PROPOSED NORTH LOCKER ROOM RENOVATIONS
LRHSD PROJECT NO. REF21-35-8267

LENAPE HIGH SCHOOL
235 HARTFORD ROAD
MEDFORD, NJ 08055

LENAPE REGIONAL HIGH SCHOOL SCHOOL DISTRICT

PREPARED FOR THE

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INDEX OF ARCHITECTURAL DRAWINGS

INDEX OF ENGINEERING DRAWINGS

JANUARY 2024

LENAPE HIGH SCHOOL NORTH LOCKER ROOM RENOVATIONS

REF21-35-8267

ABBREVIATION LIST

A.B.	ANCHOR BOLTS		FLOOR	PL.	PLATE
@	AT	FD./ FLR.	FLOOR DRAIN	PLYWD.	PLYWOOD
ACOUS.	ACOUSTIC	FLUOR.	FLUORESCENT	P.S.	PIPE SPACE
AC.T.(A.T.)	ACOUSTIC TILE	F.O.	FACE OF	PSI.	POUNDS PER SQUARE INCH
A.C.Q.	ALKALINE COPPER QUATERNARY	F.P.S.C.	FIRE PROOF SELF CLOSING	PTD.	PAINTED
A.C.C.U.	AIR COOLED CONDENSING UNIT	FR.	FRAME	PTN.	PARTITION
ADD'L	ADDITIONAL	F.R.T.(W)	FIRE RETARDANT TREADED (WOOD)	PVC.	POLYVINYL CHLORIDE
AFF.	ABOVE FINISHED FLOOR	F.R.G.W.B.	FIBERGLASS REINFORCED GYPSUM	Q.T.	QUARRY TILE
ALT.	ALTERNATE		WALLBOARD	R.	RADIUS / RISER
ALUM. / AL.	ALUMINUM	F.S.R.	FLEXIBLE SHEET ROOFING	RAD.	RADIUS
&	AND	F.R.P.	FIBERGLASS REINFORCED POLYESTER	R.D.	ROOF DRAIN
ANOD.	ANODIZED	FTG.	FOOTING	REBAR	REINFORCING BAR
∠ / ∡	ANGLE	G.B.	GYPSUM BOARD	REF. / REFRIG.	REFRIGERATOR
A.P.	ACOUSTICAL PANEL	GA.	GAGE	R/F	REFRIGERATOR / FREEZER
APP'D	APPROVED	GALV.	GALVANIZED	REQ'D.	REQUIRED
APPL.	APPLY	GCR	GENERAL CLASSROOM	REINF.	REINFORCE (ING)
ARCH.	ARCHITECTURAL	GD.	GRADE	△ / REV.	REVISION
BRG.	BEARING	G.W.B.	GYPSUM WALL BOARD	RFT	RUBBER FLOOR TILE
BD.	BOARD	GYP.	GYPSUM	RM.	ROOM
BLK.	BLACK	H.	HIGH	RT.	ROOF TOP
BOT. / B.	BOTTOM	HD.	HEAD	R.V.	ROOF VENT
B.O.	BOTTOM OF	H.M.	HOLLOW METAL	R.W.C.	RAIN WATER CONDUCTOR
B.U.(R)	BUILT-UP (ROOF)	HORIZ.	HORIZONTAL	R.W.L.	RAIN WATER LEADER
CAB.	CABINET	H.P.	HIGH POINT	SC / SP. CT.	SPECIAL COATING
CB	CHALKBOARD	H.P.S.	HIGH PRESSURE SODIUM	SF	SQUARE FOOT
CCA.	COPPER CROMATED ARSENIC	H.R.	HANDRAIL	SHT.	SHEET
CER.	CERAMIC	HT.	HEIGHT	SIM.	SIMILAR
C.J.	CONTROL JOINT	H.V.A.C.	HEATING, VENTILATION, &	SPEC (S.)	SPECIFICATION (S)
C.T.	CERAMIC TILE		AIR CONDITIONING	SQ.	SQUARE
CH. / C.	CHANNEL	IARF	INTERLOCKING ATHLETIC RUBBER	STD.	STANDARD
C.L. / ℄	CENTER LINE		FLOORING	STG.	STORAGE
CL.	CLOSET	I.D.	INSIDE DIMENSION	STL. / ST.	STEEL
CLG.	CEILING	INSUL.	INSULATION	S.S. / ST. ST.	STAINLESS STEEL
COL.	COLUMN	JB.	JAMB	STRUCT.	STRUCTURAL
CMU.	CONCRETE MASONRY UNIT	JT.	JOINT	SUSP'D.	SUSPENDED
CNTR.	COUNTER	KIT.	KITCHEN	S.W.	SHORT WAY
CONC.	CONCRETE	LG.	LONG	T.	TREAD / THICKNESS / TOP
CONSTR.	CONSTRUCTION	LAM.	LAMINATED	T.B.	TACK BOARD
CONTR.	CONTRACTOR	LAB.	LABEL	T. & B.	TOP AND BOTTOM
CORR.	CORRIDOR	LAV.	LAVATORY	TEL.	TELEPHONE
CONT.	CONTINUOUS	L.L.H.	LONG LEG HORIZONTAL	THK.	THICK
D.	DEEP	L.L.V.	LONG LEG VERTICAL	TLT.	TOILET
DET.	DETAIL	L.P.	LOW POINT	T.O.	TOP OF
ØDIA.	DIAMETER	L.W.C.	LIGHTWEIGHT CONCRETE	T.O.S.	TOP OF STEEL / TOP OF SLAB
DIST.	DISTRIBUTION (TOR)	MACH.	MACHINE	T.S.	TRANSITION STRIP ± CARPET TO VINYL
DBL.	DOUBLE	MAS.	MASONRY	T.O.W.	TOP OF WALL
DMB	DRY MARKER BOARD	MAX.	MAXIMUM	TYP.	TYPICAL
DR.	DOOR	M.B.S.R.	MODIFIED BITUMEN SHEET ROOFING	U.C.	UTILITY CLOSET
D.S.	DOWN SPOUT	MDO.	MARINE DENSITY OVERLAY	U.L.	UNDERWRITER'S LABORATORIES
DWG(S).	DRAWING (S)	MECH.	MECHANICAL	U.N.O.	UNLESS NOTED OTHERWISE
EA.	EACH	MFGR.	MANUFACTURER	U.S.	UNDER SIDE
EFF.(IC)	EFFICIENCY	MFG'D.	MANUFACTURED	U.S.G.	UNITED STATES GYPSUM
E.J.	EXPANSION JOINT	MFS	MONOLITHIC EPOXY	U.V.	UNIT VENTILATOR
EL. / ELEV.	ELEVATION		FLOOR SYSTEM	VCT.	VINYL COMPOSITION TILE
E.P.	ELECTRIC PANEL	MIN.	MINIMUM	VERT.	VERTICAL
EPDM.	ETHYLENE PROPYLENE DIENE-	M.O.	MASONRY OPENING	V.H.I.F.R.	VERY HIGH IMPACT FIBERGLASS
	MONOMER	M.T.	MARBLE THRESHOLD		REINFORCED
E.P.S.	EXTRUDED POLYSTYRENE	MTD.	MOUNTED	V.I.F.	VERIFY IN FIELD
EQ.	EQUAL	MTL.	METAL	VTR	VENT THRU ROOF
EQUIV.	EQUIVALENT	M.W.	MICROWAVE	V.W.M.	VERIFY WITH MANUFACTURER
EQUIP.	EQUIPMENT	N.C.	NO CEILING	W.	WIDTH
E.S.	EACH SIDE	N.I.C.	NOT IN CONTRACT	WD.	WOOD
E.W.C.	ELECTRIC WATER COOLER	NO.	NUMBER	W/	WITH
EX'G. / EXIST.	EXISTING	NTS.	NOT TO SCALE	W/R	WATER RESISTANT
EXP.	EXPANSION	O.C.	ON CENTER	W.W.F.	WELDED WIRE FABRIC
EXT.	EXTERIOR	OPER.	OPERATOR / TION	W.P.	WATER PROOF
F.A.	FIRE ALARM	O.D.	OUTSIDE DIAMETER	W.C.	WATER CLOSET
F.E.	FIRE EXTINGUISHER	PART.	PARTITION	W.H.	WALL HYDRANT
F.F.	FINISH FLOOR	P.C.	PRE-CAST	Y.D.	YARD DRAIN
FIN.	FINISH				

PROJECT SCOPE

THE SCOPE OF THIS PROJECT INCLUDES INTERIOR RENOVATIONS TO THE EXISTING NORTH GYM LOCKER ROOM AREAS:
GIRLS LOCKER ROOMS
BOYS LOCKER ROOMS.
WORK INCLUDES LOCKER ROOM, GYM OFFICES, STORAGE, CORRIDORS, VESTIBULES AND INCLUDING ACCESSORY ROOMS.

WORK SPECIFICALLY INCLUDES INTERIOR RENOVATIONS, PROVISION OF NEW WALLS, DOORS, VISIONS PANELS, FLOORS, LOCKERS, SHOWER ROOMS, TOILET ROOMS, STORAGE ROOMS, CORRIDORS, AND VESTIBULES INCLUDING LOOSE AND FIXED EQUIPMENT REPLACEMENT, HVAC, PLUMBING, ELECTRICAL AND FIRE SUPPRESSION SYSTEMS IMPROVEMENTS.

CODE INFORMATION

USE GROUP:	E - EDUCATIONAL
CONSTRUCTION TYPE:	2B
FIRE GRADING:	2 HOUR FLAME SPREAD, INTERIOR FINISH (ROOMS & ENCLOSED SPACES, IBC TABLE 803.9) CLASS C, INTERIOR FLOOR FINISH CLASS II, IBC 804.4.1
USE OF BUILDING:	EDUCATIONAL. NO CHANGE IN USE IS PROPOSED UNDER THE SCOPE OF THIS APPLICATION.
BUILDING HEIGHT:	2 STORY (EXISTING - NO CHANGE PROPOSED)
ZONING REQUIREMENTS:	NO CHANGE IN USE OR AREA PROPOSED

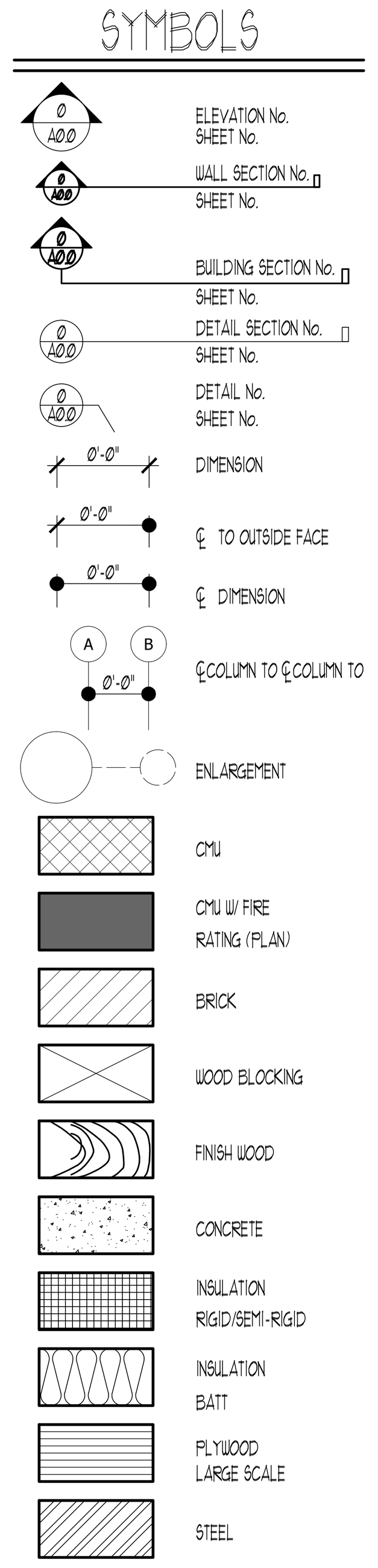
THE FOLLOWING CODES ARE APPLICABLE TO THIS PROJECT:

A. NEW JERSEY UNIFORM CONSTRUCTION CODE, 5:23, AS AMENDED, NEW JERSEY DEPARTMENT OF COMMUNITY AFFAIRS, SHALL GOVERN THE WORK OF THIS PROJECT± EXCEPT AS NOTED HEREIN. ALSO, SUBCODES AS APPLICABLE TO THE WORK
B. NEW JERSEY BARRIER-FREE SUBCODE, 5:23-7, AS AMENDED.
C. INTERNATIONAL BUILDING CODE -NJ ED., 2021
D. INTERNATIONAL MECHANICAL CODE, 2021, AS AMENDED.
E. INTERNATIONAL ENERGY CONSERVATION CODE / 2021 (RESIDENTIAL) AND ASHRAE 90.1-2019 (COMMERCIAL) INTERNATIONAL CODE COUNCIL, INC. (ICC).
F. NATIONAL STANDARD PLUMBING CODE, 2021, AS AMENDED.
G. ELECTRICAL SUBCODE, NATIONAL ELECTRICAL CODE / NATIONAL FIRE PROTECTION ASSOCIATION (NFPA) 70 / 2020, AS AMENDED.
H. REHABILITATION SUBCODE - NJAC 5:23-6, AND SPECIFICALLY 5:23-6.4
I. OSHA REGULATIONS, AS APPLICABLE.
J. ADA (Americans with Disabilities Act), AS APPLICABLE.
K. (NJAC) NEW JERSEY ADMINISTRATIVE CODE, TITLE 6± CHAPTER 22, AS APPLICABLE.
L. ICC / ANSI A117.1, 2017
M. INTERNATIONAL FUEL GAS CODE, 2021., AS APPLICABLE
N. NFPA 13, 2020.
O. SEI/ASCE (AMERICAN SOCIETY OF CIVIL ENGINEERS) CURRENT EDITION.
P. ASTM E1886-02 / ASTM E1996-02 WIND ZONE AND MISSILE TESTING.

GENERAL NOTES:

1. SCHEDULE: SUBMIT SCHEDULE INDICATING PROPOSED METHODS AND SEQUENCE OF OPERATIONS FOR SELECTIVE DEMOLITION WORK TO ARCHITECT FOR REVIEW PRIOR TO COMMENCEMENT OF WORK. INCLUDE COORDINATION FOR SHUTOFF, CAPPING, AND CONTINUATION OF UTILITY SERVICES AS REQUIRED, TOGETHER W/ DETAILS FOR DUST AND NOISE CONTROL. PROVIDE DETAILED SEQUENCE OF DEMOLITION AND REMOVAL WORK TO ENSURE OWNER'S ONSITE OPERATIONS ARE NOT UNINTERRUPTED. COORDINATE WITH OWNER'S CONTINUING OCCUPATION OF PORTIONS OF EXISTING BUILDING.
2. OCCUPANCY: OWNER WILL BE CONTINUOUSLY OCCUPYING AREAS OF THE BUILDING IMMEDIATELY ADJACENT TO AREAS OF SELECTIVE DEMOLITION. CONDUCT SELECTIVE DEMOLITION WORK IN MANNER THAT WILL MINIMIZE NEED FOR DISRUPTION OF OWNER'S NORMAL OPERATIONS. PROVIDE MINIMUM OF 72 HOURS ADVANCE NOTICE TO OWNER OF DEMOLITION ACTIVITIES WHICH WILL IMPACT OWNER'S NORMAL OPERATIONS. SPECIAL NOTE: TO THE GREATEST EXTENT POSSIBLE, DEMOLITION WORK WHICH COULD DISTURB THE OWNER'S NORMAL OPERATIONS WILL BE SCHEDULED TO OCCUR DURING THE OWNER'S OFF-PEAK OPERATION PERIOD, AS SPECIFIED BY THE OWNER.
3. STORAGE OR SALE OF REMOVED ITEMS ON SITE WILL NOT BE PERMITTED.
4. PROTECTIONS: PROVIDE TEMPORARY BARRICADES AND OTHER FORMS OF PROTECTION AS REQUIRED TO PROTECT OWNER'S PERSONNEL AND GENERAL PUBLIC FROM INJURY DUE TO DEMOLITION WORK.
5. PROVIDE PROTECTIVE MEASURES AS REQUIRED TO PROVIDE FREE AND SAFE PASSAGE OF OWNER PERSONNEL TO AND FROM OCCUPIED PORTIONS OF BUILDING.
6. PROTECT FROM DAMAGE EXISTING FINISH WORK THAT IS TO REMAIN IN PLACE AND BECOMES EXPOSED
7. CONSTRUCT TEMPORARY INSULATED SOLID DUSTPROOF PARTITIONS WHERE REQUIRED TO SEPARATE AREAS WHERE NOISY OR EXTENSIVE DIRT OR DUST OPERATIONS ARE PERFORMED. EQUIP PARTITIONS WITH DUSTPROOF DOORS AND SECURITY LOCKS IF REQUIRED. DAMAGES: PROMPTLY REPAIR DAMAGES CAUSED TO ADJACENT FACILITIES BY DEMOLITION WORK AT NO COST TO OWNER.
8. UTILITY SERVICES: MAINTAIN EXISTING UTILITIES INDICATED TO REMAIN, KEEP IN SERVICE, AND PROTECT AGAINST DAMAGE DURING DEMOLITION OPERATIONS. DO NOT INTERRUPT EXISTING UTILITIES SERVING OCCUPIED OR USED FACILITIES, EXCEPT WHEN AUTHORIZED IN WRITING BY AUTHORITIES HAVING JURISDICTION. PROVIDE TEMPORARY SERVICES DURING INTERRUPTIONS TO EXISTING UTILITIES, AS ACCEPTABLE TO GOVERNING AUTHORITIES.
9. ENVIRONMENTAL CONTROLS: USE WATER SPRINKLING, TEMPORARY ENCLOSURES, AND OTHER SUITABLE METHODS TO LIMIT DUST AND DIRT RISING AND SCATTERING IN AIR TO LOWEST PRACTICAL LEVEL. COMPLY WITH GOVERNING REGULATIONS PERTAINING TO ENVIRONMENTAL PROTECTION. DO NOT USE WATER WHEN IT MAY CREATE HAZARDOUS OR OBJECTIONABLE CONDITIONS SUCH AS ICE, FLOODING, AND POLLUTION.

SYMBOLS



GENERAL CONSTRUCTION, DEMOLITION NOTES

THE FOLLOWING NOTES SHALL APPLY TO ALL CONDITIONS, WHETHER SPECIFICALLY INDICATED OR NOT.

DIVISION 1: GENERAL NOTES AND REQUIREMENTS

1. ALL WORK INCLUDED IN THESE PLANS AND SPECIFICATIONS SHALL BE GOVERNED BY THE CONTRACT DOCUMENTS AS DEFINED BY THE GENERAL CONDITIONS OF THE CONTRACT FOR CONSTRUCTION A.I.A. A201, LATEST EDITION.
2. THE CONTRACTOR SHALL VISIT THE SITE AND FAMILIARIZE HIMSELF WITH ALL EXISTING CONDITIONS AND VERIFY THE LOCATION AND EXISTENCE OF ALL IMPROVEMENTS, BOTH ABOVE AND BELOW THE GROUND SURFACE PRIOR TO THE INITIATION OF ANY WORK. THE CONTRACTOR SHALL PROVIDE TEMPORARY SHORING AND BRACING AS REQUIRED. THE CONTRACTOR SHALL AT ALL TIMES ADEQUATELY PROTECT THE EXISTING PROPERTY AND SITE IMPROVEMENTS AGAINST DAMAGE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE AS A RESULT OF CONTRACT OPERATIONS, AND SHALL REPLACE OR REPAIR DAMAGED AREAS TO THEIR ORIGINAL CONDITION.
3. ALL WORK SHALL BE DONE IN STRICT CONFORMANCE WITH ALL STATE AND LOCAL CODES AND ORDINANCES.
4. ALL WORK SHALL BE DONE IN A MANNER CONSISTENT WITH THE HIGHEST STANDARDS OF THE RESPECTIVE TRADES AND CONSISTENT WITH INDUSTRY STANDARDS.
5. REFER TO PLUMBING, HVAC AND ELECTRICAL DRAWINGS FOR INFORMATION REGARDING BUILDING MECHANICAL AND ELECTRICAL IMPROVEMENTS.
6. THE OWNER ASSUMES NO RESPONSIBILITY FOR ACTUAL CONDITION OF ITEMS OR STRUCTURES TO BE DEMOLISHED OR DESIGNATED TO BE REMOVED FROM THE PROJECT SITE.
7. ALL CONTRACTORS SHALL REVIEW THE ARCHITECTURAL FLOOR PLANS AND DEMOLITION PLANS AND REMOVE, EXTEND, RELOCATE OR PROPERLY DISCONNECT ANY AND ALL SERVICE AS REQUIRED TO ACCOMMODATE THE PROPOSED CONDITIONS ON THESE PLANS, WHETHER OR NOT THESE ITEMS HAVE BEEN SPECIFICALLY SHOWN OR NOTED ON THE PLUMBING (P) DRAWINGS.

DIVISION 1: GENERAL DEMOLITION NOTES AND REQUIREMENTS:

1. CONTRACTORS ARE ADVISED THAT ASBESTOS CONTAINING MATERIALS, INCLUDING PIPING INSULATION HAVE BEEN IDENTIFIED ABOVE EXISTING SUSPENDED CEILINGS AND 1' X 1' SPLINE CEILINGS. CARE MUST BE TAKEN WHEN WORKING ON OR ABOVE CEILINGS TO AVOID DISTURBING ANY ASBESTOS CONTAINING MATERIALS.
2. GENERAL CONTRACTOR SHALL INFILL ALL ABANDONED OPENINGS WITH MATERIALS TO MATCH EXISTING. MATCH EX'G ADJACENT FINISH FOR ALTERATION WORK AT EXISTING BUILDING.
3. GENERAL CONTRACTOR SHALL INFILL ALL EXISTING SLABS IN AREAS OF PROPOSED DEMOLITION WITH CONCRETE TO MATCH EXISTING FLOOR FINISH, AS REQUIRED FOR NEW FLOOR FINISHES.
4. GENERAL CONTRACTOR TO REMOVE AND SAFELY STORE ALL CEILING OR WALL MOUNTED EQUIPMENT REMOVED TO FACILITATE INSTALLATION OF NEW SYSTEMS. CONTRACTOR TO REINSTALL REMOVED ITEMS IN ADJACENT LOCATION, WITHOUT CONFLICT TO THE NEW SYSTEMS.
5. GENERAL CONTRACTOR TO ENSURE AND MAINTAIN ALL AREAS ARE PROTECTED WITH FIRE ALARM THROUGHOUT THE CONSTRUCTION PERIOD. ANY REMOVAL, REPLACEMENT AND RELOCATION OF FIRE ALARM ACTUATING OR NOTIFICATION DEVICES SHALL BE EXECUTED IN CONFORMANCE WITH APPLICABLE CODES INCLUDING NFPA 13. REINSTALLATION OF CEILING SYSTEMS TO BE DONE IN ACCORDANCE WITH ALL APPLICABLE CODES.
6. WHETHER SPECIFICALLY INDICATED OR NOT, ALL APPLICABLE TRADES MUST REMOVE & RELOCATE ITEMS IN CONFLICT WITH PROPOSED NEW WORK. IF FOR ANY REASON, AN ITEM TO BE REMOVED IS IN QUESTION, CONTRACTOR MUST SUBMIT AN RFI TO THE CONSTRUCTION MANAGER/ARCHITECT FOR REVIEW.
7. CONTRACTOR MUST PATCH, REPAIR AND INFILL ALL AREAS OF CONSTRUCTION AFFECTED BY THE REMOVAL OF ANY AND ALL ITEMS TO PROVIDE SEAMLESS FINISH.
8. REMOVE EX'G GWB/PLASTER OR ACOUSTICAL TILE AS NEEDED FOR CONNECTION TO NEW SOFFITS.
9. REMOVE EXISTING WALL, CEILING, OR FLOOR MOUNTED EQUIPMENT TO ACCOMMODATE NEW CONSTRUCTION AND AS NOTED.
10. REPAIR EXISTING WALL FINISHES AS REQUIRED TO ACCEPT NEW FINISHES. WALL PREPARATION SHALL INCLUDE PATCHING AND REPAIR OF HOLES, DAMAGE AND PENETRATIONS RESULTING FROM THE WORK OF THIS CONTRACT AS WELL AS ANY AND ALL PRE-EXISTING CONDITIONS.
11. REINSTALL EX'G EQUIPMENT AFTER MODIFICATION WORK IS COMPLETED.REMOVE BUILT-IN CONSTRUCTION. REPAIR EXISTING WALL FINISHES AS REQUIRED TO ACCEPT NEW FINISHES.

GENERAL CONSTRUCTION

1. NOTES, TYPICAL DETAILS, AND SCHEDULES APPLY TO ALL WORK UNLESS NOTED OTHERWISE. TYPICAL DETAILS ARE TO BE USED FOR ALL CONDITIONS WHERE THE DETAIL IS APPLICABLE, WHETHER OR NOT NOTED ON PLAN. TYPICAL DETAILS MAY BE SLIGHTLY ALTERED IF REQUIRED DUE TO PROJECT CONDITIONS, ONLY WHEN SUBMITTED AND THE ARCHITECT'S APPROVAL IS OBTAINED PRIOR TO PERFORMING THE WORK.
2. IF THERE IS A DISCREPANCY BETWEEN DRAWINGS, IT IS THE CONTRACTOR'S RESPONSIBILITY TO NOTIFY THE ARCHITECT PRIOR TO PERFORMING THE WORK.
3. IF DIFFERENCES OCCUR WITHIN OR BETWEEN DRAWINGS AND SPECIFICATIONS REGARDING MATERIALS, STRENGTHS OR QUANTITIES, THE BETTER MATERIAL, HIGHER STRENGTH, AND GREATER QUANTITY INDICATED, SPECIFIED OR NOTED SHALL BE PROVIDED.
4. DO NOT SCALE DRAWINGS TO OBTAIN DIMENSIONAL INFORMATION.
5. THESE DRAWINGS DO NOT DEFINE SCOPE OF CONTRACTOR OR SUBCONTRACTOR CONTRACTS.
6. AT ALL TIMES, THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR THE CONDITIONS OF THE JOBSITE INCLUDING MEANS AND METHODS OF CONSTRUCTION AND SAFETY OF PERSONS AND PROPERTY. THE ARCHITECT'S/ENGINEER'S PRESENCE OR REVIEW OF WORK AT THE JOBSITE IS FOR GENERAL COMPLIANCE WITH THE DESIGN INTENT ONLY AND IS NOT EVER TO BE CONSTRUED AS A REVIEW OF MEANS AND METHODS OF CONSTRUCTION AND SAFETY METHODS.
7. COSTS OF INVESTIGATION AND/OR REDESIGN DUE TO CONTRACTOR ERRORS WILL BE AT THE CONTRACTOR'S EXPENSE.
8. ANY APPROVED CONTRACTOR REQUESTED CHANGES TO THESE DRAWINGS WILL BE DONE AT NO COST TO THE OWNER. APPROVAL OF CONTRACTOR REQUESTED CHANGES SHALL BE AT THE DISCRETION OF THE OWNER.
9. SIZE AND/OR LOCATION OF EXISTING STRUCTURES AND UTILITIES SHOWN ON THE DOCUMENTS ARE FOR THE CONTRACTOR'S CONVENIENCE ONLY. THE CONTRACTOR IS SOLELY RESPONSIBLE TO VERIFY BY FIELD MEASUREMENTS/INVESTIGATION THE SIZE AND/OR LOCATION OF ALL EXISTING STRUCTURES AND UTILITIES.

STAGING AND CONSTRUCTION SITE SAFETY

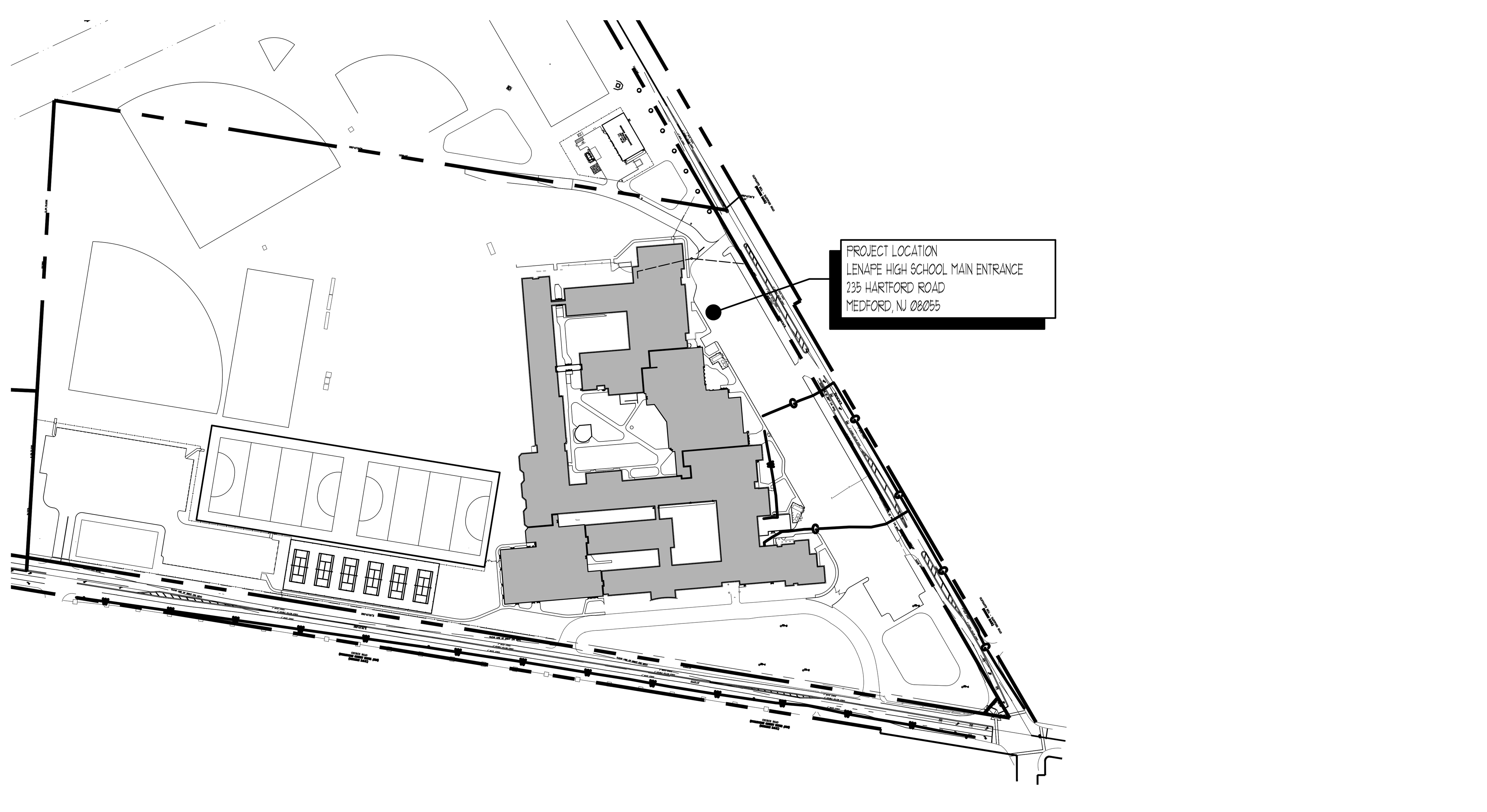
1. SAFETY PLAN: THE CONTRACTOR SHALL BE REQUIRED TO SUBMIT A PROJECT SAFETY PLAN ADDRESSING THE SAFETY REQUIREMENTS FOR THIS SPECIFIC PROJECT. THE SAFETY PLAN SHALL INCLUDE THE CONTRACTOR'S SCHEDULE AND SEQUENCE OF OPERATIONS. DEVIATIONS IN THE STAGING AND PHASING PLAN INCLUDED WITHIN THESE DOCUMENTS WILL BE CONSIDERED, BUT ARE SUBJECT TO THE APPROVAL OF THE ARCHITECT, OWNER AND AHJ. THE PROJECT SAFETY PLAN SHALL FURTHER INCLUDE THE CONTRACTOR'S PROCEDURES AND PROTOCOLS RELATIVE TO THE MITIGATION OF THE THREAT POSED BY COVID-19. THE CONTRACTOR SHALL DESIGNATE AN INDIVIDUAL TO ACT AS ITS SAFETY MANAGER. THE SAFETY MANAGER SHALL BE REQUIRED TO BE ON-SITE AT ALL TIMES THAT CONSTRUCTION IS IN PROGRESS.
2. MATERIAL STORAGE AND DUMPSTER PLACEMENT. MATERIAL LAYDOWN AND DUMPSTER LOCATIONS HAVE BEEN DESIGNATED ON THE PLANS. MATERIAL LAYDOWN AND DUMPSTER LOCATIONS ARE TO BE ENCLOSED WITHIN A LOCKED, 8'-0" HIGH CHAINLINK CONSTRUCTION FENCE. SECURING AND PROTECTION OF ALL MATERIALS STORED ON SITE SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR. BUILDING MATERIALS, TOOLS AND EQUIPMENT SHALL NOT BE STORED OR LEFT WITHIN THE PUBLIC RIGHT-OF-WAY AT ANY TIME, AND MUST BE SECURED.
3. DUMPSTERS: DUMPSTERS WILL NOT BE PERMITTED TO BE PLACED ADJACENT TO THE BUILDING. DEMOLITION DEBRIS IS TO BE COLLECTED AND TRANSPORTED TO THE LOCATION DESIGNATED ON THE PLANS. IN THE EVENT THAT THE CONTRACTOR ELECTS TO ACCESS THE ROOF, OR TRANSPORT CONSTRUCTION MATERIALS AND / OR DEMOLITION DEBRIS ACROSS THE ROOF, THE CONTRACTOR SHALL BE REQUIRED TO PROVIDE PROTECTION MATS ACROSS ALL TRAFFIC PATHS AND STAGING AREAS. ROOF LOADING SHALL BE DISTRIBUTED SO AS TO NOT ADVERSELY IMPACT THE EXISTING ROOF MEMBRANE, INSULATION, ROOF ACCESSORIES OR ROOF MOUNTED EQUIPMENT. ROOF SURFACES SHALL BE CLEANED DAILY.
4. ACCESS: DO NOT CLOSE, BLOCK OR OTHERWISE OBSTRUCT STREETS, AMBULANCE OR EMERGENCY VEHICLE ACCESS, DELIVERY ACCESS, WALKS OR OTHER OCCUPIED OR USED FACILITIES WITHOUT WRITTEN PERMISSION FROM AUTHORITIES HAVING JURISDICTION. PROVIDE ALTERNATE ROUTES AROUND CLOSED OR OBSTRUCTED TRAFFIC WAYS IF REQUIRED BY GOVERNING REGULATIONS.
5. TRAFFIC: CONDUCT CONSTRUCTION ACTIVITIES, SELECTIVE DEMOLITION OPERATIONS AND DEBRIS REMOVAL IN A MANNER TO ENSURE MINIMUM INTERFERENCE WITH ROADS, STREETS, WALKS, AND OTHER ADJACENT OCCUPIED OR USED FACILITIES. STREET OR SIDEWALK CLOSURES WILL NOT BE PERMITTED.
6. PROTECTIONS: PROVIDE PROTECTIVE MEASURES AS REQUIRED TO PROVIDE FREE AND SAFE PASSAGE. PROVIDE TEMPORARY BARRICADES, WORK AIDS AND OTHER FORMS OF PROTECTION AS REQUIRED TO PROTECT OWNER'S PERSONNEL AND THE GENERAL PUBLIC FROM INJURY DUE TO DEMOLITION OR NEW CONSTRUCTION WORK.
7. ENVIRONMENTAL CONTROLS: USE WATER SPRINKLING, TEMPORARY ENCLOSURES, AND OTHER SUITABLE METHODS TO LIMIT DUST AND DIRT RISING AND SCATTERING IN AIR TO LOWEST PRACTICAL LEVEL. COMPLY WITH GOVERNING REGULATIONS PERTAINING TO ENVIRONMENTAL PROTECTION. DO NOT USE WATER WHEN IT MAY CREATE HAZARDOUS OR OBJECTIONABLE CONDITIONS SUCH AS ICE, FLOODING, AND POLLUTION.
8. CLEANING AND MAINTENANCE: THE CONTRACTOR SHALL PROTECT EXISTING BUILDING FINISHES INDICATED TO REMAIN, AND SHALL CLEAN SURFACES SOILED AS A RESULT OF THE WORK OF THIS CONTRACT DAILY.

SEQUENCE OF WORK:
ALL DATES AND DURATIONS ARE APPROXIMATE

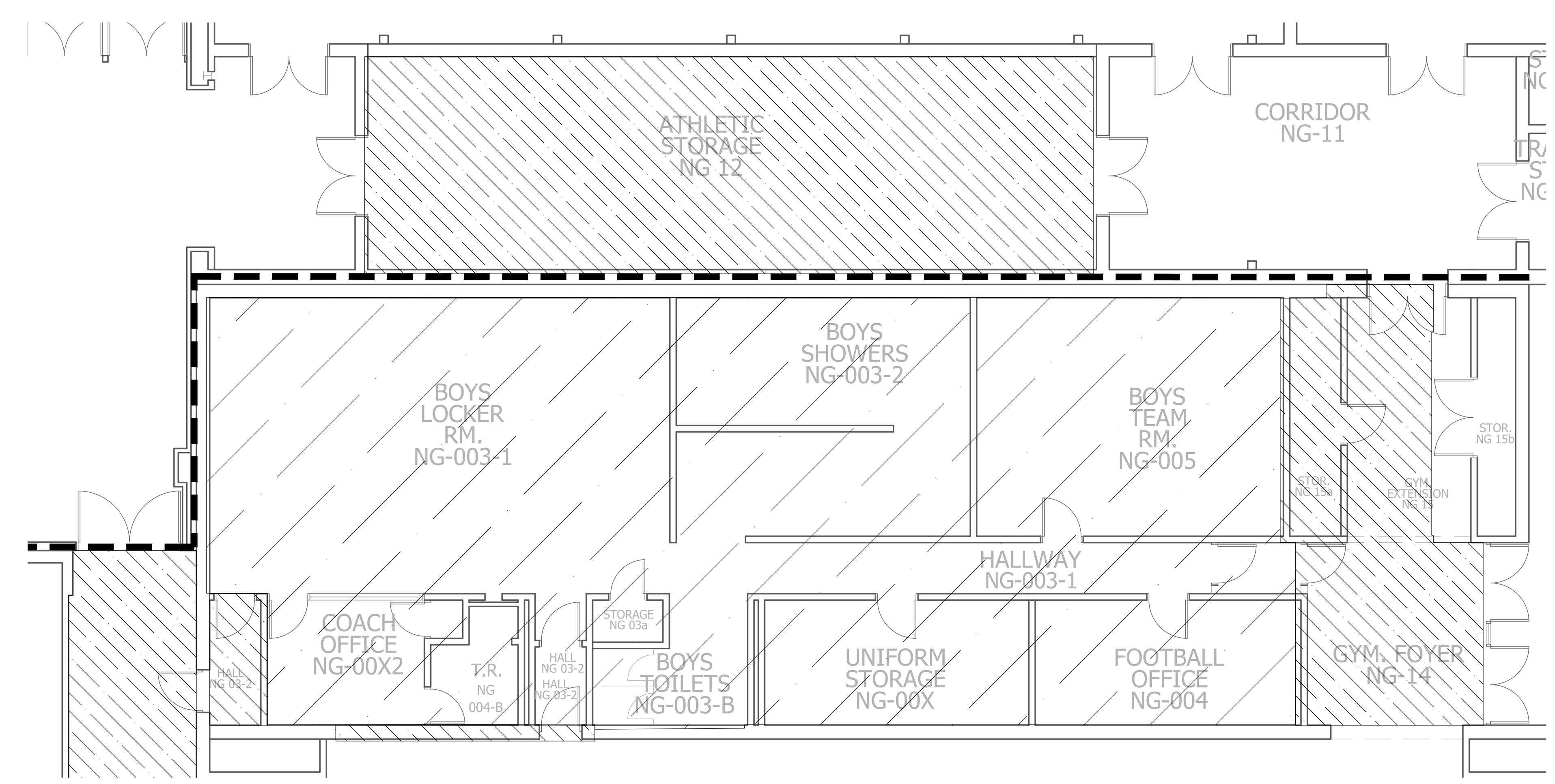
SEE SPECIFICATION SECTION MILESTONES FOR ADDITIONAL INFORMATION.

	AREAS NOT IN CONTRACT
(hatch)	ASBESTOS AREAS: GIRLS AND BOYS LOCKER ROOM AREAS 2ND SHIFT WORK - DEMO. AREAS TO EXPOSE ASBESTOS PRIOR TO END OF SCHOOL YEAR, 2024, IN PREPARATION OF ASBESTOS ABATEMENT. ASBESTOS ABATEMENT BY OTHERS: 1ST DAY AFTER GRADUATION CONSTRUCTION AREAS: GIRLS AND BOYS LOCKER ROOM AREAS, ATHLETIC STORAGE ALL CONSTRUCTION WORK BEGIN AFTER FOLLOWING ABATEMENT. ALL ROOMS ABLE TO BE OCCUPIED/SUBSTANTIALLY COMPLETE/OCCUPANCY BY OWNER PRIOR TO BEGINNING OF SCHOOL TERM, SEPTEMBER 2024
(hatch)	GYM FOYERS AND ATHLETIC STORAGE AREAS: NO WORK IN THESE AREAS UNTIL 1ST DAY AFTER GRADUATION. ROOMS ABLE TO BE OCCUPIED/SUBSTANTIALLY COMPLETE/OCCUPANCY BY OWNER PRIOR TO BEGINNING OF SCHOOL TERM, SEPTEMBER 2024.

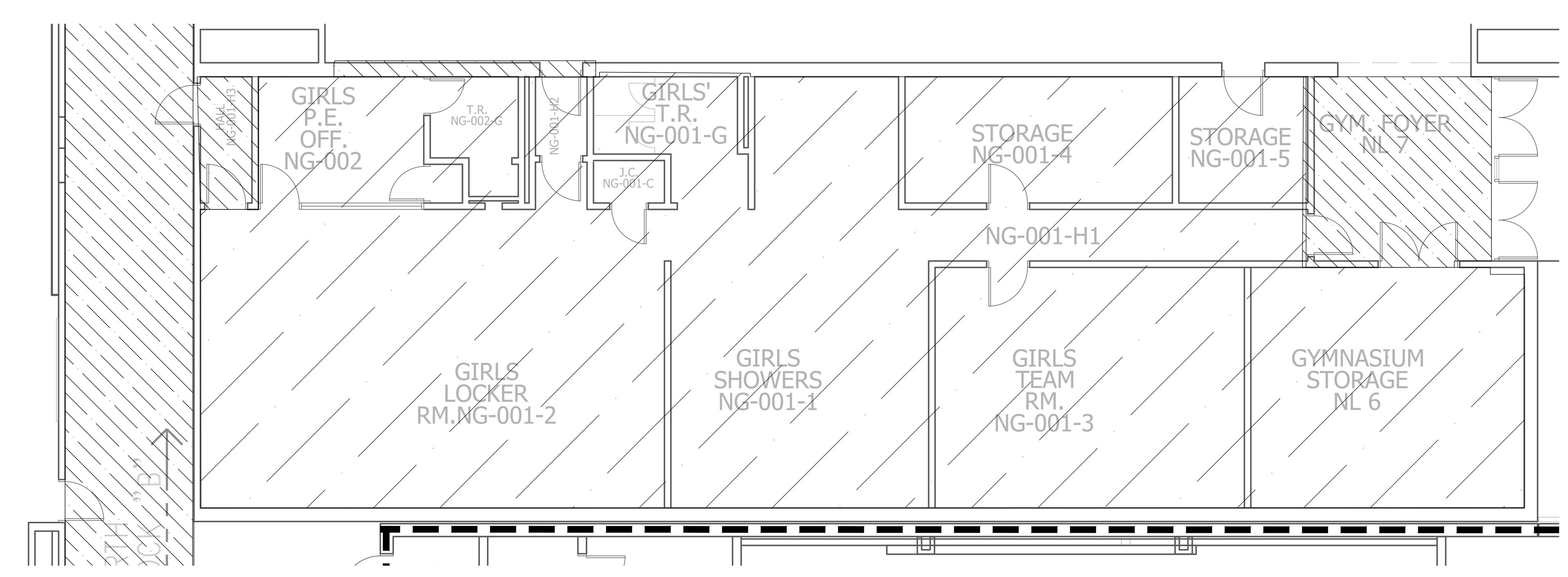
SCHEMATIC SITE LAYOUT



SEQUENCING PLAN



2 G1.0 **SEQUENCING PLAN BOYS LOCKER ROOM AREA** 1/8"=1'-0"



1 G1.0 **SEQUENCING PLAN GIRLS LOCKER ROOM AREA** 1/8"=1'-0"

DATE	No.	REVISION
01-12-24	1	ISSUED FOR BID

BLOCK NO. 201 | LOT NO. 1.01, 6.01

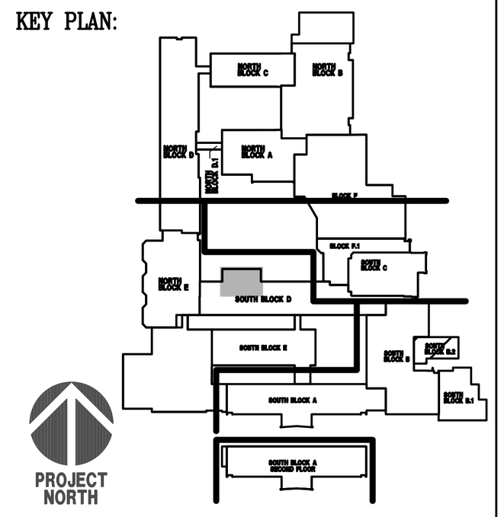
PROPOSED NORTH LOCKER ROOM RENOVATIONS
LENAPE HIGH SCHOOL
CHURCH AND HARTFORD ROADS, MEDFORD, NEW JERSEY 08055
LRHSD NO. REF21-35-8267

MEDFORD TOWNSHIP | BURLINGTON COUNTY

Drew C. Dingler, AIA, President
New Jersey LIC.# 21AI01088800

Linda M. Viventi, AIA, Secretary/Treasurer
New Jersey Architect LIC.# 21AI01090200; P.P. LIC.# 33LI00653000

KEY PLAN:

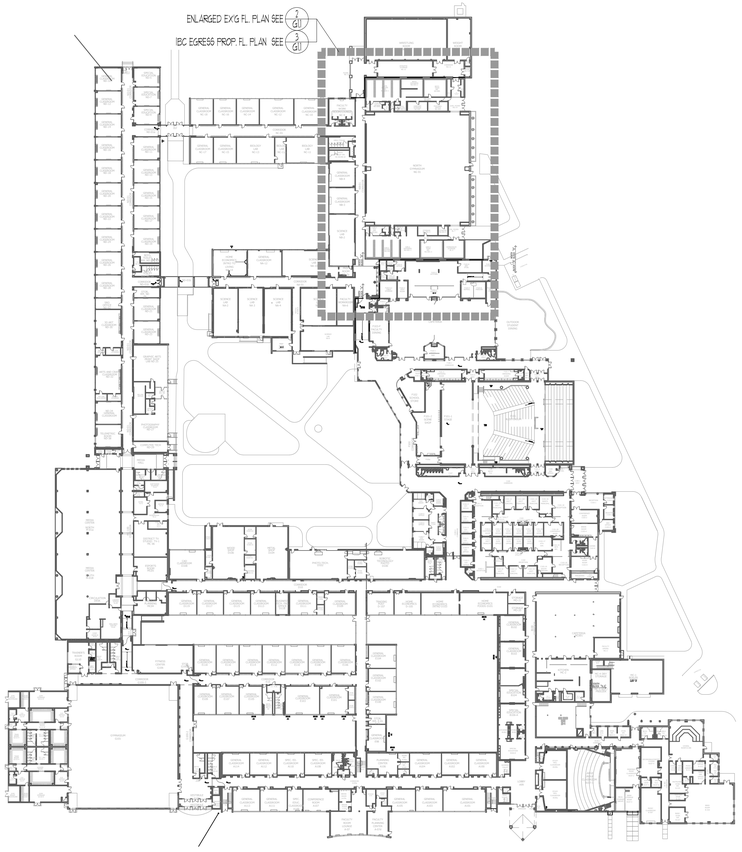


THE DESIGN COLLABORATIVE
ARCHITECTS AND PLANNERS, P.A.
1940 ROUTE 9 NORTH
CAPE MAY COURT HOUSE, NEW JERSEY 08210
PHONE: 609 465 4111 FAX: 609 465 9358
WWW.TDCARCHITECT.COM

SCALE:	AS NOTED	DRAWN BY: DCD
COMM. No.	8267	CHECKED BY: DCD
DATE:	12-12-23	

SHEET TITLE: **NOTES**

SHEET No.: **G1.0**



1 G1.1 **KEY PLAN: LENAPE HIGH SCHOOL**

N.T.S.

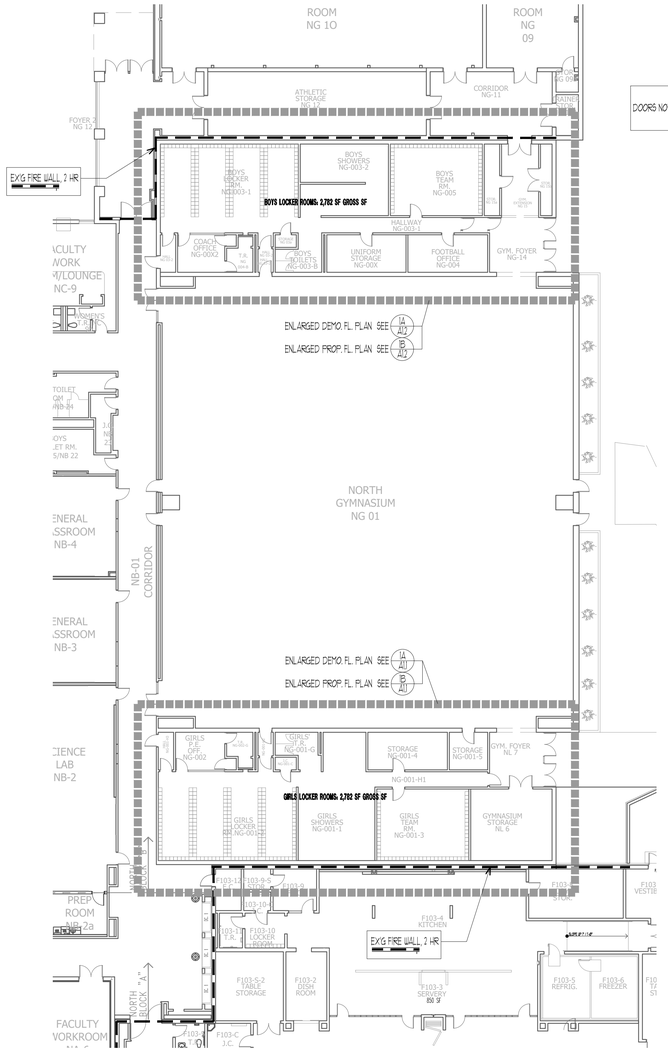
U.C.C. - Rehab Code 5:23-6
Reconstruction - 6.7(h)
All new elements shall comply with 6:3.
Materials and Methods - 6:3 (b)2.v. Section 1082
New building elements - 6:3(b)
(5) Newly created door openings in F.R. construction shall comply with IBC NJ 2021, 716.

COMMENTS	
NEW WALLS AT GYM. EXTENSIONS NG-14, NG-15, 4 NL-7	WALLS ARE NOT REQUIRED TO BE FIRE RATED. EXISTING WALLS ARE NOT FIRE RATED.

U.C.C. - Rehab Code 5:23-6
New building elements - 6:12

All new Mezzanines shall comply with 505 of IBC 2021.
505.2.1 - Area Limitation - one-third of floor area below.
Table 1004.5 Occupant Load
Table 1006.2.1 - Spaces with one exit
1011 - Stairways, 1014 - Handrails, 1015 - Guards

COMMENTS	
MEZZANINE AT ATHLETIC STORAGE NG 12	ROOM AREA: 950 SF. ALLOWABLE MEZZANINE: 316 SF, ⅓ OF ROOM AREA. AREA PROPOSED: 306 SF TABLE 1004.5, OCCUPANT LOAD: ACCESSORY STORAGE AREAS, 300 GROSS SF/OCCUPANT ALLOWABLE OCCUPANTS: 2 TABLE 1006.2.1 - SPACES WITH ONE EXIT - 75 LF EXIT ACCESS DISTANCE AND LESS THAN 49 OCCUPANTS. THEREFORE, ONE STAIR REQUIRED.



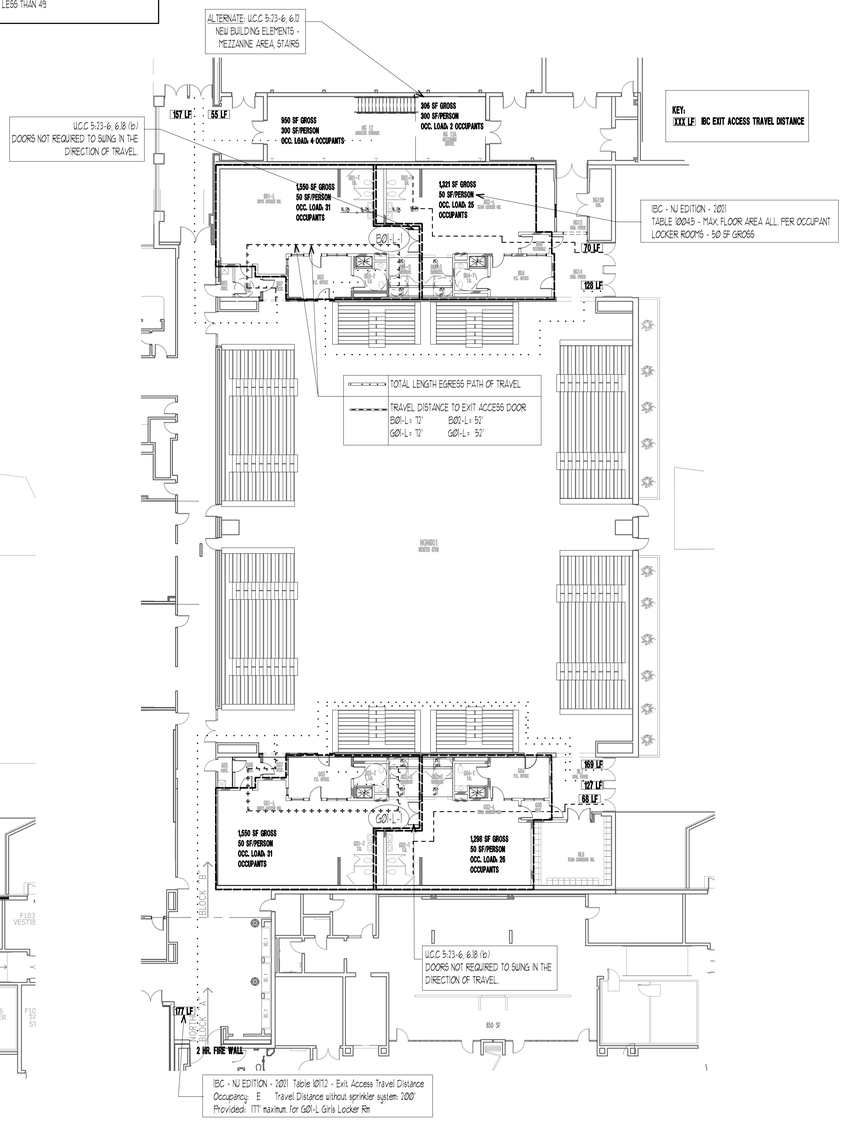
2 G1.1 **KEY PLAN: BLOCK NG EX'G CONDITIONS**

1/16"=1'-0"

U.C.C. - Rehab Code 5:23-6
Basic Requ. -Use Group E
6:18
(b) Occ. Load greater than 50 occupants or travel distance exceeds 75' requires two egress doorways. All egress doors serving an occupant load greater than 50 shall swing in the direction of exit travel.

Travel Distance to comply with 1006.1 and 1006.2, IBC 2021.
Table 1006.2.1 - Spaces with one exit or exit access doorway

COMMENTS	
FOR LOCKER ROOMS AREAS: G-01 - GIRLS LOCKER ROOM B-01 - BOYS LOCKER ROOM	OCCUPANT LOAD IS LESS THAN 50. TRAVEL DISTANCE TO AN EXIT ACCESS DOORWAY IS LESS THAN 75'. ONE EGRESS DOORWAY IS REQUIRED FOR THESE TWO ROOMS. PAIR OF DOORS B01-L-1 AND G01-L-1 ARE NOT REQUIRED TO SWING IN THE DIRECTION OF TRAVEL.
FOR LOCKER ROOMS AREAS: G-01 - TEAM LOCKER ROOM B-01 - TEAM LOCKER ROOM	EA. LOCKER ROOM AREA OCCUPANCY LOAD IS LESS THAN 50 PEOPLE. TRAVEL DISTANCE TO AN EXIT IS LESS THAN 75'. ONE EGRESS DOORWAY IS REQUIRED FOR THESE TWO ROOMS. PAIR OF DOORS B01-L-1 AND G01-L-1 ARE NOT REQUIRED TO SWING IN THE DIRECTION OF TRAVEL.
HARDWARE FOR THE FOLLOWING DOORS: G01-L-1 B01-L-1	OCCUPANT LOAD LESS THAN 50 - NO EXIT DEVICE REQUIRED. OPERATION: NORMALLY SECURE ON EA. SIDE TO PREVENT UNAUTHORIZED ACCESS BOTH SIDES. RELEASE VIA CARD READER OR KEY EA. SIDE. NOT REQUIRED: RELEASE VIA FIRE ALARM SYSTEM DURING EMERGENCY.



IBC - NJ EDITION - 2021 Table 1017.2 - Exit Access Travel Distance
Occupancy: E Travel Distance without sprinkler system: 200'
Provided: 177 maximum for G01-L Girls Locker Rm

3 G1.1 **EGRESS PLAN: BLOCK NG PROPOSED CONDITIONS**

1/16"=1'-0"

DATE	No.	REVISION
01-12-24	1	ISSUED FOR BID

PROPOSED NORTH LOCKER ROOM RENOVATIONS
LENAPE HIGH SCHOOL
CHURCH AND HARTFORD ROADS, MEDFORD, NEW JERSEY 08055
LRHSD NO. REF21-35-9267

MEDFORD TOWNSHIP **BURLINGTON COUNTY**

BLOCK NO. 201 **LOT NO. 1.01, 6.01**

Drew C. Dingler, AIA, President
New Jersey Architect Lic.# 21GI00188500

Linda M. Vivenzi, AIA, Secretary/Treasurer
New Jersey Architect Lic.# 21GI00190000, P.P. Lic.# 33LB00650000

KEY PLAN:

PROJECT NORTH

THE DESIGN COLLABORATIVE
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DCD

SCALE:	AS NOTED	DRAWN BY:	DCD
COMM. No.	8267	CHECKED BY:	
DATE:	12-12-23		

SHEET TITLE: **KEY PLANS AND CODE REVIEW**

SHEET No.: **G1.1**

FILE G:\PROJECTS\2021\ARCHITECTURAL\A1-A6 SERIES\2021 G0.0 LHS LOCKER RM COVER SHEETS.DWG DATE 1/30/2024 12:56 PM USER linda vivenzi

ROOM FINISH SCHEDULE - LENAPE HS LOCKER ROOM RENOVATIONS

ROOM NO.	ROOM NAME	FLOOR				BASE				WALL			WAINSCOT				CEILING				REMARKS
		MAT.	FINISH	TYPE	COLOR	MAT.	FINISH	HT.	COLOR	MAT.	FINISH	COLOR	MAT.	FINISH	COLOR	HT.	MAT.	FINISH	COLOR	HT.	SEE "ROOM FINISH NOTES - SPECIFIC" FOR NOTATIONS
GØ1-L	GIRLS LOCKER RM	CONC.	EPOXY	N/A	BY OWNER	CEMENT BD.	EPOXY	5-1/2"	BY OWNER	CMU	SP. COATING	BY OWNER	DIAM. PLATE	DIAM. PLATE	ST. STL	4'-Ø"	AP-1	PRE-FIN	WHITE	SEE RCP	NOTE 2
GØ1-S	SHOWERS	CONC.	EPOXY	N/A	BY OWNER	CEMENT BD.	EPOXY	5-1/2"	BY OWNER	CMU	C.T.	BY OWNER	N/A	N/A	N/A	N/A	AP-1	PRE-FIN	WHITE	SEE RCP	
GØ1-T	TOILET RM	CONC.	EPOXY	N/A	BY OWNER	CEMENT BD.	EPOXY	5-1/2"	BY OWNER	CMU	SP. COATING/C.T.	BY OWNER	N/A	N/A	N/A	N/A	AP-1	PRE-FIN	WHITE	SEE RCP	FULL HT. C.T. (1) WALL. SEE 1/A4.1
GØ2-L	TEAM LOCKER RM	CONC.	EPOXY	N/A	BY OWNER	CEMENT BD.	EPOXY	5-1/2"	BY OWNER	CMU	SP. COATING	BY OWNER	DIAM. PLATE	DIAM. PLATE	ST. STL		AP-1	PRE-FIN	WHITE	SEE RCP	NOTE 2
GØ2-S	SHOWERS	CONC.	EPOXY	N/A	BY OWNER	CEMENT BD.	EPOXY	5-1/2"	BY OWNER	CMU	C.T.	BY OWNER	N/A	N/A	N/A	N/A	AP-1	PRE-FIN	WHITE	SEE RCP	
GØ2-T	TOILET RM	CONC.	EPOXY	N/A	BY OWNER	CEMENT BD.	EPOXY	5-1/2"	BY OWNER	CMU	SP. COATING/C.T.	BY OWNER	N/A	N/A	N/A	N/A	AP-1	PRE-FIN	WHITE	SEE RCP	FULL HT. C.T. (1) WALL. SEE 1/A4.1
GØ3	P.E. OFFICE	CONC.	VCT	N/A	BY OWNER	VCB	PRE-FIN.	6"	BY OWNER	CMU	SP. COATING	BY OWNER	N/A	N/A	N/A	N/A	AP-2	PRE-FIN	WHITE	SEE RCP	
GØ3-T	TOILET RM	CONC.	EPOXY	N/A	BY OWNER	CEMENT BD.	EPOXY	5-1/2"	BY OWNER	CMU	SP. COATING	BY OWNER	C.T.	PRE-FIN.	BY OWNER	5'-Ø"	AP-1	PRE-FIN	WHITE	SEE RCP	NOTE 5
GØ4	P.E. OFFICE	CONC.	VCT	N/A	BY OWNER	VCB	PRE-FIN.	6"	BY OWNER	CMU	SP. COATING	BY OWNER	N/A	N/A	N/A	N/A	AP-2	PRE-FIN	WHITE	SEE RCP	
GØ4-T	TOILET RM	CONC.	EPOXY	N/A	BY OWNER	CEMENT BD.	EPOXY	5-1/2"	BY OWNER	CMU	SP. COATING	BY OWNER	C.T.	PRE-FIN.	BY OWNER	5'-Ø"	AP-1	PRE-FIN	WHITE	SEE RCP	NOTE 5
GØ5	STORAGE	CONC.	VCT	N/A	BY OWNER	VCB	PRE-FIN.	6"	BY OWNER	CMU	SP. COATING	BY OWNER	N/A	N/A	N/A	N/A	AP-2	PRE-FIN	WHITE	SEE RCP	
GØ6	VESTIBULE	CONC.	VCT	N/A	BY OWNER	VCB	PRE-FIN.	6"	BY OWNER	CMU	SP. COATING	BY OWNER	N/A	N/A	N/A	N/A	AP-1	PRE-FIN	WHITE	SEE RCP	
GØ7	VESTIBULE	CONC.	VCT	N/A	BY OWNER	VCB	PRE-FIN.	6"	BY OWNER	CMU	SP. COATING	BY OWNER	N/A	N/A	N/A	N/A	AP-1	PRE-FIN	WHITE	SEE RCP	
GØ8	VESTIBULE	CONC.	VCT	N/A	BY OWNER	VCB	PRE-FIN.	6"	BY OWNER	CMU	SP. COATING	BY OWNER	N/A	N/A	N/A	N/A	AP-2	PRE-FIN	WHITE	SEE RCP	
BØ1-L	BOYS LOCKER RM	CONC.	EPOXY	N/A	BY OWNER	CEMENT BD.	EPOXY	5-1/2"	BY OWNER	CMU	SP. COATING	BY OWNER	DIAM. PLATE	DIAM. PLATE	ST. STL	4'-Ø"	AP-1	PRE-FIN	WHITE	SEE RCP	NOTE 2
BØ1-S	SHOWERS	CONC.	EPOXY	N/A	BY OWNER	CEMENT BD.	EPOXY	5-1/2"	BY OWNER	CMU	C.T.	BY OWNER	N/A	N/A	N/A	N/A	AP-1	PRE-FIN	WHITE	SEE RCP	
BØ1-T	TOILET RM	CONC.	EPOXY	N/A	BY OWNER	CEMENT BD.	EPOXY	5-1/2"	BY OWNER	CMU	SP. COATING/C.T.	BY OWNER	N/A	N/A	N/A	N/A	AP-1	PRE-FIN	WHITE	SEE RCP	FULL HT. C.T. (1) WALL. SEE 1/A4.1
BØ2-L	TEAM LOCKER RM	CONC.	EPOXY	N/A	BY OWNER	CEMENT BD.	EPOXY	5-1/2"	BY OWNER	CMU	SP. COATING	BY OWNER	DIAM. PLATE	DIAM. PLATE	ST. STL	4'-Ø"	AP-1	PRE-FIN	WHITE	SEE RCP	NOTE 2
BØ2-S	SHOWERS	CONC.	EPOXY	N/A	BY OWNER	CEMENT BD.	EPOXY	5-1/2"	BY OWNER	CMU	C.T.	BY OWNER	N/A	N/A	N/A	N/A	AP-1	PRE-FIN	WHITE	SEE RCP	
BØ2-T	TOILET RM	CONC.	EPOXY	N/A	BY OWNER	CEMENT BD.	EPOXY	5-1/2"	BY OWNER	CMU	SP. COATING/C.T.	BY OWNER	N/A	N/A	N/A	N/A	AP-1	PRE-FIN	WHITE	SEE RCP	FULL HT. C.T. (1) WALL. SEE 1/A4.1
BØ3	P.E. OFFICE	CONC.	VCT	N/A	BY OWNER	VCB	PRE-FIN.	6"	BY OWNER	CMU	SP. COATING	BY OWNER	N/A	N/A	N/A	N/A	AP-2	PRE-FIN	WHITE	SEE RCP	
BØ3-T	TOILET RM	CONC.	EPOXY	N/A	BY OWNER	CEMENT BD.	EPOXY	5-1/2"	BY OWNER	CMU	SP. COATING	BY OWNER	C.T.	PRE-FIN.	BY OWNER	5'-Ø"	AP-1	PRE-FIN	WHITE	SEE RCP	NOTE 5
BØ4	P.E. OFFICE	CONC.	VCT	N/A	BY OWNER	VCB	PRE-FIN.	6"	BY OWNER	CMU	SP. COATING	BY OWNER	N/A	N/A	N/A	N/A	AP-2	PRE-FIN	WHITE	SEE RCP	
BØ4-T	TOILET RM	CONC.	EPOXY	N/A	BY OWNER	CEMENT BD.	EPOXY	5-1/2"	BY OWNER	CMU	SP. COATING	BY OWNER	C.T.	PRE-FIN.	BY OWNER	5'-Ø"	AP-1	PRE-FIN	WHITE	SEE RCP	NOTE 5
BØ5	STORAGE	CONC.	VCT	N/A	BY OWNER	VCB	PRE-FIN.	6"	BY OWNER	CMU	SP. COATING	BY OWNER	N/A	N/A	N/A	N/A	AP-2	PRE-FIN	WHITE	SEE RCP	
BØ6	VESTIBULE	CONC.	VCT	N/A	BY OWNER	VCB	PRE-FIN.	6"	BY OWNER	CMU	SP. COATING	BY OWNER	N/A	N/A	N/A	N/A	AP-1	PRE-FIN	WHITE	SEE RCP	
BØ7	VESTIBULE	CONC.	VCT	N/A	BY OWNER	VCB	PRE-FIN.	6"	BY OWNER	CMU	SP. COATING	BY OWNER	N/A	N/A	N/A	N/A	AP-1	PRE-FIN	WHITE	SEE RCP	
BØ8	VESTIBULE	CONC.	VCT	N/A	BY OWNER	VCB	PRE-FIN.	6"	BY OWNER	CMU	SP. COATING	BY OWNER	N/A	N/A	N/A	N/A	AP-1	PRE-FIN	WHITE	SEE RCP	
NGØØ1	GYMNASIUM	EX'G	EX'G	EX'G	EX'G	EX'G	EX'G	EX'G	EX'G	EX'G	EX'G	EX'G	EX'G	EX'G	EX'G	EX'G	EX'G	EX'G	EX'G	EX'G	PATCH AND REPAIR AS REQU.
NL6	TEAM CHANGING RM.	EX'G CONC.	EPOXY	N/A	BY OWNER	VCB	EPOXY	5-1/2"	BY OWNER	CMU	SP. COATING	BY OWNER	N/A	N/A	N/A	N/A	AP-2	PRE-FIN	WHITE	SEE RCP	NOTE 3
NL7	GYM. FOYER	EX'G CONC.	CARPET TILE 1	N/A	BY OWNER	VCB	PRE-FIN.	MATCH EX.G	BY OWNER	CMU	SP. COATING	BY OWNER	N/A	N/A	N/A	N/A	AP-1	PRE-FIN	WHITE	SEE RCP	NOTE 1
NG12	ATHLETIC STORAGE	CONC.	EX'G	N/A	BY OWNER	EX'G	EX'G	EX'G	EX'G	EX'G	EX'G	EX'G	EX'G	EX'G	EX'G	EX'G	EX'G	EX'G	EX'G	EX'G	PATCH AND REPAIR AS REQU.
NG12A	MEZZININE - ATHLETIC STO.	CONC.	SEALER	N/A	BY OWNER	N/A	N/A	N/A	N/A	EX'G	EX'G	EX'G	EX'G	EX'G	EX'G	EX'G	EX'G	EX'G	EX'G	EX'G	PATCH AND REPAIR AS REQU.
NG14	GYM. FOYER	EX'G CONC.	CARPET TILE 1	N/A	BY OWNER	VCB	PRE-FIN.	MATCH EX.G	BY OWNER	CMU	SP. COATING	BY OWNER	N/A	N/A	N/A	N/A	AP-2	PRE-FIN	WHITE	SEE RCP	NOTE 1
NG15	GYM. FOYER	EX'G CONC.	CARPET TILE 1	N/A	BY OWNER	VCB	PRE-FIN.	MATCH EX.G	BY OWNER	CMU	SP. COATING	BY OWNER	N/A	N/A	N/A	N/A	AP-2	PRE-FIN	WHITE	SEE RCP	NOTE 1
NG15B	STORAGE	EX'G	EX'G	EX'G	EX'G	EX'G	EX'G	EX'G	EX'G	EX'G	EX'G	EX'G	EX'G	EX'G	EX'G	EX'G	EX'G	EX'G	EX'G	EX'G	PATCH AND REPAIR AS REQU.

ROOM FINISH SCHEDULE NOTES - GENERAL:

1. PAINTING AND SPECIAL COATING: ALL EXPOSED UNFINISHED SURFACES, INCLUDING WALLS AND EXPOSED CEILING CONSTRUCTION TO BE PAINTED WITH A SPECIAL COATING PRIMER COAT PLUS FINISH COATS AS NOTED. ALL PREVIOUSLY COATED INTERIOR WALLS TO BE PRIMED THEN PAINTED WITH ONE COAT SPECIAL COATING UNLESS NOTED OTHERWISE BY OWNER.
2. FLAME SPREAD AND SMOKE DEVELOPED INDEXES FOR WALLS AND CEILING FINISHES SHALL BE IN ACCORDANCE WITH IRC R302.9 AS FOLLOWS. MATERIALS SHALL BE TESTED IN ACCORDANCE WITH ASTM E84 OR UL 723. FLAME SPREAD - 200 MAX. SMOKE DEVELOPED - 450 MAX.
3. EPOXY PREPARATION OF THE NEW AND EX'G CONCRETE SLAB AND APPLICATION OF "EPOXY" FLOORING AND WALL BASE NOTED WITHIN SHADED CELLS ABOVE IS NOT INCLUDED WITHIN THE SCOPE OF THIS CONTRACT, AND SHALL BE PERFORMED BY A SEPARATE FLOORING CONTRACTOR. THE CONTRACTOR FOR THIS CONTRACT SHALL COORDINATE THEIR WORK WITH THIS FLOORING CONTRACTOR. PATCHING AND INFILL OF THE EX'G CONCRETE FLOOR REQUIRED DUE TO DEMOLITION, ELECTRICAL FLOOR BOX REMOVAL SHALL BE PERFORMED BY THE GENERAL CONTRACTOR UNDER THE SCOPE OF THIS CONTRACT. THE GENERAL CONTRACTOR SHALL PROVIDE ¾" THICK X 6" HIGH FIBER CEMENT BOARD BASE W/ ½" COVE STRIP UNDERLAYMENT TO THE EPOXY UNDER THE SCOPE OF THIS CONTRACT.
4. FINISHES DAMAGED OR AFFECTED BY THE SCOPE OF THE CONTRACT SHALL BE RESTORED TO MATCH THE EXISTING CONSTRUCTION, AND WHERE PATCH TO ACCOMMODATE PROPOSED CONSTRUCTION IS INDICATED. PATCH AND REPAIR ANY DAMAGED FINISHES AND PROVIDE NEW FINISHES TO MATCH EX'G.
5. THE SCOPE OF THE WORK REQUIRES MODIFICATIONS TO THE EXISTING CONSTRUCTION. EXISTING ELECTRICAL DEVICES, RECEPTACLES, SWITCHES, CEILING MPE SYSTEMS, MECHANICAL DIFFUSERS, DUCTWORK, CEILING MOUNTED EQUIPMENT, FIRE ALARM DEVICES AND SPEAKERS SHALL BE SALVAGED DISCONNECTED AND RELOCATED AS REQUIRED TO ACCOMMODATE THE WORK OF THIS CONTRACT.
6. EX'G FIRE ALARM AND FIRE SUPPRESSION DEVICES SHALL BE DISCONNECTED AND RECONNECTED AS REQUIRED TO ACCOMMODATE THE WORK OF THIS CONTRACT.
7. COLORS SHALL BE SELECTED BY THE OWNER, COLOR SELECTIONS SHALL BE FROM THE FULL RANGE OF COLORS REFERENCED WIHTIN THE CONTRACT SPECIFICATIONS.
8. TYP: FINISHES NOTED APPLY TO ENTIRE ROOM, U.N.O.

ROOM FINISH SCHEDULE NOTES - SPECIFIC:

1. PROVIDE NEW V.C.B IN LOCATIONS OF NEW WALLS. EX'G GLAZED TILE/CMU WALL BASE IS TO REMAIN AT EX'G WALLS.
2. PROVIDE DIAMOND PLATE AT EXPOSED ENDS OF ALL LOCKERS.
3. PREPARE EX'G PAINTED FLOOR FIN. FOR NEW EPOXY FLOOR FINISH.
4. PREPARE EX'G FLOOR FIN. FOR NEW VCT FLOOR FINISH.
5. SHOWER WALLS TO BE C.T., FULL HT. OF SHOWER.

WALL TYPE SYMBOL

DENOTES SOUND RATED WALL ASSEMBLY W/ A DOUBLE LAYER OF GWB ON ONE SIDE OF THE WALL ASSEMBLY AND SOUND ATTENUATION INSULATION FOR THE FULL HEIGHT OF THE WALL

DENOTES WALL TO HAVE FIRE RATING PER U.L. No. (NUMBER INDICATES HOUR RATING)
FW2 - 2 HOUR FIRE WALL
FB1 - 1 HOUR FIRE BARRIER — FB2 - 2 HOUR FIRE BARRIER
FP1 - 1 HOUR FIRE PARTITION — FP2 - 2 HOUR FIRE PARTITION

DENOTES WALL TYPE MATERIAL AND SIZE -
M = MASONRY — EX= EXISTING
S = STEEL STUDS

X'-X" A F SM M8a

DENOTES WALL HEIGHT IF WALL DOES NOT EXTEND TO UNDERSIDE OF ROOF/FLOOR DECK ABOVE.
NOTE 1: EXTEND WALL TO U.S. OF CONC. LOCKER SEAT.

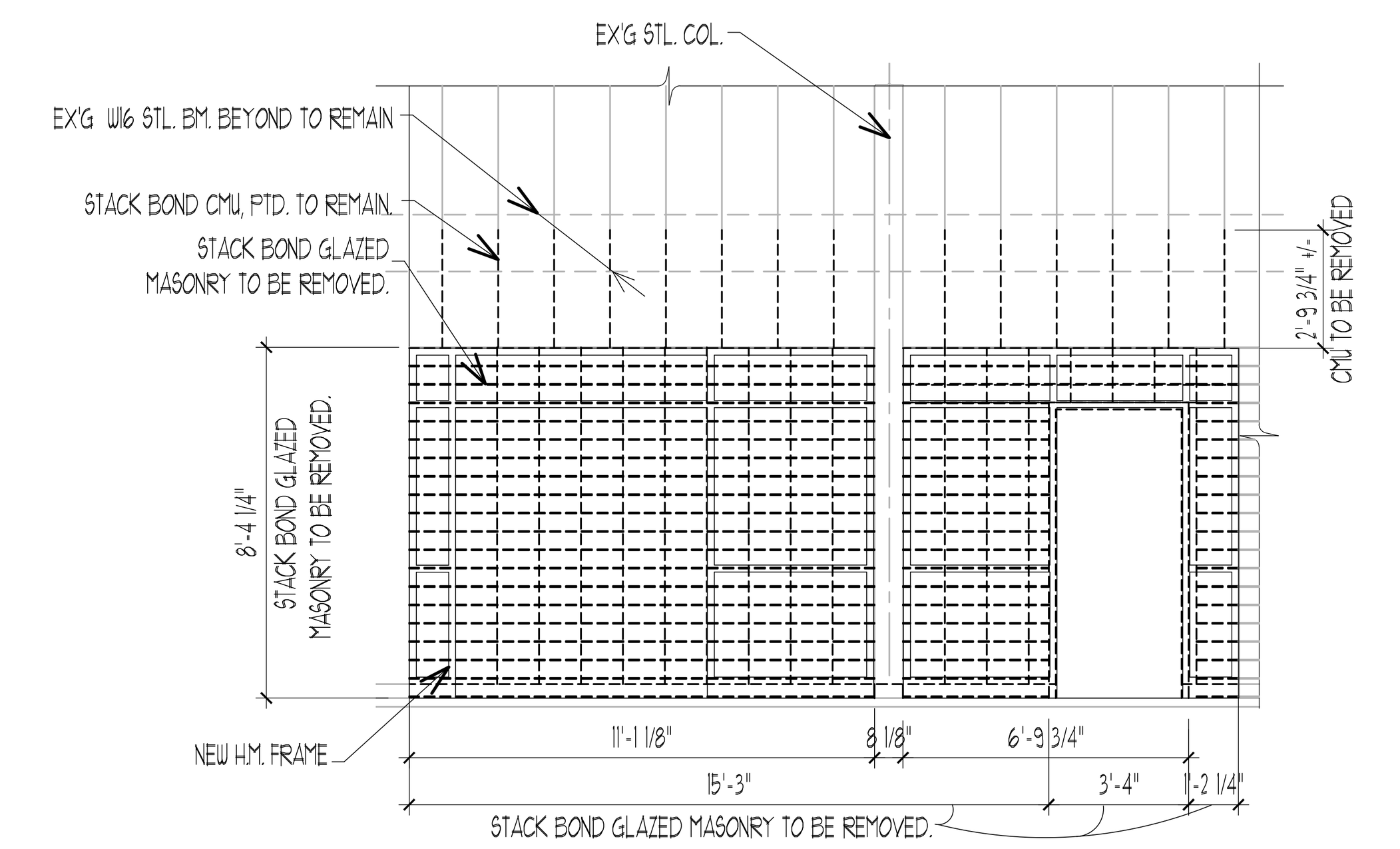
DENOTES WALL TO SMOKE PARTITION, EXTENDING FROM FINISH FLOOR TO UNDERSIDE OF ROOF ASSEMBLY ABOVE, WITH SELF CLOSING DOORS. WALL SHALL WITHSTAND THE PASSAGE OF SMOKE.

DENOTES FINISH. SEE WALL FINISHES BELOW FOR ADD'L INFORMATION.

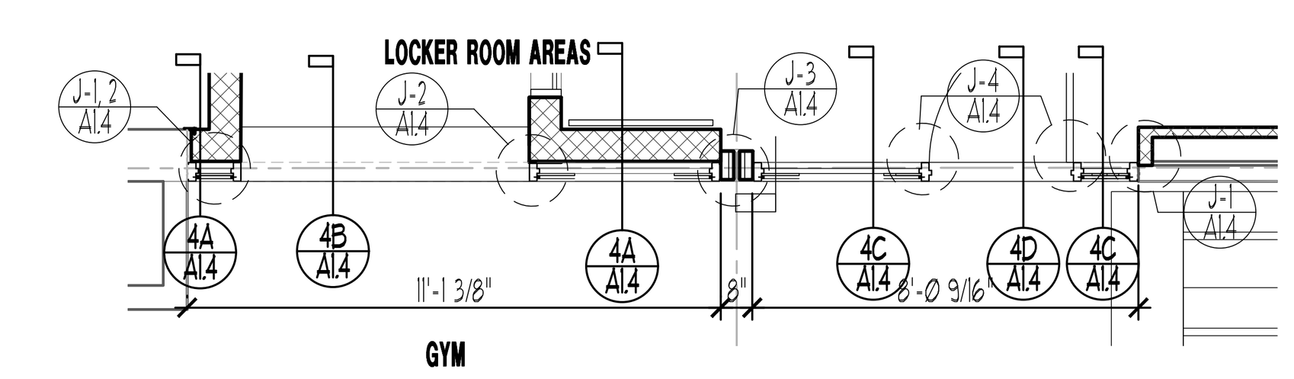
WALL FINISHES

a. SPECIAL COATING, TYP. FOR TWO SIDES, AS INDICATED WITHIN ROOM FINISH SCHEDULE.
b. ⅝" VERY HIGH IMPACT FIBERGLASS REINFORCED GYPSUM WALL BOARD, SPECIAL COATING FINISH, OR VINYL WALL COVERING, PER THE ROOM FINISH SCHEDULE, UNO.
c. EPOXY FIN. BY OTHERS
d. CERAMIC TILE. FULL WALL HT. U.N.O.

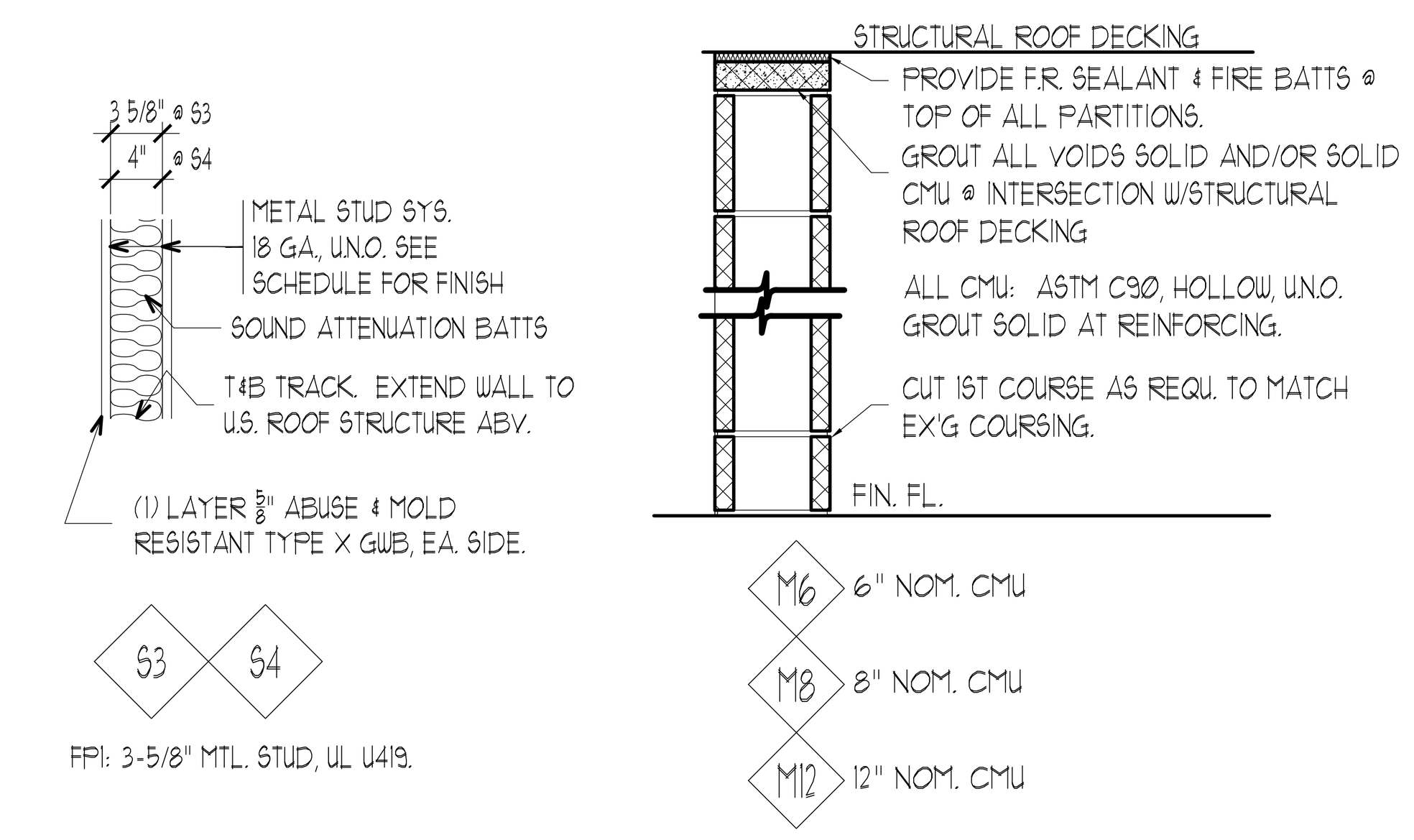
WALL HT. NOTE 1: EXTEND WALL TO U.S. OF CONC. LOCKER SEAT.



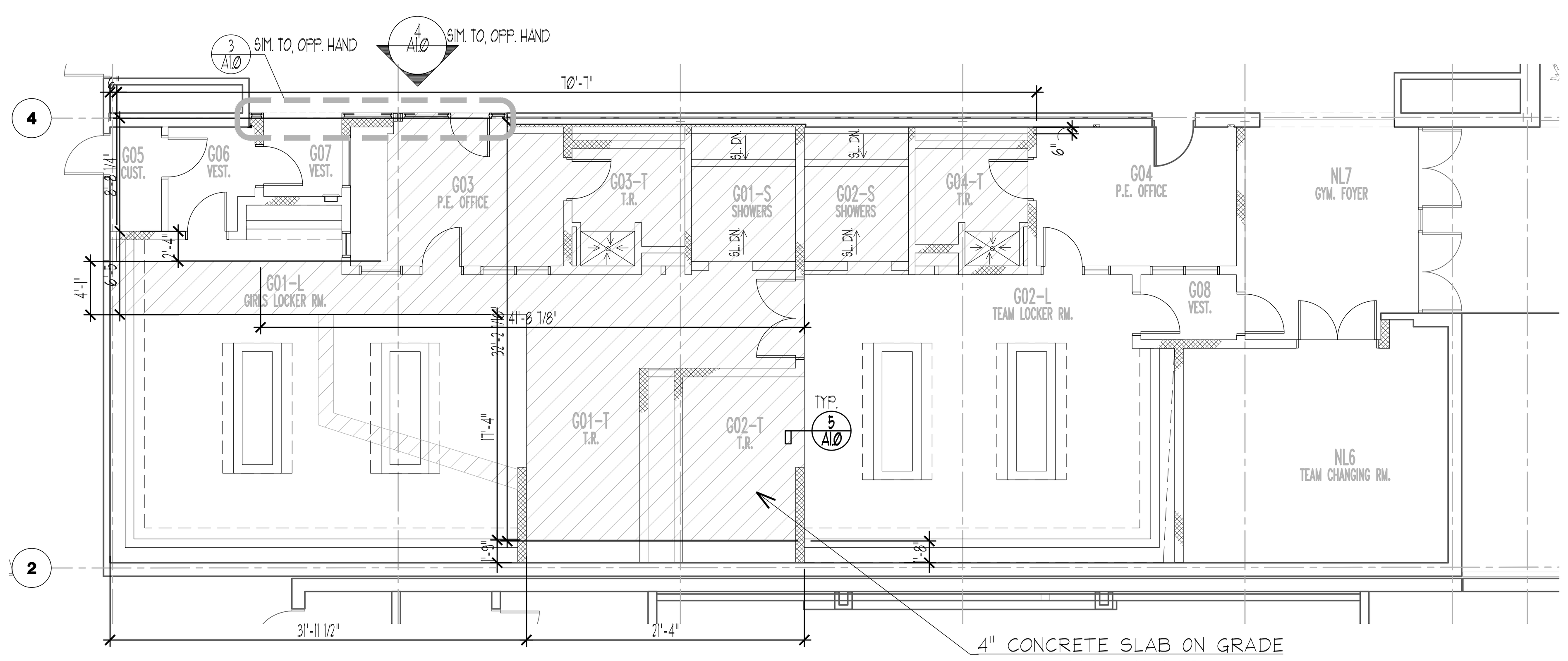
4 / A1.0 NG - NORTH ELEV. NG GYM DEMO. NG - SOUTH, OPP. HAND 1/4"=1'-0"



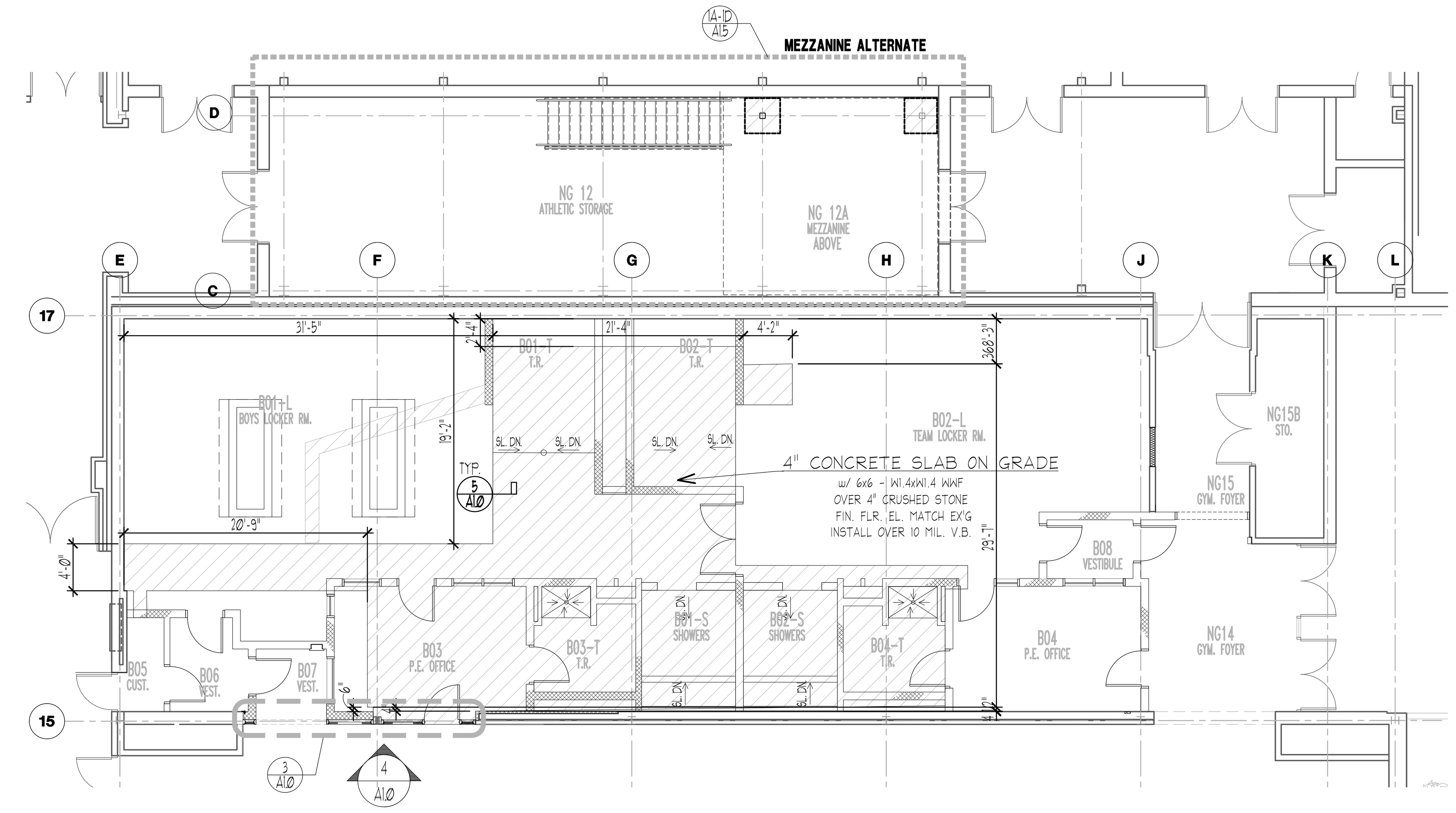
3 / A1.0 NG - PARTIAL PLAN NG GYM PROP. CONDITIONS 1/4"=1'-0"



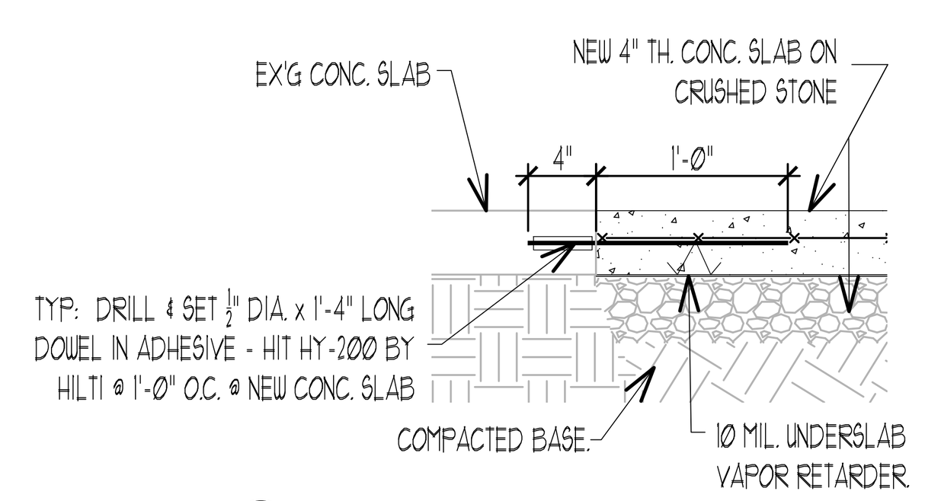
5 / A1.0 WALL TYPES 1"=1'-0"



1B / A1.0 NG - GIRL'S LOCKER ROOM AREAS PROPOSED FLOOR PLAN 1/4"=1'-0"



2B / A1.0 NG - BOY'S LOCKER ROOM AREAS PROPOSED FLOOR PLAN 1/4"=1'-0"



SEE 6&7/A1.6 FOR ADDITIONAL REQUIREMENTS.

