN CEILING AREA 1

LIBRARY 202

QUIET ROOM 204

TLT ROOM 205

TLT ROOM 206

BREAK ROOM 208

JAN. 209

VESTIBULE 210

OFFICE 211

DIRECTOR'S OFFICE 212

OPEN AREA 213

STAIR 214

WORK ROOM 215

TLT. RM 216

OFFICE 217

6"Ø E/A IN CHIMNEY

48"X12" RETURN PLENUM WITH 46"X10" OPENING W/ WMS (TYP.6)

20X10 RA GRILLE

60X12 RETURN GRILLE

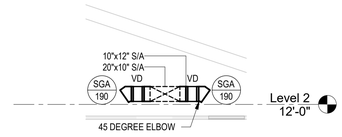
10X8 EA UP TO EF-4

20X10 RA DN TO LOWER LEVEL (TYP.2)

6X6 EA WITH HOODED WALL CAP

OCCUPANCY SENSOR FOR EF-3

(E) OPERABLE WINDOW



2 M201 LIBRARY FAN COIL DISTRIBUTION 1/4" = 1'-0"

1 M201 MECHANICAL DUCTWORK PLAN - UPPER LEVEL 3/16" = 1'-0"

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SPFLD00611 - LIBRARY BUILDING RENOVATIONS
70 POWELL ROAD, SPRINGFIELD, PA 19064

MECHANICAL HVAC PLAN - UPPER LEVEL

SPRINGFIELD TOWNSHIP
50 POWELL ROAD, SPRINGFIELD, PA 19064

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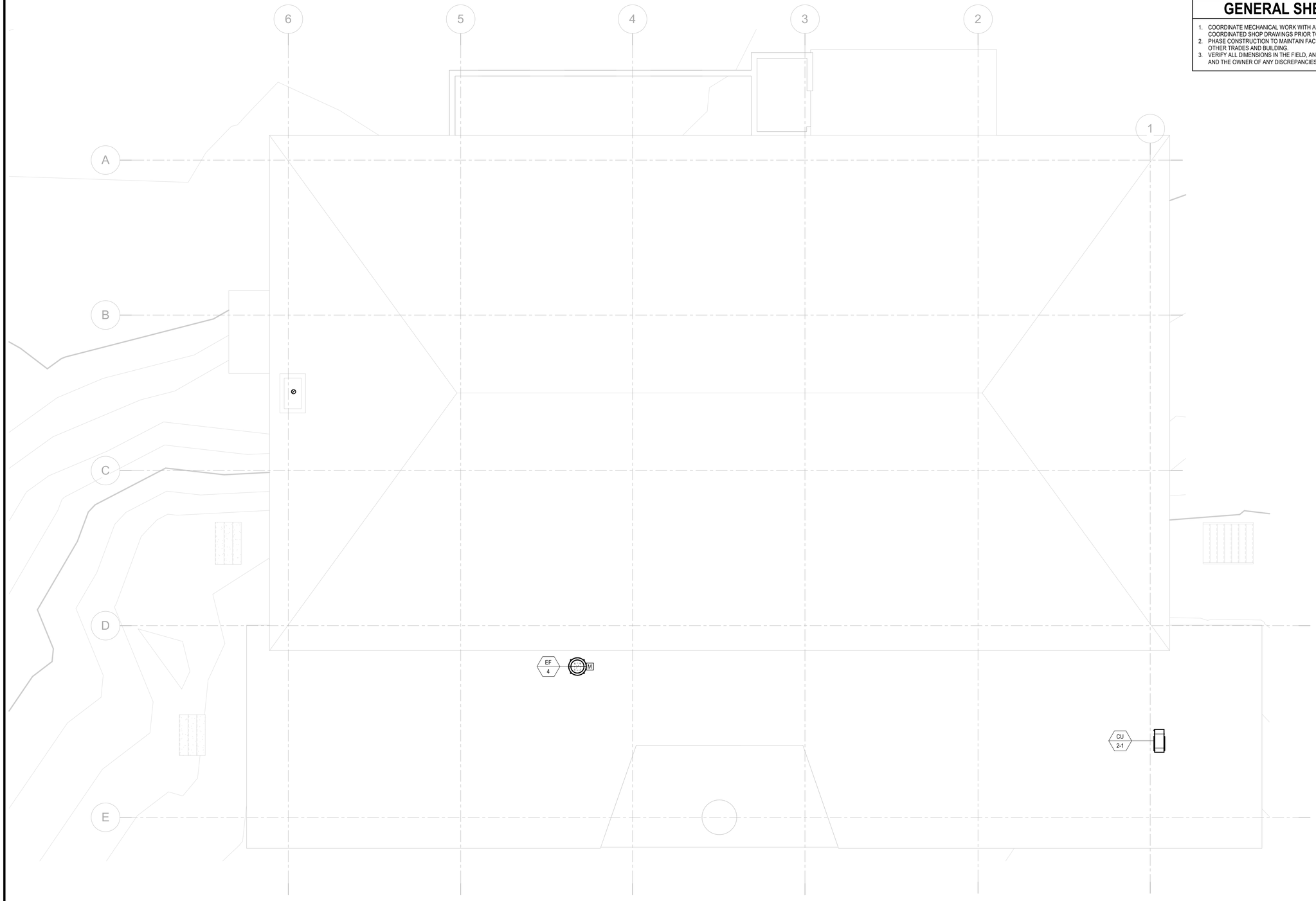
PROJECT	SPFLD00611
DATE	08/07/2026
DRAWING SCALE	AS NOTED
DRAWN BY	TFC
APPROVED BY	RHG

M201

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GENERAL SHEET NOTES

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1 / M202 MECHANICAL DUCTWORK PLAN - ROOF
3/16" = 1'-0"

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SPFLD00611 - LIBRARY BUILDING RENOVATIONS

70 POWELL ROAD, SPRINGFIELD, PA 19064

MECHANICAL HVAC PLAN - ROOF

SPRINGFIELD TOWNSHIP
50 POWELL ROAD, SPRINGFIELD, PA 19064

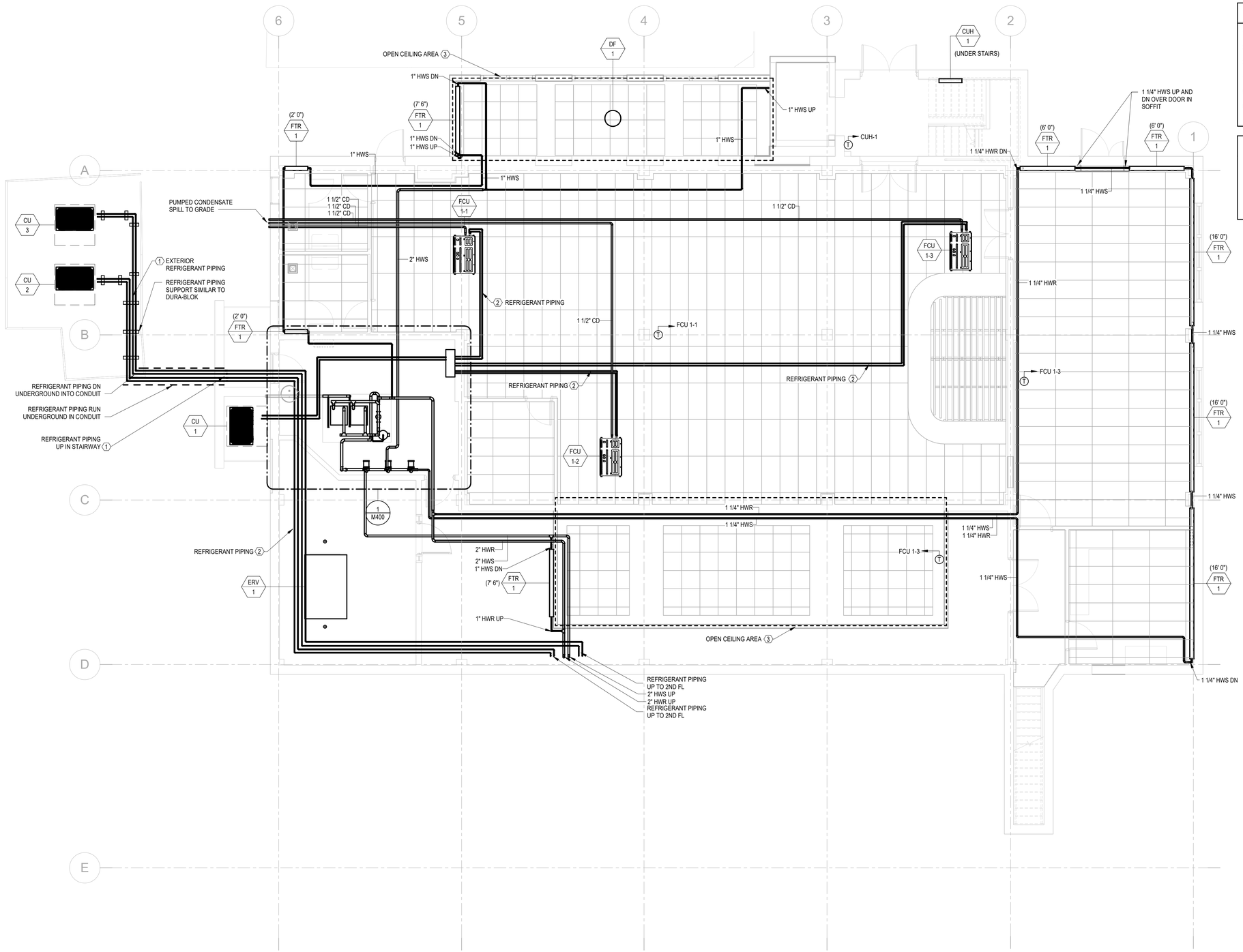
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KEYNOTES

1. PROVIDE EXTERIOR MOUNTED REFRIGERANT PIPING WITH UV AND WEATHERPROOF COATING ON INSULATION.
2. INSTALL REFRIGERANT PIPING PER MANUFACTURER SPECIFICATION, INCLUDING CONNECTION TYPE AND PIPE SUPPORTS.
3. OUTLINE INDICATES AREA WITH ARCHITECTURAL AND/OR OPEN CEILING. ALL MECHANICAL EQUIPMENT AND SYSTEMS SHALL BE PAINTED BLACK, INCLUDING BUT NOT LIMITED TO, DUCTWORK, EQUIPMENT, INSULATION, PIPING, AND HANGERS.

1 M300 MECHANICAL PIPING PLAN - LOWER LEVEL
3/16" = 1'-0"

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SPFLD00611 - LIBRARY BUILDING RENOVATIONS
70 POWELL ROAD, SPRINGFIELD, PA 19064

MECHANICAL PIPING PLAN - LOWER LEVEL

SPRINGFIELD TOWNSHIP
50 POWELL ROAD, SPRINGFIELD, PA 19064

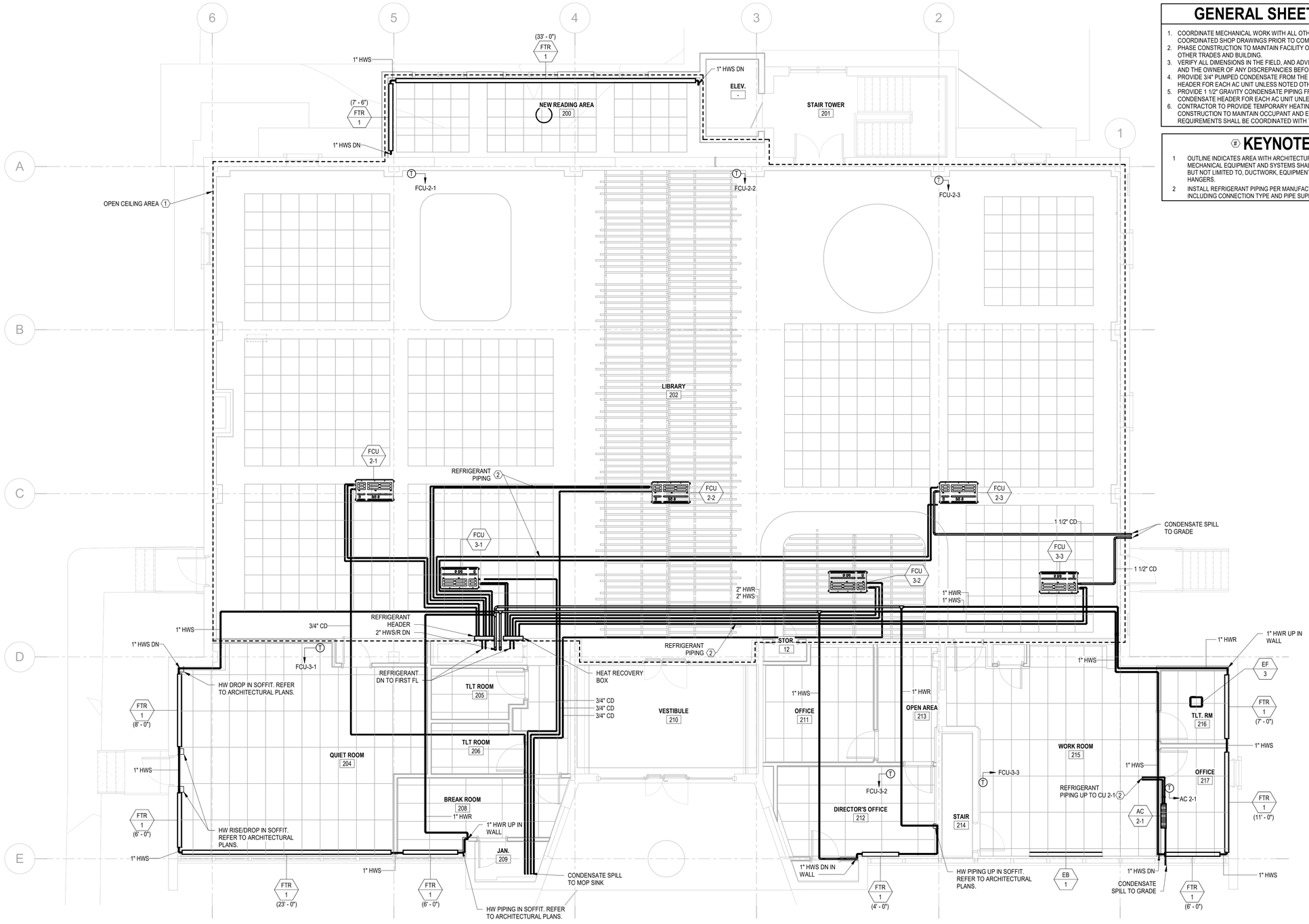
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PROJECT	SPFLD00611
DATE	08/07/2026
DRAWING SCALE	AS NOTED
DRAWN BY	TFC
APPROVED BY	RHG

M300

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1 M301 MECHANICAL PIPING PLAN - UPPER LEVEL
3/16" = 1'-0"

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2 INSTALL REFRIGERANT PIPING PER MANUFACTURER SPECIFICATION, INCLUDING CONNECTION TYPE AND PIPE SUPPORTS.

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DATE: 08/07/2026

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SPFLD00611 - LIBRARY BUILDING RENOVATIONS
70 POWELL ROAD, SPRINGFIELD, PA 19064

MECHANICAL PIPING PLAN - UPPER LEVEL

SPRINGFIELD TOWNSHIP
50 POWELL ROAD, SPRINGFIELD, PA 19064

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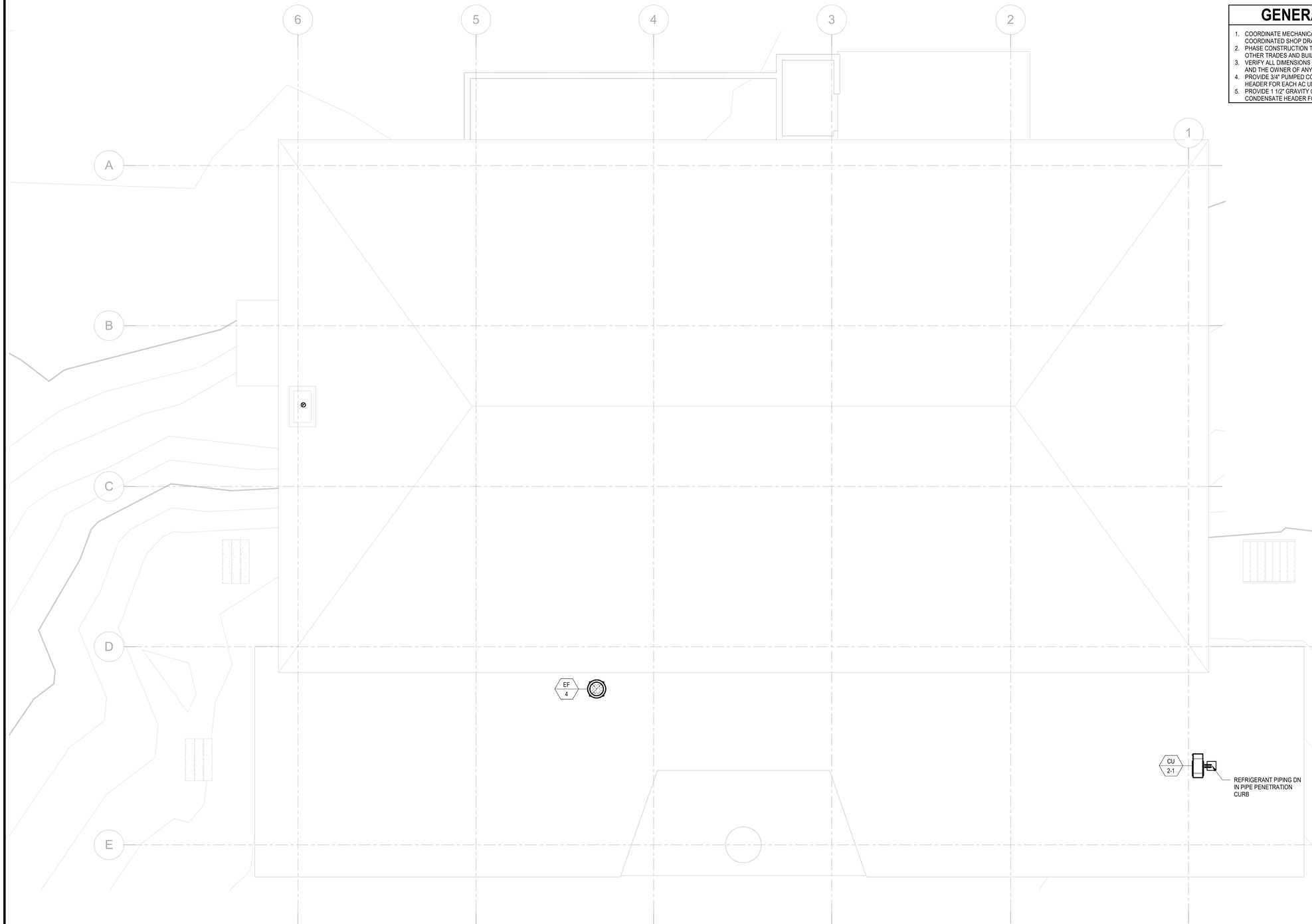
PROJECT	SPFLD00611
DATE	08/07/2026
DRAWING SCALE	AS NOTED
DRAWN BY	TFC
APPROVED BY	RHG

M301

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1 / M302 MECHANICAL PIPING PLAN - ROOF
3/16" = 1'-0"

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70 POWELL ROAD, SPRINGFIELD, PA 19064

MECHANICAL PIPING PLAN - ROOF

SPRINGFIELD TOWNSHIP
50 POWELL ROAD, SPRINGFIELD, PA 19064

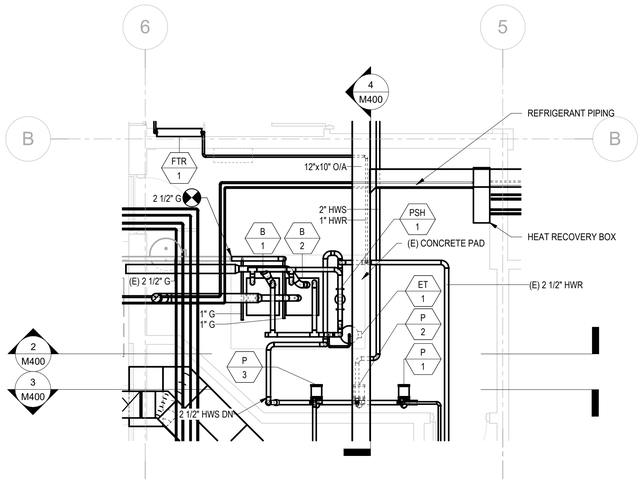
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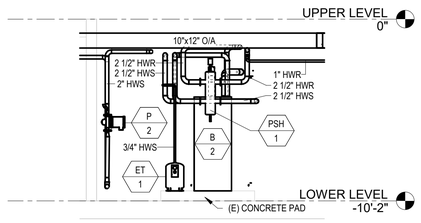
PROJECT	SPFLD00611
DATE	08/07/2026
DRAWING SCALE	AS NOTED
DRAWN BY	TFC
APPROVED BY	RHG

M302

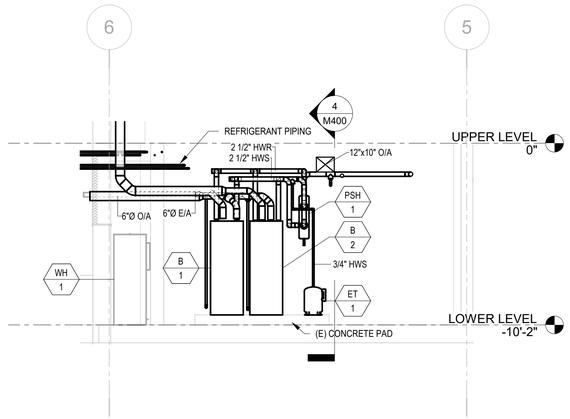
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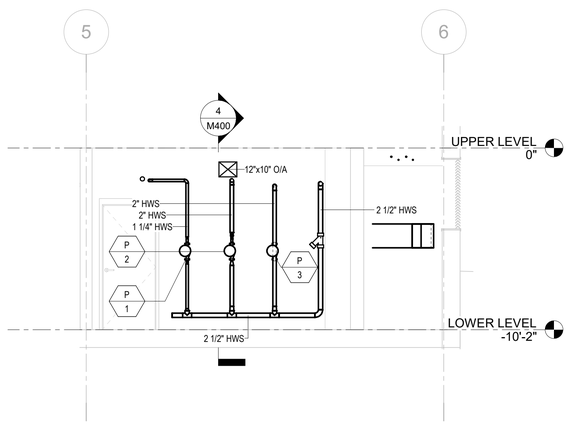
1 M400 MECHANICAL PLAN - ELECTRICAL ROOM ENLARGED
1/4" = 1'-0"



4 M400 MECHANICAL SECTION 3 - ELECTRICAL ROOM
1/4" = 1'-0"



2 M400 MECHANICAL SECTION 1 - ELECTRICAL ROOM
1/4" = 1'-0"



3 M400 MECHANICAL SECTION 2 - ELECTRICAL ROOM
1/4" = 1'-0"

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SPFLD00611 - LIBRARY BUILDING RENOVATIONS
70 POWELL ROAD, SPRINGFIELD, PA 19064

MECHANICAL - PARTIAL PLANS & SECTIONS

SPRINGFIELD TOWNSHIP
50 POWELL ROAD, SPRINGFIELD, PA 19064

NO.	DATE	REVISIONS	BY

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DRAWN BY	TFC
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SPRINGFIELD LIBRARY CONTROL SEQUENCES

HOT WATER BOILERS (B-1, B-2 AND P-1/2/3)

A. SCOPE OF WORK – PROVIDE DDC CONTROLS INTERFACE WITH FACTORY BOILER CONTROL PANEL AND MEET THE SEQUENCES OUTLINED BELOW.

B. BOILER ENABLED –THE BOILERS SHALL BE ENABLED AND OPERATE ON A TEMPERATURE RESET SCHEDULE OR VIA MANUAL COMMAND OR BASED ON THE OUTSIDE AIR TEMPERATURE SCHEDULE OUTLINED BELOW:

OADB > 60 DEG F (ADJ.): ENABLE – SUPPLY WATER TEMP = 140 DEG F (ADJ.)
OADB = 60 DEG F (ADJ.): ENABLE – SUPPLY WATER TEMP = 140 DEG F (ADJ.)
OADB = 20 DEG F (ADJ.): ENABLE – SUPPLY WATER TEMP = 180 DEG F (ADJ.)
OADB < 20 DEG F (ADJ.): ENABLED – SUPPLY WATER TEMP = 180 DEG F (ADJ.)

TEMPERATURE RESET SHALL BE ON A LINEAR SCALE FOR TEMPERATURES BETWEEN THE UPPER AND LOWER LIMIT

WHEN ENABLED THE LEAD BOILER AND ASSOCIATED PRIMARY (INTEGRAL CIRCULATION) PUMP SHALL BE ENERGIZED. THE LEAD BOILER AND PUMP WILL THE BOILER WITH THE FEWEST RUNTIME HOURS.

ON A COMMAND TO START, THE PRIMARY PUMP WILL START AND THE BOILER ISOLATION VALVES WILL OPEN. WHEN FLOW IS PROVEN THROUGH THE BOILER VIA PRESSURE DIFFERENTIAL SENSORS, THE BOILER'S GAS BURNERS WILL BE FIRED AND THE BOILER CONTROLS WILL MODULATE TO MAINTAIN SETPOINT TEMPERATURE IN ACCORDANCE WITH THE RESET SCHEDULE AND ITS BOILER INTERNAL CONTROLS.

BOILER LEAD/LAG CONTROLS – SETPOINT RETURN WATER (HWRT) TEMPERATURE SHALL BE DETERMINED BY THE FOLLOWING EQUATION:

SETPOINT HWRT = HWST – 30 DEG F (ADJ.)

IF THE HOT WATER RETURN TEMPERATURE IS 2 DEG F (ADJ.) LESS THAN THE SETPOINT FOR 15 MIN (ADJ.) AND THE LEAD BOILER IS OPERATING AT MAXIMUM FIRE, THE LAG BOILER SHALL BE ENERGIZED.

IF THE HOT WATER RETURN TEMPERATURE IS 2 DEG F (ADJ.) GREATER THAN THE SETPOINT FOR 15 MIN (ADJ.) AND BOTH BOILER ARE OPERATING AT MINIMUM FIRE, THE LEAD BOILER SHALL BE DE-ENERGIZED AND THE LAG BOILER BURNERS SHALL MODULATE TO MAINTAIN SETPOINT SUPPLY WATER TEMPERATURE.

C. SECONDARY PUMP CONTROL – THE SECONDARY PUMPS SHALL RUN CONTINUOUSLY UPON CALL FOR HEAT.

D. DISABLED MODE – THE BOILER SYSTEM WILL BE DISABLED VIA MANUAL COMMAND OR OADB SCHEDULE. WHEN DISABLED ALL PUMPS WILL BE DE-ENERGIZED, THE BOILER BURNER WILL BE DE-ENERGIZED AND ALL ASSOCIATED CONTROL VALVE IN THE BOILER PLANT WILL CLOSE.

LOWER LEVEL AND UPPER LEVEL VRF FCU SYSTEM (FCU 1-1/2/3, FCU 2-1/2/3, FCU 3-1/2/3 AND ASSOCIATED ERV-1 AND CONDENSING UNITS CU-1/2/3)

A. SCOPE OF WORK – PROVIDE AC SMART MANUFACTURER CONTROLLER AND DDC CONTROLS TO MEET THE SEQUENCES OUTLINED BELOW.

B. FIRE ALARM INTERFACE – PROVIDE UL-864 RELAY FOR CONNECTION TO FIRE ALARM SYSTEM. UPON DETECTION OF FIRE ANYWHERE IN THE BUILDING, THE HVAC SYSTEMS WILL BE SHUT DOWN AND ASSOCIATED DAMPERS WILL BE CLOSED.

C. OCCUPIED AND UNOCCUPIED MODE WILL BE BASED ON TIME-OF-DAY SCHEDULE (SET BY OWNER) AND WILL BE CAPABLE OF BEING ADJUSTED OR OVERRIDDEN THRU THE SPACE THERMOSTAT OVERRIDE BUTTON AND AC SMART CONTROLLER.

D. OCCUPIED MODE – THE FCU SHALL BE ENABLED VIA TIME-OF-DAY SCHEDULE (SET BY OWNER) AND RUN CONTINUOUSLY.

WHEN ENABLED THE FCU AND THE ASSOCIATED ERV WILL ENERGIZE AND MAINTAIN SETPOINT SPACE AIR TEMPERATURE IN ACCORDANCE WITH THE TSTAT SCHEDULE.

COOLING MODE: WHEN IN COOLING MODE, THE FCU FAN SHALL RUN CONTINUOUSLY AND THE ASSOCIATED AIR COOLED CONDENSER SHALL CYCLE TO MAINTAIN SETPOINT SPACE TEMPERATURE.

HEATING MODE: WHEN IN HEATING MODE, THE FCU FAN SHALL RUN CONTINUOUSLY AND THE ASSOCIATED AIR COOLED CONDENSER SHALL CYCLE TO MAINTAIN SETPOINT SPACE TEMPERATURE.

E. UNOCCUPIED MODE – ALL FANS WILL DE-ENERGIZE AND THE DX COMPRESSOR WILL DE-ENERGIZE. ALL ASSOCIATED OUTSIDE AIR DAMPERS WILL CLOSE. UPON A CALL FOR COOLING OR HEATING IN ACCORDANCE WITH THE OCCUPIED/UNOCCUPIED SCHEDULE, THE FAN SHALL ENERGIZE TO MINIMUM SPEED AND DX COMPRESSOR WILL ENERGIZE TO MAINTAIN UNOCCUPIED SETBACK SPACE TEMPERATURE.

SPLIT SYSTEM AIR CONDITIONER (AC 2-1 AND CU 2-1)

A. SCOPE OF WORK – PROVIDE DDC CONTROLS TO MEET THE SEQUENCES OUTLINED BELOW.

B. ENABLED MODE – AC/CU UNITS SHALL BE ENABLED VIA TIME-OF-DAY SCHEDULE (SET BY OWNER) AND RUN CONTINUOUSLY.

THE AC UNITS AND CU SHALL MODULATE VIA THEIR INTEGRAL CONTROLS TO MAINTAIN A SPACE SETPOINT TEMPERATURE IN ACCORDANCE WITH THE TEMPERATURE SENSOR SCHEDULE.

C. DISABLED MODE – AC UNITS AND CU SHALL BE DISABLED VIA TIME-OF-DAY SCHEDULE (SET BY OWNER). ALL FANS AND COMPRESSORS SHUT DOWN.

EXHAUST FAN – CONSTANT VOLUME (EF-4)

A. SCOPE OF WORK – PROVIDE DDC CONTROLS TO MEET THE SEQUENCES OUTLINED BELOW.

B. FIRE ALARM INTERFACE – PROVIDE UL-864 RELAY FOR CONNECTION TO FIRE ALARM SYSTEM. UPON DETECTION OF FIRE ANYWHERE IN THE BUILDING, THE HVAC SYSTEMS WILL BE SHUTDOWN AND ASSOCIATED DAMPERS WILL BE CLOSED.

C. ENABLED MODE –EXHAUST FAN SHALL BE ENABLED VIA TIME-OF-DAY SCHEDULE (SET BY OWNER) AND RUN CONTINUOUSLY.

WHEN ENABLED, THE ASSOCIATED MOTORIZED ISOLATION DAMPER SHALL OPEN, AND FANS SHALL ENERGIZE.

D. DISABLED MODE –WHEN DISABLED, VIA TIME-OF-DAY SCHEDULE (SET BY OWNER), THE FAN SHALL DE-ENERGIZE AND THE ASSOCIATED ISOLATION DAMPER SHALL CLOSE.

EXHAUST FAN – OCCUPANCY CONTROL (EF-1,2 AND 3)

A. SCOPE OF WORK – PROVIDE DDC CONTROLS TO MEET THE SEQUENCES OUTLINED BELOW. PROVIDE EF-1, EF-2, AND EF-3 WITH OCCUPANCY SENSOR.

B. FIRE ALARM INTERFACE – PROVIDE UL-864 RELAY FOR CONNECTION TO FIRE ALARM SYSTEM. UPON DETECTION OF FIRE ANYWHERE IN THE BUILDING, THE HVAC SYSTEMS WILL BE SHUTDOWN AND ASSOCIATED DAMPERS WILL BE CLOSED.

C. ENABLED MODE –EXHAUST FAN SHALL BE ENABLED VIA OCCUPANCY AND RUN CONTINUOUSLY.

D. DISABLED MODE –WHEN DISABLED, VIA OCCUPANCY SENSOR SENSING NO MOTION FOR 90 SECONDS (ADJ), THE FAN SHALL DE-ENERGIZE AND THE ASSOCIATED ISOLATION DAMPER SHALL CLOSE.

DESTRATIFICATION FAN – CONSTANT VOLUME (DF-1, DF-2)

A. SCOPE OF WORK – PROVIDE DDC CONTROLS TO MEET THE SEQUENCES OUTLINED BELOW.

B. FIRE ALARM INTERFACE – PROVIDE UL-864 RELAY FOR CONNECTION TO FIRE ALARM SYSTEM. UPON DETECTION OF FIRE ANYWHERE IN THE BUILDING, THE HVAC SYSTEMS WILL BE SHUTDOWN AND ASSOCIATED DAMPERS WILL BE CLOSED.

C. ENABLED MODE – EXHAUST FAN SHALL BE ENABLED VIA TIME-OF-DAY SCHEDULE (SET BY OWNER) AND RUN CONTINUOUSLY.

D. DISABLED MODE – WHEN DISABLED, VIA TIME-OF-DAY SCHEDULE (SET BY OWNER), THE FAN SHALL DE-ENERGIZE.

ELECTRIC CABINET UNIT HEATER (CUH-1)

A. SCOPE OF WORK – PROVIDE FIELD INSTALLED DDC CONTROLS TO MEET THE SEQUENCES OUTLINED BELOW.

B. HEATING MODE: WHEN IN HEATING MODE, THE CUH FAN SHALL RUN CONTINUOUSLY AND THE ELECTRIC RESISTANCE HEATING COIL SHALL ENERGIZE TO MAINTAIN SPACE SETPOINT TEMPERATURE IN ACCORDANCE WITH THE TEMPERATURE SENSOR SCHEDULE.

ELECTRIC BASEBOARD HEATER (EB-1)

A. SCOPE OF WORK – PROVIDE FIELD INSTALLED DDC CONTROLS TO MEET THE SEQUENCES OUTLINED BELOW.

B. HEATING MODE: WHEN IN HEATING MODE, HE ELECTRIC RESISTANCE HEATING COIL SHALL ENERGIZE TO MAINTAIN SPACE SETPOINT TEMPERATURE IN ACCORDANCE WITH THE TEMPERATURE SENSOR SCHEDULE.

FINNED TUBE RADIATOR (FTR)

A. SCOPE OF WORK –PROVIDE DDC CONTROLS TO MEET THE SEQUENCES OUTLINED BELOW.

B. HEATING MODE WILL BE BASED ON THERMOSTATIC RADIATOR VALVE SETPOINT (VIA REMOTE ACTUATOR) AND THE FOLLOWING SCHEDULE

HEATING MODE: TEMPERATURE FALLS BELOW REMOTE ACTUATOR SETPOINT OF 65 DEG F (ADJ.)

SENSOR SCHEDULE

UNIT NO.	SERVICE	SYSTEM	CONTROL SETPOINTS									BASIS OF DESIGN: MANUFACTURER AND MODEL NO.	REMARKS
			OCCUPIED		UNNOCCUPIED		HUMIDITY CLG (%RH)	HUMIDITY HTG (%RH)	OCC SENSOR	R32 - REFRIGERANT DETECTOR	CO2 (PPM)		
			TEMP CLG (F)	TEMP HTG (F)	TEMP CLG (F)	TEMP HTG (F)							
T-FCU-1-1	LOWER LEVEL KIDS LIBRARY	FCU 1-1	75	-	-	-	-	-	-	YES	-	AC UNIT MFR'S SENSOR	SEE NOTES
T-FCU-1-2	LOWER LEVEL KIDS LIBRARY	FCU 1-2	75	-	-	-	-	-	-	YES	-	AC UNIT MFR'S SENSOR	SEE NOTES
T-FCU-1-3	PROGRAM ROOM	FCU 1-3	75	-	-	-	-	-	-	YES	-	AC UNIT MFR'S SENSOR	SEE NOTES
T-FCU-2-1	UPPER LEVEL LIBRARY	FCU 2-1	75	-	-	-	-	-	-	YES	-	AC UNIT MFR'S SENSOR	SEE NOTES
T-FCU-2-2	UPPER LEVEL LIBRARY	FCU 2-2	75	-	-	-	-	-	-	YES	-	AC UNIT MFR'S SENSOR	SEE NOTES
T-FCU-2-3	UPPER LEVEL LIBRARY	FCU 2-3	75	-	-	-	-	-	-	YES	-	AC UNIT MFR'S SENSOR	SEE NOTES
T-FCU-3-1	UPPER LEVEL QUIET ROOM	FCU 3-1	75	-	-	-	-	-	-	YES	-	AC UNIT MFR'S SENSOR	SEE NOTES
T-FCU-3-2	UPPER LEVEL OFFICES	FCU 3-2	75	-	-	-	-	-	-	YES	-	AC UNIT MFR'S SENSOR	SEE NOTES
T-FCU-3-3	UPPER LEVEL OFFICES	FCU 3-3	75	-	-	-	-	-	-	YES	-	AC UNIT MFR'S SENSOR	SEE NOTES
T-AC-2-1	UPPER LEVEL OFFICE	AC-2-1	75	-	-	-	-	-	-	YES	-	AC UNIT MFR'S SENSOR	SEE NOTES
T-EB-1	WORK ROOM 215	EB-1	-	65	-	-	-	-	-	-	-	UNIT MFR'S SENSOR - UNIT MOUNTED ACCEPTABLE	SEE NOTES
T-CUH-1	STAIR TOWER	CUH-1	-	65	-	-	-	-	-	-	-	UNIT MFR'S SENSOR - UNIT MOUNTED ACCEPTABLE	SEE NOTES

NOTES:
1. ALL SETPOINTS SHALL BE ADJUSTABLE FROM THE SENSOR AND AC SMART CONTROLLER (FCU ONLY FOR AC SMART CONTROLLER).
2. ALL SETPOINTS SHALL UTILIZE TIME OF DAY SCHEDULE FOR CONTROL.
3. SENSORS SHALL BE LOCATED 4' ABOVE FINISH FLOOR.
4. PROVIDE ALL SENSORS WITH LOCKABLE TYPE PROTECTIVE COVERS.

ISSUED FOR BID
DATE: 08/07/2026

PENNONI ASSOCIATES INC.
1900 Market Street, Suite 300
Philadelphia, PA 19103
T 215.222.3000 F 215.222.3588

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MECHANICAL CONTROLS SEQUENCES

SPRINGFIELD TOWNSHIP
50 POWELL ROAD, SPRINGFIELD, PA 19064

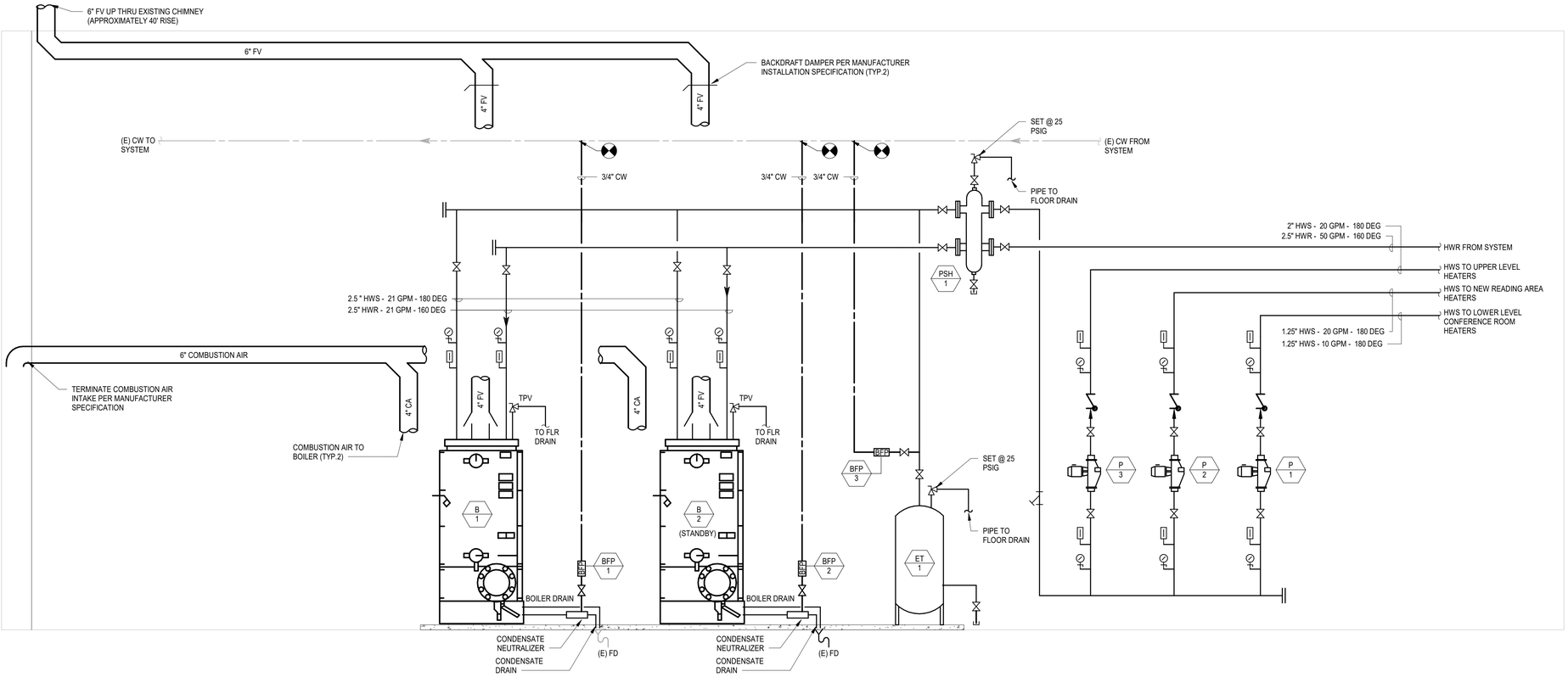
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1 / M600 BOILER HOT WATER FLOW DIAGRAM
NOT TO SCALE

BACKFLOW PREVENTOR SCHEDULE

NO.	LOCATION	SERVICE	TYPE	LEAD FREE (Y/N)	MATERIAL	MANUFACTURER	MODEL	SIZE	ACCESSORIES
BFP-1	BOILER ROOM	CONDENSATE NEUTRALIZER	RPZ	Y	STAINLESS STEEL	WATTS	994-LF	3/4"	N/A
BFP-2	BOILER ROOM	CONDENSATE NEUTRALIZER	RPZ	Y	STAINLESS STEEL	WATTS	994-LF	3/4"	N/A
BFP-3	BOILER ROOM	MAKEUP	RPZ	Y	STAINLESS STEEL	WATTS	994-LF	3/4"	N/A

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MECHANICAL DIAGRAMS

SPRINGFIELD TOWNSHIP
50 POWELL ROAD, SPRINGFIELD, PA 19064

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HOT WATER BOILER SCHEDULE

UNIT NO.	LOCATION	SERVICE	SYSTEM TYPE	BOILER PERFORMANCE DATA							BURNER PERFORMANCE DATA			ELECTRICAL DATA					OPER. WEIGHT (LBS.)	BASIS OF DESIGN : MANUFACTURER & MODEL NO.	REMARKS
				GAS INPUT (MBH)	NOMINAL CAPACITY (BTU)	GPM	EWT (°F)	LWT (°F)	MAX. PD (FT. HD)	HEAT EXCHANGER DESIGN PRESSURE (PSIG)	GAS GAS DATA			VOLTS	PHASE	HZ	MCA	MOCP			
											MEDIUM	MIN PRESS. (in. W.C.)	MAX PRESS. (in. W.C.)								
B-1	BOILER ROOM	HEATING HW	GAS	399	350	21	180	200	10	150	NG	5	14	120	1	60	15	15	300	RIELLO ARRAY SE 399	SEE NOTES
B-2	BOILER ROOM	HEATING HW	GAS	399	350	21	180	200	10	150	NG	5	14	120	1	60	15	15	300	RIELLO ARRAY SE 399	SEE NOTES

NOTES:

1. PROVIDE CONDENSATE NEUTRALIZER KIT AND CONDENSATE TRAP PER BOILER.
2. PROVDE OUTDOOR AIR TEMPERATURE SENSORAND AUX LOW WATER CUTOFF KIT.
3. PROVIDE EACH BOILER WITH A BOILER FLUE BACKDRAFT DAMPER. MECHANICAL CONTRACTOR SHALL PROVIDE DAMPER.

PUMP SCHEDULE

UNIT NO.	LOCATION	SERVICE	SYSTEM TYPE	FLUID	PERFORMANCE DATA						CONSTRUCTION DATA				MOTOR DATA		ELECTRICAL DATA			OPER. UNIT WEIGHT (LBS)	BASIS OF DESIGN : MANUFACTURER & MODEL NO.	REMARKS
					GPM	FLUID TEMP (°F)	REQUIRED NPSH	TDH (FT H2O)	RPM	BHP	TYPE	SUCTION SIZE (in.)	DISCHARGE SIZE (in.)	DESIGN PRESS (PSI)	MHP	START TYPE	VOLTS	PHASE	Hz			
P-1	BOILER ROOM	LOWER LEVEL CONFERENCE	HOT WATER	WATER	10	180	2.6	20	1800	0.12	INLINE	1	1	150	.33	-	120	1	60	50	BELL AND GOSSETT E-90-1AAB	SEE NOTES
P-2	BOILER ROOM	NEW READING HEATERS	HOT WATER	WATER	20	180	5.32	35	2778	0.33	INLINE	1.25	1.25	150	1.5	-	120	1	60	50	BELL AND GOSSETT E-90-1.25AAB	SEE NOTES
P-3	BOILER ROOM	UPPER LEVEL HEATERS	HOT WATER	WATER	20	180	12.5	55	3168	0.59	INLINE	1	1	150	1.5	-	120	1	60	50	BELL AND GOSSETT E-90-1AAB	SEE NOTES

NOTES:

1. PROVIDE PUMPS WITH ECM MOTORS.
2. PUMPS ARE INLINE AND INSTALLED VERTICALLY. PROVIDE WALL MOUNTING KITS.
3. PROVIDE ALL VALVES AND ACCESSORIES REQUIRED FOR A COMPLETE INSTALL PER MANUFACTURER SPECIFICATIONS.

AIR SEPERATOR SCHEDULE

UNIT NO.	LOCATION	SERVICE	DESIGN FLOW (CFM)	MAX PD (INWG)	WORKING PRESS. (PSIG)	OPER. WEIGHT (LBS.)	BASIS OF DESIGN : MANUFACTURER & MODEL NO.	REMARKS
PSH-1	BOILER ROOM	HW	50	10	150	90	BELL AND GOSSET CRS 2.5	SEE NOTES

NOTES:

1. UNIT SHALL BE SUPPORTED BY PIPE CONNECTIONS. CONTRACTOR TO ENSURE PROPER PIPE SUPPORTS.
2. UNIT SHALL BE CAPABLE OF SEPARATING DIRT AND AIR FROM THE SYSTEM.
3. UNIT SHALL PROVIDE HYDRONIC DECOUPLING BETWEEN PRIMARY AND SECONDARY HOT WATER CIRCUITS.

EXPANSION TANK SCHEDULE

UNIT NO.	LOCATION	SERVICE	SYSTEM TYPE	ACTUAL VOLUME (GAL.)	ACCEPT. VOLUME (GAL.)	HEIGHT (FT.- IN.)	DIAMETER (FT.- IN.)	WORKING PRESS. (PSIG)	SYSTEM OPER. TEMP(°F)	OPER. WEIGHT (LBS.)	BASIS OF DESIGN : MANUFACTURER & MODEL NO.	REMARKS
ET-1	BOILER ROOM	HOT WATER	DIAPHRAM	7.8	5	1' - 7"	1' - 0"	175	180	120	BELL AND GOSSETT SERIES D	SEE NOTES

NOTES:

1. PROVIDE UNIT WITH FACTORY FLOOR MOUNTING KIT.
2. PROVIDE UNIT WITH MINIMUM 12 PSIG PRECHARGE. FIELD ADJUST FOR SYSTEM NEEDS.

HOT WATER BASEBOARD HEATER SCHEDULE

UNIT NO.	HOT WATER					ENCLOSURE DATA			OPER. UNIT WEIGHT (LBS)	BASIS OF DESIGN: MANUFACTURER AND MODEL NO.	REMARKS
	GPM	WATER P.D. (FT. W.G.)	# OF TUBES	EWT °F	LWT °F	LENGTH (IN.)	WIDTH (IN.)	HEIGHT (IN.)			
FTR-1	SEE PLANS	-	1	180	160	SEE PLANS	5	18	-	SIGMA WALLFIN SWE-18S 24C075	SEE NOTES

NOTES:

1. REFER TO FLOOR PLANS FOR FIN TUBE LENGTH.
2. PROVIDE BLANK SECTIONS, COVER PLATES, AND TRIM PIECES AS REQUIRED TO RUN THE LENGTH OF THE ASSOCIATED WALL.
3. COORDINATE WITH ARCHITECT FOR FINISH COLOR.
4. PROVIDE EACH FIN TUBE CIRCUIT WITH DANFOSS RA2000 VALVE WITH REMOTE DIAL. REMOTE DIAL SHALL BE INSTALLED IN AN ACCESSIBLE LOCATION FOR ADJUSTMENT.

ENERGY RECOVERY VENTILATOR SCHEDULE

UNIT No.	LOCATION	SERVICE	SA CFM	SA ESP	EA CFM	EA ESP	COOLING PERFORMANCE					HEATING PERFORMANCE			ELECTRICAL					WEIGHT (LBS.)	BASIS OF DESIGN : MANUFACTURER & MODEL	REMARKS
							CAPACITY REDUCTION (MBH)	EAT °F	EAT °F	LAT °F	EAT °F	CAPACITY REDUCTION (MBH)	EAT °F	LAT °F	V	PH	HZ	MCA	MOCP			
								DB	WB	DB	WB		DB	DB								
ERV-1	HVAC ROOM	VRF SYSTEM	3000	1.5	2450	1.5	120.0	95	75	80	67.6	146.0	10	54	208	3	60	35	60	1600	SWEGON GOLD RX 020	SEE NOTES

NOTES:

1. UNIT SHALL BE PROVIDED WITH VFD.
2. UNIT SHALL BE FLOOR MOUNTED. PROVIDE ALL NECESSARY MANUFACTURER COMPONENTS FOR A COMPLETE INSTALLATION PER MANUFACTURER SPECIFICATIONS.
3. PROVIDE UNIT WITH MOTOR OPERATED DAMPERS ON OUTSIDE AIR INTAKE AND EXHAUST AIR CONNECTION.

AIR COOLED CONDENSING UNIT SCHEDULE

UNIT NO.	LOCATION	SERVICE	NOM. TONS	AMB TEMP DB °F	EER	COMPRESSOR				CONDENSER FAN			ELECTRICAL					OPER. UNIT WEIGHT (LBS)	BASIS OF DESIGN : MANUFACTURER & MODEL NO.	REMARKS
						QTY	RLA	LRA	REFRIG. TYPE	QTY	FLA	HP	V	PH	HZ	MCA	MOCP			
CU-1	EXTERIOR	FCU 1-1/2/3	12	95	11.6	2	22.5+19.3	-	R-32	2	8.4	-	208	3	60	63.6	70	700	LG ZRUM144BTE6	SEE NOTES
CU-2	EXTERIOR	FCU-2-1/2/3	20	95	10.9	2	24.2+24	-	R-32	2	5+5	-	208	3	60	72.2	80	800	LG ZRUM241DTE6	SEE NOTES
CU-3	EXTERIOR	FCU-3-1/2/3	5	95	13	1	255	-	R-32	2	0.5+0.5	-	208	1	60	32.9	40	300	LG ZRUM060GSS0	SEE NOTES
CU-2-1	ROOF	AC 2-1	1	95	12.8	1	8.3	-	R-32	1	0.4	-	208	1	60	12	15	100	LG KSUAB121A	SEE NOTES

NOTES:

1. PROVIDE EACH UNIT WITH DISCONNECT. REFER TO FLOOR PLANS FOR DISCONNECT SIZING.
2. PROVIDE ANTI-CYCLE TIMER.
3. BASIS OF DESIGN EQUIPMENT AS SPECIFIED OR AN APPROVED EQUAL.
4. PROVIDE VRF SYSTEM WITH A MANUFACTURER AC SMART CONTROLLER.
5. REFRIGERANT PIPING SHALL BE SIZED AND INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.
6. PROVIDE CU 2-1 WITH UNIT MOUNTING STAND.

