RELIEF FIRE COMPANY NO. 1 ADDITION / RENOVATION

BLOCK 86, LOTS 4, 5, 10, 11, 21, 22, 22.01 AND 23
17 PINE STREET
MOUNT HOLLY, NEW JERSEY

REBID SET 10/23/2020

OWNER:

MT HOLLY FIRE DISTRICT NO. 1
17 PINE STREET
MT HOLLY, NJ. 08060
609-261-7233

ARCHITECT:

REGAN YOUNG ENGLAND BUTERA, PC.
456 HIGH STREET
MT HOLLY, NJ. 08060
609-265-2652, FAX 609-265-0333

SITE ENGINEER:

PENNONI ASSOCIATES, INC
515 GROVE STREET, SUITE 1B
HADDON HEIGHTS, NJ. 08035
856-656-2890

STRUCTURAL ENGINEER:

HARRISON- HAMNETT, P.C.
40 KNOWLES STREET
PENNINGTON, NJ. 08534
609-818-1808

MEP ENGINEERS:

KELTER AND GILLIGO CONSULTING ENGINEERS
P.O. BOX 777, 14 WASHINGTON ROAD
PRINCETON JUNCTION, NJ. 08550
609-799-8336, FAX 609-275-9306

CONSTRUCTION MANAGER:

GREYHAWK CONSTRUCTION MANAGERS + CONSULTANTS
2000 MIDLANTIC DRIVE, SUITE 210
MOUNT LAUREL, NJ. 08554
856-722-1800

KITCHEN CONSULTANT:

TAFF NASH FOOD SERVICE DESIGN
4 SPRING HOUSE LANE
DENVER, PA 17517

LIST OF DRAWINGS

CS	COVER SHEET	
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CM0002	GENERAL NOTES	
CM0501	DEMOLITION PLAN	
CM1001	SITE PLAN	
CM1501	GRADING PLAN	
CM1701	UTILITY PLAN	
CM2001	LANDSCAPE PLAN	
CM2201	LIGHTING	
CM6001	CONSTRUCTION DETAILS-1	
CM6002	CONSTRUCTION DETAILS-2	
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CM8001	SOIL EROSION AND SEDIMENT CONTROL PLAN	
CM8501	SOIL EROSION AND SEDIMENT CONTROL NOTES	
CM8502	SOIL EROSION AND SEDIMENT CONTROL DETAILS	
ADDENDUM-01 25 SEPT 2020	**V0501**	TOPOGRAPHIC BOUNDARY SURVEY
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EC.2	EXISTING INTERIOR PHOTOS	
EC.3	EXISTING INTERIOR PHOTOS	
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A1.1	CODE ANALYSIS	
A1.2	COMCHECK ANALYSIS	
A1.3	USE GROUP, EGRESS AND SIGNAGE PLANS	
A1.4	DEMOLITION FLOOR PLANS	
A1.5	DEMOLITION ELEVATIONS	
A2.0	FIRE RATING PLAN	
A2.1	FINISH SCHEDULE AND WALL TYPES	
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A2.3	SECOND FLOOR & ROOF PLANS	
A2.4	FURNITURE AND EQUIPMENT PLANS	
A2.5	BUILDING ELEVATIONS	
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A2.7	DOOR - WINDOW TYPES & DETAILS	
A2.8	ENLARGED PLANS	
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A3.1	PLAN DETAILS	
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A3.3	PLAN DETAILS	
A4.0	WALL SECTIONS	
A4.1	WALL SECTIONS	
A4.2	WALL SECTIONS	
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A4.4	WALL SECTIONS	
A4.5	WALL SECTIONS	
A4.6	WALL SECTIONS	
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A5.1	ROOF DETAILS	
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H1	FIRST FLOOR PLAN AND MEZZANINE- HVAC	
H2	SECOND FLOOR PLAN- HVAC	
H3	ROOF PLAN- HVAC	
H4	SYMBOLS, ABBREVIATIONS & SCHEDULES- HVAC	
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H6	SCHEDULES AND DETAILS- HVAC	
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H8	CONTROLS DIAGRAMS- HVAC	
PD1	FIRST & SECOND FLOOR PLANS- PLUMBING DEMOLITION	
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P7	SCHEDULES & DETAILS- PLUMBING	
P8	DOMESTIC WATER RISER DIAGRAMS- PLUMBING	
P9	SANITARY RISER DIAGRAMS- PLUMBING	
FP1	FIRST FLOOR PLAN- FIRE PROTECTION	
FP2	SECOND FLOOR PLAN- FIRE PROTECTION	
FP3	SECTIONS- FIRE PROTECTION	
ADDED SHEET 23 OCT 2020	**FP4**	FIRST FLOOR PLAN- FIRE PROTECTION
ED1	PLANS AND SYMBOLS LIST- ELECTRICAL DEMOLITION	
E1	SITE PLAN AND DETAILS- ELECTRICAL	
E2	FIRST FLOOR PLAN- LIGHTING	
E3	FIRST FLOOR PLAN-POWER	
E4	SECOND FLOOR PLAN- LIGHTING	
E5	SECOND FLOOR PLAN- POWER	
E6	ROOF PLAN- ELECTRICAL	
E7	DIAGRAMS AND SCHEDULES- ELECTRICAL	
IT1	FIRST FLOOR PLAN- INFORMATION TECHNOLOGY	
IT2	SECOND FLOOR PLAN- INFORMATION TECHNOLOGY	

REGAN YOUNG, AIA
21A00912100

REGAN YOUNG ENGLAND BUTERA
REFERENDUMS · ENGINEERING · ARCHITECTURE · DESIGN
456 HIGH STREET • MT. HOLLY, NEW JERSEY 08060 USA
+1(609)265-2652/-0333FAX • 21A00912100 • RYEBREAD.COM

RELIEF FIRE COMPANY NO. 1
ADDITION / RENOVATION
BLOCK 86, LOTS 4, 5, 10, 11, 21, 22, 22.01 AND 23
17 PINE STREET
MOUNT HOLLY, NEW JERSEY
TITLE: COVER SHEET

DRAWING DATE: 01 JULY 2020
REVISION DATE:
1 02 SEPT 20
2 25 SEPT 20
DRAWN BY: RR
COMMISSION NO.: 5475B

CS

RELIEF FIRE COMPANY NO. 1
ADDITION / RENOVATION
BLOCK 86; LOTS 4, 5, 10, 11, 21, 22, 22.01 AND 23
BURLINGTON COUNTY, NEW JERSEY

PREPARED FOR:

OWNER

MOUNT HOLLY FIRE DISTRICT NO.1

P.O. BOX 741

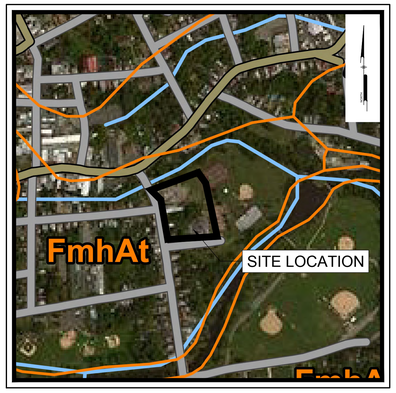
MOUNT HOLLY, NEW JERSEY 08060

ADJACENT PROPERTY LISTING APPLICANT: B-86 L-10 & 22.01 Mount Holly Fire District
TAXING DISTRICT 23 MOUNT HOLLY TWP COUNTY 03 BURLINGTON

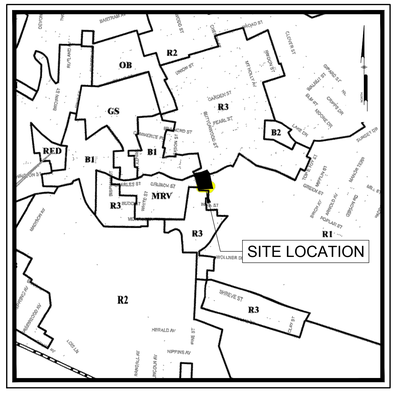
PROPERTY ID	PROPERTY LOCATION	CLASS	OWNERS NAME & ADDRESS
84 1	18-20 PINE ST	4C	18-20 PINE ST LLC%COOPER R E MGMT 55 HALSEY ST NEWARK, NJ 07102
84 2	22 PINE ST	4C	BENJAMIN, PIERRY B 22 PINE ST MT HOLLY, NJ 08060
84 3	24 PINE ST	2	UBAH, OBI PO BOX 2422 WILLINGBORO, NJ 08046
84 4	26 PINE ST	2	CRAIN, ERNEST & LARRY 26 PINE ST MT HOLLY, NJ 08060
84 5	28 PINE ST	2	WEST, TERRENCE & DIANE 312 FOUNDRY ST FLORENCE, NJ 08518
84 6	30 PINE ST	2	ROGERS, JOSEPH A JR 30 PINE ST MT HOLLY, NJ 08060
84 7	32 PINE ST	2	SMITH, ARTHUR P JR & SCHINDLER, K R 32 PINE ST MT HOLLY, NJ 08060
84 8	34 PINE ST	2	DIAMOND, DAVID PO BOX 1538 MEDFORD, NJ 08055
84 9	36 PINE ST	2	GARRETSON, CYNAMON T 36 PINE ST MT HOLLY, NJ 08060
84 21	58 CHURCH ST	2	SNEROOS PROPERTIES, LP P O BOX 1464 NEWTOWN, PA 18940
85 20	6 PINE ST L21	15C	MOUNT HOLLY TWP 23 WASHINGTON ST MT HOLLY, NJ 08060
85 22	63 CHURCH ST	15C	MOUNT HOLLY TWP 23 WASHINGTON ST MT HOLLY, NJ 08060
85 23	61 CHURCH ST	15C	MOUNT HOLLY TWP 23 WASHINGTON ST MT HOLLY, NJ 08060
85 24	59 CHURCH ST	2	LINGLE, ESTHER M 57 CHURCH ST MT HOLLY, NJ 08060
85 25	57 CHURCH ST	2	LINGLE, ESTHER M 57 CHURCH ST MT HOLLY, NJ 08060
85 26	55-55-1/2 CHURCH ST L27	4C	VIOLET RUTH PROPERTY LLC 94 WASHINGTON ST MT HOLLY, NJ 08060
86 1	WALL ST L2,3423	15C	MOUNT HOLLY TWP MILL DAM PARK 23 WASHINGTON ST MT HOLLY, NJ 08060
86 2.01	7 PINE ST	15C	MOUNT HOLLY TWP 23 WASHINGTON ST MT HOLLY, NJ 08060

ADJACENT PROPERTY LISTING APPLICANT: B-86 L-10 & 22.01 Mount Holly Fire District
TAXING DISTRICT 23 MOUNT HOLLY TWP COUNTY 03 BURLINGTON

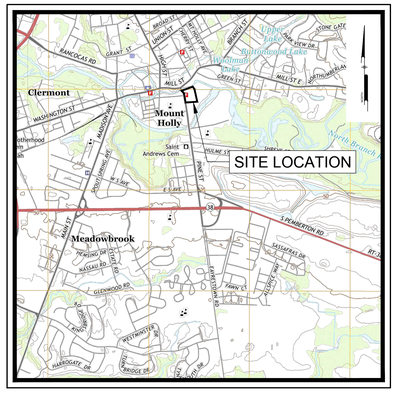
PROPERTY ID	PROPERTY LOCATION	CLASS	OWNERS NAME & ADDRESS
86 4	17 PINE ST	15C	MOUNT HOLLY FIRE DISTRICT NO 1 100 GARDEN ST MT HOLLY, NJ 08060
86 5	9 PINE ST	15C	MOUNT HOLLY FIRE DISTRICT NO 1 100 GARDEN ST MT HOLLY, NJ 08060
86 11	21 PINE ST L22	15C	MOUNT HOLLY FIRE DISTRICT NO 1 100 GARDEN ST MT HOLLY, NJ 08060
86 12	23 PINE ST	2	DELFINO, JOHN & KAREN 506 PAXSON AVE MERCERVILLE, NJ 08619
86 13	25 PINE ST	2	MOUNT, DAVID L & SHERYL L 25 PINE ST MT HOLLY, NJ 08060
86 14	27 PINE ST	4C	DANIEL MARK PROPERTIES, LLC P O BOX 1464 NEWTOWN, PA 18940
86 15	29 PINE ST	2	CONNELEY, WARREN 13 SHERMAN TERR BROWNS MILLS, NJ 08068
86 16	31 PINE ST	2	EILER, LEANNA 41 MORGAN AVE STE A PALMYRA, NJ 08065
86 17	33 PINE ST	2	BONFONTI, MARK W & KIMBERLY A 54 HANCOCK ST TRENTON, NJ 08611
86 18	35 PINE ST	2	ORESTC, VINCENT & BRENDA 30 BRANCH ST MT HOLLY, NJ 08060
86 19	11 WALL ST L20	15C	MOUNT HOLLY TWP 23 WASHINGTON ST MT HOLLY, NJ 08060
86 21	19-21 WALL ST	15C	MOUNT HOLLY TWP 23 WASHINGTON ST MT HOLLY, NJ 08060



SOILS MAP
Scale: 1" = 400'



ZONING MAP
Scale: 1" = 1000'



USGS MAP
Scale: 1" = 2000'

UTILITIES

MOUNT HOLLY WATER COMPANY C/O NJ AMER.WATER
PO BOX 5600
CHERRY HILL, NJ 08060 609-267-0540

MOUNT HOLLY SEWERAGE AUTHORITY
37 WASHINGTON STREET
MOUNT HOLLY, NJ 08060 609-267-0015

ALAIMO ASSOCIATES
200 HIGH STREET
MT. HOLLY, NJ 08060 609-267-8310

BURLINGTON COUNTY PLANNING BOARD
PO BOX 6000
MT. HOLLY, 08060 856-642-3800

P.S.E. & G. CO.
501 HIGH STREET
BURLINGTON, NJ 08016 609-239-2471

COMCAST CABLE CO.
1 CABLE TV LANE
SICKLERVILLE, NJ 08081 800-COMCAST

VERIZON - NEW JERSEY
15000 MIDATLANTIC DRIVE, FLOOR 2
MT. LAUREL, NJ 08054 800-427-9977

NEW JERSEY

ONE CALL

CALL BEFORE YOU DIG
1-800-272-1000

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

PREPARED BY:
PENNONI ASSOCIATES INC.

Pennoni

515 Grove Street, Suite 1B
Haddon Heights, NJ 08035
T 856.547.0505
F 856.547.9174
NJ CERTIFICATE OF AUTHORIZATION NO. GA28033300

SHEET LIST TABLE

SHEET NUMBER	DWG NO.	SHEET TITLE	DRAWING DATE	REVISION DATE
1	CM0001	COVER	8/18/2017	10/23/2020
2	CM0002	GENERAL NOTES	8/18/2017	10/23/2020
3	CM0501	DEMOLITION PLAN	8/18/2017	10/23/2020
4	CM1001	SITE PLAN	8/18/2017	10/23/2020
5	CM1501	GRADING PLAN	8/18/2017	10/23/2020
6	CM1701	UTILITY PLAN	8/18/2017	10/23/2020
7	CM2001	LANDSCAPE PLAN	8/18/2017	10/23/2020
8	CM2201	LIGHTING PLAN	11/30/2017	10/23/2020
9	CM6001	CONSTRUCTION DETAILS - 1	8/18/2017	10/23/2020
10	CM6002	CONSTRUCTION DETAILS - 2	8/18/2017	10/23/2020
11	CM6003	CONSTRUCTION DETAILS - 3	8/25/2020	10/23/2020
12	CM8001	SOIL EROSION AND SEDIMENT CONTROL PLAN	8/18/2017	10/23/2020
13	CM8501	SOIL EROSION AND SEDIMENT CONTROL NOTES	8/18/2017	10/23/2020
14	CM8502	SOIL EROSION AND SEDIMENT CONTROL DETAILS	8/18/2017	10/23/2020

ISSUED FOR RE-BIDDING: 10/23/2020

Pennoni
PENNONI ASSOCIATES INC.
515 Grove Street, Suite 1B
Haddon Heights, NJ 08035
T 856.547.0505 **F** 856.547.9174
NJ COA NO. GA28033300

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

HUGH J. DOUGHERTY
PROFESSIONAL ENGINEER
NEW JERSEY LICENSE NO. GE34634
10/23/2020

RELIEF FIRE COMPANY NO. 1
17 PINE STREET
BLOCK 86; LOTS 4, 5, 10, 11, 21, 22, 22.01 AND 23, TAX MAP SHEET 25
TOWNSHIP OF MOUNT HOLLY BURLINGTON COUNTY, NEW JERSEY

COVER

MOUNT HOLLY FIRE DISTRICT NO.1
P.O. BOX 741
MOUNT HOLLY, NEW JERSEY 08060

NO.	DATE	REVISIONS	
13	10/23/2020	RE-BID PLANS	SMR
12	09/25/2020	ADDENDUM 2	SMR
11	09/02/2020	ADDENDUM 1	SMR
10	08/28/2020	ISSUED FOR BIDDING	SMR
9	07/30/2020	BURL. CNTY. S.C.D. RESUBMISSION	SMR
8	06/18/2020	BID PLANS	SMR
7	02/18/2020	PER COUNTY PLANNING BOARD ENGINEER	SMR
6	01/23/2020	PER NJDEP COMMENTS	SMR
5	09/27/2019	BURL. CNTY. PB SUBMISSION RESUBMISSION	SMR
4	09/03/2019	NJDEP AND GREENACRES RESUBMISSION	SMR
3	06/22/2019	NJDEP AND GREENACRES RESUBMISSION	SMR
2	06/03/2019	BURL. CNTY. PB SUBMISSION	SMR
1	03/22/2019	NJDEP SUBMISSION	SMR

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	MHFC1500
DATE	AUGUST 18, 2017
DRAWING SCALE	1"=30
DRAWN BY	JRB
APPROVED BY	HJD

CM0001

SHEET 1 OF 14

SURVEY NOTES

EXISTING INFORMATION SHOWN BASED ON A FIELD SURVEY BY PENNONI ASSOCIATES INC. ON 2/26/2016.

REFERENCE:
- PLAN ENTITLED "SURVEY - BLOCK 86, LOTS 4, 5, 10, 11, 22 & 22.01", BY LORD WORRELL RICHTER INC., JOB NO 11739, DATED 10/30/06, DWG NO. 24-136.

- PLAN ENTITLED "TOPOGRAPHIC & BOUNDARY SURVEY", BY PENNONI, ASSOCIATES, JOB NO MHFC1500, DATED 03/03/2016, LAST REVISED 03/20/2019, DWG NO. V0501

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

THE UNDERGROUND UTILITIES SHOWN HAVE BEEN LOCATED FROM FIELD SURVEY, RECORD PLANS, AND EXISTING DRAWINGS. THE SURVEYOR MAKES NO GUARANTEES THAT THE UNDERGROUND UTILITIES SHOWN COMPRISE ALL SUCH UTILITIES IN THE AREA, EITHER IN SERVICE ARE SHOWN IN THE EXACT LOCATION INDICATED ALTHOUGH HE DOES CERTIFY THAT THEY ARE LOCATED AS ACCURATELY AS POSSIBLE FROM THE INFORMATION AVAILABLE. THE SURVEYOR HAS NOT PHYSICALLY EXPOSED UNDERGROUND UTILITIES FOR LOCATION.

VERTICAL INFORMATION BASED ON NAVD 1988.

UTILITY INSTALLATION NOTES

1. TRENCH DETAILS ARE INTENDED TO PROVIDE INFORMATION REGARDING BACKFILLING MATERIALS AND GENERAL MATERIAL DEPTHS AND PAVEMENT LIMITS ONLY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE MEANS AND METHODS OF CONSTRUCTION AND SHALL PROVIDE APPROPRIATE SAFETY MEASURES, SHEETING, AND BRACING AS MAY BE REQUIRED DUE TO FIELD CONDITIONS. THE CONTRACTOR SHALL COMPLY WITH ALL APPLICABLE OSHA STANDARDS AND DETAILS FOR TRENCH EXCAVATION. THE DESIGN ENGINEER ASSUMES NO RESPONSIBILITY OR LIABILITY FOR FIELD CONDITIONS, TRENCHING OR BACKFILLING OPERATIONS DURING CONSTRUCTION.
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DEWATERING AND PRECLUDING ANY PONDING OF WATER IN ALL AREAS, EXCEPTING REASONABLE AND SAFE WITHIN THE SEDIMENTATION/ WATER QUALITY BASINS.
3. THE ATTENTION OF THE CONTRACTOR IS DIRECTED TO THE FACT THAT THE APPROXIMATE LOCATION OF KNOWN UTILITY STRUCTURES AND FACILITIES THAT MAY BE ENCOUNTERED WITHIN AND ADJACENT TO THE LIMITS OF WORK ARE SHOWN ON THE PLANS. THE ACCURACY AND COMPLETENESS OF THIS INFORMATION IS NOT GUARANTEED BY THE ENGINEER. THE CONTRACTOR IS ADVISED TO VERIFY IN THE FIELD ALL THE FACTS CONCERNING THE UTILITY LOCATIONS AND OTHER CONSTRUCTION OBSTACLES PRIOR TO CONSTRUCTION. FURTHER, THE CONTRACTOR SHALL NOTIFY THE ENGINEER IN WRITING PRIOR TO CONSTRUCTION OF ANY DISCREPANCIES WHICH MAY AFFECT PROJECT DESIGN. THE ENGINEER ASSUMES NO LIABILITY FOR ANY OF THE UTILITY INFORMATION SHOWN HEREIN, UTILITY LINE LOCATIONS SHOWN ARE FOR SCHEMATIC PURPOSES ONLY AND MAY NOT REPRESENT ALL EXISTING UTILITIES. ALL UTILITY INFORMATION AND LOCATIONS SHALL BE VERIFIED IN FIELD PRIOR TO CONSTRUCTION.
4. APPROPRIATE EASEMENTS SHALL BE GRANTED TO APPLICABLE UTILITY COMPANIES.
5. GAS, ELECTRIC, TELEPHONE AND CABLE TV LINES MAY BE INSTALLED BY THE RESPECTIVE UTILITY. THE EXACT LOCATION OF EACH MAIN SHALL BE COORDINATED BY THE OWNER/GENERAL CONTRACTOR AND SUBMITTED TO THE DESIGN ENGINEER FOR REVIEW PRIOR TO INSTALLATION.
6. ALL NEW UTILITIES SHALL BE INSTALLED UNDERGROUND, EXCEPT WHERE OTHERWISE NOTED.
7. EXISTING STREET SURFACES AND OTHER SURFACES DISTURBED BY THE CONSTRUCTION OF FACILITIES FOR THIS PROJECT SHALL BE RESTORED BY THE CONTRACTOR IN ACCORDANCE WITH THE REQUIREMENTS OF THE TOWNSHIP ENGINEER AND THE COUNTY ENGINEER IN REGARD TO JURISDICTION OVER RESPECTIVE PUBLIC IMPROVEMENTS.
8. ALL WORK SHALL COMPLY WITH APPLICABLE STATE, FEDERAL, AND LOCAL CODES, AND ALL NECESSARY LICENSES AND PERMITS SHALL BE OBTAINED BY THE CONTRACTOR AT HIS EXPENSE UNLESS PREVIOUSLY OBTAINED BY THE OWNER/DEVELOPER.
9. DEVIATION FROM THESE PLANS AND NOTES WITHOUT THE PRIOR CONSENT OF THE CONSTRUCTION MANAGER AND THE DESIGN ENGINEER MAY BE CAUSE FOR THE WORK TO BE UNACCEPTABLE.
10. THE CONTRACTOR SHALL BE REQUIRED TO USE THE ONE-CALL CENTER TELEPHONE NUMBER 1-800-272-1000 FOR THE PURPOSE OF COORDINATING THE MARKING OF UNDERGROUND UTILITIES.
11. RESET ALL WATER VALVES BOXES, SANITARY CLEANOUTS OR VENTS, GAS VALVES, SANITARY RIMS, INLET GRATES AND ALL OTHER UTILITY BOXES OR RIMS TO NEW GRADES AS REQUIRED.
12. ALL OPEN TRENCHES OR EXCAVATED SIDEWALKS SHALL BE COVERED TO PROVIDE ACCESS TO PEDESTRIANS FOR VEHICULAR TRAFFIC, BUSINESSES AND RESIDENTS.
13. ALL NEW CONCRETE PAVING AND CURBING SHALL MEET FLUSH WITH EXISTING.
14. ALL WATER PIPES, FITTINGS AND VALVES SHALL BE DISINFECTED IN ACCORDANCE WITH AWWA REQUIREMENTS.
15. THE INSTALLATION OF ALL WATER SERVICES SHALL COMPLY WITH TOWNSHIP ORDINANCE.
16. THE TOWNSHIP ENGINEER MUST BE GIVEN 48 HOURS ADVANCE NOTICE OF SANITARY SEWER/WATERMAIN WORK AND THE REPRESENTATIVES MUST WITNESS THE WORK/CONNECTION.
17. ALL PRECAST CONCRETE INLETS SHALL CONFORM TO ASTMC-913 "PRECAST CONCRETE WATER AND WASTEWATER STRUCTURES".
18. ALL INLET AND MANHOLE PIPE OPENINGS SHALL BE SEALED WITH NON-SHRINK GROUT OR APPROVED EQUAL.
19. ALL REINFORCED CONCRETE PIPE SHALL BE CLASS III UNLESS OTHERWISE NOTED.
20. ALL HDPE PIPE SHALL BE ADS N-12 "DUAL WALL" WITH WATER TIGHT (WT) JOINTS PER ASTM D3212 OR EQUAL.
21. ALL SANITARY PIPE SHALL BE SDR 35 PVC UNLESS OTHERWISE NOTED.
22. ALL WATER PIPE SHALL BE CLASS 52 CLDIP, UNLESS OTHERWISE NOTED.
23. ALL WATER VALVE BOXES SHALL HAVE THE WORD "WATER" CAST IN THE COVER.
24. THE WATER TAPS SHALL BE PERFORMED BY CONTRACTOR WITH OVERSIGHT BY CITY ENGINEER AMERICAN WATER ENTERPRISES..
25. SELECT FILL FOR WATER/SEWER TRENCH INSTALLATION SHALL BE DENSE GRADED AGGREGATE I-5, IN ACCORDANCE WITH THE SPECIFICATION SUBSECTION 901.08 OF THE NEW JERSEY DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATION AND CONFORM TO THE TABLE IN SECTION 577-229.H OF THE CITY OF CAMDEN ORDINANCE.
26. AN AS-BUILT PLAN SHALL BE REQUIRED ON ALL COMPLETED WATER AND SEWER MAINS. THE AS-BUILT SHALL BE BASED ON A SURVEY BY A LICENSED NEW JERSEY PROFESSIONAL LAND SURVEYOR. AN ELECTRONIC FORMAT OF THE SAME IN COMPLIANCE WITH THE CITY ORDINANCE SHALL ALSO BE SUBMITTED. UPON COMPLETION OF THE WATER/SEWER INSTALLATIONS, THE APPLICANT SHALL SUBMIT THREE (3) SETS OF "AS BUILT" PLANS, TO THE CIP AND NEW JERSEY AMERICAN WATER. THE CIP WILL AUTHORIZE SUPPLY WATER UPON ACCEPTANCE OF THE "AS BUILT" DRAWINGS. SUBMISSION OF RECORD DRAWINGS IS REQUIRED IN ACCORDANCE WITH ORDINANCE FOR WATER SERVICES LINES AND SEWER LATERALS.
27. TAPPING SLEEVE SHALL BE SOLID DUCTILE IRON MUELLER H-615 OR APPROVED EQUAL. THE TAPPING SLEEVE SHALL PASS PRESSURE TESTING BASED ON AWWA STANDARDS BEFORE TAP IS MADE.
28. FOR ALL SERVICES INCLUDED HEREIN TWO (2) GATE VALVES ARE REQUIRED THAT ARE TO BE INSTALLED BY THE APPLICANT; A TAPPING VALVE, LOCATED AT THE TAP AND CURB VALVE, LOCATED IN THE SIDEWALK BEFORE THE METER. TAPPING GATES SHALL BE FURNISHED OPENED RIGHT. ALL TAPPING AND CURB VALVES SHALL BE DOUBLE DISC GATE VALVES AND MEET AWWA STANDARDS.
29. FOR TAPS OFF MAINS 2-INCHES AND LARGER, THE APPLICANT SHALL FURNISH AND INSTALL AN ADDITIONAL GATE VALVE ADJACENT TO THE TAPPING VALVE. NO TAPS SHALL BE PERMITTED ON MAINS LARGER THAN 20-INCHES UNLESS THERE IS NO ALTERNATIVE WATER SOURCE, AND SPECIAL WRITTEN APPROVAL IS ISSUED BY THE CIP.
30. VALVE BOX PARTS FOR ALL VALVES SHALL BE PROVIDED BY THE APPLICANT. ALL TAPPING GATE VALVES LARGER THAN 2-INCHES AND ALL CURB VALVES/STOPS REGARDLESS OF SIZE REQUIRE A VALVE BOX WITH THE WORD "WATER" CAST IN THE COVER. BURIED CORPORATION VALVES/STOPS SHALL BE USED AT THE TAP FOR CLASS K COPPER SERVICES 2-INCHES AND SMALLER.
31. AFTER OBTAINING THE REQUIRED PERMITS (STREET OPENING, TAP, AND METER) THE APPLICANT SHALL CALL NEW JERSEY AMERICAN WATER AT (856) 764-6924 TO SCHEDULE THE TAP. THE EXCAVATION SHALL BE COMPLETED TWENTY-FOUR (24) HOURS PRIOR TO THE SCHEDULED TAP, AND VERIFIED BY CIP OR ITS AUTHORIZED AGENT BEFORE THE TAP WILL BE INSTALLED. EXCAVATION SHALL BE CONSTRUCTED IN ACCORDANCE WITH OSHA REQUIREMENTS FOR SHEETING AND SAFETY.
32. ALL WATER PIPES, FITTING AND VALVES SHALL BE DISINFECTED IN ACCORDANCE WITH AWWA REQUIREMENTS.

UTILITY INSTALLATION NOTES CONTINUED

33. INSTALLATION OF ALL WATER/SEWER MAINS AND SERVICES SHALL COMPLY WITH LOCAL ORDINANCES.
34. THE SEPARATION OF DOMESTIC WATER AND FIRE SERVICE ALONG WITH THE NEW DOMESTIC WATER METER WILL BE INSTALLED WITHIN THE PROPOSED BUILDING'S MECHANICAL EQUIPMENT ROOM, WITH REMOTE METER STATUS INSTALLED FOR EXTERIOR METER READING.
35. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL COST RELATED TO ANY REQUIRED ISOLATION OF THE WATERMAIN AND BY-PASSING OF THE SEWER IN ORDER TO MAKE A PROPOSED CONNECTION.
36. ALL TAPPING SLEEVES 2-INCHES AND LARGER SHALL BE SOLID DUCTILE IRON SUCH AS MUELLER H-615 TAPPING SLEEVE OR APPROVED EQUAL. THE TAPPING SLEEVE SHALL PASS PRESSURE TESTING BASED ON AWWA STANDARDS BEFORE TAP IS MADE.
37. DETAILED METER AND BACK FLOW PREVENTION SET UP INSIDE THE BUILDING, SHALL BE DEPICTED ON THE PLUMBING PLANS, TO BE SUBMITTED FOR BUILDING PERMITS.
38. FOR A REGULAR FIRE SUPPRESSION SYSTEM (COMBINED SERVICE LINE LARGER THAN 2"), A COMBINED REDUCED PRESSURE DETECTOR ASSEMBLY (AMES 5000 SS, AMES 5000 RPDA OR WATTS 9098 RPDA) SHALL BE INSTALLED ON THE MAIN FIRE SERVICE LINE AND A REDUCED PRESSURE BACKFLOW PREVENTER ON THE BYPASS (AMES 4000 SS OR WATTS 909). ON THE LIMITED FIRE SUPPRESSION SYSTEM (COMBINED SERVICE LINE 1.5" OR 2"), A FIRE LINE DETECTOR CHECK WITH A SINGLE CHECK VALVE (AMES 1000 DCV) SHALL BE INSTALLED ON THE MAIN FIRE LINE AND A REDUCED PRESSURE BACKFLOW PREVENTER (AMES 4000 SS OR WATTS 909) SHALL BE INSTALLED DOWNSTREAM OF THE BYPASS. ALL REGULAR FIRE SUPPRESSION SYSTEMS MUST HAVE OS&Y VALVES, HOWEVER, LIMITED FIRE SUPPRESSION SYSTEMS MAY USE BALL VALVES (VICTAULIC SERIES 728 FIRELOCK) INSTEAD OF OS&Y VALVES. THE FIRE UNIT SHALL BE FURNISHED WITH A $\frac{5}{8}$ INCH X $\frac{3}{4}$ INCH METERED BYPASS. THE APPLICANT SHALL APPLY FOR AND REGISTER ALL RPZ WITH NJDEP.
39. ALL METER SIZES 2 INCHES THROUGH 6 INCHES SHALL BE SINGLE COMPOUND METERS AND ALL METERS 8 INCHES AND LARGER SHALL BE DUPLEX COMPOUND MANIFOLD METERS.
40. ALL METERS SHALL BE ADEQUATELY RESTRAINED WITH METAL BRACKETS FASTENED TO THE FLOOR OR WALL OR OTHER APPROVED MEANS SUCH AS UNIFLANGES WHERE INTERNAL PIPE PRESSURE AND FLOW WARRANT SUCH RESTRAINTS. METERS, DETECTOR CHECKS, AND VALVES MAY BE SEATED ON CONCRETE BLOCK AND TAPERED SHIMS TO PROVIDE ADEQUATE SUPPORT. METERS SHALL BE INSTALLED APPROXIMATELY 36" ABOVE FLOOR GRADE.
41. THE STRENGTH OF PRECAST CONCRETE FOR INLETS AND MANHOLES SHALL BE EQUAL TO OR EXCEED 4,000 PSI.
42. AN AS-BUILT PLAN SHALL BE REQUIRED FOR THE DOWNSTREAM STORMWATER COLLECTION SYSTEM. THE AS-BUILT SHALL BE BASED ON A SURVEY BY A LICENSED NEW JERSEY PROFESSIONAL LAND SURVEYOR. AN ELECTRONIC FORMAT OF THE SAME IN COMPLIANCE WITH THE CITY ORDINANCE SHALL ALSO BE SUBMITTED. UPON COMPLETION OF THE STORM WATER COLLECTION SYSTEM INSTALLATION, THE APPLICANT SHALL SUBMIT THREE (3) SETS OF "AS BUILT" PLANS, TO THE CITY OF CAMDEN AND PLANNING BOARD ENGINEER.
43. FOR A REGULAR FIRE SUPPRESSION SYSTEM A REDUCED PRESSURE DETECTOR ASSEMBLY (AMES 5000 SS, AMES 5000 RPDA OR WATTS 9098 RPDA*) SHALL BE INSTALLED ON THE MAIN FIRE SERVICE LINE.
44. PARTICULAR ATTENTION SHALL BE GIVEN TO THE PROTECTION OF THE HISTORIC FIREHOUSE THAT IS BE RELOCATED. THE RELOCATION CONTRACTOR SHALL COORDINATE DIRECTLY WITH OWNER FOR LOCATION.

GENERAL NOTES:

1. THE OFFICE OF THE TOWNSHIP ENGINEER IS TO BE NOTIFIED IN ADVANCE OF CONSTRUCTION OF ANY IMPROVEMENTS UNDER ITS JURISDICTION.
2. AS INDICATED IN THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" SUFFICIENT CONSTRUCTION WARNING SIGNS ARE TO BE PROVIDED AND MAINTAINED BY CONTRACTORS PERFORMING CONSTRUCTION WORK. SAID SIGNS ARE TO BE MAINTAINED UNTIL CONSTRUCTION IS COMPLETED AND APPROVED BY THE APPROPRIATE TOWNSHIP INSPECTION PERSONNEL.
3. THE CONTRACTOR SHALL PROVIDE SUCH TEMPORARY DRAINAGE, SOIL EROSION, AND DUST CONTROL MEASURES AS MAY BE DIRECTED BY THE TOWNSHIP ENGINEER OR OTHER AGENCIES OR DEPARTMENTS TO SATISFY ENVIRONMENTAL CONCERNS.
4. THE INSTALLATION OF UTILITIES MUST BE COORDINATED WITH BUILDING IMPROVEMENTS TO ASSURE THE WELL-BEING OF LIFE AND PROPERTY DURING CONSTRUCTION. WATER SERVICE IS A PRIMARY NEED AND MUST BE SCHEDULED ACCORDINGLY. WATER SUPPLY AND HYDRANT CONNECTION ARE TO BE ESTABLISHED AS A PRIORITY DURING INITIAL SITE DEVELOPMENT TO ASSURE ADEQUATE WATER FOR FIREFIGHTING DURING ALL PHASES OF CONSTRUCTION.
5. IT IS NOT THE INTENT OF THESE PLANS TO PROVIDE REINFORCING STEEL AND CONCRETE DESIGNS FOR ANY PRE-CAST OR POURED-IN-PLACE CONCRETE STRUCTURES, OTHER THAN THE REINFORCING STEEL AND CONCRETE DESIGNS SPECIFICALLY NOTED ON THESE PLANS. ANY REINFORCING STEEL AND CONCRETE DESIGN MUST BE SUPPLIED BY THE PRE-CASTING MANUFACTURER OR A REPUTABLE LICENSED STRUCTURAL ENGINEER CONTRACTED BY THE CONTRACTOR. BEFORE WORK MAY COMMENCE. ANY CONFLICTING INFORMATION FROM THAT SHOWN ON THESE PLANS SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE ENGINEER.
6. ALL CONSTRUCTION DUMPSTERS ARE TO BE KEPT AT LEAST 15 FEET FROM BUILDINGS.
7. ALL ROADWAYS ARE TO BE PASSABLE FOR FIRE DEPT. USE DURING CONSTRUCTION.
8. ALL CONSTRUCTION SHOWN HEREIN SHALL CONFORM TO TOWNSHIP/COUNTY STANDARD CONSTRUCTION DETAILS AND SPECIFICATIONS AND N.J. DEPT. OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION 1996, AS AMENDED, UNLESS SPECIFICALLY SHOWN OTHERWISE HEREIN. IN CASE OF CONFLICT, THE MORE RESTRICTIVE STANDARD SHALL GOVERN. CONTRACTOR SHALL NOTIFY DESIGN ENGINEER OF ANY QUESTIONS REGARDING CONFLICTS.
9. UNLESS SPECIFICALLY SHOWN HEREIN, THE ENGINEER HAS NOT CONDUCTED INVESTIGATION OR PROVIDED DATA ON THE NATURE OR STRUCTURAL SUITABILITY OF ANY SUBSURFACE MATERIALS. THE CONTRACTOR SHALL NOTIFY THE ENGINEER OF ANY UNUSUAL SOIL OR ROCK CONDITIONS ENCOUNTERED.
10. TRAFFIC STRIPING AND/OR MARKING, WHETHER CIRCULATION, DIRECTIONAL OR PARKING, SHALL BE PERFORMED IN ACCORDANCE WITH THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES", AS AMENDED.
11. PAVEMENT MARKING PAINT AS PER NJDOT SPECIFICATION.
12. THE CONTRACTOR SHALL BE RESPONSIBLE FOR INSTALLING WARNING SIGNS, BARRICADES, AND ANY AND ALL SAFETY MEASURES AS MAY BE REQUIRED BY LOCAL CODE, OSHA, STANDARD PRACTICE, AND/OR COMMON SENSE.
13. PRIOR TO ANY SITE DISTURBANCE, ALL WETLANDS AND OR WETLANDS TRANSITION AREA LIMITS SHALL BE CLEARLY IDENTIFIED IN THE FIELD WITH ORANGE "MIRAFI" PROTECTIVE FENCING OR APPROVED ALTERNATE. LOCATE SILT FENCE FIVE FEET UPSTREAM OF PROTECTIVE FENCING AND DOWNSTREAM OF CLEARING LIMITS AS SHOWN. THE CONTRACTOR SHALL VERIFY THAT ALL PERMITS AS MAY BE REQUIRED BY LOCAL, COUNTY, STATE, OR FEDERAL REGULATIONS ARE IN HAND AND VALID PRIOR TO COMMENCING WORK.
14. ALL SOIL EROSION, SEDIMENT CONTROL, AND STORMWATER MANAGEMENT STRUCTURES AND PRACTICES SHALL BE IN PLACE PRIOR TO SITE DISTURBANCE.
15. SUBSTITUTIONS OF PROPRIETARY MATERIAL AND/OR PRODUCT SPECIFICATIONS THAT NOTE "OR EQUAL" MUST BE APPROVED BY THE DESIGN ENGINEER IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO DEMONSTRATE TO THE SATISFACTION OF THE DESIGN ENGINEER THAT THE SUBSTITUTION IS EQUAL.
16. THE SITE PLANS HEREIN ARE INTENDED TO SHOW ALL SITE RELATED IMPROVEMENTS TO WITHIN FIVE (5) FEET OF ALL PROPOSED STRUCTURES. THE GENERAL CONTRACTOR SHALL COORDINATE WITH ALL TRADES, THE ARCHITECT AND ALL UTILITY CONNECTIONS BETWEEN THE BUILDING AND SITE IMPROVEMENTS, AND NOTIFY THE DESIGN ENGINEER IMMEDIATELY OF ANY DISCREPANCIES.
17. ALL LIGHTING LEVELS SHALL BE ADJUSTED AT THE REQUEST OF THE TOWNSHIP SHOULD LIGHTING LEVELS INTERFERE WITH ADJOINING PROPERTIES OR ROADS.
18. UTILITY MARK OUTS SHALL BE REQUESTED 72 HOURS PRIOR TO ANY DISTURBANCE.
19. THE APPLICANT SHALL COMPLETE THE PAVEMENT SURFACE COURSE WITHIN 60 DAYS OF THE DATE OF OCCUPANCY OF THE LAST CONSTRUCTED DWELLING.
20. A MINIMUM SLOPE OF 1.5% AND A MAXIMUM SLOPE OF 3:1 IN ALL GRASS AREAS SHALL BE MAINTAINED. A MINIMUM SLOPE OF 0.5% SHALL BE MAINTAINED IN ALL PAVED AREAS.
21. ALL SITE CONCRETE SHALL HAVE A MINIMUM 28-DAY COMPRESSIVE STRENGTH OF 4,000 PSI.
22. ALL PAVEMENT SUBGRADE PREPARATION MUST BE APPROVED BY THE TOWNSHIP ENGINEER.
23. ALL TREES AT INTERSECTIONS THAT WILL OBSTRUCT CLEAR SIGHT WITHIN SIGHT TRIANGLES SHALL BE SHALL BE LIMBED TO 7 FEET AND ANY OTHER PLANTINGS OR STRUCTURES EXCEEDING 30 INCHES IN HEIGHT SHALL BE PROHIBITED.

DEMOLITION NOTES:

1. ALL DEMOLITION WORK SHALL BE PERFORMED IN ACCORDANCE WITH NFPA 241 AND OSHA STANDARDS.
2. CONTRACTOR SHALL NOTIFY OWNER AND THE ENGINEER 72 HRS. PRIOR TO INITIATING UTILITY ABANDONMENT.
3. ALL EXCAVATIONS AND OPEN AREAS REMAINING AFTER DEMOLITION SHALL BE BACKFILLED TO MATCH EXISTING GRADE IN ACCORDANCE WITH APPLICABLE SPECIFICATIONS.
4. WHERE A PIPE BEING REMOVED IS CONNECTED TO AN EXISTING STRUCTURE, EITHER REMOVE THE PIPE AND FILL THE WALL OPENING WITH CONCRETE, OR CUT THE PIPE WITHOUT PERCUSSION NOT MORE THAN 6" FROM THE OUTSIDE FACE OF THE STRUCTURE AND FILL THE REMAINING LENGTH OF PIPE WITH CONCRETE.
5. THE REMOVAL OF EXISTING BOLLARDS, GUIDE RAIL POSTS & FOOTINGS SHALL INCLUDE THE PIPE/ POST AND CONCRETE FOOTING IN ITS ENTIRETY.
6. ALL EXISTING CATCH BASINS AND MANHOLES SHALL BE FIELD LOCATED PRIOR TO WORK AND THE ENGINEER SHALL BE NOTIFIED OF ANY DISCREPANCIES PERTAINING TO LOCATIONS SHOWN ON THE CONTRACT DRAWINGS.
7. FIELD VERIFY GRADE CONDITION AND ELEVATIONS AFTER DEBRIS AND SOILS HAVE BEEN REMOVED.
8. ALL UTILITIES SHALL BE REMOVED TO A MINIMUM OF FOUR (4) FT BELOW EXISTING GROUND SURFACE. DEMOLISH FIRE HYDRANT THRUST BLOCKS IF ENCOUNTERED.
9. ELECTRICAL UTILITIES SHALL BE DISCONNECTED PRIOR TO BEGINNING ANY DEMOLITION WORK. DEMOLITION SHALL INCLUDE THE REMOVAL OF BURIED AND EXPOSED CONDUIT IN THE AREA DESIGNATED FOR DEMOLITION, SEALING ENDS OF ALL BURIED CONDUIT ABANDONED IN PLACE AND REMOVING ALL POWER AND CONTROL WIRING BETWEEN THE DEMOLISHED FACILITY AND THE TERMINAL JUNCTION BOX, CIRCUIT BREAKER, OR METER CONTROL CENTER SUPPLYING POWER TO THE FACILITY.
10. ALL MATERIAL BROUGHT ON SITE SHALL BE CLEAN FILL, SAMPLED, AND ANALYZED WITH STANDARD NJDEP QUALITY ASSURANCE STANDARDS AND PRACTICES AT A MINIMUM, AS SPECIFIED IN N.J.A.C. 7:26E, TO FULLY CHARACTERIZE THE CONTAMINANTS IN THE LATEST SOIL CLEANUP CRITERIA (SCC). THE CONTRACTOR SHALL SUBMIT TO THE OWNER WRITTEN DOCUMENTATION FROM A LABORATORY CERTIFIED IN NEW JERSEY ENVIRONMENTAL LABORATORY CERTIFICATION PROGRAM (ELCP) AND IN ACCORDANCE WITH N.J.A.C. 7:18 PRIOR TO PLACEMENT OF THE MATERIAL ON SITE. THE MATERIAL MUST NOT CONTAIN CONTAMINANTS ABOVE THE MOST RESTRICTIVE DIRECT CONTACT OR IMPACT TO GROUNDWATER (IGW) SCC.
11. ALL ACTIVE CONSTRUCTION SITES AND LOCATIONS SHALL BE PROVIDED WITH NON-COMBUSTIBLE REFUSE CONTAINER(S) IN SUCH NUMBERS AS SHALL BE NECESSARY TO CONTAIN ALL COMBUSTIBLE REFUSE GENERATED BY THE CONSTRUCTION ACTIVITIES.
12. ALL COMBUSTIBLE REFUSE, RUBBISH AND DEBRIS SHALL BE COLLECTED UP AND DEPOSITED IN THE CONTAINER(S) ON A DAILY BASIS. REFUSE CONTAINER(S) SHALL BE LOCATED A MINIMUM OF 20 FEET AWAY FROM ANY BUILDING, STRUCTURE, LOT LINE OR COMBUSTIBLE MATERIAL STORAGE LOCATION.
13. WHILE CONSTRUCTION ACTIVITIES ARE IN PROGRESS, AT LEAST FOUR(4) PORTABLE FIRE EXTINGUISHERS HAVING A RATING OF AT LEAST 10-A, 60-BC SHALL BE PROVIDED, AND SHALL BE MAINTAINED IN A LOCATION APPROVED BY THE FIRE OFFICIAL. PERSONNEL NORMALLY ON THE CONSTRUCTION SITE SHALL BE INSTRUCTED IN THE USE OF THE FIRE EXTINGUISHERS PROVIDED.
14. ALL WATER/SEWER LATERALS PROPOSED FOR ABANDONMENT SHALL BE TERMINATED AT THE MAIN, AND ABANDONED IN ACCORDANCE WITH THE CITY ORDINANCE.
15. PARTICULAR ATTENTION SHOULD BE GIVEN TO THE PROTECTION OF THE HISTORIC FIREHOUSE THAT IS TO BE RELOCATED, AND THE COORDINATION REQUIRED WITH THE RELOCATION CONTRACTOR ENGAGED DIRECTLY BY THE OWNER.
16. PRIOR TO REMOVAL OF EXISTING FULL-DEPTH ASPHALTIC AND/OR CONCRETE PAVEMENT, CONTRACTOR SHALL SAWCUT TO FULL DEPTH TO PROVIDE A CLEAN STRAIGHT EDGE. CONCRETE SIDEWALK AND/OR CURB SHALL BE REMOVED TO THE NEAREST CONTROL JOINT.
17. ALL TREES/SHRUBS/BRUSH WITHIN THE LIMITS OF DISTURBANCE SHOWN ON CS0501 SHALL BE COMPLETELY REMOVED, INCLUDING GRUBBING.
18. CONTRACTOR IS RESPONSIBLE FOR MAINTAINING AND PROTECTING EXISTING STRUCTURES AS IDENTIFIED ON THE DEMOLITION PLAN, CS0501. THE CONTRACTOR MUST NOTIFY THE ENGINEER IF ANY DAMAGE OCCURS TO THESE ITEMS. THE ENGINEER/ OWNER WILL DETERMINE WHETHER THE DAMAGED ITEMS CAN BE REPAIRED, OR SHALL BE REPLACED AT NO ADDITIONAL COST TO THE OWNER.
19. CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING THE DISCONNECTION AND/OR REMOVAL OF ANY SERVICE UTILITIES ATTACHED/CONNECTED/RECIEVING/ SUPPLYING, ETC. TO ANY BUILDING AND/OR STRUCTURE NOTED HEREIN TO BE DEMOLISHED. CONTRACTOR SHALL OBTAIN ANY NECESSARY PERMITS OR APPROVALS ASSOCIATED WITH SAME.

LEGEND

EXISTING — PROPOSED

BUILDING
PROPERTY LINE
ADJACENT PROPERTY LINE
SETBACK LINE
RIGHT-OF-WAY LINE
ROADWAY CENTERLINE
FENCE
CURB
SIDEWALK
CONCRETE
SPOT ELEVATION (46.34 x)
IRRIGATION HEAD
LIGHT
BOLLARD
SIGN
SIGN POST AND BOARD
CONTOUR (50)
SOILS LINE
WATER LINE DOMESTIC (W)
WATER LINE FIRE (F)
SANITARY SEWER (S)
STORM SEWER ROOF DRAIN (RD)
STORM SEWER (D)
OVERHEAD ELECTRIC (OE)
UNDERGROUND ELECTRIC (UE / E)
OVERHEAD TELEPHONE (OT)
UNDERGROUND TELEPHONE (UT)
BUSH
CONIFEROUS TREE
DECIDUOUS TREE

LEGEND

EXISTING — PROPOSED

CABLE TV JUNCTION BOX
CABLE TV MANHOLE
COMMUNICATIONS MANHOLE
COMMUNICATIONS HANDHOLE
FIBER HANDHOLE
FIBER JUNCTION BOX
FIBER MANHOLE
GAS MANHOLE
GAS METER
GAS STUB OUT
GAS VALVE
ELECTRICAL HANDHOLE
ELECTRICAL METER
ELECTRICAL MANHOLE
ELECTRICAL PANEL BOX
ELECTRICAL PEDESTAL
ELECTRICAL STUB OUT
ELECTRICAL STUB OUT
MONITORING WELL
SANITARY SEWER CLEANOUT
SANITARY SEWER CLEANOUT
SANITARY MANHOLE
STEAM MANHOLE

LEGEND

EXISTING — PROPOSED

STORM DRAIN CLEANOUT
STORM DRAIN MANHOLE
STORM DRAIN FLARED END SECTION
STORM DRAIN HEADWALL
STORM DRAIN ID
STORM DRAIN INLET
STORM ROOF DRAIN
STORM STAND PIPE
STORM DRAIN WING WALL
TELEPHONE HANDHOLE
TELEPHONE JUNCTION BOX
TELEPHONE MANHOLE
TELEPHONE PANEL BOX
TELEPHONE PEDESTAL
SEPTIC TANK
UTILITY POLE

LEGEND

EXISTING — PROPOSED

STUMP
FIRE HYDRANT
WATER MANHOLE
WATER POST INDICATOR VALVE
SIAMESE CONNECTION
WATER STUB OUT
WATER VALVE
WATER METER
UNIDENTIFIED HANDHOLE
UNIDENTIFIED JUNCTION BOX
UNIDENTIFIED MANHOLE
UNIDENTIFIED PANEL BOX
UNIDENTIFIED PEDESTAL
UNIDENTIFIED VALVE

U:\Accounts\MHFCX1500-Pine Street Fire House\DESIGN_PUBLISH\PRELIMINARY FINAL SITE PLANS\CM0002.dwg PLOTTED: 10/20/2020 11:00 AM, BY: Sean Raday PLOTSTYLE: Pennoni NCS.stb PROJECT STATUS: ---

Pennoni

PENNONI ASSOCIATES INC.
515 Grove Street, Suite 1B
Haddon Heights, NJ 08035
T 856.547.0505 F 856.547.9174
NJ COA NO. GA28033300

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

HUGH J. DOUGHERTY
PROFESSIONAL ENGINEER
NEW JERSEY LICENSE NO. GE34634
10/23/2020

RELIEF FIRE COMPANY NO. 1

17 PINE STREET
BLOCK 86, LOTS 4, 5, 10, 11, 21, 22, 22.01 AND 23, TAX MAP SHEET 25
TOWNSHIP OF MOUNT HOLLY BURLINGTON COUNTY, NEW JERSEY

GENERAL NOTES

MOUNT HOLLY FIRE DISTRICT NO.1
P.O. BOX 741
MOUNT HOLLY, NEW JERSEY 08060

DATE	NO.	REVISIONS	
10/23/2020	13	RE-BID PLANS	SMR
09/25/2020	12	ADDENDUM 2	SMR
09/25/2020	11	ADDENDUM 1	SMR
08/28/2020	10	ISSUED FOR BIDDING	SMR
07/30/2020	9	BURL. CNTY. S.C.D. RESUBMISSION	SMR
06/19/2020	8	BID PLANS	SMR
02/19/2020	7	PER COUNTY PLANNING BOARD ENGINEER	SMR
01/23/2020	6	PER NJDEP COMMENTS	SMR
09/27/2019	5	BURL. CNTY. PB SUBMISSION RESUBMISSION	SMR
09/03/2019	4	NJDEP AND GREENACRES RESUBMISSION	SMR
06/22/2019	3	NJDEP AND GREENACRES RESUBMISSION	SMR
06/03/2019	2	BURL. CNTY. PB SUBMISSION	SMR
03/22/2019	1	NJDEP SUBMISSION	SMR

PROJECT	MHFC1500
DATE	AUGUST 18, 2017
DRAWING SCALE	1"=30
DRAWN BY	JRB
APPROVED BY	HJD

CM0002

NORTH

MILL STREET (CR 537)

EX. UNMETERED LIGHT POLES AND AERIAL SERVICE TO BE REMOVED BY UTILITY COMPANY

APPROX CENTER LINE OF STREAM

APPROX. EDGE OF WATERS

MILL RACE RIPARIAN ZONE LINE (50' BUFFER)

MILL RACE

REMOVE EX. CHAIN LINK FENCE

MAINTAIN AND PROTECT EX. TREE

APPROXIMATE LIMIT OF HISTORIC BUILDING FOUNDATION

REMOVE GRAVEL SURFACE (TYP)

APPROXIMATE LIMIT OF HISTORIC FILL

MAINTAIN AND PROTECT EX. UTILITY POLE

REMOVE CONCRETE SIDEWALK AND DRIVEWAY APRON

REMOVE BRICK PAVING

REMOVE SANITARY SERVICE; CAP AT RIGHT OF WAY LINE

REMOVE ELECTRIC AND WATER SERVICE; CAP AT RIGHT OF WAY LINE

MAINTAIN AND PROTECT EXISTING POST TOP LIGHT

BUILDING SECTION TO BE DEMOLISHED BY THE CONTRACTOR

REMOVE EX. BUILDING, SLAB AND HISTORIC FOUNDATIONS

EXISTING ARCHAEOLOGICAL EXPOSURE AREA

SALVAGE EXISTING FIRE DEPARTMENT SIGN AND PROVIDE TO OWNER

RELOCATE HISTORIC STONE MONUMENT. SEE SITE PLAN FOR FINAL LOCATION

REMOVE BRICK PAVING

MAINTAIN AND PROTECT EX. UTILITY POLE

REMOVE EX. FENCE

EX. UTILITY POLES AND AERIAL SERVICE TO BE REMOVED BY UTILITY COMPANY

BUILDING TO BE STORED AND PROTECTED. REMOVE BUILDING FOUNDATION AND SLAB; SEE ARCHITECTURAL PLANS FOR FINAL LOCATION WITHIN NEW BUILDING

EXISTING 2 STORY MASONRY BUILDING

BLD HT. 33.1
F.F 13.14

EX. TURN LANE SIGN TO REMAIN

SALVAGE EXISTING FIRE DEPARTMENT SIGN AND PROVIDE TO OWNER

CHURCH STREET

RESET SIGNAL BOX FOR NEW DRIVEWAY PAVING

REMOVE CONCRETE CURB AND GUTTER, 165 LF

BUILDING SECTION TO BE DEMOLISHED BY THE CONTRACTOR

CAP WATER SERVICE AT RIGHT OF WAY

REMOVE WOOD FENCE

REMOVE CONCRETE SIDEWALK

REMOVE CONCRETE & ASPHALT PAVING (TYP)

REMOVE EX. PARKING ISLAND

REMOVE STONE CURB AND GUTTER, 47 LF

MAINTAIN AND PROTECT EX. LIGHT

REMOVE BRICK PAVING

REMOVE EX. CURBING

TEMPORARY STAGING AREA FOR HISTORIC BUILDING. PROTECTIVE FENCE AROUND PERIMETER

REMOVE EX. PAVING STRIPING; 13 SPACES

PINE STREET (CR 612) (VARIABLE WIDTH)

REMOVE EX. PAVING

REMOVE EX PARKING ISLAND

REMOVE EX CURBING SECTIONS

MAINTAIN AND PROTECT EX. LIGHT

WALL STREET

REMOVE EX. FENCE

MAINTAIN AND PROTECT EX. TREE

IRON PIN FOUND (BENT OVER)

CONCRETE MONUMENT FOUND

PK NAIL FOUND

SEWER MANHOLE RIM ELEV 13.72 INV 9.22(E) INV 9.02(S) INV 8.92 (OUT)

SEWER MANHOLE RIM ELEV 13.33 INV 11.23(N) INV 11.03 (OUT)

INLET (E) GR 12.71 INV 9.21

INLET (B) GR 13.65 INV 10.40(N) INV 10.25 (OUT)

INLET (B) GR 11.48

INLET (E) GR 11.69 INV IN 9.21(E) INV IN 9.17 (N) INV OUT 9.10

SMH RIM 12.78 INV 8.38

SMH RIM 11.97 INV IN 7.67 INV OUT 7.62

SMH RIM 12.11 INV IN 7.67(N) INV IN 7.51(W) INV OUT 7.31

BLOCK 86 LOT 3

BLOCK 86 LOT 2.01

BLOCK 86 LOT 5

BLOCK 86 LOT 2

BLOCK 86 LOT 4

BLOCK 86 LOT 23

BLOCK 86 LOT 10

BLOCK 86 LOT 11

BLOCK 86 LOT 22

BLOCK 86 LOT 22.01

BLOCK 86 LOT 21

BLOCK 86 LOT 13

BLOCK 86 LOT 14

BLOCK 86 LOT 15

BLOCK 86 LOT 16

BLOCK 86 LOT 17

BLOCK 86 LOT 20

EXISTING 3 STORY FRAME DWELLING BLOCK 86 LOT 18

EXISTING 3 STORY ANAME BUILDING

EXISTING 1 STORY BLOCK BUILDING

EXISIT BUILDING

POSSIBLE BACKFILLED FOUNDATION

MILL DAM PARK CAST IRON SIGN

12" CMP INV 11.24

6" TCP

15"RCP

8" TCP

10" TCP

NOTES

VERTICAL INFORMATION BASED ON NAVD 1988.

BENCHMARK:
NJIT - LEICA SMARTNET
SITE ID#: NJGC
RTCM ID#: 252
SITE NAME: GLOUCESTER
LATITUDE: N 39 46 52
LONGITUDE: W 75 07 11
ELLIPSOID HT: (-) 3.98m
BROADCASTING NGS APPROVED

LEGEND

REMOVE EXISTING BUILDING

0 30' 60'

13	RE-BID PLANS	10/23/2020	SMR
12	ADDENDUM 2	09/25/2020	SMR
11	ADDENDUM 1	09/04/2020	SMR
10	ISSUED FOR BIDDING	08/28/2020	SMR
9	BURL. CNTY. S.C.D. RESUBMISSION	07/30/2020	SMR
8	BID PLANS	06/18/2020	SMR
7	PER COUNTY PLANNING BOARD ENGINEER	02/19/2020	SMR
6	PER NJDEP COMMENTS	01/23/2020	SMR
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4	NJDEP AND GREENACRES RESUBMISSION	09/03/2019	SMR
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2	BURL. CNTY. PB SUBMISSION	08/03/2019	SMR
1	NJDEP SUBMISSION	03/22/2019	SMR
NO.	REVISIONS	DATE	

PROJECT	MHFC1500
DATE	AUGUST 18, 2017
DRAWING SCALE	1"=30
DRAWN BY	JRB
APPROVED BY	HJD

CM0501

SHEET 3 OF 14

Pennoni

PENNONI ASSOCIATES INC.
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HUGH J. DOUGHERTY
PROFESSIONAL ENGINEER
NEW JERSEY LICENSE NO. GE34634

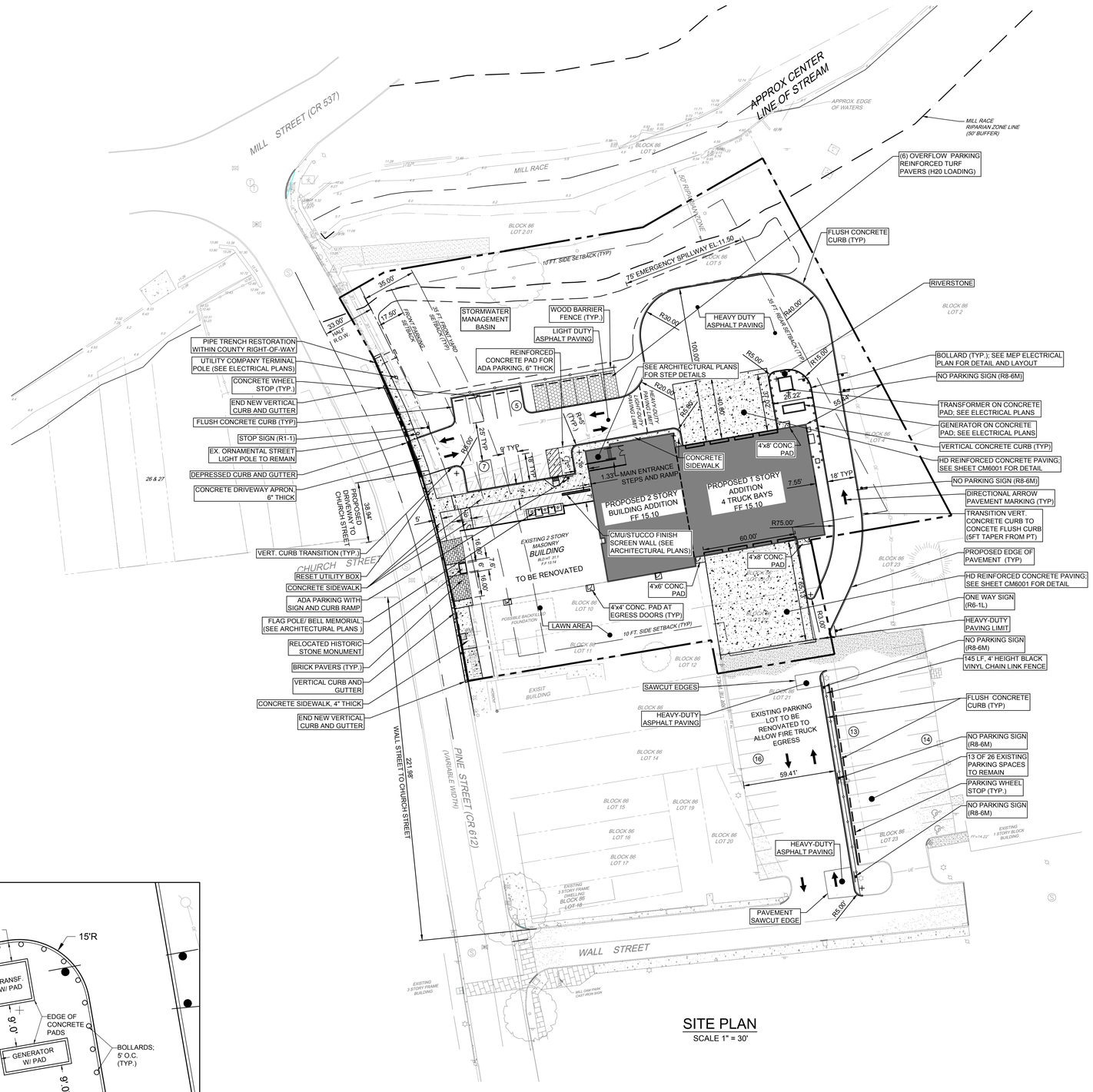
10/23/2020

RELIEF FIRE COMPANY NO. 1
17 PINE STREET
BLOCK 86; LOTS 4, 5, 10, 11, 21, 22, 22.01 AND 23, TAX MAP SHEET 25
TOWNSHIP OF MOUNT HOLLY BURLINGTON COUNTY, NEW JERSEY

DEMOLITION PLAN

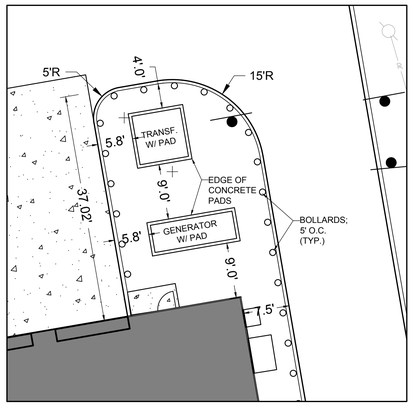
MOUNT HOLLY FIRE DISTRICT NO.1
P.O. BOX 741
MOUNT HOLLY, NEW JERSEY 08060

U:\Accounts\MHFC\1500-Pine Street Fire House\DESIGN_PUBLISH\PRELIMINARY FINAL SET\ R-ANSCM0501.dwg PLOTTED: 10/20/2020 11:01 AM, BY: Sean Radley PLOTSTYLE: Pennoni MCS.ctb PROJECT STATUS: —



SITE PLAN

SCALE 1" = 30'



TRANSFORMER AND GENERATOR DETAIL

SCALE 1" = 10'

ZONE: R-1 (RESIDENTIAL) & R-3 (RESIDENTIAL)

ORD. SECTION	ITEM	(NON-RESIDENTIAL USE) REQUIRED/PERMITTED	PROVIDED	STATUS
XIV-149	PERMITED PRINCIPAL USE	ALL PUBLIC BUILDINGS AND PUBLIC USES	FIRE DEPARTMENT	C
BULK REQUIREMENTS (R-1)				
149-94	MIN. LOT AREA	15,000 SF	Lot 5-43,995 SF Lot 4-29,185 SF Lot 22.01-3,920 SF Lot 22-3,476 SF Lot 10-3,600 SF Lot 11-3,071.5F.	ENC (Lots 22.01, 22,10 & 11)
	MIN. LOT WIDTH	100 FT	21.33 FT (Lot 11)	ENC
	MAX. BUILDING COVERAGE	N/A	N/A	N/A
	MIN. FRONT YARD SETBACK	35', EXCEPT WHERE EXISTING BUILDINGS ARE ON THE SAME SIDE OF THE STREET AND WITHIN 500' FROM AN ESTABLISHED SETBACK, NEW BUILDINGS SHALL CONFORM TO SUCH ESTABLISHED LINE, PROVIDED THAT NO NEW BLDG. MAY BE CLOSER THAN 25' TO THE FRONT PROPERTY LINE NOR BE SET BACK MORE THAN 50'	INTO ROW LINE	ENC
	MIN. SIDE YARD SETBACK	NO SIDE YARD SHALL BE LESS THAN 10', AGGREGATE WIDTH OF THE TWO SIDE YARDS COMBINED MUST EQUAL 35% OF THE LOT WIDTH AT THE BUILDING LINE	47 FT +/-	ENC
	AGGREGATE SIDE YARD SETBACK		182 FT +/-	C
	MIN. REAR YARD SETBACK	35 FT	75 FT +/-	ENC
	MAX. BUILDING HEIGHT	2 1/2 STORIES or 35 FT WHICH EVER IS LESS	>35 FT	NC
PARKING & LOADING REQUIREMENTS				
149-83.B.3	NON-RESIDENTIAL USES IN THE RESIDENTIAL ZONE PROVISIONS SHALL BE MADE FOR ONE SQUARE FOOT OF TOTAL PARKING AREA FOR EACH SQUARE FOOT OF GROSS FLOOR AREA PARKING COUNT: 130 SPACES 9X18=162 SF 21,000 SF / 162 SF = 129.6 SPACES			
2010 ADA STANDARDS	TOTAL STANDARD PARKING =	130	18	NC
	ADA PARKING SPACES = 1 (VAN ACCESSIBLE;)	1 SPACE	1 SPACE	C
	TOTAL ON-SITE PARKING	SPACES	SPACES	C
149-83.F.1.d	MIN. SPACE DIMENSIONS	9' x 18'	9' x 18'	C
	MIN. ADA PARKING SPACE SIZE	8' x 20'	8'x20'	C
149-83.C.1	NO PARKING AREA SHALL EXTEND INTO ANY FRONT YARD MORE THAN 1/2 THE FRONT YARD SETBACK REQUIREMENT	17.5'	9.00'	ENC
149-83.C	LOADING AREA	1 SPACE / 10,000 SF OF FLOOR AREA	N/A	N/A
149-83.C.1	LOADING AREA SIZE	10' WIDE X 60' LONG	NA/	N/A
149-85	VEHICULAR CIRCULATION DRIVEWAYS	10' WIDE FOR ONE WAY; 20' WIDE FOR TWO WAY WITH 15' RADIUS AT PUBLIC STREET; ALL DRIVEWAYS INTERSECTIONS WITH A PUBLIC STREET SHALL BE 90 DEGREES	18' & 25' TWO WAY DRIVEWAY	C
149-85	VEHICULAR CIRCULATION	DRIVEWAYS SHALL BE LOCATED NO CLOSER THAN 100' FROM EXISTING INTERSECTIONS OR OTHER DRIVEWAYS	100 FT.	C
LANDSCAPING & LIGHTING REQUIREMENTS				
	LIGHTING LEVEL	NOT LESS THAN 1 FOOT-CANDLE	>1 FC	C
	PARKING AREA LANDSCAPING STANDARDS	TREES ADJACENT TO PARKING AREAS SHALL HAVE AT LEAST A 4' NONPAVEMENT RADIUS AREA SURROUNDING THEM AND SHALL BE PROTECTED FROM VEHICLES		C
GREEN SPACE REQUIREMENT				
	GREEN SPACE	>30%	46.10%	C

NC = NON-CONFORMANCE

ENC = EXISTING NON-CONFORMANCE

C = CONFORMANCE

N/A = NOT APPLICABLE

OFFSITE IMPROVEMENTS

REMOVAL OF PARKING ISLAND ON LOT 21:

130 SF SMALL ISLAND
+ 260 SF LARGE ISLAND
390 SF INCREASE IN PAVEMENT (IMPERVIOUS)

INSTALLATION OF GRASS STRIP BETWEEN REMAINING ISLANDS ON LOT 21:
118 LF x 4 LF = 472 SF DECREASE IN PAVEMENT (IMPERVIOUS)

472 SF IMPERVIOUS AREA DECREASE
- 390 SF IMPERVIOUS AREA INCREASE
82 SF NET DECREASE IN IMPERVIOUS AREA

*STORMWATER CONTROLS NOT REQUIRED

NOTES

1. EXISTING INFORMATION SHOWN BASED ON FIELD SURVEY BY PENNONI ASSOCIATES, INC ON 2/26/16.
2. BLOCK AND LOT INFORMATION TAKEN FROM THE OFFICIAL TAX MAPS OF THE TOWNSHIP OF MOUNT HOLLY, PLATE 25.
3. PENNONI PERFORMED A WETLANDS INVESTIGATION AT THE PROPOSED PROJECT AREA ON 2/17/ 16. THE INVESTIGATION CONCURRED THAT THERE ARE NO WETLANDS PRESENT AT THE PROPOSED PROJECT AREA OR WITHIN THE VICINITY OF THE PROPOSED PROJECT AREA.

DATE	NO.	REVISIONS
07/30/2020	9	BURL. CNTY. & S.C.D. RESUBMISSION
06/19/2020	8	BID PLANS
02/19/2020	7	PER COUNTY PLANNING BOARD ENGINEER
01/23/2020	6	PER NJDEP COMMENTS
09/27/2019	5	BURL. CNTY. PR SUBMISSION RESUBMISSION
09/03/2019	4	NJDEP AND GREENACRES RESUBMISSION
06/22/2019	3	NJDEP AND GREENACRES RESUBMISSION
06/03/2019	2	BURL. CNTY. PR SUBMISSION
03/22/2019	1	NJDEP SUBMISSION
10/23/2020	13	RE-BID PLANS
09/25/2020	12	ADDENDUM # 2
09/04/2020	11	ADDENDUM # 1
06/26/2020	10	ISSUED FOR BIDDING

PROJECT	MHFC1500
DATE	AUGUST 18, 2017
DRAWING SCALE	AS NOTED
DRAWN BY	JRB
APPROVED BY	HJD

CM1001

SHEET 4 OF 14

PENNONI ASSOCIATES INC.
515 Grove Street, Suite 1B
Haddon Heights, NJ 08035
T 856.547.0505 F 856.547.9174
NJ COA NO. GA28033300

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

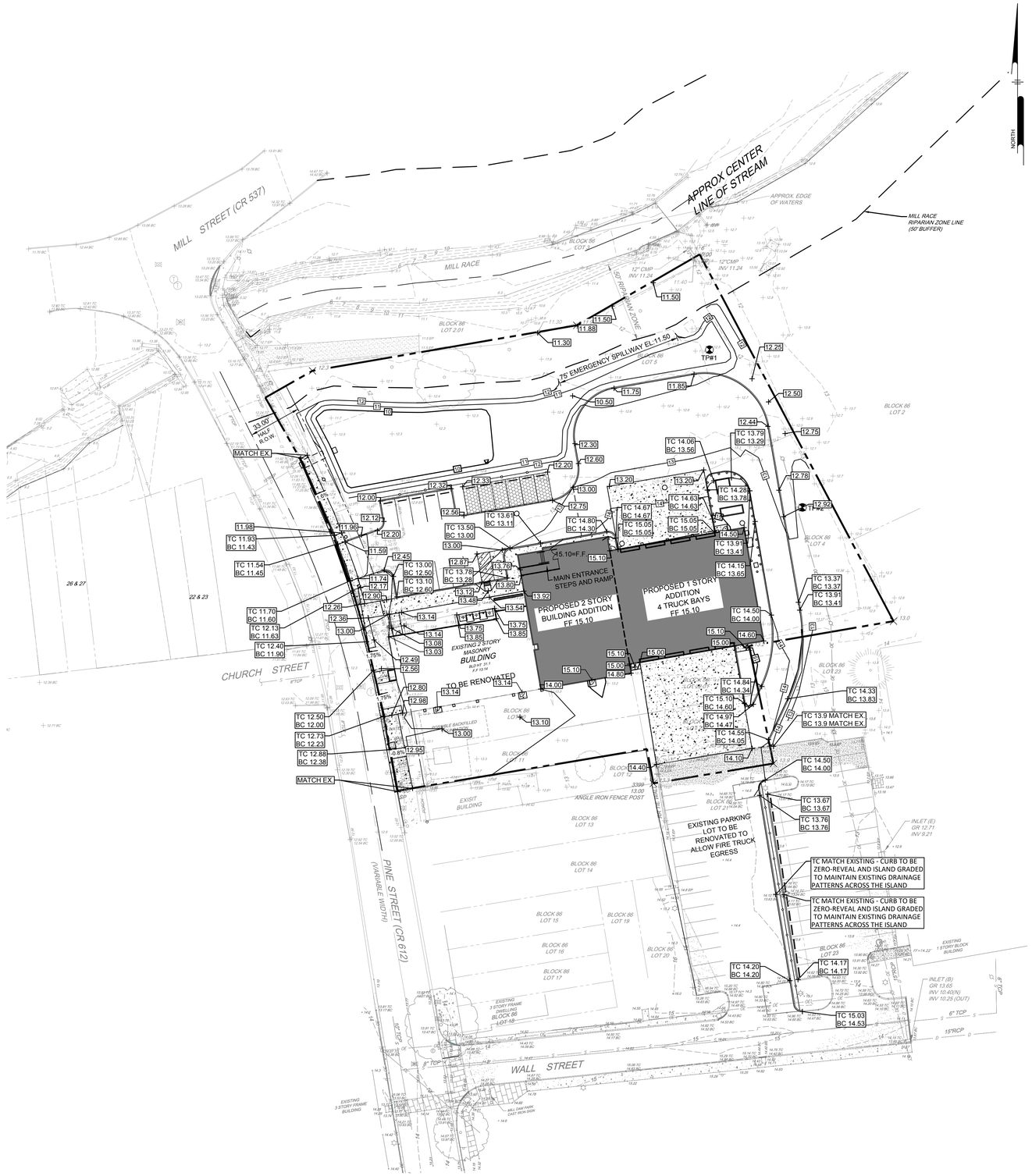
HUGH J. DOUGHERTY
PROFESSIONAL ENGINEER
NEW JERSEY LICENSE NO. GE34634

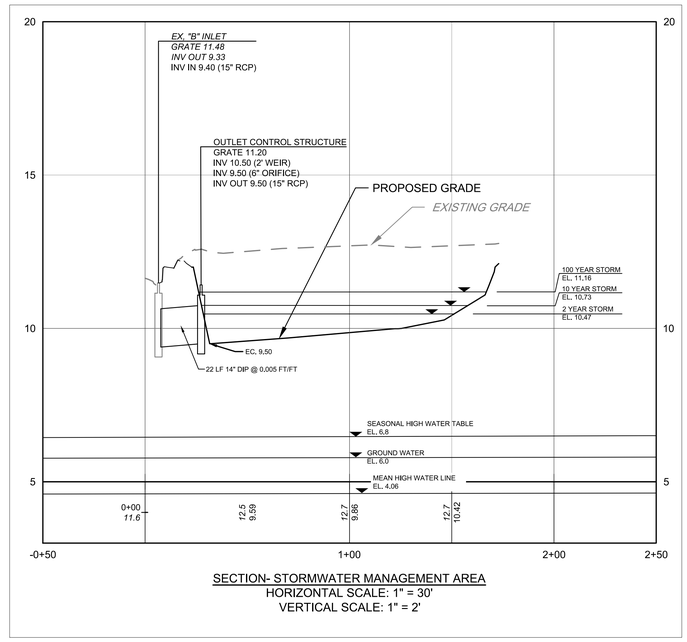
10/23/2020

RELIEF FIREHOUSE
17 PINE STREET
BLOCK 86, LOTS 4, 5, 10, 11, 21, 22, 22.01 AND 23, TAX MAP SHEET 25
TOWNSHIP OF MOUNT HOLLY BURLINGTON COUNTY, NEW JERSEY

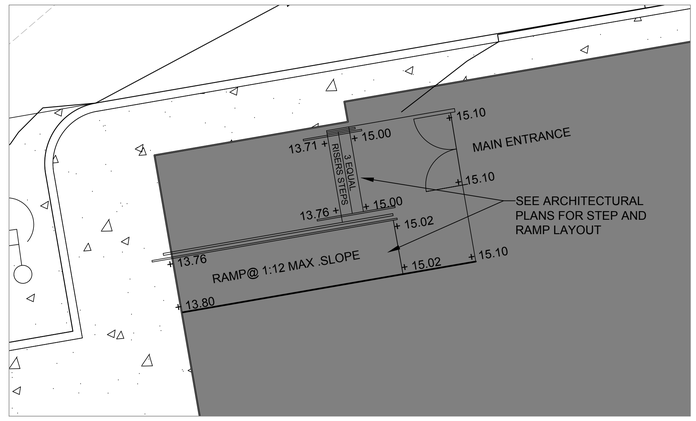
SITE PLAN

MOUNT HOLLY FIRE DISTRICT NO.1
P.O. BOX 741
MOUNT HOLLY, NEW JERSEY 08060

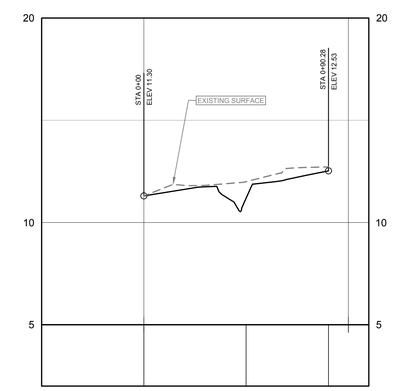




SECTION- STORMWATER MANAGEMENT AREA
HORIZONTAL SCALE: 1" = 30'
VERTICAL SCALE: 1" = 2'



MAIN ENTRANCE GRADING DETAIL
SCALE: 1"=5'



EMERGENCY SPILLWAY 3+00
HORIZONTAL SCALE: 1" = 30'
VERTICAL SCALE: 1" = 3'

NOTES

VERTICAL INFORMATION BASED ON NAVD 1988.

BENCHMARK:
NJIT - LEICA SMARTNET
SITE ID#: NJGC
RTCM ID#: 252
SITE NAME: GLOUCESTER
LATITUDE: N 39 46 52
LONGITUDE: W 75 07 11
ELLIPSOID HT: (-) 3.98m
BROADCASTING NGS APPROVED

0 5' 10'
0 30' 60'

NO.	DATE	REVISIONS	
13	10/23/2020	RE-BID PLANS	SMR
12	09/25/2020	ADDENDUM 2	SMR
11	09/04/2020	ADDENDUM 1	SMR
10	08/26/2020	ISSUED FOR BIDDING	SMR
9	07/30/2020	BURL. CNTY. S.C.D. RESUBMISSION	SMR
8	06/19/2020	BID PLANS	SMR
7	02/19/2020	PER COUNTY PLANNING BOARD ENGINEER	SMR
6	01/23/2020	PER NJDEP COMMENTS	SMR
5	09/27/2019	BURL. CNTY.- PB SUBMISSION RESUBMISSION	SMR
4	09/03/2019	NJDEP AND GREENACRES RESUBMISSION	SMR
3	06/22/2019	NJDEP AND GREENACRES RESUBMISSION	SMR
2	06/03/2019	BURL. CNTY.- PB SUBMISSION	SMR
1	03/22/2019	NJDEP SUBMISSION	SMR

PROJECT	MHFC1500
DATE	AUGUST 18, 2017
DRAWING SCALE	AS NOTED
DRAWN BY	JRB
APPROVED BY	HJD

CM1501

SHEET 5 OF 14

Pennoni
PENNONI ASSOCIATES INC.
515 Grove Street, Suite 1B
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T 856.547.0505 F 856.547.9174
NJ COA NO. GA28033300

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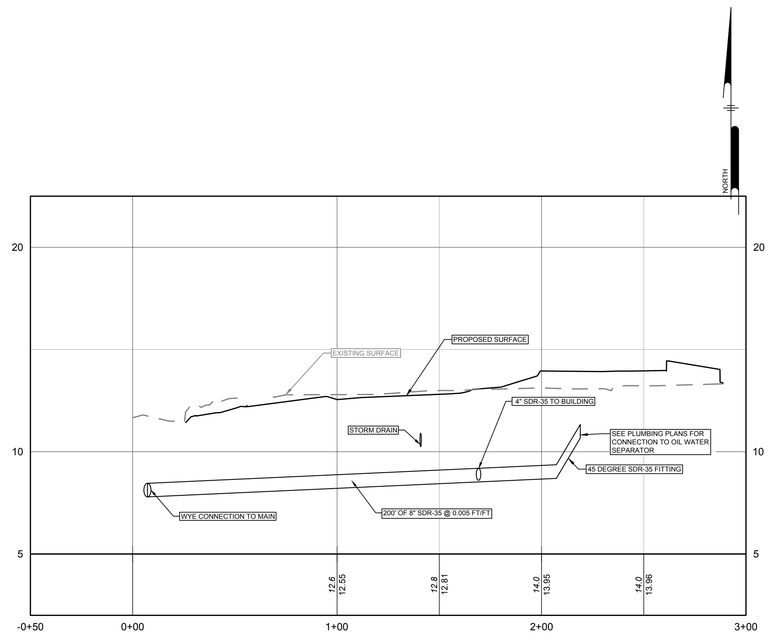
HUGH J. DOUGHERTY
PROFESSIONAL ENGINEER
NEW JERSEY LICENSE NO. GE34634
10/23/2020

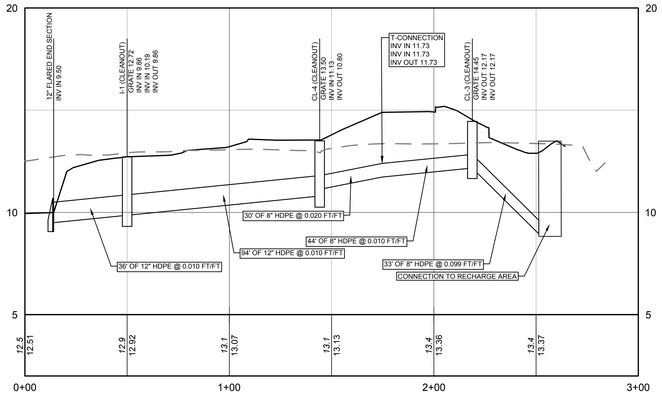
RELIEF FIRE COMPANY NO. 1
17 PINE STREET
BLOCK 86, LOTS 4, 5, 10, 11, 21, 22, 22.01 AND 23, TAX MAP SHEET 25
TOWNSHIP OF MOUNT HOLLY BURLINGTON COUNTY, NEW JERSEY

GRADING PLAN

MOUNT HOLLY FIRE DISTRICT NO.1
P.O. BOX 741
MOUNT HOLLY, NEW JERSEY 08060



SEWER LATERAL 5+00
HORIZONTAL SCALE: 1" = 30'
VERTICAL SCALE: 1" = 3'



BASIN DRAINAGE 5+00
HORIZONTAL SCALE: 1" = 30'
VERTICAL SCALE: 1" = 3'

NO.	REVISIONS	DATE	
13	RE-BID PLANS	10/23/2020	SMR
12	ADDENDUM 2	09/25/2020	SMR
11	ADDENDUM 1	09/04/2020	SMR
10	ISSUED FOR BIDDING	08/28/2020	SMR
9	BURL. CNTY. S.C.D. RESUBMISSION	07/30/2020	SMR
8	BID PLANS	06/19/2020	SMR
7	PER COUNTY PLANNING BOARD ENGINEER	02/19/2020	SMR
6	PER NJDEP COMMENTS	01/23/2020	SMR
5	BURL. CNTY. PB SUBMISSION RESUBMISSION	09/27/2019	SMR
4	NJDEP AND GREENACRES RESUBMISSION	09/03/2019	SMR
3	NJDEP AND GREENACRES RESUBMISSION	06/22/2019	SMR
2	BURL. CNTY. PB SUBMISSION	06/03/2019	SMR
1	NJDEP SUBMISSION	03/22/2019	SMR

PROJECT	MHFC1500
DATE	AUGUST 18, 2017
DRAWING SCALE	1"=30
DRAWN BY	JRB
APPROVED BY	HJD

CM1701

SHEET 6 OF 14

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BLOCK 86, LOTS 4, 5, 10, 11, 21, 22, 22.01 AND 23, TAX MAP SHEET 25
TOWNSHIP OF MOUNT HOLLY BURLINGTON COUNTY, NEW JERSEY

UTILITY PLAN

MOUNT HOLLY FIRE DISTRICT NO.1
P.O. BOX 741
MOUNT HOLLY, NEW JERSEY 08060

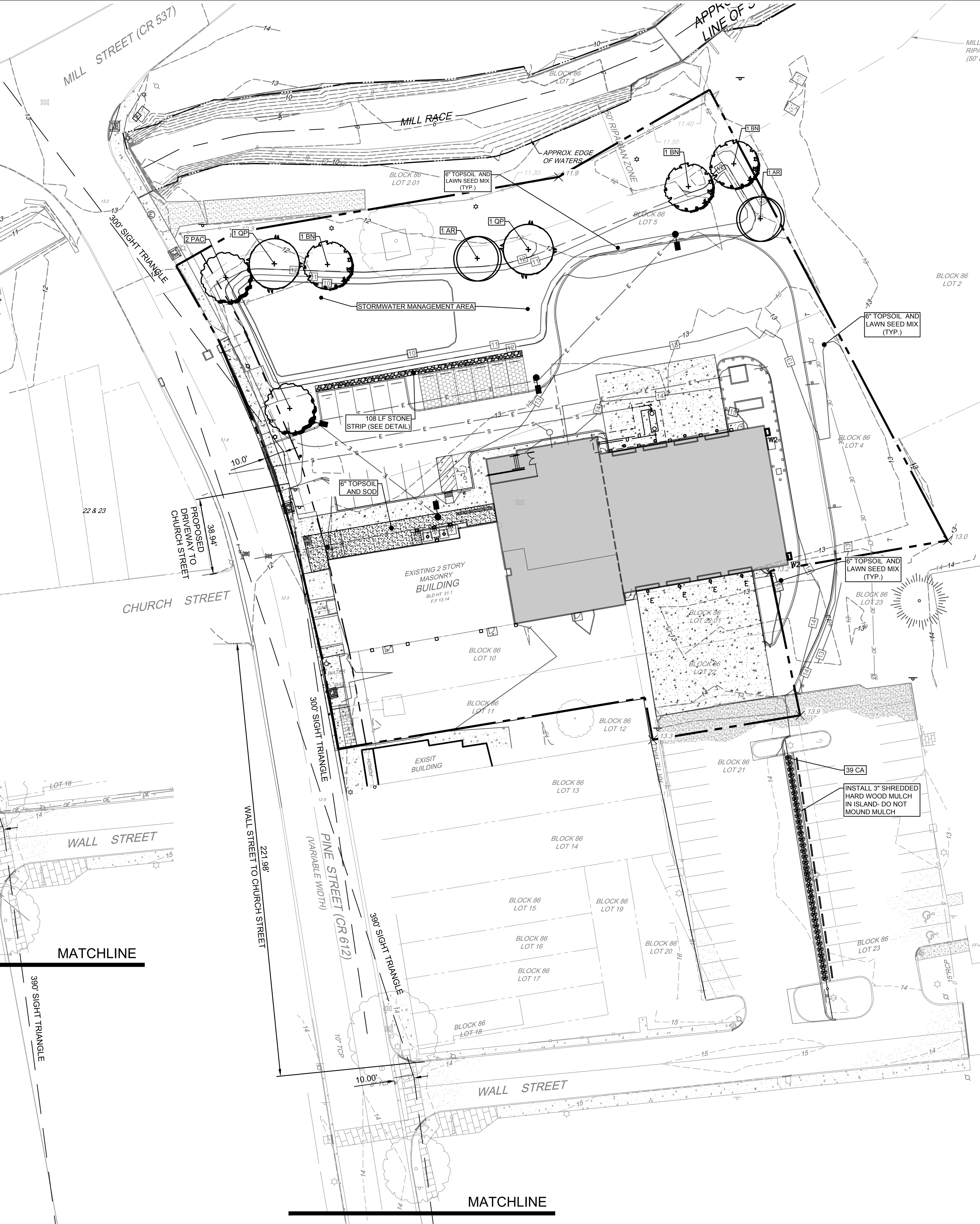
U:\Accounts\MHFC\1500\Pre Shee Fire Rsue\DESIGN_PUBLISH\PRELIMINARY FINAL SITE PLANS\CM1701.dwg PLOTTED 10/23/2020 1:03 AM BY Dave Bailey PLOTSTYLE Pennoni MCD.ctb PROJECT STATUS —

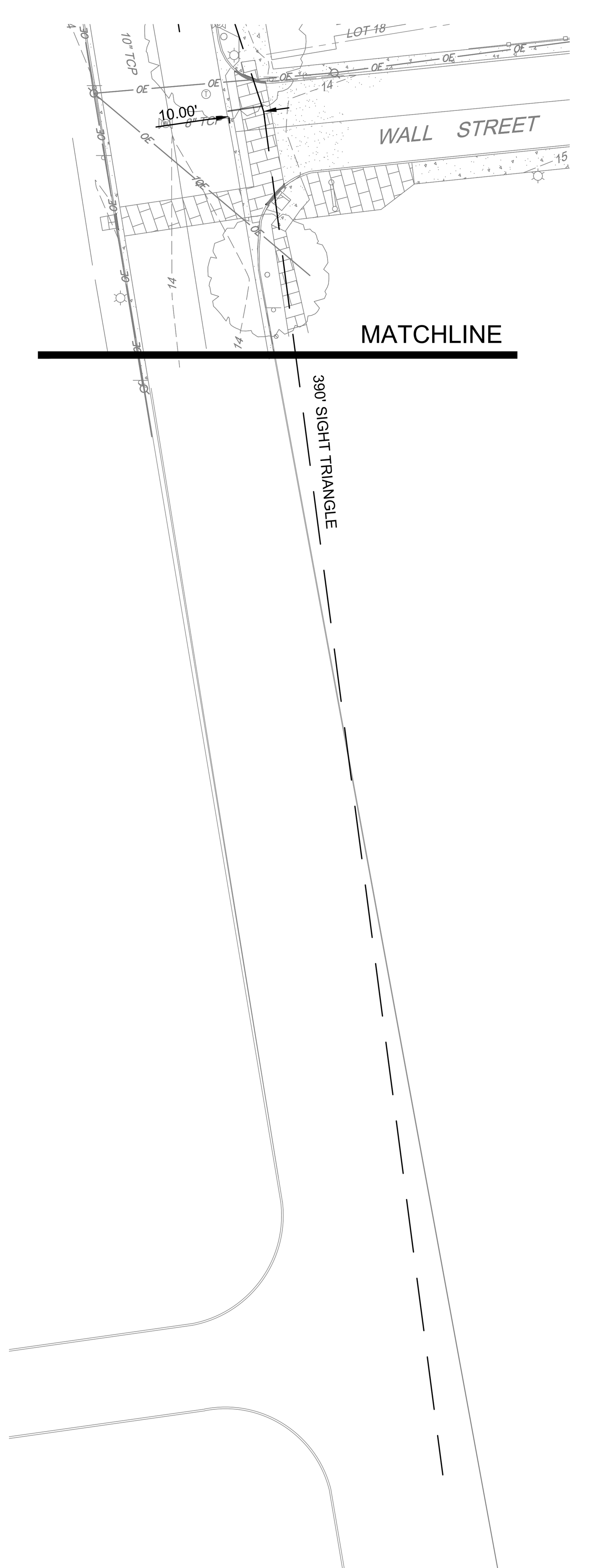
PLANT SCHEDULE						
SYM.	QTY.	BOTANICAL NAME	COMMON NAME	SIZE	ROOT	COMMENTS
DECIDUOUS SHADE TREES						
PAC	2	PLATANUS X ACERFOLIA 'COLUMBIA'	COLUMBIA PLANETREE	2.5"-3" CAL.; 12-14' HGT.	B&B	FULL; LIMBED TO 7 FT.
AR	2	ACER RUBRUM 'OCTOBER GLORY'	OCTOBER GLORY RED MAPLE	2.5"-3" CAL.; 12-14' HGT.	B&B	FULL; LIMBED TO 7 FT.
QP	2	QUERCUS PHELLOS	WILLOW OAK	2.5"-3" CAL.; 12-14' HGT.	B&B	FULL; LIMBED TO 7 FT.
BN	3	BETULA NIGRA 'HERITAGE'	HERITAGE RIVER BIRCH	2.5"-3" CAL.; 12-14' HGT.	B&B	FULL; MULTI-STEMMED
ORNAMENTAL GRASS						
CA	39	CALAMAGROSTIS ACUTIFLORA 'KARL FOERSTER'	FEATHER REED GRASS	12-15" HGT.	#1 CONT.	SPACE 3'-0" O.C.

LANDSCAPE LEGEND

- PROPOSED SHADE TREE
- PROPOSED ORNAMENTAL GRASS
- PROPOSED WALL MOUNT LIGHTS
- PROPOSED POLE LIGHT ASSEMBLIES
- PROPOSED SOD
- PROPOSED STONE STRIP

NORTH





SIGHT TRIANGLE DETAIL

SCALE 1" = 30'

NOTES:
SIGHT TRIANGLE REFERENCE LDRR, TABLE 6 AND TABLE 7

PLANTING NOTES

1. ALL PLANT LOCATIONS SHALL BE STAKED IN THE FIELD AND LOCATIONS APPROVED BY LANDSCAPE ARCHITECT PRIOR TO PLANTING.
2. TOPSOIL WITH A QUALITY ORGANIC SOIL AMENDMENT SHALL BE USED FOR ALL PLANTING AND SEEDING OPERATIONS.
3. INSTALL 12" MINIMUM TOPSOIL MIXTURE IN GROUNDCOVER BEDS AND 24" IN SHRUB BEDS AND ISLANDS. 6" OF TOPSOIL ARE TO REMAIN ON ALL DISTURBED AREAS TO RECEIVE SOD OR SEED.
4. NOTIFY ALL UTILITY COMPANIES AND LOCATE ALL UTILITIES PRIOR TO EXCAVATING PLANT PITS. PLANT LOCATIONS MAY BE ADJUSTED IN THE FIELD TO AVOID INTERFERENCE WITH UNDERGROUND UTILITIES.
5. SHOULD ANY DISCREPANCY ARISE BETWEEN THE PLANTING PLAN AND THE PLANTING SCHEDULE, THE DEVELOPER IS RESPONSIBLE FOR THE QUANTITIES SHOWN ON THE LANDSCAPE PLAN.
6. ALL PLANT MATERIAL SHALL BE OF NURSERY STOCK QUALITY AS DEFINED BY THE AMERICAN ASSOCIATION OF NURSERYMAN STANDARDS AND SHALL BE FIRST QUALITY NURSERY GROWN STOCK FREE OF DISEASE AND OBJECTIONABLE DISFIGUREMENTS AND PLANTED IN CONFORMANCE WITH SOUND NURSERY PRACTICE AND APPLICABLE CITY STANDARDS.
7. ALL NON-BIODEGRADABLE ROOT WRAPPING TO BE REMOVED COMPLETELY BEFORE PLANTING.
8. ALL TREES SHALL BE BALLED AND BULLAPED, NURSERY GROWN STOCK.
9. ALL PLANT MATERIAL AND LAWNS SHALL BE PLANTED WITHIN THE RECOMMENDED SEASONAL TIME PERIODS A S PRESCRIBED BY ACCEPTED HORTICULTURAL PRACTICE. RECOMMENDED PLANTING TIMES ARE BETWEEN APRIL 15TH THRU MAY 31ST OR AUGUST 17TH THRU OCTOBER 15TH. FALL DIGGING AND TRANSPLANT HAZARD TREE SPECIES (OAKS,ETC.) SHALL BE ONLY BE DUG AND PLANTED IN SPRING.
10. ALL PLANT MATERIAL SHALL BE APPROVED UPON ARRIVAL TO THE SITE, UNLESS OTHERWISE NOTIFIED.
11. PROPOSED PLANT MATERIAL MAY BE SUBSTITUTED BY SIMILAR PLANTS PRIOR TO INSTALLATION, SUBJECT TO APPROVAL BY THE CITY ENGINEER.
12. A TEMPORARY FENCE, SUCH AS SNOW FENCE, SHALL BE ERECTED AT THE PERIMETER OF THE DRIPLINE OF ALL EXISTING VEGETATION INDICATED TO REMAIN. PRIOR TO EXCAVATION, CONSTRUCTION OR SITE WORK. THIS FENCE SHALL BE REMOVED ONLY AT THE TIME OF COMPLETION OF ALL CONSTRUCTION AND FINAL GRADING.
13. EXISTING TREES TO BE RELOCATED SHALL BE HANDLED ACCORDING TO ACCEPTABLE HORTICULTURE PRACTICE.
14. ALL DISTURBED AREAS NOT SHOWN AS PLANTED OR LAWN SHALL BE TOPSOILED AND SEEDED OR RETURNED TO THEIR ORIGINAL STATE BEFORE DISTURBANCE AS DIRECTED BY THE CITY ENGINEER.
15. ALL AREAS NOT RELATED TO HE PROPOSED DEVELOPMENT SHALL REMAIN IN THEIR NATURAL STATE. DISTURBANCE OF EXISTING VEGETATION SHALL BE LIMITED TO WORK AREA AND AS DEFINED ON DWGS. CM0501 AND CM8001.
16. PROPOSED TREES SHALL NOT BE PLANTED WITHIN EASEMENTS, DRIVEWAYS AND SITE TRIANGLES. THEREFORE, THE TREE LOCATIONS SHALL BE APPROXIMATE AND SHALL BE ADJUSTED IN THE FIELD AS REQUIRED.
17. ALL SHADE TREES IN PEDESTRIAN WALKS AREAS SHALL HAVE AN INITIAL LIMBS PRUNED STARTING AT A MINIMUM OF 7 FT. ABOVE FINISHED GRADE.
18. ALL TREES SHALL BE MULCHED WITH A THREE INCH (3") MINIMUM DEPTH OF SHREDDED HARDWOOD BARK.
19. PLANTS ARRANGED IN CONTINUOUS GROUPINGS SHALL BE SET IN MULCHED BEDS.
20. PLANTING DEBRIS SHALL BE REMOVED FROM THE PROPERTY.
21. NO HEALTHY TREE THAT IS SPECIAL BY VIRTUE OF HISTORY, UNUSUAL SIZE, OR AGE OR OF RAE SPECIES, SHALL BE REMOVED EXCEPT AS MAY BE REQUIRED FOR PROTECTION OF PUBLIC HEALTH, SAFETY AND WELFARE.
22. NEWLY INSTALLED PLANT MATERIAL SHALL BE WATERED AT THE TIME OF PLANTING. REGULAR WATERING SHALL BE PROVIDED TO ENSURE THE ESTABLISHMENT AND REGULAR GROWTH OF PLANTS.
23. ALL SHRUBS SPACED 7 FT. O.C. OR CLOSER SHALL BE IN CONTINUOUS MULCHED BEDS.
24. SEED ALL DISTURBED AREAS WITH REQUIRED SEED MIX (SEE DWG. CM8501 FOR SEEDING MIX SCHEDULE).
25. TREES SHOULD BE PLANTED A MIN. OF FIVE (5) FEET FROM SIDEWALKS UNLESS IN TREE PITS.
26. GUY WIRES AND STAKES WILL ONLY BE UTILIZED IF CONDITIONS MERIT AND WILL BE REMOVED BY THE CONTRACTOR AT THE END OF THE GUARANTEE PERIOD.

SEEDING NOTES

1. SEED ALL AREAS DISTURBED BY CONSTRUCTION NOT OTHERWISE CONTAINING PLANTING BEDS, SIDEWALKS, BUILDINGS, ETC.
2. BEFORE SEEDING, CONTRACTOR SHALL PROVIDE SOIL TESTS AND INCORPORATE NECESSARY SOIL AMENDMENTS PER SOIL TEST RECOMMENDATIONS.
3. PERFORM ALL FINISH GRADING, WITHIN AREAS OF DISTURBANCE, NECESSARY TO BRING SITE TO REQUIRED FINISHED ELEVATIONS. FINISH GRADING SHALL CONSIST OF PREPARING SUBGRADE AND SPREADING TOPSOIL READY FOR SEEDING OPERATIONS.
4. TOPSOIL SHALL BE UNIFORMLY SPREAD IN DISTURBED AREAS WITH BLADE GRADER, OR BY ANY OTHER APPROVED METHOD, TO A MINIMUM DEPTH OF 6 INCHES TO PERMIT 1 INCH OF SETTLEMENT. CORRECT ANY SURFACE IRREGULARITIES TO PREVENT FORMATION OF LOW SPOTS AND POCKETS THAT WOULD RETAIN WATER. PRIOR TO FINE GRADING, REMOVE ALL EXISTING ANNUAL TYPE VEGETATION.
5. SOW SEED AT THE RECOMMENDED SEEDING RATE AS SHOWN IN THE SEEDING MIX SCHEDULE AS NOTED ON EROSION CONTROL PLANS.
6. SEED SHALL BE APPLIED APRIL 15TH THRU MAY 31ST OR AUGUST 17TH THRU OCTOBER 15TH.
7. ON ALL SLOPES 3:1 OR GREATER, USE AN ORGANIC SOIL STABILIZER SUCH AS 'CON-TACK' OR EQUAL AT THE RATE OF 25 LBS PER 1,000 GALLONS OR AT RATES RECOMMENDED BY THE MANUFACTURER.
8. KEEP NEWLY SEEDED GRASS AREAS MOISTENED DURING SEED GERMINATION AND UNTIL THE GRASS COVERS AT LEAST 75% OF THE SEEDED AREAS TO A HEIGHT OF 2 TO 3 INCHES.
9. ALL AREAS AND SPOTS, WHICH DO NOT SHOW A PROMPT CATCH OF GRASS, SHALL THEN BE RE-SEEDED, AND THE OPERATION REPEATED UNTIL COMPLETE COVERAGE IS OBTAINED.
10. SEE DWG. CM8501 FOR SEEDING SPECIFICATIONS AND RATES.

LANDSCAPE MAINTENANCE NOTES AND GUARANTEE

PLANT MATERIAL GUARANTEE

ALL PLANT MATERIAL SHALL BE GUARANTEED FOR TWO (2) YEARS BY THE CONTRACTOR TO BE IN HEALTHY AND VIGOROUS CONDITION FROM THE DATE OF ACCEPTANCE THE OWNER. ANY AND ALL PLANT MATERIAL THAT DIES OR FAILS TO THRIVE SHALL BE IMMEDIATELY REPLACED WITH LIKE SPECIES. IT IS UNDERSTOOD THAT THE CONTRACTOR WILL PROVIDE ADEQUATE AND TIMELY CARE DURING THE GUARANTEE PERIOD TO THE HIGHEST HORTICULTURAL STANDARDS.

MAINTENANCE

THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTENANCE OF SITE VEGETATION DURING THE GUARANTEE PERIOD TO INCLUDE BUT NOT BE LIMITED TO:

1. FERTILIZER: SPRING AND FALL FERTILIZER APPLICATIONS.
2. PRUNING: PRUNING SHALL BE LIMITED OR REMOVAL OF DEAD WOOD OR BRANCHES FOR TREES OR FOR SIGHT DIFFERENCES/SAFETY REASONS. PRUNING OF SHRUBS AND TREES SHALL BE LIMITED TO THE PRUNING NECESSARY TO MAINTAIN THE NATURAL SHAPE OF THE PLANT EXCEPT FOR SHEARED HEDGES.
3. PEST CONTROL: PRE-EMERGENT WEED CONTROL FOR MOWN LAWNS AND SHRUB BEDS MAY BE APPLIED IN FEBRUARY. CHEMICAL TREATMENT FOR INSECT INFESTATION AND DISEASE MAY BE APPLIED AND SHALL BE SPECIFIC TO THE PROBLEM.
4. MULCHING: MULCHING SHALL BE MAINTAINED AT A DEPTH OF 3" IN PLANT BEDS AND AROUND BASE OF TREES.
5. MOWING: MOWN LAWN SEED MIX SHALL BE MOWN AT REGULAR INTERVALS THROUGHOUT THE GROWING SEASON. GRASS HEIGHT SHOULD NOT EXCEED 4 INCHES BEFORE CUTTING. MOWER BLADES SHALL BE SET AT 3 INCHES UNLESS OTHERWISE DIRECTED.
6. PLANT PROTECTION: AVOID EXCESS INTRUSION INTO THE ROOT ZONE AREA OF ESTABLISHED PLANTINGS.
7. WATERING: UNLESS STATED OTHERWISE IN THESE DOCUMENTS, PROVIDE APPROXIMATELY 1-INCH OF RAINFALL/WATER PER WEEK THROUGHOUT THE GROWING SEASON FOR THE FIRST YEAR.

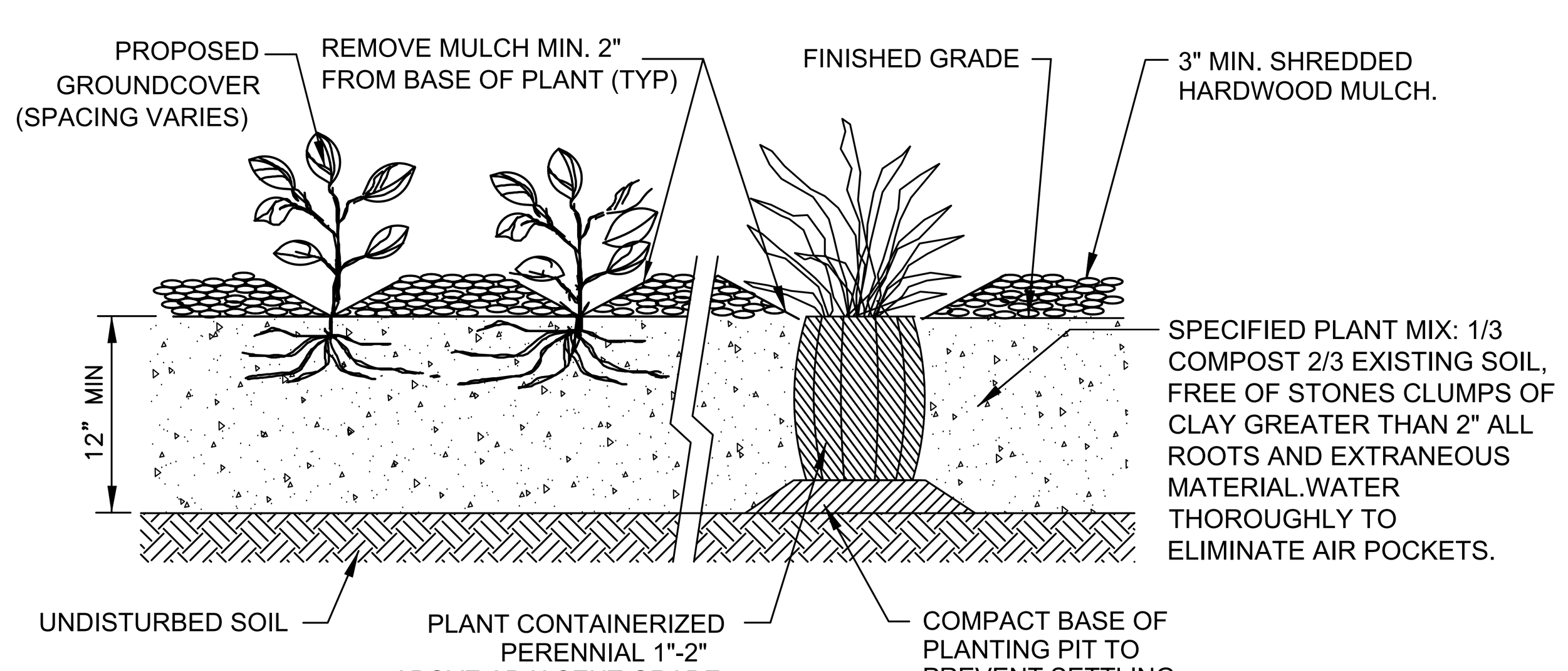
PERENNIAL AND GROUNDCOVER MAINTENANCE

8. WEED CONTROL CAN BE A PROBLEM UNTIL THE GROUNDCOVERS/ PERENNIALS HAVE SPREAD AND FILLED IN THE AREA. CONTROL OF PERSISTENT, PERENNIAL WEEDS, SUCH AS BERMUDAGRASS AND NUTGRASS SHOULD BE ACHIEVED BEFORE PLANTING. A GRANULAR PRE-EMERGENT HERBICIDE SHALL BE APPLIED PER MANUFACTURERS'S SPECIFICATIONS TO ALL BED SURFACES IMMEDIATELY AFTER MULCHNG. APPLY ADDITIONAL MULCH AFTER PLANTING TO REPLENISHED AS NEEDED TO MAINTAIN A DEPTH OF 3 INCHES.
9. FERTILIZER - MOST GROUNDCOVERS WILL BENEFIT FROM AN APPLICATION OF FERTILIZER IN LATE WINTER TO EARLY SPRING. USE 2 TO 4 POUNDS OF A COMPLETE FERTILIZER PER 1,000 SQUARE FEET. WATER OR BRUSH FERTILIZER OFF THE FOLIAGE AFTER BROADCASTING.

TREE PROTECTION NOTES

1. THOSE TREES WHICH ARE WITHIN TWENTY (20) FEET OF ANY PROPOSED EXCAVATION OR GRADING OPERATION, OR IN ANY OTHER LOCATION DEEMED APPROPRIATE BY THE ENGINEER, SHALL BE PROTECTED BY INSTALLING AND MAINTAINING A FENCE AT THE DRIP LINE.
2. NO BOARDS OR OTHER MATERIAL SHALL BE NAILED TO TREES DURING CONSTRUCTION.
3. HEAVY EQUIPMENT OPERATORS ARE PROHIBITED FROM DAMAGING EXISTING TREE TRUNKS AND ROOTS. FEEDER ROOTS SHALL NOT BE CUT CLOSER THAN TWENTY (20) FEET FROM TREE TRUNKS UNLESS APPROVED BY THE ENGINEER.

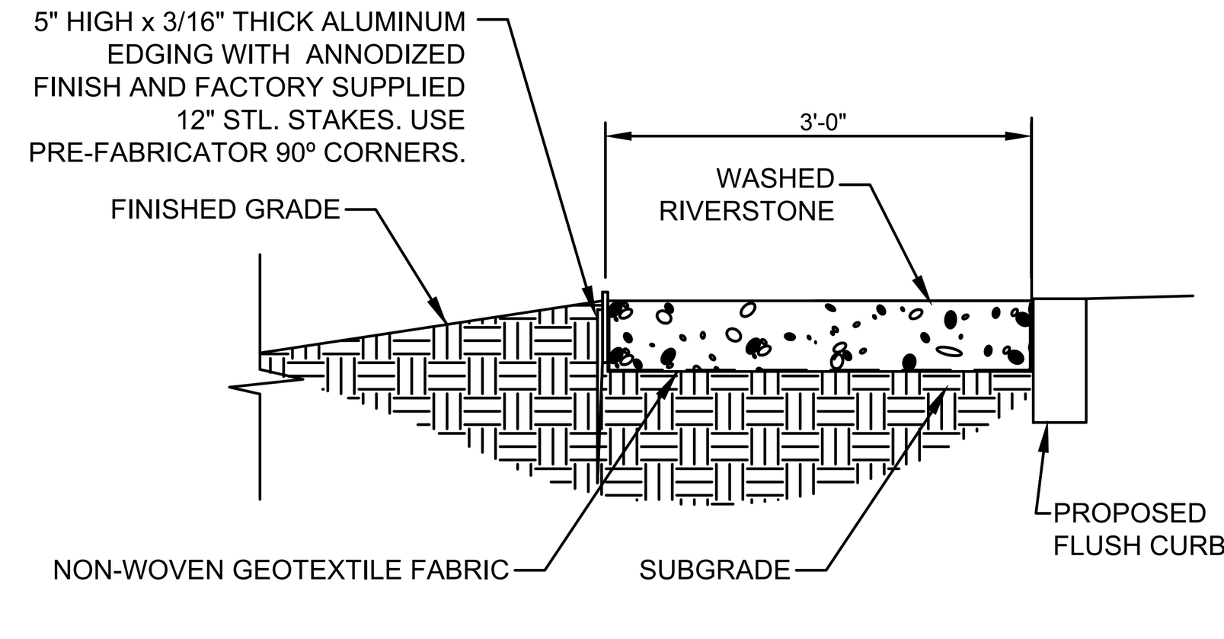
   PROTECTIVE DRAINABLE MATTING AND A MINIMUM 6" SHREDDED MULCH SHALL BE APPLIED TO THE ENTIRE ROOT AREAS WHERE HEAVY EQUIPMENT CAN NOT AVOID ROOTS.
4. TREE TRUNKS AND EXPOSED ROOTS DAMAGED DURING CONSTRUCTION SHALL BE PROTECTED FROM FURTHER DAMAGE BY BEING TREATED IMMEDIATELY.
5. TREE LIMBS DAMAGED DURING CONSTRUCTION SHALL BE PROPERLY PRUNED AND TREATED IMMEDIATELY.
6. DAMAGED TREES SHALL BE FERTILIZED TO AID IN THEIR RECOVERY.
7. CONSTRUCTION DEBRIS SHALL NOT BE DISPOSED OF NEAR OR AROUND TREES.



PERENNIAL/GROUNDCOVER/ORN. GRASS PLANTING

NOT TO SCALE

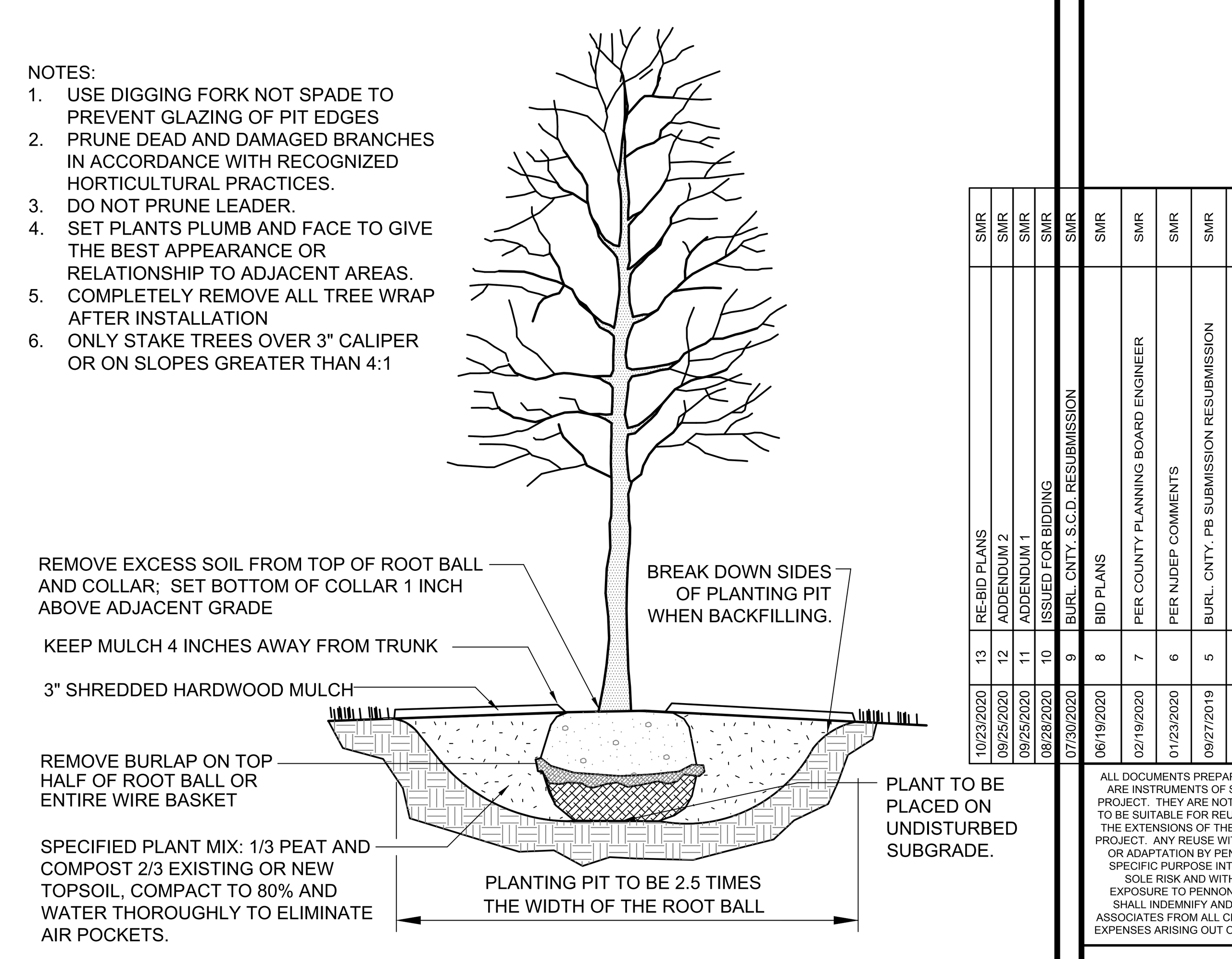
NOTES:
1. INSTALL ALUMINUM EDGING 1/2" ABOVE FINISHED GRADE.
2. LOCATE ANCHORING STAKES NO MORE THAN 3 FEET O.C.
3. RIVERSTONE GRAVEL SIZE: 1"- 3" DIAMETER
4. RIVER STONE GRAVEL COLOR: COMBINED HUES OF GRAY, BROWN, BLUE, RED AND TAN .
5. POSITIVE DRAINAGE SHALL BE PROVIDED FOR THE ALL AREAS. STONE GRADE AWAY FROM PAVEMENT SHALL BE 1% MIN.
6. ALUMINUM EDGING SHALL BE PERMASTRIP MANUFACTURED BY PERMALOC OR APPROVED EQUAL.



STONE STRIP DETAIL

NOT TO SCALE

NOTES:
1. USE DIGGING FORK NOT SPADE TO PREVENT GLAZING OF PIT EDGES
2. PRUNE DEAD AND DAMAGED BRANCHES IN ACCORDANCE WITH RECOGNIZED HORTICULTURAL PRACTICES.
3. DO NOT PRUNE LEADER.
4. SET PLANTS PLUMB AND FACE TO GIVE THE BEST APPEARANCE OR RELATIONSHIP TO ADJACENT AREAS.
5. COMPLETELY REMOVE ALL TREE WRAP AFTER INSTALLATION
6. ONLY STAKE TREES OVER 3" CALIPER OR ON SLOPES GREATER THAN 4:1



DECIDUOUS TREE PLANTING

NOT TO SCALE

0 30' 60'

DATE	NO.	REVISIONS	
10/23/2020	13	RE-BID PLANS	SMR
09/25/2020	12	ADDENDUM 2	SMR
09/25/2020	11	ADDENDUM 1	SMR
08/28/2020	10	ISSUED FOR BIDDING	SMR
07/30/2020	9	BURL. CNTY. S.C.D. RESUBMISSION	SMR
06/19/2020	8	BID PLANS	SMR
02/19/2020	7	PER COUNTY PLANNING BOARD ENGINEER	SMR
01/23/2020	6	PER NJDEP COMMENTS	SMR
09/27/2019	5	BURL. CNTY. PB SUBMISSION RESUBMISSION	SMR
09/03/2019	4	NJDEP AND GREENACRES RESUBMISSION	SMR
06/22/2019	3	NJDEP AND GREENACRES RESUBMISSION	SMR
06/03/2019	2	BURL. CNTY. PB SUBMISSION	SMR
03/22/2019	1	NJDEP SUBMISSION	SMR

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PENNONI ASSOCIATES INC.
515 Grove Street, Suite 1B
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T 856.547.0505 F 856.547.9174
NJ COA NO. GA28033300

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

HUGH J. DOUGHERTY
PROFESSIONAL ENGINEER
NEW JERSEY LICENSE NO. GE34634
10/23/2020

RELIEF FIRE COMPANY NO. 1

17 PINE STREET
BLOCK 86, LOTS 4, 5, 10, 11, 21, 22, 22.01 AND 23, TAX MAP SHEET 25
TOWNSHIP OF MOUNT HOLLY BURLINGTON COUNTY, NEW JERSEY

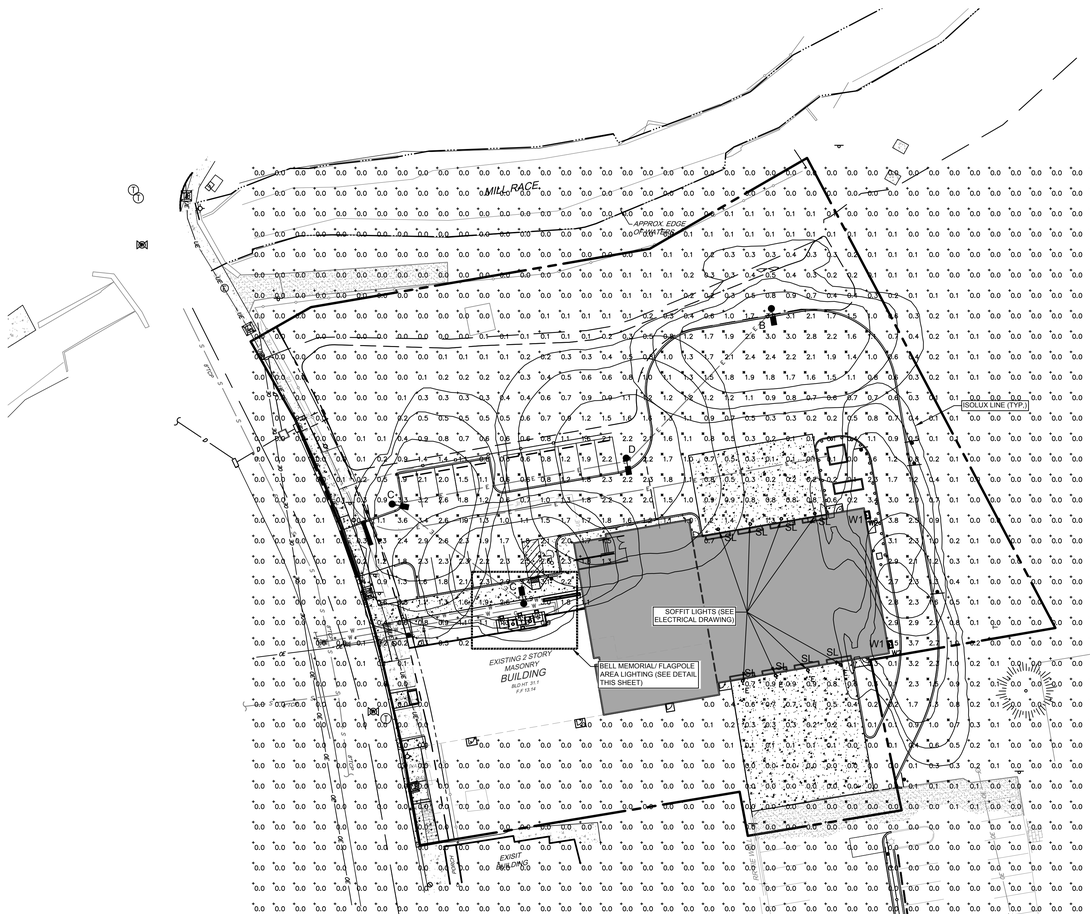
LANDSCAPE PLAN

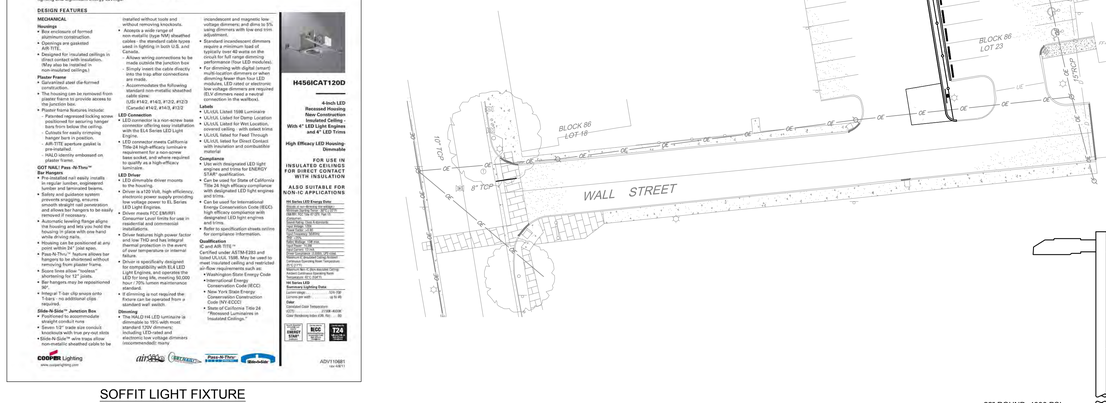
MOUNT HOLLY FIRE DISTRICT NO.1
P.O. BOX 741
MOUNT HOLLY, NEW JERSEY 08060

PROJECT	MHFC1500
DATE	AUGUST 18, 2017
DRAWING SCALE	1"=30
DRAWN BY	JRB
APPROVED BY	HJD

CM2001

U:\Accounts\MHFCX1500-Pine Street Fire House\DESIGN_PUBLISH\PRELIMINARY FINAL SITE PLANS\CM2001.dwg PLOTTED: 10/20/2020 11:04 AM, BY: Sean Raday PLOTSTYLE: Pennoni NCS.stb PROJECT STATUS: ----





SOFFIT LIGHT FIXTURE

Schedule

Symbol	Label	Quantity	Manufacturer	Catalog Number	Description	Lamp	Number Lamps	Filename	Lumens Per Lamp	Light Loss Factor	Wattage
●■	B	1	Lithonia Lighting or approved equal	DSX1 LED P3 30K T3M MVOLT	DSX1 LED P3 30K T3M MVOLT	LED	1	DSX1_LED_P3_30K_T3M_MVOLT.ies	11338	0.95	102
●■	C	2	Lithonia Lighting or approved equal	DSX1 LED P3 30K T4M MVOLT HS	DSX1 LED P3 30K T4M MVOLT with houseside shield	LED	1	DSX1_LED_P3_30K_T4M_MVOLT_HS.ies	8867	0.95	102
●■	D	1	Lithonia Lighting or approved equal	DSX1 LED P3 30K T5M MVOLT	DSX1 LED P3 30K T5M MVOLT	LED	1	DSX1_LED_P3_30K_T5M_MVOLT.ies	12118	0.95	102
■	W1	2	Lithonia Lighting or approved equal	DSXW1 LED 20C 1000 30K T2M MVOLT	DSXW1 LED WITH (2) 10 LED LIGHT ENGINES, TYPE T2M OPTIC, 3000K, @ 1000mA.	LED	1	DSXW1_LED_20C_1000_30K_T2M_MVOLT.ies	6865	0.95	73.2
●	SL	8	Halo Lighting or approved equal	H4 SERIES LED DOWNLIGHT (INSTALLED IN BLDG. SOFFIT)	SEE ELECTRICAL DRAWINGS FOR FIXTURE SPECIFICATIONS	LED	1				

Statistics

Description	Symbol	Avg	Max	Min	Max/Min	Avg/Min
Parking	+	1.2 fc	3.8 fc	0.0 fc	N/A	N/A
Site	+	0.3 fc	3.9 fc	0.0 fc	N/A	N/A

Note

1. Fixtures Mounted at 20' (Pole) and 15' (Wall)
2. Calculations Taken at Grade
3. Calculations are estimations based on the information provided and may vary with actual conditions

LIGHTING NOTES:

1. SEE ELECTRICAL PLANS FOR ALL CONDUIT LOCATIONS, SIZING AND CABLE INFORMATION.
2. ALL OUTDOOR LIGHTING NOT ESSENTIAL FOR SAFETY PURPOSES SHALL BE ACTIVATED BY AUTOMATIC CONTROL DEVICES AND TURNED OFF DURING NON-OPERATEING HOURS.

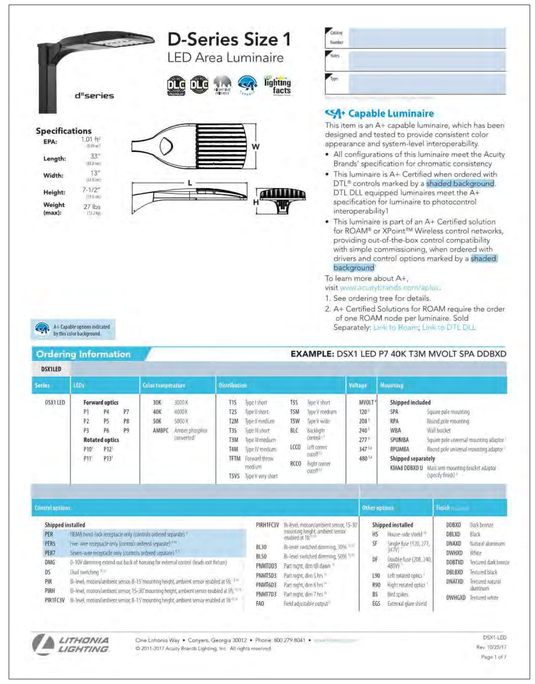
LIGHT POLE FOUNDATION DETAIL

NTS

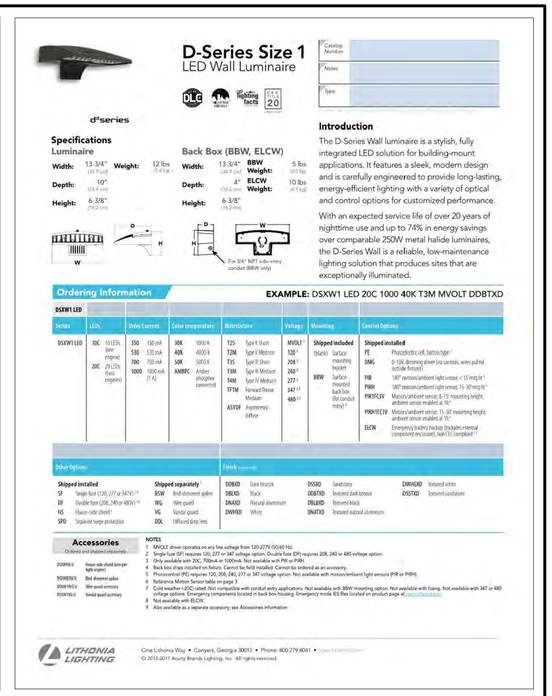
NOTE: SEE ELECTRICAL PLANS FOR SERVICE CONDUIT/WIRING TO BUILDING

FLAGPOLE/BELL AREA LIGHTING DETAIL

SCALE 1" = 10'



POLE MOUNT FIXTURE (A-C)



WALL MOUNT FIXTURE (W1 AND W2)

RECESSED WELL LIGHT FIXTURE

LIGHT POLE

FLOOD LIGHT FIXTURE

10/23/2020	13
09/25/2020	12
08/26/2020	11
07/30/2020	10
06/18/2020	9
05/19/2020	8
04/16/2020	7
01/23/2020	6
09/27/2019	5
09/03/2019	4
08/22/2019	3
08/03/2019	2
03/22/2019	1
DATE	NO.