6 / A1.0 DETAIL: CONC. SLAB & JOINING 1"=1'-0"

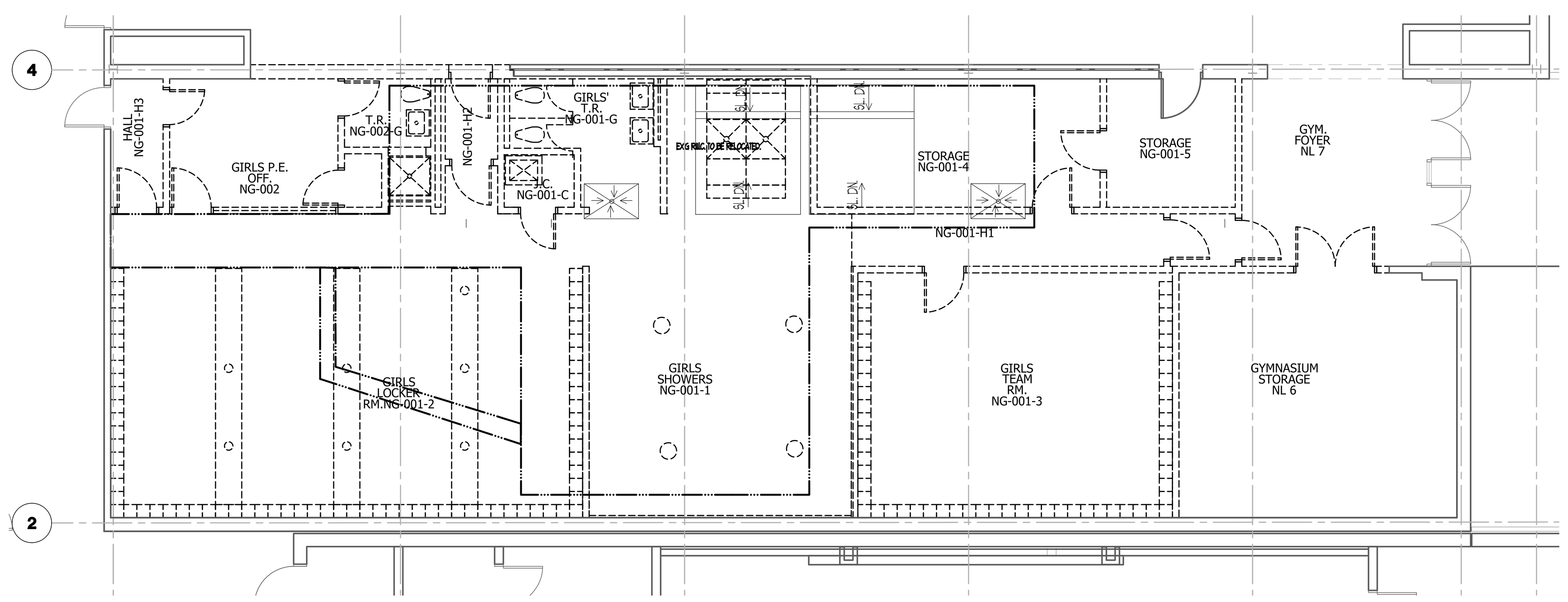
CONCRETE SLAB KEY

NEW CONC. SLAB: APPROX. EXTENT OF NEW 4" CONC. SLAB. CONTRACTOR TO VERIFY ACTUAL SIZE AND EXTENT BASED ON VERIFICATION OF EX'G UTILITIES AND LOCATION OF NEW.

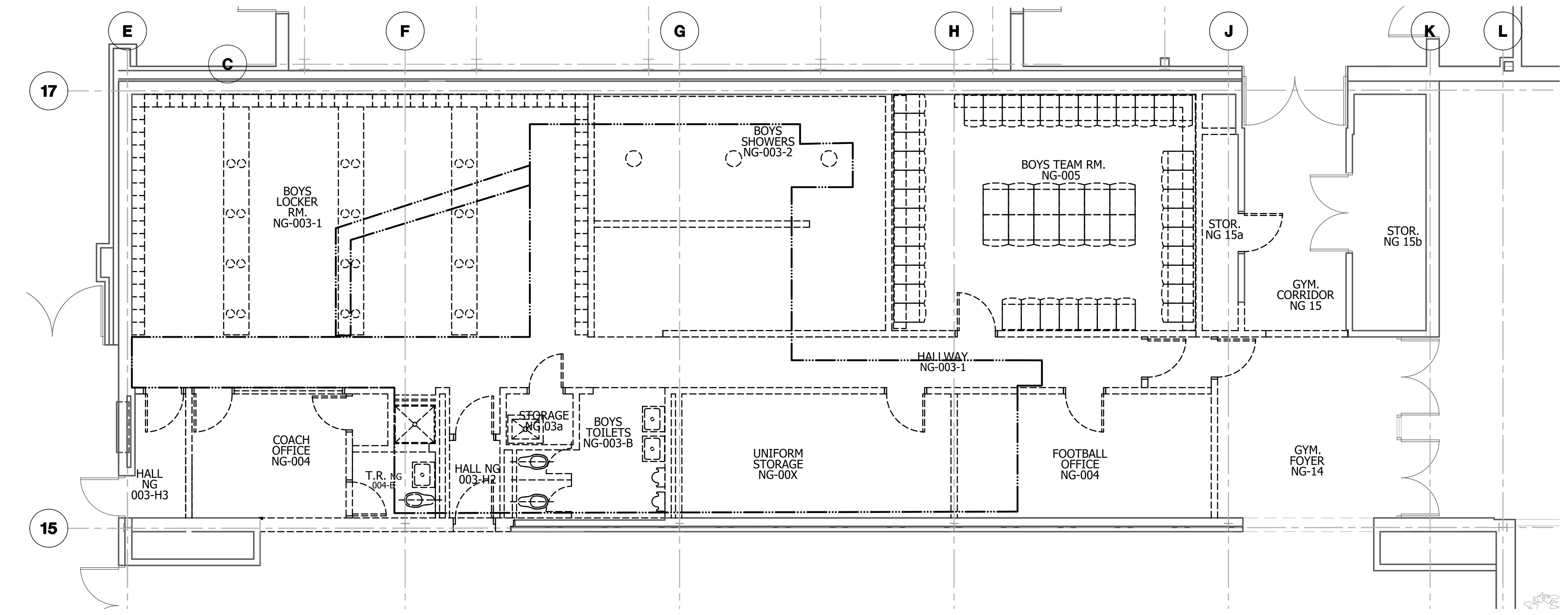
EX'G CONC. SLAB: APPROX. EXTENT OF EX'G CONC. SLAB REMOVAL. CONTRACTOR TO VERIFY ACTUAL SIZE AND EXTENT BASED ON VERIFICATION OF EX'G UTILITIES AND LOCATION OF NEW.

DRAWING KEY NOTES

SEE SHEET A1.1 FOR DRAWING KEY NOTES.
SEE SHEETS A1.1, A1.2 & A1.5 FOR DEMOLITION PLANS FURTHER INFO.



1A / A1.0 NG - GIRL'S LOCKER ROOM AREAS DEMO. SLAB FLOOR PLAN 1/4"=1'-0"



2A / A1.0 NG - BOY'S LOCKER ROOM AREAS DEMO. SLAB FLOOR PLAN 1/4"=1'-0"

DATE	No.	REVISION
01-12-24	1	ISSUED FOR BID

BLOCK NO. 201 — LOT NO. 1.01, 6.01

PROPOSED NORTH LOCKER ROOM RENOVATIONS
LENAPE HIGH SCHOOL
CHURCH AND HARTFORD ROADS, MEDFORD, NEW JERSEY 08055
LRHSD NO. REF21-35-8267

MEDFORD TOWNSHIP — BURLINGTON COUNTY

Drew C. Dingler, AIA, President
New Jersey LIC.# 21AI01088800

Linda M. Viventi, AIA, Secretary/Treasurer
New Jersey Architect LIC.# 21AI01090200; P.P. LIC.# 33LI00653000

KEY PLAN:

PROJECT NORTH

THE DESIGN COLLABORATIVE
ARCHITECTS AND PLANNERS, P.A.
1940 ROUTE 9 NORTH
CAPE MAY COURT HOUSE, NEW JERSEY 08210
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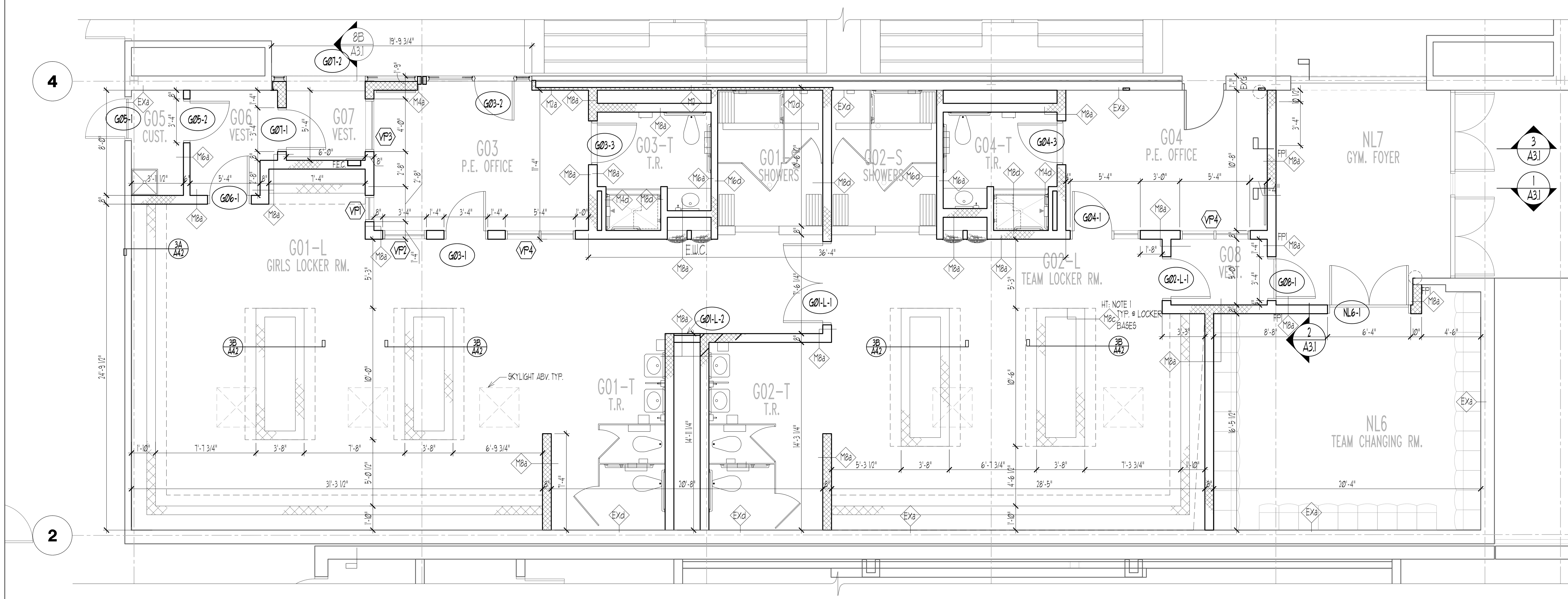
SCALE:	AS NOTED	DRAWN BY: DCD
COMM. No.	8267	CHECKED BY: DCD
DATE:	12-12-23	

SHEET TITLE: CONCRETE SLAB PLANS, DETAILS SCHEDULES, DETAILS

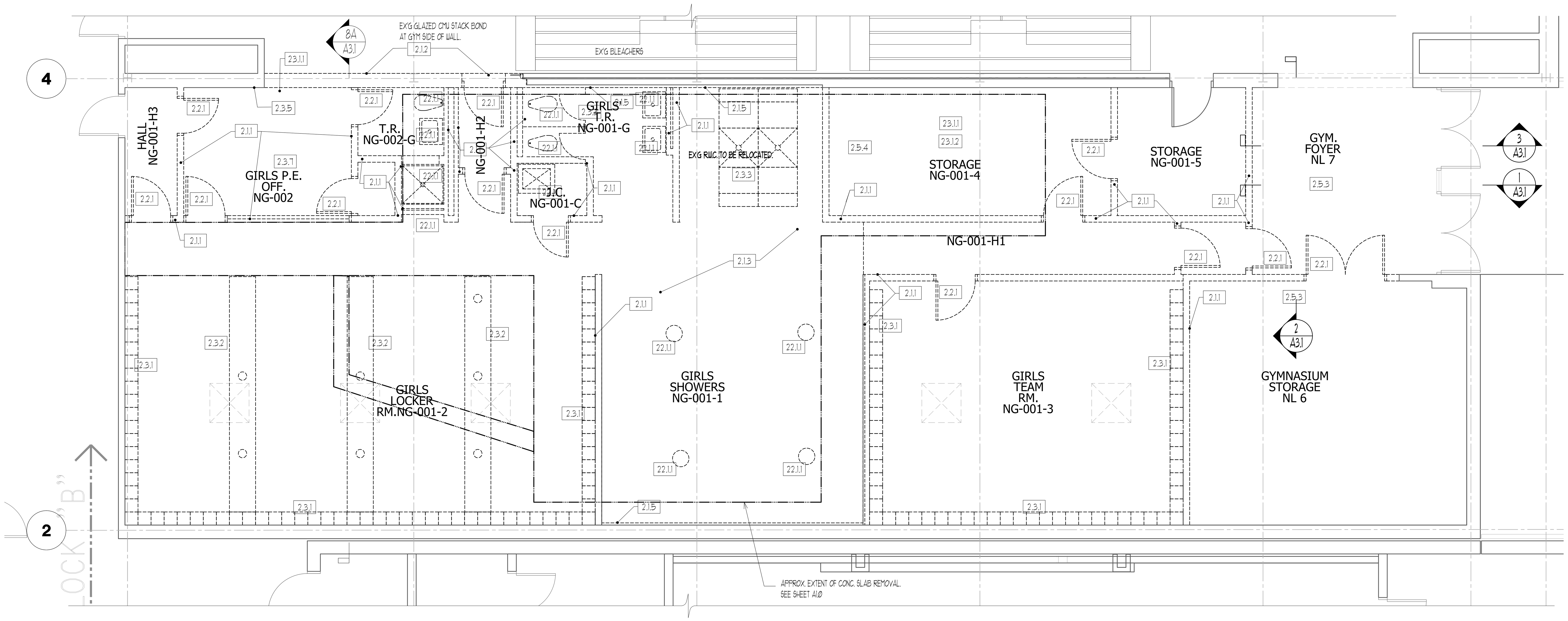
SHEET No.: A1.0



1B/A1.1 NG - GIRL'S LOCKER ROOM AREAS PROPOSED FLOOR PLAN

1/4"=1'-0"

SEE SHEET A4.1 FOR LOCKER LAYOUTS



1A/A1.1 NG - GIRL'S LOCKER ROOM AREAS DEMO. FLOOR PLAN

1/4"=1'-0"

CONCRETE SLAB KEY

SEE A1.0 FOR EXTENT OF CONCRETE SLAB REMOVAL AND NEW CONCRETE SLAB.

DRAWING KEY NOTES

DEMOLITION NOTES:

- 2.1.1 CONCRETE MASONRY: REMOVE MASONRY WALL IN ITS ENTIRETY.
- 2.1.2 CONCRETE MASONRY: REMOVE CONCRETE MASONRY WALL AS REQUIRED TO ACCOMMODATE NEW CONSTRUCTION. TOOTH IN NEW MASONRY, PROVIDE NEW STRUCTURAL LINTEL WHERE INDICATED.
- 2.1.3 INTERIOR CONCRETE CONSTRUCTION: REMOVE EXISTING CONCRETE SLABS AS REQUIRED TO ACCOMMODATE NEW CONSTRUCTION INDICATED. PRESENCE OF UNDERGROUND UTILITIES TO BE REVIEWED AND CONFIRMED
- 2.1.4 UNDERGROUND UTILITIES: LOCATE, PRESERVE AND PROTECT EXISTING UNDERGROUND UTILITIES THAT ARE NOT PROPOSED TO BE RE-USED. SEE M.P.E. DRAWINGS.
- 2.1.5 GLAZED CMU: REMOVE EX'G GLAZED CMU WHYTHE.
- 2.2.1 VISION PANELS, DOORS AND FRAMES: REMOVE EXISTING DOOR AND FRAME, SALVAGE HARDWARE, TURN OVER TO OWNER.
- 2.3.1 EXISTING LOCKERS AND LOCKER BASES: REMOVE ALL LOCKERS IN THEIR ENTIRETY INCLUDING CONCRETE BASES AND ATTACHMENT DEVICES. FILL ALL HOLES & PREP FOR NEW FINISHES.
- 2.3.2 EXISTING BENCHES & SUPPORTS: REMOVE ALL, INCLUDING RAISED CURBS.
- 2.3.3 EXISTING TOILET AND SHOWER PARTITIONS: TO BE REMOVED. ALL EX'G T.R. ACCESSORIES TO BE REMOVED INCLUDING MIRRORS, VENDERS, DISPENSERS, GRAB BAR, AND DISPOSALS.
- 2.3.4 EXISTING EQUIPMENT: REMOVE EXISTING EQUIPMENT INCLUDING HVAC, PLUMBING AND ELECTRICAL. COORDINATE WITH MPE DRAWINGS.
- 2.3.5 EXISTING WALL MOUNTED DRY MARKER / TACK / DISPLAY BOARDS: TO BE REMOVED AND DISPOSED OF. REMOVE ANCHORS, ADHESIVES, REPAIR WALL CONSTRUCTION, PREPARE TO NEW FINISHES.
- 2.3.6 EXISTING WALL MOUNTED MONITOR: TO BE REMOVED, SALVAGED AND TURNED OWNER TO THE OWNER. REMOVE ANCHORS, REPAIR WALL CONSTRUCTION, PREPARE TO NEW FINISHES.
- 2.3.7 EXISTING LOOSE MATERIALS: TO BE REMOVED BY THE OWNER.
- 2.4.1 EXISTING FLOOR FINISHES: REMOVAL ALL EX'G FLOOR FINISHES
- 2.4.2 EXISTING WALL BASE: REMOVAL OF THE EXISTING VINYL WALL BASE AND MASTIC SHALL BE THE RESPONSIBILITY OF THE G.C. UNDER THE SCOPE OF THIS CONTRACT, TYPICAL ALL SPACES.
- 2.4.3 EXISTING C.T. FLOOR: REMOVAL OF THE EXISTING CERAMIC TILE FLOOR AND SETTING BED IN THEIR ENTIRETY. REMOVE ASSOCIATED BASE AND THRESHOLDS. PREPARE NEW CONCRETE FOR PROPOSED FINISH. THIS WORK SHALL BE BY G.C. UNDER THE SCOPE OF THIS CONTRACT, TYPICAL ALL C.T. FLOORING AREAS.
  - 2.5.1 CEILINGS: SEE SHEET A5.1
  - 2.5.2 CEILINGS: SEE SHEET A5.1
  - 2.5.3 CEILINGS: SEE SHEET A5.1
  - 2.5.4 CEILINGS: SEE SHEET A5.1
- 22.1.1 PLUMBING DEMOLITION: REMOVE PLUMBING SYSTEMS, DEVICES, AND ASSOCIATED PIPING AND FIXTURES INDICATED. REFER TO THE CONTRACT PLUMBING DRAWINGS.
- 22.1.2 ABANDONED PLUMBING CONSTRUCTION: REMOVE AND CAP ABANDONED PLUMBING FIXTURES, PIPING AND SERVICES, BOTH PRE-EXISTING AND THAT RESULTING FROM THE WORK OF THIS CONTRACT.
- 23.1.1 MECHANICAL DEMOLITION: REMOVE MECHANICAL SYSTEMS INCLUDING MECHANICAL EQUIPMENT, DUCTWORK, DIFFUSERS AND ASSOCIATED PUMPS AND PIPING INDICATED. REFER TO THE CONTRACT MECHANICAL DRAWINGS.
- 23.1.2 ABANDONED MECHANICAL CONSTRUCTION: REMOVE AND CAP ABANDONED MECHANICAL EQUIPMENT, DUCTWORK AND ACCESSORIES, BOTH PRE-EXISTING AND THAT RESULTING FROM THE WORK OF THIS CONTRACT.
- 26.1.1 ELECTRICAL DEMOLITION: REMOVE ELECTRICAL DEVICES INCLUDING RECEPTACLES, DISCONNECTS, LIGHTING FIXTURES, CLOCK SPEAKER SYSTEMS. REFER TO THE CONTRACT ELECTRICAL DRAWINGS.
- 26.1.2 ELECTRICAL DEMOLITION: REMOVE, SALVAGE EXISTING ELECTRICAL DEVICES AS INDICATED AND DIRECTED BY THE OWNER. TURN OVER TO OWNER.
- 26.1.3 ABANDONED ELECTRICAL CONSTRUCTION: REMOVE AND CAP ABANDONED ELECTRICAL EQUIPMENT, DUCTWORK AND ACCESSORIES, BOTH PRE-EXISTING AND THAT RESULTING FROM THE WORK OF THIS CONTRACT.

DEMO. TYP. NOTES FOR LOCKER ROOM AREAS AND ADJACENT SPACES:

2.1.2	2.3.3	2.4.1	3.1.1	9.2.1	22.1.1	26.1.1
2.1.3	2.3.4	2.4.2	5.2.1	9.2.2	22.1.2	26.1.2
2.1.4	2.3.6			9.3.1	23.1.1	26.1.3
	2.3.7				23.1.2	

DATE	No.	REVISION
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LOT NO. 1.01, 6.01
BLOCK NO. 201
PROPOSED NORTH LOCKER ROOM RENOVATIONS
LENAPE HIGH SCHOOL
CHURCH AND HARTFORD ROADS, MEDFORD, NEW JERSEY 08055
LRHSD NO. REF21-35-8267
MEDFORD TOWNSHIP
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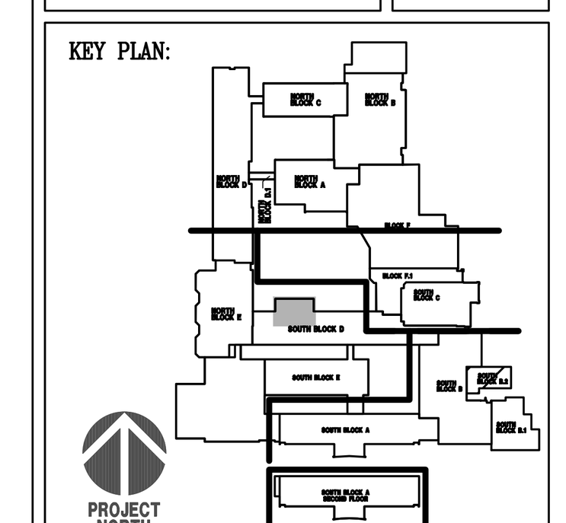
Drew C. Dingler, AIA, President
New Jersey LIC.# 21AI01088800

KEY PLAN:



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SCALE:	AS NOTED	DRAWN BY: DCD
COMM. No.	8267	CHECKED BY: DCD
DATE:	12-12-23	

SHEET TITLE: FL. PLAN GIRLS - DEMO. & PROP. EX'G

SHEET No.: A1.1

CONCRETE SLAB KEY

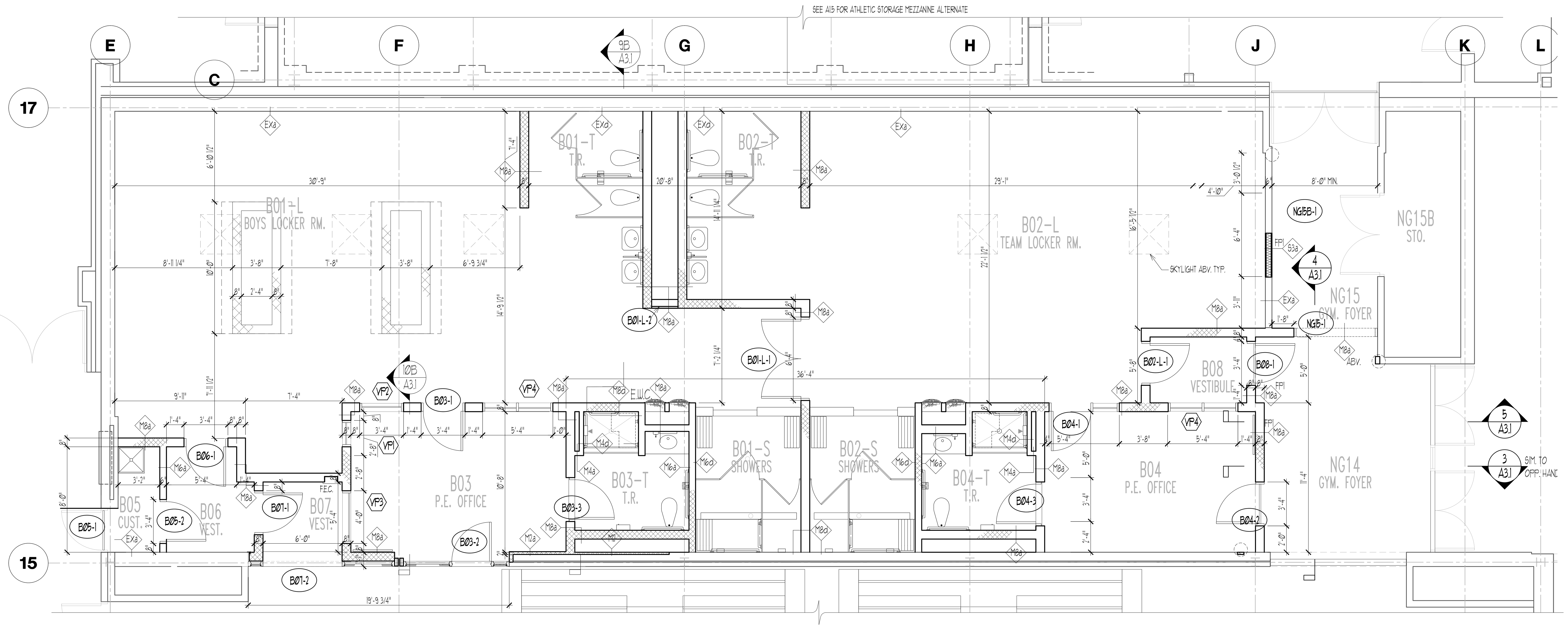
SEE A1.Ø FOR EXTENT OF CONCRETE SLAB REMOVAL AND NEW CONCRETE SLAB.

DRAWING KEY NOTES

SEE SHEET A1.1 FOR DRAWING KEY NOTES, APPLICABLE TO THIS SHEET.

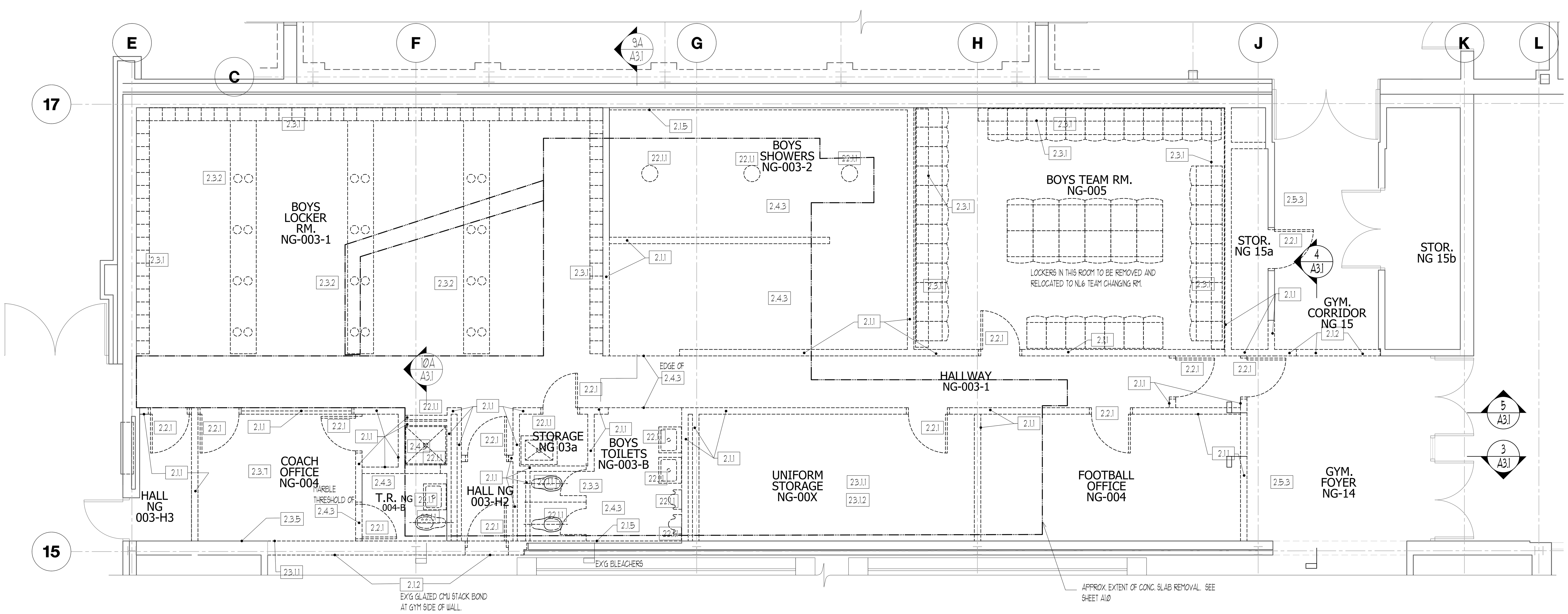
DEMO. TYP. NOTES FOR LOCKER ROOM AREAS AND ADJACENT SPACES:

2.1.2	2.3.3	2.4.1	3.1.1	9.2.1	22.1.1	26.1.1
2.1.3	2.3.4	2.4.2	5.2.1	9.2.2	22.1.2	26.1.2
2.1.4	2.3.6			9.3.1	23.1.1	26.1.3
	2.3.7				23.1.2	



1B / A1.2 NG - BOY'S LOCKER ROOM PROPOSED FLOOR PLAN 1/4"=1'-0"

SEE SHEET A3.1 FOR LOCKER LAYOUTS



1A / A1.2 NG - BOY'S LOCKER ROOM DEMO. FLOOR PLAN 1/4"=1'-0"

DATE	No.	REVISION
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BLOCK NO. 201 — LOT NO. 1.01, 6.01

PROPOSED NORTH LOCKER ROOM RENOVATIONS

LENAPE HIGH SCHOOL

CHURCH AND HARTFORD ROADS, MEDFORD, NEW JERSEY 08055

LRHSD NO. REF21-35-8267

MEDFORD TOWNSHIP — BURLINGTON COUNTY

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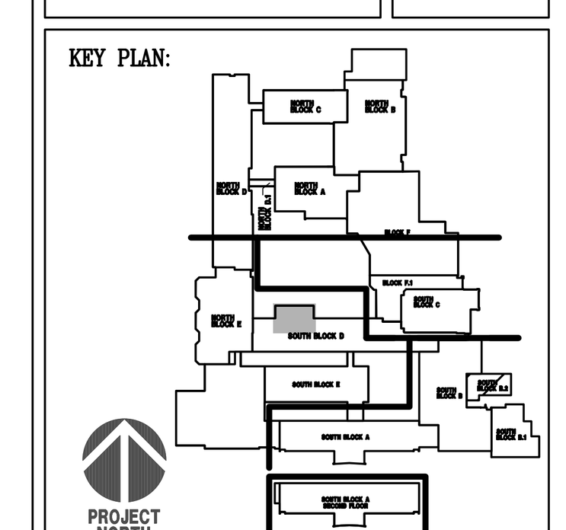
New Jersey Architect LIC.# 21AI01090200; P.P. LIC.# 33LI00653000

KEY PLAN:



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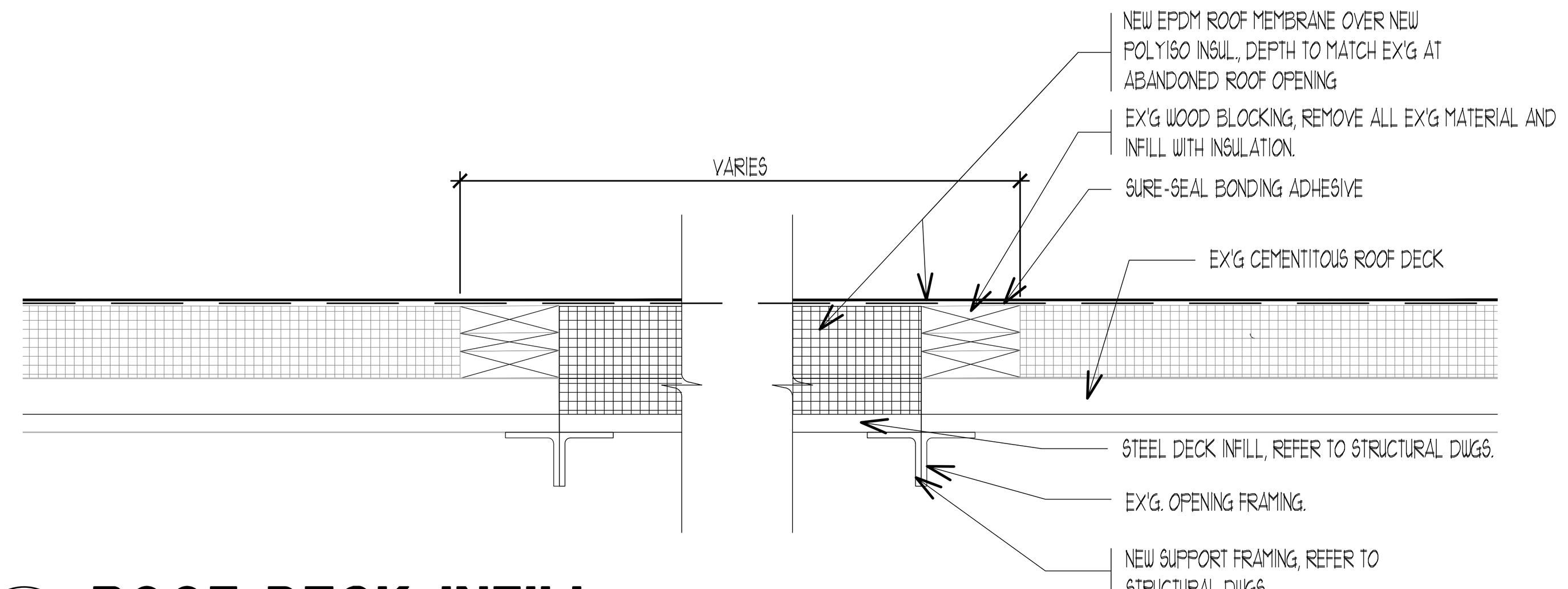
COMM. No.	8267	CHECKED BY: DCD
DATE:	12-12-23	

SHEET TITLE: FL. PLAN BOYS - DEMO. & PROP.

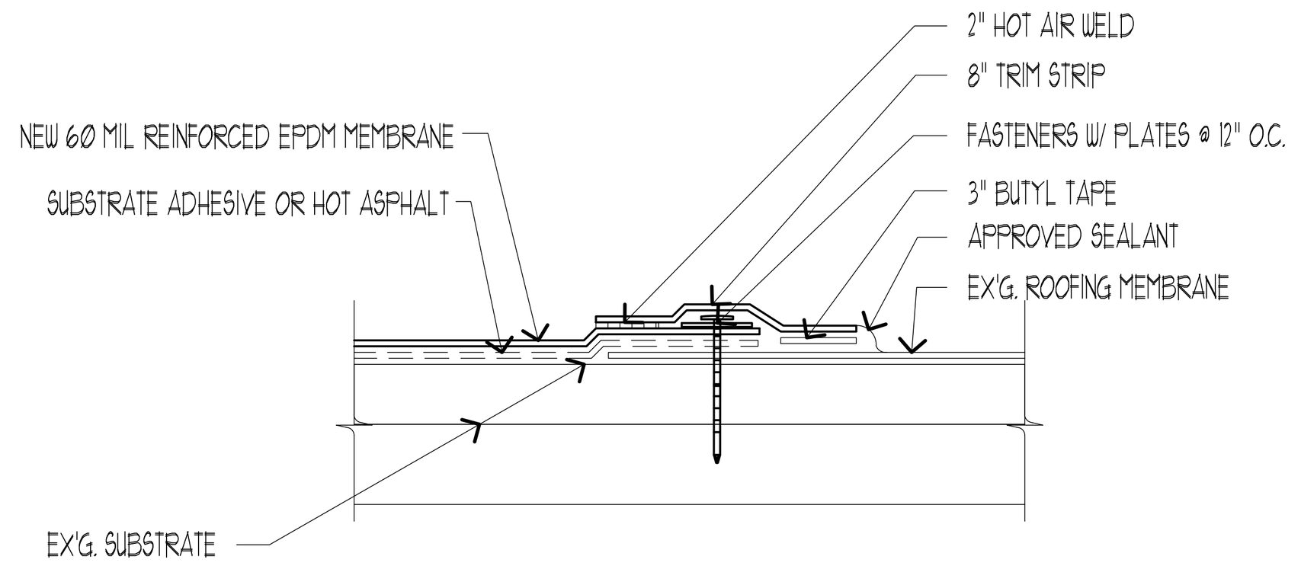
SHEET No.: A1.2



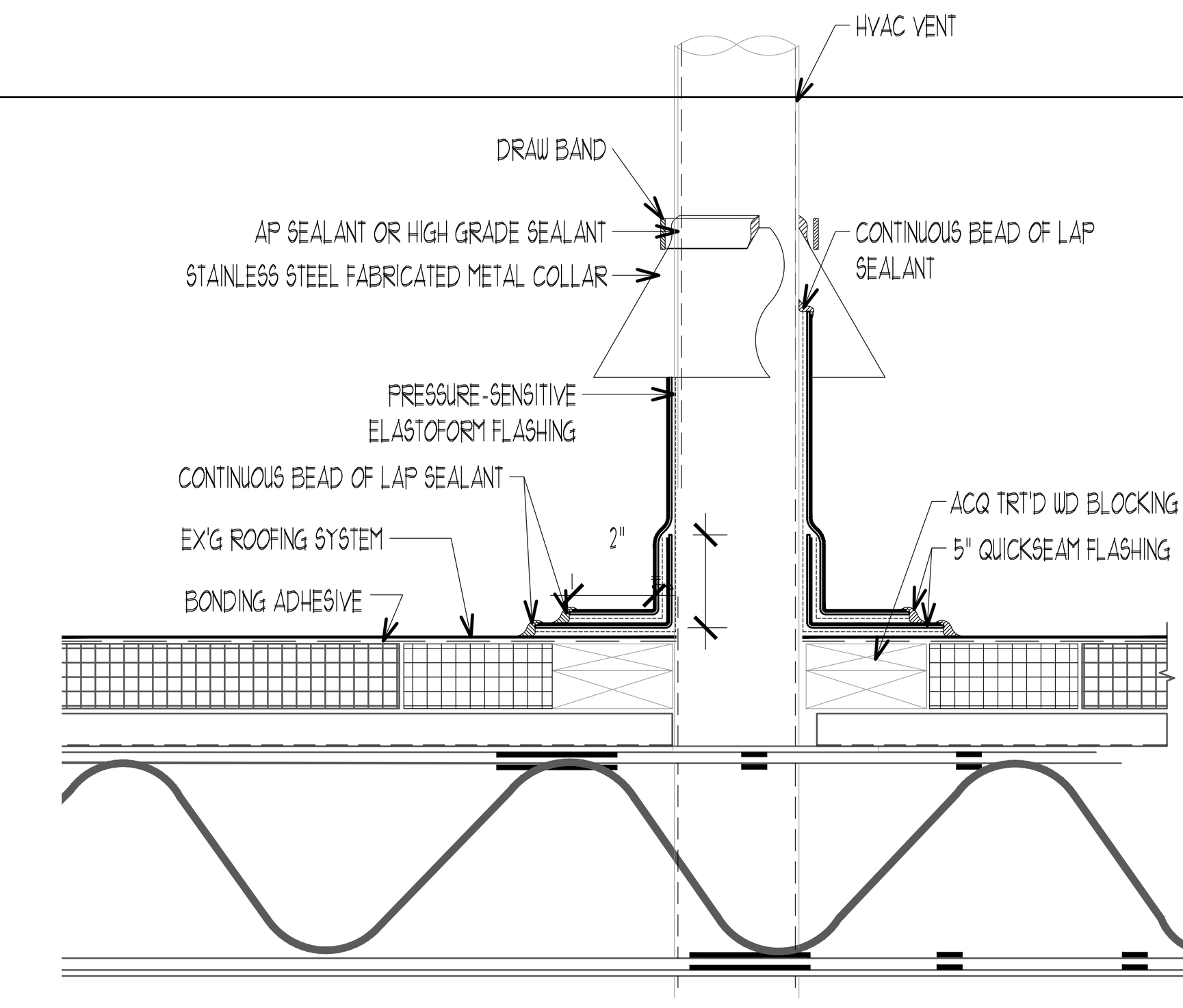
3 / A1.3 ROOF DECK INFILL — 1-1/2"=1'-0"

NOTE:
1) DETAIL TYPICAL FOR ALL ABANDONED ROOF OPENINGS AT ALL ROOF AREAS.
2) REMOVE ALL UNUSED AND ABANDONED BLOCKING AND INFILL WITH NEW INSULATION.

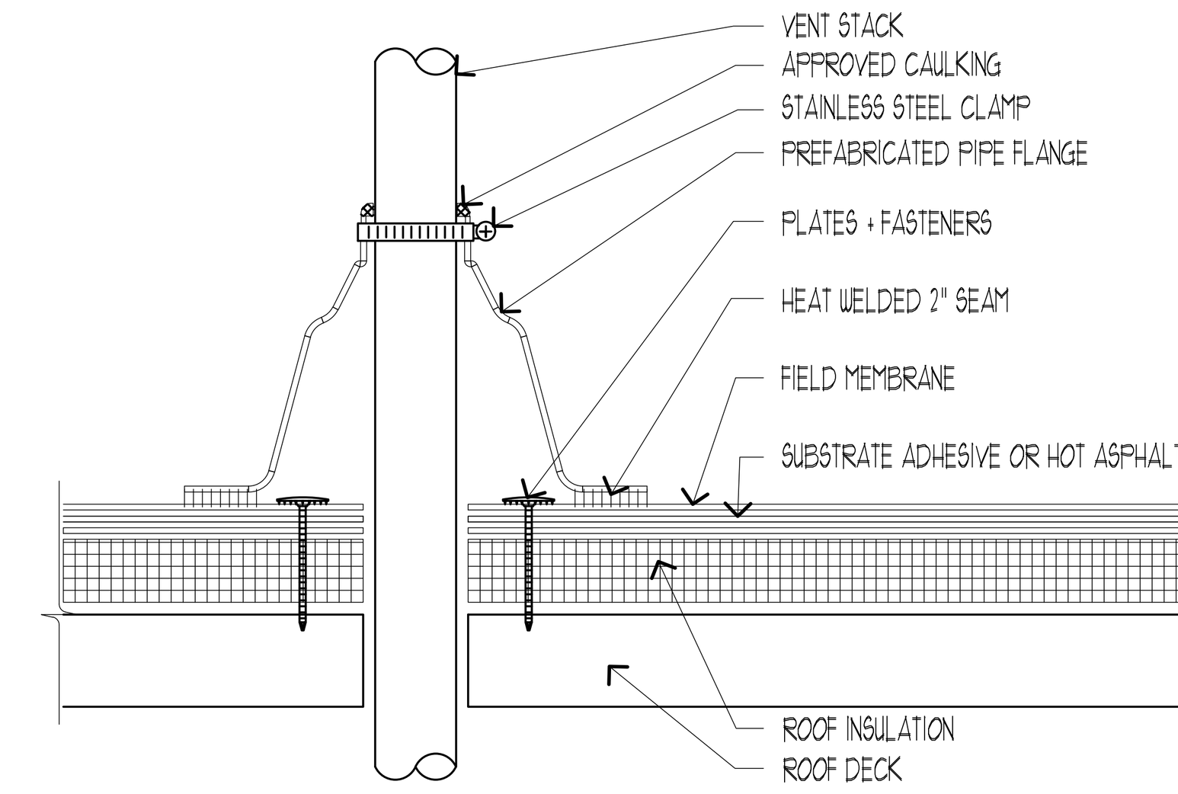
NOTE:
ALL AREAS TO COME IN CONTACT WITH 3" BUTYL TAPE MUST FIRST BE CLEANED AND PRIMED WITH PRIMER WASH. (EX'G. MEMBRANE AND 8" TRIM STRIP)



4 / A1.3 TRANSITION DETAIL — N.T.S.

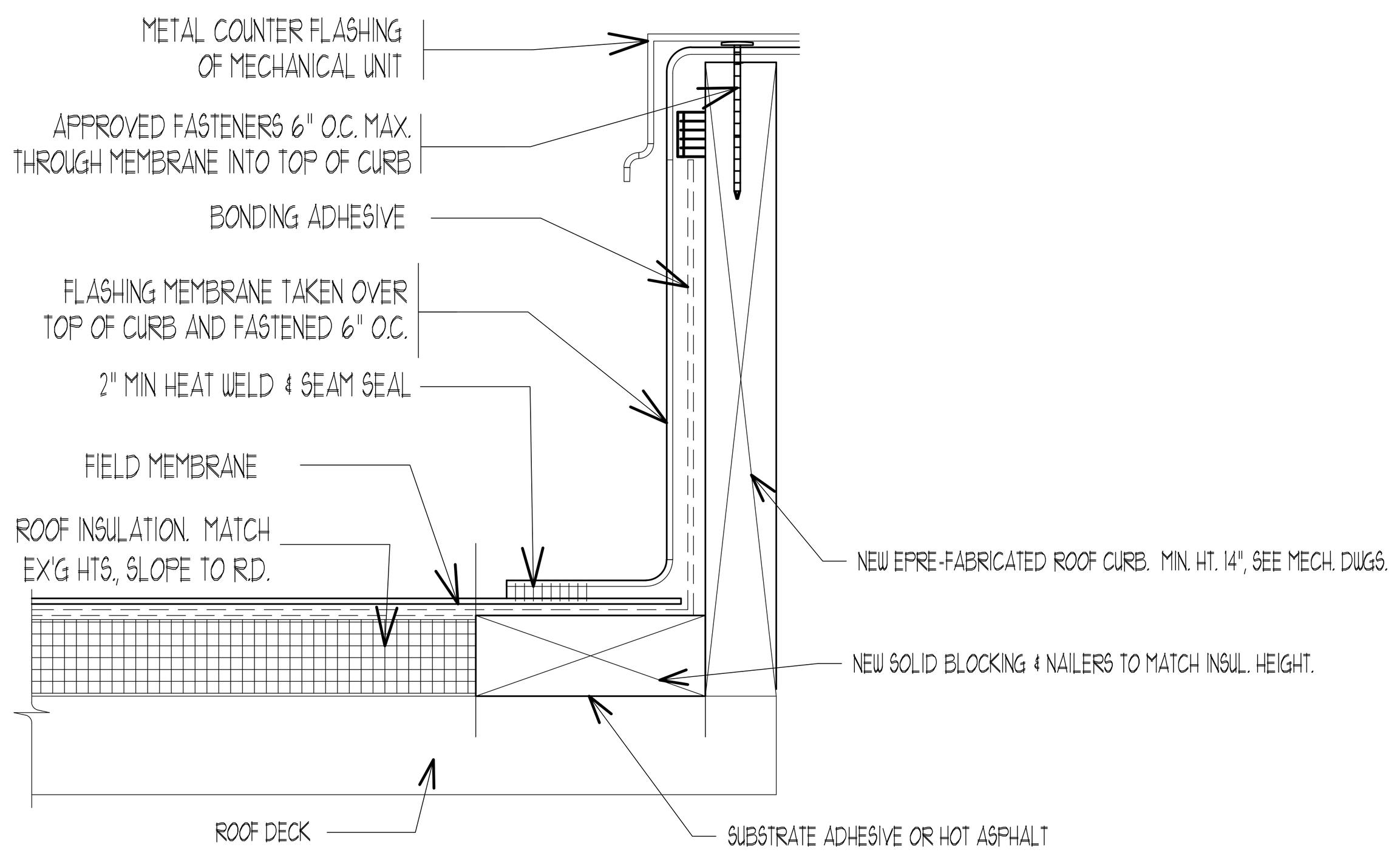


5 / A1.3 DETAIL: ROOF PENETRATION — 1"=1'-0"



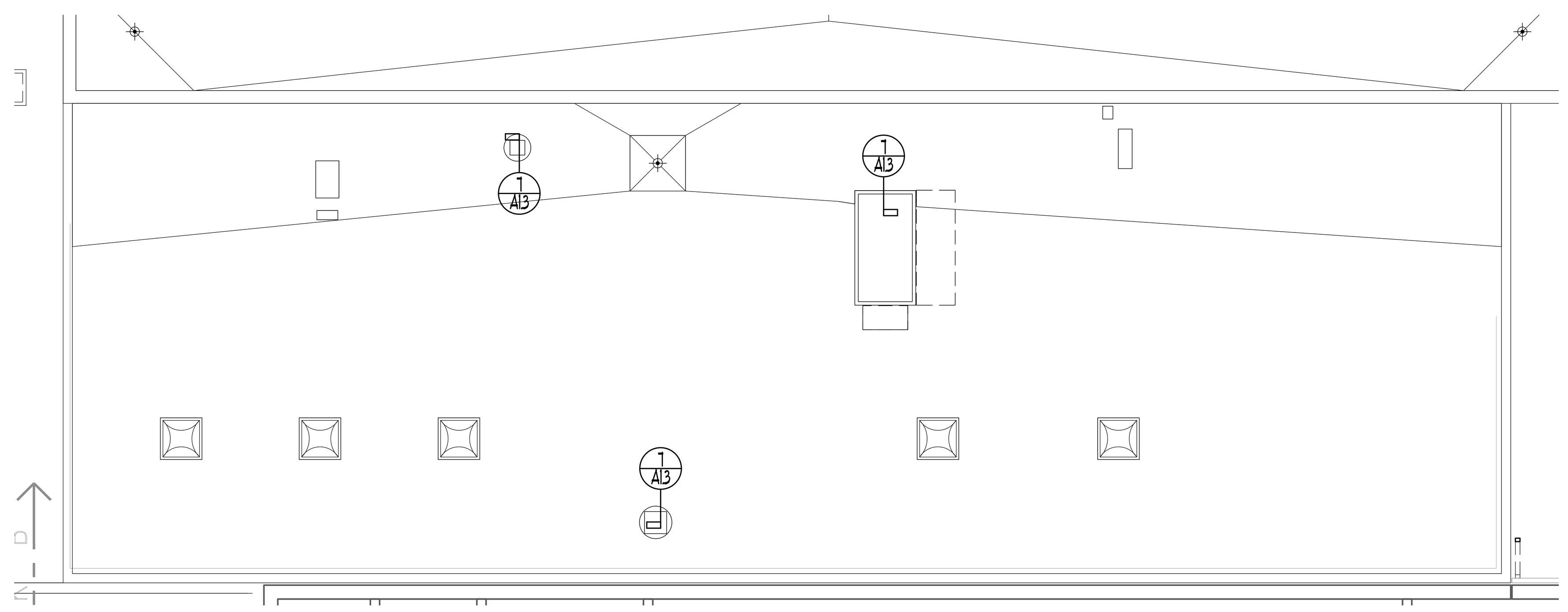
NOTE: PREFABRICATED PIPE FLANGES MAY NOT BE VERTICALLY CUT AND WELDED BACK TOGETHER. IF FLANGE CANNOT BE SLID OVER THE TOP OF THE PIPE, USE METHOD AS DESCRIBED IN PIPE DETAIL 5/A1.3. COVER ASPHALT RESIDUE ON PIPE WITH ALUMINUM TAPE PRIOR TO INSTALLING MEMBRANE.

6 / A1.3 PREFAB. VENT PIPE DETAIL — N.T.S.

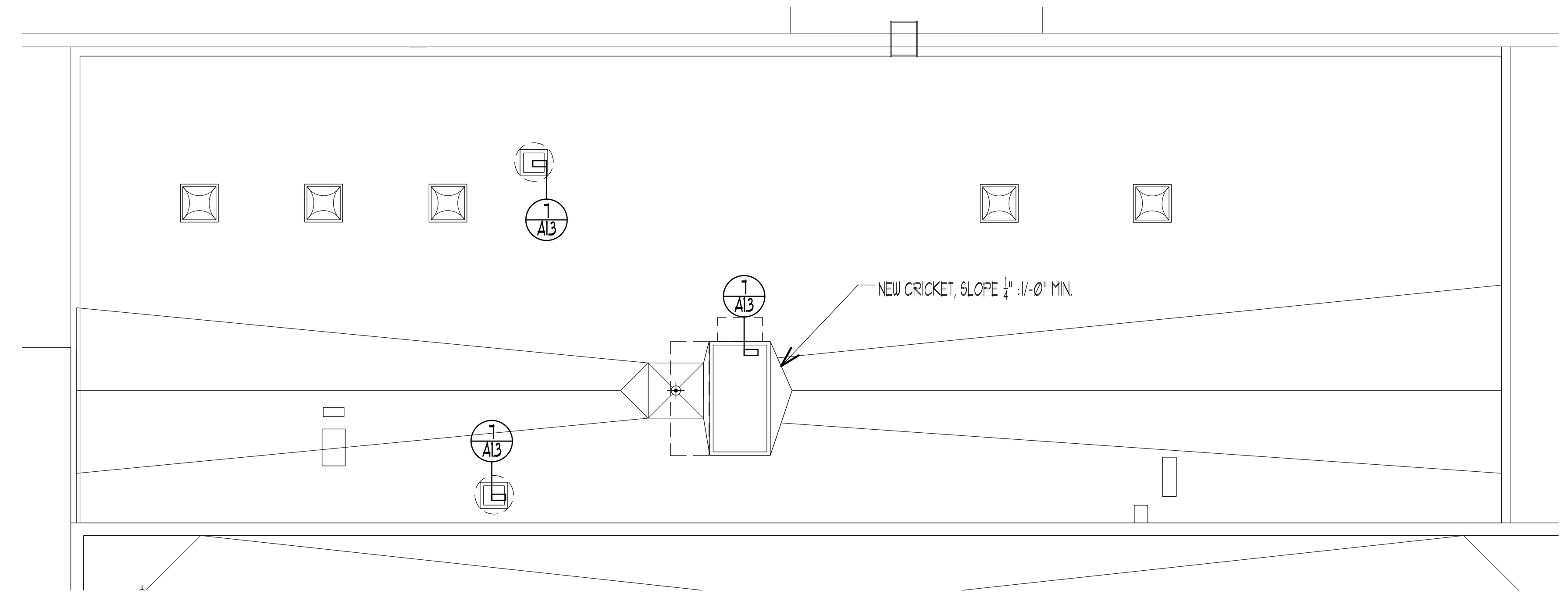


NOTE:
1. ALL FLASHING MUST BE MINIMUM OF 12" IN HEIGHT.
2. OUTSIDE CORNERS REQUIRED ON ALL CORNERS OF CURB

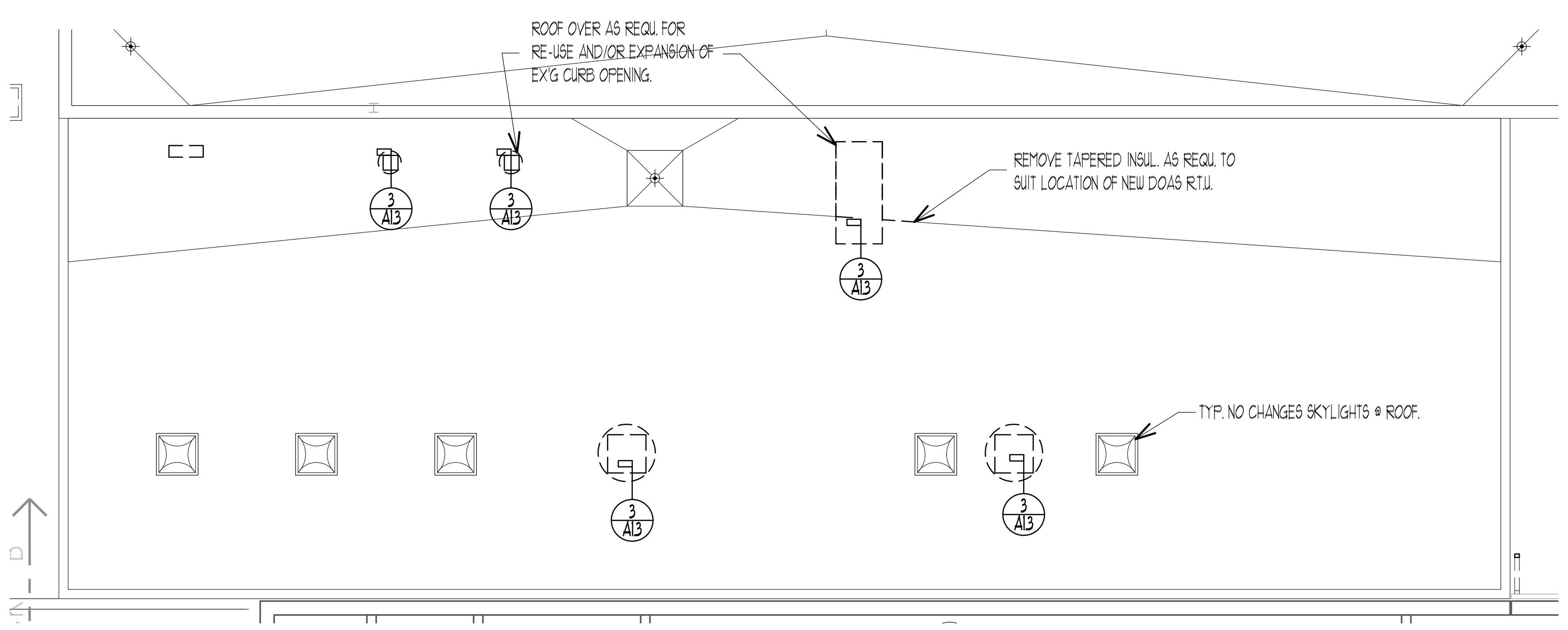
7 / A1.3 MECHANICAL CURB FLASHING ROOF DETAIL — N.T.S.



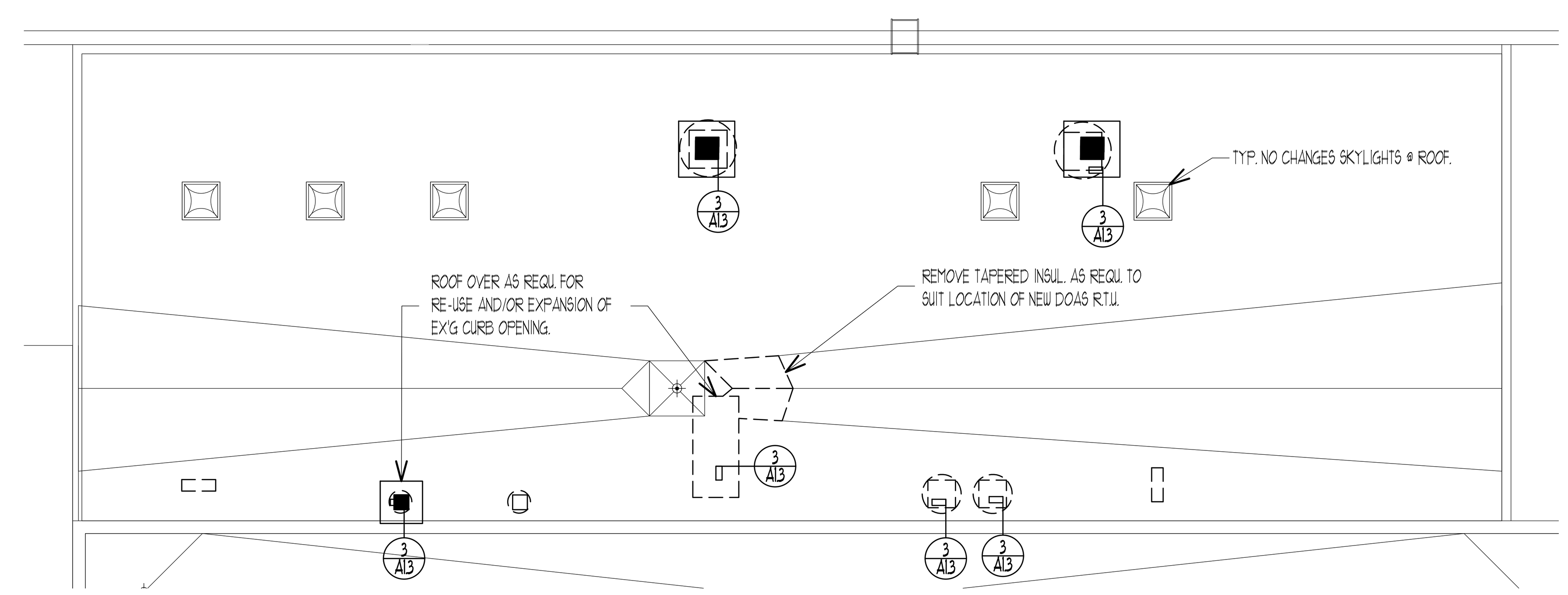
1B / A1.3 NG - GIRL'S LOCKER ROOM PROPOSED ROOF PLAN — 1/8"=1'-0"



2B / A1.3 NG - BOY'S LOCKER ROOM PROPOSED ROOF PLAN — 1/8"=1'-0"



1A / A1.3 NG - GIRL'S LOCKER ROOM EX'G ROOF PLAN — 1/8"=1'-0"



2A / A1.3 NG - BOY'S LOCKER ROOM EX'G ROOF PLAN — 1/8"=1'-0"

NOTE:
1. SEE DETAIL FOR "MECHANICAL CURB FLASHING" REQUIRED.
2. CONTRACTOR TO COORDINATE QUANTITY OF ANGLES REQU. SEE TYP. STRUCTURAL DWGS.
3. CONTRACTOR TO SUPPLY ROOF WALKWAY PADS.
4. CONTRACTOR TO VERIFY LOCATIONS IN FIELD.

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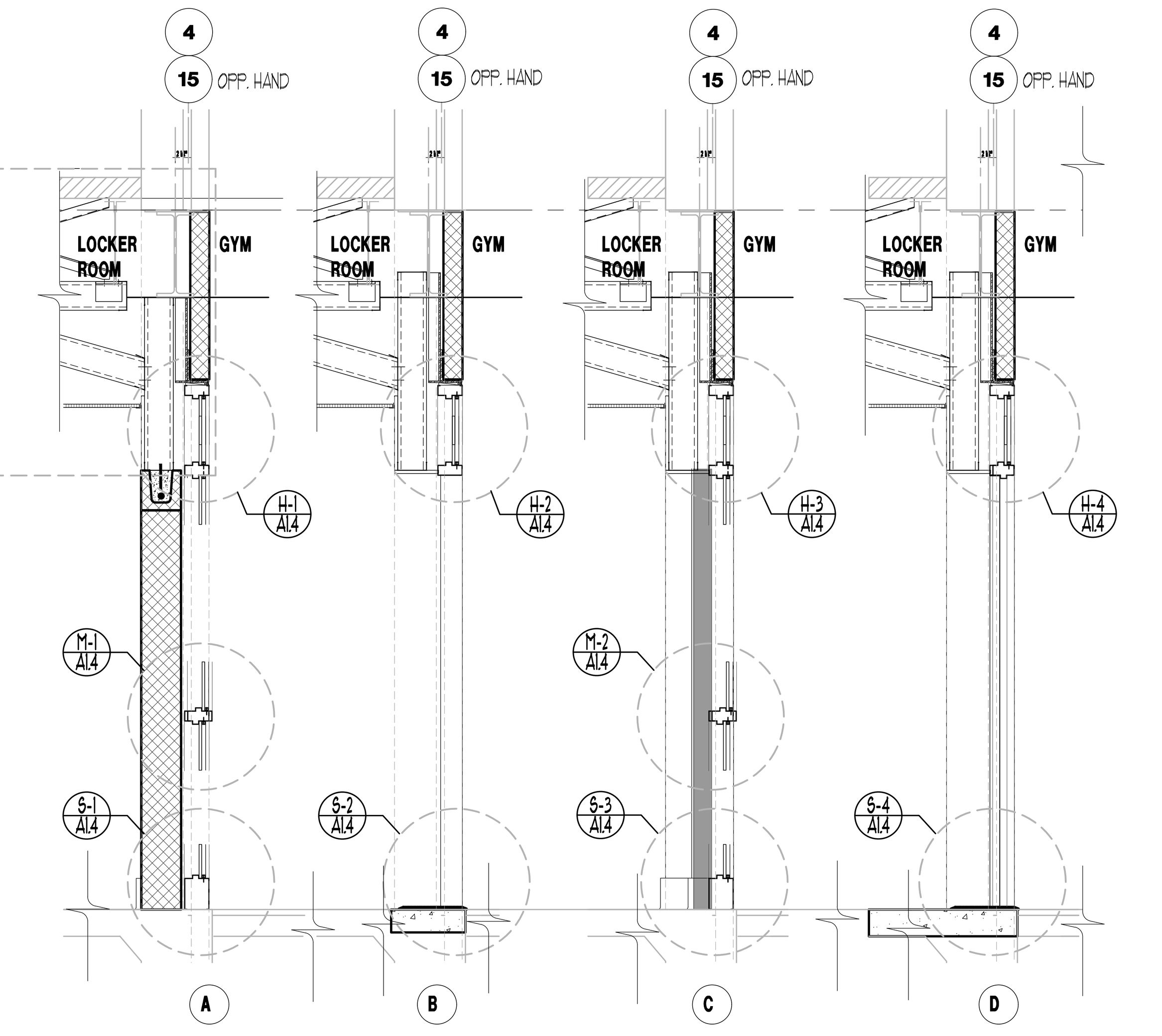
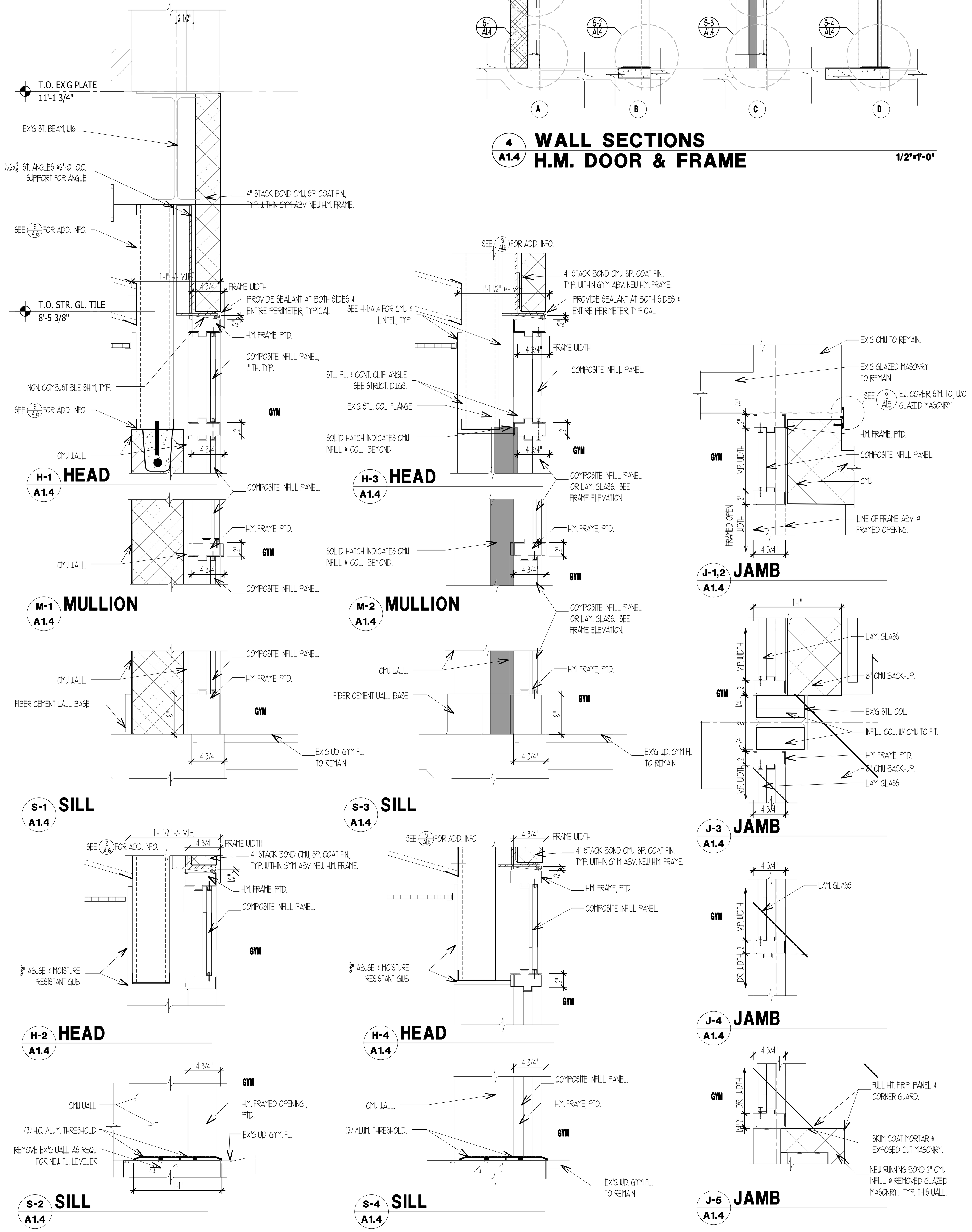
SHEET TITLE: ROOF PLAN, DETAILS

SHEET No.: A1.3



WALL SECTIONS H.M. DOOR & FRAME

4 / A1.4 — 1/2"=1'-0"



H-1 HEAD A1.4 · M-1 MULLION A1.4 · S-1 SILL A1.4 · H-2 HEAD A1.4 · S-2 SILL A1.4

H-3 HEAD A1.4 · M-2 MULLION A1.4 · S-3 SILL A1.4 · H-4 HEAD A1.4 · S-4 SILL A1.4

J-1,2 JAMB A1.4 · J-3 JAMB A1.4 · J-4 JAMB A1.4 · J-5 JAMB A1.4

DOOR SCHEDULE - LOCKER ROOMS

DOOR NO.	DOOR SIZE	DOOR TYPE	FRAME TYPE	FRAME DEPTH	DOOR MAT.	DOOR FIN.	DOOR LABEL	FRAME MAT.	FRAME FIN.	FRAME LABEL	GLASS	DETAIL - SHEET A1.4 HEAD	JAMB	SILL	THRESHOLD	HRDWR. SET	REMARKS
																	SEE "SPECIFIC NOTES, DOORS & HARDWARE", BELOW
G01-L-1	(2) 3'-0" x 6'-11" x 1-3/4"	L	02	7-5/8"	F.R.P	PEBBLE	N/A	H.M.	PTD	N/A	N/A	IMH1	IMJ1	IMS1		02	NOTE 1
G02-L-2	2'-0" x 4'-0"	F	FLANGE	N/A	S.S.	304	N/A	S.S	304	N/A	N/A	N/A	N/A	N/A		08	ACCESS DOOR. SEE SPECS.
G02-L-1	(1) 3'-0" x 6'-11" x 1-3/4"	L	01	7-5/8"	S.C. WOOD	FACTORY STAIN	N/A	H.M.	PTD	N/A	N/A	IMH1	IMJ1	IMS1		05	
G03-1	(1) 3'-0" x 6'-11" x 1-3/4"	G	01	7-5/8"	S.C. WOOD	FACTORY STAIN	N/A	H.M.	PTD	N/A	G-A	IMH1	IMJ1	IMS1		01	
G03-2	(1) 3'-0" x 6'-11" x 1-3/4"	G	04	4-3/4"	S.C. WOOD	FACTORY STAIN	N/A	H.M.	PTD	N/A	SEE NOTES	4	4	4	ALUM.	01	NOTES 2 AND 3 SEE 3&4/A1.0 FOR ADDITIONAL DETAILS.
G03-3	(1) 3'-0" x 6'-11" x 1-3/4"	L	01	7-5/8"	S.C. WOOD	FACTORY STAIN	N/A	H.M.	PTD	N/A	N/A	IMH1	IMJ1	IMS1		06	
G04-1	(1) 3'-0" x 6'-11" x 1-3/4"	G	03	7-5/8"	S.C. WOOD	FACTORY STAIN	N/A	H.M.	PTD	N/A	G-A	IMH1	IMJ1	IMS1		01.1	
G04-2	OMIT																
G04-3	(1) 3'-0" x 6'-11" x 1-3/4"	L	01	7-5/8"	S.C. WOOD	FACTORY STAIN	N/A	H.M.	PTD	N/A	N/A	IMH1	IMJ1	IMS1		06	
G05-1	EX'G	EX'G	EX'G	EX'G	EX'G	EX'G	EX'G	EX'G	PTD	EX'G	EX'G	EX'G	EX'G	EX'G		EX'G	
G05-2	(1) 3'-0" x 6'-11" x 1-3/4"	F	01	7-5/8"	S.C. WOOD	FACTORY STAIN	N/A	H.M.	PTD	N/A	N/A	IMH1	IMJ1	IMS1		07	
G06-1	(1) 3'-0" x 6'-11" x 1-3/4"	F	01	7-5/8"	S.C. WOOD	FACTORY STAIN	N/A	H.M.	PTD	N/A	N/A	IMH1	IMJ1	IMS1		05	
G07-1	(1) 3'-0" x 6'-11" x 1-3/4"	F	01	7-5/8"	S.C. WOOD	FACTORY STAIN	N/A	H.M.	PTD	N/A	N/A	IMH1	IMJ1	IMS1		04	
G07-2	FRAMED OPENING	N/A	05	4-3/4"	N/A	N/A	N/A	H.M.	PTD	N/A	SEE NOTES	4	4	4	ALUM.	N/A	NOTES 2 AND 3 SEE 3&4/A1.0 FOR ADDITIONAL DETAILS.
G08-1	(1) 3'-0" x 6'-11" x 1-3/4"	F	01	7-5/8"	S.C. WOOD	FACTORY STAIN	20 MIN	H.M.	PTD	20 MIN	N/A	IMH1	IMJ1	IMS1		04	
NL6-1	(2) 3'-0" x 6'-11" x 1-3/4"	F	02	7-5/8"	S.C. WOOD	FACTORY STAIN	20 MIN	H.M.	PTD	20 MIN	N/A	IMH1	IMJ1	IMS1		03	
B01-L-1	(2) 3'-0" x 6'-11" x 1-3/4"	L	02	7-5/8"	F.R.P	PEBBLE	N/A	H.M.	PTD	N/A	N/A	IMH1	IMJ1	IMS1		02	NOTE 1
G02-L-2	2'-0" x 4'-0"	F	FLANGE	N/A	S.S.	304	N/A	S.S	304	N/A	N/A	N/A	N/A	N/A		08	ACCESS DOOR. SEE SPECS.
B02-L-1	(1) 3'-0" x 6'-11" x 1-3/4"	L	01	7-5/8"	S.C. WOOD	FACTORY STAIN	N/A	H.M.	PTD	N/A	N/A	IMH1	IMJ1	IMS1		05	
B03-1	(1) 3'-0" x 6'-11" x 1-3/4"	G	01	7-5/8"	S.C. WOOD	FACTORY STAIN	N/A	H.M.	PTD	N/A	G-A	IMH1	IMJ1	IMS1		01	
B03-2	(1) 3'-0" x 6'-11" x 1-3/4"	G	04.1	4-3/4"	S.C. WOOD	FACTORY STAIN	N/A	H.M.	PTD	N/A	SEE NOTES	4	4	4	ALUM.	01	NOTES 2 AND 3 SEE 3&4/A1.0 FOR ADDITIONAL DETAILS.
B03-3	(1) 3'-0" x 6'-11" x 1-3/4"	L	01	7-5/8"	S.C. WOOD	FACTORY STAIN	N/A	H.M.	PTD	N/A	N/A	IMH1	IMJ1	IMS1		06	
B04-1	(1) 3'-0" x 6'-11" x 1-3/4"	G	03.1	7-5/8"	S.C. WOOD	FACTORY STAIN	N/A	H.M.	PTD	N/A	G-A	IMH1	IMJ1	IMS1		01.1	
B04-2	(1) 3'-0" x 6'-11" x 1-3/4"	N	01	7-5/8"	S.C. WOOD	FACTORY STAIN	20 MIN	H.M.	PTD	20 MIN	G-B	IMH1	IMJ1	IMS1		01	
B04-3	(1) 3'-0" x 6'-11" x 1-3/4"	L	01	7-5/8"	S.C. WOOD	FACTORY STAIN	N/A	H.M.	PTD	N/A	N/A	IMH1	IMJ1	IMS1		06	
B05-1	EX'G	EX'G	EX'G	EX'G	EX'G	EX'G	EX'G	EX'G	PTD	EX'G	EX'G	EX'G	EX'G	EX'G		EX'G	
B05-2	(1) 3'-0" x 6'-11" x 1-3/4"	F	01	7-5/8"	S.C. WOOD	FACTORY STAIN	N/A	H.M.	PTD	N/A	N/A	IMH1	IMJ1	IMS1		07	
B06-1	(1) 3'-0" x 6'-11" x 1-3/4"	F	01	7-5/8"	S.C. WOOD	FACTORY STAIN	N/A	H.M.	PTD	N/A	N/A	IMH1	IMJ1	IMS1		05	
B07-1	(1) 3'-0" x 6'-11" x 1-3/4"	F	01	7-5/8"	S.C. WOOD	FACTORY STAIN	N/A	H.M.	PTD	N/A	N/A	IMH1	IMJ1	IMS1		04	
B07-2	FRAMED OPENING	N/A	05.1	4-3/4"	N/A	N/A	N/A	H.M.	PTD	N/A	SEE NOTES	4	4	4	ALUM.	N/A	NOTES 2 AND 3 SEE 3&4/A1.0 FOR ADDITIONAL DETAILS.
B08-1	(1) 3'-0" x 6'-11" x 1-3/4"	F	01	7-5/8"	S.C. WOOD	FACTORY STAIN	20 MIN	H.M.	PTD	20 MIN	N/A	IMH1	IMJ1	IMS1		04	
NG15-1	FRAMED OPENING	F	02	7-5/8"	S.C. WOOD	N/A	N/A	H.M.	PTD	N/A	N/A	IMH1	IMJ1/XMJ	IMS1		N/A	NOTE 4
NG15A-1	(2) 3'-0" x 6'-11" x 1-3/4"	F	02	7-5/8"	S.C. WOOD	FACTORY STAIN	N/A	H.M.	PTD	N/A	N/A	IMH1	IMJ1	IMS1		03	

GENERAL NOTES: DOOR SCHEDULE AND HARDWARE:

1. REFER TO SPECIFICATION SECTION 087100, "FINISH HARDWARE" FOR THE FULL HARDWARE SCHEDULE.
2. ALL DOOR HARDWARE SPECIFIED IS ADA AND ICC / ANSI A117.1-2003 COMPLIANT.
3. THE SCOPE OF THE PROJECT SHALL INCLUDE THE REMOVAL AND DISPOSAL OF THE EXISTING DOORS AND HARDWARE. THE OWNER RETAINS THE RIGHT TO SALVAGE ANY AND ALL MATERIAL DESIGNATED FOR REMOVAL.
4. HARDWARE SUPPLIED SHALL ACCOMMODATE THE DISTRICT'S EXISTING KEYING SYSTEM.

SPECIFIC NOTES: DOOR SCHEDULE AND HARDWARE:

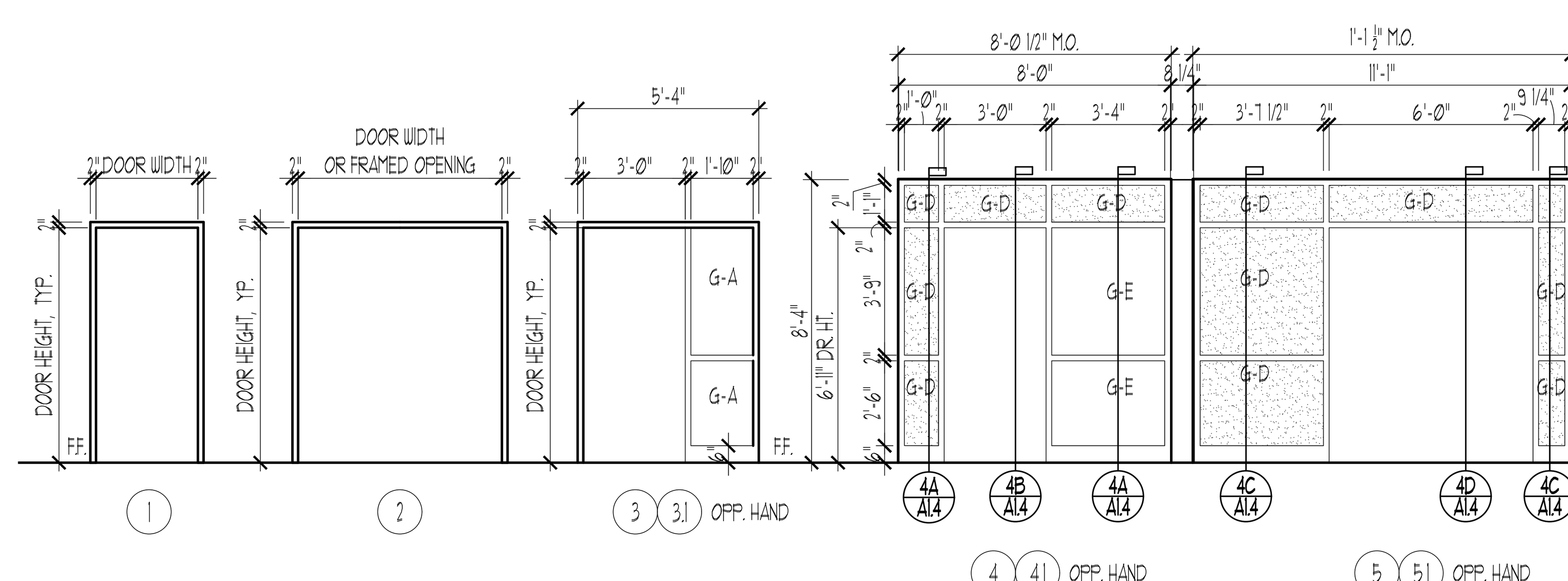
1. SEE ELECTRICAL DRAWINGS AND HW SCHEDULE FOR ACCESS & PUSH BUTTON RELEASE FOR EX'G & NEW DOORS.
2. PROVIDE GLAZING TYPES AS INDICATED IN FRAME TYPES.
3. SEE DETAIL FOR H.M. FRAME CONFIGURATION.
4. SECURE FRAME TO EX'G & PROP. WALLS W/ EX'G WALL ANCHORS.

GLAZING NOTES:

1. CONTRACTOR IS RESPONSIBLE FOR FIELD VERIFYING OPENINGS PRIOR TO FABRICATION.
2. PROVIDE SEALANT @ BOTH SIDES OF DOOR FRAMES ALL AROUND, TYP. AT ALL DOORS.
3. ALL INTERIOR GLAZING CATEGORY II CPSC 16 CFR PART 1201 OR CLASS A ANSI Z97.1 , 400 FOOT LBS, MIN.

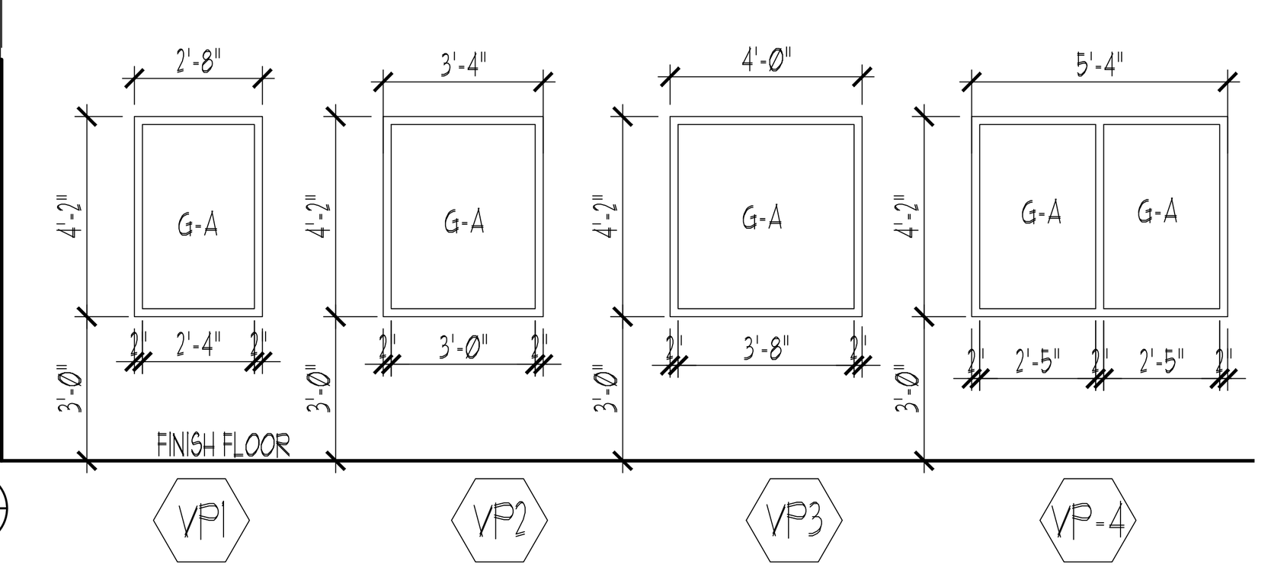
GLAZING SCHEDULE:

- G-A: 1/4" CLEAR TEMPERED
- G-B: TGP FIRE LITE PLUS, 20 MIN.
- G-C: TGP PILKINGTON PYROSTOP, 3/4 HR
- G-D: COMPOSITE INFILL PANELS, SEE SPEC
- G-E: 1/2" LAMINATE GLAZING, TRANSPARENT



HOLLOW METAL DOOR FRAMES

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

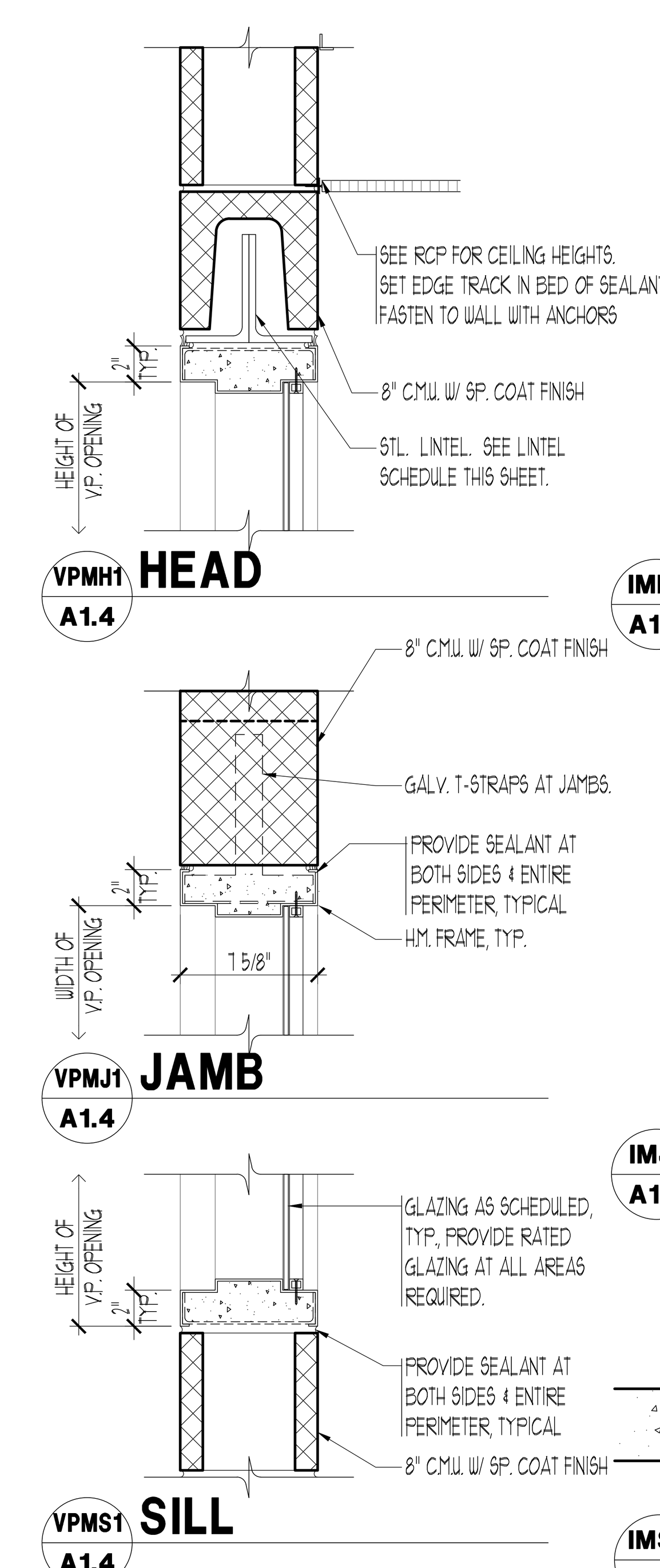


HOLLOW METAL V.P. FRAMES

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

VISION PANEL DETAILS

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



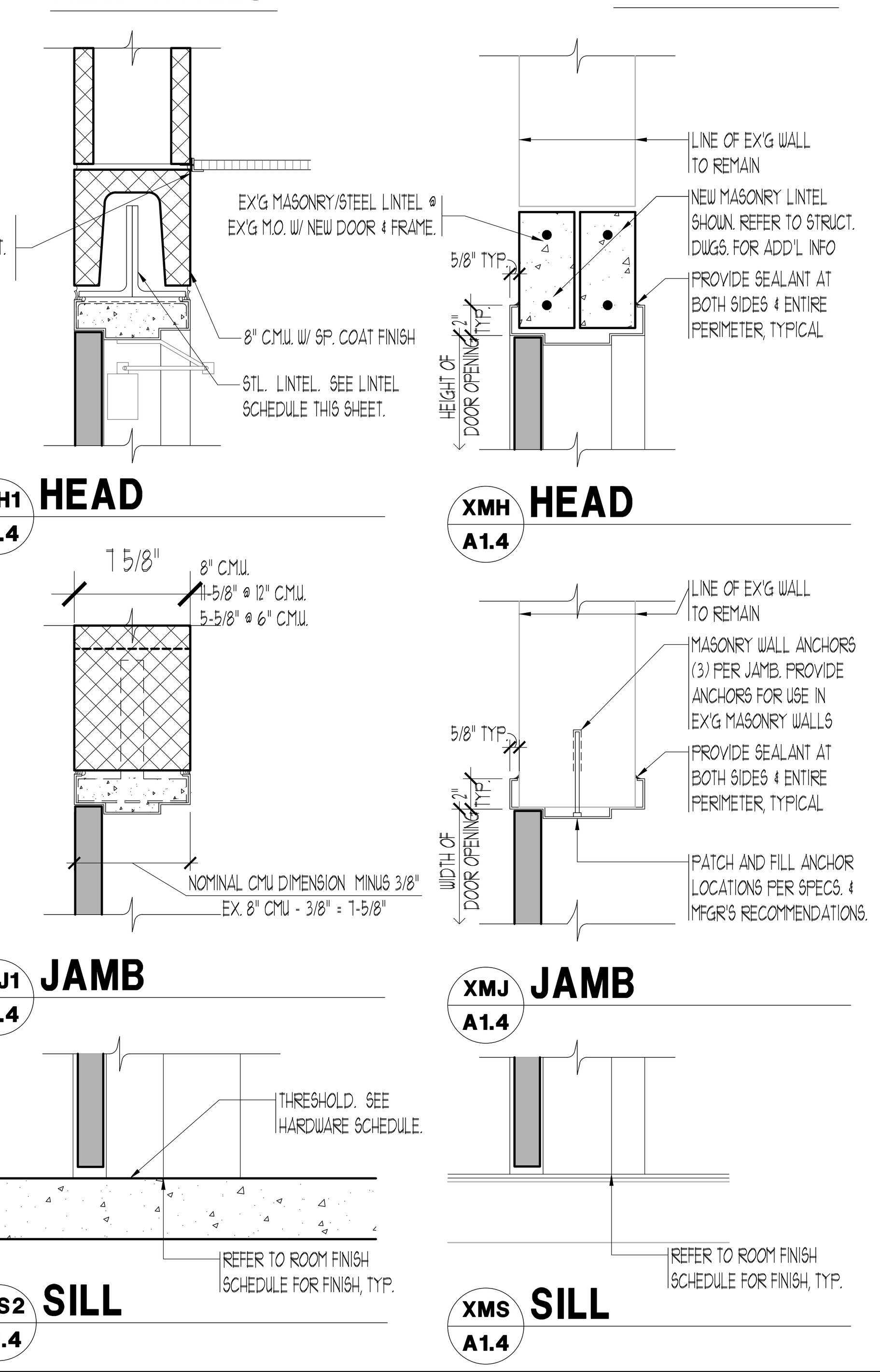
VPMH1 HEAD A1.4 · VPMJ1 JAMB A1.4 · VPMS1 SILL A1.4

INTERIOR DOORS

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

NEW WALLS

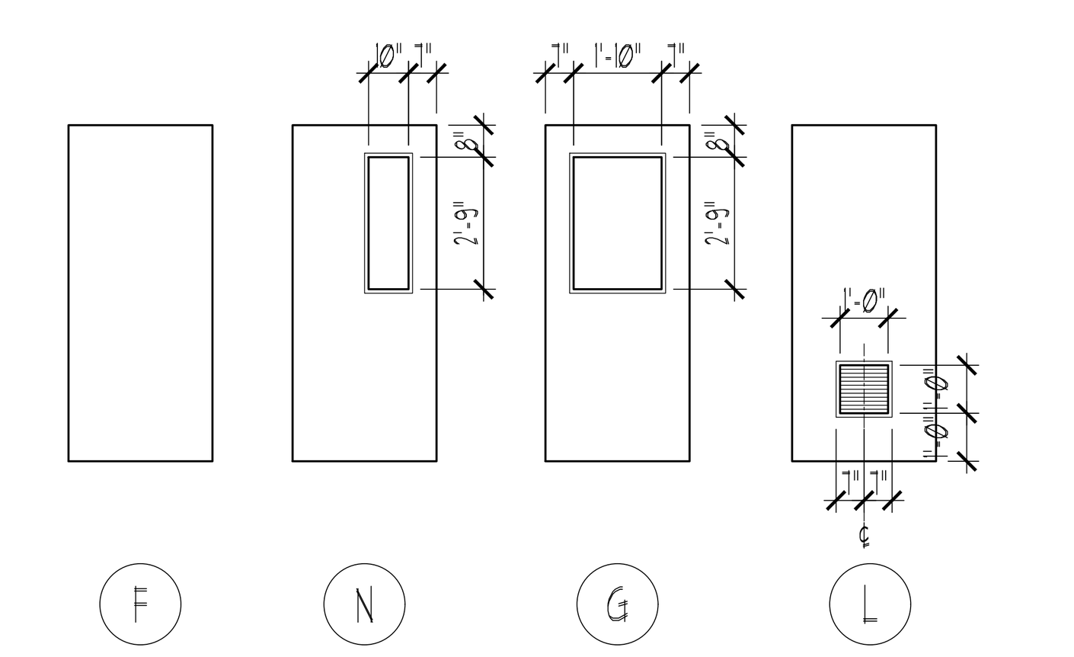
EX'G WALLS



IMH1 HEAD A1.4 · IMJ1 JAMB A1.4 · IMS2 SILL A1.4 · XMH HEAD A1.4 · XMJ JAMB A1.4 · XMS SILL A1.4

DOOR TYPES

SEE DOOR SCHEDULE FOR MATERIAL, GLAZING & DIMENSIONS NOT NOTED. 1/4" = 1'-0"



DR. & V.P. - GENERAL NOTES:

1. REFER TO DOOR FRAME AND VISION PANEL TYPE ELEVATIONS FOR DIMS, SECTION MARKS AND GLAZING REQUIREMENTS, TYP. REFER TO ELEVATIONS AND FLOOR PLANS FOR DOOR LOCATIONS AND MASONRY OPENINGS.
2. REFER TO SPECIFICATIONS FOR HOLLOW METAL DOOR FRAME AND VISION PANEL FRAME CONSTRUCTION REQUIREMENTS, INCLUDING GAUGE REQUIRED, FASTENERS REQUIRED AND ALL TESTING REQUIREMENTS, TYPICAL.
3. DETAILS FOR LINTEL BEARING PERTAIN TO ALL WINDOWS, DOORS, AND WALL PENETRATIONS REQUIRING LINTELS. REFER TO STRUCTURAL DRAWINGS FOR OPENINGS THAT REQUIRE LINTELS. REFER TO ARCHITECTURAL, MECHANICAL, ELECTRICAL, PLUMBING AND FIRE PROTECTION DRAWINGS FOR ALL OPENING SIZES AND DIMENSIONS FOR OPENINGS THAT MAY REQUIRE LINTELS. CONTRACTOR RESPONSIBLE FOR ALL COORDINATION WITH ALL TRADES FOR ALL REQUIRED LINTELS, TYPICAL.
4. ALL DOORS AND VISION PANELS TO RECEIVE SEALANT ALL AROUND, BOTH SIDES, TYPICAL. REFER TO DETAILS AND SPECIFICATIONS FOR ADDITIONAL INFORMATION.
5. CONTRACTOR SHALL COORDINATE PROPOSED WALL CONSTRUCTION WITH DETAILS PROVIDED.
6. CONTRACTOR SHALL FIELD VERIFY MASONRY OPENINGS PRIOR TO FABRICATION DOORS AND FRAMES IN EX'G OPENINGS.