VRF FAN COIL UNITS

UNIT NUMBER	LOCATION	SERVICE	SYSTEM TYPE	TOTAL CFM	MIN. OA CFM	SUPPLY FAN DATA						COOLING COIL						HEATING COIL				FILTER			OPER. UNIT WEIGHT (LBS.)	BASIS OF DESIGN : MANUFACTURER & MODEL NO.	REMARKS
						E.S.P. (in. W.G.)	MAX. T.S.P. (in. W.G.)	MCA	V	PH	HZ	TOTAL CAPACITY (MBH)	SENSIBLE CAPACITY (MBH)	EAT °F		LAT °F		CAPACITY (MBH)	EAT °F	LAT °F	REFRIGERANT	PRE FILTER SECTION					
														DB	WB	DB	WB					MERV	MAX. P.D. (in. W.G.)	MAX. FACE VEL. (FPM)			
FCU-1-1	FIRST FLOOR	CHILDRENS LIBRARY	VRF	1600	320	0.90	-	5.2	208	1	60	54.0	36.4	76	63	55	55	61	55	85	R-32	8	0.1	500	215	LG ZRNU543	
FCU-1-2	FIRST FLOOR	CHILDRENS LIBRARY	VRF	1600	320	0.90	-	5.2	208	1	60	54.0	36.4	76	63	55	55	61	55	85	R-32	8	0.1	500	215	LG ZRNU543	
FCU-1-3	FIRST FLOOR	PROGRAM ROOM	VRF	1600	320	0.90	-	5.2	208	1	60	54.0	36.4	76	63	55	55	61	55	85	R-32	8	0.1	500	215	LG ZRNU543	
FCU-2-1	SECOND FLOOR	MAIN LIBRARY	VRF	2260	450	0.90	-	6.5	208	1	60	76.4	53.5	76	63	55	55	86	55	85	R-32	8	0.1	500	215	LG ZRNU763	
FCU-2-2	SECOND FLOOR	MAIN LIBRARY	VRF	2260	450	0.90	-	6.5	208	1	60	76.4	53.5	76	63	55	55	86	55	85	R-32	8	0.1	500	215	LG ZRNU763	
FCU-2-3	SECOND FLOOR	MAIN LIBRARY	VRF	2260	450	0.90	-	6.5	208	1	60	76.4	53.5	76	63	55	55	86	55	85	R-32	8	0.1	500	215	LG ZRNU763	
FCU-3-1	SECOND FLOOR	QUIET ROOM/OFFICE	VRF	870	175	0.60	-	2.2	208	1	60	17.7	15.7	76	63	55	55	27	55	85	R-32	8	0.1	500	75	LG ZRNU243	
FCU-3-2	SECOND FLOOR	OFFICE	VRF	600	120	0.60	-	2.2	208	1	60	19.1	13.9	76	63	55	55	14	55	85	R-32	8	0.1	500	75	LG ZRNU183	
FCU-3-3	SECOND FLOOR	OFFICE	VRF	560	115	0.60	-	2.2	208	1	60	19.1	13.9	76	63	55	55	14	55	85	R-32	8	0.1	500	75	LG ZRNU183	

NOTES:

1. BALANCE ASSOCIATED OUTSIDE AIR CONNECTION TO VALUES SHOWN.
2. PROVIDE EACH FCU WITH EXTERNAL CONDENSATE PUMP SIMILAR TO BLUE DIAMOND MEGABLUE. COORDINATE WITH ELECTRICAL CONTRACTOR FOR POWER.
3. PROVIDE ALL FCU UNITS WITH DRIP PAN AND UL LISTED LEAK DETECTION. DETECTORS SHALL BE WIRED TO SHUT UNIT DOWN AND ALARM AC SMART CONTROLLER IF CONDENSATE LEVELS EXCEED THE SETPOINT LEVEL.
4. REFER TO TEMPERATURE SENSOR SCHEDULE.

DUCTLESS AC UNIT SCHEDULE

UNIT NO.	LOCATION	SERVICE	SYSTEM TYPE	TOTAL CFM	SUPPLY FAN DATA						COOLING COIL						HEATING COIL				FILTER			OPER. UNIT WEIGHT (LBS.)	BASIS OF DESIGN : MANUFACTURER & MODEL NO.	REMARKS
					E.S.P. (in. W.G.)	MAX. T.S.P. (in. W.G.)	MCA	V	PH	HZ	TOTAL CAPACITY (MBH)	SENSIBLE CAPACITY (MBH)	EAT °F		LAT °F		CAPACITY (MBH)	EAT °F	LAT °F	REFRIGERANT	PRE FILTER SECTION					
													DB	WB	DB	WB					MERV	MAX. P.D. (in. W.G.)	MAX. FACE VEL. (FPM)			
AC 2-1	OFFICE 217	OFFICE	WALL	320	-	-	POWERED BY CU 2-1				12.0	-	76	63	55	55	13.6	59	80	R-32	8	-	-	25	LG KNUAB121A	SEE NOTES

NOTES:

1. PROVIDE ALL AC UNITS WITH UL LISTED LEAK DETECTION. DETECTORS SHALL BE WIRED TO SHUT UNIT DOWN AND ALARM AC SMART CONTROLLER IF CONDENSATE LEVELS EXCEED THE SETPOINT LEVEL.
2. REFER TO MANUFACTURER'S WRITTEN INSTRUCTIONS FOR MOUNTING UNITS.
3. PROVIDE AC UNIT WITH EXTERNAL CONDENSATE LIFT KIT SIMILAR TO BLUE DIAMOND MINIBLUE.
4. REFER TO TEMPERATURE SENSOR SCHEDULE FOR THERMOSTAT INFORMATION AND SETPOINTS.
5. UNIT SHALL BE ABLE TO BE MONITORED AND CONTROLLED VIA AC SMART CONTROLLER.

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SPFLD00611 - LIBRARY BUILDING RENOVATIONS
70 POWELL ROAD, SPRINGFIELD, PA 19064
MECHANICAL SCHEDULES
SPRINGFIELD TOWNSHIP
50 POWELL ROAD, SPRINGFIELD, PA 19064

NO.	DATE	REVISIONS	BY

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PROJECT	SPFLD00611
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DRAWING SCALE	AS NOTED
DRAWN BY	TFC
APPROVED BY	RHG

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FAN SCHEDULE

UNIT NO.	LOCATION	SERVICE	SYSTEM TYPE	PERFORMANCE DATA					CONSTRUCTION DATA		ELECTRICAL DATA					MOTOR DATA		OPER. WEIGHT (LBS.)	BASIS OF DESIGN : MANUFACTURER & MODEL NO.	REMARKS
				CFM	TOTAL SP (IN. WG.)	RPM	BHP	W	CLASS	DRIVE	V	PH	HZ	MCA	MOCP	MHP	FAN TYPE			
EF-1	LOWER LEVEL MENS RR	TOILET EXHAUST	EXHAUST	100	0.50	950	0.04	80	II	DIRECT	120	1	60	1.4	15	-	-	20	GREENHECK SP-B110	SEE NOTES
EF-2	LOWER LEVEL WOMENS RR	TOILET EXHAUST	EXHAUST	100	0.50	950	0.04	80	II	DIRECT	120	1	60	1.4	15	-	-	20	GREENHECK SP-B110	SEE NOTES
EF-3	UPPER LEVEL OFFICE RR	TOILET EXHAUST	EXHAUST	100	0.50	950	0.04	80	II	DIRECT	120	1	60	1.4	15	-	-	20	GREENHECK SP-B110	SEE NOTES
EF-4	ROOF	GENERAL EXHAUST	EXHAUST	250	0.50	1,572	0.06	-	II	DIRECT	120	1	60	1.9	15	0.1	PSC	50	GREENHECK G-080-VG	SEE NOTES
DF-1	LOWER LEVEL	NEW READING AREA	DESTRATIFICATION	400	-	1,500	-	77	II	DIRECT	120	1	60	0.875	15	-	PSC	25	ZOO FANS H50-AC	SEE NOTES
DF-2	UPPER LEVEL	NEW READING AREA	DESTRATIFICATION	400	-	1,500	-	77	II	DIRECT	120	1	60	0.875	15	-	PSC	25	ZOO FANS H50-AC	SEE NOTES

NOTES:

1. PROVIDE EF-4 WITH MOTORIZED ISOLATION DAMPER AND ROOF MOUNTING CURB.
2. DF-1 AND DF-2 TO BE PROVIDED IN BLACK FINISH BY MANUFACTURER.
3. PROVIDE CEILING MOUNTING KIT FOR DF-1 AND DF-2.
4. PROVIDE EF-1,2,3 WITH OCCUPANCY SENSOR AND SIDEWALL VENT CAP.

AIR DEVICE SCHEDULE

TAG No.	TYPE	FACE SIZE	NECK SIZE	MAX. S.P. in. W.G.	MATERIAL	BASIS OF DESIGN : MANUFACTURER & MODEL No.	REMARKS
CDA	SUPPLY DIFFUSER	24X24	8IN DIAMETER	0.10	STEEL	KRUEGER 145A	SEE NOTES
CDB	SUPPLY DIFFUSER	24X24	12X12	0.10	STEEL	KRUEGER	SEE NOTES
SGA	SUPPLY GRILLE	10X6	8X4	0.10	STEEL	KRUEGER AF80	SEE NOTES
RGA	RETURN GRILLE	24X24	22X22	0.10	STEEL	KRUEGER EGC5	SEE NOTES
ERA	EXHAUST GRILLE	10X8	8X6	0.10	STEEL	KRUEGER S80	SEE NOTES

NOTES:

1. PROVIDE ALL AIR DEVICES WITH FACTORY COLOR OF WHITE, UNLESS NOTED OTHERWISE.
2. PROVIDE EACH AIR DEVICE WITH MOUNTING FRAME TYPE TO MATCH CEILING TYPE WHERE INSTALLED. VERIFY MOUNTING TYPE PRIOR TO ORDERING.
3. CDB TO HAVE INTEGRAL VOLUME DAMPER.
4. PROVIDE RETURN GRILLES ON FCU PLENUMS IN FACTORY BLACK FINISH.

ELECTRIC BASEBOARD HEATER SCHEDULE

UNIT NO.	ELECTRICAL							ENCLOSURE DATA			OPER. UNIT WEIGHT (LBS)	BASIS OF DESIGN: MANUFACTURER AND MODEL NO.	REMARKS
	CAPACITY KW	STEP	V	PH	HZ	MCA	MOCP	LENGTH (IN.)	WIDTH (IN.)	HEIGHT (IN.)			
EB-1	2.5	-	208	1	60	12	-	96	-	-	20	MARLEY QMARK 2500 SERIES	SEE NOTES

NOTES:

1. PROVIDE UNIT WITH INTEGRAL ADJUSTABLE THERMOSTAT.
2. PROVIDE LINEAR THERMAL SHUT-OFF IN EVENT OF OVERHEAT.
3. PROVIDE TWO-POLE DISCONNECT SWITCH SECTION.
4. PROVIDE UNIT WITH 8 INCH BLANK WIRING SECTION, INTEGRAL THERMOSTAT AND DISCONNECT SWITCH.

ELECTRIC HEATER SCHEDULE

UNIT No. TAG	LOCATION	TYPE	FAN DATA		ELECTRIC COIL				ELECTRICAL DATA					BASIS OF DESIGN		REMARKS
			CFM	MHP	KW	CAPACITY (MBH)	EAT °F	LAT °F	V	PH	HZ	MCA	MOCP	MODEL	MANUFACTURER	
CUH-1	LEVEL 1 STAIR	ELECTRIC	500	-	5.0	17.0	40	110	208	1	60	25	30	CU900	Q MARK	SEE NOTES

NOTES:

1. PROVIDE UNIT WITH THERMAL OVERLOAD PROTECTION.
2. REFER TO TEMPERATURE SENSOR SECHEDULE.
3. COORDINATE WITH ARCHITECT FOR FINISH COLOR.

DUCT CONSTRUCTION AND INSULATION SCHEDULE

SERVICE		SUPPLY AIR	RETURN AIR	TRANSFER AIR	ERV SUPPLY / RELIEF	GENERAL EXHUAST AIR
DUCT SECTION	FROM:					
	TO:					
DUCT SECTION	INDOORS EXPOSED:	X	X	X	X	X
	INDOORS CONCEALED:	X	X	X	X	X
	OUTDOORS:	-	-	-	-	-
PRESSURE CLASSIFICATION:		+/- 2.0" H2O	+/- 2.0" H2O	+/- 2.0" H2O	+/- 2.0" H2O	+/- 2.0" H2O
SMACNA SEAL CLASSIFICATION:		A	A	A	A	A
OUTER WALL MATERIAL:		G90 GALVANIZED STEEL	G90 GALVANIZED STEEL	G90 GALVANIZED STEEL	G90 GALVANIZED STEEL	G90 GALVANIZED STEEL
INNER WALL MATERIAL:		-	-	-	-	-
DUCT AIR TEMPERATURE:		ALL TEMPS.	ALL TEMPS.	ALL TEMPS.	ALL TEMPS.	ALL TEMPS.
EXTERIOR INSULATION	TYPE:	FIBERGLASS (1.0 PCF)	FIBERGLASS (1.0 PCF)	FIBERGLASS (1.0 PCF)	FIBERGLASS (1.0 PCF)	-
	THICKNESS:	(MIN R6 INSTALLED)	(MIN R6 INSTALLED)	(MIN R6 INSTALLED)	(MIN R6 INSTALLED)	-
	VAPOR BARRIER:	FRK	FRK	FRK	FRK	-
INTERNAL LINER	THICKNESS:					
	DENSITY:					
REMARKS:						

NOTES:

1. ALL DUCTWORK SHALL BE MINIMUM 26 GAUGE UNLESS NOTED OTHERWISE.
2. CONSTRUCT DUCTWORK TO SMACNA STANDARDS.

PIPE SCHEDULE

		HOT WATER		CONDENSATE DRAIN		REFRIGERANT	
	SERVICE						
	LOCATION TEMPERATURE	INDOORS		INDOORS		INDOORS / OUTDOORS	
		120-200 F		42-55 F		42-58 F	
PIPE MATERIALS	PIPE MATERIALS	PIPE SIZE	MATERIAL/JOINTS	PIPE SIZE	MATERIAL/JOINTS	PIPE SIZE	MATERIAL/JOINTS
		3/4" - 2"	ASTM B88 HARD-DRAWN TYPE L COPPER/ANSI B16.22 SOLDER 95/5TA SOLDERED	3/4" - 2"	ASTM B88 HARD-DRAWN TYPE L COPPER/ANSI B16.22 SOLDER 95/5TA SOLDERED	3/4" - 2"	PER MANUFACTURER REQUIREMENT
		2 1/2" & UP	ASTM A53 SCH 40 SEAMLESS STEEL/ANSI B16.9 BUTT WELD	2 1/2" & UP	ASTM A53 SCH 40 SEAMLESS STEEL/ANSI B16.9 BUTT WELD	2 1/2" & UP	PER MANUFACTURER REQUIREMENT
		-	-	-	-	-	-
	MAX OPERATING PRESSURE	150 PSIG		150 PSIG		PER MANUFACTURER REQUIREMENT	
	SEAMLESS/ERW	SEAMLESS		SEAMLESS		PER MANUFACTURER REQUIREMENT	
	-	-		-		-	
PIPE INSULATION	MINIMUM INSULATION THICKNESS	PIPE SIZE	INSULATION THICKNESS	PIPE SIZE	INSULATION THICKNESS	PIPE SIZE	INSULATION THICKNESS
		3/4" - 1"	1 1/2"	3/4" - 1"	1/2"	3/4" - 1 1/2"	1" indoor / 2" outdoor
		1 1/2" - 4"	2"	1 1/4" - 2"	1/2"	2" - 4"	1" indoor / 2" outdoor
		6"	2"	2 1/2" - 4"	1"	6"	1" indoor / 2" outdoor
		8" & UP	2"	6"	-	8" & UP	1" indoor / 2" outdoor
		-	-	8" & UP	-	-	-
	INSULATION TYPE	MOLDED FIBERGLASS		MOLDED FIBERGLASS		Flexible Elastomeric/ Armaflex	
	JACKET	ASJ		ASJ		ASJ	
	WEATHERPROOFING	NONE		NONE		NONE	
	MAXIMUM K-VALUE	Kmax = 0.27 AT 175 DEG F		Kmax = 0.23 AT 75 DEG F MEAN TEMP		Kmax = 0.27	
PIPE VALVES	VALVES	PIPE SIZE	ISOLATION/THROTTLE	PIPE SIZE	ISOLATION/THROTTLE	PIPE SIZE	ISOLATION/THROTTLE
		3/4" - 2"	BALL VALVE/BALL VALVE	3/4" - 2"	BALL VALVE/BALL VALVE	3/4" - 2"	PER MANUFACTURER REQUIREMENT
		2-1/2" & UP	BUTTERFLY VALVE/BALL VALVE	2-1/2" & UP	BUTTERFLY VALVE/BALL VALVE	2-1/2" & UP	PER MANUFACTURER REQUIREMENT
		-	-	-	-	-	-
REMARKS							

VENTILATION SCHEDULE - ERV-1

ROOM NAME	SYSTEM	No. OF PEOPLE	AREA (SF.)	SPACE TYPE	MINIMUM AIR CHANGE RATES IMC GUIDELINES			MINIMUM CFM IMC GUIDELINES			Ez	Vbz	Voz	DESIGN FLOW (Vpz)	ADJ. DESIGN FLOW (Vpz)	OA Fraction (Zpz)	Remarks
					Rp	Ra	EXH	RpPz	RaA	EA							
100 NEW READING ROOM	ERV-1	6	280	Libraries	5	0.12	0	30	34	0	0.8	64	80	400	400	0.20	SEE NOTES
107 KIDS LIBRARY	ERV-1	20	2,300	Libraries	5	0.12	0	100	276	0	0.8	376	470	2500	2500	0.19	SEE NOTES
106 OFFICE	ERV-1	1	110	Office Spaces	5	0.06	0	5	7	0	0.8	12	15	100	100	0.15	SEE NOTES
109 READING EXTENSION	ERV-1	6	535	Libraries	5	0.12	0	30	64	0	0.8	94	118	600	600	0.20	SEE NOTES
112 PROGRAM ROOM	ERV-1	20	780	Conference/meeting	5	0.06	0	100	47	0	0.8	147	184	1000	1000	0.18	SEE NOTES
113 WORKROOM	ERV-1	5	200	Conference/meeting	5	0.06	0	25	12	0	0.8	37	46	250	250	0.19	SEE NOTES
200 NEW READING AREA	ERV-1	5	315	Libraries	5	0.12	0	25	38	0	0.8	63	79	400	400	0.20	SEE NOTES
202 LIBRARY	ERV-1	5	5,300	Libraries	5	0.12	0	25	636	0	0.8	661	826	6380	6380	0.13	SEE NOTES
204 QUIET ROOM	ERV-1	5	570	Libraries	5	0.12	0	25	68	0	0.8	93	117	580	580	0.20	SEE NOTES
208 BREAK ROOM	ERV-1	3	135	Break Rooms	5	0.06	0	15	8	0	0.8	23	29	200	200	0.14	SEE NOTES
205 TOILET ROOM	ERV-1	1	55	Toilets- public	0	0	75	0	0	0	0.8	0	0	50	50	0.00	SEE NOTES
206 TOILET ROOM	ERV-1	1	55	Toilets- public	0	0	75	0	0	75	0.8	0	0	50	50	0.00	SEE NOTES
210 VESTIBULE	ERV-1	0	210	Corridors	0	0.06	0	0	13	0	0.8	13	16	150	150	0.11	SEE NOTES
211 OFFICE	ERV-1	1	150	Office Spaces	5	0.06	0	5	9	0	0.8	14	18	150	150	0.12	SEE NOTES
212 DIRECTORS OFFICE	ERV-1	1	175	Office Spaces	5	0.06	0	5	11	0	0.8	16	19	200	200	0.10	SEE NOTES
213 OPEN AREA	ERV-1	1	90	Office Spaces	5	0.06	0	5	5	0	0.8	10	13	100	100	0.13	SEE NOTES
215 WORKROOM	ERV-1	6	475	Office Spaces	5	0.06	0	30	29	0	0.8	59	73	520	520	0.14	SEE NOTES
114 CORRIDOR	ERV-1	0	120	Corridors	0	0.06	0	0	7	0	0.8	7	9	50	50	0.18	SEE NOTES
102 TOILET ROOM	-	0	90	Toilets- public	0	0	75	0	0	0	0.8	0	0	0	0	-	SEE NOTES
103 TOILET ROOM	-	0	90	Toilets- public	0	0	75	0	0	0	0.8	0	0	0	0	-	SEE NOTES
216 TOILET ROOM	-	0	60	Toilets- private	0	0	25	0	0	25	0.8	0	0	0	0	-	SEE NOTES

NOTES:

1. VENTILATION TABLE IN ACCORDANCE WITH INTERNATIONAL MECHANICAL CODE, CHAPTER 4 - VENTILATION

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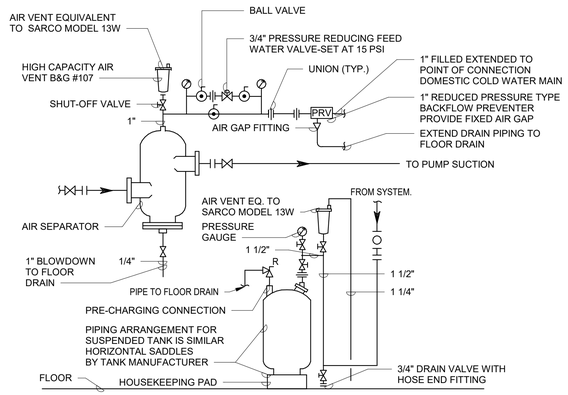
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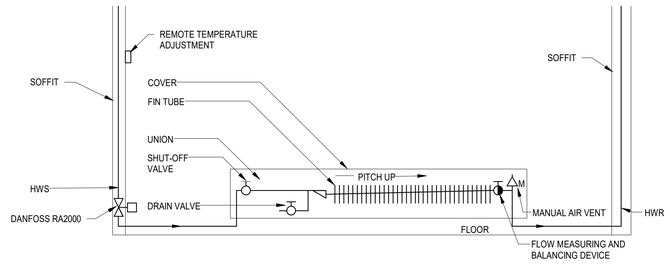
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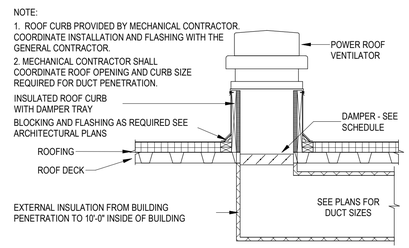
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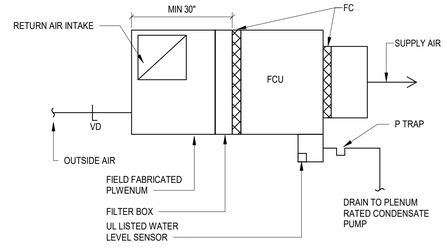
1 M800 AIR SEPERATOR & EXPANSION TANK DETAIL
NOT TO SCALE



2 M800 HOT WATER FIN TUBE DETAIL
NOT TO SCALE



3 M800 POWER ROOF VENTILATOR DETAIL
NOT TO SCALE

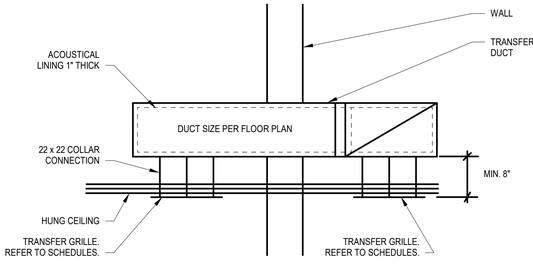


4 M800 FAN COIL UNIT CONSTRUCTION DETAIL
NOT TO SCALE

NOTES:
1. REFER TO HVAC FLOOR PLANS FOR DUCT SIZES.
2. REFER TO SCHEDULES FOR GRILLES, REGISTERS, DIFFUSERS AND TERMINAL SIZES AND TYPES.
3. PROVIDE A MANUAL TYPE BALANCING DAMPER FOR EACH SUPPLY OUTLET AND RETURN INLET.
4. ALL DUCT RUNOUTS TO DIFFUSERS SHALL BE THE SAME SIZE AS DIFFUSER NECK SIZE, UNLESS OTHERWISE NOTED.
5. FLEX DUCT WILL NOT BE ALLOWED ON RETURN OR EXHAUST DUCTWORK SYSTEMS.
6. PROVIDE 12" AIR CUSHION AT THE END OF EACH SUPPLY MAIN AND BRANCH DUCT.

5 M800 DUCTWORK INSTALLATION DIAGRAM
NOT TO SCALE

6 M800 DIFFUSER FLEXIBLE DUCT CONNECTION
NOT TO SCALE



7 M800 AIR TRANFER DUCT DETAIL
NOT TO SCALE

NOTES:
1. LENGTH OF DUCT SHALL BE MIN. 5X LARGER CHARACTERISTIC DIMENSION OF THE DUCT.

8 M800 SPIN COLLAR FLEXIBLE DUCT CONNECTOR WITH DAMPER
NOT TO SCALE

NOTES:
1. SUPPORT DUCTWORK AS REQUIRED.
2. BAND FLEX TO COLLAR 1/2" MINIMUM FROM OUTBOARD END OF COLLAR.
3. INSTALL SPIN COLLAR DAMPER IN OPEN POSITION; FINAL ADJUSTMENT BY TAB CONTRACTOR.
4. PULL FLEXIBLE DUCT INSULATION UP TO END OF SPIN COLLAR AT EDGE OF RECTANGULAR DUCTWORK; SEAL VAPOR BARRIER WITH GREY TAPE TO PREVENT MOISTURE MIGRATION.
5. PROVIDE EXTENSION RODS TO ACCOMMODATE INSULATION, PULL TO EDGE OF DUCTWORK AS REQUIRED AND SEAL TO AFFECT VAPOR BARRIER.
6. POP RIVET OR SHEET METAL SCREWS, MINIMUM 3 EACH AT 120 INTERVALS, CONNECTING STOVEPIPE TO COLLAR. ENSURE RIVETS OR SCREWS DO NOT INTERFERE WITH DAMPER.
7. TAPE AND SEAL ALL JOINTS TO PREVENT LEAKAGE.
8. INSTALL LOCKING QUADRANT AND HANDLE ON BOTTOM OF DUCT FOR EASY SERVICE (SHOWN ON TOP FOR EASE OF ILLUSTRATION ONLY).

9 M800 LOW LEAKAGE RECTANGULAR DAMPERS
NOT TO SCALE

NOTES:
1. MAXIMUM WIDTH, A, 48" PER SECTION
2. MAXIMUM HEIGHT, B, 72" PER SECTION
3. S.S. JAMB TO BLADE WINDSTOP NOT SHOWN
4. SELF LUBRICATING BRONZE BEARINGS WITH 1/2" SLIDE PINS ON END OF BLADES
5. CADMIUM PLATED CONTROL SHAFT 1/2" OR 3/8" SQUARE EXTENDED 6" BEYOND FRAME WITH SLIDE PIN CONTROL
6. PROVIDE OPPOSED BLADE DAMPERS FOR ALL AIR HANDLING UNIT OUTSIDE AIR, RELIEF AIR, AND RETURN DAMPERS.

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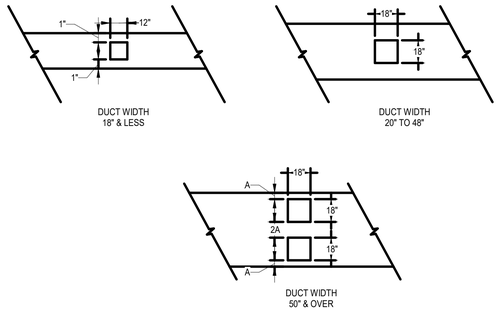
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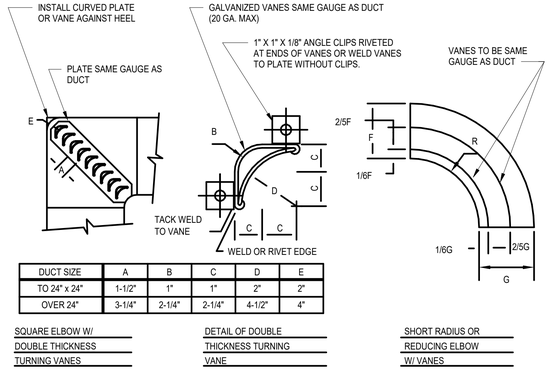
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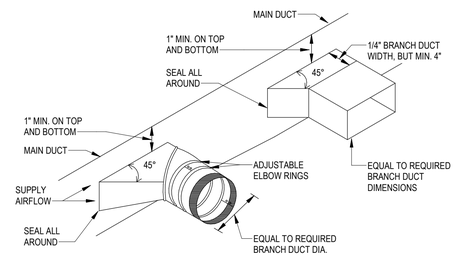


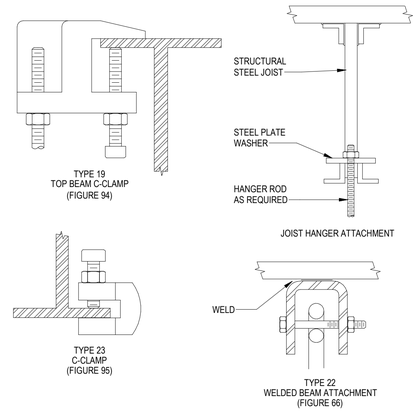
DUCT SIZE	A	B	C	D	E
TO 24" x 24"	1-1/2"	1"	1"	2"	2"
OVER 24"	3-1/4"	2-1/4"	2-1/4"	4-1/2"	4"

SQUARE ELBOW W/ DOUBLE THICKNESS TURNING VANES

DETAIL OF DOUBLE THICKNESS TURNING VANE

SHORT RADIUS OR REDUCING ELBOW W/ VANES





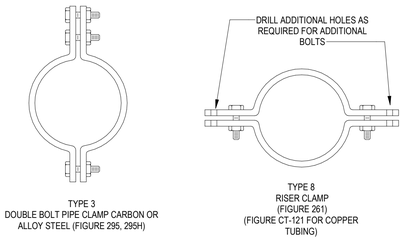
6 M801 DUCT ACCESS DOORS DETAIL
NOT TO SCALE

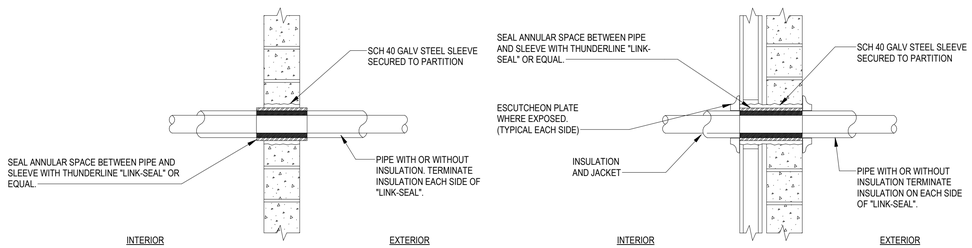
7 M801 STREAMLINE DUCT DETAIL
NOT TO SCALE

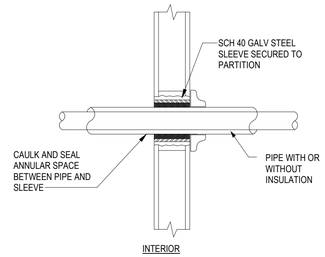
8 M801 TYPICAL BRANCH TAKEOFF FITTING DETAIL
NOT TO SCALE

9 M801 C-CLAMPS, JOIST HANGER ROD, AND WELDED BEAM ATTACHMENTS
NOT TO SCALE

NOTE:
1. FIGURE NUMBERS TYPICAL TO GRINNELL SUPPORT NUMBERS.







10 M801 PIPE CLAMPS DETAIL
NOT TO SCALE

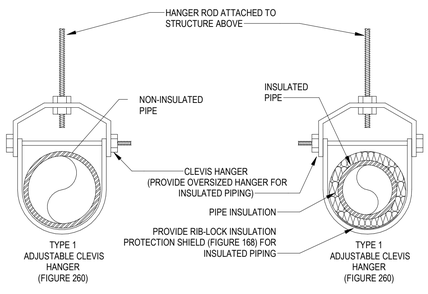
NOTE:
1. FIGURE NUMBERS ARE TYPICAL TO GRINNELL SUPPORT NUMBERS.

11 M801 PIPE PENETRATION THRU EXTERIOR WALLS
NOT TO SCALE

NOTES:
1. TYPICAL FOR NON-INSULATED PIPING AND CONDUIT.
2. TYPICAL FOR MASONRY OR CONCRETE WALL.
3. FOR WALL PENETRATION WITH FIRE RATINGS GREATER THAN (1) HOUR, USE THUNDERLINE "PYRO-PAC" SEALS OR EQUAL.
4. WHERE PIPING EXPOSED AT FINISHED WALL, FLUSH MOUNT SLEEVE, AND PROVIDE AN ESCUTCHEON PLATE.

12 M801 PIPE PENETRATION THRU INTERIOR WALLS
NOT TO SCALE

NOTES:
1. TYPICAL FOR NON-INSULATED PIPE AND CONDUIT.
2. ALL CAULKING AND SEALANT SHALL BE FIRE RATED (SEE SPECIFICATIONS).
3. WHERE PIPING IS EXPOSED AT FINISHED WALL, FLUSH MOUNT SLEEVE AND PROVIDE AN ESCUTCHEON PLATE.



(FIGURE CT-65 FOR COPPER TUBING)

1 M801 SINGLE PIPE CLEVIS HANGER
NOT TO SCALE

NOTE:
1. FIGURE NUMBERS ARE TYPICAL TO GRINNELL SUPPORT NUMBERS.

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SPFLD00611 - LIBRARY BUILDING RENOVATIONS
70 POWELL ROAD, SPRINGFIELD, PA 19064

MECHANICAL DETAILS

SPRINGFIELD TOWNSHIP
50 POWELL ROAD, SPRINGFIELD, PA 19064

NO.	DATE	REVISIONS	BY

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DRAWN BY	TFC
APPROVED BY	RHG

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ELECTRICAL SYMBOL LEGEND

LIGHTING SYMBOLS

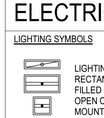
- LIGHTING FIXTURES, TYPICAL, RECTANGULAR (VARIOUS SYMBOLS) FILLED CIRCLES INDICATE RECESSED. OPEN CIRCLES INDICATE SURFACE-MOUNTED. DIAGONAL LINE INDICATES LENSED. OUTER DOTS INDICATE SUSPENDED.
- LIGHTING FIXTURES, TYPICAL, ROUND (VARIOUS SYMBOLS) CENTER DOT INDICATES PENDANT. DIAGONAL LINE INDICATES LENSED. CHEVRON INDICATES WALL WASH.
- WALL-MOUNTED FIXTURES, TYPICAL (VARIOUS SYMBOLS)
- STRIP FIXTURE
- DIRECTIONAL LIGHT, TRACK LIGHT, FLOOD LIGHT
- LINEAR LIGHT, TAPE LIGHT
- EMERGENCY LIGHTING UNIT, CEILING-MOUNTED, INTEGRAL BATTERY
- EMERGENCY LIGHTING UNIT, CEILING-MOUNTED, REMOTE BATTERY
- EMERGENCY LIGHTING UNIT, WALL-MOUNTED, INTEGRAL BATTERY
- EMERGENCY LIGHTING UNIT, WALL-MOUNTED, REMOTE BATTERY
- EXIT LIGHT, CEILING-MOUNTED. SHADING AND ARROWS INDICATE FACES AND DIRECTIONAL CHEVRONS.
- EXIT LIGHT, WALL-MOUNTED. SHADING AND ARROWS INDICATE FACES AND DIRECTIONAL CHEVRONS.
- EXIT/ELU COMBO
- POLE/AREA LIGHTS
- POST-TOP AREA LIGHT
- BOLLARD LIGHT
- DIAGONAL HATCH INDICATES LIGHT ON A CRITICAL CIRCUIT.
- SOLID HATCH INDICATES LIGHT ON AN EMERGENCY OR LIFE SAFETY CIRCUIT.
- SINGLE-POLE SWITCH
- TWO-POLE SWITCH
- THREE-POLE SWITCH

SWITCH MODIFIERS:

3: 3-WAY	OS: OCCUPANCYSENSOR
4: 4-WAY	VS: VACANCY SENSOR
K: KEYED	AC: ABOVE-COUNTER
D: DIMMING	LV: LOW-VOLTAGE
T: TIMER	M: MOTOR-RATED

- LIGHTING CONTACTOR
- LC — LIGHTING CONTROL PANEL
- OS — OCCUPANCY SENSOR
- DL — DAYLIGHT HARVESTING SENSOR

Lighting Tags



- TOP VALUE: FIXTURE TYPE ID (UNDERLINED)
- BOTTOM VALUE, LOWERCASE LETTER: SWITCH ID
- BOTTOM VALUE, NUMBER(S): CIRCUIT NUMBER
- BOTTOM VALUE, UPPERCASE LETTER(S): PANEL ID

ABSENCE OF A SWITCH DESIGNATION ON A LIGHTING FIXTURE INDICATES FIXTURE IS CONTROLLED BY THE ONLY SWITCH IN THE SPACE. AN "X" IN PLACE OF THE SWITCH DESIGNATION INDICATES UNSWITCHED.

- ^{a} — SWITCH ID INDICATED BY A LOWERCASE LETTER. SWITCH IDS ARE UNIQUE PER SPACE. A SWITCH WITH AN ID "A" CONTROLS ALL DEVICES WITHIN THE SPACE IN WHICH IT IS LOCATED TAGGED WITH "A". A SWITCH WITHOUT A TAGGED ID CONTROLS ALL LIGHTING FIXTURES WITHIN A SPACE. ID TAGS MAY BE USED ON CONTROL DEVICES OTHER THAN SWITCHES, SUCH AS OCCUPANCY SENSORS OR CONTACTORS.
- XXX — LIGHTING CONTROLS SEQUENCE OF OPERATION LOCATION TAG

GROUNDING AND LIGHTNING PROTECTION SYMBOLS

- GROUND ROD
- GROUND ROD WITH TEST WELL
- STATIC GROUND RECEPTACLE
- LIGHTNING PROTECTION AIR TERMINAL
- LIGHTNING PROTECTION CONDUCTOR SPLICE

POWER SYMBOLS

- SIMPLEX RECEPTACLE
- DUPLEX RECEPTACLE
- QUADRUPLEX RECEPTACLE
- SPECIAL RECEPTACLE, TYPE AS INDICATED

RECEPTACLE MODIFIERS:
##": HEIGHT AFF OC
AC: ABOVE COUNTER
GFI: GROUND-FAULT CIRCUIT INTERRUPTER
WP: WEATHERPROOF IN-USE COVER

- HALF SHADING INDICATES SPLIT (TYPICALLY SWITCHED)
- OUTSIDE SHADING INDICATES EMERGENCY CIRCUIT
- CENTER SHADING INDICATES ISOLATED GROUND
- SINGLE-POLE SWITCH
- TWO-POLE SWITCH
- THREE-POLE SWITCH

SWITCH MODIFIERS:
K: KEYED
T: TIMER
AC: ABOVE-COUNTER
M: MOTOR-RATED

- MULTIOUTLET ASSEMBLY. FILLED SQUARES INDICATE 120V OUTLET OPEN SQUARES INDICATE WITH USB
- CORD REEL, DEVICE VARIES
- DROP CORD, DEVICE VARIES
- J — JUNCTION BOX
- F1 — FLOOR BOX, SEE SCHEDULE FOR TYPE
- EMERGENCY POWER OFF
- DO — DOOR OPENER PUSH PLATE
- M — POWER METER
- SAFETY SWITCH, FUSED
- SAFETY SWITCH, UNFUSED
- MOTOR STARTER
- COMBINATION STARTER/DISCONNECT
- CONTACTOR

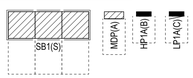
POWER DEVICE AND EQUIPMENT TAGS

- ^{a} — ELECTRICAL DEVICETAGS: UPPERCASE LETTER(S) INDICATES PANEL ID AND CIRCUIT NUMBER. LOWERCASE LETTER INDICATES DESIGNATION OF CONTROLLING SWITCH (WHERE APPLICABLE).
- XX-1 — EQUIPMENT TAGS: EQUIPMENT ID IS INDICATED BY AN UNDERLINED TAG ADJACENT TO THE EQUIPMENT. SEE THE EQUIPMENT CONNECTION SCHEDULE FOR DESCRIPTION, ELECTRICAL REQUIREMENTS, AND PANEL AND CIRCUIT NUMBER. SYMBOLS/GRAPHIC APPEARANCE OF EQUIPMENT VARIES.

WIRING

- SOLID, ARCED LINES CONNECTING EQUIPMENT, DEVICES, OR FIXTURES INDICATE UNSWITCHED POWER CIRCUITING. WIRES ARE ONLY INTENDED TO INDICATE TO WHAT CIRCUIT DEVICES ARE CONNECTED. ACTUAL CONNECTIONS, CIRCUIT ROUTING, INSTALLTION, JUNCTION BOXES, ETC. SHALL BE FIELD-DETERMINED BY THE CONTRACTOR.
- DASHED, ARCED LINES CONNECTING EQUIPMENT, DEVICES, OR FIXTURES INDICATE SWITCHED POWER.
- HOME RUN TO BRANCH CIRCUIT PANELBOARD. THE EQUIPMENT NAME AND CIRCUIT NUMBER(S) ARE INDICATED, SEPARATED BY A HYPHEN. HOMERUNS ARE ONLY INTENDED TO INDICATE PANEL AND CIRCUIT NUMBER. ACTUAL HOMERUN LOCATION SHALL BE FIELD-DETERMINED BY THE CONTRACTOR.

POWER DISTRIBUTION EQUIPMENT



HATCHED FILL INDICATES DISTRIBUTION PANEL OR SWITCHBOARD.
SOLID FILL INDICATES BRANCH PANEL OR LOAD CENTER.
DASHED BOX INDICATES CODE-REQUIRED CLEARANCE (WIDTH AND DEPTH).
DOOR INDICATES FRONT OF RECESSED PANEL.

PANELBOARDS ARE ASSIGNED AN ABBREVIATED INDICATOR (OR PANEL ID) FOR USE WITH CIRCUIT NUMBERS. PANEL ID IS LISTED WITHIN THE PANEL SCHEDULE AND IN THE PANEL ABBREVIATION SCHEDULE.

EQUIPMENT IS TAGGED WITH PANEL NAME AND WITH PANEL ID IN PARENTHESES. PANEL ID IS INTENDED AS A DESIGN DOCUMENTATION AID ONLY. DO NOT INCLUDE PANEL ID IN FIELD-APPLIED CIRCUIT DIRECTORIES OR LABELS.

DEVICES AND FIXTURES ARE TAGGED WITH PANEL ID AND CIRCUIT NUMBER. FOR EXAMPLE, A DEVICE TAGGED WITH "A1" INDICATES THE DEVICE IS CIRCUITED TO PANEL DESIGNATED "A," CIRCUIT NUMBER 1. THE PANEL SCHEDULE CIRCUIT NUMBER CONTANS BOTH THE PANEL ABBREVIATION AND THE CIRCUIT NUMBER.

- T1 — TRANSFORMER: TYPICALLY TRANSFORMER NAMES BEGIN WITH OR CONTAIN THE LETTER "T". SEE SINGLE-LINE DIAGRAM FOR DESCRIPTION AND REQUIREMENTS.

SINGLE LINE SYMBOLS

- 480V / 500KVA / 208/120V — POWER TRANSFORMER VOLTAGES, WINDINGS AND SIZE AS INDICATED
- ATS 100A 480V/4P — TRANSFER SWITCH ATS = AUTOMATIC TRANSFER MTS = MANUAL TRANSFER POLES AND RATING AS NOTED
- ATS 100A 480V/4P — TRANSFER SWITCH ATS = AUTOMATIC TRANSFER MTS = MANUAL TRANSFER POLES AND RATING AS NOTED
- G — GENERATOR
- GROUND CONNECTION
- 100/100 — FUSED SWITCH
- 100 — UNFUSED SWITCH
- 100/90 — CIRCUIT BREAKER - MOLDED CASE TYPE <FRAME AMPS>/<TRIP AMPS>
- 100/90 — CIRCUIT BREAKER - DRAW-OUT TYPE <FRAME AMPS>/<TRIP AMPS>
- M — DIGITAL MULTIMETER WITH POTENTIAL TRANSFORMER
- XXX/5, 3 — CURRENT TRANSFORMER NUMBER AND RATIO AS INDICATED
- CONTACTS NORMALLY CLOSED
- CONTACTS NORMALLY OPEN

CONSTRUCTION PHASING

(TYPICAL ALL SYMBOLS AND EQUIPMENT)

- EXISTING TO REMAIN
- EXISTING TO BE DEMOLISHED
- NEW
- EXISTING TO BE DEMOLISHED

MISCELLANEOUS

- AREA NOT IN CONTRACT
- # — KEYNOTE
- ? / ? — CALLOUT: TOP VALUE: DETAIL NUMBER ON SHEET BOTTOM VALUE: SHEET NUMBER OF DETAIL
- ROOM NAME AND NUMBER
- ? / ? — SECTION CUT ARROW: TOP VALUE: SECTION IDENTIFICATION NUMBER BOTTOM VALUE: SHEET NUMBER OF SECTION

ELECTRICAL ABBREVIATIONS

1P	1 POLE (2P, 3P, 4P, ETC.)
A, AMP	AMPERE
AC	ABOVE COUNTER
ACLG	ABOVE CEILING
ADO	AUTOMATIC DOOR OPENER
AF	AMP FRAME
AFF	ABOVE FINISHED FLOOR
AFG	ABOVE FINISHED GRADE
AFI	ARC FAULT CIRCUIT INTERRUPTER
AHU	AIR HANDLING UNIT
AL	ALUMINUM
ALT	ALTERNATE
AMP	AMPERE
AMPL	AMPLIFIER
ANNUN	ANNUNCIATOR
APPROX	APPROXIMATELY
AQ-STAT	AQUASTAT
ARCH	ARCHITECT, ARCHITECTURAL
AS	AMP SWITCH
AT	AMP TRIP
ATS	AUTOMATIC TRANSFER SWITCH
AUTO	AUTOMATIC
AUX	AUXILIARY
AV	AUDIO VISUAL
AWG	AMERICAN WIRE GAUGE
BATT	BATTERY
BD	BOARD
BLDG	BUILDING
BMS	BUILDING MANAGEMENT SYSTEM
C	CONDUIT
CAB	CABINET
CAT	CATALOG
CATV	CABLE TELEVISION
CB	CIRCUIT BREAKER
CCTV	CLOSED CIRCUIT TELEVISION
CKT	CIRCUIT
CLG	CEILING
COMB	COMBINATION
CMPR	COMPRESSOR
CONN	CONNECTION
CONST	CONSTRUCTION
CONT	CONTINUATION OR CONTINUOUS
CONTR	CONTRACTOR
CONV	CONVECTOR
CP	CIRCULATING PUMP
CRT	CATHODE-RAY TUBE
CT	CURRENT TRANSFORMER
CTR	CENTER
CU	COPPER
D	DEMOLITION
DCP	DOMESTIC WATER CIRCULATING PUMP
DEPT	DEPARTMENT
DET	DETAIL
DIA	DIAMETER
DISC	DISCONNECT
DIST	DISTRIBUTION
DN	DOWN
DPR	DAMPER
DS	SAFETY DISCONNECT SWITCH
DT	DOUBLE THROW
DWG	DRAWING
EC	ELECTRICAL CONTRACTOR
ELEC	ELECTRIC, ELECTRICAL
ELEV	ELEVATOR
ELU	EMERGENCY LIGHTING UNIT
EM	EMERGENCY
EMS	ENERGY MANAGEMENT SYSTEM
EMT	ELECTRICAL METALLIC TUBING
EP	ELECTRIC PNEUMATIC
EQUIP	EQUIPMENT
EWC	ELECTRIC WATER COOLER
EXIST	EXISTING
EXH	EXHAUST
EXP	EXPLOSION PROOF
FA	FIRE ALARM
FABP	FIRE ALARM BOOSTER POWER SUPPLY PANEL
FACP	FIRE ALARM CONTROL PANEL
FCU	FAN COIL UNIT
FIXT	FIXTURE
FLR	FLOOR
FLUOR	FLUORESCENT
FU	FUSE
FUDS	FUSED SAFETY DISCONNECT SWITCH
GA	GAUGE
GAL	GALLON
GALV	GALVANIZED
GC	GENERAL CONTRACTOR
GEN	GENERATOR
GFI	GROUND FAULT CIRCUIT INTERRUPTER
GFP	GROUND FAULT PROTECTOR
GND	GROUND
GRS	GALVANIZED RIGID STEEL (CONDUIT)
GYP BD	GYPSUM BOARD
HOA	HANDS-OFF-AUTOMATIC SWITCH
HORIZ	HORIZONTAL
HP	HORSEPOWER
HPF	HIGH POWER FACTOR
HT	HEIGHT
HTG	HEATING
HTR	HEATER
HV	HIGH VOLTAGE
HVAC	HEATING, VENTILATING AND AIR CONDITIONING
IC	INTERRUPTING CAPACITY
IG	ISOLATED GROUND
IMC	INTERMEDIATE METAL CONDUIT
INCAND	INCANDESCENT
IR	INFRARED
I/W	INTERLOCK WITH
J-BOX	JUNCTION BOX
KV	KILOVOLT
KVA	KILOVOLT-AMPERE
KVAR	KILOVOLT-AMPERE REACTIVE
KW	KILOWATT
KWH	KILOWATT HOUR
LOC	LOCATE OR LOCATION
LT	LIGHT
LTG	LIGHTING
LTNG	LIGHTNING
LV	LOW VOLTAGE
MAX	MAXIMUM
MAG.S	MAGNETIC STARTER
M/C	MOMENTARY CONTACT
MC	MECHANICAL CONTRACTOR
MCB	MAIN CIRCUIT BREAKER
MCC	MOTOR CONTROL CENTER
MDC	MAIN DISTRIBUTION CENTER
MDP	MAIN DISTRIBUTION PANEL
MFR	MANUFACTURER
MFS	MAIN FUSED DISCONNECT SWITCH
MH	MANHOLE
MIC	MICROPHONE
MIN	MINIMUM
MISC	MISCELLANEOUS
MLO	MAIN LUGS ONLY
MMS	MANUAL MOTOR STARTER
MOA	MULTIOUTLET ASSEMBLY
MSP	MOTOR STARTER PANELBOARD
MSBD	MAIN SWITCHBOARD
MSS	MOTOR STARTER SWITCH
MT	MOUNT
MT.C	EMPTY CONDUIT
MTS	MANUAL TRANSFER SWITCH
MTR	MOTOR, MOTORIZED
N	NEW
N.C.	NORMALLY CLOSED
NEC	NATIONAL ELECTRICAL CODE
NEMA	NATIONAL ELECTRICAL MANUFACTURER'S ASSOCIATION
NFDS	NON-FUSED SAFETY DISCONNECT SWITCH
NIC	NOT IN CONTRACT
NL	NIGHT LIGHT
N.O.	NORMALLY OPEN
NPF	NORMAL POWER FACTOR
NTS	NOT TO SCALE
OC	ON CENTER
OH	OVERHEAD
OL	OVERLOADS
PA	PUBLIC ADDRESS
PB	PULL BOX OR PUSHBUTTON
PE	PNEUMATIC ELECTRIC
PED	PEDESTAL
PF	POWER FACTOR
PH	PHASE
PIV	POST INDICATING VALVE
PNL	PANEL
PP	POWER POLE
PR	PAIR
PRI	PRIMARY
PROJ	PROJECTION
PRV	POWER ROOF VENTILATOR
PT	POTENTIAL TRANSFORMER
PVC	POLYVINYL CHLORIDE (CONDUIT)
PWR	POWER
QUAN	QUANTITY
RCPT	RECEPTACLE
RE	RELOCATE
REQD	REQUIRED
RM	ROOM
RSC	RIGID STEEL CONDUIT
RTU	ROOF TOP UNIT
SC	SURFACE CONDUIT
SEC	SECONDARY
SHT	SHEET
SIM	SIMILAR
SLD	SINGLE-LINE DIAGRAM
S/N	SOLID NEUTRAL
SPD	SURGE PROTECTIVE DEVICE
SPEC	SPECIFICATION
SPKR	SPEAKER
SP	SPARE
SPP	SINGLE-POINT POWER
SR	SURFACE RACEWAY
SS	STAINLESS STEEL
SSW	SELECTOR SWITCH
S/S	STOP/START PUSHBUTTONS
STA	STATION
STD	STANDARD
SURF	SURFACE MOUNTED
SW	SWITCH
SWBD	SWITCHBOARD
SYM	SYMMETRICAL
SYS	SYSTEM
TEL	TELEPHONE
TERM	TERMINAL
TL	TWIST LOCK
TR	TAMPER RESISTANT
T-STAT	THERMOSTAT
TTC	TELEPHONE TERMINAL CABINET
TV	TELEVISION
TVTC	TELEVISION TERMINAL CABINET
TYP	TYPICAL
UC	UNDER COUNTER
UE	UNDERGROUND ELECTRICAL
UG	UNDERGROUND
UH	UNIT HEATER
UT	UNDERGROUND TELEPHONE
UTIL	UTILITY
UV	ULTRAVIOLET
V	VOLT
VA	VOLT-AMPERES
VDT	VIDEO DISPLAY TERMINAL
VERT	VERTICAL
VFD	VARIABLE FREQUENCY DRIVE
VOL	VOLUME
W	WATT
W/	WITH
WG	WIRE GUARD
WH	WATER HEATER
W/O	WITHOUT
WP	WEATHERPROOF
XFMR	TRANSFORMER
XFR	TRANSFER

∠	ANGLE
@	AT
▲	DELTA
'	FEET
"	INCHES
#	NUMBER
Ø	PHASE
C	CENTER LINE
P	PLATE

GENERAL COMPLIANCE - PA

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

IBC	2021 INTERNATIONAL BUILDING CODE
IECC	2021 INTERNATIONAL ENERGY CONSERVATION CODE
NEC, NFPA 70	2020 NATIONAL ELECTRICAL CODE
NFPA 72	2022 NATIONAL FIRE ALARM AND SIGNALING CODE
NFPA 110	2022 STANDARD FOR EMERGENCY AND STANDBY POWER SYSTEMS
UL	UNDERWRITER'S LABORATORIES, INC.
FM	FACTORY MUTUAL

ELECTRICAL SHEET LIST

Sheet No.	Sheet Name
E001	ELECTRICAL INDEX SHEET
E002	ELECTRICAL INDEX SHEET
E100	ELECTRICAL DEMOLITION POWER PLAN - LOWER LEVEL
E101	ELECTRICAL DEMOLITION POWER PLAN - UPPER LEVEL
E102	ELECTRICAL DEMOLITION POWER PLAN - ROOF
E103	ELECTRICAL DEMOLITION LIGHTING PLAN - LOWER LEVEL
E104	ELECTRICAL DEMOLITION LIGHTING PLAN - UPPER LEVEL
E200	ELECTRICAL POWER PLAN - LOWER LEVEL
E201	ELECTRICAL POWER PLAN - UPPER LEVEL
E202	ELECTRICAL POWER PLAN - ROOF
E300	ELECTRICAL LIGHTING PLAN - LOWER LEVEL
E301	ELECTRICAL LIGHTING PLAN - UPPER LEVEL
E500	ELECTRICAL SINGLE LINE DIAGRAM
E501	ELECTRICAL PANEL SCHEDULES I
E502	ELECTRICAL PANEL SCHEDULES II
E503	ELECTRICAL PANEL SCHEDULES III
E504	ELECTRICAL LIGHTING SCHEDULES
E505	ELECTRICAL DETAILS
E602	ELECTRICAL DETAILS
E603	ELECTRICAL DETAILS
E701	ELECTRICAL PANEL SCHEDULES
E703	ELECTRICAL PANEL SCHEDULES

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50 POWELL ROAD, SPRINGFIELD, PA 19064

NO.	DATE	REVISIONS	BY

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PROJECT	SPFLD00611
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DRAWING SCALE	AS NOTED
DRAWN BY	SJP
APPROVED BY	JPR

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GENERAL ELECTRICAL NOTES:

1. THE CONTRACTOR SHALL VISIT THE SITE AND VERIFY ALL DIMENSIONS IN THE FIELD, AND SHALL ADVISE THE ENGINEER AND THE OWNER OF ANY DISCREPANCIES BEFORE PERFORMING THE WORK. IF THE CONTRACTOR OBSERVES ANY DISCREPANCIES TO THE DRAWINGS PRIOR TO THEIR BID THEY SHALL IDENTIFY SAME TO THE OWNER AND ENGINEER IN WRITTEN FORM WITH THEIR BID PROPOSAL UNLESS IDENTIFIED PRIOR TO SUBMITTING THEIR BID.