SMR	RE-BID PLANS
SMR	ADDENDUM 2
SMR	ADDENDUM 1
SMR	ISSUED FOR BIDDING
SMR	BURL. CNTY. ELCT. RESUBMISSION
SMR	BID PLANS
SMR	PER COUNTY PLANNING BOARD ENGINEER
SMR	PER NJDEP COMMENTS
SMR	BURL. CNTY., PB SUBMISSION RESUBMISSION
SMR	NJDEP AND GREENACRES RESUBMISSION
SMR	NJDEP AND GREENACRES RESUBMISSION
SMR	BURL. CNTY. PB SUBMISSION
SMR	NJDEP SUBMISSION
	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 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	MHFC1500
DATE	AUGUST 18, 2017
DRAWING SCALE	1"=30
DRAWN BY	JRB
APPROVED BY	HJD

CM2201

SHEET 8 OF 14

0 30' 60'

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MOUNT HOLLY FIRE DISTRICT NO.1
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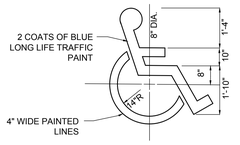
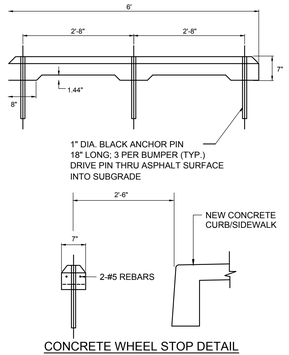
LIGHTING



ADA SYMBOL MARKING DETAIL
N.T.S.



CONCRETE WHEEL STOP DETAIL
N.T.S.

"STOP" SIGN
R1-1 (30"x 30")

"DO NOT ENTER" SIGN
R5-1 (30"x 30")

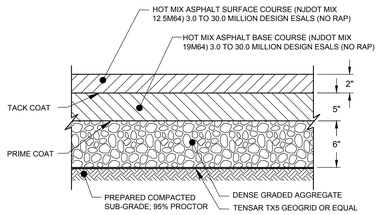
"ONE WAY" SIGN
R6-1L, R6-1R (36"x12")

NOTES:

1. ALL SIGN MATERIALS SHALL BE MADE OF ALUMINUM BLANKS MOUNTED ON GALVANIZED STEEL POSTS, ALL CONFORMING TO NJDOT STANDARD SPECIFICATIONS.
2. ALL SIGNS SHALL MEET THE MOST CURRENT MUTCD REQUIREMENTS FOR RETRO-REFLECTIVITY.

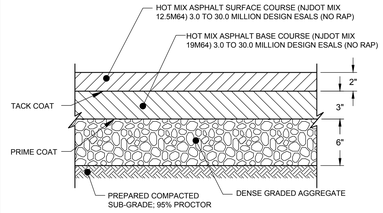
"NO PARKING FIRE LANE" SIGN
R7-6M (12"x 18")

SIGN DETAILS
N.T.S.

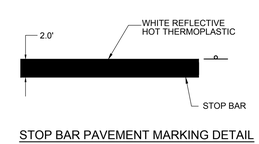


NOTE:
TENSAR TX5 GEOGRID TO BE OVERLAPPED 1'-0"
CBR VALUE OF 10.

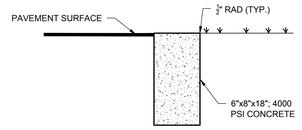
HEAVY DUTY FULL-DEPTH ASPHALT PAVEMENT DETAIL
N.T.S.



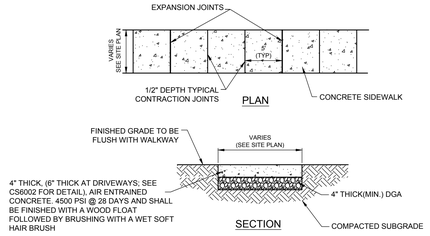
LIGHT DUTY FULL-DEPTH ASPHALT PAVEMENT DETAIL
N.T.S.



STOP BAR PAVEMENT MARKING DETAIL
N.T.S.

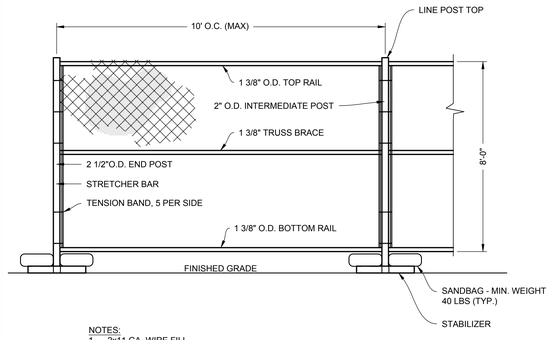


FLUSH CURB DETAIL
N.T.S.



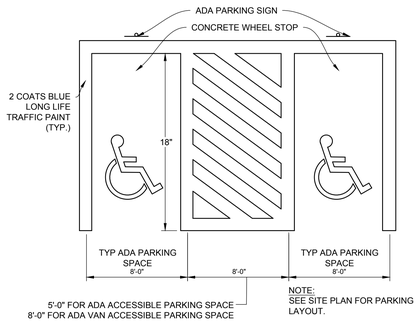
NOTE:
1. MAX. CROSS SLOPE ¼" PER FOOT MINIMUM¼" PER FOOT PITCHED TOWARDS ROADWAY.
2. PROVIDE 1/2" PREMOLDED BITUMINOUS EXPANSION JOINT AT 15' MAX. INTERVALS AND WHERE SIDEWALK MEETS OTHER STRUCTURES.
3. CONCRETE TO BE CURED PER NJDOT SPECIFICATIONS.
4. LONGITUDINAL SLOPE AND WIDTH TO COMPLY WITH ADA BARRIER FREE REQUIREMENTS.
5. ALL CONSTRUCTION TO COMPLY WITH BARRIER FREE CODE REQUIREMENTS, SHOULD CONDITIONS NOT PERMIT COMPLIANCE, THE CONTRACTOR SHALL NOTIFY THE ENGINEER IMMEDIATELY.
6. ANY EXCAVATION BELOW DESIRED GRADE DUE TO OVER EXCAVATION OR WET SOIL CONDITIONS SHALL BE BACKFILLED WITH DGA. ALL SUBGRADES SHALL BE REVIEWED AND APPROVED BY THE ENGINEER PRIOR TO POURING.

CONCRETE SIDEWALK DETAIL
N.T.S.

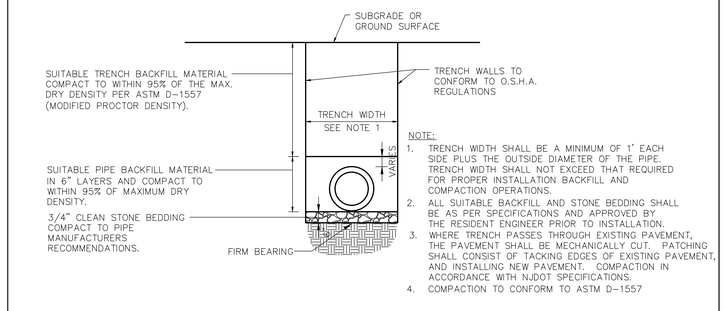


NOTES:
1. 2x11 GA. WIRE FILL
2. TENSION BANDS W/ NUTS AND BOLTS (NOT PRESS CLIPS)
3. WIRE TIES EVERY 12"
4. ALL PIPE AND WIRE TO BE HAND DIPPED GALVANIZED

CONSTRUCTION FENCE DETAIL
(N.T.S.)

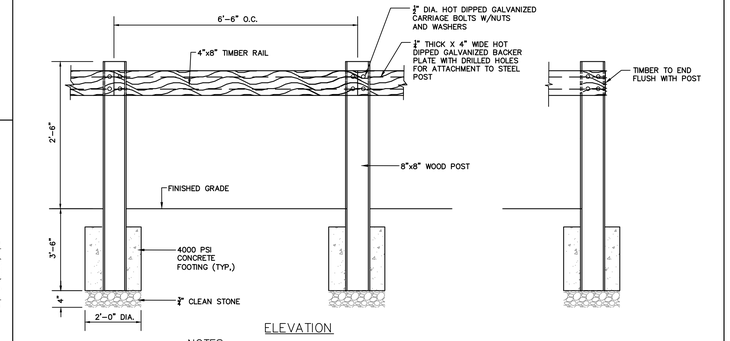


ADA PARKING STRIPING DETAIL
N.T.S.



NOTE:
1. TRENCH WIDTH SHALL BE A MINIMUM OF 1' EACH SIDE PLUS THE OUTSIDE DIAMETER OF THE PIPE. TRENCH WIDTH SHALL NOT EXCEED THAT REQUIRED FOR PROPER INSTALLATION BACKFILL AND COMPACTION OPERATIONS.
2. ALL SUITABLE BACKFILL AND STONE BEDDING SHALL BE AS PER SPECIFICATIONS AND APPROVED BY THE RESIDENT ENGINEER PRIOR TO INSTALLATION.
3. WHERE TRENCH PASSES THROUGH EXISTING PAVEMENT, THE PAVEMENT SHALL BE MECHANICALLY CUT. PATCHING SHALL CONSIST OF TACKING EDGES OF EXISTING PAVEMENT, AND INSTALLING NEW PAVEMENT. COMPACTION IN ACCORDANCE WITH NJDOT SPECIFICATIONS.
4. COMPACTION TO CONFORM TO ASTM D-1557

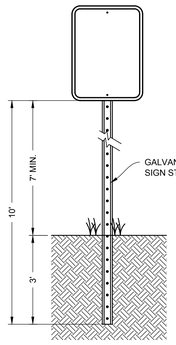
UTILITY TRENCH DETAIL
N.T.S.



ELEVATION

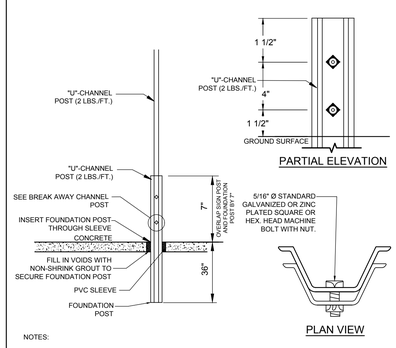
NOTES:
1. ALL WOODS SHALL BE 40 ACQ MIN. PRESSURE TREATED SOUTHERN YELLOW PINE.
2. PROVIDE SHOP DRAWINGS FOR APPROVAL.

WOOD BARRIER FENCE DETAIL
N.T.S.



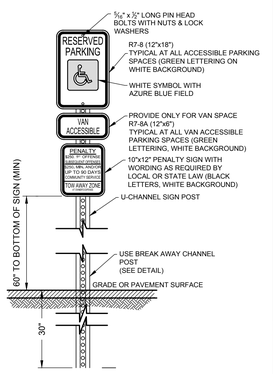
NOTE:
1. MINIMUM HEIGHT FOR ALL TRAFFIC CONTROL SIGNS

SIGN POST DETAIL
N.T.S.

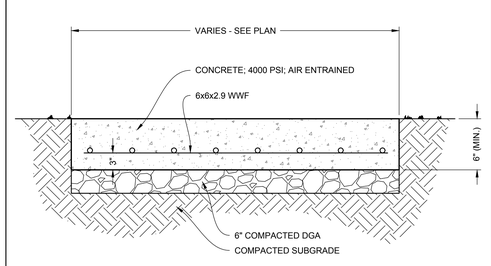


NOTES:
1. ALL SIGNS SHALL COMPLY WITH THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES.
2. SIGN LOCATIONS SHALL BE VERIFIED WITH THE ENGINEER PRIOR TO CONSTRUCTION.
3. ALL SIGNS SHALL HAVE BREAKAWAY SIGN POSTS.

BREAK AWAY SIGN POST DETAIL
N.T.S.



ADA PARKING SIGN WITH VAN ACCESSIBLE SIGN DETAIL
N.T.S.

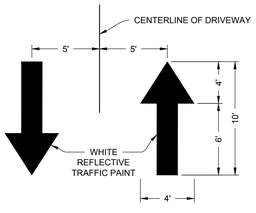


SECTION VIEW

SPECIFICATIONS

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

ADA PARKING CONCRETE PAD DETAIL
N.T.S.

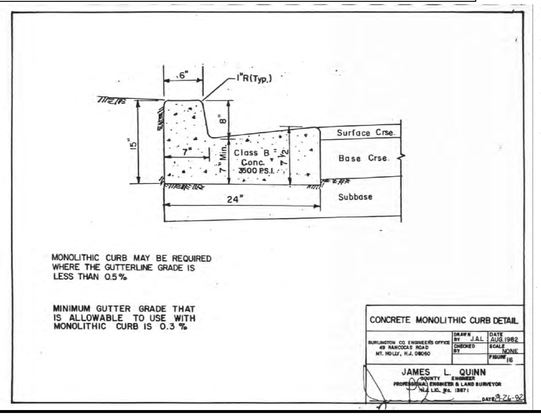


TRAFFIC FLOW DIRECTION ARROW DETAIL
N.T.S.

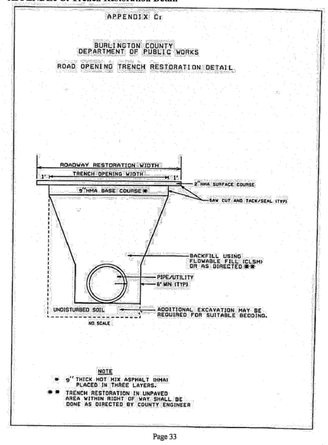
NOTE: DEPRESSED CURB INCLUDED IN APRON PRICE, EXCEPT WHERE COMBINATION CURB AND GUTTER IS INSTALLED

SECTION B-B

DRIVEWAY APRON DETAIL
N.T.S.



APPENDIX C: Trench Restoration Detail



NO.	DATE	REVISIONS	
13	10/23/2020	RE-BID PLANS	SMR
12	09/25/2020	ADDENDUM 2	SMR
11	09/16/2020	ADDENDUM 1	SMR
10	08/28/2020	ISSUED FOR BIDDING	SMR
9	07/30/2020	BURL. CNTY. S.C.D. RESUBMISSION	SMR
8	06/19/2020	BID PLANS	SMR
7	02/13/2020	PER COUNTY PLANNING BOARD ENGINEER	SMR
6	01/23/2020	PER NJDEP COMMENTS	SMR
5	09/27/2019	BURL. CNTY.- PB SUBMISSION RESUBMISSION	SMR
4	09/03/2019	NJDEP AND GREENACRES RESUBMISSION	SMR
3	06/22/2019	NJDEP AND GREENACRES RESUBMISSION	SMR
2	06/03/2019	BURL. CNTY.- PB SUBMISSION	SMR
1	03/22/2019	NJDEP SUBMISSION	SMR

PROJECT MHFC1500
DATE AUGUST 18, 2017
DRAWING SCALE NTS
DRAWN BY JRB
APPROVED BY HJD

CM6001

SHEET 9 OF 14

PENNONI ASSOCIATES INC.
515 Grove Street, Suite 1B
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NJ COA NO. GA28033300

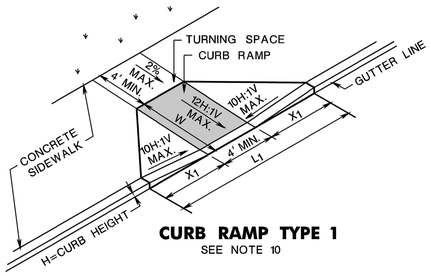
ALL DIMENSIONS MUST BE VERIFIED BY CONTRACTOR AND OWNER MUST BE NOTIFIED OF ANY DISCREPANCIES BEFORE PROCEEDING WITH WORK

HUGH J. DOUGHERTY
PROFESSIONAL ENGINEER
NEW JERSEY LICENSE NO. GE34634
10/23/2020

RELIEF FIREHOUSE
17 PINE STREET
BLOCK 86; LOTS 4, 5, 10, 11, 21, 22, 22.01 AND 23, TAX MAP SHEET 25
TOWNSHIP OF MOUNT HOLLY BURLINGTON COUNTY, NEW JERSEY

CONSTRUCTION DETAILS - 1

MOUNT HOLLY FIRE DISTRICT NO.1
P.O. BOX 741
MOUNT HOLLY, NEW JERSEY 08060



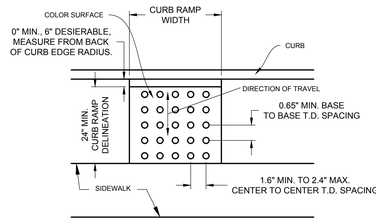
CURB RAMP TYPE 1
SEE NOTE 10

1

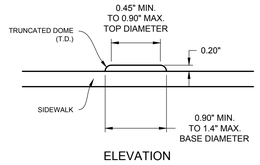
NOTE:
WHERE THE DISTANCE FROM THE GUTTER LINE TO THE OUTSIDE EDGE OF SIDEWALK IS 6 FEET OR LESS, CURB RAMP TYPE 7 SHOULD BE USED, INSTEAD OF CURB RAMP TYPE 1 THROUGH 4.

NJDOT GENERAL NOTES:
1. LANDING AREA, APPROACH SIDEWALK TRANSITIONS, AND CURB RAMP SHALL BE KEPT CLEAR OF OBSTRUCTIONS.
2. DIMENSIONS SHOWN IN TABLES ARE FOR RELATIVELY FLAT SIDEWALK AREAS. CARE SHOULD BE TAKEN WHEN DETERMINING CURB RAMP SIZE BASED ON CURB HEIGHT (H) WHERE ELEVATION OF CURB AND SIDEWALK VARY DRASTICALLY IN AREA OF PROPOSED CURB RAMP.
3. CURB (DROPPED CURB) GUTTER LINE TO BE FLUSH WITH ROADWAY PAVEMENT A MINIMUM OF 4 FEET AT ALL CURB RAMPS.
4. SIDEWALK AND CURB RAMP WITHIN AREA ENCLOSED BY HEAVY LINES TO BE PAID FOR AS CONCRETE SIDEWALK OF THE APPROPRIATE ADJACENT THICKNESS.
5. CURB AND HEADER WITHIN AREA ENCLOSED BY HEAVY LINES TO BE PAID FOR AS VERTICAL CURB OR SLOPING CURB OF THE APPROPRIATE ADJACENT SIZE AND KIND.
6. WHERE THE DISTANCE FROM THE GUTTER LINE TO THE OUTSIDE EDGE OF SIDEWALK IS 6 FEET OR LESS, CURB RAMP TYPE 7 SHOULD BE USED, INSTEAD OF CURB RAMP TYPE 1 THROUGH 4.
7. CROSSWALKS AND STOP LINES MAY BE MARKED OR UNMARKED, SEE PLANS.
8. PREFERRED AND ALTERNATE TREATMENTS SHOULD NOT BE INTERMIXED WITHIN THE SAME INTERSECTION.
9. DIMENSIONS SHOWN IN TABLES ARE FOR 3 INCH TO 9 INCH CURB HEIGHTS. WHERE THE CURB HEIGHTS ARE OTHER THAN WHAT IS PROVIDED IN THE TABLES, THE DIMENSIONS OF THE RAMPS WILL HAVE TO BE CALCULATED BASED ON CROSS SLOPES SHOWN.
10. CURB RAMP TYPE 1 THROUGH 7 ARE NORMALLY PLACED ON THE RADIUS RETURN AT THE INTERSECTION AND ON A TANGENT SECTION AS DRAWN.

GENERAL CONSTRUCTION NOTES:
1. ALL CONCRETE SHALL BE NJDOT CLASS "B" (4,000 PSI)
2. STANDARD DETAIL DIMENSIONS ARE TO BE FOLLOWED UNLESS MODIFIED BY THE ENGINEER TO ACCOMMODATE FIELD CONDITIONS.
3. PLACE EXPANSION JOINTS WHERE EVER RAMP MEETS SIDEWALK OR ADJACENT CURB.
4. TRANSITION FROM RAMP TO STREETS OR WALKS SHALL BE FLUSH AND FREE OF ABRUPT CHANGES.
5. BROOM FINISH ALL RAMP SURFACES PERPENDICULAR TO THE DIRECTION OF TRAFFIC TO CREATE A SKID RESISTANT SURFACE.



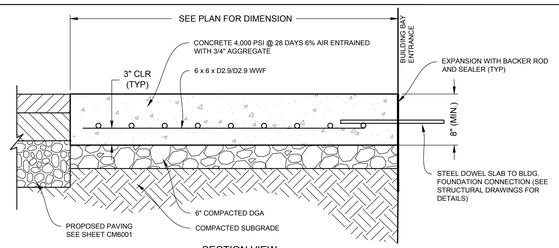
PLAN VIEW



ELEVATION

DETECTABLE WARNING SURFACE

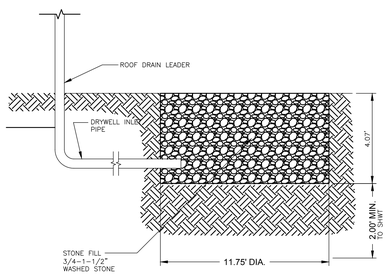
ADA CURB RAMP DETAILS
N.T.S.



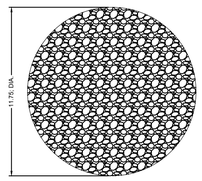
SECTION VIEW

SPECIFICATIONS
1. EXPANSION JOINTS SHALL BE AT 20 FT C.C. MAXIMUM. SEE SITE PLAN FOR EXPANSION JOINT LOCATIONS. JOINTS SHALL APPROVED BY ENGINEER/OWNER.
2. EXPANSION JOINT SHALL BE 1/2" MASTIC MATERIAL OR APPROVED EQUAL.
3. ALL EXPANSION JOINTS SHALL RECEIVE A BACKER ROD AND COLORED NON-SHRINK SEALER TO MATCH CONCRETE; SIKA OR EQUAL.

HEAVY DUTY CONCRETE REINFORCED PAVING DETAIL
N.T.S.



ROOF RECHARGE TRENCH DETAIL
N.T.S.



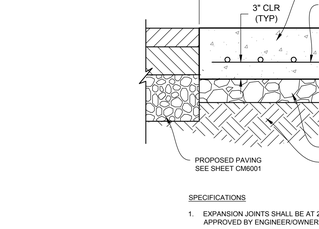
PLAN VIEW

NOTES:
FILTER FABRIC LINES TOP, BOTTOM & SIDES OF RECHARGE TRENCH

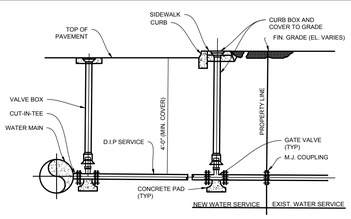
RECHARGE TRENCH TO BE OWNED AND MAINTAINED BY MOUNT HOLLY FIRE DEPARTMENT

CALCULATIONS
11.75' DIA. RECHARGE TRENCH, AREA = 108.62 SF

STORAGE PER LF
STONES = 40% (0.40) VOID RATIO
DEPTH = 4.07 FEET
SURFACE AREA = $\pi(5.88)^2$
= 108.62 SF
TOTAL STORAGE = 4.07 x 108.62 x 0.40
= 176.83 CF
= 176.83 > 175.50 CF REQUIRED

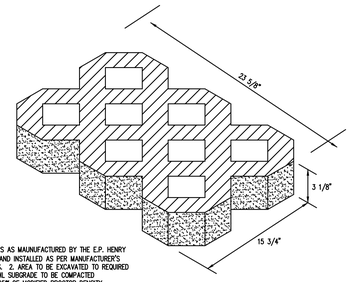


UNIT PAVER SIDEWALK DETAIL
N.T.S.



NOTES:
1. CONTRACTOR SHALL PROVIDE ALL
2. EXPANSION JOINTS 2" WIDE SHALL BE INSTALLED IN THE CURB 20' APART AND FILLED WITH CELLULAR COMPRESSION MATERIAL AS SPECIFIED AND RECESSED 2" FROM FACE AND TOP OF CURB. EXPANSION JOINTS TO BE INCLUDED IN PRICE BID FOR CURB. CONSTRUCTION JOINT SHALL BE CUT MID-POINT BETWEEN EXP. JOINTS.
- WHERE NO ELEVATION ARE GIVEN ON THE PLAN, MATCH THE PROJECTED TOP OF EXISTING CURB. THE PROJECTED TOP OF CURB SHALL BE DETERMINED BY A STRING LINE.

TYPICAL WATER SERVICE CONNECTING LARGER THAN 2-INCH DIAMETER
N.T.S.

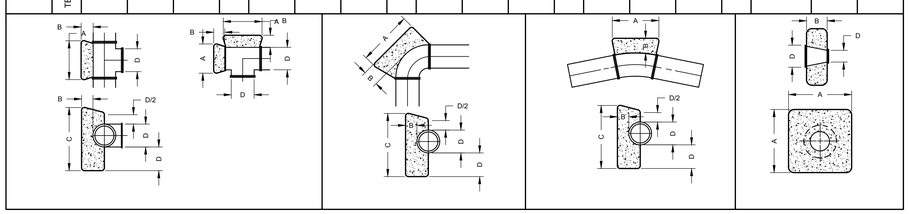


NOTES:
1. TURF PAVERS AS MAUNUFACTURED BY THE E.P. HENRY CORPORATION AND INSTALLED AS PER MANUFACTURER'S SPECIFICATIONS. 2. AREA TO BE EXCAVATED TO REQUIRED DEPTH AND SOIL SUBGRADE TO BE COMPACTED TO AT LEAST 95% OF MODIFIED PROCTOR DENSITY.
3. THE SETTING BED SHALL BE 4" THICK DGA
4. UNIT VOIDS SHAL BE FILLED WITH SANDY LOAM TOPSOIL AND SEEDED.

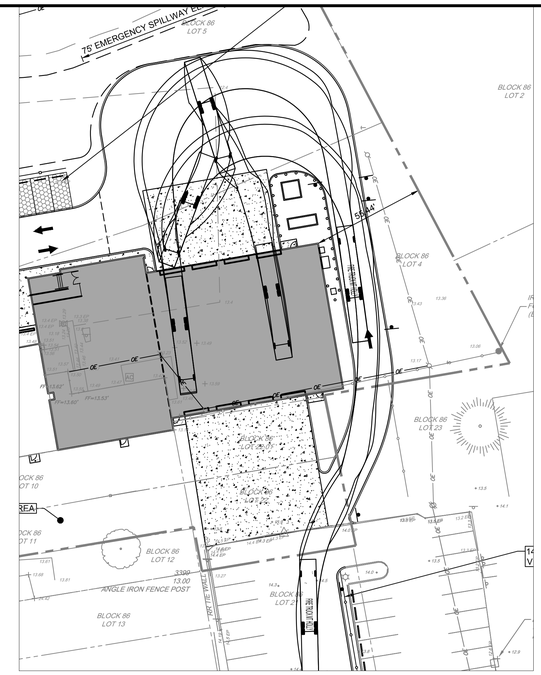
GRASS PAVER DETAIL
N.T.S.

MINIMUM SIZE OF CONCRETE THRUST BLOCKS

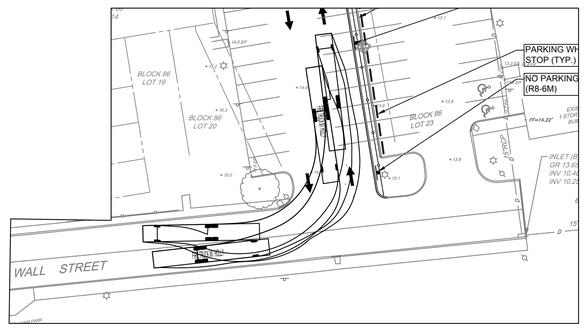
D	TEES & CROSSES A	B	C	90° BENDS A	B	C	45° BENDS A	B	C	22 1/2° BENDS 11 1/4° BENDS A	B	C	REDUCERS DxD	A	B
6"	2'-0"	8"	1'-3"	2'-6"	8"	1'-3"	1'-6"	8"	1'-3"	1'-6"	8"	1'-3"	6" x 4"	1'-6"	1'-0"
8"	2'-6"	8"	1'-6"	3'-0"	8"	1'-6"	1'-6"	8"	1'-9"	1'-6"	8"	1'-9"	8" x 4"	2'-0"	1'-0"
10"	3'-0"	10"	2'-0"	3'-6"	10"	2'-0"	2'-3"	10"	2'-0"	1'-6"	10"	2'-0"	10" x 6"	2'-4"	1'-3"
12"	3'-6"	10"	2'-9"	3'-9"	10"	2'-9"	2'-6"	10"	2'-6"	1'-6"	10"	2'-6"	10" x 8"	2'-6"	1'-6"



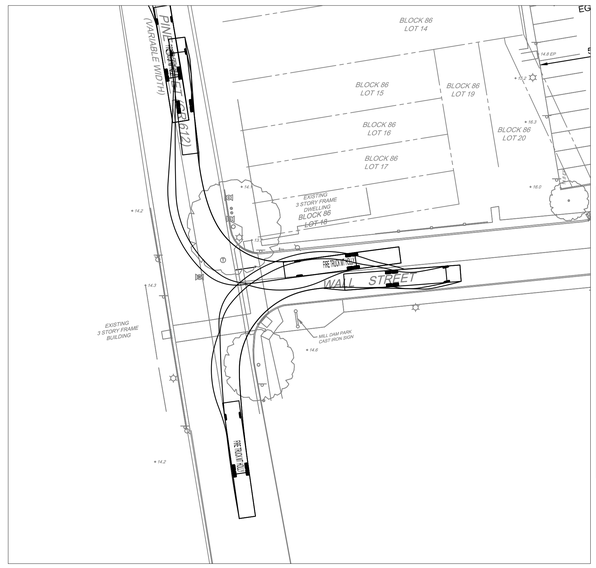
WATER MAIN THRUST BLOCK DETAIL
N.T.S.



FIRE TRUCK MANEUVERS INTO BAYS



LOT 21 PARKING LOT MANEUVERS



PINE STREET / WALL STREET
RIGHT HAND TURN

TRUCK TURNING DETAILS
SCALE: 1" = 30'

NO.	DATE	REVISIONS	
13	10/23/2020	RE:BID PLANS	SMR
12	09/25/2020	ADDENDUM 2	SMR
11	09/24/2020	ADDENDUM 1	SMR
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HUGH J. DOUGHERTY
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NEW JERSEY LICENSE NO. GE34634
10/23/2020

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NJ COA NO. GA28033300

RELIEF FIREHOUSE
17 PINE STREET
BLOCK 86; LOTS 4, 5, 10, 11, 21, 22, 22.01 AND 23, TAX MAP SHEET 25
TOWNSHIP OF MOUNT HOLLY BURLINGTON COUNTY, NEW JERSEY

CONSTRUCTION DETAILS - 2

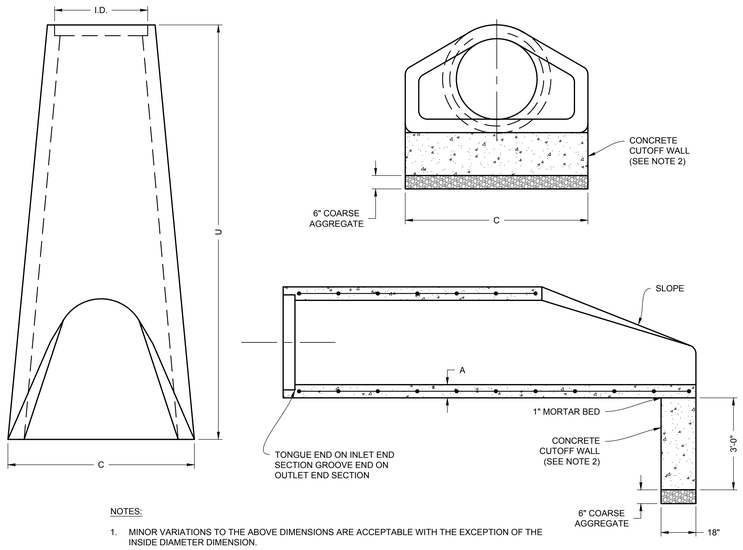
MOUNT HOLLY FIRE DISTRICT NO.1
P.O. BOX 741
MOUNT HOLLY, NEW JERSEY 08060

PROJECT	MHFC1500
DATE	AUGUST 18, 2017
DRAWING SCALE	1"=30
DRAWN BY	JRB
APPROVED BY	HJD

CM6002

SHEET 10 OF 14

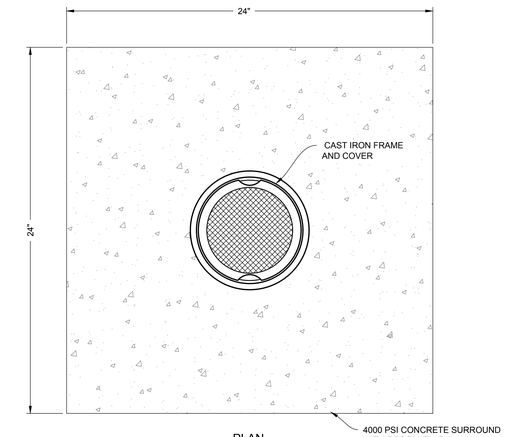
DIMENSIONS (INCHES)												
I.D.	12	15	18	21	24	27	30	36	42	48	54	60
A	2	2 1/4	2 1/2	2 3/4	2 1/4	2 1/4	2 1/4	2 1/4	2 1/4	2 1/4	2 1/4	2 1/4
U	72	72	72	72	72	72	72	96	96	96	96	96
C	28	34.5	41	47.5	54	60.5	67	80	87	94	101	108



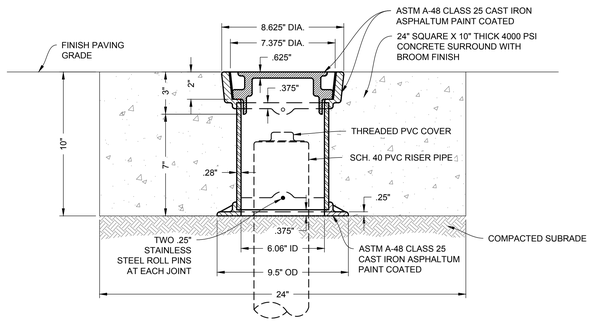
NOTES:

1. MINOR VARIATIONS TO THE ABOVE DIMENSIONS ARE ACCEPTABLE WITH THE EXCEPTION OF THE INSIDE DIAMETER DIMENSION.
2. A 1 INCH THICK MORTAR BED AND A 6 INCH DEEP LAYER OF COARSE AGGREGATE ARE REQUIRED WHEN A PRECAST CONCRETE CUTOFF WALL IS USED.
3. NO SEPARATE PAYMENT WILL BE MADE FOR THE CONCRETE CUTOFF WALL. THE COST OF THE CONCRETE CUTOFF WALL SHALL BE INCLUDED IN THE COST OF THE END SECTION.
4. THE WIDTH OF THE CONCRETE CUTOFF WALL SHALL BE EQUAL TO THE MAXIMUM WIDTH OF THE END SECTION AS INDICATED ON THE DETAIL BY DIMENSION "C". HOWEVER, IF THE ACTUAL MAXIMUM WIDTH EXCEEDS THE CHART VALUE OF "C", THE WIDTH OF THE CONCRETE CUTOFF WALL SHALL EQUAL THE ACTUAL MAXIMUM WIDTH OF THE END SECTION.

CONCRETE PIPE END SECTION DETAIL
N.T.S.

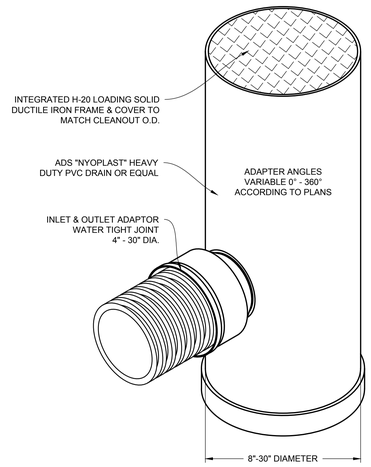


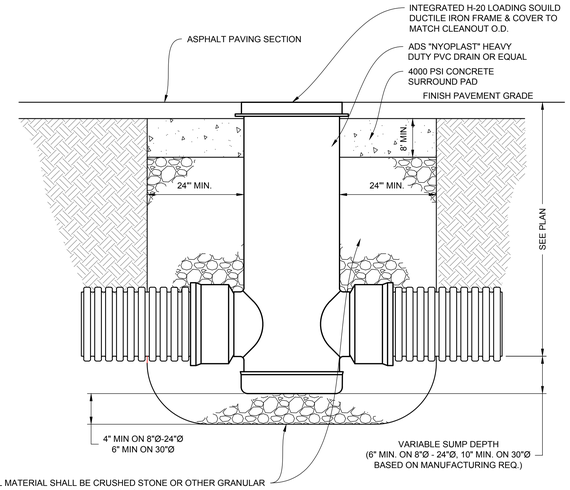
PLAN



SECTION

SANITARY CLEANOUT COVER IN PAVED OR CONCRETE AREA
(GENCO PART NO. CC4 OR APPROVED EQUAL)
N.T.S.



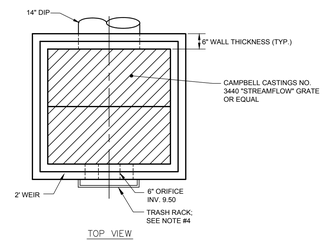


THE BACKFILL MATERIAL SHALL BE CRUSHED STONE OR OTHER GRANULAR MATERIAL MEETING THE REQUIREMENTS OF CLASS II MATERIAL AS DEFINED IN ASTM D2321, OR AS DETERMINED BY LOCAL STANDARDS & SITE ENGINEER BEDDING & BACKFILL FOR SURFACE DRAINAGE INLETS SHALL BE PLACED & COMPACTED UNIFORMLY IN ACCORDANCE WITH ASTM D2321.

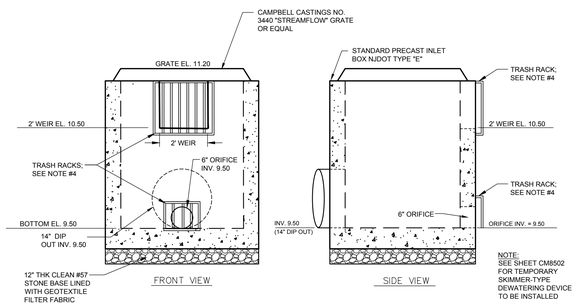
NYLOPLAST STORM CLEANOUT (H-20 LOADING) DETAIL
NOT TO SCALE

NOTES:

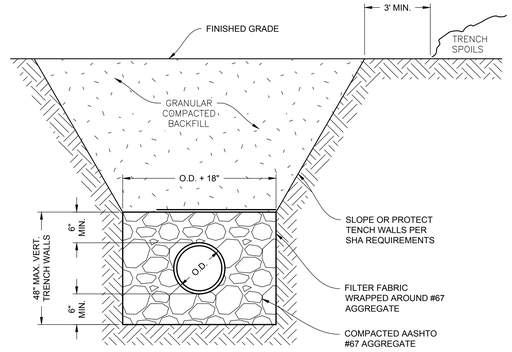
1. SHOP DRAWINGS SHALL BE SUBMITTED TO THE TOWNSHIP ENGINEER FOR REVIEW.
2. CONCRETE COMPRESSIVE STRENGTH TO BE MINIMUM 4,500 PSI.
3. PROVIDE BRUSHED CONCRETE FINISH ON ALL EXPOSED SURFACES ON OUTLET STRUCTURE.
4. STEEL TRASH RACKS SHALL BE INSTALLED ON WEIR AND ORIFICE OPENINGS: CONSTRUCT OF ¾" STEEL BARS SPACES AT 2" O.C., CIRCUMFERENCE WELDED AND HOT DIPPED GALVANIZED; MOUNT RACKS TO STRUCTURE WITH GALVANIZED EXPANSION ANCHORS.
5. SHOP DRAWINGS SHALL BE SUBMITTED TO THE TOWNSHIP ENGINEER.



TOP VIEW

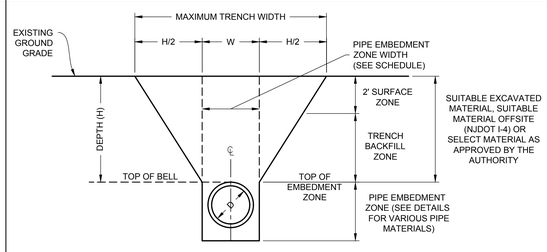


BASIN OUTLET CONTROL STRUCTURE
N.T.S.



NOTE:
TRENCHING OPERATIONS SHALL CONFORM TO ALL OSHA REQUIREMENTS IF THE PIPE DIAMETER EXCEEDS 48", THE MINIMUM 12" COVER SHALL STILL APPLY. THIS TRENCH IS SUITABLE FOR USE UNDER WET OR UNSTABLE SOIL CONDITIONS.

HDPE PIPE TRENCH
N.T.S.



PIPE EMBEDMENT ZONE WIDTH SCHEDULE

INSIDE DIA. OF PIPE (D)	4", 6", 8", 10", 12"	15"	18"	21"	24"	27"
EMBEDMENT ZONE WIDTH (W)	3'-0"	3'-6"	3'-6"	4'-0"	4'-0"	4'-6"

TRENCH EXCAVATION AND BACKFILL NOTES:

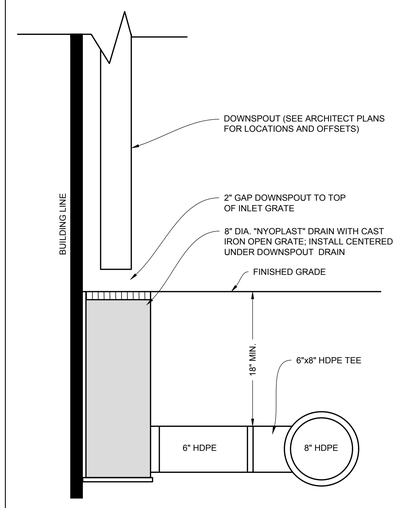
1. THE MAXIMUM DRY DENSITIES SHALL BE DETERMINED IN ACCORDANCE WITH ASTM DESIGNATION D1557. THE MINIMUM PERCENTAGE OF COMPACTION TO BE ACHIEVED BY THE CONTRACTOR IN THE VARIOUS ZONES IS AS FOLLOWS:

	PIPE MATERIAL	LOCATION	INITIAL COMPACTION
SURFACE ZONE:	ALL	ALL	95%
TRENCH BACKFILL ZONE:			90%
PIPE EMBEDMENT ZONE:			95%

THE MINIMUM COMPACTION IN EMBANKMENT SHALL BE 90%

2. THE PIPE EMBEDMENT ZONE WIDTH AND THE MAXIMUM TRENCH WIDTH SHALL NOT EXCEED THE PERMISSABLE WIDTHS SHOWN. IF PERMISSABLE WIDTH IS EXCEEDED, THE PIPE SHALL BE INSTALLED IN A HIGHER CLASS BEDDING THAN SHOWN ON THE DRAWINGS OR THE SPECIFIED PIPE SHALL BE REPLACED WITH PIPE OF GREATER CRUSHING STRENGTH OR BOTH, TO ACHIEVE SUITABLE CONDITIONS.
3. SUITABLE MATERIAL FROM EXCAVATIONS SHALL BE FREE OBJECTIONABLE QUANTITIES OF ORGANIC MATTER, CLAYS, TREES, STUMPS, FROZEN MATERIAL, RUBBLE, REFUSE, CINDERS, ROCK AND OTHER MATERIALS CONSIDERED DELETERIOUS BY THE AUTHORITY AND SHALL NOT HAVE FINES IN EXCESS OF 10 PERCENT PASSING THE NO. 200 SIEVE NOR STONE OR GRAVEL LARGER THAN 2 INCHES.
4. FOR PIPE MATERIALS OTHER THAN PVC, PIPE EMBEDMENT ZONE MAY BE INCREASED BY 6 INCHES.

SANITARY PIPE EMBEDMENT
N.T.S.



DOWNSPOUT (RWC) DRAIN
N.T.S.

NO.	DATE	REVISIONS	
13	10/23/2020	RE-BID PLANS	SMR
12	09/25/2020	ADDENDUM 2	SMR
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2	06/03/2019	BURL. CNTY. PB SUBMISSION	SMR
1	03/22/2019	NJDEP SUBMISSION	SMR

PROJECT	MHFC1500
DATE	AUGUST 18, 2017
DRAWING SCALE	1"=30
DRAWN BY	JRB
APPROVED BY	HJD

CM6003

SHEET 11 OF 14

PENNONI ASSOCIATES INC.
515 Grove Street, Suite 1B
Haddon Heights, NJ 08035
T 856.547.0505 F 856.547.9174
NJ COA NO. GA28033300

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

HUGH J. DOUGHERTY
PROFESSIONAL ENGINEER
NEW JERSEY LICENSE NO. GE34634
10/23/2020

RELIEF FIREHOUSE
17 PINE STREET
BLOCK 86, LOTS 4, 5, 10, 11, 21, 22, 22.01 AND 23, TAX MAP SHEET 25
TOWNSHIP OF MOUNT HOLLY BURLINGTON COUNTY, NEW JERSEY

CONSTRUCTION DETAILS - 3

MOUNT HOLLY FIRE DISTRICT NO.1
P.O. BOX 741
MOUNT HOLLY, NEW JERSEY 08060

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

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TOWNSHIP OF MOUNT HOLLY, BURLINGTON COUNTY, NEW JERSEY

SOIL EROSION AND SEDIMENT CONTROL PLAN

MOUNT HOLLY FIRE DISTRICT NO.1
P.O. BOX 741
MOUNT HOLLY, NEW JERSEY 08060

DATE	NO.	REVISIONS	
03/22/2019	1	NJDEP SUBMISSION	SMR
06/03/2019	2	BURL. CNTY. PB SUBMISSION	SMR
06/22/2019	3	NJDEP AND GREENACRES RESUBMISSION	SMR
09/03/2019	4	NJDEP AND GREENACRES RESUBMISSION	SMR
09/27/2019	5	BURL. CNTY. PB SUBMISSION RESUBMISSION	SMR
01/23/2020	6	PER NJDEP COMMENTS	SMR
02/19/2020	7	PER COUNTY PLANNING BOARD ENGINEER	SMR
06/19/2020	8	BID PLANS	SMR
07/30/2020	9	BURL. CNTY. S.C.D. RESUBMISSION	SMR
08/26/2020	10	ISSUED FOR BIDDING	SMR
09/25/2020	11	ADDENDUM 1	SMR
09/25/2020	12	ADDENDUM 2	SMR
10/23/2020	13	RE-BID PLANS	SMR

PROJECT	MHFC1500
DATE	AUGUST 18, 2017
DRAWING SCALE	1"=30'
DRAWN BY	JRB
APPROVED BY	HJD

CM8001

SHEET 12 OF 14

LEGEND

- STABILIZED CONSTRUCTION ACCESS
- EROSION CONTROL MATTING
- LIMIT OF DISTURBANCE
- PROPOSED SILT FENCE
- PROPOSED CONSTRUCTION FENCE
- INLET PROTECTION

0 30' 60'

NORTH

SOIL EROSION AND SEDIMENTATION CONTROL NOTES:

1. ALL APPLICABLE EROSION AND SEDIMENT CONTROL PRACTICES SHALL BE IN PLACE PRIOR TO ANY GRADING OPERATION AND/OR INSTALLATION OF PROPOSED STRUCTURES OR UTILITIES.
2. SOIL EROSION AND SEDIMENT CONTROL PRACTICES ON THIS PLAN SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE STANDARDS FOR SOIL EROSION AND SEDIMENT CONTROL IN NEW JERSEY.
3. APPLICABLE EROSION AND SEDIMENT CONTROL PRACTICES SHALL BE LEFT IN PLACE UNTIL CONSTRUCTION IS COMPLETED AND/OR THE AREA IS STABILIZED.
4. THE CONTRACTOR SHALL PERFORM ALL WORK, FURNISH ALL MATERIALS AND INSTALL ALL MEASURES REQUIRED TO REASONABLY CONTROL SOIL EROSION RESULTING FROM CONSTRUCTION OPERATIONS AND PREVENT EXCESSIVE FLOW OF SEDIMENT FROM THE CONSTRUCTION SITE.
5. ANY DISTURBED AREA THAT IS TO BE LEFT EXPOSED FOR MORE THAN THIRTY (30) DAYS AND NOT SUBJECT TO CONSTRUCTION TRAFFIC SHALL IMMEDIATELY RECEIVE A TEMPORARY SEEDING AND FERTILIZATION IN ACCORDANCE WITH THE NEW JERSEY STANDARDS AND THEIR RATES SHOULD BE INCLUDED IN THE NARRATIVE. IF THE SEASON PROHIBITS TEMPORARY SEEDING, THE DISTURBED AREAS WILL BE MULCHED WITH SALT HAY OR EQUIVALENT AND ANCHORED IN ACCORDANCE WITH THE NEW JERSEY STANDARDS (I.E. PEG AND TWINE, MULCH NETTING OR LIQUID MULCH BINDER).
6. IT SHALL BE THE RESPONSIBILITY OF THE DEVELOPER TO PROVIDE CONFIRMATION OF LIME, FERTILIZER AND SEED APPLICATION AND RATES OF APPLICATION AT THE REQUEST OF THE BURLINGTON COUNTY SOIL CONSERVATION DISTRICT.
7. ALL CRITICAL AREAS SUBJECT TO EROSION WILL RECEIVE A TEMPORARY SEEDING IN COMBINATION WITH STRAW MULCH AT A RATE OF 2 TONS PER ACRE ACCORDING TO THE NEW JERSEY STANDARDS IMMEDIATELY FOLLOWING ROUGH GRADING.
8. THE SITE SHALL AT ALL TIMES BE GRADED AND MAINTAINED SUCH THAT ALL STORMWATER RUNOFF IS DIVERTED TO SOIL EROSION AND SEDIMENT CONTROL FACILITIES.
9. ALL SEDIMENTATION STRUCTURES WILL BE INSPECTED AND MAINTAINED ON A REGULAR BASIS AND AFTER EVERY STORM EVENT.
10. A CRUSHED STONE, TIRE CLEANING PAD WILL BE INSTALLED WHEREVER A CONSTRUCTION ACCESS EXISTS. THE STABILIZED PAD WILL BE INSTALLED ACCORDING TO THE STANDARD FOR STABILIZED CONSTRUCTION ACCESS.
11. ALL DRIVEWAYS MUST BE STABILIZED WITH 2-$\frac{1}{2}$" CRUSHED STONE OR SUBBASE PRIOR TO INDIVIDUAL LOT CONSTRUCTION.
12. PAVED AREAS MUST BE KEPT CLEAN AT ALL TIMES.
13. ALL CATCH BASIN INLETS WILL BE PROTECTED ACCORDING TO THE CERTIFIED PLAN.
14. ALL STORM DRAINAGE OUTLETS WILL BE STABILIZED, AS REQUIRED BEFORE THE DISCHARGE POINTS BECOME OPERATIONAL.
15. ALL DEWATERING OPERATIONS MUST DISCHARGE DIRECTLY INTO A SEDIMENT FILTER AREA. THE SEDIMENT FILTER SHOULD BE COMPOSED OF A SUITABABLE SEDIMENT FILTER FABRIC. (SEE DETAIL). THE BASIN MUST BE DEWATERED TO NORMAL POOL WITHIN 10 DAYS OF THE DESIGN STORM.
16. NJSA 4:24-39, ET SEQ. REQUIRES THAT NO CERTIFICATE OF OCCUPANCY BE ISSUED BEFORE ALL PROVISIONS OF THE CERTIFIED SOIL EROSION AND SEDIMENT CONTROL PLAN HAVE BEEN COMPLIED WITH FOR PERMANENT MEASURES. ALL SITE WORK FOR THE PROJECT MUST BE COMPLETED PRIOR TO THE DISTRICT ISSUING A REPORT OF COMPLIANCE A PREREQUISITE TO THE ISSUANCE OF A CERTIFICATE OF OCCUPANCY BY THE MUNICIPALITY.
17. MULCHING IS REQUIRED ON ALL SEEDED AREAS TO INSURE AGAINST EROSION BEFORE GRASS IS ESTABLISHED TO PROMOTE EARLIER VEGETATION COVER.
18. OFFSITE SEDIMENT DISTURBANCE MAY REQUIRE ADDITIONAL CONTROL MEASURES TO BE DETERMINED BY THE EROSION CONTROL INSPECTOR.
19. A COPY OF THE CERTIFIED SOIL EROSION AND SEDIMENT CONTROL PLAN MUST BE MAINTAINED ON THE PROJECT SITE DURING CONSTRUCTION.
20. THE BURLINGTON COUNTY SOIL CONSERVATION DISTRICT SHALL BE NOTIFIED 48 HOURS PRIOR TO ANY LAND DISTURBANCE.
21. ANY CONVEYANCE OF THIS PROJECT PRIOR TO ITS COMPLETION WILL TRANSFER FULL RESPONSIBLITY FOR COMPLIANCE WITH THE CERTIFIED PLAN TO ANY SUBSEQUENT OWNERS.
22. IMMEDIATELY AFTER THE COMPLETION OF STRIPPING AND STOCKPILING OF TOPSOIL, THE STOCKPILE MUST BE STABILIZED ACCORDING TO THE STANDARD FOR TEMPORARY VEGETATIVE COVER. STABILIZE TOPSOIL STOCKPILE WITH STRAW MULCH FOR PROTECTION IF THE SEASON DOES NOT PERMIT THE APPLICATION AND ESTABLISHMENT OF TEMPORARY SEEDING. ALL SOIL STOCKPILES ARE NOT TO BE LOCATED WITHIN FIFTY (50) FEET OF A FLOODPLAIN, SLOPE, ROADWAY OR DRAINAGE FACILITY AND THE BASE MUST BE PROTECTED WITH A SEDIMENT BARRIER.
23. ANY CHANGES TO THE SITE PLAN WILL REQUIRE THE SUBMISSION OF A REVISED SOIL EROSION AND SEDIMENT CONTROL PLAN TO THE BURLINGTON COUNTY SOIL CONSERVATION DISTRICT. THE REVISED PLAN MUST BE IN ACCORDANCE WITH THE CURRENT NEW JERSEY STANDARDS FOR SOIL EROSION AND SEDIMENT CONTROL.
24. METHODS FOR THE MANAGEMENT OF HIGH ACID PRODUCING SOILS SHALL BE IN ACCORDANCE WITH THE STANDARDS. HIGH ACID PRODUCING SOILS ARE THOSE FOUND TO CONTAIN IRON SULFIDES OR HAVE A PH OF 4 OR LESS.
25. TEMPORARY AND PERMANENT SEEDING MEASURES MUST BE APPLIED ACCORDING TO THE NEW JERSEY STANDARDS, AND MULCHED WITH SALT HAY OR EQUIVALENT AND ANCHORED IN ACCORDANCE WITH THE NEW JERSEY STANDARDS (I.E. PEG AND TWINE, MULCH NETTING OR LIQUID MULCH BINDER).
26. MAXIMUM SIDE SLOPES OF ALL EXPOSED SURFACES SHALL NOT BE CONSTRUCTED STEEPER THAN 3:1 UNLESS OTHERWISE APPROVED BY THE DISTRICT.
27. DUST IS TO BE CONTROLLED BY AN APPROVED METHOD ACCORDING TO THE NEW JERSEY STANDARDS AND MAY INCLUDE WATERING WITH A SOLUTION OF CALCIUM CHLORIDE AND WATER.
28. ADJOINING PROPERTIES SHALL BE PROTECTED FROM EXCAVATION AND FILLING OPERATIONS ON THE PROPOSED SITE.
29. USE STAGED CONSTRUCTION METHODS TO MINIMIZE EXPOSED SURFACES WHERE APPLICABLE.
30. ALL VEGETATIVE MATERIAL SHALL BE SELECTED IN ACCORDANCE WITH AMERICAN STANDARDS FOR NURSERY STOCK OF THE AMERICAN ASSOCIATION OF THE NURSERYMAN AND IN ACCORDANCE WITH THE NEW JERSEY STANDARDS.
31. NATURAL VEGETATION AND SPECIES SHALL BE RETAINED WHERE SPECIFIED ON THE LANDSCAPING PLAN.
32. THE SOIL EROSION INSPECTOR MAY REQUIRE ADDITIONAL SOIL EROSION MEASURES TO BE INSTALLED, AS DIRECTED BY THE DISTRICT INSPECTOR.

STANDARD FOR TEMPORARY VEGETATIVE COVER FOR SOIL STABILIZATION:

DEFINITION
ESTABLISHMENT OF TEMPORARY VEGETATIVE COVER ON SOILS EXPOSED FOR PERIODS OF TWO TO 6 MONTHS WHICH ARE NOT BEING GRADED, NOT UNDER ACTIVE CONSTRUCTION OR NOT SCHEDULED FOR PERMANENT SEEDING WITHIN 60 DAYS.

PURPOSE
TO TEMPORARILY STABILIZE THE SOIL AND REDUCE DAMAGE FROM WIND AND WATER EROSION UNTIL PERMANENT STABILIZATION IS ACCOMPLISHED.

WATER QUALITY ENHANCEMENT
PROVIDES TEMPORARY PROTECTION AGAINST THE IMPACTS OF WIND AND RAIN, SLOWS THE OVERLAND MOVEMENT OF STORMWATER RUNOFF, INCREASES INFILTRATION AND RETAINS SOIL AND NUTRIENTS ON SITE, PROTECTING STREAMS OR OTHER STORMWATER CONVEYANCES.

WHERE APPLICABLE
ON EXPOSED SOILS THAT HAVE THE POTENTIAL FOR CAUSING OFF-SITE ENVIRONMENTAL DAMAGE.

METHODS AND MATERIALS

1. SITE PREPARATION
A. GRADE AS NEEDED AND FEASIBLE TO PERMIT THE USE OF CONVENTIONAL EQUIPMENT FOR SEEDBED PREPARATION, SEEDING, MULCH APPLICATION, AND MULCH ANCHORING. ALL GRADING SHOULD BE DONE IN ACCORDANCE WITH STANDARDS FOR LAND GRADING, P. 19-1.

B. INSTALL NEEDED EROSION CONTROL PRACTICES OR FACILITIES SUCH AS DIVERSIONS, GRADE STABILIZATION STRUCTURES, CHANNEL STABILIZATION MEASURES, SEDIMENT BASINS, AND WATERWAYS. SEE STANDARDS 11 THROUGH 42.

C. IMMEDIATELY PRIOR TO SEEDING, THE SURFACE SHOULD BE SCARIFIED 6" TO 12" WHERE THERE HAS BEEN SOIL COMPACTION. THIS PRACTICE IS PERMISSIBLE ONLY WHERE THERE IS NO DANGER TO UNDERGROUND UTILITIES (CABLES, IRRIGATION SYSTEMS, ETC.).

2. SEEDBED PREPARATION
A. APPLY GROUND LIMESTONE AND FERTILIZER ACCORDING TO SOIL TEST RECOMMENDATIONS SUCH AS THOSE OFFERED BY RUTGERS CO-OPERATIVE EXTENSION. SOIL SAMPLE MAILERS ARE AVAILABLE FROM THE LOCAL RUTGERS CO-OPERATIVE EXTENSION OFFICES. FERTILIZER SHALL BE APPLIED AT THE RATE OF 500 PONDS PER ACRE OR 11 POUNDS PER 1,000 SQUARE FEET OF 10-20-10 OR EQUIVALENT WITH 50% WATER INSOLUABLE NITROGEN UNLESS A SOIL TEST INDICATES OTHERWISE. APPLY LIMESTONE AT THE RATE OF 2 TONS/ACRE UNLESS SOIL TEST INDICATES OTHERWISE. CALCIUM CARBONATE IS THE EQUIVALENT AND STANDARD FOR MEASURING THE ABILITY OF LIMING MATERIALS TO NEUTRALIZE SOIL ACIDITY AND SUPPLY CALCIUM AND MAGNESIUM TO GRASSES AND LEGUMES. TABLE BELOW IS A GENERAL GUIDELINE FOR LIMESTONE APPLICATION.

SOIL TEXTURE	TONS/ACRE	LBS./1,000 S.F.
CLAY, CLAY LOAM, AND HIGH ORGANIC SOIL	3	135
SANDY LOAM, LOAM, SILT LOAM	2	90
LOAMY SAND, SAND	1	45

PULVERIZED DOLOMITIC LIMESTONE IS PREFERRED FOR MOST SOILS SOUTH OF THE NEW BRUNSWICK-TRENTON LINE.

B. WORK LIME AND FERTILIZER INTO THE SOIL AS NEARLY AS PRACTICAL TO A DEPTH OF 4 INCHES WITH A DISC, SPRINGTOOTH HARROW, OR OTHER SUITABLE EQUIPMENT. THE FINAL HARROWING OR DISCING OPERATION SHOULD BE ON THE GENERAL CONTOUR. CONTINUE TILLAGE UNTIL A REASONABLY UNIFORM SEEDBED IS PREPARED.

C. INSPECT SEEDBED JUST BEFORE SEEDING. IF TRAFFIC HAS LEFT THE SOIL COMPACTED, THE AREA MUST BE RETILLED AS ABOVE.

D. SOILS HIGH ON SULFIDES OR HAVING A PH OF 4 OR LESS REFER TO STANDARD FOR MANAGEMENT OF HIGH ACID PRODUCING SOILS, PG. 1-1 OF THE STANDARDS FOR SOIL EROSION AND SEDIMENT CONTROL IN NEW JERSEY.

3. SEEDING

A. SELECT SEED FROM RECOMMENDATIONS IN TABLE.

TEMPORARY SEEDING

SEED TYPES	SEEDING RATES 1* (POUNDS)		OPTIMUM SEEDING DATE 2* BASED ON PLANT HARDINESS ZONE 3*			OPTIMUM SEED DEPTH 4* (INCHES)
	PER ACRE	PER 1,000 SQ. FT.	ZONE 5	ZONE 6	ZONE 7	
COOL SEASON GRASSES						
PERENNIAL RYEGRASS	170	4.0	3/15 - 6/1 & 8/1 - 9/15	3/1 - 5/15 & 8/15 - 10/1	2/15 - 5/1 & 8/15 - 10/15	0.5
SPRING OATS	86	2.0	3/15 - 6/1 & 8/1 - 9/15	3/1 - 5/15 & 8/15 - 10/1	2/15 - 5/1 & 8/15 - 10/15	1.0
WINTER BARLEY	96	2.2	8/1 - 9/15	8/15 - 10/1	8/15 - 10/15	1.0
WINTER CEREAL RYE	112	2.8	8/1 - 11/1	8/1 - 11/15	8/1 - 12/15	1.0
WARM SEASON GRASSES						
PEARL MILLET	20	0.5	6/1 - 8/1	5/15 - 8/15	5/1 - 9/1	1.0
MILLET (GERMAN OR HUNGARIAN	30	0.7	6/1 - 8/1	5/15 - 8/15	5/1 - 9/1	1.0
WEEPING LOVEGRASS	5	0.2	6/1 - 8/1	5/15 - 8/15	5/1 - 9/1	0.25

1* SEEDING RATE FOR WARM SEASON GRASS, SHALL BE ADJUSTED TO REFLECT THE AMOUNT OF PURE LINE SEED (PLS) AS DETERMINED BY A GERMINATION TEST RESULT. NO ADJUSTMENT IS REQUIRED FOR COOL SEASON GRASSES.
2* MAY BE PLANTED THROUGHOUT SUMMER IF SOIL MOISTURE IS ADEQUATE OR CAN BE IRRIGATED.
3* PLANT HARDINESS ZONE (SEE BELOW)
4* TWICE THE DEPTH FOR SANDY SOILS

ZONE 6B (0 TO -5)
PORTIONS OR BERGEN, CAMDEN, ESSEX AND GLOUCESTER, HUNTERDON, MERCER, MIDDLESEX, HUDSON,MONMOUTH, OCEAN, BURLINGTON, MORRIS, PASSAIC, SOMERSET, UNION, ATLANTIC, CUMBERLAND, AND CAPE MAY COUNTIES.

ZONE 7A (5 TO 0)
PORTIONS OF CAMDEN, GLOUCESTER, SALEM, CUMBERLAND, CAPE MAY, ATLANTIC, BURLINGTON, OCEAN, AND MONMOUTH COUNTIES. ZONE 7B (10 TO 5) PORTIONS OF CAPEMAY, ATLANTIC, OCEAN AND MONMOUTH COUNTIES.

B. CONVENTIONAL SEEDING - APPLY SEED UNIFORMLY BY HAND, CYCLONE (CENTRIFUGAL) SEEDER, DROP SEEDER, DRILL OR CULTIPACKER SEEDER. EXCEPT FOR DRILLED, HYDROSEEDED OR CULTIPACKED SEEDINGS, SEED SHALL BE INCORPORATED INTO THE SOIL, TO A DEPTH OF 1/4 TO 1/2 INCH, BY RAKING OR DRAGGING. DEPTH OF SEED PLACEMENT MAY BE 1/4 INCH DEEPER ON COARSE TEXTURED SOIL.

C. HYDROSEEDING IS A BROADCAST SEEDING METHOD USUALLY INVOLVING A TRUCK OR TRAILER MOUNTED TANK, WITH AN AGITATION SYSTEM AND HYDRAULIC PUMP FOR MIXING SEED, WATER AND FERTILIZER AND SPRAYING THE MIX ONTO THE PREPARED SEEDBED. MULCH SHALL NOT BE INCLUDED IN THE TANK WITH SEED. SHORT FIBERED MULCH MAY BE APPLIED WITH A HYDROSEEDER FOLLOWING SEEDING. HYDROSEEDING IS NOT A PREFERRED SEEDING METHOD BECAUSE SEED AND FERTILIZER ARE APPLIED TO THE SURFACE AND NOT INCORPORATED INTO THE SOIL. POOR SEED TO SOIL CONTACT OCCURS REDUCING SEED GERMINATION AND GROWTH. HYDROSEEDING MAY BE USED FOR AREAS TOO STEEP FOR CONVENTIONAL EQUIPMENT TO TRAVERSE OR TOO OBSTRUCTED WITH ROCKS, STUMPS, ETC.

D. AFTER SEEDING, FIRMING THE SOIL WITH A CORRUGATED ROLLER WILL ASSURE GOOD SEED-TO-SOIL CONTACT, RESTORE CAPILLARITY, AND IMPROVE SEEDING EMERGENCE. THIS IS THE PREFERRED METHOD. WHEN PERFORMED ON THE CONTOUR, SHEET EROSION WILL BE MINIMIZED AND WATER CONSERVATION ON SITE WILL BE MAXIMIZED.

4. MULCHING
MULCHING IS REQUIRED ON ALL SEEDING. MULCH WILL INSURE AGAINST EROSION BEFORE GRASS IS ESTABLISHED AND WILL PROMOTE FASTER AND EARLIER ESTABLISHMENT. (THE EXISTENCE OF VEGETATION SUFFICIENT TO CONTROL SOIL EROSION SHALL BE DEEMED COMPLIANCE WITH THIS MULCHING REQUIREMENT.

A. STRAW OR HAY. UNROTTED SMALL GRAIN STRAW, HAY FREE OF SEEDS, OR SALT HAY TO BE APPLIED AT THE RATE OF 1-1/2 TO 2 TONS PER ACRE (70 TO 90 POUNDS PER 1,000 SQUARE FEET), EXCEPT THAT WHERE A CRIMPER IS USED INSTEAD OF LIQUID MULCH-BINDER (TACKIFYING OR ADHESIVE AGENT), THE RATE OF APPLICATION IS 3 TONS PER ACRE. MULCH CHOPPER-BLOWERS MUST NOT GRIND THE MULCH. HAY MULCH IS NOT RECOMMENDED FOR ESTABLISHING FINE TURF OR LAWNS DUE TO THE PRESENCE OF WEED SEED.

APPLICATION
SPREAD UNIFORMLY BY HAND MECHANICALLY SO THAT APPROXIMATELY 85% OF THE SOIL SURFACE WILL BE COVERED. FOR UNIFORM DISTRIBUTION OF HAND-SPREAD MULCH, DIVIDE AREA INTO APPROXIMATELY 1,000 SQUARE FEET SECTIONS AND DISTRIBUTE 70 TO 90 POUNDS WITHIN EACH SECTION.

ANCHORING SHOULD BE ACCOMPLISHED IMMEDIATELY AFTER PLACEMENT TO MINIMIZE LOSS BY WIND OR WATER. THIS MAY BE DONE BY ONE OF THE FOLLOWING METHODS, DEPENDING UPON THE SIZE OF THE AREA, STEEPNESS OF SLOPES, AND COSTS.

1. PEG AND TWINE - DRIVE 8 TO 10 INCH WOODEN PEGS TO WITHIN 2 TO 3 INCHES OF THE SOIL SURFACE EVERY 4 FEET IN ALL DIRECTIONS. STAKES MAY BE DRIVEN BEFORE OR AFTER APPLYING MULCH. SECURE MULCH TO SOIL SURFACE BY STRETCHING TWINE BETWEEN PEGS IN A CRISS-CROSS AND A SQUARE PATTERN. SECURE TWINE AROUND EACH PEG WITH TWO OR MORE ROUND TURNS.
2. MULCH NETTINGS - STAPLE PAPER, JUTE, COTTON, OR PLASTIC NETTINGS TO THE SOIL SURFACE. USE A DEGRADABLE NETTING IN AREAS TO BE MOWED.
3. CRIMPER (MULCH ANCHORING TOOL) - A TRACTOR-DRAWN IMPLEMENT, SOMEWHAT LIKE A DISC-HARROW, ESPECIALLY DESIGNED TO PUSH OR CUT SOME OF THE BROADCAST LONG FIBER MULCH 3 TO 4 INCHES INTO THE SOIL SO AS TO ANCHOR IT AND LEAVE PART STANDING UPRIGHT. THIS TECHNIQUE IS LIMITED TO AREAS TRAVERSABLE BY A TRACTOR, WHICH MUST OPERATE ON THE CONTOUR OF SLOPES. STRAW MULCH RATE MUST BE 3 TONS PER ACRE. NO TACKIFYING OR ADHESIVE AGENT IS REQUIRED.
4. LIQUID MULCH-BINDERS - MAY BE USED TO ANCHOR SALT HAY OR STRAW MULCHES.

a. APPLICATIONS SHOULD BE HEAVIER AT EDGES WHERE WIND CATCHES THE MULCH, IN VALLEYS, AND AT CRESTS OF BANKS. REMAINDER OF AREA SHOULD BE UNIFORM IN APPEARANCE.

b. USE ONE OF THE FOLLOWING:

(1) EMULSIFIED ASPHALT - (SS-1, CSS-1, CMS-2, MS-2, RS-1, RS-2, CRS-1, AND CRS-2). APPLY 0.04 GAL./SQ. YD. OR 194 GAL./ACRE ON FLAT SLOPES LESS THAN 8 FEET HIGH. ON SLOPES 8 FEET OR MORE HIGH, USE 0.075 GAL./SQ. YD. OR 363 GAL./ACRE. THESE MATERIALS MAY BE DIFFICULT TO APPLY UNIFORMLY AND WILL DISCOLOR SURFACES.

(2) ORGANIC AND VEGETABLE BASED BINDERS - NATURALLY OCCURRING, POWDER BASED, HYDROPHILIC MATERIALS WHEN MIXED WITH WATER FORMULATES A GEL AND WHEN APPLIED TO MULCH UNDER SATISFACTORY CURING CONDITIONS WILL FORM MEMBRANED NETWORKS OF INSOLUBLE POLYMERS. THE VEGETABLE GEL SHALL BE PHYSIOLOGICALLY ARMLESS AND NOT RESULT IN A PHYTOTOXIC EFFECT OR IMPEDE GROWTH OF TURFGRASS. USE AT RATES AND WEATHER CONDITIONS AS RECOMMENDED BY THE MANUFACTURER TO ANCHOR MULCH MATERIALS. MANY NEW PRODUCTS ARE AVAILABLE, SOME OF WHICH MAY NEED FURTHER EVALUATION FOR USE IN THIS STATE.

(3) SYNTHETIC BINDERS - HIGH POLYMER SYNTHETIC EMULSION, MISCIBLE WITH WATER WHEN DILUTED AND FOLLOWING APPLICATION TO MULCH, DRYING AND CURING SHALL NO LONGER BE SOLUBLE OR DISPERSIBLE IN WATER. IT SHALL BE APPLIED AT RATES RECOMMENDED BY THE MANUFACTURER AND REMAIN TACKY UNTIL GERMINATION OF GRASS.

B. WOOD-FIBER OR PAPER-FIBER MULCH. SHALL BE MADE FROM WOOD, PLANT FIBERS OR PAPER CONTAINING NO GROWTH OR GERMINATION INHIBITING MATERIALS, USED AT THE RATE OF 1,500 POUNDS PER ACRE (OR AS RECOMMENDED BY THE PRODUCT MANUFACTURER) AND MAY BE APPLIED BY A HYDROSEEDER. THIS MULCH SHALL NOT BE MIXED IN THE TANK WITH THE SEED. USE IS LIMITED TO FLATTER SLOPES AND DURING OPTIMUM SEEDING PERIODS IN SPRING AND FALL.

C. PELLETIZED MULCH. COMPRESSED AND EXTRUDED PAPER AND/OR WOOD FIBER PRODUCT, WHICH MAY CONTAIN CO-POLYMERS, TACKIFIERS, FERTILIZERS AND COLORING AGENTS. THE DRY PELLETS, WHEN APPLIED TO A SEEDED AREA AND WATERED, FORM A MULCH MAT. PELLETIZED MULCH SHALL BE APPLIED IN ACCORDANCE WITH THE MANUFACTURERS RECOMMENDATIONS. MULCH MAY BE APPLIED BY HAND OR MECHANICAL SPREADER AT THE RATE OF 60-75 LBS/1,000 SQUARE FEET AND ACTIVATED WITH 0.2 TO 0.4 INCHES OF WATER. THIS MATERIAL HAS BEEN FOUND TO BE BENEFICIAL FOR USE ON SMALL LAWN OR RENOVATION AREAS, SEEDED AREAS WHERE WEED-SEED FREE MULCH IS DESIRED OR ON SITES WHERE STRAW MULCH AND TACKIFIER AGENT ARE NOT PRACTICAL OR DESIRABLE.

APPLYING THE FULL 0.2 TO 0.4 INCHES OF WATER AFTER SPREADING PELLETIZE MULCH ON THE SEED BED IS EXTREMELY IMPORTANT FOR SUFFICIENT ACTIVATION AND EXPANSION OF THE MULCH TO PROVIDE SOIL COVERAGE.

STANDARD FOR PERMANENT VEGETATIVE COVER FOR SOIL STABILIZATION:

DEFINITION
ESTABLISHMENT OF PERMANENT VEGETATIVE COVER ON EXPOSED SOILS WHERE PERENNIAL VEGETATION IS NEEDED FOR LONG TERM PROTECTION.

PURPOSE
TO PERMANENTLY STABILIZE THE SOIL, ASSURING CONSERVATION OF SOIL AND WATER, AND TO ENHANCE THE ENVIRONMENT.

WATER QUALITY ENHANCEMENT
SLOWS THE OVERLAND MOVEMENT OF STORMWATER RUNOFF, INCREASES INFILTRATION AND RETAINS SOIL AND NUTRIENTS ON SITE, PROTECTING STREAMS OR OTHER STORMWATER CONVEYANCES.

WHERE APPLICABLE
ON EXPOSED SOILS THAT HAVE A POTENTIAL FOR CAUSING OFF-SITE ENVIRONMENTAL DAMAGE.

METHODS AND MATERIALS

1. SITE PREPARATION

A. GRADE AS NEEDED AND FEASIBLE TO PERMIT THE USE OF CONVENTIONAL EQUIPMENT FOR SEEDBED PREPARATION, SEEDING, MULCH APPLICATION, AND MULCH ANCHORING. ALL GRADING SHOULD BE DONE IN ACCORDANCE WITH STANDARDS FOR LAND GRADING, P. 19-1.

B. INSTALL NEEDED EROSION CONTROL PRACTICES OR FACILITIES SUCH AS DIVERSIONS, GRADE STABILIZATION STRUCTURES, CHANNEL STABILIZATION MEASURES, SEDIMENT BASINS, AND WATERWAYS. SEE STANDARDS 11 THROUGH 42.

C. IMMEDIATELY PRIOR TO SEEDING, THE SURFACE SHOULD BE SCARIFIED 6" TO 12" WHERE THERE HAS BEEN SOIL COMPACTION. THIS PRACTICE IS PERMISSIBLE ONLY WHERE THERE IS NO DANGER TO UNDERGROUND UTILITIES (CABLES, IRRIGATION SYSTEMS, ETC.).

D. APPLY TOPSOIL IN A UNIFORM APPLICATION TO AN AVERAGE DEPTH OF 5.0 INCHES, MINIMUM OF 4 INCHES, FIRMED IN PLACE IS REQUIRED. IMPORTED TOPSOIL SHALL HAVE A MINIMUM ORGANIC MATTER CONTENT OF 2.75 PERCENT. ORGANIC MATTER CONTENT MAY BE RAISED BY ADDITIVES.

2. SEEDBED PREPARATION

A. APPLY GROUND LIMESTONE AND FERTILIZER ACCORDING TO SOIL TEST RECOMMENDATIONS SUCH AS THOSE OFFERED BY RUTGERS CO-OPERATIVE EXTENSION. SOIL SAMPLE MAILERS ARE AVAILABLE FROM THE LOCAL RUTGERS CO-OPERATIVE EXTENSION OFFICES. FERTILIZER SHALL BE APPLIED AT THE RATE OF 500 PONDS PER ACRE OR 11 POUNDS PER 1,000 SQUARE FEET OF 10-20-10 OR EQUIVALENT WITH 50% WATER INSOLUABLE NITROGEN UNLESS A SOIL TEST INDICATES OTHERWISE. APPLY LIMESTONE IN ACCORDANCE WITH THE TABLE BELOW AND THE RESULTS OF SOIL TESTING. CALCIUM CARBONATE IS THE EQUIVALENT AND STANDARD FOR MEASURING THE ABILITY OF LIMING MATERIALS TO NEUTRALIZE SOIL ACIDITY AND SUPPLY CALCIUM AND MAGNESIUM TO GRASSES AND LEGUMES. TABLE BELOW IS A GENERAL QUIDELINE FOR LIMESTONE APPLICATION RATES.

SOIL TEXTURE	TONS/ACRE	LBS./1,000 S.F.
CLAY, CLAY LOAM, AND HIGH ORGANIC SOIL	3	135
SANDY LOAM, LOAM, SILT LOAM	2	90
LOAMY SAND, SAND	1	45

PULVERIZED DOLOMITIC LIMESTONE IS PREFERRED FOR MOST SOILS SOUTH OF THE NEW BRUNSWICK-TRENTON LINE.

B. WORK LIME AND FERTILIZER INTO THE SOIL AS NEARLY AS PRACTICAL TO A DEPTH OF 4 INCHES WITH A DISC, SPRINGTOOTH HARROW, OR OTHER SUITABLE EQUIPMENT. THE FINAL HARROWING OR DISCING OPERATION SHOULD BE ON THE GENERAL CONTOUR. CONTINUE TILLAGE UNTIL A REASONABLY UNIFORM SEEDBED IS PREPARED.

C. IMMEDIATELY PRIOR TO SEEDING, THE SURFACE SHOULD BE SCARIFIED 6" TO 12" WHERE THERE HAS BEEN SOIL COMPACTION. THIS PRACTICE IS PERMISSIBLE ONLY WHERE THERE IS NO DANGER TO UNDERGROUND UTILITIES (CABLES, IRRIGATION SYSTEMS, ETC.)

D. HIGH ACID PRODUCING SOIL.
SOILS HAVING A PH OF 4 OR LESS OR CONTAINING IRON SULFIDE SHALL BE COVERED WITH A MINIMUM OF 12 INCHES OF SOIL HAVING A PH 5 OR MORE BEFORE INITIATING SEEDBED PREPARATION. SEE STANDARD FOR MANAGEMENT OF HIGH ACID PRODUCING SOILS.

PERMANENT SEEDING

SEED MIXES

LAWN SEED MIX	1) TURFTYPE TALL FESCUE (3 DARK GREEN SEED VARIETIES MIN.)	80% BY WEIGHT	215 LB./ACRE
	2) KENTUCKY BLUEGRASS	10% BY WEIGHT	43 LB./ACRE
	3) TURFTYPE PERENNIAL RYEGRASS	10% BY WEIGHT	43 LB./ACRE
RIPARIAN BUFFER SEED MIX (FOR MITIGATION AREA)	ERNST SEED CO. MIX ERNMX #178 AND	80% BY WEIGHT	20 LB./ACRE
	GRAIN RYE (COVER CROP)	80% BY WEIGHT	30 LB./ACRE
STORMWATER MANAGEMENT AREA BOTTOM MIX	ERNST SEED CO. MIX ERNMX #180 AND	80% BY WEIGHT	20 LB./ACRE
	GRAIN RYE (COVER CROP)	80% BY WEIGHT	30 LB./ACRE

B. CONVENTIONAL SEEDING - APPLY SEED UNIFORMLY BY HAND, CYCLONE (CENTRIFUGAL) SEEDER, DROP SEEDER, DRILL OR CULTIPACKER SEEDER. EXCEPT FOR DRILLED, HYDROSEEDED OR CULTIPACKED SEEDINGS, SEED SHALL BE INCORPORATED INTO THE SOIL, TO A DEPTH OF 1/4 TO 1/2 INCH, BY RAKING OR DRAGGING. DEPTH OF SEED PLACEMENT MAY BE 1/4 INCH DEEPER ON COARSE TEXTURED SOIL.

C. HYDROSEEDING IS A BROADCAST SEEDING METHOD USUALLY INVOLVING A TRUCK OR TRAILER MOUNTED TANK, WITH AN AGITATION SYSTEM AND HYDRAULIC PUMP FOR MIXING SEED, WATER AND FERTILIZER AND SPRAYING THE MIX ONTO THE PREPARED SEEDBED. MULCH SHALL NOT BE INCLUDED IN THE TANK WITH SEED. SHORT FIBERED MULCH MAY BE APPLIED WITH A HYDROSEEDER FOLLOWING SEEDING. HYDROSEEDING IS NOT A PREFERRED SEEDING METHOD BECAUSE SEED AND FERTILIZER ARE APPLIED TO THE SURFACE AND NOT INCORPORATED INTO THE SOIL. POOR SEED TO SOIL CONTACT OCCURS REDUCING SEED GERMINATION AND GROWTH. HYDROSEEDING MAY BE USED FOR AREAS TOO STEEP FOR CONVENTIONAL EQUIPMENT TO TRAVERSE OR TOO OBSTRUCTED WITH ROCKS, STUMPS, ETC.

D. AFTER SEEDING, FIRMING THE SOIL WITH A CORRUGATED ROLLER WILL ASSURE GOOD SEED-TO-SOIL CONTACT, RESTORE CAPILLARITY, AND IMPROVE SEEDING EMERGENCE. THIS IS THE PREFERRED METHOD. WHEN PERFORMED ON THE CONTOUR, SHEET EROSION WILL BE MINIMIZED AND WATER CONSERVATION ON SITE WILL BE MAXIMIZED.

4. MULCHING
FOLLOW SAME STANDARDS AS LISTED UNDER TEMPORARY VEGETATIVE COVER FOR STABILIZATION.

5. IRRIGATION (WHERE FEASIBLE)
IF SOIL MOISTURE IS DEFICIENT, AND MULCH IS NOT USED, SUPPLY NEW SEEDINGS WITH ADEQUATE WATER (A MINIMUM OF $\frac{1}{4}$ INCH TWICE A DAY UNTIL VEGETATION IS WELL ESTABLISHED). THIS IS ESPECIALLY TRUE WHEN SEEDINGS ARE MADE IN ABNORMALLY DRY OR HOT WEATHER OR ON DROUGHTY SITES.

6.TOPDRESSING
SINCE SLOW RELEASE NITROGEN FERTILIZER (WATER INSOLUBLE IS PRESCRIBED IN SECTION II.A. SEEDBED PREPARATION IN THIS STANDARD, NO FOLLOW-UP OF TOPDRESSING IS MANDATORY. AN EXCEPTION MAY BE MADE WHERE GRASS NITROGEN DEFICIENCY EXISTS TO THE EXTENT THAT TURF FAILURE MAY DEVELOP. IN THAT INSTANCE, TOPDRESS WITH 10-10-10 OR EQUIVALENT AT 400 POUNDS PER 1,000 SQ. FT.

7. ESTABLISHING PERMANENT VEGETATIVE STABILIZATION
THE QUALITY OF PERMANENT VEGETATION RESTS WITH THE CONTRACTOR. THE TIMING OF SEEDING, PREPARING THE SEEDBED, APPLYING NUTRIENTS, MULCH AND OTHER MANAGEMENT ARE ESSENTIAL. THE SEED APPLICATION RATE IS REQUIRED WHEN A REPORT OF COMPLIANCE IS REQUESTED PRIOR TO ACTUAL ESTABLISHMENT OF PERMANENT VEGETATION. UP TO 50% REDUCTION IN APPLICATION RATES MAY BE USED WHEN PERMANENT VEGETATION IS ESTABLISHED PRIOR TO REQUESTING A REPORT OF COMPLIANCE FROM THE DISTRICT. THIS RATE APPLIES TO ALL METHODS OF SEEDING. ESTABLISHING PERMANENT VEGETATION MEANS 80% VEGETATIVE COVER (OF THE SEEDED SPECIES) AND MOWED ONCE.

8. DUST CONTROL
DUST CONTROL METHODS SHALL BE PUT IN PLACE TO PREVENT BLOWING AND MOVEMENT OF DUST FROM EXPOSED SOIL SURFACES, REDUCE ONSITE AND OFFSITE DAMAGE, PREVENT HEALTH HAZARDS, IMPROVE TRAFFIC SAFETY, AND ENHANCE WATER QUALITY. METHODS SUCH AS MULCHES, VEGETATIVE COVERS, SPRAY-ON ADHESIVES, TILLAGE, SPRINKLING, BARRIERS, CALCIUM CHLORIDE, AND STONE MAY BE USED FOR DUST CONTROL.

SEQUENCE OF CONSTRUCTION:

ITEM	DURATION
1. MOBILIZE AND CLEARLY DEFINE LIMITS OF CLEARING WITH FLAGGING. WORK SHALL BE LIMITED TO AREAS SPECIFICALLY SHOWN ON PLANS.	1 DAY
2. INSTALL SILT FENCE DOWNSTREAM OF ALL DEMOLITION AREAS.	2 DAYS
3. INSTALL ALL TEMPORARY SOIL EROSION AND SEDIMENT CONTROL BMP'S AS DETAILED ON APPROVED PLANS.	2 DAYS
4. BEGIN SITE DEMOLITION AS SHOWN ON SHEET CM0501. THE USE OF TEMPORARY BMP'S WILL NEED TO BE IMPLEMENTED AS SITE CONDITIONS WARRANT.	1 WEEK
5. COMPLETE ALL SITE CLEARING, GRUBBING AND STRIPPING AND STOCKPILE, AND STABILATION OF TOPSOIL.	1 WEEK
6. PERFORM ROUGH GRADING. IMMEDIATELY STABILIZE GRADED AREAS THAT WILL NOT BE DISTURBED AGAIN WITH TOPSOIL, PERMANENT SEEDING AND MULCH OR EROSION CONTROL BLANKETS PER PLANS.	4 WEEKS
7. INSTALL STORMWATER CONVEYANCE PIPE AND OUTLET CONTROL STRUCTURE WITH INLET PROTECTION AND DEWATERING DEVICE.	1 WEEK
8. INSTALL PERMANENT VEGETATIVE STABILIZATION OF BASIN.	5 DAYS
9. INSTALL BUILDING FOUNDATIONS.	4 WEEKS
10. INSTALL UTILITY SERVICES AND STRUCTURES INCLUDING COUNTY ROADWAY CURB BOX.	2 WEEKS
11. BUILDING CONSTRUCTION (ONGOING)	8 MONTHS
12. CONSTRUCT CONCRETE CURBING, PADS AND SIDEWALKS,	2 WEEKS
13. INSTALL STONE BASE FOR ASPHALT PAVEMENT AND ASPHALT BASE COURSE INCLUDING DRIVEWAY	2 WEEKS
14. INSTALL SITE LIGHTING CONCRETE BASES, CONDUIT AND PANEL BOX/PAD.	2 WEEKS
15. INSTALL FENCING.	2 DAYS
16. INSTALL ASPHALT WEARING COURSE.	1 WEEK
17. INSTALL ALL LANDSCAPE MATERIAL AND RE-SPREAD TOPSOIL AND PROVIDE PERMANENT VEGETATIVE STABILIZATION OF ALL EXPOSED AREAS IN ACCORDANCE WITH SPECIFICATIONS HEREON.	2 WEEKS
18. ONCE A GOOD STAND OF VEGETATIVE COVER HAS BEEN ESTABLISHED, TO THE SATISFACTION OF THE DISTRICT INSPECTOR, REMOVE TEMPORARY SOIL EROSION AND SEDIMENT CONTROL BMP'S.	3 DAYS

FOR SOIL EROSION AND SEDIMENT CONTROL PURPOSES ONLY

Pennoni
PENNONI ASSOCIATES INC.
515 Grove Street, Suite 1B
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T 856.547.0505 F 856.547.9174
NJ COA NO. GA28033300

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

HUGH J. DOUGHERTY
PROFESSIONAL ENGINEER
NEW JERSEY LICENSE NO. GE34634
10/23/2020

RELIEF FIREHOUSE
17 PINE STREET
BLOCK 86, LOTS 4, 5, 10, 11, 21, 22, 22.01 AND 23, TAX MAP SHEET 25
TOWNSHIP OF MOUNT HOLLY BURLINGTON COUNTY, NEW JERSEY

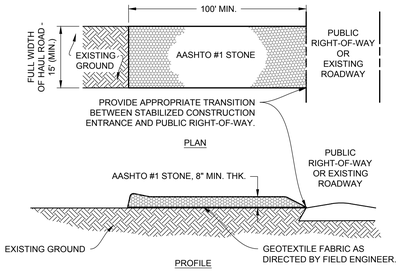
SOIL EROSION AND SEDIMENT CONTROL NOTES

MOUNT HOLLY FIRE DISTRICT NO.1
P.O. BOX 741
MOUNT HOLLY, NEW JERSEY 08060

DATE	NO.	REVISIONS	
10/23/2020	13	RE-BID PLANS	SMR
09/25/2020	12	ADDENDUM 2	SMR
09/25/2020	11	ADDENDUM 1	SMR
08/28/2020	10	ISSUED FOR BIDDING	SMR
07/30/2020	9	BURL. CNTY. S.C.D. RESUBMISSION	SMR
06/19/2020	8	BID PLANS	SMR
02/19/2020	7	PER COUNTY PLANNING BOARD ENGINEER	SMR
01/23/2020	6	PER NJDEP COMMENTS	SMR
09/27/2019	5	BURL. CNTY. PB SUBMISSION RESUBMISSION	SMR
09/03/2019	4	NJDEP AND GREENACRES RESUBMISSION	SMR
06/22/2019	3	NJDEP AND GREENACRES RESUBMISSION	SMR
06/03/2019	2	BURL. CNTY. PB SUBMISSION	SMR
03/22/2019	1	NJDEP SUBMISSION	SMR

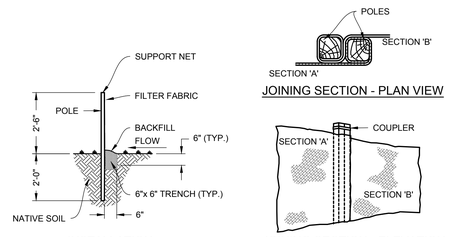
PROJECT	MHFC1500
DATE	AUGUST 18, 2017
DRAWING SCALE	1"=30
DRAWN BY	JRB
APPROVED BY	HJD

CM8501



MAINTENANCE :
THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHT-OF-WAY. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE AS CONDITIONS DEMAND AND REPAIR AND/OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT. ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACKED ONTO PUBLIC RIGHT-OF-WAY MUST BE REMOVED IMMEDIATELY.

ROCK CONSTRUCTION ENTRANCE DETAIL
N.T.S.



INSTALLATION

NOTE:
FABRIC SECURED TO POST WITH METAL FASTENERS AND REINFORCEMENT BETWEEN FASTENER AND FABRIC

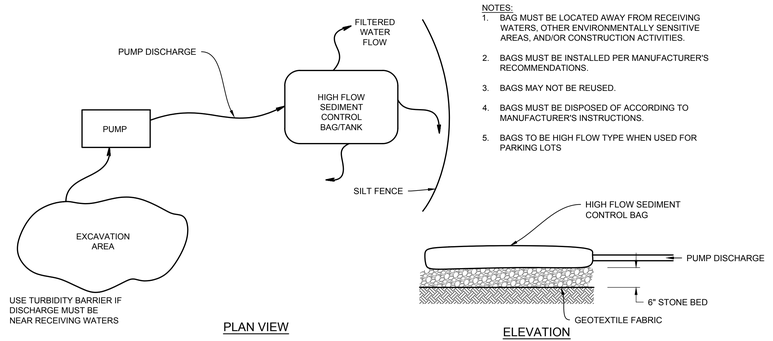
JOINING SECTION - PLAN VIEW

JOINING SECTION - ELEVATION

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

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

SILT FENCE DETAIL
N.T.S.

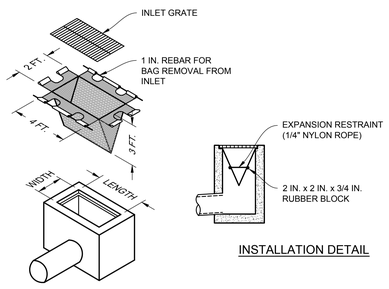


NOTES:
1. BAG MUST BE LOCATED AWAY FROM RECEIVING WATERS, OTHER ENVIRONMENTALLY SENSITIVE AREAS, AND/OR CONSTRUCTION ACTIVITIES.
2. BAGS MUST BE INSTALLED PER MANUFACTURER'S RECOMMENDATIONS.
3. BAGS MAY NOT BE REUSED.
4. BAGS MUST BE DISPOSED OF ACCORDING TO MANUFACTURER'S INSTRUCTIONS.
5. BAGS TO BE HIGH FLOW TYPE WHEN USED FOR PARKING LOTS

PLAN VIEW

ELEVATION

SEDIMENT CONTROL BAG
N.T.S.



ISOMETRIC VIEW

INSTALLATION DETAIL

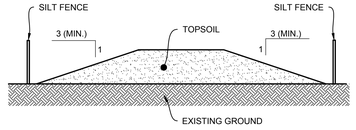
NOTES:

MAXIMUM DRAINAGE AREA = 1/2 ACRE.

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.

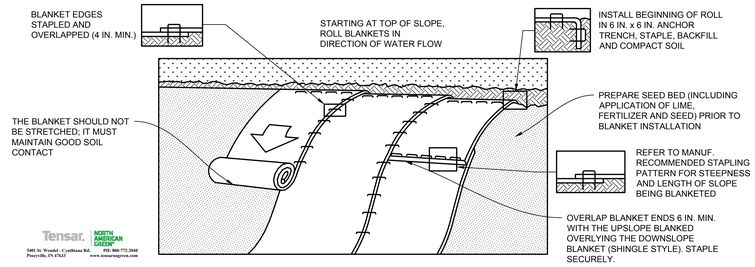
INLET FILTER BAGS SHALL BE INSPECTED ON A WEEKLY BASIS AND AFTER EACH RUNOFF EVENT. BAGS SHALL BE EMPTIED AND RINSED OR REPLACED WHEN HALF FULL OR WHEN FLOW CAPACITY HAS BEEN REDUCED SO AS TO CAUSE FLOODING OR BYPASSING OF THE INLET. DAMAGED OR CLOGGED BAGS SHALL BE REPLACED. A SUPPLY SHALL BE MAINTAINED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

INLET FILTER BAG PROTECTION DETAIL
N.T.S.



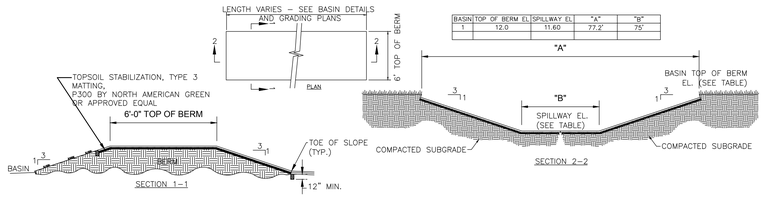
NOTES:
1. TOPSOIL STOCKPILE SHALL BE SURROUNDED BY SILT FENCE.
2. STOCKPILE SHALL RECEIVE TEMPORARY VEGETATIVE STABILIZATION IN ACCORDANCE WITH THE STANDARDS FOR SOIL EROSION AND SEDIMENT CONTROL IN NEW JERSEY IMMEDIATELY AFTER COMPLETION OF STOCKPILE.

TOPSOIL STOCKPILE DETAIL
N.T.S.



NOTES:
1. EROSION CONROL BLANKET SPECIFICATION: NORTH AMERICAN GREEN BIONET™ SC150BN™ EXTENDED-TERM BIODEGRADABLE DOUBLE-NET STRAW/COCONUT BLANKET OR APPROVED EQUIVALENT.
2. SEED AND SOIL AMENDMENTS SHALL BE APPLIED ACCORDING TO THE RATES IN THE PLAN DRAWINGS PRIOR TO INSTALLING THE BLANKET.
3. PROVIDE ANCHOR TRENCH AT TOE OF SLOPE IN SIMILAR FASHION AS AT TOP OF SLOPE.
4. SLOPE SURFACE SHALL BE FREE OF ROCKS, CLODS, STICKS, AND GRASS.
5. BLANKET SHALL HAVE GOOD CONTINUOUS CONTACT WITH UNDERLYING SOIL THROUGHOUT ENTIRE LENGTH. LAY BLANKET LOOSELY AND STAKE OR STAPLE TO MAINTAIN DIRECT CONTACT WITH SOIL. DO NOT STRETCH BLANKET.
6. THE BLANKET SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.
7. BLANKETED AREAS SHALL BE INSPECTED WEEKLY AND AFTER EACH RUNOFF EVENT UNTIL PERENNIAL VEGETATION IS ESTABLISHED TO A MINIMUM UNIFORM 70% COVERAGE THROUGHOUT THE BLANKETED AREA. DAMAGED OR DISPLACED BLANKETS SHALL BE RESTORED OR REPLACED WITHIN 4 CALENDAR DAYS.

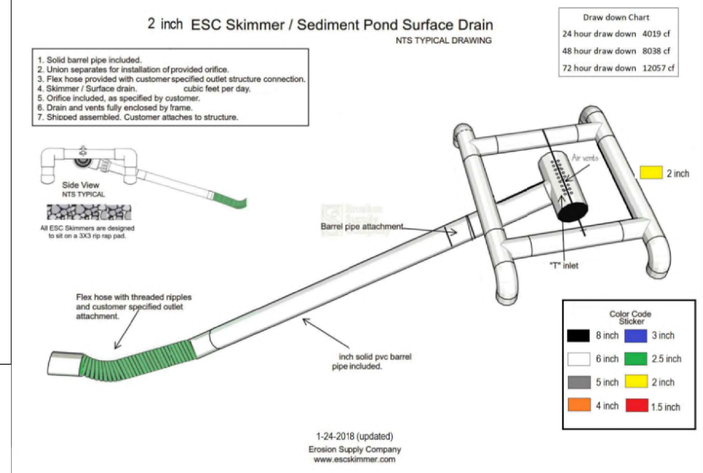
STEEP SLOPE EROSION CONTROL BLANKET DETAIL
N.T.S.

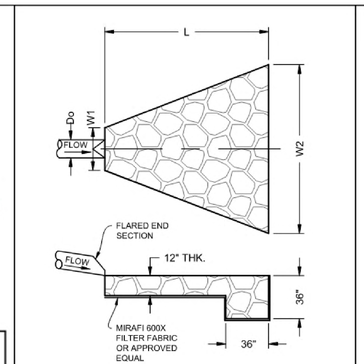


BASIN	TOP OF BERM EL.	SPILLWAY EL.	"A"	"B"
1	12.0	11.60	77.2'	75'

1. ANCHOR BLANKET IN 12" x 12" TRENCH AT TOP AND BOTTOM OF SLOPE.
2.ROLL BLANKETS DOWN SLOPE OVERLAPPING AT LEAST 12".
3.STAPLE BLANKETS SECURELY TO SUBGRADE.
4.BACKFILL TRENCH TO SECURE BLANKETS.

SPILLWAY PROTECTION DETAIL
N.T.S.

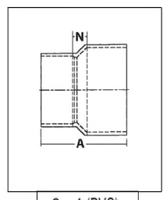




END SECTION	Do (IN)	W1 (FT)	W2 (FT)	L (FT)	MEDIAN STONE DIA. (IN)
HW1	3	1.50	2.74	3.10	6
HW2	3	1.50	3.25	4.37	6

RIPRAP APRON DETAIL
N.T.S.

PIPE REDUCER FITTING DETAIL
N.T.S.



2 x 4 (PVC)
2 x 4 (ABS)
3 x 4
3 x 6 (PVC)
4 x 6 (PVC)

PENNONI ASSOCIATES INC.
515 Grove Street, Suite 1B
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T 856.547.0505 F 856.547.9174
NJ COA NO. GA28033300

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HUGH J. DOUGHERTY
PROFESSIONAL ENGINEER
NEW JERSEY LICENSE NO. GE34634

10/23/2020

RELIEF FIREHOUSE
17 PINE STREET
BLOCK 86, LOTS 4, 5, 10, 11, 21, 22, 22.01 AND 23, TAX MAP SHEET 25
TOWNSHIP OF MOUNT HOLLY BURLINGTON COUNTY, NEW JERSEY

SOIL EROSION AND SEDIMENT CONTROL DETAILS

MOUNT HOLLY FIRE DISTRICT NO.1
P.O. BOX 741
MOUNT HOLLY, NEW JERSEY 08060

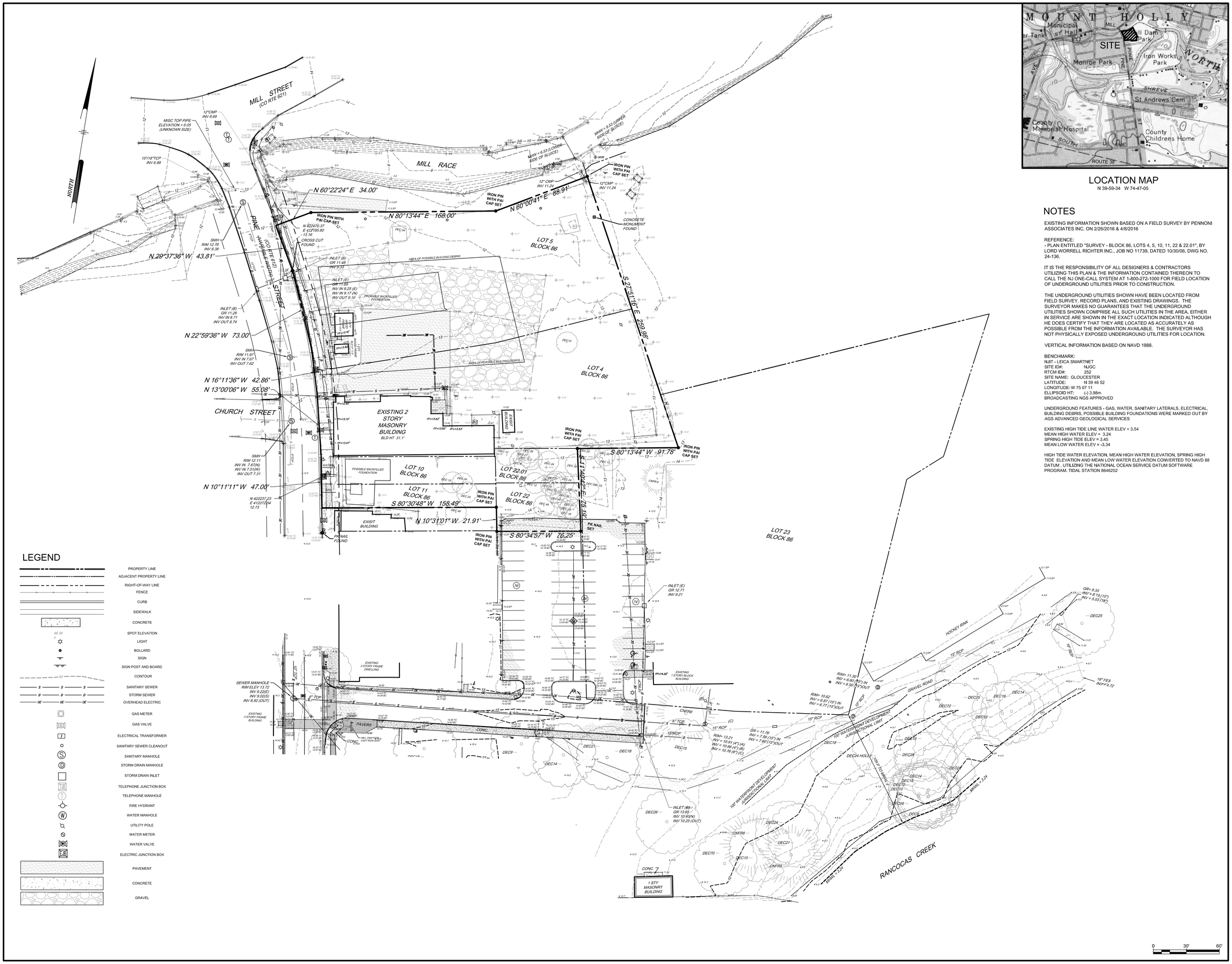
NO.	DATE	REVISIONS
13	10/23/2020	RE-BID PLANS
12	09/25/2020	ADDENDUM 2
11	09/04/2020	ADDENDUM 1
10	08/28/2020	ISSUED FOR BIDDING
9	07/30/2020	BURL. CNTY. S.C.D. RESUBMISSION
8	06/18/2020	BID PLANS
7	02/19/2020	PER COUNTY PLANNING BOARD ENGINEER
6	01/23/2020	PER NJDEP COMMENTS
5	09/27/2019	BURL. CNTY. PB SUBMISSION RESUBMISSION
4	09/03/2019	NJDEP AND GREENACRES RESUBMISSION
3	06/22/2019	NJDEP AND GREENACRES RESUBMISSION
2	06/03/2019	BURL. CNTY. PB SUBMISSION
1	03/22/2019	NJDEP SUBMISSION

PROJECT	MHFC1500
DATE	AUGUST 18, 2017
DRAWING SCALE	1"=30
DRAWN BY	JRB
APPROVED BY	HJD

CM8502

SHEET 14 OF 14

PLOTTED: 10/23/2020 11:08 AM BY: Sean Bailey PLOTSTYLE: Pennoni NCS.stb PROJECT STATUS: —
U:\Accounts\MHFC\1500\Dwg Sheet Fle Issue\DESIGN_PUBLISH\PRELIMINARY FINAL SITE PLANS\SOIL EROSION AND SEDIMENT CONTROL DETAILS.dwg



LOCATION MAP

N 39-59-34 W 74-47-05

NOTES

EXISTING INFORMATION SHOWN BASED ON A FIELD SURVEY BY PENNONI ASSOCIATES INC. ON 2/26/2016 & 4/8/2016

REFERENCE:
- PLAN ENTITLED "SURVEY - BLOCK 86, LOTS 4, 5, 10, 11, 22 & 22.01", BY LORD WORRELL RICHTER INC., JOB NO 11739, DATED 10/30/06, DWG NO. 24-136.

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

THE UNDERGROUND UTILITIES SHOWN HAVE BEEN LOCATED FROM FIELD SURVEY, RECORD PLANS, AND EXISTING DRAWINGS. THE SURVEYOR MAKES NO GUARANTEES THAT THE UNDERGROUND UTILITIES SHOWN COMPRISE ALL SUCH UTILITIES IN THE AREA, EITHER IN SERVICE ARE SHOWN IN THE EXACT LOCATION INDICATED ALTHOUGH HE DOES CERTIFY THAT THEY ARE LOCATED AS ACCURATELY AS POSSIBLE FROM THE INFORMATION AVAILABLE. THE SURVEYOR HAS NOT PHYSICALLY EXPOSED UNDERGROUND UTILITIES FOR LOCATION.

VERTICAL INFORMATION BASED ON NAVD 1988.

BENCHMARK:
NJIT - LEICA SMARTNET
SITE ID#: NJGC
RTCM ID#: 252
SITE NAME: GLOUCESTER
LATITUDE: N 39 46 52
LONGITUDE: W 75 07 11
ELLIPSOID HT: (-) 3.98m
BROADCASTING NGS APPROVED

UNDERGROUND FEATURES - GAS, WATER, SANITARY LATERALS, ELECTRICAL, BUILDING DEBRIS, POSSIBLE BUILDING FOUNDATIONS WERE MARKED OUT BY AGS ADVANCED GEOLOGICAL SERVICES

EXISTING HIGH TIDE LINE WATER ELEV = 3.54
MEAN HIGH WATER ELEV = 3.24
SPRING HIGH TIDE ELEV = 3.45
MEAN LOW WATER ELEV = -3.34

HIGH TIDE WATER ELEVATION, MEAN HIGH WATER ELEVATION, SPRING HIGH TIDE ELEVATION AND MEAN LOW WATER ELEVATION CONVERTED TO NAVD 88 DATUM, UTILIZING THE NATIONAL OCEAN SERVICE DATUM SOFTWARE PROGRAM. TIDAL STATION 8646252

LEGEND

PROPERTY LINE
ADJACENT PROPERTY LINE
RIGHT-OF-WAY LINE
FENCE
CURB
SIDEWALK
CONCRETE
40.34 SPOT ELEVATION
LIGHT
BOLLARD
SIGN
SIGN POST AND BOARD
50 CONTOUR
S S S SANITARY SEWER
D D D STORM SEWER
OE OE OE OVERHEAD ELECTRIC
GAS METER
GAS VALVE
ELECTRICAL TRANSFORMER
SANITARY SEWER CLEANOUT
SANITARY MANHOLE
STORM DRAIN MANHOLE
STORM DRAIN INLET
TELEPHONE JUNCTION BOX
TELEPHONE MANHOLE
FIRE HYDRANT
WATER MANHOLE
UTILITY POLE
WATER METER
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PAVEMENT
CONCRETE
GRAVEL

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

DENNIS S. DIBLASIO, PLS
PENNONI ASSOCIATES
NJ. LIC# GS 05830700

RELIEF FIREHOUSE

LOTS 4,5, 10, 11, 22, 22.01, BLOCK 86
MOUNT HOLLY, BURLINGTON COUNTY, NJ

TOPOGRAPHIC & BOUNDARY SURVEY

MOUNT HOLLY FIRE DISTRICT No. 1
P.O. BOX 741
MOUNT HOLLY, NEW JERSEY

NO.	DATE	REVISIONS	BY
2	3/20/2019	ADD MHWL	CWS
1	4/25/16	ADDED WALL ST PARKING	CWS

PROJECT	MHFCX1500
DATE	2016 03 03
DRAWING SCALE	1"= 30'
DRAWN BY	CWS
APPROVED BY	DSD

V0501

SHEET 1 OF 1

U:\Accounts\MHFCX1500\Pre Sheet Fire House\DESIGN\V0\MHFCX1500V1V0SHI 20200303.dwg PLOTTED: 3/10/2020 3:04 PM, BY: Charles Smith PLOTSTYLE: Pennoni NCS.ctb PROJECT STATUS: —

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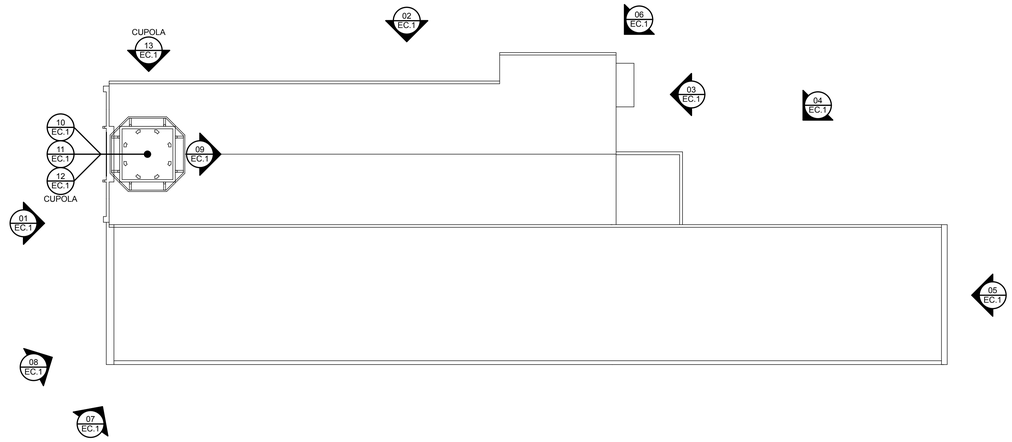


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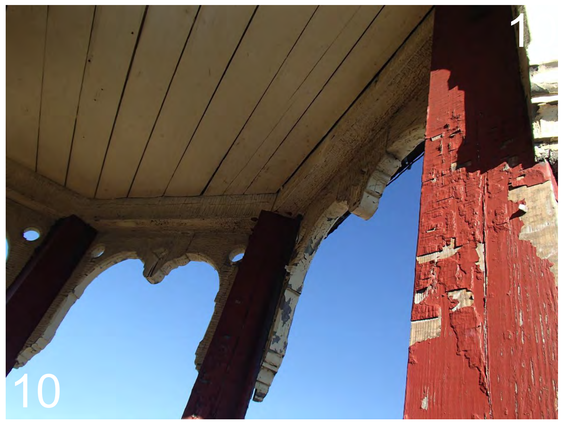

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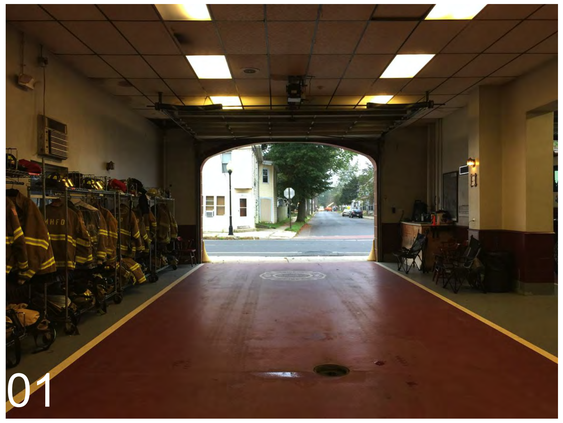
MTHFIR RELIEF ADDITION/RENOVATIONS
BLOCK 86, LOTS 4, 5, 10, 11, 21, 22, 22.1 AND 23
17 PINE STREET
MOUNT HOLLY, NEW JERSEY

TITLE: EXISTING EXTERIOR PHOTOS

DRAWING DATE: 01 JULY 2020
REVISION DATE:

DRAWN BY: RR PF
COMMISSION NO.: 5475B

EC.1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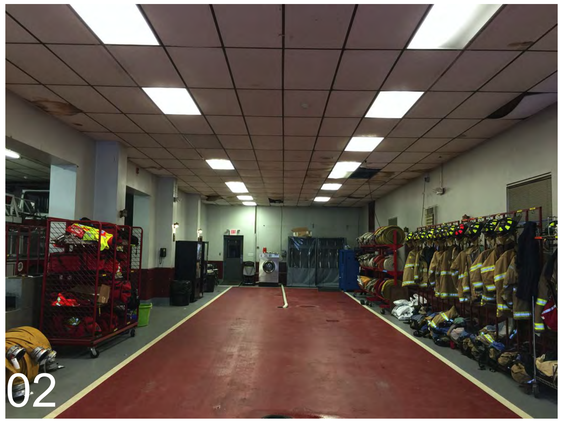
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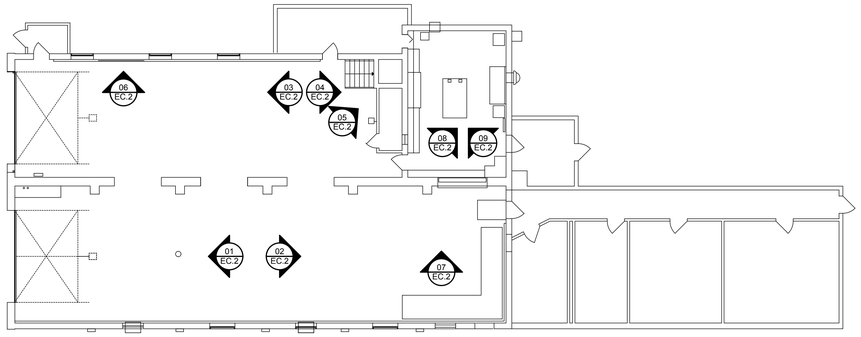

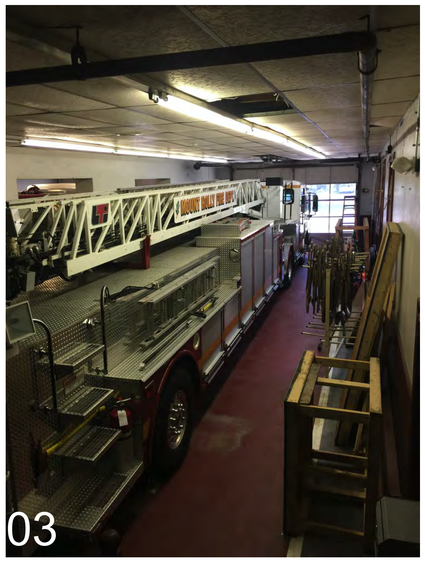
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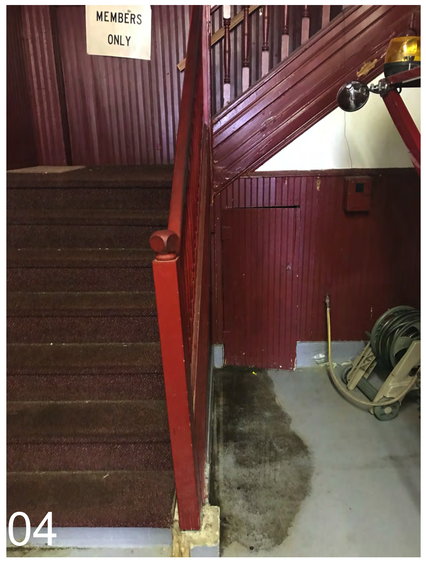

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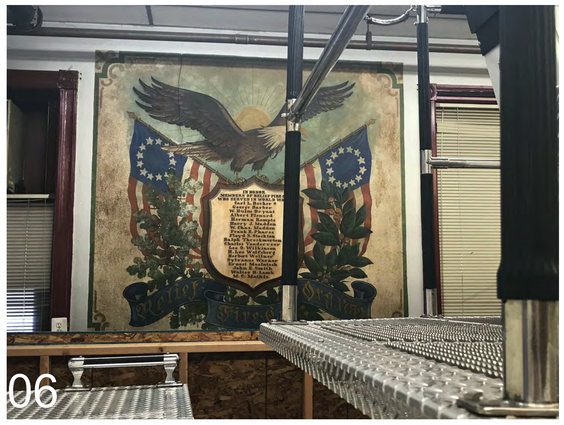
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17 PINE STREET
MOUNT HOLLY, NEW JERSEY

TITLE: EXISTING INTERIOR PHOTOS

DRAWING DATE: 01 JULY 2020
REVISION DATE:
DRAWN BY: RR PF
COMMISSION NO.: 5475B

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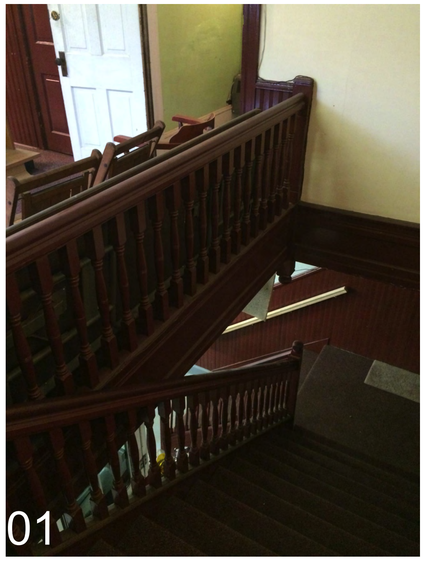
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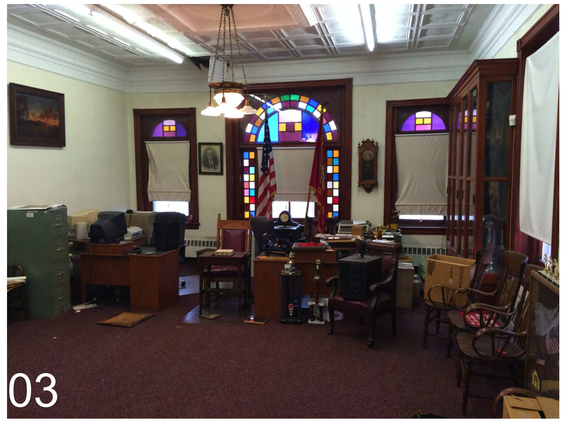
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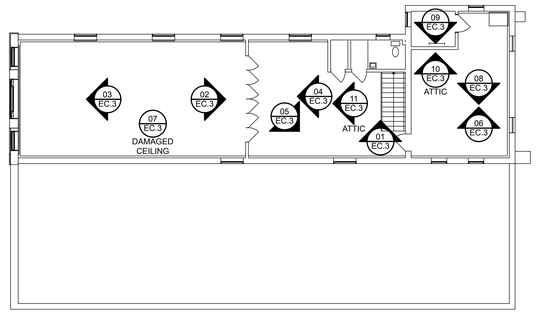


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EC.3

0100.0 Administration
(Not Applicable)

0200.0 NJUCC Excerpts

5:23-2.1(c) *New Jersey Uniform Construction Code* (*NJUCC*) shall control all matters concerning construction, alteration, addition, repair, removal, demolition, use, location, and occupancy of all buildings and structures and their service equipment, and shall apply to existing or proposed buildings and structures in the State of New Jersey.

5:23-2.5 As the building is being increased in floor area, the increased portion of the structure shall conform to the *NJUCC* requirements applicable to new construction, while any related work within the existing structure shall conform with the *NJUCC 5:23-6, Rehabilitation Subcode*.

5:23-2.15 Application for a Construction Permit shall be submitted by the Contractor(s) per *NJUCC* Section 5:23-2.15.

5:23-2.16(h) A true copy of the construction permit shall be kept on the site of operations open to inspection during the entire time of prosecution of the Work and until the completion of the same.

5:23-2.16(i) At least 24 hours notice of start of work under a construction permit shall be given to the Construction Official.

5:23-2.16(j) The issuance of the construction permit shall be conditioned upon payment of appropriate fees, the Contractor's & Owner's assurance that the Work will conform to the requirements of the Code applicable to the Work for which the permit has been issued, including prior approvals and any approved amendments thereto, that the permit is a license to proceed with the Work and shall not be construed as authority to violate, cancel, or set aside any of the provisions of the regulations, that the Owner & Contractor will assist the Enforcing Agency in its inspection work, and that all escrows required to by paid by the applicant in connection with the Work have been paid.

5:23-2.18(b) The Construction Official and appropriate Subcode Officials shall carry out periodic inspections during the progress of the Work to ensure that Work inspected conforms to the requirements of the Code.

5:23-2.18(b)2 Inspections for all subcodes of construction shall be limited to those required for one- and two-family dwellings plus the following: fire suppression systems; heat producing devices; and any special inspections required by any subcode of the regulations. The mid-point inspection shall include a review for compliance with *IBC/NJ* Chapter 11..

5:23-2.18(c)1 The Contractor shall notify the enforcing agency when the Work is ready for any required inspection specified by the NJUCC or required by the Construction Official or appropriate Subcode Official. This notice shall be given at least 24 hours prior to the time the inspection is desired. This notice shall represent an attestation on the part of the Contractor that the Work has been completed in conformance with the *NJUCC* and is ready for inspection.

5:23-2.18(c)2 The Contractor shall allow for Code Inspections to be performed within three business days of the time for which they are requested. The Work shall not proceed in a manner that will preclude the inspection until it has been made.

5:23-2.18(d) Upon completion of the Work, and before the issuance of a Certificate of Use and Occupancy required by the *NJUCC*, a final inspection shall be made, and any violations of the code shall be noted and the holder of the permit shall be notified of any discrepancies by the Construction Official.

5:23-2.21(c)4 The Contractor shall perform the necessary services and be present on the construction site on a regular and periodic basis to determine that the Work is proceeding in accordance with the *NJUCC* and any conditions of the construction permit.

5:23-2.21(d) At the completion of the construction, the Contractor shall submit to the Construction Official a report as to the satisfactory completion and the readiness of the project for occupancy and shall certify that, to the best of his/her knowledge and belief, such has been done substantially in accordance with the *NJUCC* and with the plans and specifications, with any substantial deviations noted.

5:23-2.21(e) The actual construction of the Work shall be the responsibility of the Contractor(s) as identified on the approved construction permit, and shall involve execution of the Work in accordance with the regulations, execution & control of all methods of construction in a safe & satisfactory manner, and execution all Work in accordance with the *NJUCC* and those portions of the plans and specifications controlled by the *NJUCC*. The Contractor(s) shall render all such construction services as required to effect a safe & satisfactory installation of the project.

5:23-2.21(e)5 Upon completion of the construction, the Contractor(s) shall certify to the best of their knowledge & belief that such has been done substantially in accordance with the *NJUCC* and with those portions of the plans & specifications controlled by the *NJUCC*, with any substantially deviations specifically noted.

5:23-2.23(d) No Addition which increases the height or area of an existing building or structure shall be used until a Certificate of Occupancy shall have been issued by the Construction Official certifying that the Work has been completed in accordance with the provisions of the *NJUCC*, except as otherwise provided in their rules.

5:23-2.29(a) The Owner of any premises upon which a building or structure is to be constructed shall be deemed to have consented to inspection, by the Enforcing Agency, of the entire premises and of any and all construction being performed on it until a Certificate of Occupancy has been issued.

5:23-3.5(a) Every building and structure and part thereof designed for business, factory, and industrial, high hazard, mercantile, or storage use (Use Groups B, F, H, M, & S) as defined by the *IBC/NJ* shall be posted on all floors by the Owner with a suitably designed placard in a form designated by the Building Subcode official, which shall be securely fastened to the structure in a readily visible place, stating the Use Group, and the maximum allowable Live Load & Occupancy Load.

5:23-3.5(b) Every building and structure and part thereof designed for use as a place of public assembly or as an institutional building for harboring people for penal, correctional, educational, medical, or other care or treatment (Use Groups A, E, & I) shall be posted with an approved placard designating the maximum Occupancy Load.

5:23-3.5(c) All posting signs shall be furnished by the Owner and shall be of permanent design; they shall not be removed, or defaced and, if lost, removed or defaced, shall be immediately replaced.

5:23-3.14(a)1 The Building subcode for new construction is the *International Building Code/2018, New Jersey Edition (IBC/NJ)*, as adopted by *NJUCC*.

5:23-3.15(a)1 The Plumbing subcode for new construction is the *National Standard Plumbing Code/2018 (NPC)*, as adopted by *NJUCC*.

5:23-3.16(a)1 The Electrical subcode for new construction is the *National Electrical Code/2017 (NEC)*, as adopted by *NJUCC*.

5:23-3.17(a)1 The Fire Protection Subcode shall be those portion of subcodes as adopted by *NJUCC* 5:23-3.17.

5:23-3.18(a)1 The Energy subcode for new construction is ASHRAE Standard 90.1 (*ASHRAE*), as adopted by *NJUCC*.

5:23-3.20(a)1 The Mechanical subcode for new construction is the *International Mechanical Code/2018 (IMC)*, as adopted by *NJUCC*.

5:23-3.22(a)1 The Fuel Gas subcode for new construction is the *International Fuel Gas Code/2018 (IFGC)*, as adopted by *NJUCC*.

5:23-6.3(a) Because the extent and nature of the Work on the existing building involves the removal and replacement or covering of existing interior or exterior finish, trim, doors, windows, or other materials with new materials that serve the same purpose and do not change the configuration of space, the project shall be deemed "Renovations".

5:23-6.5(c) The Work shall not cause any diminution of existing structural strength, system capacity, or mechanical ventilation below that which exists at the time of application for a permit, or that which is required by the applicable subcodes of the *NJUCC*, whichever is lower. The replacement of fixtures, equipment, or appliances shall not increase loads on these systems unless the system is upgraded in accordance with the applicable subcode of the *NJUCC* to accommodate the increased load.

5:23-6.5(c)1 Newly introduced fixed loads shall not exceed the uniformly distributed live loads or concentrated live load criteria of Table 1607.1 of *IBC/NJ* and shall not create deflection that exceeds the standards set forth in *NJUCC* 5:23-6.5(c)1.i,ii&iii. Fixed loads shall mean uniform or concentrated loads and shall include but not be limited to, equipment, files, library stacks, or similar loading conditions.

5:23-6.5(c)1.i For wood frame construction, deflection shall not exceed L/180 for roofs with a slope of 3 in 12 or less or L/120 for roofs with a slope of greater than 3 in 12 and for floors.

5:23-6.5(c)3 No work shall be undertaken that diminishes accessibility below that which is required by the IBC/*NJ Chapter 11, Accessibility*.

5:23-6.5(d)1-4 The following products and practices shall not be used: 1) wood paneling used as an interior finish not in conformance with *NJUCC* 5:23-6.11; Table 2) carpeting used for floor covering that fails to meet the DOC FF-1 "Pill Test"; 3) unlisted or unapproved electrical products, and, 4) plumbing materials listed under *NJUCC* 5:23-6.5(d)4.

5:23-6.5(d)7 A mirror shall not be placed in or adjacent to any means of egress so as to confuse the direction of egress or give the appearance of a doorway, exit, or passageway. Draperies or similar hangings shall not obscure an exit.

5:23-6.5(e)3.i When replacement doors are installed in buildings required to comply with the IBC/*NJ Chapter 11, Accessibility*, replacement hardware shall comply with *ICC/ANSI* A117.1, Section 404.2.6.

5:23-6.5(e)4 Replacement glass shall comply with the "Safety Glazing" requirements of the *IBC/NJ* and shall be installed in the "Specific Hazardous Locations" as specified by *IBC/NJ* Sections 2406.4 & 2406.5.

5:23-6.5(e)5 Where a fireproofing material is removed that is integral to the rating of an existing fire-rated assembly, the material shall be replaced so that the rating is preserved.

5:23-6.5(e)8 When a new refrigerant is introduced, the requirements of the *International Mechanical Code* (*IMC*) applicable to that refrigerant shall be met. This shall apply to the installation of new equipment, the replacement of existing equipment with equipment using a different refrigerant, or the replacement of the refrigerant in existing equipment with a different refrigerant.

5:23-6.5(e)9 When the work being performed exposes wood framing of any wall, floor, ceiling, or roof, fireblocking shall be provided as required by *IBC/NJ* Section 718.2. The fireblocking material shall comply with *IBC/NJ* Section 718.2.1.

5:23-6.5(e)10 When the work being performed exposes the roof decking/sheathing or the framing of any wall, floor, ceiling, or roof assembly that is part of the building thermal envelope (encloses conditioned space) any accessible voids in insulation shall be filled using insulation meeting the R-values of Table 5.5-4 or 5.5-5 of the *Commercial Energy Code*.

5:23-6.5(e)11 When the fenestration (windows, skylights, or doors) is newly installed or replaced, the U-factor (thermal transmittance) shall not exceed the U-factor of Table 5.5-4 or 5.5-5 of the *Commercial Energy Code*.

5:23-6.5(e)12 Ducts that are newly installed or replaced shall be installed with insulation meeting Section 6.4.4.1.2 of the *Commercial Energy Code*.

5:23-6.5(e)13 The total replacement of a building lighting system or newly installed lighting system shall meet Section 9.1.2 of the *Commercial Energy Code*.

5:23-6.5(g) In buildings containing a fuel burning appliance or having an attached garage, carbon monoxide detection equipment shall be installed in accordance with *IBC/NJ* Section 915.

5:23-6.5(h) All materials and methods used shall comply with requirements specified in *NJUCC 5:23-6.8, Materials & Methods*.