CONCRETE/STEEL LINTEL SCHEDULE (NON-BEARING WALLS)

WIDTH OF OPENING	STEEL FOR EACH 4" OF WALL THICKNESS	REINF. CONC. FOR EACH 4" OF WALL THICKNESS	REMARKS
UP TO 2'-11"	∠3 1/2x3 1/2x5/16	(1) #4 TOP & BOTTOM	
3'-0" TO 3'-11"	∠4x3 1/2x5/16	(1) #4 TOP & BOTTOM	
4'-0" TO 5'-11"	∠5x3 1/2x5/16	(1) #4 TOP & BOTTOM	
6'-0" TO 8'-0"	∠6x3 1/2x5/16	(1) #5 TOP & BOTTOM	

NOTES:
1) ALL CONCRETE LINTELS SHALL BE 4000 PSI CONCRETE AT 28 DAYS WITH GRADE 60 REINFORCING
2) ALL STEEL LINTELS SHALL BE ASTM A-36.
3) FILL CMU VOIDS SOLID (2) COURSES BELOW LINTEL BEARING.
4) ALL LINTELS SHALL HAVE 8" MINIMUM BEARING U.N.O.

DATE	No.	REVISION
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BLOCK NO. 201 — LOT NO. 1.01, 6.01

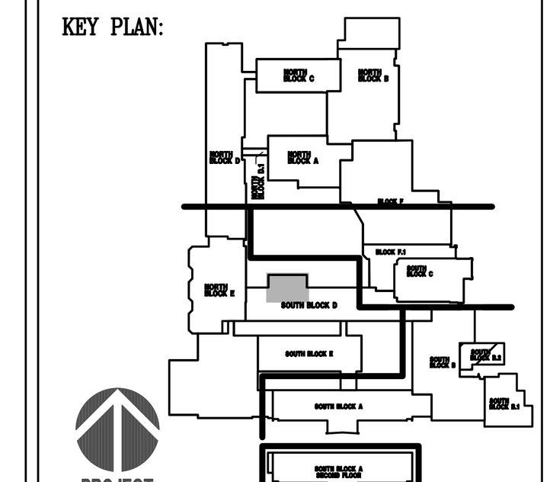
PROPOSED NORTH LOCKER ROOM RENOVATIONS
LENAPE HIGH SCHOOL
CHURCH AND HARTFORD ROADS, MEDFORD, NEW JERSEY 08055
LRHSD NO. REF21-35-8267

MEDFORD TOWNSHIP — BURLINGTON COUNTY

Linda M. Viventi, AIA, Secretary/Treasurer
New Jersey Architect LIC.# 21AI01090200; P.P. LIC.# 33LI00653000

Drew C. Dingler, AIA, President
New Jersey LIC.# 21AI01088800

KEY PLAN:



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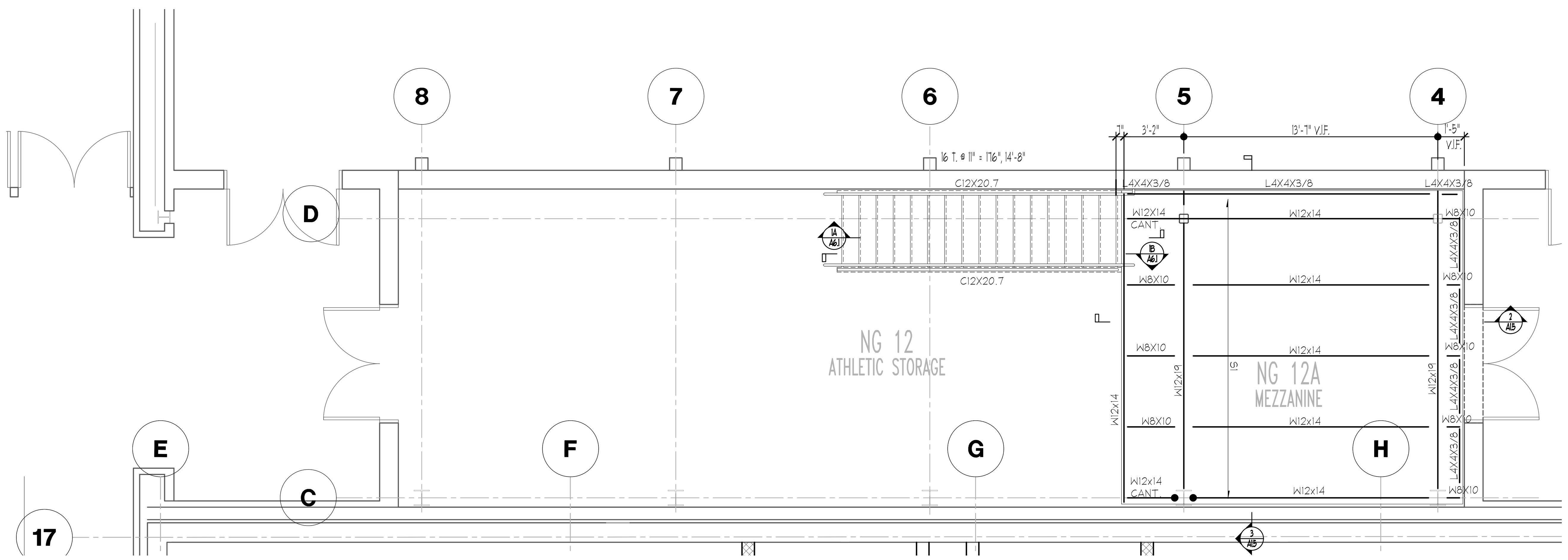
COMM. No. 8267	CHECKED BY: DCD
DATE: 12-12-23	

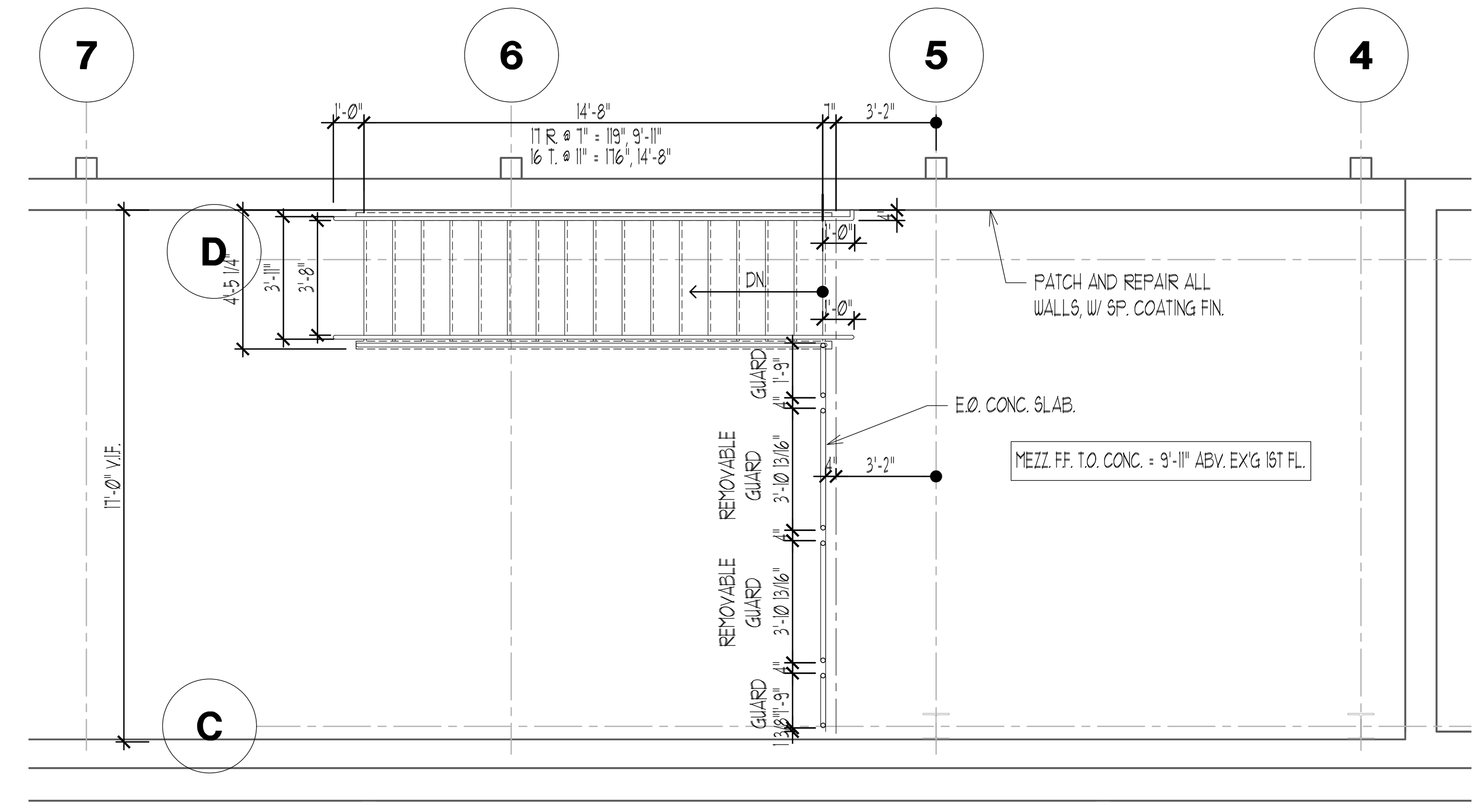
SHEET TITLE: DOOR SCHEDULE AND DETAILS

SHEET No.: A1.4



1C / A1.5 **NG - ATHLETIC STORAGE**
PROPOSED MEZZANINE FRAMING PLAN 1/4"=1'-0"

1. S1: DENOTES SPAN OF 2-1/2" CONCRETE SLAB OVER 1-1/2", 20 GA. LOK FLOOR COMPOSITE DECK (GALV.) W/ 6x6 W2.0xW2.0 WWF (4" TOTAL SLAB THICKNESS).
2. TOP OF STEEL EL. = 9'-8" AFF.
3. ○——— DENOTES FULL MOMENT CONNECTION. SEE DETAILS.

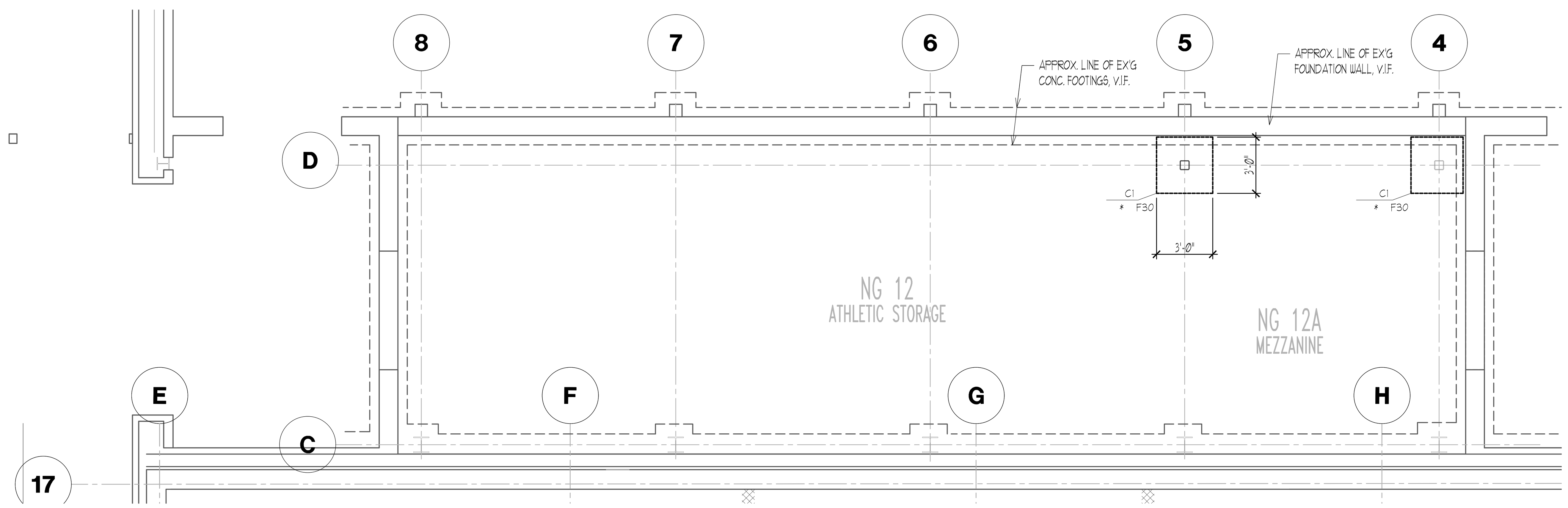


1D / A1.5 **NG - ATHLETIC STORAGE**
MEZZ. PLAN 1/4"=1'-0"

DRAWING KEY NOTES

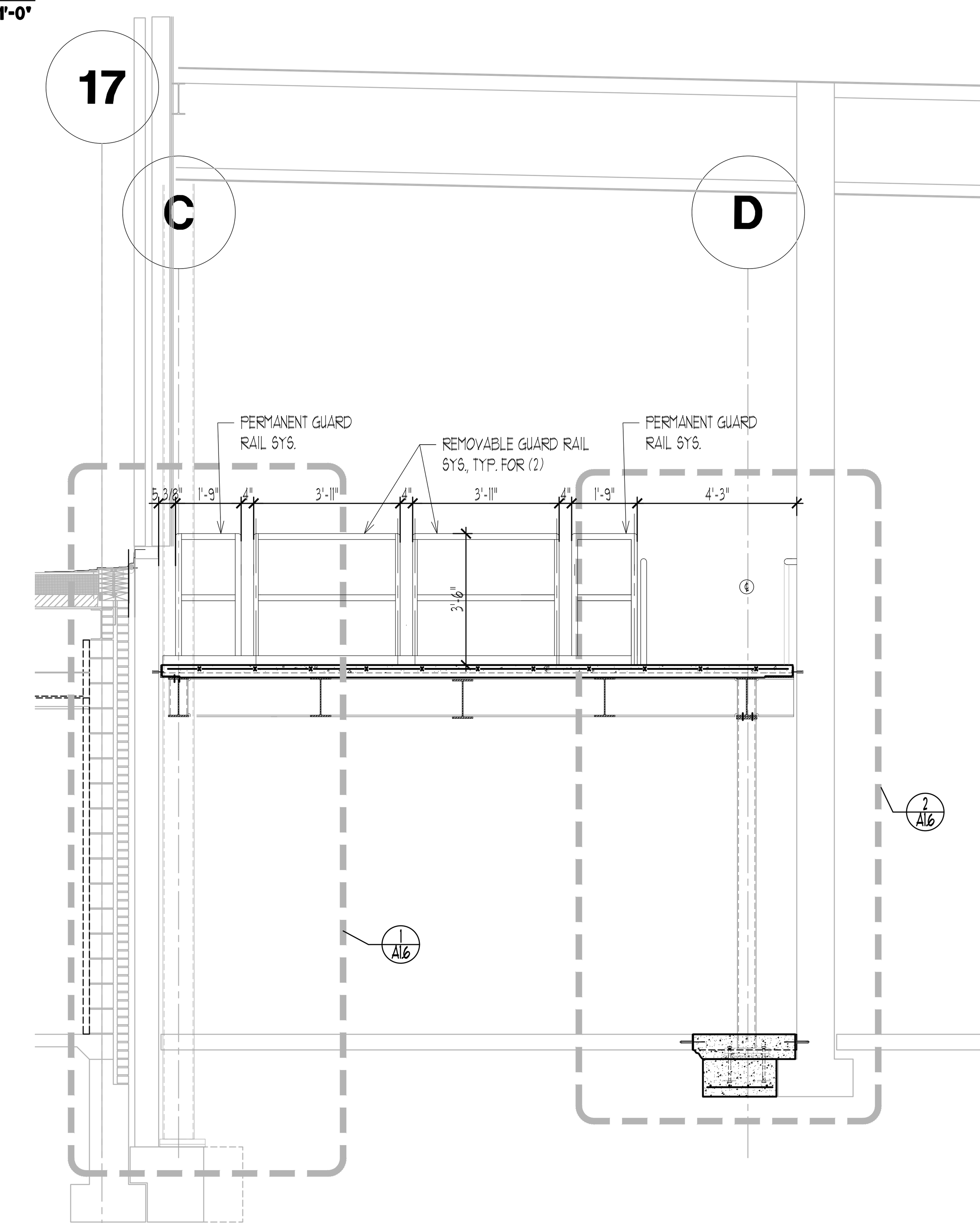
SEE SHEET A1.1 FOR DRAWING KEY NOTES, APPLICABLE TO THIS SHEET.

2.3.7 EXISTING LOOSE MATERIALS: TO BE REMOVED BY THE OWNER.

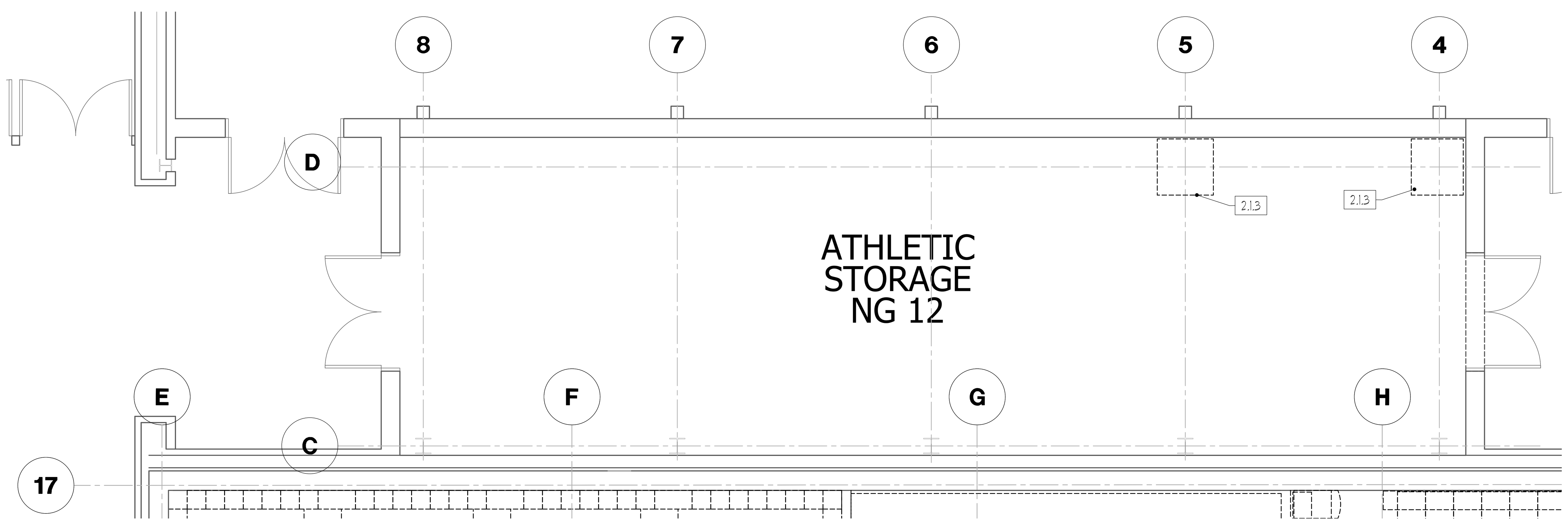


1B / A1.5 **NG - ATHLETIC STORAGE**
PROPOSED MEZZANINE FOUNDATION PLAN 1/4"=1'-0"

(*) DENOTES BOTTOM OF FOOTING TO MATCH EX'G FOUNDATION (V.I.F.)



3 / A1.5 **NG - ATHLETIC STORAGE**
MEZZANINE SECTION 3/8"=1'-0"



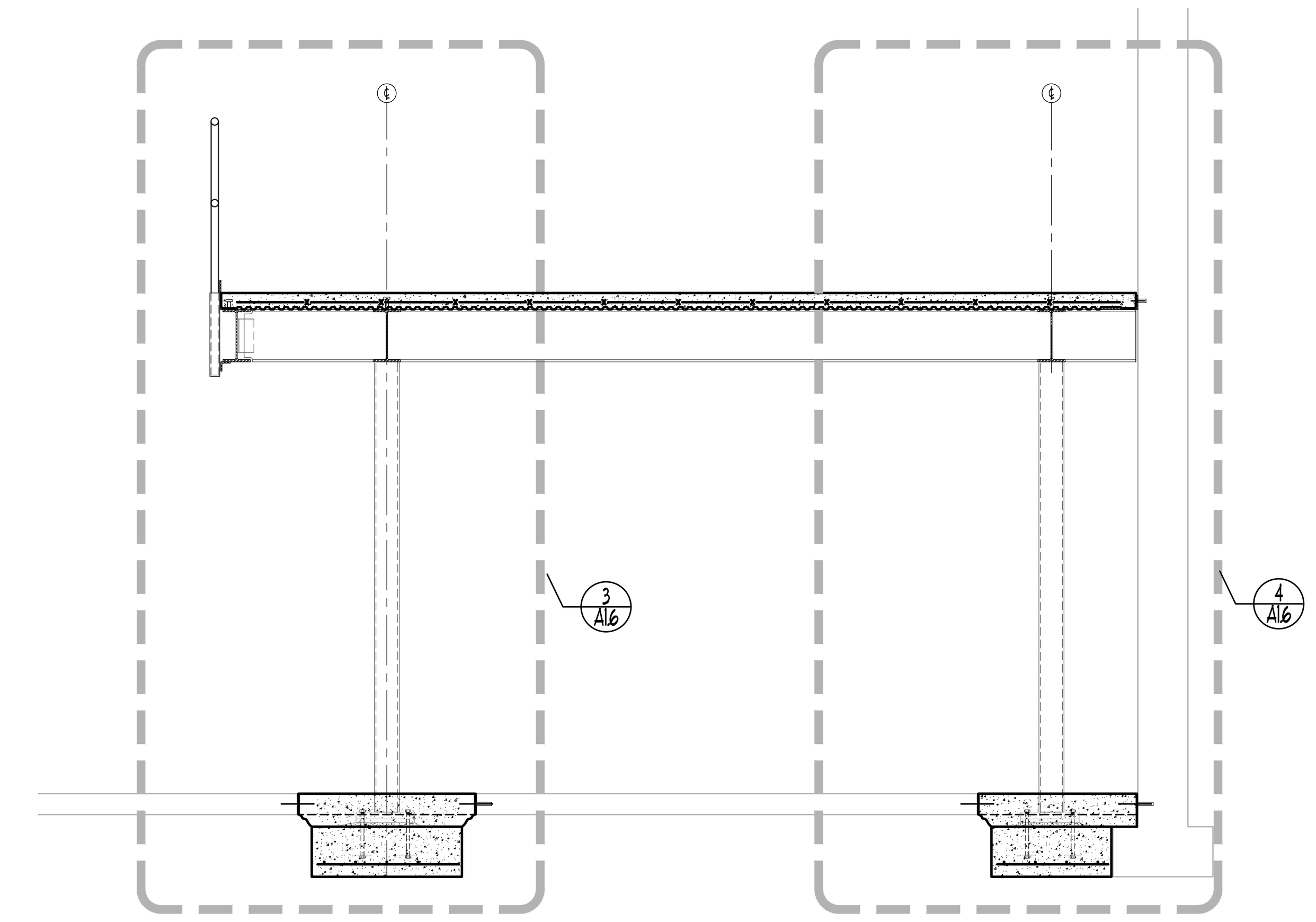
DEMO. TYP. NOTES FOR LOCKER ROOM AREAS AND ADJACENT SPACES:

2.1.2, 2.1.3, 2.1.4, 2.3.3, 2.3.4, 2.3.6, 2.3.7, 2.4.1, 2.4.2, 3.1.1, 5.2.1, 9.2.1, 9.2.2, 9.3.1, 22.1.1, 22.1.2, 23.1.1, 23.1.2, 26.1.1, 26.1.2, 26.1.3

1A / A1.5 **NG - ATHLETIC STORAGE**
DEMOLITION PLAN 1/4"=1'-0"

ALTERNATE

ALL WORK ON THIS SHEET WITHIN ATHLETIC STORAGE NG-12 IS INCLUDED WITHIN THE SCOPE OF AN ALTERNATE.



2 / A1.5 **NG - ATHLETIC STORAGE**
MEZZANINE SECTION 3/8"=1'-0"

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LOT NO. 1.01, 6.01 — BLOCK NO. 201

PROPOSED NORTH LOCKER ROOM RENOVATIONS
LENAPE HIGH SCHOOL
CHURCH AND HARTFORD ROADS, MEDFORD, NEW JERSEY 08055
LRHSD NO. REF21-35-8267

MEDFORD TOWNSHIP — BURLINGTON COUNTY

Linda M. Viventi, AIA, Secretary/Treasurer
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Drew C. Dingler, AIA, President
New Jersey LIC.# 21AI01088800

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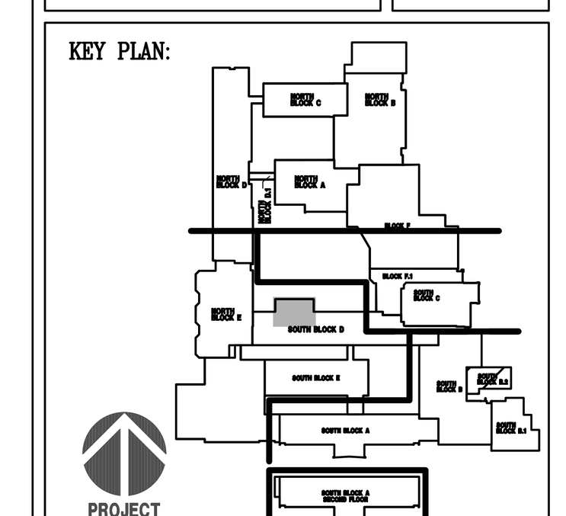

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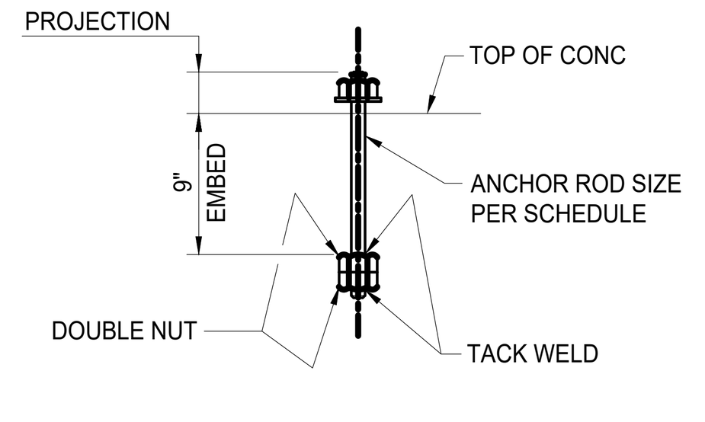
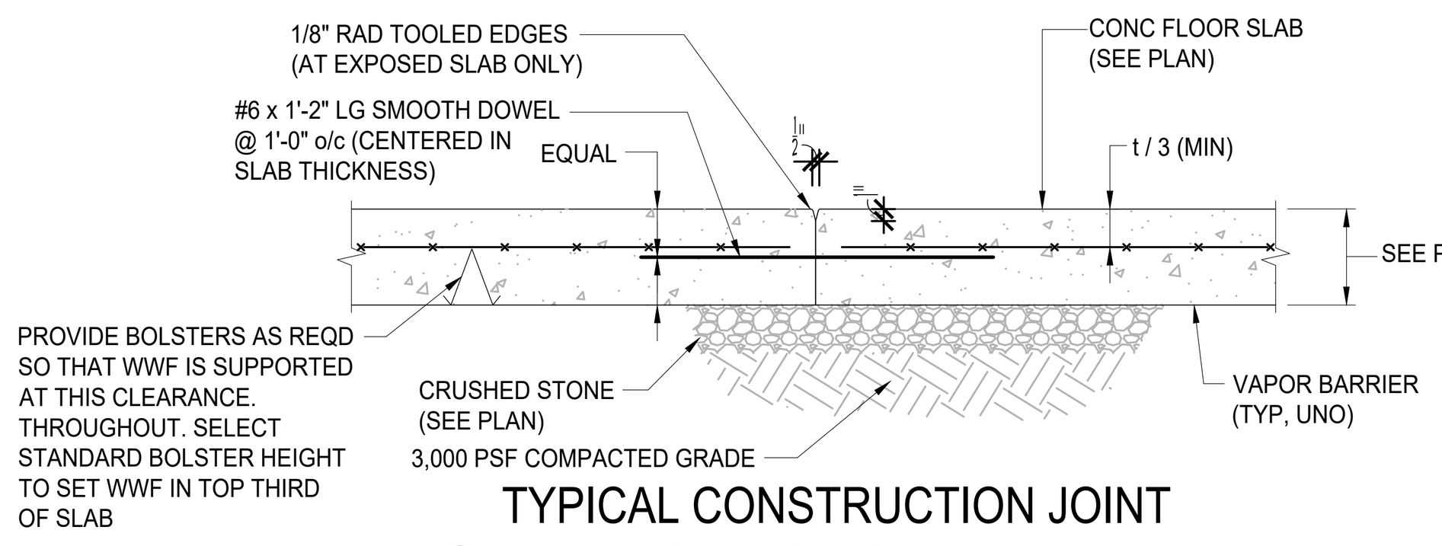
SHEET TITLE: STORAGE MEZZANINE PLANS

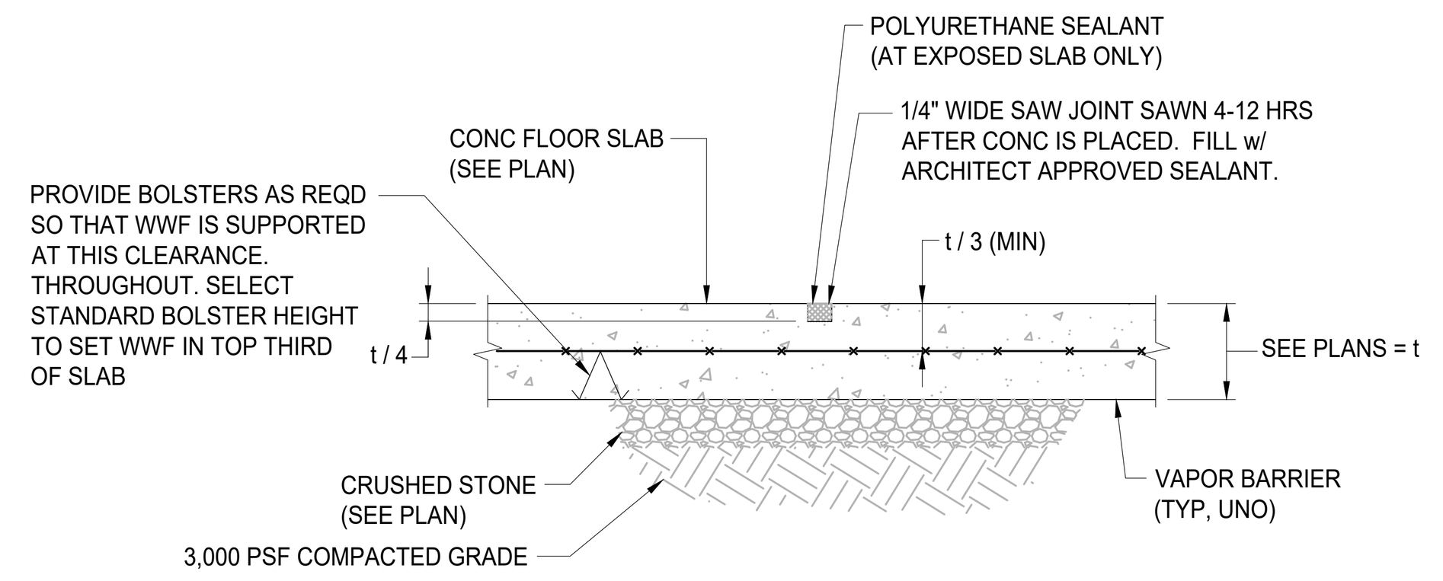
SHEET No.: A1.5



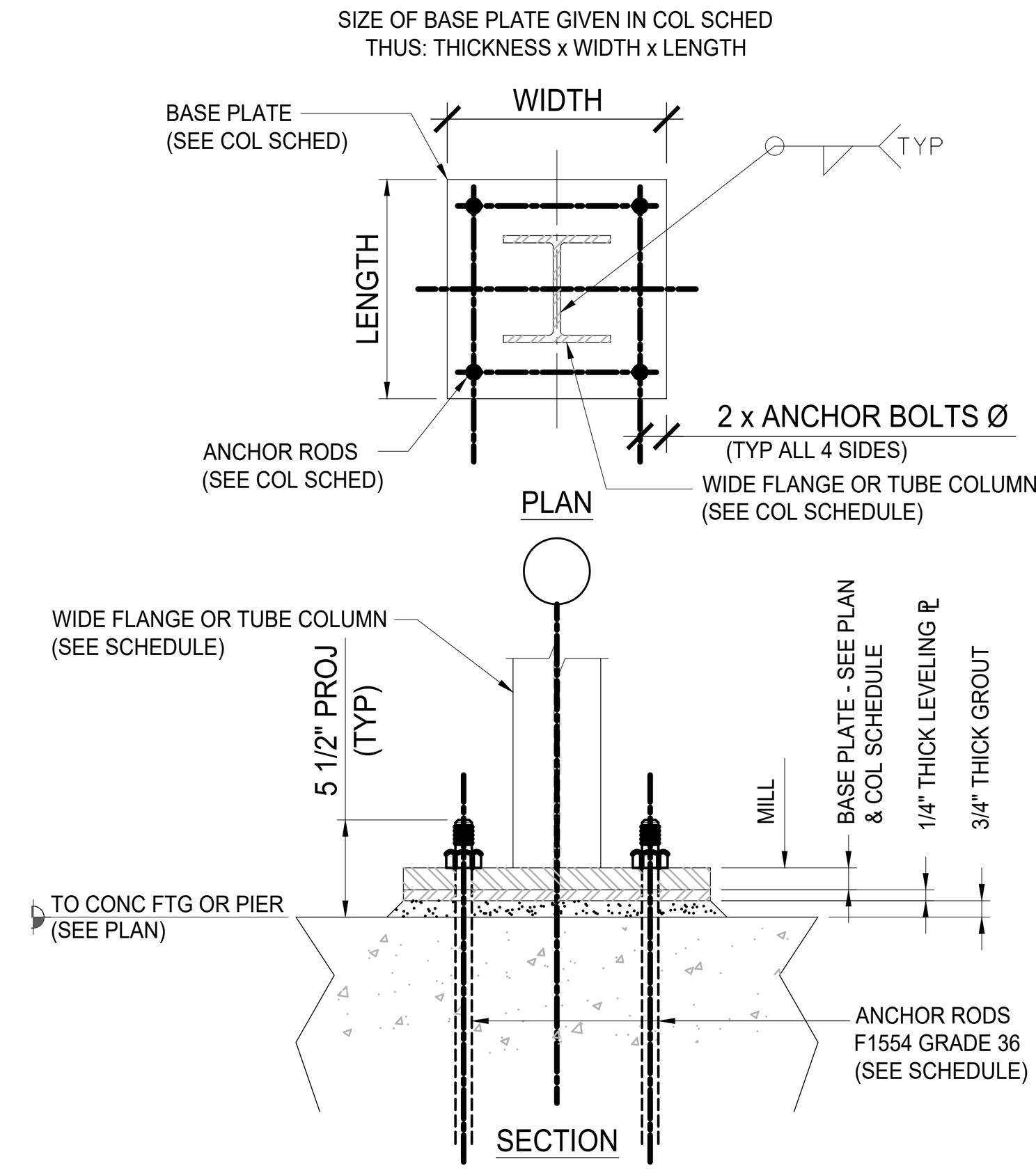
5 A1.6 ANCHOR ROD DETAILS
NOT TO SCALE



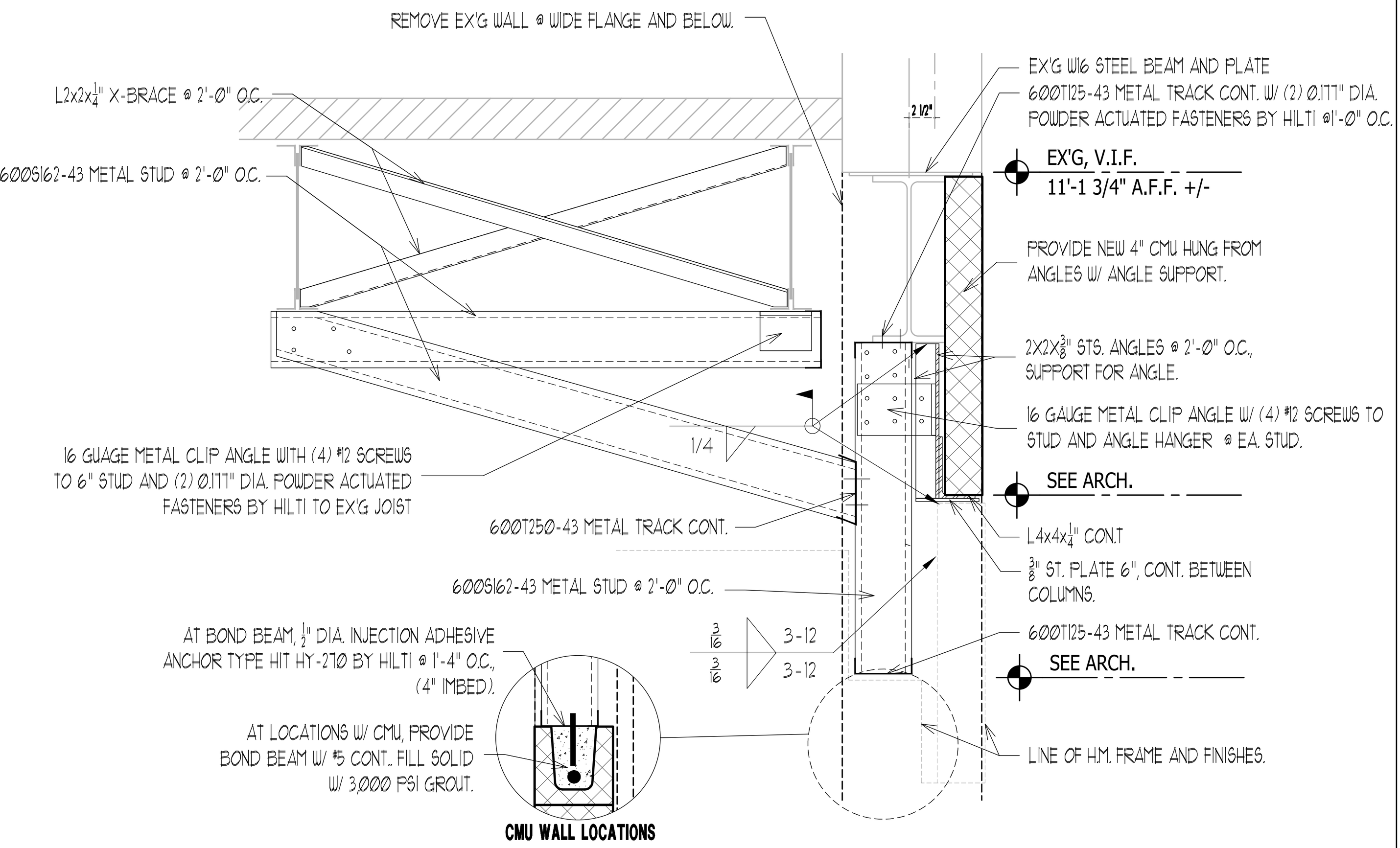
6 A1.6 TYPICAL CONSTRUCTION JOINT SLAB ON GRADE
NOT TO SCALE
(COORDINATE LOCATION OF CONSTRUCTION JOINTS WITH ARCHITECT/ENGINEER PRIOR TO PLACING OF CONCRETE)



7 A1.6 TYPICAL CONTROL JOINT (CJ) FOR SLAB ON GRADE
NOT TO SCALE



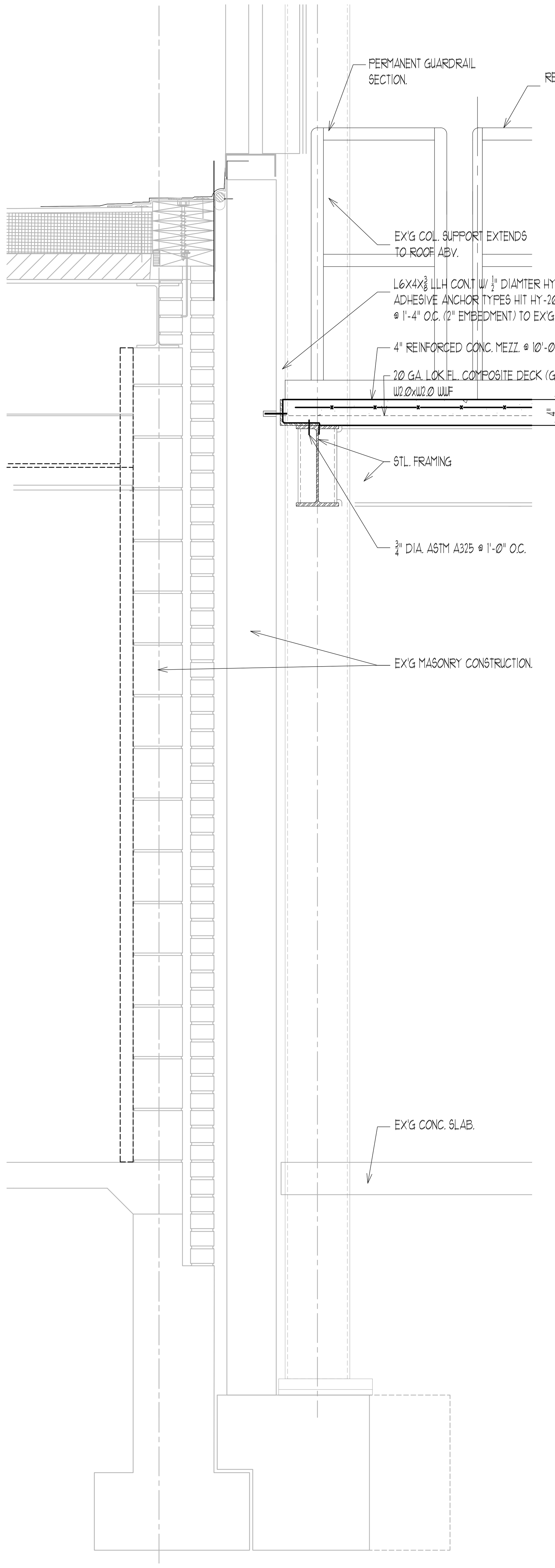
8 A1.6 TYPICAL BASE PLATE DETAIL
NOT TO SCALE



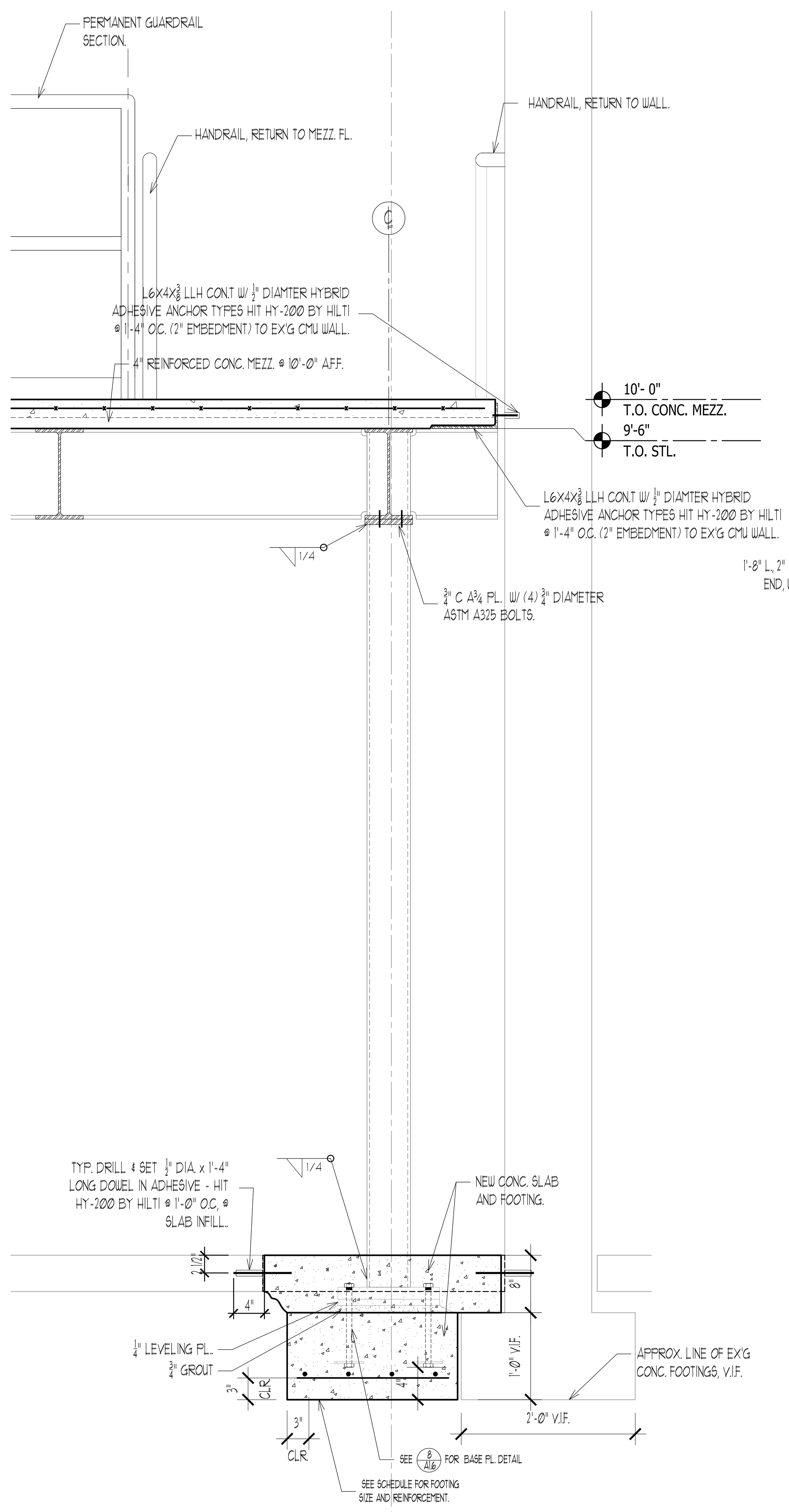
9 A1.6 DETAIL : LINTEL @ H.M. FRAME GYM TO LOCKER RMS. (BASE BID) 1"=1'-0"

ALTERNATE

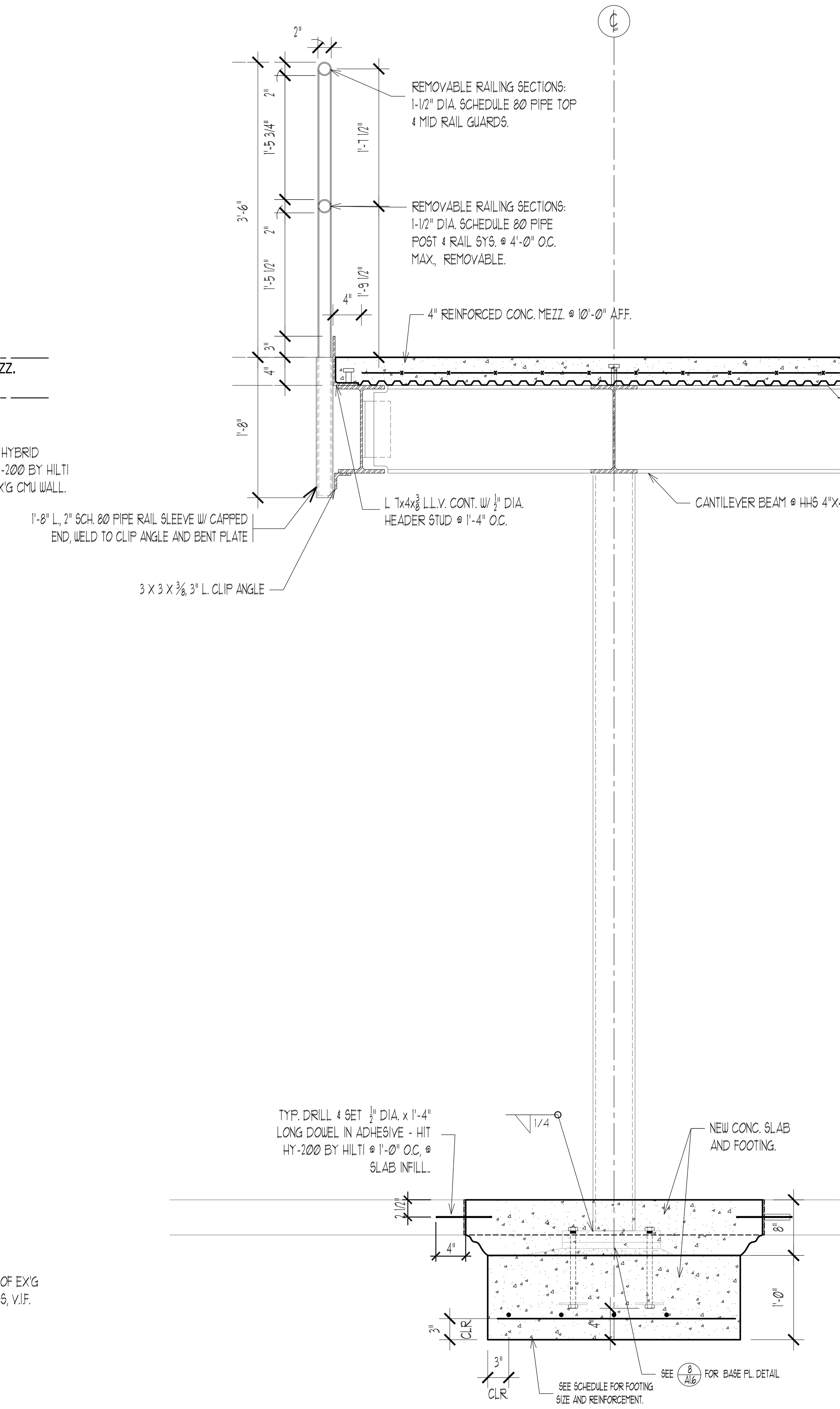
ALL WORK ON THIS SHEET UTILIZED WITHIN ATHLETIC STORAGE NG-12 IS INCLUDED WITHIN THE SCOPE OF AN ALTERNATE.



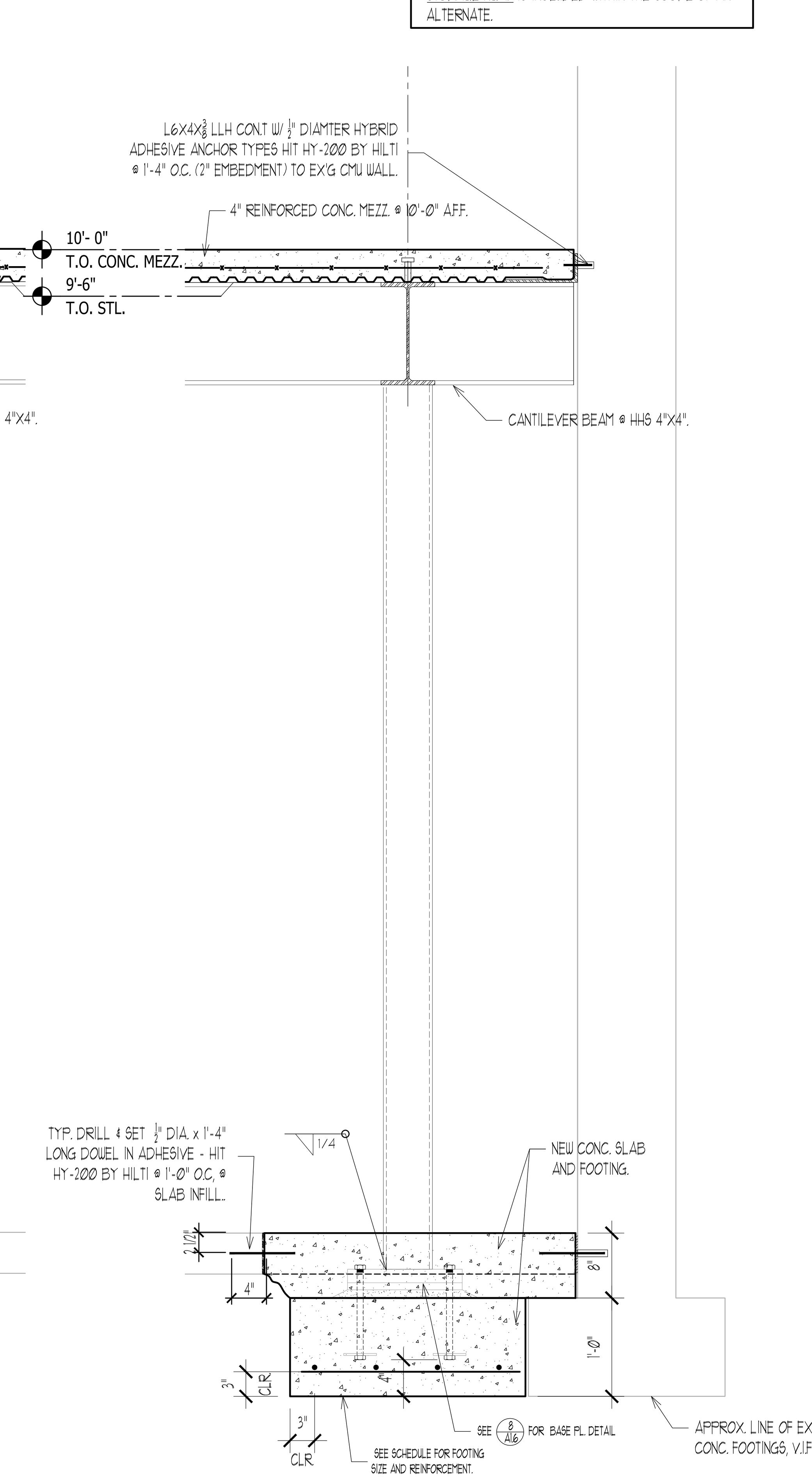
1 A1.6 NG - ATHLETIC STORAGE MEZZANINE SECTION 1"=1'-0"



2B A1.6 NG - ATHLETIC STORAGE MEZZANINE SECTION 1"=1'-0"



3 A1.6 NG - ATHLETIC STORAGE MEZZANINE SECTION 1"=1'-0"



4 A1.6 NG - ATHLETIC STORAGE MEZZANINE SECTION 1"=1'-0"

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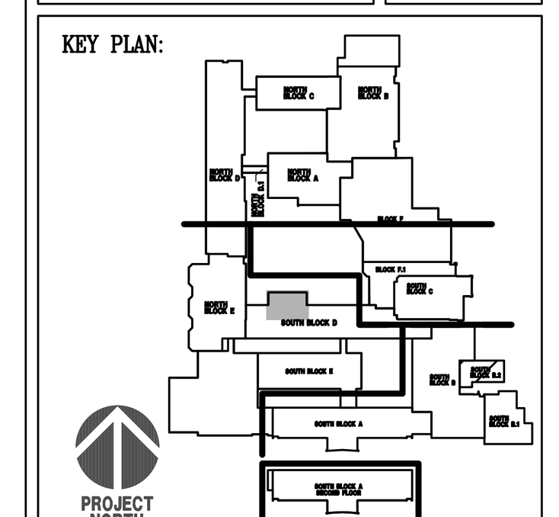

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DATE:	12-12-23		

SHEET TITLE: STORAGE MEZZANINE DETAILS

SHEET No.: A1.6

STRUCTURAL NOTES

GENERAL NOTES:

1. THIS PROJECT HAS BEEN DESIGNED USING THE 2021 INTERNATIONAL BUILDING CODE NEW JERSEY EDITION.
2. STRUCTURAL SPECIAL INSPECTIONS ARE A REQUIREMENT FOR THIS PROJECT. A QUALIFIED INDEPENDENT INSPECTION AGENCY SHALL BE SELECTED TO PERFORM THIS SERVICE. ALL INSPECTIONS AS REQUIRED BY CHAPTER 17 OF THE INTERNATIONAL BUILDING CODE (SEE THE FOLLOWING TABULAR REFERENCES) ARE REQUIRED AT A MINIMUM. FOR STEEL CONSTRUCTION REFER TO TABLE 1704.3, FOR CONCRETE CONSTRUCTION SEE TABLE 1704.4, FOR MASONRY CONSTRUCTION SEE TABLE 1704.5.3, FOR SOILS SEE TABLE 1704.7. SEE THE NOTES ON THIS DRAWING FOR ANY ADDITIONAL INSPECTIONS REQUIRED.
3. ALL CONTRACTORS AND SUBCONTRACTORS ARE RESPONSIBLE FOR ADHERING TO THE REQUIREMENTS AS INDICATED IN THE NOTES FOR THIS JOB. FAILURE OF THE CONTRACTOR TO READ THE STRUCTURAL NOTES DOES NOT PERMIT THE CONTRACTOR TO DEVIATE FROM THEIR REQUIREMENTS.
4. NO FIELD MODIFICATIONS TO ANY STRUCTURAL COMPONENTS SHALL BE MADE WITHOUT PRIOR APPROVAL BY THE STRUCTURAL ENGINEER. THIS INCLUDES, BUT IS NOT LIMITED TO REVISIONS DUE TO MIS-LOCATION, MISFIT, OR ANY OTHER CONSTRUCTION ERRORS.
5. ALL CONSTRUCTION AND DEMOLITION SHALL COMPLY WITH ALL APPLICABLE NATIONAL, STATE, AND LOCAL CODES INCLUDING ALL OSHA REGULATIONS.
6. CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO PROTECT ALL PEOPLE WHO MAY BE ON OR NEAR THE WORK AREA, BY MAINTAINING A SAFE WORK AREA, SAFE WORKING CONDITIONS, AND LIMITING ACCESS TO THE WORK AREA.
7. CONTRACTOR IS FULLY RESPONSIBLE FOR HIS WORKERS' SAFETY, SAFETY EQUIPMENT, FIRST AID, AND EMERGENCY HANDLING PROCEDURES.
8. CONTRACTOR SHALL PERSONALLY SUPERVISE THE WORK AND SHALL BE PRESENT AT THE WORK SITE AT ALL TIMES DURING CONSTRUCTION WORK. CONTRACTOR SHALL PROVIDE ADEQUATE PERSONNEL FOR THE PROPER COORDINATION AND EXPEDITING OF THE WORK.
9. THESE DRAWINGS SHALL NOT BE SCALED FOR PURPOSES OF CONSTRUCTION.
10. TYPICAL DETAILS ARE NOT NECESSARILY REFERENCED ON EVERY DRAWING SHEET AND SHALL BE USED BY THE CONTRACTOR AS REQUIRED FOR ALL CONDITIONS WHERE APPLICABLE.
11. IN CASE OF CONFLICT BETWEEN STRUCTURAL DRAWINGS AND OTHER DRAWINGS OF THIS PROJECT, CONTRACTOR SHALL IMMEDIATELY CONTACT ARCHITECT FOR CLARIFICATION PRIOR TO START OF WORK.
12. IN CASE OF CONFLICT BETWEEN STRUCTURAL DRAWINGS AND STRUCTURAL SPECIFICATIONS, CONTRACTOR SHALL IMMEDIATELY CONTACT ENGINEER FOR CLARIFICATION PRIOR TO START OF WORK.
13. ALL COLUMN LINE AND WALL DIMENSIONS SHOWN ON STRUCTURAL DRAWINGS ARE FOR REFERENCE AND SHALL FIRST BE VERIFIED WITH THE ARCHITECTURAL DRAWINGS PRIOR TO THE START OF THE PROJECT.
14. THE CONTRACTOR IS RESPONSIBLE FOR SURVEYING AND VERIFICATION OF EXISTING CONDITIONS INCLUDING BUT NOT LIMITED TO THE LOCATION, ELEVATIONS AND DIMENSIONS OF EXISTING WALLS AND FRAMING.
15. THE CONTRACTOR IS RESPONSIBLE FOR THE DESIGN, INSTALLATION, AND TEMPORARY SHORING OF THE EXCAVATIONS AND BUILDING STRUCTURE AS REQUIRED DURING CONSTRUCTION. THE CONTRACTOR IS RESPONSIBLE FOR THE MEANS AND METHODS OF CONSTRUCTION. DESIGN OF SHEETING, SHORING, SCAFFOLDING, FORM WORK, AND OTHER MEANS AND METHODS STRUCTURES SHALL BE DESIGNED BY ENGINEERS HIRED BY THE CONTRACTOR.
16. SECTIONS SHOWN ON PLANS APPLY TO SIMILAR CONDITIONS THROUGHOUT THE BUILDING.
17. THE CONTRACTOR IS RESPONSIBLE FOR COORDINATING WITH ALL DRAWINGS FOR THE PROJECT FOR THE FOLLOWING INFORMATION.
    A. LOCATION OF ALL REQUIRED OPENINGS IN WALLS, FLOORS, ROOF, ETC. ALL OPENINGS MAY NOT BE INDICATED ON STRUCTURAL DRAWINGS.
    B. SIZE AND LOCATION OF ALL SLEEVES, INSERTS, AND DEPRESSIONS.
    C. LOCATION AND SIZE OF ALL EQUIPMENT HOUSE KEEPING PADS.
18. METAL STAIRS, RAILINGS, GUARDRAILS, AND LADDERS SHALL BE DESIGNED BY ENGINEERS RETAINED BY THE CONTRACTOR. SEE THE DELEGATED DESIGN SCHEDULE FOR MORE INFORMATION. DRAWINGS AND CALCULATIONS FOR THESE ITEMS SHALL BE PREPARED AND SUBMITTED FOR REVIEW. ALL SUBMITTALS SHALL BE SIGNED AND SEALED BY ENGINEERS LICENSED IN THE STATE OF THE PROJECTS JURISDICTION. DESIGNS ARE THE RESPONSIBILITY OF THE ENGINEER RETAINED BY THE CONTRACTOR AND SHALL BE IN ACCORDANCE WITH ALL LOADS REQUIRED BY THE APPLICABLE BUILDING CODE. REVIEW OF SHOP DRAWINGS FOR THESE ITEMS WILL BE FOR CONCEPT ONLY AND WILL NOT BE A CHECK OF THE DESIGN OF THESE ITEMS. COORDINATE WITH ARCHITECTURAL DRAWINGS FOR ALL LOCATIONS, DIMENSIONS, AND DETAILS.

SHOP DRAWINGS AND SUBMITTALS:

1. FOR A LISTING OF SHOP DRAWINGS AND OTHER SUBMITTALS REQUIRED FOR THIS PROJECT SEE THE SHOP DRAWING AND SUBMITTAL REQUIREMENTS TABLE. CERTAIN SUBMITTALS MUST BE PREPARED UNDER THE SUPERVISION OF A REGISTERED PROFESSIONAL ENGINEER IN THE STATE OF THE PROJECTS JURISDICTION. THE CONTRACTOR IS REQUIRED TO RETAIN SPECIALTY ENGINEERS AS REQUIRED TO PREPARE THESE SUBMITTALS.
2. SHOP DRAWINGS AND RELATED MATERIALS PREPARED BY SUPPLIERS AND SUBCONTRACTORS SHALL BE REVIEWED BY THE GENERAL CONTRACTOR PRIOR TO SUBMITTING TO THE ARCHITECT/STRUCTURAL ENGINEER. THE GENERAL CONTRACTOR SHALL REVIEW ALL SUBMISSIONS FOR CONFORMANCE WITH THE CONTRACT DOCUMENTS, MEANS, METHODS, TECHNIQUES, SEQUENCES, AND OPERATION OF CONSTRUCTION, TECHNICAL CONTENT, COORDINATION OF TRADES, DIMENSIONAL ACCURACY, SAFETY PRECAUTIONS AND PROGRAMS INCIDENTAL THERETO, ALL OF WHICH ARE THE SOLE RESPONSIBILITY OF THE GENERAL CONTRACTOR. THE GENERAL CONTRACTOR SHALL APPROVE AND SO STAMP EACH SUBMISSION.
3. SHOP DRAWINGS, WHERE REQUIRED, SHALL BE SUBMITTED AS FOLLOWS. PROVIDE ONE (1) ELECTRONIC PDF COPY TO THE ENGINEER FOR REVIEW. ONE (1) COPY WILL BE MARKED UP AND RETURNED FOR DISTRIBUTION AS REQUIRED BY THE CONTRACTOR. ALL SHOP DRAWINGS SHALL BE CHECKED PRIOR TO SUBMISSION. CONTRACTOR SHALL ALLOW (10) WORKING DAYS IN THE CONSTRUCTION SCHEDULE FOR SHOP DRAWING REVIEW. FAX SUBMITTALS OF SHOP DRAWINGS WILL NOT BE ACCEPTED.
4. STRUCTURAL DESIGN DRAWINGS (INCLUDING ORIGINAL CAD DRAWINGS) SHALL NOT BE USED AS THE BACKGROUNDS FOR THE PRODUCTION OF ANY SHOP DRAWINGS THAT ARE SUBMITTED FOR REVIEW. SHOP DRAWINGS PRODUCED IN SUCH A MANNER WILL BE REJECTED AND RETURNED. THIS INCLUDES REBAR PLACEMENT DRAWINGS, FABRICATION DRAWINGS, ERECTION DRAWINGS, ERECTION DETAILS, ETC. THE CONTRACTOR SHALL PREPARE THEIR OWN SHOP DRAWINGS (INCLUDING DETAILS).
5. ANY DEVIATIONS FROM THE ORIGINAL DESIGN OR DESIGN CRITERIA AS SPECIFIED ON THE "ISSUED FOR CONSTRUCTION" DESIGN DOCUMENTS OF THE PROJECT SHALL BE NOTED (BUBBLED, NOTE, ETC.) ON THE SHOP DRAWINGS THAT ARE SUBMITTED FOR APPROVAL.
6. REVIEW OF SHOP DRAWINGS SHALL NOT RELIEVE THE CONTRACTOR OF ANY CONTRACT REQUIREMENTS EVEN IF SUCH ITEMS ARE NOT SHOWN ON THE SHOP DRAWINGS. THE ENGINEER'S REVIEW OF SHOP DRAWINGS IS ONLY FOR GENERAL CONFORMANCE WITH THE DESIGN CONCEPT AND PROJECT REQUIREMENTS, AND DOES NOT IMPLY APPROVAL OR VARIANCE FROM THE CONTRACT DOCUMENTS. QUANTITIES WILL NOT BE CHECKED BY THE ENGINEER.
7. ALL REVISIONS TO SHOP DRAWINGS AFTER THE FIRST SUBMISSION SHALL BE APPROPRIATELY IDENTIFIED ON SUBSEQUENT SUBMISSIONS.
8. SUBSTITUTIONS TO PRODUCTS SPECIFIED ON THE DRAWINGS IS ACCEPTABLE PROVIDED THE FOLLOWING CRITERIA ARE MET. THE CONTRACTOR SHALL SUBMIT INFORMATION ON THE PRODUCT TO BE SUBSTITUTED THAT SUBSTANTIATES ITS PERFORMANCE ON AN EQUAL OR BETTER VALUE. CONTRACTOR SHALL ALLOW A MINIMUM OF (5) WORKING DAYS IN THE CONSTRUCTION SCHEDULE FOR REVIEW OF THE SUBSTITUTED PRODUCT BY THE ENGINEER.

BUILDING STRUCTURE AND LATERAL BRACING DURING CONSTRUCTION:

1. THE STEEL FRAMING SHALL BE TEMPORARILY BRACED UNTIL ALL FLOOR DECKS AND CONCRETE HAVE BEEN INSTALLED AND ALL CONNECTIONS BETWEEN THESE ELEMENTS HAVE BEEN MADE.

FOUNDATIONS:

1. SPECIAL INSPECTIONS FOR EXISTING SITE SOIL CONDITIONS, FILL PLACEMENT, AND LOAD BEARING REQUIREMENTS SHALL BE IN ACCORDANCE WITH CHAPTER 17 OF THE INTERNATIONAL BUILDING CODE AND TABLE 1704.7.
2. BOTTOM OF ALL FOOTINGS HAVE BEEN DESIGNED TO BEAR ON SOIL CAPABLE OF SAFELY SUPPORTING 3,000 PSF.
3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONTACTING THE APPROPRIATE AUTHORITIES TO LOCATE ALL POTENTIALLY BURIED UTILITIES WITHIN THE PROPOSED PROJECT SITE BUILDING FOOTPRINT PRIOR TO COMMENCING EXCAVATION FOR NEW BUILDING FOUNDATIONS.
4. EXISTING FOUNDATIONS, SLABS, PAVEMENTS, UNDERGROUND UTILITIES, AND OTHER BELOW GRADE STRUCTURES SHALL BE REMOVED FROM THE PROPOSED PROJECT SITE BUILDING FOOTPRINT. REMOVE SURFACE VEGETATION, TOPSOIL, ROOT SYSTEMS, ORGANIC MATERIAL, EXISTING FILL, AND SOFT UNSUITABLE MATERIAL FROM THE BUILDING AREA.
5. CONTRACTOR SHALL EXERCISE EXTREME CAUTION DURING NEW FOUNDATION CONSTRUCTION ACTIVITIES ADJACENT TO EXISTING BUILDING FOUNDATIONS THAT ARE TO REMAIN (EVEN IF LOCATED ON AN ADJACENT PROPERTY). SINCE DRAWINGS FOR EXISTING CONSTRUCTION ARE NOT ALWAYS AVAILABLE DURING DESIGN, CERTAIN ASSUMPTIONS MAY BE MADE REGARDING EXISTING FOUNDATIONS BASED ON TYPICAL CONSTRUCTION PRACTICES. THESE ASSUMPTIONS TYPICALLY REQUIRE CONTRACTOR FIELD VERIFICATION PRIOR TO CONSTRUCTION OF THE NEW STRUCTURES. IN ANY EVENT, THE ENGINEER MUST BE NOTIFIED IMMEDIATELY IF EXISTING SITE OR FOUNDATION CONDITIONS DIFFER FROM THOSE SHOWN OR ASSUMED ON THE CONTRACT DRAWINGS. IN NO INSTANCE SHALL EXISTING BUILDING FOUNDATIONS BE UNDERMINED TO INSTALL NEW FOUNDATIONS. IF NEW BOTTOM OF FOOTING ELEVATIONS ARE LOWER THAN ADJACENT EXISTING BOTTOM OF FOOTING ELEVATIONS THE ENGINEER MUST BE NOTIFIED IMMEDIATELY TO PROVIDE ADDITIONAL DETAILS AS REQUIRED TO CONSTRUCT THE NEW FOUNDATIONS AT THE LOWER LEVEL.
6. BOTTOM OF ALL FOOTINGS MUST BE INSPECTED AND APPROVED BY A REGISTERED SOILS ENGINEER BEFORE PLACING ANY CONCRETE. APPROVAL IN WRITING MUST INDICATE THE SOIL IS ADEQUATE TO SAFELY SUSTAIN A SOIL BEARING PRESSURE OF 3,000 PSF BELOW ALL FOOTINGS.
7. UNLESS OTHERWISE DICTATED BY THE GEOTECHNICAL ENGINEER, ALL FILL AND BACKFILL SHALL BE COMPACTED IN 8 INCH MAXIMUM LIFTS TO NOT LESS THAN 95% OF THE MAXIMUM DENSITY IN ACCORDANCE WITH ASTM D1557.

CAST-IN-PLACE CONCRETE CLEAR COVER FOR REINFORCING

TYPE	COVER
FOOTINGS, GRADE BEAMS, CAISSONS AND OTHER CONCRETE CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH	3"
FORMED CONCRETE EXPOSED TO EARTH OR WEATHER (#6 BAR AND LARGER)	2"
FORMED CONCRETE EXPOSED TO EARTH OR WEATHER (#5 BAR AND SMALLER)	1 1/2"
INSIDE FACE OF WALLS	1"
BEAMS AND COLUMN TIES/STIRRUPS (NOT EXPOSED TO EARTH OR WEATHER)	1 1/2"

CAST-IN-PLACE CONCRETE CLEAR COVER NOTES:
1. MINIMUM REINFORCING COVER SHALL BE PROVIDED PER THIS TABLE UNLESS SHOWN OR NOTED OTHERWISE ON PLANS AND SECTIONS.

CMU REINFORCING LAP SPLICE LENGTHS

LENGTHS (INCHES)

BAR SIZE	BAR POSITION		STANDARD HOOK EMBEDMENT (SEE NOTE 7)
	CENTER	OFFSET	
#3	12"	15"	6"
#4	20"	26"	8"
#5	23"	40"	10"
#6	43"	54"	12"
#7	60"	63"	14"
#8	72"	82"	16"

1. TABLE BASED ON f'm = 1,500 PSI (MINIMUM) AND GRADE 60 REINFORCING.
2. THIS TABLE DOES NOT APPLY TO REINFORCING WITH EPOXY COATINGS.
3. LAP AND SPLICE LENGTHS SHOWN APPLY TO BARS IN TENSION AND COMPRESSION.
4. BARS IN OFFSET CONDITION SHALL HAVE A MINIMUM OF 2" CLEAR COVER FROM OUTSIDE FACE OF CMU TO FACE OF BAR.
5. MINIMUM LENGTH OF STANDARD HOOK = 12 BAR DIAMETERS.
6. AT CONTRACTORS OPTION, PROVIDE MECHANICAL SPLICES OF REINFORCING BARS. MECHANICAL SPLICE SHALL DEVELOP AT LEAST 125% OF THE SPECIFIED BAR YIELD STRENGTH.
7. STANDARD HOOK EMBEDMENT IS FOR HOOK EMBEDDED INTO ADJOINING MASONRY CONSTRUCTION. FOR HOOKED LENGTHS REQUIRED INTO CONCRETE SEE TABLE 3.

CONCRETE:

1. THE PROVISIONS OF ACI 318-19 HAVE BEEN UTILIZED FOR THE DESIGN OF CONCRETE ELEMENTS ON THIS PROJECT.
2. FLOOR FINISH TOLERANCES FOR THE SLAB ON GRADE CONSTRUCTION SHALL BE IN ACCORDANCE WITH ACI 117. FLOOR FINISH TOLERANCE SHALL BE MEASURED USING A 10 FOOT STRAIGHTEDGE ANYWHERE ON THE SLAB AND ALLOWING IT TO REST UPON TWO HIGH SPOTS WITHIN 72 HOURS AFTER SLAB PLACEMENT. THE GAP AT ANY POINT BETWEEN THE STRAIGHT EDGE AND THE FLOOR SHALL NOT EXCEED 1/4".
3. ALL CONCRETE SHALL BE NORMAL WEIGHT, READY-MIX. ALL CONCRETE MIX DESIGNS SHALL BE DESIGNED BY ENGINEERS RETAINED BY THE CONCRETE SUPPLIER ACCORDING TO THE CRITERIA CONTAINED WITHIN THESE NOTES AND AS SHOWN ON THE CONTRACT DRAWINGS. SUBMIT ALL CONCRETE MIX DESIGNS TO THE ENGINEER FOR REVIEW AND APPROVAL PRIOR TO CONSTRUCTION. ALL SUBMITTED MIX DESIGNS SHALL INCLUDE SAMPLE CYLINDER BREAK TEST RESULTS CONFIRMING COMPRESSIVE STRENGTH OF EACH MIX DESIGN.
4. ALL CONCRETE SHALL HAVE A WATER REDUCING ADMIXTURE AS REQUIRED TO INCREASE WORKABILITY. WORKABILITY SHALL NOT BE ACHIEVED THROUGH THE ADDITION OF WATER TO THE MIX. CONCRETE SLUMP PRIOR TO ADMIXTURE ADDITION SHALL BE A MAXIMUM OF 3 INCHES. PROPORTIONS OF CONCRETE ADMIXTURES SHALL BE DETERMINED BY THE CONCRETE MIX DESIGNER.
5. DO NOT USE ADMIXTURES THAT CONTAIN CHLORIDES. FLY ASH OR OTHER POZZOLANS SHALL NOT BE USED IN ANY CONCRETE UNLESS APPROVED BY THE ENGINEER.
6. ALL CONCRETE WORK SHALL COMPLY WITH THE REQUIREMENTS OF THE LATEST EDITIONS OF THE FOLLOWING ACI PUBLICATIONS ACI 301 (SPECIFICATIONS FOR STRUCTURAL CONCRETE FOR BUILDINGS), ACI 302.1R (GUIDE TO CONCRETE FLOOR AND SLAB CONSTRUCTION), ACI 304 (GUIDE FOR MEASURING, MIXING, TRANSPORTING AND PLACING CONCRETE), ACI 311.4 (GUIDE FOR CONCRETE INSPECTION), ACI 315 (DETAILS AND DETAILING OF CONCRETE REINFORCEMENT), ACI 318 (BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE), ACI 347R (GUIDE TO FORMWORK FOR CONCRETE), AND ACI 546R (GUIDE TO CONCRETE REPAIR). IN ADDITION, REFER TO THE CRSI - MANUAL OF STANDARD PRACTICE FOR DETAILS ON THE FABRICATION AND PLACEMENT OF CONCRETE REINFORCING.
7. PRIOR TO FABRICATION OR SHIPMENT OF MATERIAL, THE CONTRACTOR SHALL SUBMIT AND RECEIVE APPROVAL OF SHOP DRAWINGS. SHOP DRAWINGS SHALL INDICATE BENDING DIAGRAMS, SPLICING, LAPPING, SHAPES, DIMENSIONS AND DETAILS OF ALL BAR REINFORCING. THE APPROVAL OF SHOP DRAWINGS WILL BE FOR ARRANGEMENT ONLY AND SHALL NOT RELIEVE THE CONTRACTOR OF THE RESPONSIBILITY FOR ERRORS, OMISSIONS OR THE ACCURACY OF HIS OWN DIMENSIONS. DRAWINGS AND DETAILS SHALL CONFORM WITH ACI 315. CONTRACTOR SHALL SUBMIT ALL SHOP DRAWINGS TO THE OWNER'S REPRESENTATIVE.
8. ALL REINFORCING STEEL SHALL BE MANUFACTURED FROM HIGH STRENGTH BILLET STEEL CONFORMING TO ASTM DESIGNATION A615 GRADE 60. WWF SHALL BE COMPRISED OF CARBON STEEL PLAIN WIRES FABRICATED INTO SHEETS OR ROLLS IN ACCORDANCE WITH ASTM A1064.
9. FOOTING, SLAB, AND WALL REINFORCEMENT NOT SHOWN ON SECTIONS AND PLANS IS THE SAME AS THAT SHOWN IN SIMILAR SECTIONS AND AT SIMILAR LOCATIONS.
10. LAP ALL BARS PER TABLE 1 LAP SPLICE LENGTHS FOR CONCRETE, CLASS B. LAP ALL WWF A MINIMUM OF 8 INCHES.
11. CONTRACTOR SHALL PROVIDE ALL BOLSTERS, CHAIRS, BAR POSITIONERS, ETC. AS REQUIRED TO SET REBAR AND SLAB WWF TO REQUIRED DIMENSIONS INDICATED ON DRAWINGS.
12. CONTROL JOINTS FOR SLABS-ON-GRADE SHALL BE SAW CUT. THE SPACING OF CONTROL JOINTS SHALL BE ARRANGED SUCH THAT THE AREA OF CONCRETE SLAB BETWEEN CONTROL JOINTS DOES NOT EXCEED 144 SQUARE FEET (MAXIMUM).
13. SAW CUTTING OF CONTRACTION JOINTS IS NOT REQUIRED IN ELEVATED CONCRETE FLOORS SUPPORTED ON METAL DECK.
14. CONTRACTOR SHALL MAKE ALLOWANCES FOR ADDITIONAL CONCRETE REQUIRED AT ELEVATED DECK SUPPORTED CONCRETE FLOORS DUE TO DEFLECTION OF THE STEEL DECK FROM THE DEAD WEIGHT OF CONCRETE AND CONSTRUCTION LOADING IN ACCORDANCE WITH SDI GUIDELINES.
15. REFER TO ARCHITECTURAL DRAWINGS FOR ALL WATERPROOFING DETAILS AT FOUNDATIONS, WALLS, AND SLABS.
16. ALL CONCRETE PLACED AT TEMPERATURES BELOW 50 DEGREES F. SHALL CONFORM TO THE REQUIREMENTS OF ACI 306R "GUIDE TO COLD WEATHER CONCRETING". ALL CONCRETE PLACED IN HOT WEATHER SHALL CONFORM TO THE REQUIREMENTS OF ACI 305R " GUIDE TO HOT WEATHER CONCRETING".
17. ALL CONCRETE SHALL BE PROPERLY CONSOLIDATED THROUGH THE USE OF VIBRATORS. VIBRATORS SHALL NOT BE USED TO TRANSPORT CONCRETE ALONG FORMWORK.
18. UNLESS OTHERWISE SPECIFIED, A TESTING AGENCY SHALL BE EMPLOYED FOR EVALUATION AND QUALITY CONTROL OF CONCRETE PLACED. THE TESTING AGENCY PERFORMING ACCEPTANCE TESTING SHALL COMPLY WITH ASTM C1077. CONCRETE SHALL BE TESTED IN ACCORDANCE WITH THE REQUIREMENTS OF ACI 318. FREQUENCY OF CONCRETE TESTING SHALL MEET THE REQUIREMENTS OF ACI 318 AT A MINIMUM UNLESS REQUIRED OTHERWISE BY THE APPLICABLE BUILDING CODE.

CONCRETE MIX DESIGN AND DURABILITY REQUIREMENTS PER ACI 318 BUILDING CODE

LOCATION	DENSITY NW = 145 pcf LW = 115 pcf	FREEZE/THAW SEVERITY	SULFATE SEVERITY	PERMEABILITY	CORROSION PROTECTION OF REINF	f 'c (psi)	AIR CONTENT	w / c RATIO (max)
FOOTINGS	NW	F0	S0	P0	C1	4,000	----	0.50
SLAB-ON-GRADE CONCRETE WALLS (INTERIOR LOCATIONS)	NW	F0	S0	P0	C0	4,000	----	0.50
SLAB-ON-DECK (INTERIOR LOCATIONS)	NW	F0	S0	P0	C0	4,000	----	0.45
EXTERIOR SLABS	NW	F3	S0	P0	C2	5,000	6 %	0.40

CONCRETE MIX DESIGN & DURABILITY NOTES:
1. CONCRETE MIX SHALL BE DESIGNED BY THE CONCRETE SUPPLIER USING THE INFORMATION CONTAINED IN THIS SCHEDULE.
2. REFER TO CHAPTER 19 OF THE ACI-318 BUILDING CODE FOR ADDITIONAL INFORMATION NOT PROVIDED OR NOTED IN THIS SCHEDULE.
3. TOTAL AIR CONTENT LISTED IN THIS SCHEDULE IS BASED ON A MAXIMUM AGGREGATE SIZE OF 3/4" AND SHALL BE ADJUSTED BY THE CONCRETE MIX DESIGNER AS REQUIRED FOR DIFFERENT AGGREGATE SIZES PER ACI-318.
4. REFER TO THE CONCRETE NOTES ON THE LEAD SHEET FOR THIS PROJECT FOR ADDITIONAL REQUIREMENTS.
5. FLY ASH OR OTHER POZZOLANS SHALL NOT BE UTILIZED IN ANY CONCRETE MIX UNLESS APPROVED BY THE ENGINEER. THE QUANTITY OF POZZOLANS USED IN CONCRETE SUBJECT TO EXPOSURE CLASS F3 SHALL NOT EXCEED THE LIMITS SET FORTH IN ACI-318.
6. THE MINIMUM AMOUNT OF CEMENT TO BE USED IN THE CONCRETE MIX DESIGN IS AS OF FOLLOWS:
    4,000 PSI CONCRETE: 600 LBS OF CEMENT PER CUBIC YARD
    4,500 PSI CONCRETE: 650 LBS OF CEMENT PER CUBIC YARD
    5,000 PSI CONCRETE: 700 LBS OF CEMENT PER CUBIC YARD

STEEL:

1. ALL STRUCTURAL STEEL SHALL BE DETAILED, FABRICATED AND ERECTED IN ACCORDANCE WITH AISC 360-16 (SPECIFICATION FOR STRUCTURAL STEEL BUILDINGS), AND WITH AISC 303-16 (CODE OF STANDARD PRACTICE FOR STEEL BUILDINGS AND BRIDGES). QUALITY CONTROL AND QUALITY ASSURANCE DURING STEEL FABRICATION AND ERECTION SHALL BE IN ACCORDANCE WITH CHAPTER N OF AISC 360.
2. STRUCTURAL STEEL WIDE FLANGE SHAPES SHALL CONFORM TO ASTM SPECIFICATION A992 (Fy = 50 KSI MIN.). ALL HSS RECTANGULAR SHAPES SHALL CONFORM TO ASTM SPECIFICATION A500 GRADE C (Fy = 50 KSI). ALL HSS ROUND SHAPES SHALL CONFORM TO ASTM SPECIFICATION A500 GRADE C (Fy = 46 KSI). ALL STEEL PIPE (STANDARD, EXTRA STRONG, DOUBLE EXTRA STRONG) SHALL CONFORM TO ASTM A53 GRADE B (Fy = 35 KSI). ALL CHANNELS, ANGLES AND PLATE MATERIAL SHALL CONFORM TO ASTM A36.
3. ALL BOLTS SHALL BE 3/4" DIAMETER ASTM F3125 GRADE A325 HIGH STRENGTH BOLTS, UNLESS OTHERWISE NOTED.
4. ALL ANCHOR RODS SHALL BE FABRICATED IN ACCORDANCE WITH ASTM F1554. ALL ANCHOR RODS SHALL BE 36 KSI UNLESS OTHERWISE NOTED.
5. ALL STEEL SHALL BE THOROUGHLY CLEANED BY POWER TOOL CLEANING (SSPC SP3) PRIOR TO APPLYING PRIMER OR GALVANIZING.
6. ALL STEEL SHALL HAVE A SHOP COAT OF RUST INHIBITIVE PRIMER UNLESS OTHERWISE NOTED. ALL PRIMER THAT IS DAMAGED IN THE FIELD AND ALL FIELD WELDS SHALL BE TOUCHED UP WITH FIELD APPLIED PRIMER
7. ALL CONNECTIONS SHALL BE BOLTED OR WELDED. FULL DEPTH CONNECTIONS ARE TO BE USED ON ALL GIRDER AND BEAM CONNECTIONS TO COLUMNS. BOLTS TO BE AT 3 INCH O/C VERTICAL PROVIDE A MINIMUM 3/8" THICK FULL DEPTH TAB PLATE FOR ALL TUBE COLUMN CONNECTIONS.
8. ALL BOLTED CONNECTIONS SHALL BE BEARING TYPE WITH THREADS INCLUDED IN THE SHEAR PLANE UNLESS NOTED OTHERWISE. ALL BOLTED CONNECTIONS SHALL BE BOLTED "SNUG-TIGHT" UNLESS NOTED OTHERWISE.
9. THE STEEL FABRICATOR SHALL SELECT AND COMPLETE THE STEEL CONNECTION DETAILS FOR THE SHOP DRAWINGS BASED ON THE INFORMATION CONTAINED ON THE STRUCTURAL DESIGN DRAWINGS. THE FABRICATOR SHALL COMPLETE THE CONNECTION DETAILS UTILIZING THE REQUIREMENTS IN THE AISC SPECIFICATION AND THE CONTRACT DOCUMENTS. SUBMIT THE CONNECTION DETAILS TO THE FOR APPROVAL PRIOR TO CONSTRUCTION.
10. THE DESIGN OF ALL CONNECTIONS IS THE RESPONSIBILITY OF THE STEEL CONTRACTOR AND SHALL BE PERFORMED BY A QUALIFIED PROFESSIONAL ENGINEER RETAINED BY THE STEEL CONTRACTOR. SEE PLANS FOR DESIGN LOADS AND ANY OTHER SPECIAL CONNECTION REQUIREMENTS. SUBMIT ENGINEERING DESIGN CALCULATIONS, SIGNED AND SEALED BY A PROFESSIONAL ENGINEER LICENSED IN THE STATE OF CONSTRUCTION, PRIOR TO SUBMITTING STEEL PIECE SHOP DRAWINGS.
11. ALL SHOP AND FIELD WELDING SHALL BE PERFORMED BY WELDERS QUALIFIED, AS DESCRIBED IN "AMERICAN WELDING SOCIETY'S STANDARD QUALIFICATION PROCEDURE" (AWS D1.1), TO PERFORM THE TYPE OF WORK REQUIRED.
12. ALL STEEL WELDING RODS SHALL BE E70XX.
13. THE MINIMUM SIZE OF ALL FILLET WELDS SHOWN ON DRAWINGS SHALL BE IN ACCORDANCE WITH AISC STEEL CONSTRUCTION MANUAL TABLE J2.4 UNLESS NOTED OTHERWISE.
14. ALL MILL CAMBER TO BE ORIENTED UPWARD DURING FABRICATION AND ERECTION.
15. PRIOR TO STEEL COLUMN AND BASE PLATE FABRICATION, PROVIDE A SURVEY OF IN-PLACE ANCHOR BOLT LOCATIONS TO THE STEEL FABRICATOR. THE STEEL FABRICATOR SHALL ADJUST ANCHOR BOLT HOLES ACCORDINGLY BASED ON SITE AS-BUILT CONDITIONS BEFORE FABRICATION OF COLUMN BASE PLATES AND DELIVERY TO THE SITE.
16. GROUT FOR BASE, LEVELING, AND BEARING PLATES SHALL BE NONMETALLIC AND SHRINKAGE-RESISTANT, 6000 PSI MINIMUM. GROUT SHALL MEET THE REQUIREMENTS OF ASTM C 1107 AND SHALL BE FACTORY-PACKAGED, NONMETALLIC AGGREGATE, NON CORROSIVE, NON STAINING, MIXED WITH WATER TO CONSTANCY SUITABLE FOR APPLICATION AND A 30-MINUTE WORKING TIME. SUBMIT GROUT MANUFACTURES DATA SHEETS FOR APPROVAL PRIOR TO CONSTRUCTION.
17. PROMPTLY PACK GROUT SOLIDLY BETWEEN BEARING SURFACES AND BASE OR BEARING PLATES SO NO VOIDS REMAIN. NEATLY FINISH EXPOSED SURFACES. PROTECT GROUT AND ALLOW TO CURE. COMPLY WITH MANUFACTURER'S WRITTEN INSTALLATION INSTRUCTIONS FOR SHRINKAGE-RESISTANT GROUTS.
18. ALL STEEL BEAMS FRAMING OVER THE TOP OF COLUMNS SHALL BE FITTED WITH (2) 1/2" THICK STIFFENER PLATES ON EACH SIDE OF THE BEAM WEB. THE COLUMN CAP PLATE SHALL MATCH THE THICKNESS OF THE BEAM ABOVE (1/2" THICK MINIMUM) UNLESS NOTED OTHERWISE.
19. PROVIDE ADJUSTABILITY IN ANGLE AND BENT PLATE CONDITIONS FOR STEEL BEAMS ADJACENT TO VERTICAL SHAFTS OR EXTERIOR WALL SPANDREL CONDITIONS. ALLOW FOR A HORIZONTAL ADJUSTMENT OF 1/2" OUTWARD OR INWARD IN THE BENT PLATE OR ANGLE TO COMPENSATE FOR STEEL ERECTION TOLERANCES. MAKE FINAL CONNECTION OF ANGLE OR BENT PLATE TO STEEL BEAM IN THE FIELD AFTER STEEL ERECTION AND FINAL ALIGNMENT.
20. STEEL FABRICATOR IS SOLELY RESPONSIBLE FOR SURVEYING AND VERIFICATION OF EXISTING CONDITIONS INCLUDING BUT NOT LIMITED TO THE LOCATION, ELEVATION, AND DIMENSIONS OF EXISTING WALLS AND FRAMING.
21. SUBMIT CHECKED STEEL SHOP DRAWINGS FOR REVIEW PRIOR TO ANY FABRICATION.
22. PERFORM INSPECTIONS OF STEEL CONSTRUCTION IN ACCORDANCE WITH THE REQUIREMENTS OF THE APPLICABLE BUILDING CODE.