2. ELECTRICAL EQUIPMENT AND DEVICES INCLUDING ELECTRICAL CHARACTERISTICS SHOWN ON THE ELECTRICAL PLANS SHALL BE CHECKED AND COMPARED AGAINST ALL DRAWINGS AND SPECIFICATIONS OF ALL OTHER TRADES. BID SHALL INCLUDE ELECTRICAL ITEMS SHOWN BUT NOT PROVIDED BY OTHER TRADES. WHERE ELECTRICAL CHARACTERISTICS SHOWN BY OTHER TRADES DEVIATES FROM THOSE SHOWN ON THE ELECTRICAL PLANS, CONTRACTOR IS RESPONSIBLE FOR REQUESTING CLARIFICATION BY ENGINEER PRIOR TO SUBMITTING A BID.

3. ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE NFPA 70 (NEC) AND OTHER ADOPTED CODES AND STANDARDS BY THE LOCAL JUSRISTICTION.

4. GROUNDING SHALL BE IN STRICT ACCORDANCE WITH THE NATIONAL ELECTRICAL CODE ARTICLE 250.

5. UNLESS OTHERWISE NOTED, ALL WORK SPECIFIED HEREIN OR NOTED ON DRAWINGS, SHALL BE BY THE CONTRACTOR. THE TERM "PROVIDE" WHENEVER ENCOUNTERED ON DRAWINGS OR IN THESE SPECIFICATIONS, SHALL MEAN "FURNISH AND INSTALL".

6. ALTHOUGH WORK IS NOT SPECIFICALLY SHOWN OR SPECIFIED, PROVIDE SUPPLEMENTARY OR MISCELLANEOUS ITEMS, APPURTURANCES, DEVICES, AND MATERIALS OBVIOUSLY NECESSARY FOR A SOUND, SECURE, AND COMPLETE INSTALLATION.

7. 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. ALLOW IN 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 AT NO EXTRA COST.

8. UPON COMPLETION OF THE WORK, THE ENTIRE WIRING SYSTEM SHALL BE FREE FROM GROUNDS, SHORT CIRCUITS, OPEN CIRCUITS, OVERLOADS AND IMPROPER VOLTAGES.

9. 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 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. MC AND AC CABLES SHALL BE SECURED EVERY 6' AND WITHIN 12" FROM THE JUNCTION BOX. SUPPORT PANEL, JUNCTION AND PULLBOXES INDEPENDENTLY TO BUILDING STRUCTURE WITH NO WEIGHT BEARING ON RACEWAYS.

10. 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.

11. 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.

12. 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 LEAST 18").

13. CUT CONDUIT ENDS SQUARE, REAM SMOOTH. PAINT MALE THREAD OF FIELD THREADED RACEWAYS WITH GRAPHITE BASE PIPE COMPOUND. DRAW UP TIGHT WITH RACEWAY COUPLING.

14. 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.

15. ALL INTERIOR WIRING SHALL BE INSTALLED IN ELECTRICAL METALLIC TUBING OR METAL CLAD CABLE AND CONCEALED IN WALLS OR IN HUNG CEILING SPACE. WHERE WIRING CANNOT BE CONCEALED IN FINISHED AREAS, IT SHALL BE RUN EXPOSED IN A NEAT MANNER VIA SURFACE RACEWAY. MINIMUM CONDUIT SIZE SHALL BE 3/4".

16. 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.

17. VERIFY LOCATIONS OF OUTLETS AND SWITCHES IN FINISHED ROOMS WITH ARCHITECTURAL DRAWINGS OF INTERIOR DETAILS AND FINISH. LOCATIONS INDICATED FOR LOCAL WALL SWITCHES ARE SUBJECT TO MODIFICATIONS AT OR NEAR DOORS: COORDINATE WITH ARCHITECT AND INSTALL SWITCH ON LOCK/ LATCH SIDE OF DOOR. VERIFY FINAL HINGE LOCATIONS IN FIELD PRIOR TO SWITCH OUTLET INSTALLATION.

18. SET BOXES SQUARE AND TRUE WITH BUILDING FINISH. ERECT WALL AND SWITCH OUTLETS IN ADVANCE OF FURRING AND FIREPROOFING. SECURE TO BUILDING STRUCTURE BY ADJUSTABLE STRAP IRONS.

19. COVERS OF JUNCTION AND PULLBOXES SHALL BE ACCESSIBLE.

20. 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.

21. EMPTY RACEWAY RUNS: PROVIDE PULLBOXES EVERY 100' AND AS INDICATED. COORDINATE LOCATIONS WITH OTHER TRADES. THE PULLBOX SHALL BE INSTALLED EVERY 270° OF TOTAL CONDUIT TURNS.

22. ALL ACCESS DOOR LOCATIONS SHALL BE REVIEWED BY ARCHITECT PRIOR TO INSTALLATION.

23. CONNECT CONDUIT TO MOTOR TERMINAL BOXES WITH FLEXIBLE CONDUIT OF MINIMUM 18", MAXIMUM 6' LENGTH. (PROVIDE SUFFICIENT WIRING SLACK AT EACH END OF TERMINATION). DO NOT TERMINATE IN OR FASTEN RACEWAYS TO MOTOR FOUNDATION.

24. ALL CUTTING AND PATCHING REQUIRED FOR THE ELECTRICAL WORK SHALL BE THE RESPONSIBILITY OF THE ELECTRICAL CONTRACTOR.

25. PROVIDE 2 #14AWG WIRING FOR INDICATING PILOT LIGHT FROM PILOT LIGHT IN CONTROLLER TO LOAD SIDE OF DISCONNECT SWITCH. RUN WIRES IN BRANCH CIRCUIT CONDUIT AND INCREASE CONDUIT SIZE AS REQUIRED.

26. 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.

27. 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.

28. ALL PENETRATIONS THROUGH CONCRETE STRUCTURAL FLOORING SHALL BE SCANNED WITH GROUND PENETRATING RADAR (GPR). SUBMIT FINDINGS TO ENGINEER FOR APPROVAL PRIOR TO PENETRATION.

29. FEEDER AND BRANCH CIRCUIT WIRING SHALL BE COPPER, 600 VOLT CONDUCTOR INSULATION TYPE THHN. THE MINIMUM SIZE 600 VOLT CONDUCTOR SHALL BE #12 AWG FOR POWER AND LIGHTING BRANCH CIRCUIT WIRING. THE MINIMUM SIZE CONDUIT SHALL BE 3/4". ALL CIRCUIT WIRING SIZES #10 AWG OR LARGER SHALL BE STRANDED AND SMALLER CONDUCTORS SHALL BE SOLID. BRANCH CIRCUITS 100 TO 200 FEET IN LENGTH UTILIZING #12 AWG WIRE SHALL BE INCREASED TO #10 AWG TO THE CENTER OF THE CIRCUIT LOAD AND #12 WIRE TO THE REMAINING DEVICES BEYOND THE LOAD CENTER. ADJUST CABLING SIZES REQUIRED TO MAINTAIN VOLTAGE DROP.

30. WHERE CONDUIT RUNS CROSS STRUCTURAL EXPANSION JOINTS, LIQUID-TIGHT FLEXIBLE METAL CONDUIT SHALL BE USED TO TRANSITION CONDUIT SYSTEM FROM ONE STRUCTURAL SECTION TO THE OTHER.

31. VERIFY THAT ANY ELECTRICAL DEVICE OR PRODUCT WHICH IS TO BE RELOCATED OR REUSED IS IN PROPER WORKING CONDITION IN ACCORDANCE WITH INSTRUCTIONS INCLUDED IN ITS LISTING OR LABELING. ANY DEVICE OR PRODUCT FOUND TO BE DEFECTIVE OR DAMAGED SHALL BE REPLACED WITH NEW.

32. LABEL WITH PERMANENT MARKER ALL JUNCTION BOXES AND RECEPTACLE OUTLET BOXES WITH CIRCUIT NUMBER AND PANEL IDENTIFICATION. ALL FINISHED AREA OUTLET PLATES SHALL BE LABELED WITH LABEL TAPE.

33. 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. THE METHOD OF COLOR CODE IDENTIFICATION SHALL BE DOCUMENTED IN A MANNER THAT IS READILY AVAILABLE OR PERMANENTLY POSTED AT EACH BRANCH CIRCUIT PANELBOARD.

    208/120V - WYE SYSTEM:
    PHASES A = BLACK
    B = RED
    C = BLUE
    NEUTRAL = WHITE
    GROUNDING = GREEN

34. REPORT INCONSISTENCIES TO THE ENGINEER IN FORM OF "RFI" REQUEST FOR INFORMATION BEFORE ANY INACCURATE WORK IS EXECUTED.

35. PROVIDE PROTECTIVE COVERINGS/WIRE GUARDS FOR ALL DEVICES AND EQUIPMENT IN GYMNASIUM.

36. OBTAIN ALL TESTS AND APPROVAL CERTIFICATIONS AS REQUIRED.

37. 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, INSTALL JUNCTION BOXES AND EXTEND FEEDER WITH MATCHING CABLE TYPE, CONDUCTOR AMPACITY AND CONDUIT SIZES.

38. 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.

39. EXISTING PANEL DIRECTORIES AFFECTED BY THE ALTERATION WORK SHALL BE MODIFIED TO REFLECT THE BRANCH CIRCUIT WIRING CHANGES.

GENERAL NOTES:

1. SYMBOLS, ABBREVIATIONS, AND GENERAL NOTES INDICATED ON THIS DRAWING ARE TYPICAL. DRAWINGS MAY NOT INDICATE ALL SYMBOLS AND ABBREVIATIONS SHOWN ON THIS DRAWING.

2. GENERAL NOTES, SYMBOL LIST AND DETAILS ARE APPLICABLE TO ALL DRAWINGS.

3. PROVIDE SUPPLEMENTARY OR MISCELLANEOUS ITEMS, APPURTURANCES, DEVICES, AND MATERIALS OBVIOUSLY NECESSARY FOR A SOUND, SECURE, AND COMPLETE INSTALLATION.

4. ABIDE AND ENFORCE ALL SAFETY RULES AND REGULATIONS SET FORTH BY THE OWNER. ALL WORKERS AND SUPERVISORS MUST ATTAIN SAFETY TRAINING CLASSES (IF APPLICABLE). BE RESPONSIBLE TO FOLLOW ALL VERBAL INSTRUCTIONS GIVEN BY OWNERS REPRESENTATIVES.

5. 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.

6. 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. NO DEPARTURES SHALL BE MADE WITHOUT PRIOR APPROVAL OF THE ENGINEER AND OWNER.

7. VISIT THE SITE AND ADJOINING AREAS AND EXAMINE THE EXISTING CONDITIONS TO BECOME FAMILIAR WITH THEM AND TO DETERMINE THE DIFFICULTIES WHICH WILL AFFECT THE EXECUTION OF THE WORK OF THIS CONTRACT. THIS CONTRACTOR SHALL PERFORM THIS PRIOR TO THE SUBMISSION OF HIS PROPOSAL. SUBMISSION OF A PROPOSAL WILL BE CONSTRUED AS EVIDENCE THAT SUCH AN EXAMINATION HAS BEEN MADE AND LATER CLAIMS WILL NOT BE RECOGNIZED FOR EXTRA LABOR, EQUIPMENT OR MATERIALS REQUIRED BECAUSE OF DIFFICULTIES ENCOUNTERED WHICH COULD HAVE BEEN FORESEEN HAD SUCH AN EXAMINATION BEEN MADE.

8. 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.

9. 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.

10. 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.

11. SCHEDULE WORK IN ACCORDANCE WITH THE CONSTRUCTION SCHEDULE SO THAT ALL 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.

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

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

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

15. 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.

16. PROVIDE LABOR TO RECEIVE, UNLOAD, STORE, PROTECT, AND TRANSFER TO POINT OF INSTALLATION FOR ALL FURNISHED ITEMS.

17. 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.

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

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

20. COORDINATE ROOF PENETRATIONS WITH WORK OF OTHER SECTIONS AND WITH FLASHING REQUIREMENTS. CONTRACTOR TO NOTIFY OWNER PRIOR TO STARTING WORK TO VERIFY COMPLIANCE WITH BOND AND WARRANTY OF EXISTING ROOF.

21. RESTORE EXISTING SYSTEMS, DEVICES, FINISHED, ETC. DAMAGED OR ALTERED BY WORK TO ACCEPTABLE CONDITIONS AS DETERMINED BY THE OWNER, ARCHITECT, AND/OR ENGINEER. EXISTING SYSTEMS AND SERVICES THAT ARE TEMPORARILY DISCONNECTED BUT ARE TO REMAIN IN USE SHALL BE PERMANENTLY RECONNECTED AND RETURNED TO PROPER OPERATION.

22. SUBMIT A SCHEDULE OF SUBMITTALS PRIOR TO SUBMITTING ANY SHOP DRAWINGS, ETC. FOR THIS PROJECT, INCLUDING THE ANTICIPATED DATE OF EACH SUBMISSION. CONTRACTORS SHALL SUBMIT 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 ALL PIPING AND DUCTWORK FIELD INSTALLATION DRAWINGS FOR EACH SYSTEM TO BE INSTALLED. ANY WORK INSTALLED OR EQUIPMENT PURCHASED PRIOR TO RECEIPT OF ENGINEER APPROVED SHOP DRAWINGS THAT REQUIRES CHANGES SHALL BE REPLACED AT CONTRACTOR'S EXPENSE.

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

24. UPON COMPLETION OF CONSTRUCTION, CONTRACTOR SHALL SUPPLY THE ENGINEER WITH ONE (1) COMPLETE SET OF AS-BUILT DRAWINGS IN ELECTRONIC AUTOCAD SOFTWARE FORMAT 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.

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

26. 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.

27. PREPARE FULLY DIMENSIONED FIELD SHEET METAL AND PIPING INSTALLATION DRAWINGS (MIN. 1/4"=1'-0" SCALE). 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.

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

29. UPON COMPLETION OF ALL UNFINISHED OR FAULTY WORK NOTED IN ENGINEER FINAL PUNCH LIST, 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.

30. 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 OF ALL SLAB AND WALL OPENINGS AND BEAM PENETRATIONS, AND COR DRILLING TO THE STRUCTURAL ENGINEER FOR REVIEW AND APPROVAL.

31. 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 TO OWNER.

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

33. ALL WORK BEING INSTALLED IN AIR PLENUM SPACES MUST BE INSTALLED WITH PLENUM RATED MATERIAL. ANY EXISTING NON-PLENUM RATED PLUMBING PIPE LOCATED WITHIN THESE PLENUM RATED AREAS SHALL BE WRAPPED WITH A PLENUM RATED PIPE WRAPPING MATERIAL.

GENERAL DEMOLITION NOTES:

1. INCLUDE IN BID ALL COSTS ASSOCIATED WITH REMOVAL AND RELOCATION OF 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. REMOVE AND/OR RELOCATE ALL EXISTING WORK WHICH INTERFERES WITH THE NEW ARCHITECTURAL AND ELECTRICAL LAYOUTS IN FULL COORDINATION WITH THE ARCHITECT'S 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. 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 WORK.

4. ALL EXISTING SYSTEMS WHICH BECOME EXPOSED DURING THE ALTERATION WORK SHALL BE REMOVED AND REROUTED CONCEALED BEHIND FINISHED SURFACES.

5. ALL UNUSED OUTLET BOXES OR CAPPED FLOOR OUTLETS SHALL BE PROVIDED WITH MATCHING BLANK COVERS.

6. 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. FOLLOW CLOSELY THE ARCHITECT'S DEMOLITION AND PHASING SCHEDULE AND PROCEED IN THE SPECIFIED SEQUENCE.

7. 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 CONTRACTOR, AS DIRECTED BY THE OWNER. ITEMS OF SALVAGE SHALL BE CAREFULLY REMOVED AND STORED AT LOCATIONS DIRECTED BY THE OWNER.

8. 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.

9. 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.

10. PATCH AND PAINTING OF EXISTING WALLS TO REMAIN WHICH ARE AFFECTED BY ELECTRICAL DEMOLITION, ARE TO BE COMPLETED UNDER GENERAL CONSTRUCTION SPECIFICATION.

11. 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.

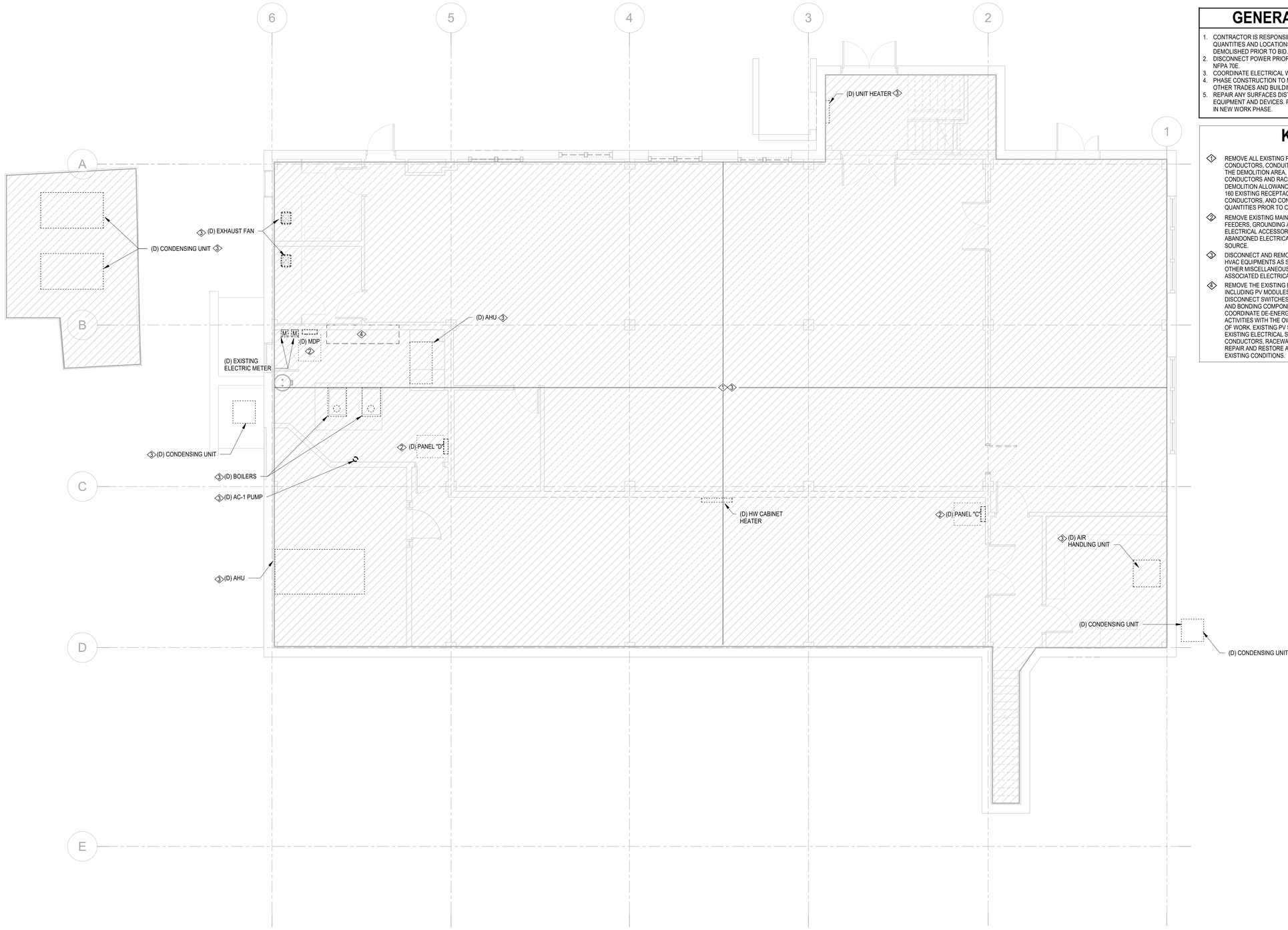
12. EXISTING WORK THAT IS TO BE REMOVED SHALL BE LEGALLY DISPOSED OF. ALL WORK TO BE DISPOSED OF SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL BE PROMPTLY REMOVED FROM THE SITE.

13. 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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Pennoni
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ALL DIMENSIONS MUST BE VERIFIED BY CONTRACTOR AND OWNER MUST BE NOTIFIED OF ANY DISCREPANCIES



1 E100 POWER DEMOLITION PLAN - LOWER LEVEL
3/16" = 1'-0"

GENERAL SHEET NOTES

1. CONTRACTOR IS RESPONSIBLE TO VISIT THE PROJECT SITE AND VERIFY ALL QUANTITIES AND LOCATIONS OF ALL EQUIPMENT AND DEVICES THAT ARE TO BE DEMOLISHED PRIOR TO BID.
2. DISCONNECT POWER PRIOR TO PERFORMING WORK IN ACCORDANCE WITH NFPA 70E.
3. COORDINATE ELECTRICAL WORK WITH ALL OTHER TRADES.
4. PHASE CONSTRUCTION TO MAINTAIN FACILITY OPERATIONS. COORDINATE WITH OTHER TRADES AND BUILDING MANAGEMENT.
5. REPAIR ANY SURFACES DISTURBED DURING REMOVAL OR REPLACEMENT OF EQUIPMENT AND DEVICES. PREPARE REPAIRED SURFACES FOR NEW FINISHED IN NEW WORK PHASE.

KEYNOTES

1. REMOVE ALL EXISTING RECEPTACLES, OUTLET BOXES, BRANCH-CIRCUIT CONDUCTORS, CONDUIT AND ASSOCIATED ELECTRICAL ACCESSORIES WITHIN THE DEMOLITION AREA, UNLESS OTHERWISE NOTED REMOVE ALL ABANDONED CONDUCTORS AND RACEWAYS BACK TO THEIR SOURCE. DEMOLITION ALLOWANCE: INCLUDE AN ALLOWANCE FOR THE REMOVAL OF UP TO 160 EXISTING RECEPTACLES, ASSOCIATED OUTLET BOXES, BRANCH-CIRCUIT CONDUCTORS, AND CONDUIT WITHIN THE PROJECT AREA. FIELD VERIFY ACTUAL QUANTITIES PRIOR TO COMMENCING WORK.
2. REMOVE EXISTING MAIN DISTRIBUTION PANEL, SUB-PANELBOARDS, ASSOCIATED FEEDERS, GROUNDING AND BONDING CONDUCTORS AND ASSOCIATED ELECTRICAL ACCESSORIES, UNLESS OTHERWISE NOTED. REMOVE ALL ABANDONED ELECTRICAL EQUIPMENT AND ASSOCIATED WIRING BACK TO THEIR SOURCE.
3. DISCONNECT AND REMOVE ALL EXISTING ELECTRICAL CONNECTIONS SERVICING HVAC EQUIPMENTS AS SHOWN ON MECHANICAL DEMOLITION PLANS AND ANY OTHER MISCELLANEOUS EXISTING MECHANICAL/HVAC EQUIPMENT. REMOVE ALL ASSOCIATED ELECTRICAL EQUIPMENT, CONDUIT, AND WIRING BACK TO SOURCE.
4. REMOVE THE EXISTING PHOTOVOLTAIC (PV) SYSTEM IN ITS ENTIRETY, INCLUDING PV MODULES, MOUNTING RACKS, INVERTERS, COMBINER BOXES, DISCONNECT SWITCHES, ASSOCIATED CONDUIT, CONDUCTORS, GROUNDING AND BONDING COMPONENTS, SUPPORTS, AND ALL RELATED EQUIPMENT. COORDINATE DE-ENERGIZATION, UTILITY DISCONNECTS, AND DEMOLITION ACTIVITIES WITH THE OWNER AND SERVING UTILITY PRIOR TO COMMENCEMENT OF WORK. EXISTING PV SYSTEM IS INTERCONNECTED ON THE LINE SIDE OF THE EXISTING ELECTRICAL SERVICE. REMOVE ALL ABANDONED PV EQUIPMENT, CONDUCTORS, RACEWAYS, SUPPORTS, AND MISCELLANEOUS MATERIALS. REPAIR AND RESTORE ALL AFFECTED SURFACES TO MATCH ADJACENT EXISTING CONDITIONS.

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70 POWELL ROAD, SPRINGFIELD, PA 19064

ELECTRICAL DEMOLITION POWER PLAN - LOWER LEVEL
SPRINGFIELD TOWNSHIP
50 POWELL ROAD, SPRINGFIELD, PA 19064

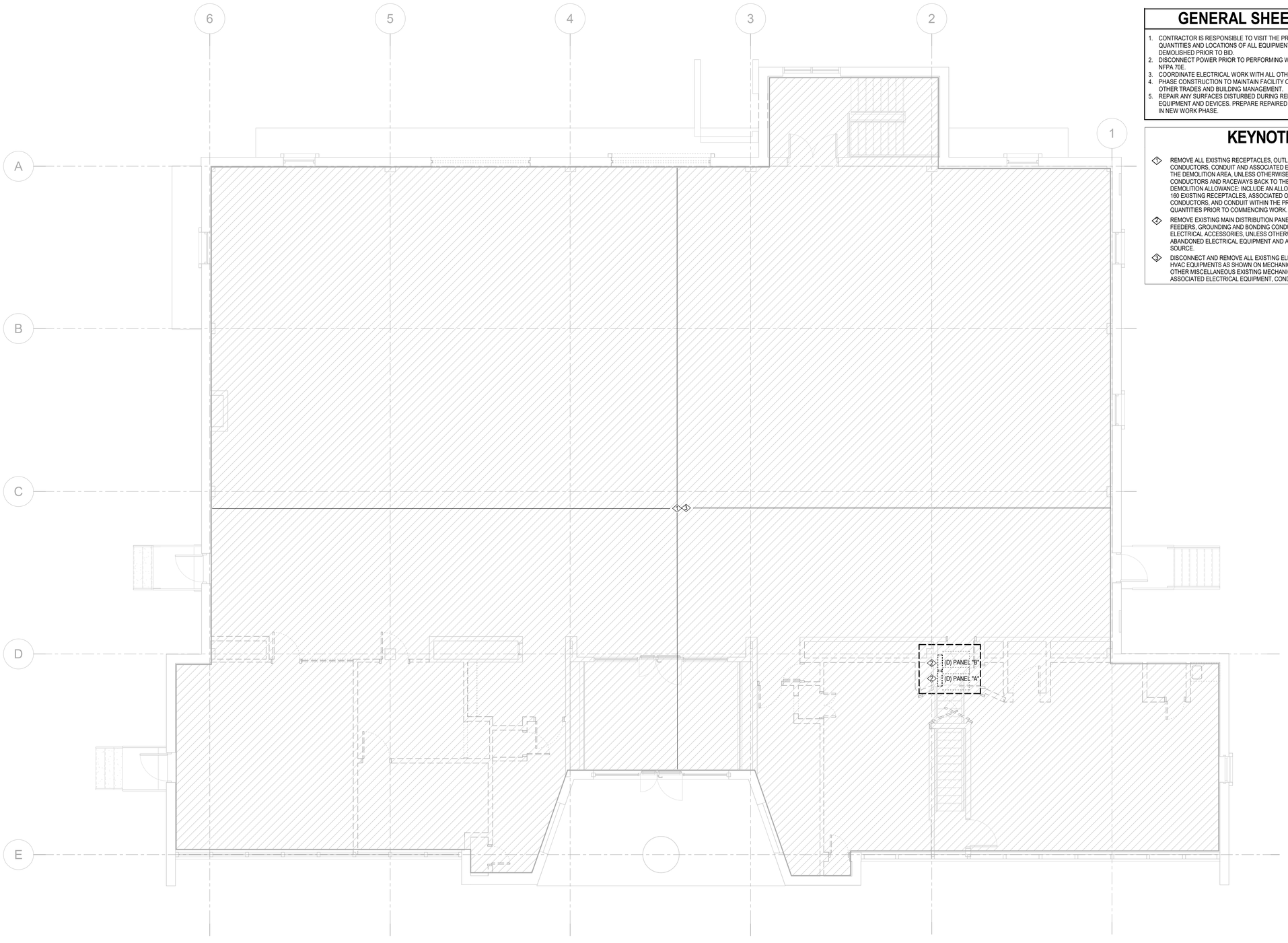
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E100

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GENERAL SHEET NOTES

1. CONTRACTOR IS RESPONSIBLE TO VISIT THE PROJECT SITE AND VERIFY ALL QUANTITIES AND LOCATIONS OF ALL EQUIPMENT AND DEVICES THAT ARE TO BE DEMOLISHED PRIOR TO BID.
2. DISCONNECT POWER PRIOR TO PERFORMING WORK IN ACCORDANCE WITH NFPA 70E.
3. COORDINATE ELECTRICAL WORK WITH ALL OTHER TRADES.
4. PHASE CONSTRUCTION TO MAINTAIN FACILITY OPERATIONS. COORDINATE WITH OTHER TRADES AND BUILDING MANAGEMENT.
5. REPAIR ANY SURFACES DISTURBED DURING REMOVAL OR REPLACEMENT OF EQUIPMENT AND DEVICES. PREPARE REPAIRED SURFACES FOR NEW FINISHED IN NEW WORK PHASE.

KEYNOTES

1. REMOVE ALL EXISTING RECEPTACLES, OUTLET BOXES, BRANCH-CIRCUIT CONDUCTORS, CONDUIT AND ASSOCIATED ELECTRICAL ACCESSORIES WITHIN THE DEMOLITION AREA, UNLESS OTHERWISE NOTED REMOVE ALL ABANDONED CONDUCTORS AND RACEWAYS BACK TO THEIR SOURCE.
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1 / E101 POWER DEMOLITION PLAN - UPPER LEVEL
3/16" = 1'-0"

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SPFLD00611 - LIBRARY BUILDING RENOVATIONS
70 POWELL ROAD, SPRINGFIELD, PA 19064

ELECTRICAL DEMOLITION POWER PLAN - UPPER LEVEL
SPRINGFIELD TOWNSHIP
50 POWELL ROAD, SPRINGFIELD, PA 19064

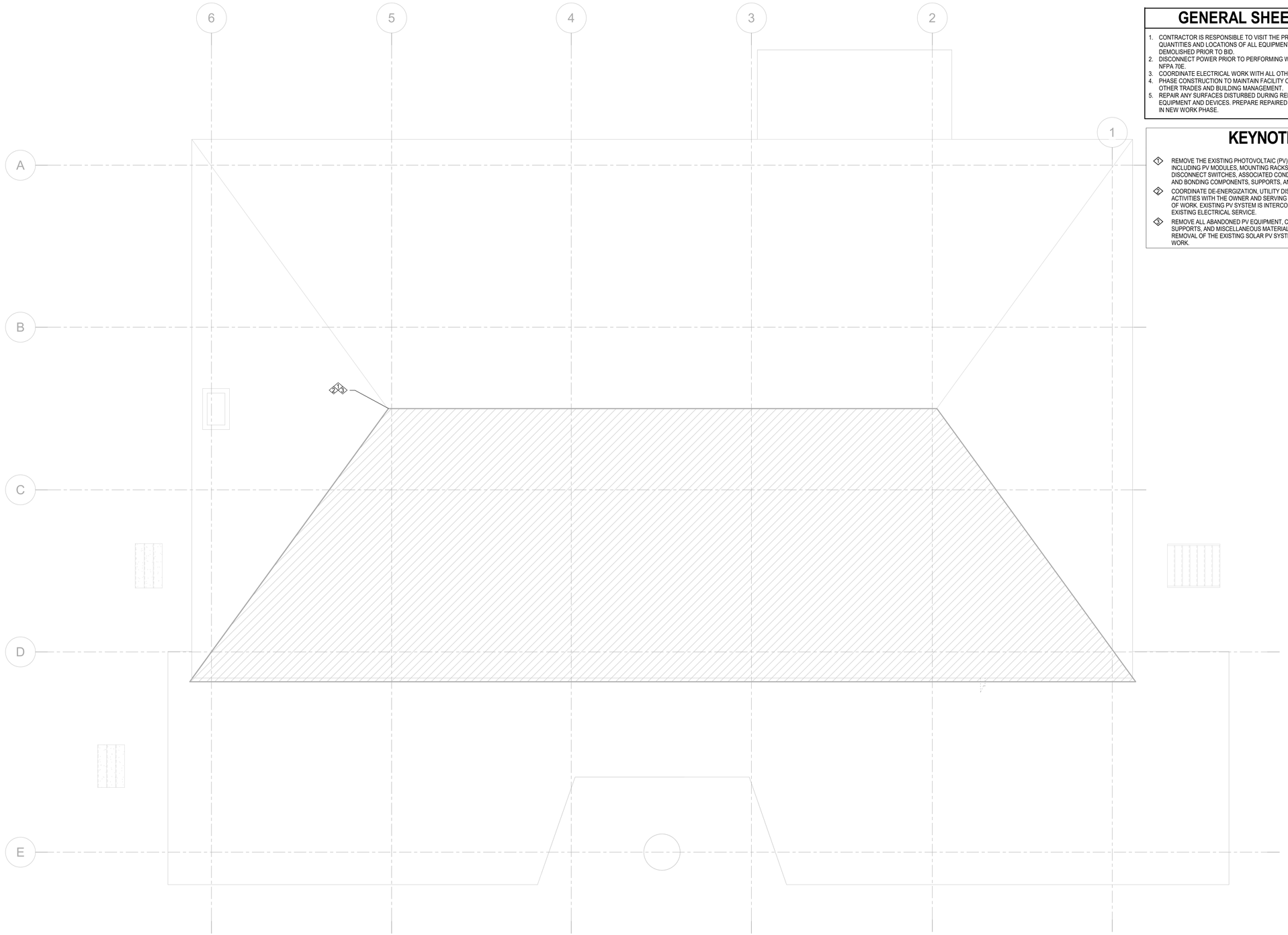
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GENERAL SHEET NOTES

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2. COORDINATE DE-ENERGIZATION, UTILITY DISCONNECTS, AND DEMOLITION ACTIVITIES WITH THE OWNER AND SERVING UTILITY PRIOR TO COMMENCEMENT OF WORK. EXISTING PV SYSTEM IS INTERCONNECTED ON THE LINE SIDE OF THE EXISTING ELECTRICAL SERVICE.
3. REMOVE ALL ABANDONED PV EQUIPMENT, CONDUCTORS, RACEWAYS, SUPPORTS, AND MISCELLANEOUS MATERIALS. COORDINATE DEMOLITION AND REMOVAL OF THE EXISTING SOLAR PV SYSTEM WITH THE ROOF REPLACEMENT WORK.

1 / E102 POWER DEMOLITION PLAN - ROOF
3/16" = 1'-0"

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70 POWELL ROAD, SPRINGFIELD, PA 19064

ELECTRICAL DEMOLITION POWER PLAN - ROOF

SPRINGFIELD TOWNSHIP
50 POWELL ROAD, SPRINGFIELD, PA 19064

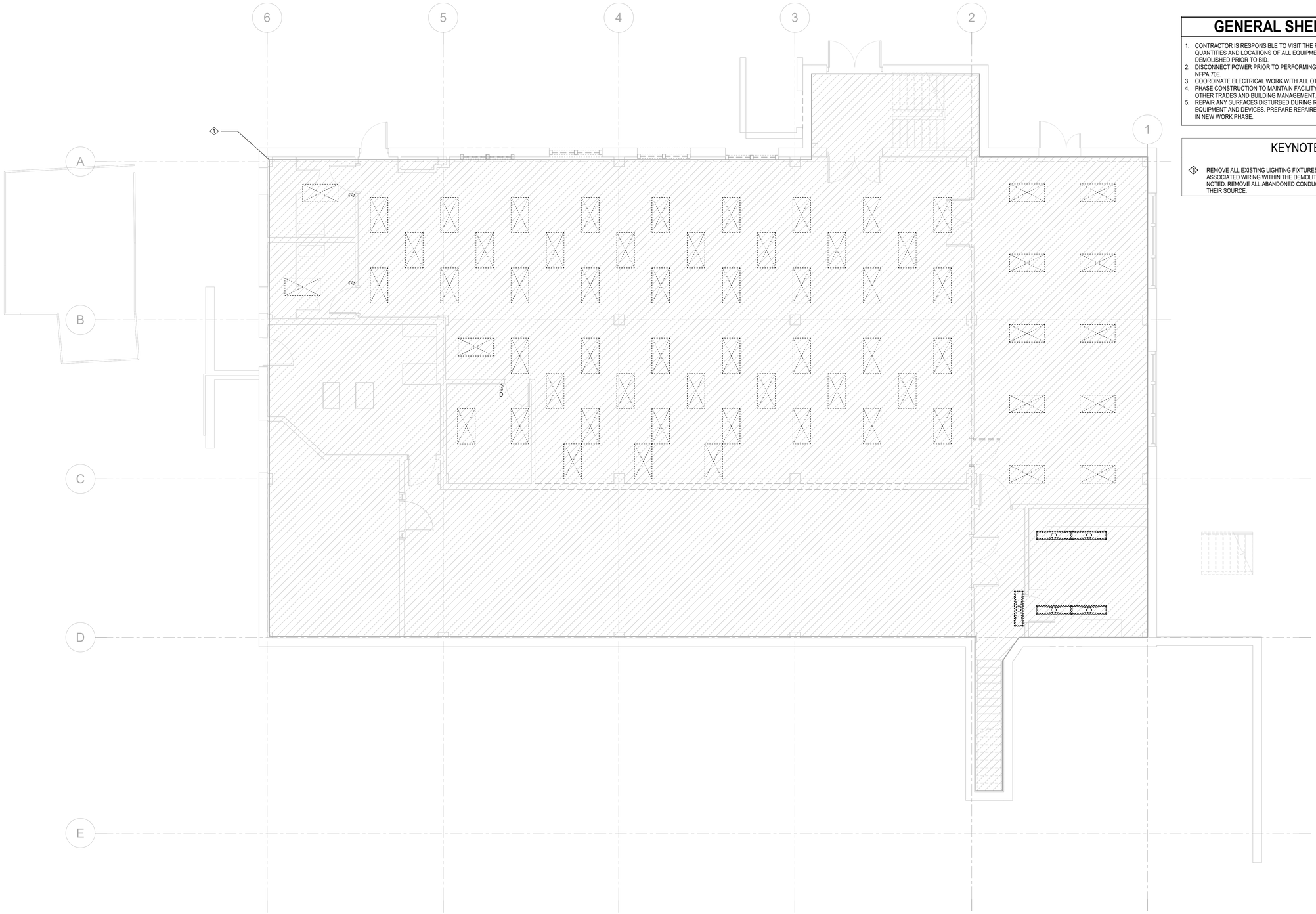
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GENERAL SHEET NOTES

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KEYNOTES

1. REMOVE ALL EXISTING LIGHTING FIXTURES, LIGHTING CONTROLS, CONDUIT AND ASSOCIATED WIRING WITHIN THE DEMOLITION AREA, UNLESS OTHERWISE NOTED. REMOVE ALL ABANDONED CONDUCTORS AND RACEWAYS BACK TO THEIR SOURCE.

1 / E103 LIGHTING DEMOLITION PLAN - LOWER LEVEL
3/16" = 1'-0"

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70 POWELL ROAD, SPRINGFIELD, PA 19064

ELECTRICAL DEMOLITION LIGHTING PLAN - LOWER LEVEL

SPRINGFIELD TOWNSHIP
50 POWELL ROAD, SPRINGFIELD, PA 19064

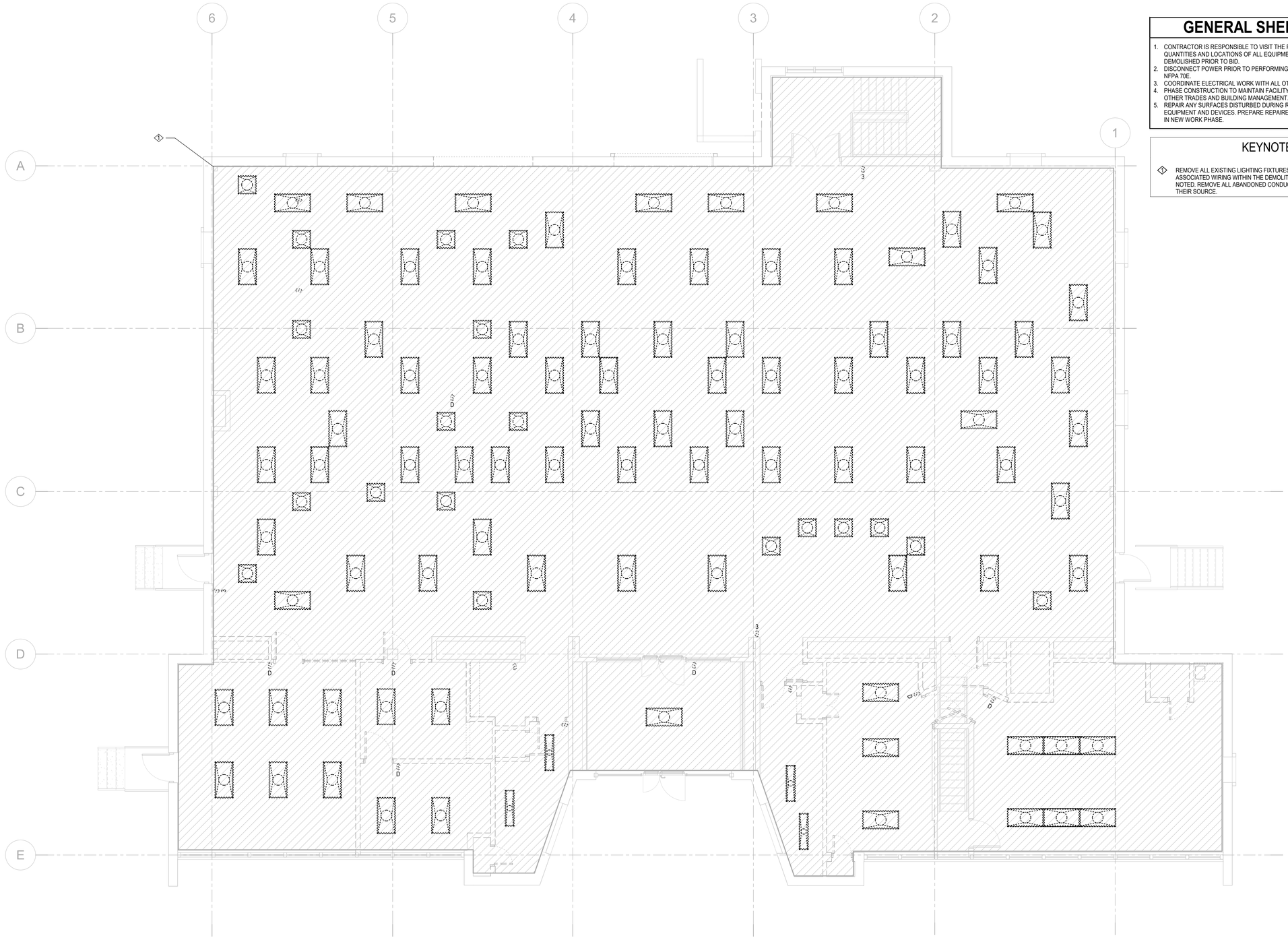
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GENERAL SHEET NOTES

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KEYNOTES

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1 / E104 LIGHTING DEMOLITION PLAN - UPPER LEVEL
3/16" = 1'-0"

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70 POWELL ROAD, SPRINGFIELD, PA 19064

ELECTRICAL DEMOLITION LIGHTING PLAN - UPPER LEVEL
SPRINGFIELD TOWNSHIP
50 POWELL ROAD, SPRINGFIELD, PA 19064

NO.	DATE	REVISIONS	BY

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GENERAL SHEET NOTES

1. COORDINATE ELECTRICAL WORK AND FINAL LOCATION OF ALL LIGHTING FIXTURES WITH ALL OTHER TRADES. PROVIDE COORDINATED SHOP DRAWINGS PRIOR TO COMMENCEMENT OF WORK.
2. ALL RECEPTACLES IN NON-MECHANICAL SPACES SHALL BE TAMPER-RESISTANT.

KEYNOTES

1 THE STANDBY GENERATOR IS EXISTING, OWNER-FURNISHED EQUIPMENT TO BE RELOCATED FROM AN EXISTING FACILITY. CONTRACTOR SHALL COORDINATE REMOVAL, TRANSPORTATION, STORAGE, REINSTALLATION, TESTING, AND COMMISSIONING WITH THE OWNER. PROVIDE ALL NEW ANCILLARY EQUIPMENT REQUIRED FOR A COMPLETE INSTALLATION, INCLUDING A NEW FUEL STORAGE TANK, UNLESS OTHERWISE NOTED.

2 PROVIDE A MINIMUM 12-INCH SEPARATION BETWEEN GENERATOR FEEDER CONDUITS AND GENERATOR/ATS COMMUNICATION CONDUITS WITHIN THE UNDERGROUND DUCT BANK. COMMUNICATION CONDUCTORS SHALL BE INSTALLED IN A DEDICATED PVC CONDUIT SEPARATE FROM POWER CONDUITS.

3 TRANSITION FROM SCHEDULE 40 PVC CONDUIT (BELOW GRADE) TO EMT CONDUIT AT A POINT BELOW GRADE. RSC SHALL PENETRATE THE EXTERIOR WALL AND CONTINUE INTO THE BUILDING. PROVIDE APPROPRIATE TRANSITION FITTINGS AND ENSURE ALL PENETRATIONS ARE SEALED AND WEATHERPROOFED PER NEC AND LOCAL CODE REQUIREMENTS.

4 PROVIDE AUTOMATIC RECEPTACLE CONTROL IN ACCORDANCE WITH IECC 2021 SECTION C405.10. 125V, 15A AND 20A RECEPTACLES LOCATED IN OFFICES, CONFERENCE ROOMS, WORKSTATIONS, AND SIMILAR SPACES SHALL BE SPLIT TYPE DUPLEX AND AUTOMATICALLY CONTROLLED. CONTROLLED RECEPTACLES SHALL BE PERMANENTLY IDENTIFIED. CONTROLLED RECEPTACLES SHALL BE CONNECTED TO THE ROOM OCCUPANCY SENSOR CONTROLLING THE LIGHTING, OR OTHER APPROVED AUTOMATIC CONTROL SYSTEM, IN ACCORDANCE WITH IECC 2021 SECTION C405.11. CONTROLS SHALL AUTOMATICALLY DE-ENERGIZE THE CONTROLLED RECEPTACLES WITHIN 20 MINUTES AFTER THE SPACE IS VACANT. PROVIDE PERMANENTLY ENERGIZED RECEPTACLES AS REQUIRED BY THE IECC AND NEC FOR EQUIPMENT REQUIRING CONTINUOUS POWER.

5 PROVIDE AND INSTALL A 60A, 208V, 3-POLE LOCKABLE FUSIBLE ELEVATOR MAIN DISCONNECT SWITCH WITH AUXILIARY CONTACTS AS REQUIRED BY THE ELEVATOR MANUFACTURER FOR BATTERY LOWERING OPERATION. DISCONNECT SHALL BE LABELED WITH ELEVATOR DESIGNATION.

6 PROVIDE AND INSTALL ELEVATOR CAB LIGHTING DISCONNECT 120V-1P, 30A/20A FUSED DISCONNECT, LOCKABLE AND LABELED WITH ELEVATOR DESIGNATION.

(N) NEW CONCRETE PAD FOR STANDBY GENERATOR. REFER TO CIVIL AND STRUCTURAL PLANS FOR DETAILS.
(1) (RE) 135KW/169KVA KOHLER DIESEL GENERATOR MODEL: 135ROZJ. RATED 208V,3PH,60Hz. PROVIDE NEW 430GALLON SUB BASE FUEL TANK AND ALL ASSOCIATED EQUIPMENT.
8'-0"
12'-0"
ENGINE BLOCK HEATER
(N) PP-1-49
20'-0"
(N) UNDERGROUND ELECTRICAL PVC SCH40 CONDUIT. REFER TO DETAIL#3 ON E504 FOR DETAILS.
18'-0"
(N) ABOVEGROUND EMT CONDUITS TO BE ROUTED ABOVE CEILING.
(N) WALL MOUNTED JUNCTION BOX (36"Wx36H"x12"D)
(N) ELECTRIC METER
(N) 600A SERVICE BREAKER
(N) 600A/3P ATS
HEAT RECOVERY BOX
GEN.BATTERY CHARGER (N) PP-1-57
UTILITY / ELECTRICAL 104
TLT RM. 102
TLT RM. 103
MECHANICAL 105
NEW READING ROOM 100
STAIR TOWER 101
ELEV
KIDS LIBRARY 107
READING EXTENSION 109
STORAGE 110
PROGRAM ROOM 112
CORRIDOR 114
WORK ROOM 113
(N) ELEVATOR DIS.
(N) ELEVATOR CAB LIGHT DIS.
(N) MDP-18,20,22
(N) MDP-19,21,23
(N) PP-1-59,61,63
(N) PP-1-1,3,5
(N) PP-1-7,9,11
(N) PP-1-13,15
(N) PP-1-16
(N) PP-1-23,25
(N) PP-1-6,8
(N) PP-1-10
(N) PP-1-12
(N) PP-1-29
ERV 1
CU 1
CU 2
CU 3
WH 1
EF 1
EF 2
FCU 1-1
FCU 1-2
FCU 1-3
CUH 1
DF 1
SIP 1
B 1
B 2
P 1
P 2
P 3

1 POWER PLAN - LOWER LEVEL
E200 3/16" = 1'-0"

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70 POWELL ROAD, SPRINGFIELD, PA 19064
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ELECTRICAL POWER PLAN - LOWER LEVEL

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APPROVED BY	JPR

E200

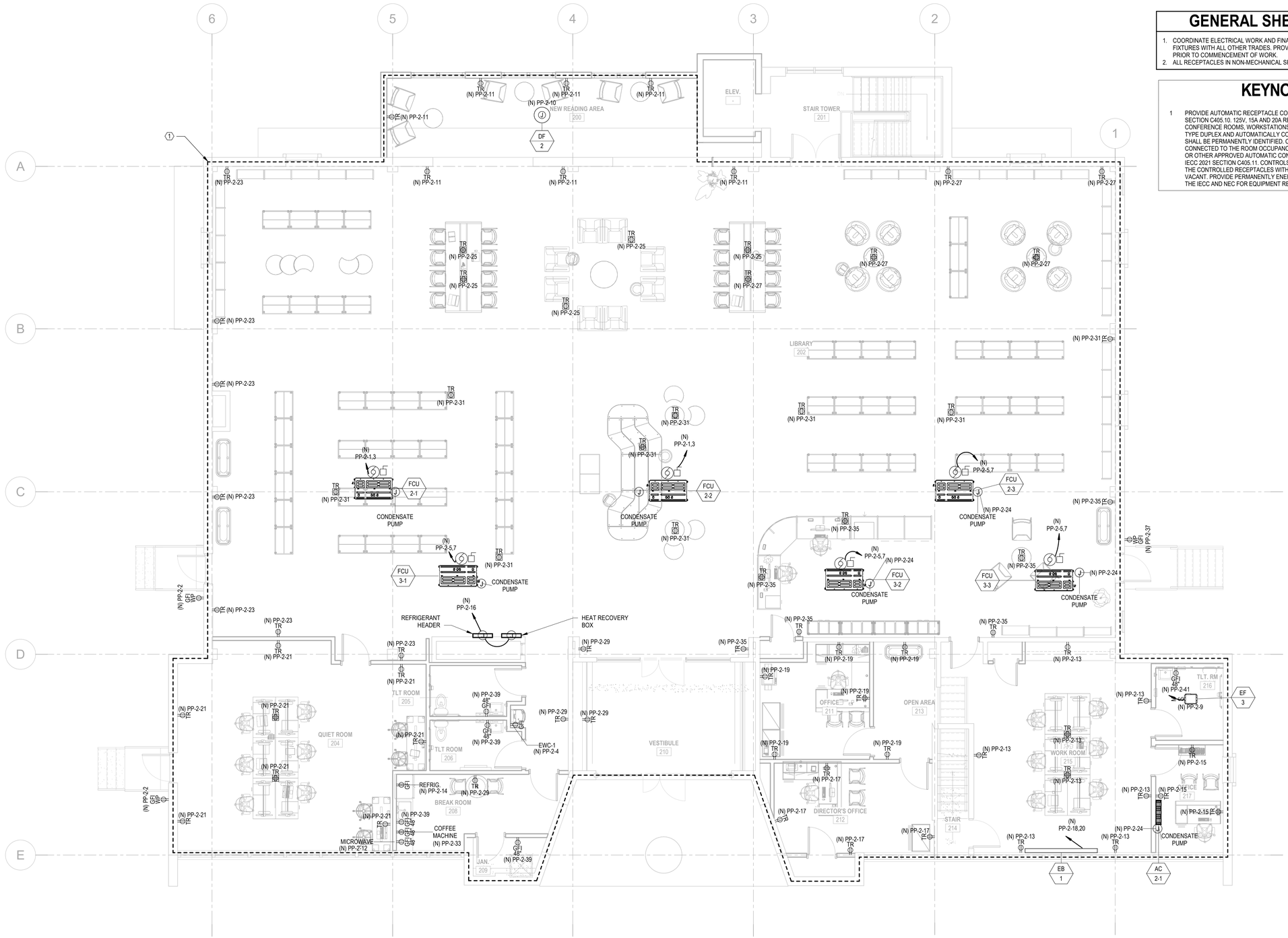
Autodesk Docs://SPFLD00611 - Library Building Renovations/SPFLD00611 - LIBRARY BUILDING RENOVATION_R25.rvt
8/7/2026 2:20:51 PM

GENERAL SHEET NOTES

1. COORDINATE ELECTRICAL WORK AND FINAL LOCATION OF ALL LIGHTING FIXTURES WITH ALL OTHER TRADES. PROVIDE COORDINATED SHOP DRAWINGS PRIOR TO COMMENCEMENT OF WORK.
2. ALL RECEPTACLES IN NON-MECHANICAL SPACES SHALL BE TAMPER-RESISTANT.