5:23-6.5(h)2 Newly installed and replacement handrails and guardrails shall comply with IBC/NJ Sections 1011.11, 1012.8, 1014, and 1015, respectively. Where 50% or more of a handrail or guardrail on a flight or on a level is replaced, then this shall be considered a complete replacement and shall comply with the above referenced sections. The repair or replacement of less than 50% of a handrail or guardrail shall be permitted to match the existing handrail or guardrail.

5:23-6.9(a)15 Newly created stages, platforms, and technical production areas shall comply with *IBC/NJ* Section 410.

5:23-6.9(a)24 Newly installed (note replacing an existing devise) electrical service equipment, switchboards, panelboards, motor control centers, and other electrical equipment containing overcurrent, switching, or control devises likely to require examination, adjustment, servicing, or maintenance while energized shall conform with the requirements specified in *NJUCC* 5:23-6.8, Materials & Methods, and, in addition, shall conform with the requirements specified in Sections 110.26 (Space About Electrical Equipment – 600 Volts, Nominal or Less), 110.32 (Work Space About Equipment – Over 600 Volts, Nominal). 110.33 (Entrance and Access to Work Spaces), 404.8 (Accessibility and Grouping), and 408.18 (Clearances), as applicable, of the *NEC*.

5:23-6.9(a)24.ii Newly installed panelboards (not replacements) shall comply with *ICC/ANSI A117.1* Sections 309.2 and 309.3

5:23-6.9(a)25 Newly installed (note replacing an existing devise) heating, air conditioning, or refrigeration equipment likely to require examination, adjustment, servicing, or maintenance shall conform with the requirements specified in *NJUCC* 5:23-6.8, Materials & Methods, and, in addition, shall conform with Section 210.63 (Heating, Air Conditioning, and Refrigeration Equipment Outlet) and, if newly installed in an attic, underfloor space, utility room, or basement, Section 210.70 (Lighting Outlets Required), as applicable, of the *NEC*.

5:23-6.9(a)29 Newly installed heating and cooling equipment shall have controls meeting Sections 6.4.3. 6.5, 7.4.4, and 7.4.6 of the *Commercial Energy Code*, as applicable. Systems include, but are not limited to, the heating and cooling of air or liquids and the ventilation or exhausting of spaces.

5:23-6.9(a)30 Newly installed systems that included piping carrying fluids shall meet Section 6.4.4.1.3 or Section 7.4.3 of the *IMC*, as applicable.

5:23-6.9(a)31 Newly installed heating and cooling equipment shall be sized in accordance with Sections 6.4.2.1, and 7.4.1 of the *Commercial Energy Code*.

0300.0 Use & Occupancy Classification

0302.1 The following Use Classifications apply to this project:

0303.3 Because the existing building will include assembly spaces similar to community halls, lecture halls, and museums, it shall be classified per the *IBC/NJ* as Use Group A-3, Assembly.

0303.1.2 A room or space used for Assembly purposes with an Occupant Load of less than 50 persons and accessory to another occupancy shall be classified per the *IBC/NJ*, as Use Group B, Business.

0304.1 Because this new support space will be used for office, professional or service-type transactions, its use shall be classified per the *IBC/NJ*, as Use Group B, Business.

0310.3 Because this new support space will be also house bunk rooms for sleeping, this portion of its use shall be classified per the *IBC/NJ*, as Use Group R-2, Residential.

0311.3 Because this new equipment bays' use is similar to a parking garage, they shall be classified per the *IBC/NJ*, as Use Group S-2, Low-Hazard Storage.

0400.0 Special Detailed Requirements Based on Use & Occupancy

0406.2.1 Automatic garage door openers shall be listed and labeled in accordance with UL 325.

0406.2.4 Motor-Vehicle Occupancies floor surfaces shall be of concrete or similar approved noncombustible and nonabsorbent materials. The area of floor used for the parking of automobiles or other vehicles shall be sloped to facilitate the movement of liquids to a drain or toward the main vehicle entry doorway.

0406.2.9. Equipment and appliances having an ignition source and located in motor-vehicle occupancies shall be elevated such that the source of ignition is not less than 18" above the floor surface on which the equipment or appliance rests. Rooms or spaces that communicate directly with the motor-vehicle occupancy through openings shall be considered part of the motor-vehicle occupancy.

0410.3 Permanent platforms shall be constructed of materials as required to the type of construction of the building in which the permanent platform is located. Where the space beneath the permanent platform is used for storage or any purpose other than equipment, wiring, or plumbing, the floor assembly shall be not less than 1-hour fire-resistance-rated construction. Where the space beneath the permanent platform is used only for equipment, wiring, or plumbing, the underside of the permanent platform need not be protected.

0420.2 Walls separating sleeping units in the same building and walls separating sleeping units from other occupancies contiguous to them in the same building shall be constructed as Fire Partitions in accordance with *IBC/NJ* Section 708.

0420.3 Floor assemblies separating sleeping units in the same building and floor assemblies separating sleeping units from other occupancies contiguous to them in the same building shall be constructed as Horizontal Assemblies in accordance with *IBC/NJ* Section 711.

0420.4 Group R occupancies shall be equipped throughout with an automatic sprinkler system in accordance with IBC/NJ Section 903.2.8.

0420.5 Fire alarm systems and smoke alarms shall be provided in Use Group R-2 in accordance with *IBC/NJ* Section 907.2.9. Single- or multiple-station smoke alarms shall be provided in Use Group R-2 in accordance with *IBC/NJ* Section 907.2.10.

0500.0 General Building Heights & Areas

0311.3 Because this new equipment bays' use is similar to a parking garage, they shall be classified per the *IBC/NJ*, as Use Group S-2, Low-Hazard Storage.

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0500.0 General Building Heights & Areas

Table 504.3 Allowable Building Height in Feet above Grade Plane -
- Use Group A-3, Construction Type V-B (existing), Sprinklered = 40'
- Use Group B, Construction Type V-B, Sprinklered = 40'
- Use Group R-2, Construction Type V-B, Sprinklered = 60'
- Use Group S-2, Construction Type V-B, Sprinklered = 40'

! Proposed Building Heights

A-3	27'-6"
B	23'-8"
R-2	23'-8"
S-2	23'-0"

Table 504.4 Allowable Number of Stories above Grade Plane -
- Use Group A-3, Construction Type V-B (existing), Sprinklered = 2
- Use Group B, Construction Type V-B, Sprinklered = 3
- Use Group R-2, Construction Type V-B, Sprinklered = 3
- Use Group S-2, Construction Type V-B, Sprinklered = 3

! Proposed Stories above Grade Plane

A-3	2
B	2
R-2	2
S-2	1

Table 504.6.2 Allowable Area Factor -
- Use Group A-3, Construction Type V-B (existing), Sprinklered, 2-Story = 18,000 SF
- Use Group B, Construction Type V-B, Sprinklered, 2-Story = 27,000 SF
- Use Group R-2, Construction Type V-B, Sprinklered, 2-Story = 21,000 SF
- Use Group S-2, Construction Type V-B, Sprinklered, 1-Story = 54,000

! Proposed Areas

First Floor	
• A-3, Assembly & B, Business (Existing Building)	4,293 SF
• B, Business (Addition)	5,046 SF
• S-2, Storage (Addition)	6,096 SF
Total	15,435 SF
Second Floor	
• Mezzanine, S-2, Storage	747 SF
• B, Business (Existing Building)	2,070 SF
• B, Business (Addition)	4,646 SF
• R-2, Residential (Addition)	400 SF
Total	4,988 SF
! Proposed Volume of Addition	259,378 CF

ADDENDUM-01
COMMENT 1.30
25 SEPT 2020

0505.2 A mezzanine in compliance with *IBC/NJ* Section 505.2 shall be considered a portion of the story below. Such a mezzanine shall not contribute to either the building area or number of stories as regulated by *IBC/NJ* Section 503.1. The area of the mezzanine shall be included in determining the fire area. The clear height above and below the mezzanine floor construction shall be not less than 7'.

0505.2.1 The aggregate area of a mezzanine within a room shall be not greater than one-third of the floor area of that room or space in which it is located. The enclosed portion of a room shall not be included in a determination of the floor area of the room in which the mezzanine is located. In determining the allowable mezzanine area, the area of the mezzanine shall not be included in the floor area of the room.

0505.2.3 A mezzanine shall be open and unobstructed to the room in which such mezzanine is located except for walls not more than 42" in height, columns, & posts.

0508.3.1 Nonseparated mixed use occupancies shall be individually classified in accordance with *IBC/NJ* Section 302.1. *IBC/NJ* requirements shall apply to each portion of the building based on the Occupancy classification of that space. In addition, the most restrictive provisions of *IBC/NJ* Chapter 9 shall apply to the nonseparated occupancies shall apply to the total nonseparated Occupancy area.

0508.3.2 The allowable building area, height, and number of stories of the building or portion thereof shall be based on the most restrictive allowances for the Occupancy groups under consideration for the type of construction of the building in accordance with *IBC/NJ* Section 503.1.

0508.3.3.2 No separation is required between nonseparated Occupancies, except R-2 sleeping united shall be separated from other sleeping units and from other Occupancies contiguous to them in accordance with the requirements of *IBC/NJ* Section 420.

0509.4 The Incidental Uses listed on *IBC/NJ* Table 509 shall be separated from the remainder of the building or equipped with an automatic sprinkler system, or both, in accordance with the provisions of that Table

Table 0509, Incidental Uses
- Furnace Room where any piece of equipment is over 400,000 BTU per hour input ..... 1-hour separation or provide automatic sprinkler system
- Rooms with Boilers where the largest piece of equipment is over 15 PSI and 10 horsepower..... 1-hour separation or provide automatic sprinkler system
- Laundry Room over 100 SF ..... 1-hour separation or provide automatic sprinkler system

0509.4.1 Where *IBC/NJ* Table 509 specifies a fire-resistance-rated separation, the Incidental Uses shall be separated from the remainder of the building by a Fire Barrier constructed in accordance with *IBC/NJ* Section 707 or a Horizontal Assembly constructed in accordance with *IBC/NJ* Section 711, or both. Construction supporting 1-hour Fire Barriers or Horizontal Assemblies used for Incidental Use separations in buildings of Construction Type IIB is not required to be fire-resistance rated unless required by other sections of the *IBC/NJ*.

0509.4.2 Where *IBC/NJ* Table 509 permits an automatic sprinkler system without a Fire Barrier, the Incidental Uses shall be separated from the remainder of the building by construction capable of resisting the passage of smoke. The walls shall extend from the top of the foundation or floor assembly below to the underside of the floor or roof sheathing, deck, or slab above. Doors shall be self- or automatic-closing upon detection of smoke in accordance with *IBC/NJ* Section 716.2.6.6. Doors shall not have air transfer openings and shall not be undercut in excess of the clearance permitted in accordance with NFPA 80. Walls surrounding the Incidental Use shall not have air transfer openings unless provided with smoke dampers in accordance with *IBC/NJ* Section 710.8.

0509.4.2.1 Where an automatic sprinkler system is provided in accordance with *IBC/NJ* Table 509, only the space occupied by the Incidental Use need be equipped with such a system.

0600.0 Types of Construction

0602.5 Proposed construction system for the Addition is classified as Type V-B, in which the structural elements, exterior walls, and interior walls are of any materials permitted by the *IBC/NJ*.

Table 0601, Fire-Resistance Rating Requirements for Building Elements (hours)

• Primary Structural frame	0
• Exterior Bearing walls	0
• Interior Bearing walls	0
• Nonbearing walls	0
• Floor construction	0
• Roof construction	0

0700.0 Fire-Resistance-Rated Construction

0705.2.2 Projections from walls of Type V Construction shall be of any approved material.

0707.1 Fire Barriers installed as required by *IBC/NJ* Section 0509, Incidental Uses, shall comply with *IBC/NJ* Section 707.

0707.2 Fire Barriers shall be of materials permitted by the building type construction.

0707.3.7 The Fire Barriers separating Incidental Uses from other spaces in the building shall have a fire-resistance rating not less than that indicated in *IBC/NJ* Table 509.

0707.5 Fire Barriers shall extend from the top of the foundation or floor/ceiling assembly below to the underside of the floor or roof sheathing, slab, or deck above and shall be securely attached thereto. Such Fire Barriers shall be continuous though concealed space, such as the space above a suspended ceiling. Joints and voids at intersections shall comply with *IBC/NJ* Sections 707.8 and 707.9.

0707.6 Openings in Fire Barriers shall be protected in accordance with *IBC/NJ* Section 716. Openings shall not be limited to 156 SF where adjoining floor areas are equipped throughout with an automatic sprinkler system installed in accordance with *IBC/NJ* Section 903.3.1.1.

0707.7 Penetrations in Fire Barriers shall comply with *IBC/NJ* Section 714.

0707.8 Joints made in or between Fire Barriers, and joints made at the intersection of Fire Barriers with underside of a fire-resistance-rated floor or roof sheathing, slab, or deck above, and the exterior vertical wall intersection shall comply with *IBC/NJ* Section 715.

0707.10 Penetrations in a Fire Barrier by ducts and air transfer openings shall comply with *IBC/NJ* Section 717.

0708.1 Fire Partitions installed as required by *IBC/NJ* Section 0420.2, Use Group R-2, shall comply with *IBC/NJ* Section 708.

0708.2 Fire Partitions shall be of materials permitted by the building type construction.

0708.3.2 Sleeping unit separations in buildings of Construction Type V-B shall have a fire-resistance-rating of not less than ½ hour in buildings equipped throughout with an automatic sprinkler system in accordance with *IBC/NJ* Section 903.3.1.1.

0708.4 Fire Partitions shall extend from the top of the foundation or floor/ceiling assembly below and be securely attached to the underside of the floor or roof sheathing, slab, or deck above, or to the fire-resistance-rated floor/ceiling or roof/ceiling assembly having a fire-resistance rating of the Fire Partition.

0708.4.1 In buildings of Type V-B Construction, the supporting construction requirement shall not apply to Fire Partitions separating sleeping units and Fire Partitions serving as corridor walls.

0708.4.2 In Group R-2 occupancies with fewer than four dwelling units, Fireblocking and Draftstopping shall not be required.

0708.6 Openings in a Fire Partition shall be protected in accordance with *IBC/NJ* Section 716.

0708.7 Penetrations in Fire Partitions shall comply with *IBC/NJ* Section 714.

0708.8 Joints made in or between Fire Partitions shall comply with *IBC/NJ* Section 715.

0708.9 Penetrations in a Fire Partition by ducts and air transfer openings shall comply with *IBC/NJ* Section 717.

0711.1 Rated Horizontal Assemblies shall comply with *IBC/NJ* Section 711.2. Nonfire-resistance-rated floor and roof assemblies shall comply with *IBC/NJ* Section 711.3.

0711.2.1 Horizontal Assemblies shall be of materials permitted by the building type construction.

0711.2.2 Horizontal Assemblies shall be continuous without vertical openings, except as permitted by *IBC/NJ* Sections 711 and 712.

0711.2.3 In buildings if Construction Type V-B, the construction supporting the Horizontal Assembly is not required to be fire-resistance rated for 1-hour Incidental Uses separations or sleeping units separations.

0711.2.4.3 Horizontal Assemblies separating sleeping units shall be not less than ½ hour fire-resistance rated construction in a building of Construction Type V-B, where the building is equipped throughout with an Automatic Sprinkler System in accordance with *IBC/NJ* Section 903.3.1.1.

0711.2.5 Where the weight of lay-in ceiling panels, used as part of fire-resistance-rated floor/ceiling or roof/ceiling assemblies, is not adequate to resist an upward force of 1 #/SF, wire or other approved devices shall be installed above the panels to prevent vertical displacement under such upward force.

0714.1 The provisions of IBC/NJ Section 714 shall govern the materials & methods of construction used to protect through penetrations and membrane penetrations of Horizontal Assemblies and fire-resistance-rated Wall Assemblies.

Table 716.1(2), Opening Fire Protection Assemblies, Ratings & Markings
- Fire Barriers, 1-hour..... 1-hour door, max 100 SI vision panel
- Fire Partition, 1/2-hour..... 1/3-hour door, max tested vision panel

716.1.2 Glazing used in Fire Door Assemblies and Fire Window Assemblies shall comply with this *IBC/NJ* Section 716.1.2, in addition to the requirements of *IBC/NJ* Sections 716.2 and 716.3, respectively.

716.2 Fire door assemblies required by the IBC/NJ shall comply with the provisions of *IBC/NJ* Section 716.2. Fire door frames with transom lights, sidelights or both shall be permitted in accordance with *IBC/NJ* Section 716.2.5.4.

0716.2.6.1 Fire doors shall be latching and self- or automatic-closing in accordance with *IBC/NJ* Section 716.2.6.1.

0717.2 Fire dampers located within air distribution systems shall be installed in accordance with the requirements of *IBC/NJ* Section 717.2, the manufacturer's instructions, and the dampers' listing.

0720.2 Insulating materials, where concealed as installed in buildings of any type of construction, shall have a flame spread index of not more than 25 and a smoke-developed index of not more than 450.

0800.0 Interior Finishes

0803.1.1 Interior Wall and Ceiling Finishes shall be classified in accordance with ASTM E 84 or UL 723. Such interior finish materials shall be grouped in the following classes in accordance with their flame spread and smoke-developed index.

- Class A: flame spread 0-25; smoke developed 0-450
- Class B: flame spread 26-75; smoke developed 0-450
- Class C: flame spread 76-200; smoke developed 0-450

IBC/NJ Table 0803.11 - Interior Wall & Ceiling Finish Requirements by Occupancy [in sprinklered building]:
- Use Group A-3, Corridors & Enclosures for Exit Access Stairways..... B
- Use Group A-3, Rooms & Enclosed Spaces..... C
- Use Group B, Corridors & Enclosures for Exit Access Stairways..... C
- Use Group B, Rooms & Enclosed Spaces..... C
- Use Group R-2, Corridors & Enclosures for Exit Access Stairways..... C
- Use Group R-2, Rooms & Enclosed Spaces..... C
- Use Group S, Corridors & Enclosures for Exit Access Stairways..... C
- Use Group S, Rooms & Enclosed Spaces..... C

0804.1 Interior floor finish and floor covering materials shall comply with *IBC/NJ* Sections 804.2 thru 804.4.2. Exception: floor finishes and coverings of a traditional type, such as wood, vinyl, linoleum, or terrazzo, and resilient floor covering materials that are not comprised of fibers.

0808.1.1.1 Suspended acoustical ceiling systems shall be installed in accordance with the provisions of ASTM C635 and ASTM C636.

0900.0 Fire Protection Systems

0902.1 Fire pump rooms and automatic sprinkler riser rooms shall have adequate space for all equipment necessary for the installation, as defined by the manufacturer, with sufficient working room around the stationary equipment. Clearances around equipment to elements of permanent construction, including other installed equipment and appliances, shall be sufficient to allow inspection, service repair, or replacement without removing such elements of permanent construction or disabling the function of a required fire-resistance-rated assembly. Fire pump and automatic sprinkler system riser rooms shall be provided with a door (s) and unobstructed passageway large enough to allow removal of the largest piece of equipment.

0903.3 Automatic sprinkler systems shall be designed in accordance with *IBC/NJ* Sections 903.3.1 through 903.3.8.

0906.1 Portable fire extinguishers shall be provided in occupancies and locations as required by *IBC/NJ* Section 906.

0907.1 The application, installation, performance, and maintenance of Fire Alarm and Detection Systems shall comply with *IBC/NJ* Section 907.

0915.1 Carbon monoxide detection shall be installed in new buildings in accordance with *IBC/NJ* Sections 915.1.1 through 915.6.

1000.0 Means of Egress

1003.2 Means of Egress shall have a ceiling height of not less than 7', except as exempted by *IBC/NJ* Sections 1003.2.1 through 1003.2.8.

1003.3 Protruding objects on circulation paths shall comply with the requirements of *IBC/NJ* Sections 1003.3.1 through 1003.3.4.

1003.4 Circulation paths of the Means of Egress shall have a slip-resistant surface and be securely attached.

1003.5 Where changes in elevation of less than 12" exist in the Means of Egress, sloped surfaces shall be used. Where the slope is greater than one unit vertical in 20 units horizontal (5% slope), ramps complying with *IBC/NJ* Section 1012 shall be used. Where the difference in elevation is 6" or less, the ramp shall be equipped with either handrails or floor finish materials that contrast with adjacent floor finish materials.

Table 1004.1.1 - Maximum Floor Area Allowances per Occupant:
- Assembly, Tables & Chairs..... 15 SF (net)/Occupant
- Assembly, Exhibit Gallery & Museums..... 30 SF (net)/Occupant
- Accessory Storage Areas, Mechanical Equipment Rooms..... 300 SF (gross)/Occupant
- Business..... 150 SF (gross)/Occupant
- Exercise Rooms..... 50 SF (gross)/Occupant
- Locker Rooms..... 50 SF (gross)/Occupant
- Residential, Dormitories..... 50 SF (gross)/Occupant
- Stages & Platforms..... 15 SF (net)/Occupant
- Storage, Parking Garages..... 200 SF (gross)/Occupant

! Proposed Egress Occupancy

First Floor, (Existing Building):	
• Business, Exhibit/Museums	663 SF ÷ 30 SF/Occupant = 22 Occupants
• Assembly Tables & Chairs	864 SF ÷ 15 SF/Occupant = 57 Occupants
• Stages & Platforms	128 SF ÷ 15 SF/Occupant = 9 Occupants
• Storage/Mechanical	450 SF ÷ 300 SF/Occupant = 2 Occupants
Subtotal	90 Occupants
Second Floor (Existing Building):	
• Business, Exhibit/Museums	578 SF ÷ 30 SF/Occupant = 19 Occupants
• Business, Tables & Chairs	168 SF ÷ 15 SF/Occupant = 11 Occupants
Subtotal	30 Occupants
First Floor (Addition):	
• Business	3268 SF ÷ 150 SF/Occupant = 22 Occupants
• Exercise Room	1050 SF ÷ 50 SF/Occupant = 22 Occupants
• Locker Room	400 SF ÷ 50 SF/Occupant = 8 Occupants
• S-2, Storage, Parking Garages	5394 SF ÷ 200 SF/Occupant = 27 Occupants
• Storage/Mechanical	747 SF ÷ 300 SF/Occupant = 3 Occupants
Subtotal	82 Occupants
Second Floor (Addition):	
• Business	4138 SF ÷ 150 SF/Occupant = 28 Occupants
• Residential, Dormitories	400 SF ÷ 50 SF/Occupant = 8 Occupants
Subtotal	36 Occupants
Mezzanine (Addition):	
• Storage/Mechanical	747 SF ÷ 300 SF/Occupant = 3 Occupants
Subtotal	3 Occupants
• Total Egress Occupant Load for Building	241 Occupants

1004.9 Every room or space that is an Assembly occupancy shall have the Occupant Load of the room or space posted in a conspicuous place, near the main exit or exit access doorway from the room or space, for the intended configurations. Posted signs shall be of an approved legible permanent design and shall be maintained by the Owner or the owner's authorized agent.

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RELIEF FIRE COMPANY NO. 1
ADDITION / RENOVATION
BLOCK 86, LOTS 4, 5, 10, 11, 21, 22, 22.01 AND 23
17 PINE STREET
MOUNT HOLLY, NEW JERSEY
TITLE: CODE ANALYSIS

DRAWING DATE: 01 JULY 2020
REVISION DATE: 1 02 SEPT 20
2 25 SEPT 20
DRAWN BY: RR
COMMISSION NO.: 5475B

A1.0

1005.3.1.1 The capacity, in inches, of Means of Egress Stairways shall be calculated by multiplying the Occupant Load served by such stairways by a Means of Egress Occupancy Factor of 0.2" per occupant in buildings equipped throughout with an automatic sprinkler system installed in accordance with *IBC/NJ* Section 903.3.1.1 or 903.3.1.2 and an emergency voice/alarm communication system in accordance with *IBC/NJ* Section 907.5.2.2

1005.3.2.1 The capacity, in inches, of Means of Egress components other than Stairways shall be calculated by multiplying the Occupant Load served by such component by a Means of Egress Occupancy Factor of 0.15" per occupant in buildings equipped throughout with an automatic sprinkler system installed in accordance with *IBC/NJ* Section 903.3.1.1 or 903.3.1.2 and an emergency voice/alarm communication system in accordance with *IBC/NJ* Section 907.5.2.2

1006.2 Rooms, areas or spaces, including mezzanines, within a story or basement shall be provided with the number of exits or access to exits in accordance with *IBC/NJ* Section 1006.

1008.2 The Means of Egress serving a room or space shall be illuminated at all times that the room or space is occupied. Exception: Sleeping Units in Use Group R-2.

1008.2.1 The Means of Egress illumination level shall not be less than 1 foot-candle at the walking surface.

1008.3.2 In the event of power supply failure in buildings that require two or more Means of Egress, an emergency electrical system shall automatically illuminate interior exit access stairways & ramps, interior & exterior exit stairways & ramps, exit passageways, vestibules on the level of discharge, and exterior landings for exit doorways that lead directly to the exit discharge.

1008.3.4 The emergency power system shall provide power for a duration of not less than 90 minutes and shall consist of storage batteries, unit equipment, or an on-site generator. The installation of the emergency power system shall be in accordance with *IBC/NJ* Section 2702.

1008.3.5 Emergency lighting facilities shall be arranged to provide initial illumination that is not less than an average of 1 foot-candle and a minimum at any point of 0.1 foot-candle measured along the path of egress at floor level. Illumination levels shall be permitted to decline to 0.6 foot—candle average and a minimum at any point of 0.06 foot-candle at the end of the emergency lighting time duration. A maximum-to-minimum illumination uniformity ration of 40-to-1 shall not be exceeded.

1009.1 Accessible spaces shall be provided with not less than one accessible Means of Egress. Where more than one Means of Egress is required by *IBC/NJ* Section 1006.2 or 1006.3 from any accessible space, each accessible portion of the space shall be served by not less than two Accessible Means of Egress.

1009.2 Each required accessible Means of Egress shall be continuous to a public way and shall consist of one or more of the components listed in *IBC/NJ* Section 1009.2

1009.3.2.1 A clear width of 48" between handrails is not required on an accessible stairway in a building equipped throughout with an automatic sprinkler system installed in accordance with *IBC/NJ* Section 903.3.1.1 or 903.3.1.2.

1009.4 In order to be considered part of an accessible Means of Egress, an elevator shall comply with *IBC/NJ* Sections 1009.4.1 and 1009.4.2.

1009.4.3 Areas of Refuge are not required at elevators not required to be located in a shaft in accordance with *IBC/NJ* Section 712.

1009.8 A two-way communication system complying with *IBC/NJ* Sections 1009.8.1 and 1009.8.2 shall be provided at the landing serving each elevator or bank of elevators on each accessible floor that is one or more stories above or below the level of Exit Discharge.

1010.1.1 The required capacity of each door opening shall be sufficient for the Occupant Load thereof and shall provide a minimum clear width of not less than 32". Clear openings of doorways with swinging doors shall be measured between the face of the door and the stop, with the door open 90 degrees. Where *IBC/NJ* Section 1010 requires a minimum clear width of 32" and a door opening includes two door leaves without a mullion, one leaf shall provide a clear opening width of 32". The maximum width of a swinging door leaf shall be 48" nominal. The height of doors shall not be less than 80".

1010.1.1(12) The minimum clear opening width shall not apply to the doors for nonaccessible toilet stalls.

1010.1.1.1 There shall not be projections into the required clear width lower than 34" above the floor or ground. Projections into the clear opening width between 34" and 80" above the floor or ground shall not exceed 4". Exception: Door closers & door stops shall be permitted to be 78" minimum above the floor.

1010.1.2 Egress doors shall be of the pivoted or side-hinged swinging type.

1010.1.2.1 Pivot or side-hinged swinging doors shall swing in the direction of egress travel where serving a room or area containing an occupant load of 50 or more persons.

1010.1.3 The force for pushing or pulling open interior swinging egress doors, other than Fire Doors, shall not exceed 5 pounds. These forces do not apply to the force required to retract latch bolts or disengage other devices that hold the door in a closed position. For other swinging doors, as well as sliding & folding doors, the door latch shall release when subjected to a 15-pound force. The door shall be set in motion when subjected to a 30-pound force. The door shall swing to a full-open position when subjected to a 15-pound force. Forces shall be applied to the latch side of the door.

1010.1.5 There shall be a floor or landing on each side of a door. Such floor or landing shall be at the same elevation on each side of the door. Landings shall be level except for exterior landings, which are permitted to have a slope not to exceed .25" unit vertical in 12 units horizontal (2% slope).

1010.1.6 Landings shall have a width not less than the width of the stairway or the door, whichever is greater. Doors in the fully open position shall not reduce a required dimension by more than 7". Where a landing serves an Occupant Load of 50 or more, doors in any position shall not reduce the landing to less than on-half its required width. Landings shall have a length measured in the direction of travel of not less than 44".

1010.1.7 Thresholds at doorways shall not exceed 0.5 inch. Raised thresholds and floor level changes greater than 0.25 at doorways shall be beveled with a slope not greater than one unit vertical in two units horizontal (50% slope).

1010.1.9 Except as specifically permitted in *IBC/NJ* Section 1010.1.9, egress doors shall be readily openable from the egress side without the use of a key or special knowledge or effort.

1010.1.9.1 Door handles, pulls, latches, and other operating devices on doors required to be accessible by *IBC/NJ* Chapter 11 shall not require tight grasping, tight pinching, or twisting of the wrist to operate.

1010.1.9.2 Door handles, pulls, latches, locks, and other operating devices shall be installed 34" minimum and 48" maximum above the finished floor. Locks used only for security purposes and not used for normal operation are permitted at any height.

1010.1.9.5 Manually operated flush bolts or surface bolts are not permitted. Exceptions: Where a pair of doors serves a Group B, F or S occupancy, manually operated edge- or surface-mounted bolts are permitted on the inactive leaf provided such inactive leaf is not needed to meet egress capacity requirements and the building is equipped throughout with an automatic sprinkler system in accordance with *IBC/NJ* Section 903.3.1.1. The inactive leaf shall not contain doorknobs, panic bars or similar operating hardware.

1010.1.9.6 The unlatching of any door or leaf shall not require more than one operation.

1010.1.10 Doors serving rooms or spaces with an occupant load of 50 or more in a Group A occupancy shall not be provided with a latch or lock other than panic hardware or fire exit hardware.

1010.1.10.1. Where panic or fire exit hardware is installed, it shall comply with the following: 1) Panic hardware shall be listed in accordance with UL 305; 2) Fire exit hardware shall be listed in accordance with UL 10C and UL 305; 3) The actuating portion of the releasing device shall extend not less than one-half of the door leaf width; and 4) The maximum unlatching force shall not exceed 15 pounds.

1011.2.1 Stairways serving an occupant load of less than 50 shall have a width of not less than 36".

1011.3 Stairways shall have a headroom clearance of not less than 80" measured vertically from a line connecting the edge of the nosings. Such headroom shall be continuous above the stairway to the point where the line intersects the landing below, one tread depth beyond the bottom riser. The minimum clearance shall be maintained the full width of the stairway and landing.

1011.5.2 Riser height and tread depth. Stair riser heights shall be 7" maximum and 4" minimum. The riser height shall be measured vertically between the nosings of adjacent treads. Rectangular tread depths shall be 11" minimum measured horizontally between the vertical planes of the foremost projection of adjacent treads and at a right angle to the tread's nosing.

1011.5.4 Stair treads and risers shall be of uniform size and shape. The tolerance between the largest and smallest riser height or between the largest and smallest tread depth shall not exceed 3/8" in any flight of stairs.

1011.5.4.1 Where the bottom or top riser adjoins a sloping public way, walkway or driveway having an established grade and serving as a landing, the bottom or top riser is permitted to be reduced along the slope to less than 4 inches (102 mm) in height, with the variation in height of the bottom or top riser not to exceed one unit vertical in 12 units horizontal (8-percent slope) of stair width. The nosings or leading edges of treads at such nonuniform height risers shall have a distinctive marking stripe, different from any other nosing marking provided on the stair flight. The distinctive marking stripe shall be visible in descent of the stair and shall have a slip-resistant surface. Marking stripes shall have a width of not less than 1 inch (25 mm) but not more than 2 inches (51 mm).

1011.5.5 Stair nosings shall have a curvature or bevel of not less than 1/16" but not more than 9/16" from the foremost projection of the tread. Risers shall be solid and vertical or sloped under the tread above from the underside of the nosing above at an angle not more than 30° from the vertical. The leading edge (nosings) of treads shall project not more than 1 1/4"beyond the tread below. Stair nosing projections of the leading edges shall be of uniform size, including the projections of the nosing's leading edge of the floor at the top of a flight.

1011.5.5.3 Stair risers shall be solid. Exception: Solid risers are not required for occupancies in Use Group S Occupancy other than areas accessible to the public. The size of the opening in the riser is not restricted.

1011.6 There shall be a floor or landing at the top and bottom of each stairway. The width of landings, measured perpendicularly to the direction of travel, shall be not less than the width of stairways served. Every landing shall have a minimum depth, measured parallel to the direction of travel, equal to the width of the stairway or 48", whichever is less. Doors opening onto a landing shall not reduce the landing to less than one-half the required width. When fully open, the door shall not project more than 7" into a landing.

1011.7 Stairways shall be built of materials consistent with the types permitted for the type of construction of the building, except that wood handrails shall be permitted for all types of construction.

1011.7.1 The walking surface of treads and landings of a stairway shall not be sloped steeper than one unit vertical in 48 units horizontal (2% slope) in any direction. Stairway treads and landings shall have a solid surface. Finish floor surfaces shall be securely attached. Exceptions: 1) Openings in stair walking surfaces shall be a size that does not permit the passage of ½"-diameter sphere. Elongated openings shall be placed so that the long dimension is perpendicular to the direction of travel. 2) In Use Group S occupancies, other than areas of parking structures accessible to the public, openings in treads and landings shall not be prohibited provided a sphere with a diameter of 1 1/8" cannot pass through the opening.

1011.7.2 Outdoor stairways and out-door approaches to stairways shall be designed so that water will not accumulate on walking surfaces

1011.7.3 The walls and soffits within enclosed usable spaces under enclosed and unenclosed stairways shall be protected by 1-hour fire-resistance-rated construction or the fire-resistance rating of the stairway enclosure, whichever is greater. Access to the enclosed space shall not be directly from within the stairway enclosure.

1011.8 A flight of stairs shall not have a vertical rise greater than 12' (3658 mm) between floor levels or landings.

1011.11 Stairways shall have handrails on each side and shall comply with Section 1014. Where glass is used to provide the handrail, the handrail shall comply with Section *IBC/NJ* 2407.

1011.12.2 Where a stairway is provided to a roof, access to the roof shall be provided through a penthouse complying with *IBC/NJ* Section 1510.2. Exception: In buildings without an occupied roof, access to the roof shall be permitted to be a roof hatch or trap door not less than 16 SF in area and having a minimum dimension of 2'.

1011.13 Guards shall be provided along stairways and landings where required by *IBC/NJ* Section 1015 and shall be constructed in accordance with *IBC/NJ* Section 1015. Where the roof hatch opening providing the required access is located within 10' of the roof edge, such roof access or roof edge shall be protected by guards installed in accordance with *IBC/NJ* Section 1015.

1012.2 Ramps used as part of a Means of Egress shall have a running slope not steeper than one unit vertical in 12 units horizontal (8% slope).

1012.3 The slope measured perpendicular to the direction of travel of a ramp shall not be steeper than one unit vertical in 48 units horizontal (2% slope).

1012.4 The rise for any ramp run shall be 30" maximum.

1012.5 The minimum dimensions of Means of Egress ramps shall comply with *IBC/NJ* Sections 1012.5.1 through 1012.5.3.

1012.5.1 The minimum width and required capacity of a Means of Egress ramp shall be not less than that required for corridors by *IBC/NJ* Section 1020.2. The clear width of a ramp between handrails, if provided, or other permissible projections shall be 36" minimum.

1012.5.2 The minimum headroom in all parts of the means of egress ramp shall be not less than 80" above the finished floor of the ramp run and any intermediate landings The minimum clearance shall be maintained for the full width of the ramp and landing.

1012.5.3 Means of Egress ramps shall not reduce in width in the direction of egress travel. Projections into the required ramp and landing width are prohibited. Doors opening onto a landing shall not reduce the clear width to less than 42".

1012.6 Ramps shall have landings at the bottom and top of each ramp, points of turning, entrance, exits and at doors. Landings shall comply with *IBC/NJ* Sections 1012.6.1 through 1012.6.5.

1012.6.1 Landings shall have a slope not steeper than one unit vertical in 48 units horizontal (2% slope) in any direction. Changes in level are not permitted.

1012.6.2 The landing width shall be not less than the width of the widest ramp run adjoining the landing.

1012.6.3 The landing length shall be 60" minimum.

1012.6.4 Where changes in direction of travel occur at landings provided between ramp runs, the landing shall be 60" by 60" minimum.

1012.6.5 Where doorways are located adjacent to a ramp landing, maneuvering clearances required by ICC A117.1 are permitted to overlap the required landing area.

1012.7 Ramps shall be built of materials consistent with the types permitted for the type of construction of the building, except that wood handrails shall be permitted for all types of construction.

1012.7.1 The surface of ramps shall be of slip-resistant materials that are securely attached.

1012.7.2 Outdoor ramps and outdoor approaches to ramps shall be designed so that water will not accumulate on walking surfaces.

1012.8 Ramps with a rise greater than 6" shall have handrails on both sides. Handrails shall comply with *IBC/NJ* Section 1014.

1012.9 Guards shall be provided where required by *IBC/NJ* Section 1015 and shall be constructed in accordance with *IBC/NJ* Section 1015.

1012.10 Edge protection complying with *IBC/NJ* Section 1012.10.1 or 1012.10.2 shall be provided on each side of ramp runs and at each side of ramp landings. Exceptions: 1) Edge protection is not required on ramps that are not required to have handrails, provided they have flared sides that comply with the ICC A117.1 curb ramp provisions; 2) Edge protection is not required on the sides of ramp landings serving an adjoining ramp run or stairway; and 3) Edge protection is not required on the sides of ramp landings having a vertical dropoff of not more than ½" within 10" horizontally of the required landing area.

1012.10.1 A curb, rail, wall or barrier shall be provided to serve as edge protection. A curb shall be not less than 4" in height. Barriers shall be constructed so that the barrier prevents the passage of a 4"-diameter sphere, where any portion of the sphere is within 4" of the floor or ground surface.

1012.10.2 The floor or ground surface of the ramp run or landing shall extend 12" minimum beyond the inside face of a handrail complying with *IBC/NJ* Section 1014.

1013.1 Exits and exit access doors shall be marked by an approved exit sign readily visible from any direction of egress travel. The path of egress travel to exits and within exits shall be marked by readily visible exit signs to clearly indicate the direction of egress travel in cases where the exit or the path of egress travel is not immediately visible to the occupants. Intervening means of egress doors within exits shall be marked by exit signs. Exit sign placement shall be such that no point in an exit access corridor or exit passageway is more than 100 feet (30 480 mm) or the listed viewing distance for the sign, whichever is less, from the nearest visible exit sign. Exceptions: 1) Exit signs are not required in rooms or areas that require only one exit or exit access; 2) Main exterior exit doors or gates that are obviously and clearly identifiable as exits need not have exit signs where approved by the building official; 3) Exit Signs are not required in individual sleeping units in Group R-2.

1013.5 Electrically powered, self-luminous and photoluminescent exit signs shall be listed and labeled in accordance with UL 924 and shall be installed in accordance with the manufacturer's instructions and the *Electrical Subcode* (*NJUCC* 5:23-3.16). Exit signs shall be illuminated at all times.

1013.6.1 Every exit sign and directional exit sign shall have plainly legible letters not less than 6" high with the principal strokes of the letters not less than ¾" wide. The word "EXIT" shall have letters having a width not less than 2" wide, except the letter "I," and the minimum spacing between letters shall be not less than 3/8". Signs larger than the minimum established in this section shall have letter widths, strokes and spacing in proportion to their height. The word "EXIT" shall be in high contrast with the background and shall be clearly discernible when the Means of Exit sign illumination is or is not energized. If a chevron directional indicator is provided as part of the exit sign, the construction shall be such that the direction of the chevron directional indicator cannot be readily changed.

1013.6.2 The face of an exit sign illuminated from an external source shall have an intensity of not less than 5 footcandles.

1013.6.3 Exit signs shall be illuminated at all times. To ensure continued illumination for a duration of not less than 90 minutes in case of primary power loss, the sign illumination means shall be connected to an emergency power system provided from storage batteries, unit equipment or an on-site generator. The installation of the emergency power system shall be in accordance with *IBC/NJ* Chapter 27

1014.1 Handrails serving flights of stairways, ramps, stepped aisles and ramped aisles shall be adequate in strength and attachment in accordance with *IBC/NJ* Section 1607.8. Handrails required for flights of stairways by *IBC/NJ* Section 1011.11 shall comply with *IBC/NJ* Sections 1014.2 through 1014.9. Handrails required for ramps by *IBC/NJ* Section 1012.8 shall comply with *IBC/NJ* Sections 1014.2 through 1014.8.

1014.2 Handrail height, measured above stair tread nosings, or finish surface of ramp slope, shall be uniform, not less than 34" and not more than 38". Handrail height of alternating tread devices and ships ladders, measured above tread nosings, shall be uniform, not less than 30" and not more than 34".

1014.2.2 Where handrail fittings or bendings are used to provide continuous transition between flights , the fittings or bendings shall be permitted to exceed the maximum height.

1014.3.1 Handrails with a circular cross section shall have an outside diameter of not less than 1 ¼" and not greater than 2". Where the handrail is not circular, it shall have a perimeter dimension of not less than 4" and not greater than 6 ¼" with a maximum cross-sectional dimension of 2 ¼" and minimum cross-sectional dimension of 1". Edges shall have a minimum radius of 0.01".

1014.3.2 Handrails with a perimeter greater than 6 ¼" shall provide a graspable finger recess area on both sides of the profile. The finger recess shall begin within a distance of ¾" measured vertically from the tallest portion of the profile and achieve a depth of not less than 5/16" within 7/8" below the widest portion of the profile. This required depth shall continue for not less than 3/8" to a level that is not less than 1 ¾" below the tallest portion of the profile. The width of the handrail above the recess shall be not less than 1 ½" to not greater than 2 ¾". Edges shall have a minimum radius of 0.01".

1014.4 Handrail gripping surfaces shall be continuous, without interruption by newel posts or other obstructions.

1014.4.3 Handrail brackets or balusters attached to the bottom surface of the handrail that do not project horizontally beyond the sides of the handrail within 1 1 /2" of the bottom of the handrail shall not be considered obstructions. For each 1/2" of additional handrail perimeter dimension above 4", the vertical clearance dimension of 1 ½" shall be permitted to be reduced by 1/8".

1014.5 Handrails shall not rotate within their fittings.

1014.6 Handrails shall return to a wall, guard or the walking surface or shall be continuous to the handrail of an adjacent flight of stairs or ramp run. Where handrails are not continuous between flights, the handrails shall extend horizontally not less than 12" beyond the top riser and continue to slope for the depth of one tread beyond the bottom riser. At ramps where handrails are not continuous between runs, the handrails shall extend horizontally above the landing 12" minimum beyond the top and bottom of ramp runs. The extensions of handrails shall be in the same direction of the flights of stairs at stairways and the ramp runs at ramps.

1014.7 Clear space between a handrail and a wall or other surface shall be not less than 1 ½". A handrail and a wall or other surface adjacent to the handrail shall be free of any sharp or abrasive elements.

1014.8 On ramps and on ramped aisles that are part of an accessible route, the clear width between handrails shall be 36" minimum. Projections into the required width of aisles, stairways, and ramps at each side shall not exceed 4 1/2" at or below the handrail height. Projections into the required width shall not be limited above the minimum headroom height required in *IBC/NJ* Section 1011.3.

1015.1 Guards shall comply with the provisions of *IBC/NJ* Sections 1015.2 through 1015.7. Operable windows with sills located more than 72" above finished grade or other surface below shall comply with *IBC/NJ* Section 1015.8.

1015.2 Guards shall be located along open-sided walking surfaces, including mezzanines, equipment platforms, aisles, stairs, ramps, and landings that are located more than 30" measured vertically to the floor or grade below at any point within 36" horizontally to the edge of the open side. Guards shall be adequate in strength and attachment in accordance with *IBC/NJ* Section 1607.8. Exception: Guards are not required on the audience side of stages and raised platforms, including stairs leading up to the stage and raised platforms.

1015.3 Required guards shall be not less than 42" high, measured vertically as follows: 1) From the adjacent walking surfaces; 2) On stairways and stepped aisles, from the line connecting the leading edges of the tread nosings; 3) On ramps and ramped aisles, from the ramp surface at the guard.

1015.4 Required guards shall not have openings that allow passage of a sphere 4" in diameter from the walking surface to the required guard height. Exceptions: 1) From a height of 36" to 42", guards shall not have openings that allow passage of a sphere 4 3/8" in diameter. 2) The triangular openings at the open sides of a stair, formed by the riser, tread and bottom rail shall not allow passage of a sphere 6 inches (152 mm) in diameter. 3). At elevated walking surfaces for access to and use of electrical, mechanical or plumbing systems or equipment, guards shall not have openings that allow passage of a sphere 21" in diameter. 4). In areas that are not open to the public within occupancy in Use Group S, guards shall not have openings that allow passage of a sphere 21" in diameter.

1015.6 Guards shall be provided where various components that require service are located within 10' of a roof edge or open side of a walking surface and such edge or open side is located more than 30" above the floor, roof or grade below. The guard shall extend not less than 30" beyond each end of such components. The guard shall be constructed so as to prevent the passage of a sphere 21" in diameter.

1015.7 Guards shall be provided where the roof hatch opening is located within 10' of a roof edge or open side of a walking surface and such edge or open side is located more than 30" above the floor, roof or grade below. The guard shall be constructed so as to prevent the passage of a sphere 21" in diameter.

1016.2.2 Egress from a room or space shall not pass through adjoining or intervening rooms or areas, except where such adjoining rooms or areas and the area served are accessory to one or the other, are not a Group H occupancy and provide a discernible path of egress travel to an exit. Exception: Means of Egress are not prohibited through adjoining or intervening rooms or spaces in a Group S occupancy where the adjoining or intervening rooms or spaces are the same or a lesser hazard occupancy group.

1016.2.3 An exit access shall not pass through a room that can be locked to prevent egress.

1017.2 Exit access travel distance shall not exceed the values given in *IBC/NJ* Table 1017.2.

Table 1017.2 – Exit Access Travel Distance:
- A, R, S-1, w/ Sprinkler ..... 250'
- B, w/ Sprinkler ..... 300'

1017.3 Exit Access Travel Distance shall be measured from the most remote point within a story along the natural and unobstructed path of horizontal and vertical egress travel to the entrance to an exit.

1019.3.1 In other than Group I-2 and I-3 occupancies, exit access stairways and ramps that serve or atmospherically communicate between only two stories shall not be required to be enclosed with a shaft enclosure constructed in accordance with *IBC/NJ* Section 713.

Table 1020.1 – Corridor Fire-Resistance Rating:
- A, B, S w/ Sprinkler 0

Table 1020.2 – Minimum Corridor Width:
- Occupant Load less than 50 ..... 36"

1020.4.2 In occupancies in Groups B, R-2, and S, where the building is equipped throughout with an automatic sprinkler system in accordance with *IBC/NJ* Section 903.3.1.1, the length of the dead-end corridors shall not exceed 50".

1030.1 In addition to the Means of Egress required by *IBC/NJ* Chapter 10, provisions shall be made for emergency escape and rescue openings in Group R-2 occupancies in accordance with *IBC/NJ* Tables 1006.3.3(1) and 1006.3.3(2). Sleeping rooms below the fourth story above grade plane shall have at least one exterior emergency escape and rescue opening in accordance with *IBC/NJ* Section 1030. Such openings shall open directly into a public way or to a yard or court that opens to a public way.

1030.2 Emergency escape and rescue openings shall have a minimum net clear opening of 5.7 SF.

1030.2.1 The minimum net clear opening height dimension shall be 24". The minimum net clear opening width dimension shall be 20". The net clear opening dimensions shall be the result of normal operation of the opening.

1030.3 Emergency escape and rescue openings shall have the bottom of the clear opening not greater than 44" measured from the floor.

1030.5 Bars, grilles, grates or similar devices are permitted to be placed over emergency escape and rescue openings provided the minimum net clear opening size complies with *IBC/NJ* Section 1030.1.1 and 1030.4.2 and such devices shall be releasable or removable from the inside without the use of a key, tool or force greater than that which is required for normal operation of the emergency escape and rescue opening.

1100.0 Accessibility

1104.1 At least one accessible route within the site shall be provided from public transportation stops, accessible parking, accessible passenger loading zones, and public streets or sidewalks to the accessible building entrance served.

1104.4.2 Large buildings, defined as those with a total gross enclosed floor area of 10,000 SF or more, shall provide the accessible building features required of small buildings in *IBC/NJ* Section 1104.4.1. In addition, large buildings shall be required to have an elevator(s) to provide a vertical accessible route between floors; however, in such buildings, floors that are less than 3,000 square feet or floors with only mechanical equipment shall not be required to be served by an elevator.

1106.1 Accessible parking spaces shall be provided per *IBC/NJ* Section 1106.

1109.2 Each toilet room and bathing room shall be Accessible.

1109.2.2 Where water closet compartments are provided in a toilet room or bathing room, at least 5% of the total number of compartments shall be wheelchair accessible. Where the combined total water closet compartments and urinals provided in a toilet room or bathing room is six or more, at least 5% of the total number of compartments shall be ambulatory accessible, provided in addition to the wheelchair accessible compartment.

1109.2.3 Where lavatories are provided, at least 5%, but not less than one, shall be accessible. Where an accessible lavatory is located within the accessible water closet compartment at least one additional accessible lavatory shall be provided in the multicompartment toilet room outside the water closet compartment.

1109.4 Where kitchens and kitchenettes are provided in accessible spaces or rooms, they shall be Accessible.

1109.5 Where drinking fountains are provided on an exterior site, on a floor or within a secured area, the drinking fountains shall be provided in accordance *IBC/NJ* with Sections 1109.5.1 and 1109.5.2.

1109.5.1 No fewer than two drinking fountains shall be provided. One drinking fountain shall comply with the requirements for people who use a wheelchair and one drinking fountain shall comply with the requirements for standing persons. Exception: A single drinking fountain with two separate spouts that complies with the requirements for people who use a wheelchair and standing persons shall be permitted to be substituted for two separate drinking fountains.

1109.9 Where fixed or built-in storage elements such as cabinets, coat hooks, shelves, medicine cabinets, lockers, closets and drawers are provided in required accessible spaces, at least 5%, but not less than one of each type shall be accessible.

1109.13 Controls, operating mechanisms and hardware intended for operation by the occupant, including switches that control lighting and ventilation and electrical convenience outlets, in accessible spaces, along accessible routes or as parts of accessible elements shall be accessible. Exceptions: 1) Operable parts that are intended for use only by service or maintenance personnel shall not be required to be accessible. 2) Electrical or communication receptacles serving a dedicated use shall not be required to be accessible. 3) Where two or more outlets are provided in a kitchen above a length of countertop that is uninterrupted by a sink or appliance, one outlet shall not be required to be accessible. 4) Floor electrical receptacles shall not be required to be accessible. 5) HVAC diffusers shall not be required to be accessible. 6) Except for light switches, where redundant controls are provided for a single element, one control in each space shall not be required to be accessible.

1111.1 Assessible signage shall be provided per *IBC/NJ* Sections 1111.1, 1111.2 and 111.3

1300.0 Energy Efficiency

5:23-3.18(a)1 The Energy subcode for new construction is ASHRAE.IESNA Standard 90.1 (*ASHROE*), as adopted by *NJUCC*.

1400.0 Exterior Walls

1403.2 Exterior walls shall provide the building with a weather-resistant exterior wall envelope. The exterior wall envelope shall include flashing, as described in *IBC/NJ* Section 1405.4. The exterior wall envelope shall be designed & constructed in such a manner as to prevent the accumulation of water within the wall assembly by providing a water-resistive barrier behind the exterior veneer, per *IBC/NJ* Section 1404.2 and a means for draining water that enters the assembly to the exterior of the veneer. Protection against condensation in the exterior wall assembly shall be provided in accordance with the *IBC/NJ* Section 1405.3.

1500.0 Roof Assemblies

1507.1 Roof coverings shall be designed, installed, and maintained in accordance with *IBC/NJ* Chapter 15 and the approved manufacturer's installation instructions such that the roof covering shall serve to protect the building.

1503.4.1 Where roof drains are required, secondary (emergency overflow roof drains or scuppers shall be provided where the roof perimeter constructions extends above the roof in such a manner that water will be entrapped if the primary drain allows buildup for any reason. The installation and sizing of secondary emergency overflow drains, leaders, and conductors shall comply with the Plumbing Subcode, *NJUCC* 5:23-3.15.

1600.0 Structural Design

1604.2 Building, structures, and parts thereof shall be designed & constructed to support safely the factored loads in load combinatons defined in the *IBC/NJ* without exceeding the appropriate strength limit states for the materials of construction.

Table 1604.5 – Occupancy Category of Buildings & Other Structures:

! Occupancy Category IV
(Fire, rescue, ambulance, and police stations and emergency vehicle garages.)

Table 1607.1 - Minimum Uniform/Concentrated Floor Live Loads:
- Assembly ..... 100 PSF
- Platforms ..... 100 PSF
- Business Corridors above First Floor ..... 80 PSF, 2000# concentrated
- Business Lobbies and First Floor Corridors ..... 100 PSF, 2000# concentrated
- Business Offices ..... 50 PSF, 2000# concentrated
- Gymnasiums ..... 100 PSF
- Residential Private Rooms and Corridors serving them ..... 40 PSF
- Roofs ..... 20 PSF

1603.1.3 The minimum Roof Snow Load is based upon 25 PSF Ground Snow Load [per DCA Bulletin 19-1].

1603.1.4 The design Basic Wind Speed is 120 mph [per DCA Bulletin 19-1].

1800.0 Soils & Foundations

1808.1 Foundations shall be constructed in accordance with *IBC/NJ* Chapter 18

1900.0 Concrete

1901.2 Structural concrete shall be constructed in accordance with *IBC/NJ* Chapter 19 and ACI 318 as amended in *IBC/NJ* Section 1905.

2100.0 Masonry

2104.2 Masonry construction shall comply with the requirements of *IBC/NJ* Sections 2104.1.1 and 2104.1.2 and with TMS 602/ACI 530.1/ASCE 6.

Plumbing Systems

5:23-3.15(a)1 Plumbing supply, drainage, venting, fixtures, devises, trim, & appliances shall be designed, installed, & tested in accordance with the requirements of the *National Standard Plumbing Code/2015 (NPC)*, as adopted by NJUCC.

P07.21.2 Plumbing Occupant Load:
First Floor (Existing Building, Addition) Assembly, Business, Gym, Lockers
!172 (IBC occupants) x .67 (IBC/NPC) x 50%. gender = 57 (NPC occupants/gender)
Second Floor (Existing Building, Addition) Business
!58 (IBC occupants) x .67 (IBC/NPC) x 50%. gender = 17 (NPC occupants/gender)
Second Floor (Addition) Dormitories
!8 (IBC occupants) x .67 (IBC/NPC) x 50%. gender = 3 (NPC occupants/gender)
First Floor (Addition) Storage, Equipment Bays
!30 (IBC occupants) x .67 (IBC/NPC) x 50%. gender = 10 (NPC occupants/gender)

Table P07.21.1 – Min Number of Required Plumbing Fixtures/Gender:
First Floor (Existing Building, Addition) Assembly, Business, Gym, Lockers
• 2 WC, 1 Lav, 1 Drinking Water Facility, 1 Service Sink/Fl per gender
Second Floor (Existing Building, Addition) Business
• 2 WC, 1 Lav, 1 Drinking Water Facility, 1 Service Sink/Fl.
Second Floor (Addition) Dormitories
• 2 WC, 2 Lav, 1 Shower, 1 Drinking Water Facility, 1 Service Sink/Fl.
First Floor (Addition) Storage, Equipment Bays
• 1 WC, 1 Lav [NSPC 7.21.4(2)]

Electrical Systems

5:23-3.16(a)1 Electrical Power & Lighting panels, circuiting, grounding, receptacles, fixtures, devises, & appliances shall be designed, installed, & tested in accordance with the requirements of the *National Electrical Code/2014 (NEC)*, as adopted by *NJUCC*.

Mechanical Systems

M07.3 Heating, Ventilation, & Air Conditioning equipment, supply, exhaust, combustion air, & controls shall be designed, installed, & tested in accordance with the requirements of the *IMC* and the manufacturer's instructions and recommendations.

This code analysis is based upon NJAC 5:23, the New Jersey Uniform Construction Code. The most recent Update (Errata 16 December 2019) was received at RYEBREAD Architects on 03 June 2020. This Code adopts and amends the International Building Code 2018 (New Jersey edition).

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RELIEF FIRE COMPANY NO. 1
ADDITION / RENOVATION
BLOCK 66, LOTS 4, 5, 10, 11, 21, 22, 22.01 AND 23
17 PINE STREET
MOUNT HOLLY, NEW JERSEY
TITLE: CODE ANALYSIS

DRAWING DATE: 01 JULY 2020
REVISION DATE:
DRAWN BY: RR
COMMISSION NO.: 5475B

A1.1

COM*check* Software Version COMcheckWeb
Envelope Compliance Certificate

Project Information

Energy Code:	90.1 (2016) Standard
Project Title:	MT HOLLY FIRE RELIEF ADDITION 2020
Location:	Mount Holly, New Jersey
Climate Zone:	4a
Project Type:	Addition
Vertical Glazing / Wall Area:	10%
Performance Sim. Specs:	EnergyPlus 8.1.0.009 (EPW: USA_PA_Philadelphia.Intl.AP.724080_TMY3.epw)

Construction Site:
17 PINE STREET
MT HOLLY, New Jersey 08060

Owner/Agent:

Designer/Contractor:
REGAN YOUNG
RYEBREAD ARCHITECTS
456 HIGH STREET
MT HOLLY, New Jersey 08060
609-265-2652
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Building Area	Floor Area
1-Equipment Bays (Fire Station) : Nonresidential	5903
2-Admin Areas (Office) : Nonresidential	4476

Envelope Assemblies

Assembly	Gross Area or Perimeter	Cavity R-Value	Cont. R-Value	Proposed U-Factor	Budget U-Factor(a)
Floor: Unheated Slab-On-Grade, Vertical 3 ft., [Bldg. Use 1 - Equipment Bays] (c)	241	---	10.0	0.510	0.520
Floor: Unheated Slab-On-Grade, Vertical 3 ft., [Bldg. Use 2 - Admin Areas] (c)	211	---	10.0	0.510	0.520
Roof: Insulation Entirely Above Deck, [Bldg. Use 1 - Equipment Bays]	5903	---	20.0	0.048	0.032
Roof: Insulation Entirely Above Deck, [Bldg. Use 2 - Admin Areas]	4476	---	20.0	0.048	0.032
NORTH					
Ext. Wall: Steel-Framed, 16in. o.c., [Bldg. Use 2 - Admin Areas]	1357	19.0	10.0	0.052	0.064
Window: Metal Frame: Fixed, Perf. Specs.: Product ID Per Project Specs, SHGC 0.29, VT 0.35, [Bldg. Use 2 - Admin Areas] (b)	401	---	---	0.300	0.380
Window: Metal Frame: Fixed, Perf. Specs.: Product ID Per Project Specifications, SHGC 0.29, VT 0.31, [Bldg. Use 2 - Admin Areas] (b)	12	---	---	0.520	0.380
Window: Metal Frame: Fixed, Perf. Specs.: Product ID Per Project Specifications, SHGC 0.29, VT 0.31, [Bldg. Use 2 - Admin Areas] (b)	12	---	---	0.520	0.380
Window: Metal Frame: Fixed, Perf. Specs.: Product ID Per Project Specifications, SHGC 0.29, VT 0.31, [Bldg. Use 2 - Admin Areas] (b)	12	---	---	0.520	0.380
Window: Metal Frame: Fixed, Perf. Specs.: Product ID Per Project Specifications, SHGC 0.29, VT 0.31, [Bldg. Use 2 -	12	---	---	0.520	0.380
Ext. Wall: Concrete Block, 12in., Partially Grouted, Cells Empty, Normal Density, Furring: None, [Bldg. Use 1 - Equipment Bays]	1505	---	5.0	0.133	0.104
Door: Insulated Metal, Non-Swinging, [Bldg. Use 1 - Equipment Bays]	168	---	---	0.040	0.310
Door: Insulated Metal, Non-Swinging, [Bldg. Use 1 - Equipment Bays]	168	---	---	0.040	0.310
Door: Insulated Metal, Non-Swinging, [Bldg. Use 1 - Equipment Bays]	168	---	---	0.040	0.310
Door: Insulated Metal, Non-Swinging, [Bldg. Use 1 - Equipment Bays]	168	---	---	0.040	0.310
Door: Insulated Metal, Swinging, [Bldg. Use 1 - Equipment Bays]	21	---	---	0.310	0.370
Door: Insulated Metal, Swinging, [Bldg. Use 1 - Equipment Bays]	21	---	---	0.310	0.370
EAST					
Ext. Wall: Concrete Block, 12in., Partially Grouted, Cells Empty, Normal Density, Furring: None, [Bldg. Use 1 - Equipment Bays]	1474	---	10.0	0.080	0.104
Ext. Wall: Steel-Framed, 16in. o.c., [Bldg. Use 2 - Admin Areas]	360	19.0	10.0	0.052	0.064
SOUTH					
Ext. Wall: Steel-Framed, 16in. o.c., [Bldg. Use 2 - Admin Areas]	1373	19.0	10.0	0.052	0.064
Window: Metal Frame: Fixed, Perf. Specs.: Product ID Per Project Specifications, SHGC 0.29, VT 0.31, [Bldg. Use 2 - Admin Areas] (b)	15	---	---	0.520	0.380
Window: Metal Frame: Fixed, Perf. Specs.: Product ID Per Project Specifications, SHGC 0.29, VT 0.31, [Bldg. Use 2 - Admin Areas] (b)	15	---	---	0.520	0.380
Window: Metal Frame: Fixed, Perf. Specs.: Product ID Per Project Specifications, SHGC 0.29, VT 0.31, [Bldg. Use 2 - Admin Areas] (b)	15	---	---	0.520	0.380
Window: Metal Frame: Fixed, Perf. Specs.: Product ID Per Project Specifications, SHGC 0.29, VT 0.31, [Bldg. Use 2 - Admin Areas] (b)	15	---	---	0.520	0.380
Window: Metal Frame: Fixed, Perf. Specs.: Product ID Per Project Specifications, SHGC 0.29, VT 0.31, [Bldg. Use 2 - Admin Areas] (b)	15	---	---	0.520	0.380
Window: Metal Frame: Fixed, Perf. Specs.: Product ID Per Project Specifications, SHGC 0.29, VT 0.31, [Bldg. Use 2 - Admin Areas] (b)	15	---	---	0.520	0.380
Window: Metal Frame: Fixed, Perf. Specs.: Product ID Per Project Specifications, SHGC 0.29, VT 0.31, [Bldg. Use 2 - Admin Areas] (b)	15	---	---	0.520	0.380
Window: Metal Frame: Fixed, Perf. Specs.: Product ID Per Project Specifications, SHGC 0.29, VT 0.31, [Bldg. Use 2 - Admin Areas] (b)	15	---	---	0.520	0.380
Ext. Wall: Concrete Block, 12in., Partially Grouted, Cells Empty, Normal Density, Furring: None, [Bldg. Use 1 - Equipment Bays]	1505	---	5.0	0.133	0.104
Door: Insulated Metal, Non-Swinging, [Bldg. Use 1 - Equipment Bays]	168	---	---	0.250	0.310
Door: Insulated Metal, Non-Swinging, [Bldg. Use 1 - Equipment Bays]	168	---	---	0.250	0.310
Door: Insulated Metal, Non-Swinging, [Bldg. Use 1 - Equipment Bays]	168	---	---	0.250	0.310
Door: Insulated Metal, Non-Swinging, [Bldg. Use 1 - Equipment Bays]	168	---	---	0.250	0.310
Door: Insulated Metal, Swinging, [Bldg. Use 1 - Equipment Bays]	21	---	---	0.310	0.370
Door: Insulated Metal, Swinging, [Bldg. Use 1 - Equipment Bays]	21	---	---	0.310	0.370
Door: Insulated Metal, Swinging, [Bldg. Use 1 - Equipment Bays]	21	---	---	0.310	0.370
WEST					
Ext. Wall: Steel-Framed, 16in. o.c., [Bldg. Use 2 - Admin Areas]	775	19.0	10.0	0.052	0.064
Door: Insulated Metal, Swinging, [Bldg. Use 2 - Admin Areas]	21	---	---	0.310	0.370
Window: Metal Frame: Fixed, Perf. Specs.: Product ID Per Project Specifications, SHGC 0.29, VT 0.31, [Bldg. Use 2 - Admin Areas] (b)	12	---	---	0.520	0.380
Window: Metal Frame: Fixed, Perf. Specs.: Product ID Per Project Specifications, SHGC 0.29, VT 0.31, [Bldg. Use 2 - Admin Areas] (b)	12	---	---	0.520	0.380
Window: Metal Frame: Fixed, Perf. Specs.: Product ID Per Project Specifications, SHGC 0.29, VT 0.31, [Bldg. Use 2 - Admin Areas] (b)	12	---	---	0.520	0.380
Window: Metal Frame: Fixed, Perf. Specs.: Product ID Per Project Specifications, SHGC 0.29, VT 0.31, [Bldg. Use 2 - Admin Areas] (b)	12	---	---	0.520	0.380
Door: Insulated Metal, Perf. Specs.: Product ID Per Project Specs, SHGC 0.68, VT 0.31, [Bldg. Use 2 - Admin Areas] (b)	109	---	---	0.440	0.680
Door: Insulated Metal, Perf. Specs.: Product ID Per Project Specs, SHGC 0.68, VT 0.31, [Bldg. Use 2 - Admin Areas] (b)	109	---	---	0.440	0.680

(a) Budget U-factors are used for software baseline calculations ONLY, and are not code requirements.
(b) Fenestration product performance must be certified in accordance with NFRC and requires supporting documentation.
(c) Slab-On-Grade proposed and budget U-factors shown in table are F-factors.

Envelope PASSES: Design 1% better than code

Envelope Compliance Statement

Compliance Statement: The proposed envelope design represented in this document is consistent with the building plans, specifications, and other calculations submitted with this permit application. The proposed envelope systems have been designed to meet the 90.1 (2016) Standard requirements in COM*check* Version COMcheckWeb and to comply with any applicable mandatory requirements listed in the Inspection Checklist.

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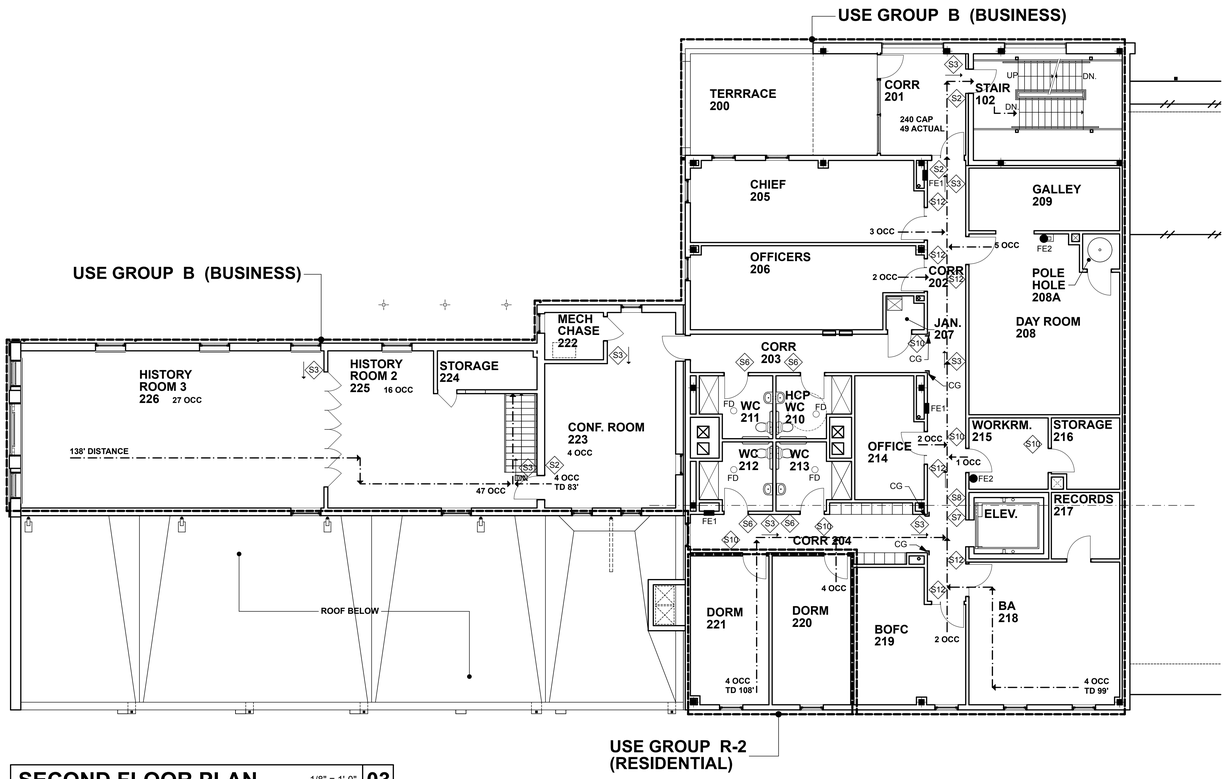
RELIEF FIRE COMPANY NO. 1
ADDITION / RENOVATION
BLOCK 86, LOTS 4, 5, 10, 11, 21, 22, 22.01 AND 23
17 PINE STREET
MOUNT HOLLY, NEW JERSEY

TITLE: **COMCHECK COMPLIANCE DATA**

DRAWING DATE: **01 JULY 2020**
REVISION DATE:

DRAWN BY: **RR**
COMMISSION NO.: **5475B**

A1.2



SECOND FLOOR PLAN 1/8" = 1'-0" 03

KEY:

- DIRECTION OF EGRESS TO EXIT
- # OCC — OCCUPANT LOAD
- #' TD — TRAVEL DISTANCE
- # CAP — DOOR EGRESS CAPACITY
- # ACTUAL — ACTUAL OCCUPANTS EXITING DOOR
- ADDENDUM-01 COMMENT 1.30 25 SEPT 2020
- RFG — REMOVABLE FLOOD GATE. PROTECTION BY THE OWNER

FIRE EXTINGUISHE SCHEDULE:

- FE1 — FULLY RECESSED CABINET AND FIRE EXTINGUISHER
- FE2 — SURFACE MOUNTED FIRE EXTINGUISHER ON BRACKET.

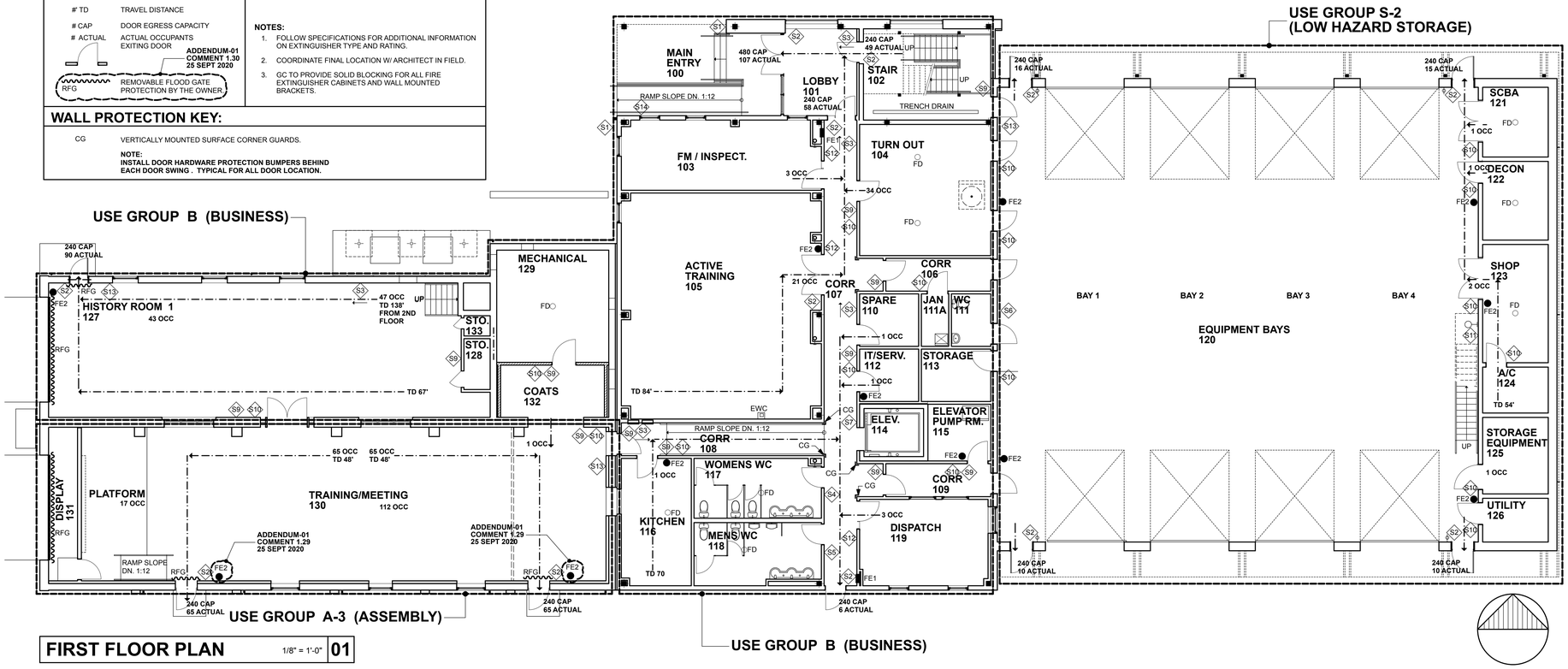
NOTES:

1. FOLLOW SPECIFICATIONS FOR ADDITIONAL INFORMATION ON EXTINGUISHER TYPE AND RATING.
2. COORDINATE FINAL LOCATION W/ ARCHITECT IN FIELD.
3. GC TO PROVIDE SOLID BLOCKING FOR ALL FIRE EXTINGUISHER CABINETS AND WALL MOUNTED BRACKETS.

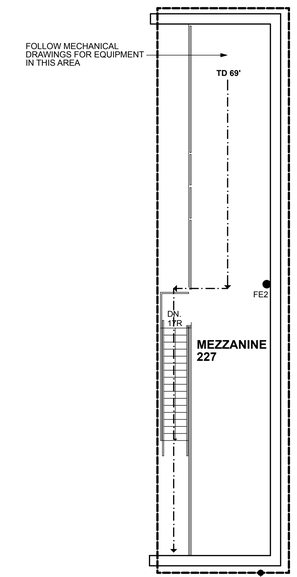
WALL PROTECTION KEY:

- CG — VERTICALLY MOUNTED SURFACE CORNER GUARDS.

NOTE:
INSTALL DOOR HARDWARE PROTECTION BUMPERS BEHIND EACH DOOR SWING . TYPICAL FOR ALL DOOR LOCATION.



FIRST FLOOR PLAN 1/8" = 1'-0" 01



MEZZANINE PLAN SCALE: 1/8" = 1'-0" 02

SIGNAGE DETAILS

S1 — SIGN TYPE / SIGN TYPE SYMBOL

SIGNAGE MOUNTED ON GLASS:

SIGNAGE REQUIRED TO BE MOUNTED TO GLASS SHALL HAVE A BLANK BACK PANEL MADE OF THE SAME MATERIAL AND OF THE SAME SIZE AND COLOR AS THE SIGN ADHERED TO THE OPPOSITE SIDE OF THE GLASS.

MOUNTING LOCATION AND HEIGHT:

WHERE PERMANENT IDENTIFICATION WITH TACTILE CHARACTERS IS PROVIDED FOR ROOMS AND SPACES, SIGNS SHALL BE INSTALLED ON THE WALL ADJACENT TO THE LATCH SIDE OF THE DOOR. AT DOUBLE LEAF DOORS, THE SIGN SHALL BE TO THE RIGHT OF THE RIGHT-HAND DOOR. WHERE THERE IS NO WALL SPACE ON THE LATCH SIDE OF A SINGLE DOOR, OR THE RIGHT SIDE OF DOUBLE DOORS, SIGNS SHALL BE ON THE NEAREST ADJACENT WALL. SIGNS SHALL HAVE AN 18-INCH MINIMUM SPACE ON THE FLOOR OR GROUND, CENTERED ON THE SIGN, BEYOND THE ARC OF ANY DOOR SWING BETWEEN THE CLOSED POSITION AND 45 DEGREE OPEN POSITION.

48-INCHES MINIMUM TO 60-INCHES MAXIMUM ABOVE FINISH FLOOR TO THE BASELINE OF THE CHARACTERS.

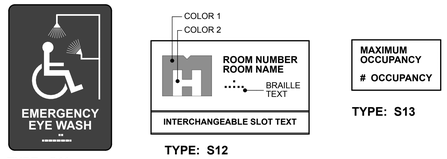
RAISED AND BRAILLED CHARACTERS AND PICTORIAL SYMBOL SIGNS:

LETTERS AND NUMERALS SHALL BE RAISED 1/32-INCH, UPPER CASE, SANS SERIF OR SIMPLE SERIF TYPE AND SHALL BE ACCOMPANIED WITH GRADE 2 BRAILLE. RAISED CHARACTERS SHALL BE AT LEAST 5/8-INCH HIGH, BUT NO HIGHER THAN 2-INCHES. PICTOGRAMS SHALL BE ACCOMPANIED BY THE EQUIVALENT VERBAL DESCRIPTION PLACED DIRECTLY BELOW THE PICTOGRAM. THE BORDER DIMENSION OF THE PICTOGRAM SHALL BE 6-INCHES MINIMUM IN HEIGHT. REFER TO TABLES 703.4.2.4.& 703.5 FOR REQUIRED CHARACTER AND BRAILLE DIMENSIONS.

FINISH AND CONTRAST:

THE CHARACTERS AND BACKGROUND OF SIGNS SHALL BE MATTE, OR OTHER NON GLARE FINISH. CHARACTERS AND SYMBOLS SHALL CONTRAST WITH THEIR BACK-GROUND EITHER LIGHT CHARACTERS ON A DARK BACKGROUND OR DARK CHARACTERS ON A LIGHT BACKGROUND.

REFER TO ICC/ANSI A117.1-2009 FOR ADDITIONAL REQUIREMENTS



ELEVATOR CONTROL SYMBOLS

ALL CONTROL SYMBOLS TO COMPLY WITH ANSI A117.1 2009

Control Button Type	Raised Symbol	Braille Message
DOOR OPEN (3.0 mm TYP. BETWEEN ELEMENTS; 16.0 mm; 4.8 mm)		op"en"
REAR/SIDE DOOR OPEN		op"en"
DOOR CLOSE		close
REAR/SIDE DOOR CLOSE		close
MAIN		ma"in"
ALARM		al"ar"m
PHONE		ph"one"
EMERGENCY STOP (WHEN PROVIDED) X on face of octagon is not required to be tactile		"st"op

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RELIEF FIRE COMPANY NO. 1
ADDITION / RENOVATION
BLOCK 66, LOTS 4, 5, 10, 11, 21, 22, 22.01 AND 23
17 PINE STREET
MOUNT HOLLY, NEW JERSEY

TITLE: USE GROUP, EGRESS AND SIGNAGE PLANS

DRAWING DATE: 01 JULY 2020
REVISION DATE:
1 02 SEPT 20
2 25 SEPT 20

DRAWN BY: RR
COMMISSION NO.: 5475B

A1.3

GENERAL NOTES:

01. ALL EXISTING INTERIOR ASBESTOS CONTAINING MATERIALS SHALL BE REMOVED BY THE OWNER, PRIOR TO THE START OF CONSTRUCTION.
02. ALL EXISTING KITCHEN EQUIPMENT, BASE AND WALL CABINETS AND SHEET FLOORING SHALL BE REMOVED BY THE OWNER, PRIOR TO THE START OF CONSTRUCTION. THE EXISTING UTILITY STUB-UPS AND LOCATIONS SHALL REMAIN AND SHALL BE REMOVED AS PART OF THE BUILDING DEMOLITION WORK PERFORMED BY THE G.C.
03. ALL DIMENSIONS SHOWN ARE APPROXIMATE AND MUST BE FIELD VERIFIED.
04. UNLESS SPECIFICALLY NOTED OTHERWISE ALL HISTORIC ARTIFACTS IN BUILDING SHALL BE REMOVED AND STORED OFFSITE BY THE FIRE DISTRICT PRIOR TO CONSTRUCTION. ANY FOUND HISTORIC ARTIFACTS DURING CONSTRUCTION SHALL BE RETURNED TO THE FIRE DISTRICT.
05. GC TO PROTECT ALL EXISTING HISTORIC FINISHES AND MATERIALS SLATED TO REMAIN.
06. ANY DEMOLITION OPERATION THAT CAUSED DAMAGE TO OR RQUIRE INFILLING OF EXISTING MATERIALS, IS TO MATCH EXISTING ADJACENT CONDITIONS (TYP.).
07. ALL EXISTING ELECTRICAL KNOB AND TUBE WIRING, ABANDONED SWITCHES, BOX PANELS, ETC TO BE REMOVED IN THEIR ENTIRETY. WALLS SHALL BE PATCHED AND REPAIRED TO MATCH ADJACENT WALL CONSTRUCTION.
08. ALL EXISTING ELECTRICAL KNOB AND TUBE WIRING, ABANDONED SWITCHES, BOX PANELS, ETC TO BE REMOVED IN THEIR ENTIRETY. WALLS TO BE PATCHED AND REPAIRED TO MATCH ADJACENT WALL CONSTRUCTION.
09. ALL EXISTING ABANDONED BOLTS AND SCREWS, ETC TO BE REMOVED. FINISHES SHALL BE PATCHED TO MATCH ADJACENT WALL CONSTRUCTION.

ASBESTOS ABATEMENT:

01. FOLLOW ASBESTOS REPORT IN APPENDIX OF PROJECT MANUAL FOR ASBESTOS ABATEMENT IDENTIFICATION IN EXISTING KITCHEN AREA.
02. FOLLOW ASBESTOS REPORT IN APPENDIX OF PROJECT MANUAL FOR ASBESTOS ABATEMENT IDENTIFICATION IN EXISTING BOILER ROOM AREA.

TERMITE TREATMENT NOTE:

01. CONTRACTOR SHALL PROVIDE TERMITE TREATMENT AT ALL AREAS OF EXISTING TERMITE DAMAGE WITHIN EXISTING BUILDING AND AT ALL AREAS OF NEW CONSTRUCTION.

DEMOLITION NOTES:

D1 EXISTING PORTION OF BUILDING FOOTINGS AND FOUNDATION TO BE DEMOLISHED IN IT'S ENTIRETY. COMPACT FILL TO DENSITY REQUIRED BY GEOTECHNICAL REPORT.

D2 **EXISTING OVERHEAD DOOR, TRACKS AND MOTORIZED OPERATOR ASSEMBLY SHALL BE REMOVED. CONVERT OVERHEAD DOOR TO BE PERMANENTLY FIXED TO ADJACENT WALL.**

D3 REMOVE EXISTING WOOD FENCE AND POST ASSEMBLY.

D4 EXISTING ACOUSTICAL PANEL CEILING GRID AND WOOD BEAD BOARD CEILING SHALL BE REMOVED IN ENTIRE EXISTING BAY 1 AREA. INSTALL NEW BEAD BOARD TO MATCH EXISTING IN ENTIRE EXISTING BAY 1 AREA.

D5 EXISTING ACOUSTICAL PANEL CEILING AND GRID IN BAY 2 AREA SHALL BE REMOVED.

D6 REMOVE EXISTING ROOF FLASHING DOWN TO ROOF DECK AND PREPARE TO RECEIVE NEW ROOFING. FOLLOW OTHER NOTES FOR ROOF DECKING REPLACEMENT.

D7 SISTER TERMITE DAMAGED FRAMING BENEATH ORIGINAL STAIR. RE-SECURE HISTORIC BALUSTERS, RESTORE TRIM TO MATCH ORIGINAL. REMOVE ALL TERMITE DAMAGED MATERIALS AND REPLACE IN KIND.

D8 REPAIR DAMAGED PLASTER CEILING AND TIN CEILING ASSEMBLY TO MATCH ORIGINAL. REPLACE WITH NEW TIN CEILING TO MATCH EXISTING.

D9 OWNER SHALL REMOVE ALL EXISTING WALL BASE, KITCHEN EQUIPMENT, SINKS, CABINETS, ETC, TO WALL SURFACES. GC TO PATCH WALLS TO MATCH EXISTING ADJACENT FINISHES. GC TO REMOVE ALL EQUIPMENT SERVICE CONNECTIONS AND PIPING AND TERMINATE AS REQUIRED.

D10 EXISTING EXHAUST FAN UNIT ABOVE SHALL BE REMOVED AND INFILL WALL TO MATCH EXISTING WALL.

D11 PORTION OF EXISTING WALL SHALL BE REMOVED FOR NEW DOOR AND SHUTTER DOOR, FRAME AND WALL OPENING. PROVIDE NEW HEADER AS REQUIRED. FOLLOW STRUCTURAL DRAWINGS FOR ADDITIONAL INFORMATION.

D12 PORTION OF EXISTING FOUNDATION WALL SHALL BE REMOVED TO ACCOMMODATE NEW ADDITION LANDING AREA ELEVATION LEVEL.

D13 EXISTING BASEBOARD HEATERS TO BE REMOVED IN THEIR ENTIRETY. PATCH AND REPAIR WALLS TO MATCH EXISTING.

D14 EXISTING DOOR AND FRAME ASSEMBLY SHALL BE REMOVED AND INFILL WALL TO MATCH EXISTING WALL FINISH AND TRIM WORK.

D15 EXISTING DOOR AND FRAME ASSEMBLY SHALL BE REMOVED FOR NEW EGRESS DOOR AND FRAME ASSEMBLY.

D16 PROTECT EXISTING WOOD FOLDING DOOR AND FRAME ASSEMBLY FROM ANY CONSTRUCTION DAMAGE.

D17 EXISTING ATTIC ACCESS LADDER ASSEMBLY SHALL BE REMOVED.

D18 EXISTING COUNTER, ROLLING DOOR AND TRACK ASSEMBLY AND SHALL BE REMOVED. INFILL OPENING TO MATCH ADJACENT WALL.

D19 EXISTING HANDRAIL ASSEMBLY TO BE REMOVED AND REPLACED WITH NEW.

D20 EXISTING WINDOW AND FRAME ASSEMBLY TO BE REMOVED AND INFILL TO MATCH EXISTING WALL.

D21 EXISTING WINDOW AND FRAME ASSEMBLY AND PORTION OF EXISTING WALL SHALL BE REMOVED FOR NEW DOOR OPENING.

D22 EXISTING CHIMNEY ASSEMBLY FOOTINGS AND FOUNDATION TO BE REMOVED IN IT'S ENTIRETY. PATCH EXISTING WALL AS REQUIRED TO MATCH EXISTING ADJACENT FINISH.

D23 EXISTING DRINKING FOUNTAIN SHALL BE REMOVED AND ALL WATER AND DRAIN CONNECTIONS SHALL BE REMOVED AND TERMINATED. FOLLOW PD1 FOR ADDITIONAL INFORMATION.

D24 EXISTING TOILET AND SINK TO BE REMOVED AND ALL WATER AND DRAIN CONNECTIONS SHALL BE TERMINATED. PATCH WALLS AND FLOOR TO MATCH EXISTING.

D25 EXISTING CEILING LOFT AND WALL SHALL BE REMOVED. PATCH WALLS TO MATCH EXISTING.

D26 EXISTING WASHER DRAIN PIPE SHALL BE REMOVED IN THIS AREA. FOLLOW PD1 FOR ADDITIONAL INFORMATION.

D27 EXISTING AC UNIT AND SUPPORT ASSEMBLY SHALL BE REMOVED AND INFILL OPENING TO MATCH EXISTING WALL.

D28 EXISTING CEILING HUNG UNIT HEATER SHALL BE REMOVED AND ALL SERVICE CONNECTIONS TO BE TERMINATED. FOLLOW HD1 FOR ADDITIONAL INFORMATION.

D29 EXISTING WALL MEMORIAL SHALL BE PROTECTED DURING CONSTRUCTION IN THIS AREA.

D30 EXISTING BELL TOWER SIGNAL DEVICE AND ADJACENT BOXES SHALL BE PROTECTED DURING CONSTRUCTION IN THIS AREA.

D31 EXISTING CABINET ENCLOSURE SHALL BE REMOVED IN IT'S ENTIRETY.

D32 REMOVE ALL EXISTING FLOOR FINISHES TO SUB FLOOR AND PREPARE TO RECEIVE NEW FLOOR FINISHES.

D33 REMOVE AND REPLACE ALL EXISTING TERMITE DAMAGED WOOD, STUDS, FRAMING, TRIM ETC., AND REBUILD TO MATCH EXISTING CONSTRUCTION. RESECURE HISTORIC BALUSTERS, RESTORE TRIM TO MATCH ORIGINAL. TYP.

D34 REMOVE EXISTING TERMITE DAMAGED DOOR AND REPLACE IN KIND, REMOVE AND REPAIR DISLOCATED WOOD TRIM ABOVE DOOR AND REPLACE IN KIND.

D35 REMOVE EXISTING FLOOR DRAIN AND INFILL OPENINGS WITH CONCRETE FLUSH WITH EXISTING ADJACENT CONCRETE SLAB. FOLLOW PD1 FOR ADDITIONAL INFORMATION.

D36 CAREFULLY PROTECT BURIED REMAINS AND HEADSTONE OF FIRE SERVICE DOG IN THIS AREA.

D37 EXISTING FIRE EQUIPMENT IN THIS AREA SHALL BE REMOVED BY FIRE DISTRICT AND REINSTALLED BY GC INTO NEW LOCATION OF ADDITION.

D38 REMOVE EXISTING MODERN STORM WINDOW ASSEMBLY. PATCH SCREW HOLES AS REQUIRED TO MATCH EXISTING.

D39 REMOVE EXISTING DOOR AND FRAME AND PREPARE OPENING TO RECEIVE NEW DOOR AND FRAME ASSEMBLY.

D40 REMOVE AND REPLACE DETERIORATED ROOF SHEATHING UNDER REMOVED ROOF TOP MECHANICAL UNIT AS PART OF BASE BID.

D41 REMOVE EXISTING WATER CONNECTION, WOOD TRIM SURROUND AND INFILL WALL AND FINISH TO MATCH EXISTING. FOLLOW PD1 FOR ADDITIONAL INFORMATION.

D42 REMOVE EXISTING MAILBOX AND RELOCATE PER OWNERS DIRECTION.

D43 REMOVE EXITING DAMAGED CONCRETE AND PREPARE SOIL TO RECEIVE NEW CONCRETE SLAB ON VAPOR BARRIER AND COMPACTED FILL.

D44 REMOVE EXISTING HOSE BIB IN PIT AND FILL PIT WITH NEW CONCRETE FLUSH WITH ADJACENT CONCRETE FLOOR SURFACE. FOLLOW PD1 FOR ADDITIONAL INFORMATION.

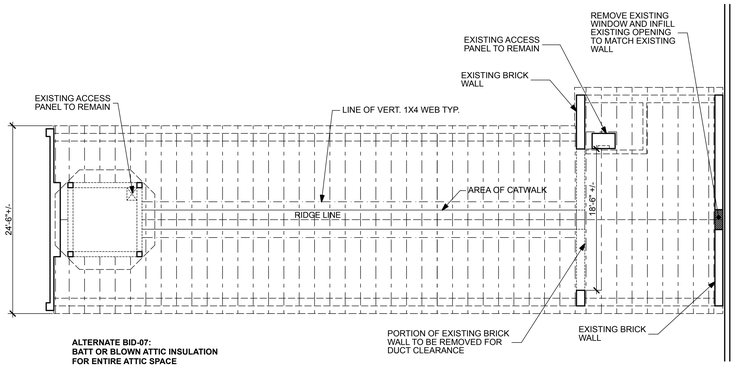
D45 REMOVE EXISTING HOSE BIB AND TERMINATE ALL WATER CONNECTIONS. FOLLOW PD1 FOR ADDITIONAL INFORMATION.

D46 REMOVE AND REPLACE DETERIORATED WOOD ROOF SHEATHING TO MATCH EXISTING AS PART OF BASE BID.

D47 CONTRACTOR TO INSPECT EXISTING SHEATHING FOR DAMAGE AND NOTIFY CONSTRUCTION MANAGER AND ARCHITECT IMMEDIATELY IF ADDITIONAL SHEATHING UNCOVERED DURING DEMOLITION.

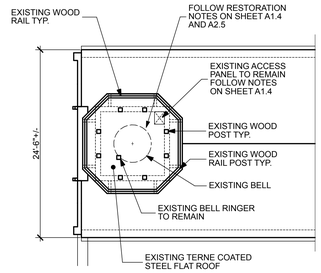
D48 REMOVE EXISTING WALL BOLTS AND PATCH PLASTER TO MATCH.

D49 CUT EXISTING ROOF RAFTERS AND SUPPORT PER STRUCTURAL DRAWINGS TO PERMIT NEW MECHANICAL DUCT TO PENETRATE ROOF. FOLLOW STRUCTURAL AND MECHANICAL DRAWINGS FOR ADDITIONAL INFORMATION.



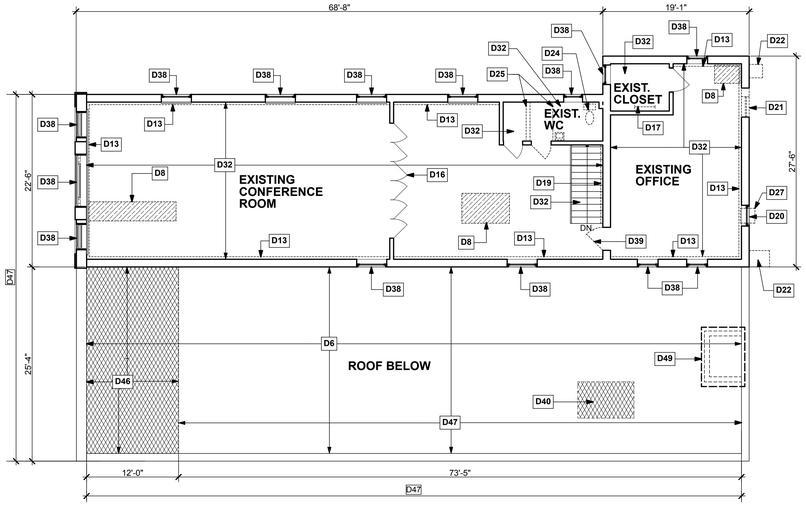
ALTERNATE BID-07:
BATT OR BLOWN ATTIC INSULATION FOR ENTIRE ATTIC SPACE

ROOF ATTIC PLAN 1/8" = 1'-0" 03



NOTE: FOLLOW SHEET A1.4 AND A2.5 FOR RESTORATION NOTES.

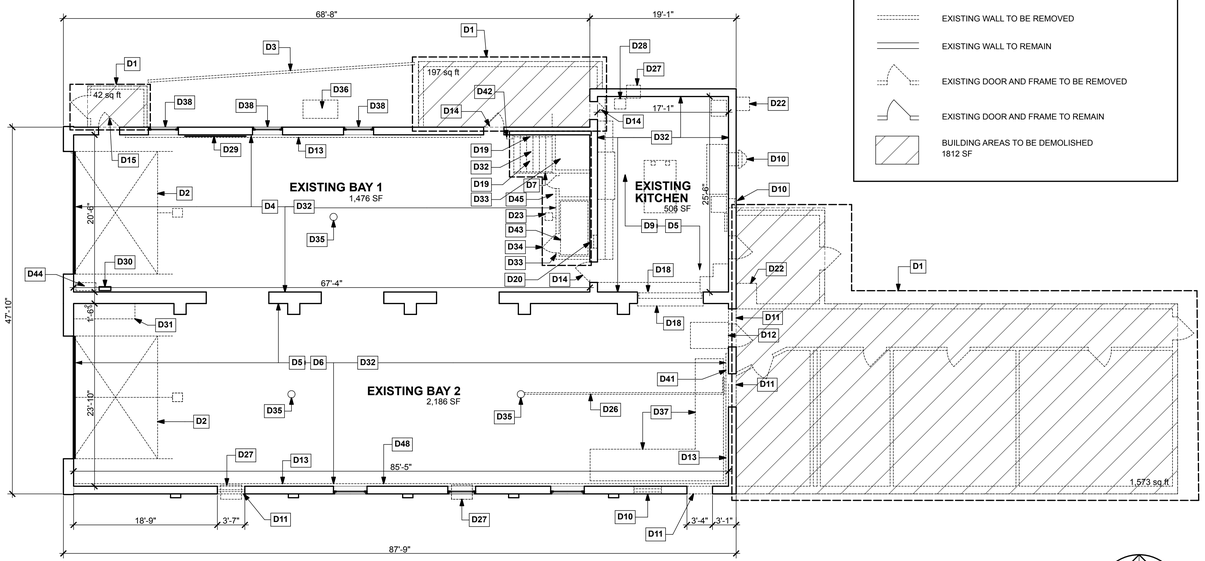
CUPOLA PLAN (ALT-BID 07) 1/8" = 1'-0" 04



SECOND FLOOR DEMO PLAN 1/8" = 1'-0" 02

MEP GENERAL NOTES:

FOLLOW MEP DRAWINGS FOR ADDITIONAL INFORMATION



FIRST FLOOR DEMO PLAN 1/8" = 1'-0" 01

KEY

NOTES:
1. **ALL DIMENSIONS SHOWN ARE +/- AND SHALL BE FIELD VERIFIED TYP.**
2. **FOLLOW DRAWING A1.5 FOR ADDITIONAL INFORMATION**

- EXISTING WALL TO BE REMOVED
- EXISTING WALL TO REMAIN
- EXISTING DOOR AND FRAME TO BE REMOVED
- EXISTING DOOR AND FRAME TO REMAIN
- BUILDING AREAS TO BE DEMOLISHED 1812 SF

BUILDING NORTH

CUPOLA RESTORATION (ALT. BID 07)

CUPOLA VIEW (ALT-BID 07)

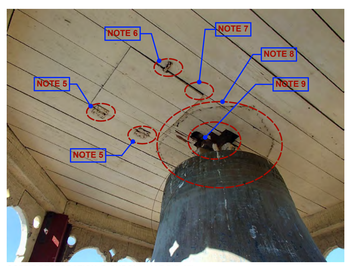
1. SCRAPE, PRIME AND PAINT ALL EXPOSED WOOD SURFACES WITH (2) COATS OF EXTERIOR GRADE ARCHITECTURAL FINISH PAINT. THIS INCLUDES ALL EXISTING WOOD SURFACES INCLUDING WOOD COLUMNS, DECORATIVE SCREENS, ORNAMENTAL WOOD BRACKETS, GUARDRAILS, SOFFITS, SIDING AND OTHER EXPOSED WOODWORK.
2. FOLLOW ADDITIONAL NOTES INDICATED ON ELEVATION SHEET A2.5.

POST AND RAIL RESTORATION (ALT-BID 07) FOLLOW NOTE 1 ABOVE

POST AND RAIL RESTORATION (ALT-BID 07) FOLLOW NOTE 1 ABOVE

TERNE-COATED STEEL FLAT ROOF RESTORATION @ CUPOLA (ALT-BID 07)

1. REMOVE SURFACE COATING AND RUST TO SOUND METAL.
2. FILL ANY METAL PITS LESS THAN 1/16" WITH SOLDER. ANY PITS LARGER THAN 1/16" SHALL BE PATCHED WITH NEW METAL OVER TOP OF HOLE. ROOFER SHALL TAKE GREAT CAUTION NOT TO BURN ANY UNDERLAYMENT OR SLIP SHEET THAT COULD IGNITE OR SMOLDER OR CAUSE A FIRE.
3. INSPECT SOLDER JOINT AND REPAIR BROKEN JOINTS AND RE-SOLDER.
4. PRIME AND PAINT ENTIRE ROOF SURFACE AND ROOF EDGE WITH TIN-O-LIN, CALBAR ROOF PAINT SYSTEMS IN STRICT ACCORDANCE WITH MANUFACTURER'S REQUIREMENTS.
5. THESE NOTES ALSO APPLY TO THE EXISTING ACCESS DOOR HATCH TO DECK.



SOFFIT RESTORATION @ CUPOLA (ALT-BID 07)

1. CONTRACTOR IS TO VERIFY AND CONFIRM WOOD BEAMS AND BELL MOUNT HAS NOT DETERIORATED. CONSULT WITH ARCHITECT IF DETERIORATED STRUCTURE IS DISCOVERED.
2. NO EXTERIOR FINISH RESTORATION OF BELL IS REQUIRED.
3. PROVIDE PROTECTION COVER ON BELL. DO NOT DRIP PAINT ON BELL.
4. SCRAPE, PRIME AND PAINT ALL EXPOSED WOOD SURFACES WITH (2) COATS OF EXTERIOR GRADE ARCHITECTURAL FINISH PAINT.
5. CLEAN AND RE-SECURE ACCESS HATCH HINGE.
6. CLEAN AND RE-SECURE ACCESS HATCH LATCH.
7. REALIGN HATCH DOOR FLUSH WITH SOFFIT FACE.
8. REMOVE ALL EXISTING STAPLES ON 1X4 T&G SOFFIT
9. INFILL GAPS IN 1X4 T&G SOFFIT TO MATCH EXISTING.

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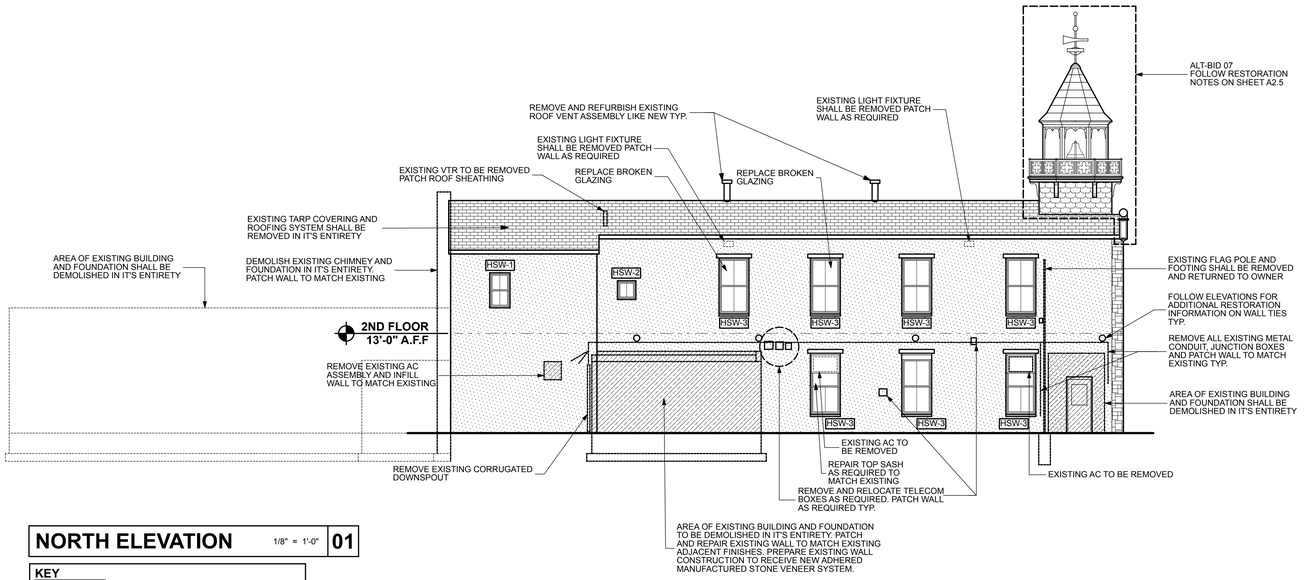
RELIEF FIRE COMPANY NO. 1
ADDITION / RENOVATION
BLOCK 86, LOTS 4, 5, 10, 11, 21, 22, 22.01 AND 23
17 PINE STREET
MOUNT HOLLY, NEW JERSEY

TITLE: DEMOLITION FLOOR PLANS

DRAWING DATE: 01 JULY 2020
REVISION DATE:
DRAWN BY: RR
COMMISSION NO.: 5475B

A1.4



NORTH ELEVATION 1/8" = 1'-0" 01

KEY

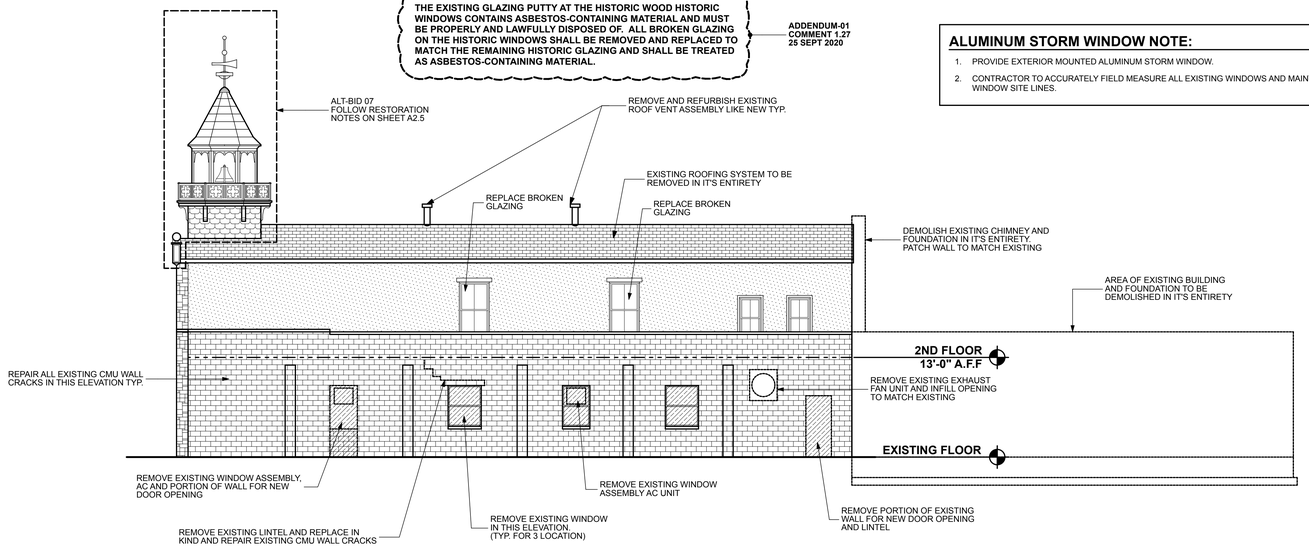
HSW-# HISTORIC STORM WINDOW, FOLLOW SHEET A2.5 AND A2.7 FOR ADDITIONAL INFORMATION

THE EXISTING GLAZING PUTTY AT THE HISTORIC WOOD HISTORIC WINDOWS CONTAINS ASBESTOS-CONTAINING MATERIAL AND MUST BE PROPERLY AND LAWFULLY DISPOSED OF. ALL BROKEN GLAZING ON THE HISTORIC WINDOWS SHALL BE REMOVED AND REPLACED TO MATCH THE REMAINING HISTORIC GLAZING AND SHALL BE TREATED AS ASBESTOS-CONTAINING MATERIAL.

ADDENDUM-01 COMMENT 1.27 25 SEPT 2020

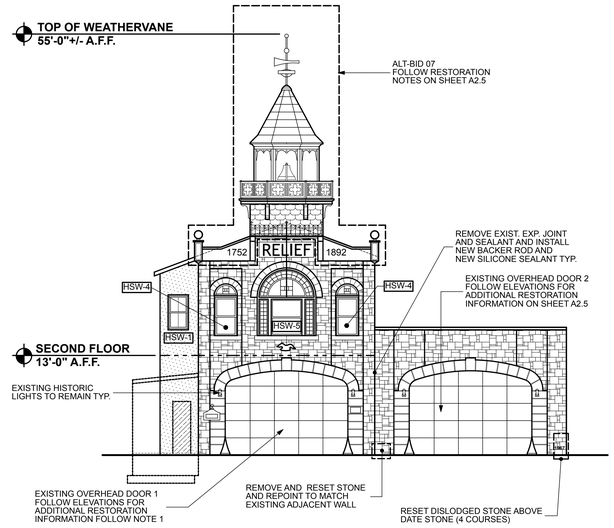
ALUMINUM STORM WINDOW NOTE:

1. PROVIDE EXTERIOR MOUNTED ALUMINUM STORM WINDOW.
2. CONTRACTOR TO ACCURATELY FIELD MEASURE ALL EXISTING WINDOWS AND MAINTAIN EXISTING WINDOW SITE LINES.



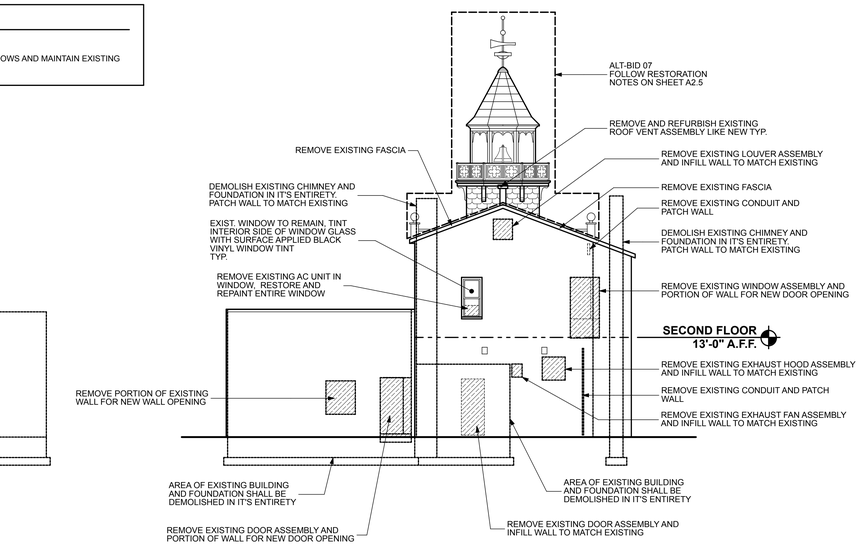
SOUTH ELEVATION 1/8" = 1'-0" 03

NOTE:
G.C. SHALL REMOVE ALL VEGETATION GROWTH OFF BUILDING.



WEST ELEVATION (PINE STREET) 1/8" = 1'-0" 02

NOTE 1 **EXISTING OVERHEAD DOOR 1 MUST REMAIN OPERATIVE TO PERMIT OWNER TO PLACE HISTORIC FIRE HOUSE, PUMPER, AND OTHER HISTORIC ARTIFACTS IN HISTORY ROOM 1(127). FOLLOW SHEET A1.4 FOR ADDITIONAL NOTES.**



EAST ELEVATION 1/8" = 1'-0" 04

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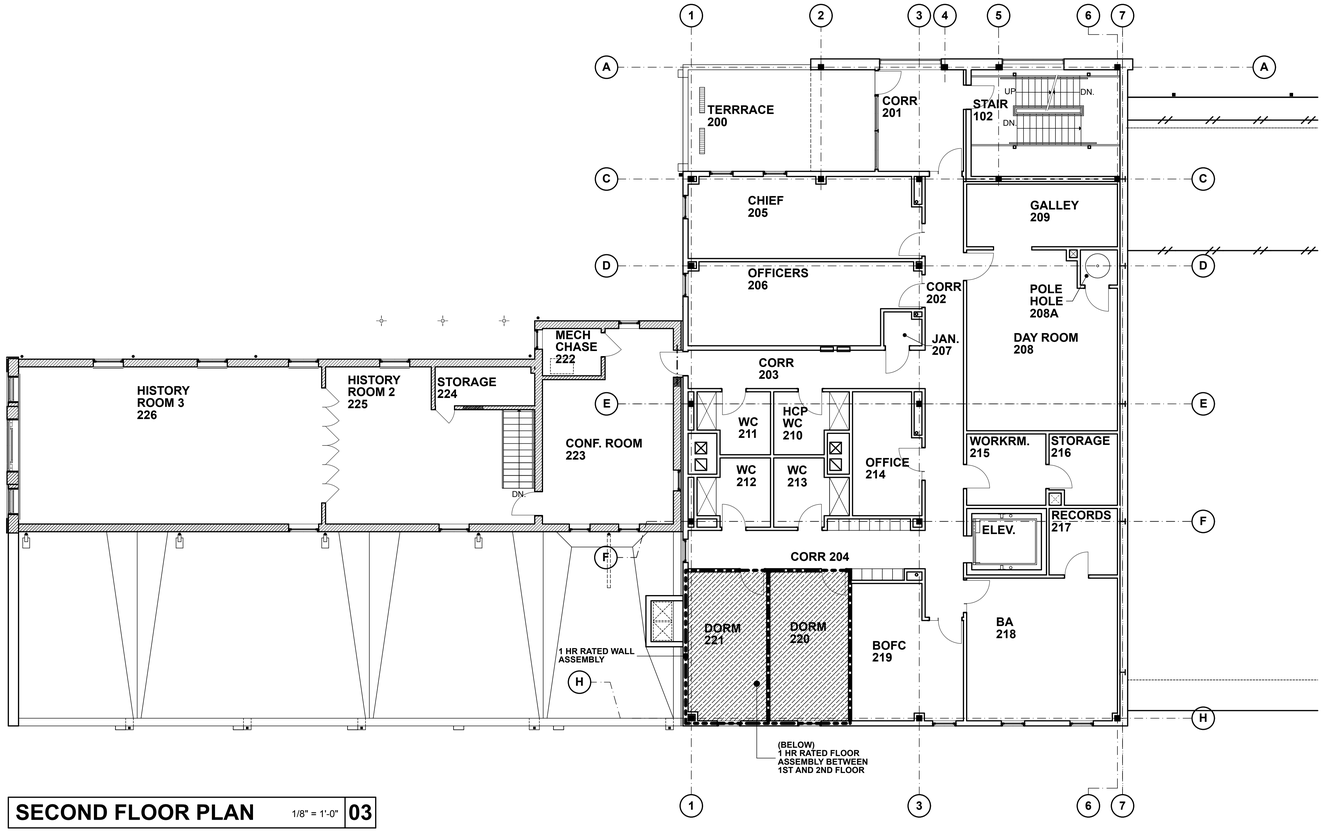
RELIEF FIRE COMPANY NO. 1
ADDITION / RENOVATION
BLOCK 86, LOTS 4, 5, 10, 11, 21, 22, 22.01 AND 23
17 PINE STREET
MOUNT HOLLY, NEW JERSEY

TITLE: **DEMOLITION ELEVATIONS**

DRAWING DATE: 01 JULY 2020
REVISION DATE:
1 02 SEPT 20
2 25 SEPT 20

DRAWN BY: RR
COMMISSION NO.: 5475B

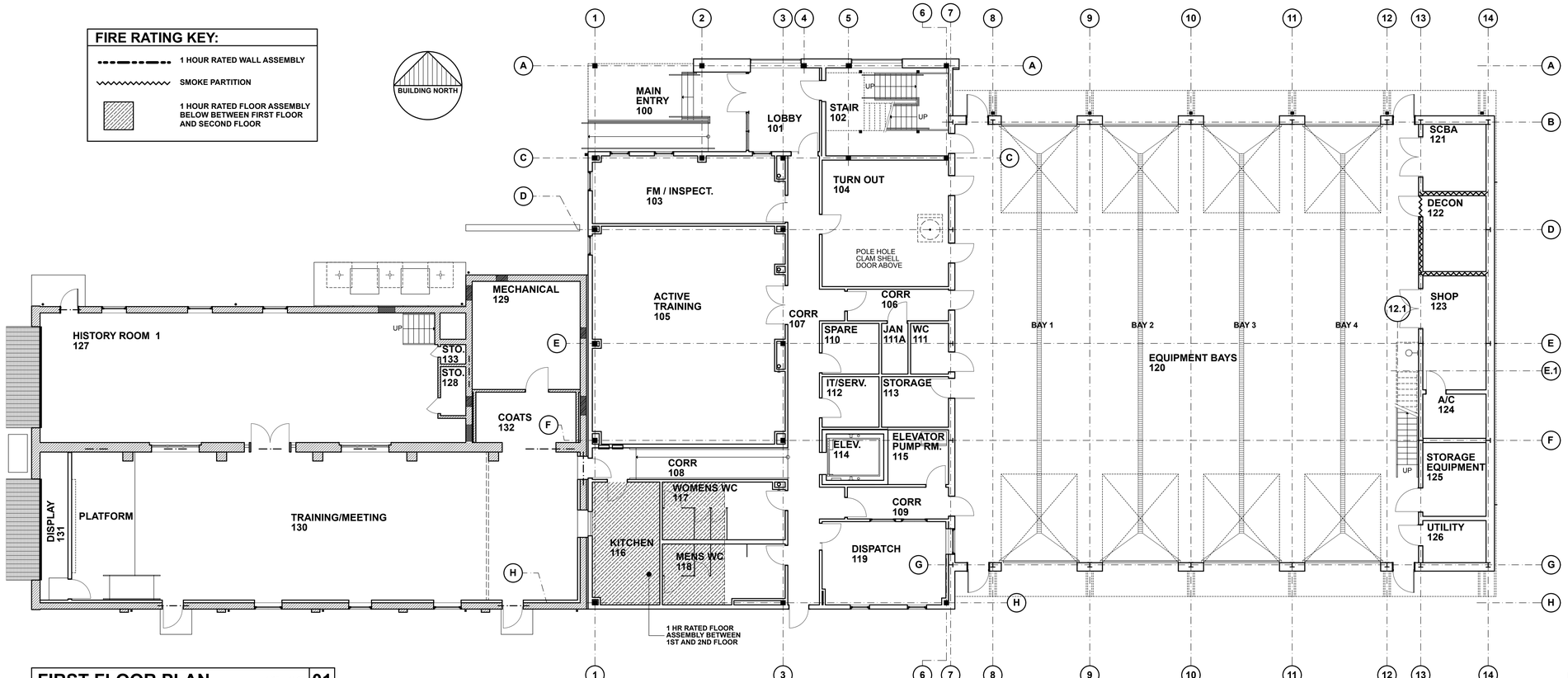
A1.5



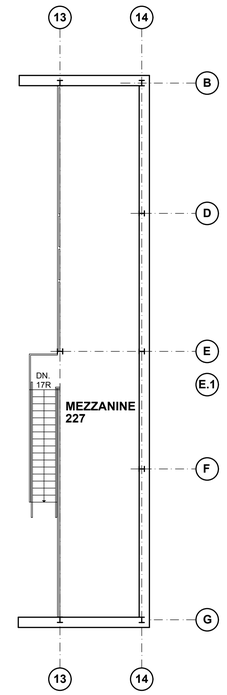
SECOND FLOOR PLAN 1/8" = 1'-0" | **03**

FIRE RATING KEY:

- 1 HOUR RATED WALL ASSEMBLY
- SMOKE PARTITION
- 1 HOUR RATED FLOOR ASSEMBLY BELOW BETWEEN FIRST FLOOR AND SECOND FLOOR



FIRST FLOOR PLAN 1/8" = 1'-0" | **01**



MEZZANINE PLAN SCALE: 1/8" = 1'-0" | **02**

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RELIEF FIRE COMPANY NO. 1
ADDITION / RENOVATION
BLOCK 66, LOTS 4, 5, 10, 11, 21, 22, 22.01 AND 23
17 PINE STREET
MOUNT HOLLY, NEW JERSEY

TITLE: **FIRE RATING PLAN**

DRAWING DATE: 01 JULY 2020
REVISION DATE:
DRAWN BY: RR
COMMISSION NO.: 5475B

A2.0

ROOM FINISH SCHEDULE

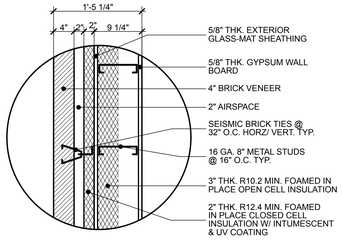
ROOM NO.	ROOM NAME	FLOOR	BASE	CEILING	WALLS NORTH	WALLS EAST	WALLS SOUTH	WALLS WEST	REMARKS
100	MAIN ENTRY	CONC.	N/A	METAL 8'-0" A.F.F.	N/A	N/A	N/A	N/A	
101	LOBBY	LVT-1	RUBBER	APC2 8'-0" A.F.F.	PTD/ DW	CT-1	PTD/ DW	PTD/ DW	OPEN GRATE METAL STAIRS AND LANDING, RAILINGS, GUARDS AND STAIR TREADS AND RISERS. (DO NOT PAINT)
102	STAIR	CONC.	RUBBER	OPEN/ PTD/ MTL DECK	PTD/ DW (HPC)	PTD/ CMU (HPC)	PTD/ CMU (HPC)	PTD/ CMU (HPC)	HPC- ALL WALL FINISHES. DO NOT PAINT STAIRS, LANDINGS, RAILINGS, GUARDS AND STAIR TREADS AND RISERS
103	FM / INSPECTION	CPT TL	RUBBER	APC1 9'-0" A.F.F.	PTD/ DW	PTD/ DW	PTD/ DW	PTD/ DW	
104	TURN OUT	RF	RF	OPEN PMD	PTD/ CMU	PTD/ CMU			SLIP RESISTANT RESINOUS FLOORING
105	ACTIVE TRAINING	CONC.	RUBBER	OPEN PMD	PTD/ DW	PTD/ DW			PAINT STEEL BEAMS COLOR "GREY" SPRINKLER LINES COLOR "RED" DO NOT PAINT STEEL DECK AND MECHANICAL DUCTS
106	CORRIDOR	LVT-1	RUBBER	APC2 8'-0" A.F.F.					
107	CORRIDOR								
108	CORRIDOR								
109	CORRIDOR			APC2 8'-0" A.F.F.					
110	SPARE	LVT-1	RUBBER	APC1 8'-0" A.F.F.		PTD/ DW			
111	WC	RF	RF	APC1 8'-0" A.F.F.		PTD/ CMU			
111A	JANITOR	LVT-1	RUBBER	APC1 8'-0" A.F.F.		PTD/ DW			
112	IT/ SERVER	LVT-1	RUBBER	APC1 8'-0" A.F.F.		PTD/ DW			
113	STORAGE	LVT-1	RUBBER	APC1 8'-0" A.F.F.	PTD/ DW	PTD/ CMU	PTD/ DW	PTD/ DW	
114	ELEVATOR	CONC.		OPEN	CMU	CMU	CMU	CMU	
115	ELEVATOR PUMP ROOM	CONC.	RUBBER	OPEN	HPC	HPC	HPC	HPC	
116	KITCHEN	RF	RF	APC3 8'-0" A.F.F.	HPC	HPC	HPC	HPC	
117	WOMENS WC	RF	RF	APC1 8'-0" A.F.F.	CT-2	CT-2	CT-2	CT-2	FULL HEIGHT CERAMIC TILE WALLS
118	MENS WC	RF	RF	APC1 8'-0" A.F.F.	CT-2	CT-2	CT-2	CT-2	FULL HEIGHT CERAMIC TILE WALLS
119	DISPATCH	CPT TILE	RUBBER	APC1 8'-0" A.F.F.	PTD/ DW	PTD/ DW	PTD/ DW	PTD/ DW	
120	EQUIPMENT BAYS	CONC.	RUBBER	OPEN/ PTD MTL DECK	HPC	HPC	HPC	HPC	HPC- ALL WALL FINISHES
121	SCBA								
122	DECON								
123	SHOP								
124	A/C								
125	STORAGE EQUIPMENT								
126	UTILITY	CONC.	RUBBER	OPEN/ PTD MTL DECK	HPC	HPC	HPC	HPC	HPC- ALL WALL FINISHES
127	HISTORY ROOM 1	LVT-2	EXISTING CONC.	(★)	PTD	PTD	PTD	PTD	(★) PRIME AND PAINT NEW WOOD BOARD CEILING
128	STORAGE	CONC.	WOOD	EXISTING	PTD	PTD	PTD	PTD	
129	MECHANICAL	CONC.	NA	12'-0" EXISTING	HPC	HPC	HPC	HPC	HPC- ALL WALL FINISHES
130	TRAINING/ MEETING	CPT TL	RUBBER	APC1 11'-0" A.F.F.	PTD	PTD/ DW	PTD/ DW	PTD/ DW	PAINT STEEL BEAMS COLOR "GREY" SPRINKLER LINES COLOR "RED" DO NOT PAINT STEEL DECK AND MECHANICAL DUCTS
131	DISPLAY	CPT TL	RUBBER	APC1 11'-0" A.F.F.	PTD/ DW	PTD/ DW	PTD/ DW	PTD/ DW	
132	COATS	CPT TL	RUBBER	APC 1 8'-0" A.F.F.	PTD/ DW	PTD/ DW	PTD/ DW	PTD/ DW	
200	TERRACE	CFAR	CFAR	METAL 8'-4" A.F.F.	SIDING	SIDING			SLIP RESISTANT CFAR
201	CORRIDOR	CPT TL	RUBBER	APC 2 8'-0" A.F.F.	PTD/ DW	PTD/ DW	PTD/ DW	PTD/ DW	
202	CORRIDOR			APC2 8'-0" A.F.F.					
203	CORRIDOR			APC2 8'-0" A.F.F.					
204	CORRIDOR			APC2 8'-0" A.F.F.					
205	CHIEF			APC1 8'-0" A.F.F.					
206	OFFICERS	CPT TL		APC1 9'-0" A.F.F.					
207	JANITOR	CONC		APC1 8'-0" A.F.F.					
208	DAY ROOM	LVT-1		APC1 8'-0" A.F.F.					
208A	POLE HOLE	LVT-1	RUBBER	APC1 8'-0" A.F.F.					
209	GALLEY	LVT-1	RUBBER	APC3 8'-0" A.F.F.	PTD/ DW	PTD/ DW	PTD/ DW	PTD/ DW	
210	HCP WC	RF	RF	PTD/ DW 8'-0" A.F.F.	CT-2	CT-2	CT-2	CT-2	FULL HEIGHT CERAMIC TILE WALLS
211	WC								FULL HEIGHT CERAMIC TILE WALLS
212	WC								FULL HEIGHT CERAMIC TILE WALLS
213	WC	RF	RF	PTD/ DW 8'-0" A.F.F.	CT-2	CT-2	CT-2	CT-2	FULL HEIGHT CERAMIC TILE WALLS
214	OFFICE	CPT	RUBBER	APC1 8'-0" A.F.F.	PTD/ DW	PTD/ DW	PTD/ DW	PTD/ DW	
215	WORKROOM	LVT-1	RUBBER	APC1 8'-0" A.F.F.					
216	STORAGE	LVT-1	RUBBER	APC1 8'-0" A.F.F.					
217	RECORDS	LVT-1	RUBBER	APC1 8'-0" A.F.F.					
218	BA/ OFFICE	CPT TL	RUBBER	APC1 8'-0" A.F.F.					
219	BOFC								
220	DORM								
221	DORM	CPT TL	RUBBER	APC1 9'-0" A.F.F.	PTD/ DW	PTD/ DW	PTD/ DW	PTD/ DW	
222	MECHANICAL CHASE	LVT-1	RUBBER	GWB	PTD/ PL	PTD/ PL	PTD/ PL	PTD/ PL	
223	CONFERENCE ROOM	CPT TL	WOOD	EXIST METAL					PRIME AND PAINT HISTORIC METAL CEILING
224	STORAGE	LVT-1	RUBBER	PTD/ PL					REPAIR PLASTER CEILING, PRIME AND PAINT
225	HISTORY ROOM 2	CPT TL	WOOD	PTD/ PL					PRIME AND PAINT HISTORIC METAL CEILING
226	HISTORY ROOM 3	CPT TL	WOOD	PTD/PL	PTD/ PL	PTD/ PL	PTD/ PL	PTD/ PL	PRIME AND PAINT HISTORIC METAL CEILING
227	MEZZANINE	CONC.	N/A	OPEN/ PTD MTL DECK	HPC	HPC	HPC	HPC	HPC- ALL FINISHES

CONC.	CONCRETE (SMOOTH FINISH W/ WATERPROOF COATING)
CPT-1	CARPET TILE
CT-1	1"X1" GLASS CERAMIC TILE
CT-2	8"X8" CERAMIC TILE
LV-1	LUXURY VINYL TILE
LVT-2	LUXURY VINYL TILE- REPLICATE WOOD PLANK FLOORING
PTD/ PL	REPAINT EXISTING PLASTER WALL. SCRAPE, PRIME AND PAINT (2 COATS EGG SHELL FINISH) EXISTING WALL.
PTD/ DW	PRIME AND PAINTED (2 COATS EGG SHELL FINISH) DRYWALL
APC1	2x4 ACOUSTICAL PANEL CEILING
APC2	2x2 ACOUSTICAL PANEL CEILING
APC3	2x4 ACOUSTICAL PANEL CEILING- KIT. UPGRADE
CFAR	COLD FLUID APPLIED ROOF
HPC	HIGH PERFORMANCE COATINGS
RF	SLIP RESISTANT RESINOUS FLOORING
TILE	MULTI- PATTERNED CERAMIC TILE FOLLOW DETAIL
OPEN PMD	OPEN PAINTED METAL DECK CEILING (PAINTED WITH HIGH PERFORMANCE COATINGS)
N/A	NOT APPLICABLE

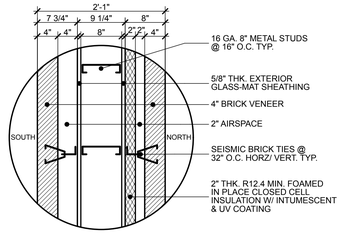
NOTES:

1. ALL EXTERIOR STEEL INCLUDING LINTELS TO BE PAINTED WITH HIGH PERFORMANCE COATING TYP.
2. CONTRACTORS TO ASSUME A MAXIMUM OF THREE (3) DIFFERENT PAINT COLORS PER ROOM (TYP.)
3. ALL EXPOSED CONCRETE SHALL BE SEALED AND POLISHED EXCEPT EQUIPMENT BAYS (NOT POLISHED). EQUIPMENT BAYS SEALED ONLY. FOLLOW SPECIFICATION 033660, CONCRETE TREATMENT.
4. ALL EXPOSED GAS PIPING SHALL BE FIELD PAINTED "YELLOW" TYP.
5. ALL EXPOSED FIRE PROTECTION PIPING SHALL BE FIELD PAINTED "RED" TYP.
6. ALL EXPOSED STEEL BEAMS SHALL BE FIELD PAINTED "GREY" TYP.
7. ALL EXISTING FINISHES TO BE REMOVED WHERE NEW FINISHES ARE NOTED. TYPICAL UNLESS OTHERWISE NOTED.
8. ALL SHOWERS TO HAVE SLIP RESISTANT FINISH ON RF FLOORING (TYP.)
9. UNLESS OTHERWISE NOTED, CONTRACTOR SHALL PROVIDE ONE PAINT COLOR PER ROOM.