TABLE 1
LAP SPLICE LENGTHS FOR CONCRETE

CLASS B SPLICE LENGTHS (INCHES)

BAR SIZE	3,000 PSI CONCRETE			4,000 PSI CONCRETE			5,000 PSI CONCRETE			6,000 PSI CONCRETE		
	TENSION		COMP	TENSION		COMP	TENSION		COMP	TENSION		COMP
	TYP	TOP		TYP	TOP		TYP	TOP		TYP	TOP	
#3	21	27	12	18	24	12	17	22	12	17	20	12
#4	29	38	15	25	32	15	22	29	15	20	26	15
#5	37	47	19	31	40	19	28	36	19	25	33	19
#6	43	56	23	38	48	23	34	43	23	31	39	23
#7	62	82	27	54	70	27	49	63	27	45	58	27
#8	72	92	30	62	80	30	56	72	30	51	66	30
#9	81	104	34	70	91	34	63	81	34	57	74	34
#10	90	116	39	79	102	39	71	92	39	64	84	39

MASONRY:

1. MASONRY UNITS SHALL BE ASTM C-90 (NORMAL WEIGHT) WITH MINIMUM COMPRESSIVE STRENGTH OF 2,000 PSI AT 28 DAYS ON THE NET AREA OF INDIVIDUAL UNITS. ALL CMU SHALL BE ERECTED IN A RUNNING BOND PATTERN AND SHALL BE LAID IN A FULL BED OF MORTAR. REFER TO ARCHITECTURAL DRAWINGS FOR ADDITIONAL BLOCK REQUIREMENTS FOR ALL CMU LOCATED IN UL FIRE RATED ASSEMBLIES.
2. ALL MORTAR SHALL BE PORTLAND CEMENT/LIME CONFORMING TO ASTM C270. USE TYPE M MORTAR BELOW GRADE AND TYPE S MORTAR FOR CMU ABOVE GRADE. DO NOT USE ADMIXTURES THAT CONTAIN CHLORIDES.
3. GROUT SHALL BE A HIGH SLUMP MIX IN ACCORDANCE WITH ASTM SPECIFICATION C476 HAVING A MINIMUM COMPRESSIVE STRENGTH OF 3,000 PSI AT 28 DAYS. GROUT MUST HAVE A SLUMP OF 8 TO 11 INCHES. DO NOT USE ADMIXTURES THAT CONTAIN CHLORIDES. DO NOT SUBSTITUTE MORTAR FOR GROUT. CONSOLIDATION OF GROUT IN BLOCK CORES SHOULD BE ACHIEVED WITH A LOW VELOCITY MECHANICAL VIBRATOR WHICH HAS A 3/4 INCH HEAD. THE VIBRATOR IS NORMALLY ACTIVATED FOR ONE OR TWO SECONDS IN EACH GROUTED CORE OF HOLLOW UNIT MASONRY.
4. LAID UP MASONRY STRENGTH f'm FOR THE COMPOSITE OF CMU, MORTAR AND GROUT FOR ALL STANDARD MASONRY WALLS SHALL BE 2,000 PSI.
5. ALL CONCRETE MASONRY SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE "BUILDING CODE REQUIREMENTS FOR MASONRY STRUCTURES ACI 530/ASCE 5/TMS 402" AND "SPECIFICATIONS FOR MASONRY STRUCTURES ACI 530.1/ASCE 6/TMS 602".
6. PERFORM INSPECTIONS OF MASONRY CONSTRUCTION IN ACCORDANCE WITH THE REQUIREMENTS OF THE APPLICABLE BUILDING CODE.
7. ALL REINFORCING BARS SHALL BE DEFORMED BARS CONFORMING TO ASTM A615 GRADE 60.
8. PROVIDE HOT-DIPPED GALVANIZED LADDER TYPE HORIZONTAL JOINT REINFORCEMENT (MIN. 9 GAGE COLD DRAWN GALVANIZED STEEL WIRE) IN ACCORDANCE WITH ASTM A1064 AT 16" ON CENTER VERTICAL IN ALL MASONRY WALLS. SPACE HORIZONTAL JOINT REINFORCEMENT AT 8" INCHES ON CENTER IN ALL PARAPETS. USE SHOP FABRICATED SPECIAL PIECES AT ALL CORNERS AND TEES.
9. ALL CMU CORES WHICH CONTAIN VERTICAL REINFORCING BARS SHALL BE GROUTED SOLID. ALL CMU PIERS SHOWN ON PLAN SHALL BE COMPLETELY GROUTED SOLID IN ALL CORES. FILLING CORES WITH MORTAR AS WORK PROGRESSES IS NOT ACCEPTABLE.
10. MINIMUM LENGTH OF LAP SPLICES FOR VERTICAL REINFORCING SHALL NOT BE LESS THAN THE VALUE PROVIDED IN THE CMU REINFORCING LAP AND SPLICE LENGTH TABLE.
11. VERTICAL REINFORCING BARS SHALL BE SECURED AGAINST DISPLACEMENT PRIOR TO GROUTING BY GALVANIZED BAR POSITIONERS SPACED AT INTERVALS NOT TO EXCEED 112 BAR DIAMETERS. PROVIDE A MINIMUM OF TWO POSITIONERS PER INDIVIDUAL REINFORCING BAR.

COLD FORMED METAL FRAMING:

1. ALL COLD FORMED METAL FRAMING SHOWN ON THE DRAWINGS HAS BEEN SPECIFIED ACCORDING TO THE STEEL STUD MANUFACTURERS ASSOCIATION FOUR PART IDENTIFICATION CODE SYSTEM.
2. ALL STEEL STUDS SHALL BE HOT-DIPPED GALVANIZED (G-60) PER ASTM A525 UNLESS LOCATED IN AN EXTERIOR WALL WITH MASONRY VENEER FINISH. ALL STEEL STUDS LOCATED IN AN EXTERIOR WALL WITH MASONRY VENEER FINISH SHALL BE HOT-DIPPED GALVANIZED (G-90). STEEL STUDS SHALL BE DESIGNED, MANUFACTURED AND INSTALLED IN ACCORDANCE WITH THE LATEST AISI SPECIFICATIONS AND SHALL COMPLY WITH ASTM A446. ALL STUDS, JOISTS, AND ACCESSORIES SHALL HAVE THE FOLLOWING MATERIALS STRENGTHS:
    A. 16 GA AND HEAVIER - Fy = 50 KSI
    B. 18 GA AND LIGHTER - Fy = 33 KSI
3. MANUFACTURER TO PROVIDE HOLES IN STUDS FOR PASSAGE OF PIPE AND WIRING. MANUFACTURER MUST INSURE THAT HOLES DO NOT INTERFERE WITH CONNECTION LOCATIONS. STUD HEADERS OVER WALL OPENINGS SHALL BE FURNISHED WITH UNPUNCHED WEBS.
4. PERFORM WELDING OF ALL COLD FORMED STEEL FRAMING IN ACCORDANCE WITH AWS D1.3 (SPECIFICATION FOR WELDING SHEET STEEL IN STRUCTURES).
5. MAKE CONNECTIONS WITH SELF-DRILLING, SELF-TAPPING SCREWS, POWDER ACTUATED FASTENERS OR WELDING FOR ALL CONNECTIONS. ALWAYS USE WELDS WHERE SHOWN ON DRAWINGS. TOUCH UP WELDS WITH ZINC RICH PAINT.
6. ALL SELF-DRILLING AND SELF-TAPPING SCREWS SHALL BE AS MANUFACTURED BY BUILDEX OR APPROVED EQUAL. SCREW PENETRATION THROUGH JOINED MATERIALS SHALL NOT BE LESS THAN THREE (3) EXPOSED THREADS. SELECT SCREWS WITH AN ADEQUATE CUTTING TIP TO ACCOMMODATE THE TOTAL THICKNESS TO BE DRILLED. MAINTAIN A MINIMUM OF 1/2" DISTANCE FROM EDGE OF STEEL TO CENTERLINE OF SCREW AND A MINIMUM OF 1" BETWEEN SCREWS. WHERE SCREW ATTACHMENTS ARE MADE BETWEEN MATERIALS OF DIFFERENT THICKNESSES, THE THINNEST COMPONENT SHALL BE PENETRATED FIRST.
7. ALL POWDER ACTUATED FASTENERS SHALL BE AS MANUFACTURED BY HILTI OR APPROVED EQUAL. PROVIDE A MINIMUM OF (1) 5/16" DIAMETER STEEL WASHER ON ALL POWDER ACTUATED FASTENER CONNECTIONS TO INCREASE THE PULL-OVER CAPACITY OF THE CONNECTION. USE POWDER ACTUATED FASTENERS WITH A KNURLED SHANK FOR ALL CONNECTIONS INTO HOT ROLLED STEEL AND MAINTAIN A MINIMUM OF 3/4" EDGE DISTANCE. POWDER ACTUATED FASTENERS INTO CONCRETE SHALL HAVE A MINIMUM EDGE DISTANCE OF 3" AND MINIMUM SPACING OF 4" ON CENTER.
8. CUT ALL COLD FORMED STEEL FRAMING MEMBERS WITH SAWS OR SHEARS. FLAME CUTTING IS NOT PERMITTED.
9. INSTALLATION TOLERANCES FOR PLUMBNESS, LEVELNESS, STUD SPACING, AND SQUARENESS OF LOAD BEARING WALLS SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF ASTM C-1007.
10. SEAT ALL SINGLE AND MULTIPLE MEMBER METAL STUDS SECURELY IN ALL TRACKS. STUD ENDS MUST BE SQUARE CUT.
11. SPLICING OF METAL FRAMING OTHER THAN TRACK COMPONENTS IS STRICTLY PROHIBITED.
12. ALL COLD FORMED METAL FRAMING STUDS/JOISTS SHALL HAVE A 1-5/8" FLANGE UNLESS NOTED OTHERWISE.
13. ALL HEADERS IN BEARING WALLS SHALL BE SUPPORTED ON A MINIMUM OF THREE (3) STUDS UNLESS NOTED OTHERWISE ON THE DRAWINGS.
14. ALL BEARING WALL HEADERS SHALL HAVE WELDED FITTED STIFFENER STUDS TO PREVENT WEB CRIPPLING OF THE HEADER.
15. ALL HEADERS SHALL HAVE THE COMPRESSION FLANGE BRACED AT A MAXIMUM OF 2'-0" ON CENTER.
16. A CONTINUOUS LOAD PATH FROM THE ELEVATED FLOOR AND ROOF STRUCTURE IS TO BE PROVIDED IN ALL BEARING WALLS. ALL BEARING WALL STUDS SHALL ALIGN WITH FLOOR AND ROOF TRUSS POINTS OF BEARING. ADDITIONAL STUD FRAMING SHALL BE ADDED WHERE FLOOR AND ROOF TRUSSES DO NOT ALIGN WITH A WALL STUD. PROVIDE SOLID BLOCKING AS REQUIRED BETWEEN FLOORS TO PROVIDE A CONTINUOUS LOAD PATH THROUGH THE FLOOR TO THE FOUNDATION.
17. ALL STUD WALLS SHALL BE BRACED AGAINST ROTATION BY THE INSTALLATION OF MECHANICAL BRIDGING AT A MAXIMUM SPACING OF 4'-0" ON CENTER.
18. THE COMPRESSION FLANGE OF ALL FLOOR AND ROOF JOISTS SHALL BE BRACED BY MECHANICAL BRIDGING AT A SPACING NOT TO EXCEED 6'-0" ON CENTER. THE INSTALLATION OF BRIDGING SHALL BE COMPLETED PRIOR TO LOADING THE FLOOR/ROOF SYSTEM.
19. FLOOR AND ROOF JOISTS SHALL BE RESTRAINED AGAINST ROTATION AT EACH END BEARING. JOISTS SHALL BE ATTACHED TO TRACK COMPONENTS OR RESTRAINED BY THE INSTALLATION OF CONTINUOUS SOLID BLOCKING. MINIMUM END BEARING FOR ALL JOISTS SHALL BE 1 1/2". PROVIDE WEB STIFFENERS AT ALL SUPPORT AND CONCENTRATED LOAD LOCATIONS.
20. STUD ENDS SHALL BE ATTACHED TO TRACK COMPONENTS AT THE TOP AND BOTTOM OF THE WALL ASSEMBLY EXCEPT WHERE THE WALL TERMINATES AT A DEFLECTION TRACK. FIXED ATTACHMENT TO DEFLECTION TRACKS SHALL NOT BE PROVIDED. STUDS FRAMING INTO DEFLECTION TRACKS SHALL BE RESTRAINED AGAINST ROTATION BY INSTALLING MECHANICAL BRIDGING NO MORE THAN 1'-0" BELOW THE DEFLECTION TRACK.
21. CONTRACTOR SHALL SUBMIT DETAILED SHOP DRAWINGS, CALCULATIONS, AND PRODUCT INFORMATION FOR REVIEW AND APPROVAL. SHOP DRAWINGS SHALL BE BASED ON THE CONCEPT SHOWN ON THE STRUCTURAL DRAWINGS AND SHALL INDICATE COLD FORMED STEEL MANUFACTURER, MEMBER SIZES TO BE USED, FRAMING PLANS, WALL ELEVATIONS, AND CONNECTION DETAILS OF THE COLD FORMED STEEL FRAMING. USE THE MINIMUM STUD GAUGE AS SHOWN ON DRAWINGS UNLESS A HEAVIER STUD GAUGE IS REQUIRED BY CALCULATIONS.

DECK:

1. ALL WELDING OF METAL DECK SHALL BE PERFORMED BY CERTIFIED WELDERS IN ACCORDANCE WITH THE LATEST EDITION OF THE AWS "SPECIFICATION FOR WELDING SHEET STEEL IN STRUCTURES".
2. ALL FORM AND COMPOSITE METAL DECK SHALL BE GALVANIZED AS MANUFACTURED BY UNITED STEEL DECK, INC. OR APPROVED EQUAL. FLOOR DECK MUST COMPLY WITH STEEL DECK INSTITUTE STANDARDS. ALL FLOOR DECK SHALL BE CONTINUOUS OVER MINIMUM OF THREE SPANS.
3. CONTRACTOR SHALL PROVIDE ALL MISCELLANEOUS CONCRETE POUR STOPS AND DECK CLOSURES REQUIRED AT DECK TERMINATION AND SLAB OPENINGS. COORDINATE WITH PLANS FOR REQUIRED LOCATIONS.
4. PROVIDE INSPECTIONS OF METAL DECK INSTALLATION TO VERIFY, AT A MINIMUM, SOUNDNESS OF WELDS AND SIDELAP SCREW SPACING.

POST-INSTALLED ADHESIVE ANCHORS & REINFORCING:

1. THE ADHESIVE ANCHOR SYSTEM USED FOR POST-INSTALLED ANCHORAGE TO CONCRETE SHALL CONFORM TO THE REQUIREMENTS OF THE MOST RECENTLY PUBLISHED ACI 355.4, ACCEPTANCE CRITERIA FOR QUALIFICATION OF POST-INSTALLED ADHESIVE ANCHORS IN CONCRETE AND COMMENTARY.
2. THE ADHESIVE ANCHORS SHALL BE SUPPLIED AS AN ENTIRE SYSTEM. THE SYSTEM SHALL INCLUDE, BUT IS NOT LIMITED TO, THE NEW ADHESIVE CARTRIDGE, A CLEAN MIXING NOZZLE, EXTENSION TUBE, A DISPENSING GUN, AND ALL MANUFACTURER RECOMMENDED SUPPLIES FOR PROPERLY CLEANING THE DRILLED HOLE.
3. EYEBOLTS, THREADED STUDS, INTERNAL THREADED PARTS TO BE USED IN ADHESIVE ANCHOR ASSEMBLIES SHALL CONFORM TO ASTM A36, A193 (GRADE B7), A307, B348 (BD), OR F1554. STAINLESS STEEL ANCHOR RODS SHALL BE AISI TYPE 304 OR TYPE 316. THREADS SHALL BE UNC COARSE THREADS, UNLESS NOTED OTHERWISE. COMPATIBLE NUTS AND WASHERS SHALL BE FURNISHED WITH THE ALL-THREAD ROD AND CONSIDERED PART OF THE ASSEMBLY. THE COST OF THE HARDWARE SHALL BE CONSIDERED INCIDENTAL TO THE INSTALLED ADHESIVE ANCHOR ASSEMBLY.
4. NUTS, WASHERS, AND OTHER HARDWARE USED WITH AN ALL-THREADED BAR ADHESIVE ANCHOR SYSTEM SHALL HAVE A MATERIAL OR AN ALLOY DESIGNATION THAT MATCHES THE ALL-THREAD MATERIAL / ALLOY. GALVANIZED ASSEMBLIES SHALL BE HOT-DIP GALVANIZED IN ACCORDANCE WITH ASTM A153 CLASS C. ELECTROPLATE GALVANIZING IS NOT ACCEPTABLE. DISSIMILAR METAL ASSEMBLIES SHALL BE SEPARATED BY NYLON, EPDM, OR OTHER APPROVED NON-METALLIC WASHERS.
5. REINFORCING BARS TO BE USED IN ADHESIVE ANCHORS ASSEMBLIES SHALL CONFORM TO ASTM A615.
6. CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH (F'c) OF 2,500 PSI AT THE TIME OF ADHESIVE ANCHOR INSTALLATION.
7. CONCRETE AT TIME OF ADHESIVE ANCHOR INSTALLATION SHALL HAVE A MINIMUM AGE OF 21 DAYS.
8. CONCRETE TEMPERATURE AT THE TIME OF ADHESIVE ANCHOR INSTALLATION SHALL BE AT LEAST 50 DEGREES F.
9. EMBEDMENT DEPTH AND ANCHOR PROJECTION (STICK-OUT) FROM THE CONCRETE SURFACE SHALL BE AS SHOWN ON THE DRAWING OR DETAIL FOR THE PARTICULAR ANCHOR OR GROUP OF ANCHORS BEING INSTALLED. ABSENT ANY INFORMATION, THE MINIMUM EMBEDMENT DEPTH SHALL BE 10 TIMES THE ANCHOR DIAMETER IN INCHES AND MINIMUM STICK-OUT SHALL BE AS REQUIRED TO MAKE THE CONNECTION.
10. ADHESIVES SHALL BE STORED AND INSTALLED AT THE SERVICE TEMPERATURE RANGES RECOMMENDED BY THE MANUFACTURER.
11. ADHESIVE ANCHORS SHALL BE INSTALLED BY QUALIFIED PERSONNEL TRAINED TO INSTALL ADHESIVE ANCHORS IN ACCORDANCE WITH THE REQUIREMENTS OF THE MANUFACTURER AND THE CONTRACT DOCUMENTS. POST-INSTALLED ADHESIVE ANCHORS SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S PRINTED INSTALLATION INSTRUCTIONS.
12. INSTALLATION OF ADHESIVE ANCHORS HORIZONTALLY OR UPWARDLY INCLINED TO SUPPORT SUSTAINED TENSION LOADS SHALL BE PERFORMED BY PERSONNEL CERTIFIED BY THE ACI/CRSI ADHESIVE ANCHOR INSTALLER CERTIFICATION PROGRAM. THESE ANCHORS ARE DESIGNATED WITH A (CERT) AFTER THE ANCHOR CALL-OUT. NOTE: SOME DOWNHAND INSTALLATIONS SHOWN ON THESE DRAWINGS SUPPORT SUSTAINED TENSION LOADS AND ARE SO DESIGNATED WITH A (CERT) AFTER THE ANCHOR CALL-OUT.
13. THE INSTALLER'S QUALIFICATIONS SHALL BE SUBMITTED AND APPROVED IN ACCORDANCE WITH THE CONTRACT DOCUMENTS.
14. THE CONTRACTOR SHALL PROVIDE ALL EQUIPMENT REQUIRED TO INSTALL THE ADHESIVE ANCHOR INCLUDING, BUT NOT LIMITED TO, DRILLS, SETTING TOOLS, CLEAN-OUT BRUSHES, BLOW OUT BULBS, OIL-FREE COMPRESSED AIR, SHOP VACUUMS, WRENCHES, ETC.
15. ANCHORS SHALL BE INSTALLED IN HOLES DRILLED WITH A ROTARY IMPACT HAMMER DRILL OR ROCK DRILL.
16. ANCHOR HOLES SHALL BE THOROUGHLY CLEANED PRIOR TO ADHESIVE INJECTION, AS REQUIRED BY THE MANUFACTURERS PRINTED INSTALLATION INSTRUCTIONS.
17. ANCHORS TO BE INSTALLED IN THE ADHESIVE SHALL BE CLEAN, OIL-FREE, AND FREE OF LOOSE RUST, PAINT, OR OTHER COATINGS.
18. INSTALLED ADHESIVE ANCHORS SHALL BE SECURELY FIXED IN-PLACE TO PREVENT DISPLACEMENT WHILE THE ADHESIVE CURES. UNLESS SHOWN OTHERWISE ON THE DRAWINGS, ANCHORS SHALL BE INSTALLED PERPENDICULAR TO THE CONCRETE SURFACE. ANCHORS DISPLACED BEFORE FULL ADHESIVE CURE SHALL BE CONSIDERED DAMAGED AND REPLACED AT THE CONTRACTOR'S EXPENSE.
19. REINFORCING BARS OR ALL-THREADED BARS SHALL NOT BE BENT AFTER BEING ADHESIVELY EMBEDDED IN HARDENED, SOUND CONCRETE, UNLESS PERMITTED BY THE ENGINEER.
20. ADHESIVE ANCHORS INTO CONCRETE SUBSTRATE APPLICATIONS SHALL USE THE HILTI HIT HY-200 SYSTEM.
21. ADHESIVE ANCHORS INTO SOLID GROUTED CMU SUBSTRATE APPLICATIONS SHALL USE THE HILTI HY-270 SYSTEM.
22. ADHESIVE ANCHORS INTO HOLLOW CMU SUBSTRATE APPLICATIONS SHALL USE THE HILTI HIT HY-270 SYSTEM.
23. ALL HOLES IN STEEL MEMBERS TO RECEIVE POST-INSTALLED ADHESIVE OR EXPANSION ANCHORS SHALL BE STANDARD SIZE BASED ON THE ANCHOR DIAMETER (UNLESS NOTED OTHERWISE). OVERSIZED OR SLOTTED HOLES IN THE DIRECTION OF FORCE APPLICATION ARE NOT PERMITTED.

TABLE 2
STRAIGHT BAR DEVELOPMENT LENGTHS

CLASS A SPLICE LENGTHS (INCHES)

BAR SIZE	3,000 PSI CONCRETE			4,000 PSI CONCRETE			5,000 PSI CONCRETE			6,000 PSI CONCRETE		
	TENSION		COMP	TENSION		COMP	TENSION		COMP	TENSION		COMP
	TYP	TOP		TYP	TOP		TYP	TOP		TYP	TOP	
#3	16	21	9	14	18	8	13	17	8	12	16	8
#4	22	29	11	19	25	9	17	22	9	15	20	9
#5	28	36	14	24	31	12	21	29	12	19	25	12
#6	33	43	17	29	37	14	26	33	14	24	30	14
#7	48	63	19	42	54	17	38	49	16	34	45	16
#8	55	71	22	48	62	19	43	56	18	39	51	18
#9	62	80	25	54	70	21	48	63	20	44	57	20
#10	69	89	28	61	79	24	54	71	23	50	64	23

NOTES (TABLES 1, 2, AND 3):
1. DEVELOPMENT AND LAP SPLICE LENGTHS SHOWN ARE FOR UNCOATED ASTM A615 GRADE 60 (Fy = 60,000 PSI) DEFORMED BAR REINFORCING.
2. DEVELOPMENT LENGTHS ARE BASED ON NORMAL WEIGHT CONCRETE. FOR LIGHT WEIGHT CONCRETE MULTIPLY THE LENGTHS SHOWN BY 1.333.
3. MINIMUM BAR CLEAR COVER SHALL BE 1 BAR DIAMETER. MINIMUM BAR CLEAR SPACING IS 1 BAR DIAMETER IN BEAMS AND COLUMNS AND 2 BAR DIAMETERS IN OTHER CONCRETE ELEMENTS. MULTIPLY THE DEVELOPMENT LENGTH SHOWN BY 1.5 FOR REINFORCING WITH COVER AND SPACING LESS THAN DESCRIBED ABOVE.
4. USE THE LAP SPLICE LENGTHS IN THE "TOP" COLUMN FOR HORIZONTAL BARS WITH MORE THAN 12" OF CONCRETE BELOW THE BAR.

TABLE 3
HOOKED BAR TENSION DEVELOPMENT LENGTHS

LENGTHS (INCHES)

BAR SIZE	3,000 PSI CONCRETE	4,000 PSI CONCRETE	5,000 PSI CONCRETE	6,000 PSI CONCRETE
#3	9	8	7	6
#4	11	10	9	8
#5	14	12	11	10
#6	17	15	13	12
#7	19	17	15	14
#8	22	19	17	16
#9	25	22	20	18
#10	28	24	22	20

FOOTING SCHEDULE

MARK	SIZE	REINFORCING
F30	3'-0"x3'-0"x2'-0"	(4) #4 BOT EACH WAY

FOOTING SCHEDULE NOTES:
1. ALL FOUNDATIONS HAVE BEEN DESIGNED USING A SAFE ALLOWABLE SOIL BEARING PRESSURE OF 3,000 PSF.
2. REFER TO THE FOUNDATION INVESTIGATION REPORT LISTED IN THE STRUCTURAL NOTES ON DRAWING S-X FOR ADDITIONAL INFORMATION REGARDING THE FOUNDATION CONSTRUCTION.

COLUMN SCHEDULE

MARK	SIZE	BASE PLATE	ANCHOR RODS	REMARKS
C1	HSS 4x4x3/8	3/4x12x1'-0"	(4) 3/4"Ø (8" EMBED)	————

COLUMN SCHEDULE NOTES:
1. ALL ANCHOR RODS SHALL BE ASTM F1554 (GRADE 36). SEE DETAIL THIS DWG.

DATE	No.	REVISION
01-12-24	1	ISSUED FOR BID

BLOCK NO. 201
LOT NO. 1.01, 6.01
PROPOSED NORTH LOCKER ROOM RENOVATIONS
LENAPE HIGH SCHOOL
CHURCH AND HARTFORD ROADS, MEDFORD, NEW JERSEY 08055
MEDFORD TOWNSHIP
LRHSD NO. REF21-35-8267
BURLINGTON COUNTY

Drew C. Dingler, AIA, President
New Jersey LIC.# 21AI01088800

Linda M. Viventi, AIA, Secretary/Treasurer
New Jersey Architect LIC.# 21AI01090200; P.P. LIC.# 33LI00653000

KEY PLAN:

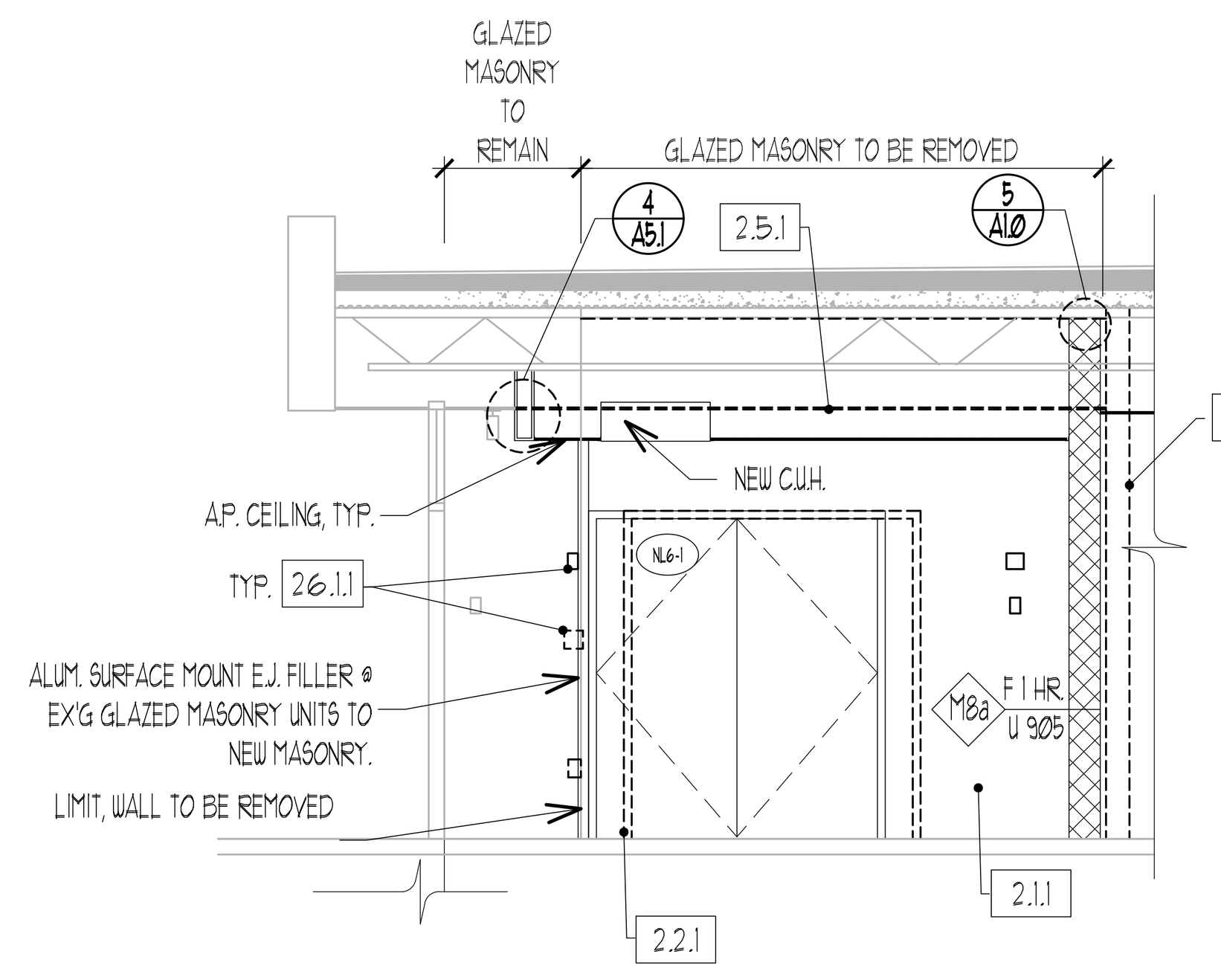
THE DESIGN COLLABORATIVE
ARCHITECTS AND PLANNERS, P.A.
1940 ROUTE 9 NORTH
CAPE MAY COURT HOUSE, NEW JERSEY 08210
PHONE: 609 465 4111 FAX: 609 465 9358
WWW.TDCARCHITECT.COM

SCALE:	AS NOTED	DRAWN BY: DCD
COMM. No.	8267	CHECKED BY: DCD
DATE:	12-12-23	

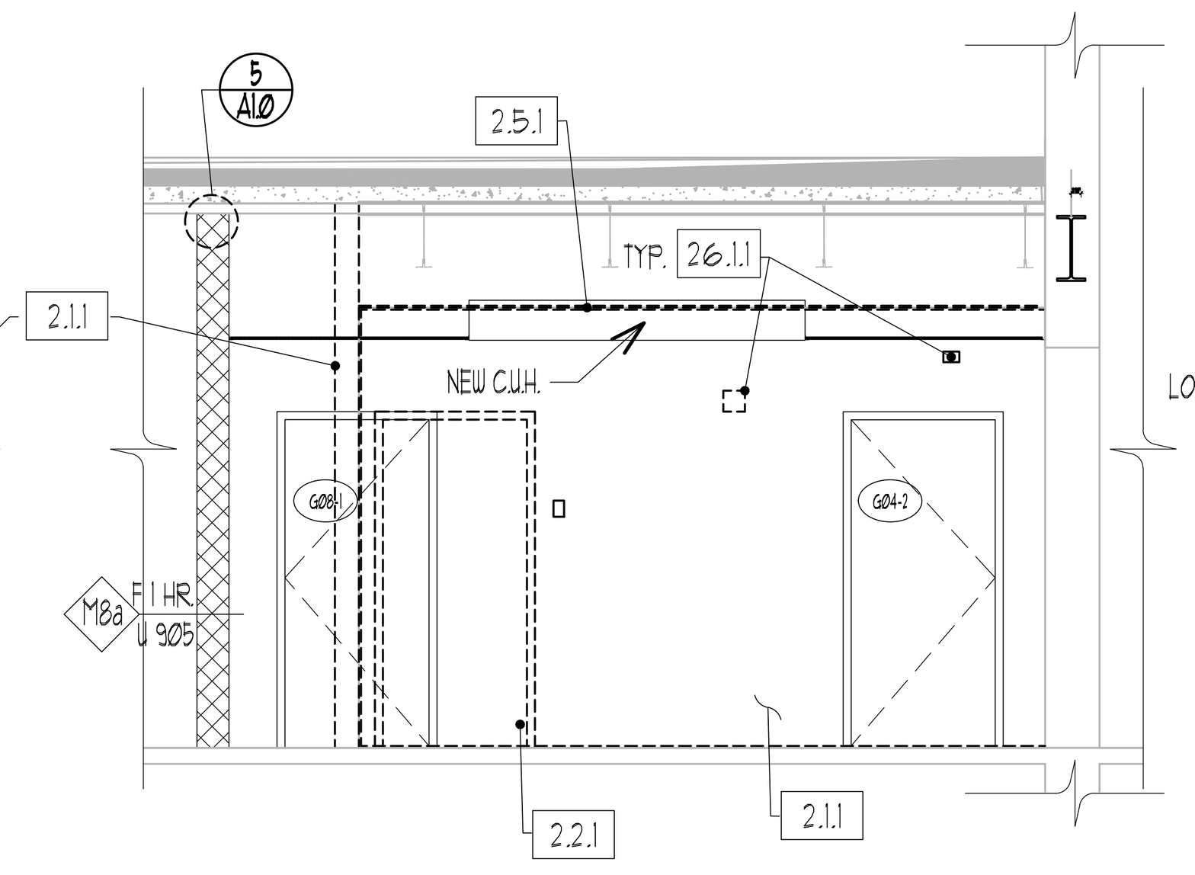
SHEET TITLE:
STRUCTURAL NOTES

SHEET No.:
A1.7

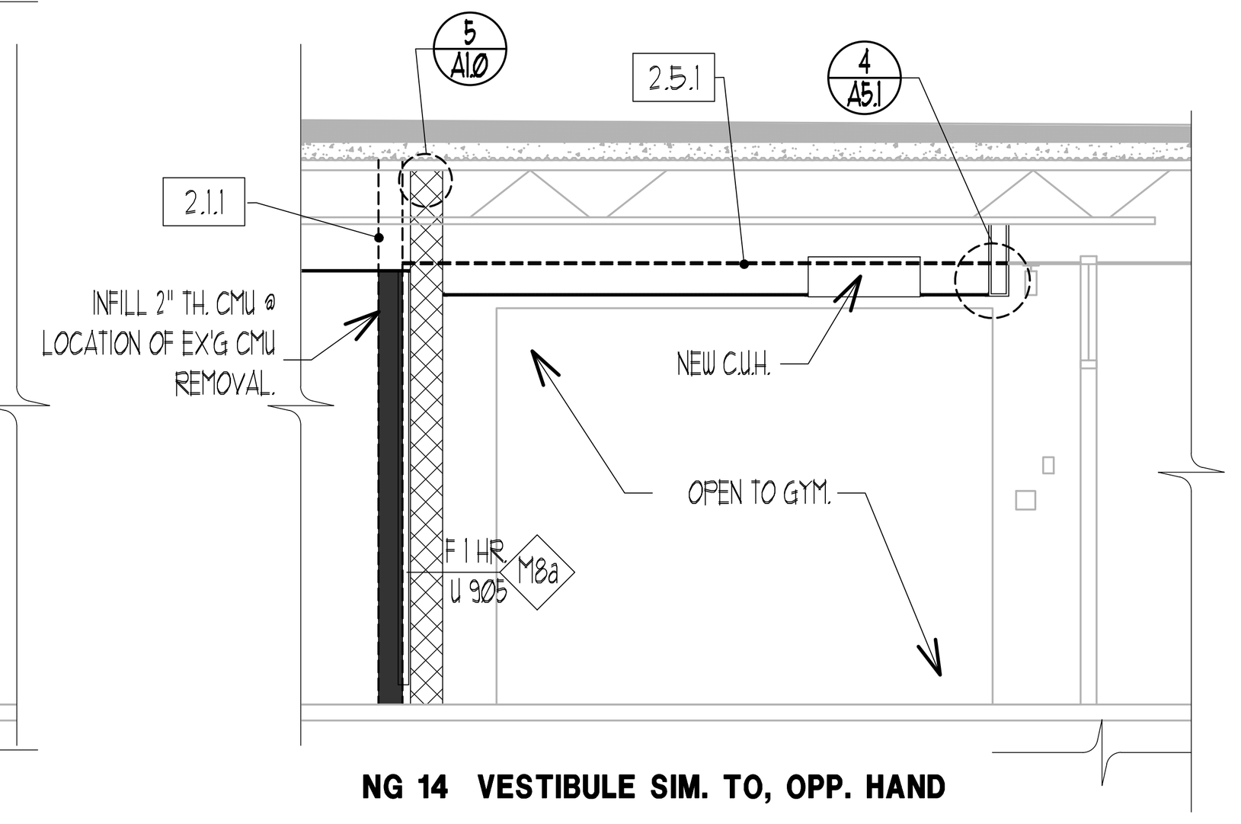
SEE DRAWING KEY NOTES SHEET A1.1 FOR DEMO. NOTES



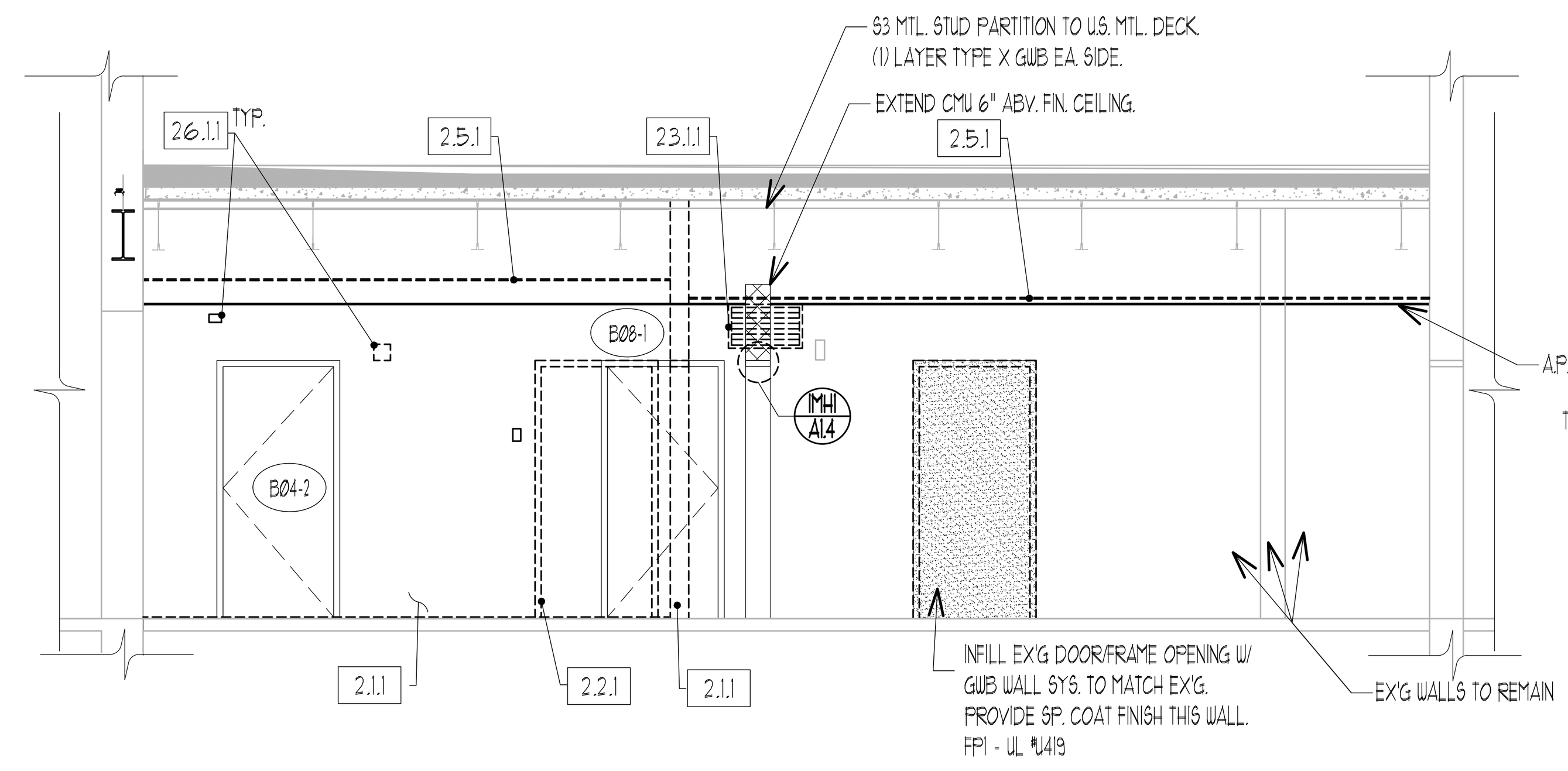
1 A3.1 **BUILDING SECTION NL 7 - GYM. FOYER** 1/4"=1'-0"
DEMO. AND NEW CONDITIONS SHOWN



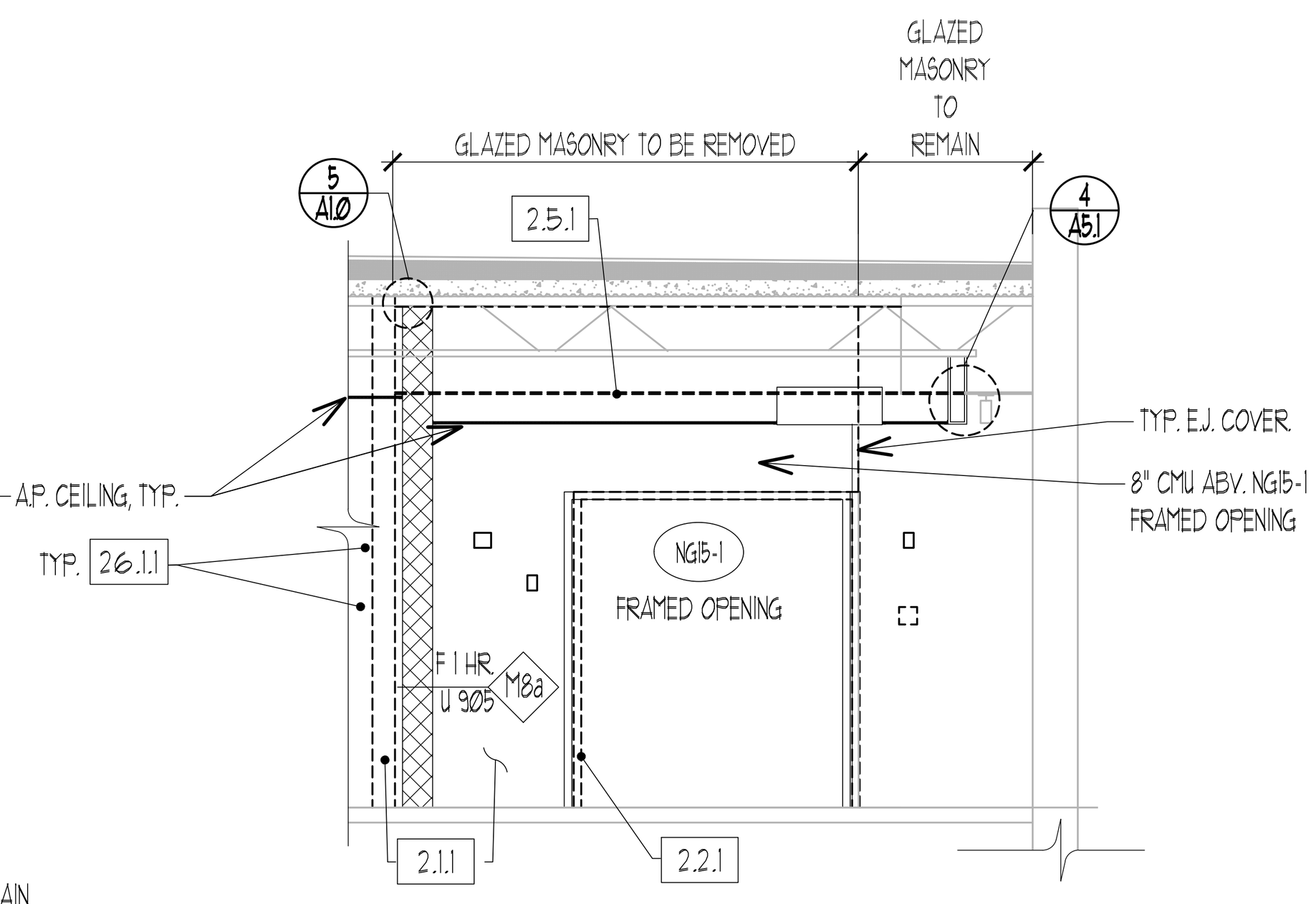
2 A3.1 **BUILDING SECTION NL 7 - GYM. FOYER** 1/4"=1'-0"
DEMO. AND NEW CONDITIONS SHOWN



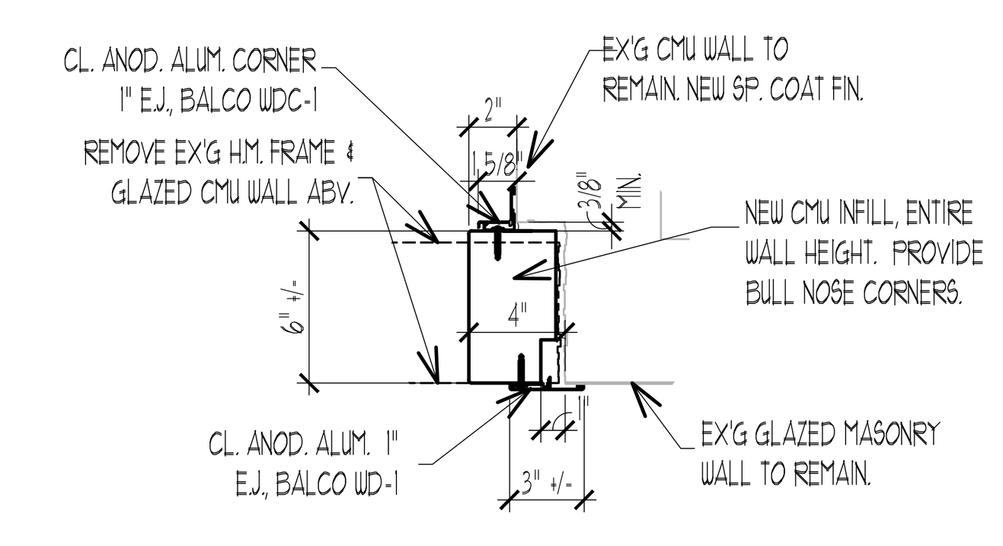
3 A3.1 **BUILDING SECTION NL 7 - GYM. FOYER** 1/4"=1'-0"
DEMO. AND NEW CONDITIONS SHOWN



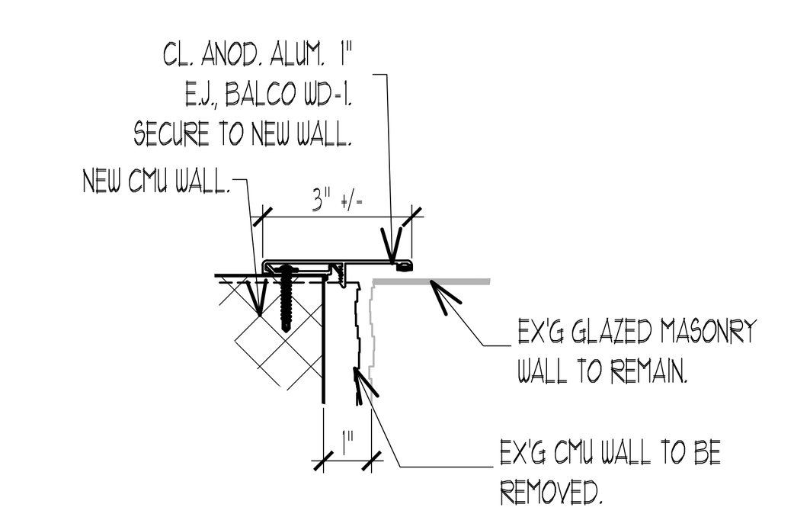
4 A3.1 **BUILDING SECTION NG 14 - GYM. FOYER** 1/4"=1'-0"
DEMO. AND NEW CONDITIONS SHOWN



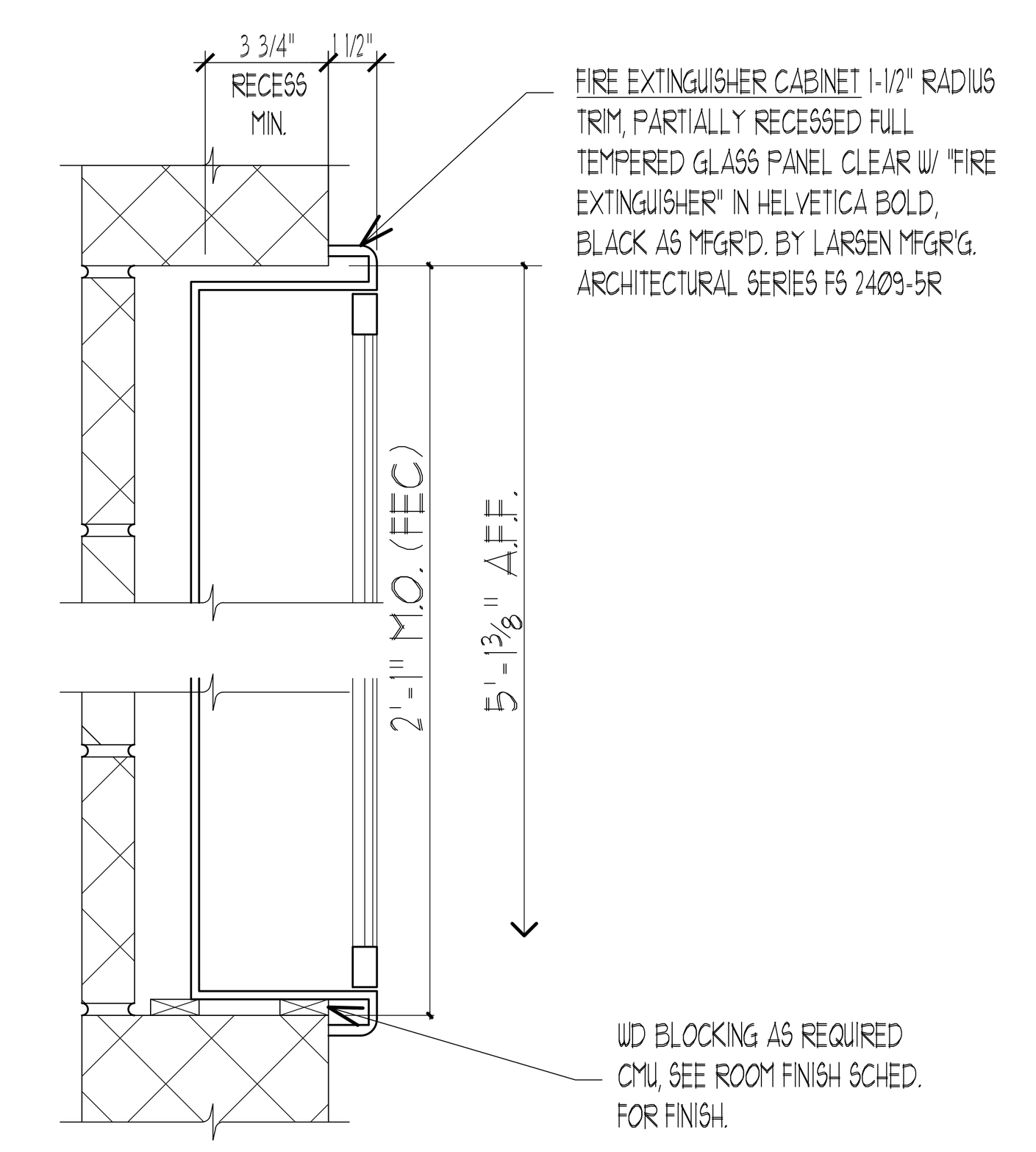
5 A3.1 **BUILDING SECTION NG 14 GYM. FOYER** 1/4"=1'-0"
DEMO. AND NEW CONDITIONS SHOWN



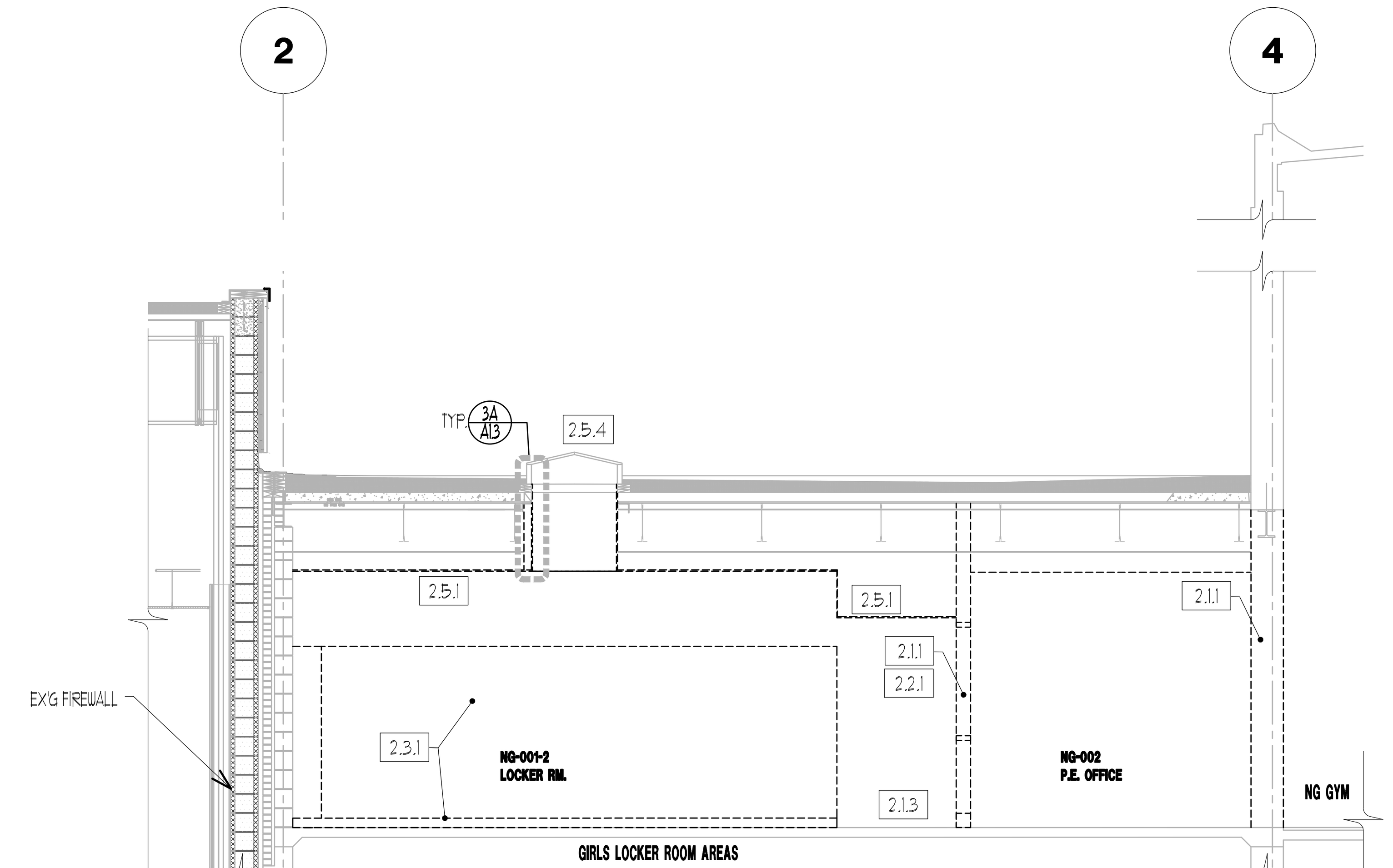
6 A3.1 **DETAIL: E.J. NG 14 GYM. FOYER** 1/4"=1'-0"



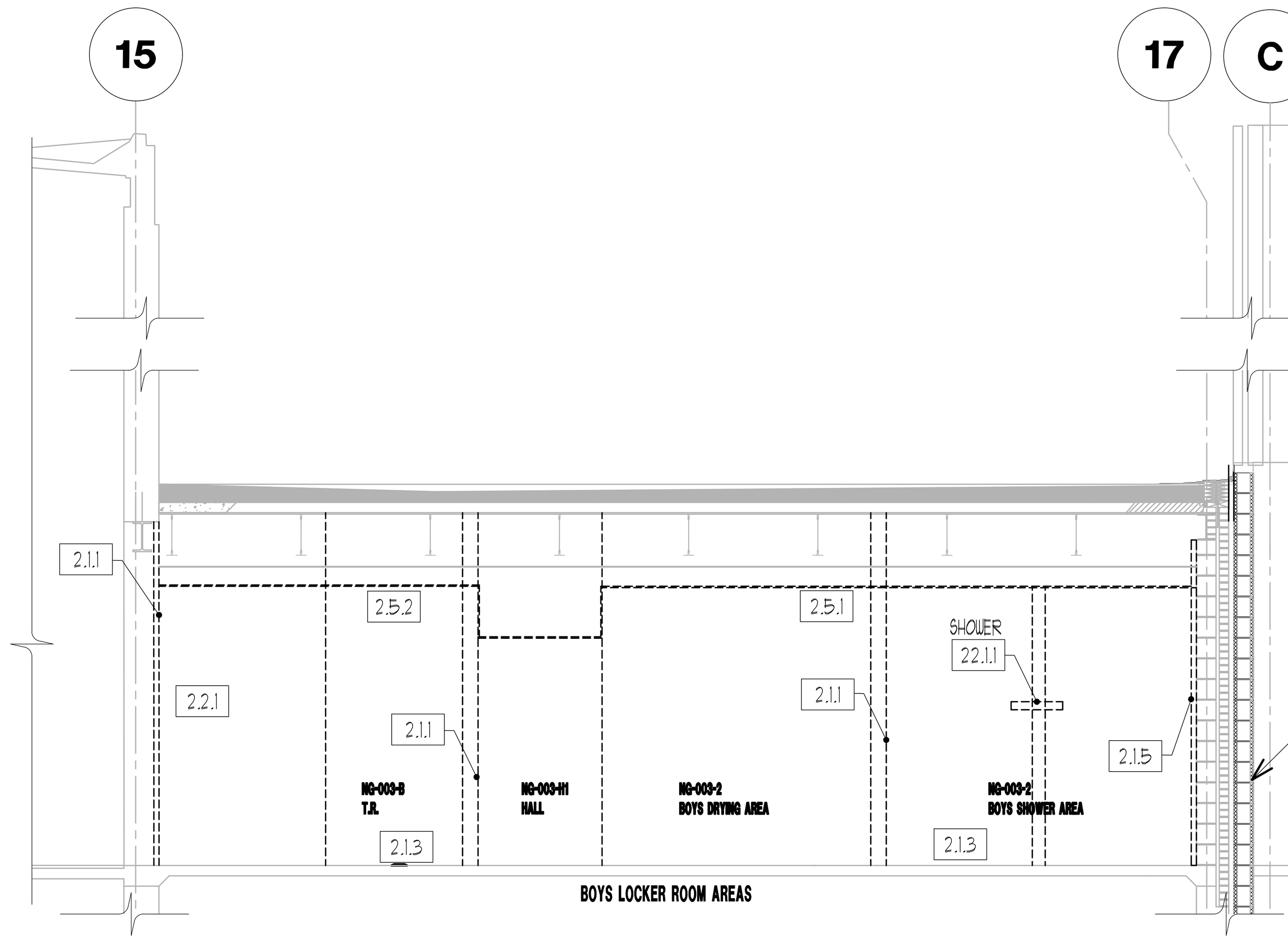
6A A3.1 **DETAIL: TYP. E.J. WALL** 1/4"=1'-0"
USE AT NEW CMU TO EX'G CMU CONSTRUCTION.
USE 90 DEGREE AT CORNERS.



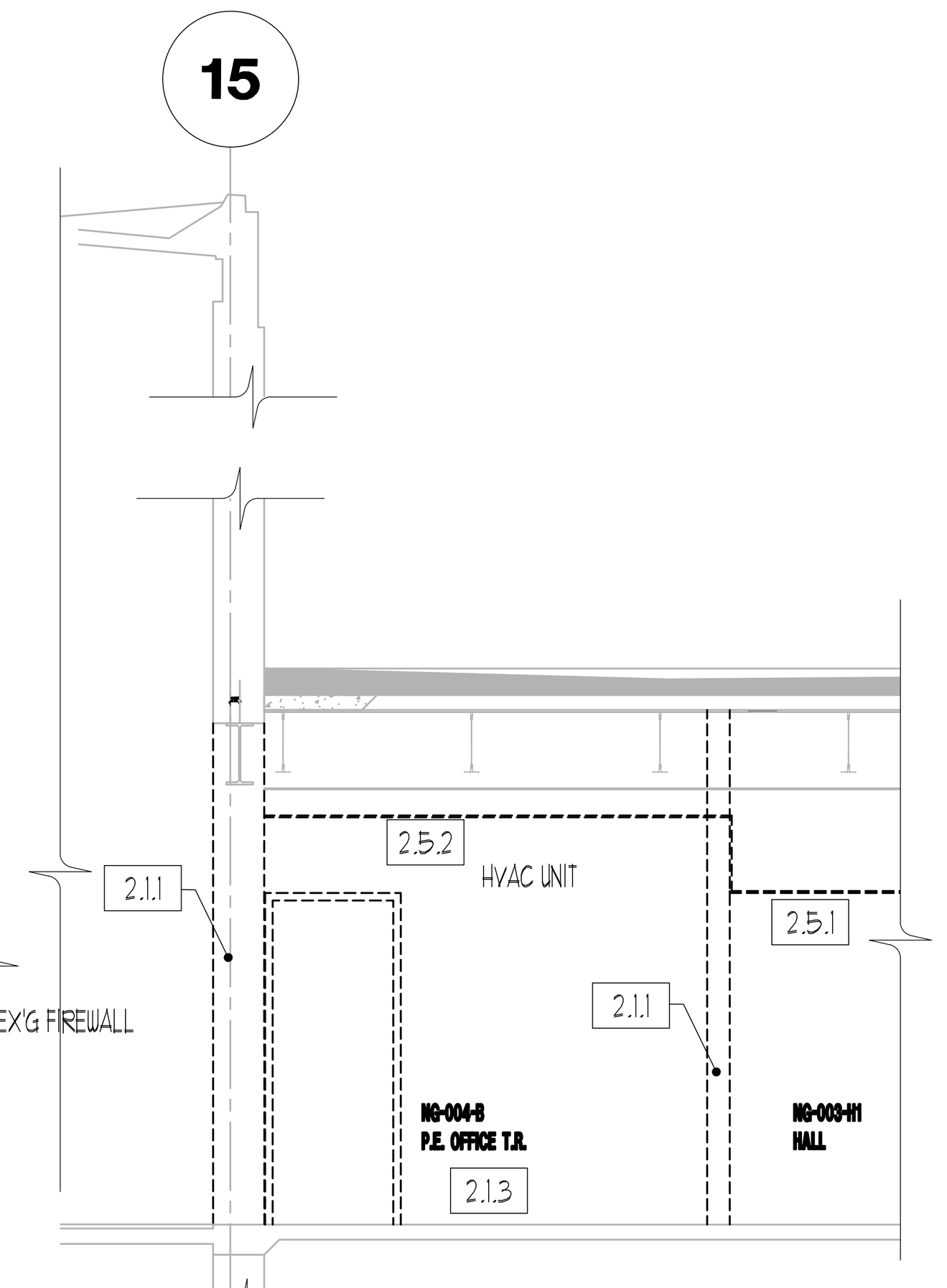
7 A3.1 **DETAIL: F.E. CAB. SEMI-RECESSED** 1-1/2"=1'-0"



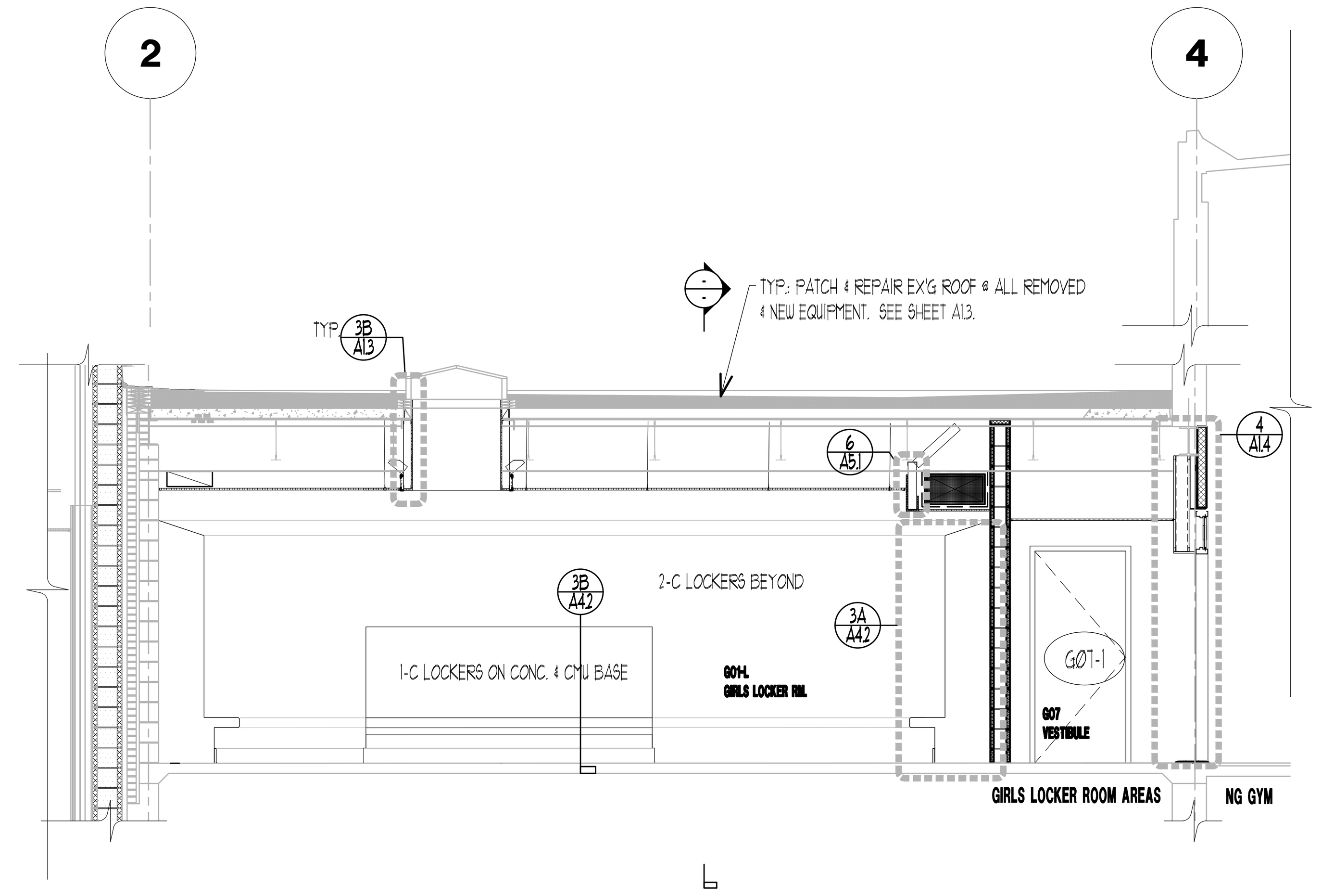
8A A3.1 **BUILDING SECTION DEMO.** 1/4"=1'-0"



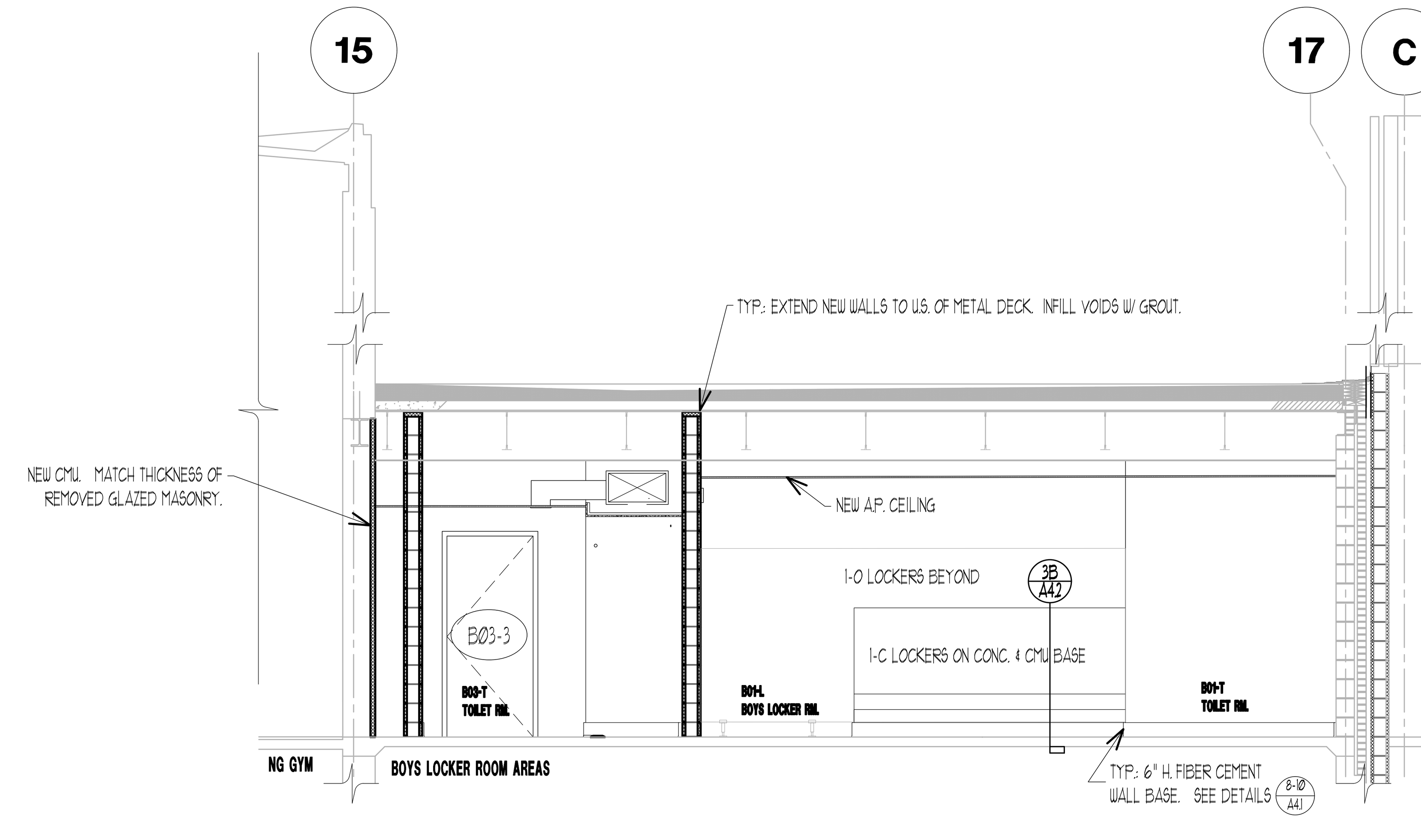
9A A3.1 **BUILDING SECTION DEMO.** 1/4"=1'-0"



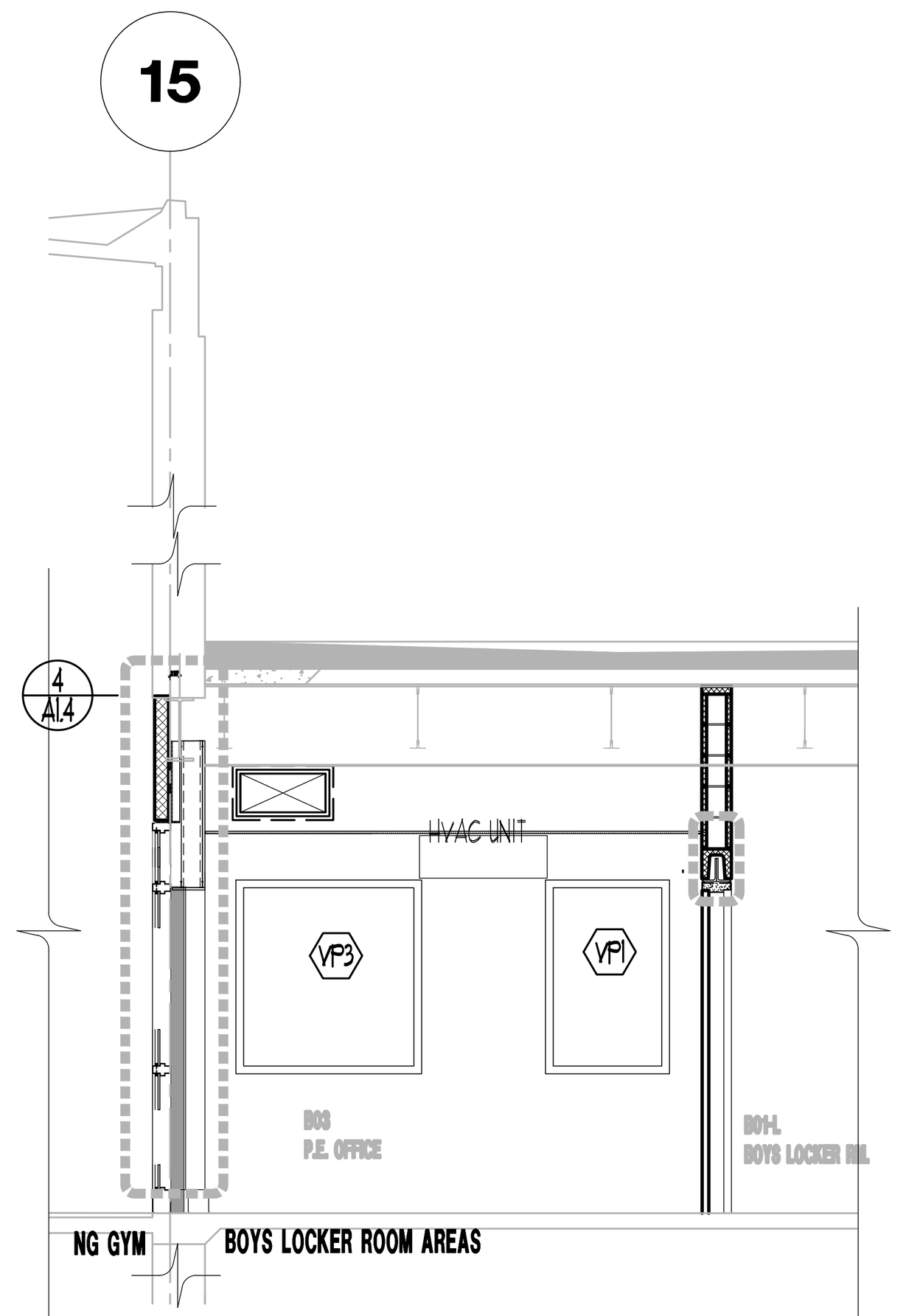
10A A3.1 **BUILDING SECTION DEMO.** 1/4"=1'-0"



8B A3.1 **BUILDING SECTION PROPOSED** 1/4"=1'-0"



9B A3.1 **BUILDING SECTION PROPOSED** 1/4"=1'-0"



10B A3.1 **BUILDING SECTION PROPOSED** 1/4"=1'-0"

DATE	No.	REVISION
01-12-24	1	ISSUED FOR BID

BLOCK NO. 201 LOT NO. 1.01, 6.01
MEDFORD TOWNSHIP BURLINGTON COUNTY

PROPOSED NORTH LOCKER ROOM RENOVATIONS
LENAPE HIGH SCHOOL
CHURCH AND HARTFORD ROADS, MEDFORD, NEW JERSEY 08055
LRHSD NO. REF21-35-8267

Drew C. Dingler, AIA, President
Linda M. Vivenzi, AIA, Secretary/Treasurer

THE DESIGN COLLABORATIVE
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1840 ROUTE 9 NORTH
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PHONE: 609 465 4111 FAX: 609 465 9358
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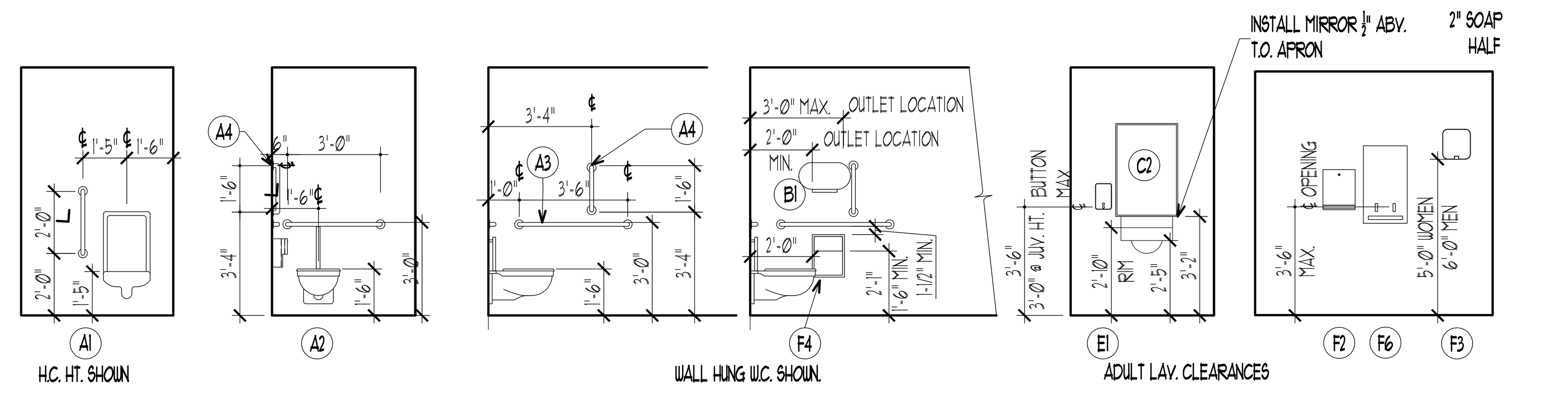
KEY PLAN:

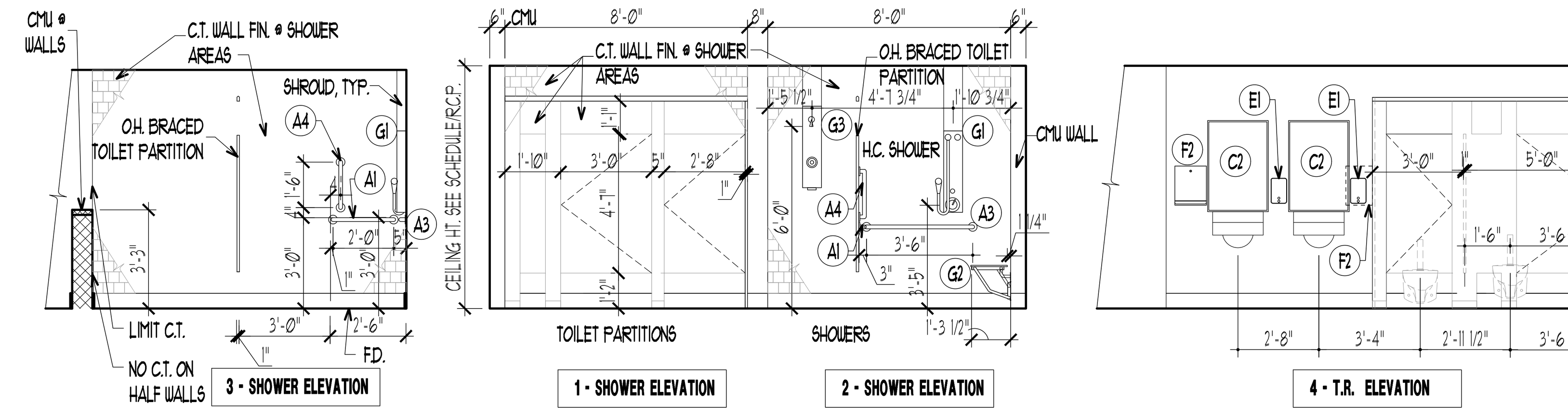
SCALE:	AS NOTED	DRAWN BY: DCD
COMM. No.	8267	CHECKED BY: DCD
DATE:	12-12-23	

SHEET TITLE: SECTIONS

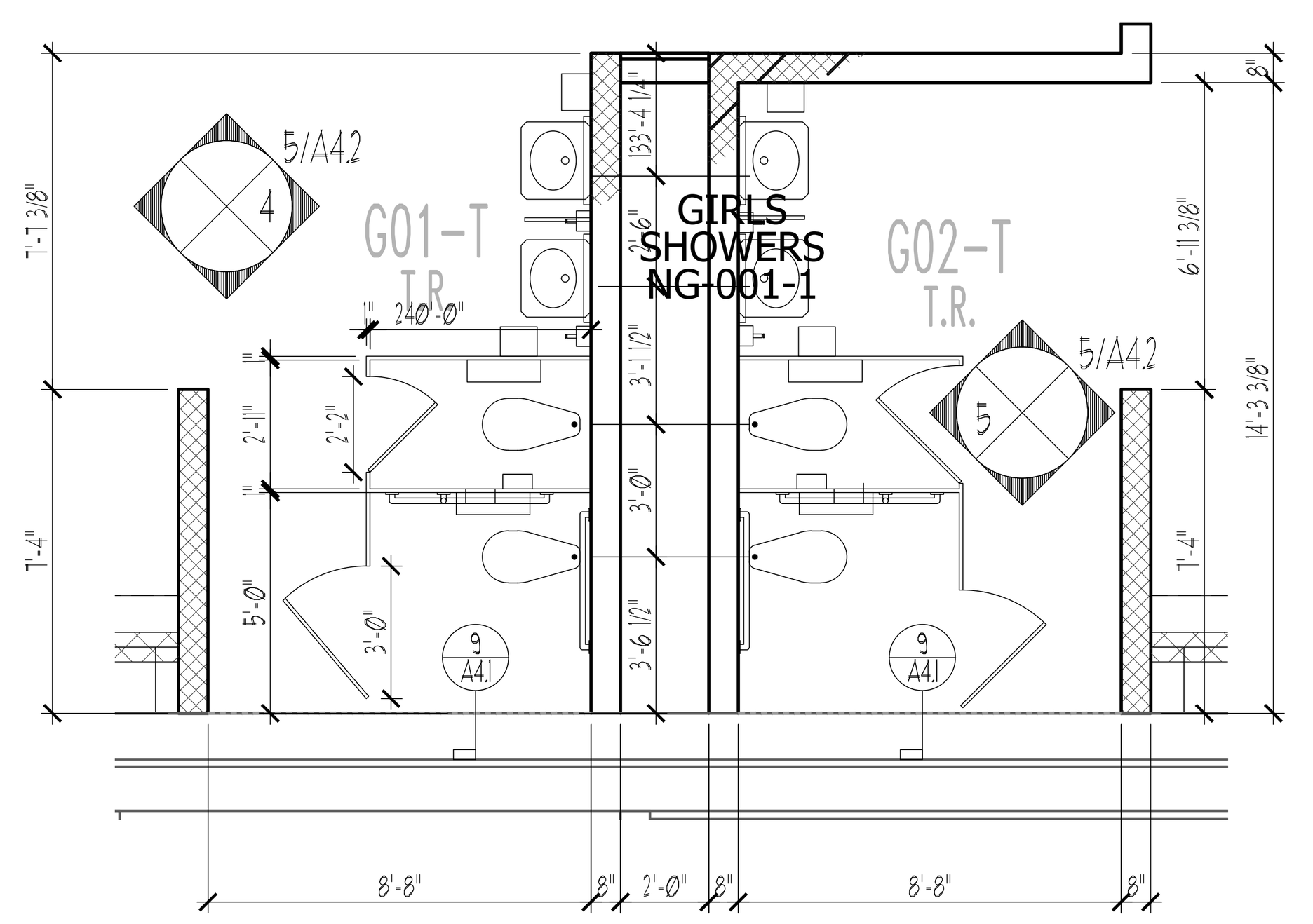
SHEET No.: A3.1



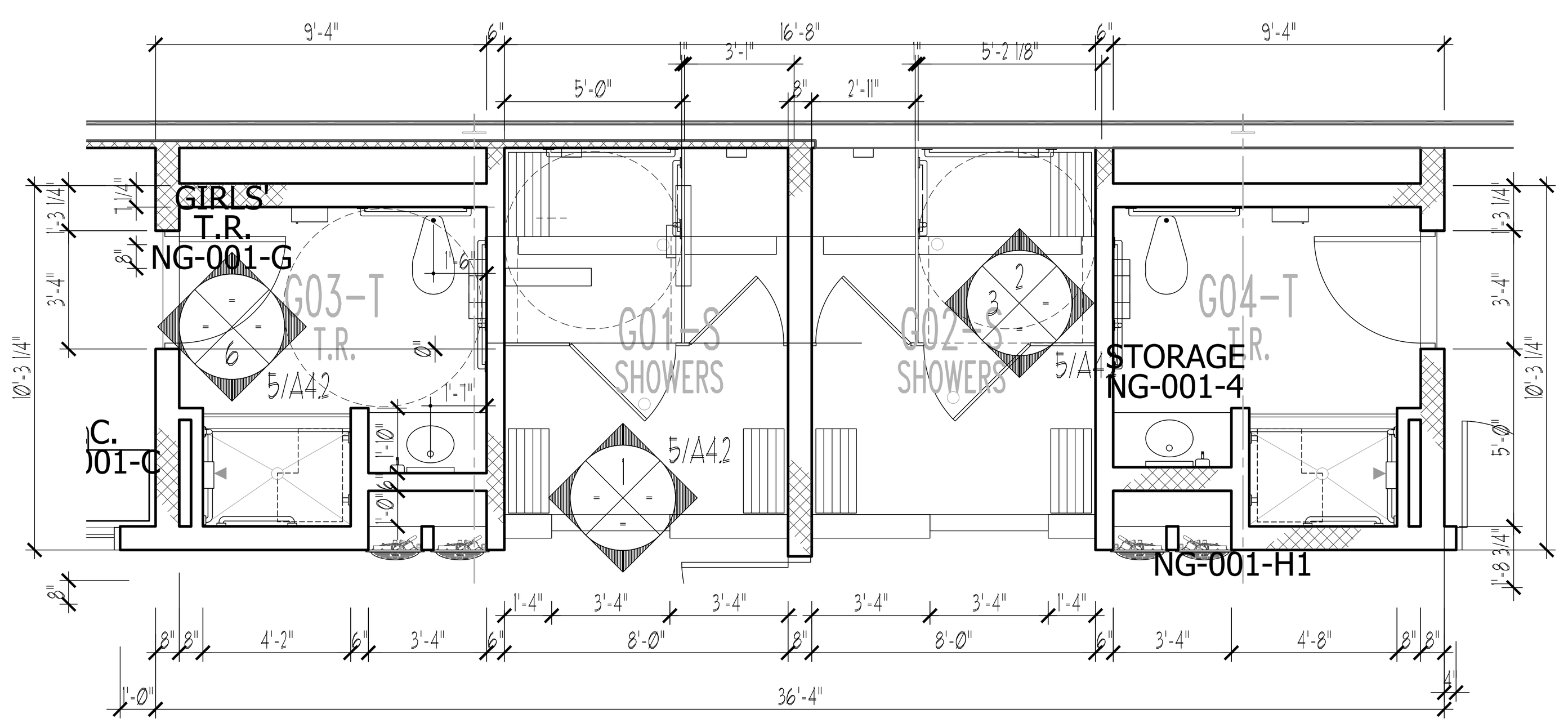
4 A4.1 TOILET AND SHOWER ACCESSORIES ELEVATIONS
1/4"=1'-0"