KEYNOTES

1 PROVIDE AUTOMATIC RECEPTACLE CONTROL IN ACCORDANCE WITH IECC 2021 SECTION C405.10. 125V, 15A AND 20A RECEPTACLES LOCATED IN OFFICES, CONFERENCE ROOMS, WORKSTATIONS, AND SIMILAR SPACES SHALL BE SPLIT TYPE DUPLEX AND AUTOMATICALLY CONTROLLED. CONTROLLED RECEPTACLES SHALL BE PERMANENTLY IDENTIFIED. CONTROLLED RECEPTACLES SHALL BE CONNECTED TO THE ROOM OCCUPANCY SENSOR CONTROLLING THE LIGHTING, OR OTHER APPROVED AUTOMATIC CONTROL SYSTEM, IN ACCORDANCE WITH IECC 2021 SECTION C405.11. CONTROLS SHALL AUTOMATICALLY DE-ENERGIZE THE CONTROLLED RECEPTACLES WITHIN 20 MINUTES AFTER THE SPACE IS VACANT. PROVIDE PERMANENTLY ENERGIZED RECEPTACLES AS REQUIRED BY THE IECC AND NEC FOR EQUIPMENT REQUIRING CONTINUOUS POWER.



1 / E201 POWER PLAN - UPPER LEVEL
3/16" = 1'-0"

ISSUED FOR BID
DATE: 08/07/2026

Pennoni
PENNONI ASSOCIATES INC.
1900 Market Street, Suite 300
Philadelphia, PA 19103
T 215.222.3000 F 215.222.3588

ALL DIMENSIONS MUST BE VERIFIED BY CONTRACTOR AND OWNER MUST BE NOTIFIED OF ANY DISCREPANCIES BEFORE PROCEEDING WITH WORK

SPFLD00611 - LIBRARY BUILDING RENOVATIONS
70 POWELL ROAD, SPRINGFIELD, PA 19064

ELECTRICAL POWER PLAN - UPPER LEVEL

SPRINGFIELD TOWNSHIP
50 POWELL ROAD, SPRINGFIELD, PA 19064

NO.	DATE	REVISIONS	BY

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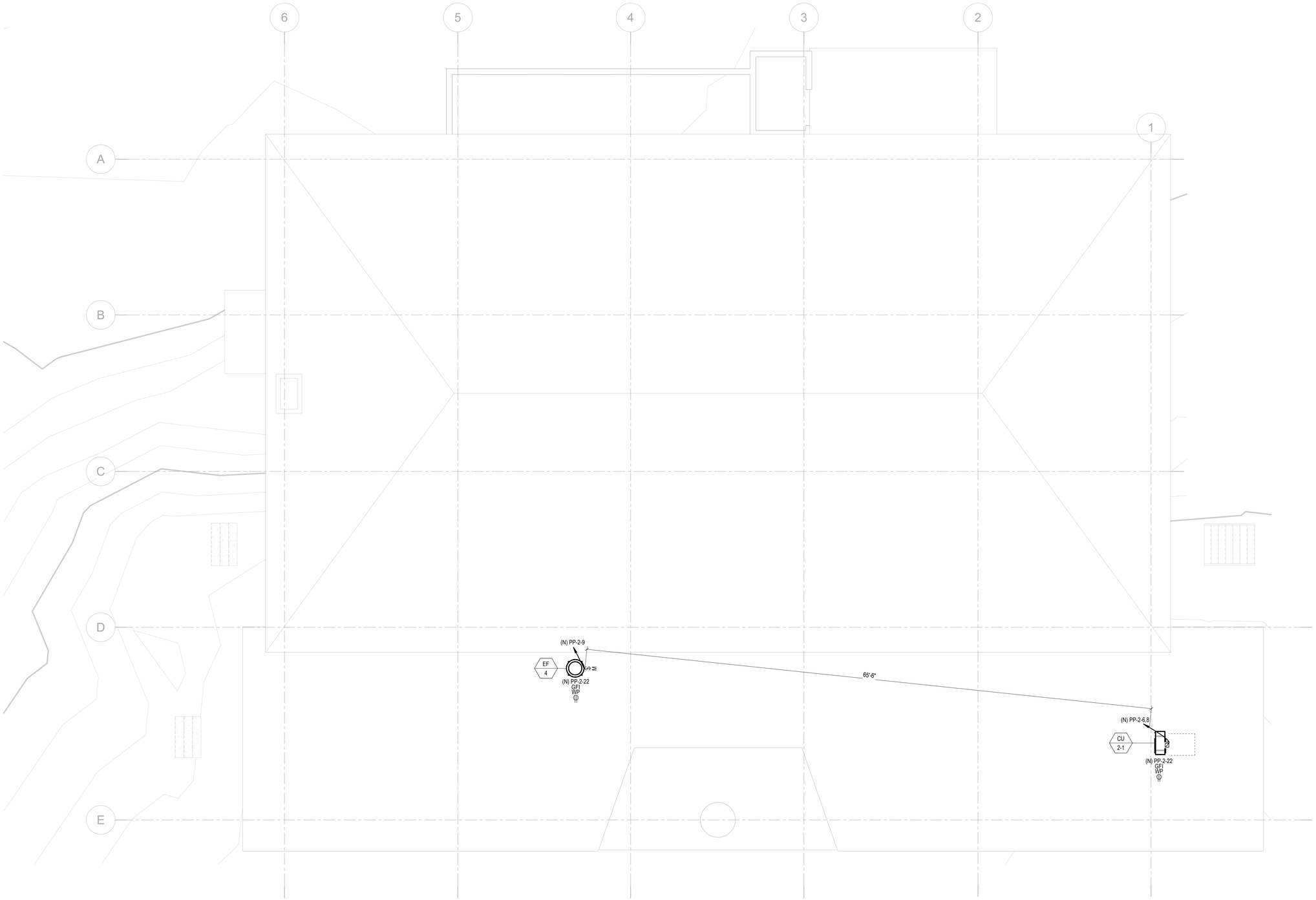
PROJECT	SPFLD00611
DATE	08/07/2026
DRAWING SCALE	AS NOTED
DRAWN BY	SJP
APPROVED BY	JPR

E201

8/7/2026 2:21:00 PM Autodesk Docs://SPFLD00611 - Library Building Renovation/SPFLD00611 - LIBRARY BUILDING RENOVATION R25.rvt

GENERAL SHEET NOTES

1. COORDINATE ELECTRICAL WORK AND FINAL LOCATION OF ALL LIGHTING FIXTURES WITH ALL OTHER TRADES. PROVIDE COORDINATED SHOP DRAWINGS PRIOR TO COMMENCEMENT OF WORK.
2. ALL RECEPTACLES IN NON-MECHANICAL SPACES SHALL BE TAMPER-RESISTANT.



1 / E202 POWER PLAN - ROOF
3/16" = 1'-0"

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DATE: 08/07/2026

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SPFLD00611 - LIBRARY BUILDING RENOVATIONS
70 POWELL ROAD, SPRINGFIELD, PA 19064

ELECTRICAL POWER PLAN - ROOF

SPRINGFIELD TOWNSHIP
50 POWELL ROAD, SPRINGFIELD, PA 19064

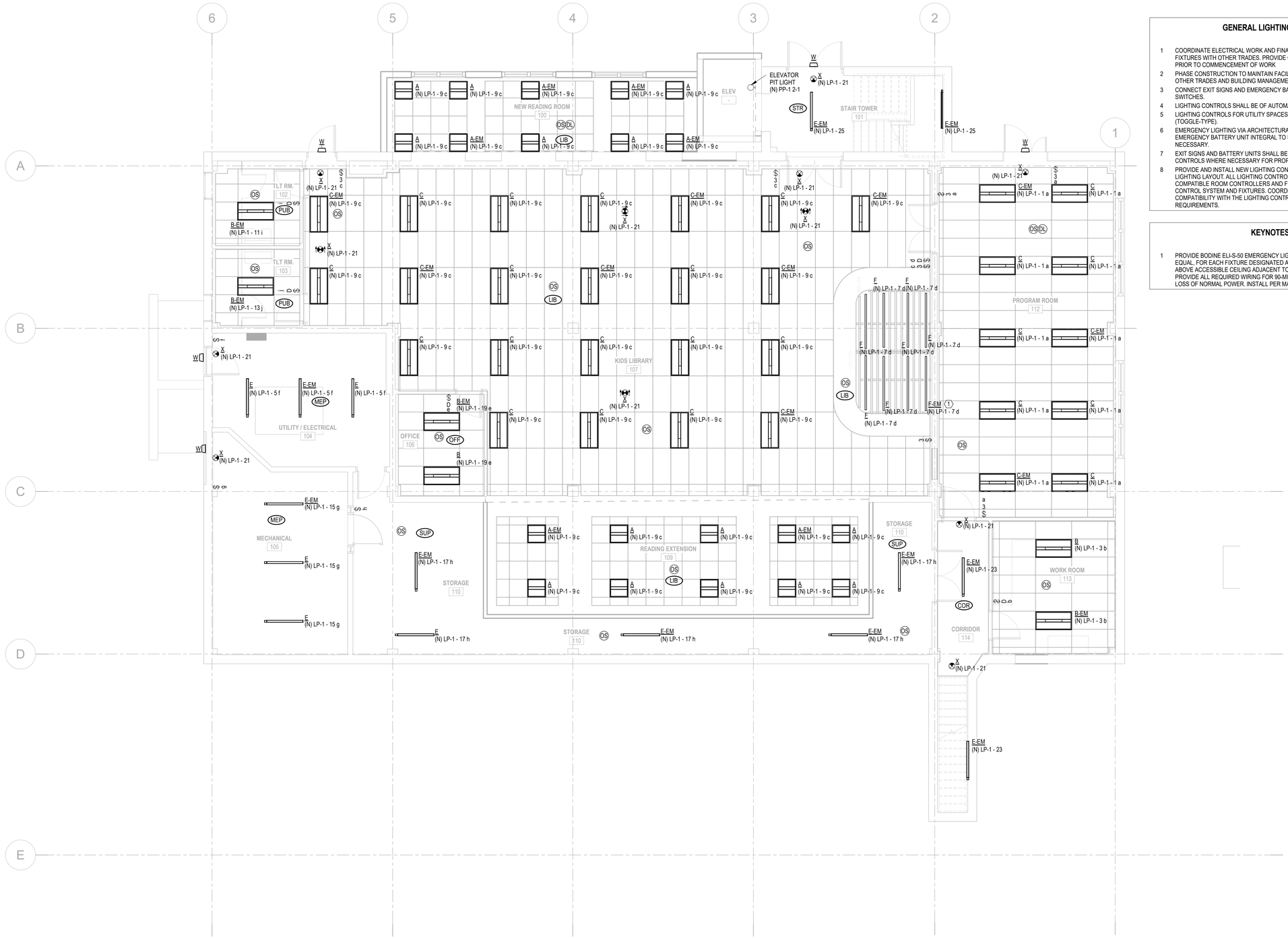
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PROJECT	SPFLD00611
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E202

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1 / E300 LIGHTING PLAN - LOWER LEVEL
3/16" = 1'-0"

GENERAL LIGHTING NOTES

1. COORDINATE ELECTRICAL WORK AND FINAL LOCATION OF ALL LIGHTING FIXTURES WITH OTHER TRADES. PROVIDE COORDINATED SHOP DRAWINGS PRIOR TO COMMENCEMENT OF WORK
2. PHASE CONSTRUCTION TO MAINTAIN FACILITY OPERATIONS. COORDINATE WITH OTHER TRADES AND BUILDING MANAGEMENT.
3. CONNECT EXIT SIGNS AND EMERGENCY BATTERY PACKS PRIOR TO ANY CIRCUIT SWITCHES.
4. LIGHTING CONTROLS SHALL BE OF AUTOMATIC TYPE FOR NON-UTILITY SPACES.
5. LIGHTING CONTROLS FOR UTILITY SPACES SHALL BE NON-AUTOMATIC (TOGGLE-TYPE).
6. EMERGENCY LIGHTING VIA ARCHITECTURAL FIXTURES SHALL BE VIA EMERGENCY BATTERY UNIT INTEGRAL TO SELECTED LIGHT FIXTURE(S) WHERE NECESSARY.
7. EXIT SIGNS AND BATTERY UNITS SHALL BE CIRCUITED AHEAD OF THE LIGHTING CONTROLS WHERE NECESSARY FOR PROPER OPERATION.
8. PROVIDE AND INSTALL NEW LIGHTING CONTROL DEVICES AS INDICATED ON THE LIGHTING LAYOUT. ALL LIGHTING CONTROL DEVICES SHALL BE PROVIDED WITH COMPATIBLE ROOM CONTROLLERS AND FULLY INTEGRATED WITH THE LIGHTING CONTROL SYSTEM AND FIXTURES. COORDINATE DEVICE TYPES, LOCATIONS, AND COMPATIBILITY WITH THE LIGHTING CONTROL MANUFACTURER'S REQUIREMENTS.

KEYNOTES

1. PROVIDE BODINE ELI-S-50 EMERGENCY LIGHTING INVERTER, OR APPROVED EQUAL, FOR EACH FIXTURE DESIGNATED AS TYPE F-EM. MOUNT INVERTER ABOVE ACCESSIBLE CEILING ADJACENT TO THE ASSOCIATED FIXTURE AND PROVIDE ALL REQUIRED WIRING FOR 90-MINUTE EMERGENCY OPERATION UPON LOSS OF NORMAL POWER. INSTALL PER MANUFACTURER'S REQUIREMENTS.

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DATE: 08/07/2026

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SPFLD00611 - LIBRARY BUILDING RENOVATIONS
70 POWELL ROAD, SPRINGFIELD, PA 19064

ELECTRICAL LIGHTING PLAN - LOWER LEVEL

SPRINGFIELD TOWNSHIP
50 POWELL ROAD, SPRINGFIELD, PA 19064

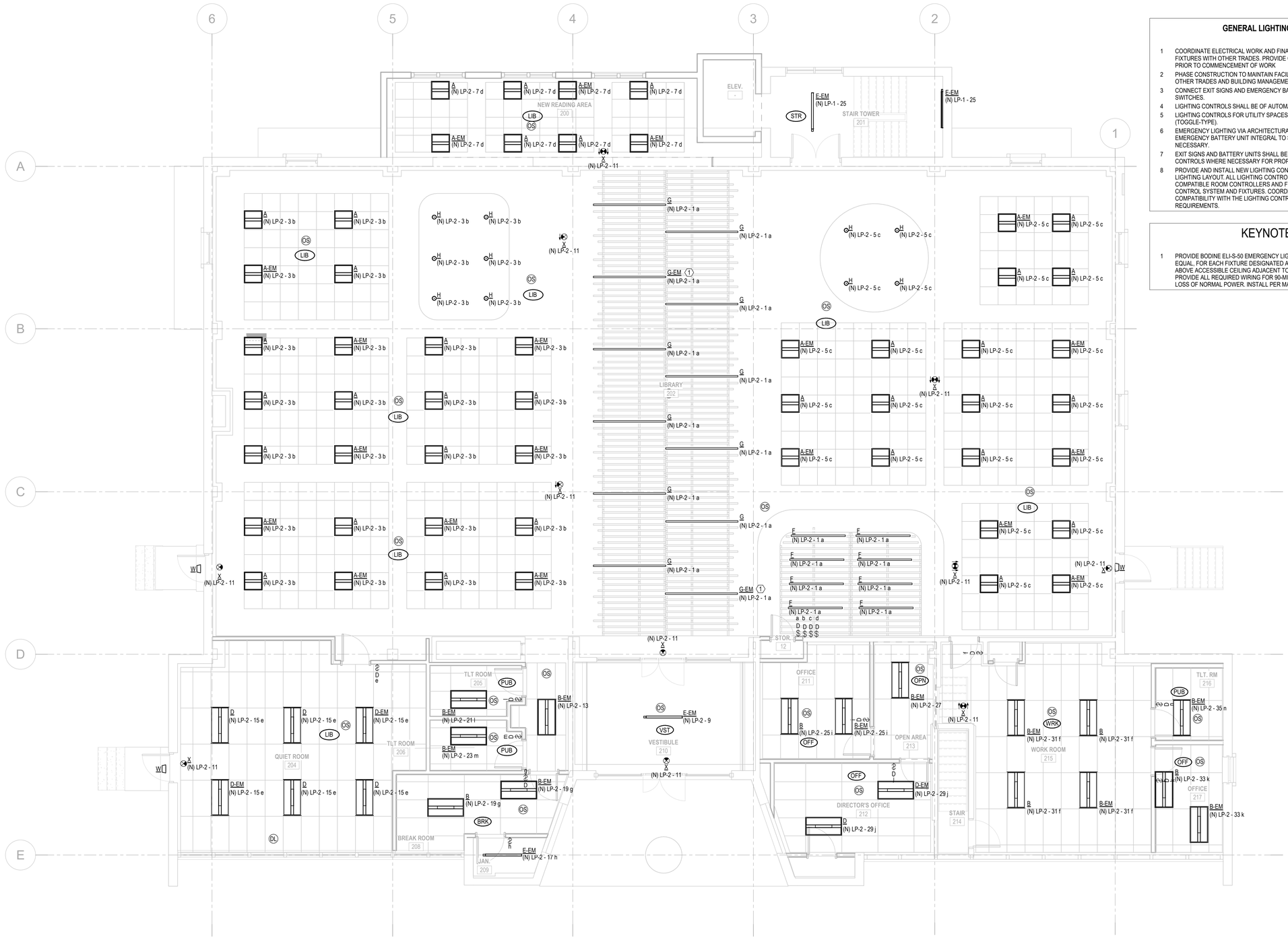
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PROJECT	SPFLD00611
DATE	08/07/2026
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E300

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1 E301 LIGHTING PLAN - UPPER LEVEL
3/16" = 1'-0"

GENERAL LIGHTING NOTES

1. COORDINATE ELECTRICAL WORK AND FINAL LOCATION OF ALL LIGHTING FIXTURES WITH OTHER TRADES. PROVIDE COORDINATED SHOP DRAWINGS PRIOR TO COMMENCEMENT OF WORK
2. PHASE CONSTRUCTION TO MAINTAIN FACILITY OPERATIONS. COORDINATE WITH OTHER TRADES AND BUILDING MANAGEMENT.
3. CONNECT EXIT SIGNS AND EMERGENCY BATTERY PACKS PRIOR TO ANY CIRCUIT SWITCHES.
4. LIGHTING CONTROLS SHALL BE OF AUTOMATIC TYPE FOR NON-UTILITY SPACES.
5. LIGHTING CONTROLS FOR UTILITY SPACES SHALL BE NON-AUTOMATIC (TOGGLE-TYPE).
6. EMERGENCY LIGHTING VIA ARCHITECTURAL FIXTURES SHALL BE VIA EMERGENCY BATTERY UNIT INTEGRAL TO SELECTED LIGHT FIXTURE(S) WHERE NECESSARY.
7. EXIT SIGNS AND BATTERY UNITS SHALL BE CIRCUITED AHEAD OF THE LIGHTING CONTROLS WHERE NECESSARY FOR PROPER OPERATION.
8. PROVIDE AND INSTALL NEW LIGHTING CONTROL DEVICES AS INDICATED ON THE LIGHTING LAYOUT. ALL LIGHTING CONTROL DEVICES SHALL BE PROVIDED WITH COMPATIBLE ROOM CONTROLLERS AND FULLY INTEGRATED WITH THE LIGHTING CONTROL SYSTEM AND FIXTURES. COORDINATE DEVICE TYPES, LOCATIONS, AND COMPATIBILITY WITH THE LIGHTING CONTROL MANUFACTURER'S REQUIREMENTS.

KEYNOTES

1. PROVIDE BODINE ELI-S-50 EMERGENCY LIGHTING INVERTER, OR APPROVED EQUAL, FOR EACH FIXTURE DESIGNATED AS TYPE G-EM. MOUNT INVERTER ABOVE ACCESSIBLE CEILING ADJACENT TO THE ASSOCIATED FIXTURE AND PROVIDE ALL REQUIRED WIRING FOR 90-MINUTE EMERGENCY OPERATION UPON LOSS OF NORMAL POWER. INSTALL PER MANUFACTURER'S REQUIREMENTS.

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DATE: 08/07/2026

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Philadelphia, PA 19103
T 215.222.3000 F 215.222.3588

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SPFLD00611 - LIBRARY BUILDING RENOVATIONS

70 POWELL ROAD, SPRINGFIELD, PA 19064

ELECTRICAL LIGHTING PLAN - UPPER LEVEL

SPRINGFIELD TOWNSHIP

50 POWELL ROAD, SPRINGFIELD, PA 19064

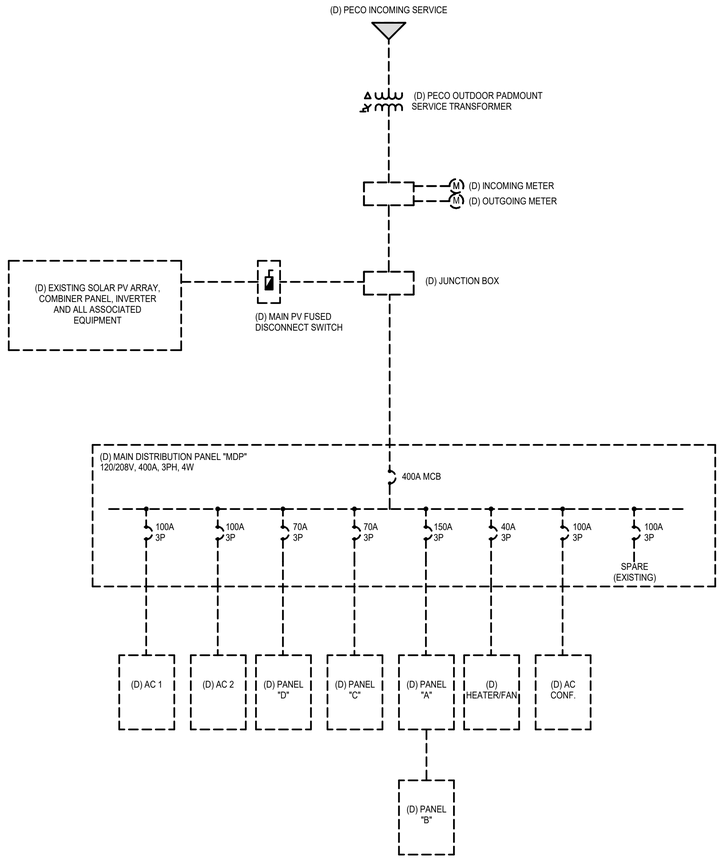
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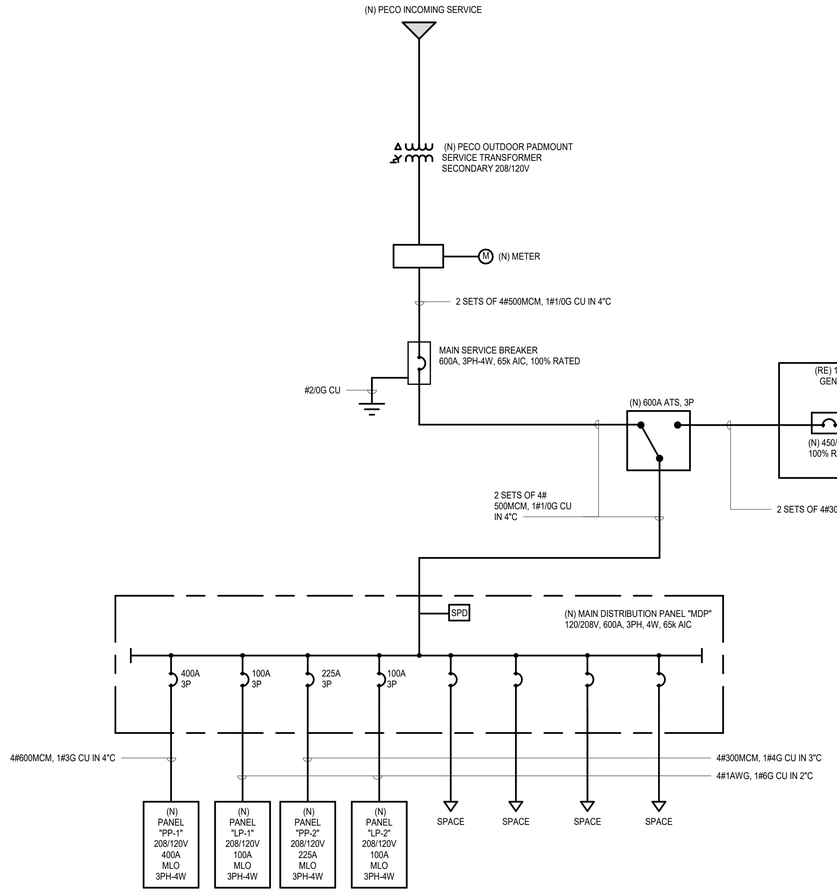
PROJECT	SPFLD00611
DATE	08/07/2026
DRAWING SCALE	AS NOTED
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E301

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1 E500 ELECTRICALSINGLE LINE DIAGRAM - DEMOLITION
N.T.S.



2 E500 ELECTRICAL SINGLE LINE DIAGRAM - PROPOSED
N.T.S.

ELECTRICAL SINGLE-LINE NOTES:

1. DISCONNECT AND REMOVE EXISTING PANELBOARD(S) AS INDICATED ON SINGLE-LINE DIAGRAM. COORDINATE ANY DISCREPANCIES WITH THE ENGINEER OF RECORD PRIOR TO PROCEEDING.
2. CONTRACTOR MAY RE-USE CONDUIT IF SIZE AND ROUTING PERMITS.
3. PROVIDE CLEAR, PERMANENT CIRCUIT IDENTIFICATION AND PANEL DIRECTORY UPDATED TO REFLECT FINAL AS-BUILT CONDITIONS.
4. FIELD VERIFY EXISTING CONDITIONS AND COORDINATE ALL OUTAGES WITH THE OWNER PRIOR TO DISCONNECTION.

ISSUED FOR BID
DATE: 08/07/2026

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SPFLD00611 - LIBRARY BUILDING RENOVATIONS
70 POWELL ROAD, SPRINGFIELD, PA 19064

ELECTRICAL SINGLE LINE DIAGRAM

SPRINGFIELD TOWNSHIP
50 POWELL ROAD, SPRINGFIELD, PA 19064

NO.	DATE	REVISIONS	BY

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PROJECT	SPFLD00611
DATE	08/07/2026
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E500

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Panelboard: (N) MDP

Location: UTILITY / ELECTRICAL 104
Supply:
Mounting: Surface
Enclosure: NEMA 1

Voltage: 208 V, 3Ø, 4W
Bus Rating: 600 A
Neutral: 100%
Feed-Thru Lugs: No
Features & Modifications: -

Mains Type: MLO
Mains Rating: 600 A
Mains FN/Note: -
SCCR: 65 kA

Ckt	Description	Wire Size	Trip (A)	Poles	FN/Note	Phase A Load (VA)		Phase B Load (VA)		Phase C Load (VA)		FN/Note	Poles	Trip (A)	Wire Size	Description	Ckt
1	(N) LP-1	3-#1, 1-#1, 1-#8	100	3		909	1311						3	100	3-#1, 1-#1, 1-#8	(N) LP-2	2
3								3041	1085								4
5										1911	760						6
7	(N) PP-2	3-#300, 1-#300, 1-#4	225	3		12292											8
9								8866									10
11										11123	36814						12
13	(N) 600A ATS	2 runs of 3-#500, 1-#500, 1-#1	600	3	--	0	31553						3	400	3-#750, 1-#750, 1-#3	(N) PP-1	14
15								0	35611								16
17										0	533						18
19	(N) ELEVATOR CONTOLLER / DISCONNECT SWITCH	3-#4, 1-#4, 1-#10	60	3		4362	533						3	20	3-#12, 1-#12, 1-#12	(N) ELEVATOR CAB DISCONNECT SWITCH	20
21								4362	533								22
23										4362							24
25																	26
27																	28
29																	30
31																	32
33																	34
35																	36
37																	38
39																	40
41																	42
					Connected Load:	51 kVA		53 kVA		56 kVA							
					Connected Current:	425 A		449 A		466 A							

Load Classification	Connected	Factor	Demand
Motor	6009 VA	118.72%	7134 VA
Other	504 VA	100.00%	504 VA
Receptacle - General	30010 VA	66.66%	20005 VA
Receptacle - Dedicated	500 VA	100.00%	500 VA
Lighting - Exterior	3000 VA	125.00%	3750 VA
HVAC	82554 VA	100.00%	82554 VA
Electric Heat	2500 VA	125.00%	3125 VA
Elevator	14687 VA	95.00%	13953 VA
Power	14183 VA	100.00%	14183 VA
Lighting	6017 VA	100.00%	6017 VA

Panel Totals	
Connected Load:	160 kVA
Connected Current:	444 A
Demand Load:	152 kVA
Demand Current:	421 A

Notes:

Panelboard: (N) PP-1

Location: UTILITY / ELECTRICAL 104
Supply: (N) MDP
Mounting: Surface
Enclosure: NEMA 1

Voltage: 208 V, 3Ø, 4W
Bus Rating: 400 A
Neutral: 100%
Feed-Thru Lugs: No
Features & Modifications: -

Mains Type: MLO
Mains Rating: 400 A
Mains FN/Note: -
SCCR: 65 kA

Ckt	Description	Wire Size	Trip (A)	Poles	FN/Note	A		B		C		FN/Note	Poles	Trip (A)	Wire Size	Description	Ckt
1	(N) CU-1	3-#4, 1-#4, 1-#8	70	3		7637	1082						2	20	2-#12, 1-#12, 1-#12	(N) FCU-1-1, (N) FCU-1-3	2
3								7637	1082								4
5										7637	541		2	20	2-#12, 1-#12, 1-#12	(N) FCU-1-2	6
7	(N) CU-2	3-#3, 1-#3, 1-#8	80	3		8670	541										8
9								8670	1800				1	20	1-#12, 1-#12, 1-#12	(N) B-2	10
11										8670	1800		1	20	1-#12, 1-#12, 1-#12	(N) B-1	12
13	(N) CU-3	2-#8, 1-#8, 1-#10	40	2		3422	1509						1	20	1-#12, 1-#12, 1-#12	(N) SP-1	14
15								3422	336				1	20	1-#12, 1-#12, 1-#12	(N) EF-1, (N) EF-2	16
17	(E) WH-1	2-#12, 1-#12, 1-#12	20	2						2250	360		1	20	1-#12, 1-#12, 1-#12	(N) FIRE ALARM CONTROL PANEL	18
19						2250	500						1	20	1-#12, 1-#12, 1-#12	(N) HEAT RECOVERY BOX	20
21	(N) ELEVATOR PIT	1-#12, 1-#12, 1-#12	20	1				195	0			--	1	20	1-#12, 1-#12, 1-#12	SPARE	22
23	(N) CUH-1	2-#12, 1-#12, 1-#12	20	2						2500	0	--	1	20	1-#12, 1-#12, 1-#12	SPARE	24
25						2500	0					--	1	20	1-#12, 1-#12, 1-#12	SPARE	26
27	(N) DF-1	1-#12, 1-#12, 1-#12	20	1				108	--			--	1	--	1-#12, 1-#12, 1-#12	SPACE	28
29	(N) P-1, (N) P-2, (N) P-3	1-#10, 1-#10, 1-#10	30	1						2610	--	--	1	--	1-#12, 1-#12, 1-#12	SPACE	30
31	(N) RECEPTACLE ROOM 113, 114	1-#12, 1-#12, 1-#12	20	1		1080	--					--	1	--	1-#12, 1-#12, 1-#12	SPACE	32
33	(N) RECEPTACLE ROOM 102, 104	1-#12, 1-#12, 1-#12	20	1				360	--			--	1	--	1-#12, 1-#12, 1-#12	SPACE	34
35	(N) RECEPTACLE ROOM 110	1-#12, 1-#12, 1-#12	20	1						1260	--	--	1	--	1-#12, 1-#12, 1-#12	SPACE	36
37	(N) RECEPTACLE ROOM 109	1-#12, 1-#12, 1-#12	20	1		1260	--					--	1	--	1-#12, 1-#12, 1-#12	SPACE	38
39	(N) RECEPTACLE ROOM 101 & CIRC. DESK	1-#12, 1-#12, 1-#12	20	1				1440	--			--	1	--	1-#12, 1-#12, 1-#12	SPACE	40
41	(N) RECEPTACLE ROOM 107	1-#12, 1-#12, 1-#12	20	1						1080	--	--	1	--	1-#12, 1-#12, 1-#12	SPACE	42
43	(N) RECEPTACLE ROOM 105	1-#12, 1-#12, 1-#12	20	1		720	--					--	1	--	1-#12, 1-#12, 1-#12	SPACE	44
45	(N) RECEPTACLE ROOM 106, 107	1-#12, 1-#12, 1-#12	20	1				900	--			--	1	--	1-#12, 1-#12, 1-#12	SPACE	46
47	(N) RECEPTACLE ROOM 100	1-#12, 1-#12, 1-#12	20	1						1260	--	--	1	--	1-#12, 1-#12, 1-#12	SPACE	48
49	(N) RECEPTACLE OUTDOORS	1-#12, 1-#12, 1-#12	20	1		900	--					--	1	--	1-#12, 1-#12, 1-#12	SPACE	50
51	(N) RECEPTACLE ROOM 112	1-#12, 1-#12, 1-#12	20	1				900	--			--	1	--	1-#12, 1-#12, 1-#12	SPACE	52
53	(N) RECEPTACLE ROOM 112	1-#12, 1-#12, 1-#12	20	1						1440	--	--	1	--	1-#12, 1-#12, 1-#12	SPACE	54
55	(N) RECEPTACLE ROOM 104	1-#12, 1-#12, 1-#12	20	1		540	--					--	1	--	1-#12, 1-#12, 1-#12	SPACE	56
57	(N) GEN. BATTERY CHARGER	1-#12, 1-#12, 1-#12	20	1				500	--			--	1	--	1-#12, 1-#12, 1-#12	SPACE	58
59	(N) ERV-1	3-#4, 1-#4, 1-#10	60	3						4203	--	--	1	--	1-#12, 1-#12, 1-#12	SPACE	60
61						4203	--					--	1	--	1-#12, 1-#12, 1-#12	SPACE	62
63								4203	--			--	1	--	1-#12, 1-#12, 1-#12	SPACE	64
					Connected Load:	37 kVA		32 kVA		36 kVA							
					Connected Current:	312 A		263 A		302 A							

Load Classification	Connected	Factor	Demand
Motor	6009 VA	118.72%	7134 VA
Receptacle - General	13320 VA	87.54%	11660 VA
Receptacle - Dedicated	500 VA	100.00%	500 VA
HVAC	74566 VA	100.00%	74566 VA
Power	9583 VA	100.00%	9583 VA

Panel Totals	
Connected Load:	104 kVA
Connected Current:	289 A
Demand Load:	103 kVA
Demand Current:	287 A

Notes:
1. PROVIDE LOCKABLE CIRCUIT BREAKER.

ISSUED FOR BID
DATE: 08/07/2026

PENNONI ASSOCIATES INC.
1900 Market Street, Suite 300
Philadelphia, PA 19103
T 215.222.3000 F 215.222.3588

ALL DIMENSIONS MUST BE VERIFIED BY CONTRACTOR AND OWNER MUST BE NOTIFIED OF ANY DISCREPANCIES BEFORE PROCEEDING WITH WORK

SPFLD00611 - LIBRARY BUILDING RENOVATIONS
70 POWELL ROAD, SPRINGFIELD, PA 19064

ELECTRICAL PANEL SCHEDULES I

SPRINGFIELD TOWNSHIP
50 POWELL ROAD, SPRINGFIELD, PA 19064

NO.	DATE	REVISIONS	BY

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 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 ASSOCIATE; AND OWNER SHALL INDEMNIFY AND HOLD HARMLESS PENNONI ASSOCIATES FROM ALL CLAIMS, DAMAGES, LOSSES AND EXPENSES ARISING OUT OF OR RESULTING THEREFROM.

PROJECT	SPFLD00611
DATE	08/07/2026
DRAWING SCALE	AS NOTED
DRAWN BY	SJP
APPROVED BY	JPR

E501

8/7/2026 2:21:14 PM Autodesk Docs://SPFLD00611 - Library Building Renovation/SPFLD00611 - LIBRARY BUILDING RENOVATIONS25.rvt

Panelboard: (N) PP-2

Location: UTILITY / ELECTRICAL 104
Supply: (N) MDP
Mounting: Surface
Enclosure: NEMA 1

Voltage: 208 V, 3Ø, 4W
Bus Rating: 225 A
Neutral: 100%
Feed-Thru Lugs: No
Features & Modifications: -

Mains Type: MLO
Mains Rating: 225 A
Mains FN/Note: -
SCCR: 65 kA

Ckt	Description	Wire Size	Trip (A)	Poles	FN/Note	Phase A Load (VA)	Phase B Load (VA)	Phase C Load (VA)	FN/Note	Poles	Trip (A)	Wire Size	Description	Ckt
1	(N) FCU-2-1, (N) FCU-2-2	2-#12, 1-#12, 1-#12	20	2		1352	360			1	20	1-#12, 1-#12, 1-#12	(N) RECEPTACLE OUTDOORS	2
3								1352	250			1	20	1-#12, 1-#12, 1-#12	(N) WATER FOUNTAIN	4
5	(N) FCU-2-3, (N) FCU-3-1, (N) FCU-3-2, (N) FCU-3-3	2-#12, 1-#12, 1-#12	20	2				1362	1248		2	20	2-#12, 1-#12, 1-#12	(N) CU-2-1	6
7						1362	1248								8
9	(N) EF-3, (N) EF-4	1-#12, 1-#12, 1-#12	20	1			396	108		1	20	1-#12, 1-#12, 1-#12	(N) DF-2	10
11	(N) RECEPTACLE ROOM 200	1-#12, 1-#12, 1-#12	20	1				1260	1800	1	20	1-#12, 1-#12, 1-#12	(N) MICROWAVE	12
13	(N) RECEPTACLE ROOM 215	1-#12, 1-#12, 1-#12	20	1		1440	1500			1	20	1-#12, 1-#12, 1-#12	(N) FRIDGE	14
15	(N) RECEPTACLE ROOM 217	1-#12, 1-#12, 1-#12	20	1			540	1000		1	20	1-#12, 1-#12, 1-#12	(N) HEAT RECOVERY BOX	16
17	(N) RECEPTACLE ROOM 212	1-#12, 1-#12, 1-#12	20	1				720	1250	2	20	2-#12, 1-#12, 1-#12	(N) EB-1	18
19	(N) RECEPTACLE ROOM 211, 213	1-#12, 1-#12, 1-#12	20	1		1080	1250							20
21	(N) RECEPTACLE ROOM 204	1-#12, 1-#12, 1-#12	20	1			1440	360		1	20	1-#12, 1-#12, 1-#12	(N) RECEPTACLE ROOF	22
23	(N) RECEPTACLE ROOM 202 ZONE B	1-#12, 1-#12, 1-#12	20	1				1260	63	1	20	1-#12, 1-#12, 1-#12	(N) CONDENSATE PUMPS	24
25	(N) RECEPTACLE ROOM 202	1-#12, 1-#12, 1-#12	20	1		900	0			--	1	20	1-#12, 1-#12, 1-#12	SPARE	26
27	(N) RECEPTACLE ROOM 202	1-#12, 1-#12, 1-#12	20	1			900	0		--	1	20	1-#12, 1-#12, 1-#12	SPARE	28
29	(N) RECEPTACLE ROOM 202, 208, 210	1-#12, 1-#12, 1-#12	20	1				720	--	--	1	--	1-#12, 1-#12, 1-#12	SPACE	30
31	(N) RECEPTACLE ROOM 202	1-#12, 1-#12, 1-#12	20	1		1620	--			--	1	--	1-#12, 1-#12, 1-#12	SPACE	32
33	(N) COFFEE MACHINE	1-#12, 1-#12, 1-#12	20	1			1800	--		--	1	--	1-#12, 1-#12, 1-#12	SPACE	34
35	(N) RECEPTACLE CIRC. DESK	1-#12, 1-#12, 1-#12	20	1				1260	--	--	1	--	1-#12, 1-#12, 1-#12	SPACE	36
37	(N) RECEPTACLE OUTDOORS	1-#12, 1-#12, 1-#12	20	1		180	--			--	1	--	1-#12, 1-#12, 1-#12	SPACE	38
39	(N) RECEPTACLE ROOM 205, 206, 208, 209	1-#12, 1-#12, 1-#12	20	1			720	--		--	1	--	1-#12, 1-#12, 1-#12	SPACE	40
41	(N) RECEPTACLE ROOM 216	1-#12, 1-#12, 1-#12	20	1				180	--	--	1	--	1-#12, 1-#12, 1-#12	SPACE	42
					Connected Load:	12 kVA	9 kVA	11 kVA						
					Connected Current:	105 A	74 A	96 A						

Load Classification	Connected	Factor	Demand
Other	504 VA	100.00%	504 VA
Receptacle - General	16690 VA	79.96%	13345 VA
HVAC	7988 VA	100.00%	7988 VA
Electric Heat	2500 VA	125.00%	3125 VA
Power	4600 VA	100.00%	4600 VA

Panel Totals	
Connected Load:	32 kVA
Connected Current:	90 A
Demand Load:	30 kVA
Demand Current:	82 A

Notes:

Panelboard: (N) LP-1

Location: UTILITY / ELECTRICAL 104
Supply: (N) MDP
Mounting: Surface
Enclosure: NEMA 1

Voltage: 208 V, 3Ø, 4W
Bus Rating: 100 A
Neutral: 100%
Feed-Thru Lugs: No
Features & Modifications: -

Mains Type: MLO
Mains Rating: 100 A
Mains FN/Note: -
SCCR: 65 kA

Ckt	Description	Wire Size	Trip (A)	Poles	FN/Note	Phase A Load (VA)	Phase B Load (VA)	Phase C Load (VA)	FN/Note	Poles	Trip (A)	Wire Size	Description	Ckt
1	(N) LIGHTING ROOM 112	1-#12, 1-#12, 1-#12	20	1		382	--		--	1	--	1-#12, 1-#12, 1-#12	SPACE	2
3	(N) LIGHTING ROOM 113	1-#12, 1-#12, 1-#12	20	1			61	--	--	1	--	1-#12, 1-#12, 1-#12	SPACE	4
5	(N) LIGHTING ROOM 104	1-#12, 1-#12, 1-#12	20	1				114	--	--	1	--	1-#12, 1-#12, 1-#12	SPACE	6
7	(N) LIGHTING CIRCULATION DESK	1-#12, 1-#12, 1-#12	20	1		283	--		--	1	--	1-#12, 1-#12, 1-#12	SPACE	8
9	(N) LIGHTING LIBRARY	1-#12, 1-#12, 1-#12	20	1			1306	--	--	1	--	1-#12, 1-#12, 1-#12	SPACE	10
11	(N) LIGHTING ROOM 102	1-#12, 1-#12, 1-#12	20	1				31	--	--	1	--	1-#12, 1-#12, 1-#12	SPACE	12
13	(N) LIGHTING ROOM 103	1-#12, 1-#12, 1-#12	20	1		31	--		--	1	--	1-#12, 1-#12, 1-#12	SPACE	14
15	(N) LIGHTING ROOM 105	1-#12, 1-#12, 1-#12	20	1			114	--	--	1	--	1-#12, 1-#12, 1-#12	SPACE	16
17	(N) LIGHTING ROOM 110	1-#12, 1-#12, 1-#12	20	1				190	--	--	1	--	1-#12, 1-#12, 1-#12	SPACE	18
19	(N) LIGHTING ROOM 106	1-#12, 1-#12, 1-#12	20	1		61	--		--	1	--	1-#12, 1-#12, 1-#12	SPACE	20
21	(N) LIGHTING FIRST FLOOR EXIT SIGNAGE	1-#12, 1-#12, 1-#12	20	1			60	--	--	1	--	1-#12, 1-#12, 1-#12	SPACE	22
23	(N) LIGHTING ROOM 114	1-#12, 1-#12, 1-#12	20	1				76	--	--	1	--	1-#12, 1-#12, 1-#12	SPACE	24
25	(N) LIGHTING STAIR TOWER	1-#12, 1-#12, 1-#12	20	1		152	--		--	1	--	1-#12, 1-#12, 1-#12	SPACE	26
27	(E) SITE PARKING LIGHT	1-#12, 1-#12, 1-#12	20	1			1500	--	--	1	--	1-#12, 1-#12, 1-#12	SPACE	28
29	(E) SITE PARKING LIGHT	1-#12, 1-#12, 1-#12	20	1				1500	--	--	1	--	1-#12, 1-#12, 1-#12	SPACE	30
31	SPARE TO RECONNECT EXISTING LOAD	1-#12, 1-#12, 1-#12	20	1	--	0	--		--	1	--	1-#12, 1-#12, 1-#12	SPACE	32
33	SPARE TO RECONNECT EXISTING LOAD	1-#12, 1-#12, 1-#12	20	1	--		0	--	--	1	--	1-#12, 1-#12, 1-#12	SPACE	34
35	SPARE TO RECONNECT EXISTING LOAD	1-#12, 1-#12, 1-#12	20	1	--			0	--	--	1	--	1-#12, 1-#12, 1-#12	SPACE	36
37	SPARE TO RECONNECT EXISTING LOAD	1-#12, 1-#12, 1-#12	20	1	--	0	--		--	1	--	1-#12, 1-#12, 1-#12	SPACE	38
39	SPARE TO RECONNECT EXISTING LOAD	1-#12, 1-#12, 1-#12	20	1	--		0	--	--	1	--	1-#12, 1-#12, 1-#12	SPACE	40
41	SPARE TO RECONNECT EXISTING LOAD	1-#12, 1-#12, 1-#12	20	1	--			0	--	--	1	--	1-#12, 1-#12, 1-#12	SPACE	42
					Connected Load:	1 kVA	3 kVA	2 kVA						
					Connected Current:	8 A	27 A	17 A						

Load Classification	Connected	Factor	Demand
Lighting - Exterior	3000 VA	125.00%	3750 VA
Lighting	2861 VA	100.00%	2861 VA

Panel Totals	
Connected Load:	6 kVA
Connected Current:	16 A
Demand Load:	7 kVA
Demand Current:	18 A

Notes:

ISSUED FOR BID
DATE: 08/07/2026

PENNONI ASSOCIATES INC.
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SPFLD00611 - LIBRARY BUILDING RENOVATIONS
70 POWELL ROAD, SPRINGFIELD, PA 19064

ELECTRICAL PANEL SCHEDULES II

SPRINGFIELD TOWNSHIP
50 POWELL ROAD, SPRINGFIELD, PA 19064

NO.	DATE	REVISIONS	BY

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DATE	08/07/2026
DRAWING SCALE	AS NOTED
DRAWN BY	SJP
APPROVED BY	JPR

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Panelboard: (N) LP-2

Location: UTILITY / ELECTRICAL 104
Supply: (N) MDP
Mounting: Surface
Enclosure: NEMA 1

Voltage: 208 V, 3Ø, 4W
Bus Rating: 100 A
Neutral: 100%
Feed-Thru Lugs: No
Features & Modifications: -

Mains Type: MLO
Mains Rating: 100 A
Mains FN/Note: -
SCCR: 65 kA

Ckt	Description	Wire Size	Trip (A)	Poles	FN/Note	Phase A Load (VA)		Phase B Load (VA)		Phase C Load (VA)		FN/Note	Poles	Trip (A)	Wire Size	Description	Ckt
1	(N) LIGHTING CIRCULATION DESK &...	1-#12, 1-#12, 1-#12	20	1		850	--					--	1	--	1-#12, 1-#12, 1-#12	SPACE	2
3	(N) LIGHTING LIBRARY ZONE B	1-#12, 1-#12, 1-#12	20	1				649	--			--	1	--	1-#12, 1-#12, 1-#12	SPACE	4
5	(N) LIGHTING LIBRARY ZONE C	1-#12, 1-#12, 1-#12	20	1						526	--	--	1	--	1-#12, 1-#12, 1-#12	SPACE	6
7	(N) LIGHTING LIBRARY ZONE D	1-#12, 1-#12, 1-#12	20	1		186	--					--	1	--	1-#12, 1-#12, 1-#12	SPACE	8
9	(N) LIGHTING VESTIBULE	1-#12, 1-#12, 1-#12	20	1				38	--			--	1	--	1-#12, 1-#12, 1-#12	SPACE	10
11	(N) LIGHTING EXIT SIGNS	1-#12, 1-#12, 1-#12	20	1						43	--	--	1	--	1-#12, 1-#12, 1-#12	SPACE	12
13	(N) LIGHTING CORRIDOR	1-#12, 1-#12, 1-#12	20	1		31	--					--	1	--	1-#12, 1-#12, 1-#12	SPACE	14
15	(N) LIGHTING ROOM 204	1-#12, 1-#12, 1-#12	20	1				276	--			--	1	--	1-#12, 1-#12, 1-#12	SPACE	16
17	(N) LIGHTING ROOM 209	1-#12, 1-#12, 1-#12	20	1						38	--	--	1	--	1-#12, 1-#12, 1-#12	SPACE	18
19	(N) LIGHTING ROOM 208	1-#12, 1-#12, 1-#12	20	1		61	--					--	1	--	1-#12, 1-#12, 1-#12	SPACE	20
21	(N) LIGHTING ROOM 205	1-#12, 1-#12, 1-#12	20	1				31	--			--	1	--	1-#12, 1-#12, 1-#12	SPACE	22
23	(N) LIGHTING ROOM 206	1-#12, 1-#12, 1-#12	20	1						31	--	--	1	--	1-#12, 1-#12, 1-#12	SPACE	24
25	(N) LIGHTING ROOM 211	1-#12, 1-#12, 1-#12	20	1		61	--					--	1	--	1-#12, 1-#12, 1-#12	SPACE	26
27	(N) LIGHTING ROOM 213	1-#12, 1-#12, 1-#12	20	1				31	--			--	1	--	1-#12, 1-#12, 1-#12	SPACE	28
29	(N) LIGHTING ROOM 212	1-#12, 1-#12, 1-#12	20	1						92	--	--	1	--	1-#12, 1-#12, 1-#12	SPACE	30
31	(N) LIGHTING ROOM 215	1-#12, 1-#12, 1-#12	20	1		122	--					--	1	--	1-#12, 1-#12, 1-#12	SPACE	32
33	(N) LIGHTING ROOM 217	1-#12, 1-#12, 1-#12	20	1				61	--			--	1	--	1-#12, 1-#12, 1-#12	SPACE	34
35	(N) LIGHTING ROOM 216	1-#12, 1-#12, 1-#12	20	1						31	--	--	1	--	1-#12, 1-#12, 1-#12	SPACE	36
37	SPARE	1-#12, 1-#12, 1-#12	20	1	--	0	--					--	1	--	1-#12, 1-#12, 1-#12	SPACE	38
39	SPARE	1-#12, 1-#12, 1-#12	20	1	--			0	--			--	1	--	1-#12, 1-#12, 1-#12	SPACE	40
41	SPARE	1-#12, 1-#12, 1-#12	20	1	--					0	--	--	1	--	1-#12, 1-#12, 1-#12	SPACE	42
					Connected Load:	1 kVA		1 kVA		1 kVA							
					Connected Current:	11 A		9 A		6 A							

Load Classification	Connected	Factor	Demand
Lighting	3156 VA	100.00%	3156 VA

Panel Totals	
Connected Load:	3 kVA
Connected Current:	9 A
Demand Load:	3 kVA
Demand Current:	9 A

Notes:

MECHANICAL AND ELECTRICAL SCHEDULE

UNIT NO.	ELECTRICAL DATA						DISCONNECT TYPE	FEEDER FROM	DISCONNECT BY (MECH CONTRACTOR -MC, ELEC CONTRACTOR -...
	KW INPUT/ OTHER	VOLTS	PHASE	HZ	MCA	MOCP			
B-1		120	1	60	15	30	NEMA 3		MC
B-2		120	1	60	15	30	NEMA 3		MC
P-1	1/3 HP	120	1	60			NEMA 3		MC
P-2	1 1/2 HP	120	1	60			NEMA 3		MC
P-3	1 1/2 HP	120	1	60			NEMA 3		MC
CU-1		208	3	60	63.6	70	NEMA 4		MC
CU-2		208	3	60	72.2	80	NEMA 4		MC
CU-3		208	1	60	32.9	40	NEMA 4		MC
CU-2-1		208	1	60	12	15	NEMA 4		MC
ERV-1		208	3	60	35	60	NEMA 3		MC
FCU-1-1		208	1	60	5.2	15	NEMA 3		MC
FCU-1-2		208	1	60	5.2	15	NEMA 3		MC
FCU-1-3		208	1	60	5.2	15	NEMA 3		MC
FCU-2-1		208	1	60	6.5	15	NEMA 3		MC
FCU-2-2		208	1	60	6.5	15	NEMA 3		MC
FCU-2-3		208	1	60	6.5	15	NEMA 3		MC
FCU-3-1		208	1	60	2.2	15	NEMA 3		MC
FCU-3-2		208	1	60	2.2	15	NEMA 3		MC
FCU-3-3		208	1	60	2.2	15	NEMA 3		MC
CUH-1	5 KW	208	1	60	25		INTEGRAL		MC
EB-1	2.5 KW	208	1	60	12		INTEGRAL		MC
EF-1		120	1	60	1.4	15	MOTOR SWITCH		MC
EF-2		120	1	60	1.4	15	MOTOR SWITCH		MC
EF-3		120	1	60	1.4	15	MOTOR SWITCH		MC
EF-4		120	1	60	1.9	15	NEMA 3		MC
DF-1		120	1	60	0.875	15	MOTOR SWITCH		MC
DF-2		120	1	60	0.875	15	MOTOR SWITCH		MC
HEAT RECOVERY BOX	500 W	120	1	60		20	NEMA 3		MC
HEAT RECOVERY BOX	500 W	120	1	60		20	MOTOR SWITCH		MC
VRF CONTROLS	500 W	120	1	60		20	MOTOR SWITCH		MC