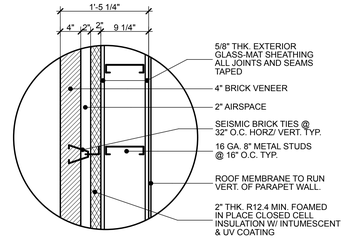
WALL TYPES



WALL TYPE W1



WALL TYPE W1A



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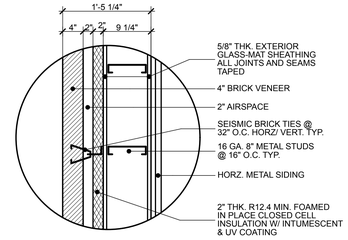
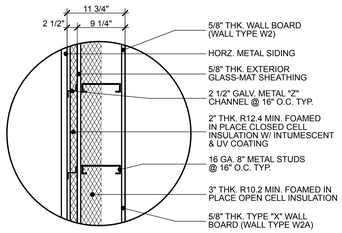
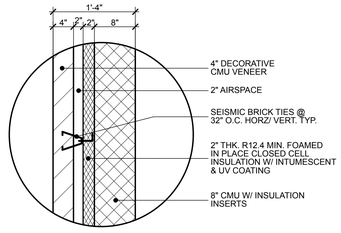


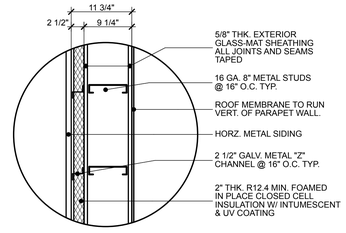
WALL TYPE W1C



WALL TYPE W2, W2A



WALL TYPE W3



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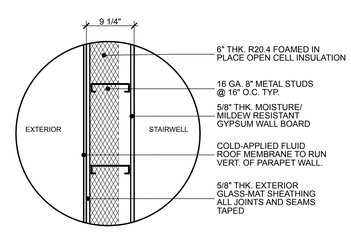
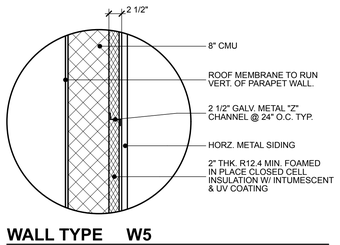
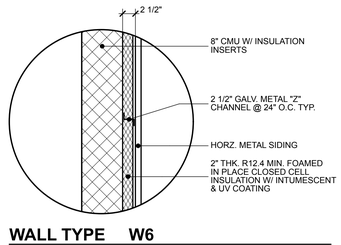


WALL TYPE W4A



WALL TYPE W5



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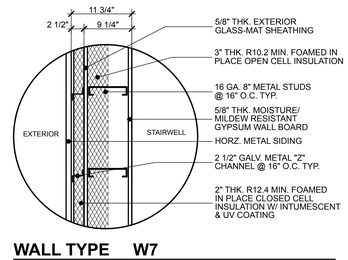
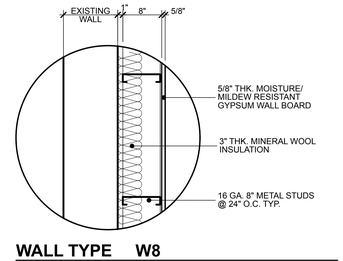
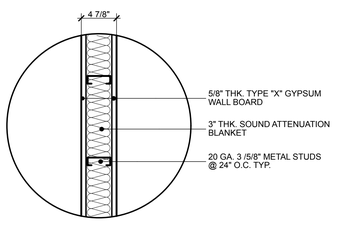


WALL TYPE W7

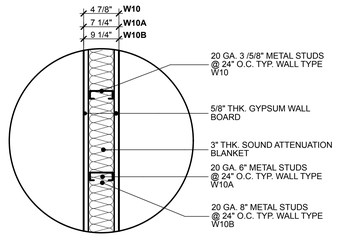


WALL TYPE W8

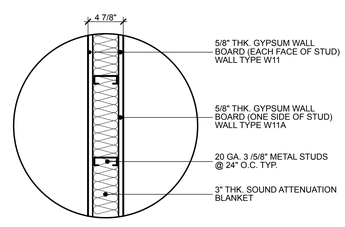


WALL TYPE W9

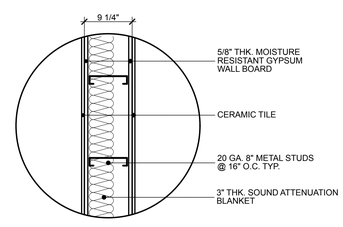
1 HOUR RATED WALL
UL DESIGN NO. U423, U425 OR U465



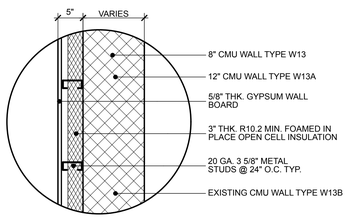
WALL TYPE W10, W10A, W10B



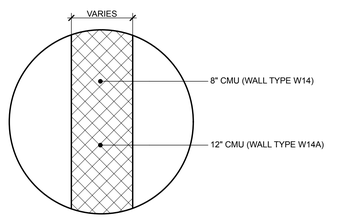
WALL TYPE W11, W11A



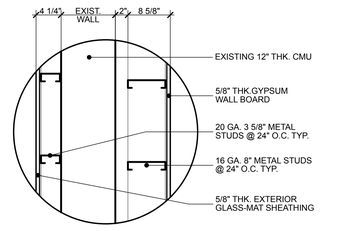
WALL TYPE W12



WALL TYPE W13, W13A, W13B



WALL TYPE W14, W14A



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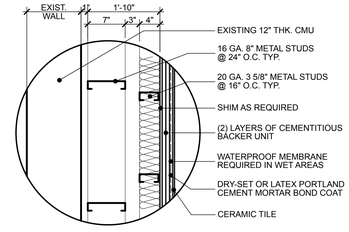
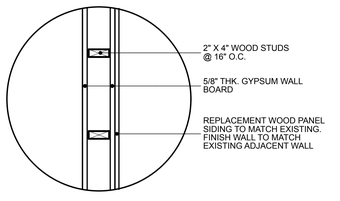
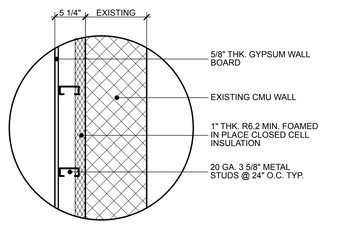


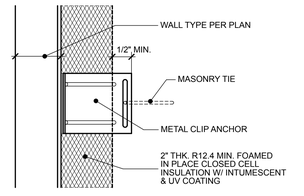
WALL TYPE W16



WALL TYPE W17



WALL TYPE W18



TYP. WALL TIE/ INSULATION DETAIL

GENERAL NOTES:

1. ALL SPRAYED IN PLACE INSULATION SERVING AS CONTINUOUS IN WALL CAVITY SHALL BE CLOSED CELL FOAM TYPE. TYP.
2. ALL EXTERIOR WALLS WITH METAL SIDING SHALL HAVE INTUMESCENT AND UV COATINGS INSTALLED ON CONTINUOUS SPRAY FOAM INSULATION. TYP.
3. PROVIDE HORIZONTAL FIRE BLOCKING 10'-0" A.F.F (TYP. AT ALL METAL STUDS PARTITIONS.)
4. TAPE ALL JOINTS ON ALL EXTERIOR GLASS-MAT SHEATHING

ALL WALL TYPES SHALL RUN FROM FINISH TIGHT TO ROOF/FLOOR DECKING ABOVE, INCLUDING ALL GYPSUM OR OTHER WALL FINISHES. IF CONCEALED FROM, APPLIED FINISHES, SUCH AS WALL TILES, ETC. SHALL BE PERMITTED TO TERMINATE APPROXIMATELY 6" ABOVE A CEILING LEVEL. FINISH PAINTING OF CONCEALED SPACE SHALL BE 6" ABOVE THE APC CEILING.

ADDENDUM-01
COMMENT 1.36
25 SEPT 2020

REGAN YOUNG, AIA
21A000912100

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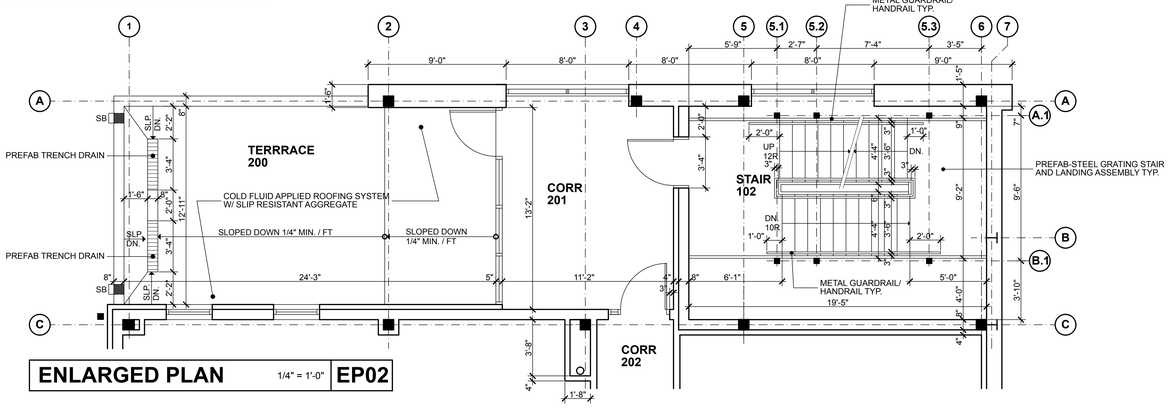
RELIEF FIRE COMPANY NO. 1
ADDITION / RENOVATION
BLOCK 66, LOTS 4, 5, 10, 11, 21, 22, 22.01 AND 23
17 PINE STREET
MOUNT HOLLY, NEW JERSEY

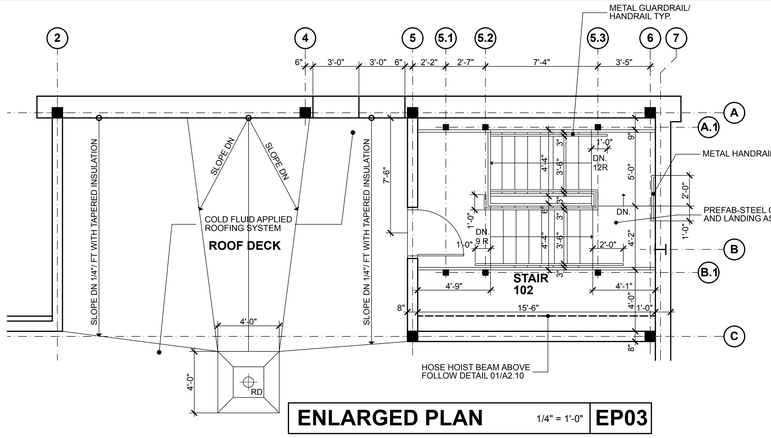
TITLE: FINISH SCHEDULE/ WALL TYPES

DRAWING DATE: 01 JULY 2020
REVISION DATE:
1 25 SEPT 20
2 25 SEPT 20
DRAWN BY: RR
COMMISSION NO.: 5475B

A2.1

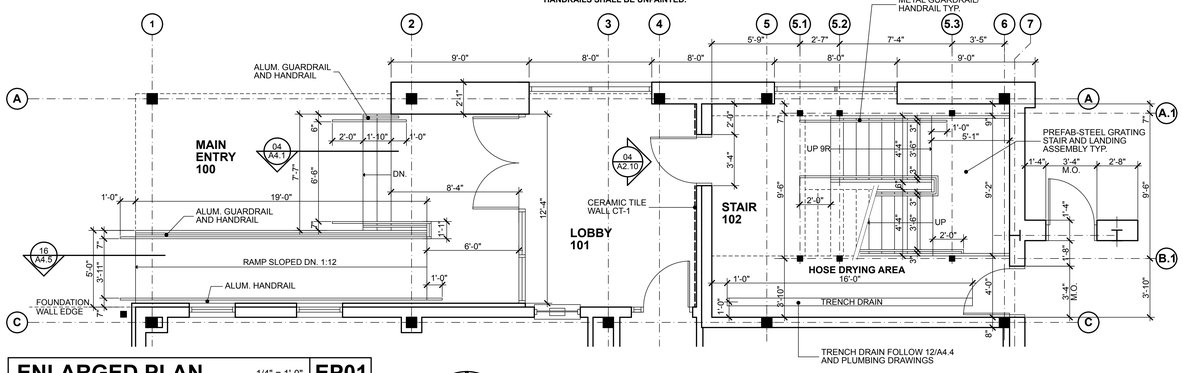


ENLARGED PLAN 1/4" = 1'-0" **EP02**

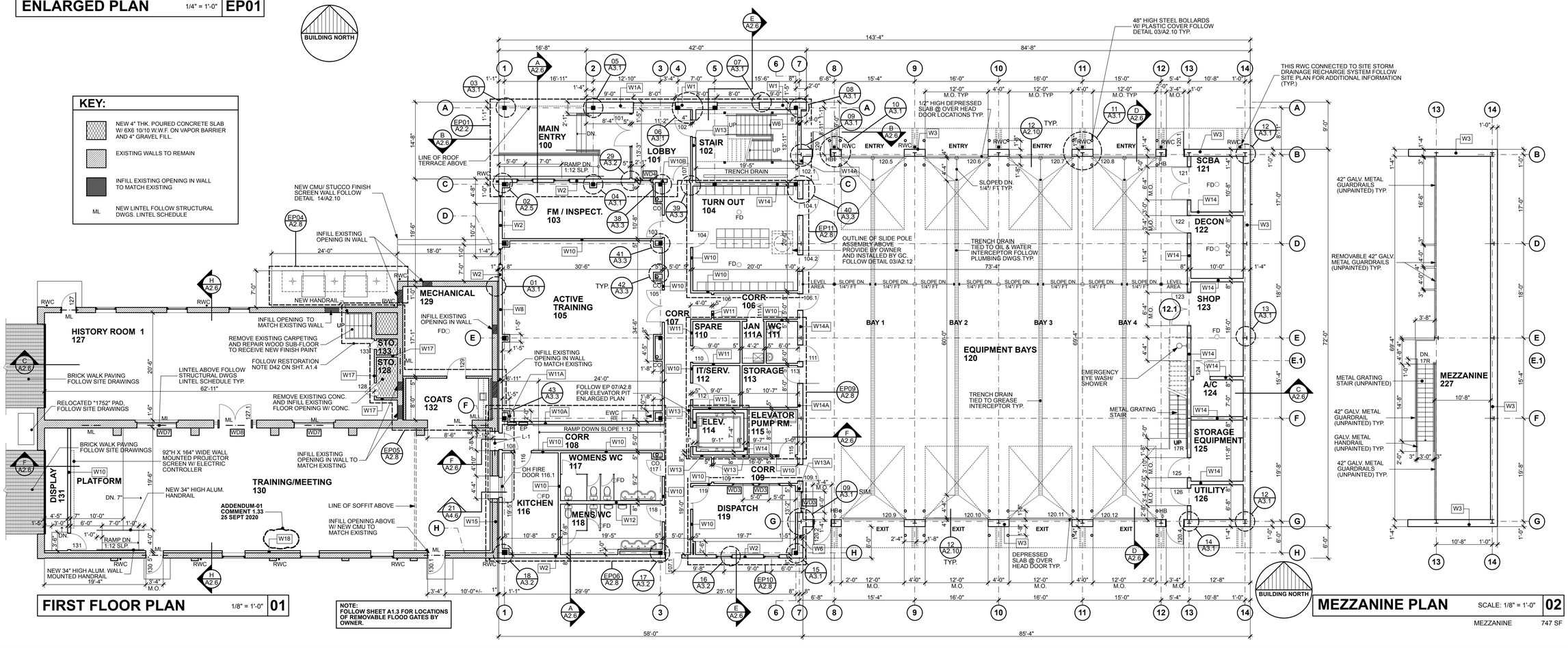


ENLARGED PLAN 1/4" = 1'-0" **EP03**

NOTE:
ALL METAL GRATING STAIR ASSEMBLY, LANDINGS, GUARDRAILS AND HANDRAILS SHALL BE UNPAINTED.



ENLARGED PLAN 1/4" = 1'-0" **EP01**



FIRST FLOOR PLAN 1/8" = 1'-0" **01**

NOTE:
FOLLOW SHEET A1.3 FOR LOCATIONS OF REMOVABLE FLOOD GATES BY OWNER.

MEZZANINE PLAN SCALE: 1/8" = 1'-0" **02**

MEZZANINE 747 SF

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17 PINE STREET
MOUNT HOLLY, NEW JERSEY

TITLE: **FIRST FLOOR & ENLARGED PLANS**

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1 02 SEPT 20
2 25 SEPT 20

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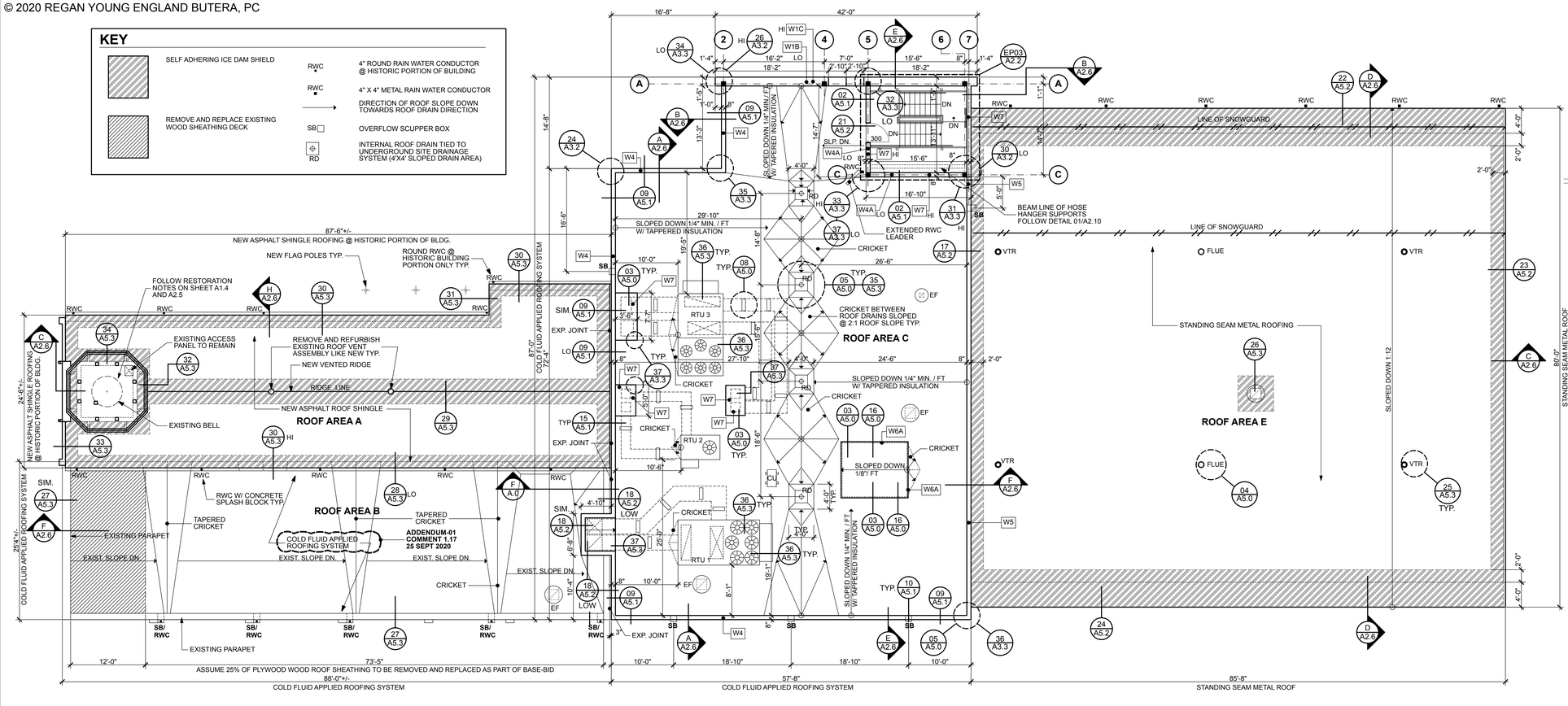
A2.2

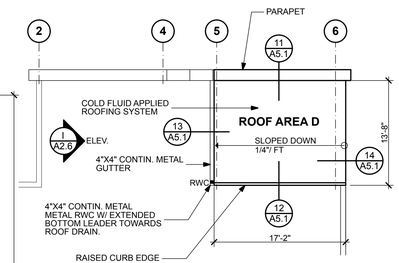
KEY

- SELF ADHERING ICE DAM SHIELD
- REMOVE AND REPLACE EXISTING WOOD SHEATHING DECK
- RWC — 4" ROUND RAIN WATER CONDUCTOR @ HISTORIC PORTION OF BUILDING
- RWC — 4" X 4" METAL RAIN WATER CONDUCTOR
- DIRECTION OF ROOF SLOPE DOWN TOWARDS ROOF DRAIN DIRECTION
- SB — OVERFLOW SCUPPER BOX
- RD — INTERNAL ROOF DRAIN TIED TO UNDERGROUND SITE DRAINAGE SYSTEM (4"X4" SLOPED DRAIN AREA)



ROOF PLAN 1/8" = 1'-0" 02

STAIR TOWER ROOF PLAN 1/8" = 1'-0" 03



ROOFING SYSTEM DESIGN PRESSURES:

FIELD OF ROOF (ZONE 1)	26.77 PSF
PERIMETER (ZONE 2)	44.92 PSF
PERIMETER (ZONE 3)	67.61 PSF

UNDER ROOF RAIN LOAD DATA:

RAIN INTENSITY (IN/HR): 9.3

ROOF RAINFALL DESIGN ARE (ft2I): 6,827

MIN. GUTTER WIDTH (IN): 6" RECTANGULAR
MIN. GUTTER DEPTH (IN): 5"

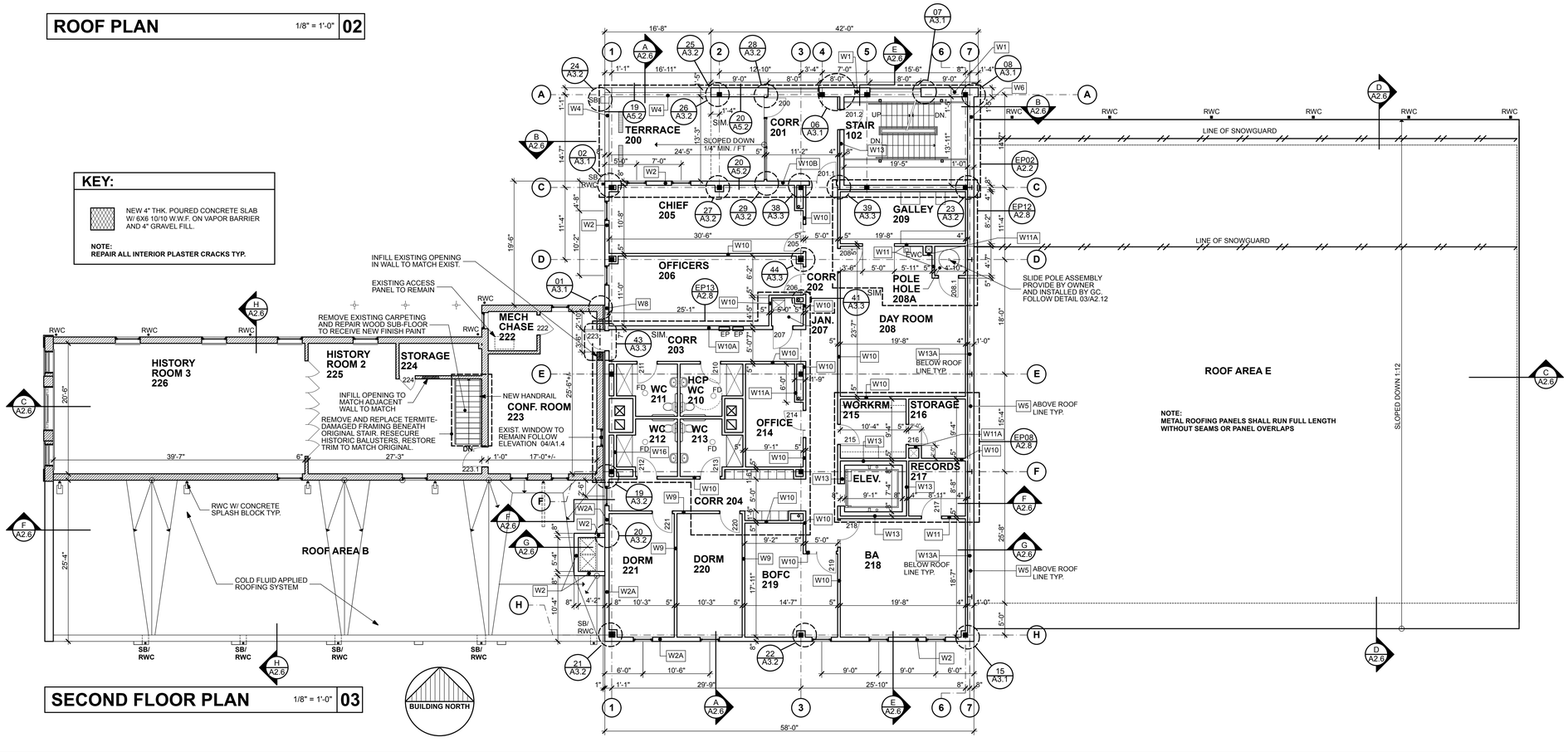
NUMBER OF DOWNSPOUTS: 6
MIN. DOWNSPOUT SIZE (IN) 4"X5"

CALCULATIONS ARE DERIVED FROM SMACNA ARCHITECTURAL SHEET METAL MANUAL (7TH EDITION). RAIN INTENSITY BASED IN TRENTON, NJ (100 YEARS)

KEY:

- NEW 4" THK. POURED CONCRETE SLAB W/ 6X6 10/10 W.W.F. ON VAPOR BARRIER AND 4" GRAVEL FILL.

NOTE:
REPAIR ALL INTERIOR PLASTER CRACKS TYP.



NOTE:
METAL ROOFING PANELS SHALL RUN FULL LENGTH WITHOUT SEAMS OR PANEL OVERLAPS

SECOND FLOOR PLAN 1/8" = 1'-0" 03

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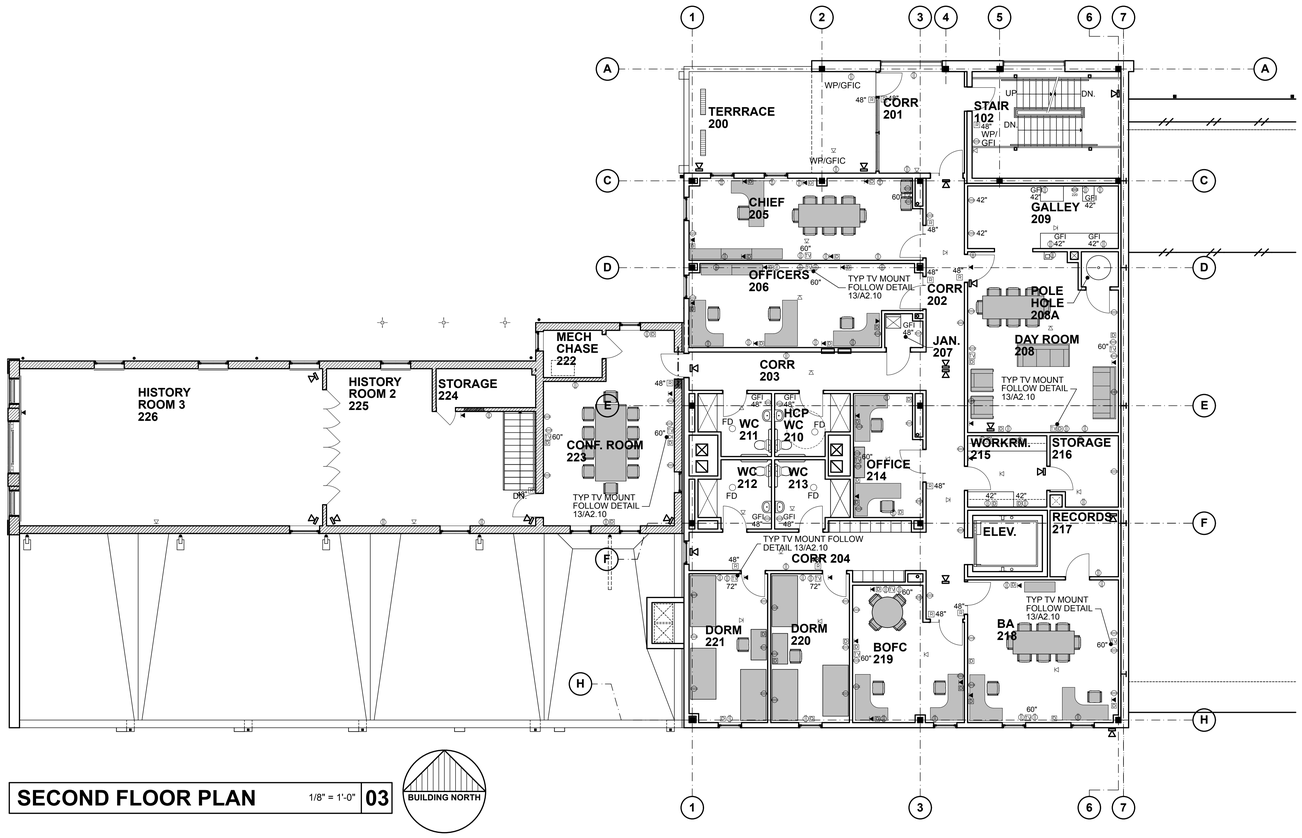
A2.3

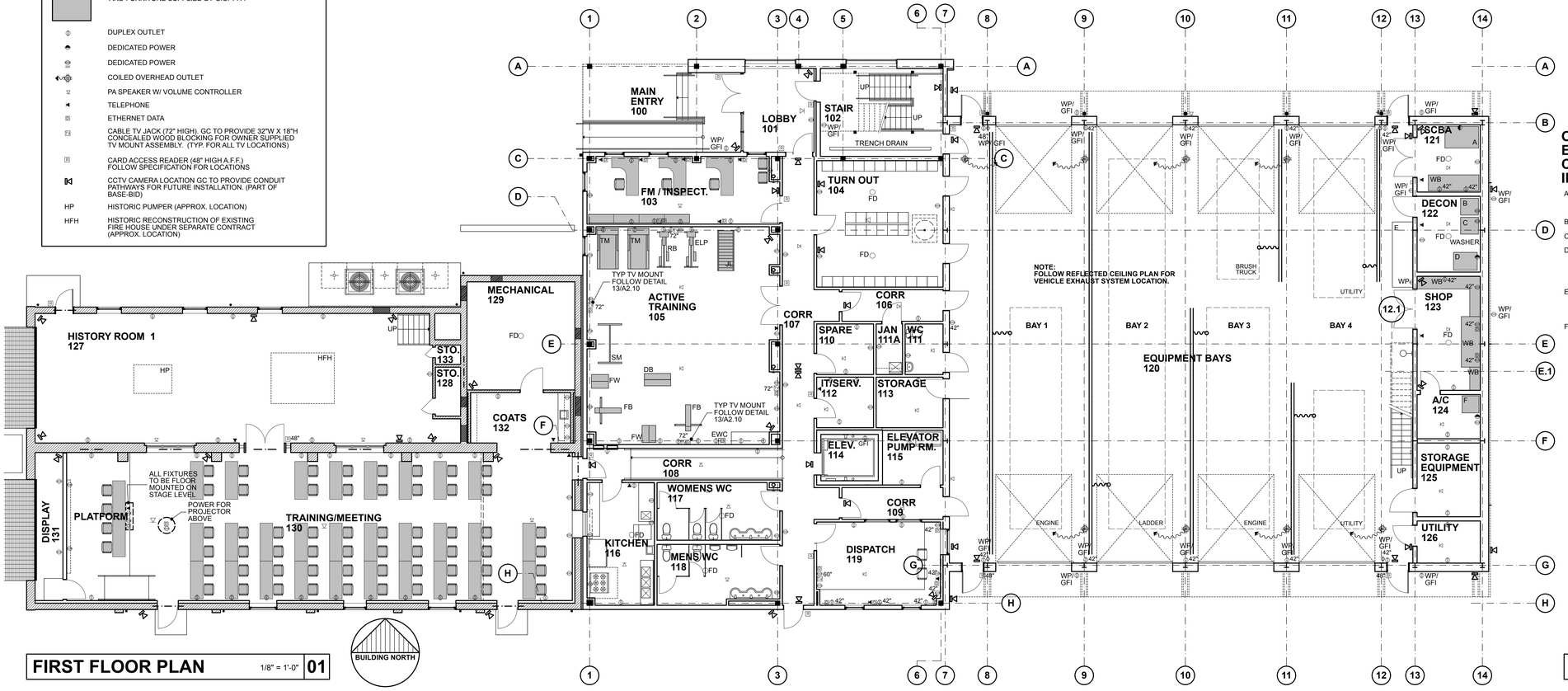


SECOND FLOOR PLAN 1/8" = 1'-0" 03

BUILDING NORTH

KEY:

	LOOSE FURNITURE AND EQUIPMENT SUPPLIED BY OWNER AND INSTALLED BY OWNER. ALL NON SHADED EQUIPMENT AND FURNITURE SUPPLIED BY G.C. TYP.
	DUPLEX OUTLET
	DEDICATED POWER
	DEDICATED POWER
	COILED OVERHEAD OUTLET
	PA SPEAKER W/ VOLUME CONTROLLER
	TELEPHONE
	ETHERNET DATA
	CABLE TV JACK (72" HIGH). GC TO PROVIDE 32"W X 18"H CONCEALED WOOD BLOCKING FOR OWNER SUPPLIED TV MOUNT ASSEMBLY. (TYP. FOR ALL TV LOCATIONS)
	CARD ACCESS READER (48" HIGH A.F.F.) FOLLOW SPECIFICATION FOR LOCATIONS
	CCTV CAMERA LOCATION GC TO PROVIDE CONDUIT PATHWAYS FOR FUTURE INSTALLATION. (PART OF BASE-BID)
HP	HISTORIC PUMPER (APPROX. LOCATION)
HFH	HISTORIC RECONSTRUCTION OF EXISTING FIRE HOUSE UNDER SEPARATE CONTRACT (APPROX. LOCATION)



FIRST FLOOR PLAN 1/8" = 1'-0" 01

BUILDING NORTH

OWNER SUPPLIED EQUIPMENT AND CONTRACTOR INSTALLED KEY:

A	BREATHING AIR COMPRESSOR EAGLE AIR BLACKHAWK CFS BH10F 64"W X 41"D X 66"H
B	STANDARD GAS DRYER UNIT
C	STANDARD WASHER UNIT
D	GEAR WASHER UNIT MAYTAG MFR35PNDVS S/N 1000007ZER ELEC 3x 208-240V 60HZ 64"W X 41"D X 66"H
E	GEAR DRYER FRC DRYGEAR PRO 1 PHASE 115/230V 32/16A 60HZ 124"W X 40"D X 88"H
F	AIR COMPRESSOR CAMPBELL HAUSFIELD DP561500AJ 1 PHASE 240V 60HZ 32"W X 32"D X 72"H

MEZZANINE PLAN SCALE: 1/8" = 1'-0" 02

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MOUNT HOLLY, NEW JERSEY

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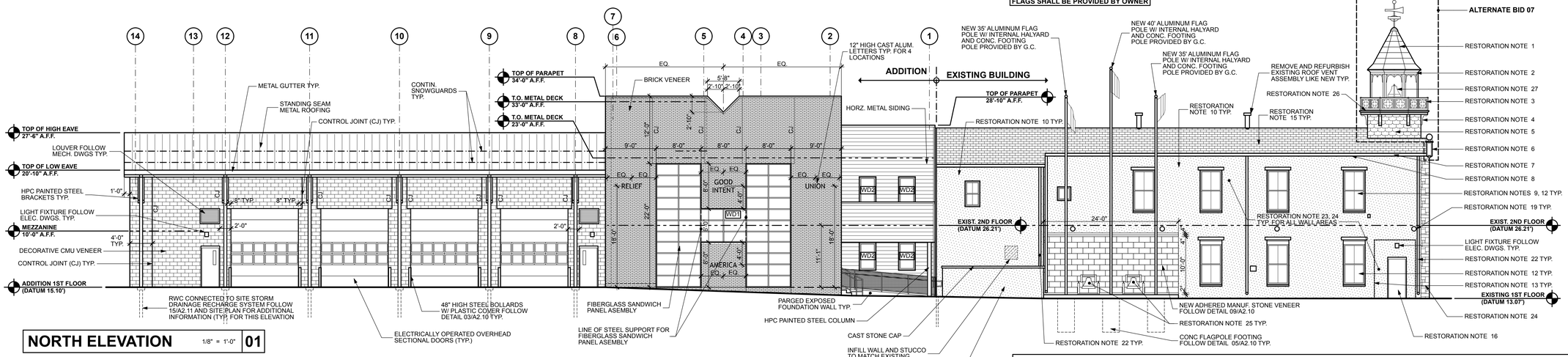
A2.4



NORTH ELEVATION 1/8" = 1'-0" 01

HISTORIC GUTTER NOTE:

REPLACE ALL EXISTING METAL GUTTER WITH NEW 5" HALF ROUND PAINTED TCS GUTTER. THOROUGHLY SOLDER TOP LEADERS INTO GUTTER ASSEMBLY. NEW TCS GUTTER SHALL BE PREPARED AND PAINTED (BRUSHED APPLIED). COLOR SELECTED BY ARCHITECT. ALL NEW HANGERS AND MISC. ACCESSORIES SHALL MATCH EXISTING.

HISTORIC DOWNSPOUT (RWC) NOTE:

REPLACE ALL EXISTING DOWNSPOUT, TOP AND BOTTOM LEADERS WITH NEW ROUND RWC CORRUGATED METAL TCS RWC. THOROUGHLY SOLDER TOP AND BOTTOM LEADERS INTO NEW TCS METAL GUTTER ASSEMBLY. TCS METAL RWC SHALL BE PREPARED AND PAINTED (BRUSHED APPLIED). COLOR SELECTED BY ARCHITECT. DIAMETER OF NEW TCS METAL RWC AND ALL POST, KEYS, ETC. TO MATCH EXISTING.

GENERAL PAINTING NOTE:

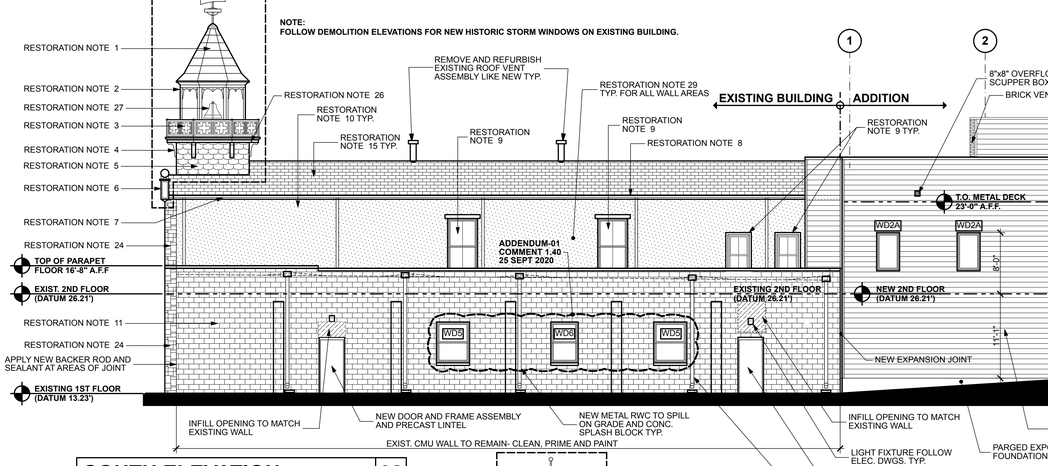
1. CLEAN, PREPARE, PRIME AND PAINT PREVIOUSLY PAINTED SURFACES TO RECEIVE NEW PAINT.
2. THIS INCLUDES BUT IS NOT LIMITED TO, WOOD SIDING, TRIMS, SOFFIT, FASCIA, DECORATIVE WINDOW AND ELEMENTS, BALLUSTERS, HANDRAILS, BRACKETS, CORNICES, CEILING SURFACES, DOORS TRIMS AND SASH TRIMS.
3. CONTRACTOR TO ASSUME 4 DIFFERENT EXTERIOR PAINT COLORS. COLORS TO BE SELECTED BY ARCHITECTS DURING CONSTRUCTION. NOTE: REPAINTING OF ALL CUPOLA COMPONENTS TO MATCH EXISTING.
4. ALL EXTERIOR STEEL COLUMNS, DOORS, FRAMES AND TRIMS SHALL BE FINISHED W/ HPC (TYP.)

ALUMINUM STORM WINDOW NOTE:

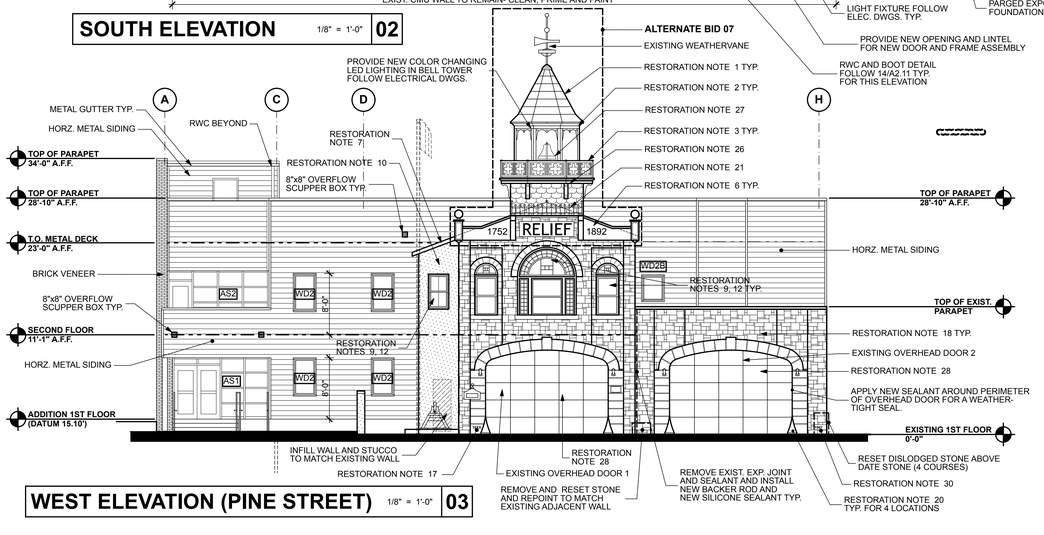
1. PROVIDE EXTERIOR MOUNTED ALUMINUM STORM WINDOW.
2. CONTRACTOR TO ACCURATELY FIELD MEASURE ALL EXISTING WINDOWS AND MAINTAIN EXISTING WINDOW SITE LINES.

BASE-BID RESTORATION NOTES:

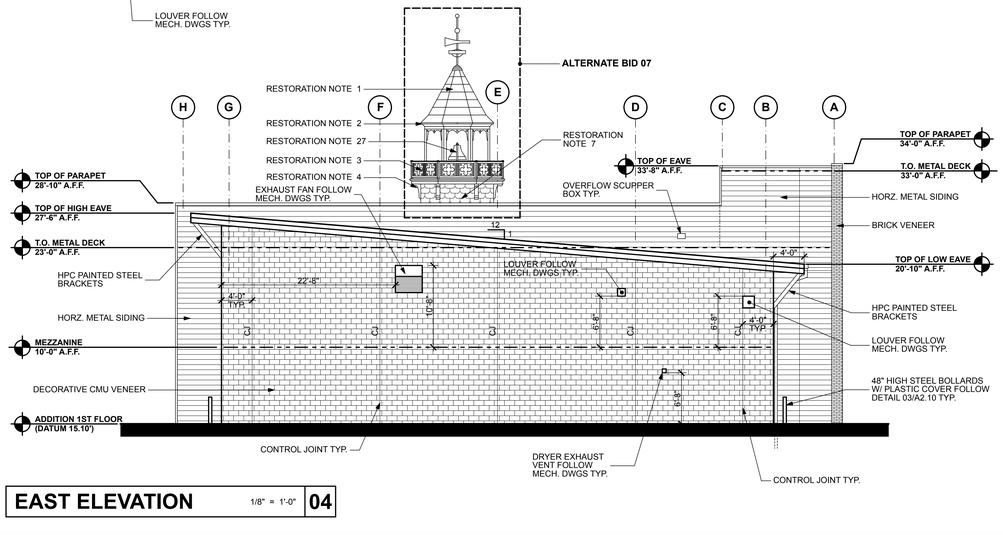
1. CLEAN EXISTING COPPER ROOF. REPAIR AND SECURE ANY LOOSE PIECES.
2. EXISTING WOOD FASCIA TRIM, CORNICE, POST AND DECORATIVE BRACKETS TO BE SCRAPED, PRIMED AND PAINTED TO MATCH EXISTING COLOR. REPAIR ANY DAMAGED OR ROTTED WOOD MEMBERS IN KIND, REPAINT TO MATCH EXISTING COLORS.
3. EXISTING RAILING, POST, DECORATIVE BALLUSTER PANEL AND MISC. BOTTOM CORNICE TRIM ASSEMBLY TO BE SCRAPED, PRIMED AND PAINTED TO MATCH EXISTING COLOR. REPAIR ANY DAMAGED OR ROTTED WOOD MEMBERS IN KIND, REPAINT TO MATCH EXISTING COLORS.
4. EXISTING DECORATIVE WOOD BRACKET ASSEMBLY TO BE SCRAPED, PRIMED AND PAINTED TO MATCH EXISTING COLOR. REPAIR ANY DAMAGED OR ROTTED WOOD AND TO BE REPAINTED TO MATCH EXISTING COLOR.
5. EXISTING WOOD SCALLOPED SIDING SHINGLES TO BE SCRAPED, PRIMED AND PAINTED TO MATCH EXISTING COLOR. REPAIR OR REPLACE DAMAGED SHINGLES AND REPAINT TO MATCH EXISTING COLOR.
6. EXISTING WOOD TRIM PIECES, DECORATIVE PANEL AND MISC. BOTTOM CORNICE TRIM ASSEMBLY TO BE SCRAPED, PRIMED AND PAINTED TO MATCH EXISTING COLOR. REPAIR ANY DAMAGED OR ROTTED WOOD MEMBERS IN KIND, REPAINT TO MATCH EXISTING COLORS.
7. EXISTING WOOD FASCIA TO BE SCRAPED, PRIMED AND PAINTED TO MATCH EXISTING COLOR. REPAIR ANY DAMAGED OR ROTTED FASCIA MEMBERS IN KIND, REPAINT TO MATCH EXISTING COLOR.
8. EXISTING ALUMINUM GUTTER TO BE REMOVED AND REPLACED WITH NEW HALF-ROUND GUTTER. FOLLOW GUTTER NOTE FOR ADDITIONAL INFORMATION.
9. EXISTING WOOD TRIM WINDOW SURROUND TO BE SCRAPED, PRIMED AND PAINTED TO MATCH EXISTING COLOR. INSTALL NEW EXTERIOR MOUNTED HISTORIC STORM WINDOW. FIELD MEASURE WINDOW FOR SIZE.
10. EXISTING STUCCO FINISH SHALL BE PREPPED, PRIMED AND REPAINTED WITH 2-COATS OF ARCHITECTURAL GRADE PAINT. PATCH AND REPAIR ANY DAMAGED AREAS TO MATCH EXISTING STUCCO FINISH.
11. EXISTING CMU SHALL BE PREPPED, PRIMED AND REPAINTED WITH 2-COATS OF ARCHITECTURAL GRADE FINISH PAINT. RESEAL MISC. CRACKS, PATCH AND REPAIR ANY DAMAGED AREAS TO MATCH EXISTING CMU FINISH.
12. REPAIR EXISTING WINDOW UNIT AND HEADER. REMOVE ALL TAPE ATTACHED TO WINDOW GLASS AND SCRAPE CLEAN. REMOVE AND REPLACE ANY BROKEN WINDOW GLASS WITH NEW TO MATCH EXISTING.
13. DEMOLISH EXISTING NON-HISTORIC ENTRY VESTIBULE, FOUNDATION AND FOOTING. FOLLOW SHEET A1.5 FOR ADDITIONAL INFORMATION.
14. REMOVE EXISTING STORAGE ROOM ADDITION. INFILL MISSING STUCCO W/ FIRST RESPONDER MEMORIAL CAST STONE.
15. REMOVE AND REPLACE ASPHALT ROOF SHINGLES AND FLASHING TO MATCH EXISTING ROOF.
16. NEW DOOR ASSEMBLY IN EXISTING WALL OPENING.
17. CLEAN AND REPAINT ALL NUMERAL OF DATE STONE TO MATCH EXISTING. TYP.
18. GENTLY CLEAN EXISTING MASONRY ON PRIMARY HISTORICAL FACADE WHERE NEEDED.
19. EXISTING WALL TIES TO BE SCRAPED, PRIMED AND PAINTED TO MATCH EXISTING COLOR.
20. EXISTING BOLLARDS TO BE SCRAPED, PRIMED AND PAINTED TO MATCH EXISTING COLOR.
21. SCRAPE, PRIME AND PAINT EXISTING CUSTOM DECORATIVE RAILING, BRACKET AND POST TYP.
22. INSTALL NEW ROUND TCS DOWNSPOUT (RWC). NEW RWC TO CONNECT TO SITE DRAINAGE SYSTEM. SEE SITE PLAN FOR ADDITIONAL INFORMATION. FOLLOW ADDITIONAL DOWNSPOUT NOTES.
23. REPAIR ALL EXISTING STUCCO, CLEAN, PREP AND PRIME AND PAINT WITH (2) COATS OF EXTERIOR TYPE FINISH PAINT. COLOR SELECTED BY ARCHITECT.
24. REMOVE ALL SURFACE MOUNTED ELEC. LIGHTS, CONDUITS, CONDUIT BRACKETS AND PATCH WALLS TO MATCH EXISTING. FOLLOW ELECTRICAL DRAWINGS FOR ADDITIONAL INFORMATION. (TYP. FOR ALL)
25. OWNER PROVIDED (2) EXISTING MEMORIAL BELLS FOR INSTALLATION BY THE GC. GC TO PROVIDE NEW 12" THICK (4000PSI CONCRETE) PLINTH UNDER BELL ASSEMBLY.
26. REPAIR BELL TOWER LANDING AS REQUIRED TO MATCH EXISTING.
27. CLEAN BRASS BELL AND BELL MOUNT, LUBRICATE ALL OPERATING PARTS AND COMPONENTS.
28. CLEAN EXISTING OVERHEAD DOOR, FOLLOW FLOOR PLAN FOR ADDITIONAL NOTES.



SOUTH ELEVATION 1/8" = 1'-0" 02



WEST ELEVATION (PINE STREET) 1/8" = 1'-0" 03



EAST ELEVATION 1/8" = 1'-0" 04

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TITLE: **BUILDING ELEVATIONS**

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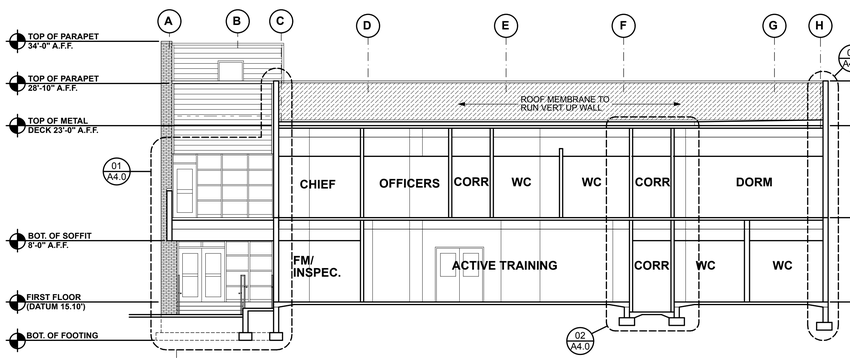
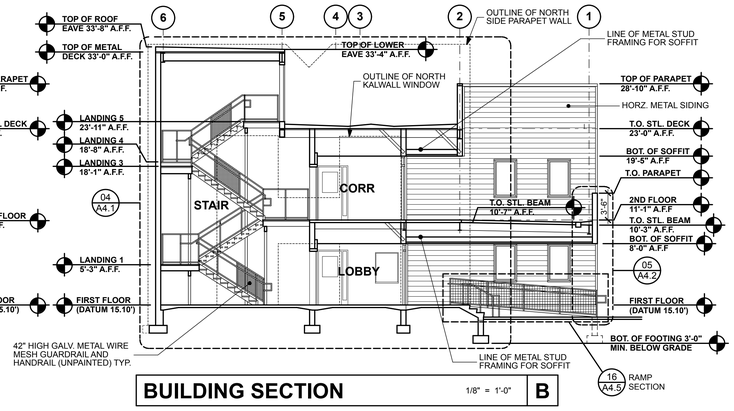
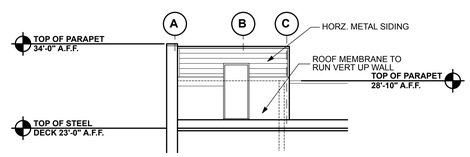
A2.5



BUILDING SECTION 1/8" = 1'-0" A



BUILDING SECTION 1/8" = 1'-0" B



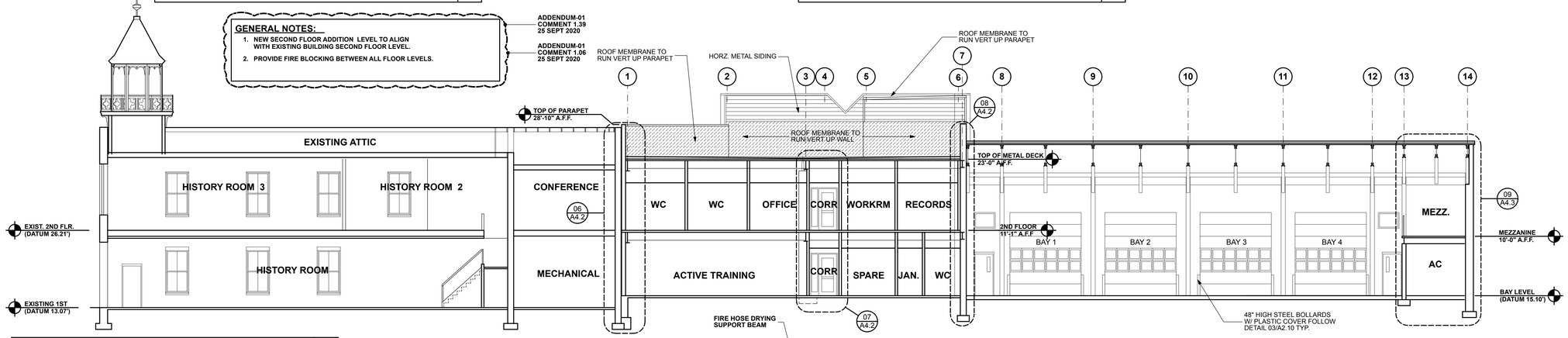
BUILDING SECTION/ ELEV. 1/8" = 1'-0" I

GENERAL NOTES:

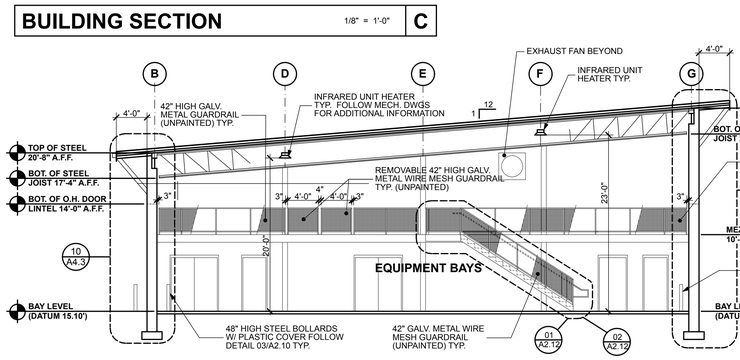
1. NEW SECOND FLOOR ADDITION LEVEL TO ALIGN WITH EXISTING BUILDING SECOND FLOOR LEVEL.
2. PROVIDE FIRE BLOCKING BETWEEN ALL FLOOR LEVELS.

ADDENDUM-01 COMMENT 1.39 25 SEPT 2020

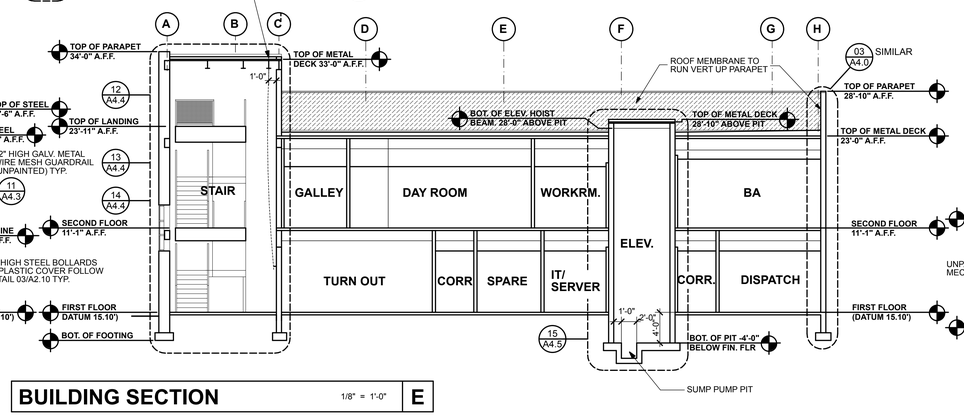
ADDENDUM-01 COMMENT 1.06 25 SEPT 2020



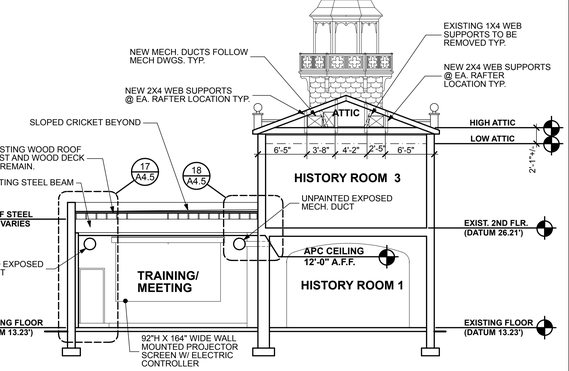
BUILDING SECTION 1/8" = 1'-0" C



BUILDING SECTION 1/8" = 1'-0" D



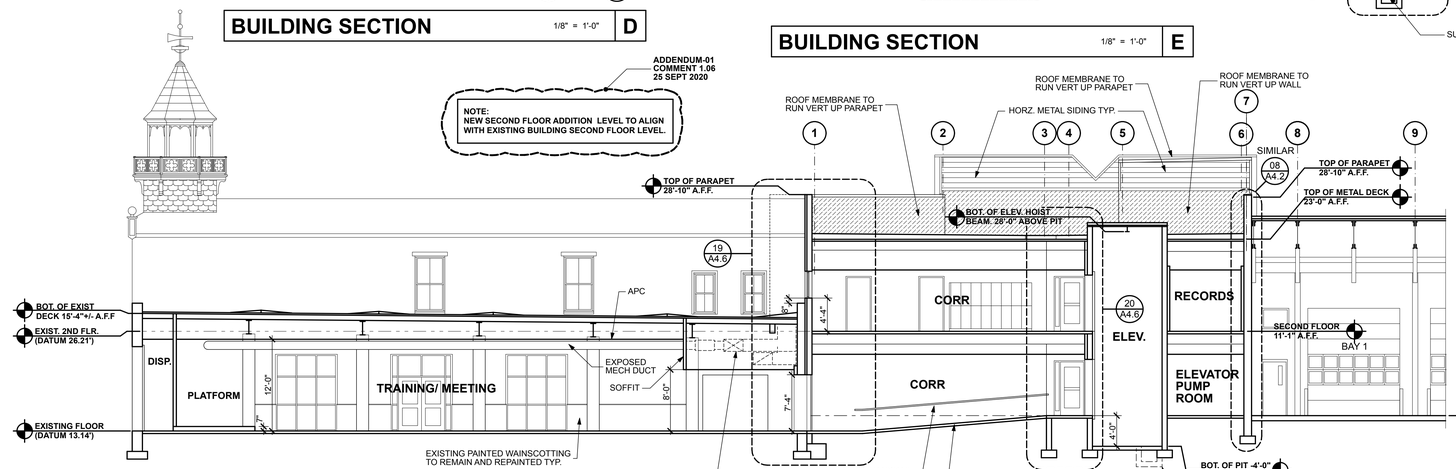
BUILDING SECTION 1/8" = 1'-0" E



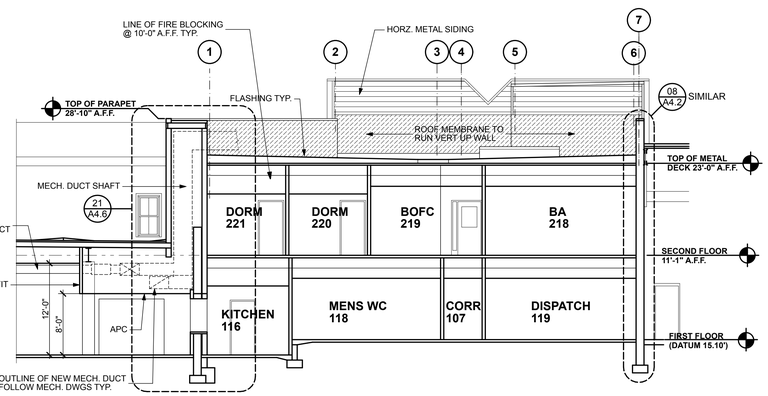
BUILDING SECTION 1/8" = 1'-0" H

ADDENDUM-01 COMMENT 1.06 25 SEPT 2020

NOTE:
NEW SECOND FLOOR ADDITION LEVEL TO ALIGN WITH EXISTING BUILDING SECOND FLOOR LEVEL.



BUILDING SECTION 1/8" = 1'-0" F



BUILDING SECTION 1/8" = 1'-0" G

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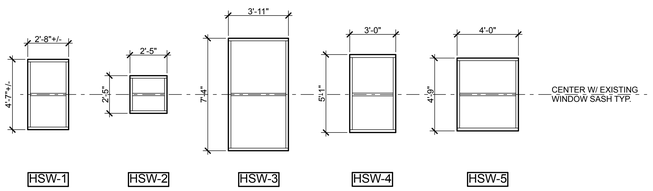
A2.6

HISTORIC STORM WINDOW TYPES HSW-# — 1/4" = 1'-0" — A

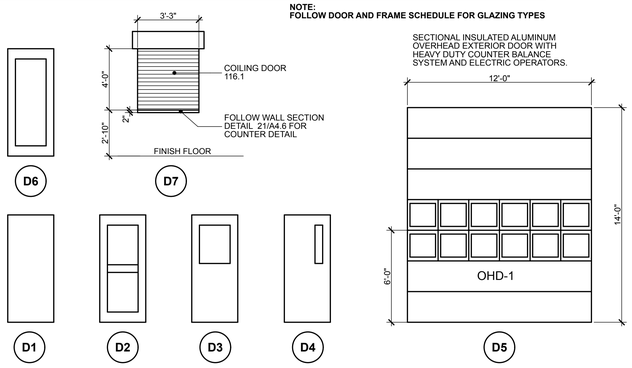
NOTE:
CONTRACTOR TO FIELD VERIFY ALL EXISTING DIMENSIONS FOR NEW HISTORIC STORM WINDOWS

EXISTING HISTORIC WINDOW NOTE:
FOLLOW SPECIFICATIONS SECTION 080153 HISTORIC TREATMENT FOR WOOD WINDOWS FOR RENOVATION OF EXISTING HISTORIC WINDOWS. (TYP. FOR ALL WINDOWS)



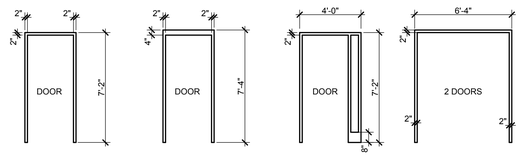
DOOR TYPES — NOTE: FOLLOW DOOR SCHEDULE FOR GLAZING TYPES — 1/4" = 1'-0" — B

NOTE:
FOLLOW DOOR AND FRAME SCHEDULE FOR GLAZING TYPES

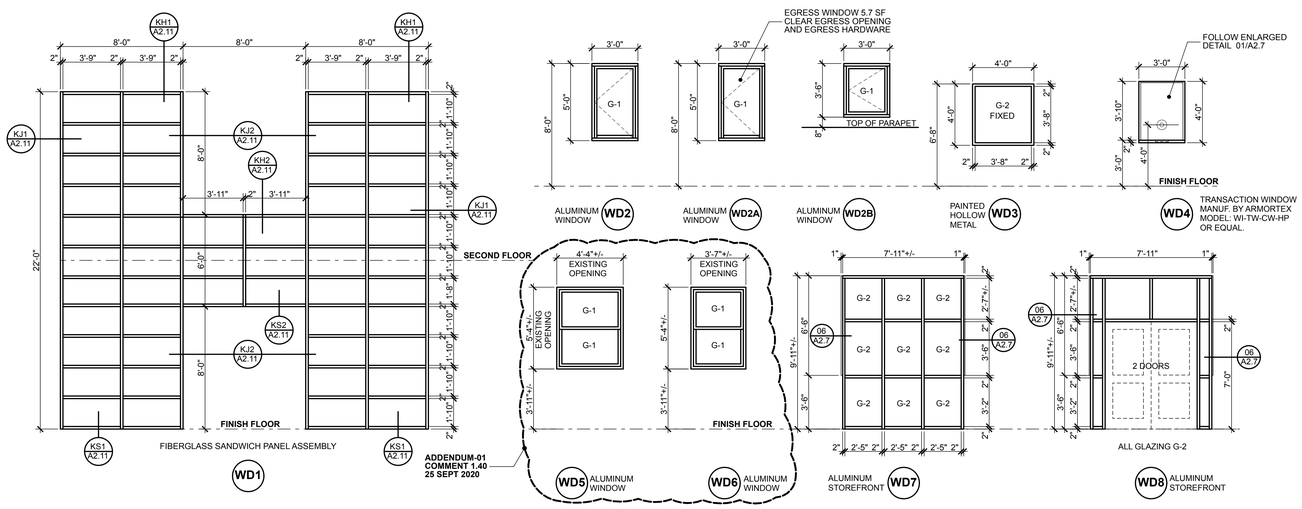


FRAME TYPES — NOTE: FOLLOW SPECIFICATIONS FOR GLAZING SCHEDULE FOR ALUMINUM ENTRANCE AND STOREFRONTS — 1/4" = 1'-0" — C

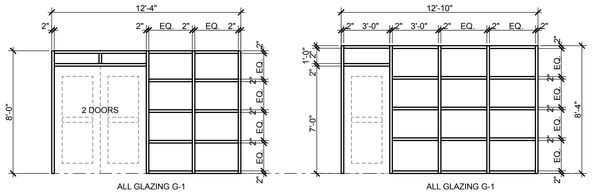
NOTE:
FOLLOW DOOR AND FRAME SCHEDULE FOR GLAZING TYPES



WINDOW TYPES — 1/4" = 1'-0" — D

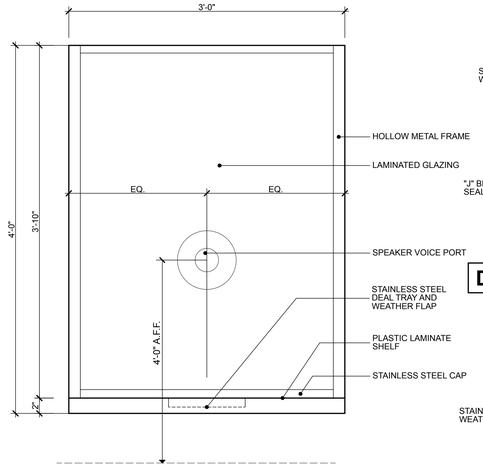


ALUMINUM AND ENTRANCE STOREFRONT — 1/4" = 1'-0" — E

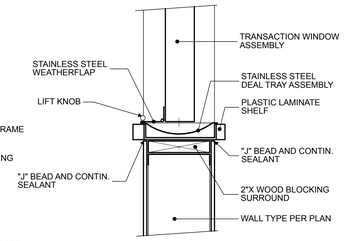


GLAZING TYPES:

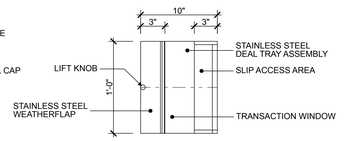
- G1: 1" THICK INSULATED GLAZING. EACH LITE 1/4" THICK FULLY TEMPERED SAFETY GLAZING WITH ARGON AND GREY TINT GLAZING TO MATCH GLASS IN ALUMINUM STOREFRONT
- G2: 1/4" CLEAR, FULLY TEMPERED SAFETY GLASS
- G4: TWO LAYERS OF 1/4" THICK TEMPERED SAFETY GLASS WITH .090-INCH THICK LAMINATED INTERLAYER



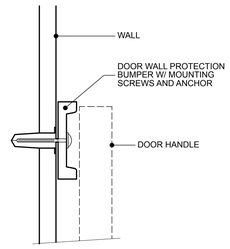
TRANSACTIONWINDOW W-4 DTL. 1 1/2" = 1'-0" — 01



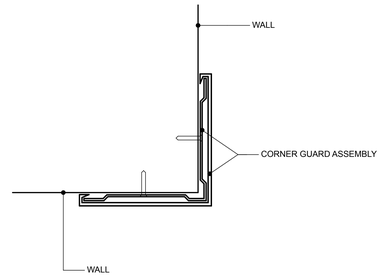
DEAL TRAY DETAIL 1 1/2" = 1'-0" — 03



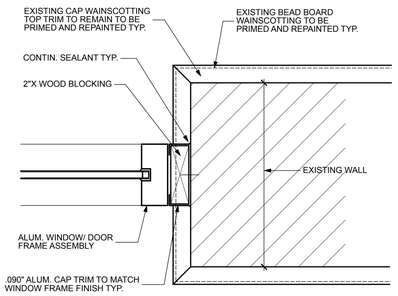
DEAL TRAY DETAIL 1 1/2" = 1'-0" — 02



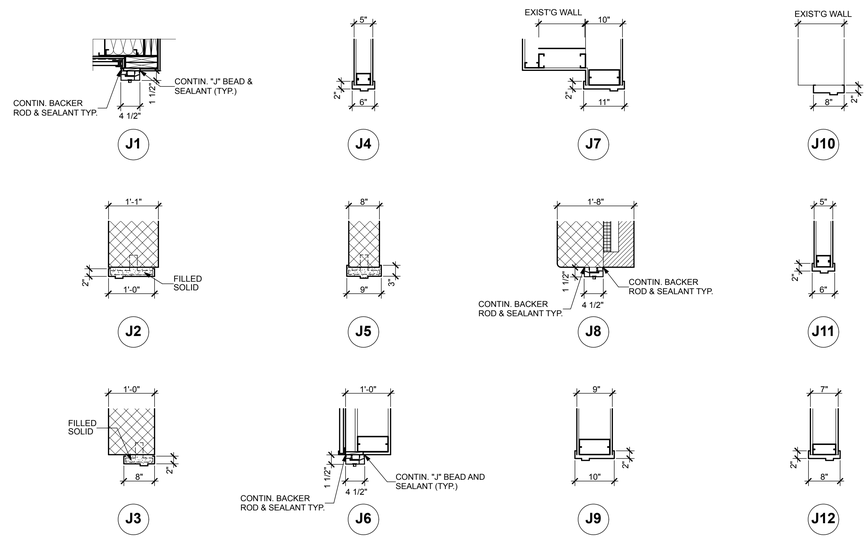
TYP. WALL PROTECTION DETAIL 1 1/2" = 1'-0" — 04



TYP. CORNER GUARD DETAIL NTS — 05



TYP. FRAME DETAIL @ WALL NTS — 06



TYPICAL DOOR HEAD/JAMB DTLS SCALE: 3/4" = 1'-0" — 07

NOTES:
1. CONT. SEALANT @ ALL SIDES OF FRAMES & ADJ. WALL CONST. (TYP.)
2. ALL PHM FRAMES @ CMU WALLS SHALL BE GROUTED SOLID. (TYP.)
3. REFER TO WALL TYPES FOR ADDITIONAL INFORMATION. (TYP.)

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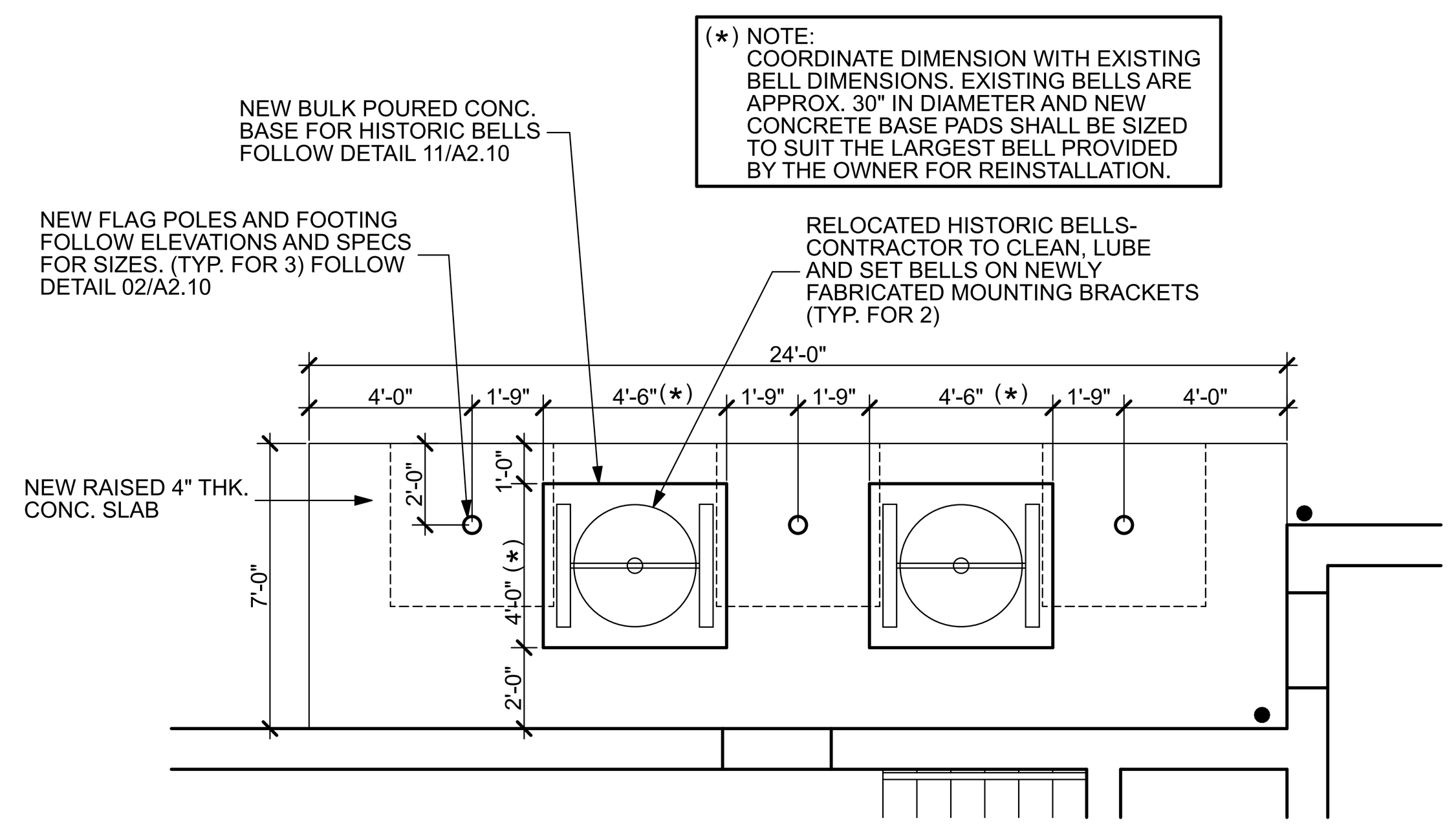
RELIEF FIRE COMPANY NO. 1
ADDITION / RENOVATION
BLOCK 86, LOTS 4, 5, 10, 11, 21, 22, 22.01 AND 23
17 PINE STREET
MOUNT HOLLY, NEW JERSEY

TITLE: DOOR- WINDOW TYPES & DETAILS

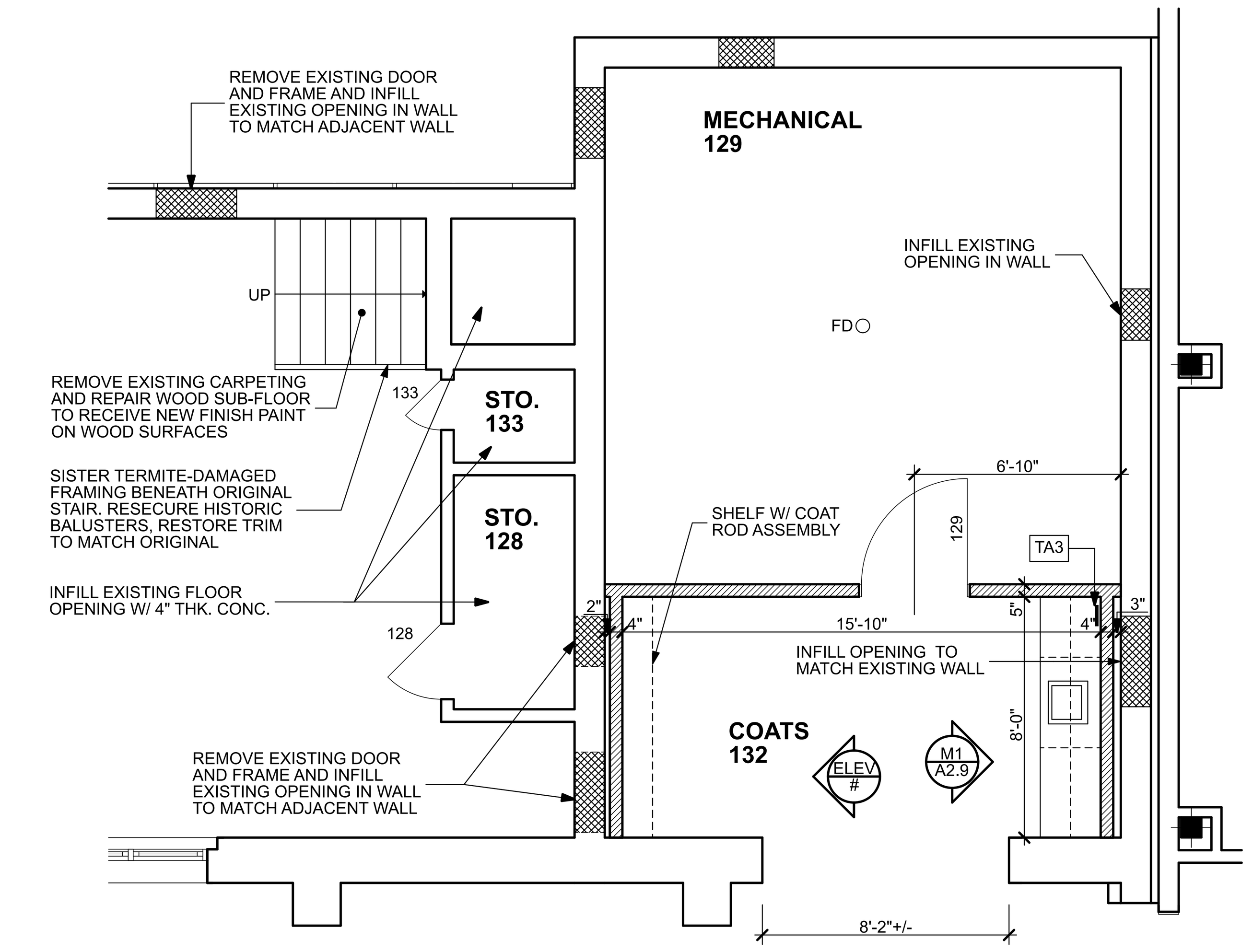
DRAWING DATE: 01 JULY 2020
REVISION DATE:
1 02 SEPT 20
2 25 SEPT 20

DRAWN BY: RR
COMMISSION NO.: 5475B

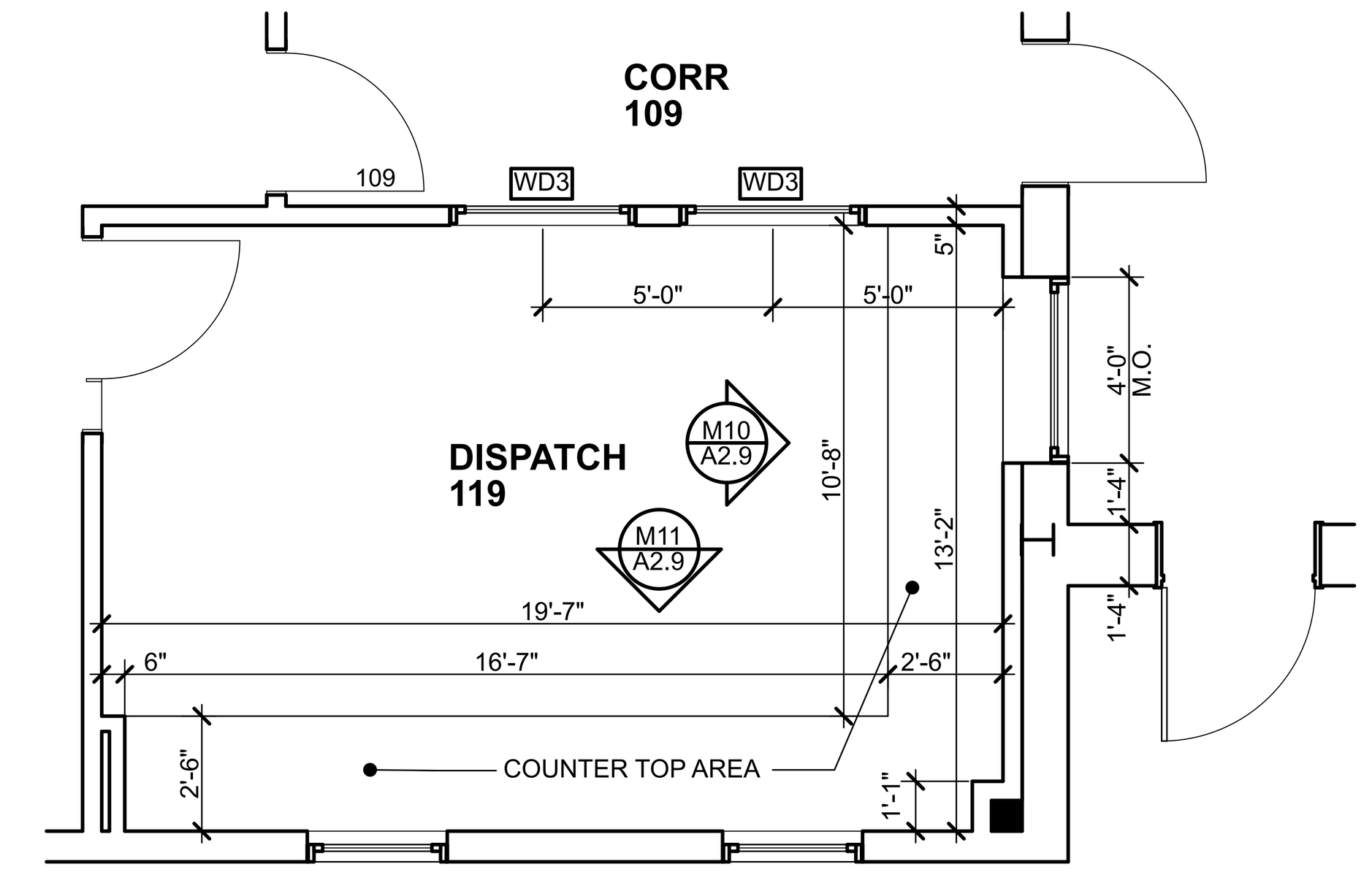
A2.7



ENLARGED PLAN 1/4" = 1'-0" EP04



ENLARGED PLAN 1/4" = 1'-0" EP05

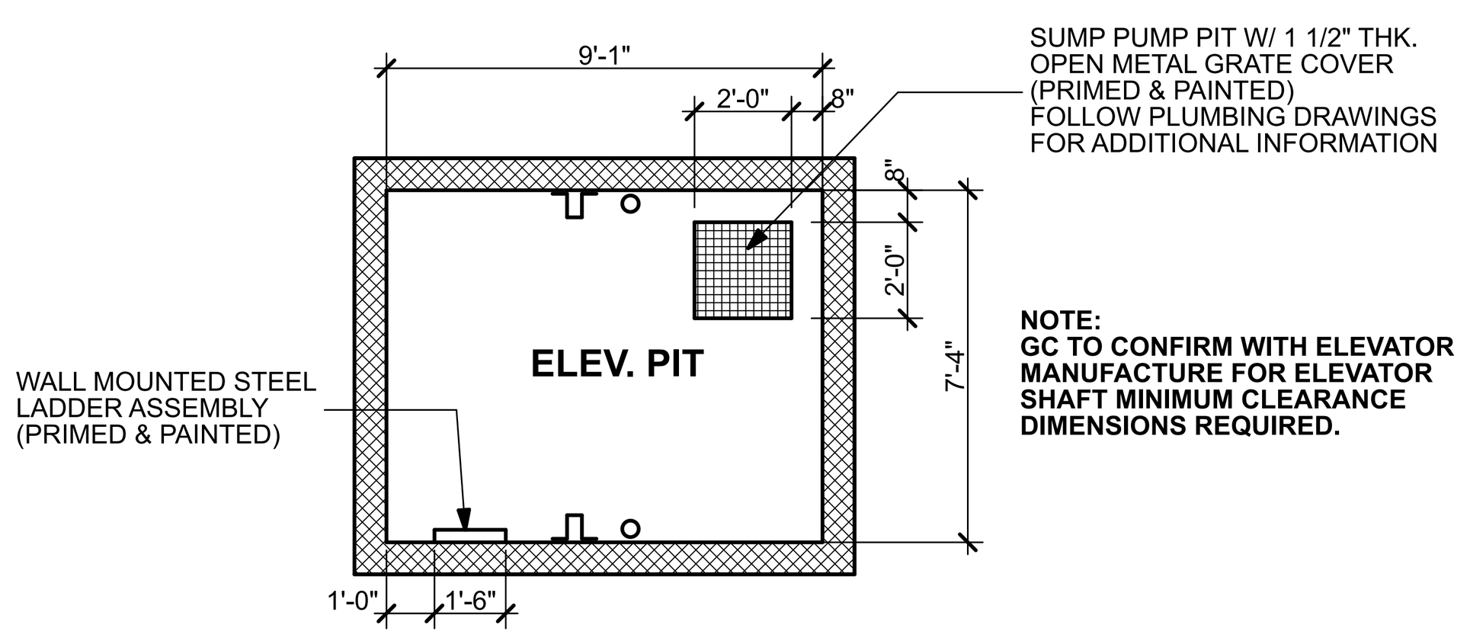


ENLARGED PLAN 1/4" = 1'-0" EP10

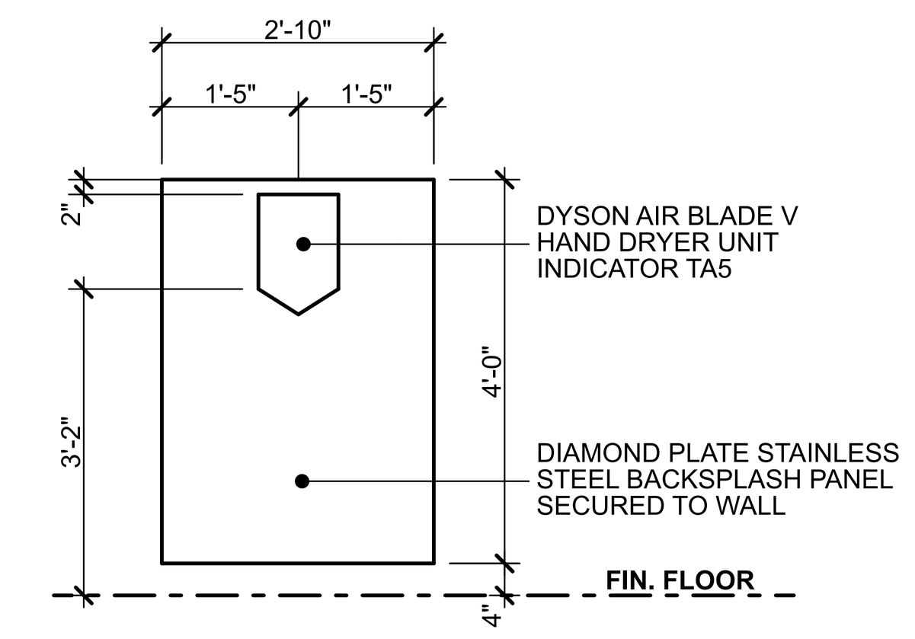
TOILET/ BATH ACCESSORY SCHEDULE

SYM.	ITEM	MODEL-BASIS OF DESIGN
TA1	18"W X 30" MIRROR	BOBRICK B-165
TA2	AUTOMATIC SOAP DISPENSER	BOBRICK B-2012
TA3	SURFACE MOUNTE PAPER TOWEL DISPENSER	BOBRICK B-2620
TA4	DOUBLE ROLL TOILET PAPER HOLDER	BOBRICK B-274
TA5	ELECTRIC HAND DRYER	DYSON AIR BLADE V
TA6	18" LONG VERT. GRAB BAR	BOBRICK B6806.99 X 18
TA7	36" LONG GRAB BAR	BOBRICK B6806.99 X 36
TA8	42" LONG GRAB BAR	BOBRICK B6806.99 X 42
TA9	SHOWER CURTAIN ROD	BOBRICK B-6047
TA10	SHOWER CURTAIN WITH HOOKS	BOBRICK-204 SERIES
TA11	FOLDING SHOWER SEAT	BOBRICK B-5181
TA12	SOAP DISH- RECESSED	BOBRICK B-4390
TA13	MOP AND BROOM HOLDER	BOBRICK B-239
TA14	24" LONG GRAB BAR	BOBRICK B6806.99 X 24

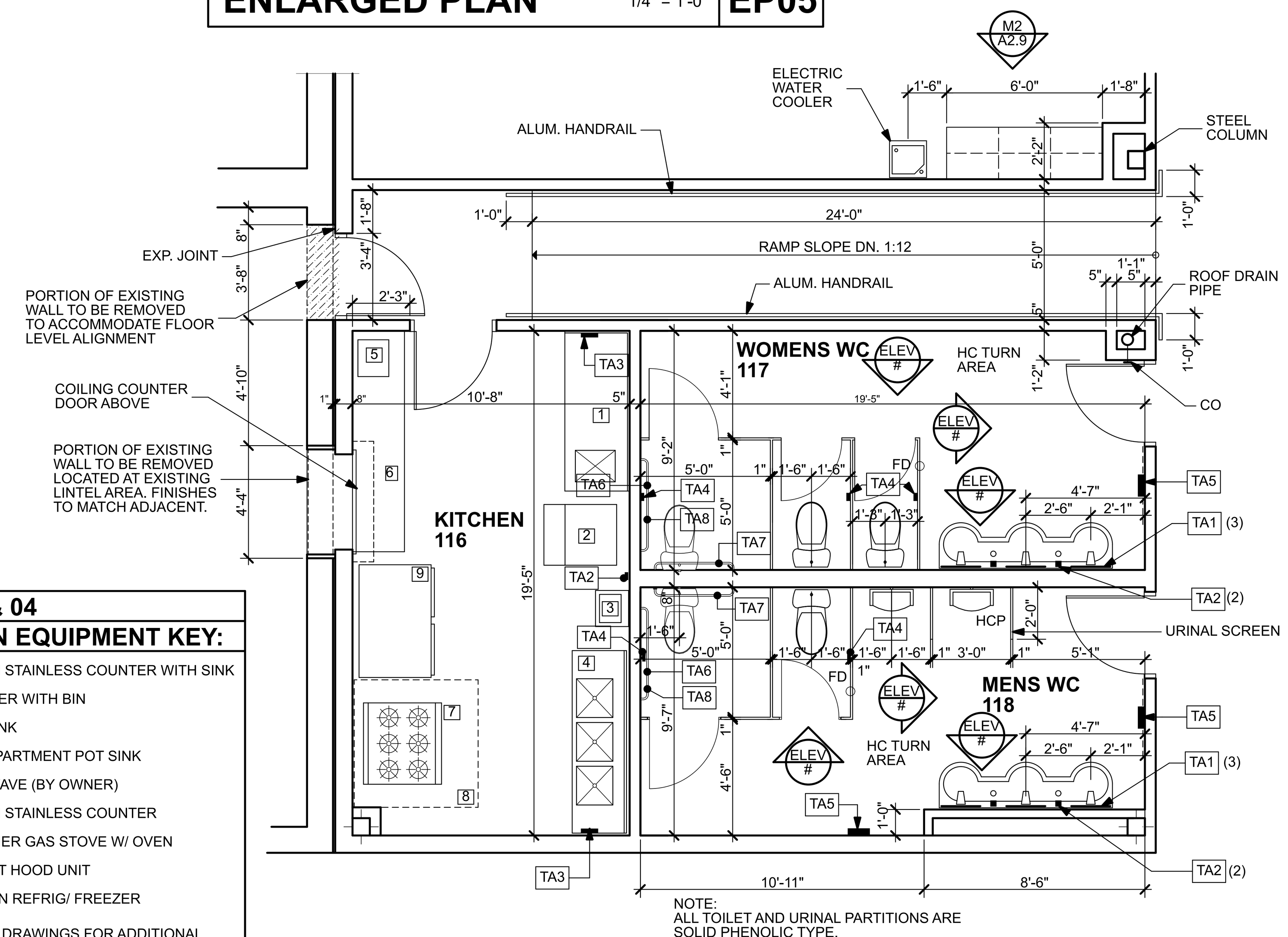
NOTES:
1. GC TO PROVIDE IN WALL SOLID BLOCKING FOR ALL TOILET AND BATH ACCESSORIES (TYP.).
2. FOLLOW PLUMBING DRAWINGS FOR ADDITIONAL INFORMATION.
3. TOILET ACCESSORIES REQUIRED FOR ROOMS 211 AND 212 ARE THE SAME AS ROOMS 210 AND 213, BUT NOT SHOWN FOR CLARITY PURPOSE ONLY.



ENLARGED PLAN 1/4" = 1'-0" EP07



TYP. HAND DRYER DETAIL NTS 01 A2.8

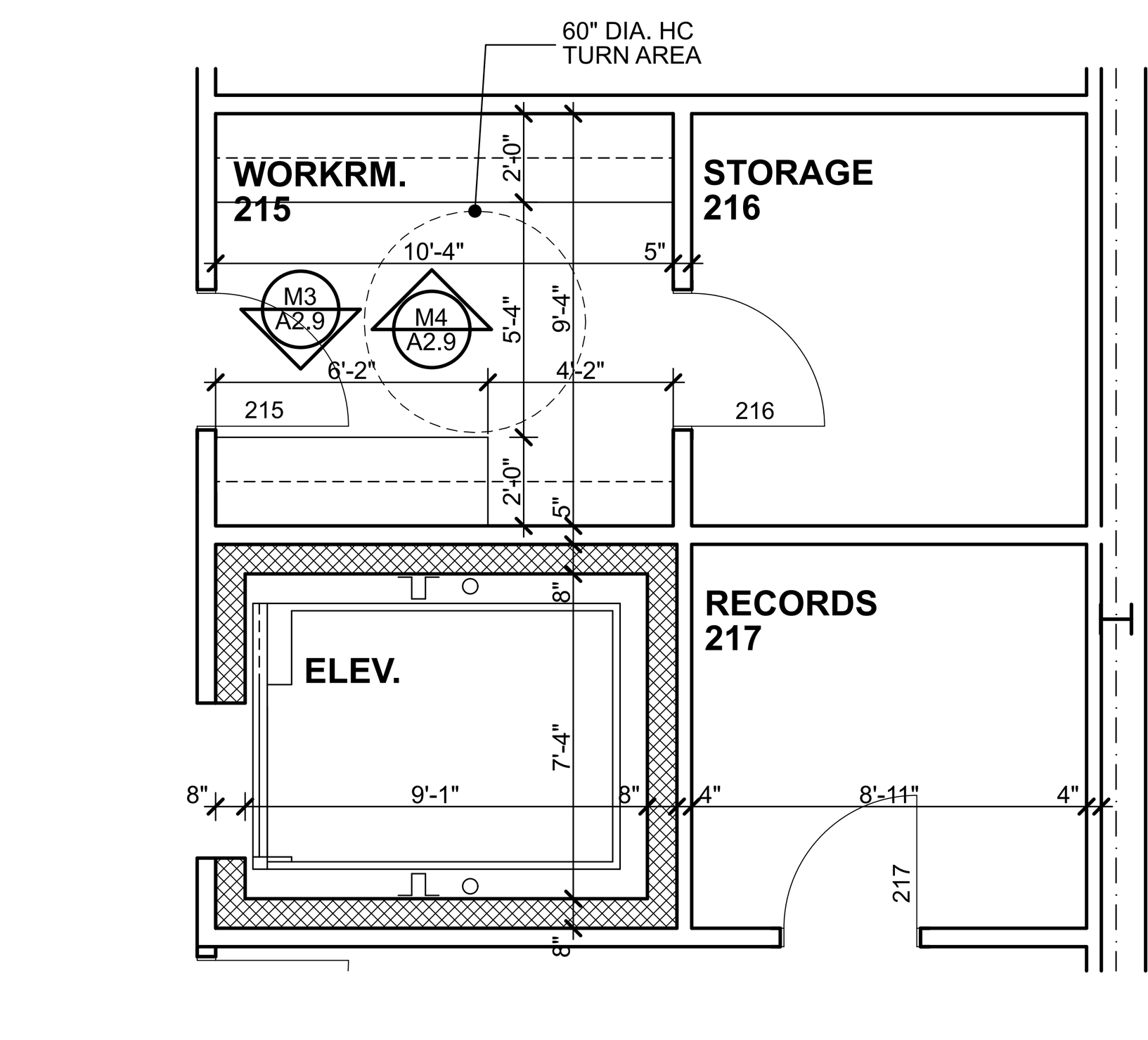


ALT-03 & 04
KITCHEN EQUIPMENT KEY:

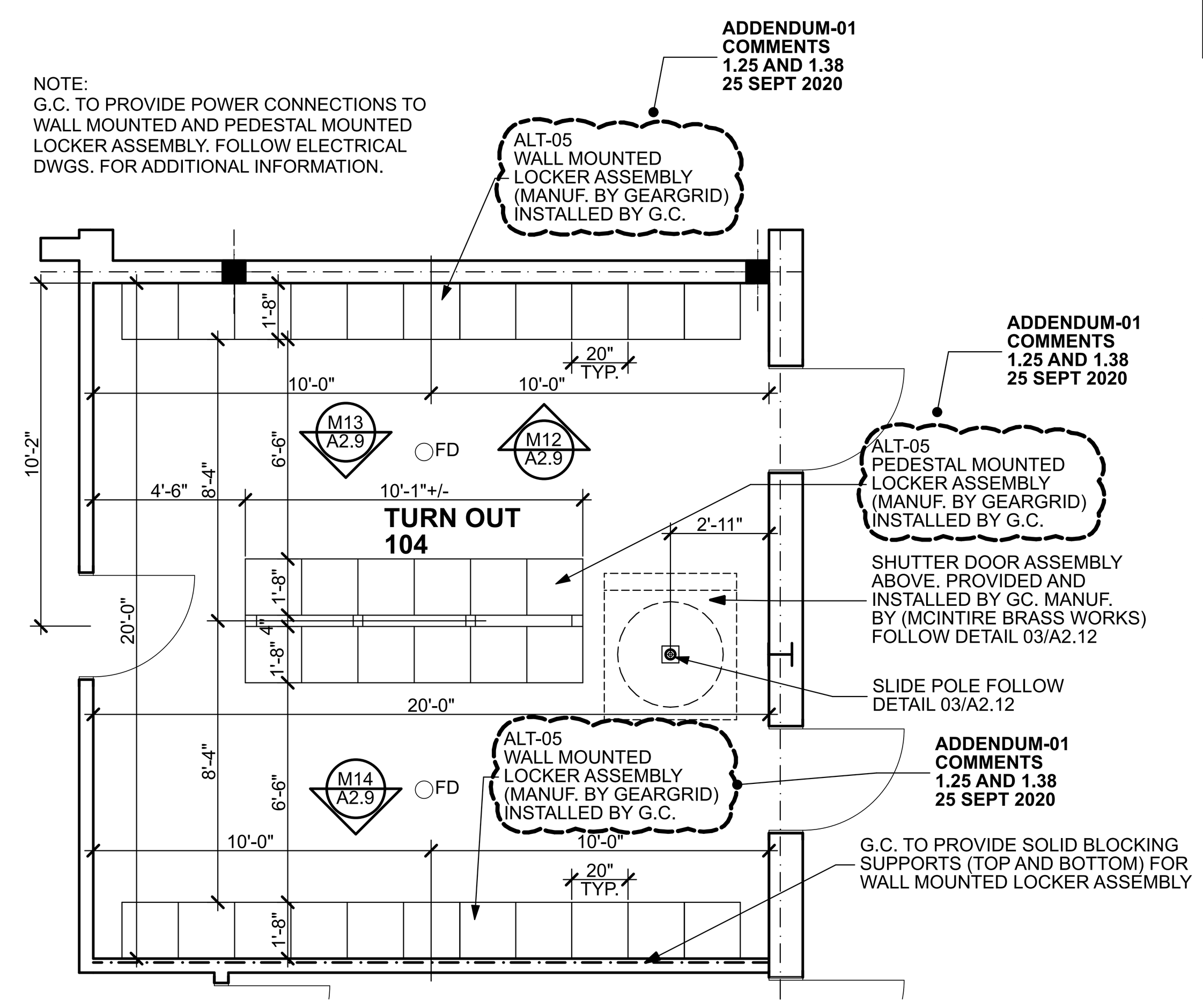
1	CUSTOM STAINLESS COUNTER WITH SINK
2	ICE MAKER WITH BIN
3	HAND SINK
4	(3) COMPARTMENT POT SINK
5	MICROWAVE (BY OWNER)
6	CUSTOM STAINLESS COUNTER
7	(6) BURNER GAS STOVE W/ OVEN
8	EXHAUST HOOD UNIT
9	REACH-IN REFRIG/ FREEZER

NOTE: FOLLOW MPE DRAWINGS FOR ADDITIONAL INFORMATION.

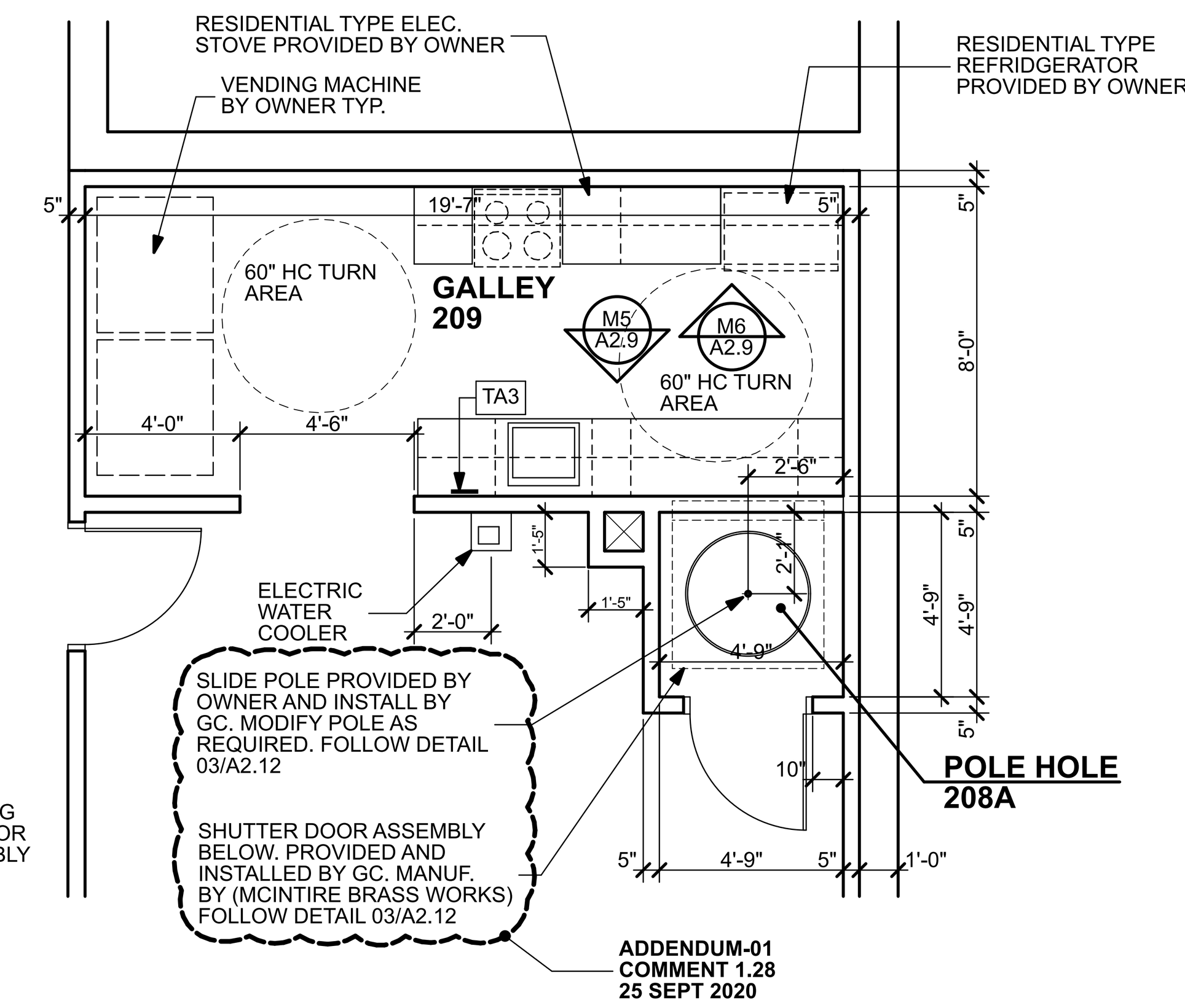
ENLARGED PLAN 1/4" = 1'-0" EP06



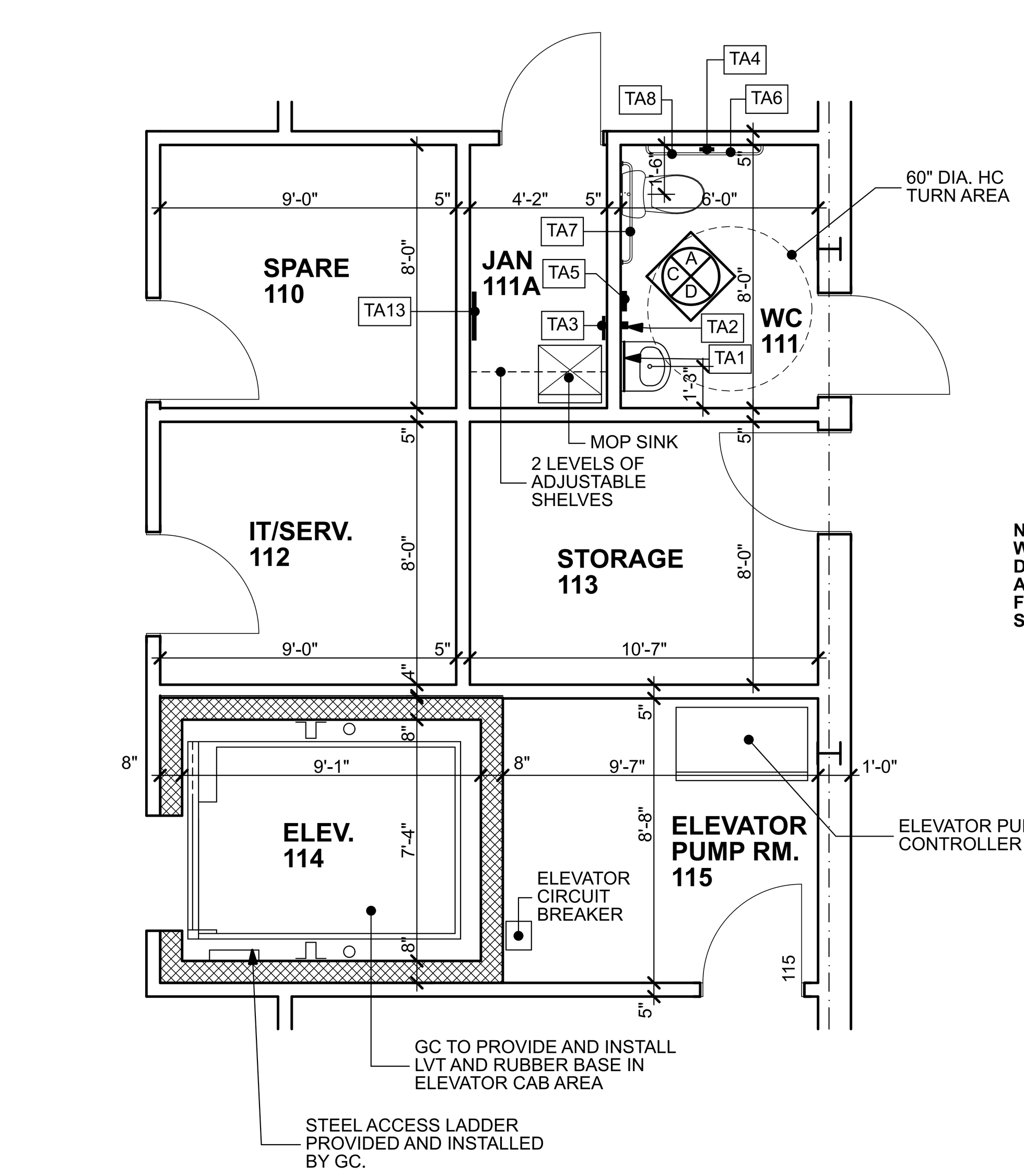
ENLARGED PLAN 1/4" = 1'-0" EP08



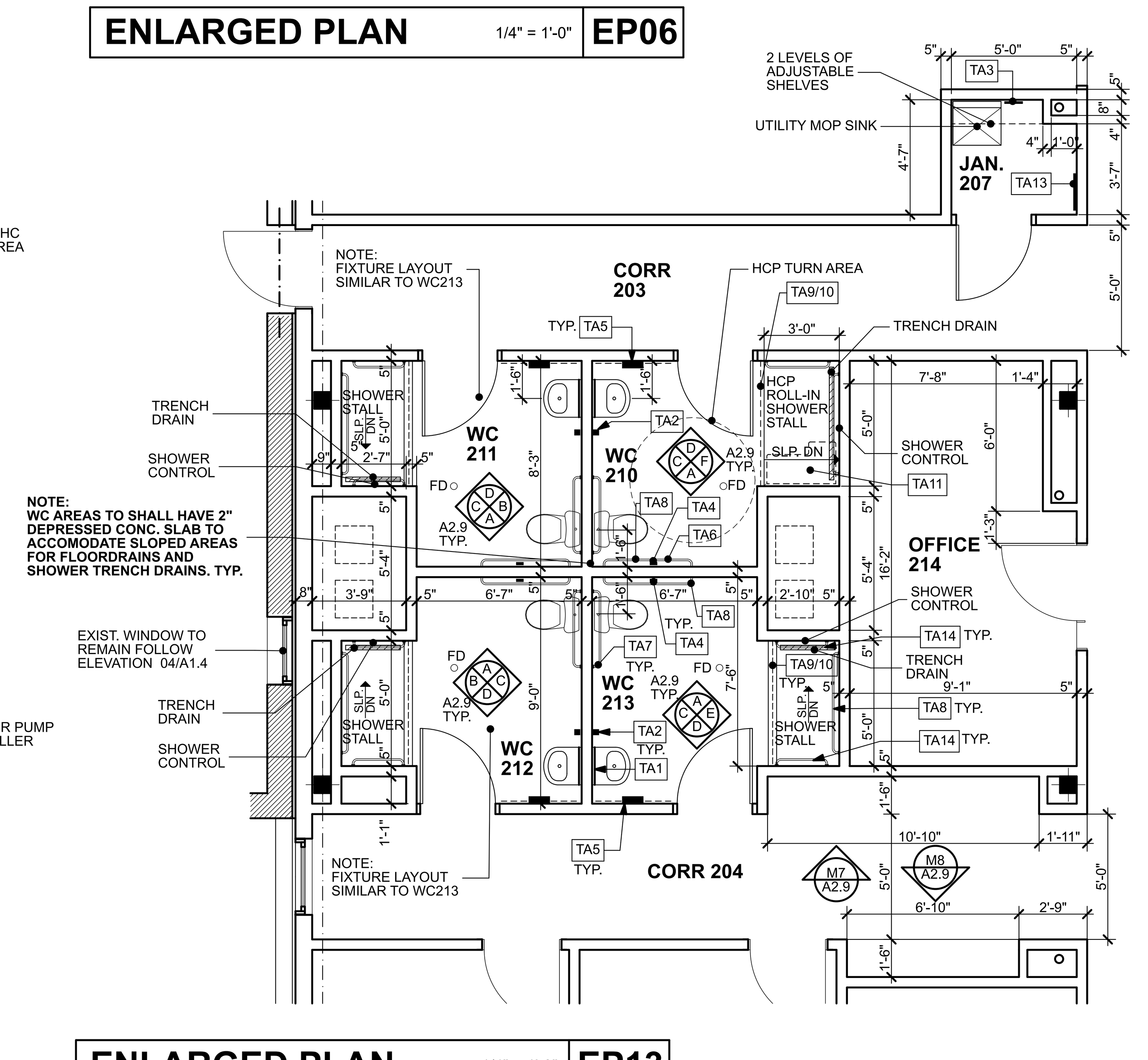
ENLARGED PLAN 1/4" = 1'-0" EP11



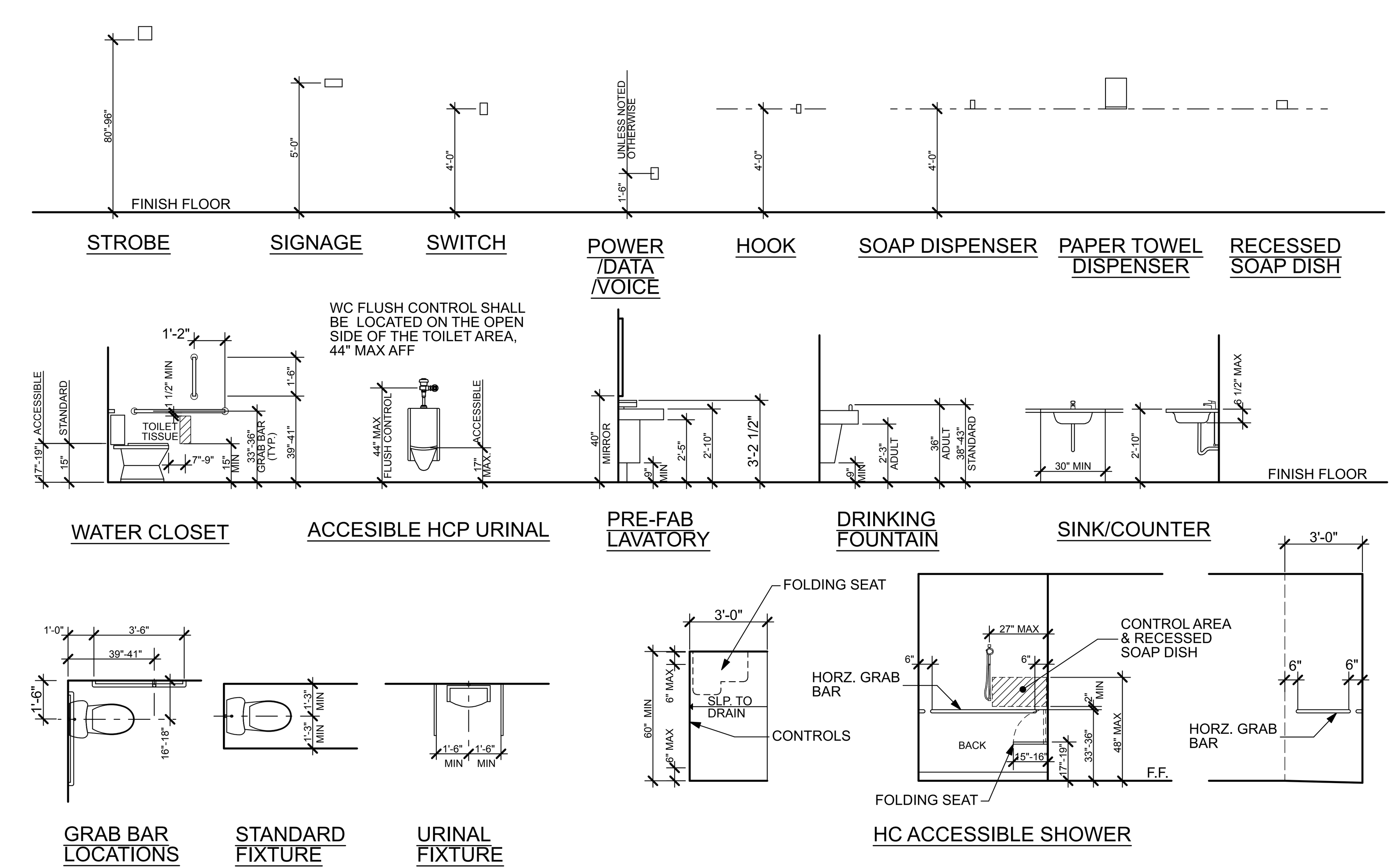
ENLARGED PLAN 1/4" = 1'-0" EP12



ENLARGED PLAN 1/4" = 1'-0" EP09



ENLARGED PLAN 1/4" = 1'-0" EP13



ACCESSIBLE FIXTURE & ACCESSORY DETAILS NTS

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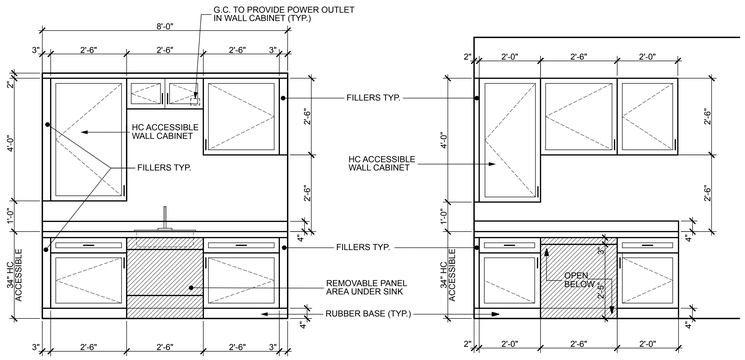
MOUNT HOLLY, NEW JERSEY

TITLE: ENLARGED PLANS

DRAWING DATE: 01 JULY 2020
REVISION DATE:
1 02 SEPT 20
2 25 SEPT 20

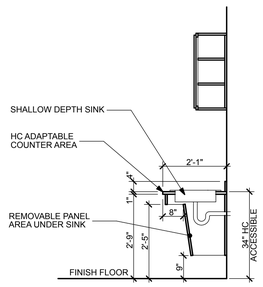
DRAWN BY: RR
COMMISSION NO.: 5475B

A2.8



MILLWORK 1/2" = 1'-0" **M1**
COATS 132

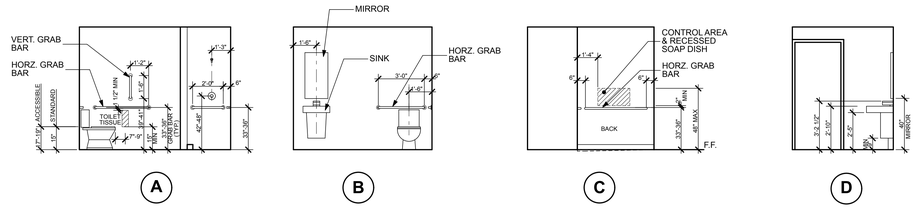
MILLWORK 1/2" = 1'-0" **M2**
TRAINING 105

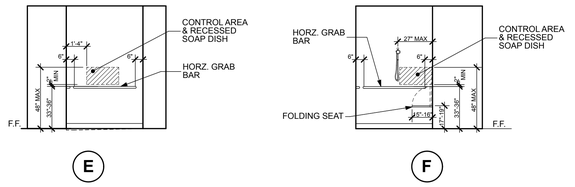


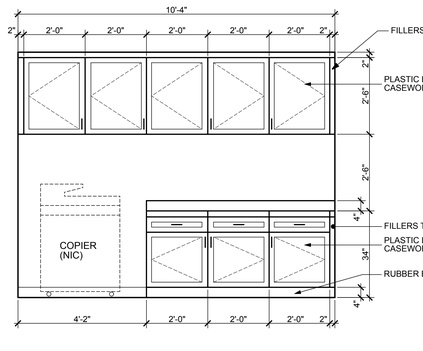
TYP. SINK MILLWORK 1/2" = 1'-0" **M9**

INTERIOR WC ELEVATIONS

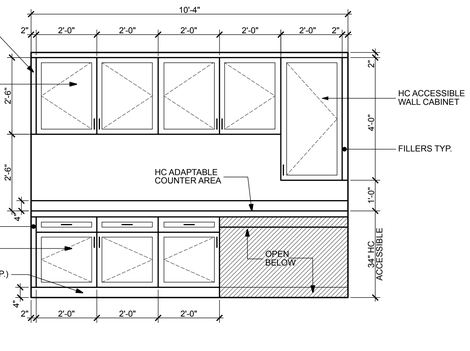
NTS



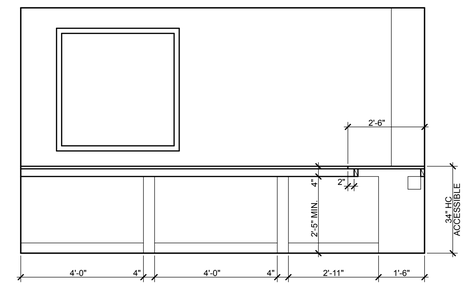




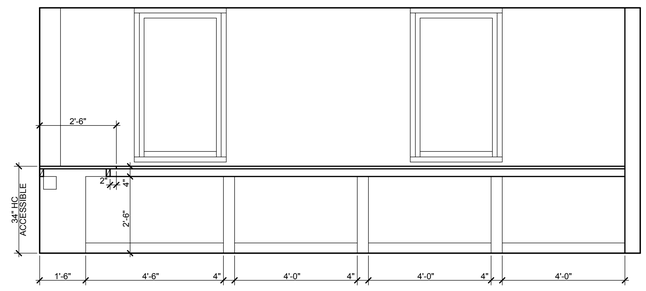
MILLWORK SCALE: 1/2" = 1'-0" **M3**
WORKROOM 215



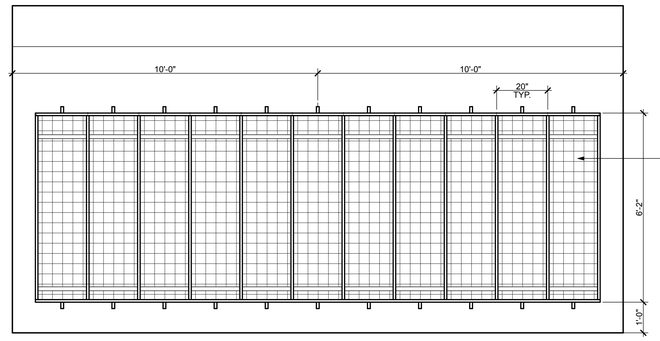
MILLWORK SCALE: 1/2" = 1'-0" **M4**
WORKROOM 215



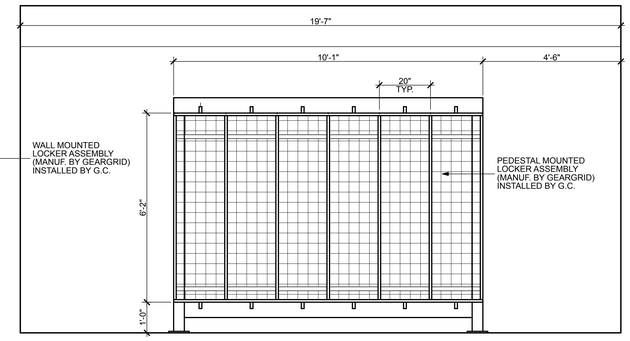
MILLWORK SCALE: 1/2" = 1'-0" **M10**
WORKROOM 119



MILLWORK SCALE: 1/2" = 1'-0" **M11**
WORKROOM 119



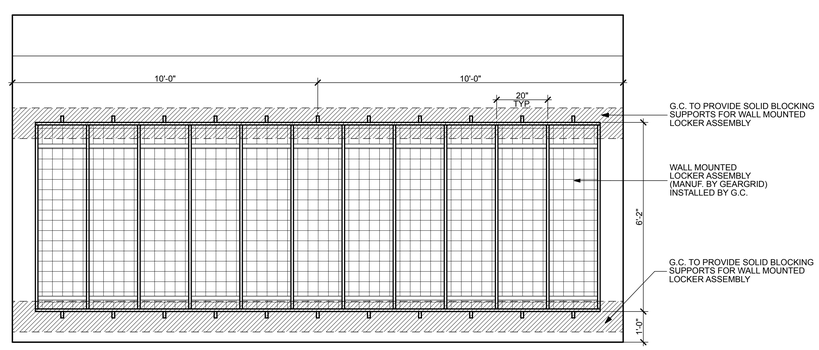
EQUIPMENT GEAR LOCKER ELEV. 1/2" = 1'-0" **M12**
TURN OUT 104 **ALT-BID 05**



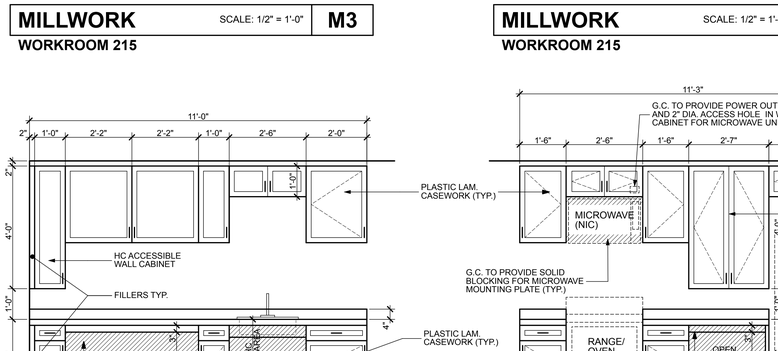
EQUIPMENT GEAR LOCKER ELEV. 1/2" = 1'-0" **M13**
TURN OUT 104 **ALT-BID 05**

MILLWORK SCALE: 1/2" = 1'-0" **M5**
GALLEY 209

MILLWORK SCALE: 1/2" = 1'-0" **M6**
GALLEY 209



EQUIPMENT GEAR LOCKER ELEV. 1/2" = 1'-0" **M14**
TURN OUT 104 **ALT-BID 05**



MILLWORK SCALE: 1/2" = 1'-0" **M7**
CORRIDOR 204

MILLWORK SCALE: 1/2" = 1'-0" **M8**
CORRIDOR 204

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ADDITION / RENOVATION
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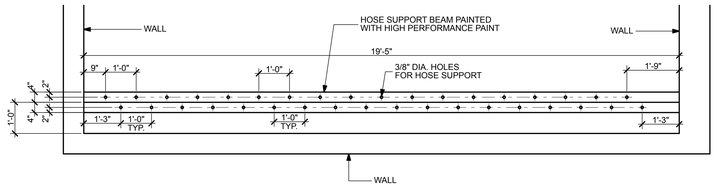
17 PINE STREET
MOUNT HOLLY, NEW JERSEY

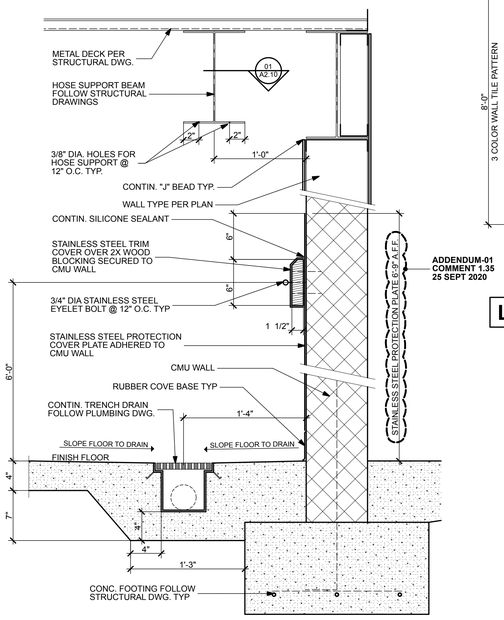
TITLE: ALTS-LOCKERS & MILLWORK

DRAWING DATE: 01 JULY 2020
REVISION DATE:
DRAWN BY: RR
COMMISSION NO.: 5475B

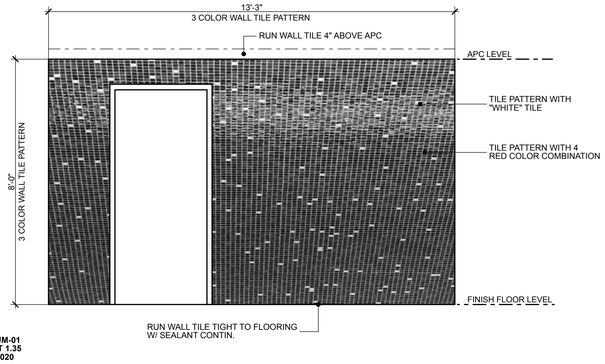
A2.9



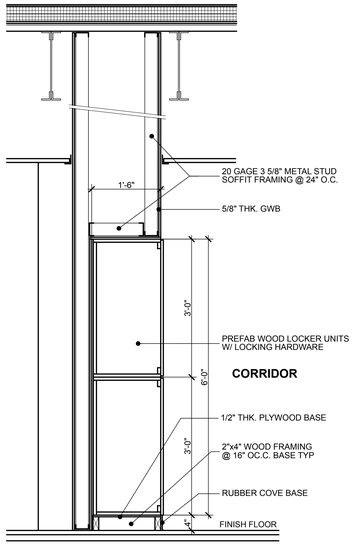
HOIST BEAM PLAN DETAIL 1/2" = 1'-0" | 01



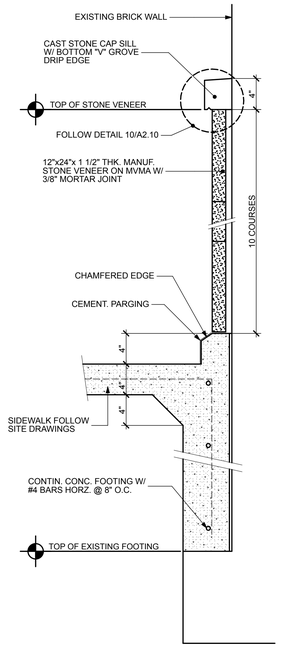
HOIST BEAM DETAIL 1 1/2" = 1'-0" | 02



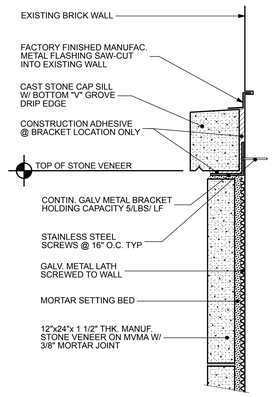
LOBBY 101 WALL TILE PATTERN 1 /2" = 1'-0" | 04



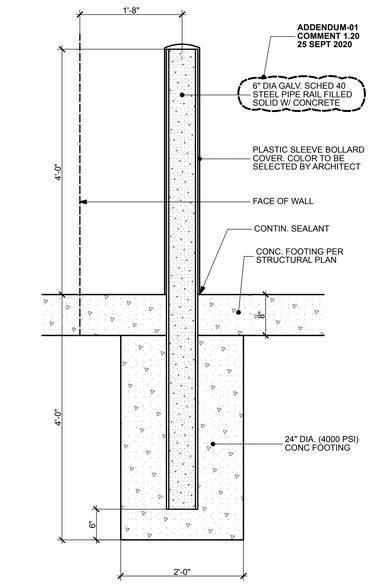
LOCKER SECTION 3/4" = 1'-0" | 08



MEMORIAL WALL DETAIL 1 1/2" = 1'-0" | 09



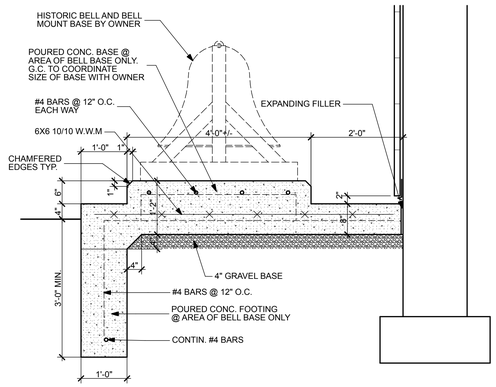
WAINSCOT DETAIL 3" = 1'-0" | 10



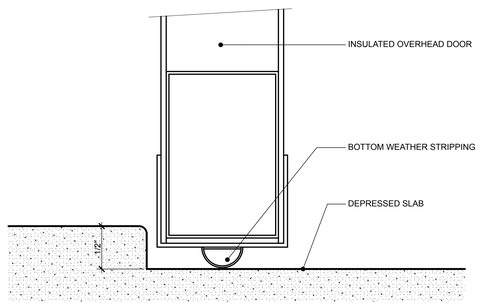
TYP. BOLLARD DETAIL 1" = 1'-0" | 03

(*) NOTE:
FOUNDATION DESIGN FOR FLAGPOLE AND FOOTING IS DELEGATED-DESIGN TO CONTRACTOR.
FOLLOW SPECIFICATIONS FOR DESIGN PARAMETERS AND ADDITIONAL INFORMATION.