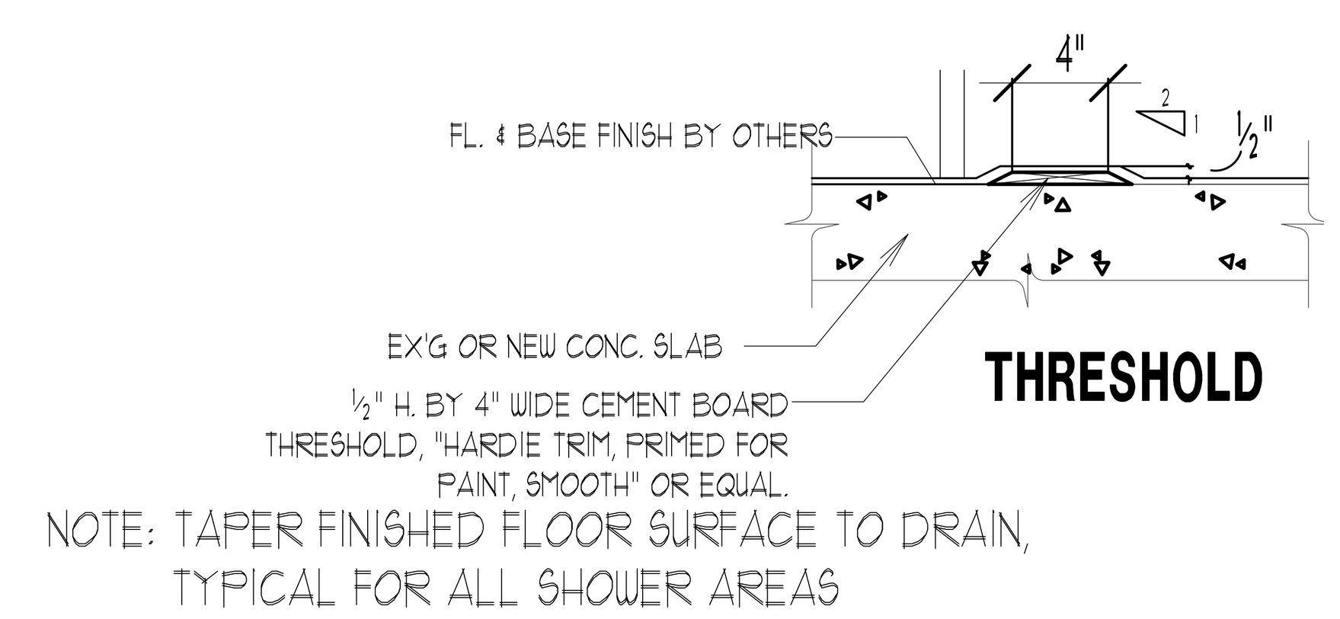
5 A4.1 TOILET AND SHOWER ELEVATIONS
1/4"=1'-0"



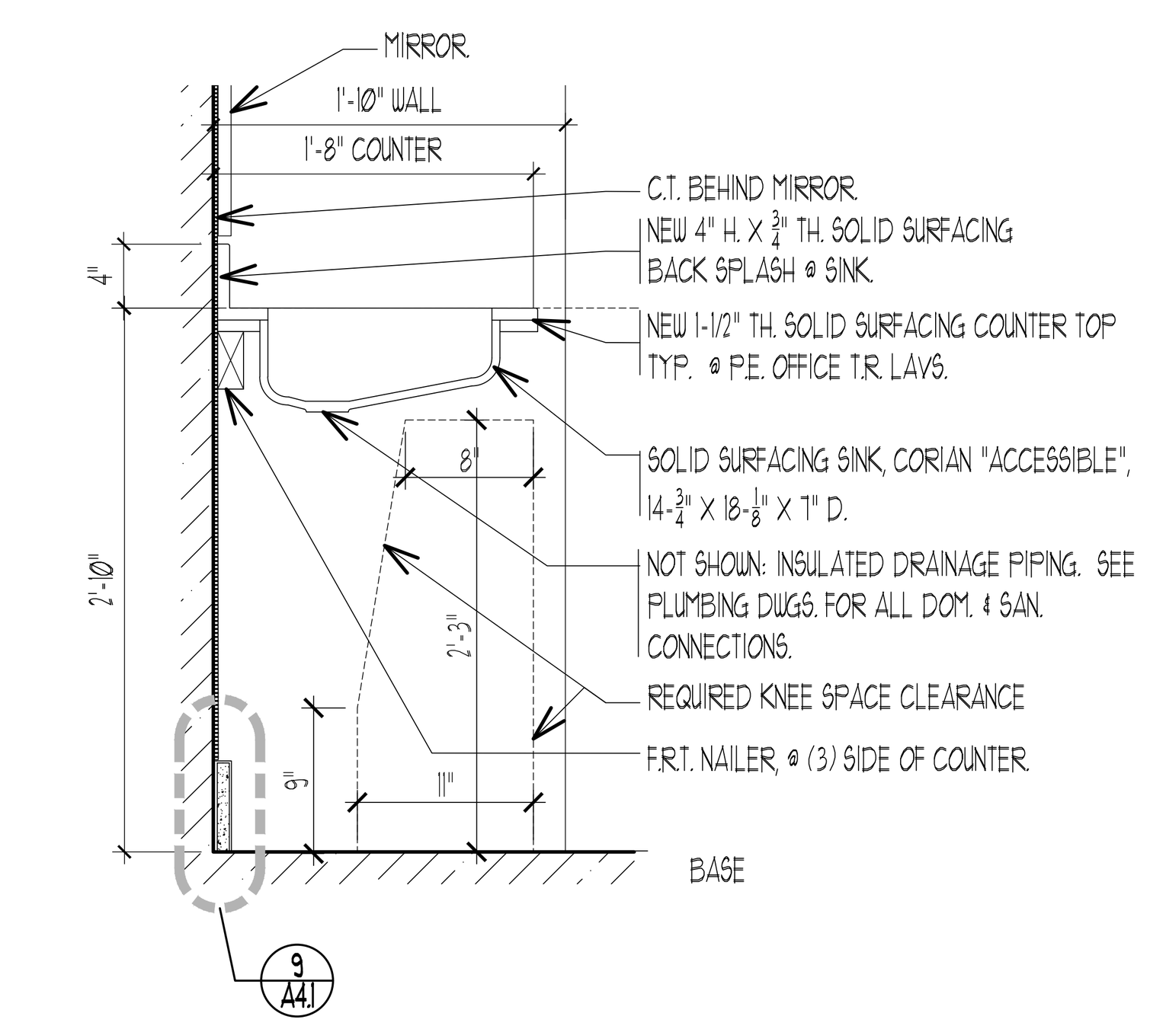
1 A4.1 ENLARGED PLAN
GIRLS T.R.
BOYS T.R. B01-T & B02-T - MIRROR IMAGE
1/4"=1'-0"



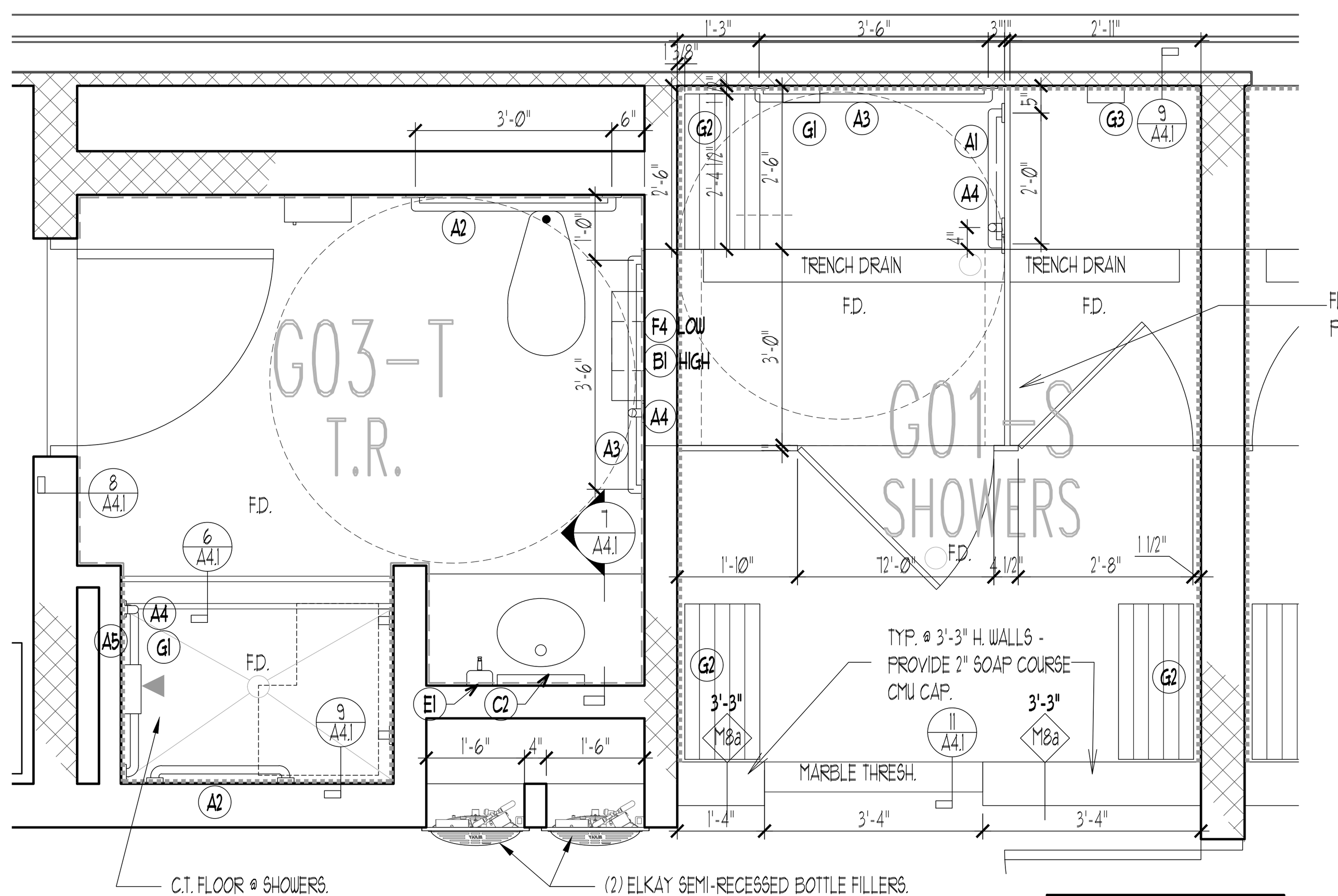
2 A4.1 ENLARGED PLAN
GIRLS T.R. AND SHOWERS
BOYS T.R. AND SHOWERS - MIRROR IMAGE
1/4"=1'-0"



6 A4.1 BASE/THRESHOLD DETAIL
CEMENT BOARD BASE
W/ EPOXY FLOOR
1-1/2"=1'-0"



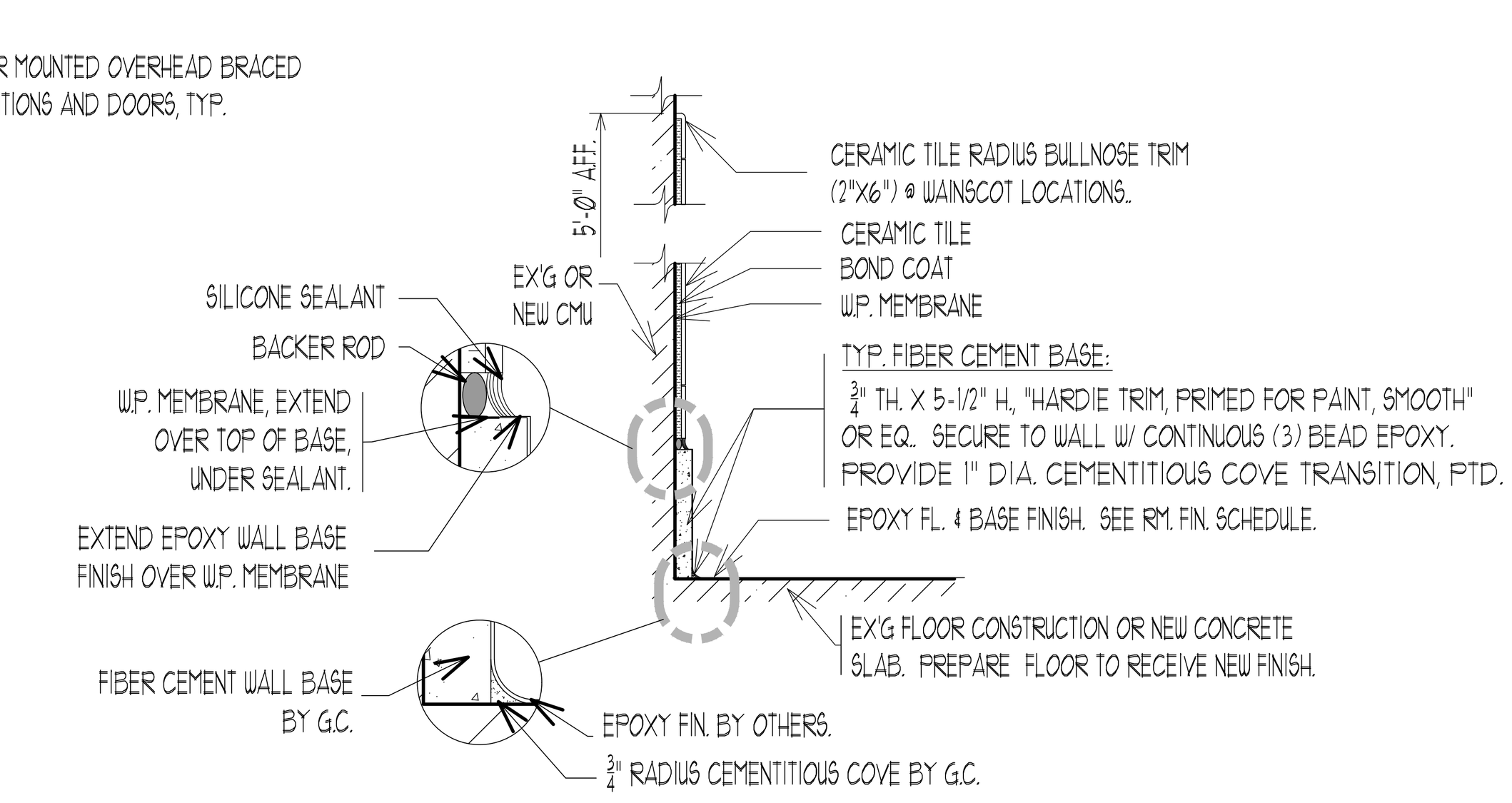
7 A4.1 DETAIL SECTION
OFFICE LAV. COUNTER
1"=1'-0"



3 A4.1 TYP. ENLARGED PLAN - TILE
GRAB BAR & ACCESSORIES
1/2"=1'-0"

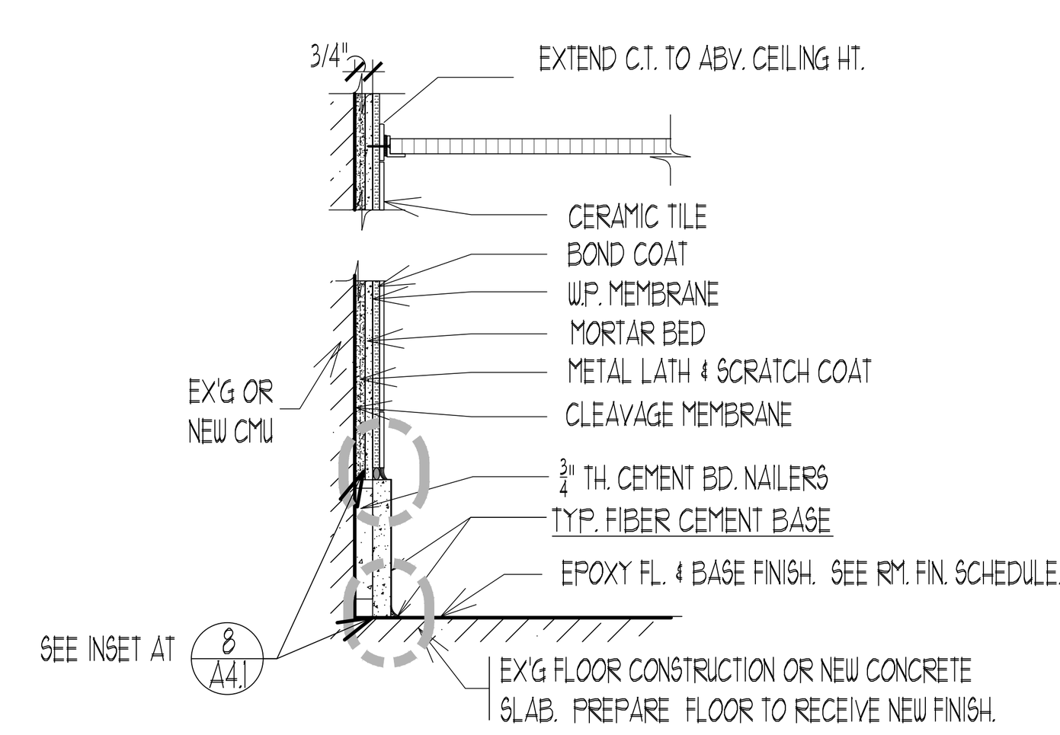
B04-T, B02-S - SIM. TO.
G04-T, G02-S - MIRROR IMAGE
B03-T, B01-S - MIRROR IMAGE

KEY: C.T. EXTENT
- FULL HT., TCNA W221
- WAINSCOT, 5'-0", TCNA 202I



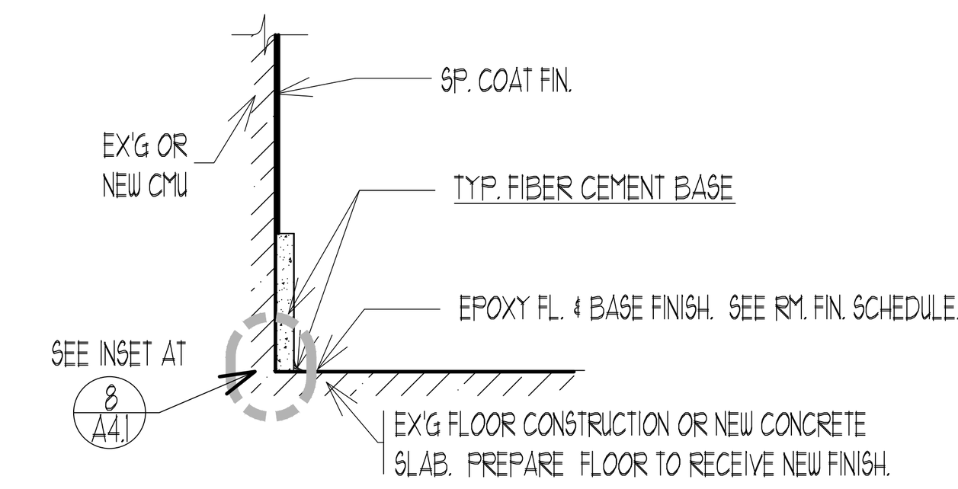
8 A4.1 DETAIL: TILE & BASE
TCNA W202I-23
1-1/2"=1'-0"

USE AT TOILET ROOMS, U.N.O.



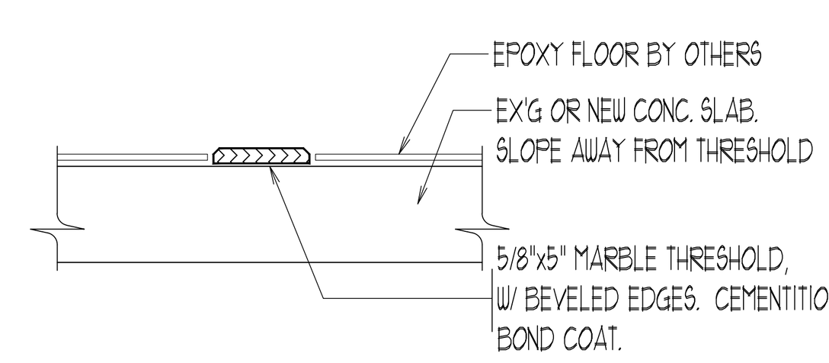
9 A4.1 DETAIL: TILE & BASE
TCNA W221-23
1-1/2"=1'-0"

USE AT ALL SHOWER AREAS
USE AT T.R. WHERE SHOWN



10 A4.1 DETAIL: WALL BASE
USE AT ALL AREAS
1-1/2"=1'-0"

WITHOUT TILE

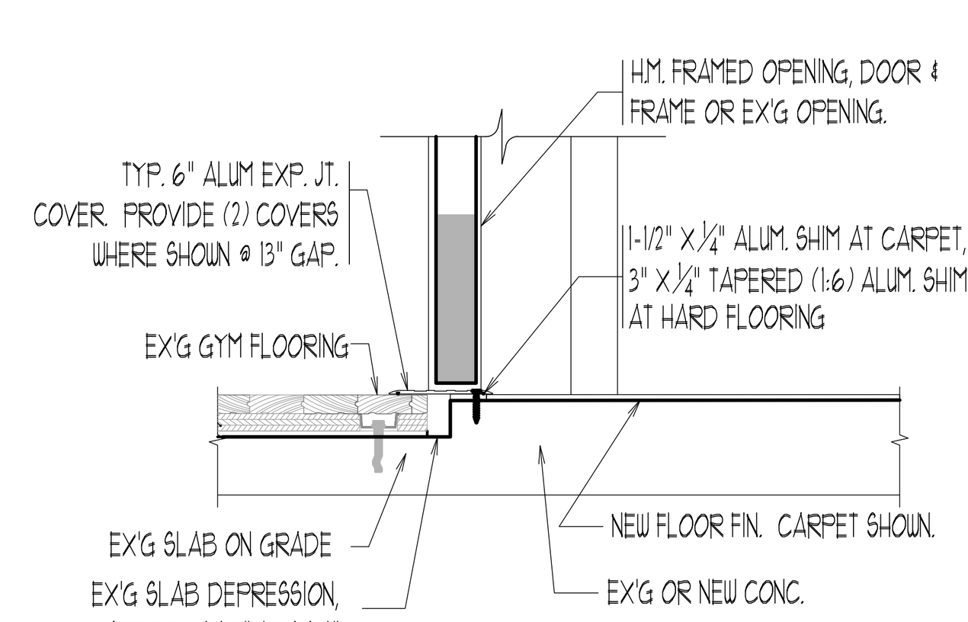


11 A4.1 DETAIL: MARBLE
THRESHOLD
1-1/2"=1'-0"

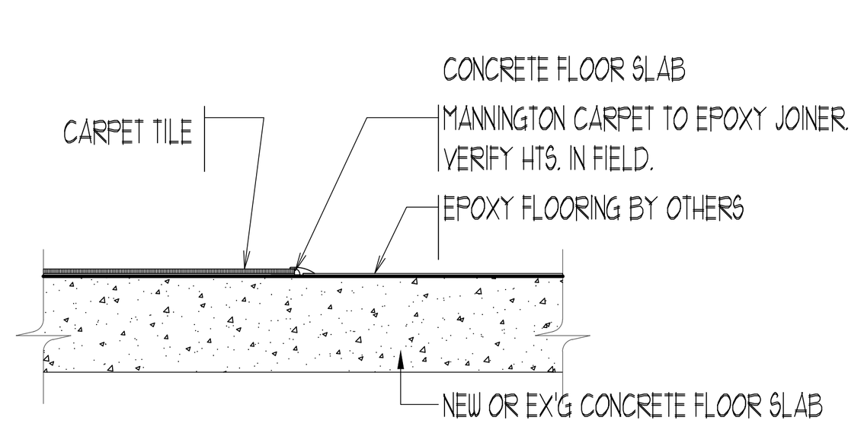
TOILET ROOM ACCESSORY SCHEDULE

MANUFACTURER CITED IS BRADLEY, U.N.O. PROVIDE BRADLEY OR APPROVED EQUAL.

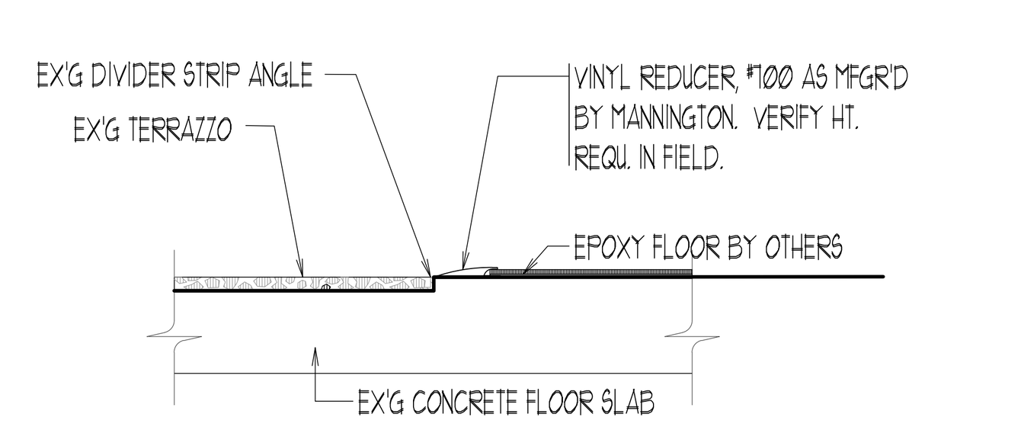
RM. NO.	ROOM NAME	GRAB BARS					TOILET TISSUE DISPENSER	MIRROR		CUSTODIAL HOLDER &SHELF	SOAP DISPENSER	WASTE RECEPT.	TOWEL DISPENSER	SAN. NAP. DISPOSAL	SAN. NAP. DISPENSER	WALL SHOWER		SHOWER SEAT		SHOWER CURTAIN, ROD, HOOKS		
		A1	A2	A3	A4	A5	B1	C1	C2	D1	E1	F1	F2	F4	F5	G1	G3	G2	G4	G5		
		812-2	812-2	812-2	812-2	812-2	OWNER SUPPLIED	780	780	9933	OWNER SUPPLIED	OWNER SUPPLIED	OWNER SUPPLIED	4781-11	OWNER SUPPLIED	WS-1X-HN, SHV W/ MODEL SA22 SOAP DISH	WS-1WCA W/ MODEL SD SOAP DISH	9593	9594	9533 60"Wx72"H	9539	9540
		24"	36"	42"	18"	30"		36"H x 78"W	24"w x 36"h				BOT. 48" A.F.F.	PROVIDE (1) TOTAL P11-022		SEE MPE DWGS FOR ADD. INFO.	SEE MPE DWGS FOR ADD. INFO.					
G01-T	TOILET ROOM		●	●	●		● (2)		● (2)		● (2)	●	●	● (2)	●							
G02-T	TOILET ROOM		●	●	●		● (2)		● (2)		● (2)	●	●	● (2)	●							
G03-T	TOILET ROOM		●	●	● (2)	●	●		● (2)		● (2)	●	●	● (2)	●	● (1)			●	●	●	●(10)
G04-T	TOILET ROOM		●	●	● (2)	●	●		● (2)		● (2)	●	●	● (2)	●				●	●	●	●(10)
G01-S	SHOWERS	●		●	●			● (2)				●				● (1)	● (1)	● (3)				
G02-S	SHOWERS	●		●	●			●								● (1)	● (1)	● (3)				
G05	CUSTODIAL									●												
B01-T	TOILET ROOM		●	●	●		● (2)		● (2)		● (2)	●	●	● (2)	●							
B02-T	TOILET ROOM		●	●	●		● (2)		● (2)		● (2)	●	●	● (2)	●							
B03-T	TOILET ROOM		●	●	● (2)	●	●		● (2)		● (2)	●	●	● (2)	●	● (1)			●	●	●	●(10)
B04-T	TOILET ROOM		●	●	● (2)	●	●		● (2)		● (2)	●	●	● (2)	●				●	●	●	●(10)
B01-S	SHOWERS	●		●	●			● (2)				●				● (1)	● (1)	● (3)				
B02-S	SHOWERS	●		●	●			● (2)								● (1)	● (1)	● (3)				
B05	CUSTODIAL									●												



12 A4.1 DETAIL: TRANSITION
TO GYM FLOOR
1-1/2"=1'-0"



13 A4.1 DETAIL: TRANSITION
CARPET TO EPOXY
1-1/2"=1'-0"



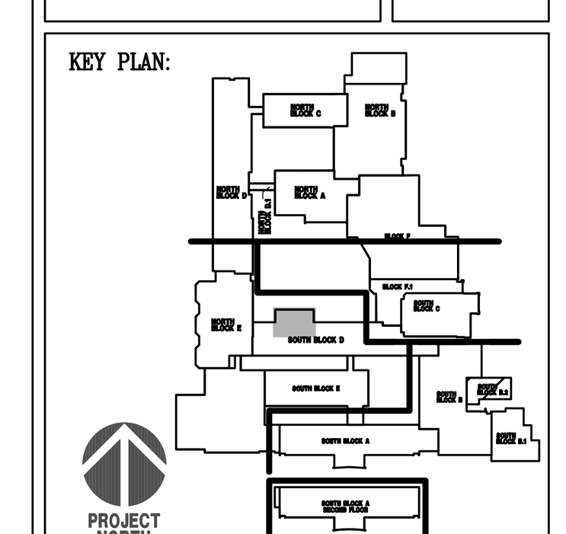
14 A4.1 DETAIL: REDUCER
EPOXY TO TERRAZZO
1-1/2"=1'-0"

DATE	No.	REVISION
01-12-24	1	ISSUED FOR BID

PROPOSED NORTH LOCKER ROOM RENOVATIONS
LENAPE HIGH SCHOOL
CHURCH AND HARTFORD ROADS, MEDFORD, NEW JERSEY 08055
LRHSD NO. REF21-35-8267

BLOCK NO. 201 — LOT NO. 1.01, 6.01
MEDFORD TOWNSHIP — BURLINGTON COUNTY
BOYS LOCKER ROOM AREAS

KEY PLAN:



THE DESIGN COLLABORATIVE
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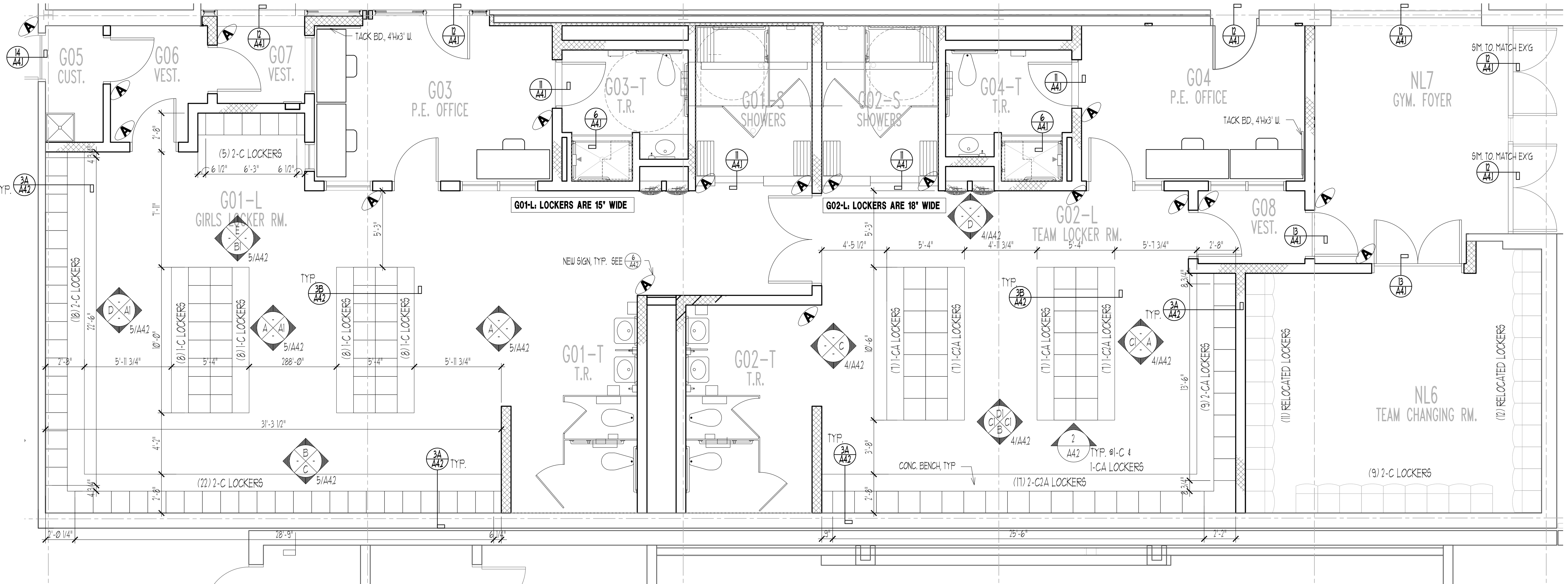
Drew C. Dingler, AIA, President
Linda M. Vivenzi, AIA, Secretary/Treasurer

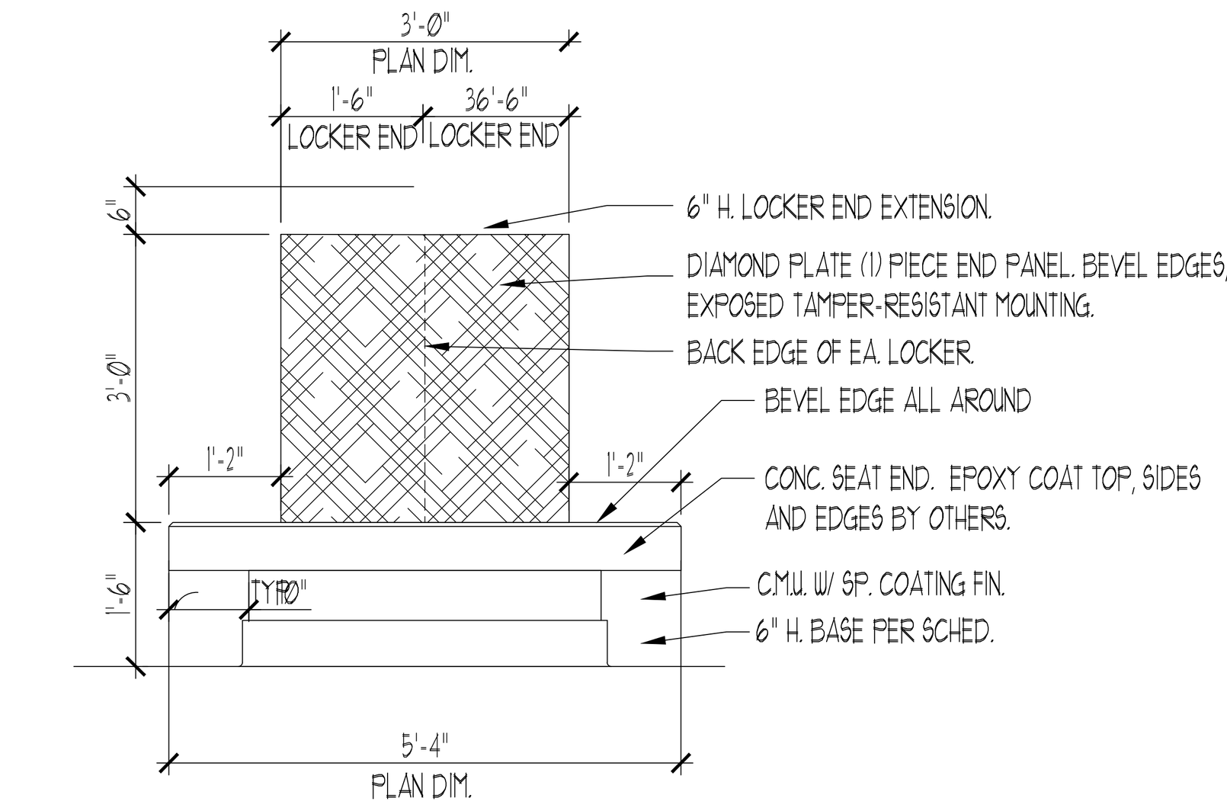
SCALE:	AS NOTED	DRAWN BY:	DCD
COMM. No.	8267	CHECKED BY:	DCD
DATE:	12-12-23		

SHEET TITLE: ENLARGED T.R. PLANS & DETAILS

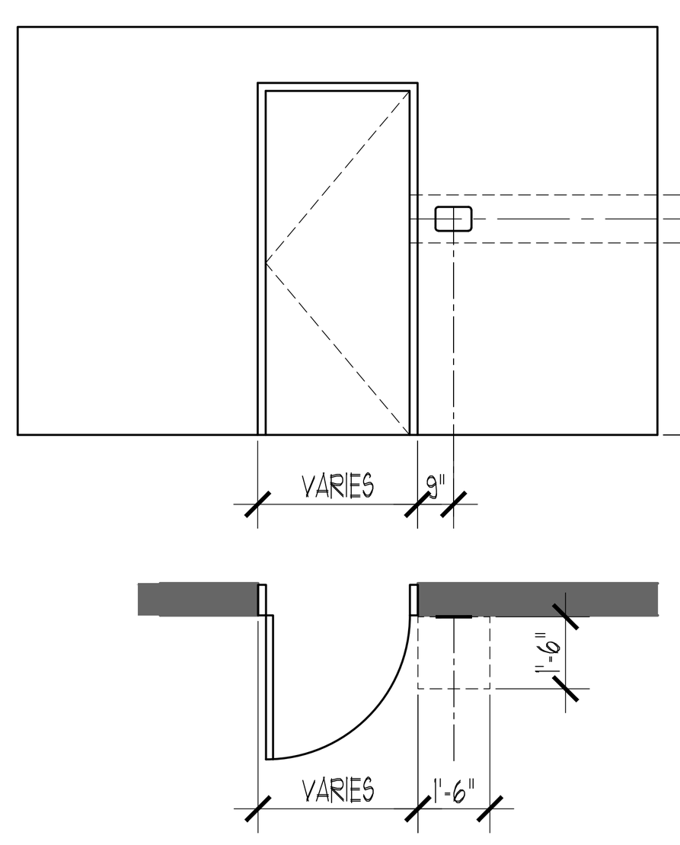
SHEET No.: A4.1

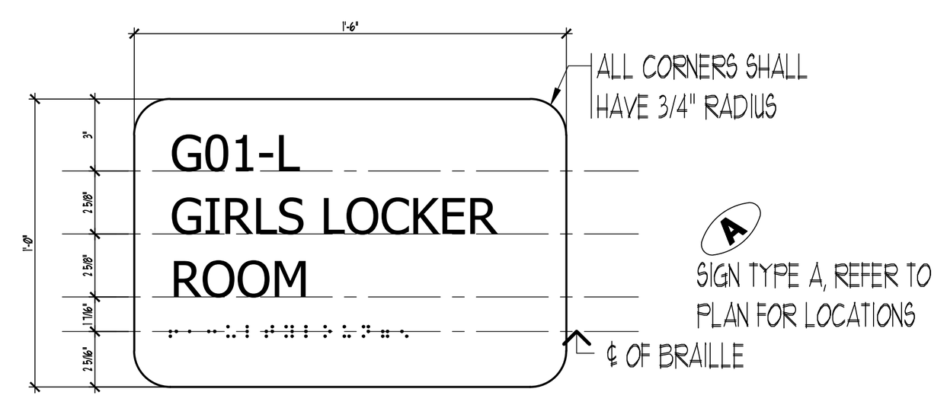


1 / A4.2 **ENLARGED PLAN — GIRL'S LOCKER ROOM** 1/4"=1'-0"



2 / A4.2 **TYP. ELEV. — ISLAND LOCKER END** 1/2"=1'-0"





NOTE: COLOR, FONT AND SIGN FINISH TO MATCH EXISTING BUILDING SIGNAGE.

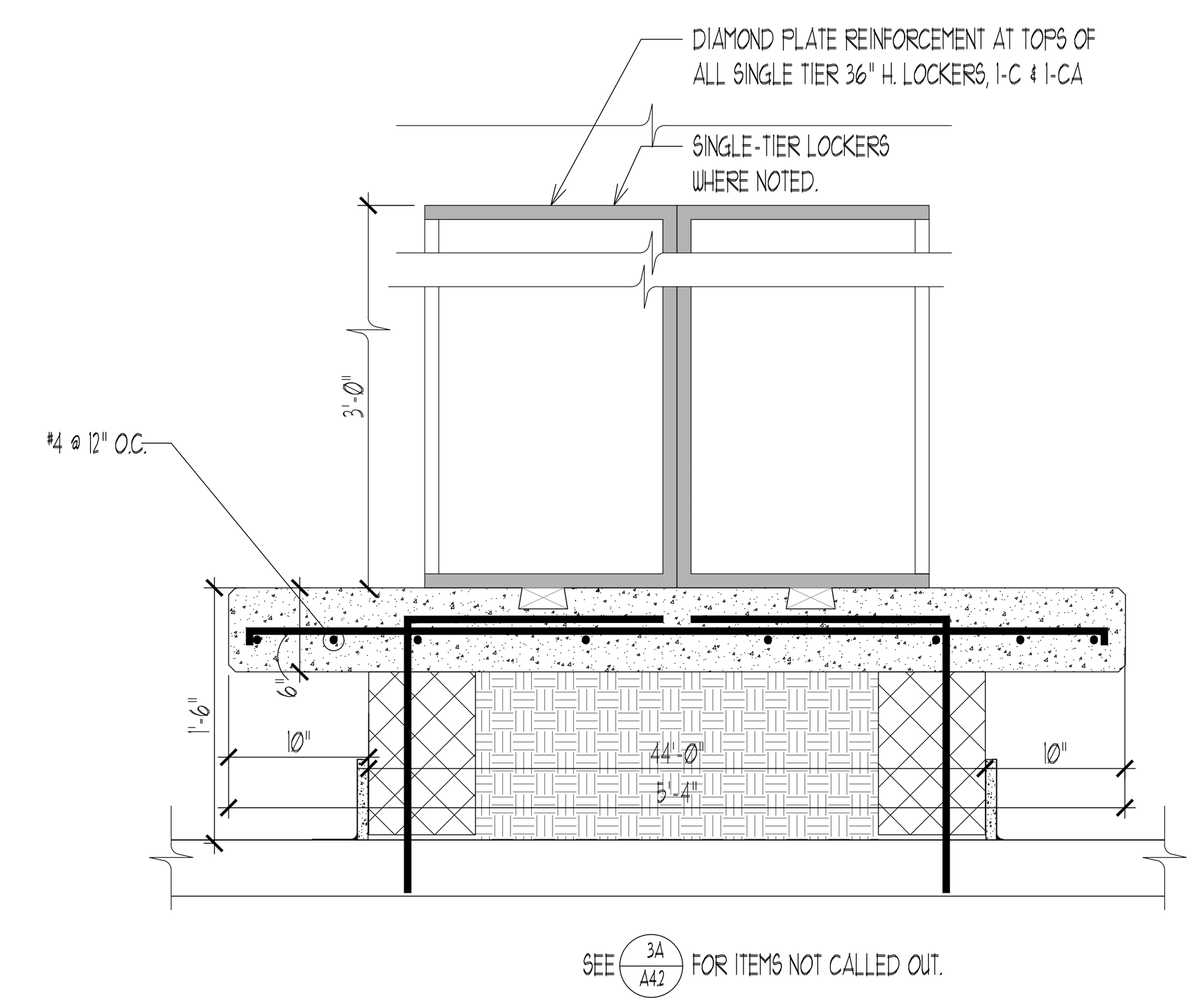
GENERAL NOTES FOR SIGNAGE SUBMITTALS:

1. SUBMIT PRODUCT DATA INCLUDING MANUFACTURER'S CONSTRUCTION DETAILS RELATIVE TO MATERIALS, DIMENSIONS OF INDIVIDUAL COMPONENTS, PROFILES, AND FINISHES FOR EACH TYPE OF SIGN INDICATED WITHIN THE DETAILS ABOVE.
2. SUBMIT SHOP DRAWINGS FOR THE FABRICATION AND ERECTION OF SIGNS. SHOP DRAWINGS SHALL INCLUDE PLANS, ELEVATIONS, AND LARGE-SCALE SECTIONS OF TYPICAL MEMBERS AND OTHER COMPONENTS. SHOW ANCHORS, GROUNDS, REINFORCEMENT, ACCESSORIES, LAYOUT, AND INSTALLATION DETAILS (WHETHER OR NOT THE SIGN CONTRACTOR PERFORMS INSTALLATION OF SIGNS).

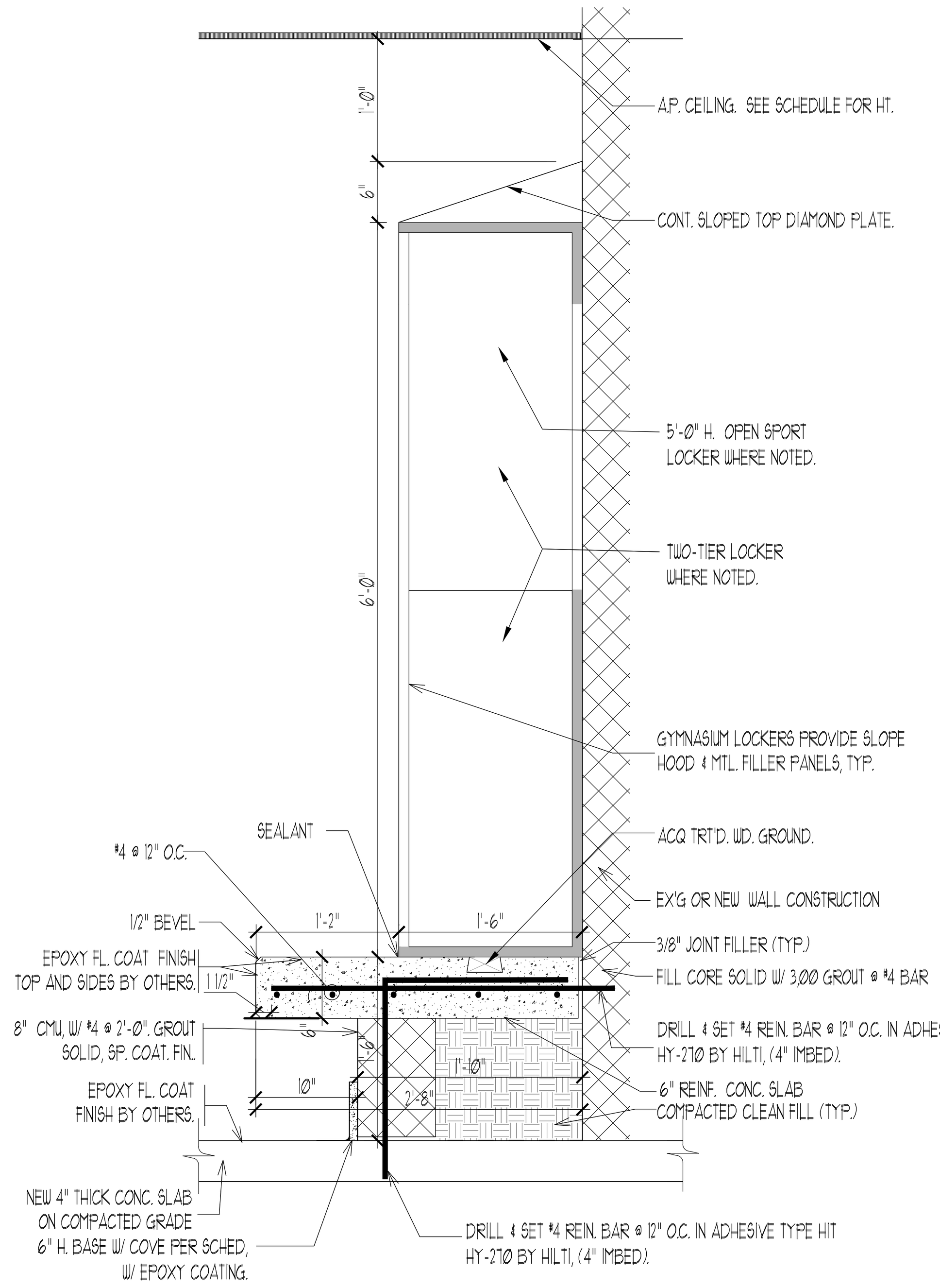
GENERAL NOTES FOR INTERIOR SIGNAGE:

1. LETTERS AND NUMBERS ON SIGN SYSTEM SHALL HAVE THE FOLLOWING:
   A. WIDTH-TO-HEIGHT RATIO OF BETWEEN 3:5 AND 1:1
   B. STROKE WIDTH-TO-HEIGHT RATIO OF BETWEEN 1:5 AND 1:10
   C. CONTRAST IN VALUE WITH THE SIGN BACKGROUND UTILIZING LIGHT LETTERS ON A DARK BACKGROUND OR DARK LETTERS ON A LIGHT BACKGROUND.
   D. MATTE FINISH ON A MATTE FINISH BACKGROUND.
2. CHARACTERS ON SIGNS SHALL BE:
   A. RAISED FROM THE SIGN FACE AT LEAST 1/32"
   B. BE BETWEEN 5/8" AND 2" HIGH
   C. BE BLOCK TYPE OR SANS SERIF
   D. BE ALL CAPITAL LETTERS
   E. BE ACCOMPANIED BY GRADE II BRAILLE WITH A DOMED OR ROUNDED SHAPE
3. CHARACTERS AND GRADE II BRAILLE ARE TO BE INTEGRAL WITH THE SIGN FACE, NOT SEPARATELY ADHERED TO THE SIGN FACE, APPLIED AS A SEPARATE SURFACE, OR RECESSED INTO THE SIGN. TACTILE LETTERS AND NUMBERS MUST BE A MINIMUM OF 5/8" HIGH, AND A MAXIMUM OF 2" HIGH. LETTERS AND NUMBERS MUST BE RAISED A MINIMUM OF 1/32" FROM THE SIGN FACE.
4. ALL CORNERS SHALL BE RADIUSED 3/4"

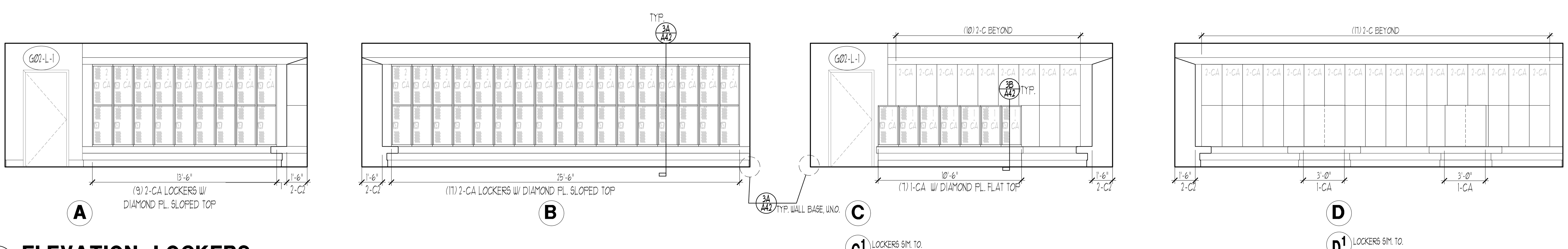
6 / A4.2 **SIGNAGE — TYP. CONDITIONS** N.T.S.



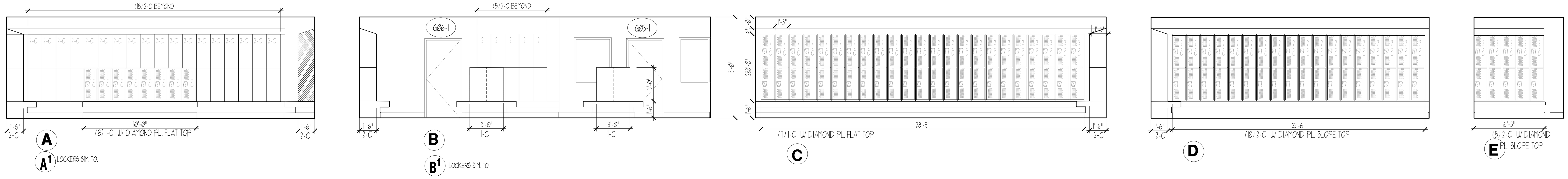
3B / A4.2 **SECTION — LOCKER SEATS & BASES** 1"=1'-0"



3A / A4.2 **SECTION — LOCKER SEATS & BASES** 1"=1'-0"



4 / A4.2 **ELEVATION: LOCKERS — G02-L: TEAM LOCKER ROOM** 1/4"=1'-0"



5 / A4.2 **ELEVATION: LOCKERS — G01-L: P.E. LOCKER RM.** 1/4"=1'-0"

DATE	No.	REVISION
01-12-24	1	ISSUED FOR BID

BLOCK NO. 201 — LOT NO. 1.01, 6.01

PROPOSED NORTH LOCKER ROOM RENOVATIONS

BOYS LOCKER ROOM AREAS

LENAPE HIGH SCHOOL

CHURCH AND HARTFORD ROADS, MEDFORD, NEW JERSEY 08055

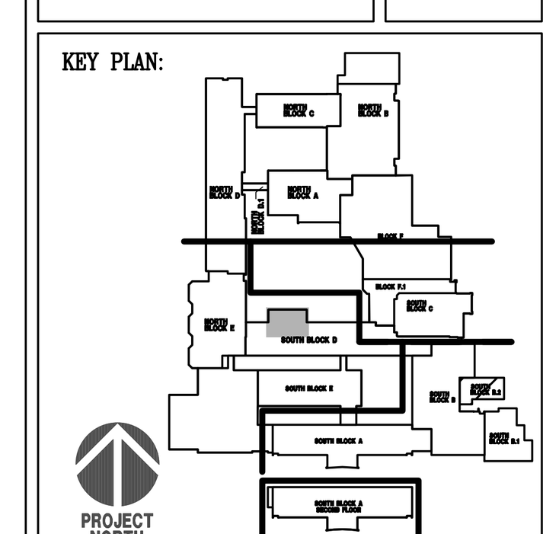
LRHSD NO. REF21-35-8267

MEDFORD TOWNSHIP — BURLINGTON COUNTY

Drew C. Dingler, AIA, President
New Jersey LIC.# 21AI01088800

Linda M. Viventi, AIA, Secretary/Treasurer
New Jersey Architect LIC.# 21AI01090200; P.P. LIC.# 33LI00653000

KEY PLAN:



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CAPE MAY COURT HOUSE, NEW JERSEY 08210
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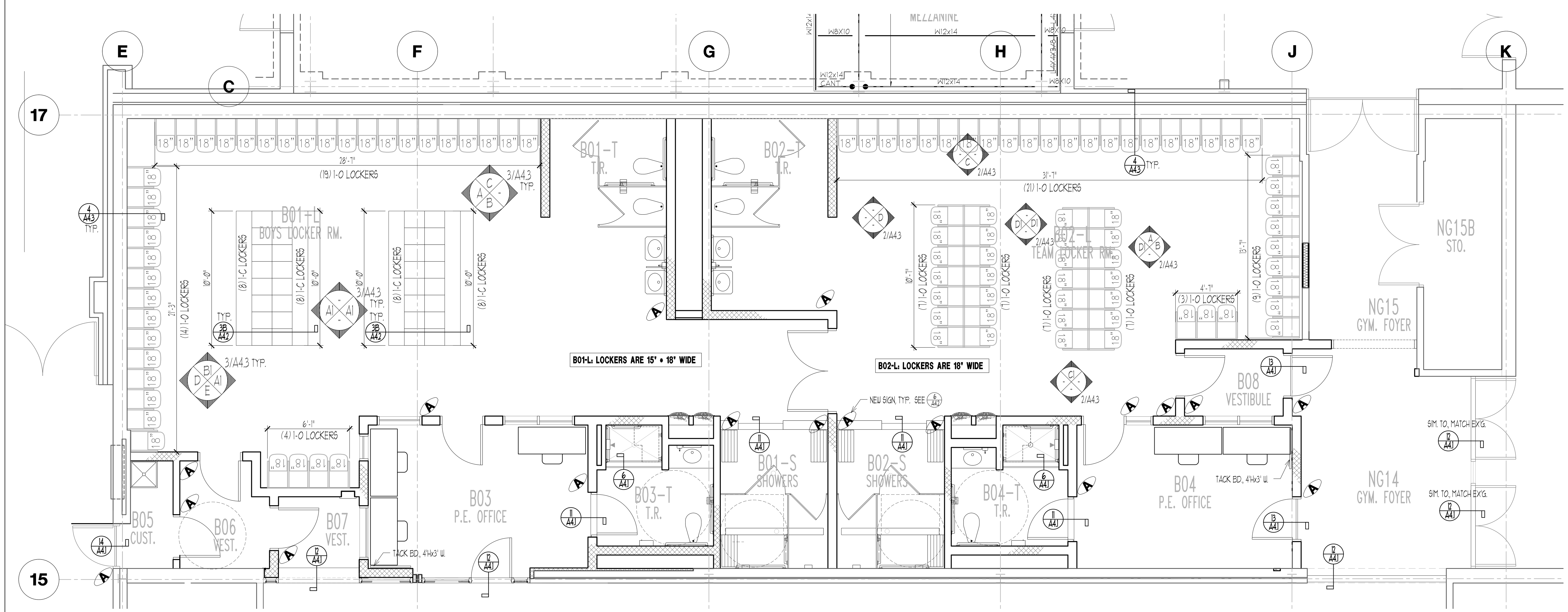
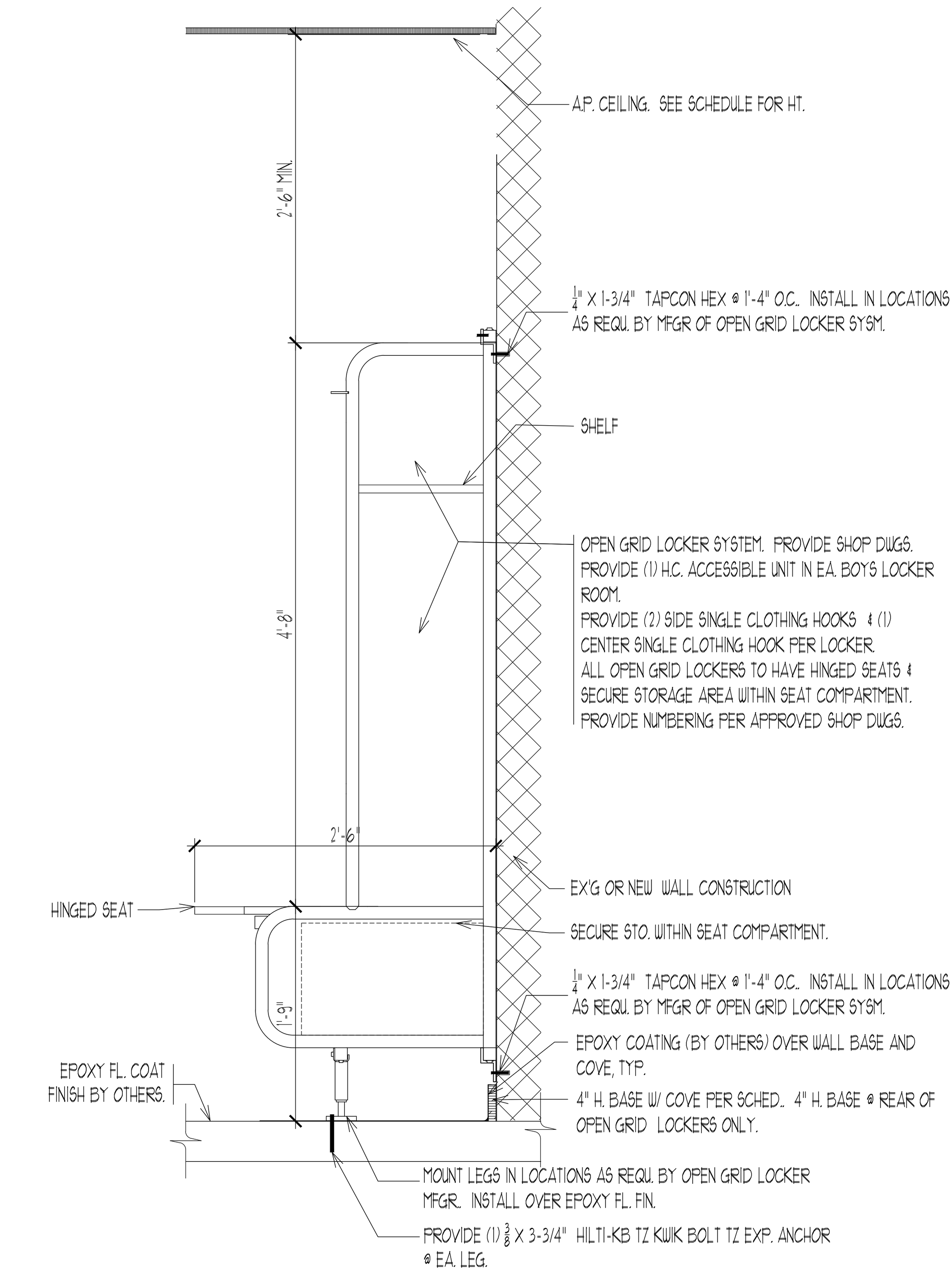
SCALE:	AS NOTED	DRAWN BY:	DCD
COMM. No.	8267	CHECKED BY:	DCD
DATE:	12-12-23		

SHEET TITLE: LOCKER PLANS AND DETAILS

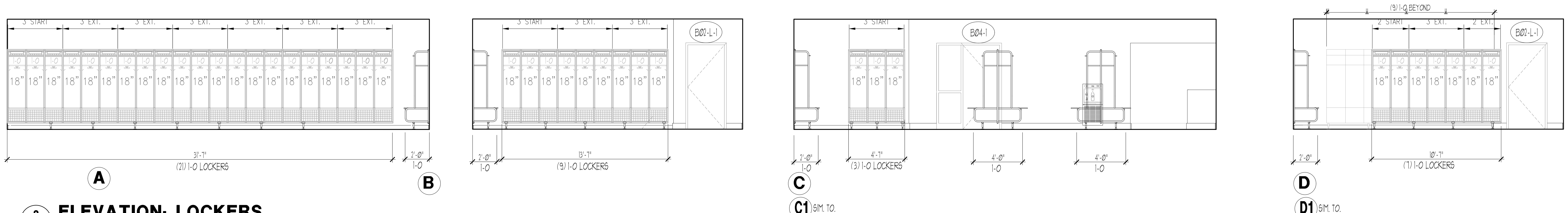
SHEET No.: A4.2



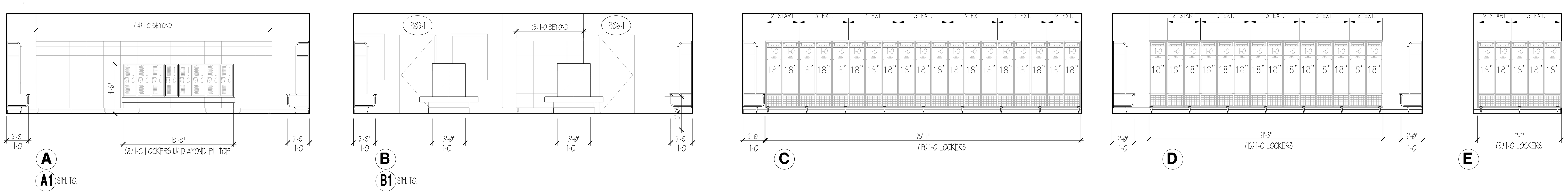
1 / A4.3 ENLARGED PLAN — BOY'S LOCKER ROOM 1/4"=1'-0"



4 / A4.3 SECTION — LOCKER SEATS & BASES 1"=1'-0"



2 / A4.3 ELEVATION: LOCKERS — B02-L 1/4"=1'-0"



3 / A4.3 ELEVATION: LOCKERS — B01-L 1/4"=1'-0"

DATE	No.	REVISION
01-12-24	1	ISSUED FOR BID

PROPOSED NORTH LOCKER ROOM RENOVATIONS
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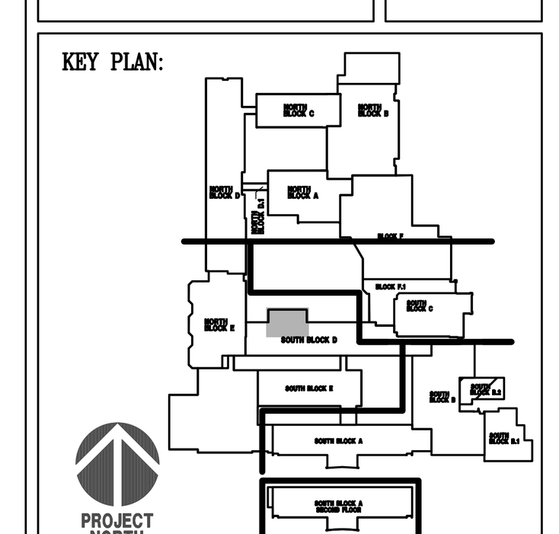
CHURCH AND HARTFORD ROADS, MEDFORD, NEW JERSEY 08055
LRHSD NO. REF21-35-8267

BLOCK NO. 201 — LOT NO. 1.01, 6.01
MEDFORD TOWNSHIP — BURLINGTON COUNTY

KEY PLAN:



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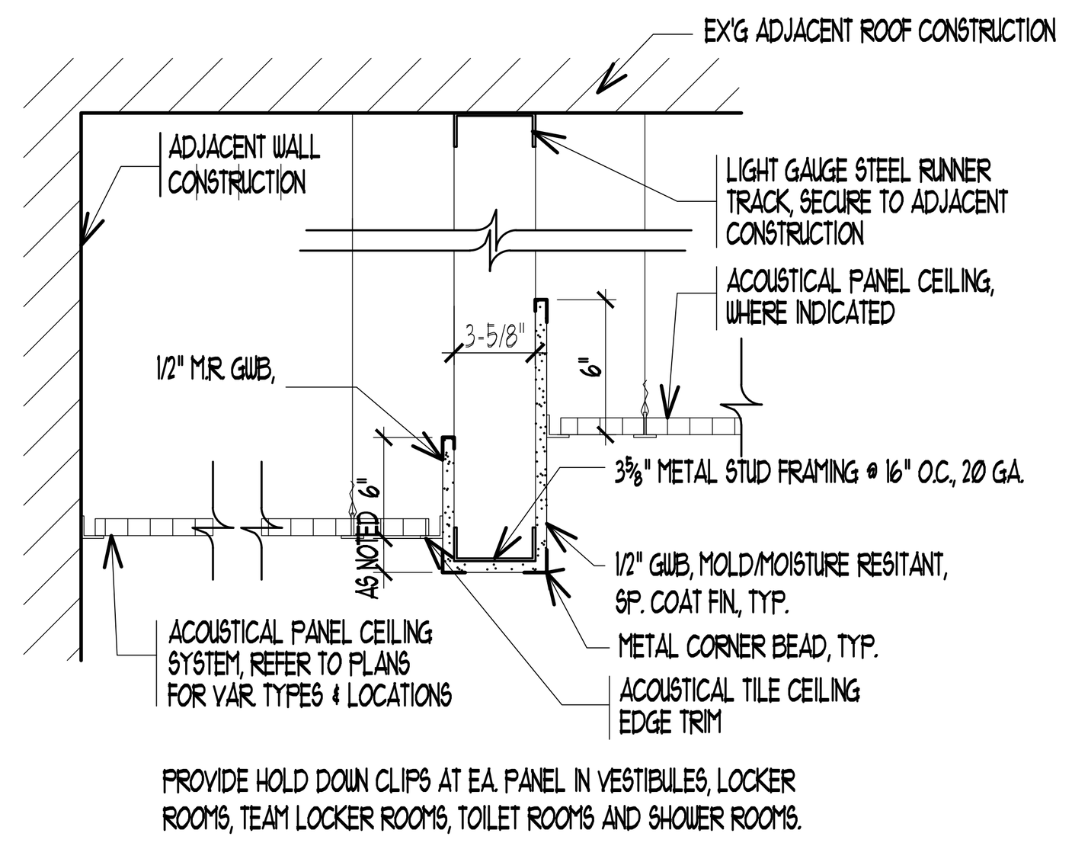
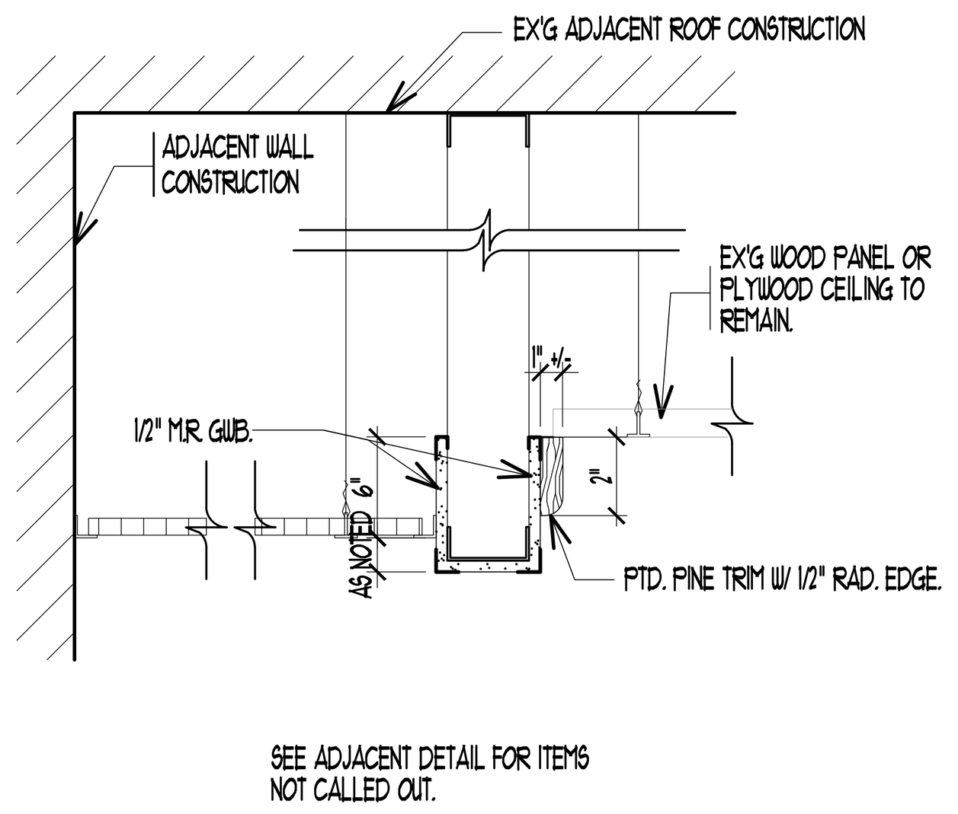
SCALE:	AS NOTED	DRAWN BY:	DCD
COMM. No.	8267	CHECKED BY:	DCD
DATE:	12-12-23		

SHEET TITLE: LOCKER PLANS AND DETAILS

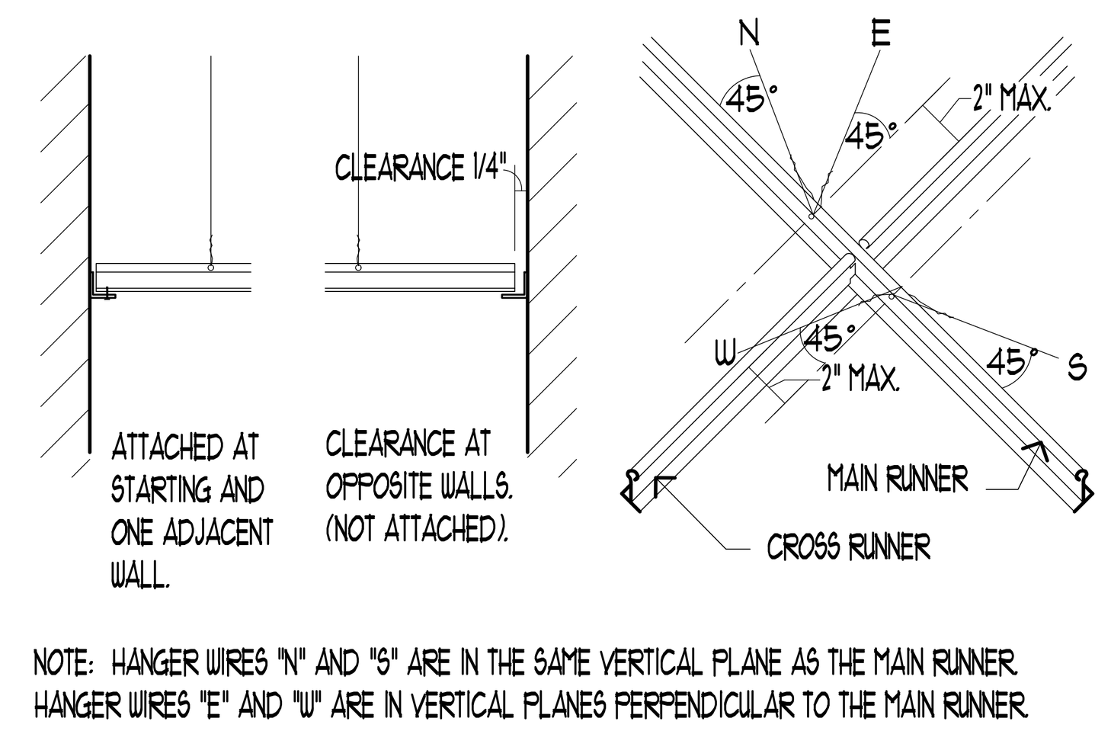
SHEET No.: A4.3



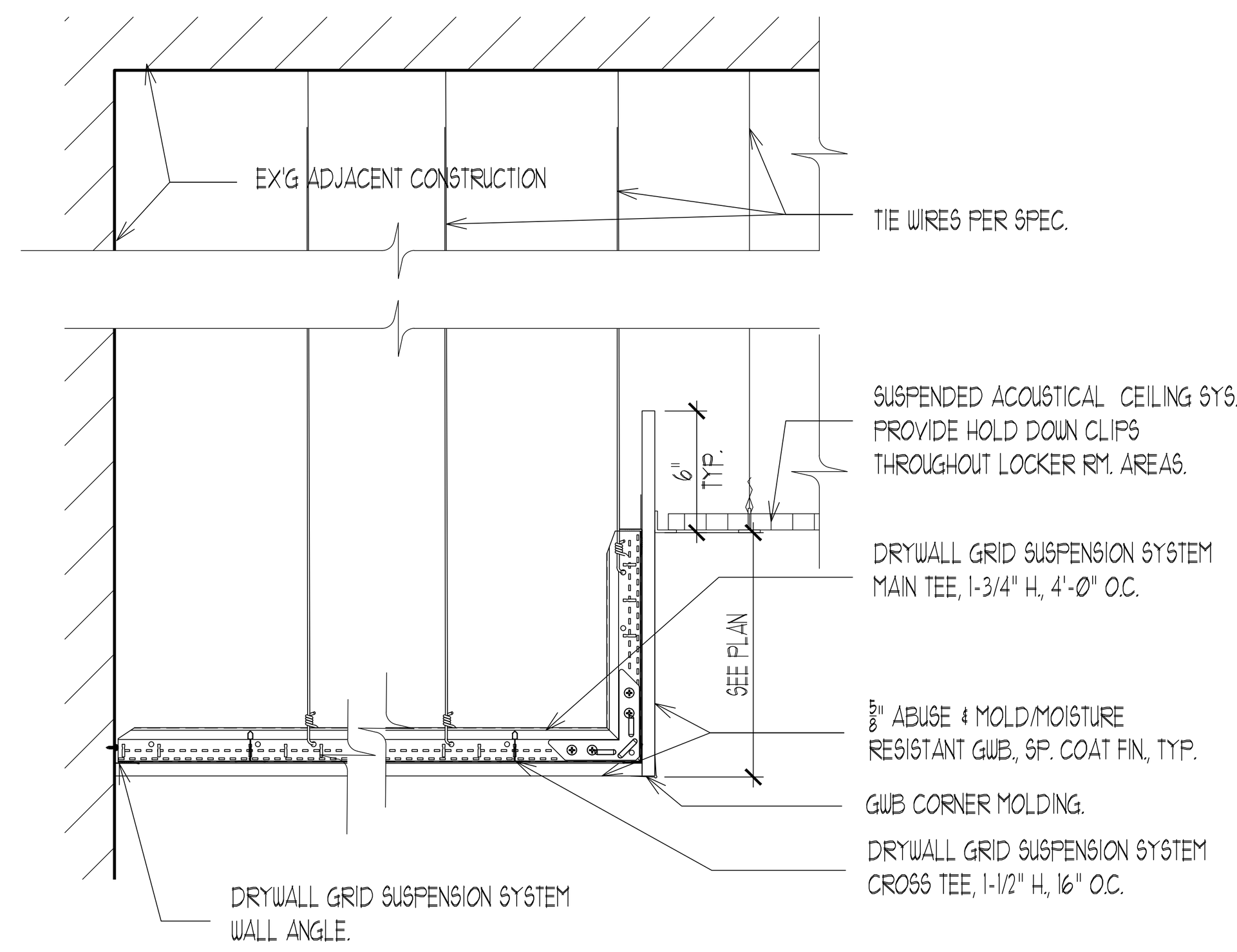
3 / A5.1 — DETAIL: TYP. SOFFIT N.T.S.



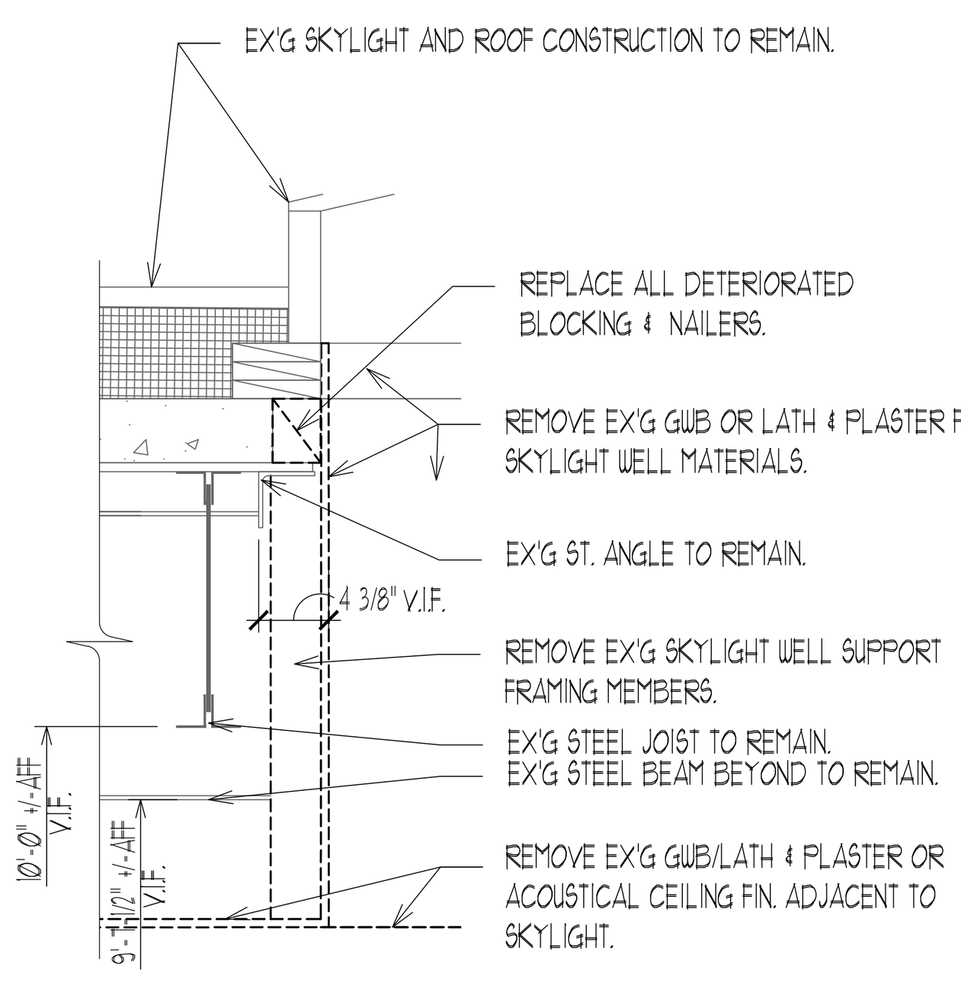
4 / A5.1 — DETAIL: SOFFIT @ EX'G CEILING N.T.S.



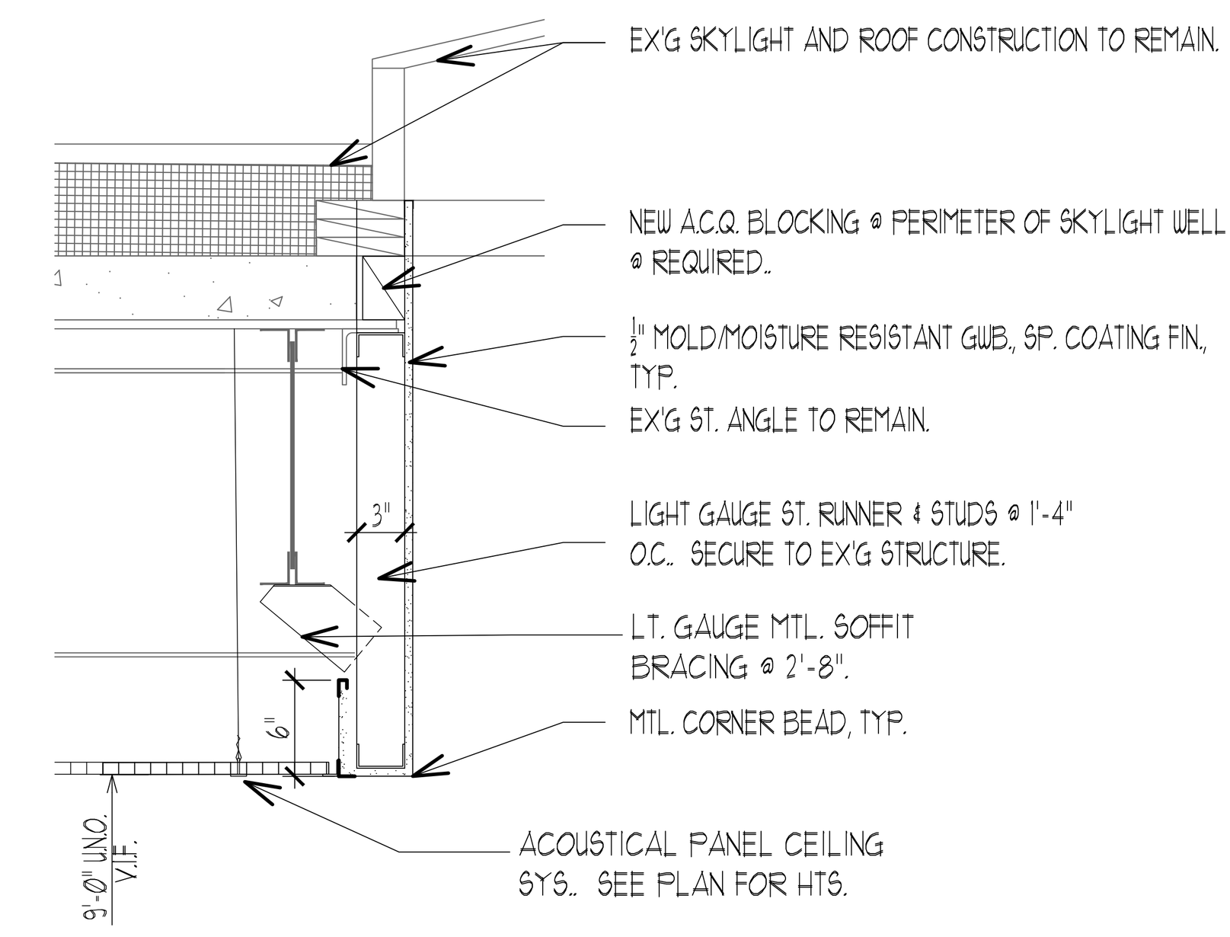
5 / A5.1 — DETAIL: ACOUSTIC. CEILING SEISMIC RESTRAINT N.T.S.



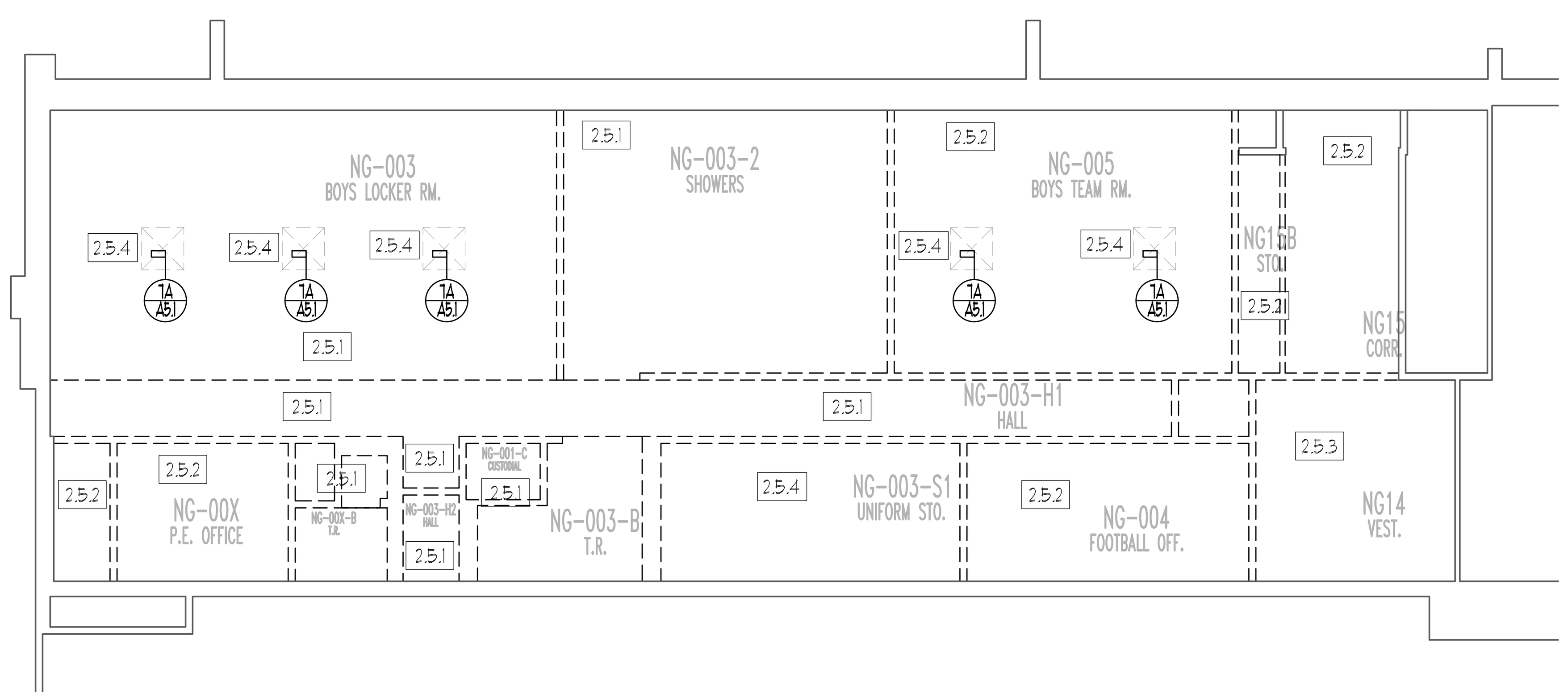
6 / A5.1 — DETAIL: SUSPENDED GWB GRID SHOWER AREAS 1-1/2"=1'-0"



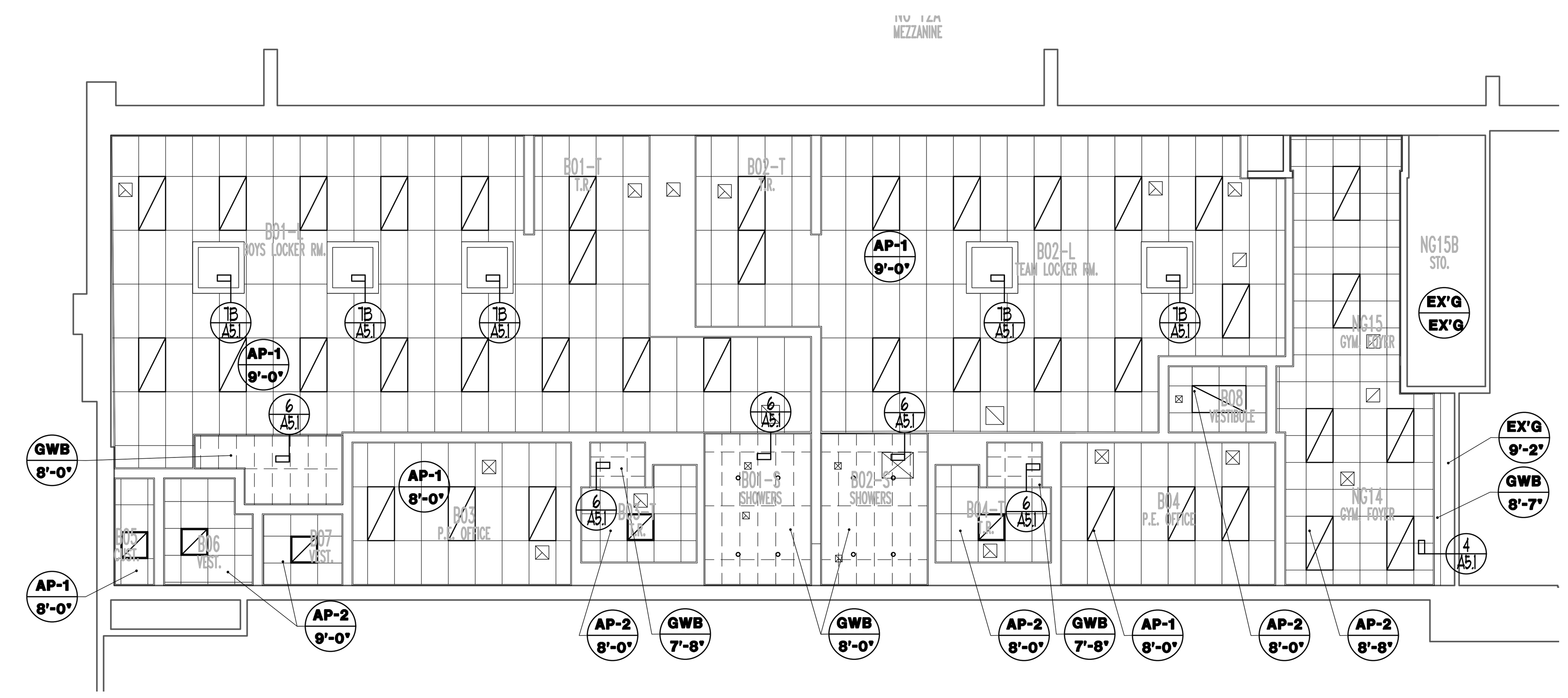
7A / A5.1 — DETAIL: DEMO. @ SKYLIGHT 1"=1'-0"



7B / A5.1 — DETAIL: GWB @ SKYLIGHT 1"=1'-0"



2A / A5.1 — R.C.P.: DEMO. BOYS LOCKER ROOM 1/8"=1'-0"



2B / A5.1 — R.C.P.: PROP. BOYS LOCKER ROOM 1/8"=1'-0"

DRAWING KEY NOTES

DEMOLITION NOTES:

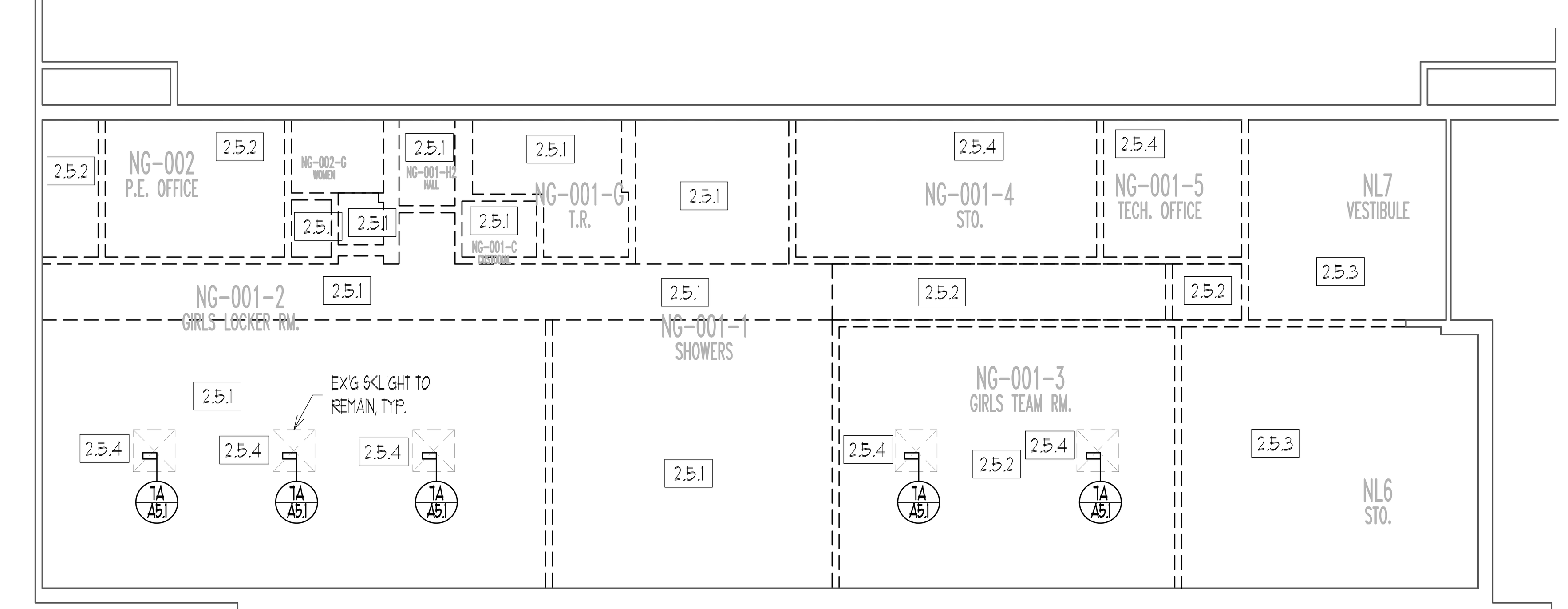
2.5.1	CEILINGS: REMOVE HARD SURFACE CEILINGS THROUGHOUT, INCLUDING UNEXPOSED HARD CEILING. INCLUDE ENTIRE SYSTEM INCLUDING FINISH SURFACE, SUPORTS AND HANGERS. INCLUDE REMOVAL OF ALL VENTS, DIFFUSERS AND SIM. HVAC DEVICES, AND ANY ELECTRICAL SYSTEMS AND DEVICES.
2.5.2	CEILINGS: REMOVE 2'X2' AND 2'X4' ACOUSTICAL CEILING SYSTEMS IN THEIR ENTIRETY INCLUDING FINISH PANELS, GRID, SUSPENSION MEMBERS, AND CEILING MOUNTED LIGHTING, FIXTURES AND EQUIPMENT. INCLUDE REMOVAL OF ALL VENTS, DIFFUSERS AND SIM. HVAC DEVICES, AND ANY ELECTRICAL SYSTEMS AND DEVICES.
2.5.3	CEILINGS: REMOVE EX'G CEILING AS REQUIRED TO INTEGRATE NEW AND EX'G CONSTRUCTION.
2.5.4	SKYLIGHTS: EX'G SKYLIGHTS & SKYLIGHT CURBS TO REMAIN., TYP. FOR (5) EA. LOCKER ROOM. REMOVE EX'G SOFFIT AND FIN. SURFACES AT SKYLIGHT WELL.
2.5.4	CEILINGS: EX'G EXPOSED CONSTRUCTION. PREPARE FOR NEW FINISH IN AREAS PROPOSED TO BE EXPOSED.