ISSUED FOR BID
DATE: 08/07/2026

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70 POWELL ROAD, SPRINGFIELD, PA 19064

ELECTRICAL PANEL SCHEDULES III

SPRINGFIELD TOWNSHIP
50 POWELL ROAD, SPRINGFIELD, PA 19064

NO.	DATE	REVISIONS	BY

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DATE	08/07/2026
DRAWING SCALE	AS NOTED
DRAWN BY	SJP
APPROVED BY	JPR

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LIGHTING FIXTURE SCHEDULE

FIXTURE TYPE	QUANTITY	MANUFACTURER	CATALOG NO.	LUMENS	WATTAGE	VOLTAGE	COLOR TEMP.	MOUNTING	DESCRIPTION	NOTES
A	48	LITHONIA	CPX3P 2X2 ALO7HE SWW7 UVOLT M4	3048 LM	23.3W	120V	3500K	CEILING	2' X 2' LED FLAT PANEL FIXTURE, LAY-IN CEILING MOUNT, MEDIUM LUMEN OUTPUT	-
A-EM	24	LITHONIA	CPX3P 2X2 ALO7HE SWW7 UVOLT IE10WCP	1308 LM	10W	120V	3500K	CEILING	2' X 2' LED FLAT PANEL FIXTURE, LAY-IN CEILING MOUNT, MEDIUM LUMEN OUTPUT WITH INTEGRAL 10W EMERGENCY BATTERY PACK	-
B	8	LITHONIA	CPX3P 2X4 ALO8HE SWW7 UVOLT M2	4138 LM	30.5W	120V	3500K	CEILING	2' X 4' LED FLAT PANEL FIXTURE, LAY-IN CEILING MOUNT, LOW LUMEN OUTPUT	-
B-EM	13	LITHONIA	CPX3P 2X4 ALO8HE SWW7 UVOLT IE10WCP	1357 LM	10W	120V	3500K	CEILING	2' X 4' LED FLAT PANEL FIXTURE, LAY-IN CEILING MOUNT, LOW LUMEN OUTPUT WITH INTEGRAL 10W EMERGENCY BATTERY PACK	-
C	21	LITHONIA	CPX3P 2X4 ALO8HE SWW7 UVOLT M2	5046 LM	38.2W	120V	3500K	CEILING	2' X 4' LED FLAT PANEL FIXTURE, LAY-IN CEILING MOUNT, MEDIUM LUMEN OUTPUT	-
C-EM	11	LITHONIA	CPX3P 2X4 ALO8HE SWW7 UVOLT IE10WCP	1321 LM	10W	120V	3500K	CEILING	2' X 4' LED FLAT PANEL FIXTURE, LAY-IN CEILING MOUNT, MEDIUM LUMEN OUTPUT WITH INTEGRAL 10W EMERGENCY BATTERY PACK	-
D	5	LITHONIA	CPX3P 2X4 ALO8HE SWW7 UVOLT M2	6021 LM	46.0W	120V	3500K	CEILING	2' X 4' LED FLAT PANEL FIXTURE, LAY-IN CEILING MOUNT, HIGH LUMEN OUTPUT	-
D-EM	3	LITHONIA	CPX3P 2X4 ALO8HE SWW7 UVOLT IE10WCP	1309 LM	10W	120V	3500K	CEILING	2' X 4' LED FLAT PANEL FIXTURE, LAY-IN CEILING MOUNT, HIGH LUMEN OUTPUT WITH INTEGRAL 10W EMERGENCY BATTERY PACK	-
E	5	LITHONIA	CSS L48 5000LM MVOLT MIN10 ZT 35K 80CRI	5078 LM	38W	120V	3500K	WALL AND CEILING	4' LED STRIP LIGHT	WALL MOUNTED STAIRWELL FIXTURE.
E-EM	14	LITHONIA	CSS L48 5000LM MVOLT MIN10 ZT 35K 80CRI E10W	1350 LM	10W	120V	3500K	CEILING	4' LED STRIP LIGHT WITH INTEGRAL 10W EMERGENCY BATTERY PACK	
F	15	USG CEILING PLUS	BD2-6-35	2514 LM	35.4	120V	3500K	CEILING	6' BAFFLES WITH INTEGRATED LED STRIP	FACTORY-INSTALLED, FULLY INTEGRATED DIMMABLE LED LIGHTING FIXTURES.
F-EM	1	USG CEILING PLUS	BD2-6-35	2514 LM	35.4	120V	3500K	CEILING	6' BAFFLES WITH INTEGRATED LED STRIP	PROVIDE BODINE ELI-S-50 EMERGENCY LIGHTING INVERTER (OR APPROVED EQUAL) FOR 90-MINUTE EMERGENCY OPERATION UPON LOSS OF NORMAL POWER. INSTALL PER MANUFACTURER REQUIREMENTS.
G	10	USG CEILING PLUS	BD2-8-35	3352 LM	47.2	120V	3500K	CEILING	8' BAFFLES WITH INTEGRATED LED STRIP	FACTORY-INSTALLED, FULLY INTEGRATED DIMMABLE LED LIGHTING FIXTURES.
G-EM	2	USG CEILING PLUS	BD2-8-35	3352 LM	47.2	120V	3500K	CEILING	8' BAFFLES WITH INTEGRATED LED STRIP	PROVIDE BODINE ELI-S-50 EMERGENCY LIGHTING INVERTER (OR APPROVED EQUAL) FOR 90-MINUTE EMERGENCY OPERATION UPON LOSS OF NORMAL POWER. INSTALL PER MANUFACTURER REQUIREMENTS.
H	10	GOTHAM ARCHITECTURAL LIGHTING	IVO4CYL PC D 15LM 35K 80CRI MD L9L14 16 P BR LS	1500 LM	15W	120V	3500K	CEILING	PENDANT LIGHT	-
V	1	LITHONIA	OLVTWM	600 LM	15W	120V	4000K	WALL	LED OUTDOOR RATED LUMINAIRE WITH FROSTED GLASS DIFFUSER	PROVIDE VAPORTIGHT FIXTURE FOR ELEVATOR PIT.
W	8	LITHONIA	ARC1 LED P2 40K MVOLT E4WH PE	2151 LM	17W	120V	4000K	WALL	ARCHITECTURAL WALL MOUNTED EXTERIOR LED FIXTURES	PROVIDE FIXTURE WITH 90 MIN EMERGENCY BATTERY PACK, BUTTON TYPE PHOTO CELL FOR DUSK TO DAWN OPERATION
X	-	LITHONIA	LQM	-	1.5W	120V	-	-	RED EXIT SIGN	-

LIGHTING CONTROL SEQUENCE OF OPERATIONS

DEVICES:

OCC = OCCUPANCY SENSOR TYPE - PROIVIDE OCCUPANCY SENSOR(S) USING TECHNOLOGY INDICATED TO SERVE SPACE. PROVIDE TYPES AND QUANTITIES OF SENSORS AS NEEDED TO PROVIDE COVERAGE OVER A MINIMUM OF 90% OF SPACE SERVED. PROVIDE TYPES AND QUANTITIES OF POWER PACKS/LOAD CONTROLLERS AS NEEED TO CONTROL NUMBER OF
ZONES AS INDICATED ON PLANS. SENSORS SHALL BE CEILING MOUNTED UNLESS SPECIFICALLY INDICATED AS WALL MOUNTED SENSORS ON PLANS.
- **PIR** = PASSIVE INFARED
- **US** = ULTRASONIC/MICROPHONIC
- **DT** = DUAL TECHNOLOGY (PASSIVE INFARED AND ULTRASONIC/MICROPHONIC)
- **N** = NO OCCUPANCY SENSOR REQUIRED

PHOTO = DAYLIGHT HARVESTING PHOTOCELL - PROVIDE PHOTOCELL TO ENABLE DAYLIGHT HARVESTING. WHERE LOCATION(S) OF OCCUPANCY SENSOR(S) ARE APPROPRIATE, PHOTCELLS MAY BE INTEGRAL TO OCCUPANCY SENSOR(S).
- **Y** = SPACE SHALL INCLUDE PHOTOCELL(S) TO PROVIDE DAYLIGHT HARVESTING OF ZONE(S) AS INDICATED ON PLANS.
- **N** = NO PHOTOCELL REQUIRED

NETWORK = NETWORK CONNECTION TO SYSTEM HEAD-END - PROVIDE LOW VOLTAGE CABLING AS REQUIRED TO CONNECT SPACE TO SYSTEM HEAD-END, ALLOWING FOR SCHEDULED CONTROL FROM SYSTEM TIME CLOCK, REMOTE CONTROL AND MONITORING, AND REMOTE PROGRAMMING.
- **Y** = SPACE SHALL BE CONNECTED TO SYSTEM HEAD-END
- **N** = CONNECTION TO SYSTEM HEAD-END NOT REQUIRED

UL924 = EGRESS LIGHTING WITHIN SPACE SHALL BE CONTROLLED ALONG WITH SPACE LIGHTING PER SEQUENCE OF OPERATIONS. PROVIDE UL924 RELAY PER SPECIFICATIONS FOR CODE REQUIRED OVERRIDE CONTROL OF CONTROLLED EGRESS LIGHTING. WHERE MULTIPLE LIGHTING BRANCH CIRCUITS SERVE THE SAME CONTROL ZONE, PROVIDE QUANTITY OF
RELAYS AS REQUIRED TO ACCOMODATE ZONES/CIRCUITS SERVED.
- **Y** = UL924 RELAY REQUIRED
- **N** = UL924 RELAY NOT REQUIRED (EITHER NO EGRESS LIGHTING OR EGRESS LIGHTING IS 24 HOUR)

SPACE TYPE	TAG	DEVICES				SEQUENCE OF OPERATIONS
		OCC	PHOTO	NETWORK	UL924	
CORRIDOR	COR	DT	N	Y	Y	SCHEDULE ON HOURS: LIGHTS ON FROM 6 AM TO 8 PM SCHEDULE OFF HOURS: LIGHTS OFF FROM 8PM TO 6AM AUTOMATIC ON (DURING SCHEDULE OFF HOURS): UPON OCCUPANCY DETECTION, LIGHTS ON AUTOMATIC OFF (DURING SCHEDULE OFF HOURS): 10 MINUTE DELAY, LIGHTS OFF
LIBRARY/ READING AREA	LIB	DT	Y	Y	Y	SCHEDULE ON: LIGHTS TO 100% AT 15 MINUTES PRIOR TO DUSK LIGHTING SETBACK: LIGHTS TO OFF AT 9:00 PM, RETURN TO 100% AT 5:00 AM SCHEDULE OFF: LIGHTS OFF AT 15 MINUTES AFTER DAWN
LOBBY/ATRIUM	LOB	DT	Y	Y	Y	SCHEDULE ON HOURS: LIGHTS ON FROM 6 AM TO 8 PM SCHEDULE OFF HOURS: LIGHTS OFF FROM 8PM TO 6AM AUTOMATIC ON (DURING SCHEDULE OFF HOURS): UPON OCCUPANCY DETECTION, LIGHTS ON AUTOMATIC OFF (DURING SCHEDULE OFF HOURS): 10 MINUTE DELAY, LIGHTS OFF
MECHANICAL/ ELECTRICAL	MEP	N	N	N	N	WALL DEVICE: ALLOW FOR ON/OFF CONTROL NO AUTOMATIC LIGHTING CONTROLS IN THIS SPACE
OFFICE	OFF	DT	N	N	N	AUTOMATIC ON: UPON OCCUPANCY DETECTION, LIGHT AT CURRENT DIMMING LEVEL WALL DEVICE: ALLOW FOR ON/OFF CONTROL AND DIMMING FROM MIN TO MAX AUTOMATIC OFF: 5 MINUTE DELAY, LIGHTS OFF
OPEN OFFICE	OPN	DT	N	N	Y	AUTOMATIC ON: UPON OCCUPANCY DETECTION, LIGHTS TO 50% WALL DEVICE: ALLOW FOR LOCAL ON/OFF AND DIMMING OVERRIDE AUTOMATIC OFF: 15 MINUTE DELAY (ALL ZONES), LIGHTS OFF OPEN OFFICE: PROIVDE OCCUPANCY SENSOR COVERAGE AND SYSTEM PROGRAMMING AS NECESSARY TO MEET THE REQUIREMENTS OF IECC 2018 PART C405.2.1.3, REFER TO PLANS FOR DESIRED ZONING
PUBLIC RESTROOM	PUB	DT	N	N	N	AUTOMATIC ON: UPON OCCUPANCY DETECTION, LIGHTS ON WALL DEVICE: ALLOW FOR ON/OFF CONTROL AUTOMATIC OFF: 15 MINUTE DELAY, LIGHTS OFF
BREAK ROOM	BRK	DT	N	N	N	AUTOMATIC ON: UPON OCCUPANCY DETECTION, LIGHTS ON WALL DEVICE: ALLOW FOR ON/OFF CONTROL AUTOMATIC OFF: 15 MINUTE DELAY, LIGHTS OFF
SUPPORT / STORAGE	SUP	DT	N	N	N	AUTOMATIC ON: UPON OCCUPANCY DETECTION, LIGHTS ON WALL DEVICE: ALLOW FOR ON/OFF CONTROL AUTOMATIC OFF: 5 MINUTE DELAY, LIGHTS OFF
STAIR TOWER	STR	DT	N	Y	Y	AUTOMATIC ON: UPON OCCUPANCY DETECTION, LIGHTS ON AT 100%. AUTOMATIC DIM: 15 MINUTE DELAY, LIGHTS TO 50%. EMERGENCY FIXTURES CONTROLLED THROUGH UL924 DEVICE.
VESTIBULE	VST	DT	N	Y	Y	SCHEDULE ON HOURS: LIGHTS ON FROM 6AM TO 8PM SCHEDULE OFF HOURS: LIGHTS OFF FROM 8PM TO 6AM SCHEDULE DIM HOURS: LIGHTS TO 50% FROM 15 MINUTES AFTER DAWN TO 15 MINUTES BEFORE DUSK AUTOMATIC ON (DURING SCHEDULE OFF HOURS):UPON OCCUPANCY DETECTION, LIGHTS ON AUTOMATIC OFF (DURING SCHEDULE OFF HOURS): 10 MINUTE DELAY, LIGHTS OFF
WORK	WRK	DT	N	N	N	AUTOMATIC ON: UPON OCCUPANCY DETECTION, LIGHTS ON WALL DEVICE: ALLOW FOR ON/OFF CONTROL AUTOMATIC OFF: 10 MINUTE DELAY, LIGHTS OFF

LIGHTING CONTROL SEQUENCE OF OPERATIONS NOTES

1. LIGHTING CONTROL SEQUENCE IS BASED ON 2021 IECC .
2. THE ABOVE IS BASED ON OPERATING HOURS OF 6 AM TO 8 PM. COORDINATE EXACT BUSINESS HOURS AND ASSOCIATED CONTROL SCHEDULES WITH OWNER.
3. PROVIDE DIMMING DOWN TO A 10% MINIMUM FOR ALL REQUIRED SPACES.

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ELECTRICAL LIGHTING SCHEDULES

SPRINGFIELD TOWNSHIP
50 POWELL ROAD, SPRINGFIELD, PA 19064

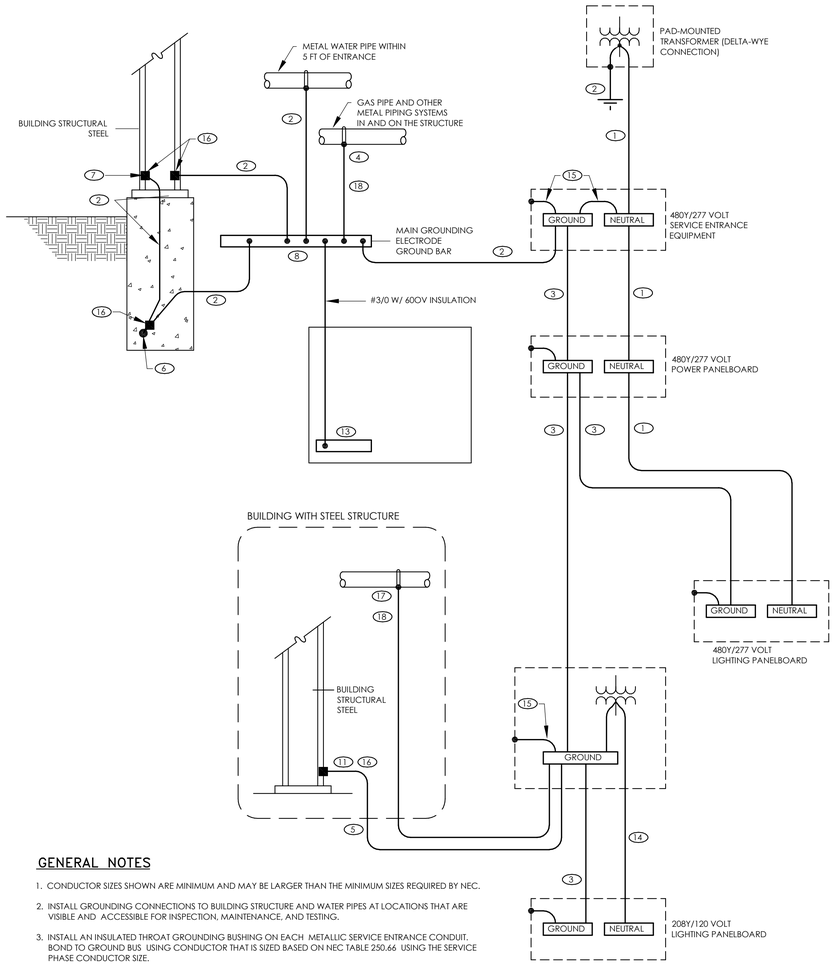
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DATE	08/07/2026
DRAWING SCALE	AS NOTED
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APPROVED BY	JPR

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KEYED NOTES

1. INSTALL GROUNDED (NEUTRAL) CONDUCTOR SAME SIZE AS THE LARGEST PHASE CONDUCTOR.
2. INSTALL GROUNDING ELECTRODE CONDUCTOR (#3/0), SIZED BASED ON NEC TABLE 250.66 USING THE SERVICE PHASE CONDUCTOR SIZE.
3. INSTALL EQUIPMENT GROUNDING CONDUCTOR SIZED BASED ON NEC TABLE 250.122 USING THE FEEDER OVERCURRENT DEVICE SIZE. REFER TO SLD DIAGRAM FOR EQUIPMENT GROUNDING CONDUCTOR WIRE SIZE.
4. BOND TO GAS PIPE ON THE BUILDING SIDE OF THE GAS METER.
5. INSTALL GROUNDING ELECTRODE CONDUCTOR THAT IS SIZED BASED ON NEC TABLE 250.66 USING THE SEPARATELY DERIVED SYSTEM PHASE CONDUCTOR SIZE. REFER TO SHEET E-601 FOR WIRE SIZES.
6. INSTALL A CONCRETE-ENCASED MAIN GROUNDING ELECTRODE IN THE BUILDING FOUNDATION AROUND THE ENTIRE PERIMETER OF THE BUILDING. LOCATE ELECTRODE IN THE BOTTOM ONE-THIRD OF THE FOUNDATION WITH AT LEAST 3 INCHES OF CONCRETE COVER. USE EITHER OF THE FOLLOWING MATERIALS FOR THE ELECTRODE:

   BARE COPPER CABLE NOT SMALLER THAN THE GROUNDING ELECTRODE CONDUCTOR REQUIRED BY THE NEC AND NOT SMALLER THAN 4 AWG.

   BARE OR GALVANIZED REBARS THAT ARE MADE ELECTRICALLY CONTINUOUS USING COPPER JUMPERS NOT SMALLER THAN THE NEC REQUIRED GROUNDING ELECTRODE CONDUCTOR AND NOT SMALLER THAN 4 AWG. USE REINFORCING BARS NOT SMALLER THAN THE FOLLOWING BASED ON THE TOTAL LENGTH OF THE INTERCONNECTED AND PARALLELED REBARS:

TOTAL LENGTH	MINIMUM REBAR SIZE
112 FT	1 3/8" (#11 BAR)
150 FT	1" (#8 BAR)
192 FT	3/4" (#6 BAR)
223 FT	5/8" (#5 BAR)
268 FT	1/2" (#4 BAR)

7. BOND EACH PERIMETER STRUCTURAL STEEL COLUMN TO THE CONCRETE-ENCASED MAIN GROUNDING ELECTRODE. USE COMPRESSION CONNECTORS THAT MEET IEEE 837 REQUIREMENTS OR USE EXOTHERMIC WELDS.
8. INSTALL A "MAIN GROUND ELECTRODE GROUND BAR" FOR SINGLE POINT GROUNDING. LOCATE AT AN ACCESSIBLE AND VISIBLE POINT NEAR THE SERVICE ENTRANCE EQUIPMENT. MAKE CONNECTIONS TO THE GROUND BAR USING TWO-HOLE COMPRESSION SPADE LUGS THAT MEET IEEE 837 REQUIREMENTS. LABEL EACH CONNECTION TO THE GROUND BAR.
11. USE THE "MAIN GROUNDING ELECTRODE GROUND BAR" INSTEAD OF BUILDING STRUCTURAL STEEL IF THE FIRST OVERCURRENT DEVICE FOR THE SEPARATELY DERIVED SYSTEM IS WITHIN 50 FEET OF THE "MAIN GROUNDING ELECTRODE GROUND BAR".
12. NOT USED.
13. INSTALL A COPPER GROUNDING BAR IN EACH TELECOMMUNICATIONS ROOM. CONNECT TO THE "MAIN GROUNDING ELECTRODE GROUND BAR" USING 600V INSULATED 3/0 AWG COPPER CABLE AND COMPRESSION SPADE LUGS.
14. INSTALL GROUNDED (NEUTRAL) CONDUCTOR THAT IS NOT LESS THAN THE PHASE CONDUCTOR AMPACITY. REFER TO SHEET E-601 FOR WIRE SIZE.
15. INSTALL BONDING CONDUCTOR THAT IS SIZED BASED ON NEC TABLE 250.66 USING THE SERVICE OR SEPARATELY-DERIVED SYSTEM PHASE CONDUCTOR SIZE. REFER TO SHEET E-601 FOR WIRE SIZES.
16. INSTALL IRREVERSIBLE COMPRESSION CONNECTOR WITH TAMPER-PROOF HARDWARE.
17. BOND TO METAL PIPING SYSTEMS IN THE AREA SERVED BY THE SEPARATELY DERIVED SYSTEM.
18. INSTALL BONDING JUMBER THAT IS SIZED BASED ON NEC TABLE 250.66 USING THE LARGEST SERVICE OR SEPARATELY DERIVED SYSTEM PHASE CONDUCTOR.

GENERAL NOTES

1. CONDUCTOR SIZES SHOWN ARE MINIMUM AND MAY BE LARGER THAN THE MINIMUM SIZES REQUIRED BY NEC.
2. INSTALL GROUNDING CONNECTIONS TO BUILDING STRUCTURE AND WATER PIPES AT LOCATIONS THAT ARE VISIBLE AND ACCESSIBLE FOR INSPECTION, MAINTENANCE, AND TESTING.
3. INSTALL AN INSULATED THROAT GROUNDING BUSHING ON EACH METALLIC SERVICE ENTRANCE CONDUIT. BOND TO GROUND BUS USING CONDUCTOR THAT IS SIZED BASED ON NEC TABLE 250.66 USING THE SERVICE PHASE CONDUCTOR SIZE.
4. INSTALL AN INSULATED THROAT GROUNDING BUSHING ON EACH METALLIC FEEDER CONDUIT. BOND TO GROUND BUS USING CONDUCTOR THAT IS SIZED BASED ON NEC TABLE 250.122 USING THE FEEDER CIRCUIT OVERCURRENT DEVICE SIZE OR THE SEPARATELY DERIVED SYSTEM OVERCURRENT DEVICE SIZE.
5. BOND HOT AND COLD WATER PIPING SYSTEMS.

1 / E505 GROUNDING SYSTEM DETAIL- TYPICAL
NOT TO SCALE

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ELECTRICAL DETAILS

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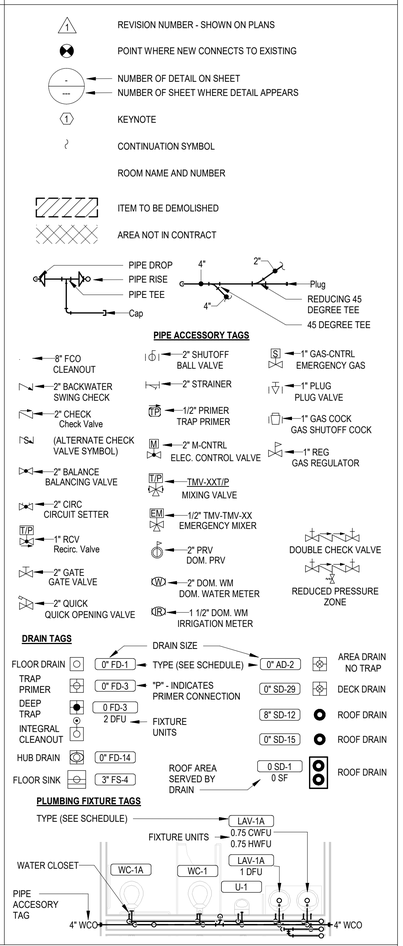
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PLUMBING SYMBOL LEGEND

CHWR	CHILLED WATER RETURN
CHWS	CHILLED WATER SUPPLY
CD	CONDENSATE DRAINAGE
CWR	CONDENSER WATER RETURN
CWS	CONDENSER WATER SUPPLY
GWR	GEOTHERMAL WATER RETURN
GWS	GEOTHERMAL WATER SUPPLY
HWR	HEATING WATER RETURN
HWS	HEATING WATER SUPPLY
G	NATURAL GAS
PG	PROPANE GAS
REF-L	REFRIGERANT-LIQUID
REF-S	REFRIGERANT-SUCTION
REF-HG	REFRIGERANT-HOT GAS
STM	STEAM
CDR	CONDENSATE RETURN
CWV	COMBINATION WASTE & VENT
CA	COMPRESSED AIR
CW	DOMESTIC COLD WATER
H-CW	HARD COLD WATER
S-CW	SOFT COLD WATER
F-CW	FILTERED COLD WATER
RO	REVERSE OSMOSIS WATER
HW	HOT WATER
HW 140°	HOT WATER 140°
HW-R	HOT WATER RECIRCULATION
HW-R 140°	HOT WATER RECIRCULATION 140°
GV	GREASE VENT
GW	GREASE WASTE
IW	INDIRECT WASTE
OV	OIL VENT
OW	OIL WASTE
PD	PUMP DISCHARGE
V	SANITARY VENT
SAN	SANITARY SEWER
SHWR	SOLAR HOT WATER RETURN
SHWS	SOLAR HOT WATER SUPPLY
SD	STORM DRAINAGE
OSD	OVERFLOW STORM DRAINAGE
2"	PIPE SIZE TAG (DIAMETER)
	ABOVE GROUND PIPING
1/8" / 12" SLOPE	PIPE SLOPE TAG
	BELOW GROUND PIPING
INVERT: -105'-1"	PIPE INVERT ELEVATION TAG
(E)	EXISTING PIPE TAG
	PIPING BEING DEMOLISHED



* NOTE *
ALL OF GENERAL NOTES ON THIS SHEET ARE TO BE APPLIED TO ALL OTHER DRAWINGS IN THIS SET.THE SYMBOLS AND ABBREVIATIONS SHOWN ON THIS SHEET MAY OR MAY NOT BE USED IN THIS SET OF DRAWINGS.

PLUMBING ABBREVIATIONS

Ø	ROUND
ABV	ABOVE
AC	AIR CONDITIONING
AD	AREA DRAIN
ADD	ADDENDUM
AFF	ABOVE FINISHED FLOOR
AFUE	ANNUAL FUEL UTILIZATION EFFICIENCY
ALT	ALTERNATE
AP	ACCESS PANEL
ARCH	ARCHITECT/ARCHITECTURAL
BFF	BELOW FINISHED FLOOR
BLW	BELOW
BTU	BRITISH THERMAL UNITS
BTUH	BRITISH THERMAL UNITS PER HOUR
CAP	CAPACITY
CB	CATCH BASIN
CFM	CUBIC FEET PER MINUTE
CLG	CEILING
CO	CLEAN OUT
CW	COLD WATER
D	DEGREE
DB	DRY BULB
DIA	DIAMETER
DN	DOWN
DW	DISTILLED WATER
EA	EACH
EAT	ENTERING AIR TEMPERATURE
ELEC	ELECTRICAL
EQUIP	EQUIPMENT
EWC	ELECTRIC WATER COOLER
EWT	ENTERING WATER TEMPERATURE
EA	EXHAUST AIR
EXIST	EXISTING
F	DEGREES FAHRENHEIT
FCO	FLOOR CLEAN OUT
FD	FLOOR DRAIN
FDC	FIRE DEPARTMENT CONNECTION
FL	FLOOR
FO	FUEL OIL
FOV	FUEL OIL VENT
FOR	FUEL OIL RETURN
FOS	FUEL OIL SUPPLY
FPM	FEET PER MINUTE
FS	FLOOR SINK
FT	FOOT/FEET
FTR	FIN TUBE RADIATION
GAL	GALLON
GF	GAS-FIRED
GC	GENERAL CONTRACTOR
GPM	GALLONS PER MINUTE
GW	GREASE WASTE
HB	HOSE BIB
HP	HORSE POWER
HTG	HEATING
HTR	HEATER
HW	HOT WATER
HYD	HYDRANT
ID	INDIRECT
IN	INCH
INV	INVERT
LB	POUND
LB/HR	POUNDS PER HOUR
LAT	LEAVING AIR TEMPERATURE
LP	LOW PRESSURE
LPG	LIQUEFIED PETROLEUM GAS
LVR	LOUVER
LWT	LEAVING WATER TEMPERATURE
M/A	MIXED AIR
MAX	MAXIMUM
MBH	ONE THOUSAND BTU PER HOUR
MCF	ONE THOUSAND CUBIC FEET
MD	MOTORIZED DAMPER
MECH	MECHANICAL
MFR	MANUFACTURER
MIN	MINIMUM
MISC	MISCELLANEOUS
MTR	MOTOR
MU/A	MAKE-UP/AIR
NC	NOISE CRITERIA
NC	NORMALLY CLOSED
NIC	NOT IN CONTRACT
NO	NUMBER
NO	NORMALLY OPEN
NTS	NOT TO SCALE
O	OXYGEN
O/A	OUTSIDE AIR
ORD	OVERFLOW ROOF DRAIN
PD	PRESSURE DROP
PIV	POST INDICATOR VALVE
PLBG	PLUMBING
PRESS	PRESSURE
PRV	PRESSURE REDUCING VALVE
PSI	POUNDS PER SQUARE INCH
PSIG	POUNDS PER SQUARE INCH GAUGE
PWR	POWER
R	DUCT RISER
R/A	RETURN AIR
RCP	RADIANT CEILING PANEL
RD	ROOF DRAIN
REC	RECESSED
RED	REDUCER
RH	RELATIVE HUMIDITY
RL/A	RELIEF AIR
RM	ROOM
RPM	REVOLUTIONS PER MINUTE
RW	RAIN WATER
SF	SQUARE FOOT
S/A	SUPPLY AIR
SAN	SANITARY
SF	SQUARE FOOT
SD	SMOKE DAMPER
SM	SURFACE MOUNT
SP	STANDPIPE
SP	STATIC PRESSURE
STM	STEAM
T	THERMOSTAT
TD	TEMPERATURE DROP
TDR	TRENCH DRAIN
TEMP	TEMPERATURE
TYP	TYPICAL
UG	UNDERGROUND
VAC	VACUUM
V	VENT
VAV	VARIABLE AIR VOLUME
VENT	VENTILATION
VTR	VENT THROUGH ROOF
W	WASTE
WB	WET BULB
WCO	WALL CLEAN OUT
WH	WALL HYDRANT

EQUIPMENT ABBREVIATIONS

AC	AIR CONDITIONING UNIT
ACCU	AIR COOLING CONDENSING UNIT
AHU	AIR HANDLING UNIT
AS	AIR SEPARATOR
B	BOILER
CH	CHILLER
CT	COOLING TOWER
CUH	CABINET UNIT HEATER
CHWP	CHILLED WATER PUMP
DBP	DOMESTIC WATER BOOSTER PUMP
DC	DUCT MOUNTED COIL
DCP	DOMESTIC WATER CIRCULATING PUMP
EF	EXHAUST FAN
EDC	ELECTRIC DUCT COIL
ET	EXPANSION TANK
EWH	ELECTRIC WATER HEATER
FCU	FAN COIL UNIT
FP	FIRE PUMP
GI	GREASE INTERCEPTOR
GRV	GRAVITY ROOF VENTILATOR
HWP	HEATING WATER PUMP
HRU	HEAT RECOVERY UNIT
PRV	POWER ROOF VENTILATOR
RE	RETURN/EXHAUST FAN
RTU	ROOFTOP UNIT
SP	SUMP PUMP
UH	UNIT HEATER
WH	WATER HEATER

GENERAL COMPLIANCE - PA

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

IBC	2021 INTERNATIONAL BUILDING CODE
IFGC	2021 INTERNATIONAL FUEL GAS CODE
IPC	2021 INTERNATIONAL PLUMBING CODE
ASTM	AMERICAN SOCIETY FOR TESTING MATERIALS
ANSI	AMERICAN NATIONAL STANDARDS INSTITUTE
UL	UNDERWRITER'S LABORATORIES, INC.
NFPA	NATIONAL FIRE PROTECTION ASSOCIATION
SMACNA	SHEET METAL AND AIR CONDITIONING CONTRACTOR'S NATIONAL ASSOCIATION
ASME	AMERICAN SOCIETY OF MECHANICAL ENGINEERS
AWWA	AMERICAN WATER WORKS ASSOCIATION
CISPI	CAST IRON SOIL PIPE
NSF	NATIONAL SANITATION FOUNDATION
MSS	MANUFACTURER'S STANDARDIZATION SOCIETY OF THE VALVE AND FITTING INDUSTRY
FM	FACTORY MUTUAL

PLUMBING SHEET LIST

Sheet No.	Sheet Name
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ISSUED FOR BID
DATE: 08/07/2026

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ALL DIMENSIONS MUST BE VERIFIED BY CONTRACTOR AND OWNER MUST BE NOTIFIED OF ANY DISCREPANCIES BEFORE PROCEEDING WITH WORK

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PLUMBING INDEX SHEET

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P001

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GENERAL NOTES:

1. SYMBOLS, ABBREVIATIONS, AND GENERAL NOTES INDICATED ON THIS DRAWING ARE TYPICAL. DRAWINGS MAY NOT INDICATE ALL SYMBOLS AND ABBREVIATIONS SHOWN ON THIS DRAWING.
2. GENERAL NOTES, SYMBOL LIST AND DETAILS ARE APPLICABLE TO ALL DRAWINGS.
3. PROVIDE SUPPLEMENTARY OR MISCELLANEOUS ITEMS, APPURTURANCES, DEVICES, AND MATERIALS OBVIOUSLY NECESSARY FOR A SOUND, SECURE, AND COMPLETE INSTALLATION.
4. ABIDE AND ENFORCE ALL SAFETY RULES AND REGULATIONS SET FORTH BY THE OWNER. ALL WORKERS AND SUPERVISORS MUST ATTAIN SAFETY TRAINING CLASSES (IF APPLICABLE). BE RESPONSIBLE TO FOLLOW ALL VERBAL INSTRUCTIONS GIVEN BY OWNERS REPRESENTATIVES.
5. 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.
6. 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. NO DEPARTURES SHALL BE MADE WITHOUT PRIOR APPROVAL OF THE ENGINEER AND OWNER.
7. VISIT THE SITE AND ADJOINING AREAS AND EXAMINE THE EXISTING CONDITIONS TO BECOME FAMILIAR WITH THEM AND TO DETERMINE THE DIFFICULTIES WHICH WILL AFFECT THE EXECUTION OF THE WORK OF THIS CONTRACT. THIS CONTRACTOR SHALL PERFORM THIS PRIOR TO THE SUBMISSION OF HIS PROPOSAL. SUBMISSION OF A PROPOSAL WILL BE CONSTRUED AS EVIDENCE THAT SUCH AN EXAMINATION HAS BEEN MADE AND LATER CLAIMS WILL NOT BE RECOGNIZED FOR EXTRA LABOR, EQUIPMENT OR MATERIALS REQUIRED BECAUSE OF DIFFICULTIES ENCOUNTERED WHICH COULD HAVE BEEN FORESEEN HAD SUCH AN EXAMINATION BEEN MADE.
8. 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.
9. 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.
10. 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.
11. SCHEDULE WORK IN ACCORDANCE WITH THE CONSTRUCTION SCHEDULE SO THAT ALL 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.
12. SECURE AND PAY ALL FEES, LICENSES, INSPECTIONS, AND PERMITS PERTAINING TO THE CONTRACT. SUBMIT TO OWNER DUPLICATE CERTIFICATES OF INSPECTION FROM APPROVED INSPECTION AGENCY.
13. ALL EQUIPMENT SHALL BE INSTALLED IN STRICT COMPLIANCE WITH THE MANUFACTURER'S WRITTEN INSTRUCTIONS.
14. BE RESPONSIBLE FOR WORKMEN'S IDENTIFICATION AND BADGING, SAFETY AND FIRE PROTECTION, BARRICADES, WARNING SIGNS, TRASH REMOVAL, CUTTING AND PATCHING.
15. 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.
16. PROVIDE LABOR TO RECEIVE, UNLOAD, STORE, PROTECT, AND TRANSFER TO POINT OF INSTALLATION FOR ALL FURNISHED ITEMS.
17. 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.
18. BE RESPONSIBLE FOR ALL SLAB OPENINGS, WALL OPENINGS, BEAM PENETRATIONS, AND CORING AS IT RELATES TO HIS WORK. SUBMIT SIZE AND LOCATION FOR REVIEW AND APPROVAL.
19. ALL EXTERIOR WALL OPENINGS SHALL BE SLEEVED, PROPERLY CAULKED, AND SEALED WITH A HIGH QUALITY SEALANT TO PREVENT INFILTRATION OF MOISTURE AND OUTSIDE AIR.
20. COORDINATE ROOF PENETRATIONS WITH WORK OF OTHER SECTIONS AND WITH FLASHING REQUIREMENTS. CONTRACTOR TO NOTIFY OWNER PRIOR TO STARTING WORK TO VERIFY COMPLIANCE WITH BOND AND WARRANTY OF EXISTING ROOF.
21. RESTORE EXISTING SYSTEMS, DEVICES, FINISHED, ETC. DAMAGED OR ALTERED BY WORK TO ACCEPTABLE CONDITIONS AS DETERMINED BY THE OWNER, ARCHITECT, AND/OR ENGINEER. EXISTING SYSTEMS AND SERVICES THAT ARE TEMPORARILY DISCONNECTED BUT ARE TO REMAIN IN USE SHALL BE PERMANENTLY RECONNECTED AND RETURNED TO PROPER OPERATION.
22. SUBMIT A SCHEDULE OF SUBMITTALS PRIOR TO SUBMITTING ANY SHOP DRAWINGS, ETC. FOR THIS PROJECT, INCLUDING THE ANTICIPATED DATE OF EACH SUBMISSION. CONTRACTORS SHALL SUBMIT 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 ALL PIPING AND DUCTWORK FIELD INSTALLATION DRAWINGS FOR EACH SYSTEM TO BE INSTALLED. ANY WORK INSTALLED OR EQUIPMENT PURCHASED PRIOR TO RECEIPT OF ENGINEER APPROVED SHOP DRAWINGS THAT REQUIRES CHANGES SHALL BE REPLACED AT CONTRACTOR'S EXPENSE.
23. SUBMIT CATALOG INFORMATION, FACTORY ASSEMBLY DRAWINGS AND FIELD INSTALLATION DRAWINGS AS REQUIRED FOR A COMPLETE EXPLANATION AND DESCRIPTION OF ALL ITEMS TO BE PROVIDED. REVIEW AND APPROVE ALL SHOP DRAWINGS. NO SUBMISSION WILL BE ACCEPTED WITHOUT THE SIGNED APPROVAL OF THE CONTRACTOR. CHECK AND VERIFY ALL FIELD MEASUREMENTS.
24. UPON COMPLETION OF CONSTRUCTION, CONTRACTOR SHALL SUPPLY THE ENGINEER WITH ONE (1) COMPLETE SET OF AS-BUILT DRAWINGS IN ELECTRONIC AUTOCAD SOFTWARE FORMAT 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.
25. NOTIFY ENGINEER OF COMPLETION OF ALL WORK, INDICATING THE CONTRACTOR IS READY FOR THE ENGINEER TO PERFORM THE FINAL PUNCHLIST INSPECTION.
26. 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.
27. PREPARE FULLY DIMENSIONED FIELD SHEET METAL AND PIPING INSTALLATION DRAWINGS (MIN. 1/4"=1'-0" SCALE). 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.
28. INSTALLED SYSTEMS SHALL OPERATE UNDER ALL CONDITIONS OF LOAD WITHOUT SOUND OR VIBRATION THAT IS OBJECTABLE TO THE ENGINEER, ARCHITECT, OR THE OWNER. OBJECTABLE SOUND OR VIBRATION CONDITIONS DUE TO WORKMANSHIP SHALL BE CORRECTED IN APPROVED MANNER BY THE CONTRACTOR AT HIS EXPENSE.
29. UPON COMPLETION OF ALL UNFINISHED OR FAULTY WORK NOTED IN ENGINEER FINAL PUNCH LIST, 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.
30. 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 OF ALL SLAB AND WALL OPENINGS AND BEAM PENETRATIONS, AND COR DRILLING TO THE STRUCTURAL ENGINEER FOR REVIEW AND APPROVAL.
31. 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 TO OWNER.
32. REFERENCED MANUFACTURES DENOTES A MINIMUM ACCEPTABLE LEVEL OF QUALITY AND IS NOT INTENDED TO PREVENT SUBMISSION OF EQUIVALENT EQUIPMENT.
33. ALL WORK BEING INSTALLED IN AIR PLENUM SPACES MUST BE INSTALLED WITH PLENUM RATED MATERIAL. ANY EXISTING NON-PLENUM RATED PLUMBING PIPE LOCATED WITHIN THESE PLENUM RATED AREAS SHALL BE WRAPPED WITH A PLENUM RATED PIPE WRAPPING MATERIAL.

PLUMBING NOTES:

1. COORDINATE ALL ADA FIXTURE LOCATIONS AND HEIGHTS WITH ARCHITECTURAL DRAWINGS.
2. ABIDE AND ENFORCE ALL SAFETY RULES AND REGULATIONS SET FOURTH BY THE OWNER. ALL WORKERS AND SUPERVISORS MUST ATTAIN SAFETY TRAINING CLASSES (IF APPLICABLE). BE RESPONSE TO FOLLOW ALL VERBAL INSTRUCTIONS GIVEN BY OWNERS REPRESENTATIVES.
3. 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 APPROVING AGENCY.
4. SYSTEM SHALL BE IN CONFORMANCE WITH ALL FEDERAL, STATE AND LOCAL REGULATIONS. CONFORM TO APPLICABLE BUILDING CODES AND THE OWNER'S INSURANCE AGENCY. PROCURE ALL LICENSES, PERMITS, CERTIFICATIONS, AND AGENCY APPROVALS PRIOR TO COMMENCING FABRICATION OR INSTALLATION. PROVIDE ALL REQUIRED DOCUMENTS, CALCULATIONS AND DRAWINGS.
5. 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.
6. 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.
7. PLUMBING SYSTEMS SHALL NOT BE LOCATED IN ELECTRICAL EQUIPMENT ROOMS, TRANSFORMER VAULT, ELECTRICAL CLOSETS, TELEX DATA ROOMS OR SIMILAR AREAS CONTAINING ELECTRICAL EQUIPMENT.
8. NO PLUMBING SYSTEMS SHALL PENETRATE INTO OR PASS THROUGH STAIRWAYS UNLESS IT IS REQUIRED BY CODE FOR SERVICING THE STAIRWAY.
9. 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.
10. PRIOR TO CONSTRUCTION, VERIFY FLOW, STATIC AND RESIDUAL PRESSURE BE PERFORMING A HYDRANT FLOW TEST OF THE EXISTING STREET MAIN AT THE POINT OF NEW CONNECTION OR AS CLOSE AS POSSIBLE. FURNISH AND INSTALL RP2 AND SET TO MAX. 80 PSI, IF BUILDING PRESSURE EXCEEDS 80 PSI.
11. COORDINATE ALL BELOW GRADE PLUMBING PIPING WITH FOUNDATION ELEVATIONS AND SITE UTILITY INVERTS. VERIFY EXISTING ELEVATIONS AND INVERTS PRIOR TO CONSTRUCTION.
12. 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.
13. PROVIDE FLUSH TYPE ACCESS DOORS OR PANELS FOR ALL VALVES OR APPARATUS LOCATED IN CHASES, WALLS, NON ACCESSIBLE CEILINGS OR FLOOR.
14. PROVIDE CLEANOUTS FOR ALL HORIZONTAL STORM AND SANITARY PIPING AT EVERY CHANGE IN DIRECTION AND AT THE BASE OF ALL WASTE STACKS.
15. PROVIDE PIPE IDENTIFICATION LABELS WITH DIRECTIONAL FLOW ARROWS ON ALL HORIZONTAL RUNS EVERY 20ft.
16. PROVIDE TRAP PRIMERS WITH 1/2" PIPING FOR ALL FLOOR DRAINS.
17. 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.
18. PROVIDE BACKFLOW PREVENTION DEVICES ON ALL WATER CONNECTIONS TO HVAC EQUIPMENT AND IRRIGATION SYSTEMS.
19. 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.
20. PROVIDE SHUT-OFF VALVES WITHIN 2 FT. OF MAINS ON ALL BRANCH PIPING SERVING PLUMBING FIXTURES, EQUIPMENT OR CASEWORK, CONNECT SERVICE BRANCHES TO TOP OF MAINS.
21. PROVIDE DRAIN VALVES AND HOSE CONNECTIONS AT ALL LOW POINTS IN SERVICE PIPING SYSTEM.
22. SLOPE ALL PIPING IN 2 ½ " OR SMALLER AT ¼" PER FOOT. SLOPE ALL PIPING 3" OR LARGER AT 1/8" PER FOOT.
23. PROVIDE PIPING MATERIAL IN CONFORMANCE WITH THE SPECIFICATIONS AND THE PLUMBING CODE.
24. TEST ALL PLUMBING SYSTEMS IN CONFORMANCE WITH THE SPECIFICATIONS AND THE PLUMBING CODE.
25. DISINFECT DOMESTIC WATER SYSTEM IN CONFORMANCE WITH THE SPECIFICATIONS AND THE PLUMBING CODE.
26. INSTALL PLUMBING FIXTURES AND EQUIPMENT IN CONFORMANCE WITH MANUFACTURER'S RECOMMENDATIONS AND THE PLUMBING CODE.
27. PROVIDE PIPE SLEEVES THROUGH CONCRETE BEAMS WHERE REQUIRED, COORDINATE WITH THE ARCHITECTURAL AND STRUCTURAL DRAWINGS.
28. PROVIDE HEAT TRACING FOR PIPING LOCATED IN UNHEATED AREAS. PROVIDE 1" INSULATION AND JACKET AROUND ALL HEAT TRACING.
29. 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 DEMOLITION NOTES:

1. INCLUDE IN BID ALL COSTS ASSOCIATED WITH REMOVAL AND RELOCATION OF 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. REMOVE AND/OR RELOCATE ALL EXISTING WORK WHICH INTERFERES WITH THE NEW ARCHITECTURAL AND ELECTRICAL LAYOUTS IN FULL COORDINATION WITH THE ARCHITECT'S 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. 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 WORK.
4. ALL EXISTING SYSTEMS WHICH BECOME EXPOSED DURING THE ALTERATION WORK SHALL BE REMOVED AND REROUTED CONCEALED BEHIND FINISHED SURFACES.
5. ALL UNUSED OUTLET BOXES OR CAPPED FLOOR OUTLETS SHALL BE PROVIDED WITH MATCHING BLANK COVERS.
6. 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. FOLLOW CLOSELY THE ARCHITECT'S DEMOLITION AND PHASING SCHEDULE AND PROCEED IN THE SPECIFIED SEQUENCE.
7. 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 CONTRACTOR, AS DIRECTED BY THE OWNER. ITEMS OF SALVAGE SHALL BE CAREFULLY REMOVED AND STORED AT LOCATIONS DIRECTED BY THE OWNER.
8. 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.
9. 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.
10. PATCH AND PAINTING OF EXISTING WALLS TO REMAIN WHICH ARE AFFECTED BY ELECTRICAL DEMOLITION, ARE TO BE COMPLETED UNDER GENERAL CONSTRUCTION SPECIFICATION.
11. 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.
12. EXISTING WORK THAT IS TO BE REMOVED SHALL BE LEGALLY DISPOSED OF. ALL WORK TO BE DISPOSED OF SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL BE PROMPTLY REMOVED FROM THE SITE.

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DATE: 08/07/2026

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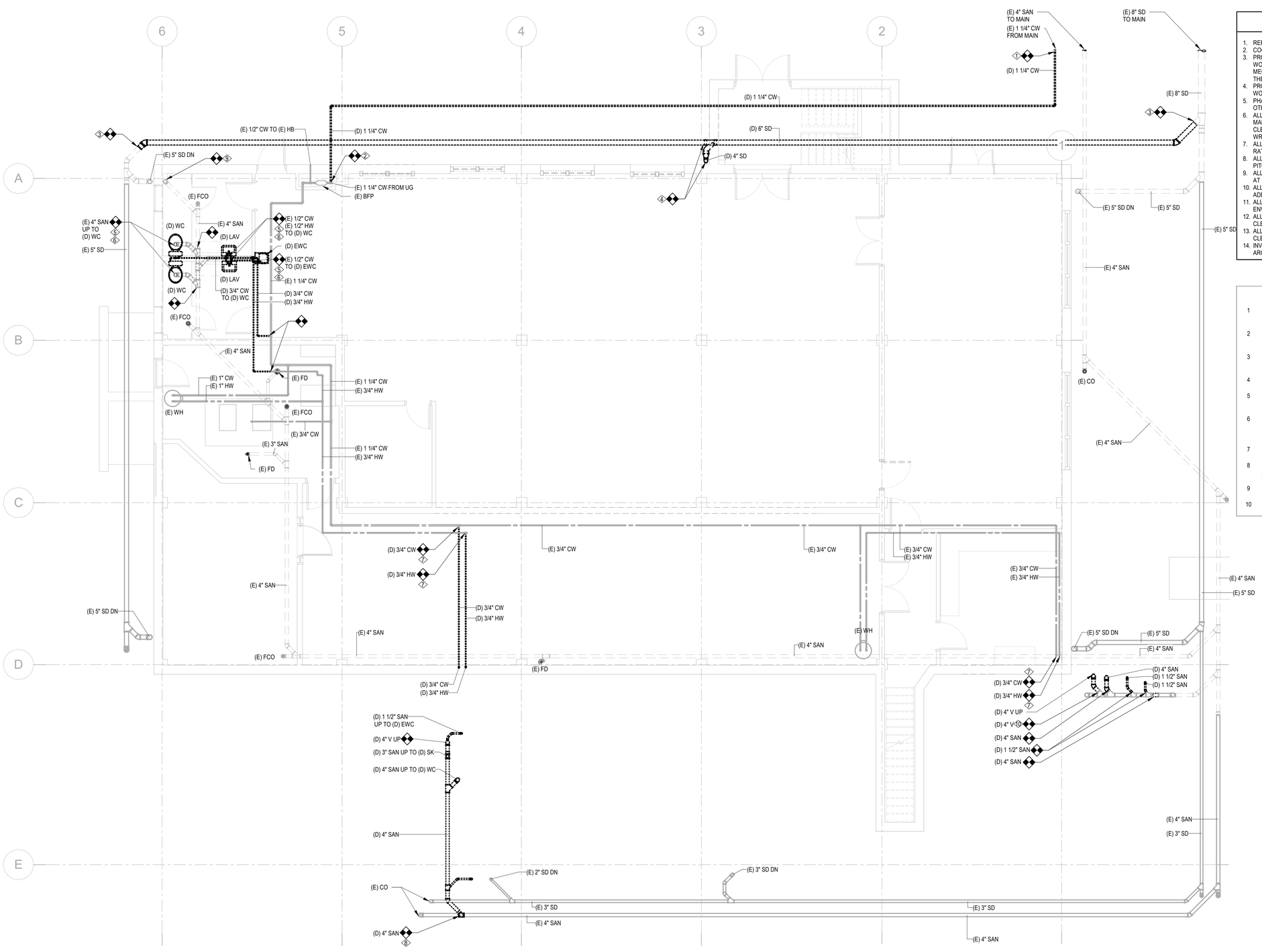
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1 P100 PLUMBING DEMOLITION PLAN - LOWER LEVEL
3/16" = 1'-0"

GENERAL SHEET NOTES

1. REFER TO P001 FOR PLUMBING NOTES, LEGENDS AND ABBREVIATIONS.
2. COORDINATE PLUMBING WORK WITH OTHER TRADES.
3. PROVIDE COORDINATED SHOP DRAWINGS PRIOR TO COMMENCEMENT OF WORK. SHOP DRAWINGS SHALL CAPTURE ALL STRUCTURAL, ARCHITECTURAL, MECHANICAL, ELECTRICAL, PLUMBING AND FIRE PROTECTION ELEMENTS OF THE AREA.
4. PROVIDE AS BUILT AUTOCAD DRAWINGS TO THE SDP UPON COMPLETION OF WORK.
5. PHASE CONSTRUCTION TO MAINTAIN FACILITY OPERATIONS. COORDINATE WITH OTHER TRADES AND BUILDING.
6. ALL EQUIPMENT SHALL BE INSTALLED IN STRICT ACCORDANCE WITH THE MANUFACTURER'S WRITTEN INSTRUCTIONS AND SHALL MAINTAIN ALL CLEARANCES (INSTALLATION AND MAINTENANCE) AS NOTED WITHIN THE WRITTEN INSTRUCTIONS.
7. ALL PENETRATIONS OF FIRE RATED CONSTRUCTION SHALL MAINTAIN THE FIRE RATING OF THE ASSEMBLY AS PER THE INTERNATIONAL BUILDING CODE.
8. ALL SANITARY AND STORM PIPING OF 4" IN SIZE OR GREATER SHALL BE PITCHED AT 1/8" SLOPE UNLESS OTHERWISE NOTED.
9. ALL SANITARY AND STORM PIPING OF 3" IN SIZE OR SMALLER SHALL BE PITCHED AT 1/4" SLOPE UNLESS OTHERWISE NOTED.
10. ALL VALVES AND CLEANOUTS SHALL BE INSTALLED AS ACCESSIBLE WITH ADEQUATELY SIZED ACCESS DOORS.
11. ALL DOMESTIC WATER PIPING SHALL BE INSTALLED WITHIN THE THERMAL ENVELOPE OF THE BUILDING.
12. ALL SANITARY AND STORM PIPING OF 4" IN SIZE OR SMALLER SHALL HAVE CLEANOUTS LOCATED AT INTERVALS OF NOT MORE THAN 50 FEET.
13. ALL SANITARY AND STORM PIPING OF 5" IN SIZE OR GREATER SHALL HAVE CLEANOUTS LOCATED AT INTERVALS OF NOT MORE THAN 100 FEET.
14. INVERT ELEVATIONS ARE BASED ON A FFE OF 780'. COORDINATE WITH SITE AND ARCHITECTURAL PLANS.