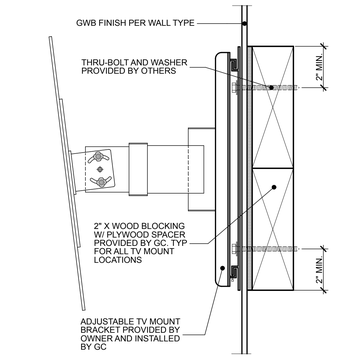
FLAGPOLE FOOTING DETAIL 3 /4" = 1'-0" | 05



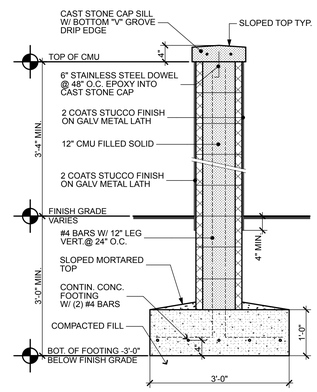
BELL BASE DETAIL 3" = 1'-0" | 11



TYP. DEPRESSED SLAB DETAIL NTS | 12



TYP. TV MOUNT DETAIL NTS | 13



RETAINING WALL DETAIL NTS | 14

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2 25 SEPT 20
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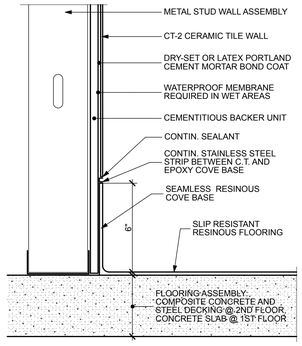
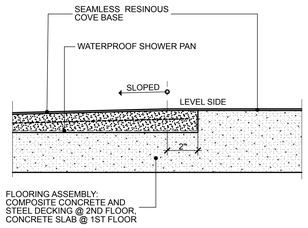
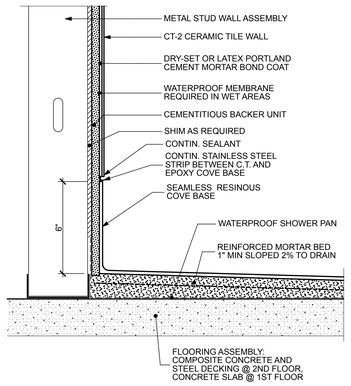
A2.10



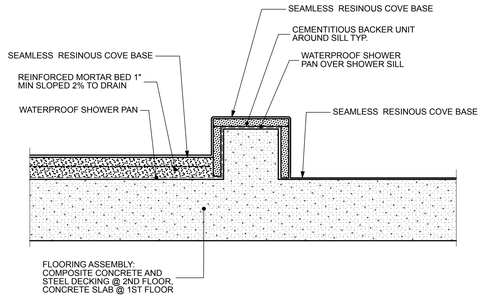
RESINOUS FLOORING DETAIL 3" = 1'-0" C1



SHOWER CERAMIC TILE DETAIL 3" = 1'-0" C4



SHOWER CERAMIC TILE DETAIL 3" = 1'-0" C2



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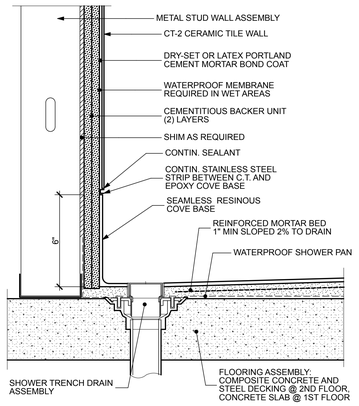
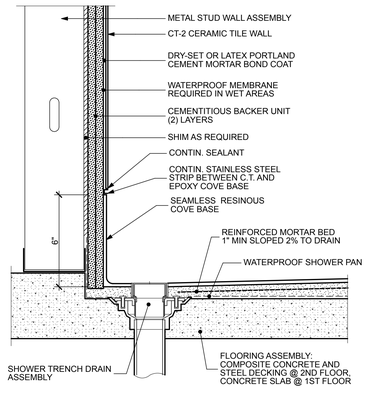
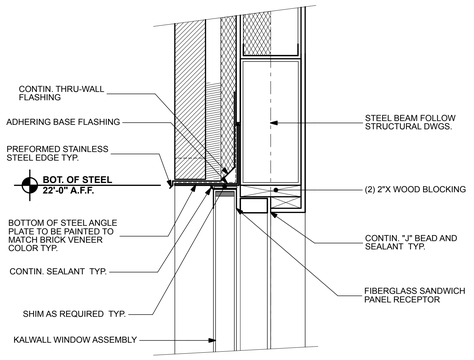


SHOWER CERAMIC TILE DETAIL 3" = 1'-0" C3



SHOWER CERAMIC TILE DETAIL 3" = 1'-0" C4

KALWALL DETAILS NTS 16



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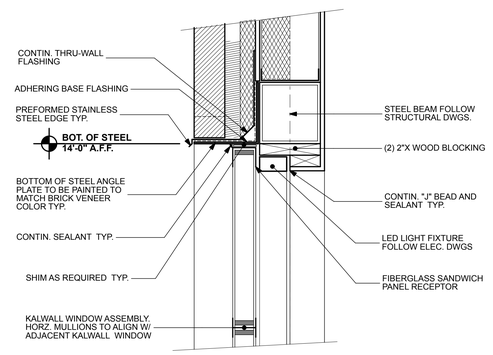

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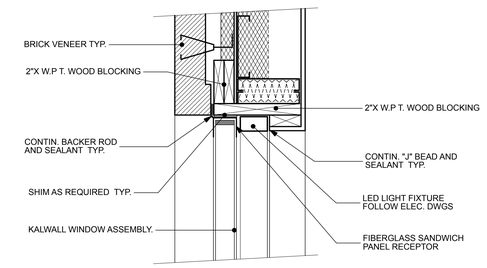

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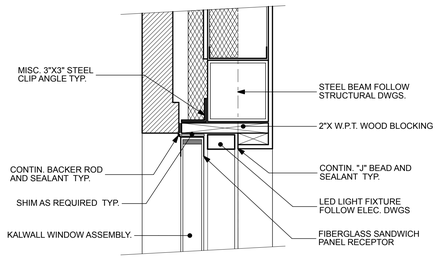

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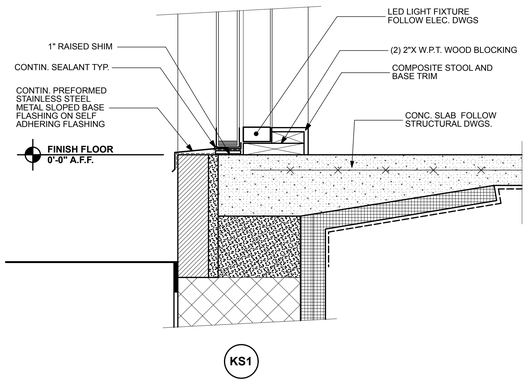

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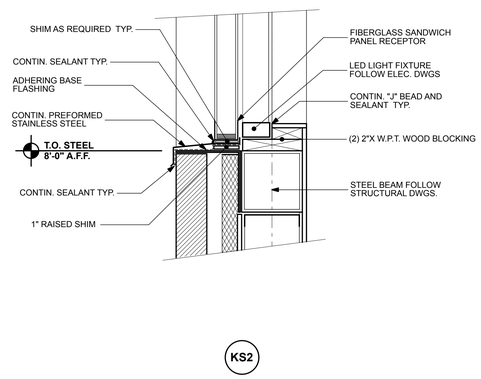

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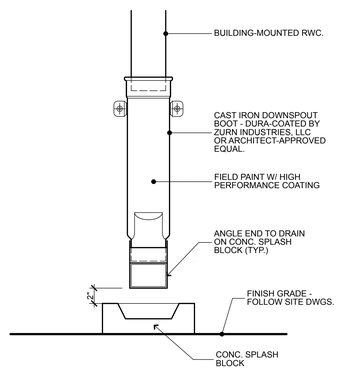
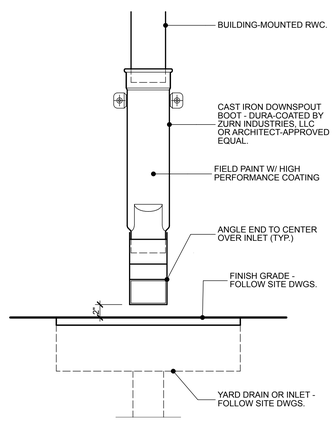


RWC @ SPLASHBLOCK DTL. NTS 14



RWC @ STORM CONN. DTL. NTS 15

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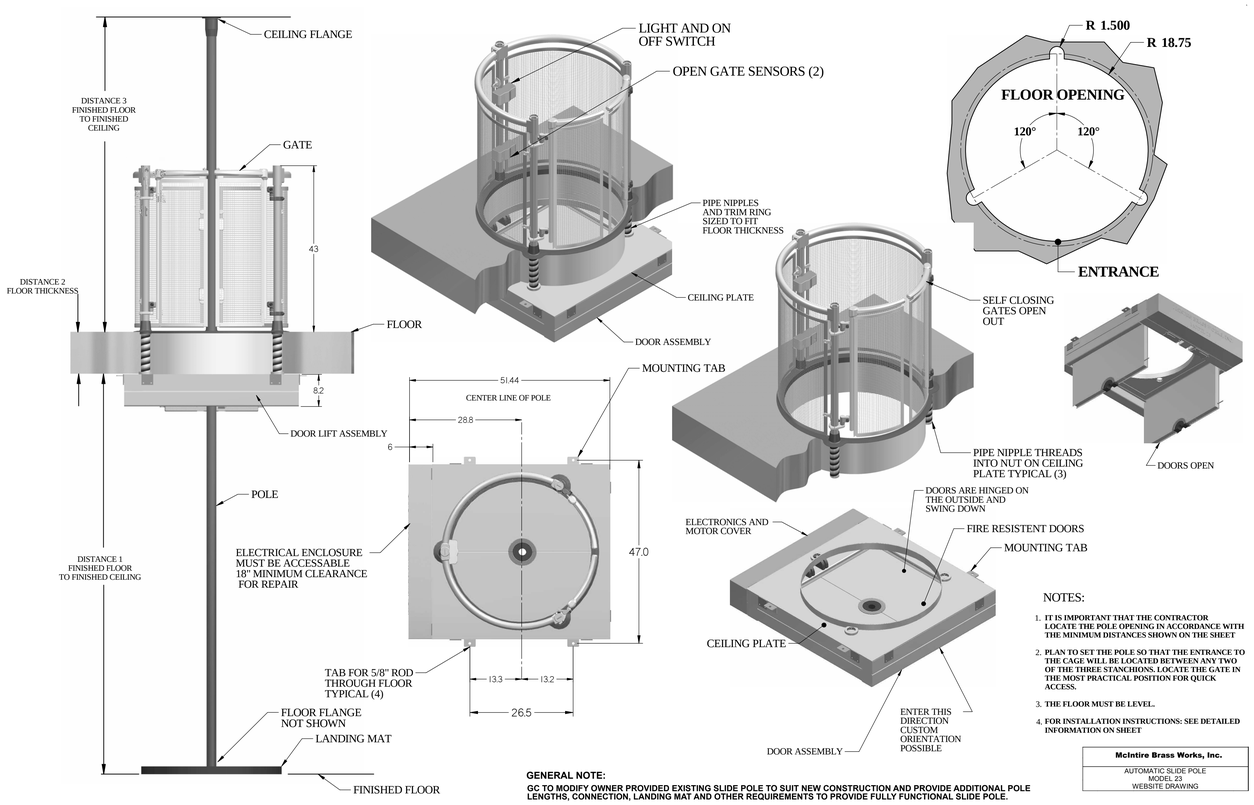
A2.11



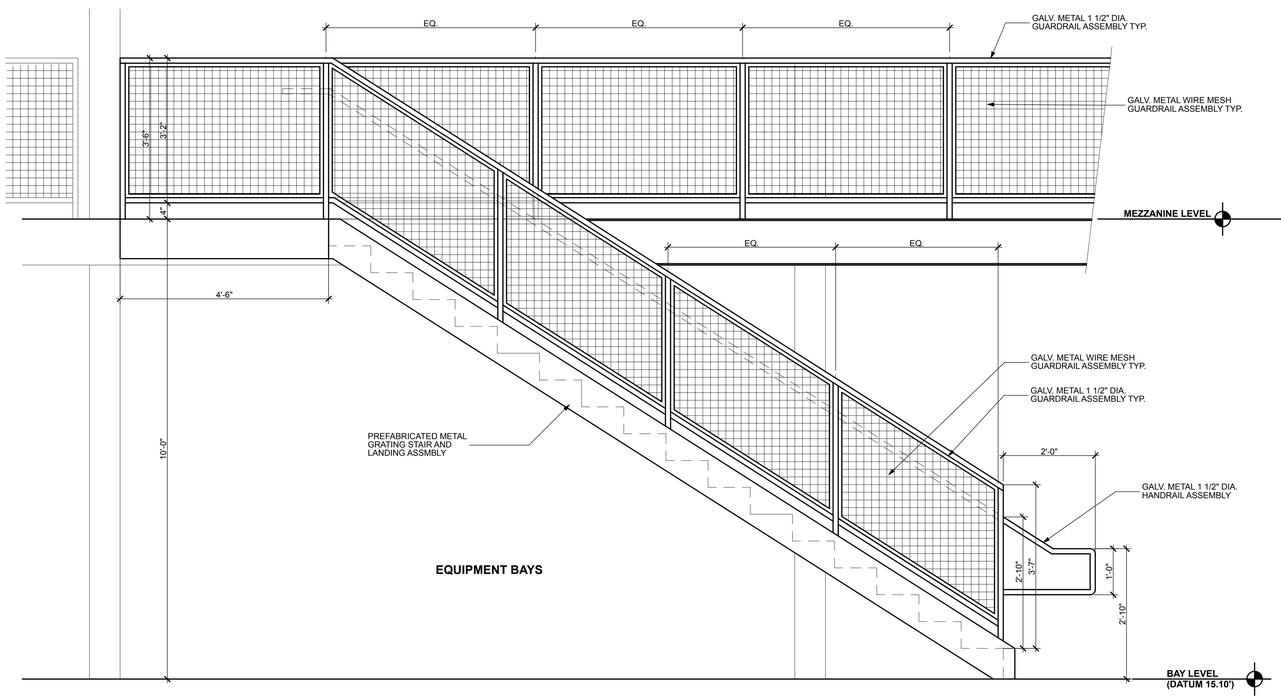
NOTES:

1. **IT IS IMPORTANT THAT THE CONTRACTOR LOCATE THE POLE OPENING IN ACCORDANCE WITH THE MINIMUM DISTANCES SHOWN ON THE SHEET**
2. **PLAN TO SET THE POLE SO THAT THE ENTRANCE TO THE CAGE WILL BE LOCATED BETWEEN ANY TWO OF THE THREE STANCHIONS. LOCATE THE GATE IN THE MOST PRACTICAL POSITION FOR QUICK ACCESS.**
3. **THE FLOOR MUST BE LEVEL.**
4. **FOR INSTALLATION INSTRUCTIONS: SEE DETAILED INFORMATION ON SHEET**

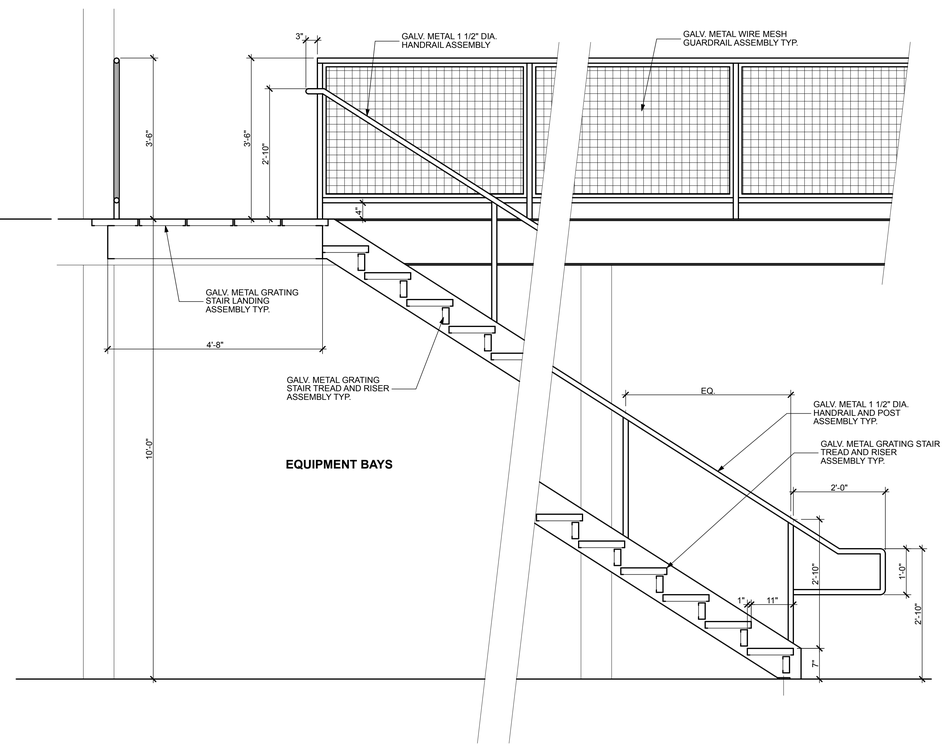
McIntire Brass Works, Inc.
AUTOMATIC SLIDE POLE MODEL 23 WEBSITE DRAWING

GENERAL NOTE:
GC TO MODIFY OWNER PROVIDED EXISTING SLIDE POLE TO SUIT NEW CONSTRUCTION AND PROVIDE ADDITIONAL POLE LENGTHS, CONNECTION, LANDING MAT AND OTHER REQUIREMENTS TO PROVIDE FULLY FUNCTIONAL SLIDE POLE.

AUTOMATIC SLIDE POLE DETAIL NTS 03



STAIR DETAIL 3/4" = 1'-0" 01



SECTION THRU- STAIR 3/4" = 1'-0" 02

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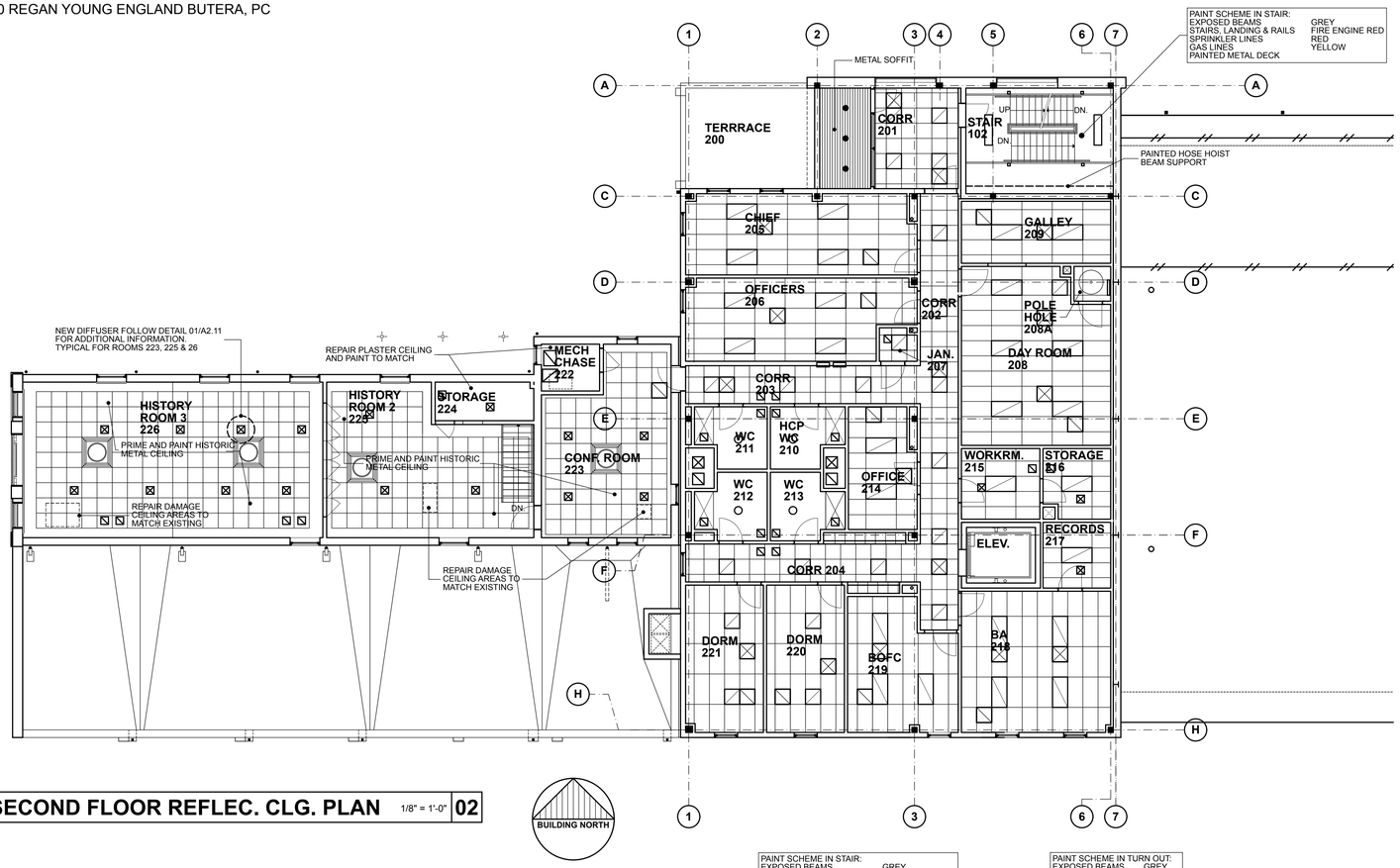
A2.12



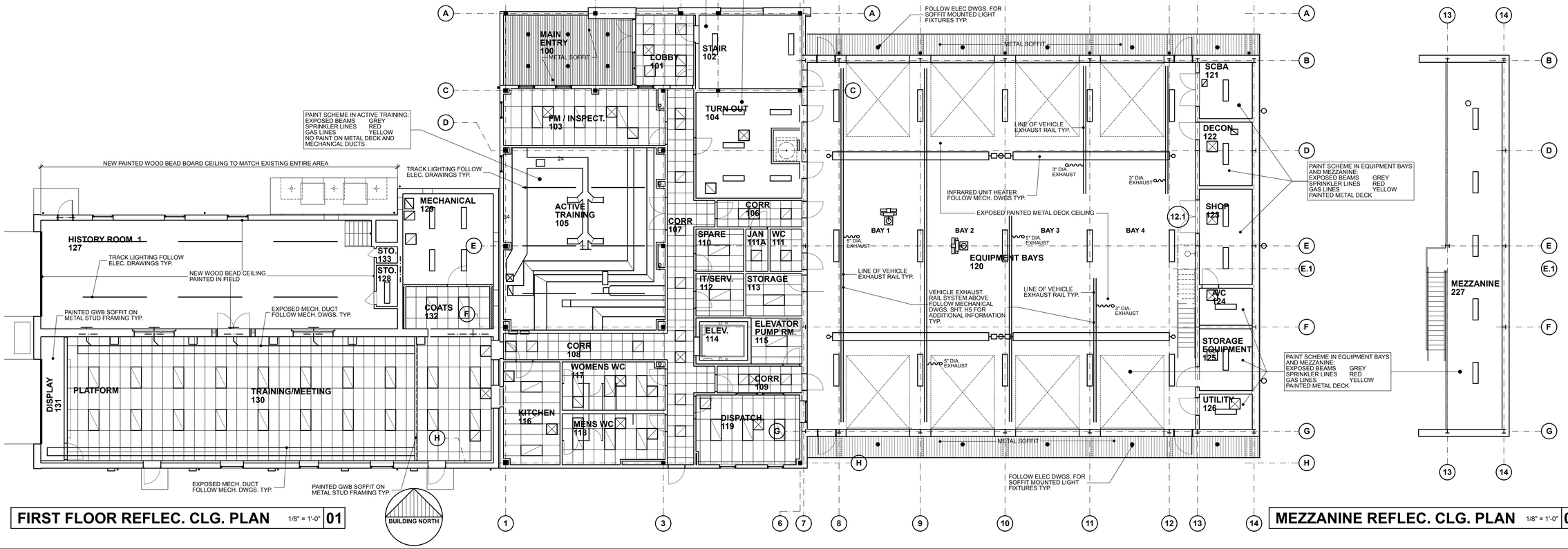
SECOND FLOOR REFLEC. CLG. PLAN 1/8" = 1'-0" | 02

CAREFULLY LOCATE AND INSTALL NEW HVAC DIFFUSER IN CENTER OF METAL CEILING PANELS- FOLLOW MECHANICAL DRAWINGS FOR APPROXIMATE LOCATIONS. GC TO VERIFY IN FIELD

REPAIR EXISTING METAL CEILING AND CORNICES, THEN PRIME AND PAINT

CONTIN. PAINTABLE SEALANT

HISTORIC METAL CEILING IN ROOMS 223, 225 AND 226 | 01



FIRST FLOOR REFLEC. CLG. PLAN 1/8" = 1'-0" | 01

MEZZANINE REFLEC. CLG. PLAN 1/8" = 1'-0" | 03

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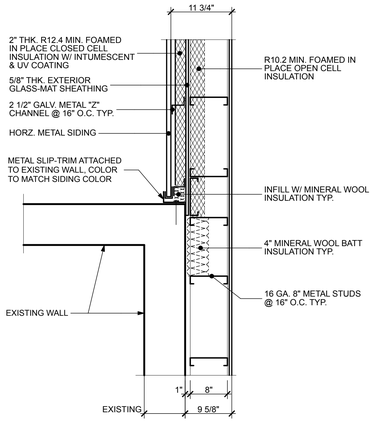
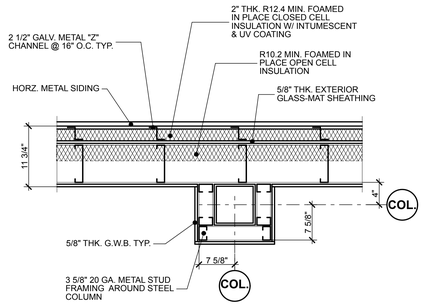
TITLE: REFLECTED CEILING PLANS

DRAWING DATE: 01 JULY 2020
REVISION DATE:
DRAWN BY: RR
COMMISSION NO.: 5475B

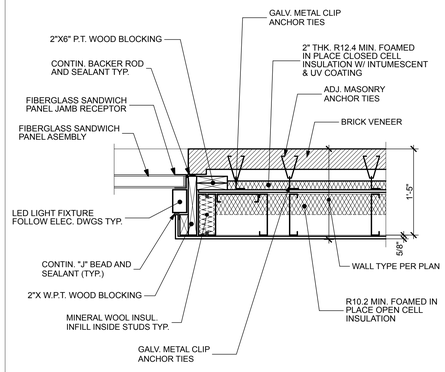
A2.13



PLAN DETAIL 1" = 1'-0" | **01**



PLAN DETAIL 1" = 1'-0" | **04**



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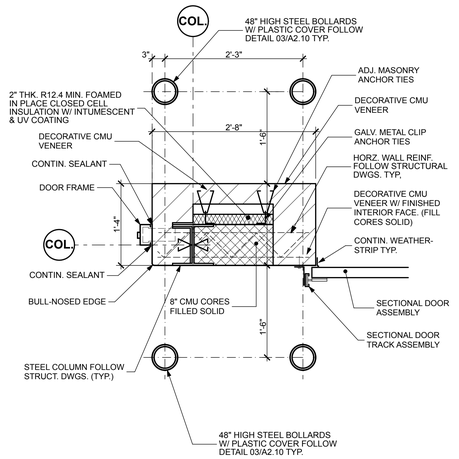
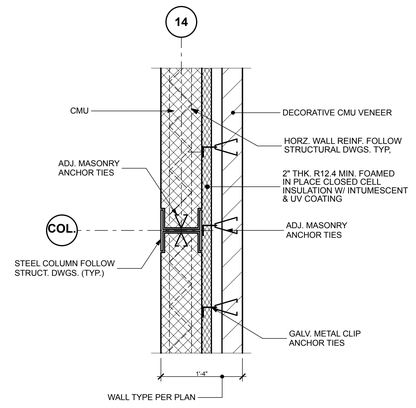


PLAN DETAIL 1" = 1'-0" | **10**



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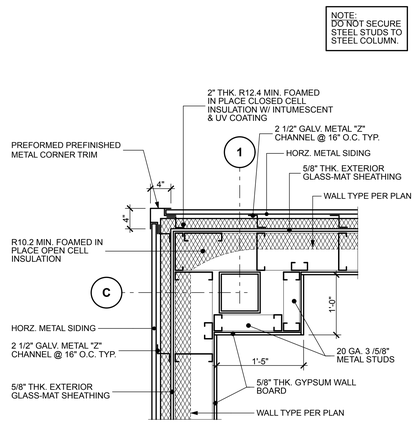

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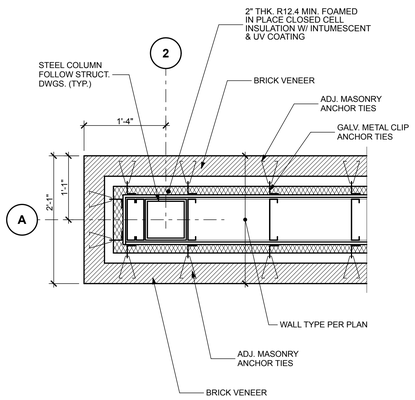

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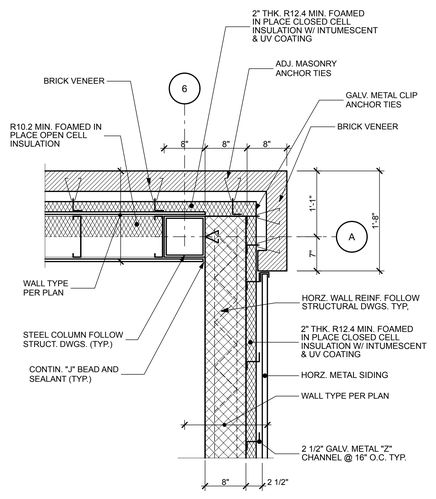

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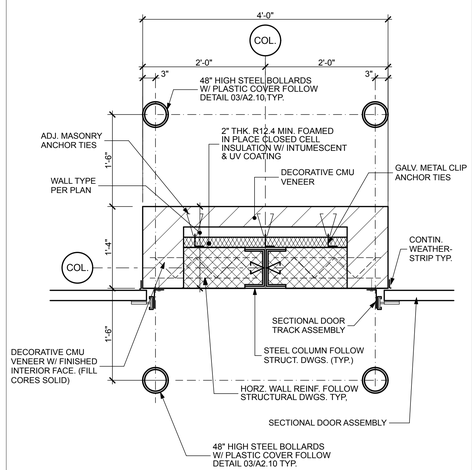

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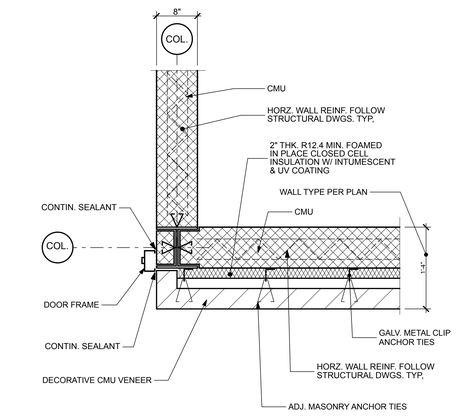
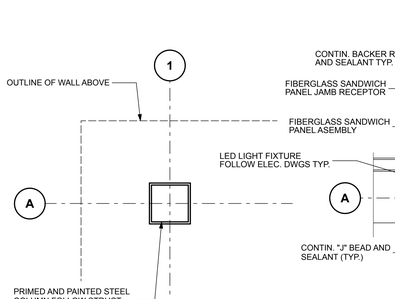


PLAN DETAIL 1" = 1'-0" | **14**



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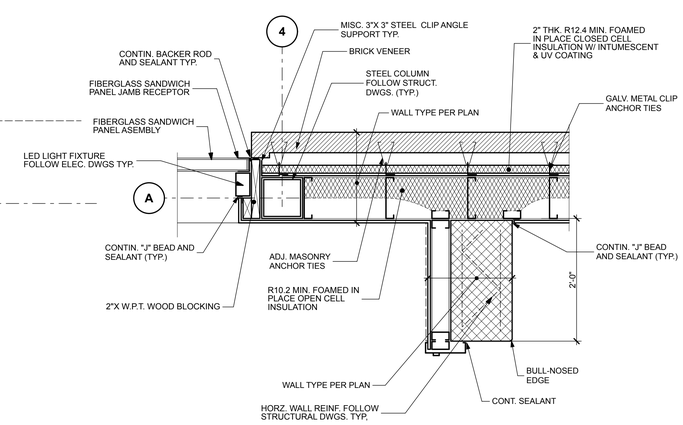

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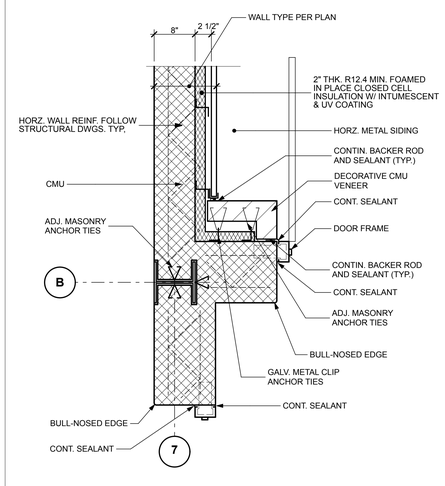
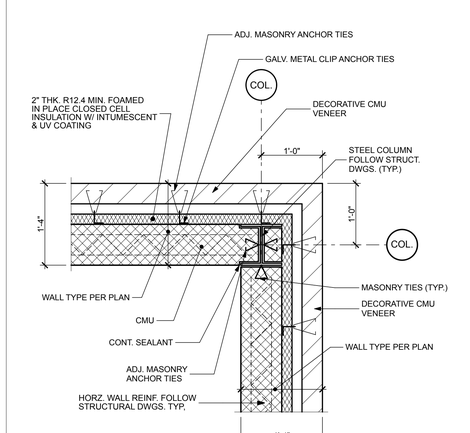
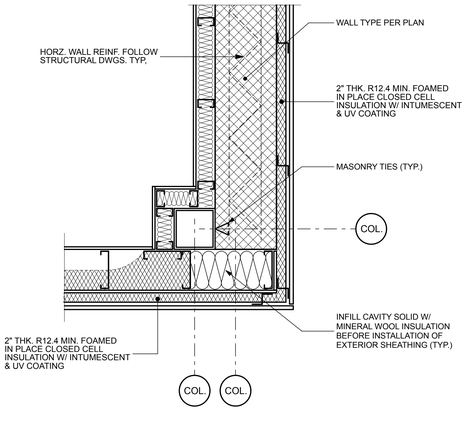


PLAN DETAIL 1" = 1'-0" | **09**



PLAN DETAIL 1" = 1'-0" | **12**



PLAN DETAIL 1" = 1'-0" | **15**

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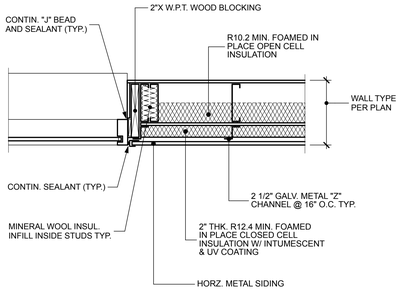
TITLE: **PLAN DETAILS**

DRAWING DATE: **01 JULY 2020**
REVISION DATE:

DRAWN BY: **RR**
COMMISSION NO.: **5475B**

A3.1



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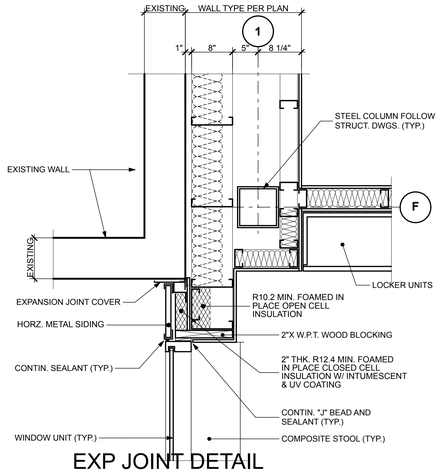
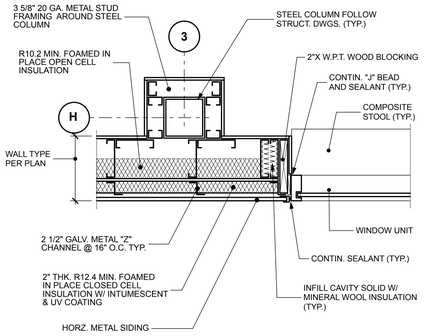


EXP JOINT DETAIL

PLAN DETAIL 1" = 1'-0" **19**



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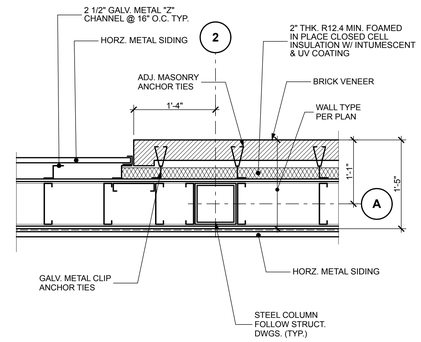

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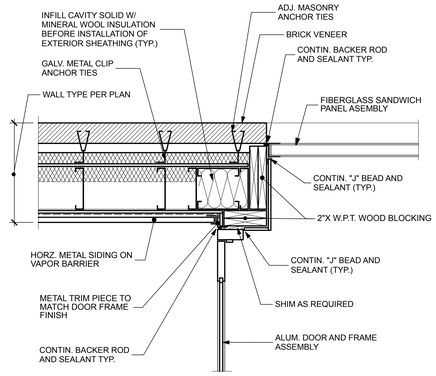
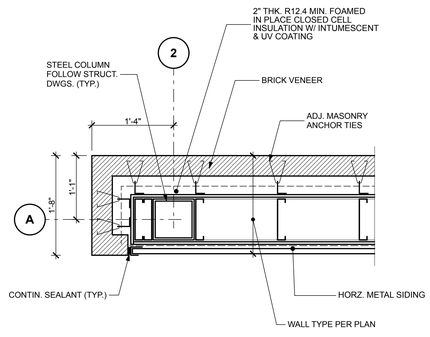


PLAN DETAIL 1" = 1'-0" **28**

PLAN DETAIL 1" = 1'-0" **17**

PLAN DETAIL 1" = 1'-0" **20**

PLAN DETAIL 1" = 1'-0" **23**



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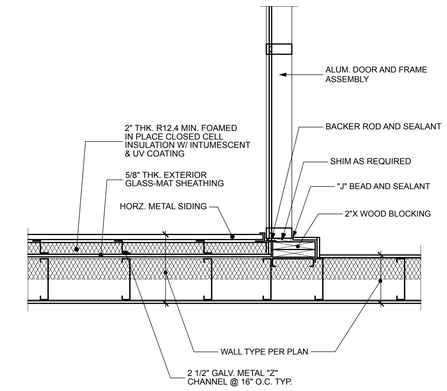
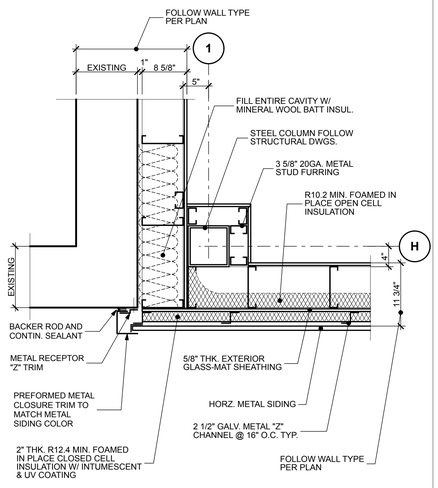
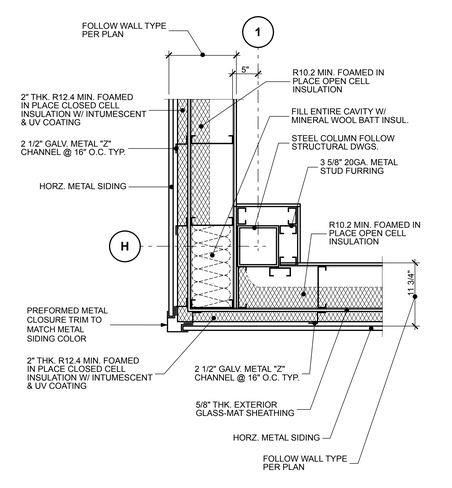


PLAN DETAIL 1" = 1'-0" **29**



PLAN DETAIL 1" = 1'-0" **18**



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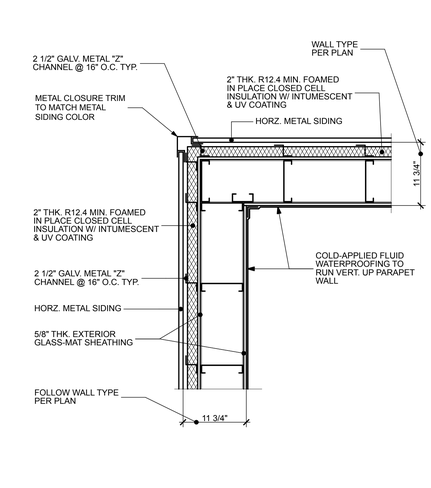
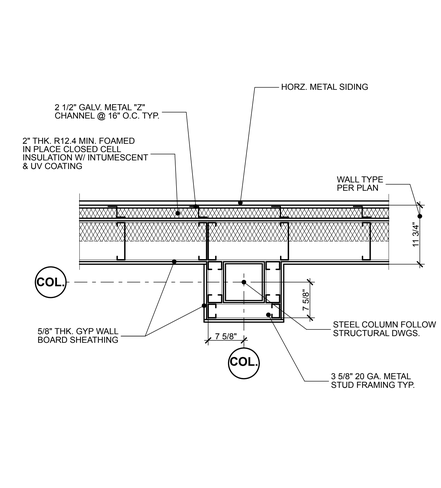
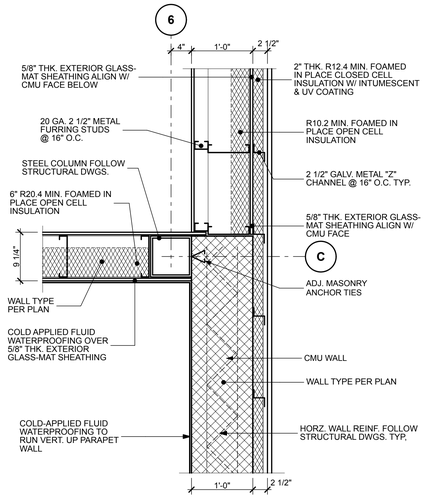


PLAN DETAIL 1" = 1'-0" **24**



PLAN DETAIL 1" = 1'-0" **27**



PLAN DETAIL 1" = 1'-0" **30**

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TITLE: PLAN DETAILS

DRAWING DATE: 01 JULY 2020
REVISION DATE:

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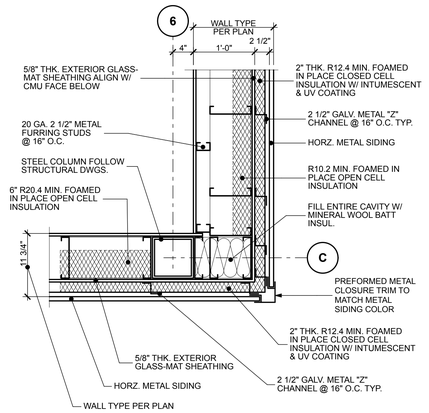
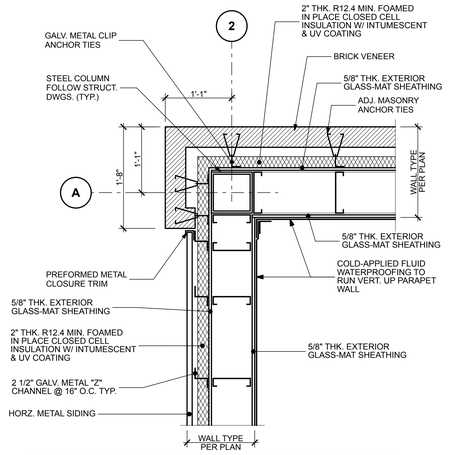
COMMISSION NO.: 5475B

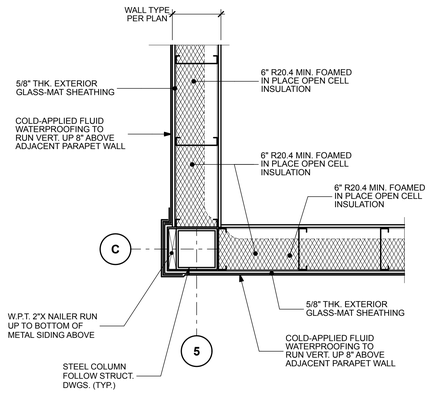
A3.2



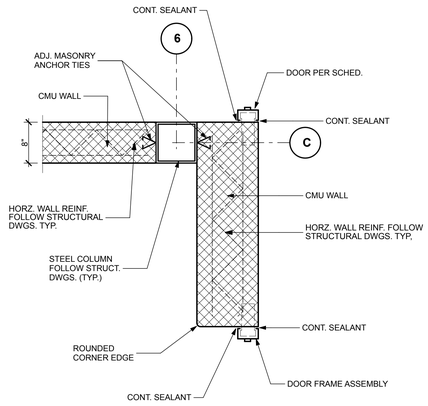
PLAN DETAIL 1" = 1'-0" | **31**



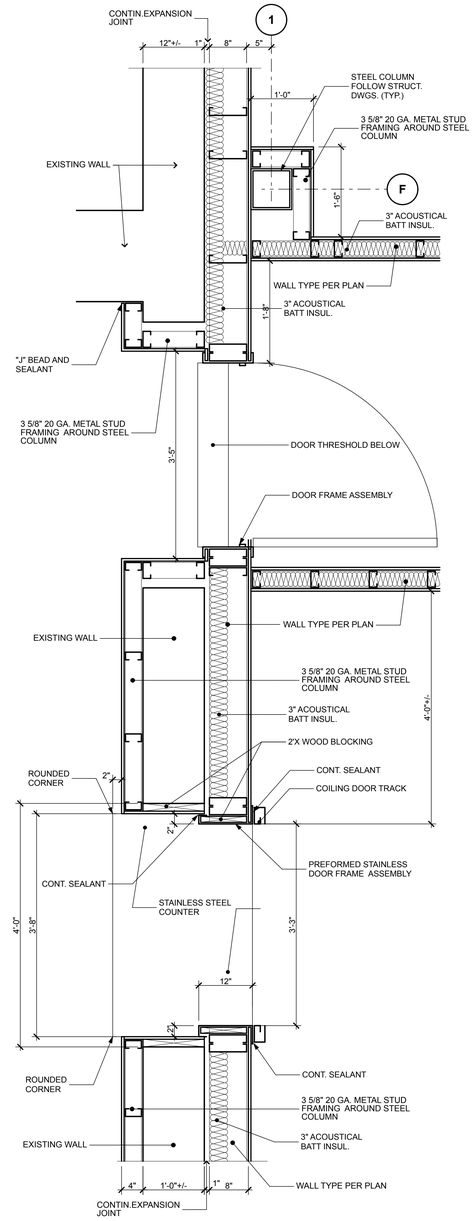
PLAN DETAIL 1" = 1'-0" | **34**



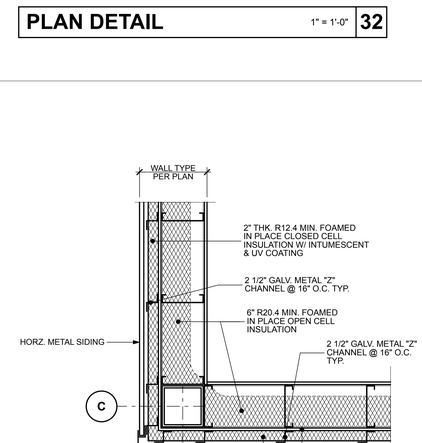
PLAN DETAIL 1" = 1'-0" | **37**



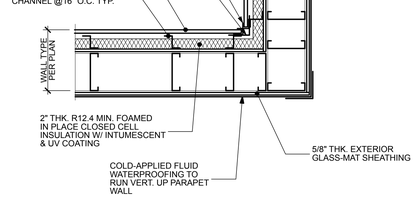
PLAN DETAIL 1" = 1'-0" | **40**



PLAN DETAIL 1" = 1'-0" | **43**



PLAN DETAIL 1" = 1'-0" | **32**



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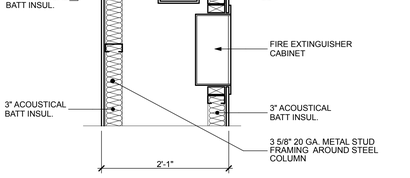
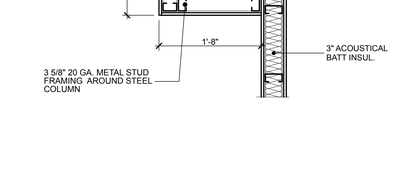
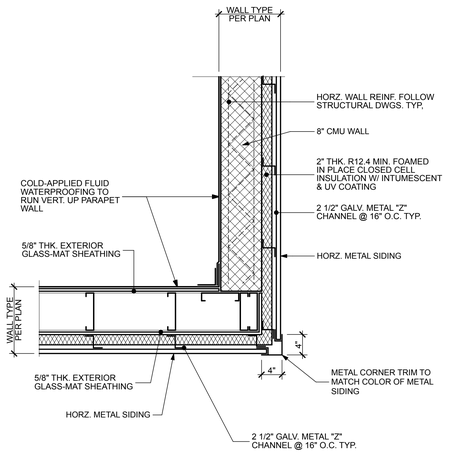


PLAN DETAIL 1" = 1'-0" | **38**

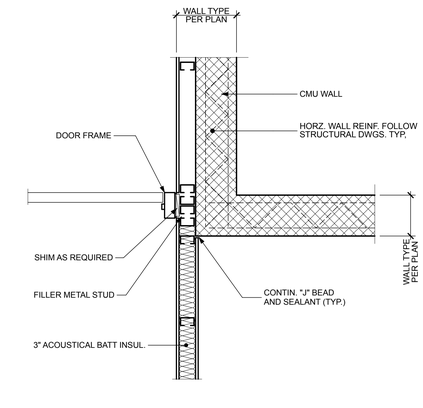


PLAN DETAIL 1" = 1'-0" | **41**

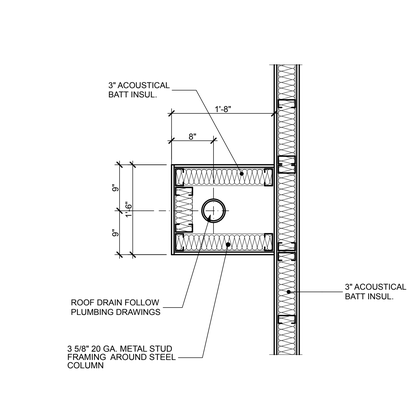
PLAN DETAIL 1" = 1'-0" | **33**



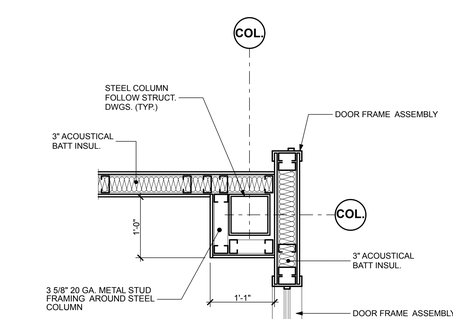
PLAN DETAIL 1" = 1'-0" | **36**



PLAN DETAIL 1" = 1'-0" | **39**



PLAN DETAIL 1" = 1'-0" | **42**



PLAN DETAIL 1" = 1'-0" | **44**

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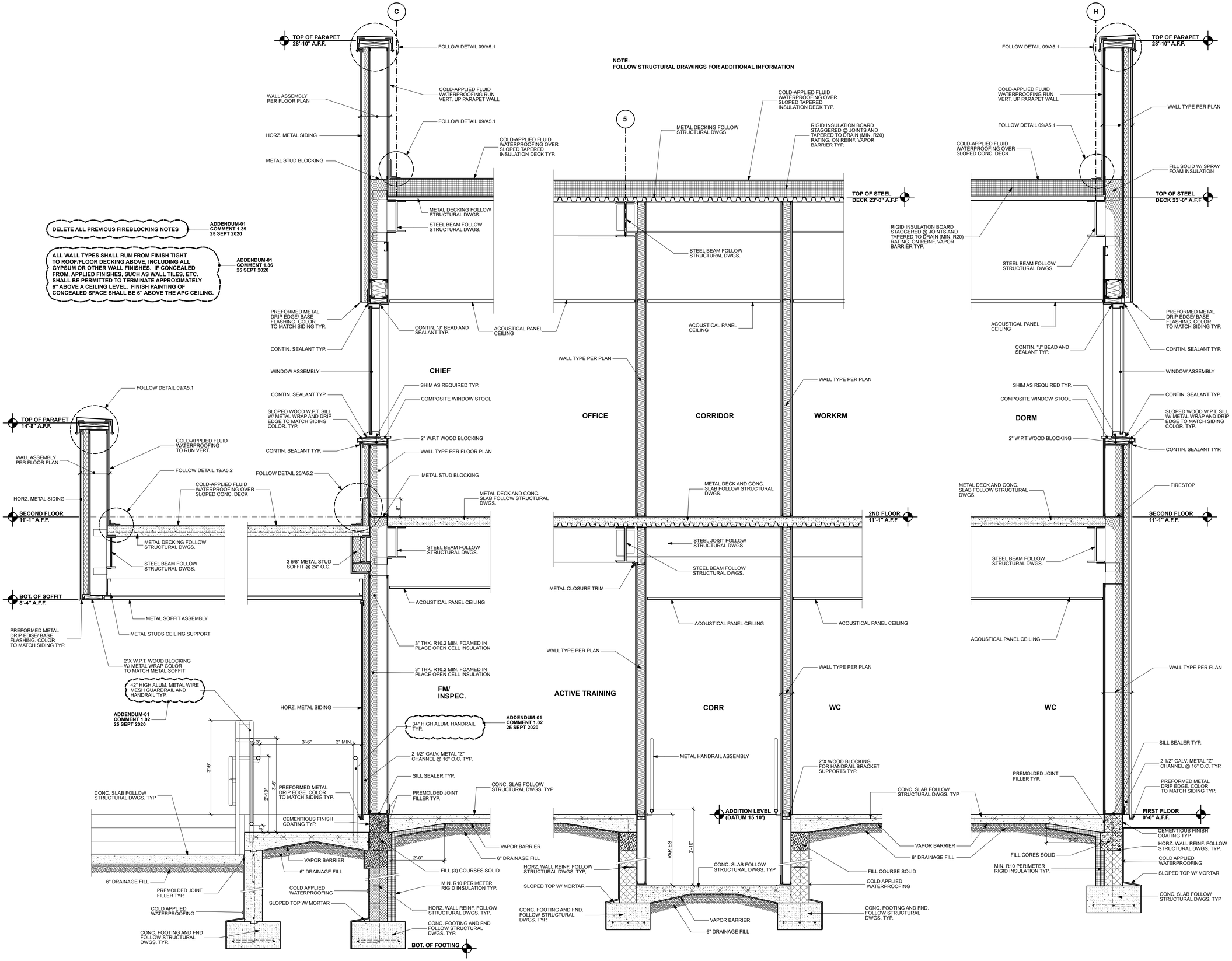
A3.3



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2 25 SEPT 20

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A4.0

6 5 4 2

FOLLOW DETAIL 13/A5.1
FOLLOW DETAIL 14/A5.1
TOP OF METAL DECK 33'-0" A.F.F.
MINERAL WOOL BATT INSULATION INFILL
COLD-APPLIED FLUID WATERPROOFING OVER SLOPED TAPERED INSULATION DECK TYP.
MINERAL WOOL BATT INSULATION INFILL
METAL STUD FRAMING
STEEL BEAM FOLLOW STRUCTURAL DWGS. TYP.
METAL DECK FOLLOW STRUCTURAL DWGS.
RIGID INSULATION BOARD STAGGERED @ JOINTS AND TAPERED TO DRAIN (MIN. R20) RATING. ON REINF. VAPOR BARRIER TYP.
STEEL JOIST FOLLOW STRUCTURAL DWGS. TYP.
CONTIN. "J" BEAD TOP AND BOTTOM TYP.
STEEL JOIST FOLLOW STRUCTURAL DWGS. TYP.
METAL CLOSURE TRIM DRIP EDGE ASSEMBLY TO MATCH METAL SIDING COLOR
METAL STUD FRAMING
2"X W.P.T. WOOD BLOCKING
OUTLINE OF PARAPET WALL

DELETE ALL PREVIOUS FIREBLOCKING NOTES — ADDENDUM-01 COMMENT 1.39 25 SEPT 2020

ALL WALL TYPES SHALL RUN FROM FINISH TIGHT TO ROOF/FLOOR DECKING ABOVE, INCLUDING ALL GYPSUM OR OTHER WALL FINISHES. IF CONCEALED FROM, APPLIED FINISHES, SUCH AS WALL TILES, ETC. SHALL BE PERMITTED TO TERMINATE APPROXIMATELY 6" ABOVE A CEILING LEVEL. FINISH PAINTING OF CONCEALED SPACE SHALL BE 6" ABOVE THE APC CEILING. — ADDENDUM-01 COMMENT 1.36 25 SEPT 2020

TOP OF PARAPET 34'-0" A.F.F.
TOP OF PARAPET 28'-10" A.F.F.
FOLLOW DETAIL 09/A5.1
WALL TYPE PER PLAN
1'-0"
42" HIGH GALV. METAL WIRE MESH GUARDRAIL AND HANDRAIL (UNPAINTED) TYP.
DOOR AND FRAME ASSEMBLY
WALL TYPE PER PLAN
FOLLOW DETAIL 21/A5.2
2"X W.P.T. WOOD BLOCKING
MINERAL WOOL BATT INSULATION INFILL
1'-6"
2'-10"
3'-6"

NOTE:
FOLLOW STRUCTURAL DRAWINGS FOR ADDITIONAL INFORMATION

RIGID INSULATION BOARD STAGGERED @ JOINTS AND TAPERED TO DRAIN (MIN. R20) RATING. ON REINF. VAPOR BARRIER TYP.
METAL DECK FOLLOW STRUCTURAL DWGS.
COLD-APPLIED FLUID WATERPROOFING OVER SLOPED TAPERED INSULATION DECK TYP.
COLD-APPLIED FLUID WATERPROOFING RUN VERT. UP PARAPET WALL
FOLLOW DETAIL 09/A5.1

LANDING 5 23'-11" A.F.F.
CONTIN. METAL CLOSURE TRIM TYP.
2'-0"
STEEL BEAM FOLLOW STRUCTURAL DWGS. TYP.
BOND BEAM FOLLOW STRUCTURAL DWGS. TYP.
T.O. STL. DECK 23'-0" A.F.F.
STEEL BEAM FOLLOW STRUCTURAL DWGS.
1'-4"
2'-10"
2'-10"
STEEL BEAM FOLLOW STRUCTURAL DWGS. TYP.
BOND BEAM FOLLOW STRUCTURAL DWGS. TYP.
HORZ. WALL REINF. FOLLOW STRUCTURAL DWGS. TYP.
STEEL JOIST FOLLOW STRUCTURAL DWGS.
METAL STUD BRACING @ 32" O.C. TYP.
STEEL JOIST FOLLOW STRUCTURAL DWGS.
METAL STUD BRACING @ 32" O.C. TYP.
METAL CLOSURE TRIM DRIP EDGE ASSEMBLY TO MATCH METAL SIDING COLOR
BOT. OF SOFFIT 19'-5" A.F.F.
LANDING 4 18'-8" A.F.F.
LANDING 3 18'-1" A.F.F.
BOND BEAM FOLLOW STRUCTURAL DWGS. TYP.
ACOUSTICAL PANEL CEILING
METAL STUD SOFFIT SUPPORT
2"X W.P.T. WOOD BLOCKING W/ METAL WRAP COLOR TO MATCH METAL SOFFIT
DOOR AND FRAME ASSEMBLY
2"X WOOD BLOCKING W/ PREFIN. PREFORMED METAL TRIM WRAP TO MATCH DOOR FRAME ASSEMBLY
METAL CLOSURE TRIM TYP.
METAL SOFFIT ASSEMBLY
CONTIN. SEALANT
CONTIN. SEALANT
SHIM AS REQUIRED
HORZ. WALL REINF. FOLLOW STRUCTURAL DWGS. TYP.
ALUM DOOR/ FRAME ASSEMBLY
CORRIDOR
TERRACE
42" HIGH GALV. METAL WIRE MESH GUARDRAIL AND HANDRAIL (UNPAINTED) TYP.
1'-0"
STAIR
2'-10"
3'-6" MIN.
THRESHOLD UNDER BED OF CONTIN. SEALANT TYP.
COLD-APPLIED FLUID WATERPROOFING OVER SLOPED CONC. DECK
METAL DECK AND CONC. SLAB FOLLOW STRUCTURAL DWGS.
T.O. STEEL BEAM 10'-7" A.F.F.
LANDING 2 11'-1" A.F.F.
42" HIGH GALV. METAL WIRE MESH GUARDRAIL AND HANDRAIL (UNPAINTED) TYP.
SECOND FLOOR 11'-1" A.F.F.
HORZ. WALL REINF. FOLLOW STRUCTURAL DWGS. TYP.
2'-4"
FILL CORES SOLID
STEEL JOIST FOLLOW STRUCTURAL DWGS.
STEEL JOIST FOLLOW STRUCTURAL DWGS.
STEEL BEAM FOLLOW STRUCTURAL DWGS.
STEEL BEAM FOLLOW STRUCTURAL DWGS.
METAL STUD BRACING @ 32" O.C. TYP.
HORZ. WALL REINF. FOLLOW STRUCTURAL DWGS. TYP.
BOT. OF SOFFIT 8'-0" A.F.F.
BOND BEAM FOLLOW STRUCTURAL DWGS.
ACOUSTICAL PANEL CEILING
METAL CLOSURE TRIM TYP.
METAL STUD SOFFIT SUPPORT
2"X WOOD BLOCKING W/ PREFIN. PREFORMED METAL TRIM WRAP TO MATCH DOOR FRAME ASSEMBLY
METAL SOFFIT ASSEMBLY
CONTIN. SEALANT
SHIM AS REQUIRED
2'-10"
LANDING 1 5'-3" A.F.F.
ADDENDUM-01 COMMENT 1.02 25 SEPT 2020
42" HIGH ALUM. METAL WIRE MESH GUARDRAIL AND HANDRAIL TYP.
2'-0"
2'-10"
5'-8"
1'-0"
2'-10"
LOBBY
ALUM DOOR/ FRAME ASSEMBLY
GALV. HANDRAIL (UNPAINTED) TYP.
2'-9"
4"
2'-0"
2'-10"
1'-0"
2'-10"
4" MIN.
7" MAX.
PREFORMED METAL DRIP EDGE, COLOR TO MATCH SIDING TYP.
CEMENTIOUS FINISH COATINGTYP.
CONC. SLAB FOLLOW STRUCTURAL DWGS. TYP
CONC. SLAB FOLLOW STRUCTURAL DWGS. TYP
CONC. SLAB FOLLOW STRUCTURAL DWGS. TYP
2'-0"
12"
1"
ROUNDED EDGE TYP
FIRST FLOOR (DATUM 15,10')
COLD APPLIED WATERPROOFING
FILL CORES SOLID
SLOPED TOP W/ MORTAR
VAPOR BARRIER
6" MIN. DRAINAGE FILL
COMPACTED FILL
MIN. R10 PERIMETER RIGID INSULATION TYP.
VAPOR BARRIER
6" MIN. DRAINAGE FILL
COMPACTED FILL
FILL CORES SOLID
MIN. R10 PERIMETER RIGID INSULATION TYP.
VAPOR BARRIER
6" MIN. DRAINAGE FILL
COMPACTED FILL
FORMED CONC. STAIR FOLLOW STRUCTURAL DWGS. TYP
COLD APPLIED WATERPROOFING
FILL CORES SOLID
SLOPED TOP W/ MORTAR
BOT. OF FOOTING 0'-0" A.F.F.
CONC. FOOTING AND FND. FOLLOW STRUCTURAL DWGS. TYP.
BOT. OF FOOTING
CONC. FOOTING AND FND. FOLLOW STRUCTURAL DWGS. TYP.
BOT. OF FOOTING

WALL SECTION 3/4" = 1'-0" | **04**

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A4.1

NOTE:
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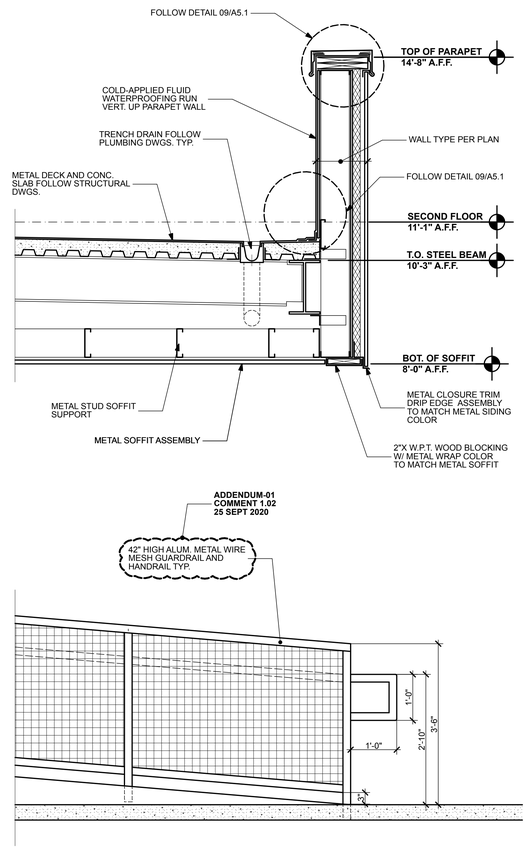
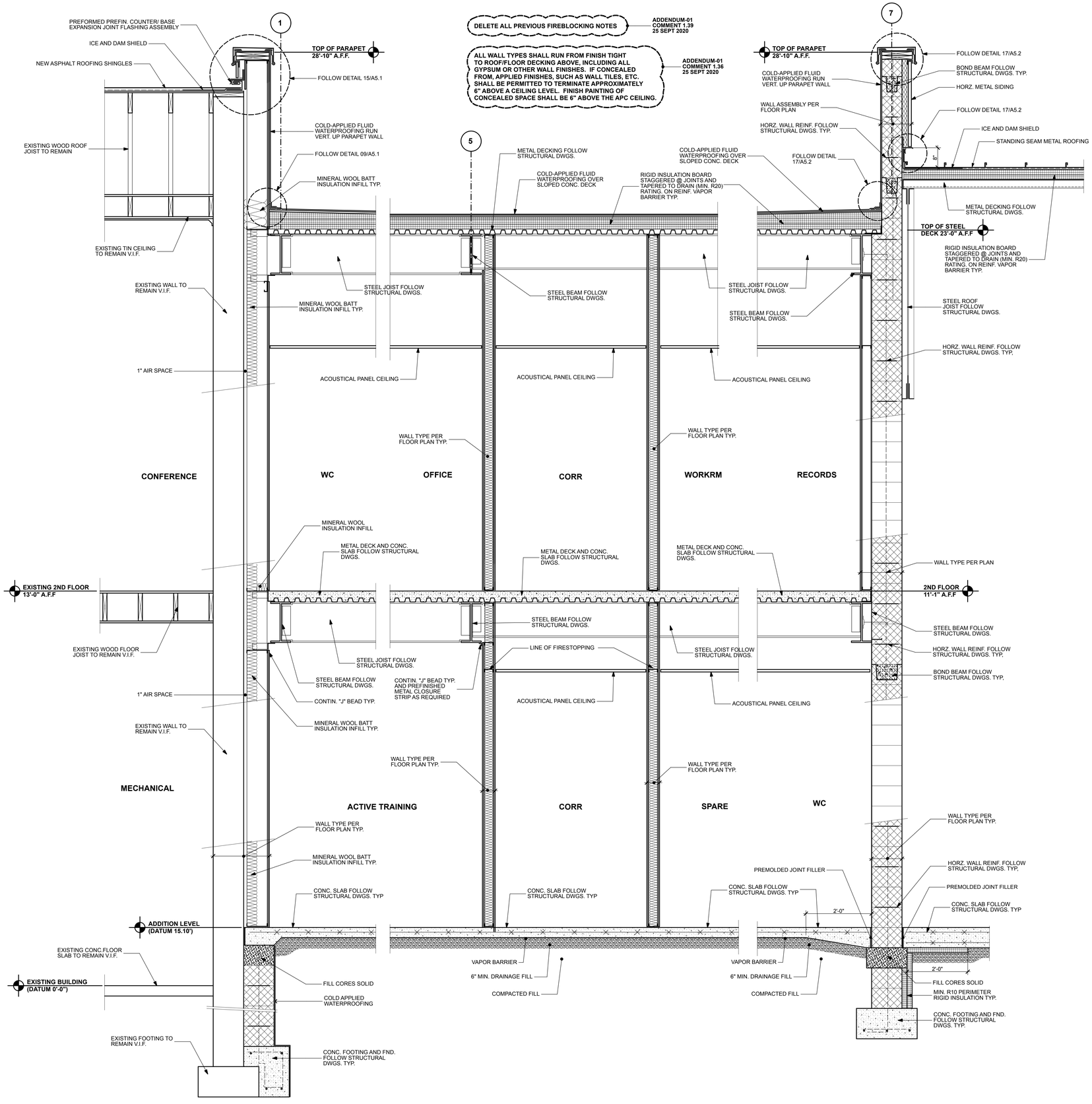


WALL SECTION 3/4" = 1'-0" **05**



WALL SECTION 3/4" = 1'-0" **06**

WALL SECTION 3/4" = 1'-0" **07**

WALL SECTION 3/4" = 1'-0" **08**

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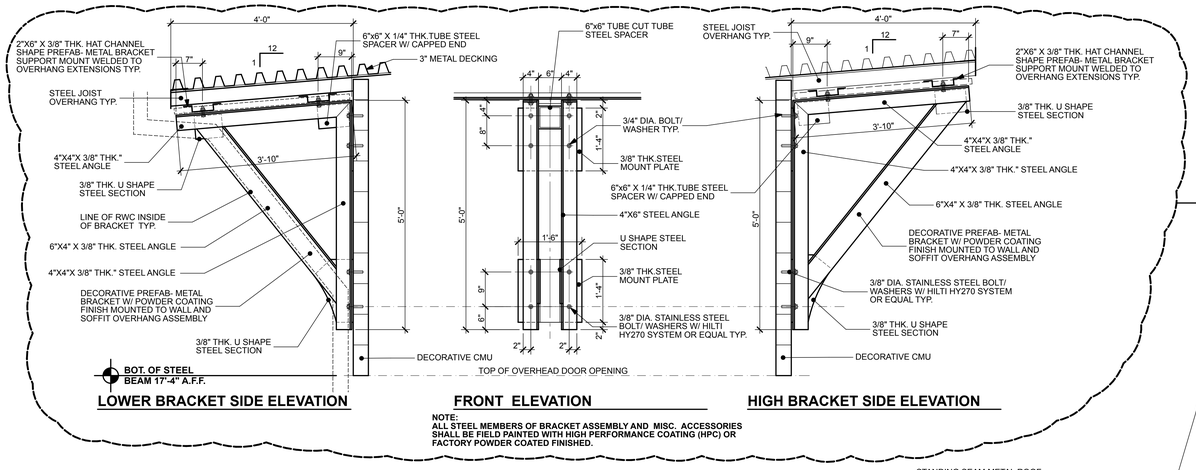
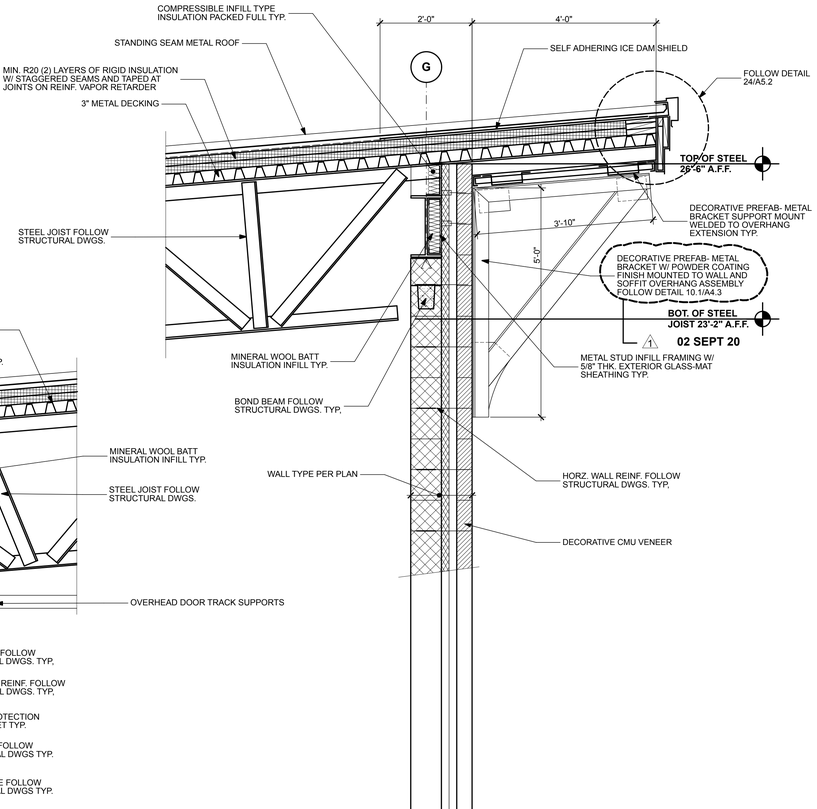
A4.2

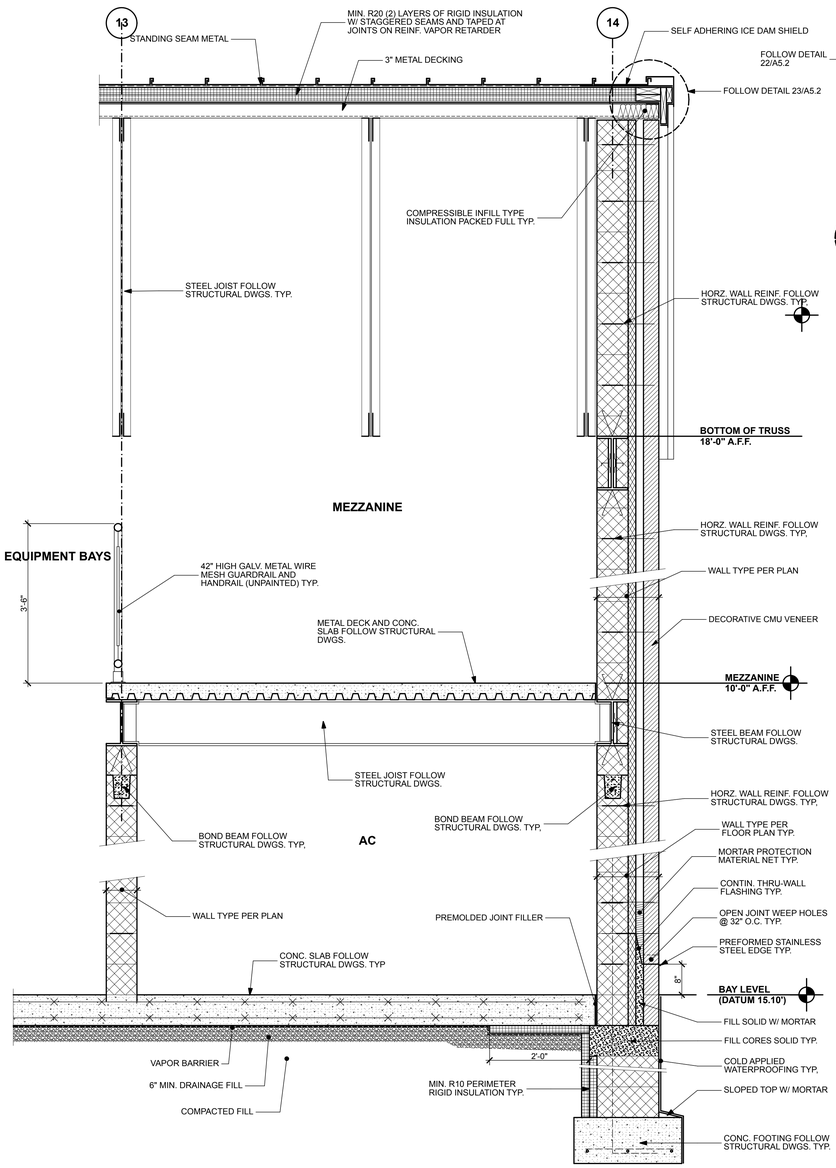


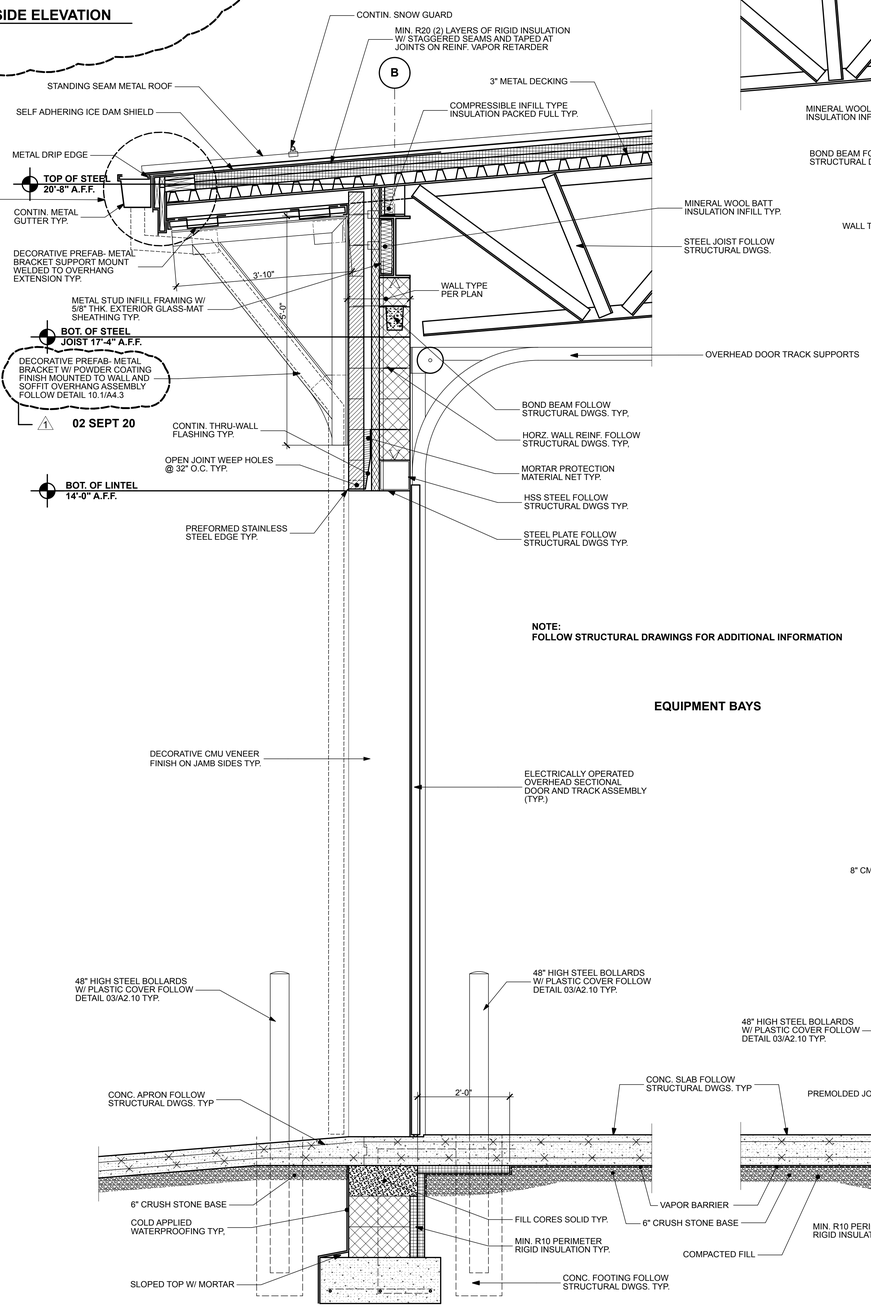
NOTE:
ALL STEEL MEMBERS OF BRACKET ASSEMBLY AND MISC. ACCESSORIES SHALL BE FIELD PAINTED WITH HIGH PERFORMANCE COATING (HPC) OR FACTORY POWDER COATED FINISHED.

ADDENDUM-01
COMMENT 1.03
25 SEPT 2020

WSK.01
1 02 SEPT 20







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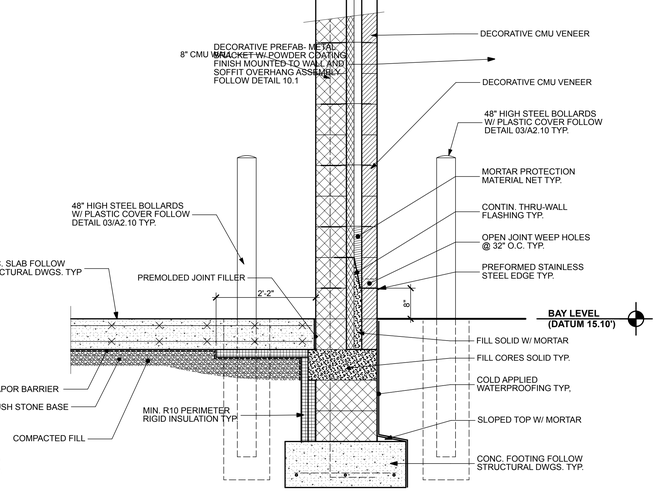

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WSK.01
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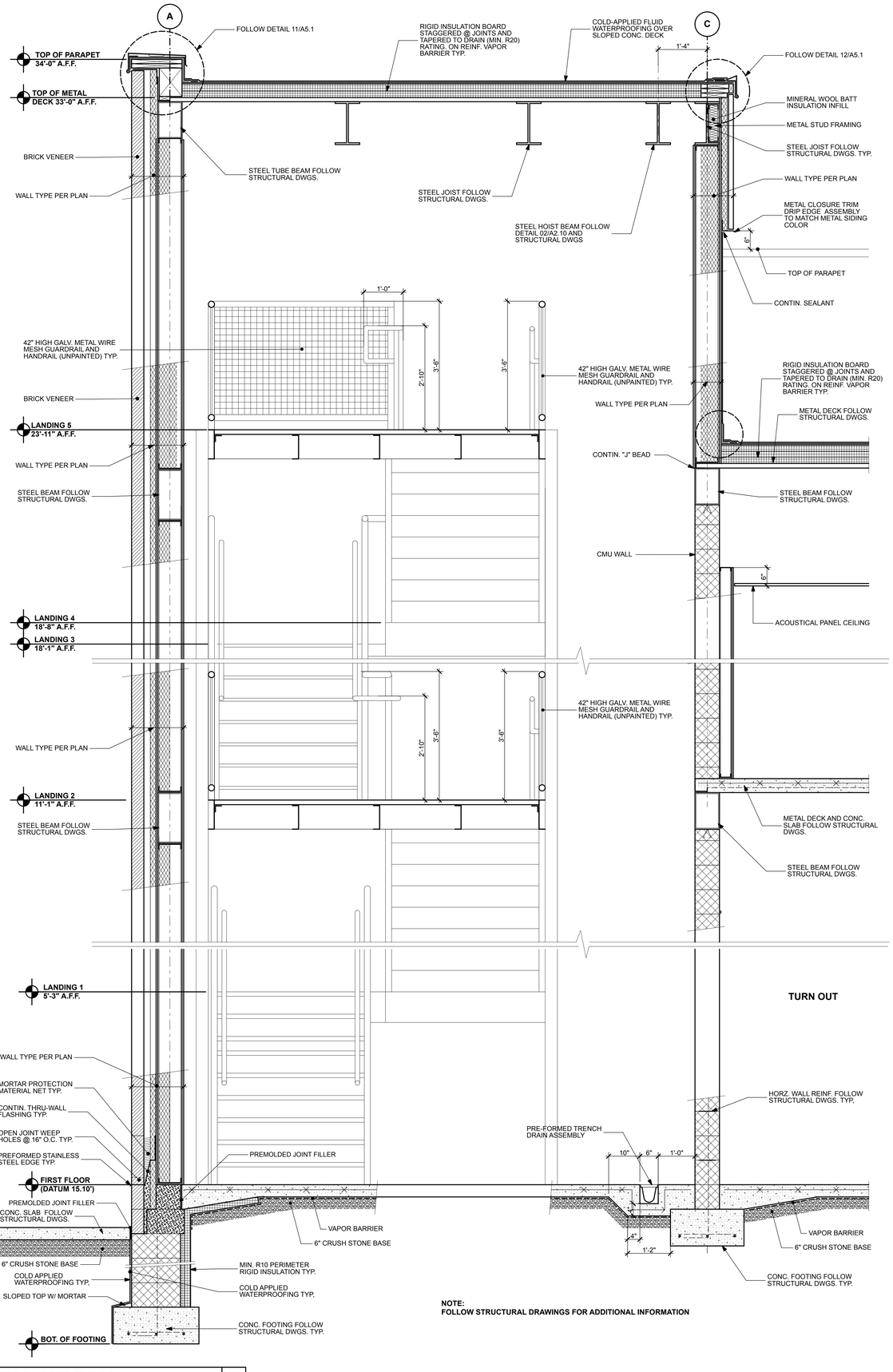

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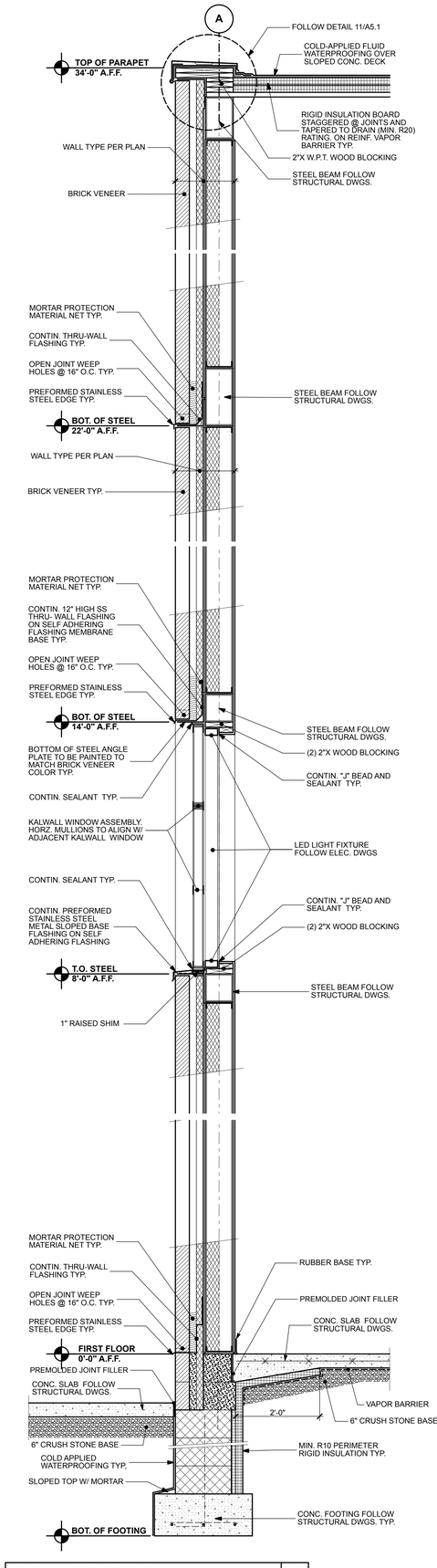
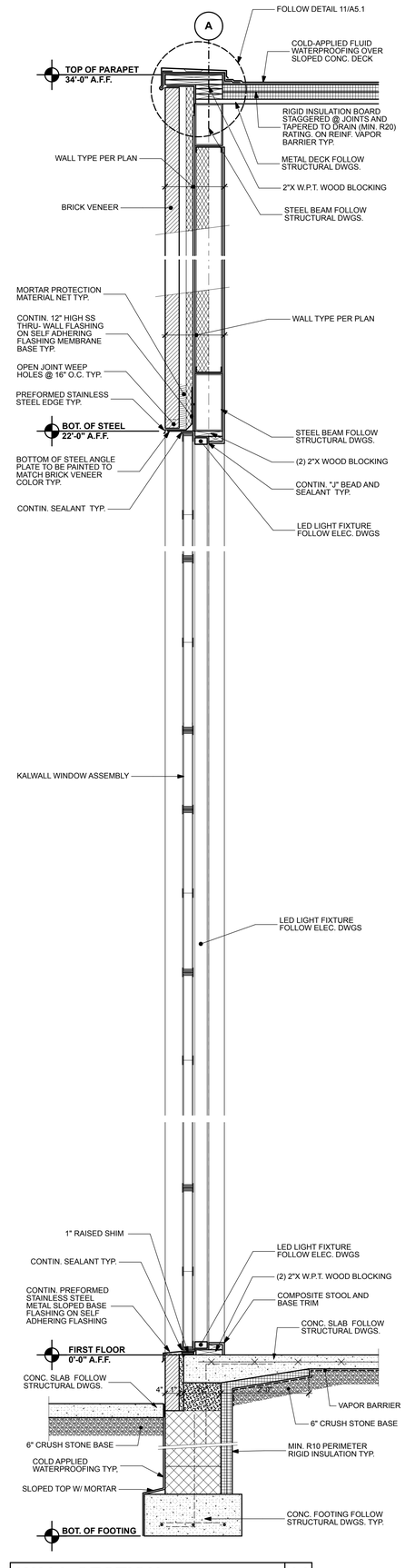
WALL SECTION 3/4" = 1'-0" **12**



WALL SECTION 3/4" = 1'-0" **13**



WALL SECTION 3/4" = 1'-0" **14**

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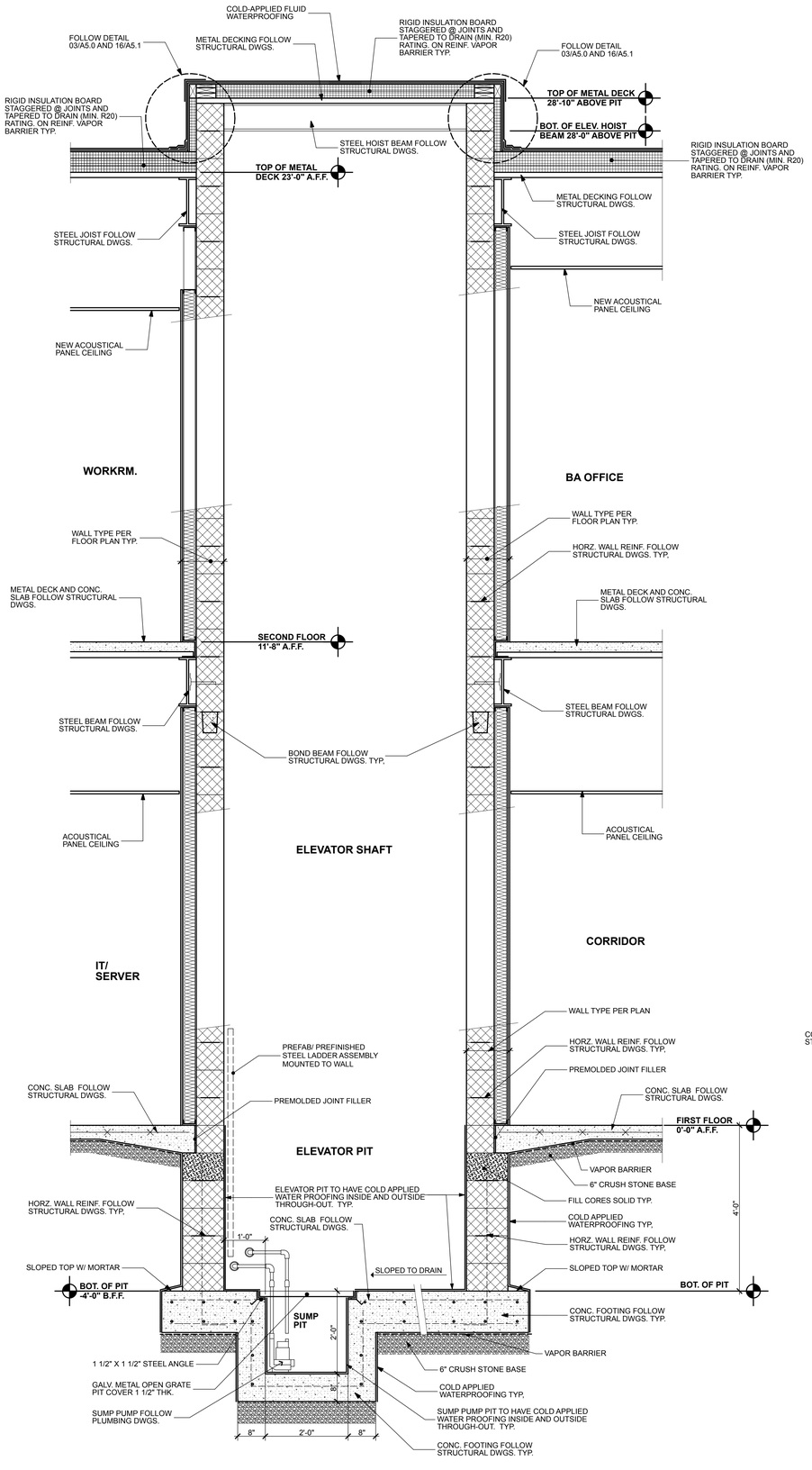
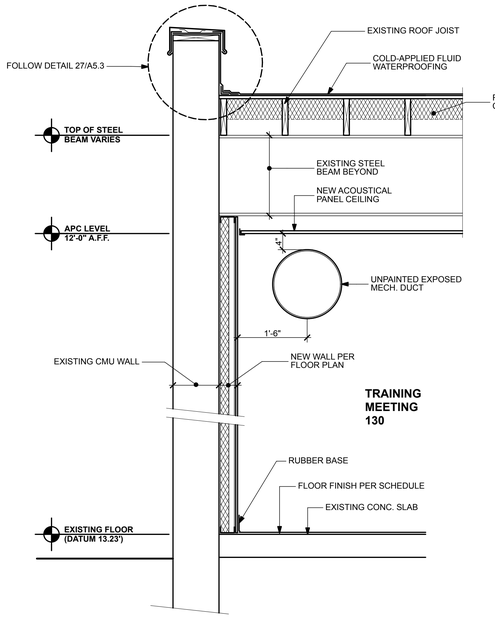
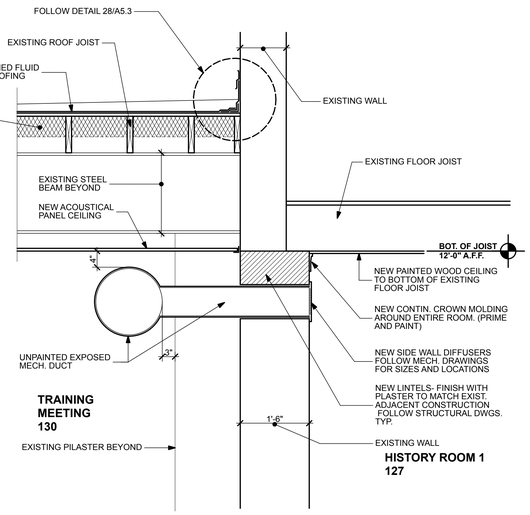
A4.4



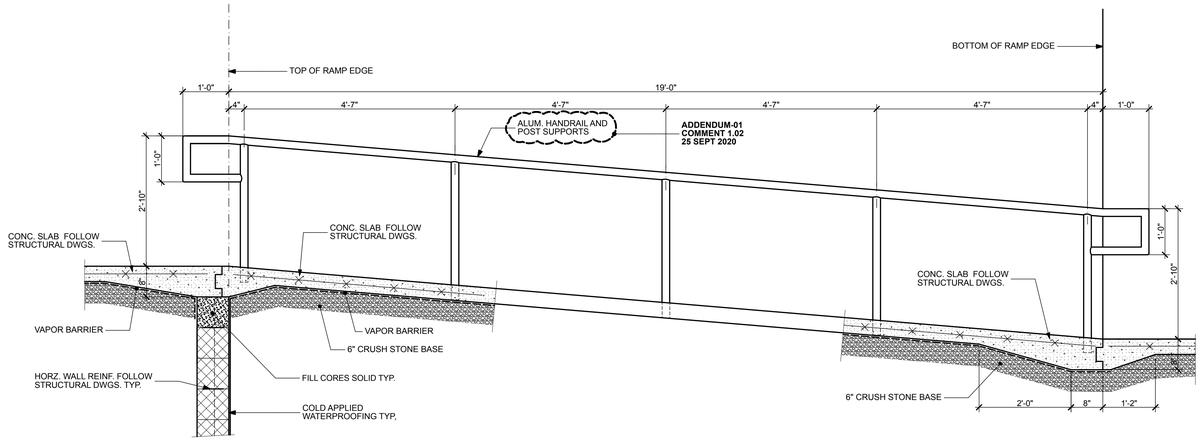




NOTE:
FOLLOW STRUCTURAL DRAWINGS FOR ADDITIONAL INFORMATION.

DELETE ALL PREVIOUS FIREBLOCKING NOTES — ADDENDUM-01 COMMENT 1.39 25 SEPT 2020

ALL WALL TYPES SHALL RUN FROM FINISH TIGHT TO ROOF/FLOOR DECKING ABOVE, INCLUDING ALL GYPSUM OR OTHER WALL FINISHES. IF CONCEALED FROM, APPLIED FINISHES, SUCH AS WALL TILES, ETC. SHALL BE PERMITTED TO TERMINATE APPROXIMATELY 6" ABOVE A CEILING LEVEL. FINISH PAINTING OF CONCEALED SPACE SHALL BE 6" ABOVE THE APC CEILING. — ADDENDUM-01 COMMENT 1.36 25 SEPT 2020



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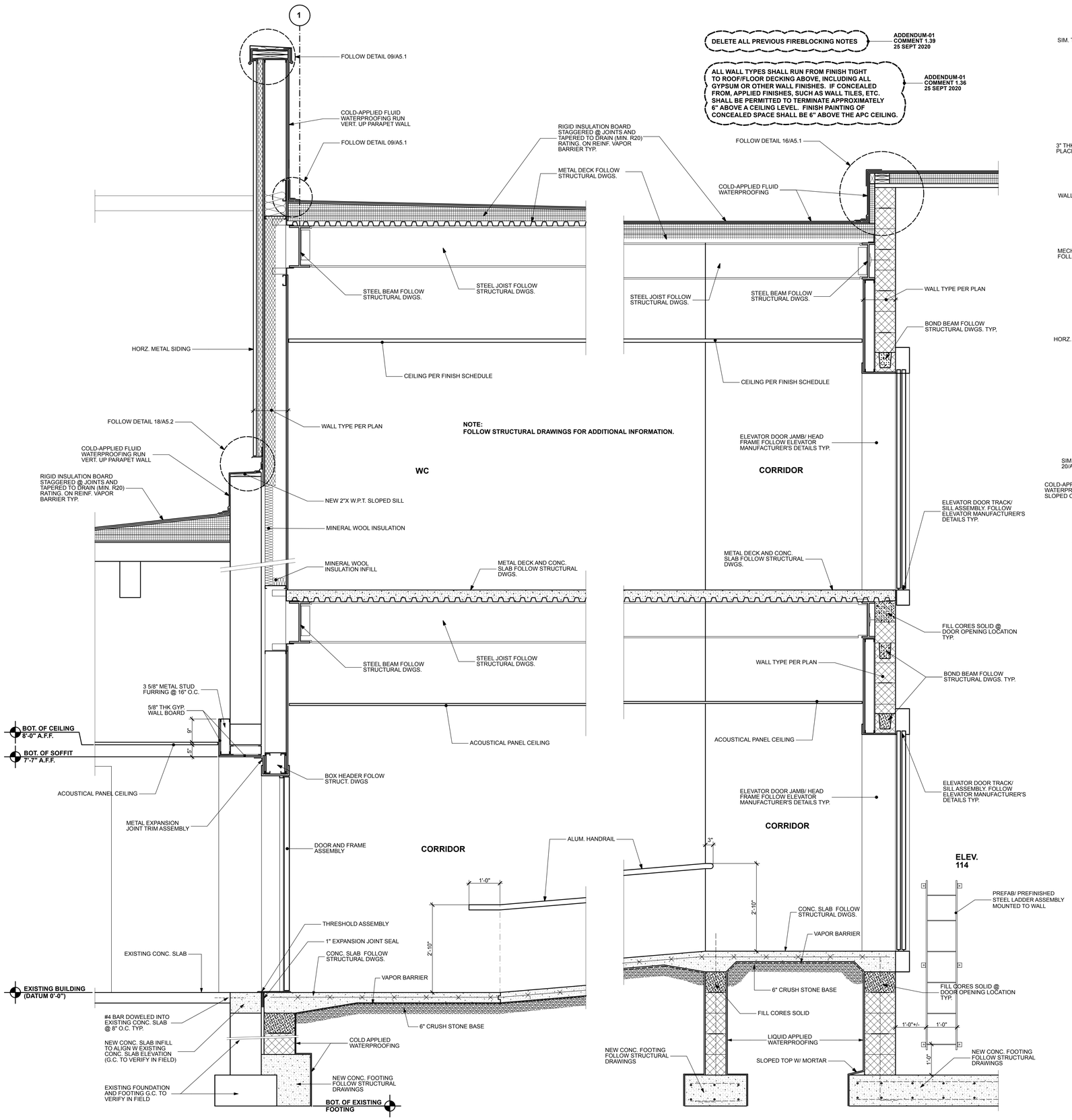
A4.5



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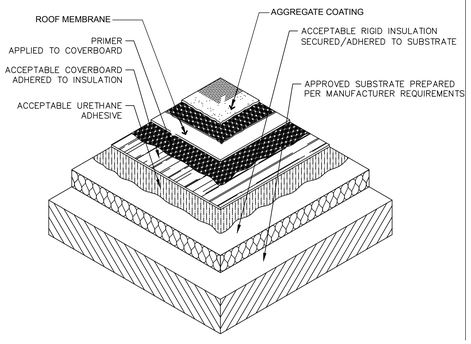
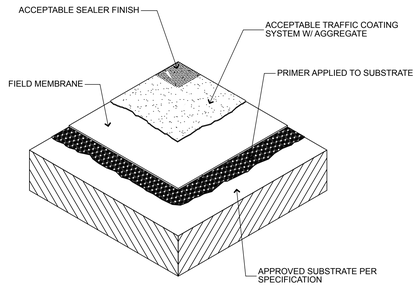
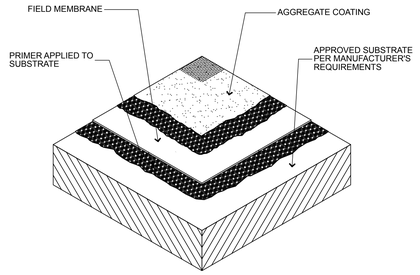
A4.6



TYP. ROOF MAKE-UP DETAIL NTS A

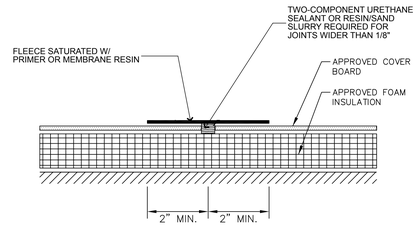


TYP. ROOF MAKE-UP DETAIL NTS B

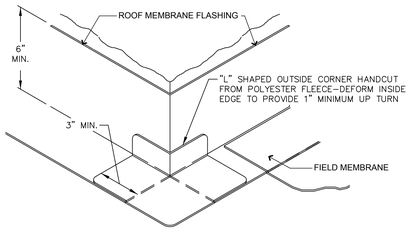


NON- INSULATED TYPE

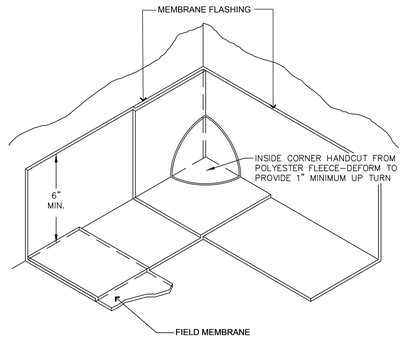
TYP. ROOF MAKE-UP DETAIL NTS C



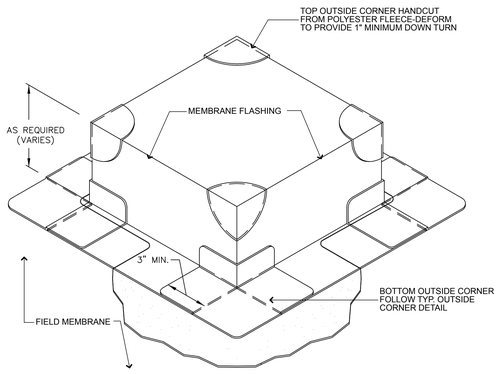
TYP. COVER BOARD JOINT DETAIL NTS D



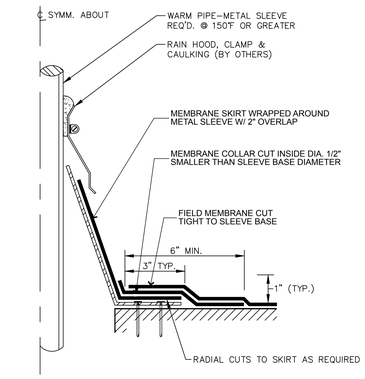
TYP. OUTSIDE CORNER FLASHING NTS 01



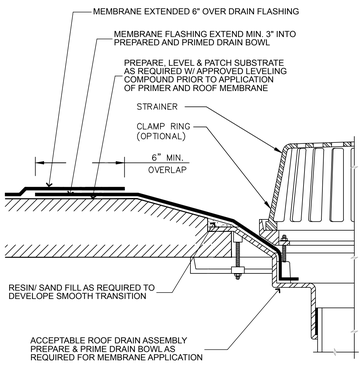
TYP. INSIDE CORNER FLASHING NTS 02



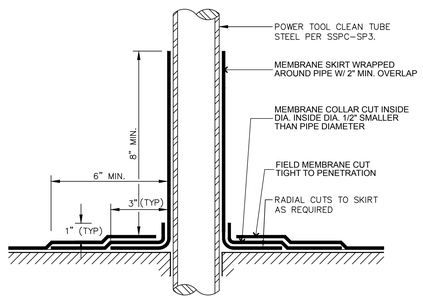
TYP. CURB/CAP FLASHING DETAIL NTS 03



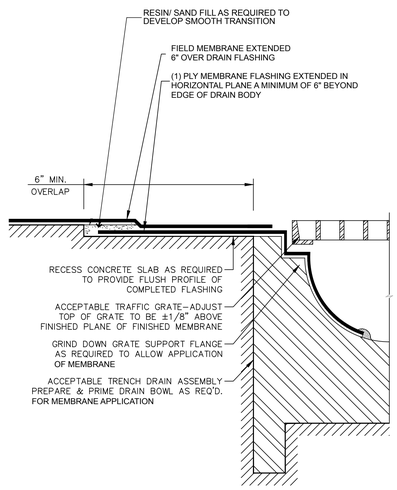
TYP. WARM PIPE FLASHING DTL. NTS 04



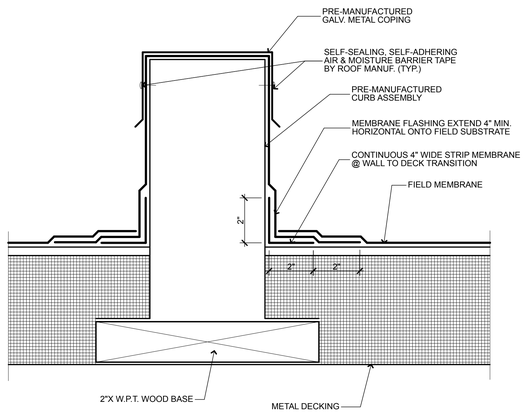
TYP. ROOF DRAIN FLASHING NTS 05



PIPE PENETRATION FLASHING NTS 06



TRENCH DRAIN FLASHING DETAIL NTS 07



EQUIPMENT CURB FLASHING DTL. NTS 08

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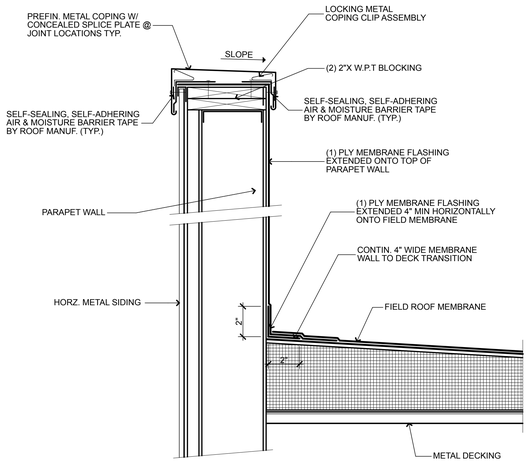
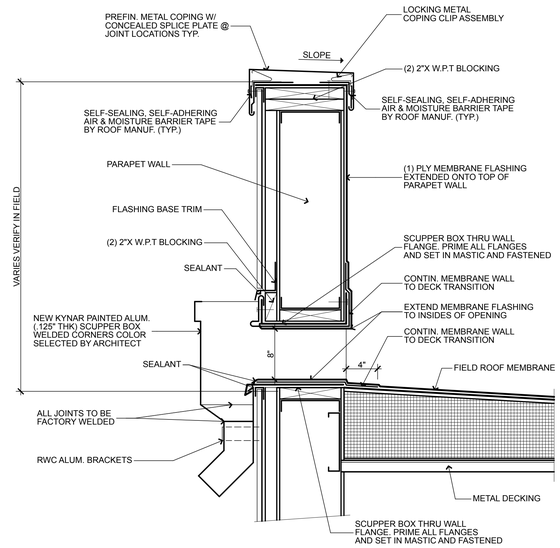
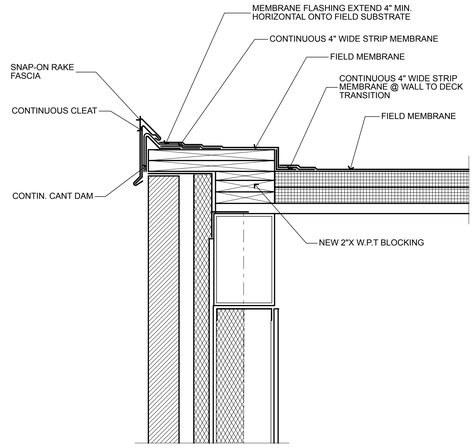
A5.0



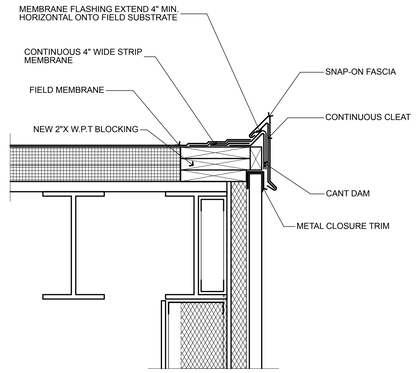
TYP. PARAPET WALL FLASHING NTS **09**



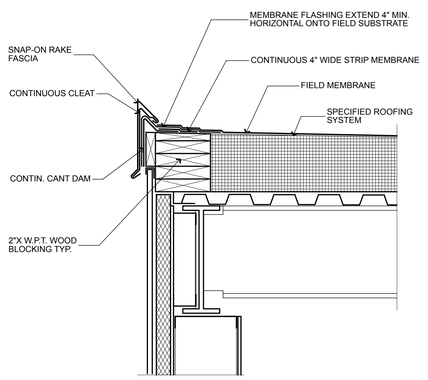
TYP. ROOF DRAIN/ SCUPPER DTL. NTS **10**



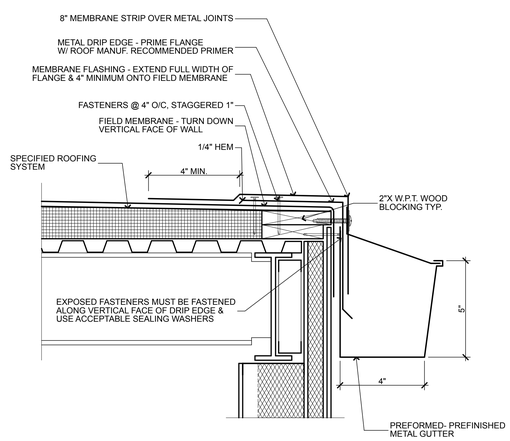
RAKE DETAIL NTS **11**



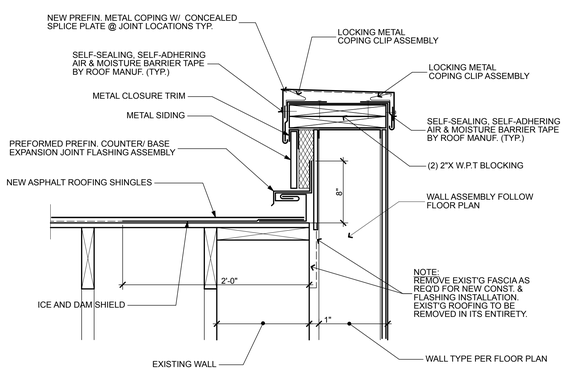
RAKE DETAIL NTS **12**



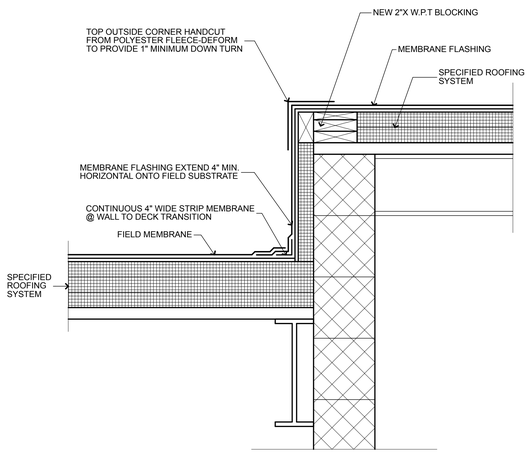
EAVE DETAIL NTS **13**



EAVE DETAIL NTS **14**



TYP. PARAPET WALL FLASHING NTS **15**



CURB/ WALL DETAIL NTS **16**

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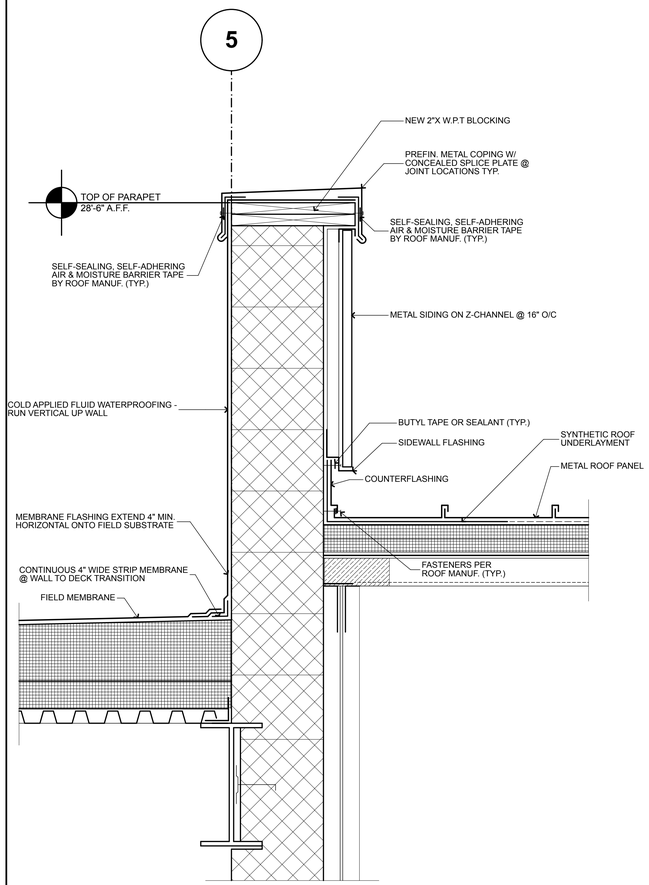
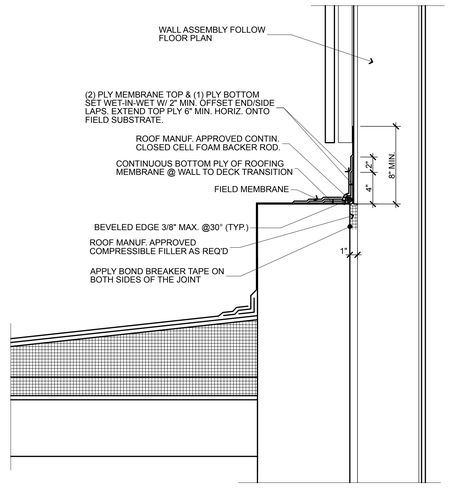
COMMISSION NO.: **5475B**

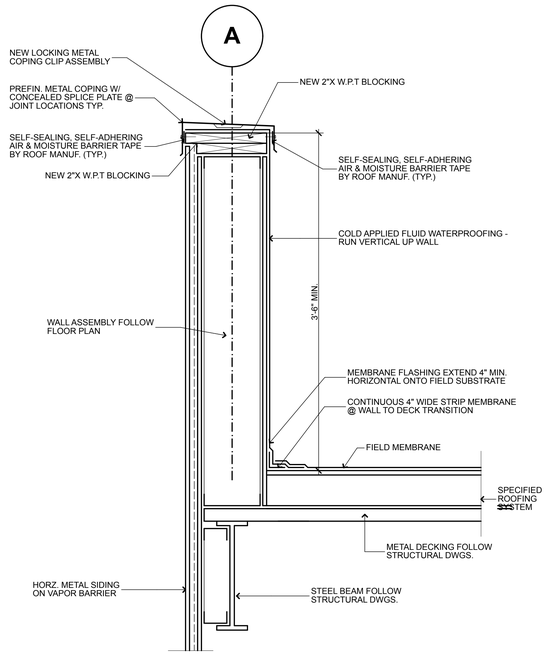
A5.1



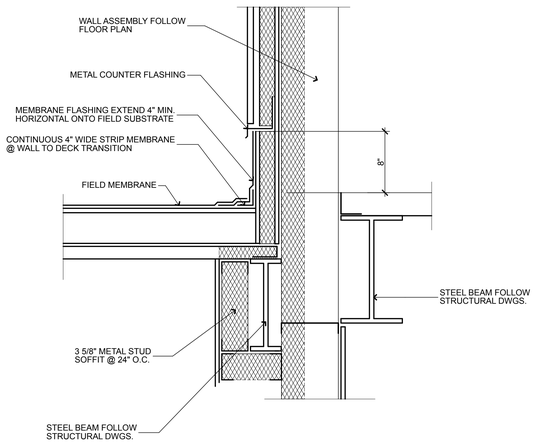
TYP. PARAPET WALL FLASHING NTS 17



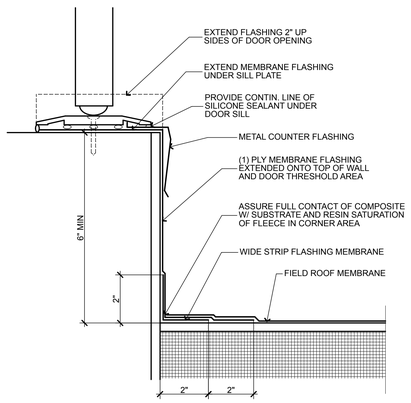
TYP. PARAPET WALL FLASHING NTS 18



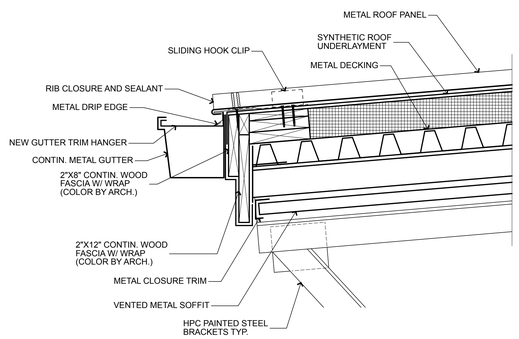
TYP. PARAPET WALL FLASHING NTS 19



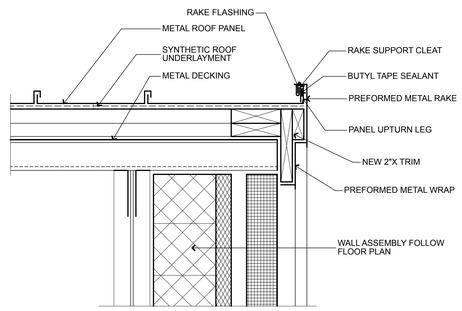
TYP. WALL FLASHING NTS 20



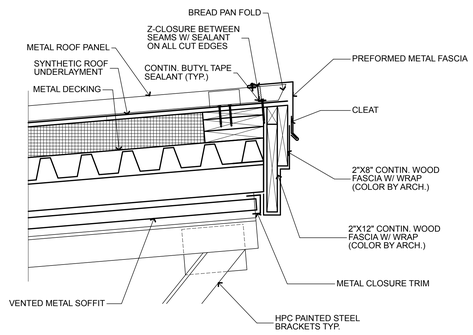
FLASHING DETAIL @ DOOR NTS 21



EAVE DETAIL NTS 22



RAKE DETAIL NTS 23



EAVE DETAIL NTS 24

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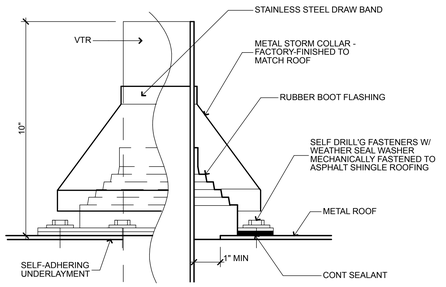
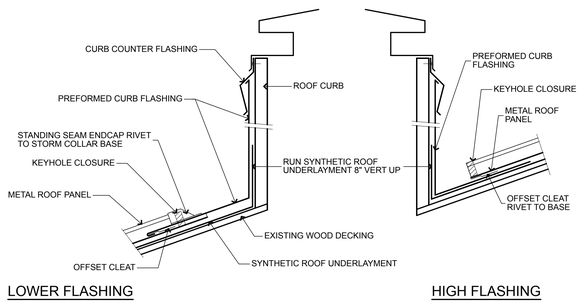
A5.2

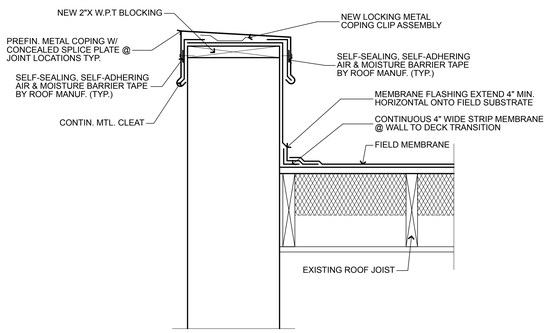


VENT THRU ROOF DTL. NTS 25

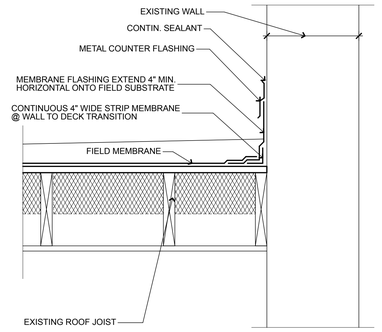


LOWER FLASHING HIGH FLASHING

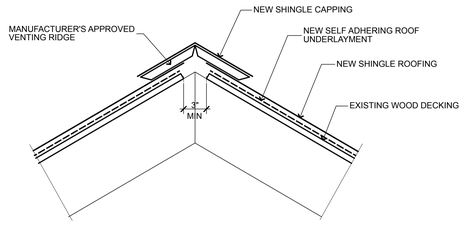
FLASHING DETAIL NTS 26



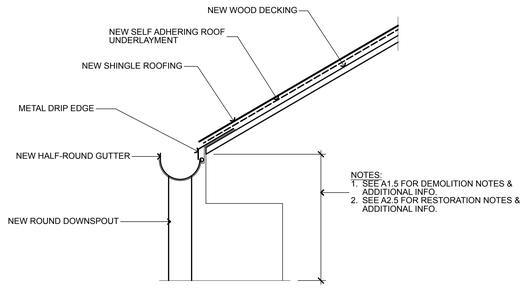
TYP. PARAPET WALL FLASHING NTS 27



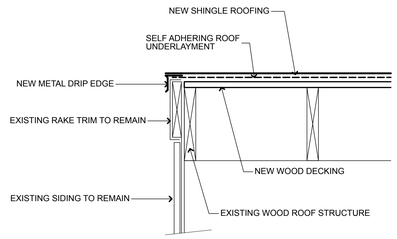
TYP. WALL FLASHING NTS 28



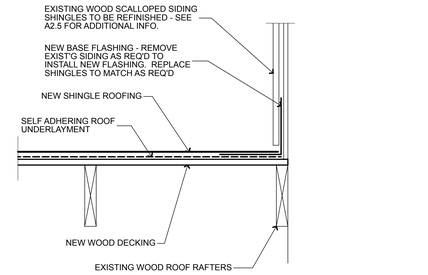
VENTED RIDGE NTS 29



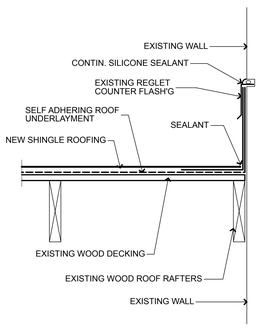
EAVE NTS 30



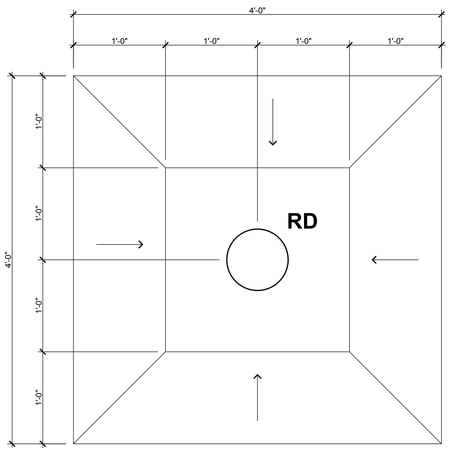
RAKE NTS 31



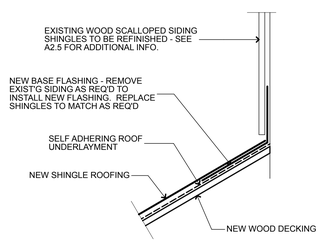
SIDEWALL FLASHING DTL. NTS 32



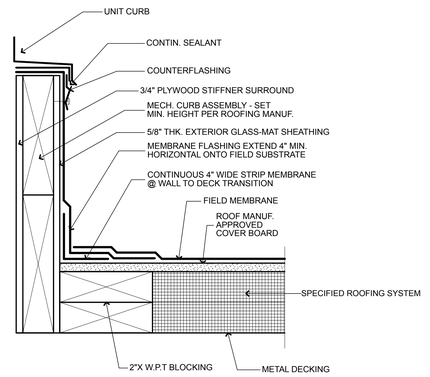
SIDEWALL FLASHING DTL. NTS 33



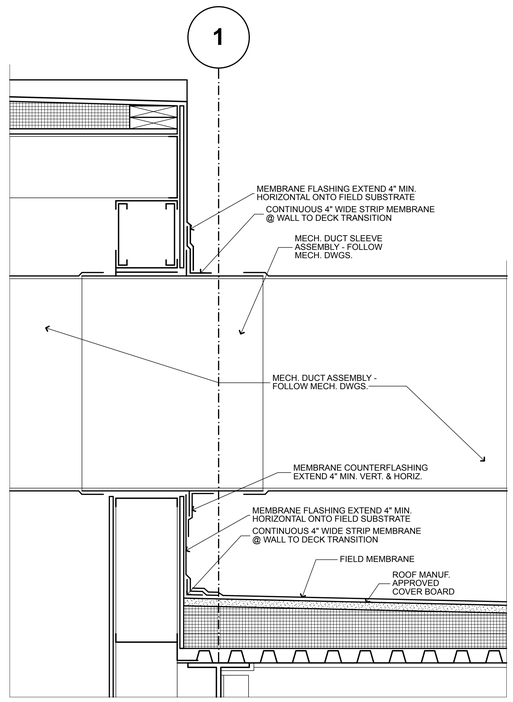
TYP. ROOF DRAIN LAYOUT NTS 35



FLASHING DETAIL NTS 34



EQUIPMENT CURB FLASHING DTL. NTS 36



MECH. DUCT FLASHING DTL. NTS 37

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21A00912100

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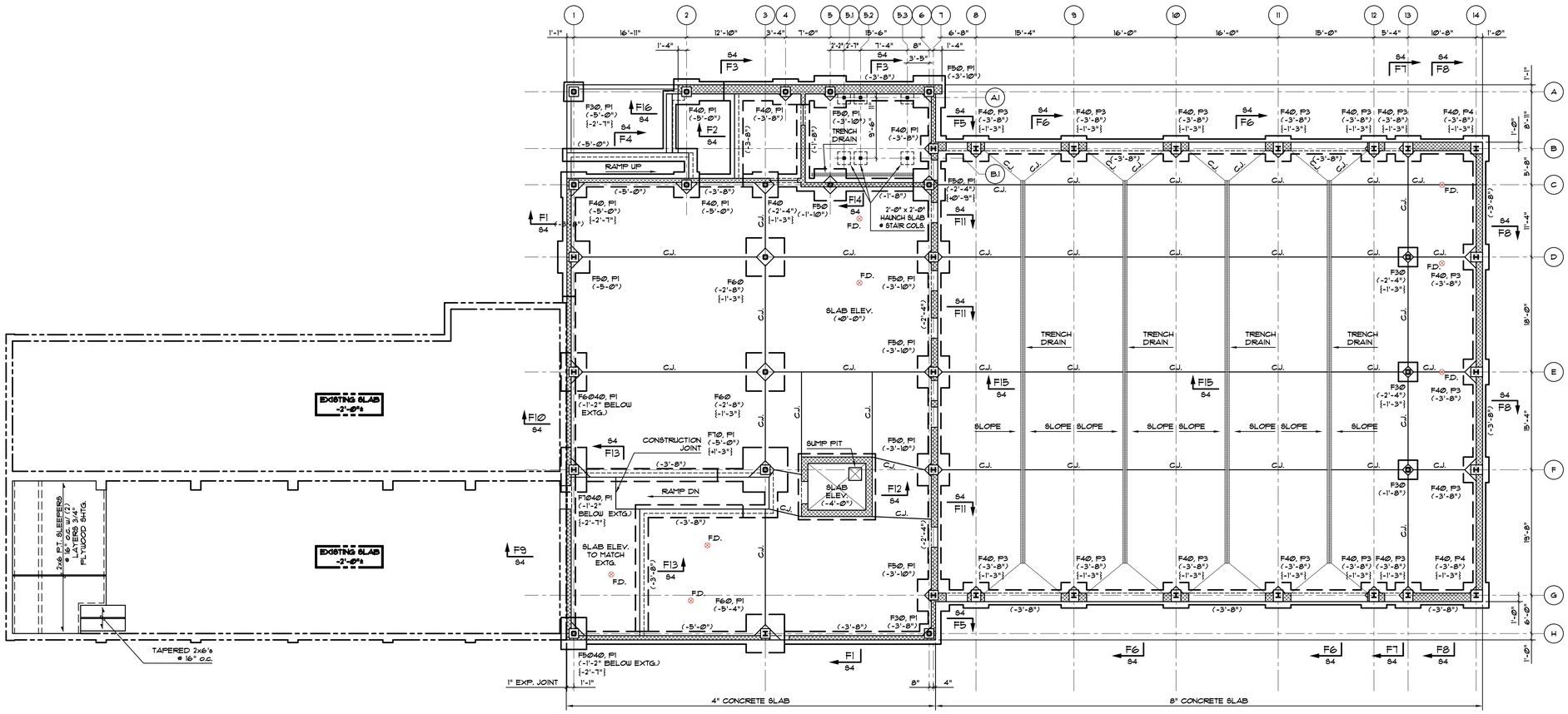
RELIEF FIRE COMPANY NO. 1
ADDITION / RENOVATION
BLOCK 66, LOTS 4, 5, 10, 11, 21, 22, 22.01 AND 23
17 PINE STREET
MOUNT HOLLY, NEW JERSEY

TITLE: **ROOF DETAILS**

DRAWING DATE: **01 JULY 2020**
REVISION DATE:
DRAWN BY: **RR**
COMMISSION NO.: **5475B**

A5.3



FOUNDATION PLAN

1/8" = 1'-0"

ELEVATION TOP OF FINISHED FLOOR SLAB: +15.10' REFERRED TO AS DATUM EL. 0'-0" UNLESS OTHERWISE NOTED ON PLAN.
FLOOR SLAB: 4" CONC. SLAB + 6x6-W1.4xW1.4 WWF. ON A VAPOR BARRIER OVER 6" MIN. DRAINAGE FILL UNLESS OTHERWISE NOTED.
EQUIPMENT BAY FLOOR SLAB: 8" CONC. SLAB + (2) LAYERS OF 6x6-W2.9xW2.9 WWF. ON A VAPOR BARRIER OVER 6" MIN. DRAINAGE FILL UNLESS OTHERWISE NOTED.
ELEVATION BOTTOM OF FOOTINGS NOTED THUS ( ) ON PLAN BELOW FINISHED FLOOR DATUM EL. 0'-0".
C.J. - INDICATES SLAB CONSTRUCTION OR CONTROL JOINT.
SLAB DEPRESSIONS NOTED THUS [ ] ON PLAN FROM TOP OF FLOOR SLAB - SEE ARCH. DWGS. FOR LOCATION & EXTENT.
{B.E. } - INDICATES BOTTOM OF BASE PLATE ABOVE OR BELOW DATUM.
ANY PENETRATIONS IN SLAB FROM ALL TRADES TO BE FILLED WITH POLYURETHANE CAULK.

FOOTING SCHEDULE

MARK	SIZE	REINFORCEMENT
F3Ø	3'-Ø" x 3'-Ø" x 12"	(3) - #4's E.W. BOT.
F4Ø	4'-Ø" x 4'-Ø" x 12"	(4) - #5's E.W. BOT.
F5Ø	5'-Ø" x 5'-Ø" x 14"	(5) - #6's E.W. BOT.
F6Ø	6'-Ø" x 6'-Ø" x 16"	(6) - #6's E.W. BOT.
F7Ø	7'-Ø" x 7'-Ø" x 20"	(7) - #6's E.W. BOT.
F5Ø4Ø	5'-Ø" x 4'-Ø" x 14"	(4) - #6's L.W. BOT. (5) - #5's S.W. BOT.
F6Ø4Ø	6'-Ø" x 4'-Ø" x 14"	(4) - #6's L.W. BOT. (6) - #5's S.W. BOT.
F7Ø4Ø	7'-Ø" x 4'-Ø" x 14"	(4) - #6's L.W. BOT. (7) - #5's S.W. BOT.