KEY - REFLECTED CEILING PLAN

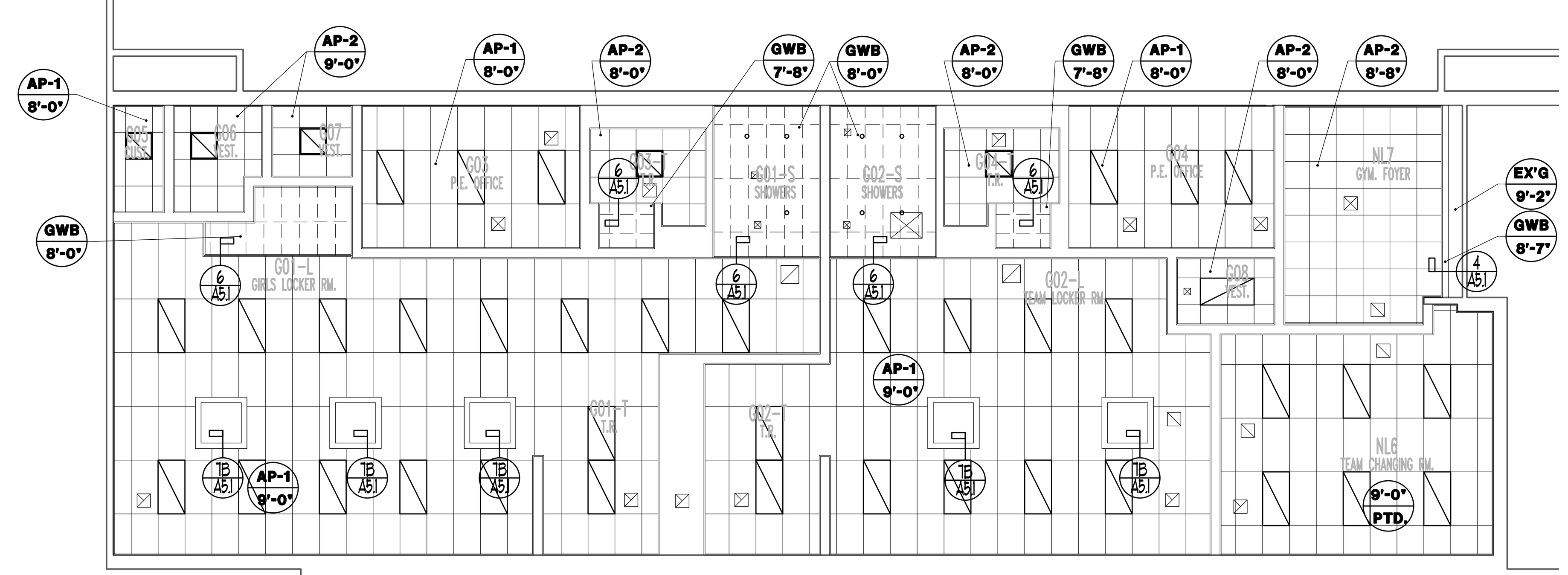
CEILING TILE SIZES

AP-1 = 24" x 48"
AP-2 = 24" x 24"
AP-3 = 24" x 24" MOISTURE RESISTANT

- 1' x 4' LIGHT FIXTURE
- 2' x 4' LIGHT FIXTURE
- 2' x 2' LIGHT FIXTURE
- SURFACE MOUNTED LIGHT FIXTURE
- EXIT LIGHTING
- SD — SMOKE DETECTOR
- SP — SPEAKER
- SUPPLY / RETURN AIR CEILING DIFFUSER
- AC-# / 8'-0" — DESIGNATES CEILING FINISHES / DESIGNATES CEILING HEIGHT
- EXG. / EXG. — DESIGNATES CEILING FINISHES TO REMAIN, CEILING FINISHES ARE TO BE MAINTAINED AND PROTECTED. THE GENERAL CONSTRUCTION CONTRACTOR SHALL REPLACE ALL EXISTING CEILINGS DAMAGED BY CONSTRUCTION OF THEIR WORK INCLUDING THE DAMAGES RESULTING FROM WORK PERFORMED BY OTHER TRADES, TYPICAL
- AP-# / M-E. — DESIGNATES HEIGHT OF NEW ACOUSTICAL CEILING TILE / PANELS AND GRADE. TO MATCH EXISTING CEILING HEIGHT
- EXP. / PTD. — EXPOSED DECK OR STRUCTURE, TYPICAL / DESIGNATES PAINTED FINISH PER SPECIFICATION



1A / A5.1 — R.C.P.: DEMO. GIRLS LOCKER ROOM 1/8"=1'-0"



1B / A5.1 — R.C.P.: PROP. GIRLS LOCKER ROOM 1/8"=1'-0"

DATE	No.	REVISION
01-12-24	1	ISSUED FOR BID

BLOCK NO. 201 — LOT NO. 1.01, 6.01

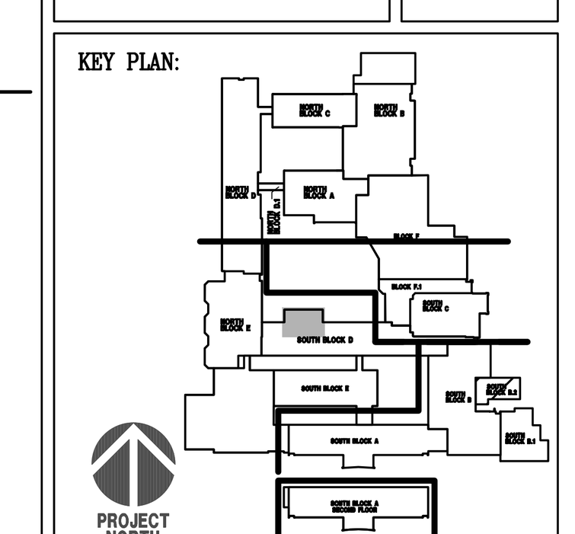
PROPOSED NORTH LOCKER ROOM RENOVATIONS
LENAPE HIGH SCHOOL
CHURCH AND HARTFORD ROADS, MEDFORD, NEW JERSEY 08055
LRHSD NO. REF21-35-8267

MEDFORD TOWNSHIP — BURLINGTON COUNTY

Linda M. Viventi, AIA, Secretary/Treasurer
New Jersey Architect LIC.# 21AI01090200; P.P. LIC.# 33LI00653000

Drew C. Dingler, AIA, President
New Jersey LIC.# 21AI01088800

KEY PLAN:



THE DESIGN COLLABORATIVE
ARCHITECTS AND PLANNERS, P.A.
1940 ROUTE 9 NORTH
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PHONE: 609 465 4111 FAX: 609 465 9358
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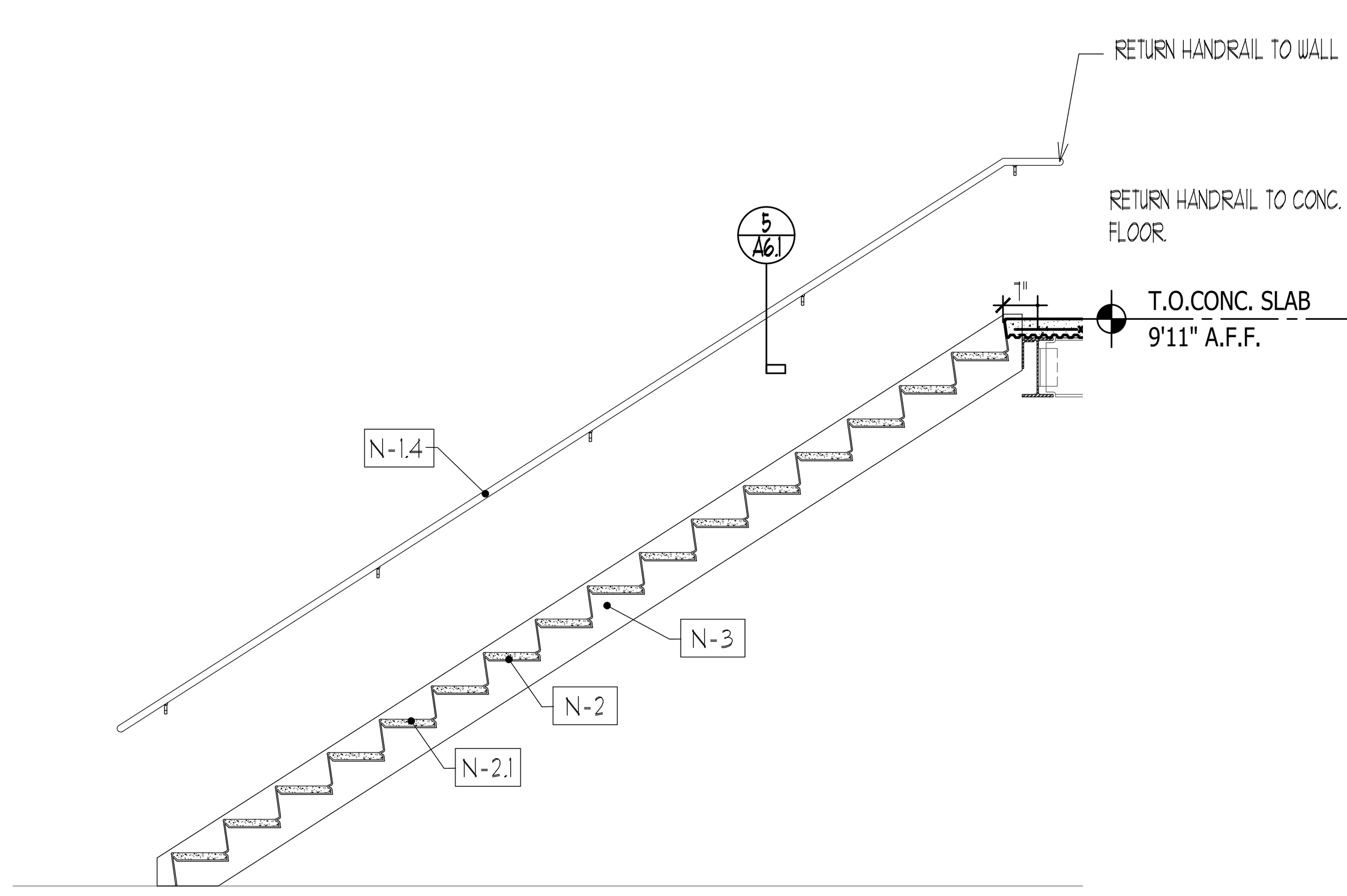
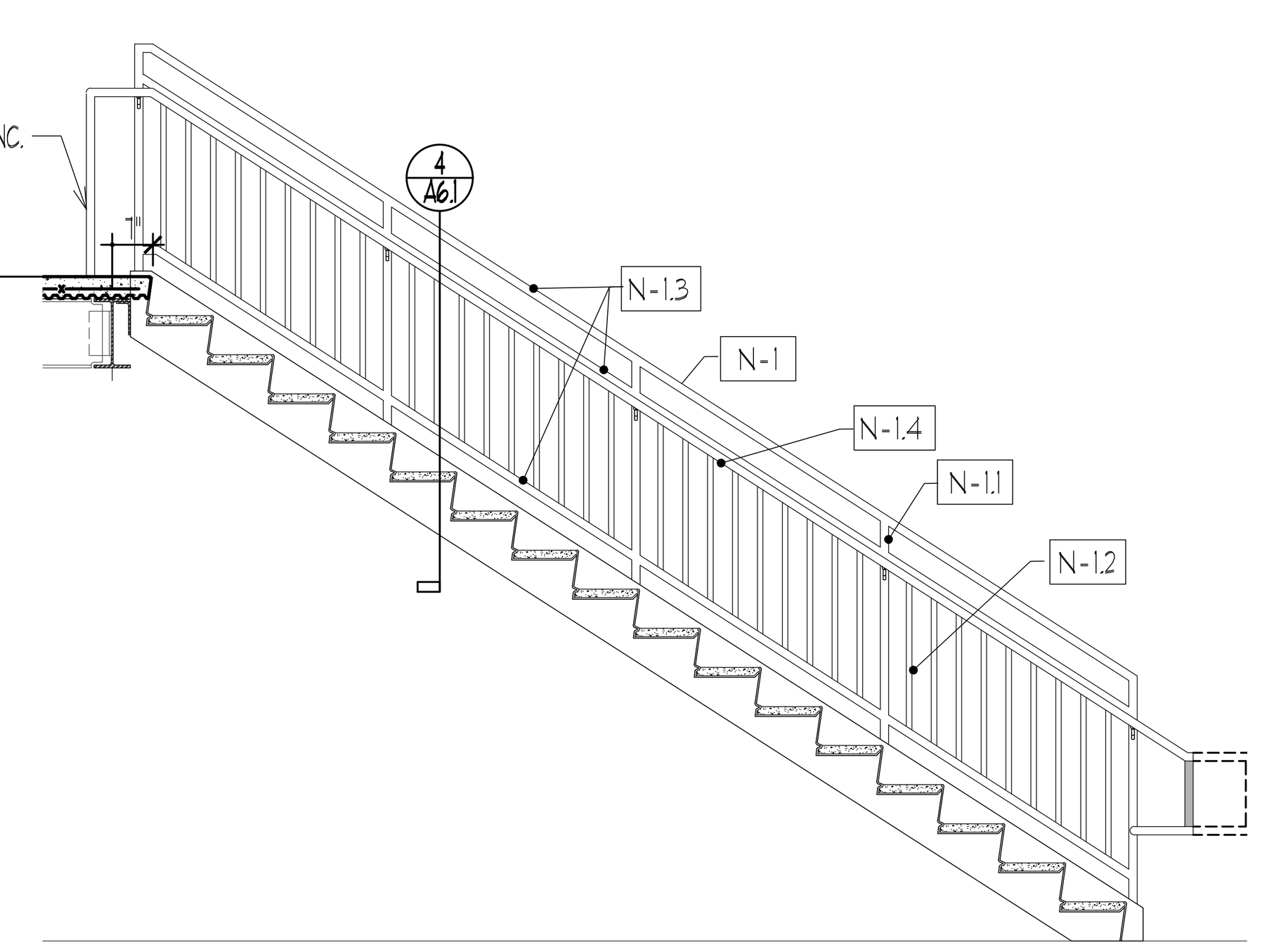
SCALE:	AS NOTED	DRAWN BY:	DCD
COMM. No.	8267	CHECKED BY:	DCD
DATE:	12-12-23		

SHEET TITLE: RCP

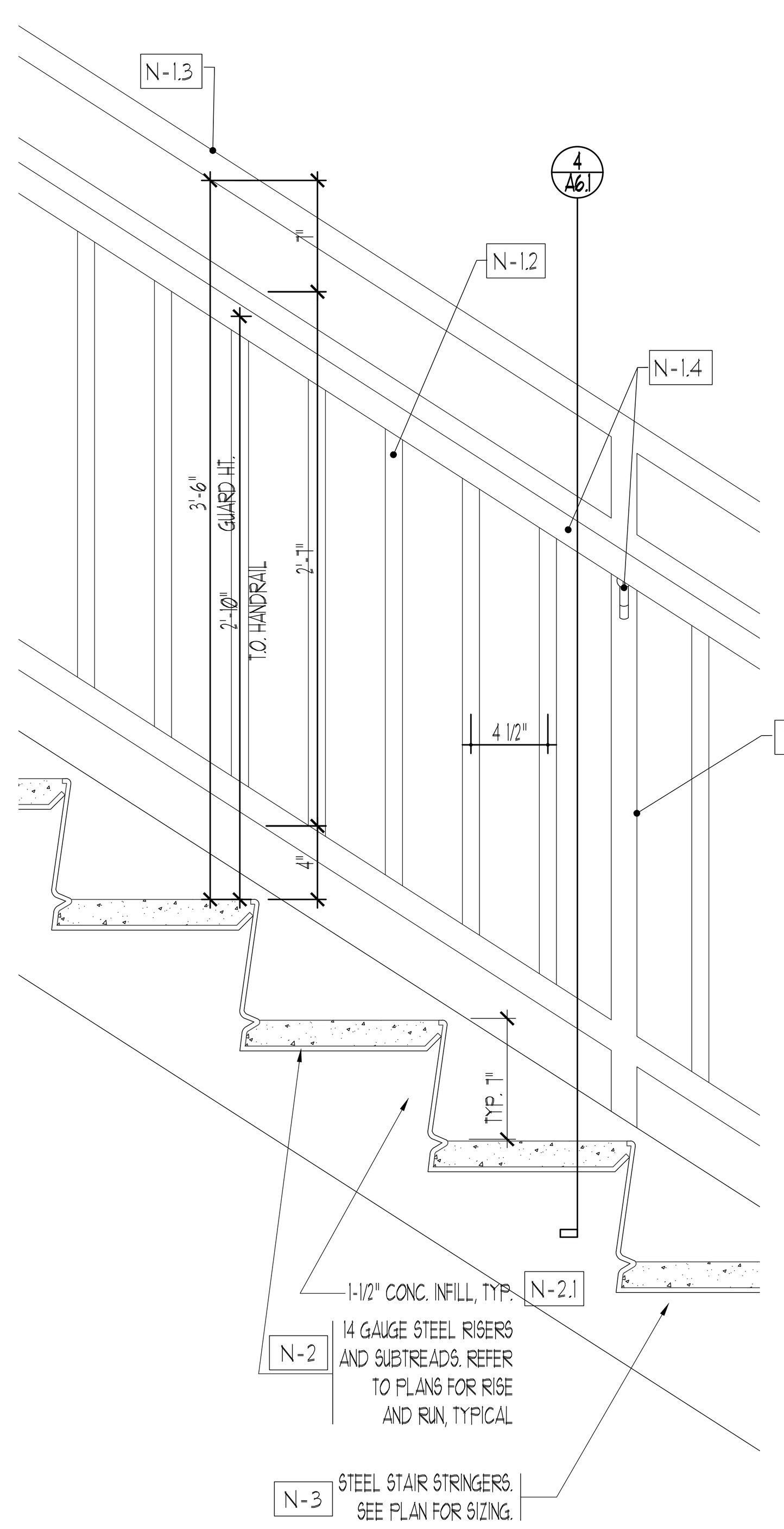
SHEET No.: A5.1



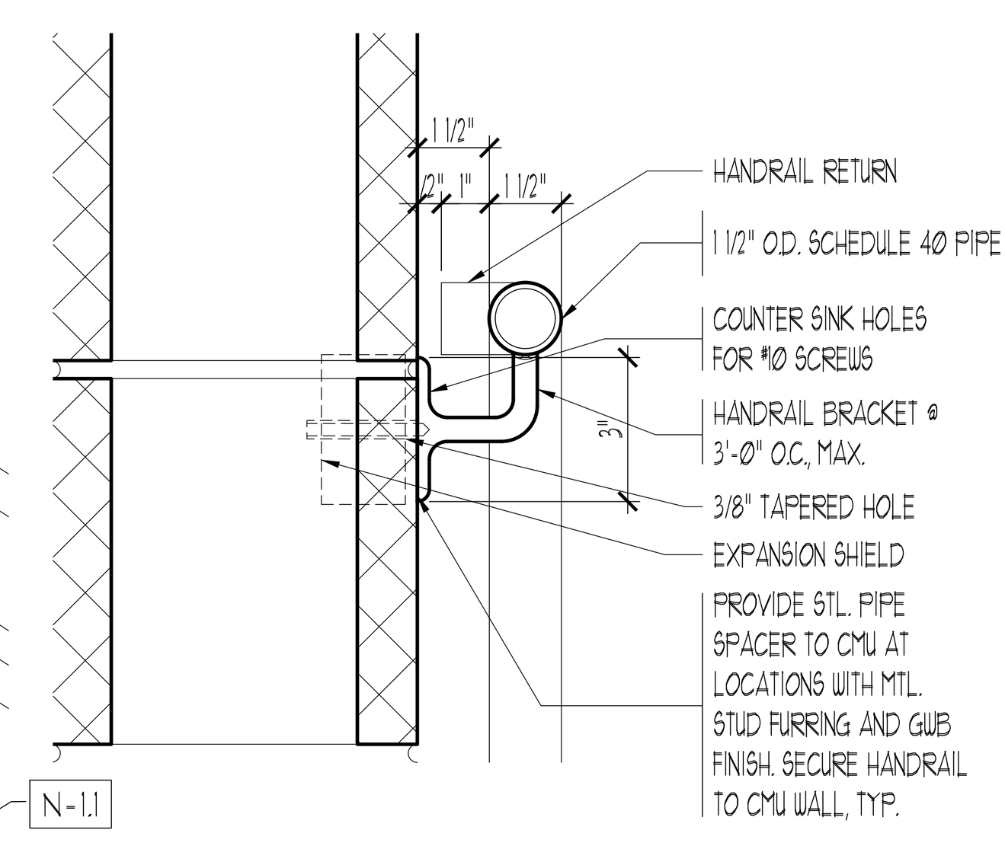
1A / A6.1 NG - ATHLETIC STORAGE STAIR SECTION 3/8"=1'-0"



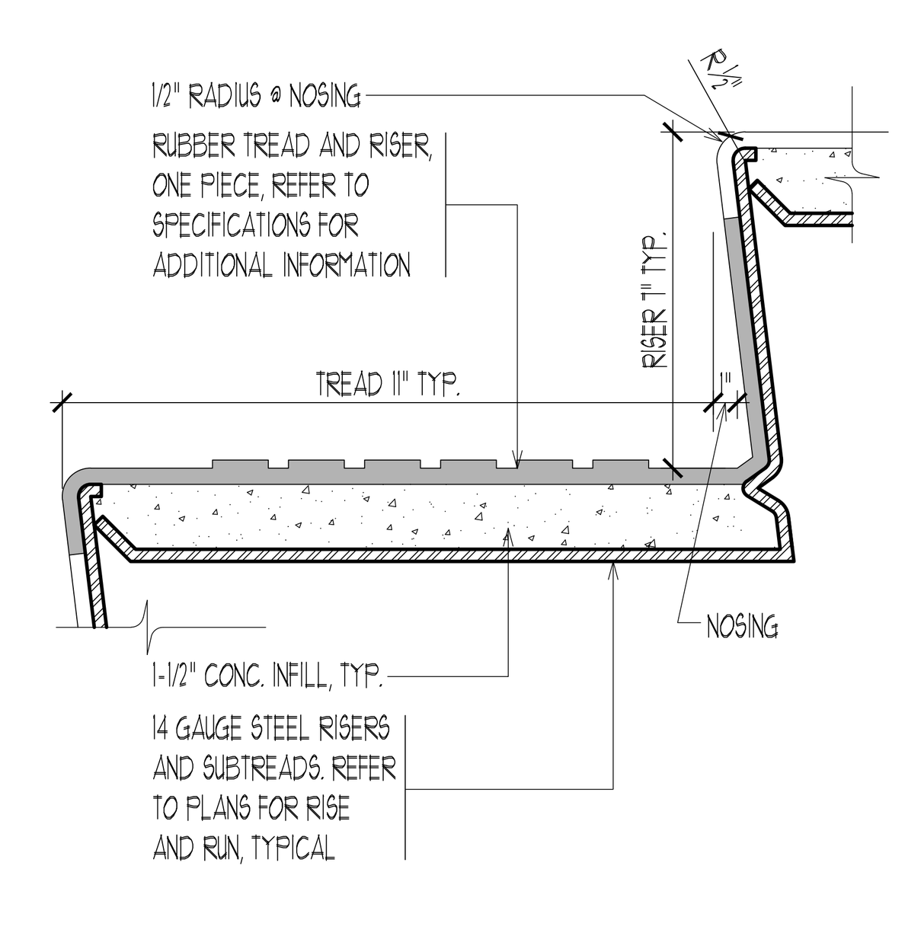
1B / A6.1 NG - ATHLETIC STORAGE STAIR SECTION 3/8"=1'-0"



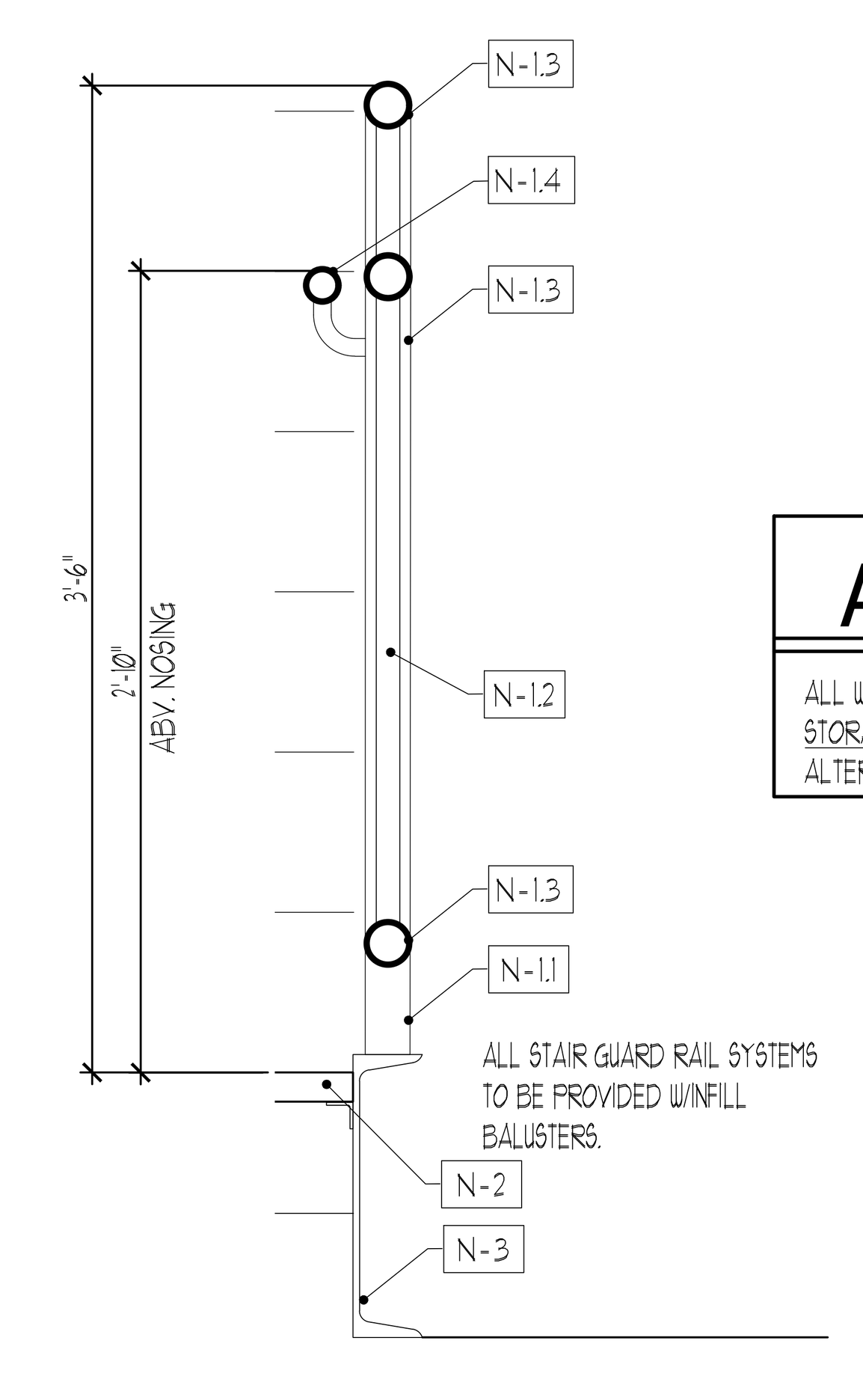
2 / A6.1 DETAIL: STAIR GUARD & RAIL 1-1/2"=1'-0"



5 / A6.1 DETAIL: TYP. STAIR HANDRAIL SUPPORT 3"=1'-0"



3 / A6.1 DETAIL: TYP. STAIR RISER & TREAD 3"=1'-0"



4 / A6.1 DETAIL: TYP. STAIR GUARD & RAIL 1-1/2"=1'-0"

NEW WORK NOTES - STAIR AND GUARDS

N-1	NEW STEEL GUARD AND HANDRAIL SYS. ALL STEEL MEMBERS TO BE PAINTED.
N-1.1	POSTS: 1-1/2" SCHEDULE 80 PIPE (1-15/16" OD), PTD.
N-1.2	BALUSTERS (PICKETS): 1" SQ. STEEL TUBE W/ LESS THAN 4" CLEAR, PTD.
N-1.3	GUARDS - TOP, MID. & BOT. RAIL: 1-1/2" SCH. 80 PIPE (1-15/16" OD), PTD.
N-1.4	HAND RAILING: 1-1/2" SCHEDULE 40 PIPE W/ 3/4" STEEL BENT ROD CONNECTION @ EA. POST, PTD.
N-2	STAIR METAL PAN TREADS AND RISERS, PTD.; ALL STEEL COMPONENTS WELDED
N-2.1	3,000 PSI CONCRETE FILL.
N-3	STAIR STRINGERS: C12x20.7, PTD.

ALTERNATE

ALL WORK ON THIS SHEET UTILIZED WITHIN ATHLETIC STORAGE NG-12 IS INCLUDED WITHIN THE SCOPE OF AN ALTERNATE.

DATE	No.	REVISION
01-12-24	1	ISSUED FOR BID

PROPOSED NORTH LOCKER ROOM RENOVATIONS
LENAPE HIGH SCHOOL
CHURCH AND HARTFORD ROADS, MEDFORD, NEW JERSEY 08055
LRHSD NO. REF21-35-8267
BLOCK NO. 201 — LOT NO. 1.01, 6.01
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Drew C. Dingler, AIA, President
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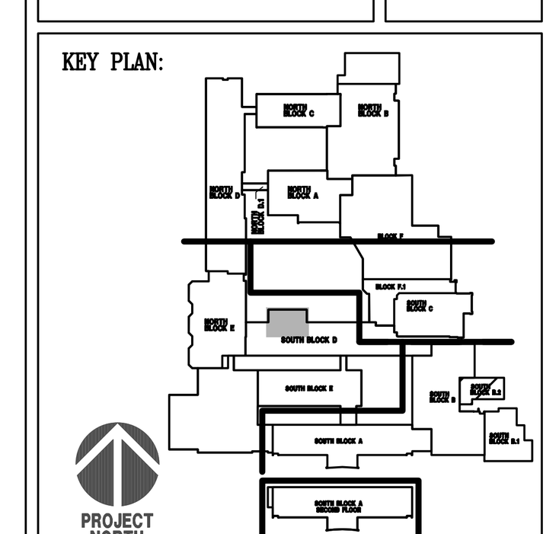
KEY PLAN:



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SCALE:	AS NOTED	DRAWN BY:	DCD
COMM. No.	8267	CHECKED BY:	DCD
DATE:	12-12-23		

SHEET TITLE: VERTICAL CIRCULATION

SHEET No.: A6.1

PROJECT CODES

APPLICABLE CODES

INTERNATIONAL BUILDING CODE – NJ EDITION 2018
REHABILITATION SUBCODE – NJAC 5:23-6
NATIONAL ELECTRIC CODE 2020

MISC. DWG. SYMBOLS

- POINT OF CONNECTION
- EQUIPMENT SYMBOL/PLAN NUMBER
  EQUIPMENT NUMBER OR FLOW (GPM,CFM,ETC.)/PLAN DRAWING NUMBER
- KEYED NEW WORK NOTE

SYMBOLS

- DUPLEX RECEPTACLE, 125V, 20A – MOUNTED 18" A.F.F. UNLESS OTHERWISE NOTED
- JUNCTION BOX
- S – SINGLE POLE SWITCH – MOUNTED 42" AFF UNLESS NOTED OTHERWISE
- S_3 – THREE WAY SWITCH – MOUNTED 42" AFF UNLESS NOTED OTHERWISE
- S_D – DUAL TECH WALL MOUNTED OCCUPANCY SENSOR
- BRANCH CIRCUIT WIRING – CONCEALED
- HOME RUN TO PANELBOARD
- UNFUSED SAFETY SWITCH
- 30/15 – FUSED SAFETY SWITCH – SWITCH & FUSE SIZE AS INDICATED
- TRANSFORMER
- MOLDED CASE CIRCUIT BREAKER
- FUSE
- M – MOTOR – 5 INDICATES MOTOR HORSE POWER
- DELTA CONNECTION
- GROUNDED WYE CONNECTION
- CONNECTION TO MAIN METAL WATER PIPING
- GFP – GROUND FAULT CURRENT PROTECTION
- M – METER FROM UTILITY
- 208/120V PANELBOARD – SURFACE MOUNTED
- 480/277V PANELBOARD – SURFACE MOUNTED
- TVSS – TRANSIENT VOLTAGE SURGE SUPPRESSOR – AS SPECIFIED
- CONNECTION TO GROUND (GND), PER APPLICABLE SECTION OF ARTICLE 250, N.E.C.
- FACP – FIRE ALARM CONTROL PANEL, WALL MOUNTED
- MOD – MONITOR MODULE, SINGLE INPUT
- CM – CONTROL MODULE, SINGLE POLE 120V AC RATED CONTACT
- KIRK KEY INTERLOCK
- S – SMOKE DETECTOR
- H – HEAT DETECTOR
- C – CARBON MONOXIDE DETECTOR
- FIRE ALARM COMBINATION HORN/STROBE
- FIRE ALARM STROBE
- F – FIRE ALARM MANUAL PULL STATION
- PROVIDE, INSTALL, TERMINATE AND TEST SINGLE CAT 6 WIRE TO BE RUN TO DOUBLE GANG SURFACE MOUNTED BACK BOX W/ SINGLE GANG FLANGE W/ SURFACE MOUNTED WIREMOLD 700 SERIES RACEWAY RAN UP TO 6" ABOVE DROP CEILING
- $\blacktriangledown_2$ – PROVIDE, INSTALL, TERMINATE AND TEST SINGLE CAT 6 WIRE TO BE RUN TO DOUBLE GANG SURFACE MOUNTED BACK BOX W/ SINGLE GANG FLANGE W/ SURFACE MOUNTED WIREMOLD 700 SERIES RACEWAY RAN UP TO 6" ABOVE DROP CEILING. DEVICES TO BE INSTALLED ON TEACHER ISLAND ADJACENT TO RECEPTACLES. COORDINATE EXACT LOCATION WITH ARCH/OWNER
- WAP – WIRELESS ACCESS POINT
- GFCI RECEPTACLE IN WEATHERPROOF HOUSING AND LIGHT FIXTURE WITH ASSOCIATED SWITCH MOUNTED ON UNISTRUT

ABBREVIATIONS

A.F.F.	ABOVE FINISHED FLOOR
ADC	ABOVE DROP CEILING
C., CND	CONDUIT
B.C.	BELOW CEILING
DISC.	DISCONNECT
DWG	DRAWING
EX	EXISTING
ER	EXISTING TO BE REMOVED
EWC	ELECTRIC WATER COOLER
ETR	EXISTING TO REMAIN
F.P.C.	FIRE PROTECTION CONTRACTOR
G., GND	GROUND
GEN	GENERATOR
GFCI	GROUND FAULT CIRCUIT INTERRUPTER
K.E.C.	KITCHEN EQUIPMENT CONTRACTOR
KW	KILOWATTS
KVA	KILOVOLT AMPERES
N.E.C.	NATIONAL ELECTRIC CODE
PVC	POLYVINAL CHLORIDE CONDUIT, SCHEDULE 40
R	REMOVE
RE	RELOCATE
SW	SWITCH
TVSS	TRANSIENT VOLTAGE SURGE SUPRESSOR
U.O.N.	UNLESS OTHERWISE NOTED
UG, U/G	UNDERGROUND
W/	WITH
WG	WIRE GUARD
WP	WEATHERPROOF
PH	PHASE
V	VOLT
4W	FOUR WIRE
25A	25 AMPERES

ELECTRICAL DEMOLITION NOTES

1. NOTES AND GRAPHIC REPRESENTATIONS SHALL NOT LIMIT THE EXTENT OF DEMOLITION REQUIRED. CONTRACTOR SHALL VISIT THE SITE, CAREFULLY EXAMINE EXISTING CONDITIONS AND SHALL PERFORM ALL DEMOLITION REQUIRED TO ACHIEVE THE FINAL DESIGN INTENT AS REQUIRED BY THE CONTRACT DOCUMENTS. EXTENT OF ALL DEMOLITION WORK SHALL BE COORDINATED WITH THE OWNER & ENGINEER.
2. ALL WORK REQUIRED TO REMAIN IN SERVICE BUT INTERFERING WITH THE ALTERATIONS SHALL BE RELOCATED AND RECONNECTED USING MATERIALS AND STANDARDS OF THIS CONTRACT.
3. ANY EQUIPMENT AND WIRING TO BE REMOVED SHALL BE DE-ENERGIZED PRIOR TO ANY DEMOLITION WORK.
4. EQUIPMENT INDICATED TO BE REMOVED SHALL BE TAKEN FROM THE SITE AND DISPOSED OF IN ACCORDANCE WITH APPLICABLE LAWS AND ENVIRONMENTAL REGULATIONS. EQUIPMENT REQUIRED TO BE TURNED OVER TO THE OWNER SHALL BE PLACED IN A MUTUALLY ACCEPTABLE LOCATION.
5. PROCEDURE FOR FEEDERS AND BRANCH CIRCUITS TO BE RE-USED – REMOVE CONDUIT AND WIRING TO LOCATIONS WHICH AVOID CONFLICTS WITH NEW WORK. INSTALL JUNCTION BOXES, TAPE OFF CONDUCTORS AND IDENTIFY WITH PANEL AND CIRCUIT NUMBER.
6. ALL WORK SHALL BE PROPERLY IDENTIFIED AFTER DEMOLITION. UPDATE ALL PANEL SCHEDULES TO REFLECT EQUIPMENT AND CIRCUIT REMOVALS.

GENERAL ELECTRICAL NOTES

1. SOME LEGEND SYMBOLS AND ELECTRICAL PROJECT NOTES MAY NOT BE USED. SEE PLANS FOR APPLICABLE DEVICES.
2. ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE 2020 EDITION OF THE NATIONAL ELECTRICAL CODE (NEC) AND THE SPECIFICATION.
3. ALL CIRCUIT BREAKERS SERVING HVAC EQUIPMENT SHALL BE UL LISTED AS 'HACR'.
4. THE DRAWINGS ARE DIAGRAMMATIC. EXACT LOCATION OF EQUIPMENT, WIRING AND RACEWAYS SHALL BE DETERMINED BY CONTRACTOR SUBJECT TO ENGINEER APPROVAL.
5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE ELECTRICAL CHARACTERISTICS OF ALL NEW EQUIPMENT, MOTORS, ETC. BEFORE INSTALLING CABLING AND RACEWAY. IF THERE ARE ANY DISCREPANCIES BETWEEN THE ACTUAL RATING OF EQUIPMENT AT THE SITE AND THE DRAWINGS, THEN THE ENGINEER SHALL BE NOTIFIED.
6. ALL EMPTY CONDUITS SHALL HAVE A PULL STRING INSTALLED.
7. THE CONTRACTOR SHALL COORDINATE HIS WORK WITH THE WORK OF ALL OTHER CONTRACTORS ON SITE, IN ACCORDANCE WITH THE REQUIREMENTS OF THE CONTRACT.
8. ALL PANELS, WIRING DEVICES, BOXES, AND ENCLOSURES LOCATED OUTDOORS SHALL BE NEMA 3R. ALL PANELS, WIRING DEVICES, BOXES, AND ENCLOSURES LOCATED INDOORS SHALL BE NEMA 1.
9. ALL FUSES IN DISCONNECT SWITCHES SHOWN SHALL BE CLASS RK-1, FAST ACTING, UNLESS RECOMMENDED OTHERWISE BY THE EQUIPMENT SUPPLIER/MANUFACTURER.
10. THE ELECTRICAL CONTRACTOR TO PROVIDE MOUNTING SUPPORTS FOR ALL DISCONNECT SWITCHES. USE P1000 UNISTRUT FOR ALL INDOOR SUPPORTS AND GALVANIZED P1000 UNISTRUT FOR ALL OUTDOOR SUPPORTS.
11. ALL RACEWAYS PENETRATING FIRE RATED PARTITIONS, WALLS, AND CEILINGS SHALL BE SEALED USING APPROVED FIRE RATED SEALANT TO MATCH THE REQUIRED WALL FIRE RATING.
12. THE ELECTRICAL CONTRACTOR SHALL SECURE FROM OTHER CONTRACTORS ON THE PROJECT: SHOP DRAWINGS TO VERIFY CHARACTERISTICS OF ALL EQUIPMENT TO BE WIRED. IF THE CONTRACTOR FINDS DISCREPANCIES BETWEEN THE SHOP DRAWINGS AND THE ELECTRICAL PLANS, THE ELECTRICAL CONTRACTOR SHALL NOTIFY THE ENGINEER PROMPTLY, THE CONTRACTOR SHALL BE RESPONSIBLE FOR CORRECTIONS TO THE ELECTRICAL INSTALLATION IF THE DRAWING REVIEW IS NOT COMPLETED BY THE CONTRACTOR.
13. THE CONTRACTOR SHALL SUBMIT TO THE OWNER: CERTIFICATES OF INSPECTION FOR THE ELECTRICAL INSTALLATION FROM AN APPROVED INSPECTION AGENCY UPON COMPLETION OF ELECTRICAL WORK.
14. THE ENTIRE ELECTRICAL SYSTEM SHALL BE TESTED FOR PROPER GROUNDING AND OPERATION. TEST SHALL VERIFY THAT THE SYSTEM HAS NO SHORT CIRCUITS, OPENS, OVERLOADS, OR PANEL IMBALANCES. THE CONTRACTOR SHALL FURNISH ALL LABOR, MATERIALS AND TEST INSTRUMENTS. ALL EQUIPMENT AND WIRING SYSTEMS SHALL BE GROUNDED IN ACCORDANCE WITH THE REQUIREMENTS OF THE NATIONAL ELECTRICAL CODE.
15. PRIOR TO FINAL ACCEPTANCE OF THE ELECTRICAL WORK, THE ELECTRICAL CONTRACTOR SHALL SUBMIT TO THE OWNER A WRITTEN STATEMENT GUARANTEEING ALL EQUIPMENT, MATERIALS, AND WORKMANSHIP FOR A PERIOD OF ONE YEAR FROM THE DATE OF ACCEPTANCE OF THE PROJECT. UPON WRITTEN NOTICE TO THE CONTRACTOR DURING THE WARRANTY PERIOD, THE CONTRACTOR NO EXPENSE TO THE OWNER, SHALL REPAIR OR REPLACE ALL DEFECTIVE MATERIALS OR WORKMANSHIP.
16. ALL WORK SHALL BE INSTALLED SO AS TO BE READILY ACCESSIBLE FOR OPERATION MAINTENANCE, AND REPAIR. MINOR DEVIATIONS FROM THE PLANS MAY BE MADE TO ACCOMPLISH THIS, SUBJECT TO THE APPROVAL OF THE ENGINEER.
17. ALL MATERIALS AND EQUIPMENT FURNISHED FOR THIS PROJECT SHALL BE NEW, LISTED, AND APPROVED BY UL.
18. THE CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMITS, INSPECTIONS, LICENSES AND PAY UTILITY COMPANY FEES WHERE REQUIRED.
19. ALL FUSED AND NON-FUSED DISCONNECT SWITCHES SHALL HAVE: 600 VOLT RATING FOR 480 VOLT CIRCUITS & 250 VOLT RATING FOR 208 VOLT CIRCUITS. SIZE FUSES TO COMPLY WITH NAMEPLATE RATING OF EQUIPMENT SERVED.
20. ELECTRICAL CONTRACTOR SHALL PROVIDE ADEQUATE TEMPORARY ELECTRICAL LIGHT AND POWER AS REQUIRED FOR THE PROJECT WORK OF ALL TRADES DURING CONSTRUCTION.
21. PROVIDE MODIFICATION OF THE FIRE ALARM SYSTEM TO ACCEPT NEW DEVICE. WIRE TO NEAREST INITIATOR DEVICE CIRCUIT. PROVIDE PROGRAMMING OF FIRE ALARM SYSTEM TO ACCEPT NEW DEVICE(S) AS NECESSARY.
    - 21.1. CONTRACTOR TO ENSURE THAT NEW DEVICE(S) SHALL BE FULLY COMPATIBLE WITH EXISTING FIRE ALARM SYSTEM
    - 21.2. PROVIDE FIRE ALARM CABLE IN CONDUIT AS NECESSARY IN ACCORDANCE WITH MANUFACTURER STANDARDS
    - 21.3. FIRE ALARM SYSTEM SHALL UNDERGO A 100% RE-ACCEPTANCE TEST IN ACCORDANCE WITH NFPA 72

MOUNTING HEIGHT CHART – ELECTRICAL EQUIPMENT

MOUNTING HEIGHT (AFF)	EQUIPMENT SYMBOL (OR REFER TO DESCRIPTION, NEXT COLUMN)	DESCRIPTION OF EQUIPMENT (DEVICES, OUTLETS, ETC.)	REMARKS
12'-0" U.O.N.		EXTERIOR WALL MOUNTED LIGHTING FIXTURES	SEE ARCHITECTURAL ELEVATIONS
10'-0"/8'-6"		BATTERY OPERATED EMERGENCY LIGHTING UNITS OR REMOTE MOUNTED HEADS	OR 1" BELOW CEILING WHICH EVER HEIGHT IS LOWER
ELECTRICAL CONTRACTOR SHALL MOUNT LIGHT FIXTURES IN NEW WORK PHASE OF PROJECT TO MATCH THE EXISTING FIXTURE HEIGHT IN ROOM D104.		PENDANT MOUNTED INDUSTRIAL AND STRIP LIGHTING FIXTURES	
8'-4"	CLOCK	WALL MOUNTED CLOCKS AND SPEAKERS	OR 9" BELOW CEILING WHICH EVER HEIGHT IS LOWER
7'-6"		TOP OF EXIT SIGNS (NOT MOUNTED ABOVE A DOOR)	
ENTIRE LENS NOT LESS THAN 80"& NOT GREATER THAN 96"AFF	F	FIRE ALARM NOTIFICATION DEVICES	
6'-6"		CENTERLINE OF INTERIOR WALL MOUNTED FIXTURES	
6'-0"		MAXIMUM ELEVATION OF DISCONNECT SWITCHES, STARTERS AND CONTACTORS	
4'-6"		MAXIMUM ELEVATION OF WALL MOUNTED PHONES	3'-6" FOR ADA DEVICES
4'-0"		WALL MOUNTED PLUGMOLD	PLUG 24" ON CENTER
3'-6"	EPO S S_3	WALL MOUNTED ELECTRICAL CONTROL DEVICES, SWITCHES, MANUAL MOTOR STARTERS	
OPERABLE PART OF PULL STATION NOT LESS THAN 3'-6" NOR MORE THAN 4'-0" AFF	F	WALL MOUNTED FIRE ALARM PULL STATION	
3'-0"		WALL MOUNTED RECEPTACLE IN MECHANICAL, ELECTRICAL, AND ELEVATOR ROOMS AND ON BUILDING EXTERIORS	
1'-6"	TD	WALL MOUNTED RECEPTACLE, DATA OUTLET, TELEPHONE OUTLET OR SPECIAL RECEPTACLE	

1. MOUNTING HEIGHT OF EQUIPMENT LISTED SHALL BE AS INDICATED OR AS SPECIFIED ON THE DRAWINGS. ACTUAL MOUNTING HEIGHT MAY BE ADJUSTED TO FIELD CONDITIONS, INCLUDING THE WALL CONSTRUCTION ELEMENTS (BLOCKS, ETC.).
2. MOUNTING HEIGHT INDICATED FOR THE CENTERLINE OF THE DEVICE OR OUTLET, OR TO THE CENTER OF THE OPERATING CONTROL DEVICE, UNLESS NOTED OTHERWISE. HEIGHTS INDICATED ARE APPLICABLE OVER GRADE, PLATFORM AND OTHER OPERATING LEVELS
3. RECEPTACLES OUTLETS SHALL BE 4" ABOVE COUNTERTOP, 6" ABOVE TABLE OR DESKTOP, OR AS NOTED ON ELECTRICAL OR ARCHITECTURAL LAYOUTS AND DETAILS.
4. THIS CHART, INCLUDING THE NOTES, IS APPLICABLE EVEN IF THE MOUNTING HEIGHT IS SPECIFIED ON THE SYMBOL LIST.

DRAWING SHEET INDEX (PROJECT 8195)

SHEET NO.	DRAWING NUMBER	DRAWING TITLE	SCALE	ISSUE FOR BID DATE 01/12/2024	ISSUE
1	E-001	ELECTRICAL LEAD SHEET	NTS	X	
2	ED-101	ELECTRICAL DEMOLITION FLOOR PLANS	1/4"=1'-0"	X	
3	ED-102	ELECTRICAL DEMOLITION ROOF PLANS	1/4"=1'-0"	X	
4	E-101	ELECTRICAL NEW WORK FLOOR PLANS	1/4"=1'-0"	X	
5	E-102	ELECTRICAL NEW WORK ROOF PLANS	1/4"=1'-0"	X	
6	E-201	ELECTRICAL NEW WORK REFLECTED CEILING PLANS	1/4"=1'-0"	X	
7	E-301	ELECTRICAL DETAILS	NTS	X	
8	E-401	ELECTRICAL SCHEDULES	NTS	X	

Maximum Wire Distances vs. Wire Size for 20A, 1 Phase Branch Cir

Voltage (V)	Load Amps	Wire Size (Copper) #12	#10	#8	#6
		Run Distance (Ft)*			
120V	14	50	80	125	215
120V	12	55	100	150	225
120V	10	65	125	175	250
120V	5	125	200	-	-
277V	14	110	200	-	-
277V	12	125	225	-	-
277V	10	150	250	-	-
277V	5	300	-	-	-

* The above wire lengths are provided for reference only. Electrica Contractor is responsible to confirm voltage drop is less than 3% for the actual branch circuit routing.

1 / E-001 **TYPICAL VOLTAGE DROP CALCULATIONS**
SCALE: NONE

ALL WORK SHOWN IS THE RESPONSIBILITY OF THE ELECTRICAL CONTRACTOR, UNLESS NOTED OTHERWISE.

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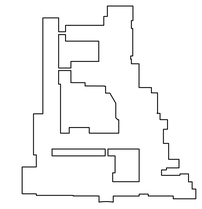
No.	Date	Description
0	01/12/2024	Issued for Bid

REVISIONS:

KEY PLAN:



John A. Marchiafava P. E.
New Jersey P. E. No. 24GE04992500

Professional Engineer
John A. Marchiafava P. E.

PROJECT: REF21-35-8267

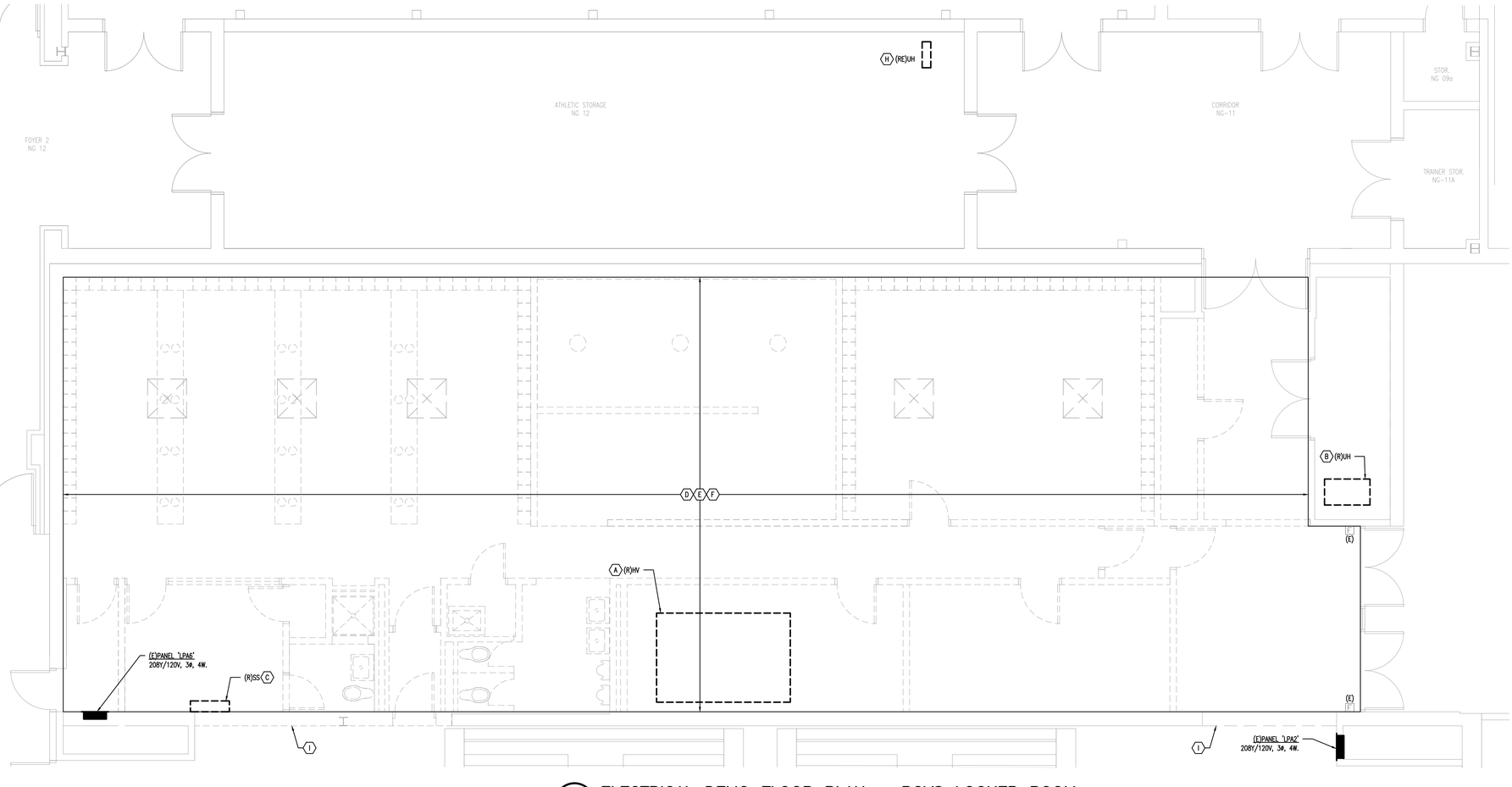
LRHSD-LENAPE HIGH SCHOOL NORTH LOCKER ROOM RENOVATIONS

235 HARTFORD RD
MEDFORD, NEW JERSEY

DRAWING TITLE:

ELECTRICAL LEAD SHEET

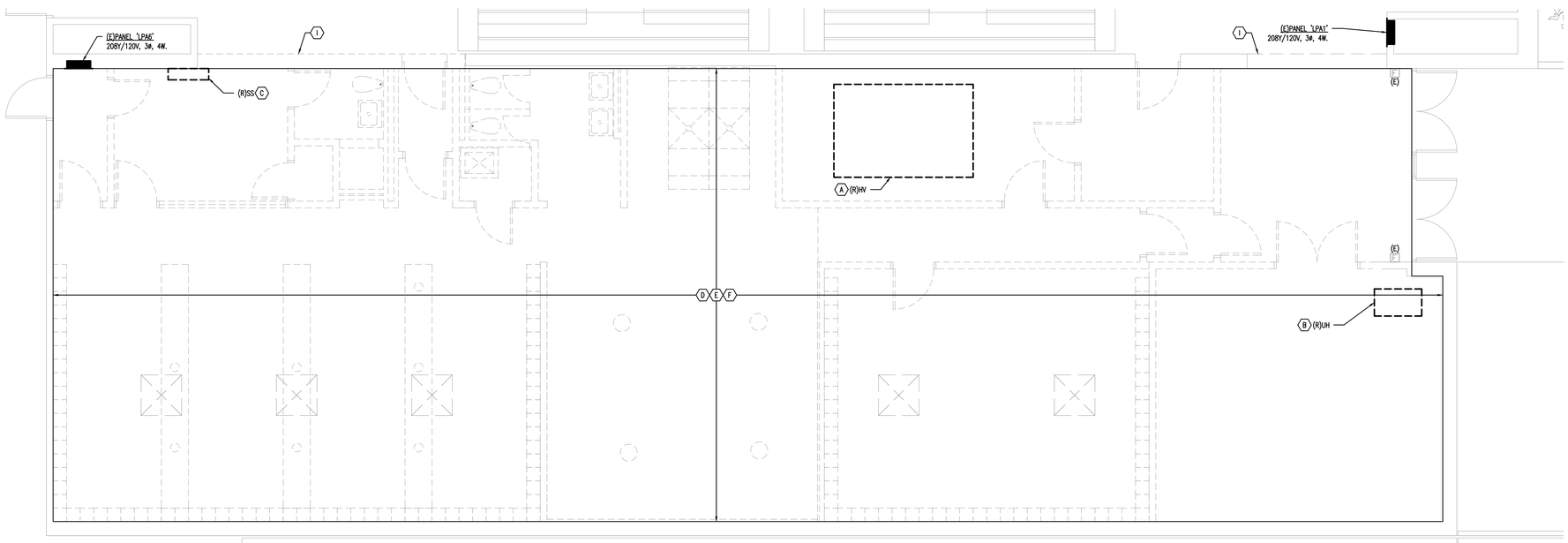
DRAWN BY: ZT	SCALE: AS NOTED	DWG SIZE: 42x30	
CHECKED BY: CM	DRAWING NO. E-001	REVISION 0	
DATE: 05/20/2022			
PROJECT NO.: 8C22002			



1 ED-101 ELECTRICAL DEMO FLOOR PLAN – BOYS LOCKER ROOM

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

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



2 ED-101 ELECTRICAL DEMO FLOOR PLAN – GIRLS LOCKER ROOM

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

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

DEMOLITION OF EXISTING SYSTEM NOTES:

GENERAL NOTES:

1. THE ELECTRICAL CONTRACTOR SHALL ACCOMPLISH COMPLETE ELECTRICAL DEMOLITION OF ALL ELECTRICAL EQUIPMENT/DEVICES ASSOCIATED WITH THE REMOVAL OF MECHANICAL EQUIPMENT IDENTIFIED ON PLAN.
2. DEMOLITION OF THESE DEVICES SHALL INCLUDE, BUT NOT BE LIMITED TO, COMPLETE REMOVAL OF ALL BRANCH CIRCUIT POWER WIRING AND ASSOCIATED CONDUIT AND BOX SYSTEMS FROM THE AFFECTED MECHANICAL EQUIPMENT BACK TO THE PANEL OF ORIGIN. REMOVE EXISTING DISCONNECT SWITCHES, STARTERS AND OTHER ELECTRICAL EQUIPMENT ASSOCIATED WITH THE MECHANICAL EQUIPMENT AND SYSTEMS BEING DEMOLISHED.
3. THE ELECTRICAL CONTRACTOR SHALL MAKE AN ON SITE INSPECTION OF THE PROJECT AREA TO DETERMINE A FULL SCOPE OF DEMOLITION WORK BEFORE SUBMITTING A PROPOSAL.
4. THE ELECTRICAL CONTRACTOR SHALL PROVIDE APPROPRIATE FIRE RATED ABANDONMENT PLATES FOR ALL REMOVED FLOOR MOUNTED POKE THROUGH WIRING DEVICES.
5. ALL DEMOLISHED MATERIAL SHALL BE REMOVED FROM THE SITE BY THE ELECTRICAL CONTRACTOR. THE CONTRACTOR IS TO RECYCLE WHEREVER POSSIBLE. COORDINATE ALL REMOVAL AND DISPOSAL WITH THE OWNER WHO RESERVES THE RIGHT TO SALVAGE ANY HVAC OR ELECTRICAL COMPONENTS.
6. ALL POWER SHUT DOWNS MUST BE COORDINATED WITH THE OWNER'S REPRESENTATIVE.
7. ALL DEMOLITION WORK SHALL BE DONE IN A SAFE AND ORDERLY MANNER AND IN ACCORDANCE WITH THE N.E.C., OSHA AND STATE REGULATIONS.
8. THE ELECTRICAL CONTRACTOR SHALL COORDINATE THE REMOVAL OF EQUIPMENT WITH OTHER TRADES SO AS NOT TO AFFECT THE OPERATION OF EXISTING SYSTEMS.
9. DO NOT DEMOLISH THE FOLLOWING ITEMS:
   - BRANCH CIRCUIT WIRING PASSING THROUGH THE AREA OF DEMOLITION BUT FEEDING OTHER WIRING DEVICES, LIGHT FIXTURES, AND OTHER EQUIPMENT NOT WITHIN THE SCOPE OF THE WORK.
   - EXISTING BRANCH CIRCUIT WIRING FOR HVAC EQUIPMENT TO REMAIN–UNLESS STATED ON MECHANICAL DEMOLITION PLAN.
10. ELECTRICAL CONTRACTOR MAY RE–USE TO THE MAXIMUM EXTENT POSSIBLE ALL WIRING AND RACEWAY ASSOCIATED WITH EXISTING EQUIPMENT BEING REMOVED. RE–USE OF WIRING, RACEWAY AND BREAKERS LOCATED IN LOCAL PANELS IS PERMITTED AS LONG AS IT MEETS THE INSTALLATION REQUIREMENTS OF THE NEW EQUIPMENT BEING PROVIDED. PROVIDE MEGGER TESTING OF CABLES TO BE RE–USED PER ANSI/ NETA ATS–2021 STANDARDS.

DEMOLITION KEYED NOTES:

GENERAL: DEMOLITION NOTES ARE INDICATED WITH THE FOLLOWING SYMBOL (#) AND ARE NUMBERED AS FOLLOWS:

(A) EXISTING HV UNIT TO BE DEMOLISHED AND REMOVED. DISCONNECT AND REMOVE ALL ELECTRIC POWER AND ASSOCIATED ELECTRICAL EQUIPMENT BACK TO SOURCE.

(B) EXISTING UNIT HEATER TO BE DEMOLISHED AND REMOVED. DISCONNECT AND REMOVE ALL ELECTRIC POWER AND ASSOCIATED ELECTRICAL EQUIPMENT BACK TO SOURCE.

(C) EXISTING SPLIT SYSTEM TO BE DEMOLISHED AND REMOVED. DISCONNECT AND REMOVE ALL ELECTRIC POWER AND ASSOCIATED ELECTRICAL EQUIPMENT BACK TO SOURCE.

(D) ALL EXISTING ELECTRICAL AND LOW VOLTAGE DEVICES WITHIN AREA OF WORK TO BE REMOVED UNLESS OTHERWISE NOTED. DISCONNECT AND REMOVE ALL ELECTRICAL POWER AND ASSOCIATED ELECTRICAL EQUIPMENT BACK TO SOURCE.

(E) ALL EXISTING LIGHT FIXTURES AND ASSOCIATED CONTROLS WITHIN AREA OF WORK TO BE REMOVED. ELECTRICAL CONTRACTOR TO REMOVE EXISTING WIRING AND CONDUIT ASSOCIATED WITH DEMOLISHED LIGHTING FIXTURES AND CONTROLS BACK TO PANEL OF ORIGIN.

(F) EXISTING FIRE ALARM DEVICES WITHIN AREA OF WORK TO BE REMOVED UNLESS OTHERWISE NOTED. SEE LEAD SHEET FOR GENERAL NOTES RELATING TO DEMOLITION, RELOCATION AND INSTALLATION OF NEW FIRE ALARM DEVICES.

(G) EXISTING EXIT SIGNAGE INDICATED AS EXISTING IS NOT INCLUDED IN THIS SCOPE OF WORK. EXISTING FIXTURES TO BE CLEANED UPON COMPLETION OF CONSTRUCTION.

(H) EXISTING UNIT HEATER TO BE RELOCATED. ELECTRICAL CONTRACTOR TO PROVIDE AND INSTALL NEW WIRE AND CONDUIT AS NECESSARY TO EXTEND EXISTING ELECTRICAL CIRCUIT. NEW WIRE AND CONDUIT SIZE TO MATCH EXISTING.

(I) ALL EXISTING ELECTRICAL AND LOW VOLTAGE DEVICES ALONG GYMNASIUM WALL TO BE RELOCATED. ELECTRICAL CONTRACTOR TO PROVIDE AND INSTALL NEW WIRING AND CONDUIT AS NECESSARY TO ENSURE A FULLY FUNCTIONING SYSTEM UPON RELOCATION. COORDINATE NEW LOCATION OF DEVICES WITH ARCHITECT/OWNER.

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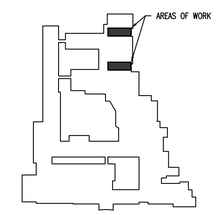
No.	Date	Description
0	01/12/2024	Issued for Bid

REVISIONS:

KEY PLAN:



John A. Marchiafava P. E.
New Jersey P. E. No. 24GE04992500

Professional Engineer
John A. Marchiafava P. E.

PROJECT: REF'21–35–8267

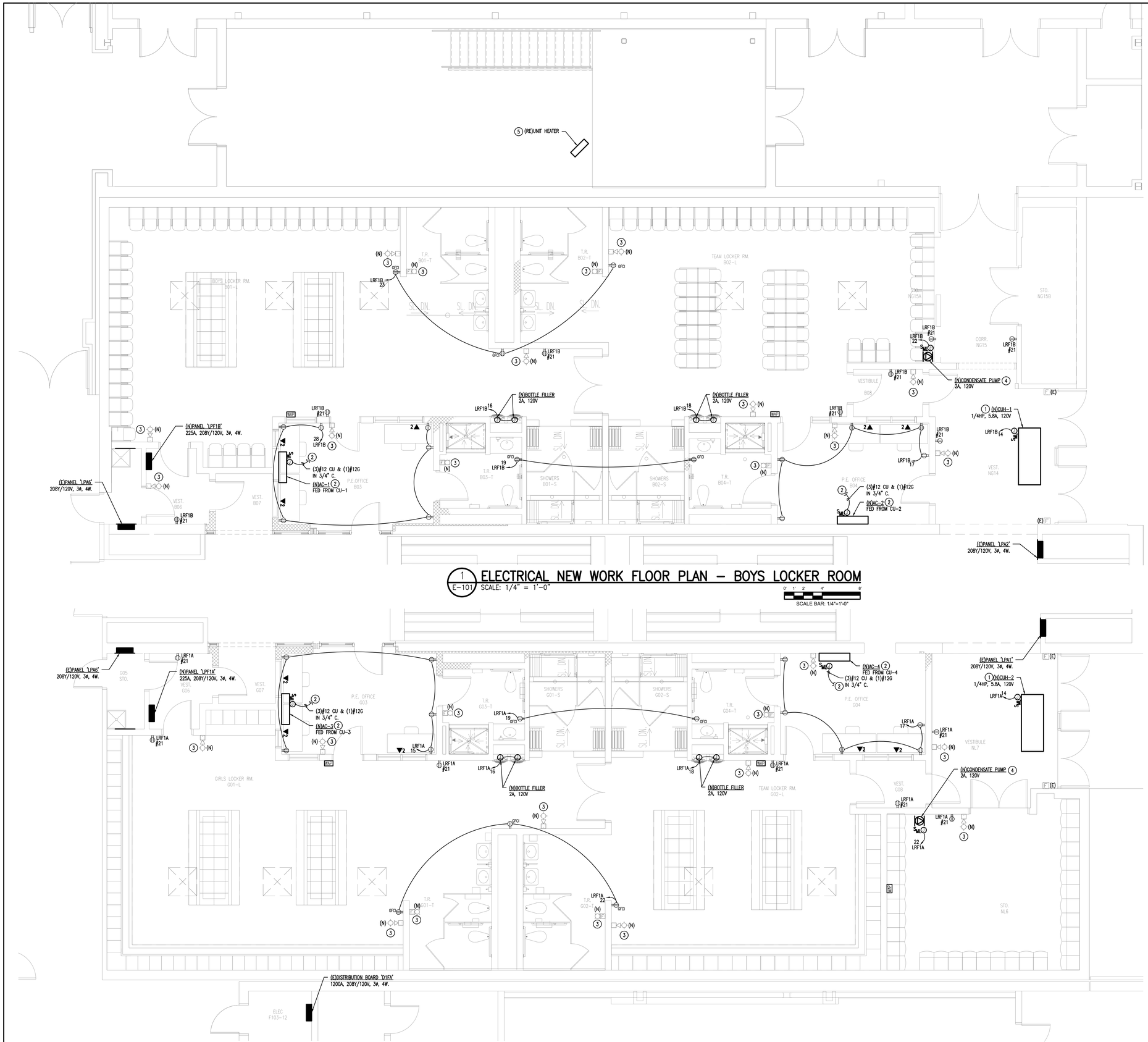
LRHSD-LENAPE HIGH SCHOOL NORTH LOCKER ROOM RENOVATIONS

235 HARTFORD RD
MEDFORD, NEW JERSEY

DRAWING TITLE:

ELECTRICAL DEMO FLOOR PLANS

DRAWN BY: ZT	SCALE: AS NOTED	DWG SIZE: 42x30	
CHECKED BY: CM	DRAWING NO. ED-101	REVISION 0	
DATE: 05/20/2022			
PROJECT NO.: 8C22002			



NEW WORK SYSTEM NOTES:

1. GENERAL NOTES:

A. REFER TO ELECTRICAL LEAD SHEETS, E-001 FOR "NOTES" THAT PERTAIN TO THE SCOPE OF THIS PROJECT.

B. REFER TO BOOK SPECIFICATIONS FOR PROJECT DETAILS AND EXECUTION REQUIREMENTS.

C. REFER TO DRAWING E-401 FOR PANEL SCHEDULES.

D. ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE 2020 EDITION OF THE NATIONAL ELECTRICAL CODE.

E. CONTRACTOR SHALL PROVIDE ALL REQUIRED CONDUITS, RACEWAYS, CONDUCTORS, AND OTHER EQUIPMENT NECESSARY TO PROVIDE A COMPLETE WORKING SYSTEM.

F. ELECTRICAL CONTRACTOR SHALL INSTALL ALL (N) EQUIPMENT IN STRICT ACCORDANCE WITH THE MANUFACTURER'S WRITTEN INSTRUCTIONS AND SHALL MAINTAIN ALL CLEARANCES AS NOTED WITHIN THE WRITTEN INSTRUCTIONS.

G. ELECTRICAL CONTRACTOR TO PROVIDE AND INSTALL ALL ELECTRICAL EQUIPMENT, WIRING AND RACEWAY, AND MAKE ALL CONNECTIONS TO/FROM PANELBOARDS, DISCONNECT SWITCHES, ADJUSTABLE SPEED DRIVES, MOTOR STARTERS, AND THE END USE EQUIPMENT NECESSARY FOR A FULLY OPERATIONAL SYSTEM. COORDINATE WITH MECHANICAL CONTRACTOR.

H. ALL RACEWAYS PENETRATING FIRE RATED PARTITIONS, WALLS, AND CEILINGS SHALL BE SEALED USING APPROVED FIRE RATED SEALANT TO MATCH THE REQUIRED WALL FIRE RATING.

I. ALL POWER SHUT DOWNS MUST BE COORDINATED WITH THE OWNER'S REPRESENTATIVE.

J. THE ELECTRICAL CONTRACTOR SHALL MAKE AN ON SITE INSPECTION TO DETERMINE THE FULL SCOPE OF WORK AND WORKING CONDITIONS BEFORE SUBMITTING A PROPOSAL.

K. ALL CIRCUIT BREAKERS SERVING HVAC EQUIPMENT SHALL BE UL LISTED AS 'HACR'.

L. THE DRAWINGS ARE DIAGRAMMATIC. EXACT LOCATION OF EQUIPMENT, WIRING AND RACEWAYS SHALL BE DETERMINED BY CONTRACTOR SUBJECT TO ARCHITECT APPROVAL.

M. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE ELECTRICAL CHARACTERISTICS OF ALL NEW EQUIPMENT, MOTORS, ETC. BEFORE INSTALLING CABLING AND RACEWAY. IF THERE ARE ANY DISCREPANCIES BETWEEN THE ACTUAL RATING OF EQUIPMENT AT THE SITE AND THE DRAWINGS, THEN THE ENGINEER SHALL BE NOTIFIED.

N. THE CONTRACTOR SHALL SUBMIT TO THE OWNER: CERTIFICATES OF INSPECTION FOR THE ELECTRICAL INSTALLATION FROM AN APPROVED INSPECTION AGENCY UPON COMPLETION OF ELECTRICAL WORK.

O. ALL WORK SHALL BE INSTALLED SO AS TO BE READILY ACCESSIBLE FOR OPERATION MAINTENANCE, AND REPAIR. MINOR DEVIATIONS FROM THE PLANS MAY BE MADE TO ACCOMPLISH THIS, SUBJECT TO THE APPROVAL OF THE ENGINEER.

P. THE ELECTRICAL CONTRACTOR SHALL USE MAXIMUM OF 6' OF FLEXIBLE CONDUIT FOR FOR EQUIPMENT SUBJECT TO VIBRATION, NOISE TRANSMISSION, OR MOVEMENT, AND FOR ALL MOTORS. USE LIQUID TIGHT FLEXIBLE CONDUIT IN WET OR DAMP LOCATIONS. INSTALL SEPARATE GROUND CONDUCTOR ACROSS FLEXIBLE CONNECTIONS.

Q. ALL WIRING SHALL BE COPPER CONDUCTOR WITH 600 VOLT TYPE THHN, OR THWN INSULATION IN CONDUIT. THE MINIMUM SIZE WIRE FOR POWER CIRCUITS SHALL BE #12 AWG. SOLID CONDUCTORS SHALL BE USED FOR NUMBER 10 AND 12; STRANDED CONDUCTORS SHALL BE USED FOR NUMBER 8 AND LARGER. THE CONTRACTOR MAY USE METAL CLAD TYPE 'MC' WHERE ALLOWED BY THE NATIONAL ELECTRICAL CODE AND APPROVED FOR USE BY THE AUTHORITIES HAVING JURISDICTION.

R. ALL MATERIALS AND EQUIPMENT FURNISHED FOR THIS PROJECT SHALL BE NEW, LISTED, AND APPROVED BY UL.

S. THE CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMITS, INSPECTIONS, LICENSES AND PAY UTILITY COMPANY FEES.

T. ALL FUSED AND NON-FUSED DISCONNECT SWITCHES SHALL HAVE: 600 VOLT RATING FOR 480 VOLT CIRCUITS. SIZE FUSES TO COMPLY WITH NAMEPLATE RATING OF EQUIPMENT SERVED.

U. THE ELECTRICAL CONTRACTOR SHALL PROVIDE NEW TYPEWRITTEN PANEL SCHEDULES WITHIN THE SCOPE OF THIS PROJECT. THIS INCLUDES ALL PANELS EVEN IF ONLY A FEW CIRCUITS WERE CHANGED AS A RESULT OF THIS PROJECT. WHERE ACTUAL FIELD CONDITIONS REQUIRE DIFFERENT CIRCUIT NUMBERS THAN THOSE INDICATED ON PLANS THE CONTRACTOR SHALL ADVISE OWNER OF CHANGES ON REQUIRED AS-BUILT DRAWINGS.

V. ELECTRICAL CONTRACTOR SHALL BE REQUIRED TO VERIFY EXISTING DEMAND LOADS ON EXISTING ELECTRICAL EQUIPMENT THAT IS BEING MODIFIED AS PART OF THIS SCOPE OF WORK AND ADVISE ENGINEER OF RECORD/OWNER WHERE THE EXISTING AND NEW EQUIPMENT LOADS EXCEED THE RATING OF THE EXISTING ELECTRICAL EQUIPMENT.

NEW WORK KEYED NOTES:

GENERAL: NEW WORK NOTES ARE INDICATED WITH THE FOLLOWING SYMBOL (-) AND ARE NUMBERED AS FOLLOWS:

(1) NEW INDOOR UNIT HEATER. PROVIDE AND INSTALL NEW NEMA KS 1, TYPE HD NONFUSIBLE MOTOR-RATED SWITCH WITH LOCKABLE HANDLE TO ACCOMMODATE INSTALLATION OF NEW INDOOR UNIT. COORDINATE SWITCH LOCATION IN FIELD WITH OWNER PRIOR TO ROUGH-IN.

(2) NEW INDOOR AC UNIT TO BE POWERED FROM ASSOCIATED ROOFTOP CONDENSING UNIT. PROVIDE AND INSTALL NEW NEMA KS 1, TYPE HD NONFUSIBLE MOTOR-RATED SWITCH WITH LOCKABLE HANDLE TO ACCOMMODATE INSTALLATION OF NEW INDOOR UNIT. COORDINATE SWITCH LOCATION IN FIELD WITH OWNER PRIOR TO ROUGH-IN.

(3) NEW FIRE ALARM DEVICE. SEE LEAD SHEET FOR GENERAL NOTES RELATING TO DEMOLITION, RELOCATION AND INSTALLATION OF NEW FIRE ALARM DEVICES.

(4) NEW CONDENSATE PUMP. EC TO PROVIDE AND INSTALL NEW NEMA KS 1, TYPE HD NONFUSIBLE MOTOR-RATED SWITCH WITH LOCKABLE HANDLE TO ACCOMMODATE INSTALLATION OF NEW CONDENSING UNIT. COORDINATE EXACT LOCATION OF SWITCH IN FIELD.

(5) RELOCATED UNIT HEATER SHOWN IN NEW LOCATION. SEE ED-101 FOR NOTES RELATING TO UNIT HEATER RELOCATION.

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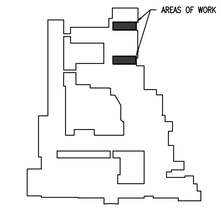
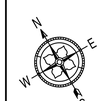
KEY PLAN:





John A. Marchiafava P. E.
New Jersey P. E. No. 24GE04992500

Professional Engineer
John A. Marchiafava P. E.

PROJECT: REF21-35-8267

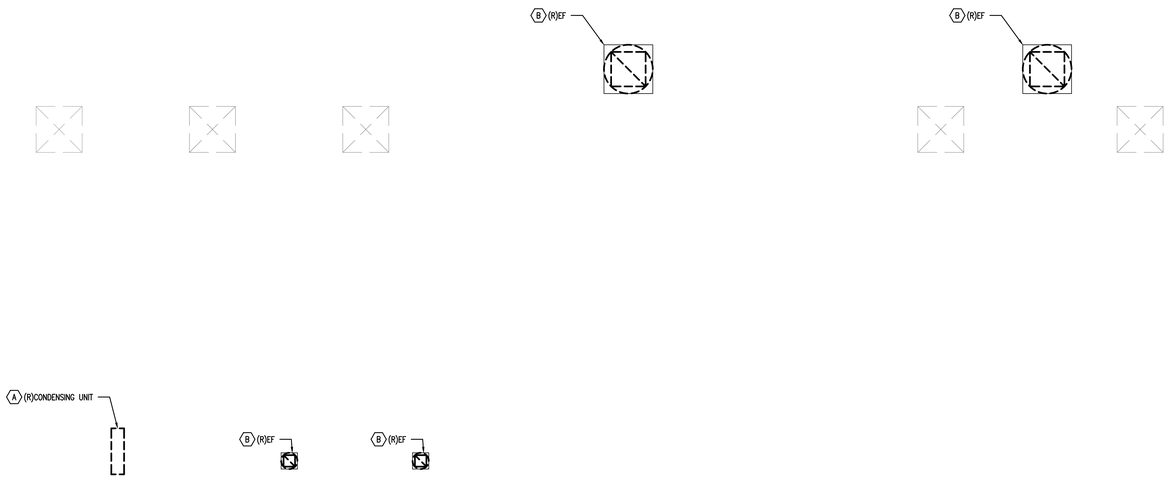
LRHSD-LENAPE HIGH SCHOOL NORTH LOCKER ROOM RENOVATIONS

235 HARTFORD RD
MEDFORD, NEW JERSEY

DRAWING TITLE:

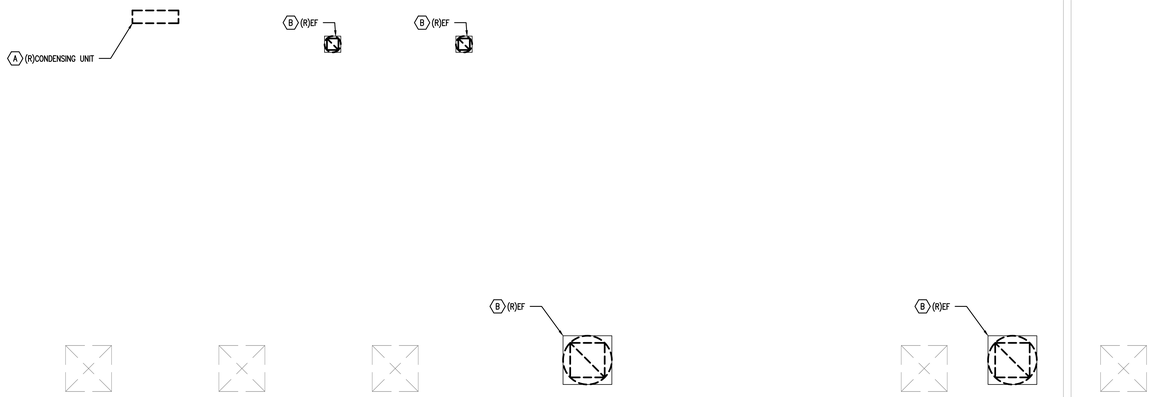
ELECTRICAL NEW WORK PLANS

DRAWN BY: ZT		SCALE: AS NOTED	DWG SIZE: 42x30
CHECKED BY: CM		DRAWING NO. E-101	REVISION 0
DATE: 05/20/2022			
PROJECT NO.: 8C22002			



1 ED-102 ELECTRICAL DEMO ROOF PLAN – BOYS LOCKER ROOM
SCALE: 1/4" = 1'-0"

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



2 ED-102 ELECTRICAL DEMO ROOF PLAN – GIRLS LOCKER ROOM
SCALE: 1/4" = 1'-0"

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

DEMOLITION OF EXISTING SYSTEM NOTES:

GENERAL NOTES:

1. THE ELECTRICAL CONTRACTOR SHALL ACCOMPLISH COMPLETE ELECTRICAL DEMOLITION OF ALL ELECTRICAL EQUIPMENT/DEVICES ASSOCIATED WITH THE REMOVAL OF MECHANICAL EQUIPMENT IDENTIFIED ON PLAN.
2. DEMOLITION OF THESE DEVICES SHALL INCLUDE, BUT NOT BE LIMITED TO, COMPLETE REMOVAL OF ALL BRANCH CIRCUIT POWER WIRING AND ASSOCIATED CONDUIT AND BOX SYSTEMS FROM THE AFFECTED MECHANICAL EQUIPMENT BACK TO THE PANEL OF ORIGIN. REMOVE EXISTING DISCONNECT SWITCHES, STARTERS AND OTHER ELECTRICAL EQUIPMENT ASSOCIATED WITH THE MECHANICAL EQUIPMENT AND SYSTEMS BEING DEMOLISHED.
3. THE ELECTRICAL CONTRACTOR SHALL MAKE AN ON SITE INSPECTION OF THE PROJECT AREA TO DETERMINE A FULL SCOPE OF DEMOLITION WORK BEFORE SUBMITTING A PROPOSAL.
4. THE ELECTRICAL CONTRACTOR SHALL PROVIDE APPROPRIATE FIRE RATED ABANDONMENT PLATES FOR ALL REMOVED FLOOR MOUNTED POKE THROUGH WIRING DEVICES.
5. ALL DEMOLISHED MATERIAL SHALL BE REMOVED FROM THE SITE BY THE ELECTRICAL CONTRACTOR. THE CONTRACTOR IS TO RECYCLE WHEREVER POSSIBLE. COORDINATE ALL REMOVAL AND DISPOSAL WITH THE OWNER WHO RESERVES THE RIGHT TO SALVAGE ANY HVAC OR ELECTRICAL COMPONENTS.
6. ALL POWER SHUT DOWNS MUST BE COORDINATED WITH THE OWNER'S REPRESENTATIVE.
7. ALL DEMOLITION WORK SHALL BE DONE IN A SAFE AND ORDERLY MANNER AND IN ACCORDANCE WITH THE N.E.C., OSHA AND STATE REGULATIONS.
8. THE ELECTRICAL CONTRACTOR SHALL COORDINATE THE REMOVAL OF EQUIPMENT WITH OTHER TRADES SO AS NOT TO AFFECT THE OPERATION OF EXISTING SYSTEMS.
9. DO NOT DEMOLISH THE FOLLOWING ITEMS:
   – BRANCH CIRCUIT WIRING PASSING THROUGH THE AREA OF DEMOLITION BUT FEEDING OTHER WIRING DEVICES, LIGHT FIXTURES, AND OTHER EQUIPMENT NOT WITHIN THE SCOPE OF THE WORK.
   – EXISTING BRANCH CIRCUIT WIRING FOR HVAC EQUIPMENT TO REMAIN–UNLESS STATED ON MECHANICAL DEMOLITION PLAN.
10. ELECTRICAL CONTRACTOR MAY RE–USE TO THE MAXIMUM EXTENT POSSIBLE ALL WIRING AND RACEWAY ASSOCIATED WITH EXISTING EQUIPMENT BEING REMOVED. RE–USE OF WIRING, RACEWAY AND BREAKERS LOCATED IN LOCAL PANELS IS PERMITTED AS LONG AS IT MEETS THE INSTALLATION REQUIREMENTS OF THE NEW EQUIPMENT BEING PROVIDED. PROVIDE MEGGER TESTING OF CABLES TO BE RE–USED PER ANSI/ NETA ATS–2021 STANDARDS.

DEMOLITION KEYED NOTES:

GENERAL: DEMOLITION NOTES ARE INDICATED WITH THE FOLLOWING SYMBOL (#) AND ARE NUMBERED AS FOLLOWS:

(A) EXISTING CONDENSING UNIT TO BE DEMOLISHED AND REMOVED. DISCONNECT AND REMOVE ALL ELECTRIC POWER AND ASSOCIATED ELECTRICAL EQUIPMENT BACK TO SOURCE.

(B) EXISTING EXHAUST FAN TO BE DEMOLISHED AND REMOVED. DISCONNECT AND REMOVE ALL ELECTRIC POWER AND ASSOCIATED ELECTRICAL EQUIPMENT BACK TO SOURCE.

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No.	Date	Description
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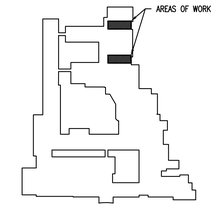
REVISIONS:

KEY PLAN:



John A. Marchiafava P. E.
New Jersey P. E. No. 24GE04992500

Professional Engineer
John A. Marchiafava P. E.

PROJECT: REF21–35–8267

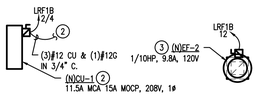
LRHSD-LENAPE HIGH SCHOOL
NORTH LOCKER ROOM
RENOVATIONS

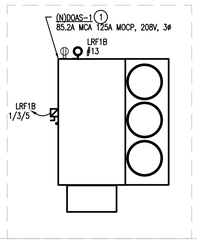
235 HARTFORD RD
MEDFORD, NEW JERSEY

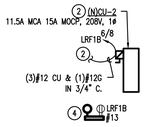
DRAWING TITLE:

ELECTRICAL DEMO ROOF PLANS

DRAWN BY: TC	SCALE: AS NOTED	DWG SIZE: 42x30	
CHECKED BY: NH	DRAWING NO. ED-102	REVISION 0	
DATE: 05/20/2022			
PROJECT NO.: 8C22002			

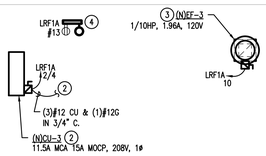


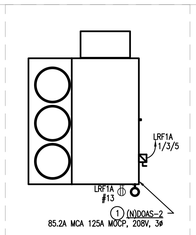


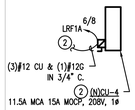


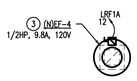
1 E-102 **ELECTRICAL NEW WORK ROOF PLAN – BOYS LOCKER ROOM**
SCALE: 1/4" = 1'-0"

0' 1' 2' 4' 8'
SCALE BAR: 1/4"=1'-0"









2 E-102 **ELECTRICAL NEW WORK ROOF PLAN – GIRLS LOCKER ROOM**
SCALE: 1/4" = 1'-0"

0' 1' 2' 4' 8'
SCALE BAR: 1/4"=1'-0"

NEW WORK SYSTEM NOTES:

1. GENERAL NOTES:
   - A. REFER TO ELECTRICAL LEAD SHEETS, E-001 FOR 'NOTES' THAT PERTAIN TO THE SCOPE OF THIS PROJECT.
   - B. REFER TO BOOK SPECIFICATIONS FOR PROJECT DETAILS AND EXECUTION REQUIREMENTS.
   - C. REFER TO DRAWING E-401 FOR PANEL SCHEDULES.
   - D. ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE 2020 EDITION OF THE NATIONAL ELECTRICAL CODE.
   - E. CONTRACTOR SHALL PROVIDE ALL REQUIRED CONDUITS, RACEWAYS, CONDUCTORS, AND OTHER EQUIPMENT NECESSARY TO PROVIDE A COMPLETE WORKING SYSTEM.
   - F. ELECTRICAL CONTRACTOR SHALL INSTALL ALL (N) EQUIPMENT IN STRICT ACCORDANCE WITH THE MANUFACTURER'S WRITTEN INSTRUCTIONS AND SHALL MAINTAIN ALL CLEARANCES AS NOTED WITHIN THE WRITTEN INSTRUCTIONS.
   - G. ELECTRICAL CONTRACTOR TO PROVIDE AND INSTALL ALL ELECTRICAL EQUIPMENT, WIRING AND RACEWAY, AND MAKE ALL CONNECTIONS TO/FROM PANELBOARDS, DISCONNECT SWITCHES, ADJUSTABLE SPEED DRIVES, MOTOR STARTERS, AND THE END USE EQUIPMENT NECESSARY FOR A FULLY OPERATIONAL SYSTEM. COORDINATE WITH MECHANICAL CONTRACTOR.
   - H. ALL RACEWAYS PENETRATING FIRE RATED PARTITIONS, WALLS, AND CEILINGS SHALL BE SEALED USING APPROVED FIRE RATED SEALANT TO MATCH THE REQUIRED WALL FIRE RATING.
   - I. ALL POWER SHUT DOWNS MUST BE COORDINATED WITH THE OWNER'S REPRESENTATIVE.
   - J. THE ELECTRICAL CONTRACTOR SHALL MAKE AN ON SITE INSPECTION TO DETERMINE THE FULL SCOPE OF WORK AND WORKING CONDITIONS BEFORE SUBMITTING A PROPOSAL.
   - K. ALL CIRCUIT BREAKERS SERVING HVAC EQUIPMENT SHALL BE UL LISTED AS 'HACR'.
   - L. THE DRAWINGS ARE DIAGRAMMATIC. EXACT LOCATION OF EQUIPMENT, WIRING AND RACEWAYS SHALL BE DETERMINED BY CONTRACTOR SUBJECT TO ARCHITECT APPROVAL.
   - M. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE ELECTRICAL CHARACTERISTICS OF ALL NEW EQUIPMENT, MOTORS, ETC. BEFORE INSTALLING CABLING AND RACEWAY. IF THERE ARE ANY DISCREPANCIES BETWEEN THE ACTUAL RATING OF EQUIPMENT AT THE SITE AND THE DRAWINGS, THEN THE ENGINEER SHALL BE NOTIFIED.
   - N. THE CONTRACTOR SHALL SUBMIT TO THE OWNER: CERTIFICATES OF INSPECTION FOR THE ELECTRICAL INSTALLATION FROM AN APPROVED INSPECTION AGENCY UPON COMPLETION OF ELECTRICAL WORK.
   - O. ALL WORK SHALL BE INSTALLED SO AS TO BE READILY ACCESSIBLE FOR OPERATION MAINTENANCE, AND REPAIR. MINOR DEVIATIONS FROM THE PLANS MAY BE MADE TO ACCOMPLISH THIS, SUBJECT TO THE APPROVAL OF THE ENGINEER.
   - P. THE ELECTRICAL CONTRACTOR SHALL USE MAXIMUM OF 6' OF FLEXIBLE CONDUIT FOR FOR EQUIPMENT SUBJECT TO VIBRATION, NOISE TRANSMISSION, OR MOVEMENT, AND FOR ALL MOTORS. USE LIQUID TIGHT FLEXIBLE CONDUIT IN WET OR DAMP LOCATIONS. INSTALL SEPARATE GROUND CONDUCTOR ACROSS FLEXIBLE CONNECTIONS.
   - Q. ALL WIRING SHALL BE COPPER CONDUCTOR WITH 600 VOLT TYPE THHN, OR THWN INSULATION IN CONDUIT. THE MINIMUM SIZE WIRE FOR POWER CIRCUITS SHALL BE #12 AWG. SOLID CONDUCTORS SHALL BE USED FOR NUMBER 10 AND 12. STRANDED CONDUCTORS SHALL BE USED FOR NUMBER 8 AND LARGER. THE CONTRACTOR MAY USE METAL CLAD TYPE 'MC' WHERE ALLOWED BY THE NATIONAL ELECTRICAL CODE AND APPROVED FOR USE BY THE AUTHORITIES HAVING JURISDICTION.
   - R. ALL MATERIALS AND EQUIPMENT FURNISHED FOR THIS PROJECT SHALL BE NEW, LISTED, AND APPROVED BY UL.
   - S. THE CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMITS, INSPECTIONS, LICENSES AND PAY UTILITY COMPANY FEES.
   - T. ALL FUSED AND NON-FUSED DISCONNECT SWITCHES SHALL HAVE: 600 VOLT RATING FOR 480 VOLT CIRCUITS. SIZE FUSES TO COMPLY WITH NAMEPLATE RATING OF EQUIPMENT SERVED.
   - U. THE ELECTRICAL CONTRACTOR SHALL PROVIDE NEW TYPEWRITTEN PANEL SCHEDULES WITHIN THE SCOPE OF THIS PROJECT. THIS INCLUDES ALL PANELS EVEN IF ONLY A FEW CIRCUITS WERE CHANGED AS A RESULT OF THIS PROJECT. WHERE ACTUAL FIELD CONDITIONS REQUIRE DIFFERENT CIRCUIT NUMBERS THAN THOSE INDICATED ON PLANS THE CONTRACTOR SHALL ADVISE OWNER OF CHANGES ON REQUIRED AS-BUILT DRAWINGS.
   - V. ELECTRICAL CONTRACTOR SHALL BE REQUIRED TO VERIFY EXISTING DEMAND LOADS ON EXISTING ELECTRICAL EQUIPMENT THAT IS BEING MODIFIED AS PART OF THIS SCOPE OF WORK AND ADVISE ENGINEER OF RECORD/OWNER WHERE THE EXISTING AND NEW EQUIPMENT LOADS EXCEED THE RATING OF THE EXISTING ELECTRICAL EQUIPMENT.