KEYNOTES

1	DEMOLITION OF EXISTING 1-1/4" CW MAIN SUPPLY TO LIBRARY, DETAILED ON SITE CIVIL PLAN CM0501. COORDINATE DEMOLITION ACTIVITIES WITH SITE CIVIL CONTRACTOR.
2	DISCONNECT AND REMOVE 1-1/4" CW PIPING FROM ELBOW AT WATER METER INLET TO BELOW FLOOR AND TO 5'-0" FROM BUILDING ENVELOPE. COORDINATE DEMOLITION ACTIVITIES WITH SITE CIVIL CONTRACTOR.
3	DEMOLITION OF EXISTING 6" SD MAIN SUPPLY TO LIBRARY, DETAILED ON SITE CIVIL PLAN CM0501. COORDINATE DEMOLITION ACTIVITIES WITH SITE CIVIL CONTRACTOR.
4	DEMOLISH STORM DRAIN GUTTER DOWNSPOUT BOOT TO DEMOLISHD 6" SD LINE.
5	DISCONNECT AND REMOVE EXISTING SANITARY PIPING BELOW THE FLOOR TO ASSOCIATED BATHROOM FIXTURES, INCLUDING BUT NOT LIMITED TO WATER CLOSETS, LAVATORIES, SINKS, ELECTRIC WATER COOLERS.
6	DISCONNECT AND REMOVE ALL EXISTING PIPING AND ACCESSORIES - INCLUDING BUT NOT LIMITED TO SANITARY, VENT, AND DOMESTIC HOT AND COLD WATER PIPING, VALVES, FITTINGS, PIPING INSULATION, SUPPORTS AND HANGERS - FROM THE ASSOCIATED PLUMBING FIXTURE.
7	DISCONNECT AND REMOVE 3/4" CW AND 3/4" HW BRANCH PIPING SUPPLYING FIXTURES AT THE LEVEL ABOVE.
8	DEMOLISH 4" SAN MAIN BRANCH PIPING AND ASSOCIATED SAN AND VENT PIPING ASSOCIATED WITH THE FIXTURES AT THE LEVEL ABOVE. TERMINATE DEMOLITON TO (E) 4" SAN MAIN AND CAP.
9	DEMOLISH ALL ABOVE-GROUND VENT PIPING ASSOCIATED WITH BATHROOM GROUP FIXTURES BACK TO (E) VENT STACK.
10	DEMOLISH 4" V VENT STACK UP TO UPPER LEVEL ABOVE. CAP VENT PIPING BELOW ROOF FOR RECONNECTION IN NEW WORK PHASE OF CONSTRUCTION.

ISSUED FOR BID
DATE: 08/07/2026

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ALL DIMENSIONS MUST BE VERIFIED BY CONTRACTOR AND OWNER MUST BE NOTIFIED OF ANY DISCREPANCIES BEFORE PROCEEDING WITH WORK

SPFLD00611 - LIBRARY BUILDING RENOVATIONS
70 POWELL ROAD, SPRINGFIELD, PA 19064

PLUMBING DEMOLITION PLAN - LOWER LEVEL

SPRINGFIELD TOWNSHIP
50 POWELL ROAD, SPRINGFIELD, PA 19064

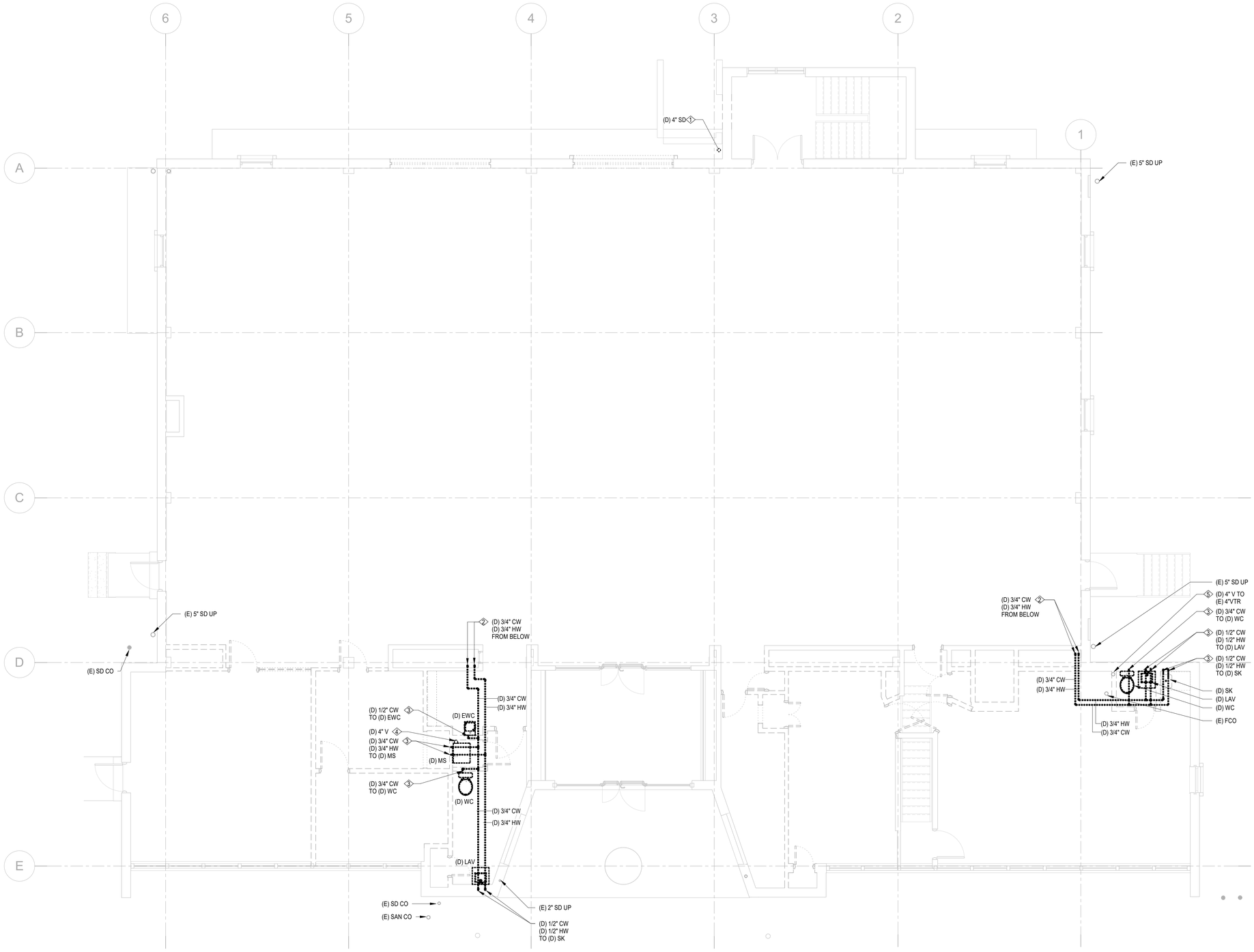
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DRAWN BY	KWJ
APPROVED BY	RHG

P100

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1 P101 PLUMBING DEMOLITION PLAN - UPPER LEVEL
3/16" = 1'-0"

GENERAL SHEET NOTES

1. REFER TO P001 FOR PLUMBING NOTES, LEGENDS AND ABBREVIATIONS.
2. COORDINATE PLUMBING WORK WITH OTHER TRADES.
3. PROVIDE COORDINATED SHOP DRAWINGS PRIOR TO COMMENCEMENT OF WORK. SHOP DRAWINGS SHALL CAPTURE ALL STRUCTURAL, ARCHITECTURAL, MECHANICAL, ELECTRICAL, PLUMBING AND FIRE PROTECTION ELEMENTS OF THE AREA.
4. PROVIDE AS BUILT AUTOCAD DRAWINGS TO THE SDP UPON COMPLETION OF WORK.
5. PHASE CONSTRUCTION TO MAINTAIN FACILITY OPERATIONS. COORDINATE WITH OTHER TRADES AND BUILDING.
6. ALL EQUIPMENT SHALL BE INSTALLED IN STRICT ACCORDANCE WITH THE MANUFACTURER'S WRITTEN INSTRUCTIONS AND SHALL MAINTAIN ALL CLEARANCES (INSTALLATION AND MAINTENANCE) AS NOTED WITHIN THE WRITTEN INSTRUCTIONS.
7. ALL PENETRATIONS OF FIRE RATED CONSTRUCTION SHALL MAINTAIN THE FIRE RATING OF THE ASSEMBLY AS PER THE INTERNATIONAL BUILDING CODE.
8. ALL SANITARY AND STORM PIPING OF 4" IN SIZE OR GREATER SHALL BE PITCHED AT 1/8" SLOPE UNLESS OTHERWISE NOTED.
9. ALL SANITARY AND STORM PIPING OF 3" IN SIZE OR SMALLER SHALL BE PITCHED AT 1/4" SLOPE UNLESS OTHERWISE NOTED.
10. ALL VALVES AND CLEANOUTS SHALL BE INSTALLED AS ACCESSIBLE WITH ADEQUATELY SIZED ACCESS DOORS.
11. ALL DOMESTIC WATER PIPING SHALL BE INSTALLED WITHIN THE THERMAL ENVELOPE OF THE BUILDING.
12. ALL SANITARY AND STORM PIPING OF 4" IN SIZE OR SMALLER SHALL HAVE CLEANOUTS LOCATED AT INTERVALS OF NOT MORE THAN 50 FEET.
13. ALL SANITARY AND STORM PIPING OF 5" IN SIZE OR GREATER SHALL HAVE CLEANOUTS LOCATED AT INTERVALS OF NOT MORE THAN 100 FEET.
14. INVERT ELEVATIONS ARE BASED ON A FFE OF 780'. COORDINATE WITH SITE AND ARCHITECTURAL PLANS.

KEYNOTES

1	DEMOLISH STORM DRAIN GUTTER TO DOWNSPOUT BOOT BELOW. COORDINATE DEMOLITION ACTIVITY SCOPE OF WORK WITH CONSTRUCTION MANAGER.
2	DISCONNECT AND REMOVE 3/4" CW AND 3/4" HW BRANCH PIPING DOWN TO LEVEL BELOW THAT SUPPLY FIXTURES ON UPPER LEVEL.
3	DISCONNECT AND REMOVE ALL EXISTING PIPING AND ACCESSORIES - INCLUDING BUT NOT LIMITED TO SANITARY, VENT, AND DOMESTIC HOT AND COLD WATER PIPING, VALVES, FITTINGS, PIPING INSULATION, SUPPORTS AND HANGERS - FROM THE ASSOCIATED PLUMBING FIXTURE.
4	DEMOLISH ALL ABOVE-GROUND VENT PIPING ASSOCIATED WITH BATHROOM GROUP FIXTURES BACK TO (E) VENT STACK.
5	DEMOLISH ALL ABOVE-GROUND VENT PIPING ASSOCIATED WITH BATHROOM GROUP FIXTURES BACK TO (E) VENT STACK. DEMOLISH 4" V UP FROM FLOOR AND CAP ABOVE CEILING LEVEL FOR RECONNECITON OF NEW VENT PIPING IN NEW WORK PHASE OF CONSTRUCTION.

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70 POWELL ROAD, SPRINGFIELD, PA 19064

PLUMBING DEMOLITION PLAN - UPPER LEVEL

SPRINGFIELD TOWNSHIP
50 POWELL ROAD, SPRINGFIELD, PA 19064

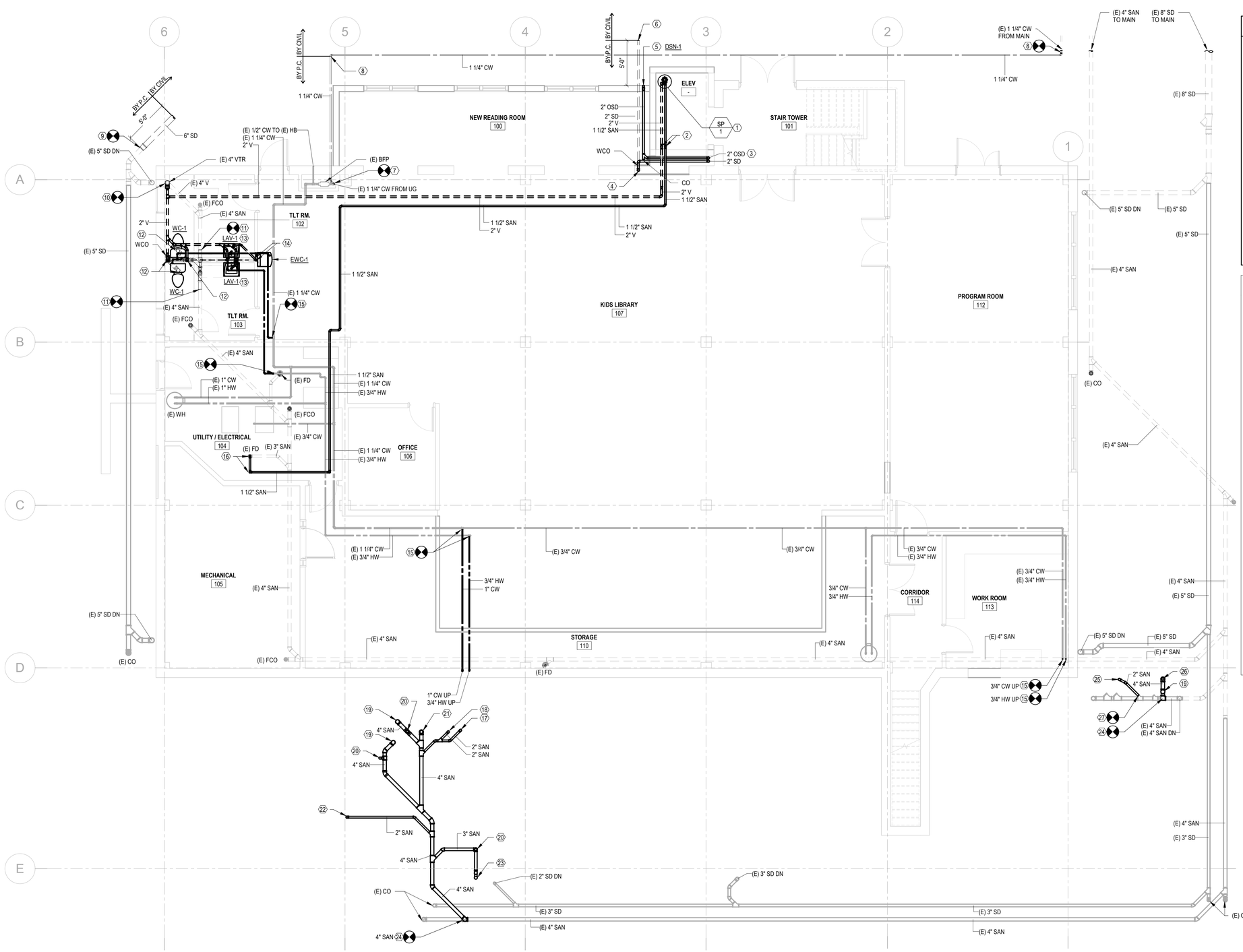
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DRAWN BY	KWJ
APPROVED BY	RHG

P101

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2 P200 PLUMBING PLAN - LOWER LEVEL
3/16" = 1'-0"

GENERAL SHEET NOTES

1. REFER TO P001 FOR PLUMBING NOTES, LEGENDS AND ABBREVIATIONS.
2. COORDINATE PLUMBING WORK WITH OTHER TRADES.
3. PROVIDE COORDINATED SHOP DRAWINGS PRIOR TO COMMENCEMENT OF WORK. SHOP DRAWINGS SHALL CAPTURE ALL STRUCTURAL, ARCHITECTURAL, MECHANICAL, ELECTRICAL, PLUMBING AND FIRE PROTECTION ELEMENTS OF THE AREA.
4. PROVIDE AS BUILT AUTOCAD DRAWINGS TO THE SDP UPON COMPLETION OF WORK.
5. PHASE CONSTRUCTION TO MAINTAIN FACILITY OPERATIONS. COORDINATE WITH OTHER TRADES AND BUILDING.
6. ALL EQUIPMENT SHALL BE INSTALLED IN STRICT ACCORDANCE WITH THE MANUFACTURER'S WRITTEN INSTRUCTIONS AND SHALL MAINTAIN ALL CLEARANCES (INSTALLATION AND MAINTENANCE) AS NOTED WITHIN THE WRITTEN INSTRUCTIONS.
7. ALL PENETRATIONS OF FIRE RATED CONSTRUCTION SHALL MAINTAIN THE FIRE RATING OF THE ASSEMBLY AS PER THE INTERNATIONAL BUILDING CODE.
8. ALL SANITARY AND STORM PIPING OF 4" IN SIZE OR GREATER SHALL BE PITCHED AT 1/8" SLOPE UNLESS OTHERWISE NOTED.
9. ALL SANITARY AND STORM PIPING OF 3" IN SIZE OR SMALLER SHALL BE PITCHED AT 1/4" SLOPE UNLESS OTHERWISE NOTED.
10. ALL VALVES AND CLEANOUTS SHALL BE INSTALLED AS ACCESSIBLE WITH ADEQUATELY SIZED ACCESS DOORS.
11. ALL DOMESTIC WATER PIPING SHALL BE INSTALLED WITHIN THE THERMAL ENVELOPE OF THE BUILDING.
12. ALL SANITARY AND STORM PIPING OF 4" IN SIZE OR SMALLER SHALL HAVE CLEANOUTS LOCATED AT INTERVALS OF NOT MORE THAN 50 FEET.
13. ALL SANITARY AND STORM PIPING OF 5" IN SIZE OR GREATER SHALL HAVE CLEANOUTS LOCATED AT INTERVALS OF NOT MORE THAN 100 FEET.
14. INVERT ELEVATIONS ARE BASED ON A FFE OF 780'. COORDINATE WITH SITE AND ARCHITECTURAL PLANS.

KEYNOTES

1. PROVIDE NEW SUMP PUMP SP-1 WITH OIL MINDER SYSTEM. PROVIDE NEW 2" V UP AND NEW 1-1/2" PUMPED SANITARY WASTE UP WITH CHECK VALVE AND SHUTOFF VALVE.
2. ROUTE NEW 2" V AND 1-1/2" PUMPED SAN IN ELEVATOR PIT AND UPALONG AND PENETRATE THROUGH ELEVATOR SHAFT WALL.
3. 2" OSD AND 2" SD DOWN FROM UPPER LEVEL ABOVE.
4. 2" SD DOWN TO BELOW FLOOR. PROVIDE WALL CLEANOUT AT BASE OF SD STACK.
5. 2" OSD DOWN IN EXTERIOR WALL TO DOWNSPOUT NOZZLE DSN-1. SPILL TO GRADE 1'-6" ABOVE FINISHED GRADE.
6. ROUTE NEW 2" SD MAIN TO RELOCATED SITE STORM DRAIN. COORDINATE ROUTING AND TIE IN WITH SITE CIVIL.
7. RECONNECT NEW 1-1/4" CW FROM RELOCATED 1-1/4" CW SUPPLY TO (E) BFP. COORDINATE ROUTING AND TIE POINT WITH SITE CIVIL.
8. ROUTE NEW 1-1/4" CW SUPPLY FROM RELOCATED 1-1/4" CW SUPPLY BY SITE CIVIL. COORDINATE ROUTING AND TIE POINT WITH SITE CIVIL.
9. ROUTE NEW RELOCATED 6" SD. COORDINATE ROUTING AND TIE POINT WITH SITE CIVIL.
10. CONNECT NEW VENT PIPING TO (E) 4" V UP TO 4" VTR.
11. RUN NEW 4" SANITARY DRAIN PIPING FOR NEW TOILET ROOMS AND CONENCT TO (E) 4" SANITARY MAIN.
12. ROUTE NEW 4" SAN BELOW FLOOR TO NEW WC-1 FIXTURE. PROVIDE 2" V UP IN WALL. ROUTE NEW 2" V WITH NEW VENT PIPING TO CONNECT TO (E) 4" V UP (E) TO 4" VTR.
13. PROVIDE NEW 1-1/2" SAN DRAIN WITH COMMON 2" V TO NEW LAV FIXTURE. ROUTE 2" SAN PIPING BELOW THE FLOOR TO UNDERGROUND. PROVIDE NEW 1/2" CW AND 1/2" HW SUPPLY TO NEW LAV-1. ROUTE NEW 2" V UP IN WALL. ROUTE NEW 2" V WITH NEW VENT PIPING TO CONNECT TO (E) 4" V UP (E) TO 4" VTR.
14. PROVIDE NEW 2" SAN DRAIN WITH 2" V. ROUTE 2" SAN DOWN TO BELOW FLOOR. PROVIDE NEW 1/2" CW SUPPLY TO NEW EWC-1. ROUTE NEW 2" V UP IN WALL. ROUTE NEW 2" V WITH NEW VENT PIPING TO CONNECT TO (E) 4" V UP (E) TO 4" VTR.
15. RUN AND CONNECT NEW 3/4" CW AND 3/4" HW TO EXISTING BRANCH PIPING.
16. ROUTE NEW 1-1/2" PUMPED SANITARY WASTE THROUGH MECHANICAL ROOM. ROUTE PIPING DOWN AND SPILL TO (E) FLOOR DRAIN.
17. ROUTE 2" SAN UP TO EWC-1 FIXTURE AT UPPER LEVEL ABOVE.
18. ROUTE 2" SAN UP TO LAV-1 FIXTURES AT UPPER LEVEL ABOVE.
19. ROUTE 4" SAN UP TO WC-1 FIXTURE AT UPPER LEVEL ABOVE.
20. ROUTE 2" V UP TO UPPER LEVEL ABOVE.
21. 3" SAN UP TO WCO IN TOILET ROOM ABOVE AT UPPER LEVEL.
22. ROUTE 2" SAN UP TO SK-1 FIXTURE AT UPPER LEVEL ABOVE.
23. ROUTE 3" SAN UP TO MS-1 FIXTURE AT UPPER LEVEL ABOVE.
24. ROUTE 3" SAN UP TO MS-1 FIXTURE AT UPPER LEVEL ABOVE.
25. ROUTE 2" SAN UP TO LAV-1 FIXTURE AT UPPER LEVEL ABOVE.
26. ROUTE 2" V UP TO UPPER LEVEL ABOVE AND ROUTE 4" SAN DOWN TO CONNECT INTO (E) SAN DRAIN.
27. CONNECT NEW 2" SAN TO (E) 4" SAN BUILDING DRAIN.

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SPRINGFIELD TOWNSHIP

PLUMBING PLAN - LOWER LEVEL

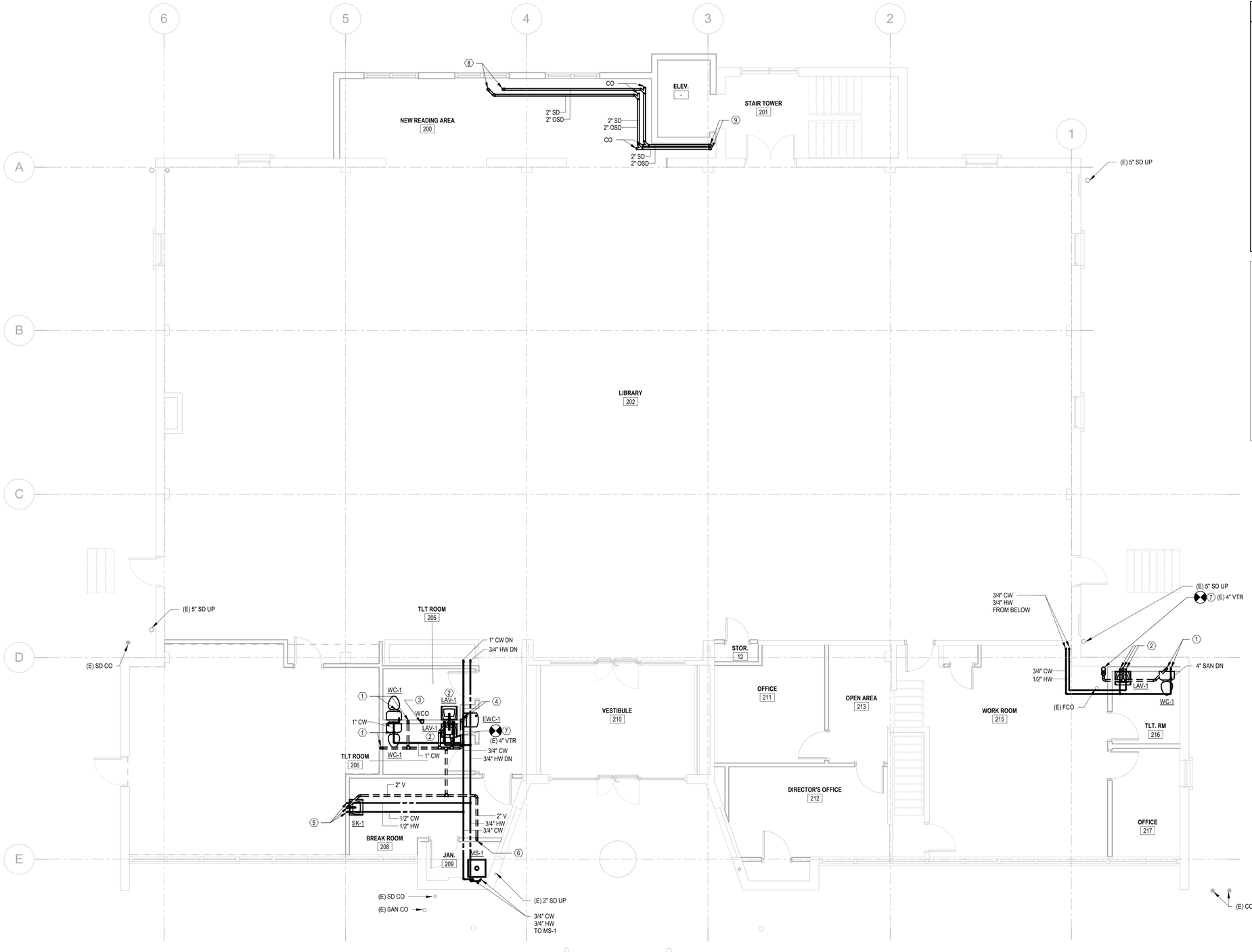
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DRAWN BY	KWJ
APPROVED BY	RHG

P200

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1 P201 PLUMBING PLAN - UPPER LEVEL
3/16" = 1'-0"

GENERAL SHEET NOTES

1. REFER TO P001 FOR PLUMBING NOTES, LEGENDS AND ABBREVIATIONS.
2. COORDINATE PLUMBING WORK WITH OTHER TRADES.
3. PROVIDE COORDINATED SHOP DRAWINGS PRIOR TO COMMENCEMENT OF WORK. SHOP DRAWINGS SHALL CAPTURE ALL STRUCTURAL, ARCHITECTURAL, MECHANICAL, ELECTRICAL, PLUMBING AND FIRE PROTECTION ELEMENTS OF THE AREA.
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9. ALL SANITARY AND STORM PIPING OF 3" IN SIZE OR SMALLER SHALL BE PITCHED AT 1/4" SLOPE UNLESS OTHERWISE NOTED.
10. ALL VALVES AND CLEANOUTS SHALL BE INSTALLED AS ACCESSIBLE WITH ADEQUATELY SIZED ACCESS DOORS.
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14. INVERT ELEVATIONS ARE BASED ON A FFE OF 780'. COORDINATE WITH SITE AND ARCHITECTURAL PLANS.

KEYNOTES

1. ROUTE NEW 4" SAN BELOW FLOOR TO NEW WC-1 FIXTURE. PROVIDE 2" V UP IN WALL. ROUTE NEW 2" V WITH NEW VENT PIPING TO CONNECT TO (E) 4" V UP (E) TO 4" VTR.
2. PROVIDE NEW 1-1/2" SAN DRAIN WITH COMMON 2" V TO NEW LAV FIXTURE. ROUTE 2" SAN PIPING BELOW THE FLOOR TO UNDERGROUND. PROVIDE NEW 1/2" CW AND 1/2" HW SUPPLY TO NEW LAV-1. ROUTE NEW 2" V UP IN WALL. ROUTE NEW 2" V WITH NEW VENT PIPING TO CONNECT TO (E) 4" V UP (E) TO 4" VTR.
3. 3" SAN UP TO WCO.
4. PROVIDE NEW 2" SAN DRAIN WITH 2" V. ROUTE 2" SAN DOWN TO BELOW FLOOR. PROVIDE NEW 1/2" CW SUPPLY TO NEW EWC-1. ROUTE NEW 2" V UP IN WALL. ROUTE NEW 2" V WITH NEW VENT PIPING TO CONNECT TO (E) 4" V UP (E) TO 4" VTR.
5. PROVIDE NEW 1-1/2" SAN DRAIN WITH 2" V TO NEW SK-1 SINK FIXTURE. ROUTE 2" SAN PIPING BELOW THE FLOOR TO UNDERGROUND. PROVIDE NEW 1/2" CW AND 1/2" HW SUPPLY TO NEW LAV-1. ROUTE NEW 2" V UP IN WALL. ROUTE NEW 2" V WITH NEW VENT PIPING TO CONNECT TO (E) 4" V UP (E) TO 4" VTR.
6. 2" V UP TO FROM LEVEL BELOW.
7. CONNECT NEW VENT PIPING TO (E) 4" V UP TO 4" VTR.
8. 2" SD AND 2" OSD UP TO RD-1 ON NEW ROOF.
9. 2" SD AND 2" OSD DOWN TO LOWER LEVEL.

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SPFLD00611 - LIBRARY BUILDING RENOVATIONS
70 POWELL ROAD, SPRINGFIELD, PA 19064

PLUMBING PLAN - UPPER LEVEL

SPRINGFIELD TOWNSHIP
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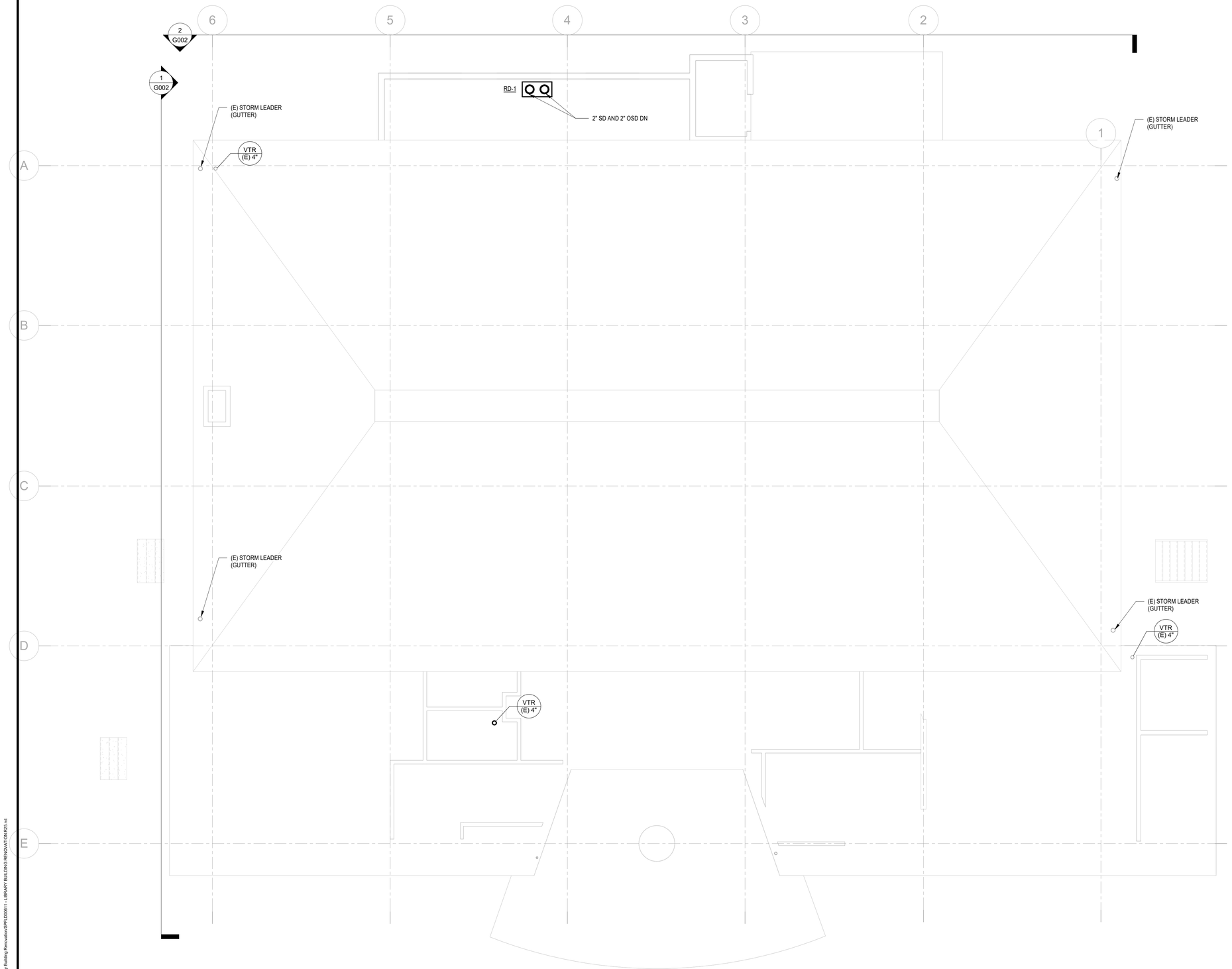
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1 / P202 PLUMBING PLAN - ROOF LEVEL
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GENERAL SHEET NOTES

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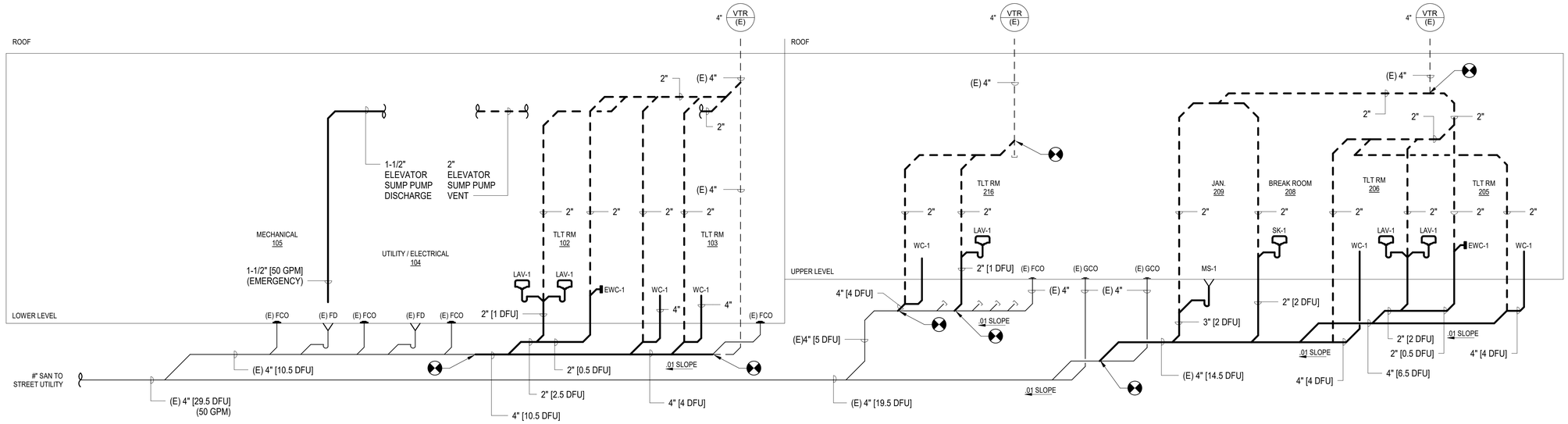
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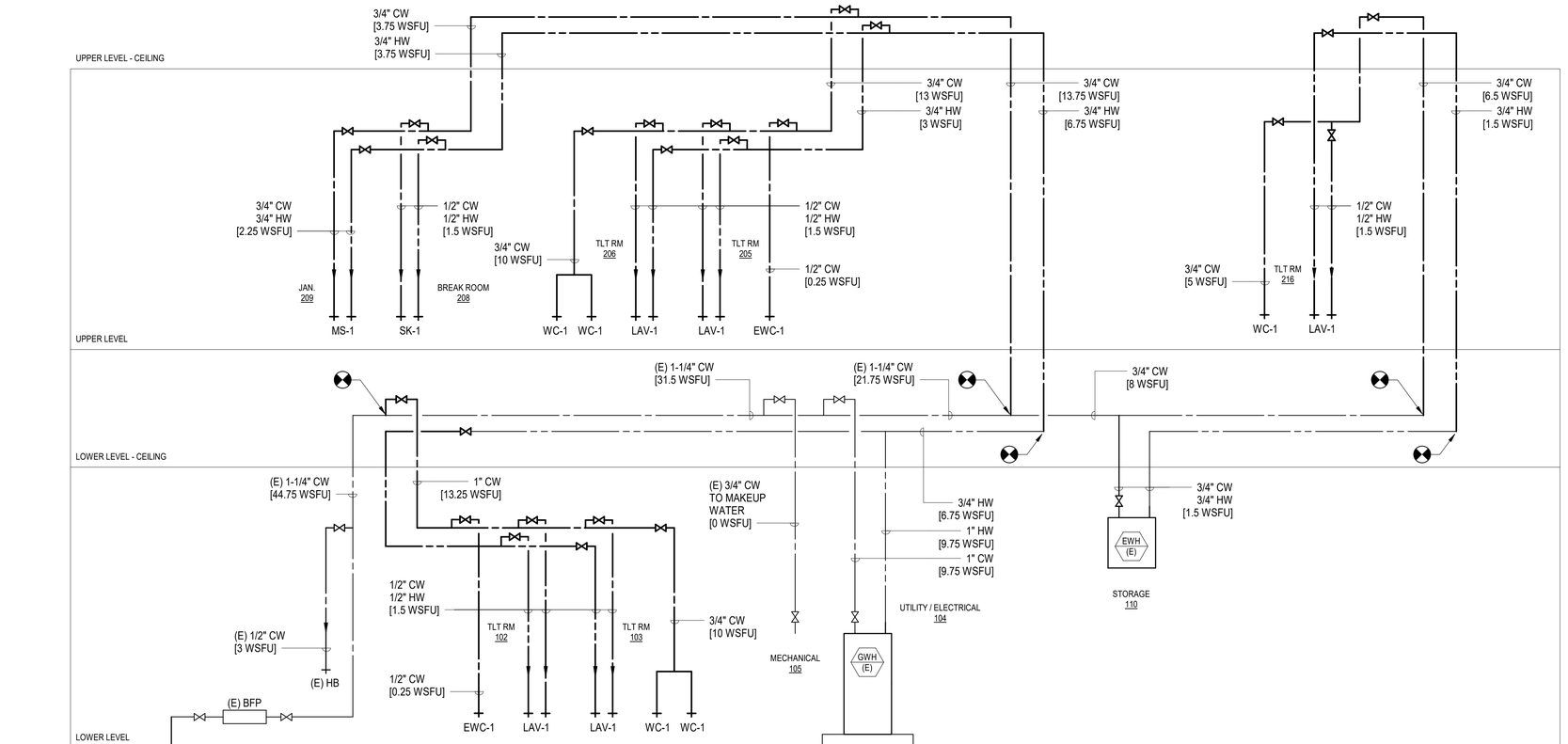
P202

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1 P300 SANITARY RISER DIAGRAM
12" = 1'-0"

NAME	DFU	MIN TRAP SIZE (IN)
MS-1	2	3"
WC-1	4	4"
LAV-1	1	1-1/2"
EWC-1	0.5	1-1/2"
SK-1	2	2"
FD	0	3"



2 P300 DOMESTIC WATER RISER DIAGRAM
12" = 1'-0"

GENERAL NOTES:
1. CONTRACTOR SHALL TEST WATER PRESSURE FROM STREET TO BUILDING. CONTRACTOR SHALL PROVIDE BOOSTER PUMP SET FOR BUILDING COLD WATER PIPING AS REQUIRED.
2. ALL DOMESTIC WATER SHALL BE INSTALLED WITHIN BUILDING THERMAL ENVELOPE.

NAME	WSFU		
	COLD	HOT	TOTAL
MS-1	2.25	2.25	3
WC-1	5	-	5
LAV-1	1.5	1.5	2
EWC-1	0.25	-	0.25
SK-1	1.5	1.5	2
HB	3	-	3

ISSUED FOR BID
DATE: 08/07/2026

Pennoni
PENNONI ASSOCIATES INC.
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ALL DIMENSIONS MUST BE VERIFIED BY CONTRACTOR AND OWNER MUST BE NOTIFIED OF ANY DISCREPANCIES BEFORE PROCEEDING WITH WORK

SPFLD00611 - LIBRARY BUILDING RENOVATIONS
70 POWELL ROAD, SPRINGFIELD, PA 19064

PLUMBING RISER DIAGRAMS

SPRINGFIELD TOWNSHIP
50 POWELL ROAD, SPRINGFIELD, PA 19064

NO.	DATE	REVISIONS	BY

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DRAWN BY	Author
APPROVED BY	Approver

P300

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PIPE SCHEDULE - DRAINAGE PIPE

SERVICE	SANITARY - GRAVITY		SANITARY - GRAVITY		STORM		STORM	
LOCATION	UNDERGROUND		ABOVE GROUND		UNDERGROUND		ABOVE GROUND	
PIPE MATERIALS	PIPE SIZE	MATERIAL/JOINTS	PIPE SIZE	MATERIAL/JOINTS	PIPE SIZE	MATERIAL/JOINTS	PIPE SIZE	MATERIAL/JOINTS
	DRAINAGE - 2'' &...	ASTM A74 SERVICE WEIGHT HUB & SPIGOT w/ ASTMB29 GASKETS	DRAINAGE - 2'' &...	ASTM A888 OR CISPI 310 CAST IRON SOIL PIPE - HUBLESS w/ STAINLESS STEEL CLAMPS	DRAINAGE - 2'' &...	ASTM A74 SERVICE WEIGHT HUB & SPIGOT w/ ASTMB29 GASKETS	DRAINAGE - 2'' &...	ASTM A888 OR CISPI 310 CAST IRON SOIL PIPE - HUBLESS w/ STAINLESS STEEL CLAMPS
	VENT 2'' AND UP	ASTM B306 DWV COPPER	VENT 2'' AND UP	ASTM B306 DWV COPPER	-	-	-	-
	-	-	-	-	-	-	-	-
PIPE MINIMUM INSULATION THICKNESS	PIPE SIZE	INSULATION THICKNESSS	PIPE SIZE	INSULATION THICKNESSS	PIPE SIZE	INSULATION THICKNESSS	PIPE SIZE	INSULATION THICKNESSS
	-	-	-	-	ALL SIZES	1''	ALL SIZES	1''
	-	-	-	-	-	-	-	-
INSULATION TYPE	-		-		-		-	
JACKET	-		-		NONE		NONE	
WEATHERPROOFING	-		-		NONE		NONE	
MAXIMUM K-VALUE	-		-		Kmax = 0.23 AT 60 DEG F MEAN TEMP		Kmax = 0.23 AT 60 DEG F MEAN TEMP	

NOTES:

1. CONTRACTOR SHALL FOLLOW ALL REQUIRED LISTINGS & MANUFACTURER'S INSTALLATION REQUIREMENTS IN ORDER TO MAINTAIN ALL WARRANTIES.

PIPE SCHEDULE - SERVICE PIPE

SERVICE	DOMESTIC COLD WATER		DOMESTIC COLD WATER		DOMESTIC COLD WATER		DOMESTIC HOT WATER	
LOCATION TEMPERATURE	ABOVEGROUND - INDOORS		BELOW GRADE - BELOW SLAB		BELOW GRADE - OUTSIDE SLAB		INDOORS	
	40-80 F		40-80 F		40-80 F		80-140 F	
PIPE MATERIALS	PIPE SIZE	MATERIAL/JOINTS	PIPE SIZE	MATERIAL/JOINTS	PIPE SIZE	MATERIAL/JOINTS	PIPE SIZE	MATERIAL/JOINTS
	1/2'' - 4''	ASTM B88 HARD-DRAWN TYPE L COPPER/ANSI B16.22 SOLDER 95/5TA SOLDERED	2'' - 4''	MECHANICAL JOINT, STANDARD OR COMPACT PATTERN DUCTILE IRON	2'' - 4''	MECHANICAL JOINT, STANDARD OR COMPACT PATTERN DUCTILE IRON	1/2'' - 4''	ASTM B88 HARD-DRAWN TYPE L COPPER/ANSI B16.22 SOLDER 95/5TA SOLDERED
	-	-	-	-	-	-	-	-
	-	-	-	-	-	-	-	-
MAX. OPERATING PRESSURE	150 PSIG		150 PSIG		150 PSIG		150 PSIG	
SEAMLESS/ERW	-		-		-		-	
-	-		-		-		-	
PIPE MINIMUM INSULATION THICKNESS	PIPE SIZE	INSULATION THICKNESSS	PIPE SIZE	INSULATION THICKNESSS	PIPE SIZE	INSULATION THICKNESSS	PIPE SIZE	INSULATION THICKNESSS
	3/4'' - 1-1/2''	1''	-	-	-	-	3/4'' - 1''	1''
	2'' - 4''	1''	-	-	-	-	2'' - 4''	1''
	-	-	-	-	-	-	-	-
INSULATION TYPE	MOLDED FIBERGLASS		-		-		MOLDED FIBERGLASS	
JACKET	ASJ		-		-		ASJ	
WEATHERPROOFING	-		0.016 ALUMINUM (OUTDOORS ONLY)		0.016 ALUMINUM (OUTDOORS ONLY)		-	
MAXIMUM K-VALUE	Kmax = 0.23 AT 60 DEG F MEAN TEMP		Kmax = 0.23 AT 60 DEG F MEAN TEMP		Kmax = 0.23 AT 60 DEG F MEAN TEMP		Kmax = 0.24 AT 120 DEG F MEAN TEMP	
PIPE VALVES	PIPE SIZE	ISOLATION/THROTTLE	PIPE SIZE	ISOLATION/THROTTLE	PIPE SIZE	ISOLATION/THROTTLE	PIPE SIZE	ISOLATION/THROTTLE
	3/4'' - 3''	BALL VALVE/BALL VALVE	2'' - 3''	BALL VALVE/BALL VALVE	2'' - 3''	BALL VALVE/BALL VALVE	3/4'' - 3''	BALL VALVE/BALL VALVE
	4'' & UP	BUTTERFLY VALVE/BALL VALVE	4''	BUTTERFLY VALVE/BALL VALVE	4''	BUTTERFLY VALVE/BALL VALVE	4'' & UP	BUTTERFLY VALVE/BALL VALVE
	-	-	-	-	-	-	-	-

NOTES:

1. CONTRACTOR SHALL FOLLOW ALL REQUIRED LISTINGS & MANUFACTURER'S INSTALLATION REQUIREMENTS IN ORDER TO MAINTAIN ALL WARRANTIES.

PLUMBING SPECIALITY EQUIPMENT SCHEDULE

NO.	DESCRIPTION	MANUFACTURER	MODEL	ACCESSORIES AND/OR NOTES
SA-1	SHOCK ABSORBER	JOSAM	#75001-S	SHOCK ABSORBER WITH WROUGHT COPPER SHELL, HYDRO-PNEUMATIC AIR CUSHION, TRIPLE O-RING SEALED PISTON, WROUGHT COPPER ADAPTER AND MALE THREADED CONNECTION.
FCO	FLOOR CLEANOUT	JAY R. SMITH	4020 SERIES	CAST IRON BODY WITH ROUND ADJUSTABLE SCORIATED SECURED ROUND NICKEL BRONZE TOP.
WCO	LINE CLEAN OUT	JAY R. SMITH	4710 SERIES	STAINLESS STEEL SHALLOW COVER WITH CENTER SCREW.
RD-1	ROOF DRAIN & OVERFLOW	ZURN	Z164	ROOF AND OVERFLOW DRAIN COMBINATION. DURA-COATED CAST IRON BODIES W/ COMBINATION MEMBRANE FLASHING CLAMP/GRAVEL GUARDS, DOUBLE DECK PLATE, LOW SILHOUETTE CAST IRON DOMES. PROVIDE GALVANIZED CAST IRON OPTION. 2" OR REFER TO PLANS FOR OUTLET SIZE.
DSN-1	DOWNSPOUT NOZZLE	ZURN	Z199	DOWNSPOUT NOZZLE, ALL NICKLE BRONZE BODY, NO-HUB INLET AND DECORATIVE FACE OF WALL FLANGE AND OUTLET NOZZLE. 2" OR REFER TO PLANS FOR OUTLET SIZE.

HANGER SCHEDULE

STEEL PIPE SIZE	SPACING OF SUPPORTS
1/2''	6'-0''
1/2'' TO 1''	8'-0''
1-1/4'' & LARGER	10'-0''

PLUMBING FIXTURE SCHEDULE

SYMBOL	DESCRIPTION	SAN	VENT	HW	CW	FIXTURE UNITS HW	FIXTURE UNITS CW	DFU	DESIGN BASED MANUFACTURER & MODEL	ACCESSORIES	NOTES
WC-1	WATER CLOSET	4"	2"	-	1"	-	5	4	AMERICAN STANDARD - CADET® PRO™ RIGHT HEIGHT® ELONGATED TOILET	AMERICAN STANDARD CADET 3 SLOW-CLOSE ELONGATED TOILET SEAT 7381251-200.0200A-EZ INSTALL BOLT CAP KIT, WHITE	ADA ACCESSIBLE
LAV-1	LAVATORY	1-1/2"	1-1/2"	1/2"	1/2"	1.5	1.5	1	AMERICAN STANDARD LUCERNE 0356.421	ZURN Z1231EZ CHICAGO FAUCETS NO. 116.221.AB.1 TOUCHLESS FAUCET	ADA ACCESSIBLE
SK-1	PANTRY SINK	1-1/2"	1-1/2"	1/2"	1/2"	1.5	1.5	2	ELKAY ECTSRS33229TFC	ELKAY LKAV2061CR	-
EWC-1	ELECTRIC WATER COOLER	1 1/2"	1 1/2"	-	1/2"	-	0.25	0.5	ELKAY LMABFTL8WSSK	51300C - FILTER REPLACEMENT, 12-MONTH, 3000 GAL	INTEGRATED FILTER
MS-1	MOP SINK	3"	1-1/2"	1/2"	1/2"	2.25	2.25	2	FIAT - MSB 2424	SPEAKMAN "COMMANDER" SC-5811, 6GPM.	-

SUMP PUMP SCHEDULE

FIXTURES	MANUFACTURER AND MODEL NO.	PUMP			MOTOR				
		SYSTEM CAPACITY	SUCTION PRESSURE	DISCHARGE PRESSURE	# OF MOTORS	MOTOR HP	V/PH/HZ	FLA	NOTES
SP-1	ZOELLER MODEL N153	50 GPM	-	22 FT HD	1	1/2	115	10.5	PROVIDE OIL GUARD PUMP SWITCH AND PANEL, 940-0007 PREPACKED SYSTEM.