PIER SCHEDULE

MARK	SIZE	REINFORCEMENT	REMARKS
P1	18" x 18"	(4) - #6's VERT.	
P2	20" x 20"	(6) - #6's VERT.	
P3	18" x 22"	(6) - #6's VERT.	
P4	22" x 22"	(8) - #6's VERT.	

NOTE:
ALL PIERS TO HAVE #3 TIES @ 12" O.C. (TYPICAL).
PROVIDE BRICKSHELF AS REQUIRED. SEE TYPICAL BRICKSHELF DETAIL ON DRAWING S-7.

NOTE:
SEE THE GEOTECHNICAL ENGINEERING SERVICES REPORT PREPARED BY PENNONI, DATED AUGUSTED 28, 2017 FOR REQUIREMENTS CONCERNING PREPARATION OF SOIL FOR FOUNDATIONS.

NOTE:
1. STEP ALL FOOTINGS AT ALL PIPES & CONDUITS, SEE TYPICAL DETAIL ON SHEET S-7.
2. G.C. TO CONFIRM ALL LOCATIONS AND INVERTS OF PIPES WITH MECHANICAL & ELECTRICAL CONTRACTORS.
3. THE FOUNDATION DRAWINGS SHOW ONLY GENERAL LOCATIONS AND MAY NOT INCLUDE ALL PENETRATIONS. G.C. TO SEE MECHANICAL DRAWINGS FOR FULL EXTENT OF PIPE PENETRATIONS.

NOTE:
GENERAL CONTRACTOR TO LAYOUT DIMENSIONS OF COLUMN CENTERLINES AT THE BEGINNING OF THE PROJECT AND IS TO NOTIFY THE ARCHITECT AND STEEL CONTRACTOR OF ANY DEVIATIONS FROM THE CONTRACT DRAWINGS.

NOTE:
ELECTRICAL CONTRACTOR TO PROVIDE GROUNDING ELECTRODE SYSTEM AS REQUIRED BY NEC SECTION 25Ø-52.a. COORDINATE LOCATION WITH GENERAL CONTRACTOR.

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ADDITION / RENOVATION
BLOCK 86, LOTS 4, 5, 10, 11, 21, 22, 22.01 AND 23
17 PINE STREET
MOUNT HOLLY, NEW JERSEY
TITLE: FOUNDATION PLAN

DRAWING DATE: 01 JULY 2020
REVISION DATE:
DRAWN BY: RCM
COMMISSION NO: 5475B

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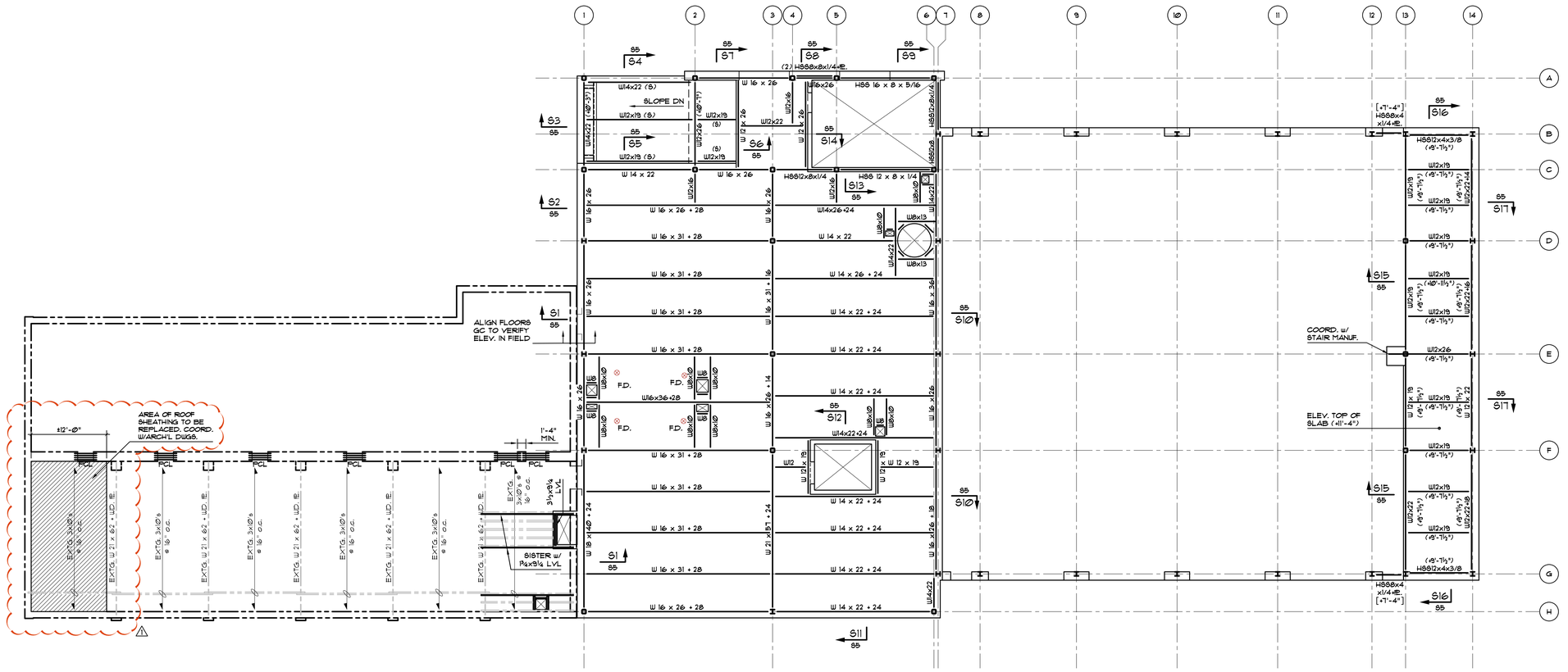
DONALD M. HAMNETT N.J.P.E. #17976 DATE

S-1



SECOND FLOOR FRAMING PLAN

1/8" = 1'-Ø"

ELEVATION TOP OF FINISHED FLOOR SLAB: +11'-1" ABOVE DATUM
EL. Ø'-Ø" UNLESS OTHERWISE NOTED ON PLAN. FINISHED FLOOR TO MATCH ADJACENT EXISTING FINISHED FLOOR ELEVATION.
FLOOR SLAB: 4 1/2" CONC. SLAB + 6x6-W1.4xW1.4 WWF. ON 2"-20 GA. COMPOSITE METAL FLOOR DECK (GALVANIZED).
ELEVATION TOP OF STEEL BEAMS -4 1/2" BELOW TOP OF SLAB UNLESS OTHERWISE NOTED THUS (+) ON PLAN ABOVE DATUM.
W 16 x 26 + 24 - INDICATES W16 x 26 STEEL BEAM WITH 24-3/4"ø SHEAR STUDS.
SPACE ALL STEEL MEMBERS EQUALLY UNLESS OTHERWISE NOTED ON PLAN.
◁ ▷ - INDICATES A TYPE 3 SEMI-RIGID WIND/SEISMIC MOMENT CONNECTION IN UNITS OF KIP - FT. (ALLOWABLE STRESS INCREASES MAY BE TAKEN FOR A.S.D.)
◂ ▸ - INDICATES MOMENT CONNECTION IN UNITS OF KIP - FT.
PCL - INDICATES 4"x8" PRECAST CONCRETE LINTELS w/ (1) - #4 BOTTOM & (1) - #3 TOP. PROVIDE (1) P/C LINTEL FOR EVERY 4" OF MASONRY WIDTH OF THE EXISTING WALL.

BUILDING NORTH

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DONALD M. HAMNETT N.J.P.E. #17976 DATE

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17 PINE STREET
MOUNT HOLLY, NEW JERSEY

TITLE: SECOND FLOOR FRAMING PLAN

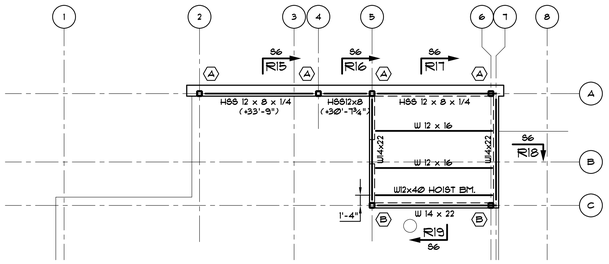
DRAWING DATE: 01 JULY 2020
REVISION DATE: 25 SEPTEMBER 2020
DRAWN BY: RCM
COMMISSION NO: 5475B

S-2

HIGH ROOF FRAMING PLAN

1/8" = 1'-0"

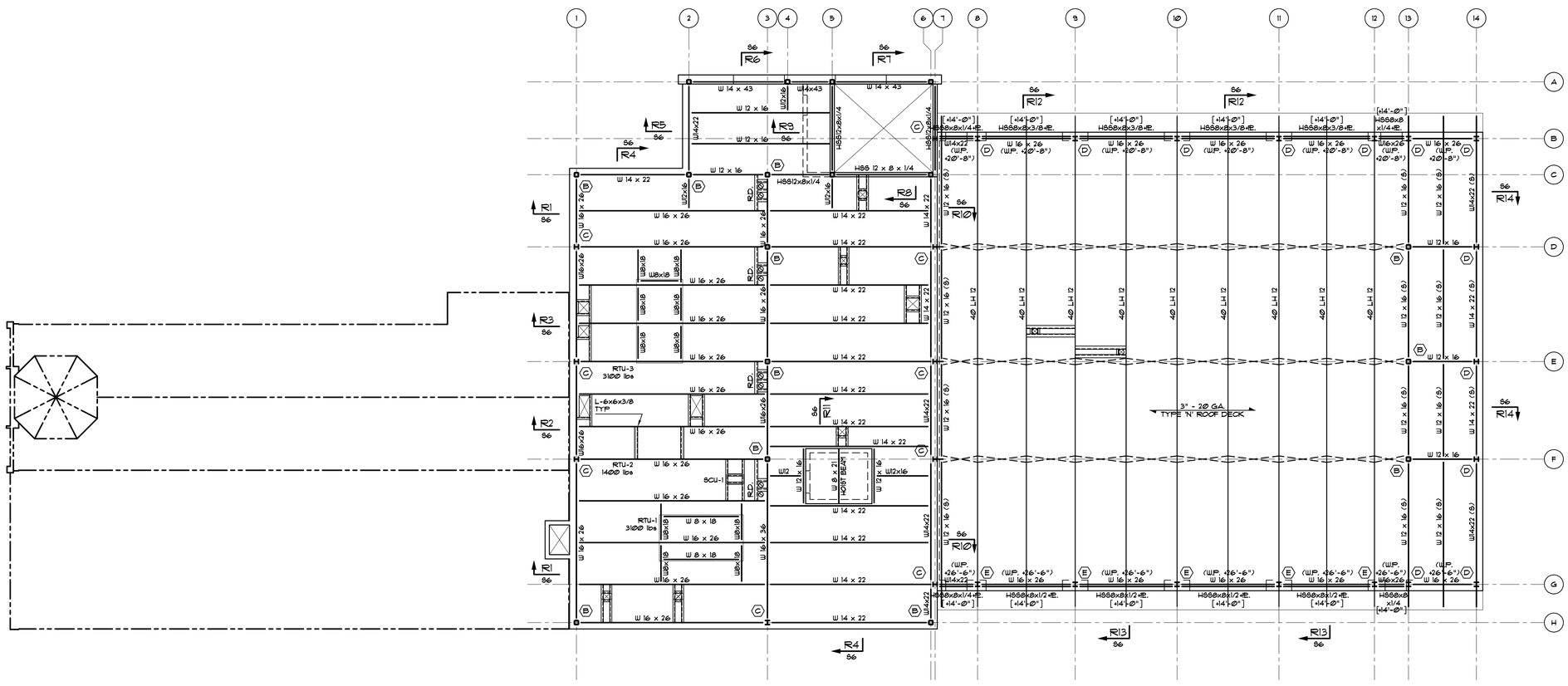
ELEVATION TOP OF STEEL BEAMS: +32'-10 1/2" ABOVE DATUM
EL. 0'-0" UNLESS OTHERWISE NOTED THUS ( ) ON PLAN.
ROOF DECK: 1 1/2" - 20 GA. TYPE "B" (WIDE RIB) METAL ROOF DECK (GALV.).
PROVIDE FRAME AROUND ALL ROOF DRAINS & AT ALL OTHER ROOF OPENINGS LARGER THAN 8" AS PER TYPICAL DETAIL.
COORDINATE SIZE & LOCATION OF ALL ROOF OPNGS. W/ ARCH. & MECH. DWGS.
SPACE ALL STEEL MEMBERS EQUALLY UNLESS OTHERWISE NOTED ON PLAN.
[ ] - INDICATES ELEVATION BOTTOM OF BEAM & TE LINTEL FROM DATUM.



COLUMN SCHEDULE

MARK	SIZE	BASE PLATE	ANCHOR RODS
A	HSS 8 x 8 x 5/8	3/4" x 14" x 1'-2"	(4) - 3/4" ø
B	HSS 8 x 8 x 1/4	3/4" x 14" x 1'-2"	(4) - 3/4" ø
C	W 8 x 31	3/4" x 14" x 1'-2"	(4) - 3/4" ø
D	W 8 x 31	3/4" x 10" x 1'-0"	(4) - 3/4" ø
E	W 8 x 58	3/4" x 10" x 1'-0"	(4) - 3/4" ø

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



ROOF FRAMING PLAN

1/8" = 1'-0"

ELEVATION TOP OF STEEL BEAMS: +32'-10 1/2" ABOVE DATUM
EL. 0'-0" UNLESS OTHERWISE NOTED THUS ( ) ON PLAN.
ROOF DECK: 1 1/2" - 20 GA. TYPE "B" (WIDE RIB) METAL ROOF DECK (GALV.).
UNLESS OTHERWISE NOTED ON PLAN.
PROVIDE FRAME AROUND ALL ROOF DRAINS & AT ALL OTHER ROOF OPENINGS LARGER THAN 8" AS PER TYPICAL DETAIL.
COORDINATE SIZE & LOCATION OF ALL ROOF OPNGS. W/ ARCH. & MECH. DWGS.
SPACE ALL STEEL MEMBERS EQUALLY UNLESS OTHERWISE NOTED ON PLAN.
[ ] - INDICATES ELEVATION BOTTOM OF BEAM & TE LINTEL FROM DATUM.
(S) - INDICATES SLOPING MEMBER.

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TITLE: ROOF FRAMING PLAN

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COMMISSION NO: 5475B

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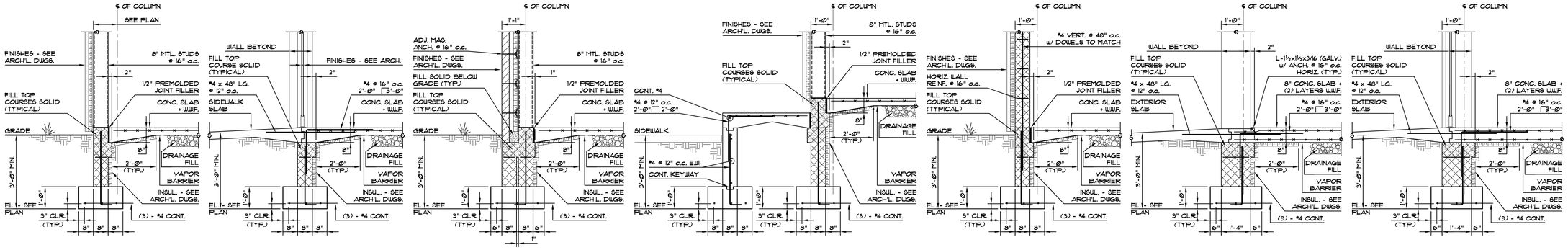
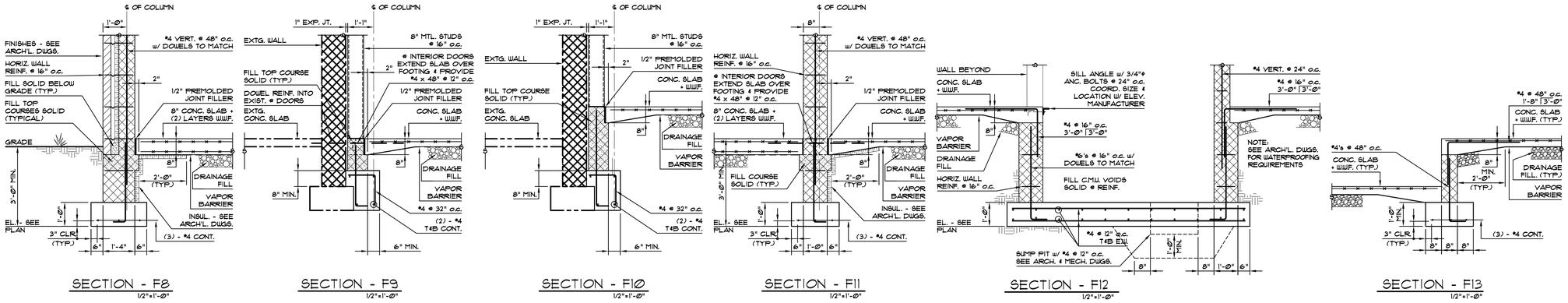
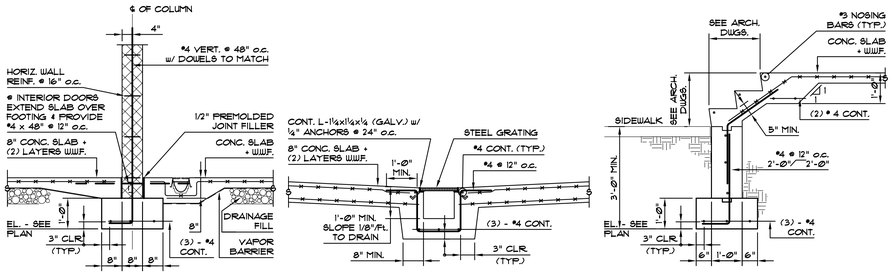
S-3







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MOUNT HOLLY, NEW JERSEY

TITLE: FOUNDATION SECTIONS

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COMMISSION NO: 5475B

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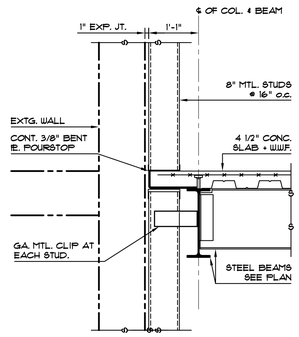
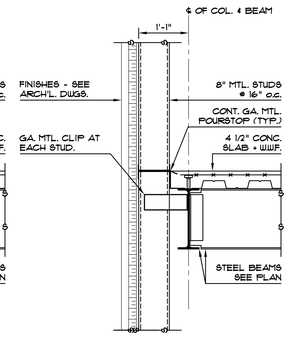
S-4



SECTION - S1
3/4"=1'-0"



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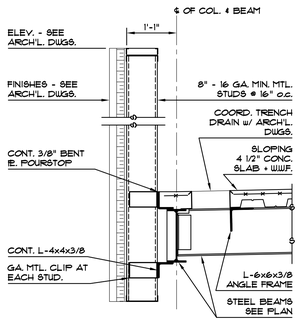

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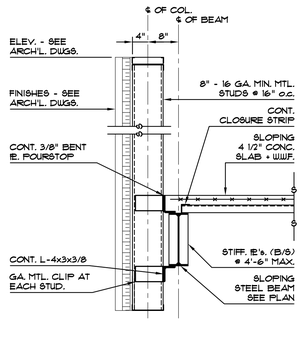

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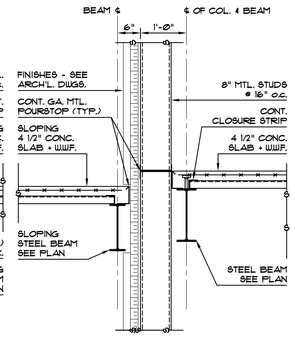

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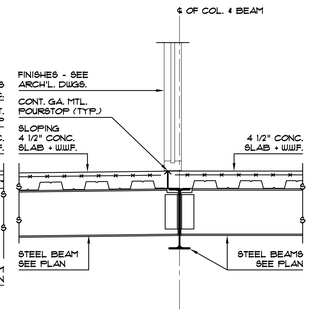

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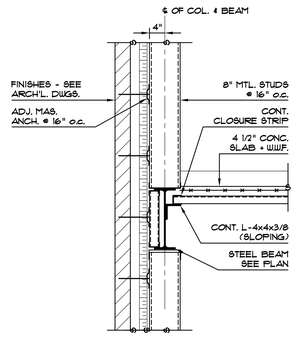

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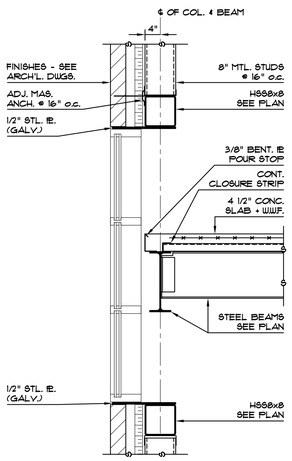

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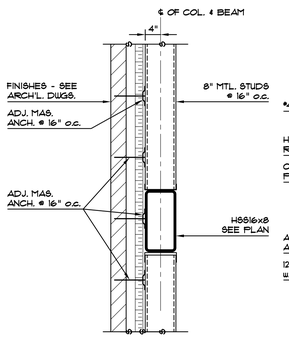

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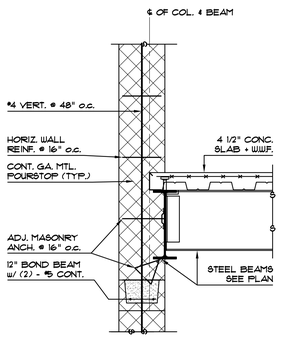

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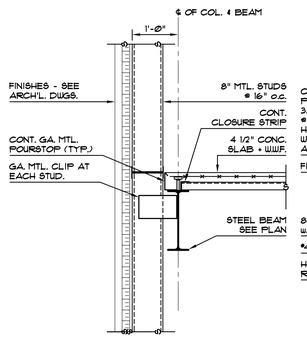

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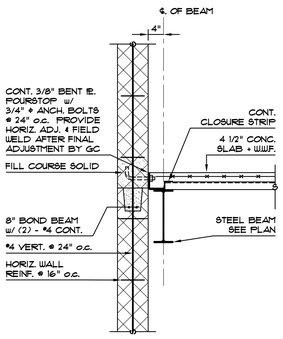

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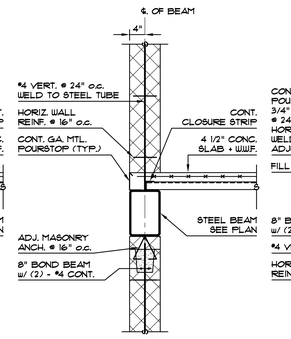

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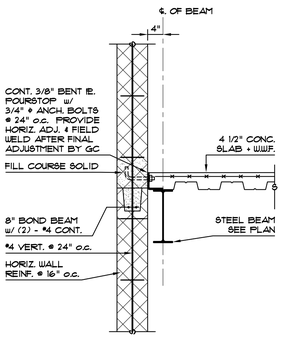

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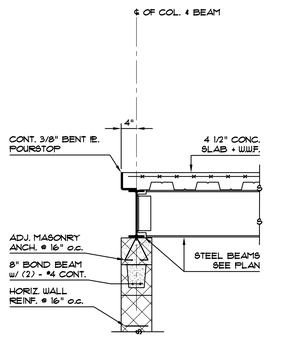

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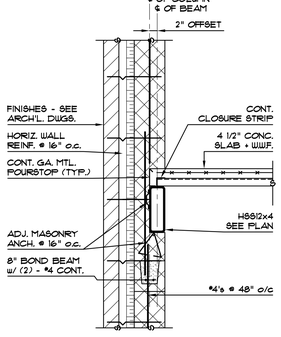

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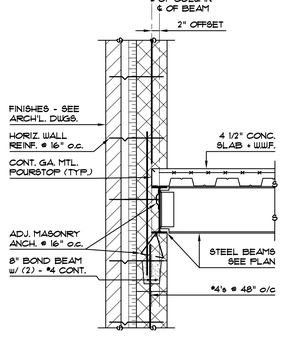

SECTION - S17
3/4"=1'-0"

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TITLE: WALL SECTIONS

DRAWING DATE: 01 JULY 2020
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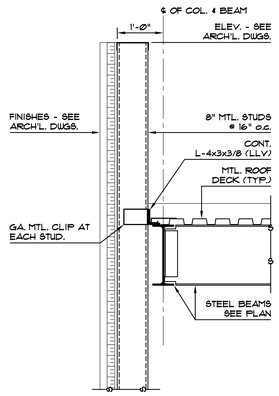
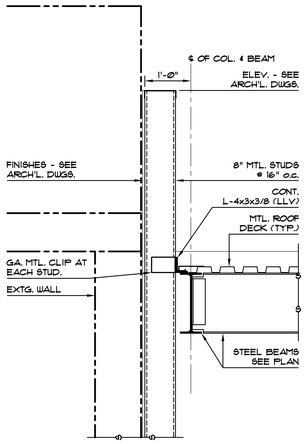
S-5



SECTION - R1
3/4"=1'-Ø"



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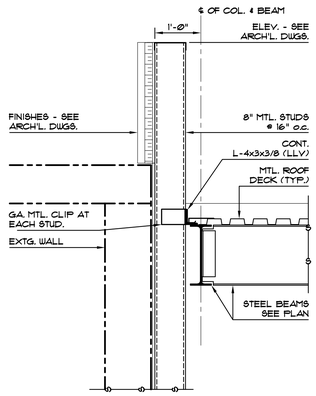

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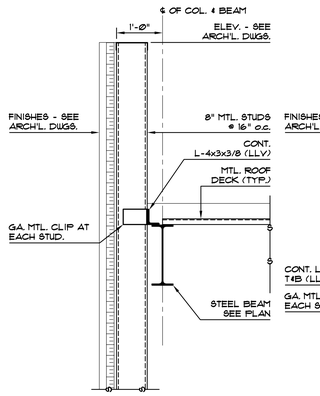

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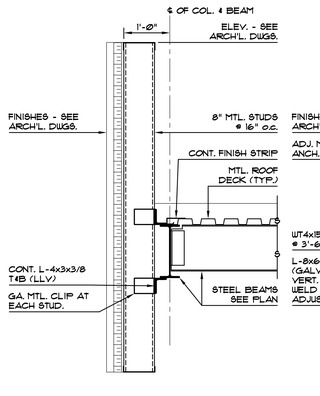

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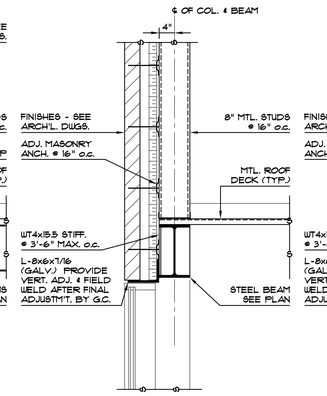

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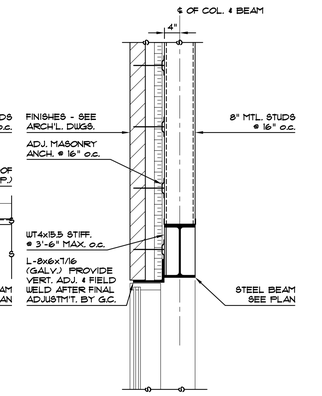

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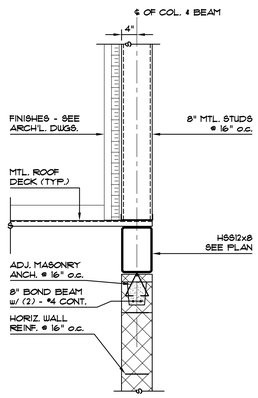

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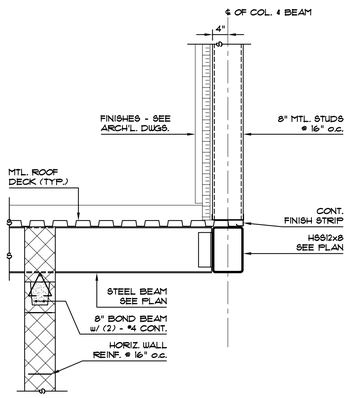

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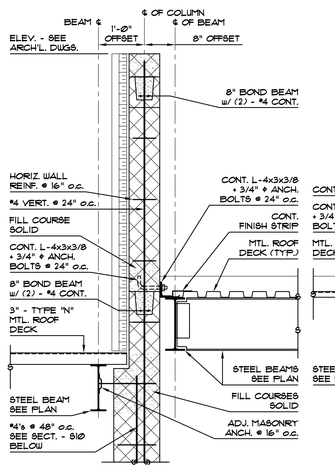

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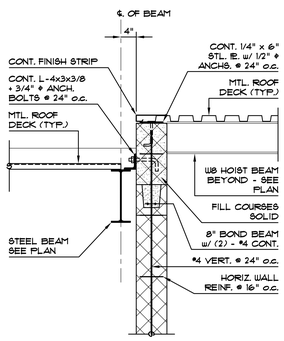

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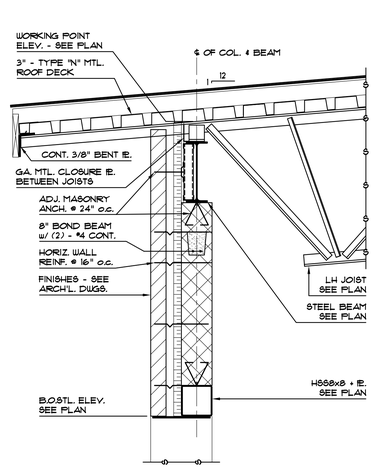

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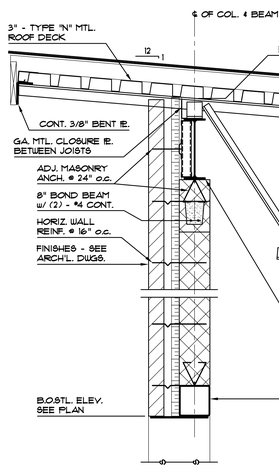

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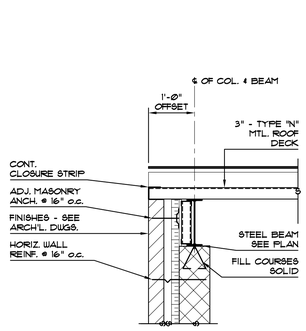

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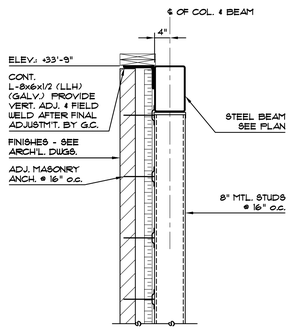

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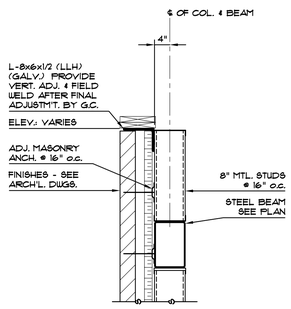

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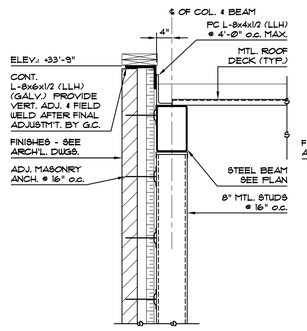

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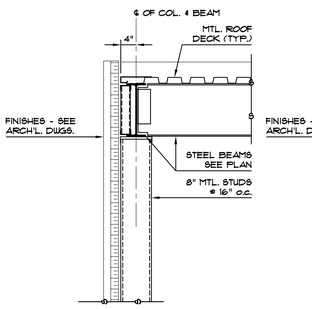

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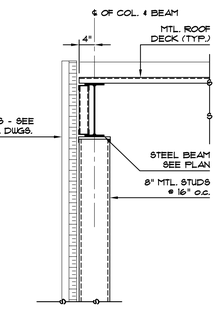

SECTION - R19
3/4"=1'-Ø"

REGAN YOUNG ENGLAND BUTERA
REFERENDUMS | ENGINEERING | ARCHITECTURE | DESIGN
456 HIGH STREET, MT. HOLLY, NEW JERSEY 08060
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RELIEF FIRE COMPANY NO. 1
ADDITION / RENOVATION
BLOCK 86, LOTS 4, 5, 10, 11, 21, 22, 22.01 AND 23
17 PINE STREET
MOUNT HOLLY, NEW JERSEY

TITLE: ROOF SECTIONS

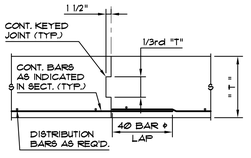
DRAWING DATE: 01 JULY 2020
REVISION DATE:

DRAWN BY: RCM
COMMISSION NO: 5475B

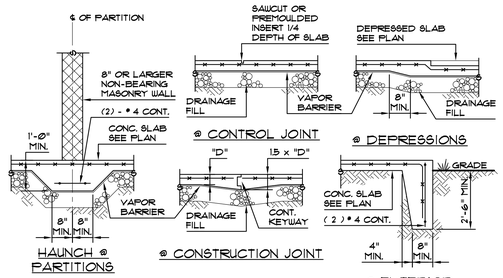
Harrison – Hamnett, P.C.
Consulting Structural Engineers
40 Knowles Street Pennington, New Jersey 08534
Ph: 609-818-1808 Fax: 609-818-1809

DONALD M. HAMNETT N.J.P.E. #17976 DATE

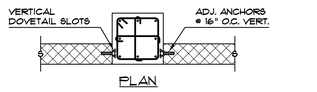
S-6



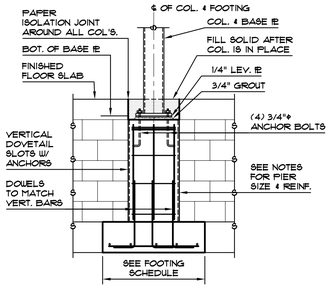
TYPICAL CONCRETE FOOTING
CONSTRUCTION JOINT



TYPICAL SLAB ON GRADE DETAILS

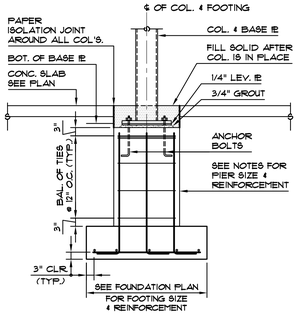


PLAN

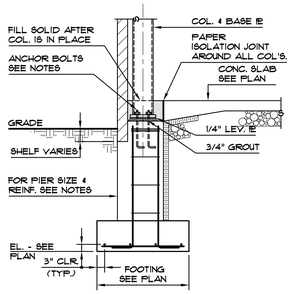


ELEVATION

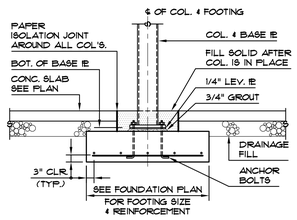
TYPICAL PIER & FOOTING DETAIL



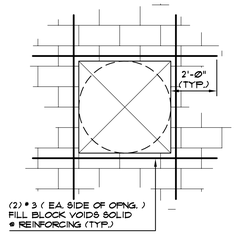
TYPICAL ISOLATED PIER
& FOOTING DETAIL



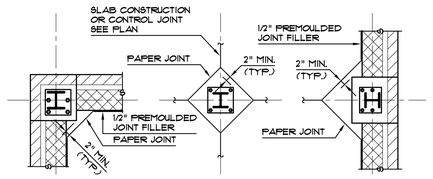
BRICK SHELF @ COLUMNS



TYPICAL INTERIOR FOOTING

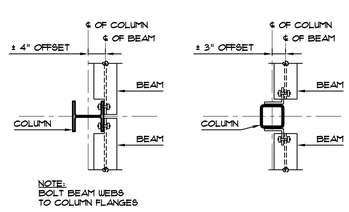


TYPICAL REINFORCING @
OPENINGS IN MASONRY WALLS

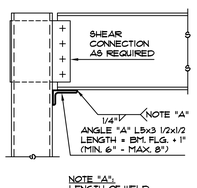


@ CORNER COLUMN @ INTERIOR COLUMN @ EXTERIOR COLUMN

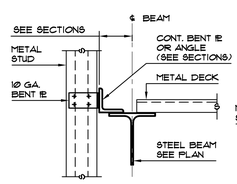
TYPICAL ISOLATION JOINT DETAILS



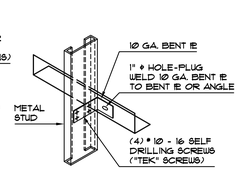
TYPICAL BEAM OFFSET CONNECTIONS



BEAM TO COLUMN CONN.
FOR WIND & SEISMIC
AT ALL COLUMNS



SECTION



ISOMETRIC

DETAIL-"A"

GENERAL NOTES

FOUNDATION

1. All footings shall bear on soil having a minimum safe bearing capacity of 3000 pounds per square foot. Confirm in field prior to placing footings.
2. Elevations given correspond to the computed bottom of footings and are minimum depths which are not to be construed as limiting in any way the depth required to reach good bearing.
3. No footings shall be placed in water or on frozen ground. After footings are placed they shall be protected against frost.
4. Fill and backfill material shall be free of deleterious organic matter.
5. All footing excavations are to be finished by hand.
6. Fill and backfill shall be clean bank run material conforming to the following graduation: 100% smaller than 4 inch sieve; maximum 15% smaller than #200 sieve, and approved as acceptable by a testing laboratory.
7. No fill or backfill shall be placed over or against work at such time or in such a manner which would endanger the stability or otherwise damage such work.
8. See the Geotechnical Engineering Services report prepared by Pennoni, dated Augusted 28, 2017 for requirements concerning preparation of soil for foundations.

CAST-IN-PLACE CONCRETE

1. All concrete work shall conform to the latest edition of the ACI Building Code.
2. All concrete shall attain 4000 PSI compressive strength at 28 days.
3. Ready Mix:
   A. Comply with ACI-301, ACI-304 and ASTM C-94.
   B. Maximum time between introduction of water and placing to be 1-1/2 hours.
   C. Minimum cement content shall be 560 pounds per cubic yard for 4000 PSI concrete.
   D. Maximum water cement ratio shall be 0.45 for 4000 PSI concrete.
   E. Maximum slump of concrete shall be 4 inches as determined by ASTM C-143. Maximum slump of concrete shall be 3 inches; and 8" after addition of HRWR to site verified 3" slump for concrete containing HRWR admixture as determined by ASTM C-143.
   F. All concrete exposed to the ground or weather shall be air entrained between 4-5% as determined by ASTM C-231 or C-173.
   G. Do not load trucks above rated capacity.
   H. High-Range Water-Reducing Admixture (Super Plasticizer) shall conform to ASTM C-494, Type F or G and contain not more than 0.1 percent chloride ions.
4. Cold weather concreting shall be in accordance with ACI-306.
5. Prepare concrete test cylinders from each day's pour. Cylinders shall be properly cured, stored and tested. Submit results to Architect.
6. Throughout construction the concrete work shall be adequately protected against damage due to excessive loading, construction equipment, materials or methods, ice, rain, snow, excessive heat and freezing temperatures.
7. Early drying out of concrete, especially during the first 24 hours, shall be carefully guarded against. All surfaces shall be moist cured or protected using a membrane curing agent applied as soon as forms are removed. If membrane curing agent is used, exercise care not to damage coating.
8. Bending, tack welding, cutting or substitute reinforcing other than as shown on the contract drawing is prohibited unless specific approval for each case is given by Architect.
9. Concrete shall be conveyed, placed and finished in a workemlike manner.
10. Prior to making repairs, contractor shall obtain permission from architect to make patches for other than minor honeycombing.
11. Contractor to coordinate requirements of structural, architectural, mechanical and electrical drawings.
12. All materials shall be stored to protect them against the elements.

REINFORCING

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

STRUCTURAL STEEL

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

STEEL JOISTS

1. All standard bar joists, materials, and workmanship shall conform to the latest edition of the S.J.I. "Standard Specifications for Open-web Joists, K Series" or "Standard Specifications for Longspan Steel Joist, LH-Series and Deep Longspan Steel Joists, DLH-Series."
2. Do not load joists until bridging is installed.

STEEL ROOF DECK

1. Deck shall be 20 gage wide rib variety (Type B) and 20 gage deep rib (Type N) continuous over at least 3 spans and shall be installed as per manufacturer's recommendations.
2. Welds to be made in strict accordance with manufacturer's recommendations by certified welders.
3. See drawings for additional specific requirements concerning welding.

STEEL FLOOR DECK

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

MASONRY

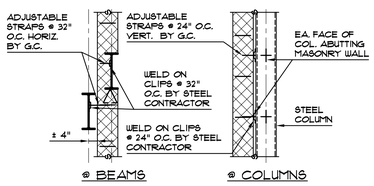
1. All block work shall be in accordance with IBC2018 w/ NJ Modification and other applicable codes.
2. All block shall be lightweight aggregate and conform to ASTM C 90.
3. Mortar shall be ASTM C 270, Type M for below grade and Type M or S for above grade work.
4. Where block fill is called for on drawings, use Type M mortar or concrete with a compressive strength of 2500 PSI in accordance with ASTM C 476, and installed in accordance with ACI-531 for high or low lift procedures.
5. All masonry walls are to have a #4 vertical reinforcing bars at ends, at intersections at corners and at a maximum spacing of 4 feet on centers. These reinforcing bars are to be full height and grouted solid. These bars may be spliced provided that a 40 bar diameter lap is maintained.
6. All openings are to have two #3 vertical reinforcing bars within 16 inches of each side and a bond beam top and bottom with two #3 bars (unless noted otherwise on plan). All reinforcing is to extend past the opening a minimum of 24 inches.
7. All masonry walls are to have a bond beam with two #4 bars within 16 inches of the top of the wall.
8. All running bond masonry walls are to have horizontal reinforcing at every other course. Where masonry is laid in other than running bond, horizontal joint reinforcement is to be provided at every horizontal joint. The horizontal wall reinforcing shall be No. 9 gage "Dur-o-wall" or equivalent. Provide fabricated corner sections at all corners.
9. All wall bearing beams are to have the masonry wall grouted solid a minimum of 8 inches each side of bearing location and two #4 vertical reinforcing bars full height at each grouted cell (maximum of four bars).
10. Coordinate masonry with all trades requiring items to be built-in.

COLD FORM METAL FRAMING

1. All Cold Form Metal framework for the exterior walls, load-bearing walls and roof framing shall be designed by the cold form metal framing contractor in accordance with the manufacturer's guidelines. See required design loads on drawings.
2. Submit signed and sealed shop drawings and calculations for review prior to fabrication and erection.
3. Installation to be in strict accordance with shop drawings and manufacturer's recommendations. Brace all walls during erection as per manufacturer's recommendations.
4. All welds are to be by a certified welder.
5. Metal studs to have rows of horizontal bridging at a maximum 4'-6" on center. Bridges to be installed as per manufacturer's recommendations.
6. All load bearing metal framing members to be a minimum of 6" - 12 gage members at a maximum spacing of 24 inches on center unless otherwise noted on plan.
7. All metal tracks to match size and gauge of wall studs.

MISCELLANEOUS

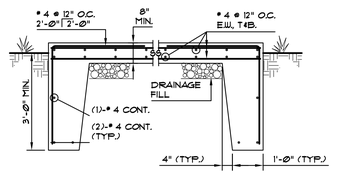
1. Contractor shall verify all dimensions, sections and elevations on the job.
2. Consult the Architectural, Mechanical and Electrical drawings for verification of location and dimensions of chases, inserts, openings, sleeves, washes, drips, reveals, depressions, equipment pads and other product requirements.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



@ BEAMS @ COLUMNS

NOTES:
1. PROVIDE WELD ON ADJUSTABLE MASONRY ANCHORS ON ALL BEAMS & COLUMNS ABUTTING MASONRY WALLS.
2. USE HOHMANN&BARNARD (OR APPROVED EQUAL) # 302W OR "VBT ADJUSTABLE STRAPS BY G.C. & # 359 WELD ON CLIPS BY STEEL CONTR. USE #359FF W/ BACKPLATE @ FIREPROOFED AREAS.
3. ANCHORS TO BE KEPT IN BLOCK COURSING.
4. STEEL CONTRACTOR SHALL COORDINATE LOCATION WITH ARCH'L. DRAWINGS PRIOR TO FABRICATION.
5. OMIT MASONRY ANCHORS @ ALL FIRE WALLS.

TYPICAL MASONRY ANCHORS



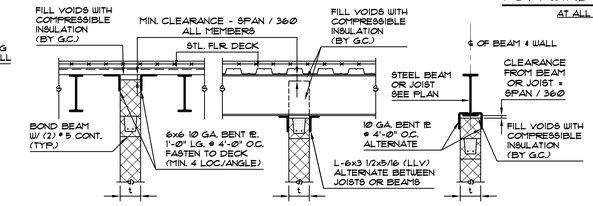
TYPICAL SITE EQUIPMENT PAD

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

LOOSE LINTEL SCHEDULE
(FOR 4", 8", 12", & 16" WALLS)

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

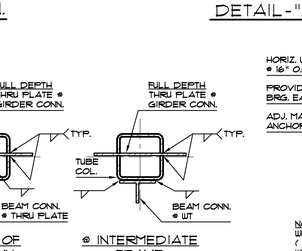
NOTES:
1. PROVIDE ONE (1) ANGLE FOR EACH 4" OF MASONRY WIDTH.
2. BEAR LINTELS 6" MINIMUM EACH SIDE OF OPENING.
3. ALL LINTELS IN EXTERIOR WALLS TO BE GALVANIZED.
4. WHERE OPENINGS LOCATED NEXT TO COLUMNS OR BEAMS, ATTACH TO STRUCTURAL STEEL. CONNECTION NOT TO PROTRUDE INTO OPENING.
5. CONSULT ARCHITECTURAL,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



BEAM PARALLEL TO WALL | BEAM PERPENDICULAR TO WALL | BEAM PARALLEL TO WALL

NOTE:
ALL STEEL (EXCEPT Ø GA. BENT ℄) SUPPLIED BY STEEL CONTRACTOR AND INSTALLED BY GENERAL CONTRACTOR. Ø GA. BENT ℄ SUPPLIED AND INSTALLED BY GENERAL CONTRACTOR

TYPICAL MASONRY WALL UP TO STEEL DECK DETAILS

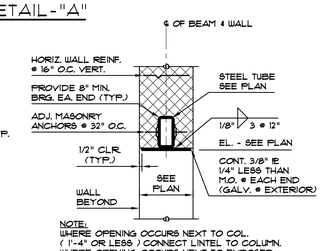


@ TOP OF COLUMN @ INTERMEDIATE FRAME

NOTE:
WHERE A SINGLE ROW OF ¾"ø BOLTS DOES NOT MEET THE CONNECTION REQUIREMENTS STATED IN THE GENERAL NOTES PROVIDE A FULL DEPTH SINGLE ROW OF 1"ø BOLTS BEFORE USING A DOUBLE ROW OF BOLTS

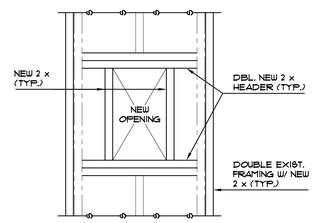
TYPICAL THRU PLATE DETAIL

(@ TUBE COLUMN)

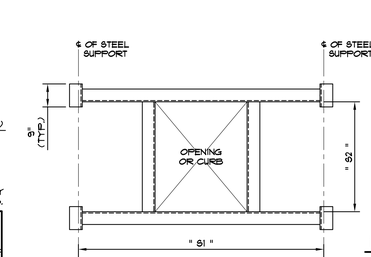


NOTE:
WHERE OPENING OCCURS NEXT TO COL. (1'-4" OR LESS) CONNECT LINTEL TO COLUMN. WHERE OPENING OCCURS NEXT TO EXPOSED COLUMN COPE ℄ AROUND COL. FACE.

TYPICAL TUBE LINTEL DETAIL

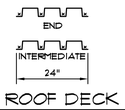


NEW ROOF OPENING IN
AN EXISTING WOOD ROOF

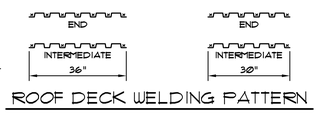


NOTES:
1. FOR SIZE & LOCATION OF OPENINGS SEE ARCHITECTURAL & MECHANICAL DRAWINGS.
2. STEEL CONTRACTOR SHALL VERIFY ALL OPENINGS AND EXACT LOCATIONS WITH THE TRADE CONTRACTOR REQUIRING SAID OPENINGS PRIOR TO FABRICATION & ERECTION OF STEEL FRAMES.
3. PROVIDE STEEL FRAMES AS SHOWN AROUND ALL REQUIRED OPENINGS LARGER THAN 8" AT ROOF.
4. PROVIDE STEEL ANGLES ON ALL SIDES OF OPENINGS UNLESS BEAM IS SHOWN ON PLAN. ANGLE SIZES TO BE:
   FOR "S1" OR "S2" ≤ 6'-6" L-4"x4"x5/16"
   FOR "S1" OR "S2" > 6'-6" L-6"x6"x3/8"
5. PROVIDE STEEL ANGLES ON ALL SIDES OF MECH'L CURBS UNLESS BEAM IS SHOWN ON PLAN. ANGLE SIZES TO BE L-6"x6"x3/8".
6. FOR SIZE & LOCATION OF MECH'L UNITS, SEE ARCH'L & MECH'L DWGS.

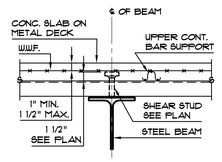
TYPICAL DETAIL @ ROOF OPENING
& UNDER MECH'L CURB



3" ROOF DECK
WELDING PATTERN



ROOF DECK WELDING PATTERN



TYPICAL W.W.F. SUPPORT

ROOF LOADING SCHEDULE

DEAD LOAD:

ROOFING	6.0	P.S.F.
INSULATION	2.0	P.S.F.
METAL ROOF DECK	2.0	P.S.F.
STEEL JOISTS	3.0	P.S.F.
STRUCTURAL STEEL	4.0	P.S.F.
MECH. ELEC.	2.0	P.S.F.
CEILING	1.0	P.S.F.
MISC.	5.0	P.S.F.
	25.0	P.S.F.

LIVE LOAD:

DESIGN LOAD	25.0	P.S.F.
GROUND SNOW LOAD (Pg)	25.0	P.S.F.
Ce = 1.0, I = 1.2, Ct = 1.0		
Pf = 0.7 x Ce x I x Ct x Pg =	21.0	P.S.F.
DRIFT LOADING TO	0.0	P.S.F.
DRIFT LENGTH 11.3 FEET		

FLOOR LOADING SCHEDULE

DEAD LOAD:

4 1/2" CONCRETE SLAB	44.0	P.S.F.
METAL FLOOR DECK	3.0	P.S.F.
STRUCTURAL STEEL	8.0	P.S.F.
MECH. ELEC.	3.0	P.S.F.
MISC.	2.0	P.S.F.
	60.0	P.S.F.

LIVE LOAD:

OFFICES	50.0	P.S.F.
PARTITIONS	20.0	P.S.F.
CORRIDORS	80.0	P.S.F.
MEZZANINE STORAGE	125.0	P.S.F.

LATERAL LOADING SCHEDULE

WIND LOAD: IBC 2018 - ASCE 7-16
BASIC WIND SPEED = 127 M.P.H.
RISK CATEGORY = IV, EXPOSURE B
INTERNAL PRESSURE COEFF. GCpi = ± 0.18
COMPONENT & CLADDING
ROOF - 10 SF = - 67.61 PSF
WALLS - 10 SF = + 24.52, - 32.67 PSF

SEISMIC LOADING: IBC 2018 - ASCE 7-16
SEISMIC RISK CATEGORY - IV
IMPORTANCE FACTOR (Ie) = 1.5
Ss = 0.185 S1 = 0.048
SITE CLASS - E
Sds = 0.297 Sd1 = 0.134
SEISMIC DESIGN CATEGORY - D
BUILDING FRAME SYSTEM w/ SPECIAL REINFORCED MASONRY SHEAR WALLS
BASE SHEAR = 106.46 KIPS
SEISMIC RESPONSE COEFFICIENT (Cs) = 0.081
RESPONSE MODIFICATION FACTOR (R) = 5.5
EQ. LAT. FORCE PROC.

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Ph: 609-818-1808 Fax: 609-818-1809

DONALD M. HAMNETT N.J.P.E. #17976 DATE

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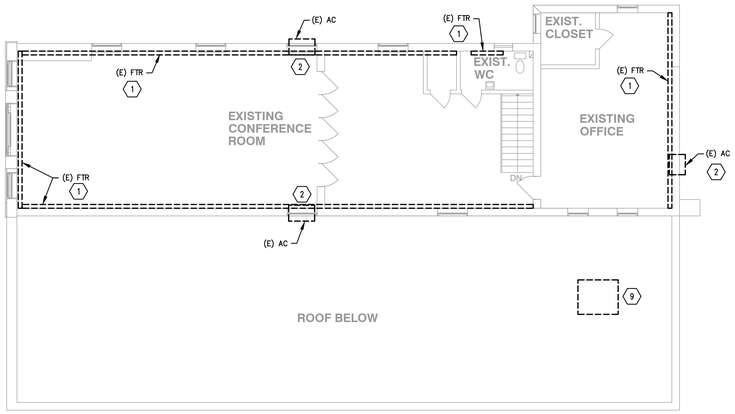
BLOCK 86, LOTS 4, 5, 10, 11, 21, 22, 22.01 AND 23
17 PINE STREET
MOUNT HOLLY, NEW JERSEY

TITLE: TYPICAL DETAILS & GENERAL NOTES

DRAWING DATE: 01 JULY 2020
REVISION DATE:
DRAWN BY: RCM
COMMISSION NO: 5475B

S-7

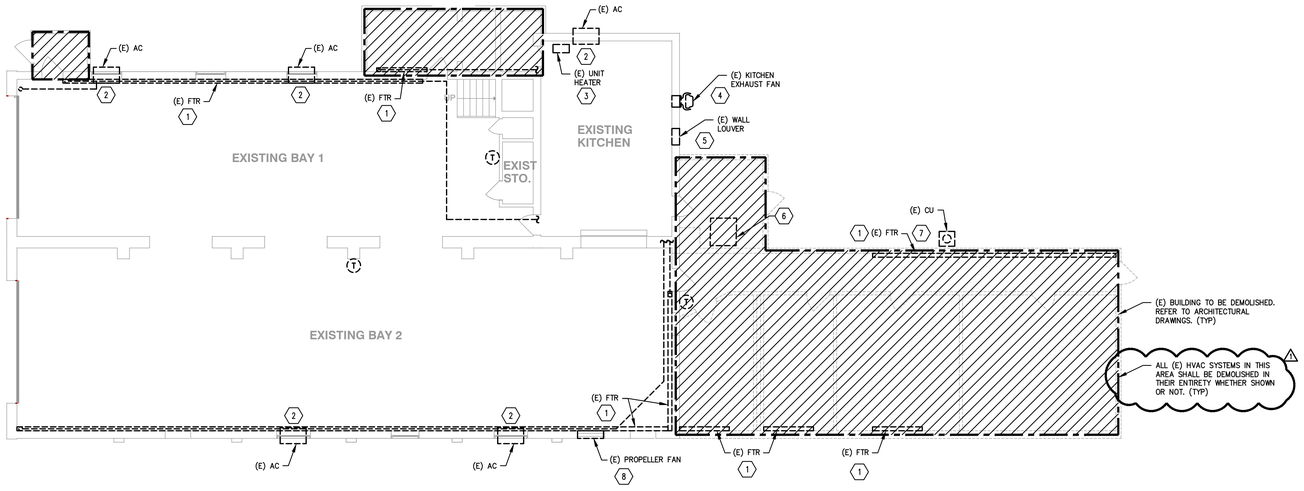


2 HD1 SECOND FLOOR PLAN – HVAC DEMOLITION

SCALE 1/8" = 1'-0"

DEMOLITION KEY NOTES:

1. EXISTING HEATING HOT WATER FINNED TUBE RADIATOR (FTR) AND ASSOCIATED ENCLOSURE, CONTROLS, PIPING, VALVES, AND APPURTENANCES SHALL BE REMOVED IN THEIR ENTIRETY. PATCH WALL, FLOOR AND CEILING TO MATCH EXISTING ADJACENT CONDITIONS & FINISHES.
2. EXISTING WINDOW/WALL AIR CONDITIONER (AC) SHALL BE CAREFULLY REMOVED AND DISPOSED OF FOLLOWING CURRENT ENVIRONMENTAL STANDARDS. PATCH WALL TO MATCH EXISTING ADJACENT CONDITIONS & FINISHES.
3. EXISTING UNIT HEATER AND ASSOCIATED CONTROLS, PIPING, VALVES, AND SUPPORTS SHALL BE REMOVED IN THEIR ENTIRETY. PATCH WALL TO MATCH EXISTING ADJACENT CONDITIONS & FINISHES.
4. EXISTING SIDEWALL KITCHEN EXHAUST FAN AND ASSOCIATED HOOD, DUCTWORK, FIRE SUPPRESSION SYSTEM, CONTROLS, AND APPURTENANCES SHALL BE REMOVED IN THEIR ENTIRETY. PATCH WALL, FLOOR AND CEILING TO MATCH EXISTING ADJACENT CONDITIONS & FINISHES. DISPOSE OF ANSUL SYSTEM FOLLOWING CURRENT ENVIRONMENTAL STANDARDS.
5. EXISTING WALL LOUVER SHALL BE REMOVED IN ITS ENTIRETY. PATCH WALL TO MATCH EXISTING ADJACENT CONDITIONS & FINISHES.
6. EXISTING HEATING HOT WATER SYSTEM AND ASSOCIATED BOILER, PUMPS, PIPING, BREACHING, CONTROLS, APPURTENANCES, ETC. SHALL BE REMOVED IN ITS ENTIRETY. PATCH WALL, FLOOR AND CEILING TO MATCH EXISTING ADJACENT CONDITIONS & FINISHES.
7. EXISTING AIR CONDITIONING SYSTEM AND ASSOCIATED GRADE MOUNTED CONDENSING UNIT, CONCRETE PAD, DUCTWORK, AIR DEVICES, CONTROLS REFRIGERANT PIPING AND SUPPORTS, SHALL BE REMOVED IN THEIR ENTIRETY. RECOVER REFRIGERANT PER LATEST ENVIRONMENTAL STANDARDS PRIOR TO DEMOLITION WORK. PATCH WALL, FLOOR AND CEILING TO MATCH EXISTING ADJACENT CONDITIONS & FINISHES.
8. EXISTING PROPELLER FAN SHALL BE REMOVED IN ITS ENTIRETY. PATCH WALL TO MATCH EXISTING ADJACENT CONDITIONS & FINISHES.
9. EXISTING ROOFTOP UNIT AND ASSOCIATED CONTROLS, DUCTWORK, AIR DEVICES, PIPING, EQUIPMENT RAILS, ETC. SHALL BE REMOVED IN THEIR ENTIRETY. RECOVER REFRIGERANT PER LATEST EPA STANDARDS PRIOR TO DEMOLITION WORK. PATCH ROOF TO MATCH EXISTING ADJACENT CONDITIONS & FINISHES.



1 HD1 FIRST FLOOR PLAN – HVAC DEMOLITION

SCALE 1/8" = 1'-0"

DEMOLITION NOTE:

1. ANY PIPING LOCATED WITHIN CONCRETE WALLS OR SLABS, THAT ARE TO REMAIN, SHALL BE ABANDONED IN PLACE AND CAPPED ON BOTH ENDS.
2. ALL UNUSED PENETRATIONS SHALL BE PATCHED, REFER TO ARCHITECTURAL NOTES, DETAILS, AND SPECIFICATIONS.

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MOUNT HOLLY, NEW JERSEY

TITLE: FLOOR PLANS - HVAC DEMOLITION

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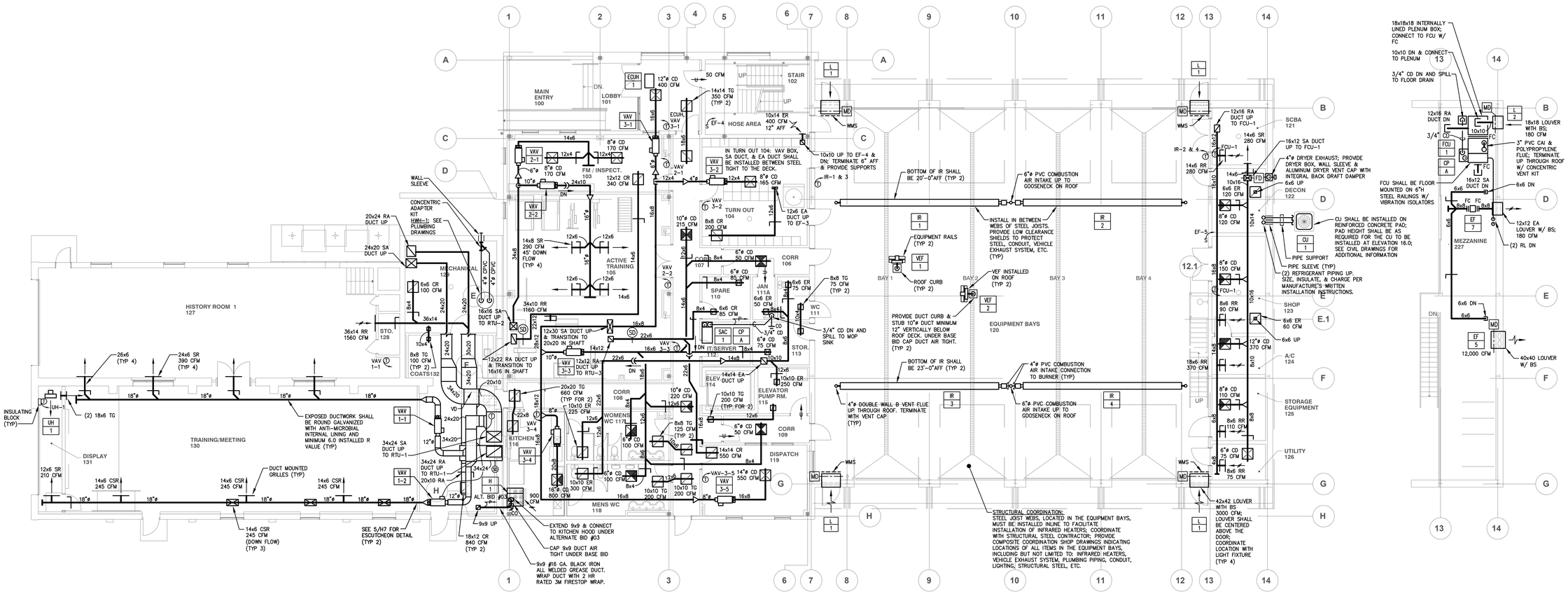
June 26, 2019 9:30:53 a.m.
Drawing: 2637 HD1.DWG

HD1

1 OF 9

WIND & SEISMIC RESTRAINTS NOTES

1. INSTALL FLEXIBLE CONNECTIONS IN RUNS OF PIPING & DUCTWORK WHERE THEY CROSS SEISMIC JOINTS, WHERE ADJACENT SECTIONS OR BRANCHES ARE SUPPORTED BY DIFFERENT STRUCTURAL ELEMENTS, AND WHERE THEY TERMINATE WITH CONNECTION TO EQUIPMENT THAT IS ANCHORED TO A DIFFERENT STRUCTURAL ELEMENT FROM THE ONE SUPPORTING THEM AS THEY APPROACH EQUIPMENT.
2. WIND RESTRAINT LOADING SHALL BE AS INDICATED ON THE CONTRACT DOCUMENTS IN THE ARCHITECTURAL/STRUCTURAL DOCUMENTS.
3. SEISMIC RESTRAINT LOADING SHALL BE AS INDICATED ON THE CONTRACT DOCUMENTS IN THE ARCHITECTURAL/STRUCTURAL DOCUMENTS.



1 / H1 FIRST FLOOR PLAN – HVAC
SCALE 1/8" = 1'-0"

NOTES:

1. ALL DUCTWORK SHALL BE INSTALLED AS HIGH AS POSSIBLE TO MAXIMIZE HEAD ROOM.
2. COORDINATE DUCTWORK WITH LIGHTING IN ACTIVE TRAINING 105.
3. RUN REFRIGERANT PIPING BETWEEN SAC AND SCU ON ROOF. SIZE, INSULATE, & CHARGE PER UNIT MANUFACTURER'S WRITTEN INSTALLATION INSTRUCTIONS.

ALTERNATE BID #03

NOTE:

1. ALL KITCHEN HOOD EXHAUST DUCTWORK SHALL BE CONSTRUCTED OF #16 GAUGE BLACK IRON WITH CONTINUOUSLY WELDED SEAMS AND CONTINUOUSLY WELDED JOINT CONNECTIONS AS PER NFPA BUL. 96. THE EXTERIOR OF ALL KITCHEN HOOD EXHAUST DUCTS SHALL HAVE 1-1/2" x 1-1/2" x 1/8" WELDED ANGLES, PUNCHED FOR SECURING BLOCK INSULATION. PROVIDE 18" x 12" INSULATED DOUBLE WALL ACCESS DOORS ON SIDE OF DUCT AT 15' SPACING. PITCH DUCTWORK TO HOOD. THE PORTION FOR DUCTWORK EXPOSED TO VIEW IN THE KITCHEN SHALL BE OF SAME GAUGE AND MATERIAL AS THE HOOD. HOOD DUCTS SHALL CONFORM TO NFPA #96.

2 / H1 MEZZANINE PLAN – HVAC
SCALE 1/8" = 1'-0"

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RELIEF FIRE COMPANY NO. 1
ADDITION / RENOVATION
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17 PINE STREET
MOUNT HOLLY, NEW JERSEY
TITLE: FIRST FLOOR PLAN & MEZZANINE - HVAC

DRAWING DATE: 01 JULY 2020
REVISION DATE:
DRAWN BY: MML
COMMISION NO.: 5475B

H1

2 OF 9

June 26, 2019 9:33:24 a.m.
Drawing: 2637 H1.DWG

WIND & SEISMIC RESTRAINTS NOTES

1. INSTALL FLEXIBLE CONNECTIONS IN RUNS OF PIPING & DUCTWORK WHERE THEY CROSS SEISMIC JOINTS, WHERE ADJACENT SECTIONS OR BRANCHES ARE SUPPORTED BY DIFFERENT STRUCTURAL ELEMENTS, AND WHERE THEY TERMINATE WITH CONNECTION TO EQUIPMENT THAT IS ANCHORED TO A DIFFERENT STRUCTURAL ELEMENT FROM THE ONE SUPPORTING THEM AS THEY APPROACH EQUIPMENT.
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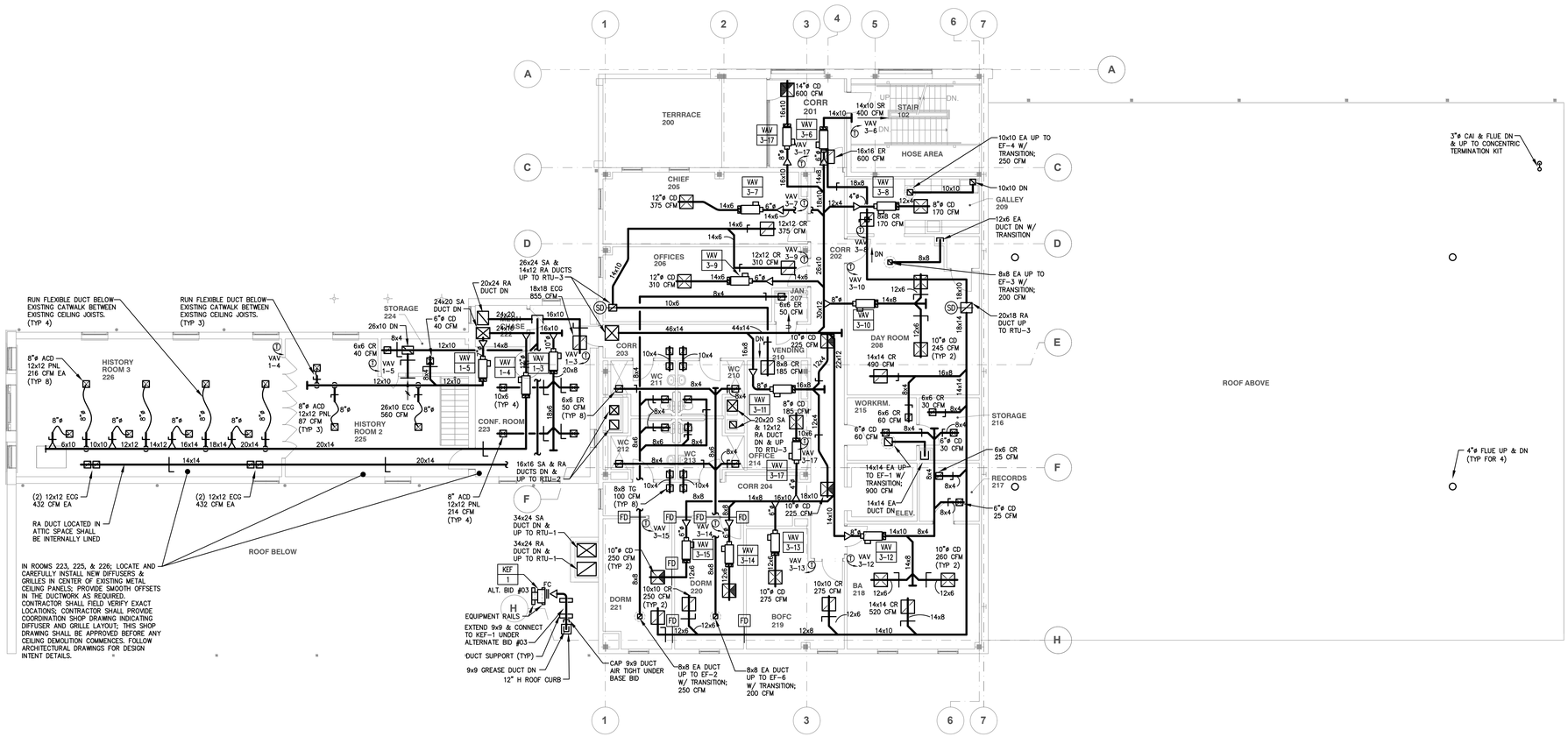

1/H2 SECOND FLOOR PLAN – HVAC

SCALE 1/8" = 1'-0"

NOTES:

1. ALL DUCTWORK SHALL BE INSTALLED AS HIGH AS POSSIBLE TO MAXIMIZE HEAD ROOM.
2. MODIFY EXISTING ROOF MEMBERS AS REQUIRED TO FACILITATE DUCTWORK INSTALLATION IN ATTIC.
3. MODIFY SIZE OF DUCTWORK THROUGH ATTIC SPACE AS REQUIRED; MIODIFIED SIZES SHALL BE OF EQUIVALENT CROSS SECTIONAL AREA.

ALTERNATE BID #03

NOTE:

1. ALL KITCHEN HOOD EXHAUST DUCTWORK SHALL BE CONSTRUCTED OF #16 GAUGE BLACK IRON WITH CONTINUOUSLY WELDED SEAMS AND CONTINUOUSLY WELDED JOINT CONNECTIONS AS PER NFPA BUL. 96. THE EXTERIOR OF ALL KITCHEN HOOD EXHAUST DUCTS SHALL HAVE 1-1/2" x 1-1/2" x 1/8" WELDED ANGLES, PUNCHED FOR SECURING BLOCK INSULATION. PROVIDE 18" x 12" INSULATED DOUBLE WALL ACCESS DOORS ON SIDE OF DUCT AT 15' SPACING. PITCH DUCTWORK TO HOOD. THE PORTION FOR DUCTWORK EXPOSED TO VIEW IN THE KITCHEN SHALL BE OF SAME GAUGE AND MATERIAL AS THE HOOD. HOOD DUCTS SHALL CONFORM TO NFPA #96.

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17 PINE STREET
MOUNT HOLLY, NEW JERSEY
TITLE: SECOND FLOOR PLAN - HVAC

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Drawing: 2637 H2.DWG

H2

WIND & SEISMIC RESTRAINTS NOTES

1. INSTALL FLEXIBLE CONNECTIONS IN RUNS OF PIPING & DUCTWORK WHERE THEY CROSS SEISMIC JOINTS, WHERE ADJACENT SECTIONS OR BRANCHES ARE SUPPORTED BY DIFFERENT STRUCTURAL ELEMENTS, AND WHERE THEY TERMINATE WITH CONNECTION TO EQUIPMENT THAT IS ANCHORED TO A DIFFERENT STRUCTURAL ELEMENT FROM THE ONE SUPPORTING THEM AS THEY APPROACH EQUIPMENT.
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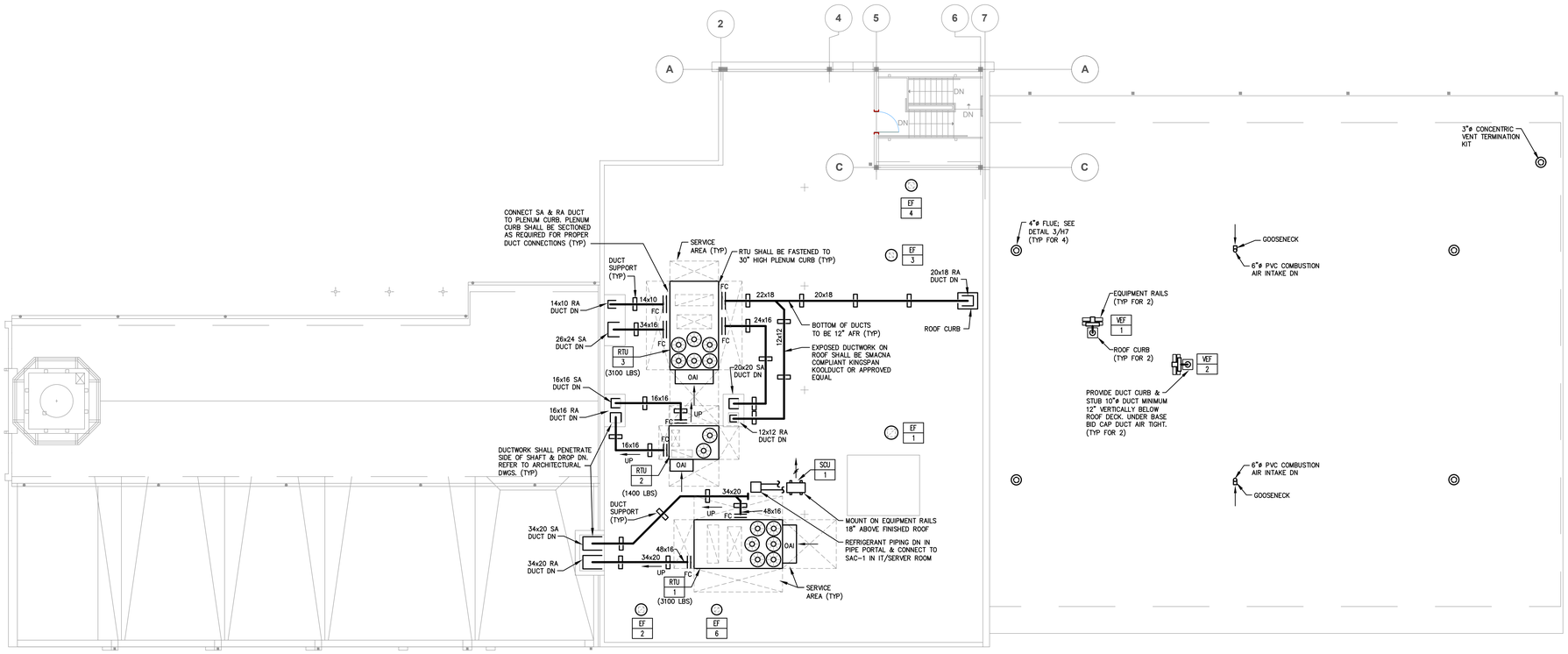

1/H3 ROOF PLAN – HVAC

SCALE 1/8" = 1'-0"

NOTE:

1. ALL SUPPLY AND RETURN/EXHAUST AIR DUCTWORK ABOVE ROOF SHALL BE PRE-FABRICATED DOUBLE-LAYER DUCTING SYSTEM WITH 0.032" ALUMINUM JACKET WITH KINGSPAN KOOL DUCT PANELS THAT ARE UL LISTED AS A CLASS 1 AIR DUCT SYSTEM BY PTM MANUFACTURING, LLC DUAL-TECH OR APPROVED EQUAL. SECURE AND SUPPORT TO ROOF ACCORDING TO CONTRACT DOCUMENTS AND PER MANUFACTURER'S INSTRUCTIONS.

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H3

ABBREVIATIONS

AC	AIR CONDITIONING UNIT	IR	INFRARED HEATER
ACD	ARCHITECTURAL CEILING DIFFUSER	IWC	INCH WATER COLUME
AD	ACCESS DOOR	IWG	INCH WATER GAUGE
AFF	ABOVE FINISHED FLOOR	KW	KILOWATTS
AFR	ABOVE FINISHED ROOF	LAT	LEAVING AIR TEMPERATURE
AMPS	AMPERES	LBS/HR	POUNDS PER HOUR
APPROX	APPROXIMATE	L	LENGTH
ARCH	ARCHITECTURAL	LBS	POUNDS
APD	AIR PRESSURE DROP	LDB	LEAVING DRY BULB
ATC	AUTOMATIC TEMPERATURE CONTROL	LF	LINEAR FEET
&	AND	LxWxH	LENGTH BY WIDTH BY HEIGHT
@	AT	MAX	MAXIMUM
BHP	BRAKE HORSEPOWER	MBH	MAXIMUM MAX THOUSAND BTU PER HOUR
BLDG	BUILDING	MCA	MINIMUM CIRCUIT AMPACITY
BS	BIRD SCREEN	MFR	MANUFACTURER
BTUH	BRITISH THERMAL UNITS HOUR	MIN	MINIMUM, MINUTE
CAI	COMBUSTION AIR INTAKE	MOCP	MAX OVER CURRENT PROTECTION
CC	COOLING COIL	N/A	NOT APPLICABLE
CD	CEILING DIFFUSER	NO2	NITROGEN DIOXIDE
CD	CONDENSATE DRAIN	NOM	NOMINAL
CENTR	CENTRIFUGAL	#, NO.	NUMBER
CFM	CUBIC FEET PER MINUTE	OA	OUTSIDE AIR
CG	CEILING GRILL	OAI	OUTSIDE AIR INTAKE
CONC	CONCRETE	OCP	OVER CURRENT PROTECTION
COND	CONDENSATE PIPING	OD	OUTSIDE DIAMETER
CONN	CONNECTION	OED	OPEN ENDED DUCTWORK
CO	CLEANOUT	PC	PUMPED CONDENSATE
CO	CARBON MONOXIDE	%	PERCENT
CP	CONDENSATE PUMP	PH	PHASE
CR	CEILING REGISTER	PNL	PANEL
CU	CONDENSING UNIT	QTY	QUANTITY
D	DEPTH	RA	RETURN AIR
DB	DRY BULB	RH	RELATIVE HUMIDITY
DF	DESTRATIFICATION FAN	RL	REFRIGERANT LINES
DIA,	ø DIAMETER	RM	ROOM
DIM	DIMENSIONS	RPM	REVOLUTIONS PER MINUTE
DN	DOWN	RR	RETURN REGISTER
DWG	DRAWING	RTU	ROOFTOP UNIT
EA	EACH	SA	SUPPLY AIR
EAT	ENTERING AIR TEMPERATURE	SAC	SPLIT AIR CONDITIONER
EC	ELECTRONICALLY COMMUNICATED	S/S	STAINLESS STEEL
ECG	EGG CRATE GRILLE	SCU	SPLIT CONDENSING UNIT
ECUH	ELECTRIC CABINET UNIT HEATER	SD	SMOKE DETECTOR
EDB	ENTERING DRY BULB	SEER	SEASONAL ENERGY EFFICIENCY RATIO
EER	ENERGY EFFICIENCY RATIO	SENS	SENSIBLE
EF	EXHAUST FAN	SQ FT	SQUARE FOOT
EQUIP	EQUIPMENT	SPEC	SPECIFICATIONS
ER	EXHAUST REGISTER	SR	SUPPLY REGISTER
ESP	EXTERNAL STATIC PRESSURE	T	THERMOSTAT
EXIST./(E)	EXISTING	TEF	TOILET EXHAUST FAN
°F	FAHRENHEIT	TEMP	TEMPERATURE
FA	FACE AREA	TSP	TOTAL STATIC PRESSURE
FC	FLEXIBLE CONNECTOR	TYP	TYPICAL
FLA	FULL LOAD AMPS	UV	UNIT VENTILATOR
FPI	FINS PER INCH	VAV	VARIABLE AIR VOLUME
FPM	FEET PER MINUTE	V/PH/Hz	VOLTS/PHASE/HERTZ
FT	FEET	VD	VOLUME DAMPER
G	GAS	(W)	WATT
H	HEIGHT	W	WIDTH
HP	HORSE POWER	W/	WITH
HTG	HEATING	WB	WET BULB
HV	HEATING & VENTILATING	WMS	WIRE MESH SCREEN
Hz	HERTZ (FREQUENCY)	WT	WEIGHT
ID	INSIDE DIAMETER		
IN	INCH		

SYMBOLS LIST

- EQUIPMENT DESIGNATION
- ITEM NUMBER
- (T) THERMOSTAT
- (SD) SMOKE DETECTOR
- (C) CARBON MONOXIDE DETECTOR
- S SPEED CONTROLLER
- BD BACKDRAFT DAMPER
- MD MOTORIZED DAMPER
- FD FIRE DAMPER
- AIRFLOW THRU UNDERCUT DOOR
- SUPPLY AIR FLOW
- RETURN OR EXHAUST AIRFLOW
- VOLUME DAMPER (MANUAL)
- 8x6 DUCT SIZE, SECOND FIGURE IS HEIGHT SHOWN
- PIPE TURNED UP
- PIPE TURNED DOWN
- PIPE TEE BRANCH TURNED DOWN
- CD CONDENSATE DRAIN PIPING
- PITCH PIPE IN DIRECTION OF ARROW
- PIPE CAP
- NEW WORK (DOUBLE-LINE & EQPT.)
- NEW WORK (SINGLE-LINE)
- AD ACCESS DOOR
- CR-X / X CFM RETURN, EXHAUST CEILING REGISTER
- CG-X / X CFM RETURN, EXHAUST CEILING GRILLE
- CD-X / X CFM SUPPLY CEILING DIFFUSER
- CR-X / X CFM SUPPLY CEILING REGISTER
- 4-WAY, 3-WAY, 2-WAY, 2-WAY, 1-WAY

CARBON MONOXIDE & NITROGEN DIOXIDE MONITORING STATION

MANUFACTURER	BRASCH MANUFACTURING, LLC
CONTROLLER	GDCP-A
MODEL NO.	72-2108RK
QUANTITY	1
VENTILATION ZONES	3
CO TRANSMITTER	
MODEL NO.	GSE-CM-TRA
QUANTITY	2
COVERAGE	UP TO 7,500 SF/SENSOR
NO2 TRANSMITTER	
MODEL NO.	GSE-NO-TRA
QUANTITY	2
COVERAGE	UP TO 7,500 SF/SENSOR
ACCESSORIES	STROBE LIGHT WITH HORN

PROVIDE THE FOLLOWING:

1. WIRING BETWEEN CONTROLLER, TRANSMITTER, & STROBE LIGHT, DAISY CHAIN WIRING BETWEEN ALL TRANSMITTERS.
2. PROGRAMMING START-UP AND PERSONNEL TRAINING.
3. RKI INSTRUMENTS AND HONEYWELL ARE APPROVED EQUAL PROVIDED IT MEETS PERFORMANCE AND SPECIFICATIONS

EXHAUST FAN SCHEDULE

EF #

NO.	MFR	MODEL	TYPE	RPM	CFM	SP IN WC	HP (WATTS)	BHP (WATTS)	V/Ph/Hz	SONES (dBA)	SERVING	LOCATION	WEIGHT (LBS)	REMARKS
EF-1	PENN BARRY	DX11B	CENTRIFUGAL	1075	900	0.50	1/3	0.25	115/1/60	7.4	TOILETS/ELEVATOR	ROOF	50	①④
EF-2	PENN BARRY	DX11B	CENTRIFUGAL	900	200	0.50	1/4	0.15	115/1/60	5.7	TOILETS	ROOF	50	①④
EF-3	PENN BARRY	DX06B	CENTRIFUGAL	925	200	0.25	1/4	0.03	115/1/60	6.2	TURN OUT	ROOF	35	①④
EF-4	PENN BARRY	DX08B	CENTRIFUGAL	880	400	0.25	1/4	0.06	115/1/60	4.0	HOSE AREA	ROOF	35	①③
EF-5	PENN BARRY	BHH30B	PROPELLER	975	12000	0.50	3.0	2.77	208/3/60	27.1	TRUCK BAYS	WALL	150	②④⑤
EF-6	PENN BARRY	DX11B	CENTRIFUGAL	900	200	0.50	1/4	0.15	115/1/60	5.7	SHOWERS	ROOF	50	①④⑥
EF-7	PENN BARRY	Z81S	IN-LINE	1050	180	0.50	(0.77)	–	115/1/60	3.1	DECON ROOM	CEILING	50	②④

REMARKS:

1. PROVIDE MOTOR W/ THERMAL OVERLOAD PROTECTION, WEATHER PROOF DISCONNECT, ALUMINUM BACK DRAFT DAMPER, 18" H SEISMIC ROOF CURB, & VIBRATION ISOLATION KIT.
2. PROVIDE MOTOR W/ THERMAL OVERLOAD PROTECTION, DISCONNECT, & ALUMINUM BACK DRAFT DAMPER.
3. PROVIDE EC MOTOR, SOLID STATE SPEED CONTROLLER, & MANUAL TIMER.
4. PROVIDE SOLID STATE SPEED CONTROLLER.
5. PROVIDE WALL MOUNTING SLEEVE GUARD, WALL SHUTTER, WEATHER SHIELD, & WEATHER SHIELD GUARD.
6. FAN SHALL BE INTERLOCKED TO SHOWER LIGHTS, WHEN ANY COMBINATION OF THE 4 LIGHTS ARE ENERGIZED, THE FAN SHALL BE ENERGIZED. FAN SHALL CONTINUE TO RUN FOR 20 MINUTES (ADJUSTABLE) AFTER LAST LIGHT SWITCH IS SHUT OFF.

VEHICLE EXHAUST FAN SCHEDULE

VEF #

NO.	MFR	MODEL	TYPE	RPM	CFM	SP IN WC	HP	BHP (WATTS)	V/Ph/Hz	SONES (dBA)	SERVICE	LOCATION	WEIGHT (LBS)	REMARKS
VEF-1	PLYMOVENT	FUA-4700	CENTRIFUGAL	3450	1000	10.4	3.0	–	208/3/60	(68.0)	EQUIP. BAYS 1 & 2	ROOF	120	①②
VEF-2	PLYMOVENT	FUA-4700	CENTRIFUGAL	3450	2000	5.2	3.0	–	208/3/60	(68.0)	EQUIP. BAYS 3 & 4	ROOF	120	①②

REMARKS:

1. PROVIDE MOTOR W/ THERMAL OVERLOAD PROTECTION, WEATHER PROOF DISCONNECT, 18" H SEISMIC ROOF EQUIPMENT RAILS, VIBRATION ISOLATION KIT, & 10" UP BLAST KIT.
2. PROVIDE EC MOTOR W/ VFD & AIRFLOW SENSOR ON FAN.

ROOF TOP UNIT SCHEDULE

RTU #

MARK No.		RTU-1	RTU-2	RTU-3
LOCATION		ROOF	ROOF	ROOF
SERVICE		HISTORY/TRAINING AREA	ACTIVE TRAINING	OFFICES/DORMS
MANUFACTURER		CARRIER	CARRIER	CARRIER
MODEL		48LCSB24E3A5-1S1C0	48LCSB07E3A5-1R1F0	48LCRB24E3A5-1S1C0
EER/IEER (SEER)		12.0/18.0	13.0/20.5	12.0/18.0
SUPPLY FAN DATA:				
TOTAL AIRFLOW	CFM	6700	1500	6500
MIN OUTSIDE AIR	CFM	1675	300	2600
ESP	IN WG	1.75	1.50	1.75
TSP	IN WG	2.07	1.77	2.07
FAN SPEED	RPM	1119	914	1108
BRAKE HORSEPOWER	BHP	5.91	1.10	5.65
MOTOR HORSEPOWER/TYPE	HP	7.5/ECM	1.50/ECM	7.50/ECM
DRIVE TYPE		BELT	BELT	BELT
EXHAUST FAN DATA:				
AIRFLOW	CFM	1675	300	2600
DRIVE TYPE		BELT	BELT	BELT
QUANTITY		2	1	2
FLA	AMP	5.9	3.8	5.9
DX COOLING COIL DATA:				
GROSS COOLING CAPACITY	MBH	247.19	65.57	252.02
GROSS SENSIBLE CAPACITY	MBH	186.04	46.72	190.04
EAT DB/WB	°F	80.0/66.0	79.2/65.1	82.4/67.4
LAT DB/WB	°F	54.3/53.8	49.5/49.4	55.3/54.9
AMBIENT AIR TEMP. DB	°F	92.0	92.0	92.0
NAT. GAS HEAT DATA:				
INPUT	MBH	176/220	50/72	248/310
OUTPUT	MBH	142/178	41/59	200/251
GAS PRESS. MIN/MAX	IWG	4/13	4/13	4/13
CONTROL CAPACITY		2:1	2:1	2:1
HX MATERIAL		STAINLESS STEEL	STAINLESS STEEL	STAINLESS STEEL
HX WARRANTY	YEARS	10	10	10
LAT	°F	77.6	96.4	80.8
CONDENSING UNIT DATA:				
CAPACITY	MBH	244.40	65.57	252.02
REFRIGERANT TYPE		R-410A	R-410A	R-410A
COMPRESSOR:				
QUANTITY		2	2	2
RLA	AMPS	29.5/33.3	8.3/13.2	29.5/33.3
CAPACITY CONTROL	AMPS	3:1	3:1	3:1
WARRANTY	YEARS	5	5	5
CONDENSER FAN:				
NUMBER OF FANS/MOTORS		6	2	6
FULL LOAD CURRENT	AMPS	1.6	1.8	1.6
TYPE		ECM	ECM	ECM
ELECTRICAL DATA:				
POWER	V/PH/HZ	208/3/60	208/3/60	208/3/60
CIRCUIT 1: FLA	AMPS	140.0	43.0	140
MCA	AMPS	130.8	41.0	130.8
MOCP	AMPS	150.0	50.0	150.0
FILTER DATA:				
TYPE		COMBO 2"/4" RACK	COMBO 2"/4" RACK	COMBO 2"/4" RACK
EFFICIENCY	%	MERV 8	MERV 8	MERV 8
DIRT ALLOWANCE	IWG	0.5	0.5	0.5
DIMENSIONS (W x L x H)	IN	87 x 158 x 59 (+ 30" H CURB)	60 x 89 x 50 (+ 30" H CURB)	87 x 158 x 59 (+ 30" H CURB)
UNIT WEIGHT (APPROX.)	LBS	3100	1400	3100

UNIT DISCHARGE SOUND DATA:

	RTU-1				RTU-2				RTU-3			
FREQUENCY	63	125	250	500	63	125	250	500	63	125	250	500
	1000	2000	4000	8000	1000	2000	4000	8000	1000	2000	4000	8000
RADIATED SOUND POWER (DB)	92.7	88.8	80.8	79.0	99.6	87.0	73.5	63.7	93.1	89.2	81.3	79.5
	74.0	72.4	72.3	63.9	61.5	63.0	61.1	66.5	74.5	73.0	72.7	64.5

NOTES:

1. PROVIDE DOUBLE WALL ACCESS SECTIONS.
2. UNIT TO BE PROVIDED WITH FACTORY MOUNTED GFI OUTLET AND NON-FUSED DISCONNECT.
3. PROVIDE FACTORY MOUNTED BACNET CONTROLLER FOR INTEGRATING TO NEW BMS SYSTEM, WIRING, RELAYS, PROGRAMMING, START UP AND PERSONNEL TRAINING.
4. PROVIDE DDC SPACE SENSOR WITH ADJUSTABLE SET POINT & USER OVERRIDE.
5. ALL UNIT SUPPLY AND EXHAUST FANS SHALL INCLUDE FACTORY MOUNTED VFD AND EC MOTOR.
6. PROVIDE 30"H DOUBLE WALL, 2" THICK, 1.5 LB PLENUM ROOF CURB.
7. PROVIDE SEISMIC ROOF CURB WITH EXTERNAL VIBRATION ISOLATORS. SECURE ROOF CURB TO ROOF STRUCTURE & SECURE RTU TO ROOF CURB.
8. CO2 SENSOR SHALL BE FACTORY INSTALLED IN RETURN DUCT FOR DEMAND CONTROL VENTILATION.
9. FACTORY MOUNTED ECONOMIZER WITH DIFFERENTIAL ENTHALPY CONTROL.
10. HEAT EXCHANGERS SHALL BE STAINLESS STEEL.
11. PROVIDE SOUND ATTENUATION ACCESSORIES AS REQUIRED TO MEET LOCAL NOISE ORDINANCES.

UNIT HEATER SCHEDULE

UH #

MARK No.		UH-1
LOCATION		DISPLAY
MANUFACTURER		VULCAN
MODEL & SIZE		HF2B5103N
TYPE		HORIZONTAL
CAPACITY	KW	2.5
CAPACITY	BTU	8.5
AIRFLOW	CFM	400
THROW	FT	12
MOTOR DATA:		
SIZE	AMPS	6.9
POWER	V-PH-HZ	208/3/60
WEIGHT	LBS	25

NOTES:

1. PROVIDE WALL MOUNTED TEMPERATURE SENSOR & TIE INTO BMS.
2. PROVIDE SINGLE DEFLECTION DISCHARGE LOUVER.
3. PROVIDE CONTROL TRANSFORMER

CABINET UNIT HEATER SCHEDULE

ECUH #

MARK No.		ECUH-1
LOCATION		LOBBY
MANUFACTURER		MARKEL
MODEL No.		F2F5103N
TOTAL CAPACITY	BTU	11.2
AIR FLOW	CFM	400
ELECTRICAL		
V-PH-HZ		208-3-60
KW		3.3
AMPS		6.9
SIZE (W x H x D)	IN	15 x 18 x 7
APPROXIMATE WEIGHT	LBS	25

PROVIDE:

1. WALL MOUNTED TEMP. SENSOR TIED INTO BMS.
2. DISCONNECT SWITCH
3. ARCHITECTURAL STYLED GRILLES
4. INTEGRAL ON-OFF SWITCH

SPLIT AC UNIT SCHEDULE

SAC # SCU #

MARK No.		SAC-1
MANUFACTURER		DAIKIN
SERVICE		SERVER ROOM
COOLING TOTAL/SENS. CAPACITY	MBH	18.0/14.48
REFRIGERANT TYPE		R410A
SEER		18.0
INDOOR UNIT:		
MODEL No.		FTK18NMVJU
V/PH/HZ		208/1/60
APPROX. WEIGHT	LBS	40
SIZE (H x W x D)	IN	12 x 39 x 11
FAN MOTOR	FLA	0.30
DRAIN	IN	5/8
OUTDOOR UNIT:		
MARK No.		SCU-1
MODEL No.		RK18NMVJU
V/PH/HZ		208/1/60
FAN MOTOR	FLA	0.45
REFRIG. PIPE LIQUID	IN	1/4
GAS	IN	1/2
MAX LENGTH	FT	98.4
APPROX. WEIGHT	LBS	150
SIZE (HxWxD)	IN	29 x 35 x 13
SYSTEM MCA		18.3
SYSTEM MFA		20.0

NOTES:

1. PROVIDE FUSED DISCONNECT FOR INDOOR UNIT WITH WEATHERPROOF FUSED DISCONNECT FOR OUTDOOR UNIT.
2. PROVIDE FIELD INSTALLED CONDENSATE PUMP FOR INDOOR UNIT. POWER PUMP FROM AC UNIT.
3. PROVIDE WIRED WALL MOUNTED PROGRAMMABLE CONTROLLER/THERMOSTAT.
4. INSTALL POWER & CONTROL WIRING IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.
5. INSTALL REFRIGERANT PIPING WITH INSULATION IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.
6. PROVIDE START-UP AND PERSONNEL TRAINING.
7. PROVIDE EQUIPMENT RAILS WITH VIBRATION ISOLATORS FOR CU.
8. PROVIDE BRC1E73 WIRE CONTROLLER AND A KPW937E4 LOW AMBIENT WIND BAFFLE KIT FOR FIELD INSTALLATION AT CONDENSING UNIT.
9. PROVIDE SOUND ATTENUATION ACCESSORIES AS REQUIRED TO MEET LOCAL NOISE ORDINANCES.

GAS FIRED INFRARED SPACE HEATER UNIT SCHEDULE

IR #

MANUFACTURER		ROBERTS-GORDON
MARK No.		IR-1,2,3,4
MODEL No.		BH-100
NATURAL GAS DATA:		
MAX. CAPACITY INPUT	MBH	100.0
GAS PRESSURES:		
BURNER	IWC	4.6
MIN./MAX.	IWC	4.6/14.0
CONNECTION SIZE	IN	1/2"
TOTAL TUBE LENGTH	FT	30
WEIGHT	LBS	40
ELECTRICAL DATA:		
POWER	V/PH/HZ	120/1/60
MIN. CIRCUIT AMPS	AMPS	1.0
MAX. FUSE SIZE	AMPS	15.0

NOTES:

1. PROVIDE REFLECTOR END CAPS, MOUNTING BRACKETS WITH ACCESSORIES, HANGER KIT WITH CHAIN AND S HOOKS, TURNBUCKLE KIT, OUTDOOR COMBUSTION AIR INLET KIT.
2. PROVIDE INSTALLATION WITH COMPLIANCE TO ALL MINIMUM CLEARANCES TO COMBUSTIBLES FROM UNIT AS REQUIRED BY MANUFACTURER.
3. PROVIDE FLUE PIPE DISTRIBUTION WITH APPROVED CATEGORY III TYPE CONSTRUCTION, APPROVED CATEGORY "B" ROOF VENT CAP, UL441 REQUIREMENTS.
4. CONTRACTOR SHALL BE RESPONSIBLE FOR DISCONNECT AND EMERGENCY GAS SHUT-OFF SWITCHES.
5. PROVIDE LOW CLEARANCE SHIELDS AS REQUIRED TO MAINTAIN CLEARANCE TO COMBUSTIBLES OR AS RECOMMENDED BY EQUIPMENT MANUFACTURE.
6. PROVIDE STAINLESS STEEL FLEXIBLE GAS CONNECTOR.
7. IR SHALL BE MOUNTED IN BETWEEN WEBS OF ROOF JOISTS.

VARIABLE AIR VOLUME BOX SCHEDULE

CARRIER MODEL 35E AS BASE MANUFACTURER/MODEL

VAV #

MARK No	BASE MFR	MODEL No	SERVICE	MAXIMUM CFM	MINIMUM CFM	INLET DIA (INCHES)	ELECTRIC HEAT COIL DATA: MBH	EAT °F	LAT °F	MAX APD (IWG)	KW	ELECTRICAL DATA V/PH/HZ	REMARKS
VAV-1-1	CARRIER	35E	HISTORY ROOM 1-127	1560	624	12	34.1	55	105.6	0.015	10.0	208/3/60	–
VAV-1-2	CARRIER	35E	TRAINING/MEETING-130	1435	574	12	32.4	55	106.3	0.02	9.5	208/3/60	–
VAV-1-3	CARRIER	35E	CONF. ROOM-223	855	171	8	11.95	55	113.2	0.007	3.5	208/3/60	–
VAV-1-4	CARRIER	35E	HISTORY ROOM 3-226	1728	691	12	40.9	55	108.8	0.02	12.0	208/3/60	–
VAV-1-5	CARRIER	35E	HISTORY ROOM 2-225	560	224	7	11.9	55	103.4	0.02	3.5	208/3/60	–
VAV-2-1	CARRIER	35E	FM/INSPECT.-103	340	136	5	6.8	55	101.5	0.012	2.0	208/3/60	–
VAV-2-2	CARRIER	35E	ACTIVE TRAINING-105	1160	464	9	10.2	55	85.2	0.048	4.5	208/3/60	–
VAV-3-1	CARRIER	35E	LOBBY-101	400	160	6	8.5	55	104.4	0.016	2.5	208/3/60	–
VAV-3-2	CARRIER	35E	TURN OUT-104	165	66	4	3.4	55	102.8	0.003	1.0	208/3/60	–
VAV-3-3	CARRIER	35E	CORR./GENERAL	895	895	8	27.3	55	82.7	0.02	8.0	208/3/60	–
VAV-3-4	CARRIER	35E	KITCHEN-116	800	240	8	5.1	55	74.8	0.012	1.5	208/3/60	–
VAV-3-5	CARRIER	35E	DISPATCH-119	550	220	7	15.4	55	119.6	0.016	4.5	208/3/60	–
VAV-3-6	CARRIER	35E	STAIR-102	400	160	6	10.2	55	114.3	0.016	3.0	208/3/60	–
VAV-3-7	CARRIER	35E	CHIEF-205	375	150	6	8.5	55	107.7	0.014	2.5	208/3/60	–
VAV-3-8	CARRIER	35E	GALLEY-209	170	68	4	3.4	55	101.5	0.003	1.0	208/3/60	–
VAV-3-9	CARRIER	35E	OFFICERS-206	310	124	5	5.1	55	93.2	0.010	1.5	208/3/60	–
VAV-3-10	CARRIER	35E	DAY ROOM-208	490	196	6	6.8	55	94.4	0.024	2.5	208/3/60	–
VAV-3-11	CARRIER	35E	CORR.-202-204	450	450	6	13.6	55	82.5	0.02	4.0	208/3/60	–
VAV-3-12	CARRIER	35E	BA-218, 215, 216, & 217	635	254	7	11.9	55	100.2	0.02	3.5	208/3/60	–
VAV-3-13	CARRIER	35E	BOFC-219	275	110	5	5.1	55	98.1	0.008	1.5	208/3/60	–
VAV-3-14	CARRIER	35E	DORM-220	250	100	5	5.1	55	102.4	0.006	1.5	208/3/60	–
VAV-3-15	CARRIER	35E	DORM-221	250	100	5	5.1	55	102.4	0.006	1.5	208/3/60	–
VAV-3-16	CARRIER	35E	OFFICE-214	185	74	4	1.7	55	96.7	0.003	1.0	208/3/60	–
VAV-3-17	CARRIER	35E	CORR.-201	600	600	7	15.4	55	80.8	0.119	5.0	208/3/60	–

PROVIDE THE FOLLOWING:

1. CONTROL POWER TRANSFORMER.
2. VAV BOXES SHALL BE FACTORY MOUNTED WITH CARRIER BACNET CONTROLLER.
3. PRESSURE INDEPENDENT CONTROLS (AIR VELOCITY SENSOR).
4. ALL CONTROLS SHALL BE COMPATIBLE WITH THE AUTOMATIC TEMPERATURE CONTROL SYSTEM.
5. UNITS SHALL INCLUDE PROPORTIONAL SCR ELECTRIC REHEAT.
6. REHEAT COIL SHALL INCLUDE FACTORY MOUNTED NON-FUSED DISCONNECT AND SOUND ATTENUATOR.

NOTE: REFER TO SPECIFICATIONS FOR LISTING OF APPROVED EQUALS.

DIFFUSER & REGISTER SCHEDULE

SELECTION BASED ON TITUS

NO.	MARK	REMARKS
1.	CD SHALL BE TITUS MODEL TMS-AA OR APPROVED "EQUAL".	①②③④
2.	CDR SHALL BE TITUS MODEL TMRA OR APPROVED "EQUAL".	①②③④
3.	CSR/CRR SHALL BE TITUS MODEL S300FL SDGE OR APPROVED "EQUAL".	②⑥
4.	SR SHALL BE TITUS MODEL 300-FL OR APPROVED "EQUAL".	②④
5.	CG/TG, CR/ER/RR SHALL BE TITUS MODEL 350-FL OR APPROVED "EQUAL".	④⑤
6.	ACD SHALL BE TITUS MODEL OMNI, PLAQUE FACE OR APPROVED "EQUAL"	③④
7.	ECG SHALL BE TITUS MODEL 45F, OR APPROVED "EQUAL"	④⑦

REMARKS:

1. LOUVERED FACE, HIGH CAPACITY, ALUMINUM DIFFUSER WITH ROUND NECK AND ADJUSTABLE DISCHARGE PATTERN.
2. PROVIDE OPPOSED BLADE VOLUME DAMPER.
3. PROVIDE EQUALIZING GRID.
4. PROVIDE STANDARD WHITE FINISH.
5. ALUMINUM RETURN/EXHAUST REGISTER WITH BLADES AT 3/4" SPACING AND 35° FIXED DEFLECTION. REFER TO DRAWINGS FOR CORRECT MOUNTING STYLE.
6. EXTRUDED ALUMINUM CONSTRUCTION. END FRAMES TO MATCH DUCT CURVATURE. DOUBLE DEFLECTION CORE WITH INDIVIDUALLY ADJUSTABLE AIRFLOW BLADES. 3/4" BLADE SPACING.
7. SITE PROOF 45° DEFLECTION ALUMINUM GRILLE WITH EGGRATE CORE.

CONDENSATE PUMP SCHED.

CP #

MARK No.		CP-A
MANUFACTURER		LITTLE GIANT
MODEL		VCMA-20ULS
CAPACITY	GPH	48
LIFT	FT	10
MOUNTING		SEE PLANS
LOCATION		SEE PLANS
TANK CAPACITY	GAL	0.5
MOTOR DATA:		
HP		1/30
FLA		1.5
V-PH-HZ		115-1-60

REMARKS:

1. PROVIDE 6 FT. ELECTRIC CORD.

FAN COIL UNIT SCHEDULE

FCU #

MARK No.		FCU-1
MANUFACTURER		CARRIER
MODEL & SIZE		59MN7A060V21
TYPE		HORIZONTAL SUSPENDED
AREA SERVED		SCBA, SHOP, STORAGE
SUPPLY AIR		DISCHARGE DUCT CONN.
RETURN AIR		REAR DUCT CONN.
OUTSIDE AIR		DUCTED TO RA DUCT WITH ATC DAMPER
FAN DATA:		
TOTAL AIR FLOW	CFM	1200
OUTSIDE AIR FLOW	CFM	180
ESP	IWC	0.80
MOTOR DATA:		
V-PH-Hz		115/1/60
TYPE		HIGH STATIC
MCA	AMPS	14.8
MOCP	AMPS	20
DX COOLING COIL:		
MODEL		CNPH
NOMINAL SIZE	TONS	3.5
EAT DB/WB	°F	77.43/64.10
LAT DB/WB	°F	57.33/54.87
GAS HEAT DATA:		
TOTAL CAPACITY (MAX)	MBH	60.0
EFFICIENCY	%	97
TEMP RISE	°F	35-65
# OF STAGES		MODULATING
FILTER DATA:		
TYPE		1" PLEATED TA
EFFICIENCY	%	30
MOTOR OPERATED DAMPER (OA)	QTY	1
APPROX. SIZE (L x W x D)	INCHES	35 x 31 x 30
APPROX. WEIGHT	LBS	215

NOTES:

1. PROVIDE UNIT WITH ECM MOTOR, CONTROL TRANSFORMER, INSULATED BLOWER CABINET, FILTER RACK, 16 GA. PLENUM, UNIT DISCONNECT, TWO (2) COMPLETE SPARE FILTER SETS AND TWO (2) SPARE FAN BELTS.
2. PROVIDE DRAIN PAN LEVEL SENSOR THAT WILL SHUT OFF THE EQUIPMENT SERVED IN THE EVENT THAT THE PRIMARY DRAIN IS BLOCKED AS PER 2015 IMC 307.2.3.
3. PROVIDE CONDENSATE NEUTRALIZATION KIT
4. PROVIDE 4" THICK ACOUSTICAL PANEL ENCLOSURE WITH REMOVABLE PANELS FOR SERVICING.

CONDENSING UNIT SCHEDULE

CU #

MARK No.		CU-1
SYSTEM No.		AHU-1
LOCATION		GRADE
MANUFACTURER		CARRIER
MODEL No.		24VNA036A003
NOMINAL COOLING TONS		3.0
TOTAL CAPACITY	MBH	36
EER	BTUH/WATT	12.2
COMPRESSOR DATA:		
TYPE		SCROLL
QTY		1
OUTDOOR FAN DATA:		
TYPE		PROPELLER
QTY		1
REFRIGERANT DATA:		
REFRIGERANT TYPE		R-410A
ELECTRICAL DATA:		
POWER	V-PH-Hz	208/1/60
MINIMUM CIRCUIT AMPS	AMPS	22.1
MAXIMUM FUSE SIZE	AMPS	30
OPERATING WEIGHT (APPROX.)	LBS	320
DIMENSIONS (L x W x H)	IN	35 x 35 x 44

NOTES:

1. PROVIDE ALL REFRIGERANT PIPING AND ACCESSORIES BETWEEN EXTERIOR CU AND INDOOR FCU. INSTALL, SIZE, CHARGE, AND INSULATE REFRIGERANT PIPING AS DIRECTED BY MANUFACTURER'S WRITTEN INSTALLATION INSTRUCTIONS.
2. PROVIDE UNIT WITH FACTORY MOUNTED SERVICE VALVES AND FACTORY MOUNTED WEATHER PROOF DISCONNECT.
3. PROVIDE 6" H CONC. PAD WITH PIERS
4. PROVIDE SOUND ATTENUATION ACCESSORIES AS REQUIRED TO MEET LOCAL NOISE ORDINANCES.

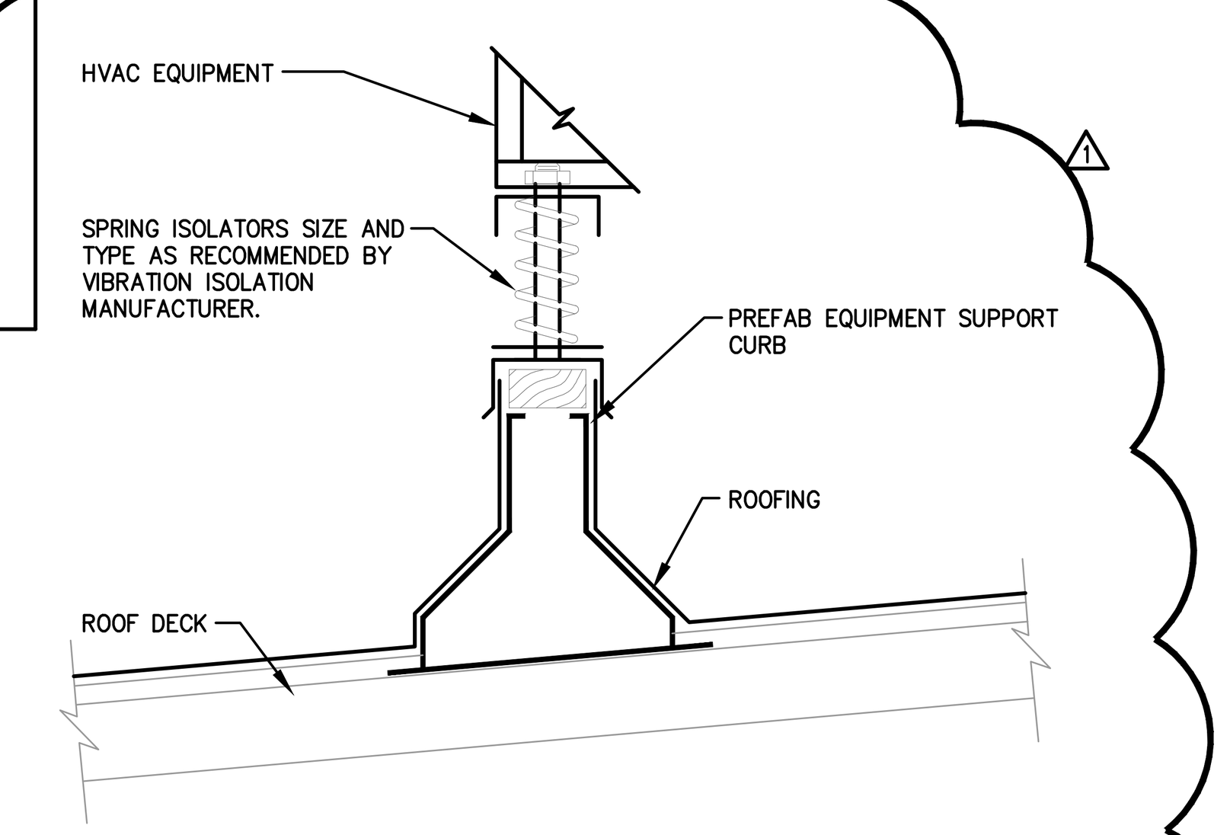
LOUVER SCHEDULE

L #

MARK		L-1	L-2
SYSTEM NO.		EXHAUST	OAI
SERVICE		EF-5	FCU-1
MANUFACTURER		RUSKIN	RUSKIN
MODEL No.		ELC445D	ELC445D
TYPE		COMBINATION, HORIZONTAL BLADES, 45° DRAINABLE	COMBINATION, HORIZONTAL BLADES, 45° DRAINABLE
MATERIAL		EXTRUDED ALUMINUM	EXTRUDED ALUMINUM
GAUGE		12	12
BLADE SPACING	IN	4-7/16	4-7/16
SIZE (W x H x D)	IN	42 x 42 x 4	18 x 18 x 4
CAPACITY	CFM	3000	300
FREE AREA	SF	4.58 (37%)	0.64 (28%)
FACE VELOCITY	FPM	750	750
PRESSURE DROP	IWG	0.08	0.08
BEGINNING OF WATER PENETRATION	FPM	974	974

NOTES:

1. PROVIDE ALUMINUM BIRD SCREEN
2. FINISH SHALL BE CLEAR ANODIZED.



1 / H4 EQUIPMENT SUPPORT CURB WITH SPRING ISOLATORS DETAIL – (FOR PITCHED ROOF)

NOT TO SCALE

June 26, 2019 9:36:15 a.m.
Drawing: 2637 H4.DWG

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RELIEF FIRE COMPANY NO. 1
ADDITION / RENOVATION
BLOCK 86, LOTS 4, 5, 10, 11, 21, 22, 22.01 AND 23
17 PINE STREET
MOUNT HOLLY, NEW JERSEY

TITLE: SYMBOLS, ABBREVIATIONS & SCHEDULES - HVAC

DRAWING DATE: 01 JULY 2020

REVISION DATE: △1 25 SEPT 2020

DRAWN BY:

COMMISION NO.: 5475B

H4

KITCHEN HOOD SCHEDULE – ALTERNATE BID #03

H / 1

MARK No.	MANUFACTURER	MODEL	LENGTH	EXHAUST CFM	EXHAUST RISER ø x H	DIMENSIONS L x W x H	UTILITY CABINET L x W x H	WEIGHT LBS
H-1	CAPTIVE AIRE	5424 ND-2	4'-0"	900	10" x 4"	48" x 54" x 24"	12" x 54" x 24"	400

NOTES:

1. HOOD CONSTRUCTION SHALL BE OF 18 GAUGE TYPE 430 STAINLESS STEEL.
2. PROVIDE STAINLESS STEEL 3" WIDE, FULL HEIGHT STANDOFF (BETWEEN WALL AND BACK OF HOOD).
3. PROVIDE GREASE DRAIN WITH REMOVABLE CUP.
4. PROVIDE TWO (2) 85% EFFICIENT CAPTRATE SOLO FILTERS.
5. PROVIDE THERMAL SENSOR AND WIRE TO HOOD CONTROL PANEL.
6. PROVIDE UL LABEL.
7. PROVIDE CANOPY LIGHT FIXTURES, HIGH TEMPERATURE ASSEMBLY.
8. PROVIDE COMPLETE UL 300 LISTED FIRE SUPPRESSION SYSTEM WITH ELECTRIC GAS VALVE AND STRAINER.
9. PROVIDE FAN AND LIGHT CONTROL PANEL.
10. PROVIDE GALVANIZED HANGING ANGLES & HARDWARE.
11. PROVIDE 1" WIDE INSULATED BACK SPLASH.
12. THE FIRE SYSTEM ACTIVATION SHALL SHUTDOWN FUEL, ELECTRIC, AND GAS TO ALL APPLIANCE AND THE FIRE ALARM PANEL SHALL ACTIVATE AN AUDIBLE ALARM.
13. PROVIDE A REMOTE PULL STATION TO ACTIVATE FIRE SUPPRESSION SYSTEM. INSTALL PULL STATION 10-20 FEET FROM THE THE HOOD IN THE PATH OF EGRESS FROM THE PROTECTED AREA AT 48" AFF. COORDINATE FINAL LOCATION OF PULL STATION WITH END USER.
14. ALL KITCHEN HOOD EXHAUST DUCTWORK SHALL BE CONSTRUCTED OF #16 GAUGE BLACK IRON WITH CONTINUOUSLY WELDED SEAMS AND CONTINUOUSLY WELDED JOINT CONNECTIONS AS PER NFPA BUL. 96. THE EXTERIOR OF ALL KITCHEN HOOD EXHAUST DUCTS SHALL HAVE 1-1/2" x 1-1/2" x 1/8" WELDED ANGLES, PUNCHED FOR SECURING BLOCK INSULATION. WHERE KITCHEN HOOD EXHAUST DUCT RISERS PASS VERTICALLY THROUGH FLOORS OF THE BUILDING, PROVIDE ANGLE CLIPS WELDED TO THE DUCT OF REQUIRED SIZES TO SUPPORT THE WEIGHT OF THE RISER SECTIONS ON THE BUILDING'S STRUCTURE AT EACH OF THE FLOOR LEVELS. PROVIDE AND INSTALL ALL SUPPLEMENTARY STRUCTURAL STEEL IN SHAFTS TO PROPERLY SUPPORT EXHAUST DUCTWORK FROM BUILDING CONSTRUCTION. PROVIDE 18" x 12" INSULATED DOUBLE WALL ACCESS DOORS ON SIDE OF DUCT AT 15' SPACING. PITCH DUCTWORK TO HOOD. THE PORTION FOR DUCTWORK EXPOSED TO VIEW IN THE KITCHEN SHALL BE OF SAME GAUGE AND MATERIAL AS THE HOOD. HOOD DUCTS SHALL CONFORM TO NFPA #96.

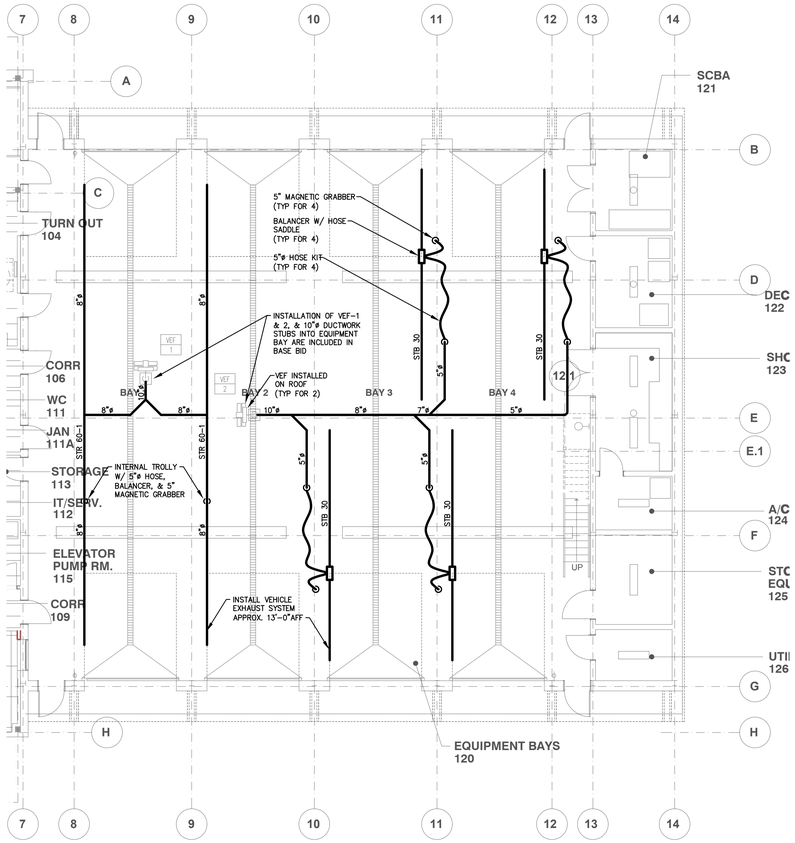
KITCHEN EXHAUST FAN SCHEDULE – ALTERNATE BID #03

KEF / 1

NO.	MFR	MODEL	TYPE	RPM	CFM	SP IN WC	HP	FLA	V/Ph/Hz	SONES (dBA)	SERVICE	LOCATION	WEIGHT (LBS)	REMARKS
KEF-1	PENN BARRY	D12	UTILITY SET	1483	900	1.50	0.439	3.50	208/1/60	12.3	KITCHEN HOOD H-1	ROOF	180	

PROVIDE THE FOLLOWING:

1. MOTOR W/ THERMAL OVERLOAD PROTECTION, STARTER AND WEATHER PROOF DISCONNECT, UL762 FAT TRAP, EQUIPMENT RAILINGS WITH 1.5" DEFLECTION SPRING VIBRATION ISOLATORS, AND WEATHERPROOF MOTOR HOUSING.
2. PROVIDE HIGH HEAT OPERATION UP TO 300°F AND GREASE CLASSIFICATION TESTING.
3. MANUAL ON/OFF FAN SWITCH MOUNTED ON KITCHEN HOOD OR WALL.



1 / H5 ALTERNATE BID #02 – VEHICLE EXHAUST – HVAC

SCALE 1/8" = 1'-0"

NOTES:

1. PROVIDE ALL RAILS WITH END STOP SHOCK ABSORBERS.
2. PROVIDE TAIL PIPE ATTACHMENTS FOR EACH VEHICLE.

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TITLE: FLOOR PLAN & SCHEDULES - HVAC ALT BID

DRAWING DATE: 01 JULY 2020
REVISION DATE:
DRAWN BY: MB
COMMISION NO.: 5475B

H5

June 26, 2019 9:36:57 a.m.
Drawing: 2637 H5.DWG

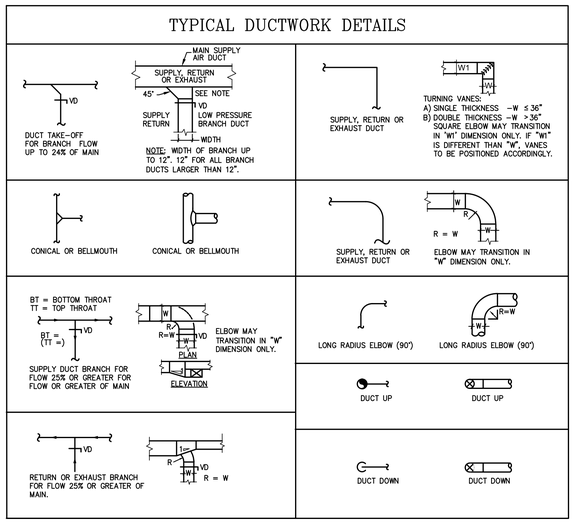
VENTILATION SCHEDULE

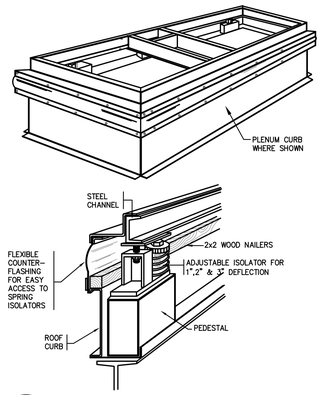
ROOM NAME	ROOM NUMBER	AREA SQ. FT.	No. OF WC & URINAL FIXTURES	No. OF PEOPLE	REQUIRED OUTSIDE AIR (EXHAUST AIR) CFM PER CODE				PROVIDED VENTILATION AIR (CFM) PER DESIGN				EQUIPMENT TAG No.
					PER PERSON	PER FIXTURE	PER SQ. FT.	TOTAL (MINIMUM)	SUPPLY	RETURN	OUTSIDE AIR	EXHAUST	
LOBBY	101	148	–	3	5	–	0.06	24	400	190	160	160	RTU–3
FM/INSPECTOR	103	318	–	5	5	–	0.06	45	340	272	68	68	RTU–2
TURN OUT	104	400	–	–	–	–	0.25	100	165	0	66	246	RTU–3/EF–3
ACTIVE TRAINING	105	1032	–	8	20	–	0.06	222	1160	928	232	232	RTU–2
CORRIDOR	106 & 109	150	–	–	–	–	0.06	9	100	0	20	20	RTU–2
CORRIDOR	107 & 108	556	–	–	–	–	0.06	34	340	0	136	136	RTU–3
SPARE ROOM	110	72	–	1	5	–	0.06	10	85	51	34	34	RTU–3
WATER CLOSET	111	48	1	–	–	(70)	–	(70)	0	0	0	75	EF–1
JANITOR CLOSET	111A	33	1	–	–	(50)	–	(50)	0	0	0	50	EF–1
ELEVATOR PUMP RM.	115	82	–	–	–	–	–	(250)	0	0	0	250	EF–1
KITCHEN	116	208	–	1	–	–	–	–	800	480	320	1220	RTU–3/KEF–1
WOMEN'S TOILET	117	182	3	–	–	(70)	–	(210)	100	0	40	225	RTU–3/EF–1
MEN'S TOILET	118	103	4	–	–	(70)	–	(280)	100	0	40	300	RTU–3/EF–1
DISPATCH	119	256	–	3	5	–	0.06	31	550	330	220	220	RTU–3
HISTORY ROOM 1	127	1304	–	14	5	–	0.06	149	1560	1170	390	390	RTU–1
TRAINING/MEETING	130	1987	–	60	5	–	0.06	420	1470	1313	367	367	RTU–1
SCBA	121	106	–	–	–	–	0.12	13	280	238	42	42	FCU–1
DECON	122	120	–	–	–	–	0.12	15	95	81	14	14	FCU–1
SHOP	123	180	–	–	–	–	0.12	22	140	119	21	21	FCU–1
A/C	124	70	–	–	–	–	0.12	9	370	314	56	56	FCU–1
STORAGE EQUIP	125	116	–	–	–	–	0.12	14	95	81	14	14	FCU–1
UTILITY	126	65	–	–	–	–	0.12	8	55	47	8	8	FCU–1
CORRIDOR	201	154	–	–	–	–	0.06	10	600	360	240	240	RTU–3
CORRIDOR	202–204	598	–	–	–	–	0.06	36	450	0	180	180	RTU–3
CHIEF	205	318	–	11	5	–	0.06	74	375	225	150	150	RTU–3
OFFICERS	206	305	–	3	5	–	0.06	34	310	186	124	124	RTU–3
JANITOR'S CLOSET	207	23	1	–	–	(50)	–	(50)	0	0	0	50	EF–2
DAY ROOM	208	463	–	13	5	–	0.06	93	490	294	196	196	RTU–3
GALLEY	209	160	–	1	–	–	–	–	170	102	68	68	RTU–3
OFFICE	214	138	–	2	5	–	0.06	19	185	111	74	74	RTU–3
WORK ROOM	215	96	–	1	5	–	0.06	12	60	21	14	14	RTU–3
STORAGE	216	83	–	–	–	–	0.12	11	30	18	12	12	RTU–3
WATER CLOSET	210–213	74	1	–	–	(70)	–	(70)	0	0	0	100	EF–2
RECORDS ROOM	217	77	–	–	–	–	0.12	10	25	15	10	10	RTU–3
BA	218	365	–	10	5	–	0.06	72	510	316	204	204	RTU–3
BOFC	219	234	–	5	5	–	0.06	39	275	165	110	110	RTU–3
DORM	220 & 221	200	–	3	5	–	0.06	27	250	150	100	100	RTU–3
CONFERENCE RM	223	382	–	10	5	–	0.06	73	856	640	214	214	RTU–1
STORAGE	224	66	–	–	–	–	0.12	4	40	30	10	10	RTU–1
HISTORY ROOM 2	225	442	–	5	5	–	0.06	52	561	421	140	140	RTU–1
HISTORY ROOM 3	226	810		9	5		0.06	94	1728	1296	432	432	RTU–1

VENTILATION SCHEDULE NOTES:

1. VENTILATION REQUIREMENTS ARE BASED ON THE INTERNATIONAL MECHANICAL CODE (IMC) 2015.

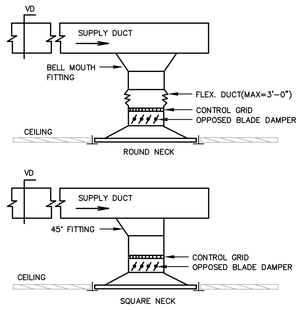
TYPICAL DUCTWORK DETAILS



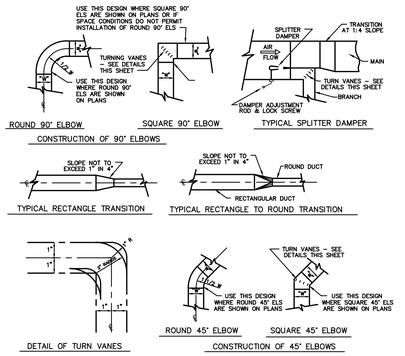


1 H6 ROOF CURB DETAIL
NOT TO SCALE

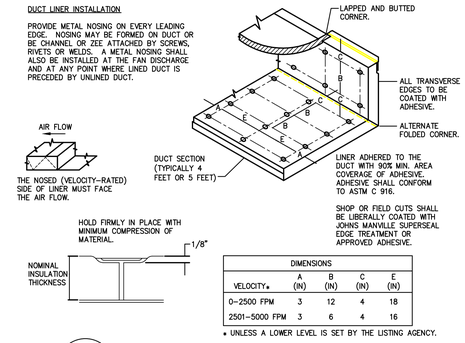
NOTE: SHIM ROOF CURB AS REQUIRED FOR LEVEL INSTALLATION.



4 H6 CEILING DIFFUSER TAKE–OFF
NOT TO SCALE



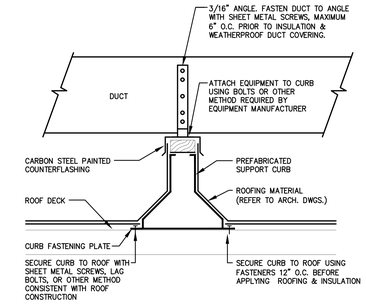
2 H6 DUCTWORK DETAILS
NOT TO SCALE



DIMENSIONS				
VELOCITY*	A (IN)	B (IN)	C (IN)	E (IN)
0–2500 FPM	3	12	4	18
2501–5000 FPM	3	6	4	16

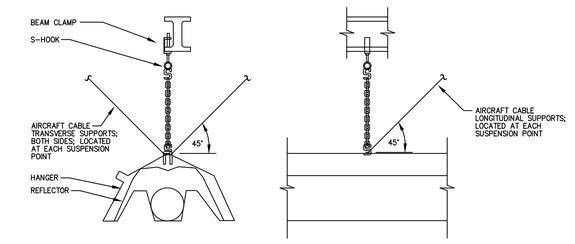
* UNLESS A LOWER LEVEL IS SET BY THE LISTING AGENCY.

3 H6 DUCT LINER INSTALLATION DETAIL
NOT TO SCALE

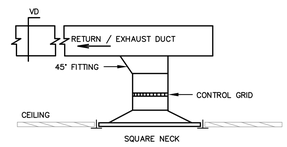


5 H6 ROOFTOP DUCT SUPPORT CURB DETAIL
NOT TO SCALE

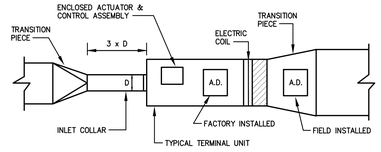
NOTE: COORDINATE CANT STYLE WITH ROOFING SYSTEM AFTER MFR IS APPROVED DURING CONSTRUCTION.