NEW WORK KEYED NOTES:

GENERAL: NEW WORK NOTES ARE INDICATED WITH THE FOLLOWING SYMBOL (–) AND ARE NUMBERED AS FOLLOWS:

1. NEW ROOFTOP DOAS. PROVIDE AND INSTALL (1) NEW 200A FRAME FUSED DISCONNECT SWITCH WITH 125A FUSES.
2. NEW ROOFTOP CONDENSING UNIT. PROVIDE AND INSTALL (1) NEW 30A FRAME FUSED DISCONNECT SWITCH WITH 15A FUSES. INDOOR AC UNIT TO BE POWERED FROM ASSOCIATED CONDENSING UNIT.
3. NEW ROOFTOP EXHAUST FAN. PROVIDE AND INSTALL (1) NEW 30A FRAME FUSED DISCONNECT SWITCH WITH 20A FUSES.
4. ELECTRICAL CONTRACTOR TO PROVIDE AND INSTALL CONVENIENCE GFCI RECEPTACLE IN WEATHERPROOF HOUSING AS WELL AS LOCAL LIGHT FIXTURE AND ASSOCIATED SWITCH MOUNTED ON UNISTRUT. ELECTRICAL CONTRACTOR TO UTILIZE CIRCUIT #X IN PANEL 'X'. PROVIDE AND INSTALL NEW BREAKER, WIRING AND CONDUIT AS NECESSARY. SEE DETAIL

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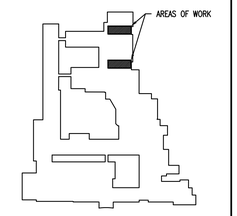
No.	Date	Description
0	01/12/2024	Issued for Bid

REVISIONS:

KEY PLAN:



John A. Marchiafava P. E.
New Jersey P. E. No. 24GE04992500

Professional Engineer
John A. Marchiafava P. E.

PROJECT: REF21-35-8267

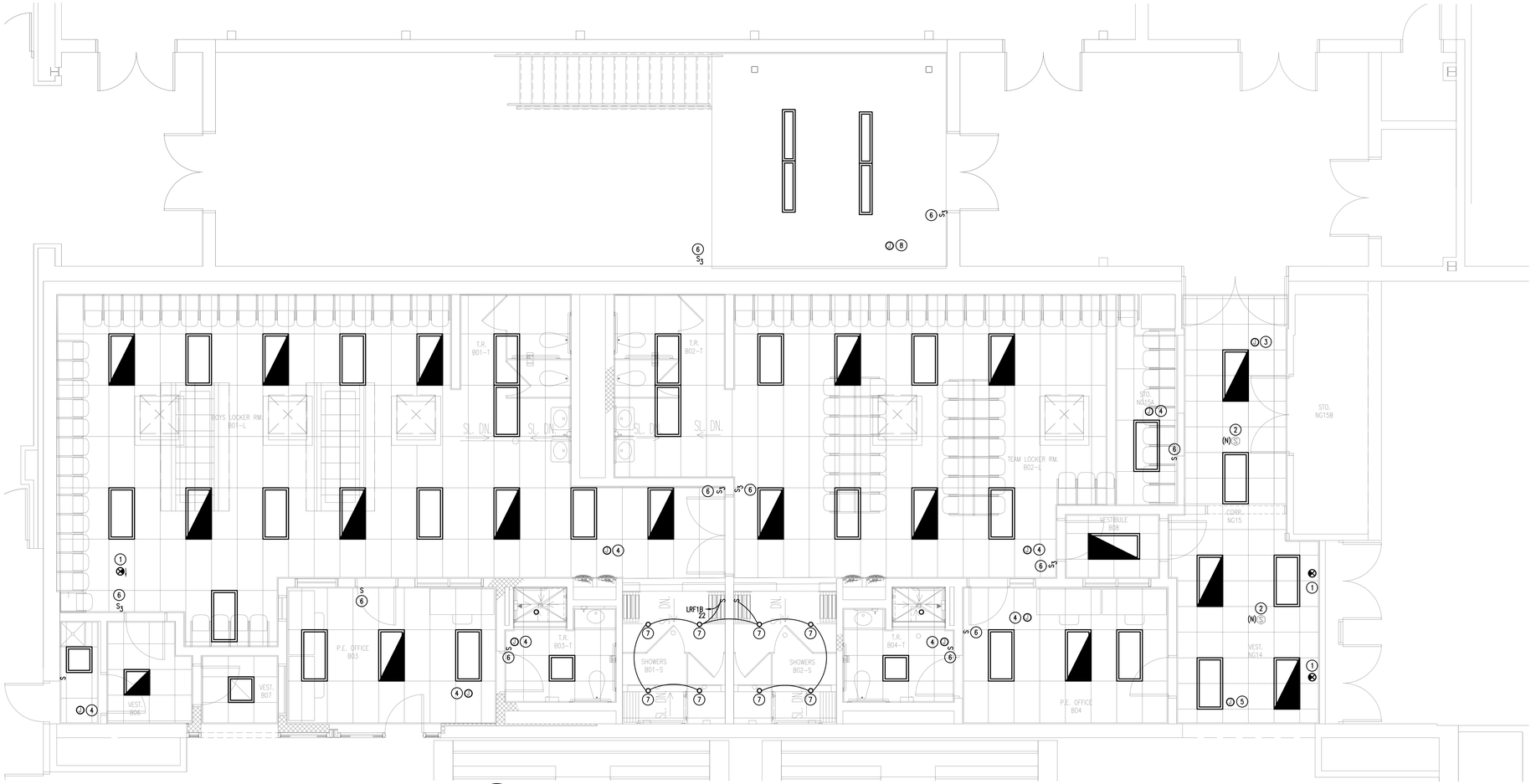
LRHSD-LENAPE HIGH SCHOOL
NORTH LOCKER ROOM
RENOVATIONS

235 HARTFORD RD
MEDFORD, NEW JERSEY

DRAWING TITLE:

ELECTRICAL NEW WORK PLANS

DRAWN BY: ZT	SCALE: AS NOTED	DWG SIZE: 42x30	
CHECKED BY: CM	DRAWING NO. E-102	REVISION 0	
DATE: 05/20/2022			
PROJECT NO.: 8C22002			

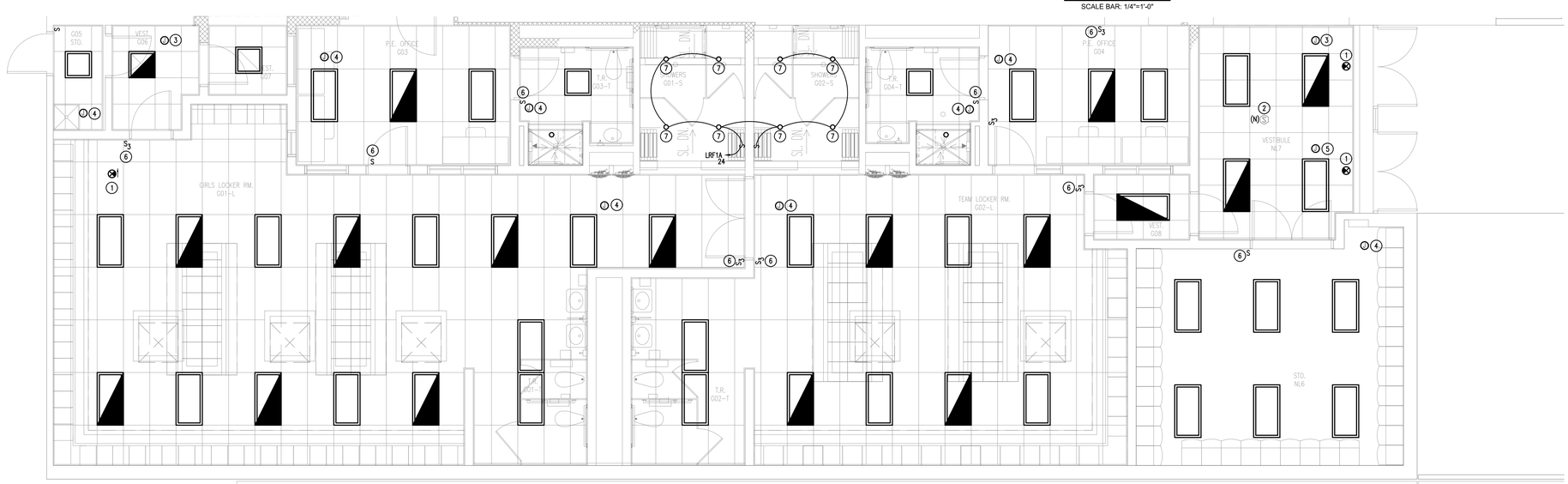


1 E-201 **ELECTRICAL NEW WORK REFLECTED CEILING PLAN – BOYS LOCKER ROOM**

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

0' 1' 2' 4' 8'

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



2 E-201 **ELECTRICAL NEW WORK REFLECTED CEILING PLAN – GIRLS LOCKER ROOM**

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

0' 1' 2' 4' 8'

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

NEW WORK SYSTEM NOTES:

1. GENERAL NOTES:

A. REFER TO ELECTRICAL LEAD SHEETS, E-001 FOR "NOTES" THAT PERTAIN TO THE SCOPE OF THIS PROJECT.

B. REFER TO BOOK SPECIFICATIONS FOR PROJECT DETAILS AND EXECUTION REQUIREMENTS.

C. REFER TO DRAWING E-401 FOR PANEL SCHEDULES.

D. ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE 2020 EDITION OF THE NATIONAL ELECTRICAL CODE.

E. CONTRACTOR SHALL PROVIDE ALL REQUIRED CONDUITS, RACEWAYS, CONDUCTORS, AND OTHER EQUIPMENT NECESSARY TO PROVIDE A COMPLETE WORKING SYSTEM.

F. ELECTRICAL CONTRACTOR SHALL INSTALL ALL (N) EQUIPMENT IN STRICT ACCORDANCE WITH THE MANUFACTURER'S WRITTEN INSTRUCTIONS AND SHALL MAINTAIN ALL CLEARANCES AS NOTED WITHIN THE WRITTEN INSTRUCTIONS.

G. ELECTRICAL CONTRACTOR TO PROVIDE AND INSTALL ALL ELECTRICAL EQUIPMENT, WIRING AND RACEWAY, AND MAKE ALL CONNECTIONS TO/FROM PANELBOARDS, DISCONNECT SWITCHES, ADJUSTABLE SPEED DRIVES, MOTOR STARTERS, AND THE END USE EQUIPMENT NECESSARY FOR A FULLY OPERATIONAL SYSTEM. COORDINATE WITH MECHANICAL CONTRACTOR.

H. ALL RACEWAYS PENETRATING FIRE RATED PARTITIONS, WALLS, AND CEILINGS SHALL BE SEALED USING APPROVED FIRE RATED SEALANT TO MATCH THE REQUIRED WALL FIRE RATING.

I. ALL POWER SHUT DOWNS MUST BE COORDINATED WITH THE OWNER'S REPRESENTATIVE.

J. THE ELECTRICAL CONTRACTOR SHALL MAKE AN ON SITE INSPECTION TO DETERMINE THE FULL SCOPE OF WORK AND WORKING CONDITIONS BEFORE SUBMITTING A PROPOSAL.

K. ALL CIRCUIT BREAKERS SERVING HVAC EQUIPMENT SHALL BE UL LISTED AS 'HACR'.

L. THE DRAWINGS ARE DIAGRAMMATIC. EXACT LOCATION OF EQUIPMENT, WIRING AND RACEWAYS SHALL BE DETERMINED BY CONTRACTOR SUBJECT TO ARCHITECT APPROVAL.

M. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE ELECTRICAL CHARACTERISTICS OF ALL NEW EQUIPMENT, MOTORS, ETC. BEFORE INSTALLING CABLING AND RACEWAY. IF THERE ARE ANY DISCREPANCIES BETWEEN THE ACTUAL RATING OF EQUIPMENT AT THE SITE AND THE DRAWINGS, THEN THE ENGINEER SHALL BE NOTIFIED.

N. THE CONTRACTOR SHALL SUBMIT TO THE OWNER: CERTIFICATES OF INSPECTION FOR THE ELECTRICAL INSTALLATION FROM AN APPROVED INSPECTION AGENCY UPON COMPLETION OF ELECTRICAL WORK.

O. ALL WORK SHALL BE INSTALLED SO AS TO BE READILY ACCESSIBLE FOR OPERATION MAINTENANCE, AND REPAIR. MINOR DEVIATIONS FROM THE PLANS MAY BE MADE TO ACCOMPLISH THIS, SUBJECT TO THE APPROVAL OF THE ENGINEER.

P. THE ELECTRICAL CONTRACTOR SHALL USE MAXIMUM OF 6' OF FLEXIBLE CONDUIT FOR FOR EQUIPMENT SUBJECT TO VIBRATION, NOISE TRANSMISSION, OR MOVEMENT, AND FOR ALL MOTORS. USE LIQUID TIGHT FLEXIBLE CONDUIT IN WET OR DAMP LOCATIONS. INSTALL SEPARATE GROUND CONDUCTOR ACROSS FLEXIBLE CONNECTIONS.

Q. ALL WIRING SHALL BE COPPER CONDUCTOR WITH 600 VOLT TYPE THHN, OR THWN INSULATION IN CONDUIT. THE MINIMUM SIZE WIRE FOR POWER CIRCUITS SHALL BE #12 AWG. SOLID CONDUCTORS SHALL BE USED FOR NUMBER 10 AND 12; STRANDED CONDUCTORS SHALL BE USED FOR NUMBER 8 AND LARGER. THE CONTRACTOR MAY USE METAL CLAD TYPE 'MC' WHERE ALLOWED BY THE NATIONAL ELECTRICAL CODE AND APPROVED FOR USE BY THE AUTHORITIES HAVING JURISDICTION.

R. ALL MATERIALS AND EQUIPMENT FURNISHED FOR THIS PROJECT SHALL BE NEW, LISTED, AND APPROVED BY UL.

S. THE CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMITS, INSPECTIONS, LICENSES AND PAY UTILITY COMPANY FEES.

T. ALL FUSED AND NON-FUSED DISCONNECT SWITCHES SHALL HAVE: 600 VOLT RATING FOR 480 VOLT CIRCUITS. SIZE FUSES TO COMPLY WITH NAMEPLATE RATING OF EQUIPMENT SERVED.

U. THE ELECTRICAL CONTRACTOR SHALL PROVIDE NEW TYPEWRITTEN PANEL SCHEDULES WITHIN THE SCOPE OF THIS PROJECT. THIS INCLUDES ALL PANELS EVEN IF ONLY A FEW CIRCUITS WERE CHANGED AS A RESULT OF THIS PROJECT. WHERE ACTUAL FIELD CONDITIONS REQUIRE DIFFERENT CIRCUIT NUMBERS THAN THOSE INDICATED ON PLANS THE CONTRACTOR SHALL ADVISE OWNER OF CHANGES ON REQUIRED AS-BUILT DRAWINGS.

V. ELECTRICAL CONTRACTOR SHALL BE REQUIRED TO VERIFY EXISTING DEMAND LOADS ON EXISTING ELECTRICAL EQUIPMENT THAT IS BEING MODIFIED AS PART OF THIS SCOPE OF WORK AND ADVISE ENGINEER OF RECORD/OWNER WHERE THE EXISTING AND NEW EQUIPMENT LOADS EXCEED THE RATING OF THE EXISTING ELECTRICAL EQUIPMENT.

NEW WORK KEYED NOTES:

GENERAL: NEW WORK NOTES ARE INDICATED WITH THE FOLLOWING SYMBOL (−) AND ARE NUMBERED AS FOLLOWS:

(1) EXISTING EXIT SIGNAGE IS NOT INCLUDED WITHIN SCOPE OF WORK. EXISTING FIXTURES TO BE PROTECTED DURING CONSTRUCTION AND CLEANED UPON COMPLETION OF NEW WORK.

(2) NEW FIRE ALARM DEVICE. SEE LEAD SHEET FOR GENERAL NOTES RELATING TO DEMOLITION, RELOCATION AND INSTALLATION OF NEW FIRE ALARM DEVICES

(3) NEW EMERGENCY LIGHT FIXTURES TO BE SUPPLIED AND INSTALLED BY OTHERS UNDER SEPARATE CONTRACT. ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR EXTENDING EXISTING EMERGENCY LIGHTING CIRCUIT TO NEW JUNCTION BOX PROVIDED AND INSTALLED BY EC TO FACILITATE INSTALLATION OF NEW LIGHTING.

(4) NEW LIGHT FIXTURES TO BE SUPPLIED AND INSTALLED BY OTHERS UNDER SEPARATE CONTRACT. ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING AND INSTALLING NEW JUNCTION IN EACH ROOM WITHIN AREA OF WORK AS WELL AS (2)#12 CU & (1)#12 CU GRD IN 3/4" C. TO NEW LOCKER ROOM PANELS AS NECESSARY, OCCUPYING BREAKER POSITIONS INDICATED, TO FACILITATE INSTALLATION OF NEW LIGHTING.

(5) NEW CORRIDOR LIGHT FIXTURES TO BE SUPPLIED AND INSTALLED BY OTHERS UNDER SEPARATE CONTRACT. ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR EXTENDING EXISTING CORRIDOR LIGHTING CIRCUIT TO NEW JUNCTION BOX PROVIDED AND INSTALLED BY EC TO FACILITATE INSTALLATION OF NEW LIGHTING.

(6) NEW SWITCH LOCATION TO BE WIRED BY ELECTRICAL CONTRACTOR TO ASSOCIATED ROOM LIGHTING JUNCTION BOX. NEW LIGHTING CONTROLS TO BE PROVIDED AND INSTALLED BY OTHERS UNDER SEPARATE CONTRACT. IT SHALL BE THE RESPONSIBILITY OF THE ELECTRICAL CONTRACTOR TO PROVIDE WIRE, CONDUIT, AND BACKBOXES AS NECESSARY TO FACILITATE NEW LIGHTING SWITCH INSTALLATION.

(7) NEW DOWNLIGHT TO BE SUPPLIED AND INSTALLED BY ELECTRICAL CONTRACTOR. ELECTRICAL CONTRACTOR TO PROVIDE AND INSTALL NEW LED DOWNLIGHT MODEL RAB #CSR-1-8-835-UNV-W OR APPROVED EQUAL. COORDINATE EXACT LOCATION IN FIELD WITH ARCH/OWNER PRIOR TO ROUGH-IN.

(8) NEW LIGHT FIXTURES IN ATHLETIC STORAGE MOUNTED BELOW NEW MEZZANINE TO BE SUPPLIED AND INSTALLED BY OTHERS UNDER SEPARATE CONTRACT. ELECTRICAL CONTRACTOR TO EXTEND EXISTING LIGHTING CIRCUIT IN STORAGE ROOM TO NEW JUNCTION BOX TO BE MOUNTED BELOW NEW MEZZANINE TO FACILITATE INSTALLATION OF NEW LIGHTING.

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No.	Date	Description
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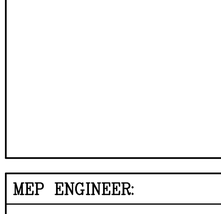
REVISIONS:

KEY PLAN:



John A. Marchiafava P. E.
New Jersey P. E. No. 24GE04992500

Professional Engineer
John A. Marchiafava P. E.

PROJECT: REF21-35-8267

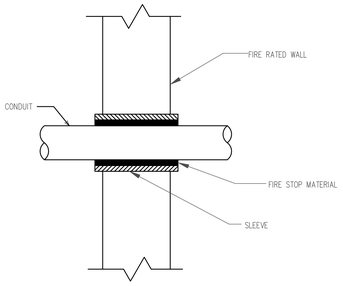
LRHSD-LENAPE HIGH SCHOOL
NORTH LOCKER ROOM
RENOVATIONS

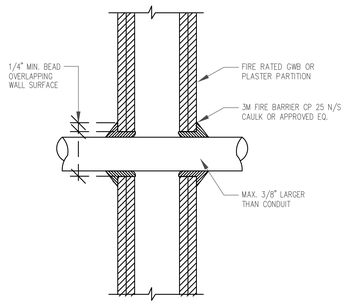
235 HARTFORD RD
MEDFORD, NEW JERSEY

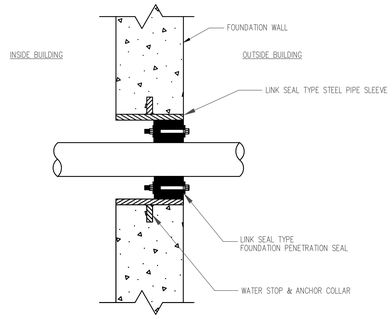
DRAWING TITLE:

ELECTRICAL NEW WORK
REFLECTED CEILING PLANS

DRAWN BY: ZT	SCALE: AS NOTED	DWG SIZE: 42x30	
CHECKED BY: CM	DRAWING NO. E-201	REVISION 0	
DATE: 05/20/2022			
PROJECT NO.: BC22002			







GENERAL FIRE STOP NOTES:

1. REFER TO SPEC SHEET SPECIFICATIONS FOR QUALITY CONTROL REQUIREMENTS
2. DETAILS SHOWN ON THIS DRAWING ARE TYPICAL DETAILS. IF FIELD CONDITIONS DO NOT MATCH REQUIREMENTS OF TYPICAL DETAILS, APPROVED ALTERNATE DETAILS SHALL BE UTILIZED. FIELD CONDITIONS AND DIMENSIONS NEED TO BE VERIFIED FOR COMPLIANCE WITH THE DETAILS, INCLUDING BUT NOT LIMITED TO THE FOLLOWING:
   - MINIMUM AND MAXIMUM WIDTH OF JOINTS.
   - REFER TO DRAWING E-401 FOR PANEL SCHEDULES.
3. IF ALTERNATE DETAILS MATCHING THE FIELD CONDITIONS ARE NOT AVAILABLE, MANUFACTURER'S ENGINEERING JUDGEMENT DRAWINGS ARE ACCEPTABLE. DRAWINGS SHALL FOLLOW THE INTERNATIONAL FIRESTOP COUNCIL (IFC) GUIDELINES FOR EVALUATING FIRESTOP SYSTEMS ENGINEERING JUDGEMENTS.
   REFERENCES:
   - 2002 UNDERWRITER'S LABORATORIES FIRE RESISTANCE DIRECTORY, VOLUMES 1 & 2
   - NFPA 101 LIFE SAFETY CODE
   - NFPA 70 – NATIONAL ELECTRIC CODE 2020
   - ALL GOVERNING LOCAL AND REGIONAL BUILDING CODES
4. FIRESTOP SYSTEM INSTALLATION MUST MEET REQUIREMENTS OF ASTM E-814 (UL 1479) TESTED ASSEMBLIES THAT PROVIDE A FIRE RATING EQUAL TO THAT OF CONSTRUCTION BEING PENETRATED.
5. ALL RATED THROUGH-PENETRATION ASSEMBLIES SHALL BE PROMINENTLY LABELLED WITH THE FOLLOWING INFORMATION:
   - ATTENTION: FIRE RATED ASSEMBLY
   - UL SYSTEM #
   - PRODUCT(S) USED
   - HOURLY RATING (F-RATING)
   - INSTALLATION DATE

1 E-301 TYPICAL CONDUIT PENETRATION DETAIL #1
SCALE: NONE

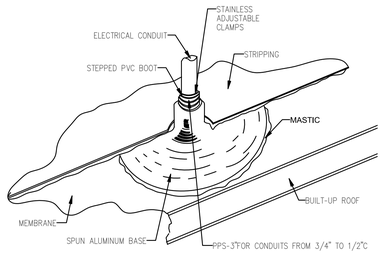
NOTES:
1. USE THIS DETAIL WHERE CONDUITS PASS THRU FIRE RATED WALL.
2. WHERE CONDUITS PASS THRU FOUNDATION WALLS, FLOOR SLAB ON EARTH, ROOF, CONCRETE BEAM, BRICK WALL, OR WATER PROOF FLOORS, USE PIPE SLEEVES.
3. FIRESTOPPING OF CONDUIT PENETRATIONS SHALL UTILIZE THE CORRECT UL STANDARD FOR THE SPECIFIC WALL/FLOOR/CEILING TYPES AND RATINGS.

2 E-301 TYPICAL CONDUIT PENETRATION DETAIL #2
SCALE: NONE

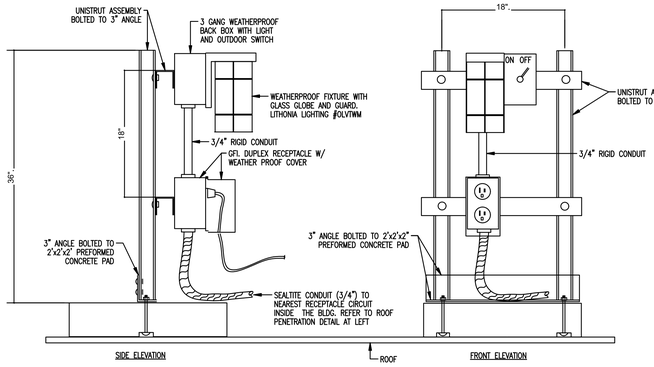
NOTES:
1. FIRESTOPPING OF CONDUIT PENETRATIONS SHALL UTILIZE THE CORRECT UL STANDARD FOR THE SPECIFIC WALL/FLOOR/CEILING TYPES AND RATINGS.

3 E-301 TYPICAL CONDUIT PENETRATION DETAIL #3
SCALE: NONE

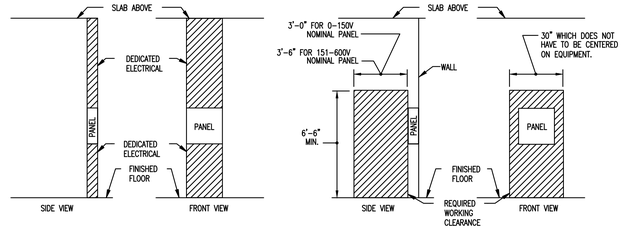
NOTES:
1. FOR SLEEVE DIAMETER USE MANUFACTURER'S SIZE RECOMMENDATION.
2. FIRESTOPPING OF CONDUIT PENETRATIONS SHALL UTILIZE THE CORRECT UL STANDARD FOR THE SPECIFIC WALL/FLOOR/CEILING TYPES AND RATINGS.



4 E-301 TYPICAL CONDUIT ROOF PENETRATION
SCALE: NONE



5 E-301 ROOFTOP MOUNTED RECEPTACLE AND LIGHT CONNECTION DETAIL
SCALE: NONE



6 E-301 ELECTRICAL PANEL CLEARANCE REQUIREMENTS
SCALE: NOT TO SCALE

NOTE:
1. DISTANCE FROM FACE OF EQUIPMENT PER NEC 110.26 (A)(1): 3'-0" MINIMUM CLEARANCE FOR ELECTRICAL EQUIPMENT AT 208Y/120V. 3'-6" MINIMUM CLEARANCE FOR ELECTRICAL EQUIPMENT AT 480Y/277V. NOTE: MINIMUM CLEARANCE INCREASED TO 4'-0" IF THERE ARE EXPOSED LIVE PARTS ON BOTH SIDE OF THE WORKING SPACE. ELECTRICAL EQUIPMENT DOOR MUST BE ABLE TO OPEN TO 90 DEGREES MINIMUM.
2. DEDICATED EQUIPMENT SPACE, ABOVE AND BELOW THE ELECTRICAL EQUIPMENT, SHALL BE PROVIDED AS DESCRIBED IN NEC 2017 – 110.26(E)(1). THE SPACE EQUAL TO THE WIDTH AND DEPTH OF THE EQUIPMENT AND EXTENDING FROM THE FLOOR TO A HEIGHT OF 6'-0" ABOVE THE EQUIPMENT OR TO THE STRUCTURAL CEILING, WHICHEVER IS LOWER, SHALL BE DEDICATED TO THE ELECTRICAL INSTALLATION. NO PIPING, DUCTS, LEAK PROTECTION APPARATUS, OR OTHER EQUIPMENT FOREIGN TO THE ELECTRICAL INSTALLATION SHALL BE LOCATED IN THIS ZONE. SEE NEC 2020 – 110.26 FOR EXCEPTIONS AND FURTHER INFORMATION.

ALL WORK SHOWN IS THE RESPONSIBILITY OF THE ELECTRICAL CONTRACTOR, UNLESS NOTED OTHERWISE.

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No.	Date	Description
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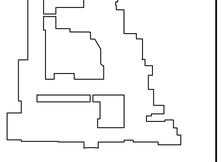
REVISIONS:

KEY PLAN:



John A. Marchiafava P. E.
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Professional Engineer
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PROJECT: REF21-35-8267

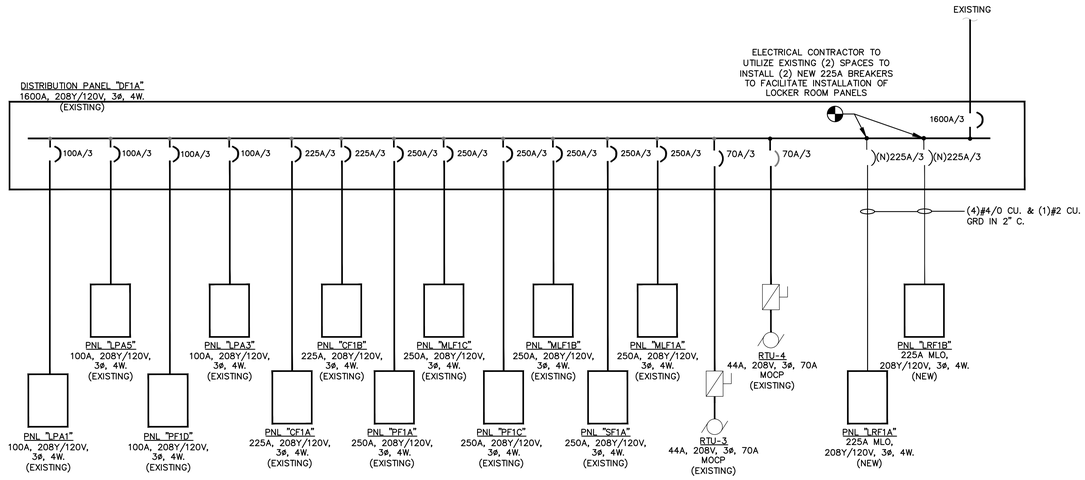
LRHSD-LENAPE HIGH SCHOOL NORTH LOCKER ROOM RENOVATIONS

235 HARTFORD RD
MEDFORD, NEW JERSEY

DRAWING TITLE:

ELECTRICAL DETAILS

DRAWN BY: ZT	SCALE: AS NOTED	DWG SIZE: 42x30	
CHECKED BY: CM	DRAWING NO. E-301	REVISION 0	
DATE: 05/20/2022			
PROJECT NO.: 8C22002			



1 E-401 PARTIAL DIST. DF1A ELECTRICAL RISER DIAGRAM – MODIFIED

SCALE: NONE

KEY TO LINETYPES/SYMBOLS	
──	EXISTING EQUIPMENT TO REMAIN
– – – –	EXISTING EQUIPMENT TO BE DEMOLISHED
━━	NEW EQUIPMENT
◈	POINT OF DISCONNECTION/ DEMOLITION – EXISTING EQUIPMENT TO REMAIN FROM EXISTING EQUIPMENT TO BE REMOVED
◐	POINT OF CONNECTION – EXISTING EQUIPMENT TO NEW EQUIPMENT/WORK

NEW WORK SYSTEM NOTES:

1. GENERAL NOTES:
   - A. REFER TO ELECTRICAL LEAD SHEETS, E-001 FOR "NOTES" THAT PERTAIN TO THE SCOPE OF THIS PROJECT.
   - B. REFER TO BOOK SPECIFICATIONS FOR PROJECT DETAILS AND EXECUTION REQUIREMENTS.
   - C. REFER TO DRAWING E-401 FOR PANEL SCHEDULES.
   - D. ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE 2020 EDITION OF THE NATIONAL ELECTRICAL CODE.
   - E. CONTRACTOR SHALL PROVIDE ALL REQUIRED CONDUITS, RACEWAYS, CONDUCTORS, AND OTHER EQUIPMENT NECESSARY TO PROVIDE A COMPLETE WORKING SYSTEM.
   - F. ELECTRICAL CONTRACTOR SHALL INSTALL ALL (N) EQUIPMENT IN STRICT ACCORDANCE WITH THE MANUFACTURER'S WRITTEN INSTRUCTIONS AND SHALL MAINTAIN ALL CLEARANCES AS NOTED WITHIN THE WRITTEN INSTRUCTIONS.
   - G. ELECTRICAL CONTRACTOR TO PROVIDE AND INSTALL ALL ELECTRICAL EQUIPMENT, WIRING AND RACEWAY, AND MAKE ALL CONNECTIONS TO/FROM PANELBOARDS, DISCONNECT SWITCHES, ADJUSTABLE SPEED DRIVES, MOTOR STARTERS, AND THE END USE EQUIPMENT NECESSARY FOR A FULLY OPERATIONAL SYSTEM. COORDINATE WITH MECHANICAL CONTRACTOR.
   - H. ALL RACEWAYS PENETRATING FIRE RATED PARTITIONS, WALLS, AND CEILINGS SHALL BE SEALED USING APPROVED FIRE RATED SEALANT TO MATCH THE REQUIRED WALL FIRE RATING.
   - I. ALL POWER SHUT DOWNS MUST BE COORDINATED WITH THE OWNER'S REPRESENTATIVE.
   - J. THE ELECTRICAL CONTRACTOR SHALL MAKE AN ON SITE INSPECTION TO DETERMINE THE FULL SCOPE OF WORK AND WORKING CONDITIONS BEFORE SUBMITTING A PROPOSAL.
   - K. ALL CIRCUIT BREAKERS SERVING HVAC EQUIPMENT SHALL BE UL LISTED AS 'HACR'.
   - L. THE DRAWINGS ARE DIAGRAMMATIC. EXACT LOCATION OF EQUIPMENT, WIRING AND RACEWAYS SHALL BE DETERMINED BY CONTRACTOR SUBJECT TO ARCHITECT APPROVAL.
   - M. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE ELECTRICAL CHARACTERISTICS OF ALL NEW EQUIPMENT, MOTORS, ETC. BEFORE INSTALLING CABLING AND RACEWAY. IF THERE ARE ANY DISCREPANCIES BETWEEN THE ACTUAL RATING OF EQUIPMENT AT THE SITE AND THE DRAWINGS, THEN THE ENGINEER SHALL BE NOTIFIED.
   - N. THE CONTRACTOR SHALL SUBMIT TO THE OWNER: CERTIFICATES OF INSPECTION FOR THE ELECTRICAL INSTALLATION FROM AN APPROVED INSPECTION AGENCY UPON COMPLETION OF ELECTRICAL WORK.
   - O. ALL WORK SHALL BE INSTALLED SO AS TO BE READILY ACCESSIBLE FOR OPERATION MAINTENANCE, AND REPAIR. MINOR DEVIATIONS FROM THE PLANS MAY BE MADE TO ACCOMPLISH THIS, SUBJECT TO THE APPROVAL OF THE ENGINEER.
   - P. THE ELECTRICAL CONTRACTOR SHALL USE MAXIMUM OF 6' OF FLEXIBLE CONDUIT FOR FOR EQUIPMENT SUBJECT TO VIBRATION, NOISE TRANSMISSION, OR MOVEMENT, AND FOR ALL MOTORS. USE LIQUID TIGHT FLEXIBLE CONDUIT IN WET OR DAMP LOCATIONS. INSTALL SEPARATE GROUND CONDUCTOR ACROSS FLEXIBLE CONNECTIONS.
   - Q. ALL WIRING SHALL BE COPPER CONDUCTOR WITH 600 VOLT TYPE THHN, OR THWN INSULATION IN CONDUIT. THE MINIMUM SIZE WIRE FOR POWER CIRCUITS SHALL BE #12 AWG. SOLID CONDUCTORS SHALL BE USED FOR NUMBER 10 AND 12; STRANDED CONDUCTORS SHALL BE USED FOR NUMBER 8 AND LARGER. THE CONTRACTOR MAY USE METAL CLAD TYPE 'MC' WHERE ALLOWED BY THE NATIONAL ELECTRICAL CODE AND APPROVED FOR USE BY THE AUTHORITIES HAVING JURISDICTION.
   - R. ALL MATERIALS AND EQUIPMENT FURNISHED FOR THIS PROJECT SHALL BE NEW, LISTED, AND APPROVED BY UL.
   - S. THE CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMITS, INSPECTIONS, LICENSES AND PAY UTILITY COMPANY FEES.
   - T. ALL FUSED AND NON-FUSED DISCONNECT SWITCHES SHALL HAVE: 600 VOLT RATING FOR 480 VOLT CIRCUITS. SIZE FUSES TO COMPLY WITH NAMEPLATE RATING OF EQUIPMENT SERVED.
   - U. THE ELECTRICAL CONTRACTOR SHALL PROVIDE NEW TYPEWRITTEN PANEL SCHEDULES WITHIN THE SCOPE OF THIS PROJECT. THIS INCLUDES ALL PANELS EVEN IF ONLY A FEW CIRCUITS WERE CHANGED AS A RESULT OF THIS PROJECT. WHERE ACTUAL FIELD CONDITIONS REQUIRE DIFFERENT CIRCUIT NUMBERS THAN THOSE INDICATED ON PLANS THE CONTRACTOR SHALL ADVISE OWNER OF CHANGES ON REQUIRED AS-BUILT DRAWINGS.
   - V. ELECTRICAL CONTRACTOR SHALL BE REQUIRED TO VERIFY EXISTING DEMAND LOADS ON EXISTING ELECTRICAL EQUIPMENT THAT IS BEING MODIFIED AS PART OF THIS SCOPE OF WORK AND ADVISE ENGINEER OF RECORD/OWNER WHERE THE EXISTING AND NEW EQUIPMENT LOADS EXCEED THE RATING OF THE EXISTING ELECTRICAL EQUIPMENT.
   - W. ELECTRICAL CONTRACTOR SHALL PROVIDE NEW CIRCUIT BREAKERS FOR NEW CIRCUITS AS REQUIRED. NEW CIRCUIT BREAKERS IN ALL MODIFIED PANELS SHALL MATCH EXISTING TYPES AND RATINGS.

Panel:	LRF1A			Main Bkr SCA
Location:	G05			Branch Bkr SCA
Fed From:	DF1A			Branch Bkr Series SCA
Voltage:	208Y/120V, 3P4W		X	100% Neutral Bus
Main Config:	MLO	Main Amps: 225A	X	Equipment Ground Bus
Bus Rating:				Isolated Ground Bus
Bus Matl:				Sub-Feed Lugs
NEMA:				Sub-Feed Breaker Amps
Mounting:				Service Entrance Rated
Panel Info:				

(Demand Calculation does not include sub-panel loads)

Category	Conn.	D.F.	Demand	Conn.	D.F.	Demand
Lighting:	0	1.25	0			
Receptacles:	0	1.00	0	0	0.50	0
General:	0	1.25	0	0	1.00	0
Motors:	0	1.00	0	0	0.25	0
Electric Space Htg:	0	1.00	0			0
Kitchen:	0	1.00	0		1st & 2nd:	0
Noncoincident:	0	0.00	0			0
HVAC:	0	1.00	0	0	0.25	0
Demand VA:	0	Demand Amps:	0			

Ckt #	Load Description	Load VA	Breaker P	Breaker Trip	Wiring	Phase A	Phase B	Phase C	Wiring	Breaker Trip	Breaker P	Load VA	Load Description	Ckt #
1	(N)DOAS-2	8,179	3	125	4#1, 1#6G, 1-1/2"C	9,135	0	0	3#12, 1#12G, 3/4"C	15	2	956	(N)CU-3	2
3		8,179	-			0	9,135	0			-	956		4
5		8,179	-			0	0	9,135	3#12, 1#12G, 3/4"C	15	2	956	(N)CU-4	6
7	(N)SPARE		3	20		956	0	0			-	956		8
9			-			0	235	0	2#12, 1#12G, 3/4"C	20	1	235	(N)EF-3	10
11			-			0	0	1,176	2#12, 1#12G, 3/4"C	20	1	1,176	(N)EF-4	12
13	(N)ROOFTOP CONV RECEPT	360	1	20	2#12, 1#12G, 3/4"C	1,056	0	0	2#12, 1#12G, 3/4"C	20	1	696	(N)CUH-1	14
15	(N)G03 RECEPT	900	1	20	2#12, 1#12G, 3/4"C	0	1,140	0	2#12, 1#12G, 3/4"C	20	1	240	(N)WATER FOUNTAINS	16
17	(N)G04 RECEPT	900	1	20	2#12, 1#12G, 3/4"C	0	0	1,140	2#12, 1#12G, 3/4"C	20	1	240	(N)WATER FOUNTAINS	18
19	(N)RESTROOM RECEPT	360	1	20	2#12, 1#12G, 3/4"C	360	0	0		20	1		(N)LOCKER ROOM LIGHTING	20
21	(N)CONV RECEPT	1,260	1	20	2#12, 1#12G, 3/4"C	0	1,500	0	2#12, 1#12G, 3/4"C	20	1	240	(N)CONDENSATE PUMP	22
23	(N)CONV RECEPT	540	1	20	2#12, 1#12G, 3/4"C	0	0	740	2#12, 1#12G, 3/4"C	20	1	200	(N)LOCKER ROOM DOWNLIGHTS	24
25	(N)SPARE		1	20		0	0	0		20	1		(N)SPARE	26
27	(N)SPARE		1	20		0	0	0		20	1		(N)SPARE	28
29	(N)SPARE		1	20		0	0	0		20	1		(N)SPARE	30
31	(N)SPARE		1	20		0	0	0		20	1		(N)SPARE	32
33	(N)SPARE		1	20		0	0	0		20	1		(N)SPARE	34
35	(N)SPARE		1	20		0	0	0		20	1		(N)SPARE	36
37	(N)SPARE		1	20		0	0	0		20	1		(N)SPARE	38
39	(N)SPARE		1	20		0	0	0		20	1		(N)SPARE	40
41	(N)SPARE		1	20		0	0	0		20	1		(N)SPARE	42

Phase A	Phase B	Phase C	
11,507	12,010	12,191	VA
			VA (Sub-Feed)
11,507	12,010	12,191	VA (Total)
96	100	102	Amperage

Total Connected Load: 35,708 VA
Total Connected Amps: 99 A

Notes:

Warning:The load category information has not been entered for all circuits.

\\VH-NASUNI\projects\2022\8C22002.00 - LRHSD Referendum Phase 1 HVAC Projects\05 - Drawings\02-Lenape\8267 North Locker Room Renovation\Schedules\[Panel Sched - ZT.xlsm](N) LRF1A

2 E-401 PANEL 'LRF1A' SCHEDULE – NEW

SCALE: NONE

Panel:	LRF1B			Main Bkr SCA
Location:	B05			Branch Bkr SCA
Fed From:	DF1A			Branch Bkr Series SCA
Voltage:	208Y/120V, 3P4W		X	100% Neutral Bus
Main Config:	MLO	Main Amps: 225A	X	Equipment Ground Bus
Bus Rating:				Isolated Ground Bus
Bus Matl:				Sub-Feed Lugs
NEMA:				Sub-Feed Breaker Amps
Mounting:				Service Entrance Rated
Panel Info:				

(Demand Calculation does not include sub-panel loads)

Category	Conn.	D.F.	Demand	Conn.	D.F.	Demand
Lighting:	0	1.25	0			
Receptacles:	0	1.00	0	0	0.50	0
General:	0	1.25	0	0	1.00	0
Motors:	0	1.00	0	0	0.25	0
Electric Space Htg:	0	1.00	0			0
Kitchen:	0	1.00	0		1st & 2nd:	0
Noncoincident:	0	0.00	0			0
HVAC:	0	1.00	0	0	0.25	0
Demand VA:	0	Demand Amps:	0			

Ckt #	Load Description	Load VA	Breaker P	Breaker Trip	Wiring	Phase A	Phase B	Phase C	Wiring	Breaker Trip	Breaker P	Load VA	Load Description	Ckt #
1	(N)DOAS-1	8,179	3	125	4#1, 1#6G, 1-1/2"C	9,135	0	0	3#12, 1#12G, 3/4"C	15	2	956	(N)CU-1	2
3		8,179	-			0	9,135	0			-	956		4
5		8,179	-			0	0	9,135	3#12, 1#12G, 3/4"C	15	2	956	(N)CU-2	6
7	(N)SPARE		3	20		956	0	0			-	956		8
9			-			0	1,176	0	2#12, 1#12G, 3/4"C	20	1	1,176	(N)EF-1	10
11			-			0	0	235	2#12, 1#12G, 3/4"C	20	1	235	(N)EF-2	12
13	(N)ROOFTOP CONV RECEPT	360	1	20	2#12, 1#12G, 3/4"C	1,056	0	0	2#12, 1#12G, 3/4"C	20	1	696	(N)CUH-2	14
15	(N)B03 RECEPT	1,080	1	20	2#12, 1#12G, 3/4"C	0	1,320	0	2#12, 1#12G, 3/4"C	20	1	240	(N)WATER FOUNTAINS	16
17	(N)B04 RECEPT	900	1	20	2#12, 1#12G, 3/4"C	0	0	1,140	2#12, 1#12G, 3/4"C	20	1	240	(N)WATER FOUNTAINS	18
19	(N)RESTROOM RECEPT	360	1	20	2#12, 1#12G, 3/4"C	360	0	0		20	1		(N)LOCKER ROOM LIGHTING	20
21	(N)CONV RECEPT	1,260	1	20	2#12, 1#12G, 3/4"C	0	1,460	0	2#12, 1#12G, 3/4"C	20	1	200	(N)LOCKER ROOM DOWNLIGHTS	22
23	(N)CONV RECEPT	540	1	20	2#12, 1#12G, 3/4"C	0	0	540		20	1		(N)SPARE	24
25	(N)SPARE		1	20		0	0	0		20	1		(N)SPARE	26
27	(N)SPARE		1	20		0	0	0		20	1		(N)SPARE	28
29	(N)SPARE		1	20		0	0	0		20	1		(N)SPARE	30
31	(N)SPARE		1	20		0	0	0		20	1		(N)SPARE	32
33	(N)SPARE		1	20		0	0	0		20	1		(N)SPARE	34
35	(N)SPARE		1	20		0	0	0		20	1		(N)SPARE	36
37	(N)SPARE		1	20		0	0	0		20	1		(N)SPARE	38
39	(N)SPARE		1	20		0	0	0		20	1		(N)SPARE	40
41	(N)SPARE		1	20		0	0	0		20	1		(N)SPARE	42

Phase A	Phase B	Phase C	
11,507	13,091	11,050	VA
			VA (Sub-Feed)
11,507	13,091	11,050	VA (Total)
96	109	92	Amperage

Total Connected Load: 35,648 VA
Total Connected Amps: 99 A

Notes:

Warning:The load category information has not been entered for all circuits.

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3 E-401 PANEL 'LRF1B' SCHEDULE – NEW

SCALE: NONE

ALL WORK SHOWN IS THE RESPONSIBILITY OF THE ELECTRICAL CONTRACTOR, UNLESS NOTED OTHERWISE.

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No.	Date	Description
0	01/12/2024	Issued for Bid

REVISIONS:

KEY PLAN:

John A. Marchiafava P. E.
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Professional Engineer
John A. Marchiafava P. E.

PROJECT: REF21-35-8267

LRHSD-LENAPE HIGH SCHOOL
NORTH LOCKER ROOM
RENOVATIONS

235 HARTFORD RD
MEDFORD, NEW JERSEY

DRAWING TITLE:

ELECTRICAL SCHEDULES

DRAWN BY: ZT	SCALE: AS NOTED	DWG SIZE: 42x30
CHECKED BY: CM	DRAWING NO.	REVISION
DATE: 05/20/2022	E-401	0
PROJECT NO.: 8C22002		

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ABBREVIATIONS

AC	AIR CONDITIONING UNIT
ACR	AIR CURTAIN
AD	ACCESS DOOR
AF	AIRFOIL
AFF	ABOVE FINISHED FLOOR
AHU	AIR HANDLING UNIT
AL	ACOUSTICAL LINING
AMD	AIR MEASURING DEVICE
AP	ACCESS PANEL
AS	AIR SEPARATOR
ATC	AUTOMATIC TEMPERATURE CONTROL
B	BOILER
BAS	BUILDING AUTOMATION SYSTEM
BBD	BOILER BLOWDOWN
BD	BACKDRAFT DAMPER
BF	BOILER FEED UNIT
BFP	BACK FLOW PREVENTER
BFW	BOILER FEEDWATER
BFWP	BOILER FEEDWATER PUMP
BHP	BRAKE HORSEPOWER
BI	BACKWARD INCLINE
BOD	BOTTOM OF DUCT
BOP	BOTTOM OF PIPE
BOS	BOTTOM OF STEEL
BPD	BYPASS AIR DAMPER
BTU	BRITISH THERMAL UNIT
BTUH	BRITISH THERMAL UNIT PER HOUR
BV	BUTTERFLY VALVE
℄	CENTER LINE
CBD	CONTINUOUS BOILER BLOWDOWN
CC	COOLING COIL
CD	CEILING DIFFUSER
CF	CHEMICAL FEED UNIT
CFH	CUBIC FEET PER HOUR
CFM	CUBIC FEET PER MINUTE
CH	CHILLER
CHWR	CHILLED WATER RETURN
CHWS	CHILLED WATER SUPPLY
CI	CAST IRON
CIP	CLEAN IN PLACE
COMP	COMPRESSOR
CON	CONCENTRIC
COND	CONDENSATE
CP	CONDENSATE PUMP
CRU	COMPUTER ROOM AIR CONDITIONING UNIT
CS - __	CLEAN STEAM - PSIG
CT	COOLING TOWER
CU	CONDENSING UNIT
CUH	CABINET UNIT HEATER
CV	CONSTANT VOLUME / CONTROL VALVE
CVB	CONSTANT VOLUME BOX
CWR	CONDENSER WATER RETURN
CWS	CONDENSER WATER SUPPLY
DA	DIRECT ACTING
DB	DRY BULB
DC	DUST COLLECTOR
DDC	DIRECT DIGITAL CONTROLS
DEH	DEHUMIDIFIER
DHWS/R	DOMESTIC HOT WATER SUPPLY / RETURN
DIA./Ø	DIAMETER
DIFF	DIFFERENTIAL
DISCH	DISCHARGE
DL	DOOR LOUVER
DN	DOWN
DR	DRAIN
DWDI	DOUBLE WIDTH DOUBLE INLET
DX	DIRECT EXPANSION
D/L	DRILLING AND LOOPING
(E)	EXISTING TO REMAIN
EAT	ENTERING AIR TEMPERATURE
EBB	ELECTRIC BASEBOARD RADIATION
EC	EVAPORATIVE CONDENSOR
ECC	ECCENTRIC
EDH	ELECTRIC DUCT HEATER
EDR	EQUIVALENT DIRECT RADIATION
EF	EXHAUST FAN
EG	EXHAUST GRILLE
EGE	EMERGENCY GENERATOR EXHAUST
EH	ELECTRIC HEATER
EJ	EXPANSION JOINT
EMCS	ENERGY MONITORING CONTROL SYSTEM
EP	ELECTRIC-PNEUMATIC
ER	EXHAUST REGISTER
ERU	ENERGY RECOVERY UNIT
ES	END SWITCH
ESP	EXTERNAL STATIC PRESSURE
ET	EXPANSION TANK
EUH	ELECTRIC UNIT HEATER
EWT	ENTERING WATER TEMPERATURE
EX	EXHAUST
(F)	FUTURE
°F	DEGREES FAHRENHEIT
F	FILTER
FC	FORWARD CURVED OR FLEX CONN.
FCU	FAN COIL UNIT
FCV	FLOW CONTROL VALVE
FD	FLOOR DRAIN OR FIRE DAMPER
FG	FIBERGLASS
FH	FUME HOOD
FHE	FUME HOOD EXHAUST
FLA	FULL LOAD AMPS
FM	FLOW METER
FOB	FLAT ON BOTTOM
FOR	FUEL OIL RETURN
FOS	FUEL OIL SUPPLY
FOT	FLAT ON TOP
FOV	FUEL OIL VENT
FPB	FAN POWERED BOX
FPM	FEET PER MINUTE
FPS	FEET PER SECOND
FRP	FIBERGLASS REINFORCED PIPE
FS	FLOW SWITCH
FT	FEET OR FLASH TANK
FT/WG	FEET WATER GAUGE
F&T	FLOAT & THERMOSTATIC TRAP
FTR	FINNED TUBE RADIATION
FV	FACE VELOCITY
FZ	FREEZESTAT
GPH	GALLONS PER HOUR
GPM	GALLONS PER MINUTE
GR	GRILLE OR GLYCOL RETURN
GRAV	GRAVITY
GS	GLYCOL SUPPLY
GV	GATE VALVE
H	HUMIDISTAT
HC	HEATING COIL
HD	HEAD
HEPA	HIGH EFFICIENCY PARTICULATE ARRESTANCE FILTER
HL	HIGH LIMIT
HOA	HAND-OFF AUTOMATIC SELECTOR SWITCH
H/O	HAND-OFF SELECTOR SWITCH WITH PILOT LIGHT
HP	HORSEPOWER OR HEAT PUMP
HPC	HIGH PRESSURE CONDENSATE
HPD	HIGH PRESSURE DRIP
HPS	HEAT PUMP SUPPLY
HPS	HEAT PUMP RETURN
HRU	HEAT RECOVERY UNIT
HUM	HUMIDITY OR HUMIDIFIER
HV	HEATING & VENTILATING UNIT
HW	HOT WATER
HWR	HOT WATER RETURN
HWS	HOT WATER SUPPLY
HX	HEAT EXCHANGER
Hz	HERTZ
ID	INSIDE DIAMETER
I/L	INTERLOCK
IN	INCH
IN/WG	INCHES WATER GAUGE
KW	KILOWATT
LAT	LEAVING AIR TEMPERATURE
LB	POUND(S)
LB/HR	POUNDS PER HOUR
LD	LINEAR DIFFUSER
LF	LINEAR FEET
LH	LATENT HEAT
LPC	LOW PRESSURE CONDENSATE
LPD	LOW PRESSURE DRIP
LPS	LOW PRESSURE STEAM
LR	LINEAR RETURN
LRA	LOCKED ROTOR AMPS
LVR	LOUVER
LWT	LEAVING WATER TEMPERATURE
MAU	MAKEUP AIR UNIT
MB	MIXING BOX
MBH	1000 BTU PER HOUR
MOD	MOTOR OPERATED DAMPER
MPR	MEDIUM PRESSURE STEAM RETURN
MPS	MEDIUM PRESSURE STEAM SUPPLY
MU	MAKE UP WATER
(N)	NEW
NC	NORMALLY CLOSED
NG	NATURAL GAS
NO	NORMALLY OPEN
NTS	NOT TO SCALE
OA	OUTSIDE AIR
OAD	OUTSIDE AIR DAMPER
OAI	OUTSIDE AIR INTAKE
OBD	OPPOSED BLADE DAMPER
OCC	OCCUPIED
OD	OUTSIDE DIAMETER
OED	OPEN END DUCT
OP	ORIFICE PLATE
OV	OUTLET VELOCITY
P	PUMP
PBD	PARALLEL BLADE DAMPER
PC - __	PUMPED CONDENSATE - PSIG
PD	PRESSURE DROP
PERF	PERFORATED
PH	PHASE
PHC	PREHEAT COIL
PNEU	PNEUMATIC
PRV	PRESSURE REDUCING VALVE
PSF	POUNDS PER SQUARE FOOT
PSIA	POUNDS PER SQUARE INCH ABSOLUTE
PSIG	POUNDS PER SQUARE INCH GAUGE
PT	PRESSURE TRANSMITTER
PVC	POLYVINYL CHLORIDE
(R)	REMOVE EXISTING
RA	RETURN AIR OR REVERSE ACTING
RAD	RADIATION
RCP	RADIANT CEILING PANEL
RD	RETURN AIR DAMPER
(RE)	RELOCATE EXISTING
RE	RELIEF AIR
REFR	REFRIGERANT
RELD	RELIEF DAMPER
RF	RETURN AIR FAN
RG	RETURN AIR GRILLE
RH	RELATIVE HUMIDITY
RHC	REHEAT COIL
RHG	REFRIGERANT HOT GAS
RL	REFRIGERANT LIQUID
RO	ROOF OPENING
RPM	REVOLUTIONS PER MINUTE
RR	RETURN AIR REGISTER
RS	REFRIGERANT SUCTION
RTU	ROOFTOP UNIT
RV	REFRIGERANT VENT
S - __	STEAM - PSIG
SA	SUPPLY AIR
SD	SMOKE DAMPER OR SUPPLY DIFFUSER
SDA	SOUND ATTENUATOR
SEF	SMOKE EXHAUST FAN
SF	SUPPLY AIR FAN
SG	SUPPLY AIR GRILLE
SH	SENSIBLE HEAT
SMD	SMOKE DETECTOR
SP	STATIC PRESSURE
SQ FT	SQUARE FEET
SR	SUPPLY AIR REGISTER
SRD	SAFETY RELIEF VALVE DISCHARGE
SRV	SAFETY RELIEF VALVE
SS	STAINLESS STEEL
STM	STEAM
SUCT	SUCTION
SWSI	SINGLE WIDTH SINGLE INLET
S/R	SUPPLY AND RETURN
T	THERMOSTAT
TAB	TESTING AND BALANCING
TAD	TRANSFER AIR DUCT
TF	TERMINAL AIR FILTER
TEMP	TEMPERATURE
TH	TOTAL HEAT
THERM	THERMOMETER
TOD	TOP OF DUCT
TOP	TOP OF PIPE
TOS	TOP OF STEEL
TP	TOTAL PRESSURE
TSP	TOTAL STATIC PRESSURE
TT	TEMPERATURE TRANSMITTER
UC	UNDERCUT
UH	UNIT HEATER
UNO	UNLESS NOTED OTHERWISE
UNOCC	UNOCCUPIED
UV	UNIT VENTILATOR
V	VENT OR VOLTS
VAC	VACUUM
VAV	VARIABLE AIR VOLUME
VB	VACUUM BREAKER
VD	MANUAL VOLUME DAMPER
VEL	VELOCITY
VF	VENTILATING FAN
VFD	VARIABLE FREQUENCY DRIVE
VI	VIBRATION ISOLATOR
VIB	VIBRATION
VIV	VARIABLE INLET VANES
VP	VACUUM PUMP
VTR	VENT THROUGH ROOF
WB	WET BULB
WC	WATER COLUMN
WG	WATER GAUGE
WMS	WIRE MESH SCREEN
WP	WATERPROOF
XP	EXPLOSION PROOF

DUCTWORK SYMBOLS

SYMBOL	DESCRIPTION
	SUPPLY/OUTSIDE AIR DUCT
	RETURN/EXHAUST AIR DUCT
	45° ENTRY TAKEOFF, RECTANGULAR TO RECTANGULAR
	90° TAKEOFF, RECTANGULAR TO ROUND, STRAIGHT
	90° TAKEOFF, RECTANGULAR TO ROUND, BELLMOUTH W/ MANUAL VOLUME DAMPER
	90° TAKEOFF, ROUND TO ROUND, STRAIGHT
	90° CONICAL TAKEOFF, ROUND TO ROUND
	45° CONICAL LATERAL, ROUND TO ROUND
	45° LATERAL, ROUND TO ROUND
	45° WYE, ROUND TO ROUND
	END OF DUCT (CAPPED)
	SIDEWALL AIR TERMINAL W/VD (ARROWS DENOTE THROW DIRECTION)
	LINEAR DIFFUSER
FD	FIRE DAMPER - VERTICAL POSITION
	FIRE DAMPER - HORIZONTAL POSITION
	FLEXIBLE CONNECTION
	MANUAL VOLUME DAMPER
MOD	MOTOR OPERATED DAMPER
SD	SMOKE DETECTOR (DUCT-MOUNTED)
	EXHAUST AIR DESIGNATION
	RETURN AIR DESIGNATION
	SUPPLY AIR DESIGNATION

PIPING SYMBOLS

SYMBOL	DESCRIPTION
	MANUAL BALANCING VALVE WITH PRESSURE TAPS SEE SPECIFICATIONS FOR TYPE
	BALL VALVE
	GATE VALVE
	GLOBE VALVE
	BUTTERFLY VALVE
	PLUG VALVE
	VACUUM BREAKER
	CHECK VALVE
	ANGLE SHUTOFF VALVE SEE SPECIFICATIONS FOR TYPE
	ANGLE BALANCING/SHUTOFF VALVE SEE SPECIFICATIONS FOR TYPE
	TRIPLE DUTY VALVE
	COMBINATION BALANCING/SHUTOFF VALVE W/PRESSURE TAPS
	PRESSURE REDUCING VALVE
	SAFETY/RELIEF VALVE - PLAN AND ELEVATION
	PUMP - GENERIC
	PUMP - END SUCTION
B	BASKET STRAINER - ELEVATION AND PLAN
	Y-STRAINER WITH PLUG
	Y-STRAINER WITH DRAIN VALVE
	PRESSURE GAUGE WITH GAUGE COCK
	PRESSURE GAUGE WITH GAUGE COCK AND BOURDON TUBE
	THERMOMETER
P/T	PRESSURE/TEMPERATURE TEST FITTING
FM	FLOW METER
	PIPE UP AND DOWN
	TEE CONNECTION - STRAIGHT, DOWN, AND UP
	UNION
	END CAP
	BLIND FLANGE
	PIPE BELLOWS
	PIPE ANCHOR
	PIPE GUIDE (SLIDING)
	PIPE GUIDE (MOMENT)
	ELECTRICALLY HEAT TRACED PIPING
	AIR VENT - (MANUAL)
	AUTOMATIC AIR VENT
	CONCENTRIC REDUCER
	ECCENTRIC REDUCER
F	STEAM TRAP - FLOAT AND THERMOSTATIC
B	STEAM TRAP - BUCKET
T	STEAM TRAP - THERMOSTATIC
TH	STEAM TRAP - THERMODYNAMIC
P R	PITCH OF PIPE, RISE (R) DROP (D)
W H	EXPANSION LOOP AND SIZE

LINE DESIGNATIONS

CHWS	CHILLED WATER SUPPLY
CHWR	CHILLED WATER RETURN
CWS	CONDENSER WATER SUPPLY
CWR	CONDENSER WATER RETURN
HWS	HOT WATER SUPPLY
HWR	HOT WATER RETURN
HPS	HEAT PUMP SUPPLY
HPR	HEAT PUMP RETURN
GS	GLYCOL SUPPLY
GR	GLYCOL RETURN
FOS	FUEL OIL SUPPLY
FOR	FUEL OIL RETURN
FOV	FUEL OIL VENT
G	NATURAL GAS
C	COIL CONDENSATE DRAIN
MU	MAKE UP WATER
RV	REFRIGERANT VENT
RL	REFRIGERANT LIQUID
RS	REFRIGERANT SUCTION
	EXISTING PIPING/DUCTWORK TO REMAIN (WITH SERVICE DESIGNATION)
	EXISTING PIPING/DUCTWORK TO BE REMOVED (WITH SERVICE DESIGNATION)

CONTROLS

SYM. SYM. AUTOMATIC CONTROL DAMPER SYMBOLS:

OA = OUTSIDE AIR SA = SUPPLY AIR
RA = RETURN AIR SD = SMOKE DAMPER
EA = EXHAUST AIR FS = FIRE/SMOKE
RE = RELIEF AIR
BD = BACKDRAFT DAMPER

	THERMOSTAT - DUCT MOUNTED
	THERMOSTAT - WALL MOUNTED
H	HUMIDISTAT - DUCT MOUNTED
H	HUMIDISTAT - WALL MOUNTED
FZ	FREEZESTAT (LOW TEMPERATURE DETECTOR)
SP	STATIC PRESSURE SENSOR - DUCT MOUNTED
SP	SPACE STATIC PRESSURE SENSOR
	AUTOMATIC CONTROL VALVE (2 - WAY)
	AUTOMATIC CONTROL VALVE (3 - WAY)
	SOLENOID VALVE
FS	FLOW SWITCH
CO2 (T)	CO2 SENSOR
CO	CO DETECTOR
$	SWITCH

MISC. DWG. SYMBOLS

	POINT OF CONNECTION
	POINT OF DISCONNECT
	POINT OF CONNECTION FOR FUTURE WORK
	EQUIPMENT SYMBOL
	EQUIPMENT NUMBER OR FLOW (GPM,CFM,ETC.)
	DETAIL NUMBER
	DETAIL DRAWING NUMBER
	SECTION NUMBER
	SECTION DRAWING NUMBER
	PLAN NUMBER
	PLAN DRAWING NUMBER
	KEYED DEMOLITION NOTE
	KEYED NEW WORK NOTE

APPLICABLE CODES & STANDARDS

THE FOLLOWING CODES AND STANDARDS APPLY TO THIS PROJECT:

1. INTERNATIONAL BUILDING CODE (IBC) 2021, NJ EDITION.
2. NJAC REHABILITATION SUB-CODE 5:23-6
3. INTERNATIONAL MECHANICAL CODE (IMC) 2021.
4. INTERNATIONAL FUEL GAS CODE (IFGC) 2021.
5. NATIONAL STANDARD PLUMBING CODE (NSPC) 2021
6. NFPA 70 - NATIONAL ELECTRICAL CODE (NEC) 2020

GENERAL PROJECT NOTES

THE FOLLOWING NOTES APPLY TO ALL "M" MECHANICAL DRAWINGS:

1. ALL WORK SHALL FOLLOW THE REFERENCED APPLICABLE CODES AS ADOPTED AND MODIFIED BY THE STATE OF NEW JERSEY.
2. ALL WORK CONTAINED WITHIN THE MECHANICAL DRAWINGS AND SPECIFICATIONS IS THE RESPONSIBILITY OF THE SINGLE PRIME CONTRACTOR UNLESS OTHERWISE NOTED.
3. NOT ALL SYMBOLS, ABBREVIATIONS AND LINE DESIGNATIONS ARE NECESSARILY USED ON THIS PROJECT.
4. ALL HVAC EQUIPMENT, DUCTWORK, PIPING, SUPPORTS AND ACCESSORY LOCATIONS AND ROUTING SHALL BE COORDINATED WITH ALL OTHER TRADES AND FIELD VERIFIED PRIOR TO INSTALLATION TO PROVIDE REQUIRED CLEARANCES FOR ALL OTHER SYSTEMS.
5. SUPPLY, RETURN AND EXHAUST AIR OPENING LOCATIONS AND SIZES FOR ROOF MOUNTED MECHANICAL EQUIPMENT ARE SHOWN FOR DUCTWORK ROUTING ONLY. THE MECHANICAL CONTRACTOR SHALL VERIFY THE ACTUAL SIZES OF DUCT CONNECTIONS AND THE REQUIRED ROOF OPENING SIZES FOR THE ROOF MOUNTED EQUIPMENT AND COORDINATE THE FINAL LOCATION OF ROOF PENETRATIONS WITH THE GENERAL CONTRACTOR.
6. THE CONTRACTOR PROVIDING MECHANICAL TRADE WORK SHALL INSTALL ALL ROOF MOUNTED MECHANICAL EQUIPMENT CURBS AND FLASHING AND COORDINATE WITH THE CONTRACTOR PROVIDING GENERAL TRADES PRIOR TO THE APPLICATION OF THE BUILDING ROOFING. THE CONTRACTOR PROVIDING MECHANICAL TRADE WORK SHALL ALSO INSTALL ALL NECESSARY ROOF CURB COUNTER-FLASHING TO ACHIEVE A WATERTIGHT ROOFING SEAL.
7. DUCTWORK MAINS AND BRANCHES ARE SHOWN DIAGRAMMATICALLY AND FOR DESIGN CLARITY AND AT THE ROOM LEVEL ROUTING AND ARRANGEMENT IS SHOWN TO MINIMIZE NOISE CARRYOVER FROM MECHANICAL EQUIPMENT AND ADJOINING SPACES. CONTRACTOR MAY PROPOSE REROUTING, OFFSETS, RISES AND DROPS AS NECESSARY TO CLEAR INSTALLED TRUSSES, JOISTS AND OTHER INTERFERENCES. FINAL DUCTWORK LAYOUT WILL BE APPROVED IN REQUIRED DUCTWORK SHOP DRAWING SUBMITTAL REVIEW PRIOR TO INSTALLATION. DEVIATIONS FROM APPROVED DUCTWORK SHOP DRAWING TO SUIT FIELD CONDITIONS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PRIOR TO INSTALLATION.
8. ALL PIPING/DUCTWORK/CONTROLS PENETRATING FIRE RATED PARTITIONS, WALLS AND CEILINGS SHALL BE SEALED ON BOTH SIDES USING AN APPROVED, UL LISTED FIRE SEALANT TO MATCH EXISTING WALL FIRE RATING. WHERE A PIPE/DUCT/CONTROL CONDUIT HAS BEEN REMOVED THAT PREVIOUSLY PENETRATED A FIRE RATED PARTITION, WALL OR CEILING, THE CONTRACTOR SHALL PATCH AND SEAL THE PENETRATION ON BOTH SIDES USING AN APPROVED, UL LISTED FIRE SEALANT TO MATCH EXISTING WALL FIRE RATING. ALL FIRESTOP SYSTEMS SHALL BE TESTED IN ACCORDANCE WITH ASTM E814. REFER TO SPECIFICATIONS FOR ADDITIONAL INFORMATION.
9. CONTRACTOR SHALL RE-APPLY FIREPROOFING IN TYPE AND THICKNESS TO MATCH EXISTING IN ANY AREAS WHERE EXISTING FIREPROOFING IS DAMAGED DO TO DEMOLITION OR NEW WORK ACTIVITIES. REFER TO ARCHITECTURAL SPECIFICATIONS FOR ADDITIONAL INFORMATION.
10. CONTRACTOR SHALL COORDINATE THE REPLACEMENT OF MECHANICAL EQUIPMENT WITH THE FACILITIES STAFF AND THE OWNER IN ADDITION TO ALL OTHER WORK BEING COMPLETED UNDER SEPARATE CONTRACTS. ALL ITEMS BEING REMOVED AS PART OF THE UPGRADES SHALL BE REMOVED FROM THE PREMISES AND DISPOSED OF IN ACCORDANCE WITH LOCAL REGULATIONS.
11. MECHANICAL CONTRACTOR SHALL COORDINATE WITH ELECTRICAL CONTRACTOR IN REGARDS TO THE DISCONNECT AND RECONNECT OF ALL EQUIPMENT BEING REMOVED AND/OR REPLACED IN-KIND AS INDICATED ON THE CONTRACT DOCUMENTS.
12. MECHANICAL CONTRACTOR SHALL FURNISH LOOSE MOTOR STARTERS AND DISCONNECT SWITCHES FOR INSTALLATION AND WIRING BY THE ELECTRICAL CONTRACTOR.
13. ELECTRICAL COORDINATION: CONTRACTOR PROVIDING MECHANICAL TRADE WORK SHALL COORDINATE VOLTAGES FOR EACH PIECE OF EQUIPMENT BEFORE PURCHASING EQUIPMENT WITH CONTRACTOR PROVIDING ELECTRICAL TRADE WORK.
14. HVAC TESTING & BALANCING (AIR & WATER) IS A PART OF THIS CONTRACT. CONTRACTOR SHALL SUBMIT SIGNED AND SEALED TEST & BALANCE REPORTS, REFER TO PROJECT BOOK SPECIFICATIONS FOR DETAILS.
15. CONTRACTOR SHALL PROVIDE FLEXIBLE CONNECTIONS AT ALL DUCT CONNECTIONS TO EQUIPMENT. IF DUCT CONNECTION TO EQUIPMENT CANNOT BE MADE WITHOUT A HARD CONNECTION (E.G. MIXING BOX/FILTER RACK ASSEMBLY), CONTRACTOR SHALL PROVIDE FLEX CONNECTIONS FOR ALL DUCT CONNECTING WITH A HARD CONNECTION TO EQUIPMENT.
16. ALL EXISTING WALLS, CEILINGS, ROOF, FLOORS AND OTHER FINISHED SURFACES DAMAGED OR MODIFIED SHALL BE REPAIRED TO MATCH ADJACENT UNDISTURBED AREA. PATCH AND REPAIR SHALL MATCH EXISTING ADJACENT SURFACES AS TO THICKNESS, TEXTURE, MATERIALS AND COLOR. ALL ABANDONED OPENINGS SHALL BE PATCHED AND REPAIRED TO MATCH ADJACENT UNDISTURBED AREA AND ARCHITECTURE. ALL ROOF PENETRATIONS SHALL BE PERFORMED SUCH THAT WARRANTY IS MAINTAINED.
17. CONTRACTOR SHALL REMOVE, STORE AND RE-INSTALL ALL CEILING TILES AS REQUIRED TO ACCESS ABOVE CEILING AREAS TO ROUTE NEW PIPING OR INSTALL EQUIPMENT. CONTRACTOR SHALL SUPPLY MATCHING CEILING TILES FOR ANY BROKEN TILES THAT OCCUR DURING THE CONSTRUCTION.
18. CONTRACTOR SHALL MODIFY SPRINKLER PIPING SYSTEMS AS REQUIRED TO ALLOW NEW EQUIPMENT INSTALLATION AND DUCTWORK MODIFICATIONS. WORK SHALL BE PERFORMED BY A CERTIFIED SPRINKLER CONTRACTOR.
19. ALL NECESSARY STAGING AND MATERIAL STORAGE AREAS SHALL BE AS DIRECTED AND APPROVED BY THE OWNER.
20. ALL SYSTEMS THAT NEED TO BE DRAINED SHALL BE COORDINATED WITH THE OWNER.
21. ALL WORK SHALL BE PERFORMED TO NOT INTERFERE WITH THE NORMAL OPERATION OF THE FACILITIES. COORDINATE ANY NECESSARY SHUTDOWNS WITH THE FACILITY. MINIMIZE SHUTDOWNS TO LIMIT IMPACT OF INTERRUPTION OF COOLING, HEATING, DHW AND ELECTRICAL SERVICE TO THE FACILITY.
22. ALL MEANS OF EGRESS MUST BE KEPT FREE AND CLEAR OF ALL MATERIAL.
23. VERIFY ALL CONDITIONS, ELEVATIONS AND MEASUREMENTS SHOWN ON CONTRACT DRAWINGS. ALL DIMENSIONS AND ELEVATIONS FOR NEW AND EXISTING EQUIPMENT, PIPING AND APPARATUS ARE APPROXIMATE AND ARE ONLY FOR REFERENCE. SUBMIT SHOP DRAWINGS SHOWING ALL DIMENSIONS AND ELEVATIONS VERIFIED IN THE FIELD.
24. CONTRACTOR SHALL TEMPORARILY RELOCATE ALL PIPING, ELECTRICAL CONDUITS, LIGHTING, CONTROLS, ETC., TO ACCOMMODATE WORK UNDER THIS CONTRACT. RESTORE TO INITIAL OPERATING CONDITION AND FUNCTION UPON COMPLETION OF WORK. EXISTING PIPING IN WORK AREA SMALLER THAN 2" AND CONDUITS SMALLER THAN 1" ARE NOT EXPLICITLY SHOWN. CONDUCT FIELD SURVEY AS REQUIRED TO DETERMINE EXISTING CONDITIONS.
25. PROVIDE VALVED DRAINS ON ALL WATER PIPING SYSTEM LOW POINTS AND AS REQUIRED ON NEW EQUIPMENT. PROVIDE AIR VENTS AT PIPING SYSTEM HIGH POINTS AS REQUIRED FOR RELEASING AIR DURING STARTUP.
26. NO PIPING SMALLER THAN 3/4" EXCEPT AS NOTED.
27. PROVIDE WIRING AND RACEWAYS RELATED TO CONTROL OF MECHANICAL EQUIPMENT. RACEWAYS TO BE MINIMUM 3/4" RIGID CONDUIT.
28. CONTRACTOR SHALL REFER TO SPECIFICATIONS FOR MATERIAL PIPE SIZE & MATERIAL TYPE BY SYSTEM. FOR SYSTEMS REQUIRING DISISIMILAR METALS CONTRACTOR SHALL PROVIDE GALVANIC CORROSION AND CATHODIC PROTECTION (DIELECTRIC UNION, DIELECTRIC FITTING, ETC.) IN ACCORDANCE WITH THE SPECIFICATIONS.
29. CONTRACTOR IS RESPONSIBLE FOR CONDUCTING WALK-THROUGH OF SITE PRIOR TO SUBMITTING BID TO BE FAMILIAR WITH SITE CONDITIONS AND REQUIREMENTS.
30. THE CONTRACTOR SHALL PROVIDE ALL REQUIRED CALCULATIONS (SIGNED AND SEALED BY AN ENGINEER LICENSED IN THE STATE OF NEW JERSEY) AND INSTALLATION INFORMATION TO SHOW COMPLIANCE WITH SEISMIC AND WIND FORCES IN ACCORDANCE WITH THE INTERNATIONAL BUILDING CODE 2021, NJ EDITION. INFORMATION SHALL BE MADE AVAILABLE TO ENGINEER FOR REVIEW AND ALSO, MADE AVAILABLE UPON REQUEST FOR SUBMISSION TO CODE ENFORCEMENT. PROVIDE ALL SUPPORT SYSTEMS, SUPPLEMENTAL STEEL, ANCHORS, PIPE HANGERS AND ENGINEERING DOCUMENTATION NECESSARY TO PROVIDE A COMPLETE CODE COMPLIANT SYSTEM.

SCOPE OF WORK INFORMATION

PROJECT SCOPE OF WORK:

1. ALL WORK CONTAINED WITHIN THE DRAWINGS AND SPECIFICATIONS IS THE RESPONSIBILITY OF THE SINGLE PRIME CONTRACTOR, UNLESS OTHERWISE NOTED. REFER TO INDIVIDUAL DRAWING SHEETS AND SPECIFICATIONS FOR SPECIFIC REQUIREMENTS.
2. REFER TO PROJECT MANUAL FOR ADDITIONAL REQUIREMENTS OF THE PROJECT.
3. REFER TO MECHANICAL DRAWINGS AND SPECIFICATIONS FOR SPECIFIC MECHANICAL REQUIREMENTS AND COORDINATION.
4. REFER TO ARCHITECTURAL DRAWINGS AND SPECIFICATIONS FOR SPECIFIC ARCHITECTURAL REQUIREMENTS AND COORDINATION.
5. REFER TO ELECTRICAL DRAWINGS AND SPECIFICATIONS FOR SPECIFIC ELECTRICAL REQUIREMENTS AND COORDINATION.
6. REFER TO STRUCTURAL DRAWINGS AND SPECIFICATIONS FOR SPECIFIC STRUCTURAL REQUIREMENTS AND COORDINATION.

DRAWING SHEET INDEX (PROJECT 8267)

SHEET NO.	DRAWING NUMBER	DRAWING TITLE	SCALE	ISSUE: ISSUED FOR BID DATE 01/12/2024
1	M-001	MECHANICAL LEAD SHEET	NTS	x
2	MD-101	MECHANICAL DEMOLITION FLOOR PLANS	1/4"=1'-0"	x
3	MD-102	MECHANICAL DEMOLITION ROOF PLANS	1/4"=1'-0"	x
4	M-101	MECHANICAL NEW WORK FLOOR PLANS	1/4"=1'-0"	x
5	M-102	MECHANICAL NEW WORK ROOF PLANS	1/4"=1'-0"	x
6	M-301	MECHANICAL SCHEDULES	NTS	x
7	M-401	MECHANICAL DETAILS	NTS	x

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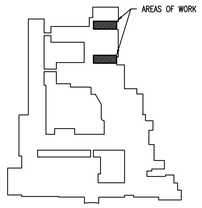
No.	Date	Description
0	01/12/2024	Issued for Bid

REVISIONS:

KEY PLAN:



John A. Marchiafava P. E.
New Jersey P. E. No. 24GE04992500

Professional Engineer
John A. Marchiafava P. E.

PROJECT: REF'21-35-8267

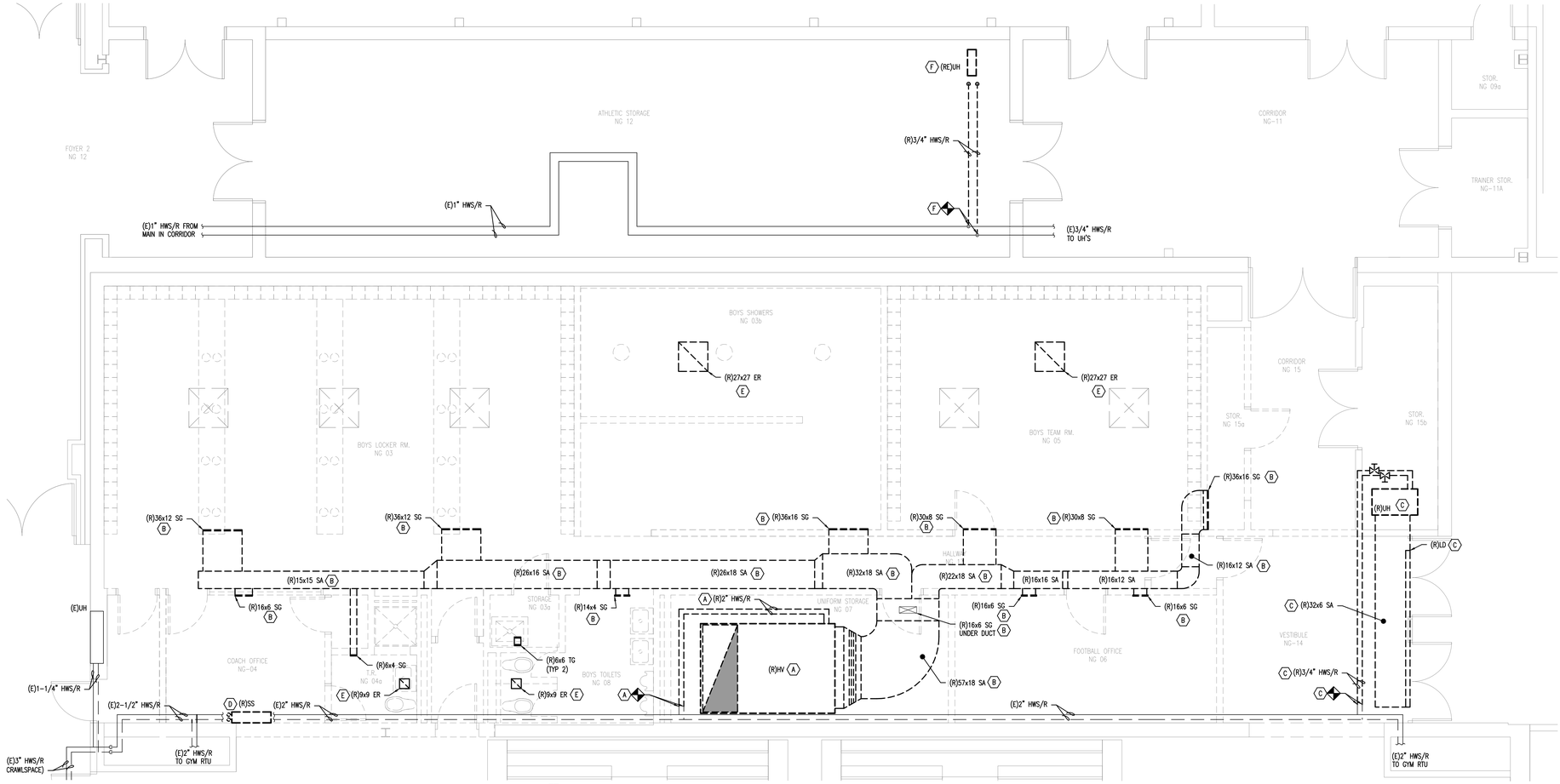
LRHSD-LENAPE HIGH SCHOOL NORTH LOCKER ROOM RENOVATIONS

235 HARTFORD RD
MEDFORD, NEW JERSEY

DRAWING TITLE:

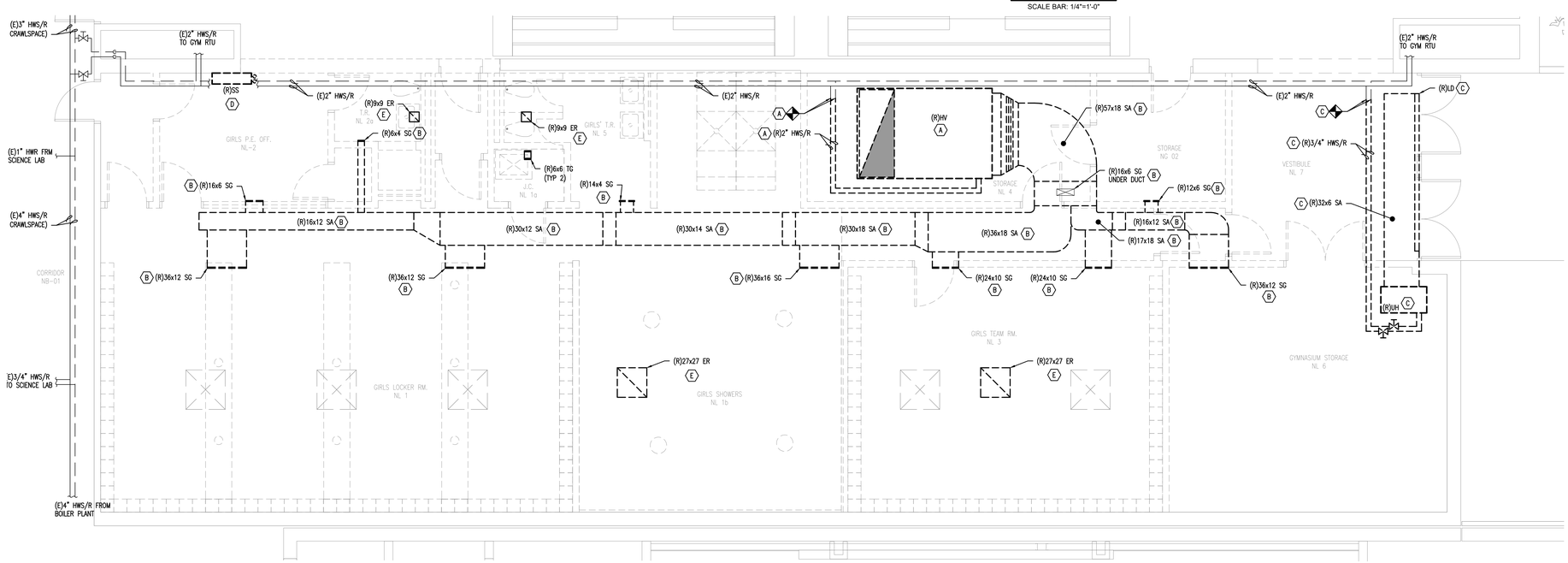
MECHANICAL LEAD SHEET

DRAWN BY: TC		SCALE: AS NOTED	DWG SIZE: 42x30
CHECKED BY: NH		DRAWING NO. M-001	REVISION 0
DATE: 05/20/2022			
PROJECT NO.: 8C22002			



1 MD-101 **MECHANICAL DEMOLITION FLOOR PLAN – BOYS LOCKER ROOM**
SCALE: 1/4" = 1'-0"

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



2 MD-101 **MECHANICAL DEMOLITION FLOOR PLAN – GIRLS LOCKER ROOM**
SCALE: 1/4" = 1'-0"

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

EQUIPMENT REPLACEMENT NOTES:

GENERAL NOTES:

1. REFER TO MECHANICAL LEAD SHEET, M-001 FOR "NOTES" THAT PERTAIN TO THE SCOPE OF THIS PROJECT.
2. CONTRACTOR SHALL COORDINATE THE REPLACEMENT OF MECHANICAL EQUIPMENT WITH THE OWNER AND OTHER WORK BEING COMPLETED UNDER SEPARATE CONTRACTS. ALL ITEMS REMOVED FROM THE EQUIPMENT AS PART OF THE REPLACEMENT SHALL BE REMOVED FROM THE PREMISES AND DISPOSED OF IN ACCORDANCE WITH LOCAL REGULATIONS.
3. CONTRACTOR SHALL COORDINATE AND SCHEDULE THE DRAINING OF ANY HYDRONIC SYSTEMS WITH THE FACILITIES MANAGER AND OWNER.
4. CONTRACTOR SHALL SUBMIT TO ARCHITECT & ENGINEER PRODUCT DATA FOR ALL ITEMS THAT ARE TO BE INCLUDED IN THE REPLACEMENT FOR REVIEW PRIOR TO COMMENCING WORK.

DEMOLITION KEYED NOTES:

GENERAL: DEMOLITION NOTES ARE INDICATED WITH THE FOLLOWING SYMBOL (#) AND ARE NUMBERED AS FOLLOWS:

(A) DEMOLISH AND REMOVE EXISTING H&V UNIT IN ITS ENTIRETY. SAFELY DISCONNECT AND SAFE OFF ELECTRICAL POWER IN ACCORDANCE WITH NEC GUIDELINES. REFER TO ELECTRICAL DRAWINGS FOR FURTHER ELECTRICAL REQUIREMENTS. DEMOLISH AND REMOVE ALL CONTROL WIRING AND CONDUIT BACK TO SOURCE. DISCONNECT HW SUPPLY AND RETURN PIPING AND DEMOLISH TO POINT INDICATED. DISCONNECT DUCTWORK AND REMOVE ALL ASSOCIATED HANGERS AND APPURTENANCES.

(B) DEMOLISH AND REMOVE ALL DUCTWORK ASSOCIATED WITH EXISTING H&V UNIT AND EXHAUST FANS. REMOVE ALL HANGERS, DAMPERS, GRILLES, ACCESSORIES, AND ALL ASSOCIATED APPURTENANCES.

(C) DEMOLISH AND REMOVE EXISTING CABINET UNIT HEATER AND ALL ASSOCIATED DUCTWORK, HANGERS, AND ACCESSORIES. SAFELY DISCONNECT AND SAFE OFF ELECTRICAL POWER PER NEC GUIDELINES. REFER TO ELECTRICAL DRAWING FOR FURTHER ELECTRICAL REQUIREMENTS. DISCONNECT HW SUPPLY AND RETURN PIPING AND DEMOLISH TO POINT INDICATED.

(D) DEMOLISH AND REMOVE SPLIT AC UNIT AND ASSOCIATED CONDENSATE PUMP. SAFELY DISCONNECT AND SAFE OFF ELECTRICAL POWER PER NEC GUIDELINES. DEMOLISH AND REMOVE ALL ASSOCIATED REFRIGERANT PIPING AND CONTROL WIRING BETWEEN INDOOR UNIT AND CONDENSING UNIT ON ROOF ABOVE.