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SPFLD00611 - LIBRARY BUILDING RENOVATIONS
70 POWELL ROAD, SPRINGFIELD, PA 19064

PLUMBING SCHEDULES

SPRINGFIELD TOWNSHIP
50 POWELL ROAD, SPRINGFIELD, PA 19064

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FIRE ALARM SYMBOL LEGEND

FIRE ALARM SYMBOLS

- F — MANUAL PULL STATION
- F — HORN, WALL
- F — HORN, CEILING
- STROBE, WALL, CANDELA AS INDICATED
- STROBE, CEILING, CANDELA AS INDICATED
- HORN/STROBE, WALL, CANDELA AS INDICATED
- HORN/STROBE, CEILING, CANDELA AS INDICATED
- REMOTE INDICATOR W/ TEST SWITCH, WALL
- REMOTE INDICATE W/ TEST SWITCH, CEILING
- S — SMOKE DETECTOR
- H — HEAT DETECTOR
- CO — CARBON MONOXIDE DETECTOR
- S — BEAM DETECTOR T: TRANSMITTER R: RECEIVER
- H S CO — COMBINATION DETECTOR (UP TO THREE)
- S — DUCT SMOKE DETECTOR
- SMOKE DAMPER
- DH — DOOR HOLDER
- DCL — DOOR CLOSER
- FIRE SERVICE PHONE
- XXX — Addressible Module
  - AIM: ADDRESSIBLE INPUT MODULE
  - AOM:ADDRESSIBLE OUTPUT CONTROL MODULE
  - AIO: ADDRESSIBLE INPUT/OUTPUT MODULE
- XXXX — FIRE ALARM CONTROL UNIT
  - EVAC: VOICE EVACUATION CONTROL PANEL
  - FAA: FIRE ALARM ANNUNCIATOR
  - FACP: FIRE ALARM CONTROL PANEL
  - FATC: FIRE ALARM TERMINAL CABINET
  - NACP: NOTIFICATION APPLIANCE CIRCUIT PANEL
  - FAMN: FIRE ALARM MASS NOTIFICATION CONTROL PANEL
- XX — SUPERVISORY OR INTERFACE DEVICE
  - PIV: POST INDICATOR VALVE SUPERVISORY
  - PS: PRESSURE SWITCH
  - R: NON-ADDRESSIBLE RELAY
  - VS: VALVE SUPERVISORY SWITCH
  - WF: WATER FLOW SWITCH

FIRE ALARM ABBREVIATIONS

1P	1 POLE (2P, 3P, 4P, ETC.)
A, AMP	AMPERE
AC	ABOVE COUNTER
ACLG	ABOVE CEILING
ADO	AUTOMATIC DOOR OPENER
AF	AMP FRAME
AFF	ABOVE FINISHED FLOOR
AFG	ABOVE FINISHED GRADE
AFI	ARC FAULT CIRCUIT INTERRUPTER
AHU	AIR HANDLING UNIT
AL	ALUMINUM
ALT	ALTERNATE
AMP	AMPERE
AMPL	AMPLIFIER
ANNUN	ANNUNCIATOR
APPROX	APPROXIMATELY
AQ-STAT	AQUASTAT
ARCH	ARCHITECT, ARCHITECTURAL
AS	AMP SWITCH
AT	AMP TRIP
ATS	AUTOMATIC TRANSFER SWITCH
AUTO	AUTOMATIC
AUX	AUXILIARY
AV	AUDIO VISUAL
AWG	AMERICAN WIRE GAUGE
BATT	BATTERY
BD	BOARD
BLDG	BUILDING
BMS	BUILDING MANAGEMENT SYSTEM
C	CONDUIT
CAB	CABINET
CAT	CATALOG
CATV	CABLE TELEVISION
CB	CIRCUIT BREAKER
CCTV	CLOSED CIRCUIT TELEVISION
CKT	CIRCUIT
CLG	CEILING
COMB	COMBINATION
CMPR	COMPRESSOR
CONN	CONNECTION
CONST	CONSTRUCTION
CONT	CONTINUATION OR CONTINUOUS
CONTR	CONTRACTOR
CONV	CONVECTOR
CP	CIRCULATING PUMP
CRT	CATHODE-RAY TUBE
CT	CURRENT TRANSFORMER
CTR	CENTER
CU	COPPER
DCP	DOMESTIC WATER CIRCULATING PUMP
DEPT	DEPARTMENT
DET	DETAIL
DIA	DIAMETER
DISC	DISCONNECT
DIST	DISTRIBUTION
DN	DOWN
DPR	DAMPER
DS	SAFETY DISCONNECT SWITCH
DT	DOUBLE THROW
DWG	DRAWING
EC	ELECTRICAL CONTRACTOR
ELEC	ELECTRIC, ELECTRICAL
ELEV	ELEVATOR
ELU	EMERGENCY LIGHTING UNIT
EM	EMERGENCY
EMS	ENERGY MANAGEMENT SYSTEM
EMT	ELECTRICAL METALLIC TUBING
EP	ELECTRIC PNEUMATIC
EQUIP	EQUIPMENT
EWC	ELECTRIC WATER COOLER
EXIST	EXISTING
EXH	EXHAUST
EXP	EXPLOSION PROOF
FA	FIRE ALARM
FABP	FIRE ALARM BOOSTER POWER SUPPLY PANEL
FACP	FIRE ALARM CONTROL PANEL
FCU	FAN COIL UNIT
FIXT	FIXTURE
FLR	FLOOR
FLUOR	FLUORESCENT
FU	FUSE
FUDS	FUSED SAFETY DISCONNECT SWITCH
GA	GAUGE
GAL	GALLON
GALV	GALVANIZED
GC	GENERAL CONTRACTOR
GEN	GENERATOR
GFI	GROUND FAULT CIRCUIT INTERRUPTER
GFP	GROUND FAULT PROTECTOR
GND	GROUND
GRS	GALVANIZED RIGID STEEL (CONDUIT)
GYP BD	GYPSUM BOARD
HOA	HANDS-OFF-AUTOMATIC SWITCH
HORIZ	HORIZONTAL
HP	HORSEPOWER
HPF	HIGH POWER FACTOR
HT	HEIGHT
HTG	HEATING
HTR	HEATER
HV	HIGH VOLTAGE
HVAC	HEATING, VENTILATING AND AIR CONDITIONING
IC	INTERRUPTING CAPACITY
IG	ISOLATED GROUND
IMC	INTERMEDIATE METAL CONDUIT
INCAND	INCANDESCENT
IR	INFRARED
I/W	INTERLOCK WITH
J-BOX	JUNCTION BOX
KV	KILOVOLT
KVA	KILOVOLT-AMPERE
KVAR	KILOVOLT-AMPERE REACTIVE
KW	KILOWATT
KWH	KILOWATT HOUR
LOC	LOCATE OR LOCATION
LT	LIGHT
LTG	LIGHTING
LTNG	LIGHTNING
LV	LOW VOLTAGE
MAX	MAXIMUM
MAG.S	MAGNETIC STARTER
M/C	MOMENTARY CONTACT
MC	MECHANICAL CONTRACTOR
MCB	MAIN CIRCUIT BREAKER
MCC	MOTOR CONTROL CENTER
MDC	MAIN DISTRIBUTION CENTER
MDP	MAIN DISTRIBUTION PANEL
MFR	MANUFACTURER
MFS	MAIN FUSED DISCONNECT SWITCH
MH	MANHOLE
MIC	MICROPHONE
MIN	MINIMUM
MISC	MISCELLANEOUS
MLO	MAIN LUGS ONLY
MMS	MANUAL MOTOR STARTER
MOA	MULTIOUTLET ASSEMBLY
MSP	MOTOR STARTER PANELBOARD
MSBD	MAIN SWITCHBOARD
MSS	MOTOR STARTER SWITCH
MT	MOUNT
MT.C	EMPTY CONDUIT
MTS	MANUAL TRANSFER SWITCH
MTR	MOTOR, MOTORIZED
N.C.	NORMALLY CLOSED
NEC	NATIONAL ELECTRICAL CODE
NEMA	NATIONAL ELECTRICAL MANUFACTURER'S ASSOCIATION
NFDS	NON-FUSED SAFETY DISCONNECT SWITCH
NIC	NOT IN CONTRACT
NL	NIGHT LIGHT
N.O.	NORMALLY OPEN
NPF	NORMAL POWER FACTOR
NTS	NOT TO SCALE
OC	ON CENTER
OH	OVERHEAD
OL	OVERLOADS
PA	PUBLIC ADDRESS
PB	PULL BOX OR PUSHBUTTON
PE	PNEUMATIC ELECTRIC
PED	PEDESTAL
PF	POWER FACTOR
PH	PHASE
PIV	POST INDICATING VALVE
PNL	PANEL
PP	POWER POLE
PR	PAIR
PRI	PRIMARY
PROJ	PROJECTION
PRV	POWER ROOF VENTILATOR
PT	POTENTIAL TRANSFORMER
PVC	POLYVINYL CHLORIDE (CONDUIT)
PWR	POWER
QUAN	QUANTITY
RCPT	RECEPTACLE
REQD	REQUIRED
RM	ROOM
RSC	RIGID STEEL CONDUIT
RTU	ROOF TOP UNIT
SC	SURFACE CONDUIT
SEC	SECONDARY
SHT	SHEET
SIM	SIMILAR
SLD	SINGLE-LINE DIAGRAM
S/N	SOLID NEUTRAL
SPEC	SPECIFICATION
SPKR	SPEAKER
SP	SPARE
SPP	SINGLE-POINT POWER
SR	SURFACE RACEWAY
SS	STAINLESS STEEL
SSW	SELECTOR SWITCH
S/S	STOP/START PUSHBUTTONS
STA	STATION
STD	STANDARD
SURF	SURFACE MOUNTED
SW	SWITCH
SWBD	SWITCHBOARD
SYM	SYMMETRICAL
SYS	SYSTEM
TEL	TELEPHONE
TERM	TERMINAL
TL	TWIST LOCK
TR	TAMPER RESISTANT
T-STAT	THERMOSTAT
TTC	TELEPHONE TERMINAL CABINET
TV	TELEVISION
TVTC	TELEVISION TERMINAL CABINET
TYP	TYPICAL
UC	UNDER COUNTER
UE	UNDERGROUND ELECTRICAL
UG	UNDERGROUND
UH	UNIT HEATER
UT	UNDERGROUND TELEPHONE
UTIL	UTILITY
UV	ULTRAVIOLET
V	VOLT
VA	VOLT-AMPERES
VDT	VIDEO DISPLAY TERMINAL
VERT	VERTICAL
VFD	VARIABLE FREQUENCY DRIVE
VOL	VOLUME
W	WATT
W/	WITH
WG	WIRE GUARD
WH	WATER HEATER
W/O	WITHOUT
WP	WEATHERPROOF
XFMR	TRANSFORMER
XFR	TRANSFER
∠	ANGLE
@	AT
▲	DELTA
'	FEET
"	INCHES
#	NUMBER
Ø	PHASE
C	CENTER LINE
P	PLATE

GENERAL COMPLIANCE - PA

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

IBC	2021 INTERNATIONAL BUILDING CODE
IECC	2021 INTERNATIONAL ENERGY CONSERVATION CODE
NEC, NFPA 70	2020 NATIONAL ELECTRICAL CODE
NFPA 72	2022 NATIONAL FIRE ALARM AND SIGNALING CODE
NFPA 101	2016 LIFE SAFETY CODE
NFPA 70E	2024 STANDARD FOR ELECTRICAL SAFETY IN THE WORKPLACE
NFPA 110	2022 STANDARD FOR EMERGENCY AND STANDBY POWER SYSTEMS
NFPA 780	2023 STANDARD FOR LIGHTING PROTECTION SYSTEMS
UL	UNDERWRITER'S LABORATORIES, INC.
FM	FACTORY MUTUAL

FIRE ALARM GENERAL NOTES

1. PROVIDE NEW COMPLETE FIRE ALARM, SMOKE AND FIRE DETECTION SYSTEM. THE SYSTEM SHALL CONSIST OF FIRE ALARM CONTROL PANELS (FACP), REQUIRED NUMBER OF EXTENDER PANELS, AND FIRE ALARM ANNUNCIATOR PANEL (FAAP) WITH AUTOMATIC AND MANUAL CONTROLS. THE INITIATING DEVICES SHALL BE AREA SMOKE DETECTORS, DUCT SMOKE DETECTORS, HEAT DETECTORS, FLOW SWITCHES, TAMPER SWITCHES, PRESSURE SWITCHES AND MANUAL PULL STATIONS. THE ANNUNCIATING DEVICES SHALL BE STROBE LIGHTS, HORNS, HORN/STROBE LIGHT COMBINATION AND SINGLE 10" DIAMETER BELL OR HORN / VISUAL DEVICE ON THE EXTERIOR WALL OF THE BUILDING OF THE ADDRESS SIDE.
2. PROVIDE FIRE ALARM SYSTEM IN ACCORDANCE WITH NFPA 72, MANUFACTURER'S RECOMMENDATIONS, ALL APPLICABLE LOCAL BUILDING CODES AND OWNER'S INSURANCE UNDERWRITER REQUIREMENTS.
3. FIRE ALARM SYSTEM MATERIALS SHALL BE UL LISTED AND FM GLOBAL APPROVED.
4. COORDINATE THE INSTALLATION OF FIRE ALARM DEVICES AND WIRING WITH ALL TRADES AND DRAWINGS PRIOR TO COMMENCING INSTALLATION.
5. ALL FIRE ALARM DEVICES SHALL BE LOCATED IN CENTER OF CEILING TILES UNLESS NOTED OTHERWISE AND APPROVED.
6. BEFORE ANY WORK STARTS, SUBMIT AND OBTAIN APPROVAL FROM THE AUTHORITY HAVING JURISDICTION (AHJ) OF THE INFORMATION, DATA, CALCULATIONS, DRAWINGS AND CATALOG CUTS AS REQUIRED BY NFPA 72 AND OTHER REQUIREMENTS AS MAY BE PROMULGATED BY AHJ.
7. CONTACT THE BUILDING ENGINEER AND BUILDING OWNER, TO ARRANGE ACCEPTANCE OF CONSTRUCTION SCHEDULE. OBTAIN IN WRITTEN FORM AN ACCEPTANCE OF THE CONSTRUCTION SCHEDULE FOR DEMOLITION AND NEW WORK. THE EXISTING FIRE ALARM SYSTEM DURING THE ENTIRE CONSTRUCTION WORK MUST BE OPERATIONAL. REMOVAL OF OLD DEVICES OR REALLOCATIONS AND RECONNECTION SHALL BE COMPLETED IN ONE DAY BEFORE SCHEDULED TEST. PROVIDE FIRE WATCHMAN FOR ANY PERIOD OF TIME WHEN THE EXISTING FIRE ALARM SYSTEM IS DOWN WHILE THE BUILDING IS OCCUPIED. ARRANGE FOR TEST AND ACCEPTANCE SUCH WAY THAT THERE WILL BE NO EXTENDED TIME INTERVAL BETWEEN COMPLETION OF CONSTRUCTION AND FIRE ALARM TEST AND APPROVAL.
8. MINIMUM CONDUIT SIZE FOR BRANCH FIRE ALARM CIRCUIT SHALL BE ¾".
9. PROVIDE ALL SYSTEM COMPONENTS AS INDICATED ON THE DRAWINGS AND AS SPECIFIED BY THE MANUFACTURER.
10. INSTALL, TEST AND OBTAIN FIRE MARSHALL APPROVAL OF ALTERED EXISTING FA SYSTEM BY THIS RENOVATION.
11. NEW FIRE ALARM SYSTEM SHALL BE MULTIPLEX, ADDRESSABLE ANALOG, NON CODED, ELECTRICALLY SUPERVISED GENERAL ALARM SYSTEM ARRANGED WITH SINGLE ZONE PER FLOOR, CONSISTING OF PROGRAMMED F.A.C.P. AND F.A.A.P. INTERLOCK TO MECHANICAL EQUIPMENT CONTROLS, ELEVATOR POWER SUPPLY AND ELEVATOR CONTROLS FOR ELEVATOR RECALL AND INTERLOCK TO THE SECURITY ACCESS SYSTEM.
12. PROVIDE NEW FIRE ALARM SYSTEM THAT MEETS AND EXCEEDS REQUIREMENTS SHOWN IN THE CONSTRUCTION DOCUMENT.
13. THE MAIN FIRE ALARM CONTROLS PANEL SHALL BE LOCATED IN ELECTRICAL ROOM AS SHOWN ON THE DRAWING. THE EXACT LOCATION OF THE FIRE ALARM ANNUNCIATOR PANEL AND DISPLAY CONFIGURATION SHALL BE COORDINATED WITH FIRE MARSHALL BEFORE FABRICATION. SEE FLOOR PLAN FOR PROPOSED LOCATION OF THE FIRE ALARM ANNUNCIATOR PANEL.
14. PROVIDE AND INSTALL EXTENDER PANEL REMOTE FIRE ALARM UNITS TO SUPPORT INDICATING APPLIANCES. AT EACH EXTENDER REMOTE FIRE ALARM UNIT PROVIDE MINIMUM 8 CIRCUITS CAPACITY. EACH USED CIRCUIT MAY BE LOADED TO NO MORE THAN 75% OF ITS ALLOWED CAPACITY. EACH ZONE/FLOOR SHALL UTILIZE 2 CIRCUITS MINIMUM. NO MORE THAN 50% OF INDICATING DEVICES CAN BE INOPERABLE IN THE ZONE UPON FAILURE OF ANY CIRCUIT IN THE SAME ZONE.
15. PROVIDE NEW CONDUIT RISERS AND TERMINAL CABINETS "FATC" AS REQUIRED FOR FIRE ALARM WIRING BETWEEN FACP AND FIRE ALARM DEVICES. CONTRACTOR MAY USE SINGLE CONDUIT RISER FOR BOTH (INITIATING AND INDICATING DEVICES) CIRCUITS, IF PROPER SHIELDED WIRING IS UTILIZED TO PREVENT INTRODUCTION OF INDUCTION CURRENT IN INITIATING CIRCUITS DURING ALARM OR ABNORMAL CONDITION. CONDUIT CONNECTING THE TERMINAL CABINETS BETWEEN THE FLOORS SHALL BE 2" MIN. TERMINATION CABINET SHALL BE W20" x H24" x D6". ALL CONNECTIONS SHALL BE MADE WITH IDENTIFIED SCREW TYPE TERMINAL STRIPS AND LABELED WITH SYMBOLS CORRESPONDING TO F.A. SHOP DRAWINGS AND DIAGRAM.
16. IN ADDITION TO INDICATED BUILDING DEVICES INSTALLED UNDER THIS CONTRACT, PROVIDE SPARE CAPACITY ON A PER FLOOR BASIS IN THE FIRE ALARM CONTROL PANEL, TERMINAL CABINETS, EXTENDER PANELS AND POWER SUPPLIES TO ACCOMMODATE ANY ADDITIONAL FUTURE FIRE ALARM AND FIRE DETECTION DEVICES AS FOLLOWS: 25% FOR ALL INDICATED DEVICES WITH ASSUMPTION OF FUTURE VISUAL DEVICE RATED AT AVERAGE OF 75 CANDELAS AND WITH POWER SUPPLIES TO BE SIZED SO IF FULLY LOADED UNDER ALARM CONDITION INCLUDING ALL ESTIMATED FUTURE DEVICES THE CURRENT DRAW WILL NOT EXCEED 80% OF POWER SUPPLY CAPACITY.
17. THE SYSTEM SHALL BE CONTINUOUSLY ELECTRICALLY SUPERVISED AGAINST FAILURE ANY COMPONENT, APPLIANCES, WIRING, SWITCHES AND ELECTRICAL CONTACTS AND SHALL DETECT OPENS, SHORTS AND GROUND WHICH MIGHT IMPAIR THE FUNCTION OF THE SYSTEM. BOTH A VISUAL AND AUDIBLE TROUBLE SIGNAL SHALL OPERATE AT FIRE CONTROL PANEL, F.A. ANNUNCIATOR PANEL AND CENTRAL STATION VIA COMMUNICATION LINE.
18. PROVIDE DEDICATED 120V, 1PH. 20A CIRCUITS FOR EACH EXTENDER FIRE ALARM PANEL.
19. PROVIDE TWO (2) 120V, 20A, 1Ø CIRCUITS TO FEED FACP. DERIVE CIRCUITS FROM EMERGENCY POWER SOURCE AS SHOWN ON THE DRAWING.
20. PROVIDE MINIMUM BATTERY BACKUP FOR FIRE ALARM SYSTEM AS REQUIRED BY LOCAL CODES AND IN ACCORDANCE WITH NFPA 72.
21. WHERE THERE ARE A NUMBER OF POWER REQUIRING DEVICES, SUCH AS SMOKE DETECTORS, FAN RELAYS, DOOR HOLDERS, STROBE LIGHTS AND SMOKE DAMPER OPERATORS INSTALLED IN A CIRCUIT, GROUP IN NUMBERS SO POWER REQUIRED DOES NOT EXCEED 80% OF MANUFACTURER'S POWER SUPPLY RATING. PROVIDE EXTRA CAPACITY OF POWER SUPPLIES REQUIRED TO FULFILL THAT REQUIREMENT. IN ADDITION PROVIDE EXTRA BRANCH WIRING OR LARGER SIZE WIRING TO ALLEVIATE VOLTAGE DROP. INSTALL ALL DEVICES IN ACCORDANCE WITH MANUFACTURER RECOMMENDATIONS.
22. NUMBER OF CONDUCTORS, SIZE, TYPE AND COLOR CODE SHALL BE IN ACCORDANCE WITH MANUFACTURER'S REQUIREMENTS. INSTALL PER MANUFACTURER'S POINT-TO-POINT WIRING DIAGRAM. DETERMINE EXACT NUMBER OF WIRES FOR EACH FIRE AREA ZONE FROM NUMBER AND TYPES OF DEVICES INSTALLED.
23. ALL INTERCONNECTING WIRING FOR FIRE ALARM SYSTEM SHALL BE OF STRANDED TYPE CONDUCTOR 16 GAGE MINIMUM.
24. ALL WIRING CONNECTIONS SHALL BE MADE IN TERMINATION CABINETS OR FA DEVICE JUNCTION BOX ONLY. WIRING SPLICES OR T-TAPS ARE NOT ALLOWED.
25. END OF LINE RESISTOR WHERE USED SHALL BE INSTALLED IN THE FLOOR TERMINAL CABINET. END OF LINE RESISTOR SHALL BE ADEQUATELY LABELED TO DISTINGUISH FROM OTHER COMPONENTS OF THE FA SYSTEM. THE WIRING CONNECTION SHALL BE POINT TO POINT FROM DEVICE TO DEVICE.
26. ALL WIRING SHALL BE INSTALLED IN METALLIC TUBING OR METAL CONDUITS. THE INSTALLATION SHALL BE IN A MANNER WHICH WILL AFFORD THE MAXIMUM PROTECTION AGAINST THE EFFECTS OF FIRE AND OTHER PHYSICAL OR ACCIDENTAL DAMAGE. WIRING SHALL BE INSTALLED IN LOCATIONS WHICH WILL FACILITATE REPAIR OR REPLACEMENT. SURFACE INSTALLATION SHALL UTILIZE COMPRESSION FITTING AND KNOCKOUT BOXES WILL NOT BE ACCEPTABLE.
27. POWER SUPPLY AND FIRE ALARM CIRCUIT CONDUCTORS SHALL BE PERMITTED IN THE SAME CABLE, RACEWAY, JUNCTION BOX OR ENCLOSURE ONLY WHERE CONNECTED TO THE SAME EQUIPMENT.
28. PROVIDE DUCT SMOKE DETECTORS IN THE AHU RETURN AIR DUCTS AND/OR IN SUPPLY AIR AS INDICATED ON MECHANICAL DRAWINGS AND/OR FIRE ALARM DRAWINGS. PROVIDE INTERLOCK WITH EACH AHU'S SUPPLY AIR FAN MOTOR STARTER AND/OR THE RETURN AIR FAN STARTERS TO SHUT DOWN FANS ON INITIATION OF DUCT SMOKE DETECTOR OR ALARM SIGNAL. ACTIVATION OF DUCT SMOKE DETECTOR SHALL SEND SIGNAL TO F.A. SYSTEM. ALL DUCT SMOKE DETECTORS INSTALLED NOT IN DIRECT VIEW OR BE READILY ACCESSIBLE SHALL BE INSTALLED WITH THE REMOTE LED INDICATOR AND TEST FEATURES. THE REMOTE LED INDICATOR WITH TEST SHALL BE INSTALLED ON THE CEILING DIRECTLY BELOW RESPECTIVE DUCT SMOKE DETECTOR OR ON THE WALL WITH DIRECTORY OR PLAN OF SMOKE DETECTOR LOCATION WHERE THERE IS NO CEILING. THE DUCT SMOKE DETECTOR SHALL BE PROGRAMMABLE TO PROVIDE A SUPERVISORY SIGNAL.
29. ALL SMOKE DETECTORS INSTALLED IN NORMALLY LOCKED ROOMS SHALL BE PROVIDED WITH THE REMOTE LED INDICATOR. THE REMOTE LED INDICATOR SHALL BE INSTALLED ON THE WALL NEAR ACCESS DOOR WITH DIRECTORY OR PLAN OF SMOKE DETECTOR LOCATION.
30. ALL HEAT DETECTORS SHALL BE OF THE FIXED TEMPERATURE TYPE. HEAT DETECTORS INSTALLED IN NORMALLY LOCKED ROOMS SHALL BE PROVIDED WITH THE REMOTE LED INDICATOR. THE REMOTE LED INDICATOR SHALL BE INSTALLED ON THE WALL NEAR ACCESS DOOR WITH DIRECTORY OR PLAN OF SMOKE DETECTOR LOCATION.
31. GENERAL: ALL FIRE ALARM SYSTEM FIELD RELAYS CONTROLLING OR DEACTIVATING ANY DEDICATED SECURITY DEVICES OR POWER CONTROL DEVICES SHALL BE INSTALLED WITHIN 3' OF CONTROL DEVICE.
32. THE FOLLOWING SPECIFICATIONS APPLY TO ALL VISUAL ALARMS:
33. THE LAMP SHALL BE A XENON STROBE TYPE OR EQUIVALENT.
34. THE COLOR SHALL BE CLEAR OR NOMINAL WHITE (i.e. UNFILTERED OR CLEAR FILTERED WHITE LIGHT.)
35. THE MAXIMUM PULSE DURATION SHALL BE TWO-TENTHS OF ONE SECOND (0.2 SEC) WITH A MAXIMUM DUTY CYCLE OF 40 PERCENT. THE PULSE DURATION IS DEFINED AS THE TIME INTERVAL BETWEEN INITIAL AND FINAL POINTS OF 10 PERCENT OF MAXIMUM LIGHT.
36. THE INTENSITY SHALL BE A MINIMUM OF 75 CANDELA OR AS INDICATED ON THE DRAWING.
37. THE FLASH RATE SHALL BE A MINIMUM OF 1 HZ AND A MAXIMUM OF 3 HZ.
38. AREA SMOKE DETECTORS SHALL BE PROVIDED WHERE INDICATED ON THE DRAWINGS.
39. REFER TO FIRE ALARM SYSTEM MATRIX FOR SEQUENCE OF OPERATION.
40. COORDINATE WORK WITH ALL ELECTRICAL, MECHANICAL, OR PLUMBING EQUIPMENT SCHEDULED TO BE INTERLOCK WITH THE NEW FIRE ALARM SYSTEM.
41. PROVIDE REQUIRED CLEARANCE AROUND THE PANELS PER EQUIPMENT MANUFACTURER'S RECOMMENDATIONS AND NEC.
42. THE FIRE ALARM SYSTEM SHALL BE DESIGNED AND INSTALLED SO ANY DAMAGE TO ANY TERMINAL UNIT WILL NOT RENDER MORE THAN ONE CIRCUIT LIMITED TO THE SINGLE ZONE OF THE ELEMENT INOPERATIVE. NO MORE THAN 50% OF FIRE ALARM DEVICES CAN BE INOPERABLE PER ZONE UPON THE CIRCUIT FAILURE.
43. THE SYSTEM SHALL BE INSTALLED SO TROUBLE CAN BE READILY DETECTED BY FLOOR AND DEVICE.
44. PROVIDE AND ARRANGE THE STROBE AND AUDIBLE CIRCUITS SO THERE SHALL BE MINIMUM OF TWO CIRCUITS PER ZONE ON EVERY FLOOR AND LOSS OF ONE CIRCUIT WILL NOT AFFECT MORE THAN 50% OF DEVICES PER ZONE.
45. LOCATION, SIZE, AND FINISH OF THE FIRE ALARM ANNUNCIATOR PANEL(S) SHALL BE COORDINATED WITH OWNER/FIRE MARSHALL PRIOR TO FABRICATION.
46. PROVIDE 1" CONDUIT FROM FACP TO ELEVATOR MACHINE ROOM FOR CONTROL SIGNAL AND FIRE ALARM INTERFACE. PROVIDE WIRING PER EQUIPMENT SUPPLIER.
47. PROVIDE MINIMUM 3/4" CONDUIT AND REQUIRED WIRING FROM FIRE ALARM CONTROL PANEL TO ACCESS CONTROL SYSTEM FOR FIRE ALARM INTERFACE WITH ELECTRIC DOOR LOCKS. ALL STAIR AND OTHER ELECTRIC DOOR LOCKS IN THE PATH OF THE EGRESS SHALL UNLOCK SIMULTANEOUSLY UPON ACTIVATION OF THE FIRE ALARM SYSTEM OR UPON LOSS OF PRIMARY POWER TO THE FIRE ALARM SYSTEM. PROVIDE CONDUIT AND CONTROL WIRING PER EQUIPMENT SUPPLIER REQUIREMENTS. PROVIDE ALL REQUIRED RELAYS, TRANSFORMERS, POWER SUPPLIES AND ALL OTHER DEVICES TO AFFECT AN INTERFACE BETWEEN THE FIRE ALARM AND SECURITY SYSTEM. AN AUXILIARY RELAY CONNECTED TO FIRE ALARM SYSTEM TO UNLOCK DESIGNATED DOORS SHALL BE LOCATED WITHIN 3' OF THE CONTROL DEVICE.
48. PROVIDE MINIMUM 3/4" CONDUIT AND REQUIRED WIRING FROM FIRE ALARM CONTROL PANEL TO DOOR HOLDER CONTROLLER FOR FIRE ALARM INTERFACE. PROVIDE CONDUIT AND CONTROL WIRING PER EQUIPMENT SUPPLIERS REQUIREMENTS. ALL DOOR HOLDERS SHALL BE RELEASE SIMULTANEOUSLY UPON ACTIVATION OF THE FIRE ALARM SYSTEM. PROVIDE SMOKE DETECTOR AT EACH SMOKE DOOR WHERE SHOWN ON THE DRAWING. THE CONTRACTOR SHALL PROVIDE ALL REQUIRED RELAYS, TRANSFORMERS, POWER SUPPLIES AND ALL OTHER DEVICES TO AFFECT AN INTERFACE. AN AUXILIARY RELAY CONNECTED TO FIRE ALARM SYSTEM SHALL BE LOCATED WITHIN 3' OF CONTROL DEVICE.
49. PROVIDE MINIMUM 3/4" CONDUIT AND REQUIRED WIRING FROM FIRE ALARM CONTROL PANEL TO EMERGENCY FIRE PUMP CONTROL PANEL FOR FIRE ALARM INTERFACE. PROVIDE CONDUIT AND CONTROL WIRING PER EQUIPMENT SUPPLIERS REQUIREMENTS.
50. PROVIDE MINIMUM ¾" CONDUIT AND REQUIRED WIRING FROM FIRE ALARM CONTROL PANEL TO HVAC SHUTDOWN EQUIPEMENT FOR FIRE ALARM INTERFACE. PRIVIDE CONDUIT AND WIRING PER EQUIPMENT SUPPLIER REQUIREMENTS. THE CONTRACTOR SHALL PROVIDE ALL REQUIRED RELAYS, TRANSFORMERS, POWER SUPPLIES AND ALL OTHER DEVICES TO AFFECT AN INTERFACE BETWEEN THE FIRE ALARM SYSTEM AND BUILDING MANAGEMENT SYSTEM. AN AUXILIARY RELAY CONNECTED TO THE FIRE ALARM SYSTEM SHALL BE LOCATED WITHIN 3' OF THE CENTRAL DEVICE.
51. PROVIDE AUTOMATIC DIALER WITH MINIMUM TWO DEDICATED TELEPHONE LINES. THE DIALER SHALL ANNUNCIATE THE ALARM AND TROUBLE CONDITION AT THE SECURITY OFFICE RESPONSIBLE FOR CALLING THE FIRE DEPARTMENT.
52. MINIMUM CONDUIT SIZE FOR BRANCH FIRE ALARM CIRCUIT SHALL BE 3/4" EMT WITH COMPRESSION FITTINGS. ALL FA WIRING CONDUITS AND FITTINGS MUST BE RED OR PAINTED RED.
53. LINE VOLTAGE CIRCUITS AND LOW VOLTAGE CIRCUITS SHALL RUN IN SEPARATE CONDUITS.
54. ALL FIRE ALARM CABINETS AND TERMINAL BOXES SHALL BE PAINTED RED.
55. SYSTEM RESET SHALL BE PROVIDED AT FACP IN ELECTRICAL ROOM AND AT ANNUNCIATOR PANEL.
56. PROVIDE ALL SYSTEM COMPONENTS AS INDICATED ON THE DRAWINGS AND AS SPECIFIED BY THE MANUFACTURER.
57. PROVIDE EXTERIOR HORN AND VISUAL DEVICE ON EXTERIOR OF THE BUILDING AT LOCATION OF FIRE DEPARTMENT ACCESS. COORDINATE EXACT LOCATION WITH DIRECTOR OF FACILITIES AND FIRE MARSHALL.
58. ALL FIRE ALARM STROBES IN OPEN AREAS, GARAGES, CORRIDORS, LOBBIES AND RETAIL AREAS SHALL BE SYNCHRONIZED SO THE TOTAL FREQUENCY WILL NOT EXCEED 3 Hz. IN ANY SINGLE AREA OF VIEW.
59. FIRE ALARM CIRCUIT AND EQUIPMENT SHALL BE GROUNDED IN ACCORDANCE WITH NEC.
60. SUBMITTAL FOR FIRE ALARM SHOP DRAWINGS SHALL INCLUDE POINTS LIST WITH ALL ADDRESSES WRITTEN ON THE DRAWINGS (RISER AND FLOOR PLAN) NEXT TO EVERY DEVICE.
61. ABANDONED FIRE ALARM CABLES SHALL BE REMOVED.
62. ALL WIRING SHALL BE COLOR CODED AND LABELED IN EVERY TERMINATION BOX.
63. WIRING/ CONDUCTOR MATERIAL SHALL BE SOLID OR STRANDED COPPER ONLY.
64. NON-POWER LIMITED FIRE ALARM CIRCUITS TYPES NPLFP, NPLFR AND NPLF SHALL NOT BE INSTALLED EXPOSED IN DUCTS OR PLENUMS. THE CABLE TYPE NPLFP MAY BE USED ABOVE SUSPENDED CEILING.
65. CABLES INSTALLED IN VERTICAL RUNS PENETRATING MORE THAN ONE FLOOR SHALL BE TYPE NPLFR. CABLE SHALL BE SUITABLE FOR RISER OF PLENUM USE.
66. VERTICAL CABLE SHALL BE SUPPORTED AT INTERVALS NOT EXCEEDING 18".
67. RUNS IN METAL CONDUIT OR RNC PASSING THROUGH A FLOOR OR WALL TO THE HEIGHT OF 7' ABOVE THE FLOOR SHALL BE ADEQUATELY PROTECTED FROM PHISICAL DAMAGE BY THE BUILDING STRUCTURE OR SOLID METAL GUARD.
68. CABLE USED IN WET LOCATIONS SHALL BE LISTED FOR USE IN WET LOCATION OR SHALL HAVE A MOISTURE-IMPERVIOUS METAL SHEATH.
69. FIRE ALARM WIRING SHALL COMPLY WITH NEC 760.130(B). PLENUM RATED FIRE ALARM WIRING OUTSIDE OF CONDUIT IS ACCEPTABLE IN THE CEILING SPACES. FA WIRING SHALL BE IN CONDUIT IN EXPOSED AREAS.

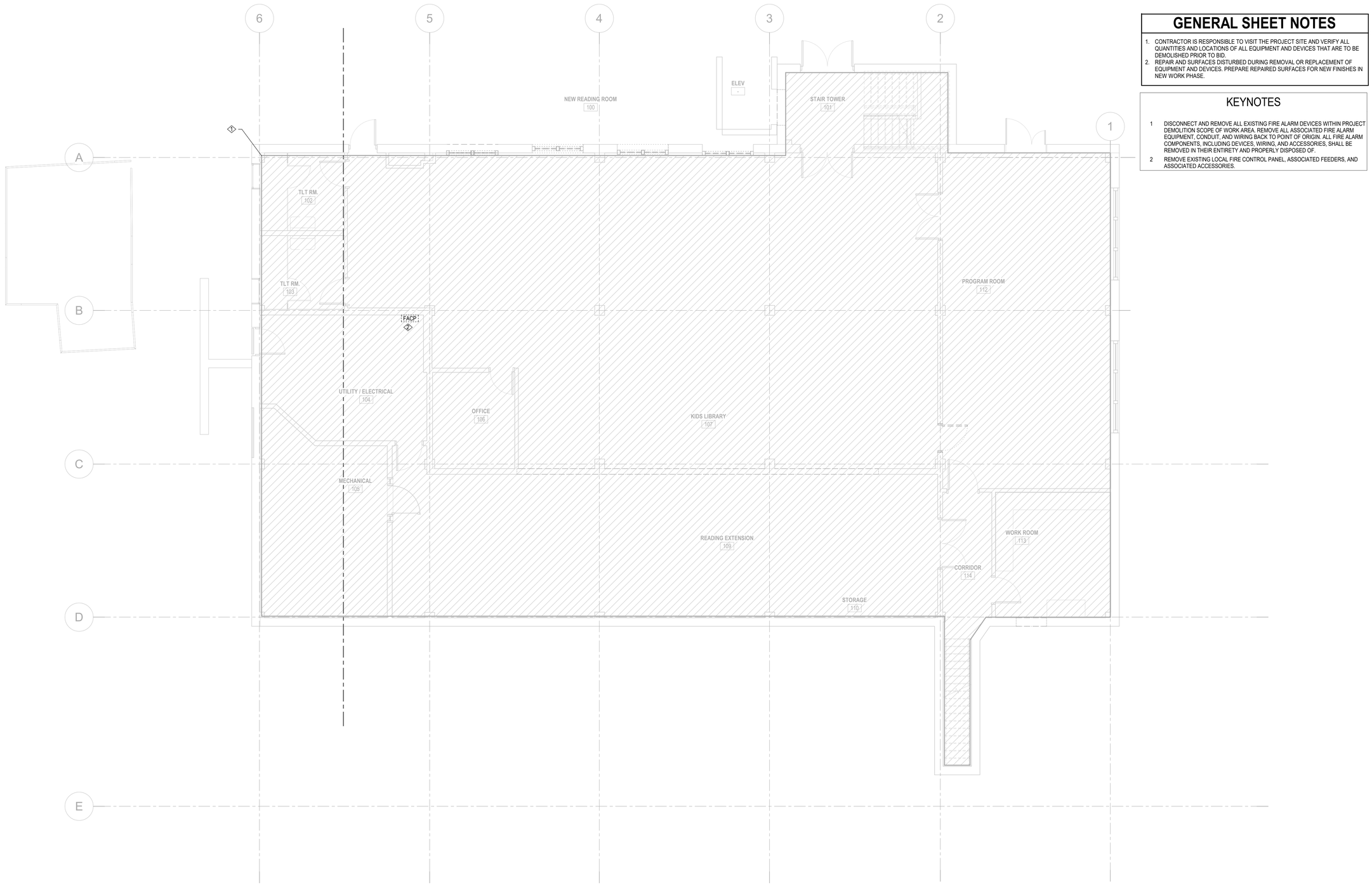
FIRE ALARM SHEET LIST

Sheet No.	Sheet Name
FA001	FIRE ALARM INDEX SHEET
FA100	FIRE ALARM DEMOLITION PLAN - LOWER LEVEL
FA101	FIRE ALARM DEMOLITION PLAN - UPPER LEVEL
FA200	FIRE ALARM PLAN - LOWER LEVEL
FA201	FIRE ALARM PLAN - UPPER LEVEL
FA300	FIRE ALARM DIAGRAMS

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GENERAL SHEET NOTES

1. CONTRACTOR IS RESPONSIBLE TO VISIT THE PROJECT SITE AND VERIFY ALL QUANTITIES AND LOCATIONS OF ALL EQUIPMENT AND DEVICES THAT ARE TO BE DEMOLISHED PRIOR TO BID.
2. REPAIR AND SURFACES DISTURBED DURING REMOVAL OR REPLACEMENT OF EQUIPMENT AND DEVICES. PREPARE REPAIRED SURFACES FOR NEW FINISHES IN NEW WORK PHASE.

KEYNOTES

1 DISCONNECT AND REMOVE ALL EXISTING FIRE ALARM DEVICES WITHIN PROJECT DEMOLITION SCOPE OF WORK AREA. REMOVE ALL ASSOCIATED FIRE ALARM EQUIPMENT, CONDUIT, AND WIRING BACK TO POINT OF ORIGIN. ALL FIRE ALARM COMPONENTS, INCLUDING DEVICES, WIRING, AND ACCESSORIES, SHALL BE REMOVED IN THEIR ENTIRETY AND PROPERLY DISPOSED OF.

2 REMOVE EXISTING LOCAL FIRE CONTROL PANEL, ASSOCIATED FEEDERS, AND ASSOCIATED ACCESSORIES.

1 / FA100 FIRE ALARM DEMOLITION PLAN - LOWER LEVEL
3/16" = 1'-0"

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FIRE ALARM DEMOLITION PLAN - LOWER LEVEL

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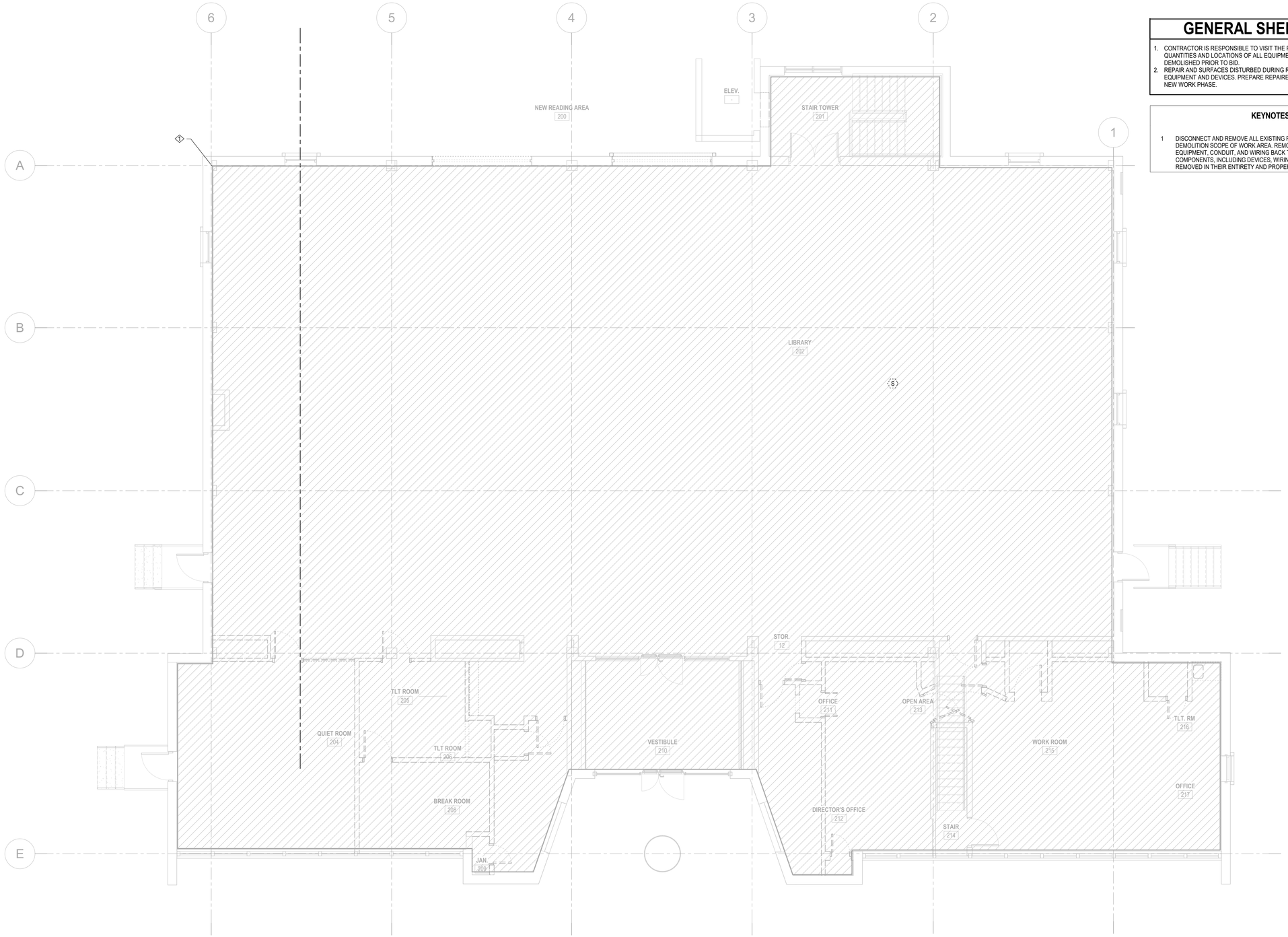
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KEYNOTES

1 DISCONNECT AND REMOVE ALL EXISTING FIRE ALARM DEVICES WITHIN PROJECT DEMOLITION SCOPE OF WORK AREA. REMOVE ALL ASSOCIATED FIRE ALARM EQUIPMENT, CONDUIT, AND WIRING BACK TO POINT OF ORIGIN. ALL FIRE ALARM COMPONENTS, INCLUDING DEVICES, WIRING, AND ACCESSORIES, SHALL BE REMOVED IN THEIR ENTIRETY AND PROPERLY DISPOSED OF.

1 / FA101 FIRST FLOOR POWER PLAN
3/16" = 1'-0"

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FIRE ALARM DEMOLITION PLAN - UPPER LEVEL

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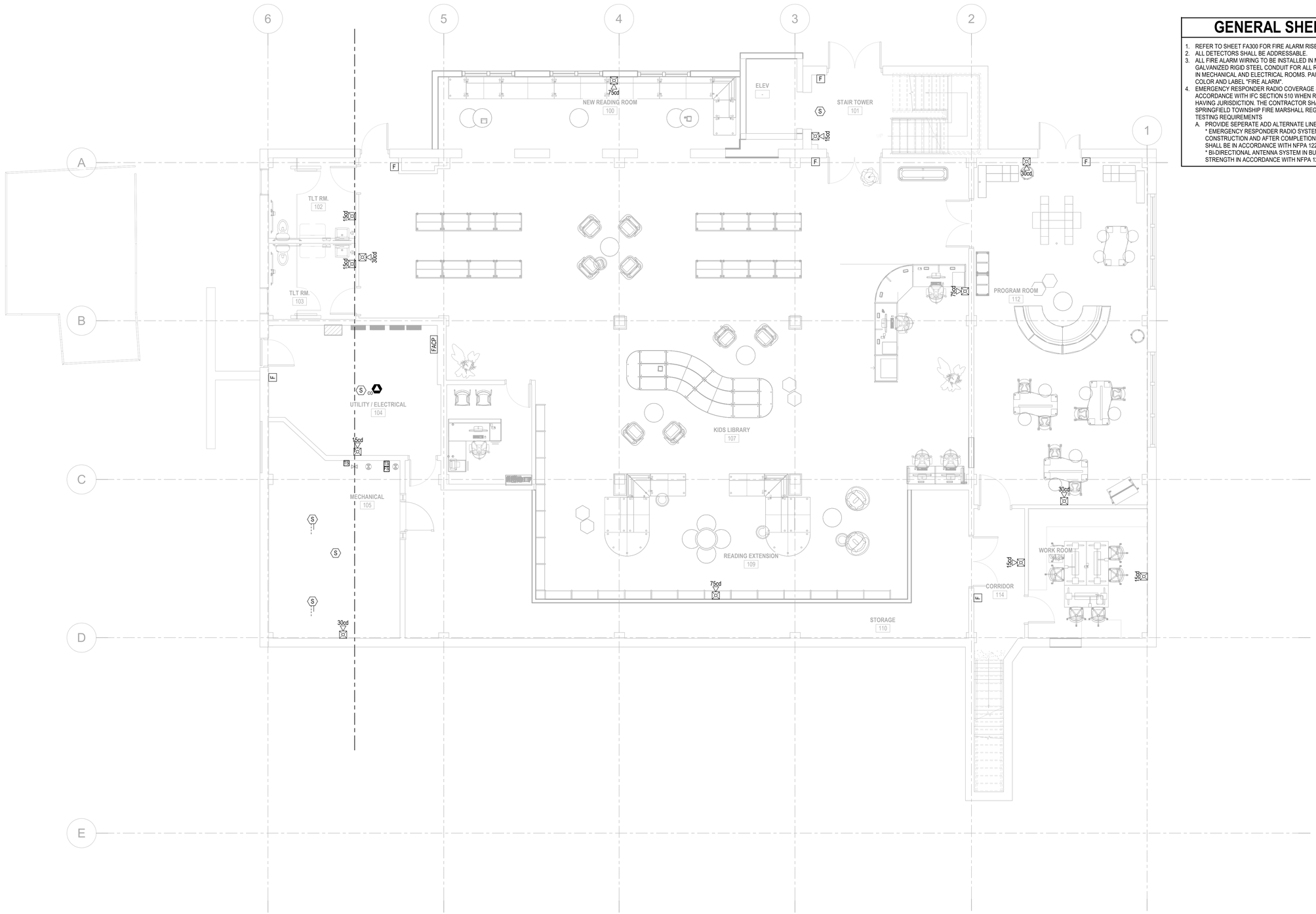
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GENERAL SHEET NOTES

1. REFER TO SHEET FA300 FOR FIRE ALARM RISER DIAGRAM AND MATRIX.
2. ALL DETECTORS SHALL BE ADDRESSABLE.
3. ALL FIRE ALARM WIRING TO BE INSTALLED IN METAL CONDUIT. PROVIDE GALVANIZED RIGID STEEL CONDUIT FOR ALL RISER CONDUITS AND ALL CONDUITS IN MECHANICAL AND ELECTRICAL ROOMS. PAINT ALL JUNCTION BOXES WITH RED COLOR AND LABEL "FIRE ALARM".
4. EMERGENCY RESPONDER RADIO COVERAGE SHALL BE PROVIDED IN ACCORDANCE WITH IFC SECTION 510 WHEN REQUIRED BY THE AUTHORITY HAVING JURISDICTION. THE CONTRACTOR SHALL COORDINATE WITH SPRINGFIELD TOWNSHIP FIRE MARSHALL REGARDING RADIO COVERAGE TESTING REQUIREMENTS
   A. PROVIDE SEPERATE ADD ALTERNATE LINE ITEM FOR:
      * EMERGENCY RESPONDER RADIO SYSTEM TESTING BOTH DURING CONSTRUCTION AND AFTER COMPLETION OF CONSTRUCTION. TESTING SHALL BE IN ACCORDANCE WITH NFPA 1225 CHAPTER 18.
      * BI-DIRECTIONAL ANTENNA SYSTEM IN BUILDING WHICH PROVIDES SIGNAL STRENGTH IN ACCORDANCE WITH NFPA 1225 CHAPTER 18.

2 / FA200 CELLAR ELECTRICAL POWER PLAN
3/16" = 1'-0"

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FIRE ALARM PLAN - LOWER LEVEL

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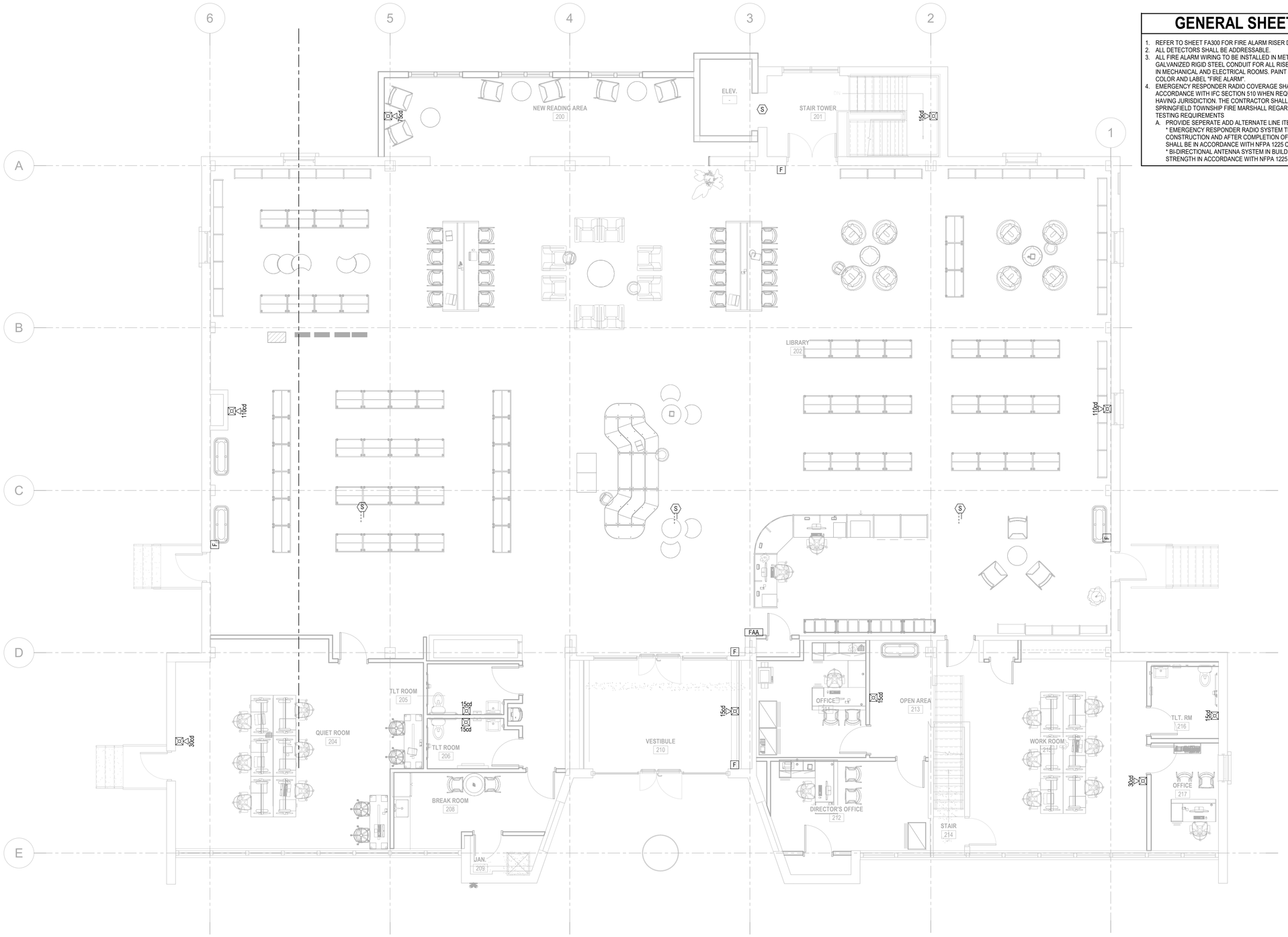
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GENERAL SHEET NOTES

1. REFER TO SHEET FA300 FOR FIRE ALARM RISER DIAGRAM AND MATRIX.
2. ALL DETECTORS SHALL BE ADDRESSABLE.
3. ALL FIRE ALARM WIRING TO BE INSTALLED IN METAL CONDUIT. PROVIDE GALVANIZED RIGID STEEL CONDUIT FOR ALL RISER CONDUITS AND ALL CONDUITS IN MECHANICAL AND ELECTRICAL ROOMS. PAINT ALL JUNCTION BOXES WITH RED COLOR AND LABEL "FIRE ALARM".
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   A. PROVIDE SEPERATE ADD ALTERNATE LINE ITEM FOR:
      * EMERGENCY RESPONDER RADIO SYSTEM TESTING BOTH DURING CONSTRUCTION AND AFTER COMPLETION OF CONSTRUCTION. TESTING SHALL BE IN ACCORDANCE WITH NFPA 1225 CHAPTER 18.
      * BI-DIRECTIONAL ANTENNA SYSTEM IN BUILDING WHICH PROVIDES SIGNAL STRENGTH IN ACCORDANCE WITH NFPA 1225 CHAPTER 18.