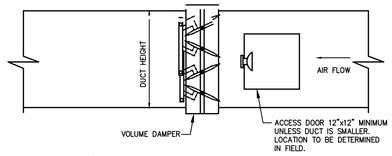
6 H6 INFRARED SEISMIC SUPPORT DETAIL
NOT TO SCALE



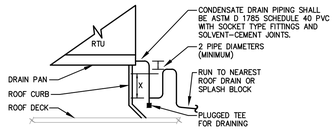
7 H6 CEILING REGISTER TAKE–OFF
NOT TO SCALE



8 H6 TYPICAL VAV BOX ARRANGEMENT
NOT TO SCALE

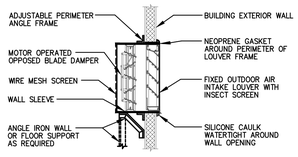


9 H6 VOLUME DAMPER DETAIL
NOT TO SCALE



DRAW THRU UNITS: X (INCHES) = MAX. FAN S.P. (IN. H20) x 2

10 H6 DRAIN CONNECTION AT COOLING COIL DETAIL
NOT TO SCALE



11 H6 OUTDOOR AIR INTAKE LOUVER DETAIL
NOT TO SCALE

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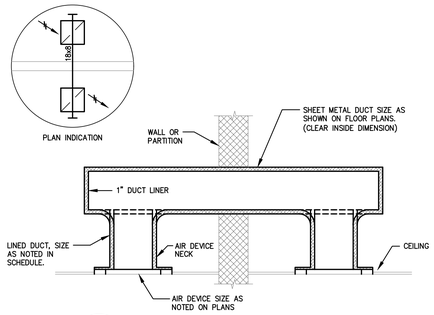
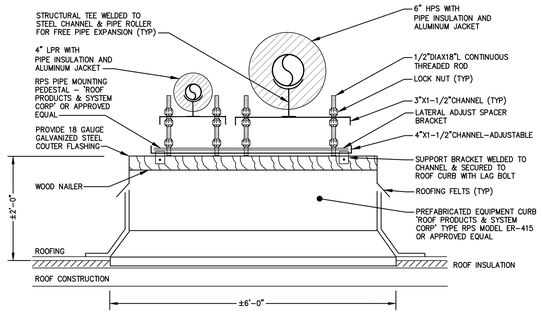
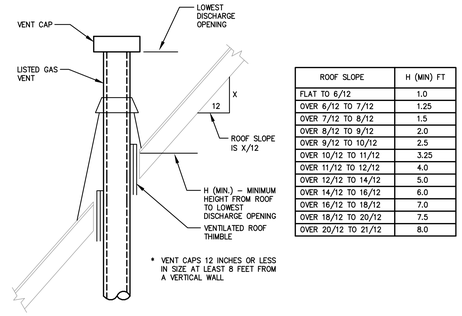
H6



1 H7 TRANSFER DUCT DETAIL
NOT TO SCALE

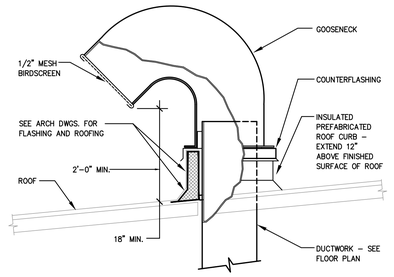


2 H7 DETAIL OF PIPING SUPPORT ON ROOF
NOT TO SCALE

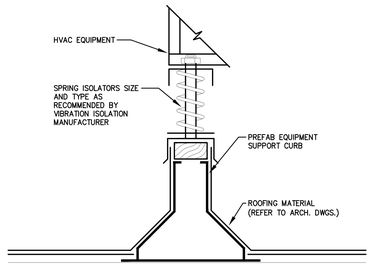


ROOF SLOPE	H (MIN) FT
FLAT TO 6/12	1.0
OVER 6/12 TO 7/12	1.25
OVER 7/12 TO 8/12	1.5
OVER 8/12 TO 9/12	2.0
OVER 9/12 TO 10/12	2.5
OVER 10/12 TO 11/12	3.25
OVER 11/12 TO 12/12	4.0
OVER 12/12 TO 14/12	5.0
OVER 14/12 TO 16/12	6.0
OVER 16/12 TO 18/12	7.0
OVER 18/12 TO 20/12	7.5
OVER 20/12 TO 21/12	8.0

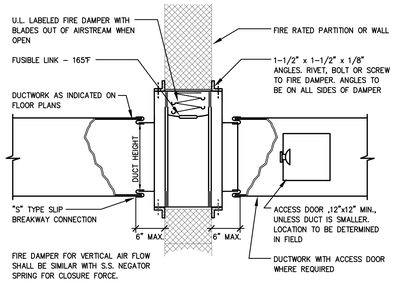
3 H7 GAS VENT TERMINATION DETAIL (FOR PITCHED ROOF)
NOT TO SCALE



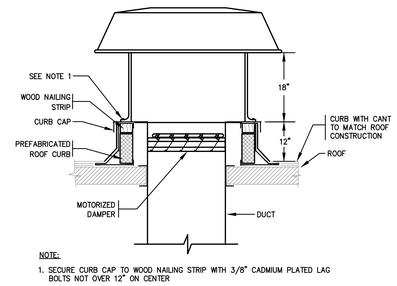
4 H7 GOOSENECK DETAIL (FOR PITCHED ROOF)
NOT TO SCALE



5 H7 EQUIPMENT SUPPORT CURB W/ SPRING ISOLATORS DETAIL
NOT TO SCALE



6 H7 FIRE DAMPER DETAIL
NOT TO SCALE



7 H7 TYPICAL ROOF CAP VENT DETAIL
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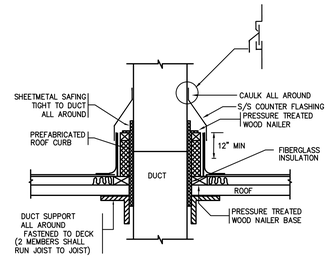
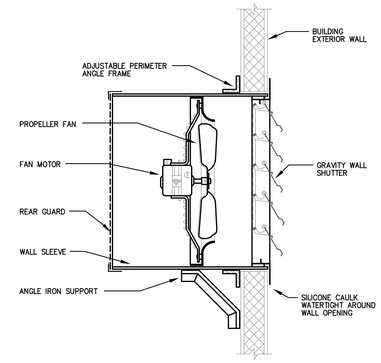
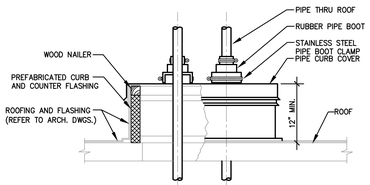


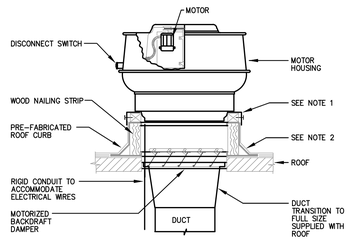
8 H7 DUCT PENETRATION THROUGH ROOF DETAIL
NOT TO SCALE



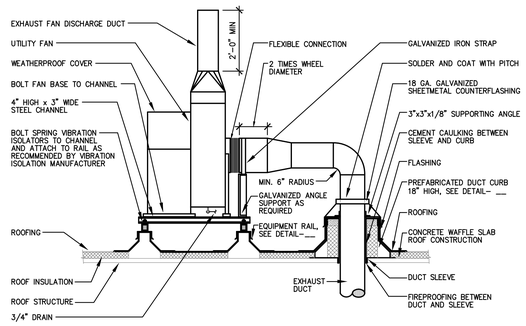
9 H7 PROPELLER FAN DETAIL
NOT TO SCALE



10 H7 TYPICAL PIPE PENETRATION THROUGH ROOF
NOT TO SCALE

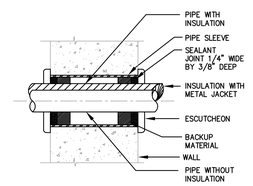


11 H7 ROOF EXHAUST FAN DETAIL
NOT TO SCALE

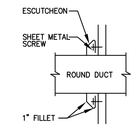


12 H7 ROOF MOUNTED UTILITY FAN AND DUCT DETAIL
NOT TO SCALE

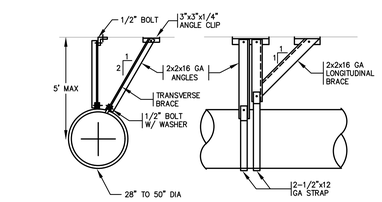
NOTE: SHIM ROOF EQUIPMENT RAIL AS REQUIRED FOR LEVEL INSTALLATION.

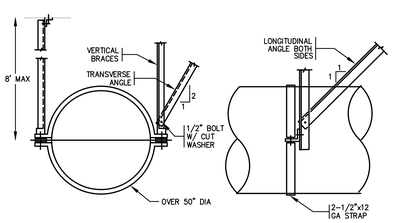


13 H7 PIPE THRU INTERIOR WALL DETAIL
NOT TO SCALE

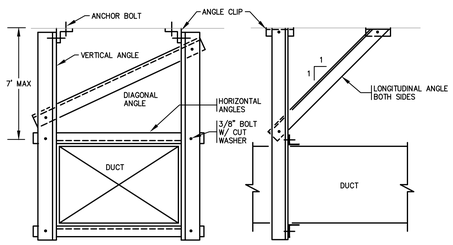


14 H7 DUCT ESCUTCHEON DETAIL
NOT TO SCALE

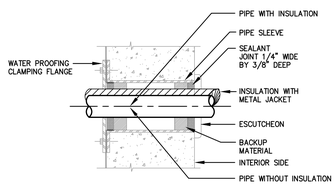




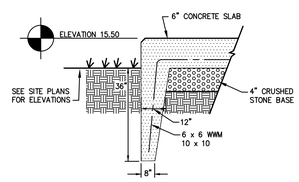
15 H7 SEISMIC BRACING FOR ROUND/OVAL DUCTS
NOT TO SCALE



16 H7 SEISMIC BRACING FOR RECTANGUALR DUCTS
NOT TO SCALE



17 H7 PIPE THROUGH EXTERIOR WALL DETAIL
NOT TO SCALE



18 H7 CU PAD CONCRETE SUPPORT
NOT TO SCALE

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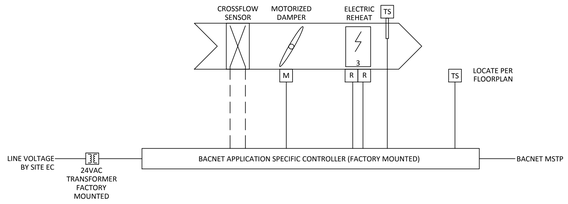
RELIEF FIRE COMPANY NO. 1
ADDITION / RENOVATION
BLOCK 86, LOTS 4, 5, 10, 11, 21, 22, 22.01 AND 23
17 PINE STREET
MOUNT HOLLY, NEW JERSEY
TITLE: DETAILS - HVAC

DRAWING DATE: 01 JULY 2020
REVISION DATE:
DRAWN BY: MB
COMMISION NO.: 5475B

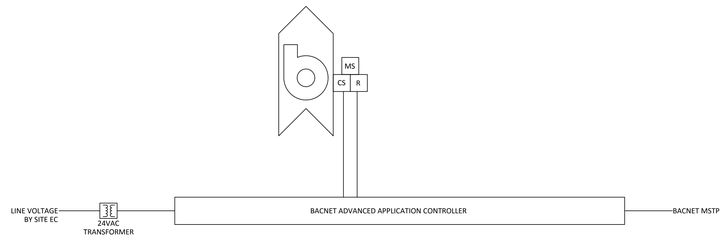
June 26, 2019 9:40:55 a.m.
Drawing: 2637 H7.DWG

H7



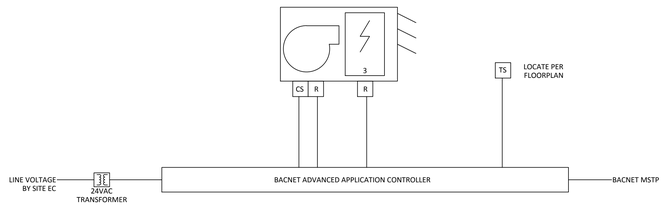
1 H8 TYPICAL VAV UNIT CONTROL DIAGRAM

NOT TO SCALE



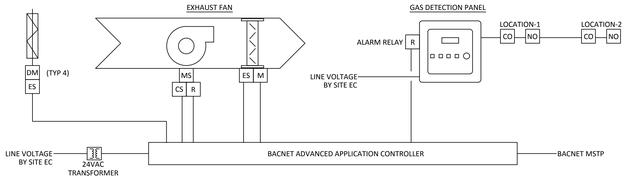
2 H8 TYPICAL EXHAUST FAN CONTROL DIAGRAM

NOT TO SCALE



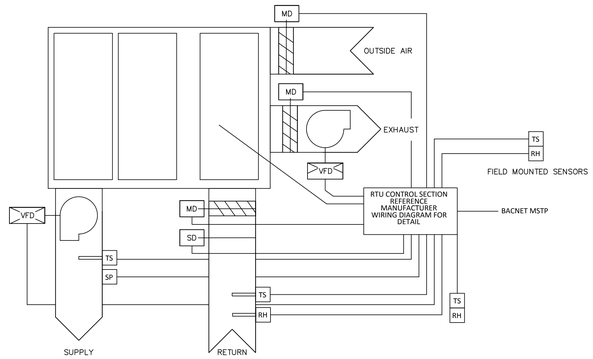
3 H8 TYPICAL UNIT HEATER CONTROL DIAGRAM

NOT TO SCALE



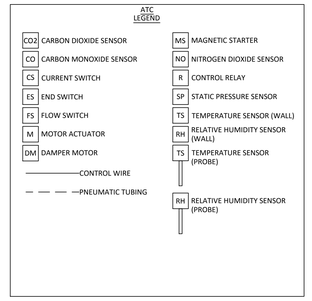
4 H8 CO & NO2 MONITORING STATION CONTROL DIAGRAM

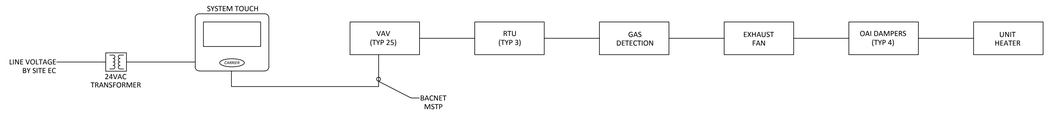
NOT TO SCALE

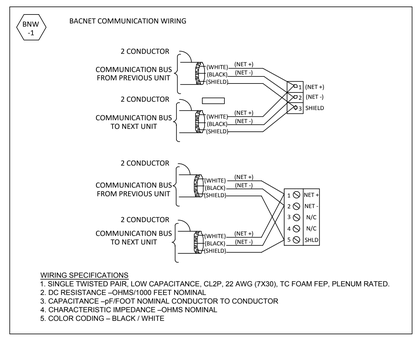


5 H8 TYPICAL RTU CONTROL DIAGRAM

NOT TO SCALE







6 H8 NETWORK ARCHITECTURE

NOT TO SCALE

June 26, 2019 9:42:24 a.m.
Drawing: 2637 H8.DWG

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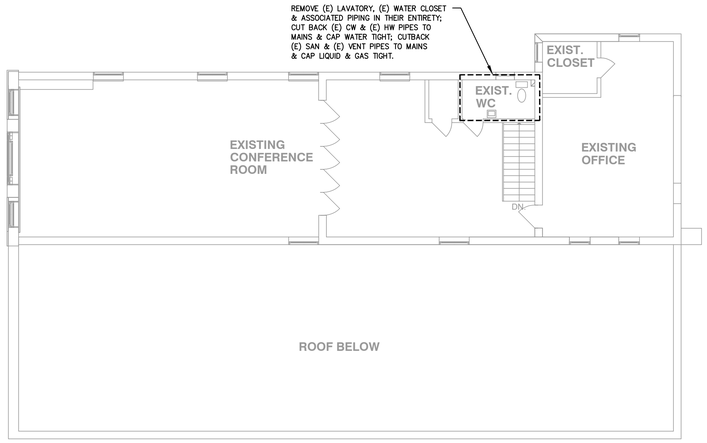
RELIEF FIRE COMPANY NO. 1
ADDITION / RENOVATION
BLOCK 86, LOTS 4, 5, 10, 11, 21, 22, 22.01 AND 23
17 PINE STREET
MOUNT HOLLY, NEW JERSEY

TITLE: CONTROL DIAGRAMS - HVAC

DRAWING DATE: 01 JULY 2020
REVISION DATE:
DRAWN BY: MB
COMMISION NO: 5475B

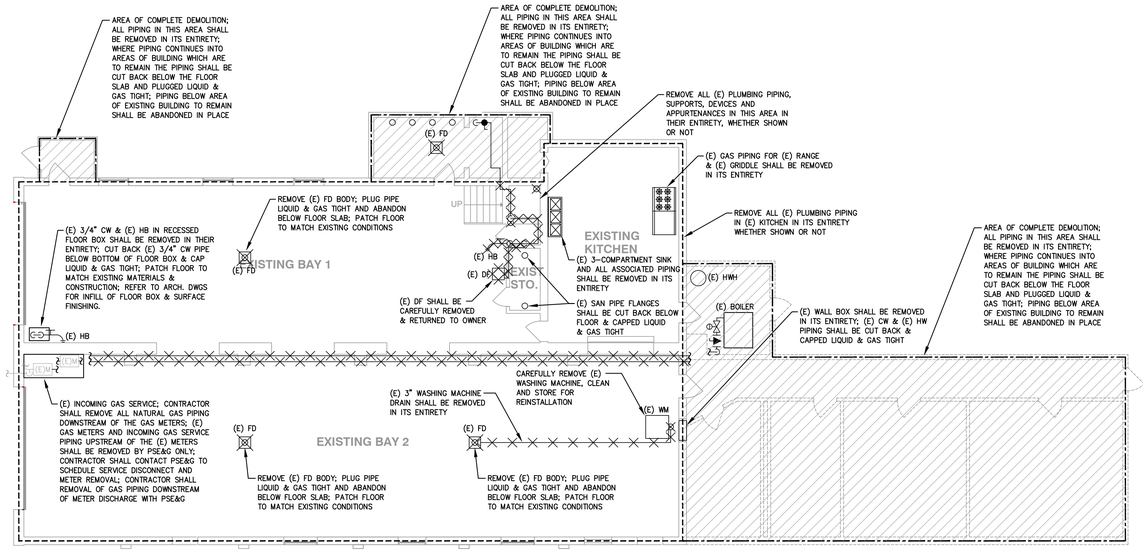
H8

9 OF 9



1 / PD1 — SECOND FLOOR PLAN – PLUMBING DEMOLITION

SCALE 1/8" = 1'-0"



2 / PD1 — FIRST FLOOR PLAN – PLUMBING DEMOLITION

SCALE 1/8" = 1'-0"

NOTES:

1. ALL PLUMBING PIPING ABOVE THE FIRST FLOOR SLAB SHALL BE REMOVED IN ITS ENTIRETY.
2. THE CONTRACTOR IS RESPONSIBLE FOR COORDINATING REMOVAL OF ANY UNDERGROUND PIPING TO 5'-0" OUTSIDE THE FOUNDATION WALL WITH EXISTING UNDERGROUND UTILITIES. ALL UTILITIES SHALL BE MARKED OUT AS REQUIRED BY NJUA, CALL BEFORE YOU DIG.

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ADDITION / RENOVATION
BLOCK 86, LOTS 4, 5, 10, 11, 21, 22, 22.01 AND 23
17 PINE STREET
MOUNT HOLLY, NEW JERSEY

TITLE: FIRST & SECOND FLOOR PLANS - PLUMBING DEMOLITION

DRAWING DATE: 01 JULY 2020
REVISION DATE:
DRAWN BY: ACL
COMMISION NO: 5475B

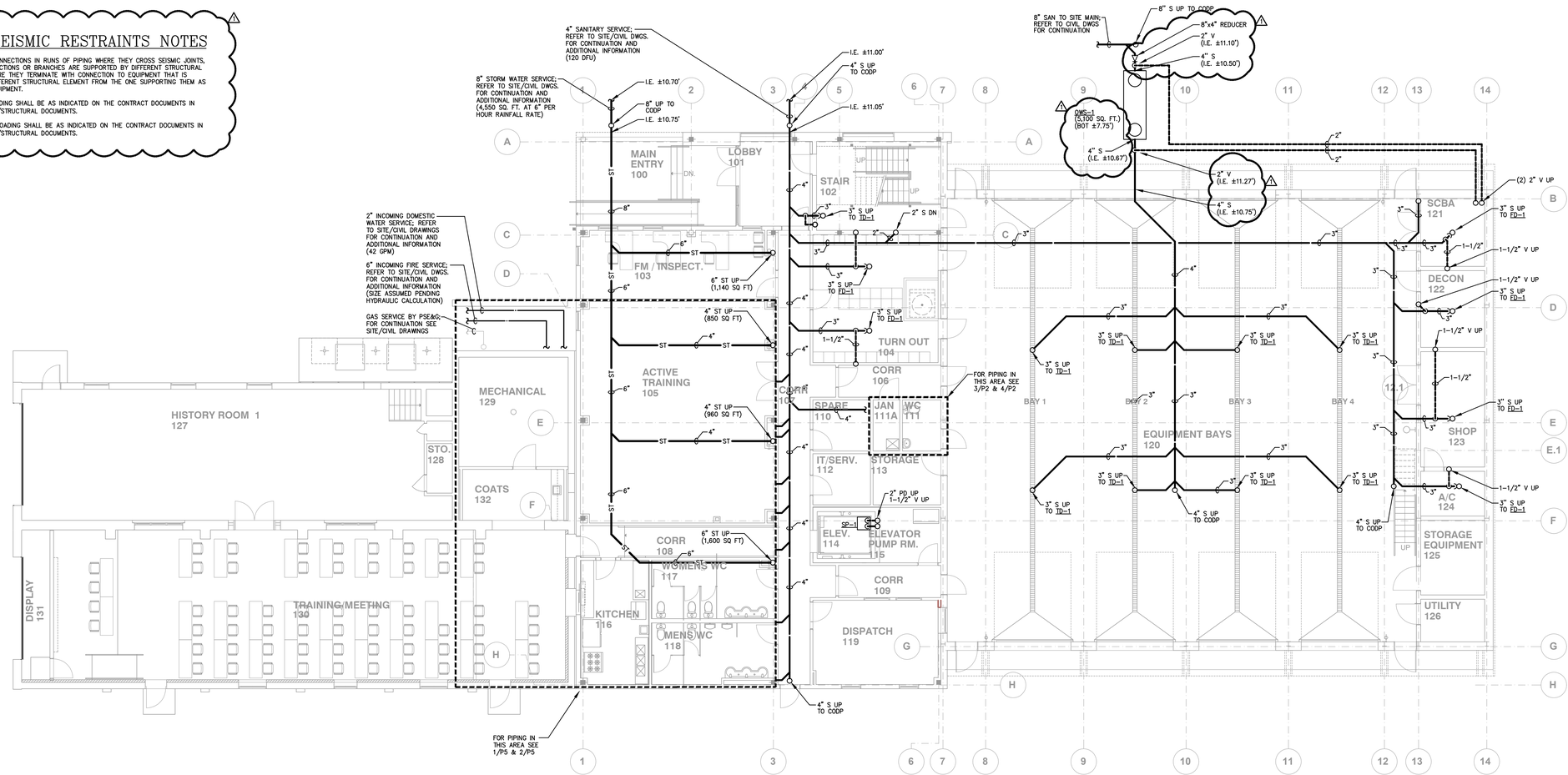
August 28, 2020, 3:20:43 p.m.
Drawing: 2637 PD1.DWG

PD1

1 OF 10

WIND & SEISMIC RESTRAINTS NOTES

1. INSTALL FLEXIBLE CONNECTIONS IN RUNS OF PIPING WHERE THEY CROSS SEISMIC JOINTS, WHERE ADJACENT SECTIONS OR BRANCHES ARE SUPPORTED BY DIFFERENT STRUCTURAL ELEMENTS, AND WHERE THEY TERMINATE WITH CONNECTION TO EQUIPMENT THAT IS ANCHORED TO A DIFFERENT STRUCTURAL ELEMENT FROM THE ONE SUPPORTING THEM AS THEY APPROACH EQUIPMENT.
2. WIND RESTRAINT LOADING SHALL BE AS INDICATED ON THE CONTRACT DOCUMENTS IN THE ARCHITECTURAL/STRUCTURAL DOCUMENTS.
3. SEISMIC RESTRAINT LOADING SHALL BE AS INDICATED ON THE CONTRACT DOCUMENTS IN THE ARCHITECTURAL/STRUCTURAL DOCUMENTS.



1/P1 UNDERSLAB PLAN– PLUMBING

SCALE 1/8" = 1'-0"

NOTES:

1. INSTALL FLEXIBLE CONNECTIONS IN RUNS OF PIPING WHERE PIPING CROSSES SEISMIC JOINTS, WHERE ADJACENT BRANCHES ARE SUPPORTED BY DIFFERENT STRUCTURAL ELEMENTS, AND WHERE PIPES TERMINATE WITH CONNECTIONS TO FIXTURES AND/OR EQUIPMENT THAT ARE ANCHORED TO DIFFERENT STRUCTURAL ELEMENTS FROM THE ONES SUPPORTING THE PIPING AS IT APPROACHES FIXTURES/EQUIPMENT.
2. WIND RESTRAINT LOADING SHALL BE AS INDICATED ON THE CONTRACT DOCUMENTS IN THE ARCHITECTURAL/STRUCTURAL CODE ANALYSIS.
3. SEISMIC RESTRAINT LOADING SHALL BE AS INDICATED ON THE CONTRACT DOCUMENTS IN THE ARCHITECTURAL/STRUCTURAL CODE ANALYSIS.
4. PIPES SHALL BE PITCHED IN ACCORDANCE WITH NATIONAL STANDARD PLUMBING CODE (2018), NEW JERSEY EDITION.
5. DUE TO EXPECTATION OF ENCOUNTERING HIGH WATER, REFER TO DE-WATERING SPECIFICATION IN PROJECT MANUAL.

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RELIEF FIRE COMPANY NO. 1
ADDITION / RENOVATION
BLOCK 86, LOTS 4, 5, 10, 11, 21, 22, 22.01 AND 23
17 PINE STREET
MOUNT HOLLY, NEW JERSEY

TITLE: UNDERSLAB PLAN - PLUMBING

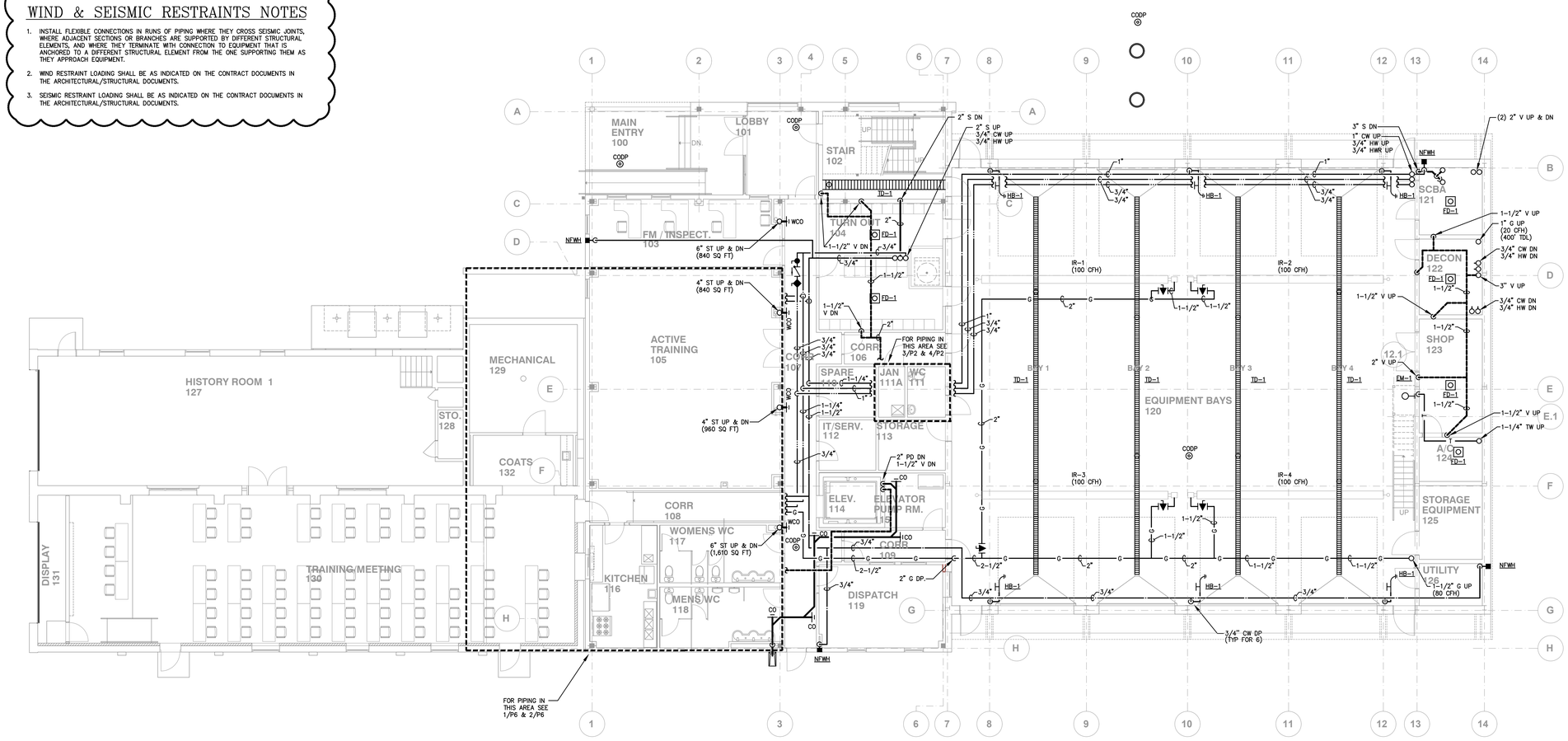
DRAWING DATE: 01 JULY 2020
REVISION DATE: 1 25 SEPT 2020
DRAWN BY: ACL
COMMISION NO: 5475B

September 24, 2020 4:00:07 p.m.
Drawing: 2637 P1.DWG

P1

WIND & SEISMIC RESTRAINTS NOTES

1. INSTALL FLEXIBLE CONNECTIONS IN RUNS OF PIPING WHERE THEY CROSS SEISMIC JOINTS, WHERE ADJACENT SECTIONS OR BRANCHES ARE SUPPORTED BY DIFFERENT STRUCTURAL ELEMENTS, AND WHERE THEY TERMINATE WITH CONNECTION TO EQUIPMENT THAT IS ANCHORED TO A DIFFERENT STRUCTURAL ELEMENT FROM THE ONE SUPPORTING THEM AS THEY APPROACH EQUIPMENT.
2. WIND RESTRAINT LOADING SHALL BE AS INDICATED ON THE CONTRACT DOCUMENTS IN THE ARCHITECTURAL/STRUCTURAL DOCUMENTS.
3. SEISMIC RESTRAINT LOADING SHALL BE AS INDICATED ON THE CONTRACT DOCUMENTS IN THE ARCHITECTURAL/STRUCTURAL DOCUMENTS.

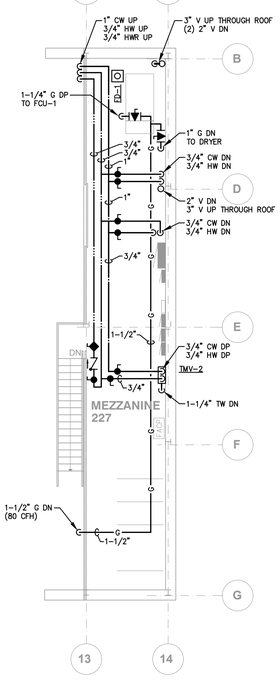


1/P2 FIRST FLOOR PLAN– PLUMBING

SCALE 1/8" = 1'–0"

NOTES:

1. INSTALL FLEXIBLE CONNECTIONS IN RUNS OF PIPING WHERE PIPING CROSSES SEISMIC JOINTS, WHERE ADJACENT BRANCHES ARE SUPPORTED BY DIFFERENT STRUCTURAL ELEMENTS, AND WHERE PIPES TERMINATE WITH CONNECTIONS TO FIXTURES AND/OR EQUIPMENT THAT ARE ANCHORED TO DIFFERENT STRUCTURAL ELEMENTS FROM THE ONES SUPPORTING THE PIPING AS IT APPROACHES FIXTURES/EQUIPMENT.
2. WIND RESTRAINT LOADING SHALL BE AS INDICATED ON THE CONTRACT DOCUMENTS IN THE ARCHITECTURAL/STRUCTURAL CODE ANALYSIS.
3. SEISMIC RESTRAINT LOADING SHALL BE AS INDICATED ON THE CONTRACT DOCUMENTS IN THE ARCHITECTURAL/STRUCTURAL CODE ANALYSIS.

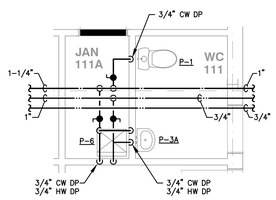


2/P2 MEZZANINE PLAN – PLUMBING

SCALE 1/8" = 1'–0"

NOTES:

1. INSTALL FLEXIBLE CONNECTIONS IN RUNS OF PIPING WHERE PIPING CROSSES SEISMIC JOINTS, WHERE ADJACENT BRANCHES ARE SUPPORTED BY DIFFERENT STRUCTURAL ELEMENTS, AND WHERE PIPES TERMINATE WITH CONNECTIONS TO FIXTURES AND/OR EQUIPMENT THAT ARE ANCHORED TO DIFFERENT STRUCTURAL ELEMENTS FROM THE ONES SUPPORTING THE PIPING AS IT APPROACHES FIXTURES/EQUIPMENT.
2. WIND RESTRAINT LOADING SHALL BE AS INDICATED ON THE CONTRACT DOCUMENTS IN THE ARCHITECTURAL/STRUCTURAL CODE ANALYSIS.
3. SEISMIC RESTRAINT LOADING SHALL BE AS INDICATED ON THE CONTRACT DOCUMENTS IN THE ARCHITECTURAL/STRUCTURAL CODE ANALYSIS.

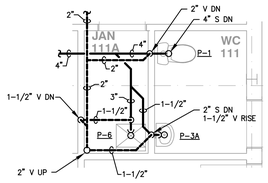


3/P2 JC 111A & WC 111 – DOMESTIC WATER – PLUMBING

SCALE 1/4" = 1'–0"

NOTES:

1. INSTALL FLEXIBLE CONNECTIONS IN RUNS OF PIPING WHERE PIPING CROSSES SEISMIC JOINTS, WHERE ADJACENT BRANCHES ARE SUPPORTED BY DIFFERENT STRUCTURAL ELEMENTS, AND WHERE PIPES TERMINATE WITH CONNECTIONS TO FIXTURES AND/OR EQUIPMENT THAT ARE ANCHORED TO DIFFERENT STRUCTURAL ELEMENTS FROM THE ONES SUPPORTING THE PIPING AS IT APPROACHES FIXTURES/EQUIPMENT.
2. WIND RESTRAINT LOADING SHALL BE AS INDICATED ON THE CONTRACT DOCUMENTS IN THE ARCHITECTURAL/STRUCTURAL CODE ANALYSIS.
3. SEISMIC RESTRAINT LOADING SHALL BE AS INDICATED ON THE CONTRACT DOCUMENTS IN THE ARCHITECTURAL/STRUCTURAL CODE ANALYSIS.



4/P2 JC 111A & WC 111 – SANITARY & VENT – PLUMBING

SCALE 1/4" = 1'–0"

NOTES:

1. INSTALL FLEXIBLE CONNECTIONS IN RUNS OF PIPING WHERE PIPING CROSSES SEISMIC JOINTS, WHERE ADJACENT BRANCHES ARE SUPPORTED BY DIFFERENT STRUCTURAL ELEMENTS, AND WHERE PIPES TERMINATE WITH CONNECTIONS TO FIXTURES AND/OR EQUIPMENT THAT ARE ANCHORED TO DIFFERENT STRUCTURAL ELEMENTS FROM THE ONES SUPPORTING THE PIPING AS IT APPROACHES FIXTURES/EQUIPMENT.
2. WIND RESTRAINT LOADING SHALL BE AS INDICATED ON THE CONTRACT DOCUMENTS IN THE ARCHITECTURAL/STRUCTURAL CODE ANALYSIS.
3. SEISMIC RESTRAINT LOADING SHALL BE AS INDICATED ON THE CONTRACT DOCUMENTS IN THE ARCHITECTURAL/STRUCTURAL CODE ANALYSIS.

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Professional Engineer
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RELIEF FIRE COMPANY NO. 1
ADDITION / RENOVATION
BLOCK 66, LOTS 4, 5, 10, 11, 21, 22, 22.01 AND 23
17 PINE STREET
MOUNT HOLLY, NEW JERSEY

TITLE: FIRST FLOOR PLAN & PARTIAL PLANS - PLUMBING

DRAWING DATE: 01 JULY 2020
REVISION DATE: 1 25 SEPT 2020

DRAWN BY: ACL
COMMISION NO.: 5475B

P2

3 OF 10

September 24, 2020 2:54:32 p.m.
Drawing: 2637 P1.DWG

WIND & SEISMIC RESTRAINTS NOTES

1. INSTALL FLEXIBLE CONNECTIONS IN RUNS OF PIPING WHERE THEY CROSS SEISMIC JOINTS, WHERE ADJACENT SECTIONS OR BRANCHES ARE SUPPORTED BY DIFFERENT STRUCTURAL ELEMENTS, AND WHERE THEY TERMINATE WITH CONNECTION TO EQUIPMENT THAT IS ANCHORED TO A DIFFERENT STRUCTURAL ELEMENT FROM THE ONE SUPPORTING THEM AS THEY APPROACH EQUIPMENT.
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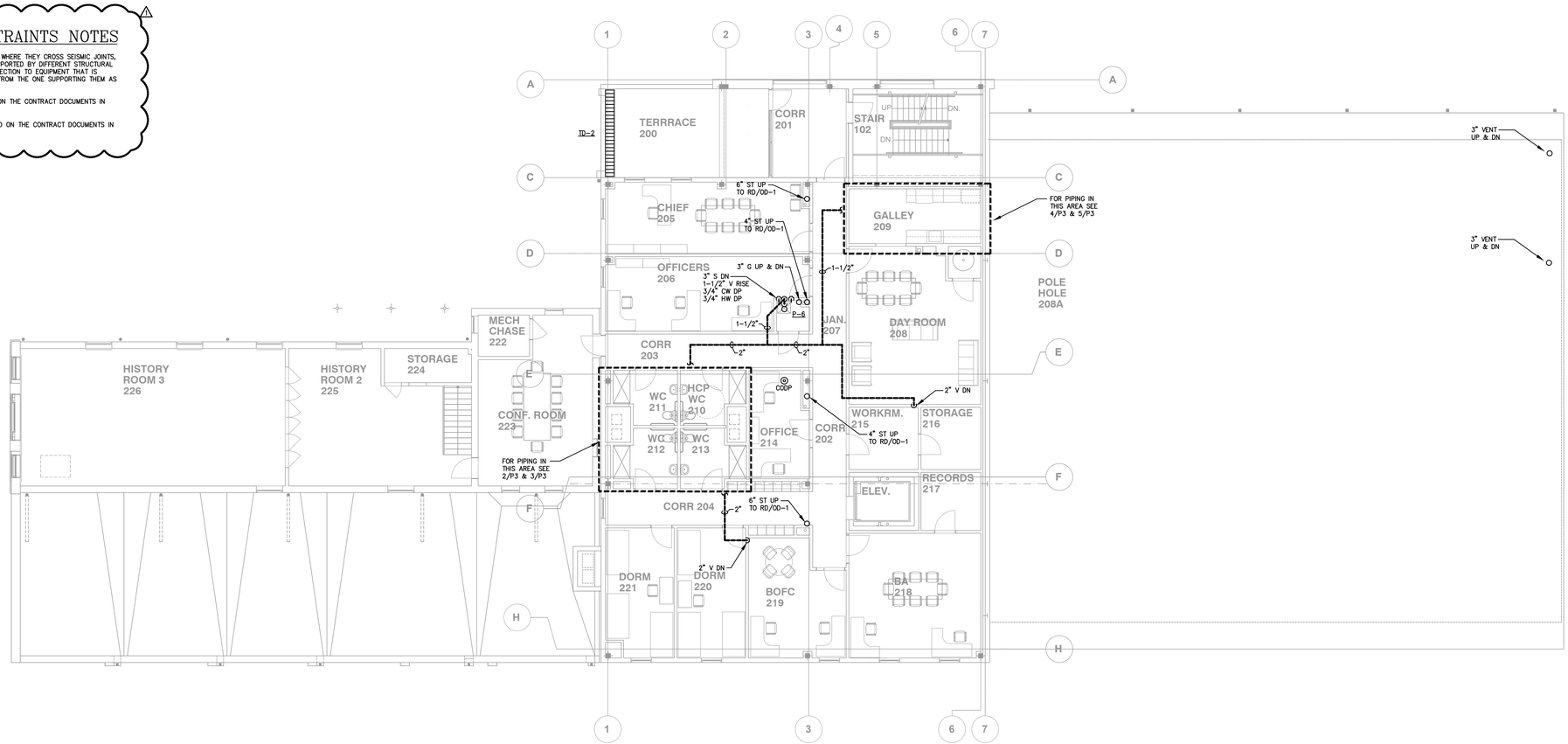

1 P3 SECOND FLOOR PLAN– PLUMBING

SCALE 1/8" = 1'-0"

NOTES:

1. INSTALL FLEXIBLE CONNECTIONS IN RUNS OF PIPING WHERE PIPING CROSSES SEISMIC JOINTS, WHERE ADJACENT BRANCHES ARE SUPPORTED BY DIFFERENT STRUCTURAL ELEMENTS, AND WHERE PIPES TERMINATE WITH CONNECTIONS TO FIXTURES AND/OR EQUIPMENT THAT ARE ANCHORED TO DIFFERENT STRUCTURAL ELEMENTS FROM THE ONES SUPPORTING THE PIPING AS IT APPROACHES FIXTURES/EQUIPMENT.
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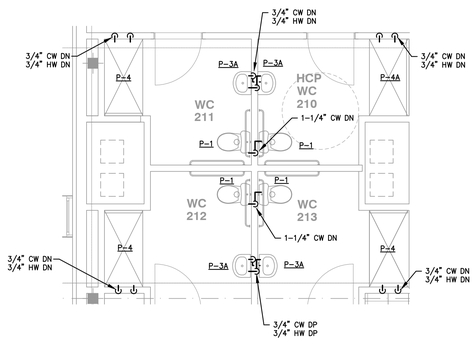
3. SEISMIC RESTRAINT LOADING SHALL BE AS INDICATED ON THE CONTRACT DOCUMENTS IN THE ARCHITECTURAL/STRUCTURAL CODE ANALYSIS.



2 P3 WC 210, 211, 212, & 213 – DOMESTIC WATER – PLUMBING

SCALE 1/4" = 1'-0"

NOTES:

1. INSTALL FLEXIBLE CONNECTIONS IN RUNS OF PIPING WHERE PIPING CROSSES SEISMIC JOINTS, WHERE ADJACENT BRANCHES ARE SUPPORTED BY DIFFERENT STRUCTURAL ELEMENTS, AND WHERE PIPES TERMINATE WITH CONNECTIONS TO FIXTURES AND/OR EQUIPMENT THAT ARE ANCHORED TO DIFFERENT STRUCTURAL ELEMENTS FROM THE ONES SUPPORTING THE PIPING AS IT APPROACHES FIXTURES/EQUIPMENT.
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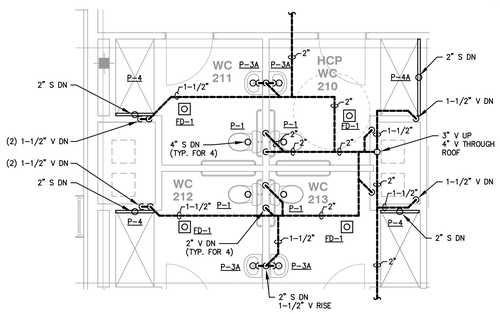

3 P3 WC 210, 211, 212, & 213 – SANITARY & VENT – PLUMBING

SCALE 1/4" = 1'-0"

NOTES:

1. INSTALL FLEXIBLE CONNECTIONS IN RUNS OF PIPING WHERE PIPING CROSSES SEISMIC JOINTS, WHERE ADJACENT BRANCHES ARE SUPPORTED BY DIFFERENT STRUCTURAL ELEMENTS, AND WHERE PIPES TERMINATE WITH CONNECTIONS TO FIXTURES AND/OR EQUIPMENT THAT ARE ANCHORED TO DIFFERENT STRUCTURAL ELEMENTS FROM THE ONES SUPPORTING THE PIPING AS IT APPROACHES FIXTURES/EQUIPMENT.
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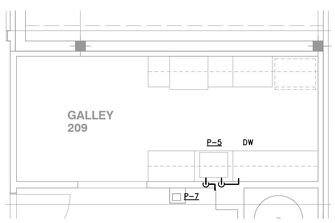

4 P3 GALLEY 209 – DOMESTIC WATER – PLUMBING

SCALE 1/4" = 1'-0"

NOTES:

1. INSTALL FLEXIBLE CONNECTIONS IN RUNS OF PIPING WHERE PIPING CROSSES SEISMIC JOINTS, WHERE ADJACENT BRANCHES ARE SUPPORTED BY DIFFERENT STRUCTURAL ELEMENTS, AND WHERE PIPES TERMINATE WITH CONNECTIONS TO FIXTURES AND/OR EQUIPMENT THAT ARE ANCHORED TO DIFFERENT STRUCTURAL ELEMENTS FROM THE ONES SUPPORTING THE PIPING AS IT APPROACHES FIXTURES/EQUIPMENT.
2. WIND RESTRAINT LOADING SHALL BE AS INDICATED ON THE CONTRACT DOCUMENTS IN THE ARCHITECTURAL/STRUCTURAL CODE ANALYSIS.
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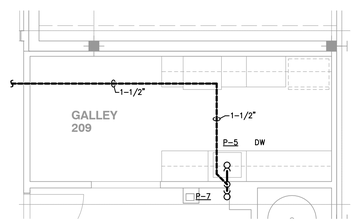

5 P3 GALLEY 209 – SANITARY & VENT – PLUMBING

SCALE 1/4" = 1'-0"

NOTES:

1. INSTALL FLEXIBLE CONNECTIONS IN RUNS OF PIPING WHERE PIPING CROSSES SEISMIC JOINTS, WHERE ADJACENT BRANCHES ARE SUPPORTED BY DIFFERENT STRUCTURAL ELEMENTS, AND WHERE PIPES TERMINATE WITH CONNECTIONS TO FIXTURES AND/OR EQUIPMENT THAT ARE ANCHORED TO DIFFERENT STRUCTURAL ELEMENTS FROM THE ONES SUPPORTING THE PIPING AS IT APPROACHES FIXTURES/EQUIPMENT.
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RELIEF FIRE COMPANY NO. 1
ADDITION / RENOVATION
BLOCK 86, LOTS 4, 5, 10, 11, 21, 22, 22.01 AND 23
17 PINE STREET
MOUNT HOLLY, NEW JERSEY

TITLE: SECOND FLOOR PLAN & PARTIAL PLANS - PLUMBING

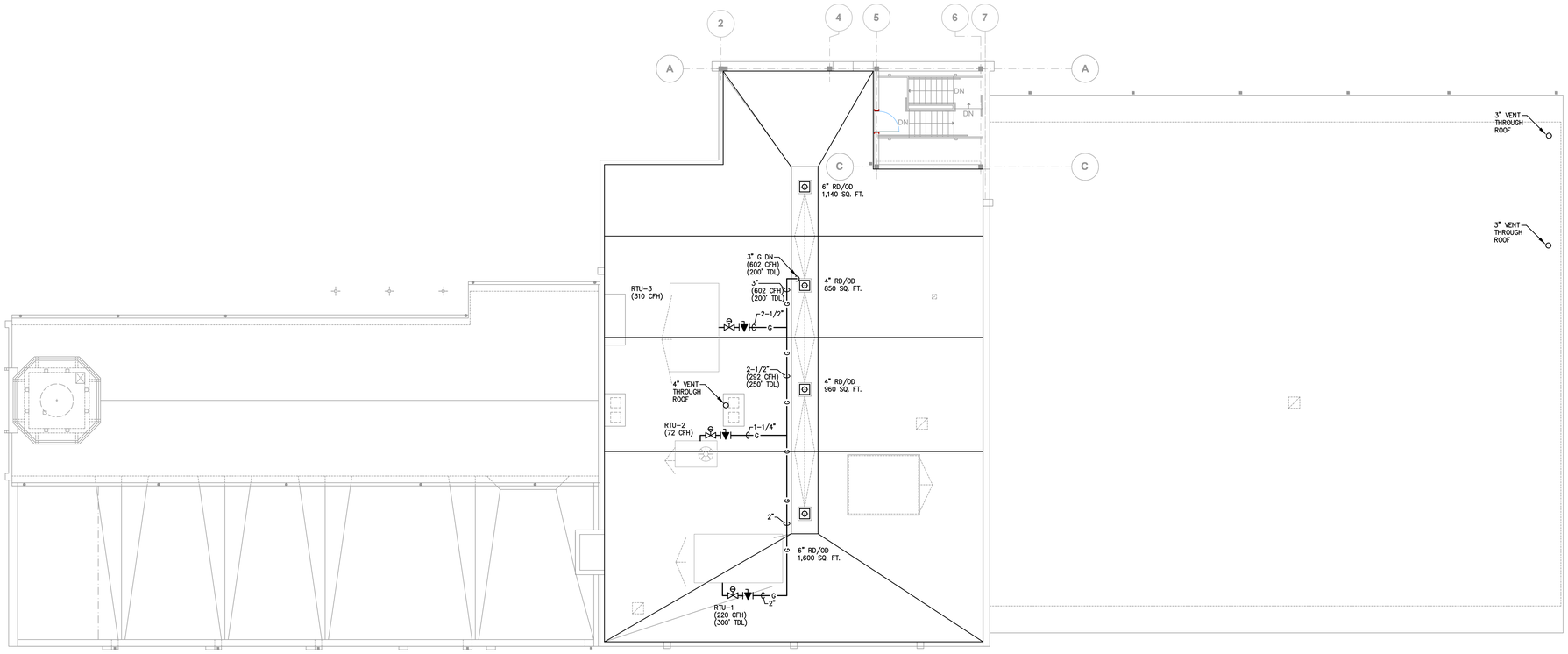
DRAWING DATE: 01 JULY 2020
1 REVISION DATE: 25 SEPT 2020
DRAWN BY: ACL
COMMISION NO.: 5475B

P3

September 24, 2020 2:54:57 p.m.
Drawing: 2637 P1.DWG

WIND & SEISMIC RESTRAINTS NOTES

1. INSTALL FLEXIBLE CONNECTIONS IN RUNS OF PIPING WHERE THEY CROSS SEISMIC JOINTS, WHERE ADJACENT SECTIONS OR BRANCHES ARE SUPPORTED BY DIFFERENT STRUCTURAL ELEMENTS, AND WHERE THEY TERMINATE WITH CONNECTION TO EQUIPMENT THAT IS ANCHORED TO A DIFFERENT STRUCTURAL ELEMENT FROM THE ONE SUPPORTING THEM AS THEY APPROACH EQUIPMENT.
2. WIND RESTRAINT LOADING SHALL BE AS INDICATED ON THE CONTRACT DOCUMENTS IN THE ARCHITECTURAL/STRUCTURAL DOCUMENTS.
3. SEISMIC RESTRAINT LOADING SHALL BE AS INDICATED ON THE CONTRACT DOCUMENTS IN THE ARCHITECTURAL/STRUCTURAL DOCUMENTS.



1 / P4 ROOF PLAN– PLUMBING

SCALE 1/8" = 1'-0"

NOTES:

1. INSTALL FLEXIBLE CONNECTIONS IN RUNS OF PIPING WHERE PIPING CROSSES SEISMIC JOINTS, WHERE ADJACENT BRANCHES ARE SUPPORTED BY DIFFERENT STRUCTURAL ELEMENTS, AND WHERE PIPES TERMINATE WITH CONNECTIONS TO FIXTURES AND/OR EQUIPMENT THAT ARE ANCHORED TO DIFFERENT STRUCTURAL ELEMENTS FROM THE ONES SUPPORTING THE PIPING AS IT APPROACHES FIXTURES/EQUIPMENT.
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4. FOR PITCHED ROOF AREAS REFER TO ARCHITECTURAL DRAWINGS.

STORM WATER PIPE SIZING

SLOPE = 1/8" PER 1'-0"		
SIZE	5" RAINFALL PER HOUR	6" RAINFALL PER HOUR
2"	N/A	N/A
3"	674 SQ. FT.	561 SQ. FT.
4"	1,444 SQ. FT.	1,203 SQ. FT.
6"	4,293 SQ. FT.	3,577 SQ. FT.
8"	9,221 SQ. FT.	7,684 SQ. FT.
10"	16,728 SQ. FT.	13,940 SQ. FT
12"	27,200 SQ. FT.	22,667 SQ. FT.
15"	49,338 SQ. FT.	41, 115 SQ. FT.

NOTES:

1. FOR SLOPES OTHER THAN THAT SHOWN, REFER TO NSPC 2018 TABLE 13.6.2 PART I.

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ADDITION / RENOVATION
BLOCK 66, LOTS 4, 5, 10, 11, 21, 22, 22.01 AND 23
17 PINE STREET
MOUNT HOLLY, NEW JERSEY

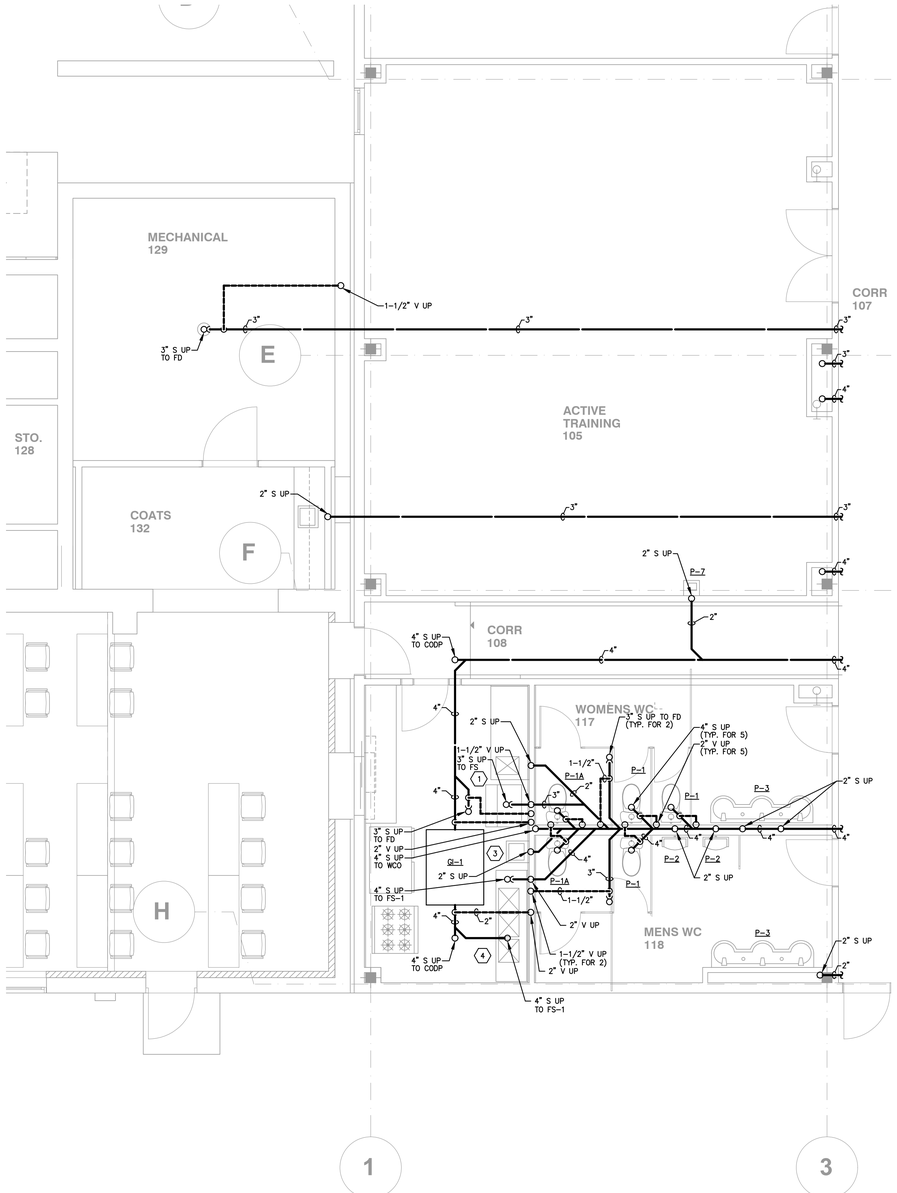
TITLE: ROOF PLAN - PLUMBING

DRAWING DATE: 01 JULY 2020
REVISION DATE: 1 25 SEPT 2020
DRAWN BY: ACL
COMMISION NO: 5475B

September 24, 2020 2:55:18 p.m.
Drawing: 2637 P1.DWG

P4

5 OF 10



1/P5 PARTIAL UNDERSLAB PLAN – SANITARY AND VENT – PLUMBING

SCALE 1/4" = 1'-0"

NOTES:

1. INSTALL FLEXIBLE CONNECTIONS IN RUNS OF PIPING WHERE PIPING CROSSES SEISMIC JOINTS, WHERE ADJACENT BRANCHES ARE SUPPORTED BY DIFFERENT STRUCTURAL ELEMENTS, AND WHERE PIPES TERMINATE WITH CONNECTIONS TO FIXTURES AND/OR EQUIPMENT THAT ARE ANCHORED TO DIFFERENT STRUCTURAL ELEMENTS FROM THE ONES SUPPORTING THE PIPING AS IT APPROACHES FIXTURES/EQUIPMENT.
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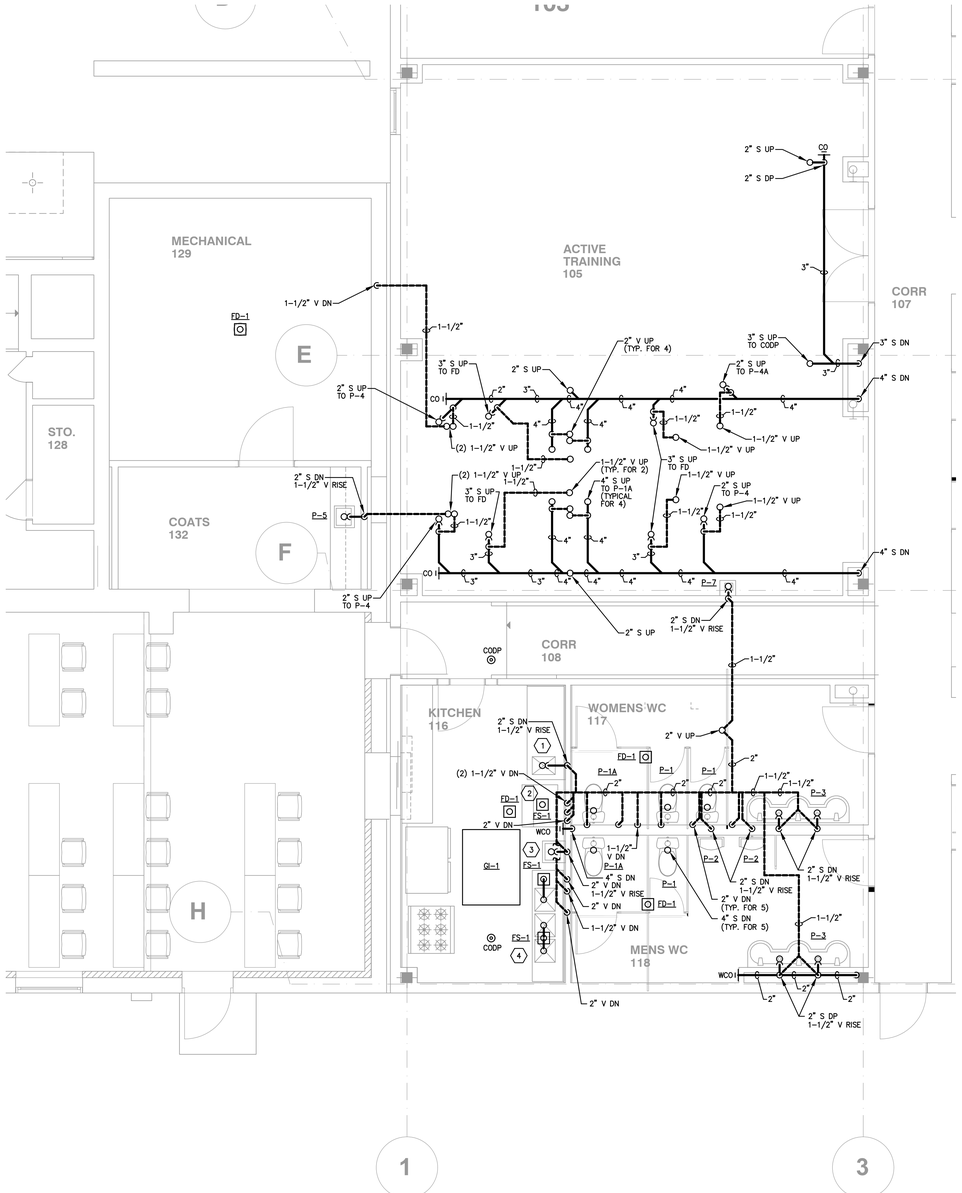
4. FLOOR DRAINS IN WOMEN'S WC 117 & MEN'S WC 118 SHALL BE LOCATED IN FIELD SUCH THAT CENTERLINE OF DRAIN BODY SHALL ALIGN UNDER CENTERLINE OF TOILET PARTITION.



2/P5 PARTIAL FIRST FLOOR PLAN – SANITARY AND VENT – PLUMBING

SCALE 1/4" = 1'-0"

NOTES:

1. INSTALL FLEXIBLE CONNECTIONS IN RUNS OF PIPING WHERE PIPING CROSSES SEISMIC JOINTS, WHERE ADJACENT BRANCHES ARE SUPPORTED BY DIFFERENT STRUCTURAL ELEMENTS, AND WHERE PIPES TERMINATE WITH CONNECTIONS TO FIXTURES AND/OR EQUIPMENT THAT ARE ANCHORED TO DIFFERENT STRUCTURAL ELEMENTS FROM THE ONES SUPPORTING THE PIPING AS IT APPROACHES FIXTURES/EQUIPMENT.
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4. FLOOR DRAINS IN WOMEN'S WC 117 & MEN'S WC 118 SHALL BE LOCATED IN FIELD SUCH THAT CENTERLINE OF DRAIN BODY SHALL ALIGN UNDER CENTERLINE OF TOILET PARTITION.

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17 PINE STREET
MOUNT HOLLY, NEW JERSEY
TITLE: PARTIAL PLANS - PLUMBING

DRAWING DATE: 01 JULY 2020
REVISION DATE:
DRAWN BY: ACL
COMMISION NO.: 5475B

P5

6 OF 10

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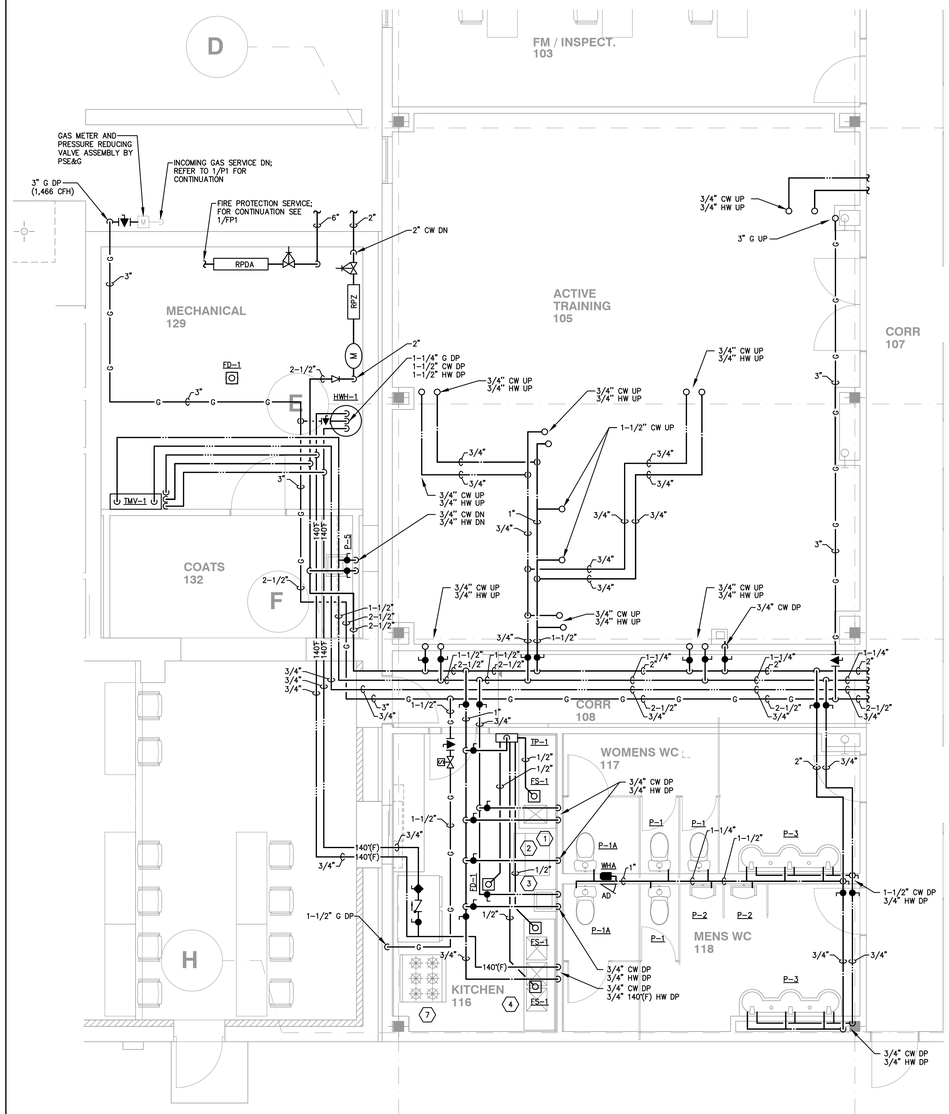

1 / P6 PARTIAL FIRST FLOOR PLAN – DOMESTIC WATER AND NATURAL GAS – PLUMBING

SCALE 1/4" = 1'-0"

NOTES:

1. INSTALL FLEXIBLE CONNECTIONS IN RUNS OF PIPING WHERE PIPING CROSSES SEISMIC JOINTS, WHERE ADJACENT BRANCHES ARE SUPPORTED BY DIFFERENT STRUCTURAL ELEMENTS, AND WHERE PIPES TERMINATE WITH CONNECTIONS TO FIXTURES AND/OR EQUIPMENT THAT ARE ANCHORED TO DIFFERENT STRUCTURAL ELEMENTS FROM THE ONES SUPPORTING THE PIPING AS IT APPROACHES FIXTURES/EQUIPMENT.
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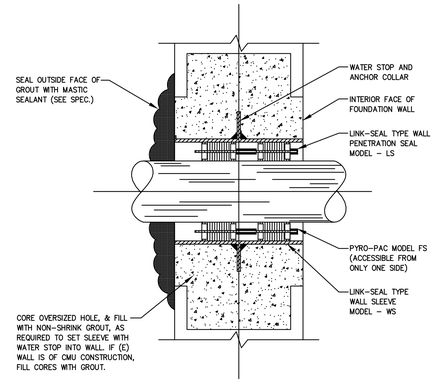
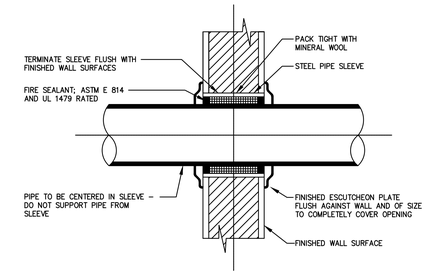


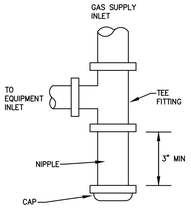
2 / P6 PIPE SLEEVE THROUGH EXTERIOR FOUNDATION WALL

NOT TO SCALE



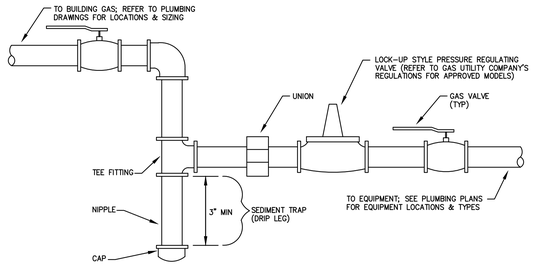
3 / P6 PIPE SLEEVE THROUGH INTERIOR FIRE RATED WALL WALL ASSEMBLY

NOT TO SCALE



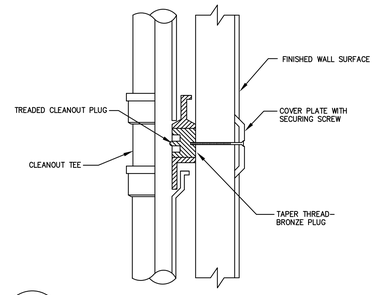
4 / P6 GAS PIPING SEDIMENT TRAP

NOT TO SCALE



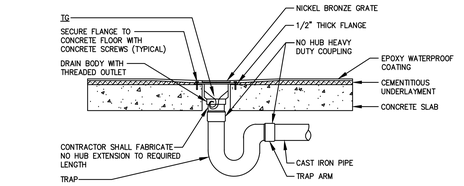
5 / P6 TYPICAL GAS EQUIPMENT CONNECTION

NOT TO SCALE



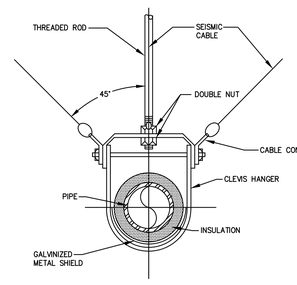
6 / P6 CLEANOUT FOR DRAINAGE PIPING CONCEALED BEHIND WALLS

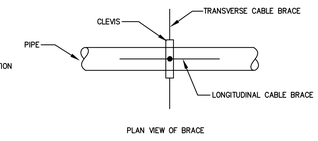
NOT TO SCALE



7 / P6 FLOOR DRAIN DETAIL WITH ELASTOMERIC TRAP SYSTEM

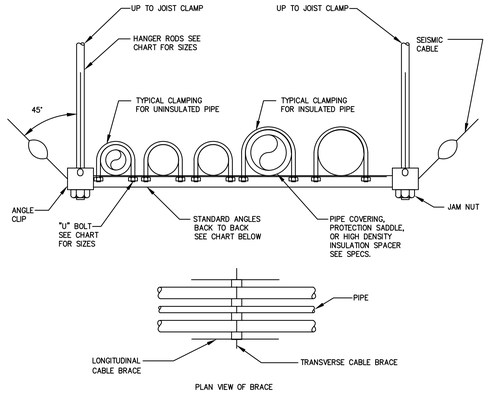
NOT TO SCALE





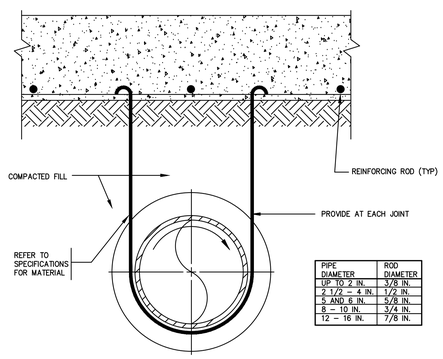
8 / P6 TRANSVERSE AND LONGITUDINAL CABLE BRACE FOR CLEVIS HUNG PIPE

NOT TO SCALE



9 / P6 TRAPEZE HANGER DETAIL

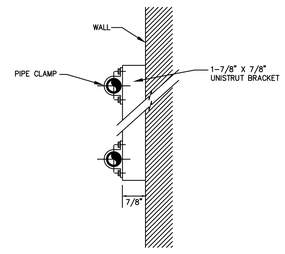
NOT TO SCALE



PIPE DIAMETER	ROD DIAMETER
UP TO 2 IN.	3/8 IN.
2 1/2 – 4 IN.	1/2 IN.
5 AND 6 IN.	5/8 IN.
8 – 10 IN.	3/4 IN.
12 – 16 IN.	7/8 IN.

10 / P6 UNDERGROUND PIPING SUPPORT

NOT TO SCALE



11 / P6 PIPE BRACKET DETAIL

NOT TO SCALE

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17 PINE STREET
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TITLE: PARTIAL PLAN & DETAILS - PLUMBING

DRAWING DATE: 01 JULY 2020
REVISION DATE:
DRAWN BY: ACL
COMMISION NO.: 5475B

P6

7 OF 10

August 28, 2020 3:18:25 p.m.
Drawing: 2637 P1.DWG

PLUMBING FIXTURE & CONNECTION SCHEDULE

MARK	FIXTURE	MOUNTING	MANUFACTURER	MODEL NO.	TRIM NO.	SUPPORT NO.	TRAP	WASTE	VENT MIN.	CW	HW	REMARKS
P-1	WATERCLOSET (HANDICAPPED)	FLOOR MOUNTED	KOHLER	HIGHLINE K-3519	N/A	N/A	INTEGRAL	4"	2"	1-1/4"	N/A	ADA COMPLIANT, VITREOUS CHINA WITH SKIRTED TRAPWAY; 1.28 GPF GRAVITY SIPHON JET DESIGN WITH KOHLER BREVIA K-20110-0 QUIET CLOSE SEAT
P-2	URINAL	WALL HUNG	KOHLER	BARDON K-4991-ET	SLOAN ROYAL 186	ZURN Z-1222	1-1/4" x 1-1/2"	1-1/2"	1-1/2"	1/2"	1/2"	VITREOUS CHINA HIGH-EFFICIENCY URINAL; 0.125 GPF WASH OUT DESIGN WITH 14" EXTENDED RIM
P-2A	URINAL (HANDICAPPED)	WALL HUNG	KOHLER	BARDON K-4991-ET	SLOAN ROYAL 186	ZURN Z-1222	1-1/4" x 1-1/2"	1-1/2"	1-1/2"	1/2"	1/2"	ADA COMPLIANT, VITREOUS CHINA HIGH-EFFICIENCY URINAL; 0.125 GPF WASH OUT DESIGN WITH 14" EXTENDED RIM
P-3	LAVATORY	WALL HUNG	BRADLEY	EXPRESS SS-3N/IRP	SEE REMARKS	ZURN	1-1/2" x 1-1/2"	1-1/2"	1-1/2"	3/4"	3/4"	ADA COMPLIANT VANDAL RESISTANT TERREON BODY WITH STAINLESS STEEL ACCESS PANEL, HARDWIRED INFRARED FAUCET CONTROLS, 0.5 GPM FLOW RATE
P-3A	LAVATORY (HANDICAPPED)	WALL HUNG	BRADLEY	EXPRESS SS-1N/IRP	SEE REMARKS	ZURN	1-1/2" x 1-1/2"	1-1/2"	1-1/2"	3/4"	3/4"	ADA COMPLIANT VANDAL RESISTANT TERREON BODY WITH STAINLESS STEEL ACCESS PANEL, HARDWIRED INFRARED FAUCET CONTROLS, 0.5 GPM FLOW RATE
P-4	SHOWER	FLOOR MOUNTED	SEE REMARKS	SEE REMARKS	KOHLER RITE-TEMP K-8304-KS	N/A	1-1/2" x 1-1/2"	1-1/2"	1-1/2"	3/4"	3/4"	FORGED BRASS PRESSURE BALANCE VALVE KIT; PROVIDE KOHLER K-TS6910-4A SHOWER VALVE TRIM AND INFINITY DRAIN MODEL FXIG-6532
P-4A	SHOWER (HANDICAPPED)	FLOOR MOUNTED	SEE REMARKS	SEE REMARKS	KOHLER RITE-TEMP K-8304-KS	N/A	1-1/2" x 1-1/2"	1-1/2"	1-1/2"	3/4"	3/4"	ADA COMPLIANT; FORGED BRASS PRESSURE BALANCE VALVE KIT; PROVIDE KOHLER K-TS6910-4A SHOWER VALVE TRIM AND INFINITY DRAIN MODEL FXIG-6560
P-5	STAINLESS STEEL SINK	COUNTER MOUNTED	ELKAY	LUSTERSTONE LRAD252155	ELKAY LKD-2439C	COUNTERTOP	1-1/2" x 1-1/2"	1-1/2"	1-1/2"	3/4"	3/4"	18 GAUGE STAINLESS STEEL SINK WITH GRID STRAINER; PROVIDE 3 HOLE CONFIGURATION, P-TRAP, TAIL PIECE, ANGLE VALVE, AND BRAIDED STEEL HOSE
P-6	MOP SINK	FLOOR MOUNTED	FIAT	STOCKTON TSB-700	AMERICAN STANDARD 8355.110	N/A	1-1/4" x 1-1/2"	3"	1-1/2"	3/4"	3/4"	36" x 24" TERAZZO MOP BASIN WITH 12" DEEP CURBS, STAINLESS STEEL CAP AND INTEGRAL STAINLESS STEEL DRAIN ASSEMBLY WITH STRAINER; PROVIDE MOP HANGER, HOSE BRACKET, AND WALL GUARDS
P-7	WATER COOLER	WALL HUNG	ELKAY	EZSGBS	N/A	N/A	–	N/A	N/A	3/4"	N/A	STAINLESS STEEL, VANDAL RESISTANT, WALL MOUNTED, 8 GPH, SINGLE STATION WATER COOLER
EM-1	EMERGENCY EYEWASH/SHOWER	FLOOR MOUNTED	GUARDIAN	G1950HS	N/A	N/A	N/A	N/A	N/A	N/A	N/A	COMBINATION SHOWER/EYEWASH WITH AUXILIARY DRENCH HOSE; PROVIDE 1-1/4" TEMPERED WATER FROM THERMOSTATIC MIXING VALVE TMV-1

NOTE:

1. ALL EXPOSED TRAP ASSEMBLIES AND WATER SUPPLIES TO BE INSULATED.
2. MOUNTING HEIGHTS FOR ALL FIXTURES SHALL BE AS INDICATED AND DIRECTED BY ARCHITECT.
3. PLUMBING CONTRACTOR SHALL COORDINATE SPECIFIED COUNTER SINKS WITH MILLWORK CONSTRUCTION DRAWINGS PRIOR TO PURCHASE OF ANY PLUMBING FIXTURES, AND SUBMIT MILLWORK DRAWINGS WITH FIXTURE SHOP DRAWINGS FOR REVIEW AND APPROVAL.
4. ALL LAVATORIES AND HANDWASH SINKS SHALL BE PROVIDED WITH TEMPERING VALVE TV-1 SET TO 105°(F) DISCHARGE TEMPERATURE.

PLUMBING ABBREVIATIONS

AFF	ABOVE FINISHED FLOOR	HP	HORSEPOWER
BF	BELOW FLOOR	HW	HOT WATER SUPPLY
CFH	CUBIC FEET PER HOUR	HWR	HOT WATER RETURN
CO	CLEANOUT	HZ	HERTZ
CW	COLD WATER	I.W.	INDIRECT WASTE
DIA.	DIAMETER	kW	KILOWATT
DN	DOWN	LBS	POUNDS
DP.	DROP	PH	PHASE
DW	DISHWASHER	PSI	POUNDS PER SQUARE INCH
DWG	DRAWING	S	SANITARY
(E)	EXISTING	SAN.	SANITARY
F	FARENHEIT	SCW	STANDARD CLOTHES WASHER
G	NATURAL GAS	TEMP.	TEMPERATURE
GAL	GALLONS	W	WATT
GPF	GALLONS PER FLUSH	W.C.	WATER COLUMN
GPH	GALLONS PER HOUR	@	AT
GPM	GALLONS PER MINUTE	°	DEGREES
GW	GEAR WASHER		

KITCHEN PLUMBING EQUIPMENT SCHEDULE

ITEM	QTY.	DESCRIPTION	WASTE	I.W.	VENT	CW	HW	GAS	CFH	REMARKS
1	1	CUSTOM STAINLESS STEEL WORK COUNTER WITH SINK	N/A	1-1/2"	N/A	1/2"	1/2"	N/A	N/A	–
2	1	ICE MAKER WITH BIN	N/A	3/4"	N/A	3/8"	N/A	N/A	N/A	–
3	1	HAND SINK	1-1/2"	N/A	1-1/2"	1/2"	1/2"	N/A	N/A	–
4	1	THREE-COMPARTMENT SINK	N/A	(3) 2"	N/A	1/2"	1/2" 140° F	N/A	N/A	–
7	1	SIX-BURNER GAS RANGE	N/A	N/A	N/A	N/A	N/A	1-1/4"	184	GAS QUICK DISCONNECT

NOTE:

1. KITCHEN EQUIPMENT IS SHOWN FOR COORDINATION OF CONNECTION SIZES ONLY; ALL EQUIPMENT IS PROVIDED BY OWNER OR SPECIFIED ON ARCHITECTURAL DRAWINGS.

PLUMBING SPECIALTIES SCHEDULE

MARK	DESCRIPTION	MANUFACTURER MODEL	REMARKS
HB-1	HOSE BIBB	ZURN Z-195	BRONZE BODY, ENCASED, ANTI-SIPHON, AUTOMATIC DRAINING, INTEGRAL BACKFLOW PREVENTOR & 3/4" HOSE CONNECTION
WHA	WATER HAMMER ARRESTOR	ZURN Z-1700	STAINLESS STEEL CONSTRUCTION, SIZE 600 & 1" OUTLET
TG	WATERLESS TRAP GUARD	PROVENT TRAP GUARD	ELASTOMERIC, NORMALLY CLOSED TRAP GUARD DEVICE WHICH OPENS WHEN IN CONTACT WITH LIQUID, COMPLIES WITH WITH ANSI/ASME A112.6.3
RPZ	BACKFLOW PREVENTOR	WATTS 009	2" SIZE DOMESTIC WATER REDUCED PRESSURE ZONE VALVE ASSEMBLY WITH STRAINER
RPDA	BACKFLOW PREVENTOR	WATTS 909 RPDA	6" SIZE FIRE PROTECTION REDUCED PRESSURE DETECTOR CHECK VALVE ASSEMBLY W/FLANGED ENDS & BYPASS ASSEMBLY W/WATER METER
TMV-1	THERMOSTATIC MIXING VALVE	LEONARD TM-1520A	HIGH/LOW DESIGN WITH LEAD-FREE BRASS BODY, BI-METALIC THERMOSTATIC ELEMENTS, 1-1/4" HW & CW INLETS, 1-1/2" HW OUTLET
TMV-2	THERMOSTATIC MIXING VALVE	LEONARD TM-600	BRASS BODY, BIMETALIC THERMOSTAT SET TO 85(F) WITH 90(F) HIGH LIMIT, VALVE WILL LOCK OUT IF COLD WATER SUPPLY FAILS
TV-1	POINT OF USE TEMPERING VALVE	LEONARD 270	INSTALL BELOW SINK–SET OUTLET TEMPEATURE TO 105° (F).

PLUMBING SYMBOL LIST

ABBREVIATION	SYMBOL	DESCRIPTION
CW		COLD WATER PIPING
HW		HOT WATER PIPING
HWR		HOT WATER RETURN PIPING
140°F HW	140°F	140°F HOT WATER PIPING
140°F HWR	140°F	140°F HOT WATER RETURN PIPING
T	T	TEMPERED WATER
EX		EXISTING PIPING TO BE REMOVED
V		VENT
SAN		SOIL, WASTE, OR SANITARY SEWER
SAN		UNDERGROUND/BELOW SLAB SOIL, WASTE, OR SANITARY SEWER
IW	IW	INDIRECT WASTE
ST	ST	STORM WATER SEWER
G	G	NATURAL GAS
(E) G	(E) G	(E) NATURAL GAS
		PIPING DROP
		PIPING RISE
		REDUCER
		CAPPED OUTLET
		VALVED & CAPPED OUTLET
		VALVE ON VERTICAL
PV		GAS PLUG VALVE
		GAS PRESSURE REGULATOR
T&P		TEMPERATURE & PRESSURE RELIEF VALVE
CO		CLEANOUT
		TRAP
M	M	WATER METER & VALVE ASSEMBLY
M	M	GAS METER AND PRESSURE REGULATING VALVE ASSEMBLY

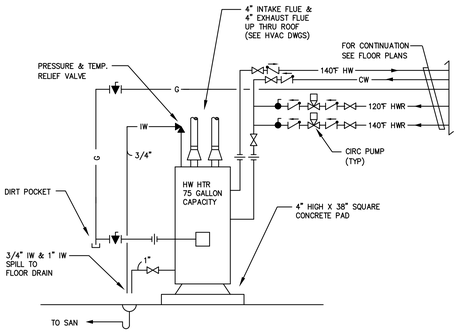
ABBREVIATION	SYMBOL	DESCRIPTION
BV		BALL VALVE
O.S.&Y.		OUTSIDE STEM & YOKE VALVE
CV		CHECK VALVE
SV		SOLENOID VALVE
AV		ANGLE VALVE
		STRAINER
		INLINE PUMP
		UNION
HB		HOSE BIBB W/VACUUM BREAKER
WH		NON-FREEZE WALL HYDRANT
PG		PRESSURE GAUGE WITH GAUGE COCK
		THERMOMETER
		BRANCH – TOP CONNECTION
		BRANCH – BOTTOM CONNECTION
WHA		WATER HAMMER ARRESTOR
		HOT WATER RETURN BALANCING VALVE ASSEMBLY
FD/RD		FLOOR/ROOF DRAIN
TD		TRENCH DRAIN
CODP	CODP	CLEAN OUT DECK PLATE
TV		HOT WATER TEMPERING VALVE
TMV		THERMOSTATIC MIXING VALVE
RPZ	RPZ	REDUCED PRESSURE ZONE VALVE ASSEMBLY
HWR		HOT WATER RECIRCULATING PUMP

PLUMBING EQUIPMENT SCHEDULE

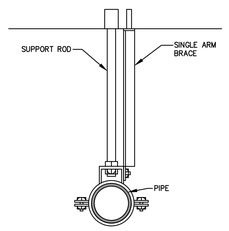
MARK	GENERAL DESCRIPTION	GENERAL MANUFACTURER	GENERAL MODEL NUMBER	GENERAL LOCATION	DESIGN DATA CAPACITY	DESIGN DATA PUMP HEAD	ELECTRICAL HP	ELECTRICAL RPM	ELECTRICAL VOLTS	ELECTRICAL PH	ELECTRICAL HZ	GAS MBH	REMARKS
HWH-1	GAS FIRED HOT WATER HEATER	BRADFORD WHITE	EF-60T-150E-3NA	MECHANICAL 129	169 GPH @ 100°(F) TEMPERATURE RISE	N/A	N/A	N/A	120	1	60	150	99.1% EFFICIENT ENERGY STAR RATED, DIRECT SPARK IGNITION, VITRAGLAS LINING, MAGNESIUM ANODE RODS, 4" CPVC CONCENTRIC FLUE/AIR INTAKE, PROVIDE LOW INLET GAS PRESSURE OPTION
ET-1	HOT WATER EXPANSION TANK	AMTROL	ST-5-C	MECHANICAL 129	2.1 GAL	N/A	N/A	N/A	N/A	N/A	N/A	N/A	ASME RATED THERMAL EXPANSION TANK WITH 150 PSI WORKING PRESSURE, 2.1 GALLON TANK VOLUME, STEEL SHELL, NSF/ANSI 61 BUTYL DIAPHRAGM, POLYPROPYLENE LINER, FACTORY PRE-CHARGED
GI-1	AUTOMATIC GREASE INTERCEPTOR	HIGHLAND TANK	AGI-50-FM	KITCHEN 116	50 GPM	N/A	N/A	N/A	115	1	60	N/A	12 GA TYPE 304 STAINLESS STEEL BODY, 1500W IMMERSION HEATER, HOLDING CAPACITY 49.9 GAL/ 284 LBS, RETENTION TIME 59.9 SEC., WITH REMOTE DIGITAL TIMER AND HIGH GREASE ALARM
OWS-1	OIL/WATER SEPARATOR	HIGHLAND TANK	OSI-750	SEE DRAWINGS	750 GALLON	N/A	N/A	N/A	N/A	N/A	N/A	N/A	DOUBLE WALL, STEEL UNDERGROUND OIL/SAND INTERCEPTOR WITH INTERNAL LEAK MONITORING; PROVIDE HEAVY-DUTY TRAFFIC RATED MANWAY COVERS
TP-1	TRAP PRIMER	ZURN	Z1020	MECHANICAL 129	2 OZ PER PORT	N/A	N/A	N/A	120	1	60	N/A	PREPROGRAMMED ELECTRONIC TRAP PRIMER IN GALVANIZED STEEL SURFACE MOUNT CABINET WITH 1/2" COPPER SOLDER COPPER CONNECTIONS AND 24 VAC SOLENOID VALVE
HWR-1	HOT WATER RETURN CIRCULATION PUMP	BELL & GOSSETT	XL55-45	MECHANICAL 129	15 GPM	40'	1/2	–	208	1	60	N/A	BRONZE BODY & IMPELLER WITH CERAMIC SEAL & SPRING COUPLING
HWR-2	HOT WATER RETURN CIRCULATION PUMP	BELL & GOSSETT	XL55-45	MECHANICAL 129	15 GPM	40'	1/2	–	208	1	60	N/A	BRONZE BODY & IMPELLER WITH CERAMIC SEAL & SPRING COUPLING
SP-1	ELEVATOR SUMP PUMP	STANCOR	SE-50 O/M ELV	ELEVATOR PIT	67 GPM	15'	1/2	3600	115	1	60	N/A	COMPLETE WITH SUBMERSIBLE PUMP, CHECK VALVE, SHUT-OFF VALVE, ALARM PANEL AND HIGH LIQUID ALARM FLOAT & 2" DISHARGE, WITH OIL SMART SWITCH

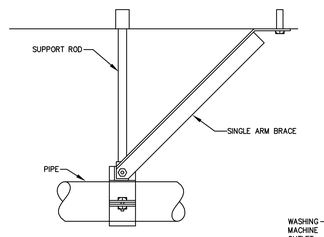
PLUMBING FLOOR DRAIN SCHEDULE

MARK	DESCRIPTION	MANUFACTURER MODEL	LOCATION	REMARKS
FD-1	GENERAL DRAIN	ZURN INDUSTRIES, INC. ZN-415-P-Y	SEE DRAWINGS	C.I. BODY, SEDIMENT BUCKET, 3" OUTLET SIZE, 6" SQUARE "TYPE S" POLISHED NICKEL BRONZE STRAINER & ELASTOMETRIC TRAP SEAL DEVICE (SEE "TG" ON SPECIALTIES SCHEDULE)
FS-1	FLOOR SINK	ZURN INDUSTRIES, INC. ZN-1901-P-HD	SEE DRAWINGS	8" DEEP C.I. BODY, 4" OUTLET SIZE, 12" NICKEL-BRONZE FRAME AND FULL GRATE WITH 1/2" SQUARE OPENINGS, 1/2" TRAP PRIMER CONNECTION
RD/OD	ROOF/OVERFLOW	FROET 100C	SEE DRAWINGS	BI-FUNCTIONAL ROOF DRAIN WITH LOW PROFILE OVERFLOW STRAINER; REFER TO PLANS FOR DISCHARGE SIZES AND COVERAGE AREAS
TD-1	TRENCH DRAIN	ZURN INDUSTRIES INC Z886 PERMA-TRENCH	EQUIPMENT BAYS 120	6" X 80" HDPE TRENCH DRAIN WITH HEAVY DUTY FRAME ASSY, 40" ANSI A112.21.1M SPECIAL DUTY & DIN 19580 LOAD CLASS F GALVANIZED DUCTILE IRON GRATES, 4" BOTTOM OUTLETS
TD-2	SHOWER DRAIN	INFINITY DRAIN FXIG-6536	WC'S 211, 212, 213	3-3/4" WIDE 305 LSTAINLESS STEEL PRE-PITCHED CHANNEL WITH FIXED OUTLET AND REMOVABLE GRATE; FLASH INTO FLOOR WATERPROOFING SYSTEM TO PREVENT GAPS AND/OR LEAKS
TD-3	SHOWER DRAIN	INFINITY DRAIN FXIG-6560	HCP WC 210	3-3/4" WIDE 305 LSTAINLESS STEEL PRE-PITCHED CHANNEL WITH FIXED OUTLET AND REMOVABLE GRATE; FLASH INTO FLOOR WATERPROOFING SYSTEM TO PREVENT GAPS AND/OR LEAKS



1 P7 GAS FIRED HOT WATER HEATER
NOT TO SCALE





5 P7 SWAY BRACE FOR LARGE DIAMETER PIPE
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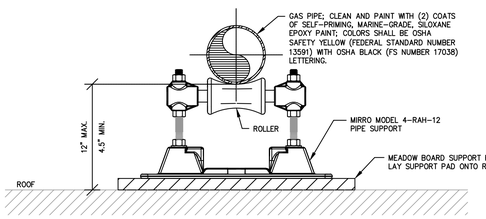
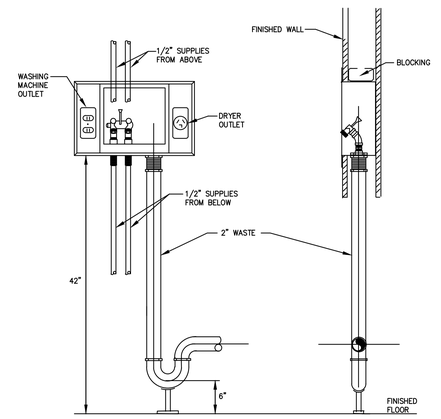


6 P7 ROOF-TOP GAS PIPE SUPPORT DETAIL
NOT TO SCALE

NOTES:

1. HEIGHT ADJUSTABLE FROM 4-1/2" TO 12"; EVEN LOADING REQUIRED – LOAD SHALL NOT EXCEED 186 LBS.
2. MAXIMUM SPACING SHALL NOT EXCEED:
   10'-0" FOR PIPES 1" AND LARGER
   5'-0" FOR 3/4" PIPES



7 P7 LAUNDRY SUPPLY & DRAIN DETAIL
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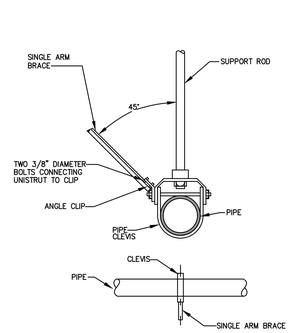

PLAN VIEW OF BRACE

2 P7 SINGLE ARM BRACE FOR CLEVIS HUNG PIPE
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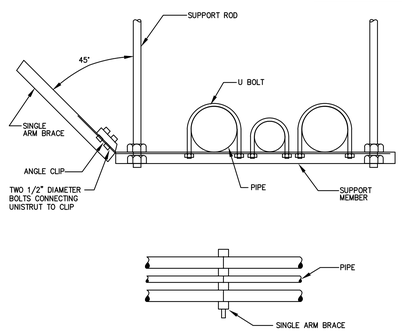
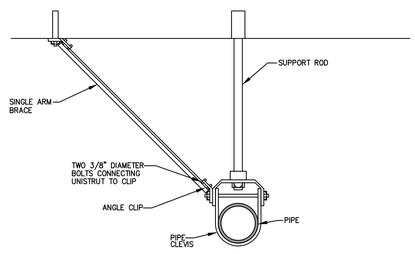


PLAN VIEW OF BRACE

3 P7 SINGLE ARM BRACE FOR TRAPEZE HUNG PIPE
NOT TO SCALE



4 P7 SINGLE ARM BRACE FOR CLEVIS HUNG PIPE
NOT TO SCALE

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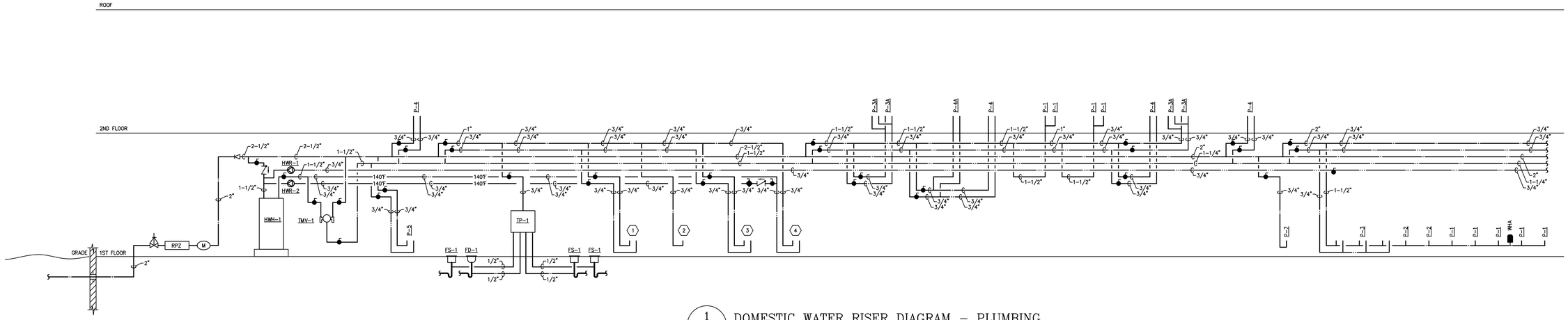
RELIEF FIRE COMPANY NO. 1
ADDITION / RENOVATION
BLOCK 86, LOTS 4, 5, 10, 11, 21, 22, 22.01 AND 23
17 PINE STREET
MOUNT HOLLY, NEW JERSEY
TITLE: SCHEDULES & DETAILS - PLUMBING

DRAWING DATE: 01 JULY 2020
REVISION DATE:
DRAWN BY: ACL
COMMISSION NO.: 5475B

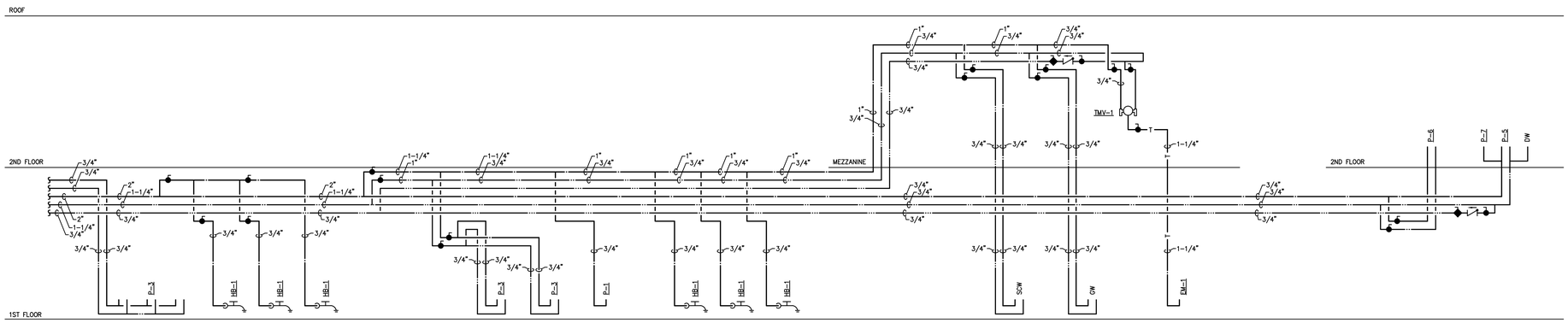
P7

August 28, 2020 3:18:49 p.m.
Drawing: 2637 P1.DWG



1 / P8 DOMESTIC WATER RISER DIAGRAM – PLUMBING

NOT TO SCALE



2 / P8 DOMESTIC WATER RISER DIAGRAM – PLUMBING

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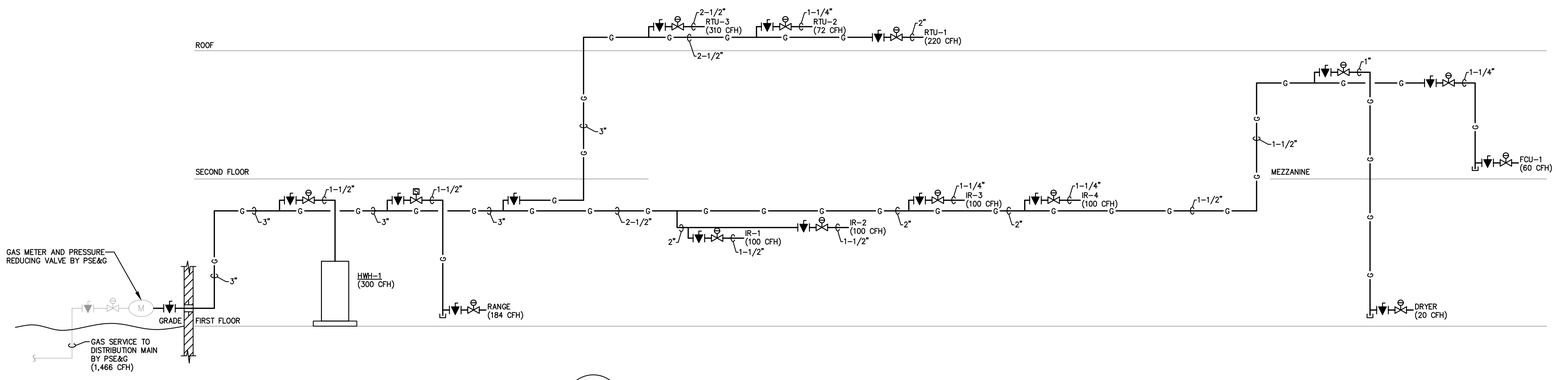
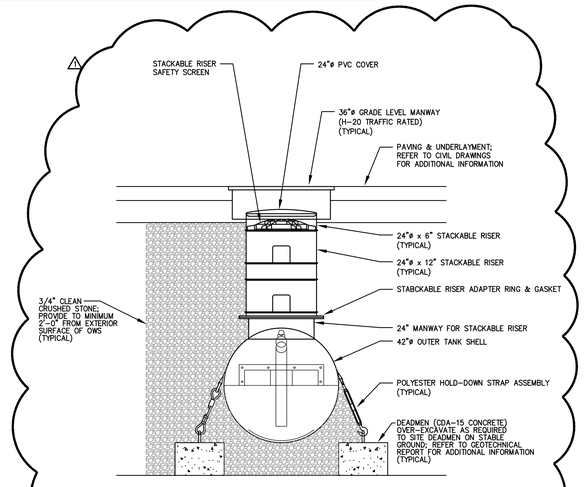


3 / P8 NATURAL GAS RISER DIAGRAM

NOT TO SCALE

NOTES:

1. TOTAL DEVELOPED LENGTH OF GAS PIPING TO HWH-1 = 60'-0"
2. TOTAL DEVELOPED LENGTH OF GAS PIPING TO RANGE = 150'-0"
3. TOTAL DEVELOPED LENGTH OF GAS PIPING TO RTU-3 = 250'-0"
4. TOTAL DEVELOPED LENGTH OF GAS PIPING TO RTU-2 = 250'-0"
5. TOTAL DEVELOPED LENGTH OF GAS PIPING TO RTU-1 = 300'-0"
6. TOTAL DEVELOPED LENGTH OF GAS PIPING TO IR-1 = 350'-0"
7. TOTAL DEVELOPED LENGTH OF GAS PIPING TO IR-2 = 350'-0"
8. TOTAL DEVELOPED LENGTH OF GAS PIPING TO IR-3 = 300'-0"
9. TOTAL DEVELOPED LENGTH OF GAS PIPING TO IR-4 = 300'-0"
10. TOTAL DEVELOPED LENGTH OF GAS PIPING TO DRYER = 450'-0"
11. TOTAL DEVELOPED LENGTH OF GAS PIPING TO FCU-1 = 450'-0"
12. THE CONTRACTOR IS RESPONSIBLE FOR COORDINATING INSTALLATION OF UNDERGROUND GAS PIPING WITH EXISTING UNDERGROUND UTILITIES. ALL UTILITIES SHALL BE MARKED OUT AS REQUIRED BY NJ/UA, CALL BEFORE YOU DIG.
13. ALL GAS PRV'S SHALL BE EQUIMETER LOCK-UP TYPE APPROVED BY PSE&G. ALL VENTS SHALL BE EXTENDED OUTSIDE OF BUILDING AND PROVIDED WITH GOOSENECK AND INSECT SCREEN.
14. ALL EXPOSED NATURAL GAS PIPING SHALL BE PAINTED YELLOW WITH BLACK MARKING. FOR ADDITIONAL INFORMATION REFER TO WRITTEN SPECIFICATIONS.



4 / P8 OIL/WATER INTERCEPTOR DETAIL

NOT TO SCALE

NOTES:

1. CONTRACTOR SHALL PROVIDE MANUFACTURER'S STRUCTURAL AND BUOYANCY CALCULATIONS, SIGNED BY MANUFACTURER'S PROFESSIONAL ENGINEER, WITH SHOP DRAWING SUBMITTAL.
2. DUE TO LIKELYHOOD OF ENCOUNTERING GROUND WATER DURING UNDERGROUND WORK, REFER TO DE-WATERING SPECIFICATION UNDER DIVISION 32 OF THE PROJECT MANUAL.

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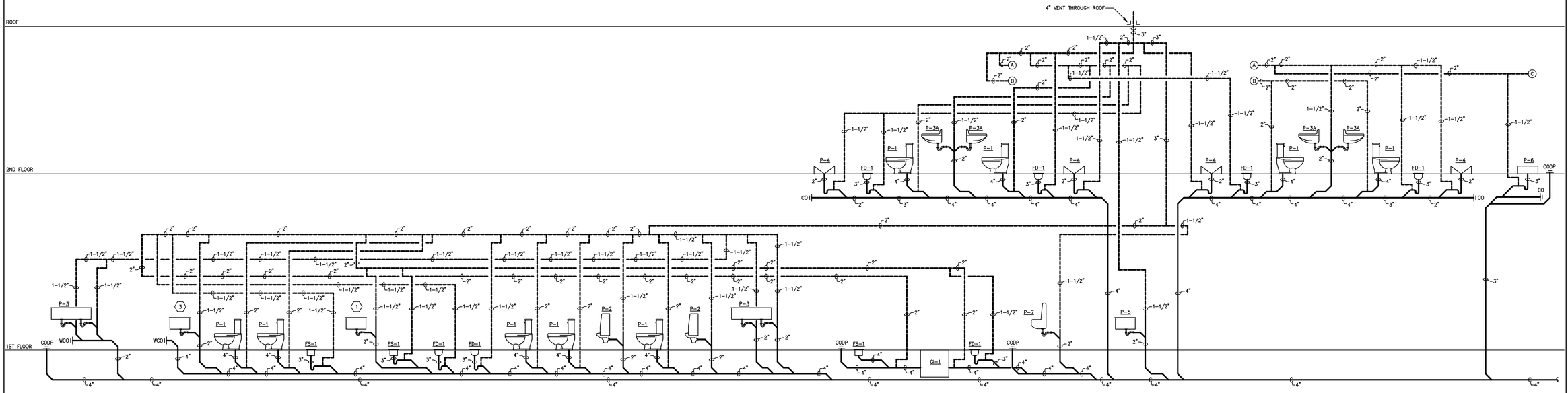
TITLE: DOMESTIC WATER RISER DIAGRAMS - PLUMBING

DRAWING DATE: 01 JULY 2020
REVISION DATE: 1 25 SEPT 2020
DRAWN BY: ACL
COMMISSION NO.: 5475B

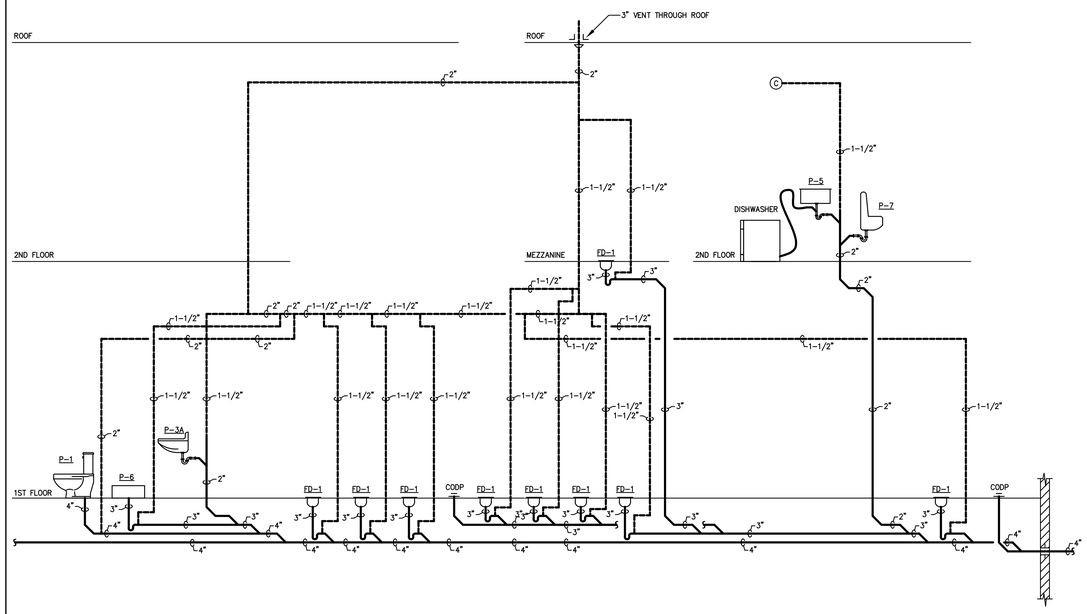
P8

9 OF 10

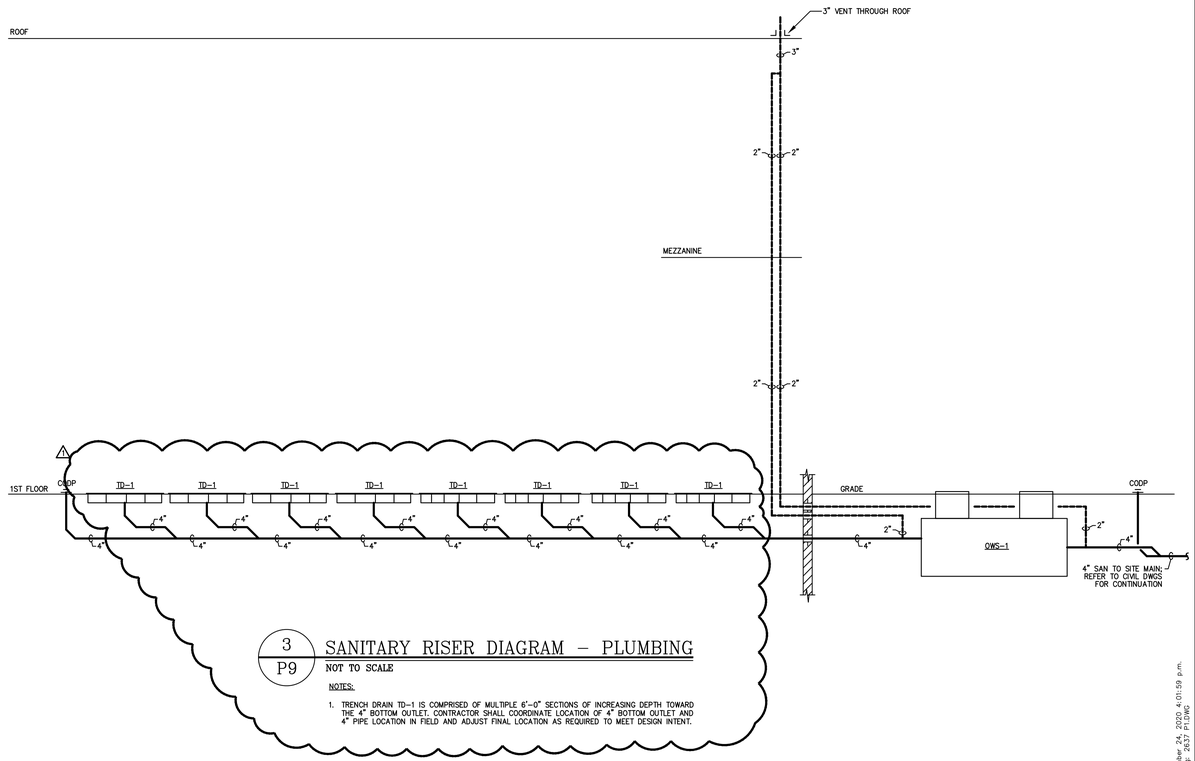
September 24, 2020, 4:01:38 p.m.
Drawing: 2637 P1.DWG



1 P9 SANITARY RISER DIAGRAM – PLUMBING
NOT TO SCALE



2 P9 SANITARY RISER DIAGRAM – PLUMBING
NOT TO SCALE



3 P9 SANITARY RISER DIAGRAM – PLUMBING
NOT TO SCALE

NOTES:

1. TRENCH DRAIN TD-1 IS COMPRISED OF MULTIPLE 6'-0" SECTIONS OF INCREASING DEPTH TOWARD THE 4" BOTTOM OUTLET. CONTRACTOR SHALL COORDINATE LOCATION OF 4" BOTTOM OUTLET AND 4" PIPE LOCATION IN FIELD AND ADJUST FINAL LOCATION AS REQUIRED TO MEET DESIGN INTENT.

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TITLE: SANITARY RISER DIAGRAMS - PLUMBING

DRAWING DATE: 01 JULY 2020
1 REVISION DATE: 25 SEPT 2020
DRAWN BY: ACL
COMMISION NO.: 5475B

P9

10 OF 10

September 24, 2020 4:01:59 p.m.
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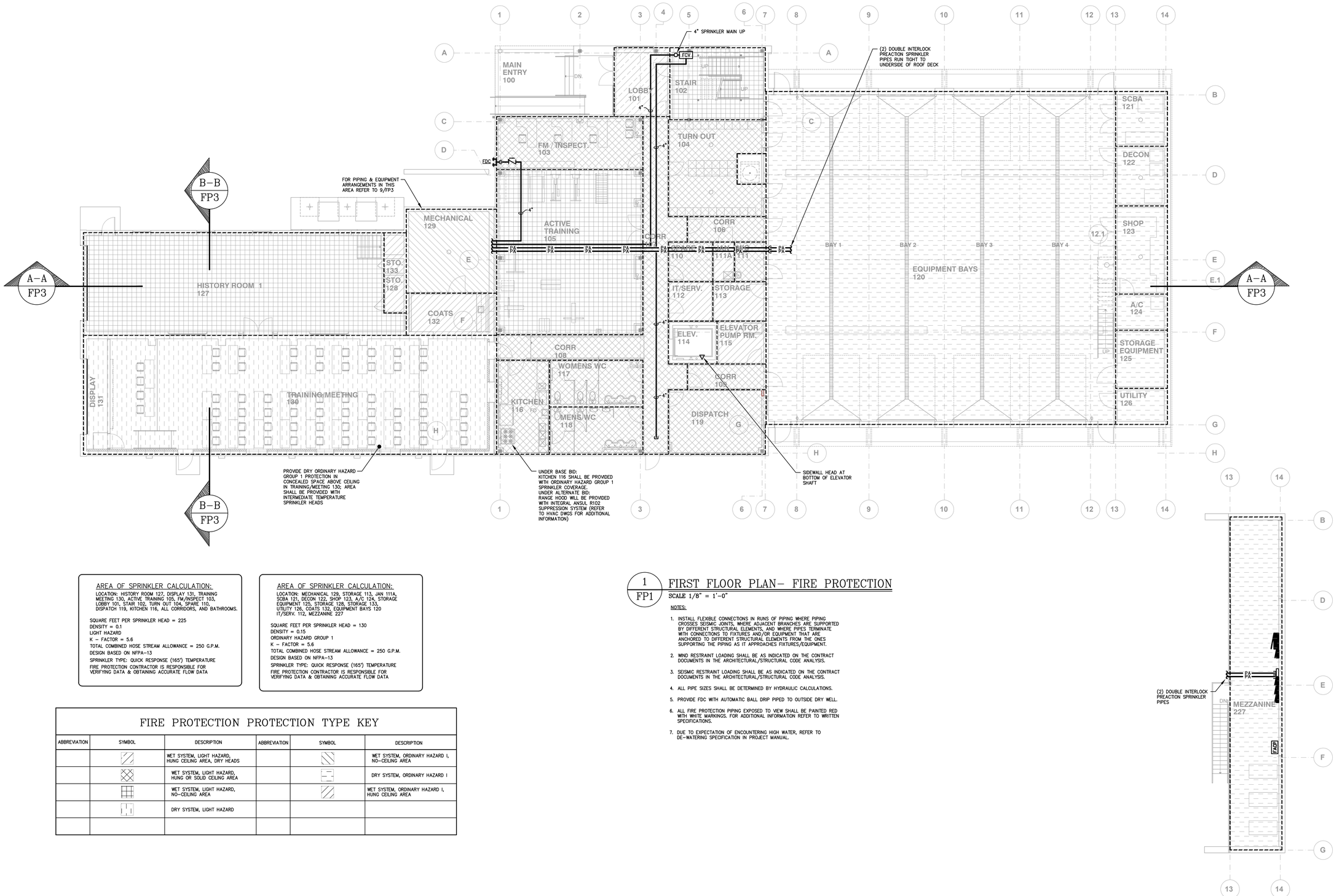

AREA OF SPRINKLER CALCULATION:

LOCATION: HISTORY ROOM 127, DISPLAY 131, TRAINING MEETING 130, ACTIVE TRAINING 105, FM/INSPECT 103, LOBBY 101, STAIR 102, TURN OUT 104, SPARE 110, DISPATCH 119, KITCHEN 116, ALL CORRIDORS, AND BATHROOMS.

SQUARE FEET PER SPRINKLER HEAD = 225
DENSITY = 0.1
LIGHT HAZARD
K – FACTOR = 5.6
TOTAL COMBINED HOSE STREAM ALLOWANCE = 250 G.P.M.
DESIGN BASED ON NFPA–13
SPRINKLER TYPE: QUICK RESPONSE (165°) TEMPERATURE
FIRE PROTECTION CONTRACTOR IS RESPONSIBLE FOR VERIFYING DATA & OBTAINING ACCURATE FLOW DATA

AREA OF SPRINKLER CALCULATION:

LOCATION: MECHANICAL 129, STORAGE 113, JAN 111A, SCBA 121, DECON 122, SHOP 123, A/C 124, STORAGE EQUIPMENT 125, STORAGE 128, STORAGE 133, UTILITY 126, COATS 132, EQUIPMENT BAYS 120 IT/SERV. 112, MEZZANINE 227

SQUARE FEET PER SPRINKLER HEAD = 130
DENSITY = 0.15
ORDINARY HAZARD GROUP 1
K – FACTOR = 5.6
TOTAL COMBINED HOSE STREAM ALLOWANCE = 250 G.P.M.
DESIGN BASED ON NFPA–13
SPRINKLER TYPE: QUICK RESPONSE (165°) TEMPERATURE
FIRE PROTECTION CONTRACTOR IS RESPONSIBLE FOR VERIFYING DATA & OBTAINING ACCURATE FLOW DATA

FIRE PROTECTION PROTECTION TYPE KEY

ABBREVIATION	SYMBOL	DESCRIPTION	ABBREVIATION	SYMBOL	DESCRIPTION
		WET SYSTEM, LIGHT HAZARD, HUNG CEILING AREA, DRY HEADS			WET SYSTEM, ORDINARY HAZARD I, NO–CEILING AREA
		WET SYSTEM, LIGHT HAZARD, HUNG OR SOLID CEILING AREA			DRY SYSTEM, ORDINARY HAZARD I
		WET SYSTEM, LIGHT HAZARD, NO–CEILING AREA			WET SYSTEM, ORDINARY HAZARD I, HUNG CEILING AREA
		DRY SYSTEM, LIGHT HAZARD			

1/FP1 FIRST FLOOR PLAN– FIRE PROTECTION

SCALE 1/8" = 1'–0"

NOTES:

1. INSTALL FLEXIBLE CONNECTIONS IN RUNS OF PIPING WHERE PIPING CROSSES SEISMIC JOINTS, WHERE ADJACENT BRANCHES ARE SUPPORTED BY DIFFERENT STRUCTURAL ELEMENTS, AND WHERE PIPES TERMINATE WITH CONNECTIONS TO FIXTURES AND/OR EQUIPMENT THAT ARE ANCHORED TO DIFFERENT STRUCTURAL ELEMENTS FROM THE ONES SUPPORTING THE PIPING AS IT APPROACHES FIXTURES/EQUIPMENT.
2. WIND RESTRAINT LOADING SHALL BE AS INDICATED ON THE CONTRACT DOCUMENTS IN THE ARCHITECTURAL/STRUCTURAL CODE ANALYSIS.
3. SEISMIC RESTRAINT LOADING SHALL BE AS INDICATED ON THE CONTRACT DOCUMENTS IN THE ARCHITECTURAL/STRUCTURAL CODE ANALYSIS.
4. ALL PIPE SIZES SHALL BE DETERMINED BY HYDRAULIC CALCULATIONS.
5. PROVIDE FDC WITH AUTOMATIC BALL DRIP PIPED TO OUTSIDE DRY WELL.
6. ALL FIRE PROTECTION PIPING EXPOSED TO VIEW SHALL BE PAINTED RED WITH WHITE MARKINGS. FOR ADDITIONAL INFORMATION REFER TO WRITTEN SPECIFICATIONS.
7. DUE TO EXPECTATION OF ENCOUNTERING HIGH WATER, REFER TO DE–WATERING SPECIFICATION IN PROJECT MANUAL.

2/FP1 MEZZANINE PLAN– FIRE PROTECTION

SCALE 1/8" = 1'–0"

NOTES:

1. WIND RESTRAINT LOADING SHALL BE AS INDICATED ON THE CONTRACT DOCUMENTS IN THE ARCHITECTURAL/STRUCTURAL CODE ANALYSIS.
2. SEISMIC RESTRAINT LOADING SHALL BE AS INDICATED ON THE CONTRACT DOCUMENTS IN THE ARCHITECTURAL/STRUCTURAL CODE ANALYSIS.
3. ALL PIPE SIZES SHALL BE DETERMINED BY HYDRAULIC CALCULATIONS.
4. ALL FIRE PROTECTION PIPING EXPOSED TO VIEW SHALL BE PAINTED RED WITH WHITE MARKINGS. FOR ADDITIONAL INFORMATION REFER TO WRITTEN SPECIFICATIONS.
5. DUE TO EXPECTATION OF ENCOUNTERING HIGH WATER, REFER TO DE–WATERING SPECIFICATION IN PROJECT MANUAL.

NORTH

October 21, 2020 12:46:17 p.m.
Drawing: 2637 FP1.DWG

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Frank Thrall, P.E.
Professional Engineer
NJ. 38636

RELIEF FIRE COMPANY NO. 1 ADDITION / RENOVATION

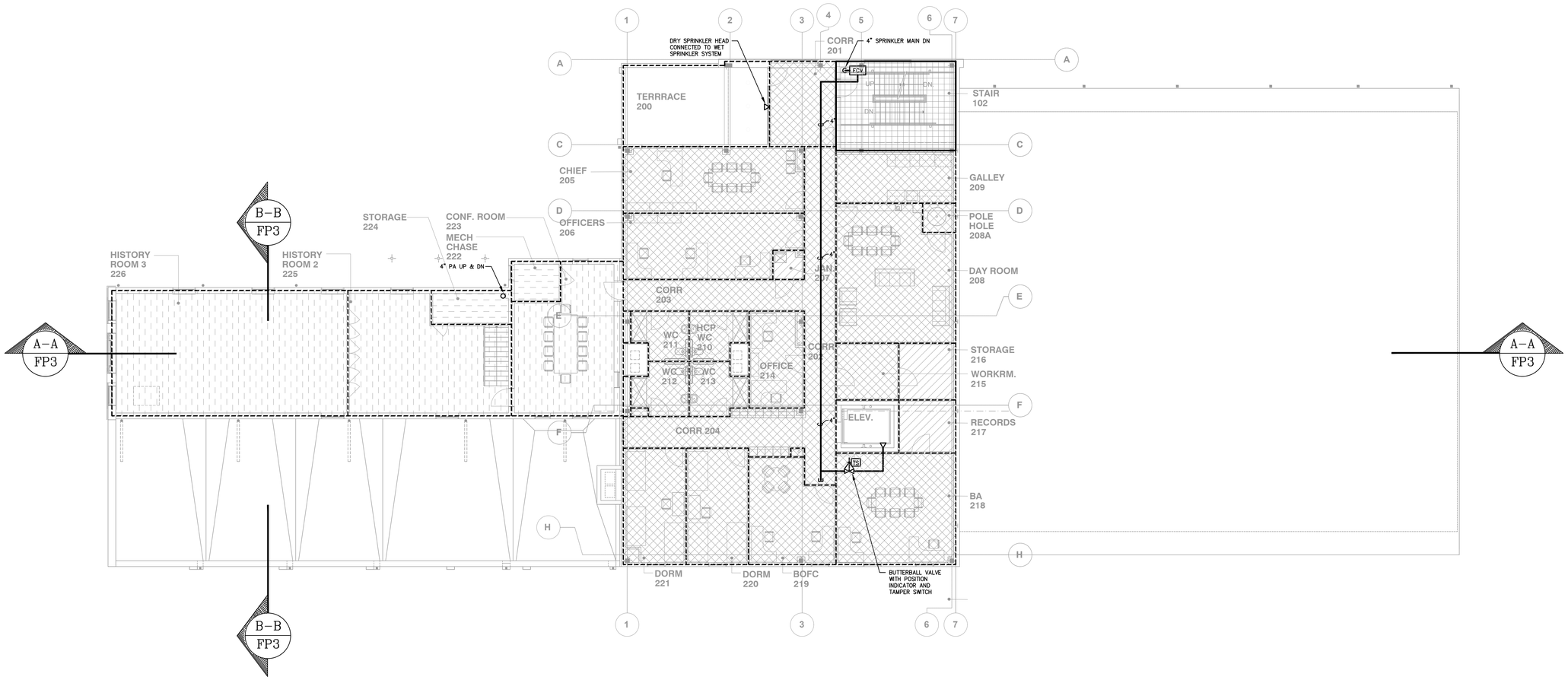
BLOCK 86, LOTS 4, 5, 10, 11, 21, 22, 22.01 AND 23
17 PINE STREET
MOUNT HOLLY, NEW JERSEY

TITLE: FIRST FLOOR PLAN - FIRE PROTECTION

DRAWING DATE: 01 JULY 2020
REVISION DATE: 25 SEPT 2020
DRAWN BY: ACL
COMMISION NO: 5475B

FP1

1 OF 3



AREA OF SPRINKLER CALCULATION:

LOCATION: STAIR 102, CORRIDOR 201, CORRIDOR 202, CORRIDOR 203, CORRIDOR 204, CHIEF 205, OFFICERS 206, DAY ROOM 208, GALLEY 209, HCP WC 210, WC 211 WC 212, WC 213, OFFICE 214, WORK ROOM 215, BA 218, BOFC 219, DORM 220, DORM 221, CONFERENCE RM 223, HISTORY RM 2 225 AND HISTORY RM 3 226.

SQUARE FEET PER SPRINKLER HEAD = 225
DENSITY = 0.1
LIGHT HAZARD
K – FACTOR = 5.6
TOTAL COMBINED HOSE STREAM ALLOWANCE = 250 G.P.M.
DESIGN BASED ON NFPA–13
SPRINKLER TYPE: QUICK RESPONSE (165°) TEMPERATURE
FIRE PROTECTION CONTRACTOR IS RESPONSIBLE FOR VERIFYING DATA & OBTAINING ACCURATE FLOW DATA

AREA OF SPRINKLER CALCULATION:

LOCATION: STORAGE 224, MECHANICAL CHASE 222, JAN. 207, STORAGE 216 AND RECORDS 217

SQUARE FEET PER SPRINKLER HEAD = 130
DENSITY = 0.15
ORDINARY HAZARD GROUP 1
K – FACTOR = 5.6
TOTAL COMBINED HOSE STREAM ALLOWANCE = 250 G.P.M.
DESIGN BASED ON NFPA–13
SPRINKLER TYPE: QUICK RESPONSE (165°) TEMPERATURE
FIRE PROTECTION CONTRACTOR IS RESPONSIBLE FOR VERIFYING DATA & OBTAINING ACCURATE FLOW DATA

FIRE PROTECTION PROTECTION TYPE KEY

ABBREVIATION	SYMBOL	DESCRIPTION	ABBREVIATION	SYMBOL	DESCRIPTION
		WET SYSTEM, LIGHT HAZARD, HUNG CEILING AREA, DRY HEADS			WET SYSTEM, ORDINARY HAZARD I, NO–CEILING AREA
		WET SYSTEM, LIGHT HAZARD, HUNG OR SOLID CEILING AREA			DRY SYSTEM, ORDINARY HAZARD I
		WET SYSTEM, LIGHT HAZARD, NO–CEILING AREA			WET SYSTEM, ORDINARY HAZARD I, HUNG CEILING AREA
		DRY SYSTEM, LIGHT HAZARD			

1 / FP2 SECOND FLOOR PLAN – FIRE PROTECTION

SCALE 1/8" = 1'–0"

NOTES:

1. INSTALL FLEXIBLE CONNECTIONS IN RUNS OF PIPING WHERE PIPING CROSSES SEISMIC JOINTS, WHERE ADJACENT BRANCHES ARE SUPPORTED BY DIFFERENT STRUCTURAL ELEMENTS, AND WHERE PIPES TERMINATE WITH CONNECTIONS TO FIXTURES AND/OR EQUIPMENT THAT ARE ANCHORED TO DIFFERENT STRUCTURAL ELEMENTS FROM THE ONES SUPPORTING THE PIPING AS IT APPROACHES FIXTURES/EQUIPMENT.
2. WIND RESTRAINT LOADING SHALL BE AS INDICATED ON THE CONTRACT DOCUMENTS IN THE ARCHITECTURAL/STRUCTURAL CODE ANALYSIS.
3. SEISMIC RESTRAINT LOADING SHALL BE AS INDICATED ON THE CONTRACT DOCUMENTS IN THE ARCHITECTURAL/STRUCTURAL CODE ANALYSIS.
4. ALL PIPE SIZES SHALL BE DETERMINED BY HYDRAULIC CALCULATIONS.
5. ALL FIRE PROTECTION PIPING EXPOSED TO VIEW SHALL BE PAINTED RED WITH WHITE MARKINGS. FOR ADDITIONAL INFORMATION REFER TO WRITTEN SPECIFICATIONS.
6. CONTRACTOR SHALL CLOSELY COORDINATE INSTALLATION OF SPRINKLER HEAD IN ALL AREAS CONTAINING HISTORIC METAL CEILINGS WITH LAYOUT OF HISTORIC METAL CEILINGS TO PROVIDE UNIFORM AND SYMMETRICAL APPEARANCE TO COMPLEMENT AESTHETIC OF CEILING PATTERN. PROVIDE ADDITIONAL HEADS BEYOND THAT REQUIRED TO ACHIEVE NECESSARY COVERAGE IF REQUIRED. SUBMIT PROPOSED LAYOUT DRAWINGS SHOWING COORDINATION WITH PATTERN OF HISTORIC METAL CEILING TO ARCHITECT & ENGINEER FOR APPROVAL PRIOR TO FABRICATION.

NORTH

October 21, 2020 12:49:35 p.m.
Drawing: 2637 FP1.DWG

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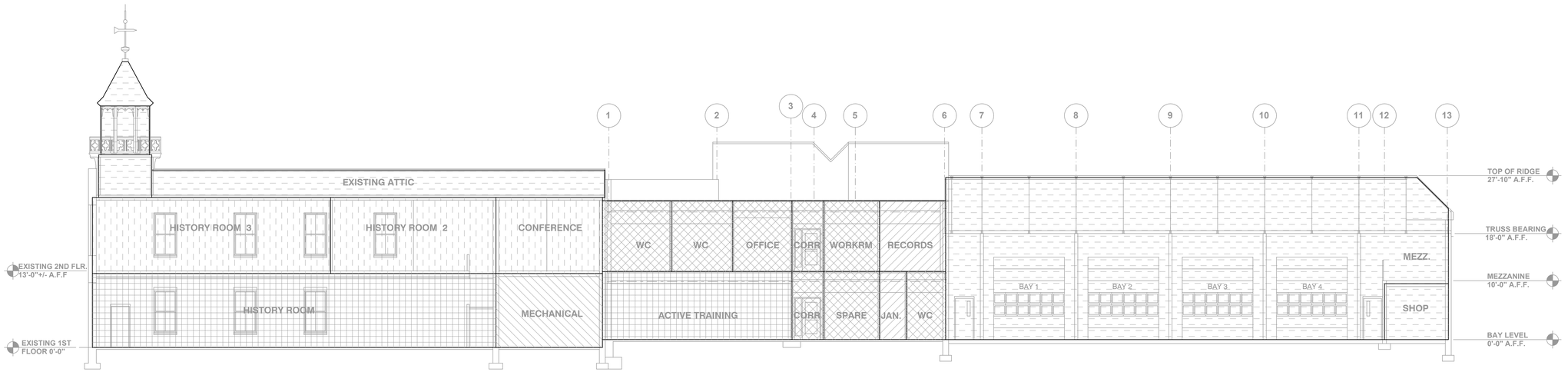
Tom Thiele, P.E.
Professional Engineer
NJ. 38656

RELIEF FIRE COMPANY NO. 1
ADDITION / RENOVATION
BLOCK 86, LOTS 4, 5, 10, 11, 21, 22, 22.01 AND 23
17 PINE STREET
MOUNT HOLLY, NEW JERSEY

TITLE: SECOND FLOOR PLAN - FIRE PROTECTION

DRAWING DATE: 01 JULY 2020
REVISION DATE: 25 SEPT 2020
DRAWN BY: ACL
COMMISION NO.: 5475B

FP2



A-A / FP3 SECTION – FIRE PROTECTION

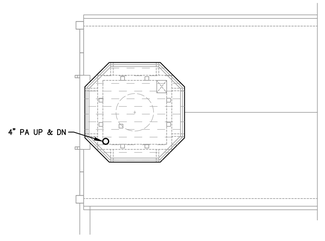
SCALE 1/8" = 1'-0"

NOTES:

1. INSTALL FLEXIBLE CONNECTIONS IN RUNS OF PIPING WHERE PIPING CROSSES SEISMIC JOINTS, WHERE ADJACENT BRANCHES ARE SUPPORTED BY DIFFERENT STRUCTURAL ELEMENTS, AND WHERE PIPES TERMINATE WITH CONNECTIONS TO FIXTURES AND/OR EQUIPMENT THAT ARE ANCHORED TO DIFFERENT STRUCTURAL ELEMENTS FROM THE ONES SUPPORTING THE PIPING AS IT APPROACHES FIXTURES/EQUIPMENT.
2. WIND RESTRAINT LOADING SHALL BE AS INDICATED ON THE CONTRACT DOCUMENTS IN THE ARCHITECTURAL/STRUCTURAL CODE ANALYSIS.
3. SEISMIC RESTRAINT LOADING SHALL BE AS INDICATED ON THE CONTRACT DOCUMENTS IN THE ARCHITECTURAL/STRUCTURAL CODE ANALYSIS.
4. ALL PIPE SIZES SHALL BE DETERMINED BY HYDRAULIC CALCULATIONS.
5. ALL EXPOSED FIRE PROTECTION PIPING SHALL BE PAINTED RED WITH WHITE MARKINGS. FOR ADDITIONAL INFORMATION REFER TO WRITTEN SPECIFICATIONS.
6. CONTRACTOR SHALL CLOSELY COORDINATE INSTALLATION OF SPRINKLER HEAD IN ALL AREAS CONTAINING HISTORIC METAL CEILINGS WITH LAYOUT OF HISTORIC METAL CEILINGS TO PROVIDE UNIFORM AND SYMMETRICAL APPEARANCE TO COMPLEMENT AESTHETIC OF CEILING PATTERN. PROVIDE ADDITIONAL HEADS BEYOND THAT REQUIRED TO ACHIEVE NECESSARY COVERAGE IF REQUIRED. SUBMIT PROPOSED LAYOUT DRAWINGS SHOWING COORDINATION WITH PATTERN OF HISTORIC METAL CEILING TO ARCHITECT & ENGINEER FOR APPROVAL PRIOR TO FABRICATION.
7. ATTIC, CUPOLA, AND CUPOLA ATTIC SHALL BE PROTECTED BY DOUBLE-INTERLOCK PREACTION SYSTEM(S). NUMBER OF SYSTEMS, SYSTEM LOCATIONS, AND SYSTEM ZONING TO BE DETERMINED BY HYDRAULIC DESIGN.
8. DUE TO EXPECTATION OF ENCOUNTERING HIGH WATER, REFER TO DE-WATERING SPECIFICATION IN PROJECT MANUAL.