2 FA201 FIRST FLOOR POWER PLAN
3/16" = 1'-0"

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FIRE ALARM PLAN - UPPER LEVEL

SPRINGFIELD TOWNSHIP
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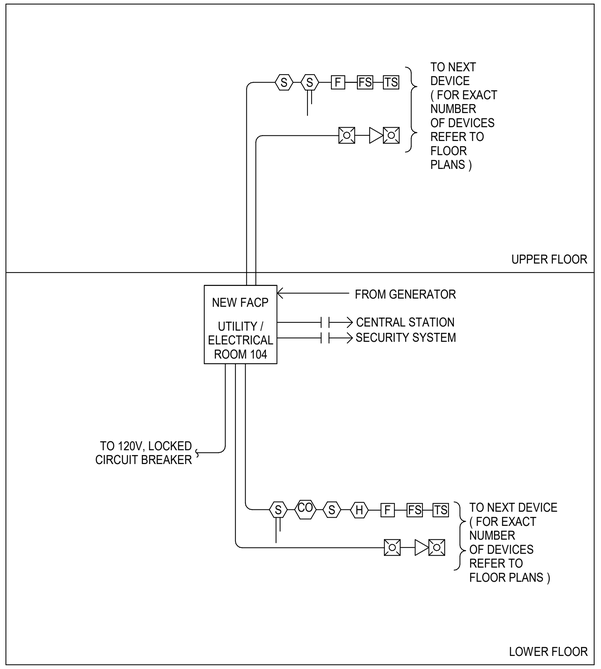
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APPROVED BY	JPR

FA201

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1 FA300 FIRE ALARM RISER DIAGRAM
N/A

LOCATIONS	EVENT OR DEVICE	ACTIVATE TROUBLE SIGNAL	ACTIVATE GENERAL ALARM SIGNAL	ACTIVATE SUPERVISORY SIGNAL	ACTIVATE AUDIBLE DEVICES	ACTIVATE VISUAL DEVICES	DISPLAY DESCRIPTION ON FACP LCD DISPLAY	DISPLAY DESCRIPTION ON ANNUNCIATOR LCD DISPLAY	ACTIVATE GENERAL ALARM SIGNAL TO CENTRAL STATION	ACTIVATE SUPERVISORY SIGNAL TO CENTRAL STATION	RECALL ELEVATOR TO PRIMARY RECALL FLOOR	RECALL ELEVATOR TO ALTERNATE RECALL FLOOR	SHUTDOWN ASSOCIATED ERV AND FAN COIL UNITS
		ANNUNCIATION			NOTIFICATION						CONTROL		
EVERYWHERE	ANY SYSTEM MALFUNCTION	o	o			o	o						
	MANUAL PULL STATION		o		o	o	o	o					
	SMOKE DETECTOR		o		o	o	o	o					
	SPRINKLER FLOW SWITCH	o	o		o	o	o						
	SPRINKER TAMPER SWITCH	o	o	o			o	o					
UTILITY / ELECTRICAL ROOM 104	CO DETECTOR		o		o	o	o	o					
ERV/ FCUs	DUCT DETECTOR		o		o	o	o	o	o			o	
ELEVATOR LOBBY	LOWER FL. SMOKE DETECTOR		o		o	o	o	o	o		o		
	UPPER FL. SMOKE DETECTOR		o		o	o	o	o	o			o	
STANDBY GENERATOR	LOW FUEL			o			o			o			
	NOT IN AUTOMATIC			o			o			o			

2 FA300 FIRE ALARM MATRIX
N/A

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FIRE ALARM DIAGRAMS

SPRINGFIELD TOWNSHIP
50 POWELL ROAD, SPRINGFIELD, PA 19064

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FIRE PROTECTION SYMBOL LEGEND:

LINETYPES

- FIRE SERVICE PIPING MAIN — F
- SPRINKLER PIPING — SP
- FIRE PUMP TEST HEADER PIPING — FPTH
- FIRE DEPARTMENT CONNECTION PIPING — FDC
- COMBINATION SPRINKLER/STANDPIPE PIPING — SP/ST
- COMPRESSED AIR PIPING — A
- DRY SPRINKLER PIPING — DRY

SYMBOLS

- RECESSED PENDENT TYPE SPRINKLER HEAD
- PENDENT TYPE SPRINKLER HEAD
- UPRIGHT PENDENT TYPE SPRINKLER HEAD
- DRY TYPE SPRINKLER HEAD
- SIDEWALL TYPE SPRINKLER HEAD
- CONCEALED SIDEWALL TYPE SPRINKLER HEAD
- FIRE DEPARTMENT CONNECTION
- FIRE DEPARTMENT TEST HEADER (SIAMESE CONNECTION)
- CONTROL VALVE WITH SUPERVISORY SWITCH — TS
- FLOW SWITCH WITH SUPERVISORY SWITCH — FS
- UNION
- BACKFLOW PREVENTER
- ABORT SWITCH (INDICATE TYPE) — XXX
- ABORT SWITCH - CO2 — CO2
- FLUSH FIRE DEPARTMENT CONNECTION
- FREESTANDING SIAMESE FIRE DEPTARTMENT CONNECTION
- SIAMESE FIRE DEPARTMENT CONNECTION
- FIRE SUPPRESSION CONTROL PANEL — FSCP
- FESTANDING TEST HEADER
- WALL-MOUNTED TEST HEADER
- METER
- MANUAL STATION (INDICATE TYPE) — XX
- MANUAL STATION (INDICATE TYPE) — XXX
- MANUAL STATION - CARBON DIOXIDE — CO2
- MONITOR SWITCH (INDICATE TYPE) — XX
- PIPE CAP
- CONCENTRIC REDUCER
- ECCENTRIC REDUCER
- PIPE FLOW DIRECTION
- MECHANICAL PIPE COUPLING
- PIPE DROP
- PIPE RISE
- PIPE TEE

- PIPE TRACE HEATER
- PIPE CONTINUATION
- POINT OF CONNECTION - NEW/EXISTING
- POINT OF CONNECTION - DEMOLITION
- HORIZONTAL FIRE PUMP
- VERTICAL FIRE PUMP
- RISER CHECK VALVE
- ANGLE VALVE
- CHECK VALVE
- BACKFLOW PREVENTOR - DOUBLE CHECK TYPE
- DELUGE VALVE
- DRY PIPE VALVE
- DRY PIPE VALVE W/ QUICK OPENING DEVICE
- PREACTION VALVE
- FIRE HOSE VALVE — FHV
- VALVE (GENERAL)
- OUTSIDE SCREW & YOKE (OS&Y) VALVE
- POST-INDICATOR VAVLE
- PRESSURE RELIEF VALVE
- PRESSURE REGULATING VALVE
- CONTROL VALVE W/ TAMPER SWITCH — VS
- WALL CABINET (INDICATE TYPE) — XXX

GENERAL SYMBOLS

- POINT OF CONNECTION (NEW TO EXISTING)
- EXTENT OF DEMOLITION
- POINT OF CONNECTION TO EQUIPMENT SUPPLIED BY CONTRACTOR
- CENTERLINE
- DIAMETER — Ø
- BREAK LINE (SINGLE LINE)
- EQUIPMENT TAG - SEE EQUIPMENT DATA SHEET:
  EQPM = EQUIPMENT ABBREVIATION
  # = EQUIPMENT NUMBER — EQP / #
- DETAIL BUBBLE:
  1 = DENOTES DETAIL NUMBER
  # = DENOTES DRAWING NUMBER OF DETAIL LOCATION — ? / ?
- SECTION CUT ARROW:
  A = DENOTES SECTION IDENTIFICATION
  # = DENOTES DRAWING NUMBER OF SECTION DETAIL — ? / ?

ABBREVIATIONS:

AFF	ABOVE FINISHED FLOOR
APPROX	APPROXIMATE
BFP- ()	BACK FLOW PREVENTER- (TYPE)
BHP	BRAKE HORSEPOWER
CL	CENTERLINE
CO2	CARBON DIOXIDE
COMB	COMBINATION
CONN	CONNECTION
DCH	DRY CHEMICAL
DEPT	DEPARTMENT
DESS	DELUGE SPRINKLER SYSTEM
DET	DETAIL
DEG	DEGREE
DEG F	DEGREES FAHRENHEIT
DIA	DIAMETER
DISC	DISCHARGE
DN	DOWN
DR	DRAIN
DSP	DRY STANDPIPE
DSS	DRY SPRINKLER SYSTEM
DWG	DRAWING
EA	EACH
EL	ELEVATION
ELEC	ELECTRICAL
F	FIRE MAIN - UNDERGROUND
FCVA	FLOOR CONTROL VALVE ASSEMBLY
FDC	FIRE DEPARTMENT CONNECTION
FE	FIRE EXTINGUISHER
FEC	FIRE EXTINGUISHER CABINET
FHVC	FIRE HOSE VALVE CABINET
FHR	FIRE HOSE RACK
FHV	FIRE HOSE VALVE
FLR	FLOOR
FOM	FOAM SYSTEM
FP	FIRE PUMP
FPS	FEET PER SECOND
FS	FLOW SWITCH
FSCP	FIRE SUPRESSION CONTROL PANEL
FT	FEET
GA	GAUGE
GAL	GALLON
GALV	GALVANIZED
GPM	GALLONS PER MINUTE
HAZ	HAZARDOUS
HORIZ	HORIZONTAL
HP	HORSEPOWER
HR	HOUR
HZ	HERTZ
JP	JOCKEY PUMP
KW	KILOWATT
L	LITER
LPM	LITERS PER MINUTE
MECH	MECHANICAL
MFR	MANUFACTURER
MIN	MINIMUM
NO.	NUMBER
NC	NORMALLY CLOSED
NIC	NOT IN CONTRACT
NO	NORMALLY OPEN
NTS	NOT TO SCALE
OS&Y	OUTSIDE SCREW AND YOKE
PH	PHASE
PIV	POST INDICATOR VALVE
PNTHSE	PENTHOUSE
PRESS	PRESSURE
PSI	POUNDS PER SQUARE INCH
PSIG	POUNDS PER SQUARE INCH GAUGE
PSS	PREACTION SPRINKLER SYSTEM
QR	QUICK RESPONSE
QTY	QUANTITY
RM	ROOM
SPEC	SPECIFICATION
SQ FT	SQUARE FOOT
SQ M	SQUARE METER
SPKR	SPRINKLER
SS	STAINLESS STEEL
SUCT	SUCTION
SYS	SYSTEM
TEMP	TEMPERATURE
TS	TAMPER SWITCH
TYP	TYPICAL
UNO	UNLESS NOTED OTHERWISE
V	VOLTS
W/	WITH
W/O	WITHOUT
WFS	WATER FLOW SWITCH
WSP	WET STANDPIPE
WSR	WET SPRINKLER RISER
WSS	WET SPRINKLER SYSTEM

NOTE - NOT ALL ABBREVIATIONS MAY BE USED

FIRE PROTECTION SHEET LIST

Sheet No.	Sheet Name
FP001	FIRE PROTECTION SYMBOLS AND ABBREVIATIONS
FP002	FIRE PROTECTION NOTES
FP200	FIRE PROTECTION PLAN - LOWER LEVEL
FP201	FIRE PROTECTION PLAN - UPPER LEVEL
FP300	FIRE PROTECTION RISER & DETAILS

SPRINKLER HEAD SCHEDULE

TYPE	SYMBOL	MANUFACTURER	MODEL	TEMP	K-FACTOR	NOTES
SIDEWALL	◀	VIKING	VK319	155	K = 5.6	
CONCEALED PENDENT	●	VIKING	VK462	155	K = 5.6	
STANDARD PENDENT	◉	VIKING	VK3021	155	K = 5.6	
UPRIGHT	○	VIKING	VK3001	155	K = 5.6	

SPRINKLER DESIGN CRITERIA

PATTERN	HAZARD	SYSTEM TYPE	DENSITY	REMOTE AREA	HEAD COVERAGE	SPRINKLER TYPE
	LIGHT	WET	0.10 GPM/SF	1,875 SF	225 SF MAX	PENDENT UNLESS OTHERWISE NOTED
	ORD. GRP 1	WET	0.15 GPM/SF	1,500 SF	130 SF MAX	PENDENT UNLESS OTHERWISE NOTED

AREA - XXX	
SYSTEM TYPE - XXX	HAZARD - XXX
DENSITY - XXX	MIN. AREA - XXX
SPKR. TEMP. - XXX	MIN. SF/HD - XXX

GENERAL COMPLIANCE - PA

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

IBC	2021 INTERNATIONAL BUILDING CODE
IFC	2021 INTERNATIONAL FIRE CODE
NFPA 13	2019 FIRE SPRINKLER CODE
UL	UNDERWRITER'S LABORATORIES, INC.
FM	FACTORY MUTUAL

ISSUED FOR BID
DATE: 08/07/2026

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FIRE PROTECTION SYMBOLS AND ABBREVIATIONS

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FP001

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GENERAL NOTES:

1. SYMBOLS, ABBREVIATIONS, AND GENERAL NOTES INDICATED ON THIS DRAWING ARE TYPICAL. DRAWINGS MAY NOT INDICATE ALL SYMBOLS AND ABBREVIATIONS SHOWN ON THIS DRAWING.
2. GENERAL NOTES, SYMBOL LIST AND DETAILS ARE APPLICABLE TO ALL DRAWINGS.
3. PROVIDE SUPPLEMENTARY OR MISCELLANEOUS ITEMS, APPURTURANCES, DEVICES, AND MATERIALS OBVIOUSLY NECESSARY FOR A SOUND, SECURE, AND COMPLETE INSTALLATION.
4. ABIDE AND ENFORCE ALL SAFETY RULES AND REGULATIONS SET FORTH BY THE OWNER. ALL WORKERS AND SUPERVISORS MUST ATTAIN SAFETY TRAINING CLASSES (IF APPLICABLE). BE RESPONSIBLE TO FOLLOW ALL VERBAL INSTRUCTIONS GIVEN BY OWNERS REPRESENTATIVES.
5. 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.
6. 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. NO DEPARTURES SHALL BE MADE WITHOUT PRIOR APPROVAL OF THE ENGINEER AND OWNER.
7. VISIT THE SITE AND ADJOINING AREAS AND EXAMINE THE EXISTING CONDITIONS TO BECOME FAMILIAR WITH THEM AND TO DETERMINE THE DIFFICULTIES WHICH WILL AFFECT THE EXECUTION OF THE WORK OF THIS CONTRACT. THIS CONTRACTOR SHALL PERFORM THIS PRIOR TO THE SUBMISSION OF HIS PROPOSAL. SUBMISSION OF A PROPOSAL WILL BE CONSTRUED AS EVIDENCE THAT SUCH AN EXAMINATION HAS BEEN MADE AND LATER CLAIMS WILL NOT BE RECOGNIZED FOR EXTRA LABOR, EQUIPMENT OR MATERIALS REQUIRED BECAUSE OF DIFFICULTIES ENCOUNTERED WHICH COULD HAVE BEEN FORESEEN HAD SUCH AN EXAMINATION BEEN MADE.
8. 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.
9. 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.
10. 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.
11. SCHEDULE WORK IN ACCORDANCE WITH THE CONSTRUCTION SCHEDULE SO THAT ALL 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.
12. SECURE AND PAY ALL FEES, LICENSES, INSPECTIONS, AND PERMITS PERTAINING TO THE CONTRACT. SUBMIT TO OWNER DUPLICATE CERTIFICATES OF INSPECTION FROM APPROVED INSPECTION AGENCY.
13. ALL EQUIPMENT SHALL BE INSTALLED IN STRICT COMPLIANCE WITH THE MANUFACTURER'S WRITTEN INSTRUCTIONS.
14. BE RESPONSIBLE FOR WORKMEN'S IDENTIFICATION AND BADGING, SAFETY AND FIRE PROTECTION, BARRICADES, WARNING SIGNS, TRASH REMOVAL, CUTTING AND PATCHING.
15. 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.
16. PROVIDE LABOR TO RECEIVE, UNLOAD, STORE, PROTECT, AND TRANSFER TO POINT OF INSTALLATION FOR ALL FURNISHED ITEMS.
17. 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.
18. BE RESPONSIBLE FOR ALL SLAB OPENINGS, WALL OPENINGS, BEAM PENETRATIONS, AND CORING AS IT RELATES TO HIS WORK. SUBMIT SIZE AND LOCATION FOR REVIEW AND APPROVAL.
19. ALL EXTERIOR WALL OPENINGS SHALL BE SLEEVED, PROPERLY CAULKED, AND SEALED WITH A HIGH QUALITY SEALANT TO PREVENT INFILTRATION OF MOISTURE AND OUTSIDE AIR.
20. COORDINATE ROOF PENETRATIONS WITH WORK OF OTHER SECTIONS AND WITH FLASHING REQUIREMENTS. CONTRACTOR TO NOTIFY OWNER PRIOR TO STARTING WORK TO VERIFY COMPLIANCE WITH BOND AND WARRANTY OF EXISTING ROOF.
21. RESTORE EXISTING SYSTEMS, DEVICES, FINISHED, ETC. DAMAGED OR ALTERED BY WORK TO ACCEPTABLE CONDITIONS AS DETERMINED BY THE OWNER, ARCHITECT, AND/OR ENGINEER. EXISTING SYSTEMS AND SERVICES THAT ARE TEMPORARILY DISCONNECTED BUT ARE TO REMAIN IN USE SHALL BE PERMANENTLY RECONNECTED AND RETURNED TO PROPER OPERATION.
22. SUBMIT A SCHEDULE OF SUBMITTALS PRIOR TO SUBMITTING ANY SHOP DRAWINGS, ETC. FOR THIS PROJECT, INCLUDING THE ANTICIPATED DATE OF EACH SUBMISSION. CONTRACTORS SHALL SUBMIT 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 ALL PIPING AND DUCTWORK FIELD INSTALLATION DRAWINGS FOR EACH SYSTEM TO BE INSTALLED. ANY WORK INSTALLED OR EQUIPMENT PURCHASED PRIOR TO RECEIPT OF ENGINEER APPROVED SHOP DRAWINGS THAT REQUIRES CHANGES SHALL BE REPLACED AT CONTRACTOR'S EXPENSE.
23. SUBMIT CATALOG INFORMATION, FACTORY ASSEMBLY DRAWINGS AND FIELD INSTALLATION DRAWINGS AS REQUIRED FOR A COMPLETE EXPLANATION AND DESCRIPTION OF ALL ITEMS TO BE PROVIDED, REVIEW AND APPROVE ALL SHOP DRAWINGS. NO SUBMISSION WILL BE ACCEPTED WITHOUT THE SIGNED APPROVAL OF THE CONTRACTOR. CHECK AND VERIFY ALL FIELD MEASUREMENTS.
24. UPON COMPLETION OF CONSTRUCTION, CONTRACTOR SHALL SUPPLY THE ENGINEER WITH ONE (1) COMPLETE SET OF AS-BUILT DRAWINGS IN ELECTRONIC AUTOCAD SOFTWARE FORMAT 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.
25. NOTIFY ENGINEER OF COMPLETION OF ALL WORK, INDICATING THE CONTRACTOR IS READY FOR THE ENGINEER TO PERFORM THE FINAL PUNCHLIST INSPECTION.
26. 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.
27. PREPARE FULLY DIMENSIONED FIELD SHEET METAL AND PIPING INSTALLATION DRAWINGS (MIN. 1/4"=1'-0" SCALE). 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.
28. INSTALLED SYSTEMS SHALL OPERATE UNDER ALL CONDITIONS OF LOAD WITHOUT SOUND OR VIBRATION THAT IS OBJECTABLE TO THE ENGINEER, ARCHITECT, OR THE OWNER. OBJECTABLE SOUND OR VIBRATION CONDITIONS DUE TO WORKMANSHIP SHALL BE CORRECTED IN APPROVED MANNER BY THE CONTRACTOR AT HIS EXPENSE.
29. UPON COMPLETION OF ALL UNFINISHED OR FAULTY WORK NOTED IN ENGINEER FINAL PUNCH LIST, 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.
30. 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 OF ALL SLAB AND WALL OPENINGS AND BEAM PENETRATIONS, AND COR DRILLING TO THE STRUCTURAL ENGINEER FOR REVIEW AND APPROVAL.
31. 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 TO OWNER.
32. REFERENCED MANUFACTURES DENOTES A MINIMUM ACCEPTABLE LEVEL OF QUALITY AND IS NOT INTENDED TO PREVENT SUBMISSION OF EQUIVALENT EQUIPMENT.
33. ALL WORK BEING INSTALLED IN AIR PLENUM SPACES MUST BE INSTALLED WITH PLENUM RATED MATERIAL. ANY EXISTING NON-PLENUM RATED PLUMBING PIPE LOCATED WITHIN THESE PLENUM RATED AREAS SHALL BE WRAPPED WITH A PLENUM RATED PIPE WRAPPING MATERIAL.

GENERAL FIRE PROTECTION NOTES:

1. DESIGN AND PROVIDE THE SPRINKLER SYSTEM MODIFICATIONS IN ACCORDANCE WITH LOCAL CODES, NFPA 13, MANUFACTURER'S RECOMMENDATIONS, OWNER'S DESIGN STANDARDS AND OWNER'S INSURANCE UNDERWRITER REQUIREMENTS.
2. FIRE PROTECTION SYSTEM MATERIALS SHALL BE UL LISTED AND FM GLOBAL APPROVED.
3. SURVEY EXISTING SPRINKLER SYSTEM TO VERIFY PIPING LOCATIONS AND SIZES PRIOR TO BEGINNING SYSTEM DESIGN.
4. COORDINATE THE INSTALLATION OF FIRE PROTECTION PIPING WITH ALL TRADES AND DRAWINGS PRIOR TO COMMENCING INSTALLATION.
5. SYSTEM DESIGN SHALL BE BASED ON THE FOLLOWING MINIMUM CRITERIA UNLESS NOTED OTHERWISE:
   a. HAZARD CLASS: ORDINARY
   b. DENSITY: 0.15 GPM/SQ FT
   c. AREA: 1500 SQ FT
   d. SPACING: 130 SQ FT MAXIMUM PER SPRINKLER
6. WHERE THE EXISTING SPRINKLER INSTALLATION IS INSTALLED TO A HIGHER HAZARD CLASSIFICATION, PER NFPA 13, THIS HIGHER CLASSIFICATION AND ASSOCIATED DESIGN CRITERIA SHALL BE MAINTAINED.
7. PROVIDE COMPLETE WORKING PLANS, INCLUDING HYDRAULIC CALCULATIONS, TO CLEARLY DEFINE THE SCOPE OF WORK FOR THE SPRINKLER SYSTEM MODIFICATIONS WITHIN THE DEFINED SCOPE OF WORK AREA AS WELL AS ALL APPLICABLE ITEMS AS INDICATED FOR WORKING PLANS IN ACCORDANCE WITH NFPA 13. THE PLANS SHALL INCLUDE INDICATION OF BRANCHLINE/MAIN SIZES, LOCATIONS AND ROUTING. THE PLANS SHALL INCLUDE INDICATION OF NEW SPRINKLER LOCATIONS, BRANCHLINE/MAIN SIZES, LOCATION AND ROUTING AS REQUIRED TO SATISFY THE DESIGN CRITERIA AS SPECIFIED. EXISTING PIPING LOCATIONS, SIZES AND ROUTING SHALL BE INDICATED (INCLUDING NON-SCOPE AREA) WITH HYDRAULIC NODE POINTS BACK TO SOURCE OF FIRE PROTECTION WATER TO COMPLEMENT THE HYDRAULIC CALCULATIONS. IN ALL CASES, INFORMATION AS REQUIRED BY THE AUTHORITY HAVING JURISDICTION (AHJ) SHALL BE PROVIDED.
8. A MINIMUM TEN (10) PERCENT OR TEN (10) PSI PRESSURE SAFETY FACTOR (WHICHEVER IS GREATER) SHALL BE MAINTAINED BETWEEN AVAILABLE WATER SUPPLY AND COMBINED DEMAND OF SPRINKLER SYSTEM AND HOSE STREAM ALLOWANCE TO ACCOUNT FOR FUTURE DETERIORATION.
9. RELOCATE, ADD AND/OR REMOVE AUTOMATIC SPRINKLERS AND ASSOCIATED PIPING/FITTINGS AND OTHER DEVICES AS REQUIRED TO ACCOMMODATE AND COORDINATE WITH ALL ARCHITECTURAL, MEP AND FIRE PROTECTION RENOVATIONS/MODIFICATIONS IN THE SCOPE OF WORK AREA AND AS INDICATED.
10. PIPE VELOCITIES SHALL BE LIMITED TO 20 FPS IN BRANCHLINES AND 25 FPS IN MAINS.
11. CONTRACTOR SHALL PROVIDE PROTECTION FOR PIPING AGAINST DAMAGE BY EARTHQUAKES IN ACCORDANCE WITH NFPA 13 AND ASCE/SEI 7-05 "MINIMUM DESIGN LOADS FOR BUILDINGS AND OTHER STRUCTURES".
12. PIPING, FITTINGS, AND JOINTS SHALL BE BLACK CARBON STEEL. PIPING SHALL BE SCHEDULE 40 (2 INCH DIAMETER AND SMALLER) AND SCHEDULE 10 (2.5 INCH DIAMETER AND LARGER).
13. WHERE NEW SPRINKLERS ARE ADDED, THE NEW SPRINKLERS SHALL MATCH EXISTING (TYPE, FINISH, RESPONSE TYPE, TEMPERATURE RATING, ORIFICE, ETC).
14. PIPING SIZE CHANGES SHALL BE MADE WITH REDUCING FITTINGS. FLUSH OR HEX BUSHINGS ARE NOT ACCEPTABLE.
15. FLUSHING CONNECTIONS CONSISTING OF A THREADED CAPPED NIPPLE OR APPROVED MECHANICAL GROOVED END CAP SHALL BE PROVIDED ON THE END(S) OF ALL CROSS-MAINS. THE NIPPLE SHALL BE THE SAME DIAMETER AS THE END PIPE BUT NOT LARGER THAN 2 INCHES.
16. FOR WELDED PIPING AND PIPING WITH CUT HOLES, THE CONTRACTOR SHALL CERTIFY THAT ALL CUTOUTS (COUPONS OR DISCS) HAVE BEEN RETRIEVED AND THAT ALL INTERNAL SLAG AND WELDING RESIDUE IS REMOVED.
17. PROVIDE SPECIAL SPRINKLER WRENCHES, SPARE SPRINKLER HEADS, AND STORAGE CABINETS IN ACCORDANCE WITH NFPA 13.
18. DO NOT RUN PIPING OVER ELECTRICAL EQUIPMENT. FOR ELECTRICAL EQUIPMENT ROOMS AND ELEVATOR MACHINE ROOMS, ONLY SPRINKLERS AND PIPING WHICH ARE DIRECTLY AND EXCLUSIVELY PROVIDING PROTECTION TO THESE SPACES MAY ENTER THESE SPACES.
19. LOCATE PIPING SO THAT ACCESS TO AND CLEARANCE AROUND EQUIPMENT AND MINIMUM HEADROOM OF 7 FEET ARE MAINTAINED. RUN PIPING IN THE MOST DIRECT MANNER, FORMING RIGHT ANGLES WITH OR PARALLEL TO BUILDING LINES.
20. SPRINKLER DISCHARGE SHALL NOT BE OBSTRUCTED IN ANY WAY. WHERE OBSTRUCTIONS TO SPRINKLER DISCHARGE EXIST, LOCATE SPRINKLERS WITH RESPECT TO THESE OBSTRUCTIONS IN ACCORDANCE WITH NFPA 13.
21. PROVIDE SPRINKLERS BELOW DUCTS, DECKS, PIPES, CONDUITS, CABLE TRAYS AND OTHER OBSTRUCTIONS WHICH, INDIVIDUALLY OR IN COMBINATION, CREATE AN OBSTRUCTION WHICH IS 48 INCHES OR MORE IN WIDTH.
22. DRAINAGE SHALL BE PROVIDED IN ACCORDANCE WITH NFPA 13. ALL SPRINKLER PIPING SHALL BE INSTALLED SO THAT THE FIRE PROTECTION SYSTEMS MAY BE DRAINED. ALL DROPS TO MORE THAN ONE SPRINKLER HEAD AND ALL CHANGES IN ELEVATION THAT CREATE TRAPPED SECTIONS SHALL BE PROVIDED WITH AUXILIARY DRAINS IN ACCORDANCE WITH NFPA 13.
23. INSTALL PIPING TO ALLOW FOR GRAVITY DRAINAGE.
24. BEFORE ANY WORK STARTS, SUBMIT AND OBTAIN APPROVAL FROM THE AUTHORITY HAVING JURISDICTION (AHJ) OF THE INFORMATION, DATA, CALCULATIONS, DRAWINGS AND CATALOG CUTS AS REQUIRED BY NFPA 13 AND OTHER REQUIREMENTS AS MAY BE PROMULGATED BY AHJ.
25. SUBMIT DRAWINGS, CUTS AND CATALOG INFORMATION SHOWING DIMENSIONS, WEIGHT PERFORMANCE, ETC. OF ALL EQUIPMENT.
26. AFTER APPROVAL BY THE AHJ AND PRIOR TO BEGINNING WORK, SUBMIT SHOP DRAWINGS, AND CATALOG CUTS BEARING THIS APPROVAL TO THE OWNER AND DESIGN PROFESSIONAL FOR APPROVAL.
27. SUBMIT ALL SHOP DRAWINGS, CALCULATIONS AND CATALOG CUTS AT ONE TIME. PARTIAL SUBMISSIONS WILL NOT BE ACCEPTED.
28. SUBMIT DRAWINGS AND DETAILS SHOWING ALL PIPING MAINS, RUNS, BRANCHES, VALVES, DRAINS, SPRINKLERS AND ACCESSORIES FOR THE COMPLETE FIRE PROTECTION SYSTEM. ALSO SUBMIT THE MANUFACTURER'S NAME, FIGURE NUMBERS, OR OTHER MEANS OF IDENTIFICATION, OF ALL PIPE, FITTINGS, VALVES AND OTHER MATERIALS REQUIRED FOR THE INSTALLATION OF THE WORK.
29. TEST NEW AND MODIFIED SPRINKLER PIPING IN ACCORDANCE WITH NFPA 13.
30. FOR EXISTING PIPING:
   a. DO NOT TEST EXISTING STANDPIPE AND SPRINKLER PIPING.
   b. DO NOT TEST EXISTING UNDERGROUND FIRE MAIN.
31. ALL NEW SPRINKLER PIPING SHALL BE TESTED AND FLUSHED IN ACCORDANCE WITH NFPA 13 AND INSURANCE UNDERWRITER REQUIREMENTS. REPAIR ALL DAMAGE CAUSED BY LEAKS, FLOODING, OR DRAINING DURING OR TESTING WORK.
32. SPRINKLER SYSTEM SHUTDOWNS SHALL BE KEPT TO A MINIMUM. COORDINATE SHUTDOWNS WITH AHJ, INSURANCE UNDERWRITER AND BUILDING OWNER'S REPRESENTATIVE.
33. MAINTAIN SPRINKLER SYSTEM SO THAT IT IS FULLY OPERATIONAL WHEN PROJECT IS OFFICIALLY ACCEPTED BY OWNER'S REPRESENTATIVE.
34. OBTAIN WRITTEN APPROVAL OF SPRINKLER SYSTEM INSTALLATION FROM AHJ AND OWNER'S INSURANCE UNDERWRITER AND SUBMIT ONE (1) COPY TO OWNER'S REPRESENTATIVE AND DESIGN PROFESSIONAL.
35. COMPLETE AND FORWARD CONTRACTOR'S MATERIAL AND TEST CERTIFICATE(S) TO AHJ, OWNER'S INSURANCE UNDERWRITER, DESIGN PROFESSIONAL AND OWNER'S REPRESENTATIVE.
36. OCCUPANCY HAZARD CLASSIFICATION AND WATER DEMAND - THE FIRST FLOOR SPRINKLER COVERAGE SHALL BE DESIGNED TO THE FOLLOWING HAZARD CLASSIFICATION.

HAZARD CLASSIFICATION: ORDINARY HAZARD (GROUP 1)	
DENSITY	0.15 GPM/SQ.FT.
AREA OF SPRINKLER OPERATION	1500 SQ.FT.
HOSE STREAM ALLOWANCE	250 GPM
MAXIMUM SPRINKLER COVERAGE	130 SQ.FT.
ORIFICE SIZE	K = 5.6
CONNECTIONS SIZE	MINIMUM 1/2"
ROOM	MECHANICAL SPACES

THE ORDINARY HAZARD (GROUP 1) DESIGNED CRITERIA DRIVES THE WET SYSTEM PERFORMANCE A MINIMUM FLOW OF 475 GPM IS REQUIRED, WITH 225 GPM FOR SPRINKLER OPERATION (FROM 0.15 GPM/SQ.FT. X 1500 SQ.FT) AND 250 GPM FOR HOSE STREAM ALLOWANCE.

37. THE FIRE PROTECTION CONTRACTOR SHALL PERFORM A HYDRANT FLOW TEST AT OR NEAR THE POINT OF SERVICE CONNECTION PRIOR TO FINAL HYDRAULIC CALCULATIONS AND SYSTEM INSTALLATION. THE FLOW TEST SHALL VERIFY THE AVAILABLE WATER SUPPLY, INCLUDING STATIC PRESSURE, RESIDUAL PRESSURE, AND AVAILABLE FLOW. ANY DISCREPANCIES BETWEEN THE MEASURED WATER SUPPLY AND THE DESIGN CRITERIA SHOWN ON THE PLANS SHALL BE IMMEDIATELY REPORTED TO THE ENGINEER OF RECORD FOR REVIEW AND RESOLUTION. THE FIRE SPRINKLER SYSTEM SHALL BE HYDRAULICALLY DESIGNED BASED ON THE VERIFIED WATER SUPPLY DATA.

ISSUED FOR BID
DATE: 08/07/2026

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ALL DIMENSIONS MUST BE VERIFIED BY CONTRACTOR AND OWNER MUST BE NOTIFIED OF ANY DISCREPANCIES BEFORE PROCEEDING WITH WORK

SPFLD00611 - LIBRARY BUILDING RENOVATIONS
70 POWELL ROAD, SPRINGFIELD, PA 19064

FIRE PROTECTION NOTES

SPRINGFIELD TOWNSHIP
50 POWELL ROAD, SPRINGFIELD, PA 19064

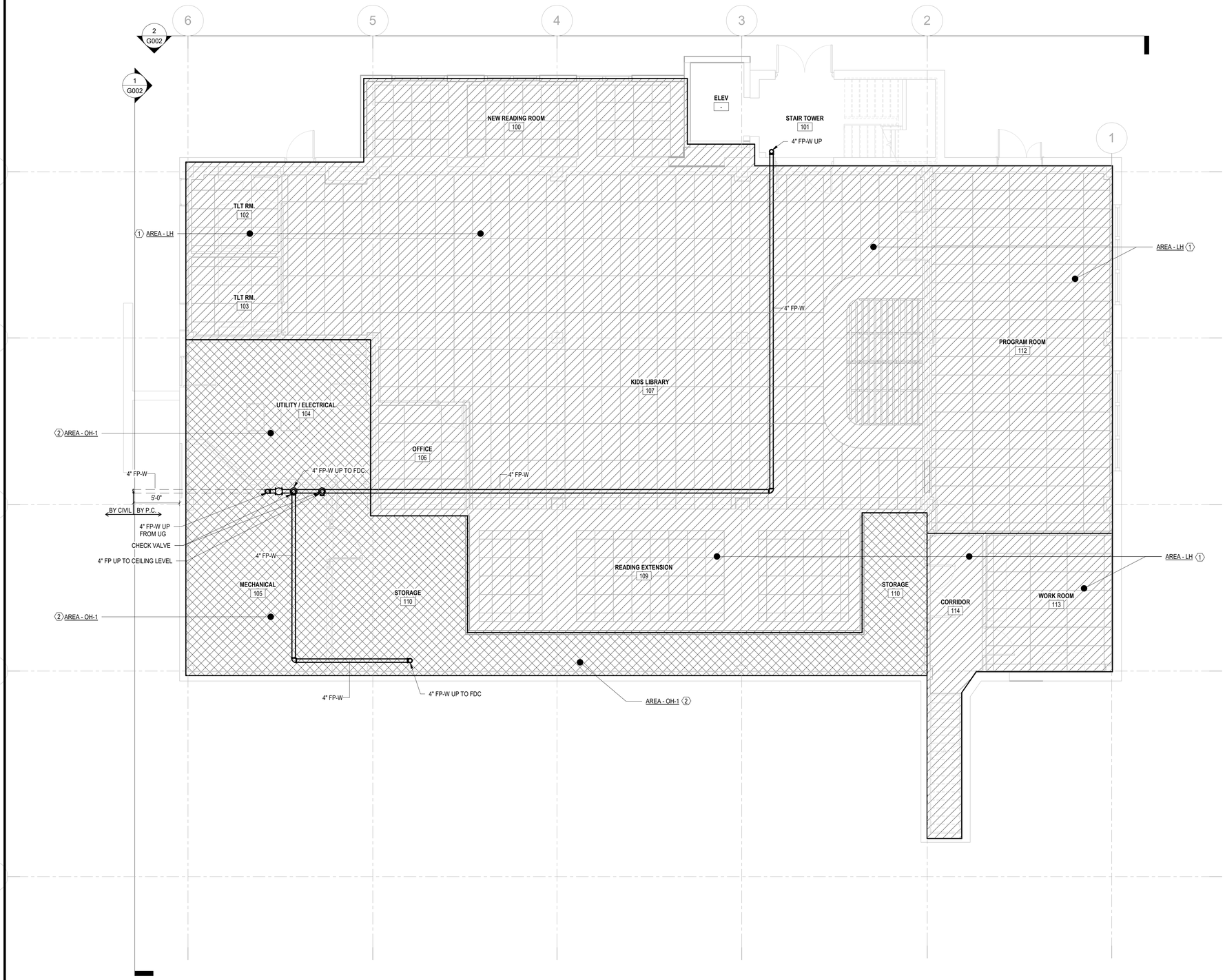
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PROJECT	SPFLD00611
DATE	08/07/2026
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DRAWN BY	KWJ
APPROVED BY	RHG

FP002

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1 FP200 FIRE PROTECTION PLAN - LOWER LEVEL
3/16" = 1'-0"

GENERAL NOTES

1. FIRE PROTECTION CONTRACTOR SHALL ACQUIRE THE COMPLETE DESIGN DOCUMENTATION FOR THIS PROJECT, INCLUDING ARCHITECTURAL, STRUCTURAL, MECHANICAL (HVAC), ELECTRICAL, PLUMBING, PROCESS AND CIVIL ENGINEERING DRAWINGS. FIRE PROTECTION CONTRACTOR SHALL UTILIZE THE COMPLETE SET OF DRAWINGS FOR COORDINATING THE FIRE PROTECTION WORK IN THE FIELD.
2. FIRE PROTECTION CONTRACTOR SHALL COORDINATE THE EXECUTION OF ALL FIELD VERIFICATIONS WITH THE CONSTRUCTION SCHEDULE. ALL FIELD VERIFICATIONS ACTIVITIES SHALL BE UNDERTAKEN BY THE CONTRACTOR SUFFICIENTLY IN ADVANCED OF OTHER SCHEDULED WORK TO ALLOW FOR THE TIMELY IDENTIFICATION OF EXISTING CONDITIONS THAT MAY ADVERSELY AFFECT THE SCHEDULED INSTALLATION OF THE NEW WORK.
3. FIRE PROTECTION CONTRACTOR SHALL COORDINATE THE ROUTING OF THE SPRINKLER PIPING IN THE FIELD, WITH ALL OTHER TRADES INVOLVED, PRIOR TO COMMENCEMENT OF ANY WORK.
4. FIRE PROTECTION CONTRACTOR SHALL COORDINATE THE LOCATION OF THE SPRINKLERS IN THE FIELD, WITH ALL OTHER TRADES INVOLVED, PRIOR TO COMMENCEMENT OF ANY WORK.
5. ADDITIONAL SPRINKLERS SHALL BE PROVIDED UNDER ANY FIXED OBSTRUCTION WIDER THAN 4 FT.
6. ANY SPRINKLERS, PIPING, ETC. EXISTING TO REMAIN THAT ARE DAMAGED DURING NEW WORK ACTIVITIES SHALL BE REPLACED IN-KIND WITH NEW.
7. FIRE WATCH SHALL BE PROVIDED IN ACCORDANCE WITH NFPA 101 AND NFPA 25 WHEN THE EXISTING FIRE SUPPRESSION SYSTEM, OR PORTION OF THE EXISTING SYSTEM IS NOT IN OPERATING CONDITION. FIRE WATCH SHALL BE COORDINATED WITH OWNER AND LOCAL FIRE DEPARTMENT.
8. ALL PENDENT SPRINKLERS ARE TO BE INSTALLED ON RETURN BENDS.
9. REFER TO GENERAL NOTES ON SHEET FP001.

KEYNOTES

1 PROVIDE CONCEALED POENDANT SPIRNKLERS IN ACT AND GYP BOARD CEILINGS.
2 PROVIDE UPRIGHT SPRINKLERS IN ROOMS WITH UNFINISHED CEILINGS AND MECHANICAL SPACES.

AUTOMATIC SPRINKLER SYSTEM DESIGN CRITERIA

SYMBOL	OCCUPANCY HAZARD CLASSIFICATION	DESIGN DENSITY (GPM/SF)	DESIGN AREA
R	RESIDENTIAL (DWELLING) OCCUPANCY	0.05	400 SF
LH	LIGHT HAZARD OCCUPANCY	0.10	1500 SF
OH1	ORDINARY HAZARD, GROUP 1 OCCUPANCY	0.15	1500 SF
OH2	ORDINARY HAZARD, GROUP 2 OCCUPANCY	0.20	1500 SF
EH1	EXTRA HAZARD, GROUP 1 OCCUPANCY	0.30	2500 SF
EH2	EXTRA HAZARD, GROUP 2 OCCUPANCY	0.40	2500 SF
S	SPECIAL HAZARD OCCUPANCY		

AREA - LH	
SYSTEM TYPE - WET	HAZARD - LIGHT HAZARD
DENSITY - 0.10	MAX. AREA - 1875 SF
SPKR. TEMP. - 155°F	MIN. SF/HD - 225 SF
AREA - OH-1	
SYSTEM TYPE - WET	HAZARD - ORDINARY HAZARD GROUP 1
DENSITY - 0.15	MAX. AREA - 1500 SF
SPKR. TEMP. - 155°F	MIN. SF/HD - 130 SF

ISSUED FOR BID
DATE: 08/07/2026

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70 POWELL ROAD, SPRINGFIELD, PA 19064

FIRE PROTECTION PLAN - LOWER LEVEL

SPRINGFIELD TOWNSHIP
50 POWELL ROAD, SPRINGFIELD, PA 19064

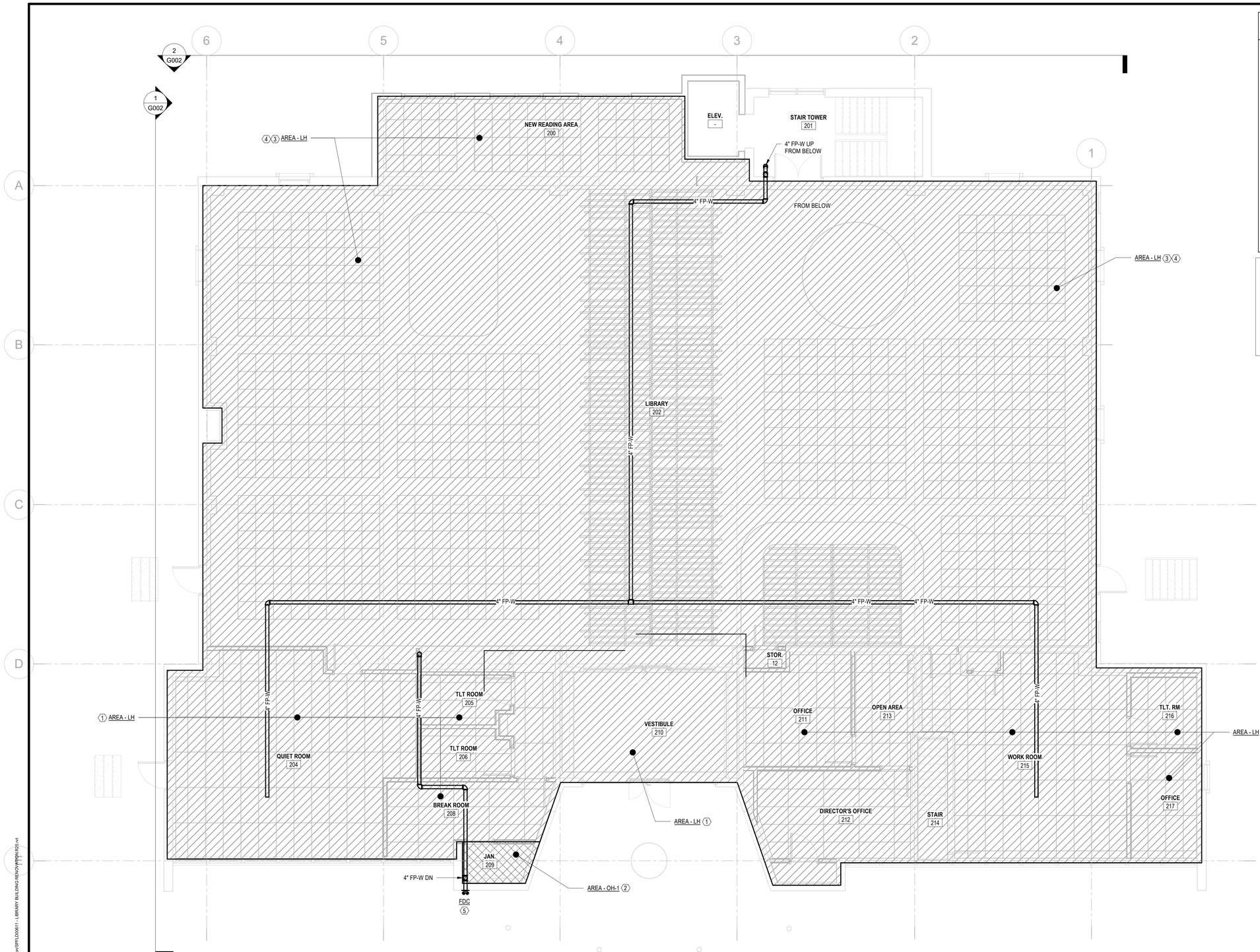
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DRAWN BY	KWJ
APPROVED BY	RHG

FP200

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1 FP201 FIRE PROTECTION PLAN - UPPER LEVEL
3/16" = 1'-0"

GENERAL NOTES

1. FIRE PROTECTION CONTRACTOR SHALL ACQUIRE THE COMPLETE DESIGN DOCUMENTATION FOR THIS PROJECT, INCLUDING ARCHITECTURAL, STRUCTURAL, MECHANICAL (HVAC), ELECTRICAL, PLUMBING, PROCESS AND CIVIL ENGINEERING DRAWINGS. FIRE PROTECTION CONTRACTOR SHALL UTILIZE THE COMPLETE SET OF DRAWINGS FOR COORDINATING THE FIRE PROTECTION WORK IN THE FIELD.
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8. ALL PENDENT SPRINKLERS ARE TO BE INSTALLED ON RETURN BENDS.
9. REFER TO GENERAL NOTES ON SHEET FP001.

KEYNOTES

1 PROVIDE CONCEALED POENDANT SPIRNKLERS IN ACT AND GYP BOARD CEILINGS.
2 PROVIDE PENDANT SPRINKLERS IN JANITOR'S CLOSET ROOM
3 PROVIDE UPRIGHT SPRINKLERS AT HIGHEST CEILING PLANE OF OPEN LIBRARY SPACE.
4 PROVIDE PENDANT SPRINKLERS BETWEEN DECORATIVE CEILING SYSTEM GRIDDED ELEMENTS. LOCATE PENDANT SPRINKLER HEADS AT HEIGHT AT OR JUST BELOW GRID ELEMENTS.
5 SPRINKLER CONTRACTOR SHALL COORDINATE THE FINAL LOCATION OF THE FDC WITH THE FIRE MARSHAL.

AUTOMATIC SPRINKLER SYSTEM DESIGN CRITERIA

SYMBOL	OCCUPANCY HAZARD CLASSIFICATION	DESIGN DENSITY (GPM/SF)	DESIGN AREA
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FIRE PROTECTION PLAN - UPPER LEVEL
SPRINGFIELD TOWNSHIP
50 POWELL ROAD, SPRINGFIELD, PA 19064

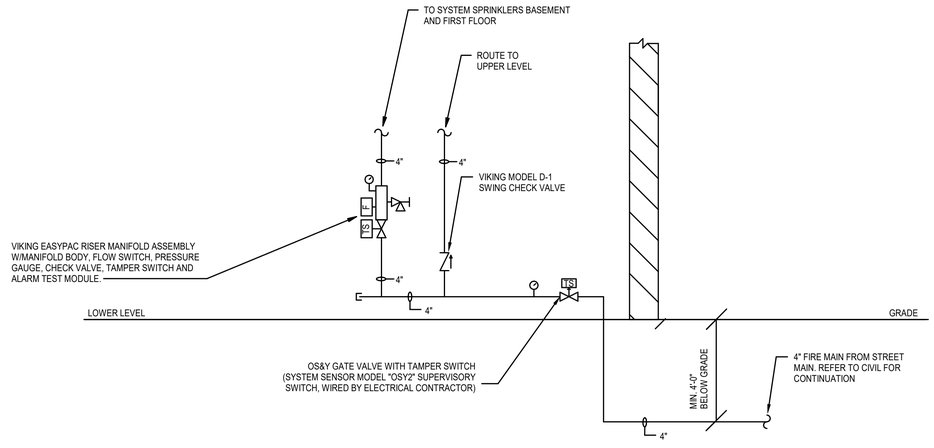
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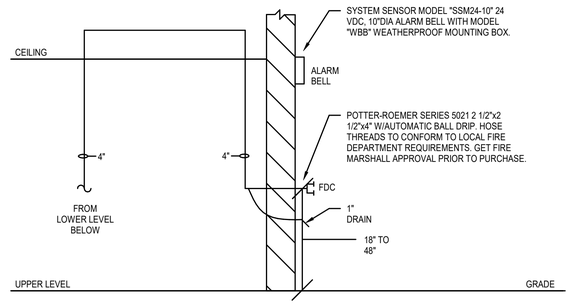
PROJECT	SPFLD00611
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DRAWING SCALE	AS NOTED
DRAWN BY	KWJ
APPROVED BY	RHG

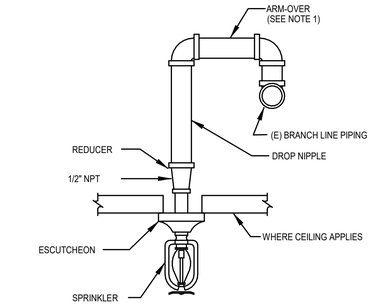
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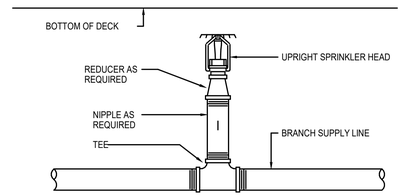
1 FP300 FIRE PROTECTION RISER DIAGRAM
NOT TO SCALE



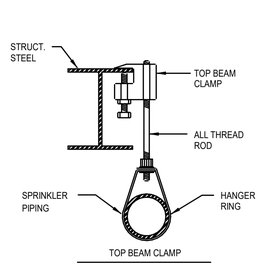


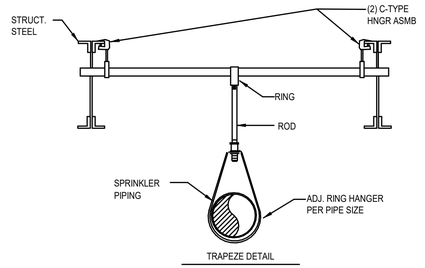
NOTE:
1. WHEN ARM-OVER IS MORE THEN 24" INCHES IN LENGTH IT MUST BE SUPPORTED WITH A PIPE HANGER.

2 FP300 PENDENT SPRINKLER ARM OVER DETAIL
NOT TO SCALE



4 FP300 UPRIGHT SPRINKLER HEAD DETAIL
NOT TO SCALE





3 FP300 SPRINKLER PIPE HANGER DETAIL
NOT TO SCALE

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FIRE PROTECTION RISER & DETAILS

SPRINGFIELD TOWNSHIP
50 POWELL ROAD, SPRINGFIELD, PA 19064

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APPROVED BY	RHG

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