FIRE PROTECTION PROTECTION TYPE KEY

ABBREVIATION	SYMBOL	DESCRIPTION	ABBREVIATION	SYMBOL	DESCRIPTION
		WET SYSTEM, LIGHT HAZARD, HUNG CEILING AREA, DRY HEADS			WET SYSTEM, ORDINARY HAZARD I, NO-CEILING AREA
		WET SYSTEM, LIGHT HAZARD, HUNG OR SOLID CEILING AREA			DRY SYSTEM, ORDINARY HAZARD I
		WET SYSTEM, LIGHT HAZARD, NO-CEILING AREA			WET SYSTEM, ORDINARY HAZARD I, HUNG CEILING AREA
		DRY SYSTEM, LIGHT HAZARD			

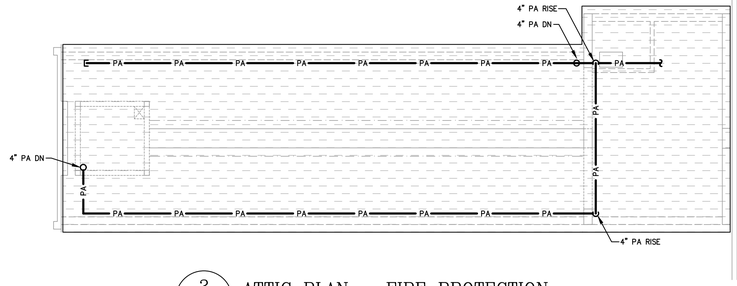


1 / FP3 CUPOLA PLAN – FIRE PROTECTION

SCALE 1/8" = 1'-0"

NOTES:

1. CUPOLA AND CUPOLA ATTIC SHALL BE PROTECTED BY DOUBLE-INTERLOCK PREACTION SYSTEM.
2. WIND RESTRAINT LOADING SHALL BE AS INDICATED ON THE CONTRACT DOCUMENTS IN THE ARCHITECTURAL/STRUCTURAL CODE ANALYSIS.
3. SEISMIC RESTRAINT LOADING SHALL BE AS INDICATED ON THE CONTRACT DOCUMENTS IN THE ARCHITECTURAL/STRUCTURAL CODE ANALYSIS.
4. ALL PIPE SIZES SHALL BE DETERMINED BY HYDRAULIC CALCULATIONS.
5. ALL FIRE PROTECTION PIPING EXPOSED TO VIEW SHALL BE PAINTED RED WITH WHITE MARKINGS. FOR ADDITIONAL INFORMATION REFER TO WRITTEN SPECIFICATIONS.
6. CONTRACTOR SHALL CLOSELY COORDINATE INSTALLATION OF SPRINKLER HEAD IN ALL AREAS CONTAINING HISTORIC METAL CEILINGS WITH LAYOUT OF HISTORIC METAL CEILINGS TO PROVIDE UNIFORM AND SYMMETRICAL APPEARANCE TO COMPLEMENT AESTHETIC OF CEILING PATTERN. PROVIDE ADDITIONAL HEADS BEYOND THAT REQUIRED TO ACHIEVE NECESSARY COVERAGE IF REQUIRED. SUBMIT PROPOSED LAYOUT DRAWINGS SHOWING COORDINATION WITH PATTERN OF HISTORIC METAL CEILING TO ARCHITECT & ENGINEER FOR APPROVAL PRIOR TO FABRICATION.
7. ATTIC, CUPOLA, AND CUPOLA ATTIC SHALL BE PROTECTED BY DOUBLE-INTERLOCK PREACTION SYSTEM(S). NUMBER OF SYSTEMS, SYSTEM LOCATIONS, AND SYSTEM ZONING TO BE DETERMINED BY HYDRAULIC DESIGN.

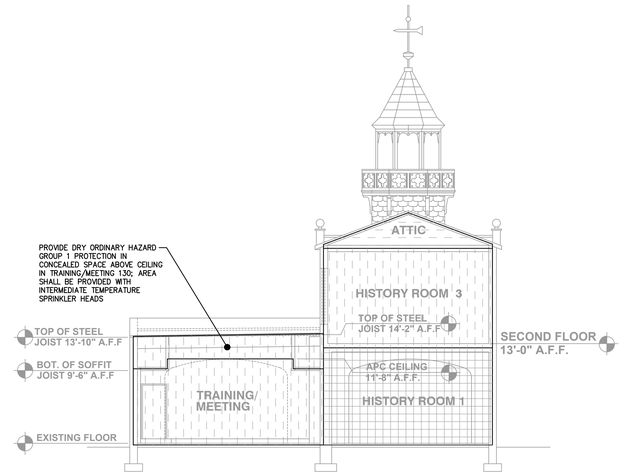


2 / FP3 ATTIC PLAN – FIRE PROTECTION

SCALE 1/8" = 1'-0"

NOTES:

1. INSTALL FLEXIBLE CONNECTIONS IN RUNS OF PIPING WHERE PIPING CROSSES SEISMIC JOINTS, WHERE ADJACENT BRANCHES ARE SUPPORTED BY DIFFERENT STRUCTURAL ELEMENTS, AND WHERE PIPES TERMINATE WITH CONNECTIONS TO FIXTURES AND/OR EQUIPMENT THAT ARE ANCHORED TO DIFFERENT STRUCTURAL ELEMENTS FROM THE ONES SUPPORTING THE PIPING AS IT APPROACHES FIXTURES/EQUIPMENT.
2. WIND RESTRAINT LOADING SHALL BE AS INDICATED ON THE CONTRACT DOCUMENTS IN THE ARCHITECTURAL/STRUCTURAL CODE ANALYSIS.
3. SEISMIC RESTRAINT LOADING SHALL BE AS INDICATED ON THE CONTRACT DOCUMENTS IN THE ARCHITECTURAL/STRUCTURAL CODE ANALYSIS.
4. ALL PIPE SIZES SHALL BE DETERMINED BY HYDRAULIC CALCULATIONS.
5. ALL FIRE PROTECTION PIPING EXPOSED TO VIEW SHALL BE PAINTED RED WITH WHITE MARKINGS. FOR ADDITIONAL INFORMATION REFER TO WRITTEN SPECIFICATIONS.
6. CONTRACTOR SHALL CLOSELY COORDINATE INSTALLATION OF SPRINKLER HEAD IN ALL AREAS CONTAINING HISTORIC METAL CEILINGS WITH LAYOUT OF HISTORIC METAL CEILINGS TO PROVIDE UNIFORM AND SYMMETRICAL APPEARANCE TO COMPLEMENT AESTHETIC OF CEILING PATTERN. PROVIDE ADDITIONAL HEADS BEYOND THAT REQUIRED TO ACHIEVE NECESSARY COVERAGE IF REQUIRED. SUBMIT PROPOSED LAYOUT DRAWINGS SHOWING COORDINATION WITH PATTERN OF HISTORIC METAL CEILING TO ARCHITECT & ENGINEER FOR APPROVAL PRIOR TO FABRICATION.
7. ATTIC, CUPOLA, AND CUPOLA ATTIC SHALL BE PROTECTED BY DOUBLE-INTERLOCK PREACTION SYSTEM(S). NUMBER OF SYSTEMS, SYSTEM LOCATIONS, AND SYSTEM ZONING TO BE DETERMINED BY HYDRAULIC DESIGN.



B-B / FP3 SECTION – FIRE PROTECTION

SCALE 1/8" = 1'-0"

NOTES:

1. INSTALL FLEXIBLE CONNECTIONS IN RUNS OF PIPING WHERE PIPING CROSSES SEISMIC JOINTS, WHERE ADJACENT BRANCHES ARE SUPPORTED BY DIFFERENT STRUCTURAL ELEMENTS, AND WHERE PIPES TERMINATE WITH CONNECTIONS TO FIXTURES AND/OR EQUIPMENT THAT ARE ANCHORED TO DIFFERENT STRUCTURAL ELEMENTS FROM THE ONES SUPPORTING THE PIPING AS IT APPROACHES FIXTURES/EQUIPMENT.
2. WIND RESTRAINT LOADING SHALL BE AS INDICATED ON THE CONTRACT DOCUMENTS IN THE ARCHITECTURAL/STRUCTURAL CODE ANALYSIS.
3. SEISMIC RESTRAINT LOADING SHALL BE AS INDICATED ON THE CONTRACT DOCUMENTS IN THE ARCHITECTURAL/STRUCTURAL CODE ANALYSIS.
4. ALL PIPE SIZES SHALL BE DETERMINED BY HYDRAULIC CALCULATIONS.
5. ALL EXPOSED FIRE PROTECTION PIPING SHALL BE PAINTED RED WITH WHITE MARKINGS. FOR ADDITIONAL INFORMATION REFER TO WRITTEN SPECIFICATIONS.
6. CONTRACTOR SHALL CLOSELY COORDINATE INSTALLATION OF SPRINKLER HEAD IN ALL AREAS CONTAINING HISTORIC METAL CEILINGS WITH LAYOUT OF HISTORIC METAL CEILINGS TO PROVIDE UNIFORM AND SYMMETRICAL APPEARANCE TO COMPLEMENT AESTHETIC OF CEILING PATTERN. PROVIDE ADDITIONAL HEADS BEYOND THAT REQUIRED TO ACHIEVE NECESSARY COVERAGE IF REQUIRED. SUBMIT PROPOSED LAYOUT DRAWINGS SHOWING COORDINATION WITH PATTERN OF HISTORIC METAL CEILING TO ARCHITECT & ENGINEER FOR APPROVAL PRIOR TO FABRICATION.
7. ATTIC, CUPOLA, AND CUPOLA ATTIC SHALL BE PROTECTED BY DOUBLE-INTERLOCK PREACTION SYSTEM(S). NUMBER OF SYSTEMS, SYSTEM LOCATIONS, AND SYSTEM ZONING TO BE DETERMINED BY HYDRAULIC DESIGN.
8. DUE TO EXPECTATION OF ENCOUNTERING HIGH WATER, REFER TO DE-WATERING SPECIFICATION IN PROJECT MANUAL.

NORTH

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RELIEF FIRE COMPANY NO. 1
ADDITION / RENOVATION
BLOCK 86, LOTS 4, 5, 10, 11, 21, 22, 22.01 AND 23
17 PINE STREET
MOUNT HOLLY, NEW JERSEY

TITLE: SECTIONS - FIRE PROTECTION

DRAWING DATE: 01 JULY 2020
REVISION DATE: 25 SEPT 2020
DRAWN BY: ACL
COMMISION NO.: 5475B

FP3
2 OF 3

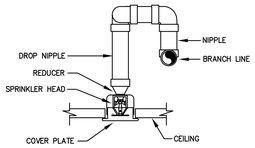
October 21, 2020 12:49:53 p.m.
Drawing: 2637 FP1.DWG

FIRE PROTECTION SYMBOL LIST

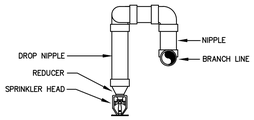
ABBREVIATION	SYMBOL	DESCRIPTION	ABBREVIATION	SYMBOL	DESCRIPTION
		CONCEALED TYPE SPRINKLER HEAD	PG		PRESSURE GAUGE
		PENDANT TYPE SPRINKLER HEAD	FC		FLEXIBLE CONNECTION
		UPRIGHT TYPE SPRINKLER HEAD			BRANCH – TOP CONNECTION
		SIDEWALL (DRY TYPE) SPRINKLER HEAD			BRANCH – BOTTOM CONNECTION
		DRY TYPE SPRINKLER HEAD			
SP		SPRINKLER PIPING	PS	P	PRESSURE SWITCH
		PIPING DROP	TS	TS	TAMPER SWITCH
		PIPING RISE	WFS	FS	WATER FLOW SWITCH
CO		CAPPED OUTLET	FCV	FCV	FLOOR CONTROL VALVE ASSEMBLY
BV		BALL VALVE	ZCV	ZCV	ZONE CONTROL VALVE ASSEMBLY
RCV		RISER CONTROL VALVE	RPDA	RPDA	REDUCED PRESSURE ZONE DETECTOR ASSEMBLY
ABD		FIRE DEPARTMENT SIAMESE CONNECTION AUTOMATIC (BALL DRIP & CHECK VALVE	FDC		WALL MOUNTED FIRE DEPARTMENT SIAMESE CONNECTION
O.S.&Y.	TS	OUTSIDE STEM & YOKE VALVE WITH TAMPER SWITCH			VALVE ON VERTICAL
ACV		ALARM CHECK VALVE (WITH ALL RELATED APPURTENANCES)	AV		ANGLE VALVE
PAV		PRE-ACTION VALVE (WITH ALL RELATED APPURTENANCES)	CV		CHECK VALVE
		WET SYSTEM, LIGHT HAZARD, HUNG CEILING AREA, DRY HEADS			WET SYSTEM, LIGHT HAZARD, HUNG OR SOLID CEILING AREA
		WET SYSTEM, ORDINARY HAZARD I, HUNG CEILING AREA			WET SYSTEM, LIGHT HAZARD, NO-CEILING AREA
PA	PA	PREACTION SPRINKLER PIPING			WET SYSTEM, ORDINARY HAZARD I, NO-CEILING AREA
					DRY SYSTEM, ORDINARY HAZARD I
					DRY SYSTEM, LIGHT HAZARD

FIRE PROTECTION ABBREVIATIONS

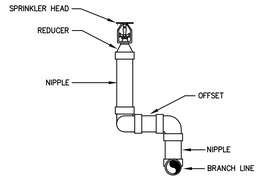
AC	AIR COMPRESSOR
AFF	ABOVE FINISHED FLOOR
ASTM	AMERICAN SOCIETY FOR TESTING & MATERIALS
BLDG	BUILDING
DN.	DOWN
DWG.	DRAWING
(E)	EXISTING
FDC	FIRE DEPARTMENT CONNECTION
GPM	GALLONS PER MINUTE
NC	NORMALLY CLOSED (VALVE)
NFPA	NATIONAL FIRE PROTECTION ASSOCIATION
PSI	POUNDS PER SQUARE INCH
TYP.	TYPICAL
W/	WITH
FD	FLOOR DRAIN
FDC	FIRE DEPARTMENT CONNECTION
FH	FIRE HYDRANT



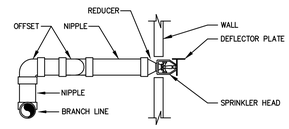
1 FP4 CONCEALED TYPE SPRINKLER HEAD
NOT TO SCALE



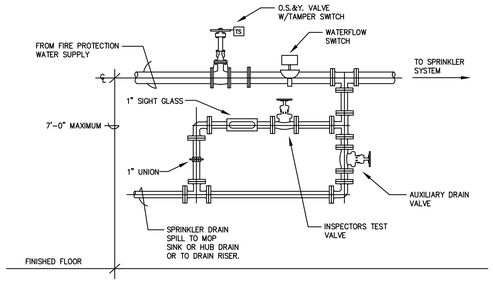
2 FP4 PENDANT TYPE SPRINKLER HEAD
NOT TO SCALE



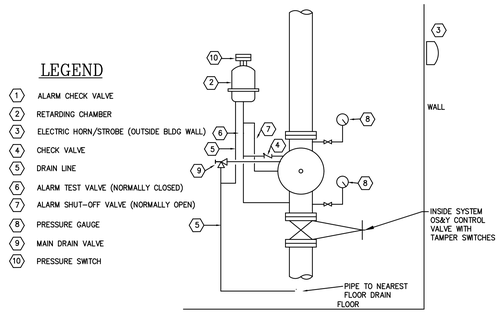
3 FP4 TYPICAL CONNECTION TO UPRIGHT SPRINKLER HEAD
NOT TO SCALE



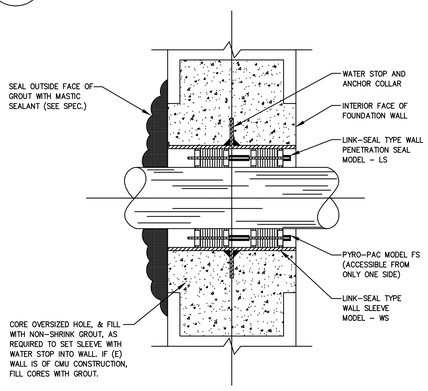
4 FP4 TYPICAL CONNECTION TO SIDEWALL SPRINKLER HEAD
NOT TO SCALE



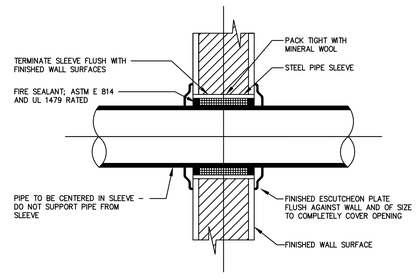
5 FP4 SPRINKLER FLOOR CONTROL VALVE ASSEMBLY
NOT TO SCALE



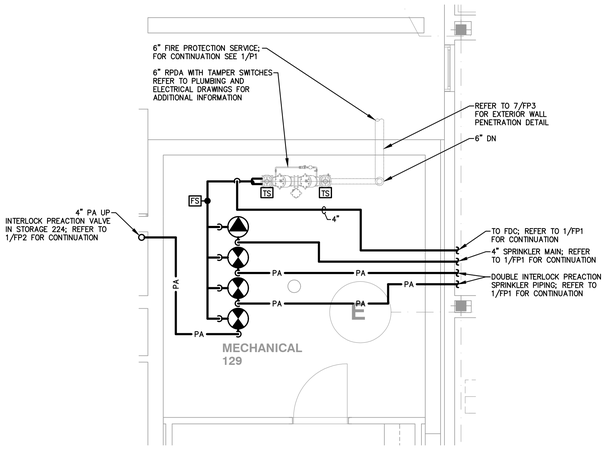
6 FP4 SPRINKLER ALARM CHECK VALVE ASSEMBLY
NOT TO SCALE



7 FP4 PIPE SLEEVE THROUGH EXTERIOR FOUNDATION WALL
NOT TO SCALE



8 FP4 PIPE SLEEVE THROUGH INTERIOR FIRE RATED WALL WALL ASSEMBLY
NOT TO SCALE

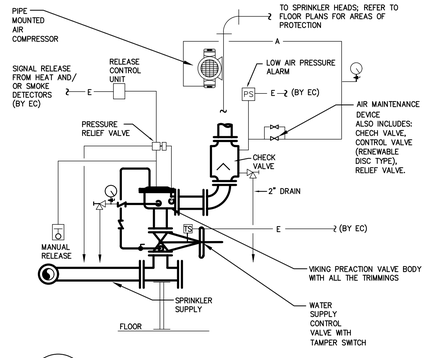


9 FP4 MECHANICAL ROOM 129 – FIRE PROTECTION
NOT TO SCALE

NOTES:

1. ALL PIPE SIZES SHALL BE VERIFIED BY HYDRAULIC DESIGN TO BE PERFORMED BY THE SUCCESSFUL CONTRACTOR.
2. TOTAL NUMBER OF PREACTION VALVES SHALL BE VERIFIED BY HYDRAULIC DESIGN TO BE PERFORMED BY THE SUCCESSFUL CONTRACTOR.
3. SEISMIC RESTRAINT LOADING SHALL BE AS INDICATED ON THE CONTRACT DOCUMENTS IN THE ARCHITECTURAL/STRUCTURAL CODE ANALYSIS.

NORTH



10 FP4 PRE-ACTION VALVE ASSEMBLY DETAIL
NOT TO SCALE

NOTES:

1. BASIS OF DESIGN IS VIKING FIREFLEX TOTALPAC 3 SELF-CONTAINED DOUBLE INTERLOCK PREACTION SYSTEM WITH ELECTRIC/PNEUMATIC RELEASE. CONTRACTOR SHALL CONFIRM NUMBER AND SIZE OF SYSTEMS BY HYDRAULIC DESIGN AND COORDINATE WITH OTHER TRADES AS REQUIRED.

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RELIEF FIRE COMPANY NO. 1
ADDITION / RENOVATION
BLOCK 86, LOTS 4, 5, 10, 11, 21, 22, 22.01 AND 23
17 PINE STREET
MOUNT HOLLY, NEW JERSEY

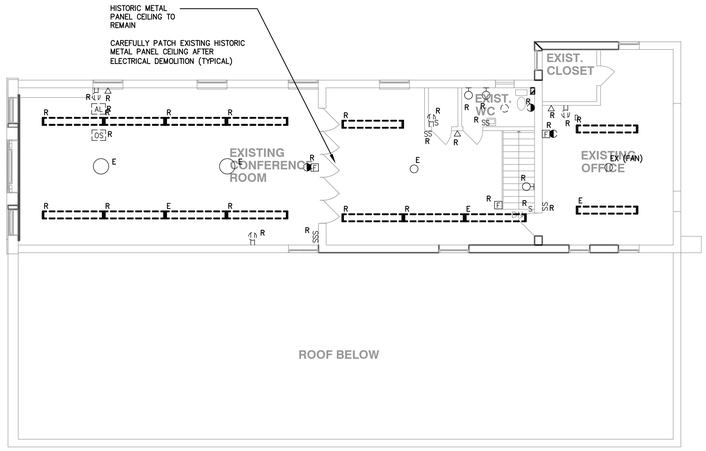
TITLE: FIRST FLOOR PLAN - FIRE PROTECTION

DRAWING DATE: 01 JULY 2020
REVISION DATE: 25 SEPT 2020
DRAWN BY: ACL
COMMISION NO.: 5475B

FP4

3 OF 3

October 21, 2020 12:50:09 p.m.
Drawing: 2637 FP1.DWG



DEMOLITION NOTES:

1. THESE DEMOLITION PLANS ARE INTENDED TO BE USED AS A GUIDE TO THE CONTRACTOR. ALL DEMOLITION WORK REQUIRED, OR NECESSARY FOR THE INSTALLATION OF NEW WORK OR THE REMOVAL OF EXISTING EQUIPMENT, IS HEREBY INCLUDED, WHETHER SHOWN ON THESE PLANS OR NOT. REFER TO DRAWINGS OF ALL TRADES FOR ADDITIONAL WORK, AND COORDINATE IN THE FIELD.
2. THE CONTRACTOR SHALL VERIFY ACTUAL SITE CONDITIONS PRIOR TO SUBMITTING HIS BID. THE CONTRACTOR SHALL INCLUDE ALL DEMOLITION WORK NECESSARY FOR THE EFFECTIVE INSTALLATION AND PERFORMANCE OF NEW SYSTEMS. THE CONTRACTOR SHALL ALSO INCLUDE TEMPORARY REMOVAL AND REINSTALLATION OF EXISTING WORK WHEREVER NECESSARY. THE OWNER SHALL NOT ACCEPT EXTRA COSTS ASSOCIATED WITH THE DEMOLITION AND/OR TEMPORARY REMOVAL/REINSTALLATION WORK FROM THE CONTRACTOR.
3. THIS CONTRACTOR SHALL REMOVE ALL LIGHTING FIXTURES AND ELECTRICAL DEVICES AS INDICATED ON THE DEMOLITION PLANS, OR THAT ARE NO LONGER NEEDED BY THE OWNER. ALL EXISTING WIRING AND CONDUIT WHERE NO LONGER REQUIRED SHALL BE REMOVED BACK TO EXISTING PANEL. ALL EXISTING DISCONNECTED CIRCUITS NOT BEING REUSED SHALL BE TURNED OFF AND LABELED "SPARE". WHERE CONDUITS ARE INACCESSIBLE, REMOVE WIRE AND ABANDON CONDUITS.
4. IT IS THE CONTRACTORS RESPONSIBILITY TO VERIFY POWER IS BEING PROVIDED TO ALL EXISTING EQUIPMENT REQUIRED TO REMAIN IN SERVICE. RECONNECT ALL DISTURBED FACILITIES WHICH ARE EXISTING TO REMAIN AND PLACE THEM IN OPERATIONAL CONDITION.
5. REMOVE ALL WIRING DEVICES FROM WALLS TO BE DEMOLISHED. REMOVE EXISTING LIGHT SWITCHES WHERE NO LONGER REQUIRED. REUSE ALL EXISTING CONCEALED CONDUIT AND RECESSED DEVICE BOXES WHERE POSSIBLE. ABANDON BOXES IF THEY ARE IN EXISTING WALLS TO REMAIN. PATCH WALLS OVER ABANDONED BOXES TO MATCH ADJACENT SURFACES.
6. REMOVE ABANDONED OUTLET BOXES, SURFACE METAL RACEWAY AND CONDUIT THAT WOULD BE EXPOSED, AND REPAIR DISTURBED SURFACES TO MATCH ADJACENT AREAS.
7. MAJOR PIECES OF EQUIPMENT ARE TO BE TURNED OVER TO THE OWNER FOR HIS USE, OR AT THE OWNER'S DISCRETION, REMOVED FROM THE SITE AND DISPOSED OF, IF NO LONGER REQUIRED.
8. PATCH ALL WALLS TIGHT AT REMOVALS. MAINTAIN FIRE RATINGS AS REQUIRED.
9. THE CONTRACTOR SHALL REFER TO THE ARCHITECTURAL DRAWINGS FOR THE EXTENT OF WALL FINISHES AND CEILINGS TO BE REPLACED. ALL EXISTING DEVICES TO REMAIN SHALL BE TEMPORARILY DISCONNECTED AND REINSTALLED. WHERE TEMPORARY REMOVAL IS NOT POSSIBLE THE CONTRACTOR SHALL PROVIDE TEMPORARY SUPPORT OF EXISTING EQUIPMENT IN PLACE.
10. THE EXISTING FIRE ALARM SYSTEM SHALL BE MAINTAINED THROUGHOUT DEMOLITION AND CONSTRUCTION. PROVIDE TEMPORARY SUPPORT OF EXISTING DEVICES AS REQUIRED. THE CONTRACTOR SHALL NOTIFY THE FIRE MARSHAL UPON ANY MODIFICATIONS TO OR ANY NECESSARY INTERRUPTION IN SYSTEM OPERATION. NOTE THAT COVERING DEVICES DURING CONSTRUCTION IS AN INTERRUPTION TO COVERAGE.

SYMBOL LIST & ABBREVIATIONS

	LIGHT FIXTURE – REFER TO LIGHTING FIXTURE SCHEDULE
NL NL	UNSWITCHED NIGHT LIGHT FIXTURE
	EXIT SIGN – REFER TO LIGHTING FIXTURE SCHEDULE
OS	OCCUPANCY SENSOR – LETTER DENOTES TYPE OF SENSOR TO BE INSTALLED. WATTSTOPPER OR APPROVED EQUAL. DT = DT–300 (DUAL TECHNOLOGY SENSOR); CI = CI–300, CIT = CIT–355 (PASSIVE INFRARED SENSOR); CX = CX–100 (WALL MOUNTED PASSIVE INFRARED SENSOR); PW = PW–100 (PASSIVE INFRARED WALL SWITCH SENSOR); WT = WT–2250 (ULTRASONIC SENSOR); UT1 = UT–355 (ULTRASONIC SENSOR); TS1 = TS–400 (TIME SWITCH)
PS	POWER SUPPLY
PP	POWER PACK TRANSFORMER AND RELAY, OUTPUT RELAYS RATED 20A BALLAST OR INCANDESCENT, PROVIDE QUANTITY OF RELAYS AS REQUIRED, REFER TO AUTOMATIC LIGHTING CONTROL NOTES
EM	EMERGENCY LIGHTING CONTROL RELAY WATTSTOPPER ELCU–200, SEE WATTSTOPPER DWG 61–510
TV TR GFI	DUPLEX RECEPTACLE, 20A, 125V, 2 POLE, 3 WIRE, GROUNDED GFI INDICATES GROUND FAULT INTERRUPTION, TR INDICATES TAMPER–RESISTANT WITH UL LISTED TAMPER–RESISTANT SHUTTER, TV INDICATES MOUNTED HIGH FOR TELEVISION, SEE ARCHITECTURAL DRAWINGS CP INDICATES CONDENSATE PUMP RECEPTACLE
	DUPLEX RECEPTACLE MOUNTED ABOVE COUNTER HEIGHT
Q	DOUBLE DUPLEX RECEPTACLE (QUAD)
CR	CEILING MOUNTED RECEPTACLE CR INDICATES CORD REEL
	SPECIAL PURPOSE RECEPTACLE, TYPE AS NOTED, COORDINATE WITH WITH EQUIPMENT VENDOR IN FIELD
EWC	SINGLE RECEPTACLE, EWC INDICATES ELECTRIC WATER COOLER
	DUAL SERVICE FLOOR BOX, TYPE WIREMOLD EVOLUTION SERIES OR APPROVED EQUAL PROVIDE WITH (2) DUPLEX 125A RECEPTACLES, AND (2) RJ45 JACKS
S	SINGLE POLE SWITCH
S_3	THREE WAY SWITCH
S_4	FOUR WAY SWITCH
S_D	DIMMING SWITCH
S_F	FAN SWITCH WITH LIGHT AND FAN CONTROL
S_M	MANUAL MOTOR STARTER
	COMBINATION STARTER CIRCUIT BREAKER
	FUSED DISCONNECT SWITCH
	UNFUSED DISCONNECT SWITCH
	FIRE TRUCK BAY DOOR OPERATOR
	MOTOR

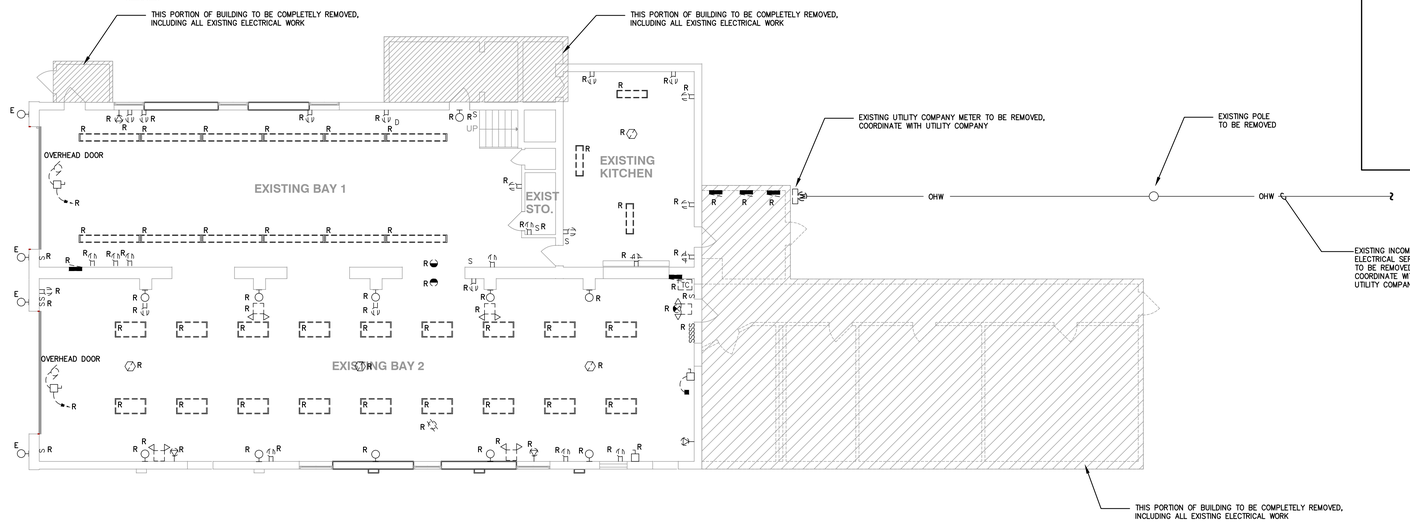
	208/120V PANELBOARD
FACP	FIRE ALARM CONTROL PANEL
RA	FIRE ALARM REMOTE ANNUNCIATOR PANEL
	FIRE ALARM AUDIO/VISUAL DEVICE
	FIRE ALARM VISUAL DEVICE
F	FIRE ALARM MANUAL PULL STATION
H	FIRE ALARM HEAT DETECTOR (RATE OF RISE)
H 165°	FIRE ALARM HEAT DETECTOR FIXED TEMPERATURE
H AC	FIRE ALARM HEAT DETECTOR (ABOVE CEILING)
	FIRE ALARM COMBINATION SMOKE/CARBON MONOXIDE DETECTOR
	FIRE ALARM DUCT MOUNTED SMOKE DETECTOR WITH REMOTE INDICATING LIGHT AND TEST KEY SWITCH
FS	WATER FLOW SWITCH
TS	TAMPER SWITCH
TC	TIMECLOCK
	WIRE & CONDUIT, CONCEALED IN CEILING OR WALL
	WIRE & CONDUIT, BELOW SLAB
	WIRE & CONDUIT, HOMERUN TO PANEL
	CONNECTION TO EQUIPMENT
AC	AIR CONDITIONING
CU	CONDENSING UNIT
E	EXISTING TO REMAIN
EF	EXHAUST FAN
EP	ELECTRICAL PRIMARY
ES	ELECTRICAL SECONDARY
FCU	FAN COIL UNIT
IR	INFRARED
OHW	OVERHEAD WIRING
R	EXISTING TO BE REMOVED
T	TELEPHONE
VAV	VARIABLE AIR VOLUME BOX
WP	WEATHERPROOF

2 / ED1 SECOND FLOOR PLAN – ELECTRICAL DEMOLITION

SCALE 1/8" = 1'–0"

NOTE:

1. DEMOLISH ALL ABANDONED JUNCTION BOXES, PANELS, SWITCHES, ETC. AND PATCH WALLS TO MATCH ADJACENT CONDITIONS AND FINISHES. ALL OLD WIRING MUST BE REMOVED.



TEMPORARY SERVICE NOTES:

1. CONTRACTOR TO PROVIDE TEMPORARY ELECTRICAL SERVICE AND LIGHTING AS REQUIRED THROUGHOUT CONSTRUCTION.
2. PROVIDE NEW PANEL "RLP1" AND PLACE ON TEMPORARY SERVICE PRIOR TO DEMOLISHING EXISTING ELECTRICAL SERVICE. SWING OVER ALL EXISTING CIRCUITING IN PORTION OF BUILDING NOT BEING DEMOLISHED AS REQUIRED TO KEEP FIREHOUSE IN OPERATION THROUGHOUT CONSTRUCTION.
3. PLACE PANEL "RLP1" ONTO NEW SERVICE AFTER CONSTRUCTION OF ADDITION IS COMPLETE.

GENERAL NOTE:

1. REFER TO SPECIFICATIONS FOR LISTING OF APPROVED MANUFACTURERS.
2. THE EXACT LOCATIONS OF ALL RECEPTACLES, VOICE/DATA OUTLETS AND TV OUTLETS SHALL BE COORDINATED WITH DRAWING A2.4 AND FIELD VERIFIED WITH ARCHITECT AND OWNER PRIOR TO INSTALLATION.

1 / ED1 FIRST FLOOR PLAN – ELECTRICAL DEMOLITION

SCALE 1/8" = 1'–0"

NOTE:

1. DEMOLISH ALL ABANDONED JUNCTION BOXES, PANELS, SWITCHES, ETC. AND PATCH WALLS TO MATCH ADJACENT CONDITIONS AND FINISHES. ALL OLD WIRING MUST BE REMOVED.

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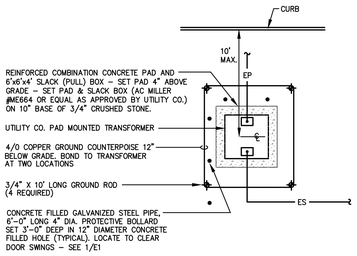
BLOCK 66, LOTS 4, 5, 10, 11, 21, 22, 22.01 AND 23
17 PINE STREET
MOUNT HOLLY, NEW JERSEY

TITLE: PLANS AND SYMBOLS LIST - ELECTRICAL DEMOLITION

DRAWING DATE: 01 JULY 2020
REVISION DATE:
DRAWN BY: LA
COMMISSION NO: 5475B

ED1

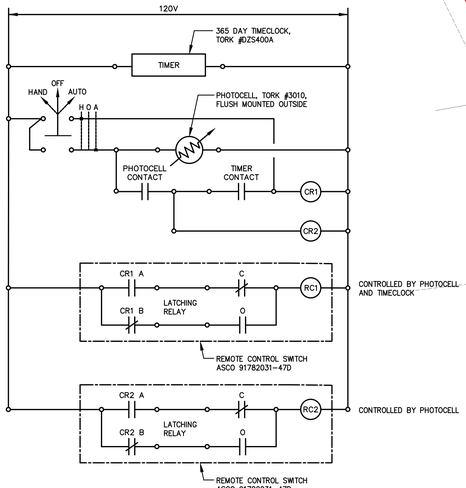


NOTE:

COORDINATE TRANSFORMER PAD REQUIREMENTS WITH THE UTILITY CO. AND MAKE ALL NECESSARY PROVISIONS.

2/E1 TRANSFORMER PAD DETAIL

NOT TO SCALE

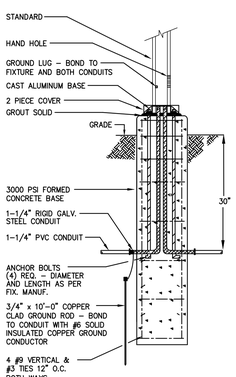


3/E1 SCHEMATIC WIRING DIAGRAM FOR EXTERIOR LIGHTING CONTROL

SCHEMATIC

NOTES:

1. MOUNT CONTROL SWITCH RELAY & REMOTE CONTROL SWITCH IN NEMA 1 ENCLOSURE AND MOUNT HAND–OFF–AUTO SELECTOR SWITCH ON THE FACE OF ENCLOSURE. COORDINATE EXACT LOCATION IN FIELD.
2. ALL EXTERIOR EMERGENCY FIXTURES SHALL BE CONTROLLED BY PHOTOCELL ONLY.

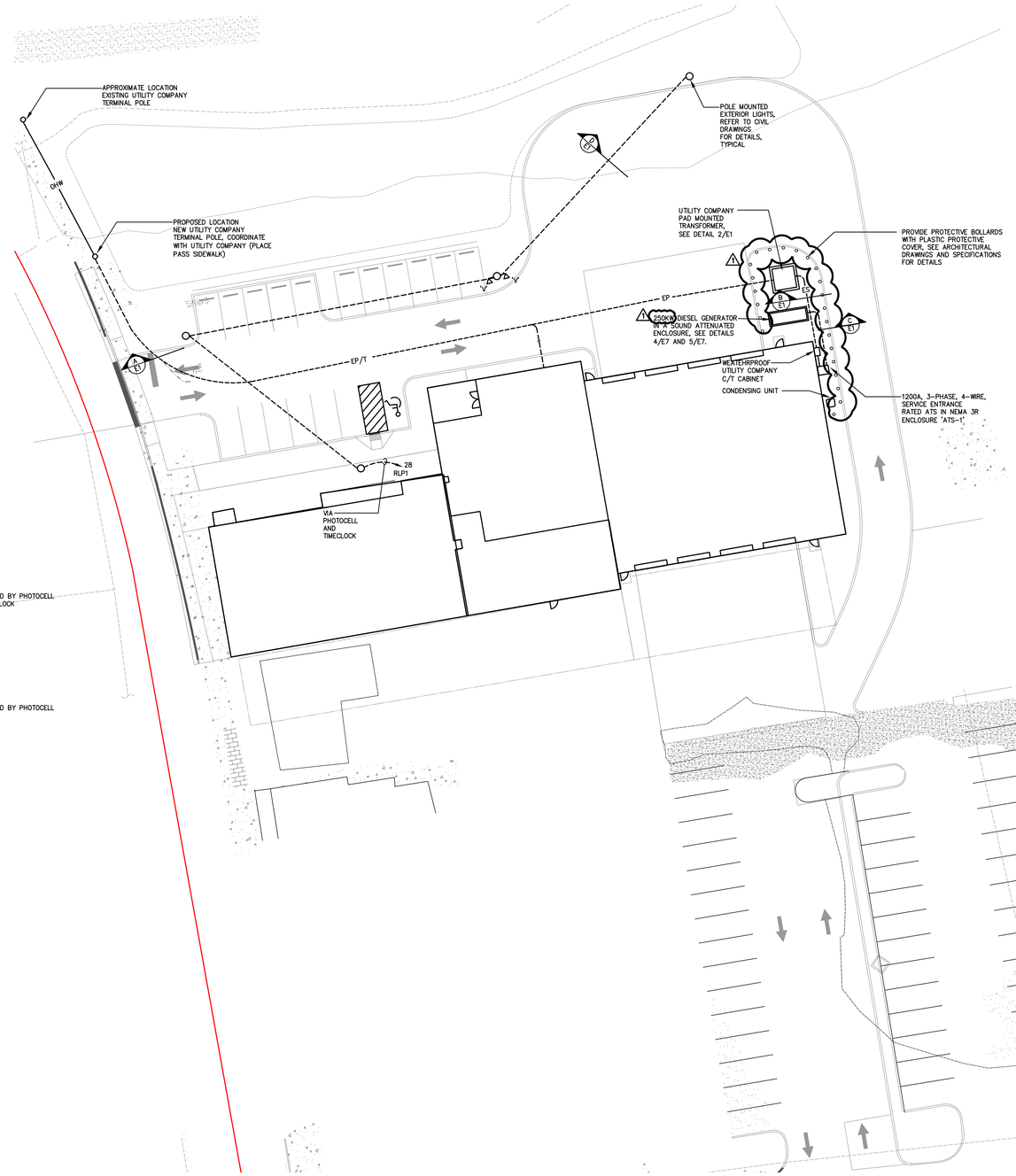


4/E1 SITE LIGHTING BASE DETAIL

NOT TO SCALE

NOTE:

1. REFER TO CIVIL DRAWINGS FOR FOUNDATION DIMENSIONS.

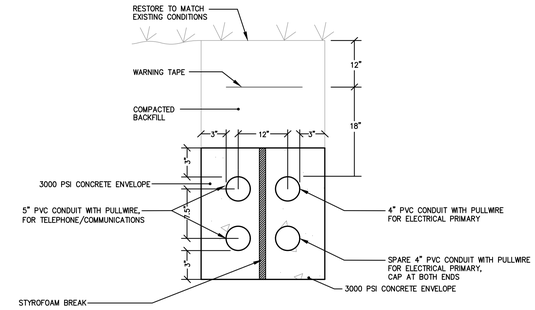


1/E1 SITE PLAN – ELECTRICAL

SCALE 1" = 20'–0"

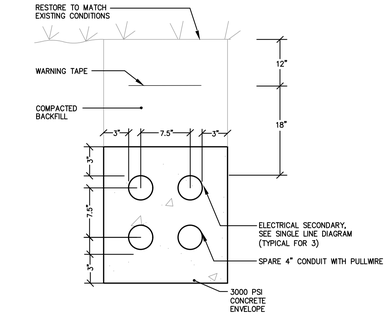
NOTES:

1. THE CONTRACTOR IS RESPONSIBLE FOR COORDINATING EXISTING UNDERGROUND UTILITIES. ALL UTILITIES SHALL BE MARKED OUT AS REQUIRED BY NJUA, CALL BEFORE YOU DIG.
2. ACQUIRE AND PAY FOR ALL PERMITS ASSOCIATED WITH OPENING THE STREET FOR THE INSTALLATION OF NEW UNDERGROUND ELECTRICAL SERVICE FEEDERS.
3. ALL EXTERIOR EQUIPMENT GENERATOR, TRANSFORMER, ATS–1. CT–CABINET ETC. SHALL BE PLACED ON A CONCRETE PAD THAT IS POURED HIGH ENOUGH SO THAT THE EQUIPMENT SITS ABOVE 15.5' ELEVATION FLOOD LINE. COORDINATE ALL PAD HEIGHTS WITH CIVIL ENGINEER.
4. ALL CONDUIT ELEVATIONS TO BE COORDINATED WITH NEW UNDERGROUND UTILITIES, REFER TO CIVIL DRAWINGS.
5. DUE TO THE EXPECTATION OF ENCOUNTERING HIGH WATER, REFER TO DE–WATERING SPECIFICATIONS.



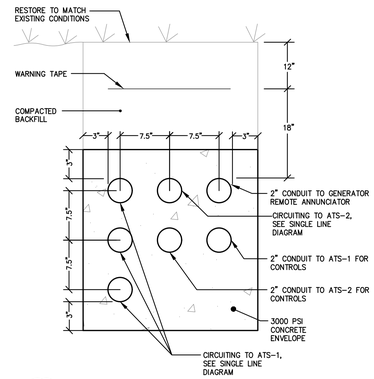
A/E1 DUCTBANK DETAIL

NOT TO SCALE



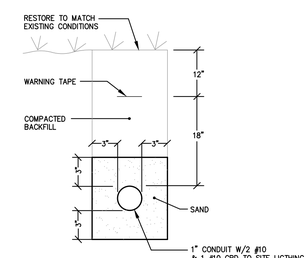
B/E1 DUCTBANK DETAIL

NOT TO SCALE



C/E1 DUCTBANK DETAIL

NOT TO SCALE



D/E1 DUCTBANK DETAIL

NOT TO SCALE

NOTE:

1. ENCASE DUCTBANK IN CONCRETE WHEN UNDERNEATH ROADWAYS.

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TITLE: SITE PLAN AND DETAILS - ELECTRICAL

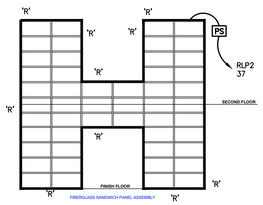
DRAWING DATE: 01 JULY 2020
REVISION DATE: 1 25 SEPT 2020
DRAWN BY: LA
COMMISION NO.: 5475B

E1

PANELBOARD 'ERP'

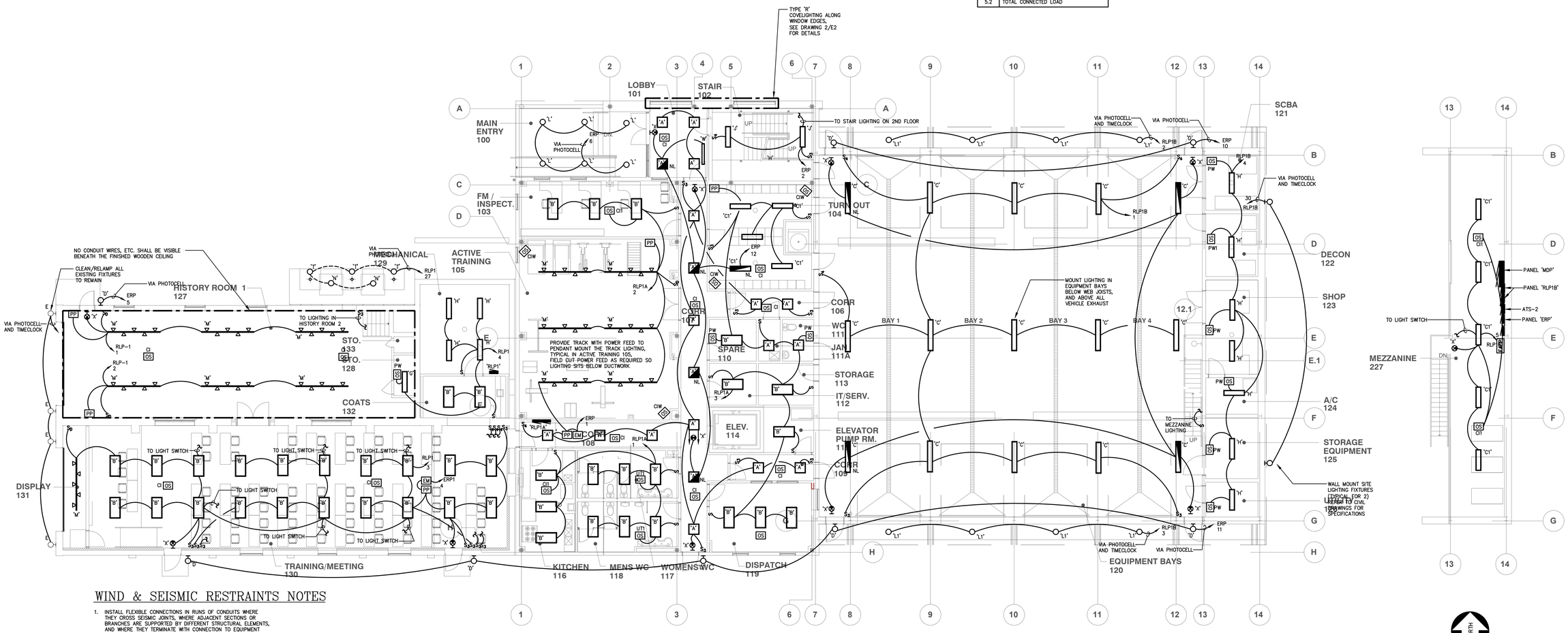
208/120V, 3ø, 4W, S/N, SURFACE, 100A/3P MAIN CIRCUIT BREAKER

CKT. NO.	CIRCUIT BREAKER AMPS	CIRCUIT BREAKER POLES	LOAD KVA	LOAD HP	CIRCUIT DESCRIPTION	WIRE & CONDUIT
1	20	1	0.34	–	LIGHTING 1ST FLOOR CORRIDOR	2 #12 & 1 #12 GRD – 3/4"C
2	20	1	0.25	–	LIGHTING STAIR	2 #12 & 1 #12 GRD – 3/4"C
3	20	1	0.26	–	LIGHTING 2ND FLOOR CORRIDOR	2 #12 & 1 #12 GRD – 3/4"C
4	20	1	0.13	–	TRANING ROOM 2X4 FIXTURES	2 #12 & 1 #12 GRD – 3/4"C
5	20	1	0.22	–	EXTERIOR LIGHTING	2 #12 & 1 #12 GRD – 3/4"C
6	20	1	0.12	–	LTG MAIN ENTRY CANOPY	2 #12 & 1 #12 GRD – 3/4"C
7	20	1	0.20	–	FACP	2 #12 & 1 #12 GRD – 3/4"C
8	20	2	3.00	–	GENERATOR BLOCK HTR	2 #12 & 1 #12 GRD – 3/4"C
9	20	1	0.20	–	GENERATOR BATTERY CHARGER	2 #12 & 1 #12 GRD – 3/4"C
10	20	1	0.05	–	EQUIPMENT BAYS OVERDOOR LTG.	2 #12 & 1 #12 GRD – 3/4"C
11	20	1	0.14	–	BACK OVERDOOR LTG.	2 #12 & 1 #12 GRD – 3/4"C
12	20	1	0.17	–	NIGHT LTG. 1ST FL CORR./TURNOUT	2 #12 & 1 #12 GRD – 3/4"C
13	20	1	0.12	–	NIGHT LTG. 2ND FL CORRIDOR	2 #12 & 1 #12 GRD – 3/4"C
14	20	1	–	–	SPARE	–
15	20	1	–	–	SPARE	–
16	20	1	–	–	SPARE	–
17	20	1	–	–	SPARE	–
18	20	1	–	–	SPARE	–
19	20	1	–	–	SPARE	–
20	20	1	–	–	SPARE	–
21	20	1	–	–	SPARE	–
22	20	1	–	–	SPARE	–
23	20	1	–	–	SPARE	–
24	20	1	–	–	SPARE	–
25	20	1	–	–	SPARE	–
26	20	1	–	–	SPARE	–
27	20	1	–	–	SPARE	–
28	20	1	–	–	SPARE	–
29	20	1	–	–	SPARE	–
			5.2		TOTAL CONNECTED LOAD	



2/E2 TRANSLUCENT INSUL PANELS ELEVATION – LIGHTING

SCALE 1/8" = 1'-0"



WIND & SEISMIC RESTRAINTS NOTES

1. INSTALL FLEXIBLE CONNECTIONS IN RUNS OF CONDUITS WHERE THEY CROSS SEISMIC JOINTS, WHERE ADJACENT SECTIONS OR BRANCHES ARE SUPPORTED BY DIFFERENT STRUCTURAL ELEMENTS, AND WHERE THEY TERMINATE WITH CONNECTION TO EQUIPMENT THAT IS ANCHORED TO A DIFFERENT STRUCTURAL ELEMENT FROM THE ONE SUPPORTING THEM AS THEY APPROACH EQUIPMENT.
2. WIND RESTRAINT LOADING SHALL BE AS INDICATED ON THE CONTRACT DOCUMENTS IN THE ARCHITECTURAL/STRUCTURAL CODE ANALYSIS.
3. SEISMIC RESTRAINT LOADING SHALL BE AS INDICATED ON THE CONTRACT DOCUMENTS IN THE ARCHITECTURAL/STRUCTURAL CODE ANALYSIS.

1/E2 FIRST FLOOR PLAN – LIGHTING

SCALE 1/8" = 1'-0"

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TITLE: FIRST FLOOR PLAN - LIGHTING

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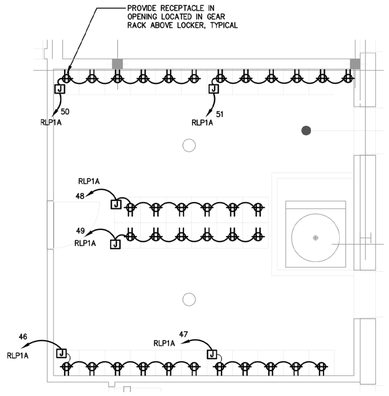
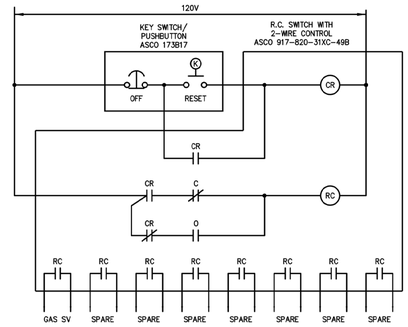
E2



2 / E3 TURN OUT ROOM – GEAR RACK CIRCUITING

SCALE 1/4" = 1'-0"

(PART OF BASEBID)

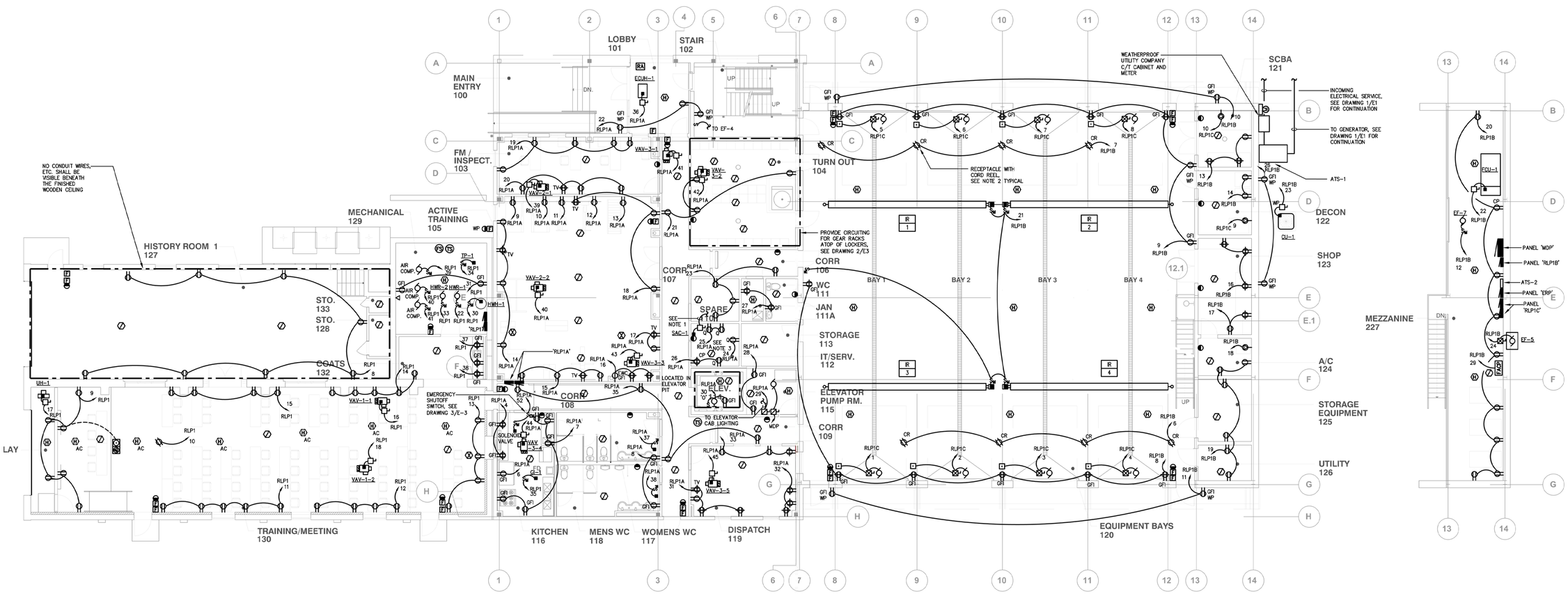


3 / E3 WIRING DIAGRAM FOR GAS EMERGENCY SHUT DOWN

SCHEMATIC

NOTE:

1. RUN POWER FOR ELECTRICAL HELD GAS SOLENOID VALVE VIA ASCO R.C. SWITCH.



1 / E3 FIRST FLOOR PLAN – POWER

SCALE 1/8" = 1'-0"

NOTES:

1. PROVIDE POWER AND CONTROL WIRING TO OUTDOOR UNIT PER MANUFACTURER'S DIRECTIONS.
2. PROVIDE 50' 2 #12 & 1 #12 RETRACTABLE CORD REEL, HUBBELL MODEL NO HBL45123TL20W, COORDINATE EXACT LOCATION IN FIELD.
3. PROVIDE POWER AS REQUIRED TO DOOR ACCESS CONTROL PANELS IN IT ROOM, COORDINATE WITH SECURITY VENDOR, MINIMUM (1) 120V, 20A CIRCUIT.

WIND & SEISMIC RESTRAINTS NOTES

1. INSTALL FLEXIBLE CONNECTIONS IN RUNS OF CONDUITS WHERE THEY CROSS SEISMIC JOINTS, WHERE ADJACENT SECTIONS OR BRANCHES ARE SUPPORTED BY DIFFERENT STRUCTURAL ELEMENTS, AND WHERE THEY TERMINATE WITH CONNECTION TO EQUIPMENT THAT IS ANCHORED TO A DIFFERENT STRUCTURAL ELEMENT FROM THE ONE SUPPORTING THEM AS THEY APPROACH EQUIPMENT.
2. WIND RESTRAINT LOADING SHALL BE AS INDICATED ON THE CONTRACT DOCUMENTS IN THE ARCHITECTURAL/STRUCTURAL CODE ANALYSIS.
3. SEISMIC RESTRAINT LOADING SHALL BE AS INDICATED ON THE CONTRACT DOCUMENTS IN THE ARCHITECTURAL/STRUCTURAL CODE ANALYSIS.

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RELIEF FIRE COMPANY NO. 1
ADDITION / RENOVATION
BLOCK 86, LOTS 4, 5, 10, 11, 21, 22, 22.01 AND 23
17 PINE STREET
MOUNT HOLLY, NEW JERSEY

TITLE: FIRST FLOOR PLAN - POWER

DRAWING DATE: 01 JULY 2020
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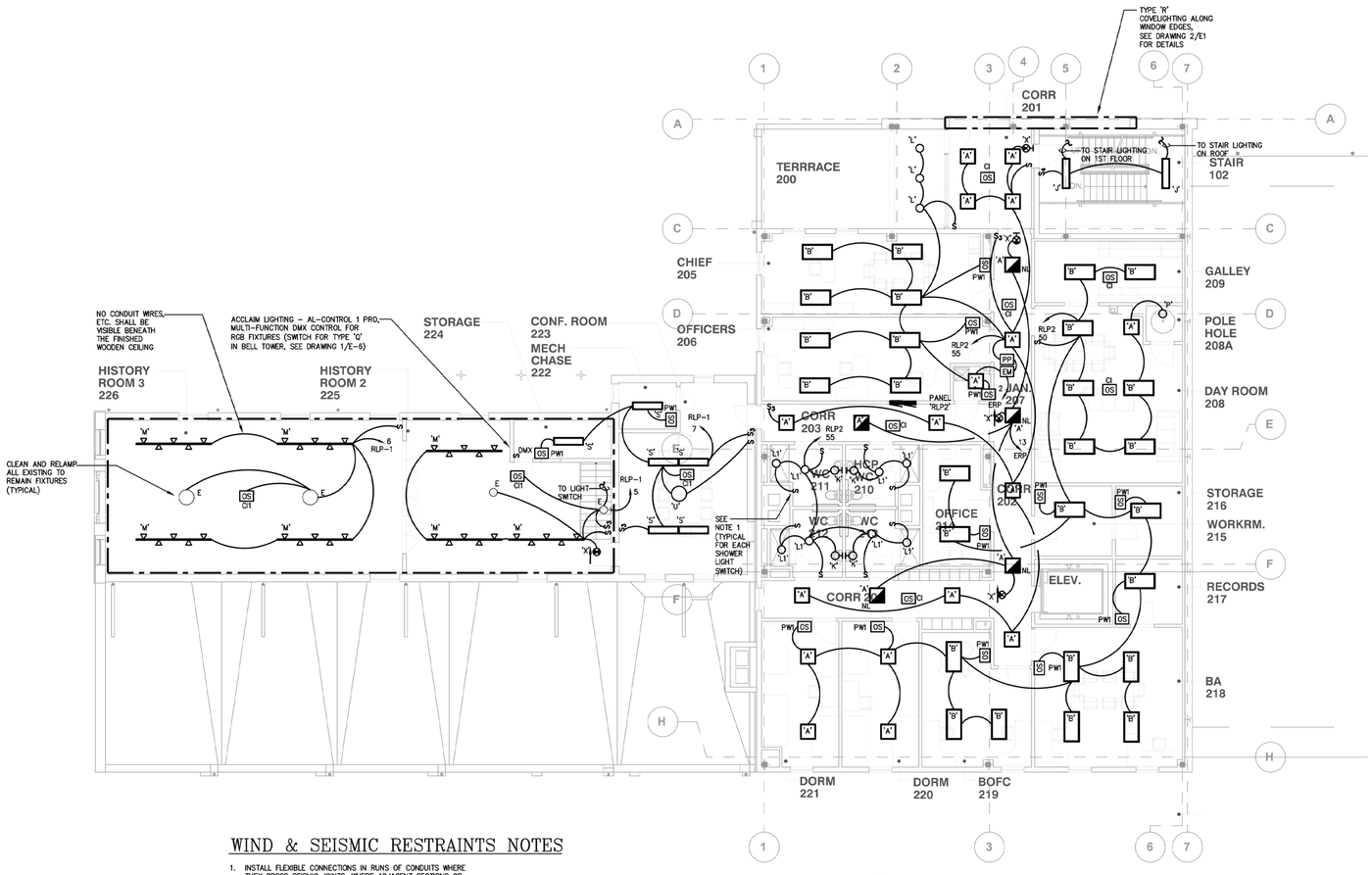
COMMISION NO: 5475B

E3



WIND & SEISMIC RESTRAINTS NOTES

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1/E4 SECOND FLOOR PLAN – LIGHTING

SCALE 1/8" = 1'-0"

NOTES:

1. SWITCH FOR SHOWER LIGHT TO CONTROL BOTH LIGHT AND SHOWER EXHAUST FAN; REFER TO EXHAUST FAN SCHEDULE ON HVAC DRAWINGS FOR DETAILS.

LIGHTING FIXTURE SCHEDULE

ID	LAMPS	MANUF.	CAT. NO.	MOUNTING	DESCRIPTION
A	24W LED SPX 30	METALUX	22CZ-LD5-29-UNV-L830-CD1 OR APPROVED EQUAL BY LITHONIA, LIGHTOLIER	RECESSED	2'x2' BASKETED FIXTURE, ACRYLIC PRISMATIC LENS, DIE FORMED HOUSING, WHITE ENAMEL FINISH, 120V INPUT
B	32W LED SPX 30	METALUX	24CZ-LD5-40-UNV-L830-CD1 OR APPROVED EQUAL BY LITHONIA, LIGHTOLIER	RECESSED	2'x4' BASKETED FIXTURE, ACRYLIC PRISMATIC LENS, DIE FORMED HOUSING, WHITE ENAMEL FINISH, 120V INPUT
C	48W LED SPX 30	CORELITE	CTA-F-0100-30L-830-1-D-UNV-STD-X-AC-XX-UN-6 OR APPROED EQUAL BY FINELITE, NEORAY	PENDANT	7.0"W X 6'L DIRECT LINEAR FIXTURE, FROSTED CONTINUOUS ROLL LENS, FINISH AS SELECTED BY ARCHITECT, PROVIDE CABLE LENGTH AS REQUIRED FOR FIXTURE TO BE BELOW OPEN WEB JOISTS, 120V INPUT
C1	21W LED SPX 30	CORELITE	CTA-F-0100-20L-1-D-UNV-STD-X-AC-XX-UN-4 OR APPROED EQUAL BY FINELITE, NEORAY	PENDANT	7.0"W X 4'L DIRECT LINEAR FIXTURE, FROSTED CONTINUOUS ROLL LENS, FINISH AS SELECTED BY ARCHITECT, PROVIDE CABLE LENGTH AS REQUIRED FOR FIXTURE TO BE BELOW OPEN WEB JOISTS, 120V INPUT
D	27W LED SPX 30	LUMARK	LD-WP-FC-38-120V OR APPROVED EQUAL BY GARDCO, HADCO	WALL	16-5/8"W X 15"D X 10"W HIGH WALL PACK FIXTURE, 120V INPUT
G	21W LED SPX 30	COLUMBIA	CWM-2-30-LW-SM-FR-FP-E-U OR APPROVED EQUAL BY LITHONIA, LIGHTOLIER	WALL	25"W X 5"H X 3"D CLOSET LIGHT, 120V INPUT
H	53W LED SPX 30	METALUX	48LED-LD4-7-W-FL-UNV-L830-CD1 OR APPROVED EQUAL BY LITHONIA, LIGHTOLIER	PENDANT	11"W x 57"H x 4'L LENSED INDUSTRIAL FIXTURE, DIE FORMED PRIME STEEL REFLECTOR, BAKED WHITE ENAMEL FINISH, 120V INPUT
J	LED SPX 30	CORELITE	RZL-NL-30L-830-1-D-UNV-STD-IL8120X-SU-4 OR APPROED EQUAL BY FINELITE, NEORAY	SURFACE	4'L X 8.4"W X 3.5"D LINEAR FIXTURE, FROSTED LINEAR PRISMATIC LENS, INTEGRAL 90 MINUTE BATTERY BACKUP, 120V INPUT
K	22W LED SPX 30	SEAGULL	43579SS-04 OR APPROED EQUAL BY KICHLER, BELLACOR	SURFACE	26" WIDE X 5"H X 3-3/4" DEEP VANITY LIGHT, UL LISTED FOR DAMP LOCATIONS, FROSTED ACRYLIC DIFFUSER,
L	LED SPX 30	HALO	HOUSING: H456ICAT120D LIGHT ENGINE: EL405830 TRIM: TL402XX OR APPROVED EQUAL BY PORTFOLIO, JUNO	RECESSED	6" DIAMETER DOWNLIGHT UL WET LOCATION LISTED, SPECULAR CLEAR REFLECTOR W/SOLITE LENS WHITE TRIM FINISH, 120V INPUT
L1	LED SPX 30	HALO	HOUSING: H456ICAT120D LIGHT ENGINE: WLS612936 TRIM: TL602SCS OR APPROVED EQUAL BY PORTFOLIO, JUNO	RECESSED	6" DIAMETER DOWNLIGHT UL WET LOCATION LISTED, SPECULAR CLEAR REFLECTOR W/SOLITE LENS TRIM FINISH AS SELECTED BY ARCHITECT, 120V INPUT
M	LED SPX 35	JUNO	TRACK HEAD: R600L-35K-80CR1-UNF-XX TRACK: MLFT MONOLINE OR APPROVED EQUAL BY HALO, PHILIPS	TRACK	TRACK SPOT LIGHT, UNIVERSAL DISTRIBUTION, FINISH AS SELECTED BY ARCHITECT, MONOLINE FLEXIBLE TRACK, AND FLOATING POWER FEED, FIELD CUT AS REQUIRED SO TRACK SITS, APPROXIMATELY 3" BELOW DUCTWORK, PROVIDE WITH DIMMING, 120V INPUT
N	LED SPX 30	EATON	696-10LED-30-21-120/12-XX OR APPROVED EQUAL BY KIM, GARDCO	IN-GROUND	6" DIAMETER IN-GROUND UP LIGHT TO LIGHT BELLS, 21 DEGREE NARROW DISTRIBUTION, COLOR AS SELECTED BY ARCHITECT, PROVIDE WITH INTEGRAL 120V-12V TRANSFORMER, PROVIDE WITH DIMMING, 120V INPUT
O	(2)-18W COMPACT FL.	CROUSE-HINDS	VFHF2222P OR APPROVED EQUAL BY LITHONIA, LIGHTOLIER	SURFACE	FLUORESCENT FIXTURE, ENCLOSED VAPORTIGHT BODY AND GLOBE WITH GUARD, 120V ELECTRONIC BALLAST
P	LED RED	EDWARDS SIGNALING	125-XBR2G120A OR APPROVED EQUAL BY HUBBELL, LIGHTOLIER	PENDANT	STEADY-ON RED BEACON LIGHT, PROVIDE WITH MEANS TO PENDANT MOUNT LIGHT ABOVE POLE, 120V INPUT
Q	LED RGB	ACCLAIM	DDJ-24H-1-AX-H-N OR APPROVED EQUAL BY HUBBELL, LIGHTONIA	WALL	15.47" DIAMETER X 8.22" DEEP FLOOD LIGHT IN BELLTOWER, PROVIDE DMX CABLE AS REQUIRED FOR FIXTURE CONTROL, HOUSING COLOR AS SELECTED BY ARCHITECT, SELECT BEAM ANGLE BASED ON EXACT FIXTURE PLACEMENT, 120V INPUT
R	LED 30K	FEELUX	FLEXIBLE NEON 1 OR APPROVED EQUAL BY ECON, LEDWORLD	COVE	FLEXIBLE LED CIRCUIT STRIP, COPPER STRIP HOUSING, PROVIDE WITH REMOTE POWER SUPPLY, FIELD COORDINATE LOCATION, PROVIDE FLEX CHANNELS AS REQUIRED, 24V INPUT
S	LED 30K	CORELITE	HGL-S-FR-30L-830-1-D-UNV-STD XX-SU-4 OR APPROED EQUAL BY FINELITE, NEORAY	SURFACE	3.5"W x 4'L X 3.5"D LIGHT FIXTURE, FINISH AS SELECTED BY ARCHITECT, 120V INPUT
T	LED 30K	LUMARK	NFFLD-C25-E-UNV-33-S-XX OA/RA1016 OR APPROVED EQUAL BY GARDCO, INVUE	FLOOD	FLOOD SPOT LIGHT FOR FLAGPOLE, COLOR AS SELECTED BY ARCHITECT, PROVIDE WITH PHOTOCELL CONTROL, 120V INPUT
U	LED 30K	ZANEEN	L30303-DV-30K-19-01 OR APPROVED EQUAL BY CORONET, FINELITE	PENDANT	37" DIAMETER ROUND PENDANT, 120V INPUT
V	LED 30K	KIM	ARX16-X-30-UN-XX-ST-SQ OR APPROVED EQUAL BY GARDCO, INVUE	POLE	FLOOD LIGHT WITH SIDE POLE MOUNT TENON, LIGHT DISTRIBUTION AS REQUIRED TO EVENLY WASH THE 'W' ON THE FACADE, AS SELECTED BY ARCHITECT, 120V INPUT
W	LED 30K	ACCLAIM	LNIX-D-T OR APPROVED EQUAL BY LITHONIA, LIGHTOLIER	RECESSED	4'L WALL WASH FIXTURE TO LIGHT MOSAIC WALL, 120V INPUT
X	LED	EMERGI-LITE	WW-12-DXN-R-N OR APPROVED EQUAL BY SURELITE, ISOLITE	WALL OR CEILING	DIE-CAST ALUMINUM EXIT SIGN, STENCIL FACE, 6" RED LETTERS, 90 MIN EMERG BATTERY PACK, WHITE BODY & FACE, 120V
X1	LED	EMERGI-LITE	WW-12-DXN-R-N OR APPROVED EQUAL BY SURELITE, ISOLITE	WALL OR CEILING	WEATHERPROOF EXIT SIGN, STENCIL FACE, 6" RED LETTERS, 90 MIN EMERG BATTERY PACK, WHITE BODY & FACE, 120V

LIGHTING FIXTURE NOTES:

1. CONNECT ALL EMERGENCY EXIT SIGNS AHEAD OF ALL SWITCHING.
2. VERIFY THE EXACT LOCATION OF ALL FIXTURES IN FIELD WITH ARCHITECT PRIOR TO ROUGH-IN.
3. ALL EXTERIOR FIXTURES TO BE 30K.

AUTOMATIC LIGHTING CONTROL NOTES:

1. FURNISH AND INSTALL ALL OCCUPANCY SENSORS AND ACCESSORIES AS RECOMMENDED BY THE MANUFACTURER'S WRITTEN WIRING INSTRUCTIONS.
2. PROVIDE ALL RELAYS, POWER PACKS AND LOW VOLTAGE WIRING AS REQUIRED. COORDINATE QUANTITY OF RELAYS & POWER PACKS IN THE FIELD AND PROVIDE AS REQUIRED.
3. CONTRACTOR SHALL SET, ADJUST, AND CALIBRATE ALL FIXTURES SPECIFIED WITH DAYLIGHT RESPONSE CONTROLS.

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TITLE: SECOND FLOOR PLAN - LIGHTING

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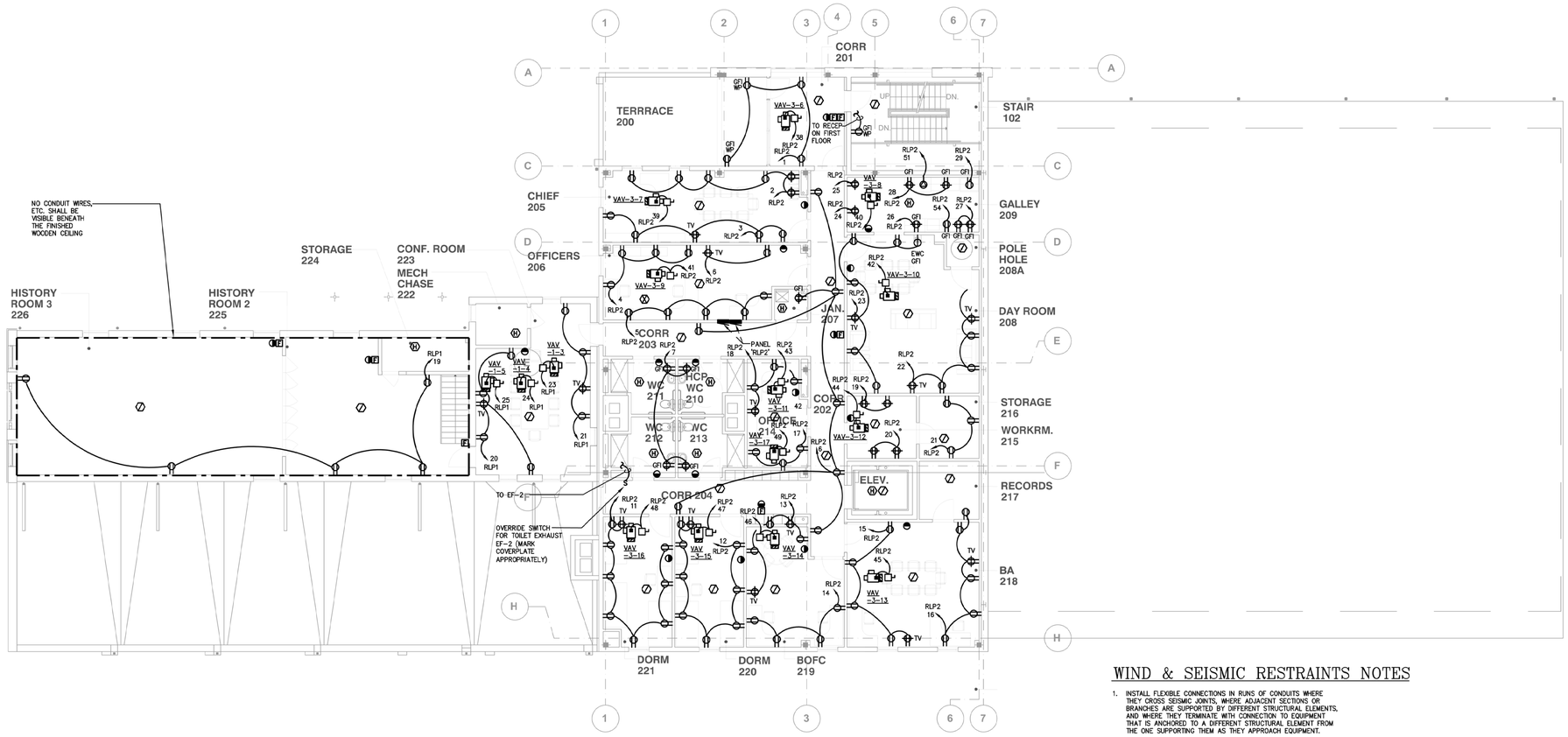
E4

5 OF 8



1/E5 SECOND FLOOR PLAN – POWER

SCALE 1/8" = 1'-0"

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PANELBOARD 'RLP2' (2 SECTIONS)

208/120V, 3ø, 4W, S/N, FLUSH, 225A MAIN LUGS ONLY, 22 KAIC

CKT. NO.	CIRCUIT BREAKER AMPS	CIRCUIT BREAKER POLES	LOAD KVA	LOAD HP	CIRCUIT DESCRIPTION	WIRE & CONDUIT
1	20	1	0.72	–	RECEPS CORR./TERRACE	2 #12 & 1 #12 GRD – 3/4"C
2	20	1	1.08	–	RECEPS. CHIEF	2 #12 & 1 #12 GRD – 3/4"C
3	20	1	1.08	–	RECEPS. CHIEF	2 #12 & 1 #12 GRD – 3/4"C
4	20	1	0.72	–	RECEPS. OFFICERS	2 #12 & 1 #12 GRD – 3/4"C
5	20	1	0.90	–	RECEPS. OFFICERS	2 #12 & 1 #12 GRD – 3/4"C
6	20	1	0.36	–	RECEPS. OFFICERS	2 #12 & 1 #12 GRD – 3/4"C
7	20	1	0.72	–	RECEPS. BATHROOM	2 #12 & 1 #12 GRD – 3/4"C
8	20	1	–	–	SPARE	–
9	20	1	–	–	SPARE	–
10	20	1	–	–	SPARE	–
11	20	1	1.26	–	RECEPS. DORM 221	2 #12 & 1 #12 GRD – 3/4"C
12	20	1	1.26	–	RECEPS. DORM 220	2 #12 & 1 #12 GRD – 3/4"C
13	20	1	0.90	–	RECEPS. BOFC	2 #12 & 1 #12 GRD – 3/4"C
14	20	1	0.72	–	RECEPS. BOFC	2 #12 & 1 #12 GRD – 3/4"C
15	20	1	0.90	–	RECEPS. BA	2 #12 & 1 #12 GRD – 3/4"C
16	20	1	0.90	–	RECEPS. BA	2 #12 & 1 #12 GRD – 3/4"C
17	20	1	0.54	–	RECEPS. OFFICE 214	2 #12 & 1 #12 GRD – 3/4"C
18	20	1	0.72	–	RECEPS. OFFICE 214	2 #12 & 1 #12 GRD – 3/4"C
19	20	1	0.36	–	RECEPS. WORKROOM	2 #12 & 1 #12 GRD – 3/4"C
20	20	1	0.36	–	RECEPS. WORKROOM	2 #12 & 1 #12 GRD – 3/4"C
21	20	1	0.54	–	RECEPS. STORAGE	2 #12 & 1 #12 GRD – 3/4"C
22	20	1	1.08	–	RECEPS. DAYROOM	2 #12 & 1 #12 GRD – 3/4"C
23	20	1	1.08	–	RECEPS. DAYROOM	2 #12 & 1 #12 GRD – 3/4"C
24	20	1	0.18	–	RECEPS. GALLEY	2 #12 & 1 #12 GRD – 3/4"C
25	20	1	0.18	–	RECEPS. GALLEY	2 #12 & 1 #12 GRD – 3/4"C
26	20	1	0.18	–	RECEPS. GALLEY AB. CTR.	2 #12 & 1 #12 GRD – 3/4"C
27	20	1	0.18	–	RECEPS. GALLEY AB. CTR.	2 #12 & 1 #12 GRD – 3/4"C
28	20	1	0.36	–	RECEPS. GALLEY AB. CTR.	2 #12 & 1 #12 GRD – 3/4"C
29	20	1	1.00	–	REFRIGERATOR GALLEY	2 #12 & 1 #12 GRD – 3/4"C
30	20	2	3.80	–	SCU/SAC-1	2 #12 & 1 #12 GRD – 3/4"C
31	20	2	1.00	1/2	KEF-1	2 #12 & 1 #12 GRD – 3/4"C
32	20	1	0.86	1/3	EF-1	2 #12 & 1 #12 GRD – 3/4"C
33	20	1	0.69	1/4	EF-2	2 #12 & 1 #12 GRD – 3/4"C
34	20	1	0.69	1/4	EF-3	2 #12 & 1 #12 GRD – 3/4"C
35	20	1	0.69	1/4	EF-4	2 #12 & 1 #12 GRD – 3/4"C
36	20	1	0.54	–	RTU RECEPTACLES	2 #12 & 1 #12 GRD – 3/4"C
37	20	1	0.55	–	COVE LIGHTING FOR KALWALL	2 #12 & 1 #12 GRD – 3/4"C
38	20	3	3.00	–	VAV-3-6	3 #12 & 1 #12 GRD – 3/4"C
39	20	3	2.50	–	VAV-3-7	3 #12 & 1 #12 GRD – 3/4"C
40	20	3	1.00	–	VAV-3-8	3 #12 & 1 #12 GRD – 3/4"C
41	20	3	1.50	–	VAV-3-9	3 #12 & 1 #12 GRD – 3/4"C
42	20	3	2.50	–	VAV-3-10	3 #12 & 1 #12 GRD – 3/4"C
43	20	3	4.00	–	VAV-3-11	3 #12 & 1 #12 GRD – 3/4"C
44	20	3	3.50	–	VAV-3-12	3 #12 & 1 #12 GRD – 3/4"C
45	20	3	2.50	–	VAV-3-13	3 #12 & 1 #12 GRD – 3/4"C
46	20	3	1.50	–	VAV-3-14	3 #12 & 1 #12 GRD – 3/4"C
47	20	3	1.50	–	VAV-13-15	3 #12 & 1 #12 GRD – 3/4"C
48	20	3	1.00	–	VAV-13-16	3 #12 & 1 #12 GRD – 3/4"C
49	20	3	5.00	–	VAV-13-17	3 #12 & 1 #12 GRD – 3/4"C
50	20	1	0.76	–	LTG. 208–209, 214–221	2 #12 & 1 #12 GRD – 3/4"C
51	20	2	2.00	–	208V RECEP. GALLERY (MIRCO)	2 #12 & 1 #12 GRD – 3/4"C
52	20	1	0.50	–	EF-6	2 #12 & 1 #12 GRD – 3/4"C
53	20	1	1.00	–	GALLERY – MICORWAVE	2 #12 & 1 #12 GRD – 3/4"C
54	20	1	–	–	GALLERY – DISHWASHER	2 #12 & 1 #12 GRD – 3/4"C
55	20	1	–	–	LTG 200–202, 205–206	2 #12 & 1 #12 GRD – 3/4"C
56	20	1	–	–	LTG BATHROOMS	2 #12 & 1 #12 GRD – 3/4"C
57	20	1	–	–	SPARE	–
			59.93		TOTAL CONNECTED LOAD	

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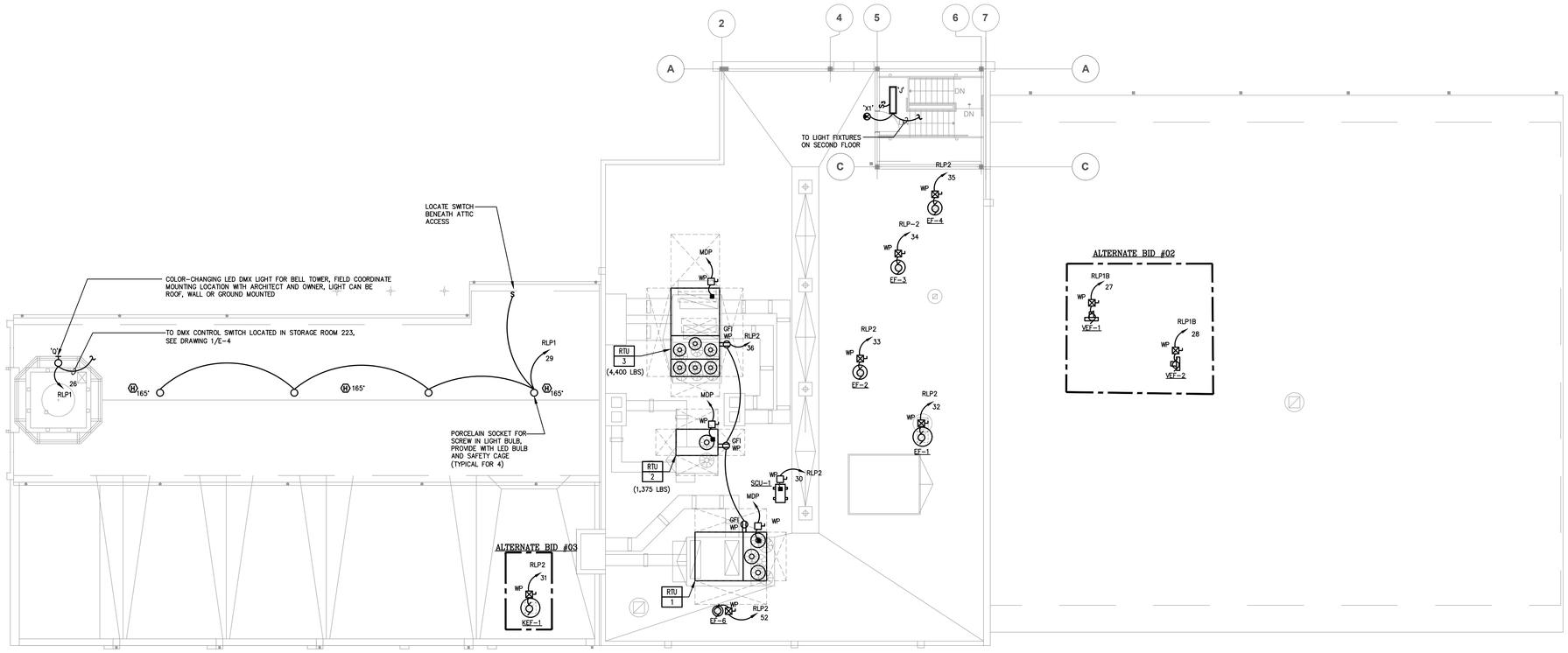

1 / E6 ATTIC/ROOF PLAN – ELECTRICAL

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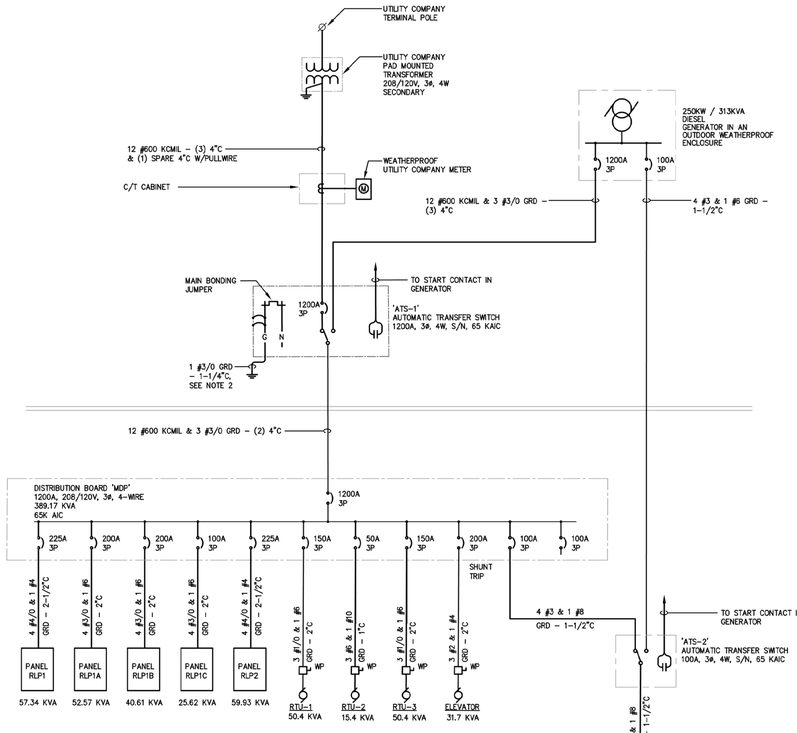


1 E7 SINGLE LINE DIAGRAM

SCHEMATIC

NOTE:

1. WHERE THERE IS 20' OR MORE OF 1/2" OR LARGER REBAR ENCASED IN A MINIMUM OF 2" OF CONCRETE IT SHALL BE BONDED TOGETHER WITH STEEL WIRE TIES AND CONNECTED TO THE GROUNDING ELECTRODE SYSTEM VIA #4 AWG SOLID COPPER CONDUCTOR AND A APPROVED GROUNDING CLAMP, BURNDY TYPE "GAR" SERIES OR EQUAL PER NEC 250–50(C) 250–52(A)(3), 250–66(B) AND 250–70.
2. COORDINATE WITH PSE&G AND MAKE ALL NECESSARY PROVISIONS AS REQUIRED. METER CONDUITS SHALL BE 2" RIGID CONDUIT.
3. THE ELECTRICAL DISTRIBUTION SHALL SELECTIVELY COORDINATE UP TO THE EQUIPMENT FAULT CURRENT RATING ONLY MANUFACTURER'S WHO HAVE TESTED AND CERTIFY THEIR PROPOSED OVER CURRENT PROTECTION DEVICES IN SERIES ARE ACCEPTABLE. IN NO CASE WILL EQUIPMENT BE APPROVED WITHOUT THE PROPER OVER CURRENT PROTECTION DEVICE SELECTIVE COORDINATION TESTING DOCUMENTATION.

NOTES:

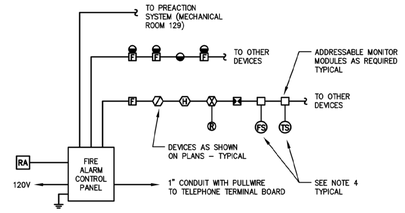
1. THE ELEMENTARY DIAGRAM DOES NOT SHOW ALL NECESSARY VALVES, PIPING AND WIRING REQUIRED.
2. SHUNT TRIP CIRCUIT BREAKER, NORMALLY OPENED CONTACT PER NEC 620.91

THE FOLLOWING IS THE SEQUENCE OF OPERATION FOR SIGNALING RECALL TO THE ELEVATOR CONTROLLER(S) AND REMOVAL OF POWER TO THE ELEVATOR(S)

1. SMOKE DETECTORS IN EITHER THE ELEVATOR SHAFT, MACHINE ROOM OR ELEVATOR LOBBIES (OTHER THAN THE PRIMARY RECALL FLOOR) INITIATE PHASE 1 RECALL TO THE PRIMARY FLOOR. SMOKE DETECTOR(S) IN THE PRIMARY FLOOR ELEVATOR LOBBY INITIATE PHASE 1 RECALL TO THE SECONDARY FLOOR.
2. HEAT DETECTORS IN EITHER THE ELEVATOR SHAFT OR ELEVATOR MACHINE ROOM OPERATE AT 135° F (HEAT DETECTORS ARE SET TO OPERATE AT A LOWER TEMPERATURE THAN THE SPRINKLER HEADS), OPENING THE SHUNT TRIP CIRCUIT BREAKER(S), REMOVING POWER FROM THE ELEVATOR(S) BEFORE A SPRINKLER HEAD IS ACTIVATED.
3. HEAT DETECTORS USED FOR ELEVATOR POWER SHUTDOWN PRIOR TO SPRINKLER OPERATION IN ELEVATOR SHAFTS SHALL BE LOCATED WITHIN 2'–0" OF EACH SPRINKLER HEAD.

3 E7 ELEVATOR RECALL SYSTEM

SCHEMATIC

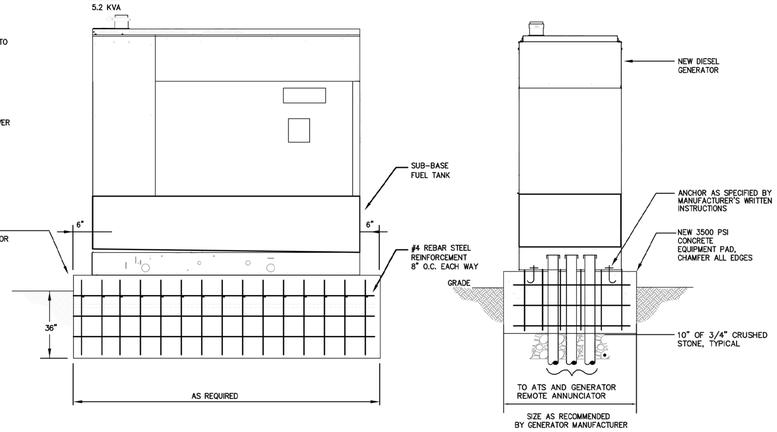


2 E7 FIRE ALARM SYSTEM RISER DIAGRAM

SCHEMATIC

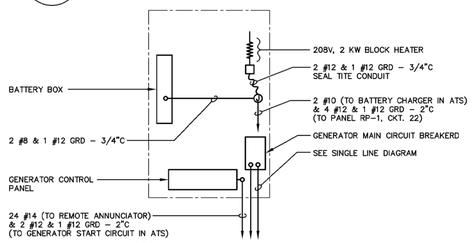
FIRE ALARM SYSTEM NOTES:

1. PROVIDE ALL WIRING AS RECOMMENDED BY MANUFACTURER. ALL WIRING SHALL BE IN CONDUIT. FIRE ALARM LABELED MC CABLE MAY BE USED IN CONCEALED LOCATIONS WHERE PERMITTED BY CODE.
2. ALL EQUIPMENT AND WIRING SHALL BE CLASS A, STYLE 6, STYLE D AND STYLE Z.
3. CONTRACTOR IS RESPONSIBLE FOR INSURING THAT COMPLETE SYSTEM MEETS ALL APPLICABLE CODES AND FOR OBTAINING FINAL APPROVAL FROM LOCAL FIRE INSPECTOR(S).
4. CONTRACTOR IS RESPONSIBLE TO COORDINATE QUANTITY AND LOCATION OF SPRINKLER FLOW AND TAMPER SWITCHES AND DUCT MOUNTED SMOKE DETECTORS. REFER TO FIRE PROTECTION AND HVAC DRAWINGS.
5. PROVIDE INTERCONNECTION WIRING BETWEEN HVAC EQUIPMENT AND FIRE ALARM CONTROL PANEL AS REQUIRED FOR FAN SHUTDOWN
6. PROVIDE AN LCD STYLE REMOTE ANNUNCIATOR WHERE INDICATED ON PLANS AND WIRE AS REQUIRED.
7. PROVIDE AT EACH LOCATION SHOWN, AUDIO/VISUAL DEVICES WITH OUTPUT LEVELS AS RECOMMENDED BY MANUFACTURER FOR THE SPACE TO COMPLY WITH ADA & CODE REQUIREMENTS. PROVIDE ADDITIONAL DEVICES TO THOSE SHOWN IF/AS REQUIRED TO MEET LEVELS.
8. UPON COMPLETION OF FIRE ALARM WORK, PROVIDE AN ACCEPTANCE TEST OF THE ENTIRE SYSTEM PER NFPA 72.



4 E7 GENERATOR ARRANGEMENT ON GRADE

NOT TO SCALE



5 E7 EMERGENCY GENERATOR CONNECTION DETAIL

NOT TO SCALE

PANELBOARD 'RLP1' (2 SECTIONS)

208/120V, 3ø, 4W, S/N, SURFACE, 200A MAIN LUGS ONLY, 22 KAIC

CKT. NO.	CIRCUIT BREAKER AMPS	CIRCUIT BREAKER POLES	LOAD KVA	LOAD HP	CIRCUIT DESCRIPTION	WIRE & CONDUIT
1	20	1	0.75	–	TRACK LIGHTING HISTORY	2 #12 & 1 #12 GRD – 3/4"C
2	20	1	0.75	–	TRACK LIGHTING HISTORY	2 #12 & 1 #12 GRD – 3/4"C
3	20	1	0.54	–	TRAINING ROOM LTG.	2 #12 & 1 #12 GRD – 3/4"C
4	20	1	1.11	–	LTG. MECH./STORAGE RM	2 #12 & 1 #12 GRD – 3/4"C
5	20	1	1.11	–	LTG HISTORY ROOM 2	2 #12 & 1 #12 GRD – 3/4"C
6	20	1	0.61	–	LTG HISTORY ROOM 3	2 #12 & 1 #12 GRD – 3/4"C
7	20	1	0.35	–	LTG CONFERENCE ROOM	2 #12 & 1 #12 GRD – 3/4"C
8	20	1	1.44	–	RECEPS. HISTORY ROOM 1	2 #12 & 1 #12 GRD – 3/4"C
9	20	1	1.26	–	RECEPS. TRAINING RM FRONT	2 #12 & 1 #12 GRD – 3/4"C
10	20	1	0.18	–	PROJ. RECEP. TRAINING RM	2 #12 & 1 #12 GRD – 3/4"C
11	20	1	0.90	–	RECEPS. TRAINING RM	2 #12 & 1 #12 GRD – 3/4"C
12	20	1	0.90	–	RECEPS. TRAINING RM	2 #12 & 1 #12 GRD – 3/4"C
13	20	1	0.72	–	RECEPS. TRAINING RM	2 #12 & 1 #12 GRD – 3/4"C
14	20	1	0.72	–	RECEPS. TRAINING RM	2 #12 & 1 #12 GRD – 3/4"C
15	20	1	0.72	–	RECEPS. TRAINING RM	2 #12 & 1 #12 GRD – 3/4"C
16	40	3	10.00	–	VAV–1–1	3 #8 & 1 #10 GRD – 1"C
17	20	3	2.50	–	UH–1	3 #12 & 1 #12 GRD – 3/4"C
18	40	3	9.50	–	VAV–1–2	3 #8 & 1 #10 GRD – 1"C
19	20	1	0.54	–	RECEPS. HISTORY ROOM 2	2 #12 & 1 #12 GRD – 3/4"C
20	20	1	0.54	–	RECEPS. CONFERENCE RM	2 #12 & 1 #12 GRD – 3/4"C
21	20	1	0.54	–	RECEPS. CONFERENCE RM	2 #12 & 1 #12 GRD – 3/4"C
22	20	2	0.75	–	HWR–1	2 #12 & 1 #12 GRD – 3/4"C
23	20	3	3.50	–	VAV–1–3	3 #12 & 1 #12 GRD – 3/4"C
24	50	3	12.0	–	VAV–1–4	3 #6 & 1 #10 GRD – 1"C
25	20	3	3.50	–	VAV–1–5	3 #12 & 1 #12 GRD – 3/4"C
26	20	1	0.01	–	COLOR CHANGING BELL TOWER LIGHT	2 #12 & 1 #12 GRD – 3/4"C
27	20	1	0.02	–	FLAG POLE/BELL LIGHTS	2 #12 & 1 #12 GRD – 3/4"C
28	20	2	0.03	–	SITE LIGHTING	2 #10 & 1 #10 GRD – 1"C
29	20	1	0.01	–	ATTIC LIGHTING	2 #12 & 1 #12 GRD – 3/4"C
30	20	1	0.20	–	HWH–1	2 #12 & 1 #12 GRD – 3/4"C
31	20	1	0.36	–	RECEPTACLES MECH. SPACE	2 #12 & 1 #12 GRD – 3/4"C
32	20	1	0.20	–	EXTERIOR LTG.	2 #12 & 1 #12 GRD – 3/4"C
33	20	2	0.75	–	HWR–2	2 #12 & 1 #12 GRD – 3/4"C
34	20	1	0.10	–	TP–1	2 #12 & 1 #12 GRD – 3/4"C
35	20	1	0.10	–	GI–1	2 #12 & 1 #12 GRD – 3/4"C
36	20	1	0.10	–	SECURITY EQUIPMENT PWR SUP.	2 #12 & 1 #12 GRD – 3/4"C
37	20	1	–	–	ROOM 132 MICROWAVE	2 #12 & 1 #12 GRD – 3/4"C
38	20	1	–	–	ROOM 132 AB CTR – RECEPS.	2 #12 & 1 #12 GRD – 3/4"C
39	20	1			AIR COMPRESSOR – PRE. ACT.	2 #12 & 1 #12 GRD – 3/4"C
40	20	1			AIR COMPRESSOR – PRE. ACT.	2 #12 & 1 #12 GRD – 3/4"C
41	20	1			AIR COMPRESSOR – PRE. ACT.	2 #12 & 1 #12 GRD – 3/4"C
42	20	1			SPARE	
43	20	1			SPARE	
44	20	1			SPARE	
45–69	–	1			SPACE	
			57.34		TOTAL CONNECTED LOAD	

PANELBOARD 'RLP1A' (2 SECTION)

208/120V, 3ø, 4W, S/N, FLUSH, 200A MAIN LUGS ONLY, 22 KAIC

CKT. NO.	CIRCUIT BREAKER AMPS	CIRCUIT BREAKER POLES	LOAD KVA	LOAD HP	CIRCUIT DESCRIPTION	WIRE & CONDUIT
1	20	1	0.26	–	LTG. KITCHEN/BATHROOMS	2 #12 & 1 #12 GRD – 3/4"C
2	20	1	0.48	–	LTG. ACT TRAINING/INSPECTORS	2 #12 & 1 #12 GRD – 3/4"C
3	20	1	0.51	–	LTG. TURN/WC/IT/ELEV/DIS. RMS	2 #12 & 1 #12 GRD – 3/4"C
4	20	1	0.18	–	KITCHEN REC. AB CTR.	2 #12 & 1 #12 GRD – 3/4"C
5	20	1	–	–	SPARE	–
6	20	1	1.00	–	REFRIGERATOR KITCHEN	2 #12 & 1 #12 GRD – 3/4"C
7	20	1	0.90	–	GENERAL RECEPS/STOVE KITCHEN	2 #12 & 1 #12 GRD – 3/4"C
8	20	1	0.36	–	RECEPS. BATHROOM	2 #12 & 1 #12 GRD – 3/4"C
9	20	1	1.00	–	TREADMILL ACTIVE TRAINING	2 #12 & 1 #12 GRD – 3/4"C
10	20	1	1.00	–	TREADMILL ACTIVE TRAINING	2 #12 & 1 #12 GRD – 3/4"C
11	20	1	1.00	–	BICYCLE ACTIVE TRAINING	2 #12 & 1 #12 GRD – 3/4"C
12	20	1	1.00	–	BICYCLE ACTIVE TRAINING	2 #12 & 1 #12 GRD – 3/4"C
13	20	1	1.00	–	EQUIPMENT ACTIVE TRAINING	2 #12 & 1 #12 GRD – 3/4"C
14	20	1	0.54	–	RECEPS/TV LEFT WALL ACTIVE TRAINING	2 #12 & 1 #12 GRD – 3/4"C
15	20	1	0.54	–	RECEPS BACK WALL ACTIVE TRAINING	2 #12 & 1 #12 GRD – 3/4"C
16	20	1	0.54	–	EWC/RECEPS BACK WALL ACTIVE TRAINING	2 #12 & 1 #12 GRD – 3/4"C
17	20	1	0.36	–	RECEPS/TV RIGHT WALL ACTIVE TRAINING	2 #12 & 1 #12 GRD – 3/4"C
18	20	1	0.54	–	TV FRONT WALL/RECEPS RIGHT WALL ACTIVE TRAINING	2 #12 & 1 #12 GRD – 3/4"C
19	20	1	0.54	–	DESK RECEPS. FW/INSPECTS.	2 #12 & 1 #12 GRD – 3/4"C
20	20	1	0.72	–	TV/BACK WALL RECEPS FW/INSPECTS.	2 #12 & 1 #12 GRD – 3/4"C
21	20	1	0.90	–	RECEP. TURN/OUT/CORR.	2 #12 & 1 #12 GRD – 3/4"C
22	20	1	0.54	–	RECEP. LOBBY/EXT. MAIN ENT.	2 #12 & 1 #12 GRD – 3/4"C
23	20	1	0.72	–	RECEP. SPARE/CORR.	2 #12 & 1 #12 GRD – 3/4"C
24	20	1	1.00	–	RECEP. SERVER	2 #12 & 1 #12 GRD – 3/4"C
25	20	1	1.00	–	RECEP. SERVER	2 #12 & 1 #12 GRD – 3/4"C
26	20	1	1.00	–	RECEP. SERVER	2 #12 & 1 #12 GRD – 3/4"C
27	20	1	0.36	–	RECEP. WC/JAN	2 #12 & 1 #12 GRD – 3/4"C
28	20	1	0.36	–	ELEV. MACHINE RM RECEPS	2 #12 & 1 #12 GRD – 3/4"C
29	20	1	0.10	–	ELEV. CAB LTG.	2 #12 & 1 #12 GRD – 3/4"C
30	20	1	0.30	–	ELEV. PIT LTG/RECEP.	2 #12 & 1 #12 GRD – 3/4"C
31	20	1	0.54	–	DISPATCH RECEPS.	2 #12 & 1 #12 GRD – 3/4"C
32	20	1	0.54	–	DISPATCH RECEPS.	2 #12 & 1 #12 GRD – 3/4"C
33	20	1	0.54	–	DISPATCH RECEPS.	2 #12 & 1 #12 GRD – 3/4"C
34	20	1	–	–	SPARE	–
35	20	1	0.72	–	CORRIDOR RECEPS.	2 #12 & 1 #12 GRD – 3/4"C
36	20	3	3.00	–	ECUH	3 #12 & 1 #12 GRD – 3/4"C
37	20	1	1.50	–	WOMENS ROOM HANDDRYER	2 #12 & 1 #12 GRD – 3/4"C
38	20	1	1.50	–	MENS ROOM HANDDRYER	2 #12 & 1 #12 GRD – 3/4"C
39	20	3	2.50	–	VAV–2–1	3 #12 & 1 #12 GRD – 3/4"C
40	20	3	4.50	–	VAV–2–2	3 #12 & 1 #12 GRD – 3/4"C
41	20	3	2.50	–	VAV–3–1	3 #12 & 1 #12 GRD – 3/4"C
42	20	3	1.00	–	VAV–3–2	3 #12 & 1 #12 GRD – 3/4"C
43	30	3	8.00	–	VAV–3–3	3 #10 & 1 #10 GRD – 3/4"C
44	20	3	1.50	–	VAV–3–4	3 #12 & 1 #12 GRD – 3/4"C
45	20	3	4.50	–	VAV–3–5	3 #12 & 1 #12 GRD – 3/4"C
46	20	1	1.08	–	GR RACK RECEPS. TURNOUT RM	2 #12 & 1 #12 GRD – 3/4"C
47	20	1	1.08	–	GR RACK RECEPS. TURNOUT RM	2 #12 & 1 #12 GRD – 3/4"C
48	20	1	1.08	–	GR RACK RECEPS. TURNOUT RM	2 #12 & 1 #12 GRD – 3/4"C
49	20	1	1.08	–	GR RACK RECEPS. TURNOUT RM	2 #12 & 1 #12 GRD – 3/4"C
50	20	1	1.08	–	GR RACK RECEPS. TURNOUT RM	2 #12 & 1 #12 GRD – 3/4"C
51	20	1	1.08	–	GR RACK RECEPS. TURNOUT RM	2 #12 & 1 #12 GRD – 3/4"C
52	20	1	–	–	GAS SOLENOID VALVE	2 #12 & 1 #12 GRD – 3/4"C
53	20	1	–	–	ACCESS CONTROL PANEL	2 #12 & 1 #12 GRD – 3/4"C
54–68	20	1	–	–	SPARE	–
			52.57		TOTAL CONNECTED LOAD	

PANELBOARD 'RLP1B

208/120V, 3ø, 4W, S/N, SURFACE, 200A MAIN LUGS ONLY, 22 KAIC

CKT. NO.	CIRCUIT BREAKER AMPS	CIRCUIT BREAKER POLES	LOAD KVA	LOAD HP	CIRCUIT DESCRIPTION	WIRE & CONDUIT
1	20	1	1.00	–	LTG – EQUIPMENT BAYS	2 #12 & 1 #12 GRD – 3/4"C
2	20	1	0.40	–	EXT. LTG – BACK ENT. EQ. BAYS	2 #12 & 1 #12 GRD – 3/4"C
3	20	1	0.40	–	EXT. LTG – FRT ENT. EQ. BAYS	2 #12 & 1 #12 GRD – 3/4"C
4	20	1	0.40	–	LTG – RMS 121 – 126	2 #12 & 1 #12 GRD – 3/4"C
5	20	1	0.40	–	LTG – MEZZANINE	2 #12 & 1 #12 GRD – 3/4"C
6	20	1	0.72	–	OVERHEAD RECEPS. BACK	2 #12 & 1 #12 GRD – 3/4"C
7	20	1	0.72	–	OVERHEAD RECEPS. FRONT	2 #12 & 1 #12 GRD – 3/4"C
8	20	1	1.08	–	WALL RECEPS – EQ. BAYS BACK	2 #12 & 1 #12 GRD – 3/4"C
9	20	1	1.26	–	WALL RECEPS – EQ. BAYS FRONT	2 #12 & 1 #12 GRD – 3/4"C
10	20	1	0.36	–	EXT. RECEPS EQ. BAYS – FRONT	2 #12 & 1 #12 GRD – 3/4"C
11	20	1	0.36	–	EXT RECEPS EQ. BAYS – BACK	2 #12 & 1 #12 GRD – 3/4"C
12	20	1	–	–	EF–7	2 #12 & 1 #12 GRD – 3/4"C
13	20	1	0.54	–	RECEPS – SCBA	2 #12 & 1 #12 GRD – 3/4"C
14	20	1	1.50	–	WASHER/DRYER DECON	2 #12 & 1 #12 GRD – 3/4"C
15	20	2	–	–	SPARE	–
16	20	1	0.54	–	RECEPS. – SHOP	2 #12 & 1 #12 GRD – 3/4"C
17	20	1	0.36	–	RECEPS. – SHOP	2 #12 & 1 #12 GRD – 3/4"C
18	60	2	8.77	7.5	AIR COMPRESSOR	2 #6 & 1 #10 GRD – 1"C
19	20	1	1.08	–	RECEPS – COMP./STOR/UTIL. RM	2 #12 & 1 #12 GRD – 3/4"C
20	20	1	1.80	–	RECEPS – MEZZANINE	2 #12 & 1 #12 GRD – 3/4"C
21	20	1	1.30	–	IR (4)	2 #12 & 1 #12 GRD – 3/4"C
22	20	1	1.77	–	FCU–1	2 #12 & 1 #12 GRD – 3/4"C
23	30	2	4.59	–	CU–1	2 #10 & 1 #10 GRD – 3/4"C
24	20	3	3.21	–	EF–5	3 #12 & 1 #12 GRD – 3/4"C
25	20	1	–	–	SPARE	–
26	20	1	0.36	–	EXT. RECEPS. ELEC SERV/CU	2 #12 & 1 #12 GRD – 3/4"C
27	20	3	3.21	–	VEF–1	3 #12 & 1 #12 GRD – 3/4"C
28	20	3	3.21	–	VEF–2	3 #12 & 1 #12 GRD – 3/4"C
29	20	1	0.20	–	FACP	2 #12 & 1 #12 GRD – 3/4"C
30	20	1	0.02	–	BACKSIDE WALL SEC. LTG.	2 #12 & 1 #12 GRD – 3/4"C
31	20	1	–	–	FLOOD LIGHT FOR "MH"	2 #12 & 1 #12 GRD – 3/4"C
32	20	1	–	–	SPARE	–
			40.61		TOTAL CONNECTED LOAD	

CIRCUIT BREAKERS TO BE LOCKED OUT UNDER BASEBID

PANELBOARD 'RLP1C' (2 SECTIONS)

208/120V, 3ø, 4W, S/N, SURFACE, 100A MAIN LUGS ONLY, 22 KAIC

CKT. NO.	CIRCUIT BREAKER AMPS	CIRCUIT BREAKER POLES	LOAD KVA	LOAD HP	CIRCUIT DESCRIPTION	WIRE & CONDUIT
1	20	3	1.14	–	FIRE TRUCK BAY DOOR	3 #12 & 1 #12 GRD – 3/4"C
2	20	3	1.14	–	FIRE TRUCK BAY DOOR	3 #12 & 1 #12 GRD – 3/4"C
3	20	3	1.14	–	FIRE TRUCK BAY DOOR	3 #12 & 1 #12 GRD – 3/4"C
4	20	3	1.14	–	FIRE TRUCK BAY DOOR	3 #12 & 1 #12 GRD – 3/4"C
5	20	3	1.14	–	FIRE TRUCK BAY DOOR	3 #12 & 1 #12 GRD – 3/4"C
6	20	3	1.14	–	FIRE TRUCK BAY DOOR	3 #12 & 1 #12 GRD – 3/4"C
7	20	3	1.14	–	FIRE TRUCK BAY DOOR	3 #12 & 1 #12 GRD – 3/4"C
8	20	3	1.14	–	FIRE TRUCK BAY DOOR	3 #12 & 1 #12 GRD – 3/4"C
9	20	3	5.00		3–PHASE WASHER DECON	3 #12 & 1 #12 GRD – 3/4"C
10	40	3	11.50		AIR COMPRESSOR – SCBA	3 #8 & 1 #10 GRD – 3/4"C
11	20	3			SPARE	
12	20	3			SPARE	
13	20	3			SPARE	
14	20	3			SPARE	
15	20	3			SPARE	
16	20	3			SPARE	
17	20	3			SPARE	
18	20	3			SPARE	
19	20	1	–	–	SPARE	–
20	20	1	–	–	SPARE	–
21	20	1	–	–	SPARE	–
22	20	1	–	–	SPARE	–
23	20	1	–	–	SPARE	–
24	20	1	–	–	SPARE	–
25	20	1	–	–	SPARE	–
26	20	1	–	–	SPARE	–
27	20	1	–	–	SPARE	–
28	20	1	–	–	SPARE	–
29	20	1	–	–	SPARE	–
30	20	1	–	–	SPACE	–
31–48	–	1	–	–	SPACE	–
			25.62		TOTAL CONNECTED LOAD	

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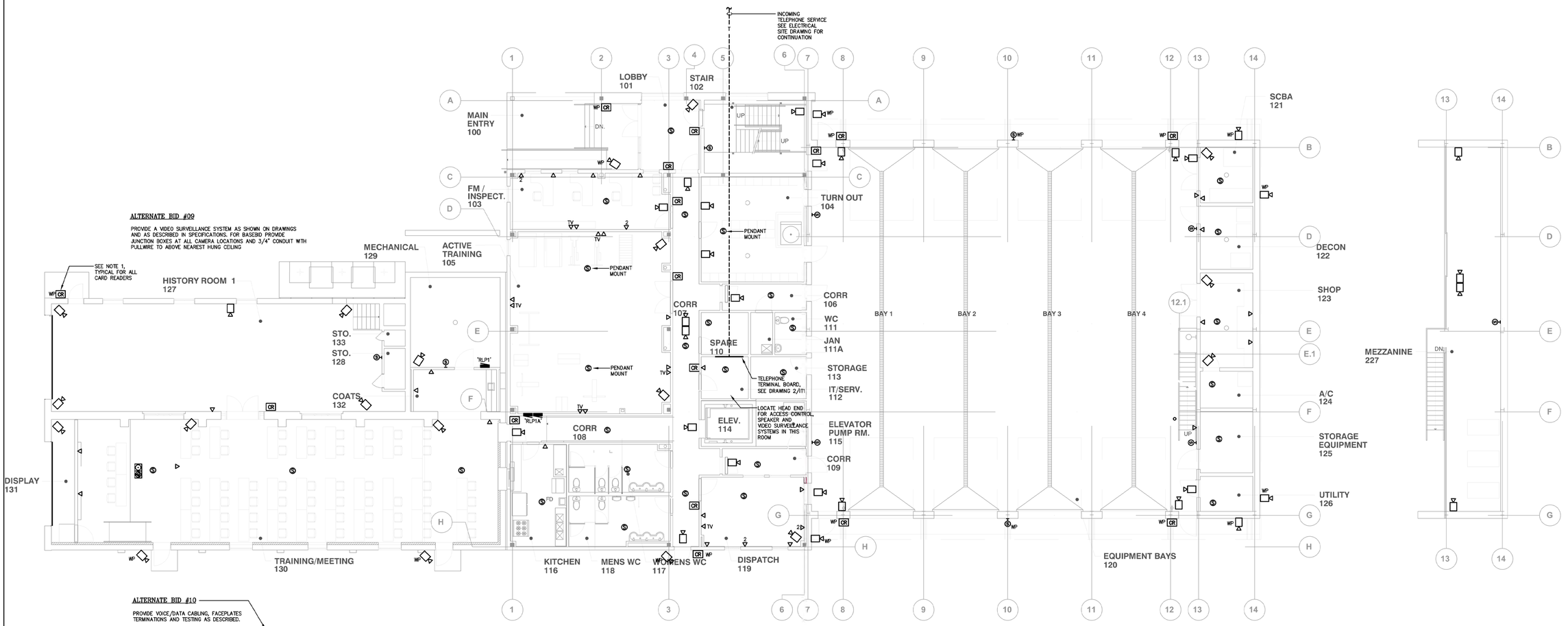
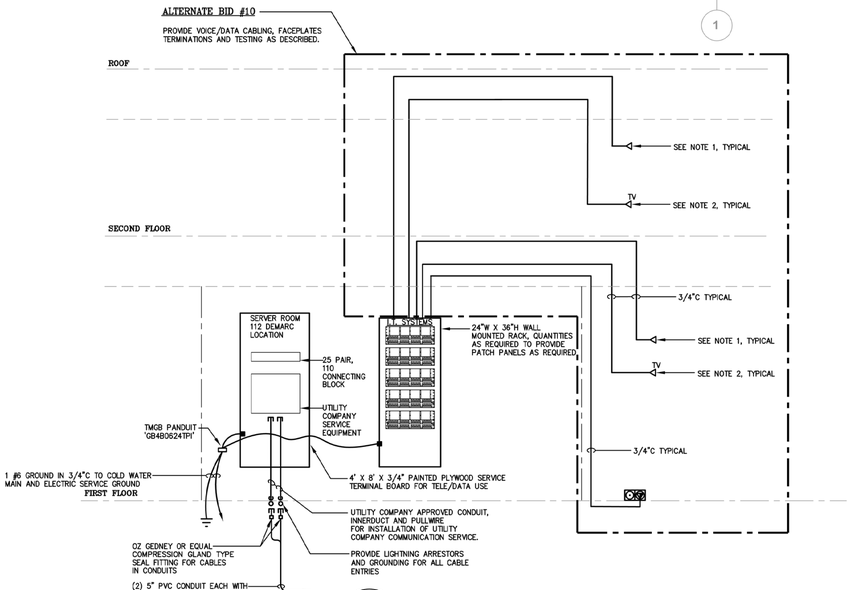
RELIEF FIRE COMPANY NO. 1
ADDITION / RENOVATION
BLOCK 86, LOTS 4, 5, 10, 11, 21, 22, 22.01 AND 23
17 PINE STREET
MOUNT HOLLY, NEW JERSEY
TITLE: DIAGRAMS AND SCHEDULES - ELECTRICAL

DRAWING DATE: 01 JULY 2020
REVISION DATE: 25 SEPT 2020
DRAWN BY: LA
COMMISION NO.: 5475B

E7





2 / IT1 TELE./DATA RISER DIAGRAM

SCHEMATIC

NOTES:

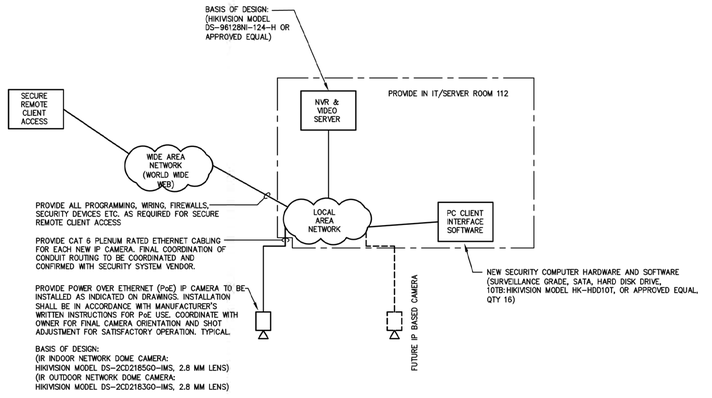
1. PROVIDE (1) CATEGORY 6 PLENUM RATED CMP 4 PAIR 24 AWG COPPER CABLE TO EACH VOICE DATA OUTLET LOCATION SHOWN ON PLANS. PROVIDE WITH RJ45 JACK AND TERMINATE. PROVIDE DIFFERENT CABLE AND JACK QUANTITIES WHERE NOTED BY NUMERAL NEXT TO OUTLET SYMBOL.
2. PROVIDE TO EACH TV (1) COAXIAL CABLE AND (1) CATEGORY 6 PLENUM RATED CMP 4 PAIR 24 AWG COPPER CABLE. FACEPTACLE SHALL CONTAIN (1) F-TYPE CONNECTOR AND (1) RJ45 JACK. TERMINATE THE COAXIAL CABLE TO THE F-TYPE CONNECTOR AND TERMINATE THE CAT 6 CABLE TO THE RJ45 JACK.
3. ALL VOICE/DATA WIRING AND JACKS SHALL BE PERMANENTLY LABELED TO MATCH CORRESPONDING PATCH PANEL TERMINATION NUMBERS.
4. ALL VOICE/DATA SYSTEMS SHALL BE INSTALLED BY A MANUFACTURER'S CERTIFIED INSTALLER. THE CONTRACTOR SHALL TEST THE COMPLETE SYSTEM INCLUDING ALL WIRE TERMINATIONS, PATCH CABLING, FIBER CABLING, ETC. AND GUARANTEE SYSTEM PERFORMANCE. PROVIDE TYPED TEST RESULT DATA TO OWNER.

1 / IT1 FIRST FLOOR PLAN – INFORMATION TECHNOLOGY

SCALE 1/8" = 1'-0"

NOTES:

1. PROVIDE A COMPLETE ACCESS CONTROL SYSTEM PER MANUFACTURER'S WRITTEN DIRECTIONS, LOCATE HEAD END EQUIPMENT FOR ACCESS CONTROL IN ROOM 112.
2. ALL SPEAKERS SHALL HAVE INDIVIDUAL ROOM VOLUME CONTROL (TYP).
3. COORDINATE LOCATIONS OF ALL SPEAKERS IN HISTORIC FIREHOUSE BUILDING WITH ARCHITECT.
4. SHOP DRAWINGS FOR ACCESS CONTROL, PAGING AND VIDEO SURVEILLANCE SYSTEMS SHALL BE APPROVED BY OWNER PRIOR TO ORDERING.



3 / IT1 CAMERA NVR INTERCONNECTION WIRING DIAGRAM

SCHEMATIC

NOTES:

1. PROVIDE A COMPLETE VIDEO SURVEILLANCE SYSTEM INCLUDING IP BASED CAMREAS, POWER SUPPLIES, NETWORK SWITCHES, VIDEO RECORDERS, SERVERS, SOFTWARE, HARDWARE CABLING, PROGRAMMING, ETC. AS REQUIRED FOR COMPLETE SYSTEM OPERATION.
2. SYSTEM SHALL HAVE 20% SPARE CAPACITY.

WIND & SEISMIC RESTRAINTS NOTES

1. INSTALL FLEXIBLE CONNECTIONS IN RUNS OF CONDUITS WHERE THEY CROSS SEISMIC JOINTS. WHERE ADJACENT SECTIONS OR BRANCHES ARE SUPPORTED BY DIFFERENT STRUCTURAL ELEMENTS, AND WHERE THEY TERMINATE WITH CONNECTION TO EQUIPMENT THAT IS ANCHORED TO A DIFFERENT STRUCTURAL ELEMENT FROM THE ONE SUPPORTING THEM AS THEY APPROACH EQUIPMENT.
2. WIND RESTRAINT LOADING SHALL BE AS INDICATED ON THE CONTRACT DOCUMENTS IN THE ARCHITECTURAL/STRUCTURAL CODE ANALYSIS.
3. SEISMIC RESTRAINT LOADING SHALL BE AS INDICATED ON THE CONTRACT DOCUMENTS IN THE ARCHITECTURAL/STRUCTURAL CODE ANALYSIS.

SYMBOL LIST & ABBREVIATIONS

▽	VOICE/DATA/VIDEO OUTLET – 4" X 4" OUTLET BOX WITH 3/4"C STUBBED UP ABOVE NEAREST ACCESSIBLE CEILING. PROVIDE CABLING AND FACEPLATE AS INDICATED ON RISER DIAGRAM NUMERAL NEXT TO JACKS INDICATES NUMBER OF CABLES AND RJ45 JACKS
▽TV	TV OUTLET – 4" X 4" OUTLET BOX WITH 3/4"C STUBBED UP ABOVE NEAREST ACCESSIBLE CEILING. PROVIDE CABLING AND FACEPLATE AS INDICATED ON RISER DIAGRAM
CR	CARD READER
	CAMERA
S	SPEAKER (CEILING/WALL) PROVIDE WITH VOLUME CONTROL
WP	WEATHERPROOF

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RELIEF FIRE COMPANY NO. 1
ADDITION / RENOVATION
BLOCK 86, LOTS 4, 5, 10, 11, 21, 22, 22.01 AND 23
17 PINE STREET
MOUNT HOLLY, NEW JERSEY

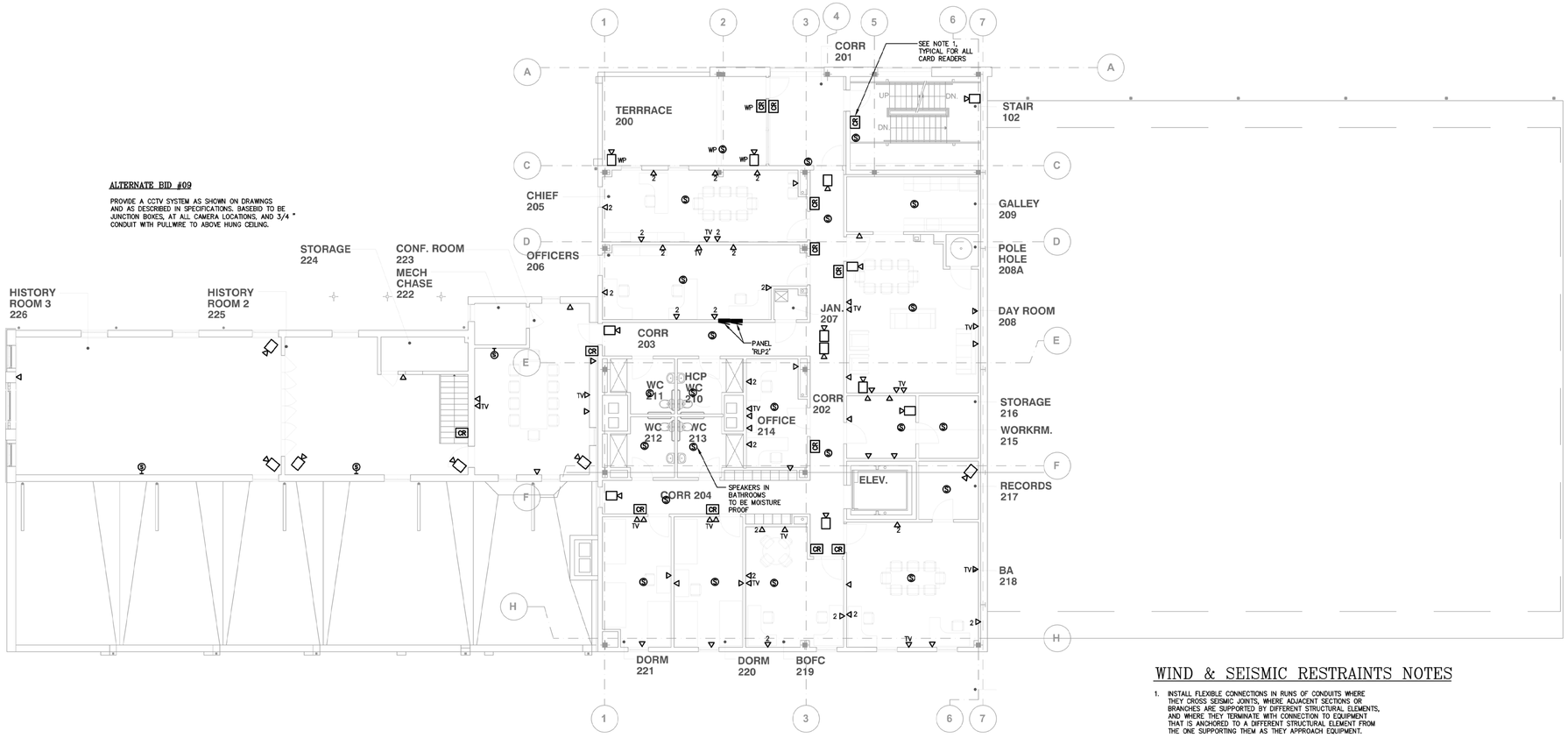
TITLE: FIRST FLOOR PLAN - INFORMATION TECHNOLOGY

DRAWING DATE: 01 JULY 2020
REVISION DATE: 25 SEPT 2020
DRAWN BY: LA
COMMISION NO: 5475B

NORTH

IT1

1 OF 2



1 / IT2 SECOND FLOOR PLAN – INFORMATION TECHNOLOGY

SCALE 1/8" = 1'-0"

NOTES:

1. PROVIDE A COMPLETE ACCESS CONTROL SYSTEM PER MANUFACTURER'S WRITTEN DIRECTIONS, LOCATE HEAD END EQUIPMENT FOR ACCESS CONTROL IN ROOM 112.
2. ALL SPEAKERS SHALL HAVE INDIVIDUAL ROOM VOLUME CONTROL (TYP).
3. COORDINATE LOCATIONS OF ALL SPEAKERS IN HISTORIC FIREHOUSE BUILDING WITH ARCHITECT.
4. SHOP DRAWINGS FOR ACCESS CONTROL, PAGING AND VIDEO SURVEILLANCE SYSTEMS SHALL BE APPROVED BY OWNER PRIOR TO ORDERING.

WIND & SEISMIC RESTRAINTS NOTES

1. INSTALL FLEXIBLE CONNECTIONS IN RUNS OF CONDUITS WHERE THEY CROSS SEISMIC JOINTS, WHERE ADJACENT SECTIONS OR BRANCHES ARE SUPPORTED BY DIFFERENT STRUCTURAL ELEMENTS, AND WHERE THEY TERMINATE WITH CONNECTION TO EQUIPMENT THAT IS ANCHORED TO A DIFFERENT STRUCTURAL ELEMENT FROM THE ONE SUPPORTING THEM AS THEY APPROACH EQUIPMENT.
2. WIND RESTRAINT LOADING SHALL BE AS INDICATED ON THE CONTRACT DOCUMENTS IN THE ARCHITECTURAL/STRUCTURAL CODE ANALYSIS.
3. SEISMIC RESTRAINT LOADING SHALL BE AS INDICATED ON THE CONTRACT DOCUMENTS IN THE ARCHITECTURAL/STRUCTURAL CODE ANALYSIS.

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IT2

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