(E) DEMOLISH AND REMOVE EXISTING EXHAUST GRILLE AND ASSOCIATED DUCTWORK BETWEEN GRILLE AND FAN ON ROOF ABOVE.

(F) EXISTING UNIT HEATER TO BE RELOCATED. DISCONNECT HWS/R PIPING IN LOCATIONS AS NOTED. SAFELY DISCONNECT AND SAFE OFF ELECTRICAL POWER PER NEC GUIDELINES. REFER TO ELECTRICAL DRAWINGS FOR FURTHER INFORMATION. SAFELY STORE UNIT HEATER AND ALL ASSOCIATED VALVES AND APPURTENANCES FOR RE-USE UNDER NEW WORK.

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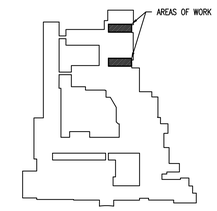

John A. Marchiafava P. E.
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Professional Engineer
John A. Marchiafava P. E.

PROJECT: REF21-35-8267

LRHSD-LENAPE HIGH SCHOOL
NORTH LOCKER ROOM
RENOVATIONS

235 HARTFORD RD
MEDFORD, NEW JERSEY

DRAWING TITLE:

MECHANICAL DEMOLITION
FLOOR PLANS

DRAWN BY: TC	SCALE: AS NOTED	DWG SIZE: 42x30	
CHECKED BY: NH	DRAWING NO. MD-101	REVISION 0	
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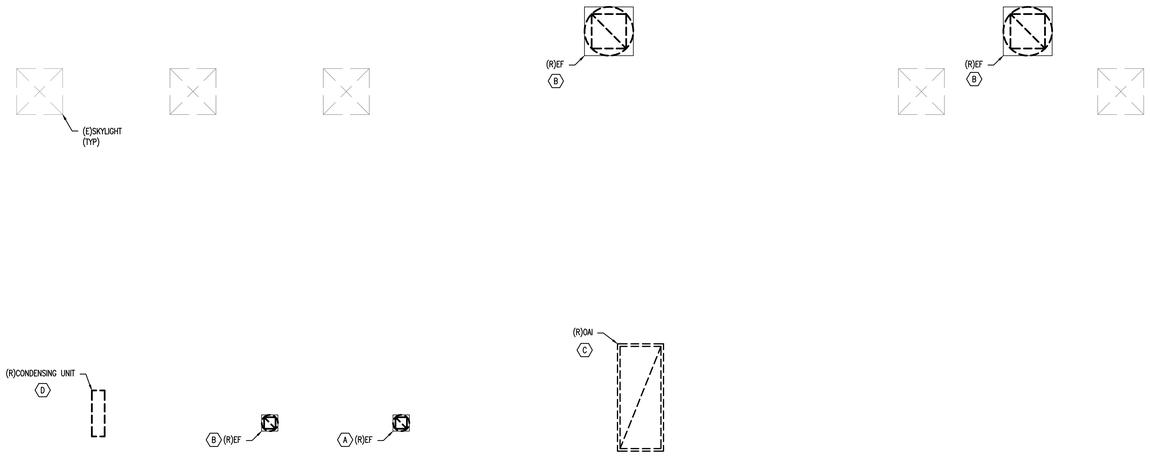
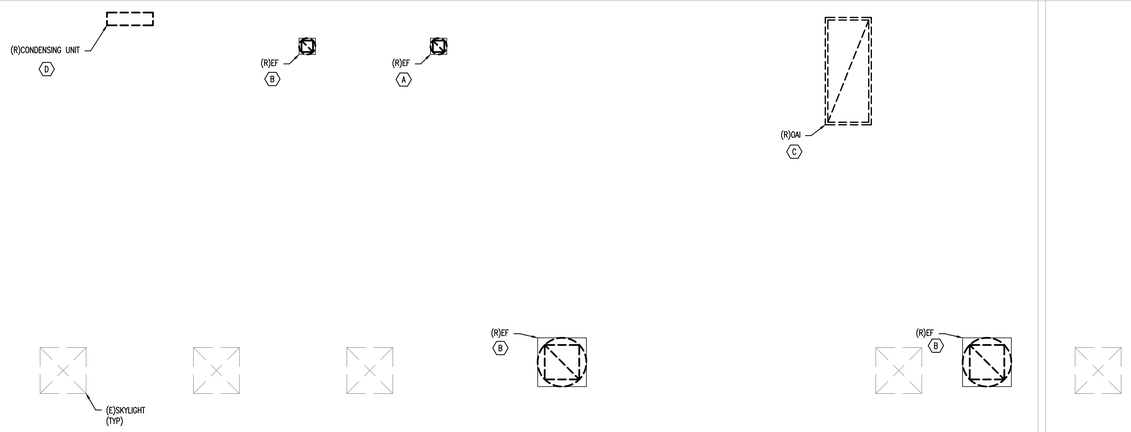


1 MD-102 MECHANICAL DEMOLITION ROOF PLAN – BOYS LOCKER ROOM
SCALE: 1/4" = 1'-0"

0' 1' 2' 4' 8'
SCALE BAR: 1/4"=1'-0"



2 MD-102 MECHANICAL DEMOLITION ROOF PLAN – GIRLS LOCKER ROOM
SCALE: 1/4" = 1'-0"

0' 1' 2' 4' 8'
SCALE BAR: 1/4"=1'-0"

EQUIPMENT REPLACEMENT NOTES:

GENERAL NOTES:

1. REFER TO MECHANICAL LEAD SHEET, M-001 FOR "NOTES" THAT PERTAIN TO THE SCOPE OF THIS PROJECT.
2. CONTRACTOR SHALL COORDINATE THE REPLACEMENT OF MECHANICAL EQUIPMENT WITH THE OWNER AND OTHER WORK BEING COMPLETED UNDER SEPARATE CONTRACTS. ALL ITEMS REMOVED FROM THE EQUIPMENT AS PART OF THE REPLACEMENT SHALL BE REMOVED FROM THE PREMISES AND DISPOSED OF IN ACCORDANCE WITH LOCAL REGULATIONS.
3. CONTRACTOR SHALL COORDINATE AND SCHEDULE THE DRAINING OF ANY HYDRONIC SYSTEMS WITH THE FACILITIES MANAGER AND OWNER.
4. CONTRACTOR SHALL SUBMIT TO ARCHITECT & ENGINEER PRODUCT DATA FOR ALL ITEMS THAT ARE TO BE INCLUDED IN THE REPLACEMENT FOR REVIEW PRIOR TO COMMENCING WORK.

DEMOLITION KEYED NOTES:

GENERAL: DEMOLITION NOTES ARE INDICATED WITH THE FOLLOWING SYMBOL (#) AND ARE NUMBERED AS FOLLOWS:

(A) DEMOLISH AND REMOVE EXISTING EXHAUST FAN IN ITS ENTIRETY. SAFELY DISCONNECT AND SAFE OFF ELECTRICAL POWER PER NEC GUIDELINES. REFER TO ELECTRICAL DRAWINGS FOR FURTHER ELECTRICAL REQUIREMENTS. DEMOLISH AND REMOVE CURB AND PREPARE AREA TO RECEIVE NEW CURB UNDER NEW WORK. COORDINATE ALL ROOFING WORK WITH ROOF MANUFACTURER TO MAINTAIN ANY EXISTING ROOF WARRANTY.

(B) DEMOLISH AND REMOVE EXISTING EXHAUST FAN IN ITS ENTIRETY. SAFELY DISCONNECT AND SAFE OFF ELECTRICAL POWER PER NEC GUIDELINES. REFER TO ELECTRICAL DRAWINGS FOR FURTHER ELECTRICAL REQUIREMENTS. CAP CURB AND SEAL AIR AND WEATHER TIGHT. COORDINATE ANY ROOFING WORK WITH ROOF MANUFACTURER TO MAINTAIN ANY EXISTING ROOF WARRANTY.

(C) DEMOLISH AND REMOVE EXISTING OA INTAKE. PATCH EXISTING ROOF OPENING IN ACCORDANCE WITH ROOFING MANUFACTURER REQUIREMENTS.

(D) DEMOLISH AND REMOVE EXISTING CONDENSING UNIT INCLUDING ALL ACCESSORIES AND APPURTENANCES. SAFELY DISCONNECT AND SAFE OFF ELECTRICAL POWER PER NEC GUIDELINES. REFER TO ELECTRICAL DRAWINGS FOR FURTHER INFORMATION. DEMOLISH AND REMOVE ALL REFRIGERANT AND POWER AND CONTROL WIRING BETWEEN THE CONDENSING UNIT AND THE ASSOCIATED INDOOR UNIT.

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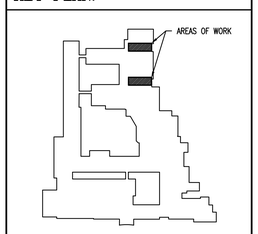

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PROJECT: REF21-35-8267

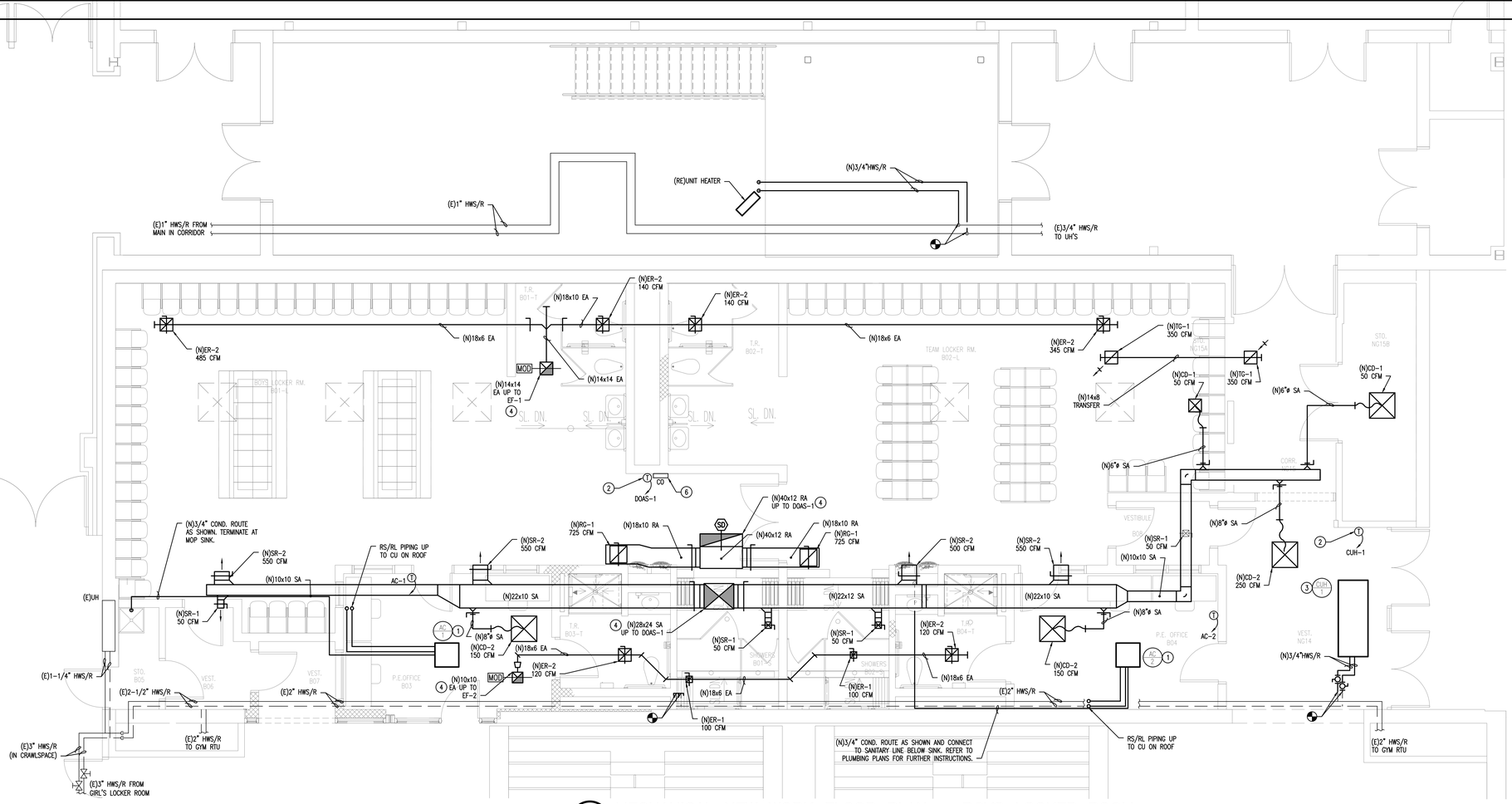
LRHSD-LENAPE HIGH SCHOOL
NORTH LOCKER ROOM
RENOVATIONS

235 HARTFORD RD
MEDFORD, NEW JERSEY

DRAWING TITLE:

MECHANICAL DEMOLITION
ROOF PLANS

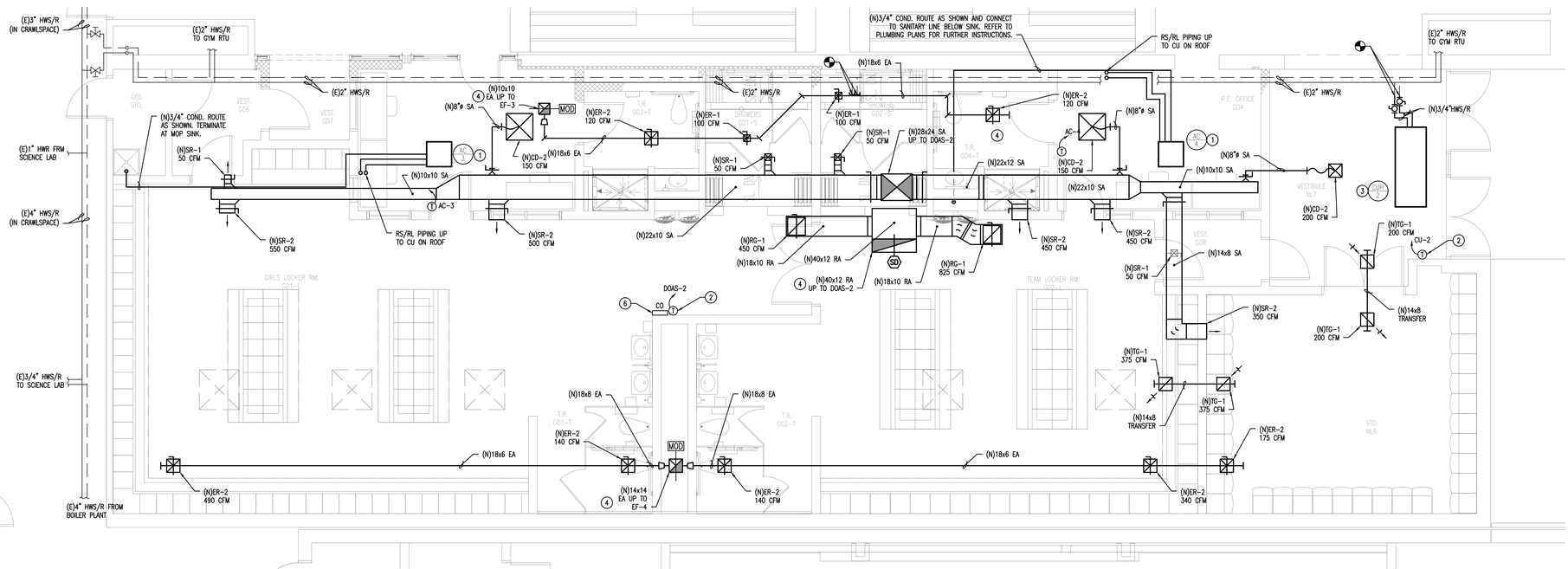
DRAWN BY: TC	SCALE: AS NOTED	DWG SIZE: 42x30	
CHECKED BY: NH	DRAWING NO. MD-102	REVISION 0	
DATE: 05/20/2022			
PROJECT NO.: 8C22002			



1 MECHANICAL NEW WORK FLOOR PLAN – BOYS LOCKER ROOM

M-101 SCALE: 1/4" = 1'-0"

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



2 MECHANICAL NEW WORK FLOOR PLAN – GIRLS LOCKER ROOM

M-101 SCALE: 1/4" = 1'-0"

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

NEW WORK SYSTEM NOTES:

GENERAL NOTES:

1. REFER TO MECHANICAL LEAD SHEET, M-001 FOR "NOTES" THAT PERTAIN TO THE SCOPE OF THIS PROJECT.
2. CONTRACTOR SHALL COORDINATE THE REPLACEMENT OF MECHANICAL EQUIPMENT WITH THE OWNER AND OTHER WORK BEING COMPLETED UNDER SEPARATE CONTRACTS. ALL ITEMS REMOVED FROM THE EQUIPMENT AS PART OF THE REPLACEMENT SHALL BE REMOVED FROM THE PREMISES AND DISPOSED OF IN ACCORDANCE WITH LOCAL REGULATIONS.
3. CONTRACTOR SHALL COORDINATE AND SCHEDULE THE DRAINING OF ANY HYDRONIC SYSTEMS WITH THE FACILITIES MANAGER AND OWNER.
4. CONTRACTOR SHALL PROVIDE ALL REQUIRED PIPING, VALVES, AND APPURTENANCES TO PROVIDE A COMPLETE WORKING SYSTEM.
5. CONTRACTOR SHALL INSTALL ALL NEW EQUIPMENT IN STRICT ACCORDANCE WITH THE MANUFACTURER'S WRITTEN INSTRUCTIONS AND SHALL MAINTAIN ALL CLEARANCES (INSTALLATION AND MAINTENANCE) AS NOTED WITHIN WRITTEN INSTRUCTIONS.
6. CONTRACTOR SHALL SUBMIT TO ARCHITECT & ENGINEER PRODUCT DATA FOR ALL ITEMS THAT ARE TO BE INCLUDED IN THE REPLACEMENT FOR REVIEW PRIOR TO COMMENCING WORK.

NEW WORK KEYED NOTES:

GENERAL: NEW WORK NOTES ARE INDICATED WITH THE FOLLOWING SYMBOL (n) AND ARE NUMBERED AS FOLLOWS:

1. PROVIDE AND INSTALL NEW DUCTLESS SPLIT AC UNIT WITH ACCESSORIES AND APPURTENANCES IN LOCATION AS INDICATED AND WITH CAPACITIES AND CHARACTERISTICS AS NOTED WITHIN THE SCHEDULE AND SPECIFICATIONS. UNIT SHALL BE MOUNTED ON WALL AS HIGH AS POSSIBLE. COORDINATE FINAL LOCATION WITH ARCHITECTURAL ELEVATIONS TO AVOID CONFLICTS WITH ARCHITECTURAL ELEMENTS. PROVIDE WALL MOUNTED CONDENSATE PUMP (BASIS OF DESIGN: LITTLE GIANT VCCA-20ULS.
2. PROVIDE AND INSTALL NEW THERMOSTAT/HUMIDISTAT IN LOCATIONS INDICATED. WHERE CONCEALED WIRING IS NOT POSSIBLE PROVIDE 3/4" WIREMOLD TO NEAREST CONCEALED LOCATION. PROVIDE LOCKABLE THERMOSTAT GUARD.
3. PROVIDE AND INSTALL NEW CABINET UNIT HEATER IN LOCATION AS INDICATED AND WITH CAPACITIES AND CHARACTERISTICS AS NOTED WITHIN THE SCHEDULE AND SPECIFICATIONS. PROVIDE AND INSTALL NEW HW SUPPLY AND RETURN PIPING FROM POINTS INDICATED AND CONNECT TO UNIT PER DETAIL. PROVIDE AND INSTALL REMOTE MOUNTED THERMOSTAT IN LOCATION INDICATED.
4. PROVIDE AND INSTALL NEW DUCTWORK ASSOCIATED WITH DOAS SYSTEM AND EXHAUST FANS IN LOCATIONS INDICATED. ROUTE DUCTWORK AS TIGHT TO STRUCTURE AS POSSIBLE. COORDINATE DUCT LOCATION WITH ARCHITECTURAL PLANS FOR ANY REQUIRED SOFFITING.
5. CONTRACTOR SHALL FURNISH AND INSTALL NEW CONDENSATE PUMP AND ACCESSORIES IN LOCATIONS SHOWN. BASIS OF DESIGN: LITTLE GIANT VCMA-20-UL WITH OVERFLOW CUT-OFF SWITCH.
6. FURNISH AND INSTALL BATTERY OPERATED CARBON MONOXIDE ALARM IN LOCATION AS INDICATED ON PLAN. BASIS OF DESIGN: KIDDIE M/N KN-COB-LP2 OR APPROVED EQUAL.
7. RELOCATE EXISTING UNIT HEATER TO LOCATION SHOWN. INSTALL AT 8'-0"AFF. ROUTE NEW PIPING AS SHOWN AND RECONNECT UH TO HWS/R. RECONNECT POWER PER ELECTRICAL DRAWINGS. REPLACE ANY VALVES OR APPURTENANCES DAMAGED DURING DEMOLITION AND PROVIDE A COMPLETE AND WORKING HEATER.

MEP ENGINEER:

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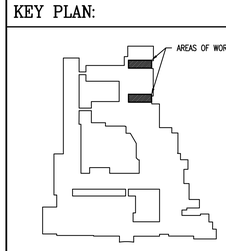

John A. Marchiafava P. E.
New Jersey P. E. No. 24GE04992500

Professional Engineer
John A. Marchiafava P. E.

PROJECT: REF21-35-8267

LRHSD-LENAPE HIGH SCHOOL
NORTH LOCKER ROOM
RENOVATIONS

235 HARTFORD RD
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FLOOR PLANS

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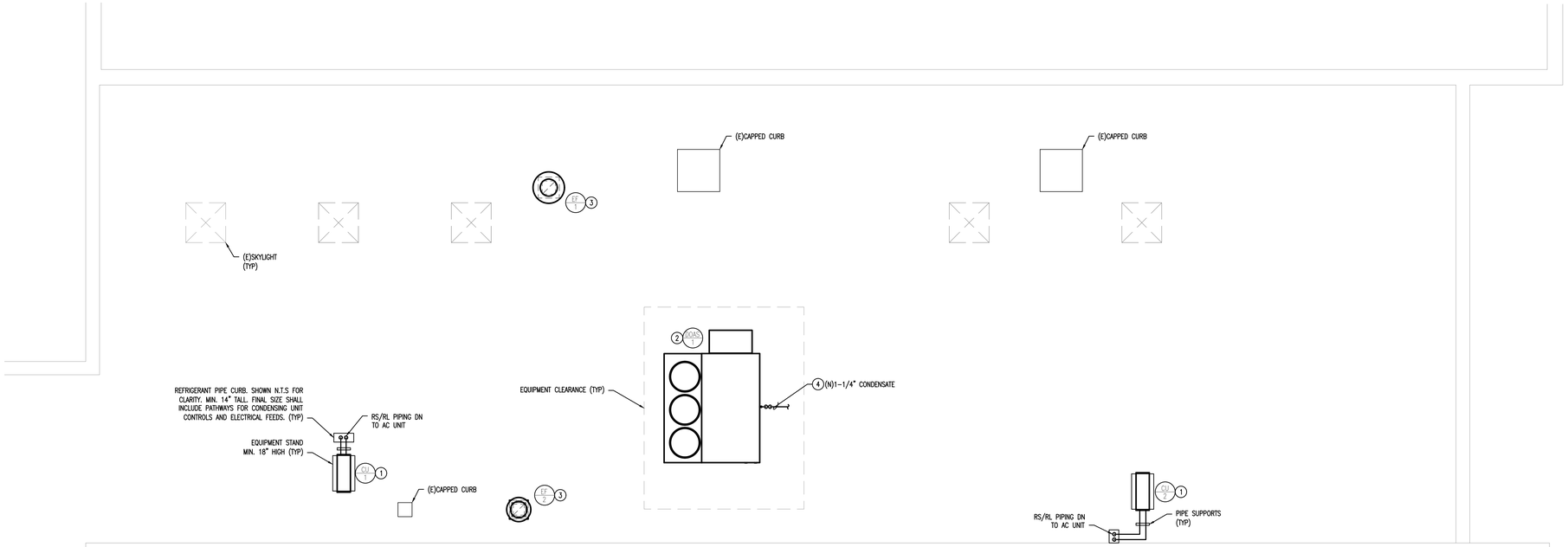
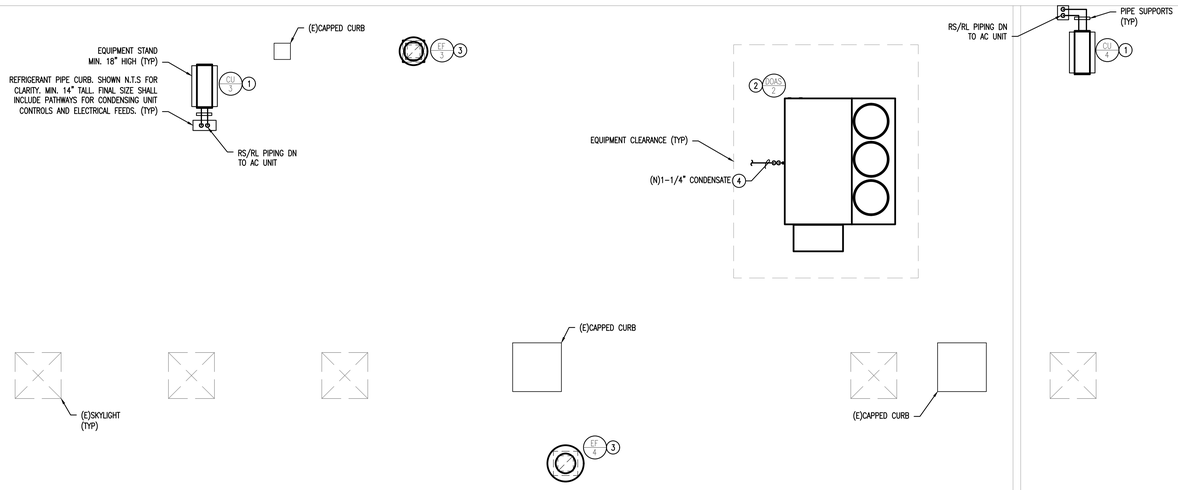


1 M-102 **MECHANICAL NEW WORK ROOF PLAN – BOYS LOCKER ROOM**
SCALE: 1/4" = 1'-0"

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



2 M-102 **MECHANICAL NEW WORK ROOF PLAN – GIRLS LOCKER ROOM**
SCALE: 1/4" = 1'-0"

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

NEW WORK SYSTEM NOTES:

GENERAL NOTES:

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3. CONTRACTOR SHALL COORDINATE AND SCHEDULE THE DRAINING OF ANY HYDRONIC SYSTEMS WITH THE FACILITIES MANAGER AND OWNER.
4. CONTRACTOR SHALL PROVIDE ALL REQUIRED PIPING, VALVES, AND APPURTENANCES TO PROVIDE A COMPLETE WORKING SYSTEM.
5. CONTRACTOR SHALL INSTALL ALL NEW EQUIPMENT IN STRICT ACCORDANCE WITH THE MANUFACTURER'S WRITTEN INSTRUCTIONS AND SHALL MAINTAIN ALL CLEARANCES (INSTALLATION AND MAINTENANCE) AS NOTED WITHIN WRITTEN INSTRUCTIONS.
6. CONTRACTOR SHALL SUBMIT TO ARCHITECT & ENGINEER PRODUCT DATA FOR ALL ITEMS THAT ARE TO BE INCLUDED IN THE REPLACEMENT FOR REVIEW PRIOR TO COMMENCING WORK.

NEW WORK KEYED NOTES:

GENERAL: NEW WORK NOTES ARE INDICATED WITH THE FOLLOWING SYMBOL (–) AND ARE NUMBERED AS FOLLOWS:

(1) PROVIDE AND INSTALL NEW CONDENSING UNIT WITH ACCESSORIES AND APPURTENANCES IN LOCATION AS INDICATED AND WITH CAPACITIES AND CHARACTERISTICS AS NOTED WITHIN THE SPECIFICATIONS AND SCHEDULES. PROVIDE AND INSTALL NEW UNIT STAND (BASIS OF DESIGN: DIVERSITECH GTSD3000) MINIMUM 18" HIGH AND SECURE TO ROOF STRUCTURE IN ACCORDANCE WITH IBC REWIND RESTRAINT REQUIREMENTS. PROVIDE AND INSTALL ALL REFRIGERANT, POWER, AND CONTROL WIRING BETWEEN CONDENSING UNIT AND ASSOCIATED INDOOR AC UNIT.

(2) PROVIDE AND INSTALL NEW DOAS UNIT IN LOCATION AS INDICATED AND WITH CAPACITIES AND CHARACTERISTICS AS NOTED WITHIN THE SPECIFICATION AND SCHEDULE. PROVIDE NEW 20" VIBRATION ISOLATION CURB AND PROVIDE POSITIVE ATTACHMENT BETWEEN THE CURB AND THE ROOF STRUCTURE AND BETWEEN THE CURB AND THE DOAS UNIT. ATTACHMENTS SHALL COMPLY WITH IBC WIND RESTRAINT REQUIREMENTS. COORDINATE CUTTING OF NEW ROOF OPENING, AND INSTALLATION AND FLASHING OF CURB WITH ROOFING MANUFACTURER TO MAINTAIN ANY EXISTING ROOF WARRANTY.

(3) PROVIDE AND INSTALL NEW EXHAUST FAN IN LOCATION INDICATED AND WITH CAPACITIES AND CHARACTERISTICS AS NOTED WITHIN THE SPECIFICATIONS AND SCHEDULE. PROVIDE NEW 20" ROOF CURB AND INSTALL PER MANUFACTURER'S RECOMMENDATIONS.

(4) PROVIDE AND INSTALL CONDENSATE FROM DOAS UNIT TO NEAREST ROOF DRAIN AS INDICATED. REFER TO DETAIL SHEET FOR ADDITIONAL REQUIREMENTS.

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REVISIONS:

KEY PLAN:

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VENTILATION SCHEDULE

ROOM NUMBER	ROOM NAME	BREATHING ZONE OA CALCULATION VBZ= (Rp*Pz)+(Ra*Az)					ZONE OA CALCULATION VOZ = VBZ / EZ		EXHAUST CALCULATION			DESIGN AIRFLOWS			NOTES
		A_z FLOOR AREA (SF)	R_A AREA OA RATE (CFM / SF)	P_z NO. OF PEOPLE (QTY)	R_p PEOPLE OA RATE (CFM / PERSON)	V_{BZ} BREATHING ZONE OA (CFM)	E_Z ZONE AIR DISTRIBUTION EFFECTIVENESS	V_{OZ} ZONE OUTDOOR AIRFLOW (CFM)	NO. OF FIXTURES (QTY)	EA RATE (CFM / FIXTURE) OR (CFM/SF)	CALCULATED EXHAUST AIRFLOW (CFM)	SUPPLY AIRFLOW (CFM)	EXHAUST AIRFLOW (CFM)	OUTSIDE AIRFLOW (CFM)	
BOYS LOCKER ROOM															
B01-L	BOYS LOCKER RM.	963	-	-	-	-	0.8	-	-	0.5	485	1100	485	525	-
B01-T	T.R.	70	-	-	-	-	0.8	-	2	70	140	-	140	25	
B01-S	SHOWERS	83	-	-	-	-	0.8	-	2	50	100	50	100	25	
B02-L	TEAM LOCKER ROOM	683	-	-	-	-	0.8	-	-	0.5	345	1050	345	525	
B02-T	T.R.	70	-	-	-	-	0.8	-	2	70	140	50	140	25	
B02-S	SHOWERS	83	-	-	-	-	0.8	-	2	50	100	-	100	25	
B03	P.E. OFFICE	174	0.06	3	5	25	0.8	32	-	-	-	150	-	50	
B03-T	T.R.	69	-	-	-	-	0.8	-	2	70/50	120	-	120	25	
B04	P.E. OFFICE	171	0.06	2	5	20	0.8	25	-	-	-	150	-	50	
B04-T	T.R.	69	-	-	-	-	0.8	-	2	70/50	120	-	120	25	
B06	VEST.	50	0.06	-	-	3	0.8	4	-	-	-	50	-	25	-
B08	VEST.	37	0.06	-	-	2	0.8	3	-	-	-	50	-	25	
NG14/NG15	CORRIDOR/VESTIBULE	350	0.06	-	-	21	0.8	26	-	-	-	250	-	150	
NG15A	STO.	69	0.12	-	-	8	0.8	10	-	-	-	50	-	25	
NG15B	STO.	108	0.12	-	-	13	0.8	16	-	-	-	50	-	25	
TOTALS:		3049									1550	3000	1550	1550	
GIRLS LOCKER ROOM															
G01-L	GIRLS LOCKER RM.	979	-	-	-	-	0.8	-	-	0.5	490	1050	490	575	
G01-T	T.R.	70	-	-	-	-	0.8	-	2	70	140	-	140	25	
G01-S	SHOWERS	83	-	-	-	-	0.8	-	2	50	100	50	100	25	
G02-L	TEAM LOCKER ROOM	671	-	-	-	-	0.8	-	-	0.5	340	900	340	490	
G02-T	T.R.	70	-	-	-	-	0.8	-	2	70	140	-	140	30	
G02-S	SHOWERS	83	-	-	-	-	0.8	-	2	50	100	50	100	25	
G03	P.E. OFFICE	174	0.06	3	5	25	0.8	32	-	-	-	150	-	60	
G03-T	T.R.	69	-	-	-	-	0.8	-	2	70/50	120	-	120	30	
G04	P.E. OFFICE	164	0.06	2	5	20	0.8	25	-	-	-	150	-	60	
G04-T	T.R.	69	-	-	-	-	0.8	-	2	70/50	120	-	120	30	
G06	VEST.	50	0.06	-	-	3	0.8	4	-	-	-	50	-	30	
G08	VEST.	37	0.06	-	-	2	0.8	3	-	-	-	50	-	30	
NL6	STO.	343	-	-	-	-	0.8	-	-	0.5	175	350	175	200	
NL7	VEST.	211	0.06	-	-	13	0.8	16	-	-	-	200	-	115	
TOTALS:		3073									1725	3000	1725	1725	

AIR TERMINAL DEVICE SCHEDULE

SYMBOL	SERVICE	TYPE	CFM RANGE	NECK SIZE	N.C	FACE OVERALL DIMENSIONS WxL (IN.)	BASIS OF DESIGN	
							MANUFACTURER	MODEL NUMBER
CD-1	SUPPLY	LAY IN	0-100	6"ø	30	24x24	PRICE	ASCD
CD-2	SUPPLY	LAY IN	100-250	8"ø	30	24x24	PRICE	ASCD
SR-1	SUPPLY	SURFACE	0-150	6x6	30	8x8	PRICE	630
SR-2	SUPPLY	SURFACE	200-550	20x6	30	22x8	PRICE	630
RG-1	RETURN	SURFACE	0-825	16x16	30	18x18	PRICE	630
TG-1	TRANSFER	SURFACE	0-500	12x12	30	14x14	PRICE	630
ER-1	EXHAUST	SURFACE	0-100	6x6	30	12x12	PRICE	630
ER-2	EXHAUST	SURFACE	100-500	12x12	30	18x18	PRICE	630

NOTES:
1. REFER TO MECHANICAL DRAWINGS FOR LOCATIONS.
2. MOUNTING FRAME TYPE SHALL BE COORDINATED WITH THE CEILING/WALL CONSTRUCTION TYPE.

DEDICATED OUTDOOR AIR SYSTEM SCHEDULE

SYMBOL	LOCATION	SERVICE	TOTAL CFM	DESIGN MIN O.A. CFM	ESP (IN WC)	MAX FAN RPM	FAN HP	MAX FACE VEL(FPM)	AIR FILTERS		DIRECT EXPANSION COOLING COIL						GAS FIRED HEAT EXCHANGER					ELECTRICAL			OPER WEIGHT	BASIS OF DESIGN	
									TYPE	EFF%	REF TYPE	MIN NET CAP (MBH)		EAT(°F)		LAT(°F)		INPUT CAPACITY (MBH)	OUTPUT CAPACITY (MBH)	EAT (°F) DB	LAT (°F) DB	MIN EFF	V/PH/HZ	MCA	MOCP		MANUFACTURER	MODEL NUMBER
												TOTAL	SENS	DB	WB	DB	WB										
DOAS-1	ROOF	BOYS LOCKER ROOM	3000	1550	1	1780	3	500	2"	MERV 13	R-410a	192	109	84.3	71.3	51	51	200	162	40	90	80	208/3/60	85.2	125	2400	GREENHECK	RV-25-15I-G-G1
DOAS-2	ROOF	GIRLS LOCKER	3000	1725	1	1780	3	500	2"	MERV 13	R-410a	192	109	84.3	71.3	51	51	200	162	40	90	80	208/3/60	85.2	125	2400	GREENHECK	RV-25-15I-G-G1

NOTES:
1. PROVIDE WITH VFD ON SUPPLY FAN.
2. PROVIDE WITH BACNET CONTROLLER. INTEGRATION SHALL BE BY DISTRICT CONTROLS CONTRACTOR UNDER SEPARATE CONTRACT.
3. PROVIDE WITH FACTORY MOUNTED LIGHT AND CONVENIENCE OUTLET TO BE POWERED SEPARATELY FROM THE UNIIT,
4. PROVIDE WITH FUSED DISCONNECT
5. PROVIDE SINGLE POINT POWER CONNECTION AND CONTROLS TRANSFORMER
6. POWER CONNECTION THROUGH THE BASE OF THE UNIT

DUCTLESS SPLIT SYSTEM HEAT PUMP SCHEDULE

SYMBOL		LOCATION	SERVICE	INDOOR UNIT		OUTDOOR UNIT				COOLING		HEATING		ELECTRICAL DATA			OPER WEIGHT (LBS)		BASIS OF DESIGN	
INDOOR UNIT	OUTDOOR CONDENSING UNIT			TYPE	TOTAL CFM	COMPRESSOR		CONDENSER FAN		CAPACITY (MBH)	SEER	CAPACITY @ 47°F AMBIENT	COP	MCA	MOP	V/PH/Hz	INDOOR UNIT	OUTDOOR CONDENSING UNIT	MANUFACTURER	MODEL NUMBER
						QTY	REFRIG TYPE	QTY	FAN MOTOR FLA											
AC-1	CU-1	SEE PLAN	PE OFFICE B03	CASSETTE	453	1	R-410A	1	.45	12	22.1	14.5	4.1	11.5	15	208/1/60	30	80	FUJITSU	ACUH12/AOUH12
AC-2	CU-2	SEE PLAN	PE OFFICE B04	CASSETTE	453	1	R-410A	1	.45	12	22.1	14.5	4.1	11.5	15	208/1/60	30	80	FUJITSU	ACUH12/AOUH12
AC-3	CU-3	SEE PLAN	PE OFFICE G03	CASSETTE	453	1	R-410A	1	.45	12	22.1	14.5	4.1	11.5	15	208/1/60	30	80	FUJITSU	ACUH12/AOUH12
AC-4	CU-4	SEE PLAN	PE OFFICE G04	CASSETTE	453	1	R-410A	1	.45	12	22.1	14.5	4.1	11.5	15	208/1/60	30	80	FUJITSU	ACUH12/AOUH12

NOTES:
1. PROVIDE DISCONNECT SWITCH
2. EVAPORATOR SHALL BE CEILING MOUNTED
3. PROVIDE MANUFACTURER'S PROGRAMMABLE 7-DAY THERMOSTAT
4. PROVIDE LOW AMBIENT OPERATION KIT TO 0 DEGREE OUTDOOR AMBIENT
5. PROVIDE UNIT WITH BUILT IN CONDENSATE LIFT CAPABLE OF LIFTING CONDENSATE 27" ABOVE CEILING SURFACE.
6. REFER TO MECHANICAL SPECIFICATIONS FOR FURTHER REQUIREMENTS
7. INDOOR UNIT IS POWERED OFF OF OUTDOOR UNIT
8. INDOOR PROVIDES COOLING OR HEATING

EXHAUST FAN SCHEDULE

SYMBOL	SERVICE	LOCATION	CFM	ESP	FAN RPM	MOTOR HP	ELECTRICAL	OPER WEIGHT (LBS)	BASIS OF DESIGN		NOTES
							V/PH/HZ		MANUFACTURER	MODEL NUMBER	
EF-1	BOYS LOCKER ROOM GENERAL EXHAUST	ROOF	1110	0.5	1094	0.5	120/1/60	50	GREENHECK	G-130-VG	1-5
EF-2	BOYS LOCKER ROOM SHOWER AREA	ROOF	440	0.5	1510	0.1	120/1/60	50	GREENHECK	G-090-VG	1-5
EF-3	GIRLS LOCKER ROOM SHOWER AREA	ROOF	440	0.5	1510	0.1	120/1/60	50	GREENHECK	G-090-VG	1-5
EF-4	GIRLS LOCKER ROOM GENERAL EXHAUST	ROOF	1285	0.5	1317	0.5	120/1/60	50	GREENHECK	G-130-VG	1-5

NOTES:
1. PROVIDE BIRDSCREEN
2. MOUNT ON NEW ROOF CURB
3. PROVIDE MOTORIZED BACKDRAFT DAMPER. INTERLOCK DAMPER OPERATION WITH EXHAUST FAN OPERATION. MOTORIZED DAMPER TO HAVE SAME VOLTAGE AS FAN
4. PROVIDE PREMIUM EFFICIENCY MOTOR
5. PROVIDE FACTORY MOUNTED PREWIRED DISCONNECT SWITCH

CABINET UNIT HEATER SCHEDULE

SYMBOL	SERVICE	HEATING							FAN					BASIS OF DESIGN	
		MBH	EAT (°F)	WATER					CFM	ESP (IN WC)	RPM	V/PH/HZ	HP	MFG	MODEL NUMBER
				GPM	EWT	LWT	ROWS	PD (FT)							
CUH-1	VEST NG14	35	70	3.5	180	160	1	0.15	870	0.1	MED	120/1/60	0.25	MODINE	CW-010-58
CUH-2	VEST NL7	35	70	3.5	180	160	1	0.15	870	0.1	MED	120/1/60	0.25	MODINE	CW-010-58

NOTES:
1. PROVIDE WITH DISCONNECT SWITCH. COORDINATE ELECTRICAL DISCONNECT REQUIREMENTS WITH ELECTRICAL CONTRACTOR.
2. PROVIDE WITH EC MOTOR.

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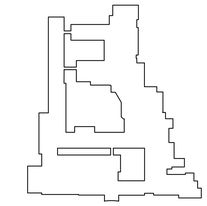

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NORTH LOCKER ROOM
RENOVATIONS

235 HARTFORD RD
MEDFORD, NEW JERSEY

DRAWING TITLE:

MECHANICAL SCHEDULES

DRAWN BY: TC	SCALE: AS NOTED	DWG SIZE: 42x30	
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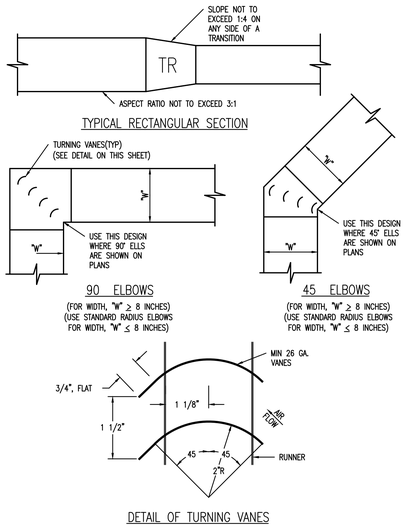
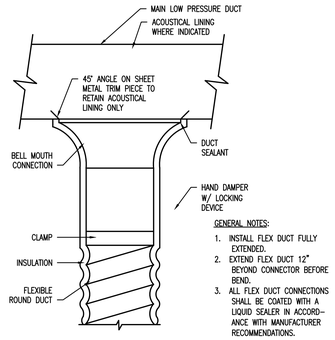


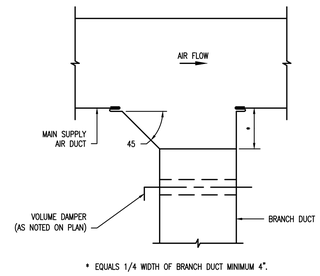
1 M-401 DUCT LAYOUT DETAILS

SCALE: N.T.S.



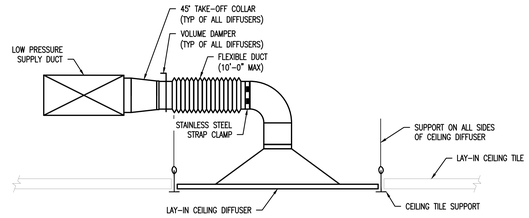
2 M-401 LOW PRESSURE ROUND DUCT TAKE-OFF

SCALE: N.T.S.



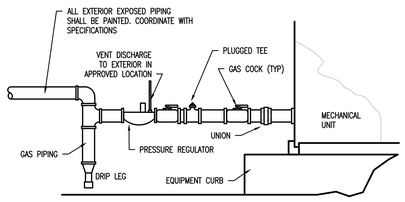
3 M-401 TYPICAL LOW PRESSURE RECTANGULAR DUCT TAKE-OFF DETAIL

SCALE: N.T.S.



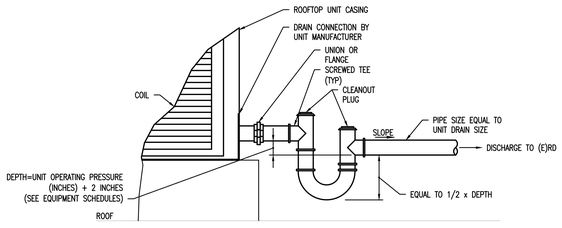
4 M-401 FLEXIBLE BRANCH DUCT DETAIL

SCALE: N.T.S.



5 M-401 GAS PIPING CONNECTION DETAIL

SCALE: N.T.S.

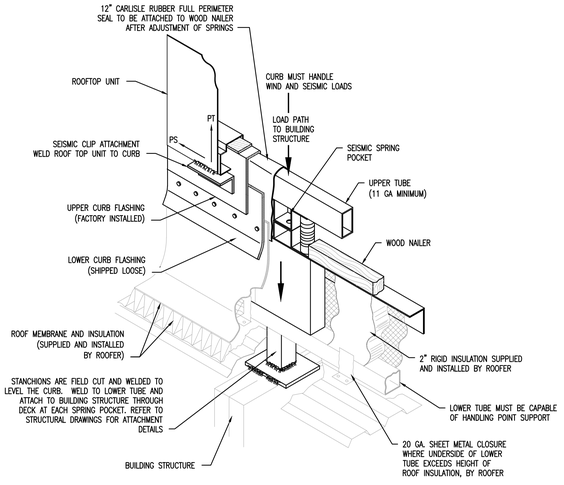


6 M-401 CONDENSATE DRAIN PIPE ROOF MOUNTED UNIT DETAIL

SCALE: N.T.S.

NOTES:

1. PROVIDE PEDESTAL MOUNTED PIPE SUPPORT SYSTEM WHERE INDICATED ON PLAN AND AS REQUIRED BY THE PEDESTAL MANUFACTURER'S WRITTEN INSTRUCTIONS.
2. PIPING MATERIAL SHALL BE PVC PLASTIC PIPE, ASTM D 1785, SCHEDULE 80, PLAIN ENDS WITH PVC PLASTIC PIPE SOCKET-TYPE PIPE FITTINGS, ASTM D 2467 FOR SCHEDULE 80 PIPE WITH SOLVENT CEMENT AND PRIMER.



7 M-401 ATTACHMENT OF ISOLATED SEISMIC/WIND ROOF CURB ON JOIST-SUPPORTED ROOF DETAIL

SCALE: N.T.S.

NOTES:

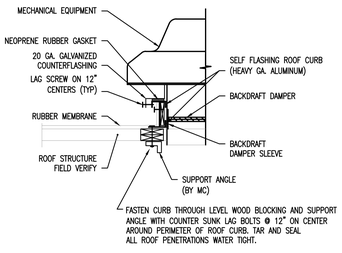
A. ALL NEW ROOFTOP EQUIPMENT SHALL BE EVALUATED FOR WIND LOADING AND VIBRATION BY A SEISMIC CONSULTANT. ACCEPTABLE SEISMIC CONSULTANTS ARE THE VMC GROUP, MASON, KINETICS, AMBER/BOOTH AND KORFUND DYNAMICS. ALL SEISMIC SUBMITTALS TO BE SIGNED AND SEALED BY A PROFESSIONAL ENGINEER.

B. REFER TO SEISMIC SPECIFICATION SECTION 230548 FOR ADDITIONAL INFORMATION.

C. ALL EQUIPMENT MOUNTED ON ROOF RAILS SHALL HAVE POSITIVE ATTACHMENT BETWEEN THE EQUIPMENT AND THE RAIL, AND THE RAIL TO THE BUILDING STRUCTURE. REFER TO SEISMIC/WIND RESTRAINT RAIL DETAILS ON THIS SHEET. ALL NEW RAILS SHALL BE SUPPORTED TO THE STRUCTURE WITH METAL STANCHIONS AT A MINIMUM OF 2 POINTS.

D. ALL EQUIPMENT MOUNTED ON ROOF CURBS SHALL HAVE POSITIVE ATTACHMENT BETWEEN THE EQUIPMENT AND THE CURB, AND THE CURB TO THE BUILDING STRUCTURE. REFER TO SEISMIC/WIND ROOF CURB DETAILS. ALL NEW ROOFTOP UNIT CURBS SHALL BE SUPPORTED TO THE STRUCTURE WITH METAL STANCHIONS AT A MINIMUM OF 4 POINTS.

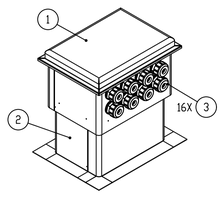
E. ALL ROOF MOUNTED EQUIPMENT MUST BE EVALUATED FOR WIND LOADING ONLY.



8 M-401 FLAT ROOF CURB DETAIL

SCALE: N.T.S.

ITEM NO.	NOMENCLATURE	PART NUMBER	QTY.
1	MEDIUM HOUSING	AL-201412	1
2	MEDIUM CURB 14" TALL	AL-1014C	1
3	SIGRIST EXIT SEAL	N/A	X

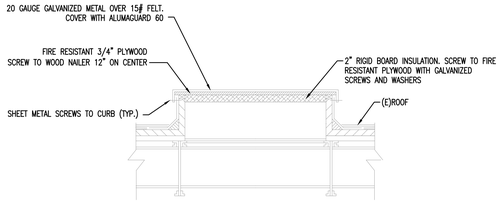


9 M-401 PIPE CURB INSTALLATION DETAIL

SCALE: N.T.S.

NOTES:

1. FINAL FINISH AND SEALING OF PIPE CURBS SHALL BE IN ACCORDANCE WITH METHODS APPROVED BY ROOFING MANUFACTURER OF (E)ROOFING SYSTEM.
2. PIPE CURBS TO BE UTILIZED FOR BOTH MECHANICAL AND ELECTRICAL SERVICES.



10 M-401 CURB CAP DETAIL

SCALE: N.T.S.

MEP ENGINEER:

CONCORD ENGINEERING

P.A. 24GA27936700
Phila. Business License No. 107707

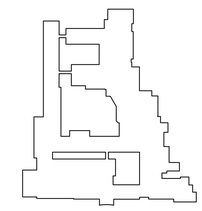
520 South Burrit Mill Road
Voorhees, New Jersey 08043
(856) 427-0200

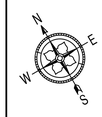
www.concord-engineering.com

No.	Date	Description
0	01/12/2024	Issued for Bid

REVISIONS:

KEY PLAN:





John A. Marchiafava P. E.
New Jersey P. E. No. 24GE04992500

Professional Engineer
John A. Marchiafava P. E.

PROJECT: REF21-35-8267

LRHSD-LENAPE HIGH SCHOOL
NORTH LOCKER ROOM RENOVATIONS

235 HARTFORD RD
MEDFORD, NEW JERSEY

DRAWING TITLE:

MECHANICAL DETAILS

DRAWN BY: TC	SCALE: AS NOTED	DWG SIZE: 42x30	
CHECKED BY: NH	DRAWING NO. M-401	REVISION 0	
DATE: 05/20/2022			
PROJECT NO.: 8C22002			

LEGEND

- EXISTING COLD WATER PIPING
- NEW COLD WATER PIPING
- EXISTING HOT WATER PIPING
- NEW HOT WATER PIPING
- EXISTING SANITARY WASTE PIPING
- NEW SANITARY WASTE PIPING
- EXISTING SANITARY VENT PIPING
- NEW SANITARY VENT PIPING
- EXISTING GREASE WASTE PIPING
- NEW GREASE WASTE PIPING
- NEW GAS PIPING
- EXISTING PIPING TO BE REMOVED
- GRADE & FLOOR CLEANOUT
- FLOW DIRECTION
- PIPING DOWN/DROP @ ELBOW
- PIPING DOWN/DROP @ TEE
- PIPING RISE/UP @ ELBOW
- PIPING RISE/UP @ TEE
- P-TRAP
- CONCENTRIC REDUCER
- ECCENTRIC REDUCER
- UNION
- CAPPED OFF PIPE
- BALL VALVE
- BACKFLOW PREVENTER
- SHOCK ABSORBER
- CHECK VALVE
- PRESSURE REGULATING/REDUCING VALVE
- BALANCING VALVE
- GAS COCK
- SOLENOID OPERATED AUTOMATIC GAS SHUT OFF VALVE
- WATER METER
- GAS METER
- MIXING VALVE
- FLOOR DRAIN
- FLOOR SINK
- POINT OF DEMOLITION TO EXISTING
- POINT OF CONNECTION TO EXISTING
- FOOD SERVICE EQUIPMENT IDENTIFICATION
- TROUGH DRAIN

PLUMBING DEMOLITION NOTES

1. IT IS THE INTENT THAT ALL EXISTING PIPING, DUCTWORK, FIXTURES AND OTHER EQUIPMENT AND MATERIALS THAT INTERFERE WITH THE ALTERED EXISTING BUILDING ARRANGEMENTS AND NEW SYSTEMS BE REMOVED, RELOCATED, REROUTED OR ABANDONED. THE DRAWINGS GENERALLY INDICATE MAJOR ITEMS OF EXISTING MATERIALS AND EQUIPMENT THAT ARE TO BE REMOVED, RELOCATED, REROUTED OR ABANDONED BY EACH TRADE. IT IS NOT POSSIBLE TO INDICATE ALL RELATED ACCESSORIES, SPECIALTIES AND OTHER MINOR ITEMS. HOWEVER, THEIR REMOVAL, RELOCATIONS, REROUTING OR ABANDONMENT SHALL ALSO BE INCLUDED IN THIS CONTRACT AND SHALL BE DONE AT NO ADDITIONAL COST TO THE OWNER.
2. EXISTING CONCEALED AND EXPOSED EQUIPMENT AND MATERIALS THAT WILL BECOME ABANDONED DUE TO NEW WORK SHALL BE REMOVED BACK TO ACTIVE RISER AND MAIN AND PROPERLY PLUGGED OR CAPPED BEHIND FINISHED SURFACES.
3. ALL EXISTING PIPING TO BE DEMOLISHED MAY NOT BE SHOWN. CONTRACTOR SHALL DURING PRE-BID SITE VISIT DETERMINE EXTENT OF DEMOLITION AND INCLUDE COST OF THIS WORK IN BID. SHOULD A CONTRACTOR REQUIRE REMOVAL, RELOCATION OR REROUTING OF ANOTHER TRADE'S WORK THAT IS NOT INDICATED ON DRAWINGS, THE CONTRACTOR REQUIRING SUCH WORK SHALL BE RESPONSIBLE FOR THAT WORK, AND PAY ALL REQUIRED COSTS. ALL UNKNOWN BELOW SLAB PIPING ENCOUNTERED DURING INSTALLATION OF NEW WORK SHALL BE REMOVED AND CAPPED OFF AT ACTIVE MAIN OR BRANCH. ALLOWANCE SHALL BE MADE FOR THESE ITEMS IN BID PRICE.
4. EXISTING EQUIPMENT AND MATERIALS THAT ARE TO REMAIN, BUT BECOME EXPOSED DUE TO NEW WORK, SHALL BE RELOCATED AND RECONNECTED AS DIRECTED BY ARCHITECT.
5. ALL WORK INVOLVING ALTERATIONS TO EXISTING SYSTEMS, EQUIPMENT AND MATERIALS SHALL BE REVIEWED WITH ARCHITECT AND OWNER BEFORE BEGINNING WORK.
6. REMOVED EQUIPMENT AND MATERIALS NOT DESIRED BY OWNER SHALL BECOME PROPERTY OF CONTRACTOR AND SHALL BE PROMPTLY REMOVED FROM SITE. EQUIPMENT AND MATERIALS DESIRED BY OWNER SHALL BE DELIVERED BY CONTRACTOR TO AN ON-SITE STORAGE LOCATION DESIGNATED BY OWNER.
7. THE CONTRACTOR MUST SURVEY AND VERIFY LOCATIONS AND PHYSICAL SIZES OF ALL EXISTING ITEMS AND DETERMINE WHETHER RELOCATION OR REROUTING WILL BE REQUIRED. IF RELOCATION OR REROUTING IS REQUIRED, INCLUDING THAT OF ALL RELATED ACCESSORIES, SPECIALTIES AND OTHER MINOR ITEMS, THE CONTRACTOR SHALL INCLUDE ALL NECESSARY WORK AS PART OF HIS CONTRACT AND IT SHALL BE DONE AT NO ADDITIONAL COST TO THE OWNER.
8. PLUMBING CONTRACTOR SHALL BE RESPONSIBLE FOR CUTTING AND CAPPING OF THE BUILDING'S EXISTING DOMESTIC WATER, SANITARY SEWER AND NATURAL GAS SERVICES AS SHOWN ON THE CONTRACT DRAWINGS. ALL REMAINING PLUMBING SYSTEMS INCLUDING PIPING, FIXTURE, EQUIPMENT, ETC., SHALL BE DEMOLISHED AND REMOVED BY OTHERS.
9. PRIOR TO TERMINATION OF THE BUILDING'S EXISTING DOMESTIC WATER, SANITARY SEWER AND NATURAL GAS SERVICES, PLUMBING CONTRACTOR SHALL NOTIFY AND COORDINATE THIS WORK WITH EACH RESPECTIVE UTILITY COMPANY.
10. PRIOR TO BID, CONTRACTOR SHALL FIELD INSPECT AND VERIFY SCOPE OF DEMOLITION WORK AND INCLUDE IN BID ALL COSTS ASSOCIATED WITH THE DISCONNECTION AND SAFING-OFF OF THE BUILDING'S EXISTING DOMESTIC WATER, SANITARY SEWER AND NATURAL GAS SERVICES.

GENERAL SPECIFICATIONS

1. ALL PLUMBING SHALL COMPLY WITH THE 2021 EDITION OF THE NATIONAL STANDARD PLUMBING CODE AS ADOPTED BY THE STATE OF NEW JERSEY.
2. CONTRACTOR SHALL PROVIDE AND PAY ALL FEES AND PERMITS.
3. THE DRAWINGS ARE INTENDED TO SHOW APPROXIMATE AND RELATIVE LOCATIONS OF MATERIALS AND EQUIPMENT. DRAWINGS SHALL NOT BE SCALED TO DETERMINE EXACT POSITIONS AND CLEARANCES. BECAUSE OF DIAGRAMMATIC LAYOUT AND SMALL SCALE OF DRAWINGS, NOT ALL RISES, DROPS, OFFSETS, VENTS, TRAPS AND RELATED SPECIALTIES ARE INDICATED. PROVIDE ALL SUCH PIPING, FITTINGS, VALVES AND SPECIALTIES REQUIRED IN SUCH CASES TO INSURE A COMPLETE AND PROPERLY OPERATING INSTALLATION IN ACCORDANCE WITH CODES AND WITHOUT EXTRA COST TO OWNER.
4. WORK SHALL BE PERFORMED BY MECHANICS SKILLED IN PARTICULAR TRADE INVOLVED, THAT IS, PLUMBING WORK SHALL BE PERFORMED BY PLUMBERS, ELECTRICAL WORK SHALL BE PERFORMED BY ELECTRICIANS, MECHANICAL WORKED PERFORMED BY STEAM FITTERS AND SHEET METAL MECHANICS.
5. ALL WORK SHALL BE INSPECTED, TESTED AND APPROVED BY THE PROPER AUTHORITIES HAVING JURISDICTION. CERTIFIED COPIES OF THESE APPROVALS SHALL BE DELIVERED TO THE OWNER BEFORE FINAL PAYMENT.
6. SLEEVES SHALL BE INSTALLED THROUGH FLOORS AND FIRE RATED WALLS. SLEEVES SHALL BE 2 PIPE SIZES LARGER THAN PIPE PASSING THRU AND SHALL BE SCHEDULE 40 STEEL PIPE. PROVIDE FIRE PROOF SEAL BETWEEN PIPES AND SLEEVES WHEN PASSING THRU FIRE RATED WALLS/FLOORS. SLEEVES PASSING THRU FLOORS SHALL BE EXTENDED 4" ABOVE FLOOR.
7. ESCUTCHEON PLATES SHALL BE PROVIDED ON ALL PIPE WHICH PASS THROUGH WALL PARTITIONS, FLOORS OR CEILINGS. PLATES SHALL BE ONE PIECE, CHROME FINISHED BRONZE.
8. COREDRILLING SHALL BE ACCOMPLISHED BY MECHANICAL MEANS IN A MANNER THAT WILL NOT AFFECT THE INTEGRITY OF THE STRUCTURE. AFTER INSTALLATION OF PIPING THRU THE COREDRILL, PACK THE ANNULAR SPACE WITH OAKUM OR FIBROUS GLASS, LEAVING A MINIMUM OF TWO INCHES AT EACH END TO BE FILLED AND FINISHED WITH A "FIRE BARRIER" MATERIAL EQUAL TO 3M "PENETRATION SEALING SYSTEMS" SUCH AS "CP-25 CAULK", "303 PUTTY" OR "FS-195 WRAP". APPLICATION OF "FIRE BARRIER" MATERIAL SHALL BE IN ACCORDANCE WITH MANUFACTURER'S STANDARDS AND APPLICABLE CODES.
9. PROVIDE COPIES OF ALL TEST REPORTS TO OWNER.
10. FLUSH VALVE/TANK HANDLES FOR HANDICAPPED WATER CLOSETS SHALL FACE WIDE SIDE OF STALL/ROOM.
11. COORDINATE LOCATION OF ALL ABOVE CEILING PIPING WITH MECHANICAL, ELECTRICAL & FIRE PROTECTION CONTRACTORS PRIOR TO INSTALLATION.
12. IF CONFLICT ARISES BETWEEN ITEMS SHOWN ON DRAWINGS AND ITEMS SPECIFIED, THE MOST STRINGENT ITEM SHALL BE USED.
13. THE INSTALLATION OF ALL INSULATION SHALL BE PERFORMED BY AN EXPERIENCED CRAFTSMAN IN A NEAT WORKMAN-LIKE MANNER AND SHALL BE IN ACCORDANCE WITH THE MANUFACTURER'S PUBLISHED RECOMMENDATIONS FOR SERVICE INTENDED.
14. ALL NEW PLUMBING FIXTURES SHALL MEET THE APPROPRIATE "ANSI" STANDARDS LISTED IN THE PLUMBING SUBCODE. USE OF SUBSTANDARD AND NON-CONFORMING FOREIGN MADE PRODUCTS IS PROHIBITED.
15. ALL PLUMBING SYSTEMS AND VALVES SHALL BE LABELED FOR PROPER IDENTIFICATION. NAMEPLATES, METAL TAGS, & PLASTIC PIPE MARKERS SHALL BE IN ACCORDANCE WITH BRIMAR IDENTIFICATION & SAFETY PRODUCTS, BRIMAR INDUSTRIES, INC.
16. INSULATE EXPOSED WASTE & WATER PIPING BELOW HANDICAPPED LAVATORIES WITH PLUMBEREX "PRO-EXTREME" FORM FIT INSULATING COVERS.
17. HANDICAPPED FIXTURE HEIGHTS SHALL BE IN ACCORDANCE WITH ICC/ANSI A-117.1.
18. ALL PLUMBING FIXTURES SHALL BE PROVIDED WITH CHROME PLATED SHUT OFF VALVES (ANGLE STOPS), CHROME PLATED SUPPLIES AND P-TRAPS.

HANGERS & SUPPORTS

1. HANGERS AND ANCHORS SHALL BE SECURELY ATTACHED TO BUILDING CONSTRUCTION AT SUFFICIENTLY CLOSE INTERVALS TO SUPPORT PIPING AND ITS CONTENTS.
   - (A) VERTICAL PIPING FOR CAST IRON SHALL BE SUPPORTED AT BASE AND AT EACH STORY HEIGHT BUT NOT MORE THAN 15 FOOT INTERVALS.
   - (B) VERTICAL PIPING FOR COPPER SHALL BE SUPPORTED AT EACH STORY HEIGHT BUT NOT MORE THAN 10 FOOT INTERVALS.
   - (C) VERTICAL PIPING FOR STEEL SHALL BE SUPPORTED AT BASE AND AT EVERY OTHER STORY HEIGHT BUT NOT MORE THAN 15 FOOT INTERVALS.
   - (D) HORIZONTAL PIPING FOR CAST IRON SHALL BE SUPPORTED WITH MINIMUM ONE HANGER LOCATED WITHIN 18" OF EACH JOINT, AT CHANGES IN DIRECTION, AND AT EACH BRANCH CONNECTION. WHERE PIPE IS SUSPENDED BY NON-RIGID HANGERS MORE THAN 18" LONG PROVIDE LATERAL SUPPORT.
   - (E) HORIZONTAL PIPING FOR COPPER SHALL BE SUPPORTED AT 6 FOOT INTERVALS FOR PIPE SIZES 1-1/4" AND SMALLER AND AT 10 FOOT INTERVALS FOR PIPE SIZES 1-1/2" AND LARGER. WHERE PIPE IS SUSPENDED BY NON-RIGID HANGERS MORE THAN 18" LONG PROVIDE LATERAL SUPPORT.
   - (F) HORIZONTAL PIPING FOR STEEL SHALL BE SUPPORTED AT 12 FOOT INTERVALS FOR PIPE SIZES 1-1/4" AND SMALLER AND AT 12 FOOT INTERVALS FOR PIPE SIZES 1-1/2" AND LARGER. WHERE PIPE IS SUSPENDED BY NON-RIGID HANGERS MORE THAN 18" LONG PROVIDE LATERAL SUPPORT.
   - (G) PLASTIC PIPE SHALL BE SUPPORTED AT INTERVALS OF NOT MORE THAN 4 FEET, AT END OF BRANCHES, AND CHANGES OF DIRECTION OR ELEVATION. SUPPORTS SHALL ALLOW FOR FREE MOVEMENT. VERTICAL PIPE SHALL BE MAINTAINED IN STRAIGHT ALIGNMENT. TRAP ARMS IN EXCESS OF 3 FEET SHALL BE SUPPORTED AS CLOSE TO TRAP AS POSSIBLE. CARE SHALL BE TAKEN NOT TO COMPRESS, DISTORT, CUT OR ABRADE PIPING.
2. ALL SUPPORTS COMING IN CONTACT WITH COPPER PIPING SHALL BE PLASTIC COATED.
3. INSTALL METAL SHIELDS ON HANGERS SUPPORTING INSULATED PIPE.
4. PROVIDE HANGERS THAT ARE U.L. LISTED AND LABELED.
5. ALL DOMESTIC WATER, STORM & SANITARY WASTE PIPE SUPPORTS SHALL BE IN ACCORDANCE WITH THE NATIONAL STANDARD PLUMBING CODE 2021 AS ADOPTED BY THE STATE OF NEW JERSEY.
6. PLUMBING SYSTEMS SHALL BE INSTALLED SO AS TO PREVENT STRAINS & STRESSES WHICH WILL EXCEED STRUCTURAL STRENGTH OF PIPE. PROVISIONS SHALL BE MADE FOR EXPANSION & CONTRACTION OF PIPING. ALL HANGERS LOCATED OUTSIDE OR IN CORROSIVE AREAS SHALL BE GALVANIZED.
7. ALL HANGERS ON GALVANIZED PIPE SHALL BE GALVANIZED.
8. MINIMUM ROD DIAMETER FOR SINGLE RIGID SUPPORTS SHALL BE AS FOLLOWS:
   - (A) FOR 1/4" THRU 2" PIPE: 3/8"DIAMETER
   - (B) FOR 2 1/2" AND 3" PIPE: 1/2"DIAMETER
   - (C) FOR 4" AND 5" PIPE: 5/8"DIAMETER
   - (D) FOR 6" PIPE: 3/4"DIAMETER
   - (E) FOR 8" THRU 12"PIPE: 7/8"DIAMETER
   - (F) FOR 14" THRU 18"PIPE: 1"DIAMETER
   - (G) RODS MAY BE REDUCED ONE SIZE FOR DOUBLE ROD HANGERS (3/8"DIA MIN).
9. LONG RUNS OF DOMESTIC WATER PIPING SHALL BE SECURED TO AVOID MOVEMENT DUE TO PRESSURE FLUCTUATIONS (WATER HAMMER).

ABBREVIATIONS

ABV CLG	ABOVE CEILING
BF	BARRIER-FREE
BLW FLR	BELOW FLOOR
BT	BATHTUB
BFP	BACKFLOW PREVENTER
CI	CAST IRON
CO	CLEANOUT
CW	COLD WATER
CONT	CONTINUE
CWFU	COLD WATER FIXTURE UNIT
DF	DRINKING FOUNTAIN
DFU	DRAINAGE FIXTURE UNIT
DN	DOWN
EC	ELECTRICAL CONTRACTOR
EWC	ELECTRICAL WATER COOLER
E	EXISTING
FCO	FLOOR CLEAN OUT
FD	FLOOR DRAIN
FM	FORCE MAIN
FNL	FUNNEL
FPC	FIRE PROTECTION CONTRACTOR
FS	FLOOR SINK
FSEC	FOOD SERVICE CONTRACTOR
G	GAS
GC	GENERAL CONTRACTOR
GI	GREASE INTERCEPTOR
GPM	GALLONS PER MINUTE
GW	GREASE WASTE
HB	HOSE BIBB
HC	HANDICAPPED ACCESSIBLE
HW	HOT WATER
HWFU	HOT WATER FIXTURE UNIT
HWR	HOT WATER RETURN
IW	INDIRECT WASTE
LAV	LAVATORY SINK
MC	MECHANICAL CONTRACTOR
MR	MOP RECEPTOR
MS	MOP SINK
MV	MIXING VALVE
N	NEW
PC	PLUMBING CONTRACTOR
PRV	PRESSURE REGULATING/REDUCING VALVE
RAC	RUN ABOVE CEILING
RD/ORD	ROOF DRAIN/OVERFLOW ROOF DRAIN
SAN	SANITARY
SH	SHOWER
SK	SINK
SF	SQUARE FOOT
S/S	STAINLESS STEEL
T & P	TEMPERATURE & PRESSURE
TD	TRENCH DRAIN / TROUGH DRAIN
TW	TEMPERED WATER
UG	UNDERGROUND
UNO	UNLESS NOTED OTHERWISE
UR	URINAL
V	VENT
VTR	VENT THRU ROOF
W/	WITH
WB	WASHING MACHINE SUPPLY & WASTE BOX
WC	WATER CLOSET
WCO	WALL CLEAN OUT
W/D	WASHER/DRYER
WH	WALL HYDRANT

SUBMITTAL NOTE:

1. CONTRACTOR SHALL PROVIDE SUBMITTALS FOR ALL PIPING, VALVES, EQUIPMENT, ETC IN ACCORDANCE WITH ARCHITECTURAL SPECIFICATIONS. NO WORK SHALL BEGIN UNTIL APPROVAL HAS BEEN OBTAINED FROM ARCHITECT/ENGINEER.
2. CONTRACTOR SHALL SUBMIT COORDINATION DRAWINGS 1/4" SCALE MINIMUM FOR REVIEW AND APPROVAL AS STATED IN NOTE 1 ABOVE.

"AS BUILT" CONSTRUCTION DRAWINGS NOTES:

1. CONTRACTOR SHALL PROVIDE (1) SET OF "AS-BUILT" DRAWINGS ON DISC IN PDF FORMAT TO ARCHITECT AND OWNER AT THE COMPLETION OF PROJECT.
2. TWO (2) SETS OF "AS-BUILT" DRAWINGS ON BLACKLINE PRINTS SHALL BE SUPPLIED TO THE ARCHITECT FOR THE ARCHITECT'S AND ENGINEER'S USE AT THE PROJECT COMPLETION.

CONTINUITY OF EXISTING SYSTEMS

1. ALL WORK SHALL BE PERFORMED AT SUCH TIME AND IN SUCH MANNER AS WILL LEAST INTERFERE WITH MAINTENANCE AND OPERATION OF OWNER'S ACTIVITIES. PROVISIONS SHALL BE MADE TO PERMIT OWNER'S USE OF ALL THE BUILDING AND OF EXISTING SYSTEMS AT ALL TIMES. PROVIDE TEMPORARY FACILITIES TO SECURE THESE CONDITIONS. REMOVE TEMPORARY FACILITIES WHEN PERMANENT WORK HAS BEEN PLACED INTO SERVICE.
2. FULLY COORDINATE WITH ARCHITECT, OWNER AND ALL OTHER TRADES, ALL WORK INVOLVING SHUT-DOWN AND INTERRUPTION OF EXISTING SYSTEMS AND SERVICE.
3. SHUT-DOWN OF EXISTING SERVICES WHERE REQUIRED TO INSTALL NEW SYSTEMS OR ALTER EXISTING SHALL BE PERFORMED IN A MANNER THAT WILL NOT INTERFERE WITH OWNER'S OPERATIONS. ALL COSTS FOR PERFORMING THIS WORK SHALL BE BORNE BY THE CONTRACTOR AND WITHOUT "EXTRA" COST TO THE OWNER.
4. EXISTING SYSTEMS AND SERVICES THAT ARE TEMPORARILY DISCONNECTED, BUT ARE TO REMAIN IN USE, SHALL BE PERMANENTLY RECONNECTED AND RETURNED TO PROPER OPERATION.
5. FULLY COORDINATE WITH ARCHITECT, OWNER AND OTHER TRADES TO ENSURE COMPLETE CONTINUITY OF ALL SYSTEMS AND SERVICES.

DRAWING SHEET INDEX (PROJECT 8267)

SHEET NO.	DRAWING NUMBER	DRAWING TITLE	SCALE	ISSUE DATE	ISSUED FOR BID 01/12/24
1	P-001	PLUMBING LEAD SHEET	NTS		x
2	P-002	PLUMBING DETAILS AND SCHEDULES	NTS		x
3	PD-100	PLUMBING OVERALL DEMOLITION FLOOR PLAN	1/8"=1'-0"		x
4	PD-101	PLUMBING DEMOLITION FLOOR PLAN - BOYS LOCKER ROOM	1/4"=1'-0"		x
5	PD-102	PLUMBING DEMOLITION FLOOR PLAN - GIRLS LOCKER ROOM	1/4"=1'-0"		x
6	P-100	PLUMBING OVERALL NEW WORK FLOOR PLAN	1/8"=1'-0"		x
7	P-101	PLUMBING NEW WORK FLOOR PLANS - BOYS LOCKER ROOM	1/4"=1'-0"		x
8	P-102	PLUMBING NEW WORK FLOOR PLANS - GIRLS LOCKER ROOM	1/4"=1'-0"		x
9	P-200	PLUMBING NEW WORK ROOF PLAN	1/8"=1'-0"		x
10	P-301	PLUMBING SANITARY AND NATURAL GAS RISER DIAGRAMS	NTS		x
11	P-302	PLUMBING DOMESTIC WATER RISER DIAGRAMS	NTS		x

MEP ENGINEER:

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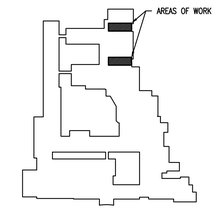
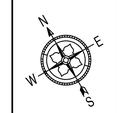
No.	Date	Description
0	01/12/2024	ISSUED FOR BID

REVISIONS:

KEY PLAN:





John A. Marchiafava P. E.
New Jersey P. E. No. 24GE04992500

Professional Engineer
John A. Marchiafava P. E.

PROJECT: REF'21-09-8267

LRHSD REFERENDUM
PHASE 1 HVAC PROJECTS

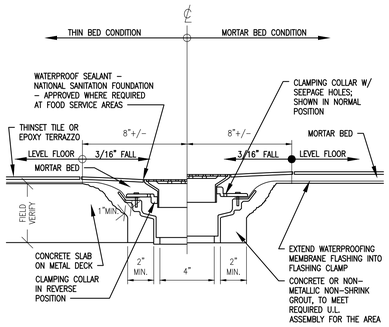
LENAPE HIGH SCHOOL

235 HARTFORD RD
MEDFORD, NEW JERSEY

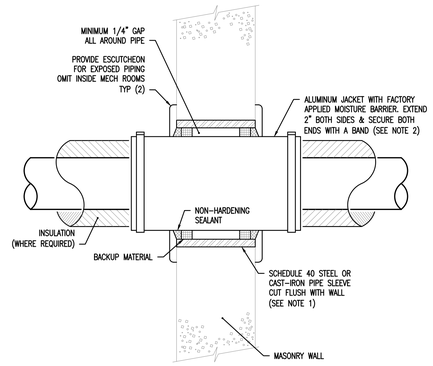
DRAWING TITLE:

PLUMBING LEAD SHEET

DRAWN BY: MSV	SCALE: AS NOTED	DWG SIZE: 42x30	
CHECKED BY: CEC	DRAWING NO. P-001	REVISION 0	
DATE: 05/20/2022			
PROJECT NO.: 8C22002			



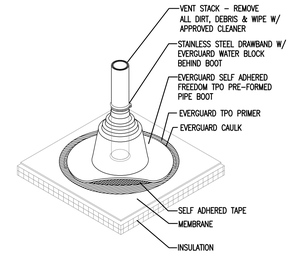
1 P-002 **DETAIL – FLOOR DRAIN**
SCALE: NTS



NOTES:

1. FOR GYP. BOARD WALLS PROVIDE MIN. 16 GAUGE GALV. STEEL SLEEVE W/ LOCK-TYPE LONGITUDINAL SEAM.
2. OMIT ALUMINUM JACKET IF PIPING IS UNINSULATED.
3. ALL EXTERIOR PIPING AND PENETRATIONS SHALL BE PAINTED WITH ONE COAT OF PRIMER SUITABLE FOR THE PAINTED SURFACE AND TWO COATS OF EXTERIOR GRADE PAINT W/ COLOR SELECTED BY OWNER.

2 P-002 **DETAIL – WALL PENETRATION**
SCALE: N.T.S.



3 P-002 **DETAIL – VENT FLASHING**
SCALE: NTS

PLUMBING FIXTURE SCHEDULE

SYMBOL	FIXTURE	BASIS OF DESIGN		CONNECTION SIZE				MOUNT	FAUCET/FLUSHOMETER		ELECTRICAL	REMARKS
		MFGR	MODEL	WASTE	VENT	CW	HW		MFGR	MODEL		
WC-1/1A	WATER CLOSET	AMERICAN STANDARD	AFWALL MILLENNIUM #3351.101	3"	2"	1-1/4"	-	WALL	AMERICAN STANDARD	ULTIMA #6147SM121.002	-	ELONGATED BOWL, TOP SPUD, PROVIDE #5901.100 OPEN FRONT SEAT, BATTERY OPERATED FLUSH VALVE, 1.28 GPF, COLOR: WHITE
LAV-1	LAVATORY	AMERICAN STANDARD	LUCERNE #0356.421	1-1/4"	1-1/4"	1/2"	1/2"	WALL	AMERICAN STANDARD	#1340.109	-	METERING FAUCET, 1.0 GPM, PROVIDE WITH UNDER COUNTER MIXING VALVE - WATTS #LFUSG-B, CHROME PLATED SUPPLY FITTING WITH STOPS, CHROME PLATED 17 GAUGE BRASS P-TRAP WITH CLEANOUT, PROFLO LAV GUARD #PF202WH. PROVIDE CONCEALED CARRIER FOR STUD WALL.
LAV-2	LAVATORY	AMERICAN STANDARD	OVALYN #0497221	1-1/4"	1-1/4"	1/2"	1/2"	UNDERMOUNT	AMERICAN STANDARD	#5502.175	-	WRIST BLADE FAUCET, 4" CENTERSET, 0.5 GPM, PROVIDE WITH UNDER COUNTER MIXING VALVE - WATTS #LFUSG-B, CHROME PLATED SUPPLY FITTING WITH STOPS, CHROME PLATED 17 GAUGE BRASS P-TRAP WITH CLEANOUT, PROFLO LAV GUARD #PF202WH.
SH-1	SHOWER	BRADLEY	#WS-1X-HN	2"	-	1/2"	1/2"	WALL	-	-	-	PREASSEMBLED WALL SHOWER, 1.5 GPM. PROVIDE ZURN #FD2260 SHOWER DRAIN, 2" OUTLET WITH PROSET WATERLESS TRAP PRIMER. REFER TO ARCHITECTURAL DRAWINGS FOR SHOWER MOUNTING HEIGHT & SHOWER BASE MATERIAL.
SH-2	SHOWER	BRADLEY	#WS-1X-HN	-	-	1/2"	1/2"	WALL	-	-	-	PREASSEMBLED WALL SHOWER, 1.5 GPM. REFER TO ARCHITECTURAL DRAWINGS FOR SHOWER MOUNTING HEIGHT & SHOWER BASE MATERIAL.
BF	BOTTLE FILLER	ELKAY	#LZWSM8K	1-1/2"	1-1/2"	1/2"	-	WALL	-	-	120/1/60, 1 FLA	REFRIGERATED BOTTLE FILLING STATION, PROVIDE WITH EXTRA ELKAY REPLACEMENT FILTER
MS	MOP SINK	FIAT	#MSB2424	3"	2"	3/4"	3/4"	FLOOR	FIAT	#830-AA	-	PROVIDE WITH QDC - QUICK DRAIN CONNECTOR, FIAT #1453BB SS STRAINER, FIAT #832AA HOSE & HOSE BRACKET, FIAT #MSG WALL GUARD
TD	TRENCH DRAIN	ZURN	#Z884	3"	-	-	-	FLOOR	-	-	-	LENGTH AS REQUIRED, 3" NO-HUB BOTTOM OUTLET, WITH PROSET WATERLESS TRAP PRIMER.
FD	FLOOR DRAIN	ZURN	#Z415B	3"	-	-	-	FLOOR	-	-	-	6" DIA NICKEL BRONZE STRAINER, WITH PROSET WATERLESS TRAP PRIMER.
HB	HOSE BIBB	ZURN	#1330XL	-	-	3/4"	-	WALL	-	-	-	3/4" HOSE OUTLET, 304 SS HOUSING WITH LOCKING HINGED COVER.
TBV	THERMOSTATIC BALANCING VALVE	CIRCUIT SOLVER	#CSUAS-1/2-110-CV1	-	-	-	1/2"	-	-	-	-	AUTOMATIC BALANCING VALVE W/ SHUTOFFS AND STRAINER, 110°F CLOSING TEMPERATURE AND OPTIONAL CHECK VALVE INSERTS.

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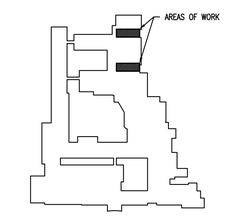
No.	Date	Description
0	01/12/2024	ISSUED FOR BID

REVISIONS:

KEY PLAN:



John A. Marchiafava P. E.
New Jersey P. E. No. 24GE04692500

Professional Engineer
John A. Marchiafava P. E.

PROJECT: REF21-09-8267

LRHSD REFERENDUM
PHASE 1 HVAC PROJECTS

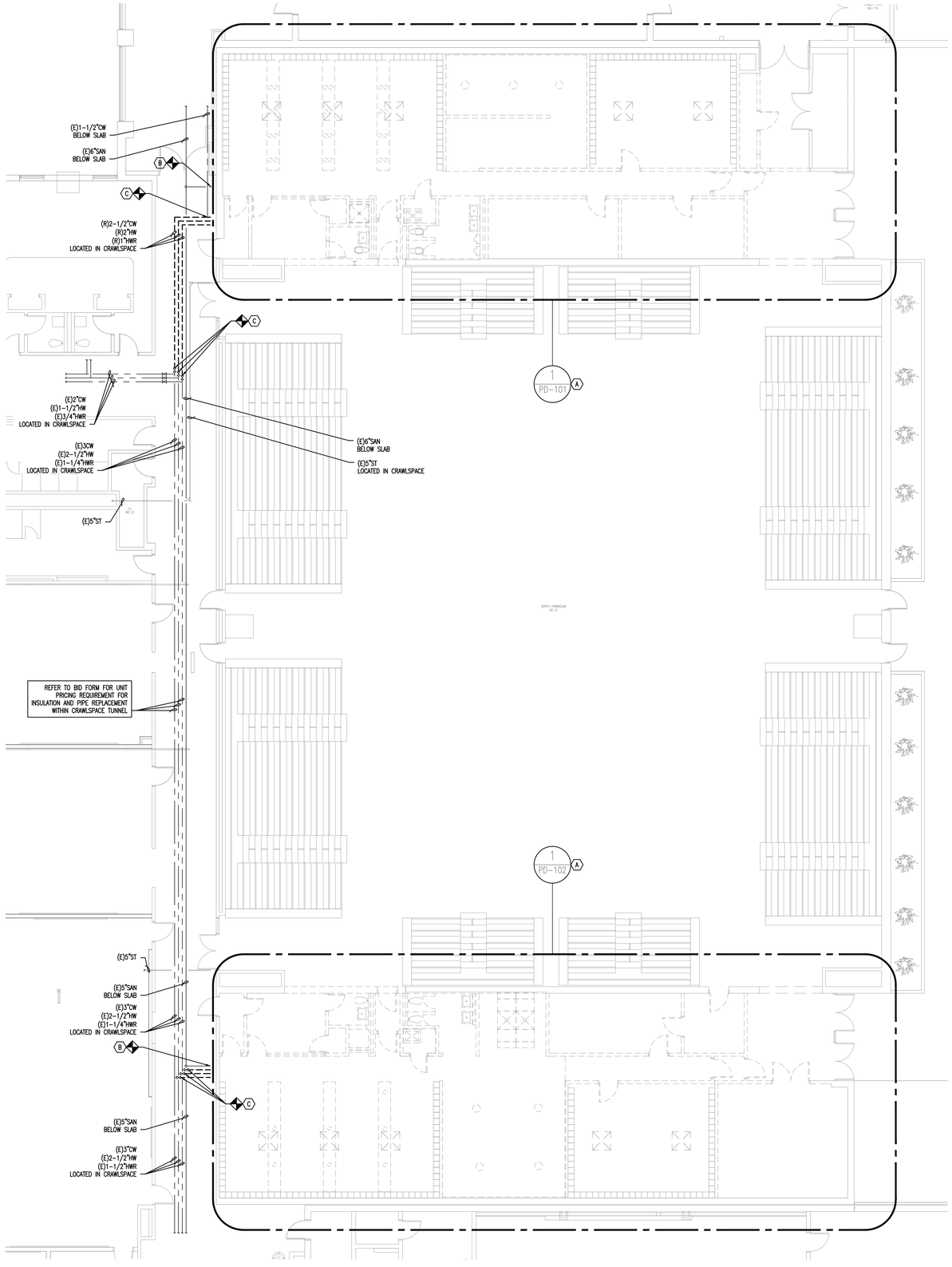
LENAPE HIGH SCHOOL

235 HARTFORD RD
MEDFORD, NEW JERSEY

DRAWING TITLE:

PLUMBING DETAILS AND SCHEDULES

DRAWN BY: MSV	SCALE: AS NOTED	DWG SIZE: 42x30	
CHECKED BY: CEG	DRAWING NO. P-002	REVISION 0	
DATE: 05/20/2022			
PROJECT NO.: 8C22002			



1 PD-100 **PLUMBING OVERALL DEMOLITION FLOOR PLAN**
SCALE: 1/8" = 1'-0"

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

PLUMBING DEMOLITION NOTES:

GENERAL NOTES:

1. REFER TO PLUMBING LEAD SHEET, P-001 FOR 'NOTES' THAT PERTAIN TO THE SCOPE OF THIS PROJECT.
2. EXISTING CONCEALED AND EXPOSED EQUIPMENT AND MATERIALS THAT WILL BECOME ABANDONED DUE TO NEW WORK SHALL BE REMOVED BACK TO ACTIVE RISER AND MAIN AND PROPERLY PLUGGED OR CAPPED BEHIND FINISHED SURFACES.
3. WHERE PIPING PENETRATES AN EXISTING WALL OR SURFACE AND IS BEING ABANDONED IN PLACE, THE PIPING SHALL BE CUT BEYOND THE EXTERIOR SURFACE OF THE MATERIAL AND CAPPED. ONCE CAPPED, THE SURFACE SHALL BE PATCHED TO MATCH EXISTING SURFACES.
4. IN THE REMOVAL OF ANY PART OF A DRAINAGE OR WATER SYSTEM, DEAD ENDS SHALL BE AVOIDED EXCEPT WHERE NECESSARY TO EXTEND TO A CLEANOUT SO AS TO BE ACCESSIBLE.
5. CONTRACTOR SHALL VERIFY LOCATION, SIZE, AND ROUTING OF ALL PIPING PRIOR TO DEMOLITION. PLUMBING DRAWINGS ARE DIAGRAMMATIC AND MAY NOT BE AN EXACT REPRESENTATION OF FIELD CONDITIONS.
6. CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING AND VERIFYING SHUTOFF VALVES FOR DOMESTIC AND NATURAL GAS PIPING TO ISOLATE THE AREA OF WORK PRIOR TO DEMOLITION.
7. REMOVED EQUIPMENT AND MATERIALS NOT DESIRED BY OWNER SHALL BECOME PROPERTY OF CONTRACTOR AND SHALL BE PROMPTLY REMOVED FROM SITE. EQUIPMENT AND MATERIALS DESIRED BY OWNER SHALL BE DELIVERED BY CONTRACTOR TO AN ON-SITE LOCATION DESIGNATED BY OWNER.

DEMOLITION KEYED NOTES:

GENERAL: DEMOLITION NOTES ARE INDICATED WITH THE FOLLOWING SYMBOL (#) AND ARE NUMBERED AS FOLLOWS:

(A) REFER TO ENLARGED PLANS FOR WORK WITHIN LOCKER ROOM. ALL PLUMBING FIXTURES AND THEIR RELATED PIPING, ACCESSORIES, AND APPURTENANCES WITHIN LOCKER ROOM SHALL BE DEMOLISHED AND REMOVED UNLESS NOTED OTHERWISE. EXACT LOCATION OF ALL PIPING AND POINTS OF DISCONNECT SHALL BE VERIFIED IN FIELD.

(B) DEMOLISH AND REMOVE SANITARY PIPING WITHIN LOCKER ROOM TO ALL PLUMBING FIXTURES AND FLOOR DRAINS. DISCONNECT SANITARY PIPE FROM MAIN WITHIN CRAWLSPACE. CONTRACTOR SHALL DETERMINE BEST METHOD AND ROUTING OF REMOVING AND INSTALLING NEW SANITARY PIPE TO MINIMIZE SAW-CUTTING OF FLOOR. ALL VENT PIPING SHALL BE DEMOLISHED BACK TO VENT THROUGH ROOF. CONTRACTOR MAY REUSE EXISTING VENT THROUGH ROOF PENETRATIONS FOR NEW WORK. ANY ROOF PENETRATIONS NOT USED SHALL BE PATCHED AND SEALED WATERTIGHT.

(C) DEMOLISH AND REMOVE DOMESTIC WATER PIPING WITHIN LOCKER ROOM TO ALL PLUMBING FIXTURES. DISCONNECT DOMESTIC PIPING FROM MAINS WITHIN CRAWLSPACE. CONTRACTOR SHALL VERIFY EXACT LOCATION OF DISCONNECT IN FIELD.

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(856) 427-0200

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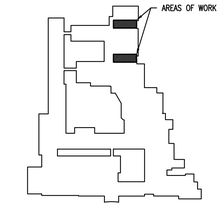
No.	Date	Description
0	01/12/2024	ISSUED FOR BID

REVISIONS:

KEY PLAN:



John A. Marchiafava P. E.
New Jersey P. E. No. 24GE04992500

Professional Engineer
John A. Marchiafava P. E.

PROJECT: REF21-09-8267

LRHSD REFERENDUM
PHASE 1 HVAC PROJECTS

LENAPE HIGH SCHOOL

235 HARTFORD RD
MEDFORD, NEW JERSEY

DRAWING TITLE:

PLUMBING OVERALL DEMOLITION FLOOR PLAN

DRAWN BY: MSV	SCALE: AS NOTED	DWG SIZE: 42x30	
CHECKED BY: CEG	DRAWING NO. PD-100	REVISION 0	
DATE: 05/20/2022			
PROJECT NO.: 8C22002			

PLUMBING DEMOLITION NOTES:

GENERAL NOTES:

1. REFER TO PLUMBING LEAD SHEET, P-001 FOR 'NOTES' THAT PERTAIN TO THE SCOPE OF THIS PROJECT.
2. EXISTING CONCEALED AND EXPOSED EQUIPMENT AND MATERIALS THAT WILL BECOME ABANDONED DUE TO NEW WORK SHALL BE REMOVED BACK TO ACTIVE RISER AND MAIN AND PROPERLY PLUGGED OR CAPPED BEHIND FINISHED SURFACES.
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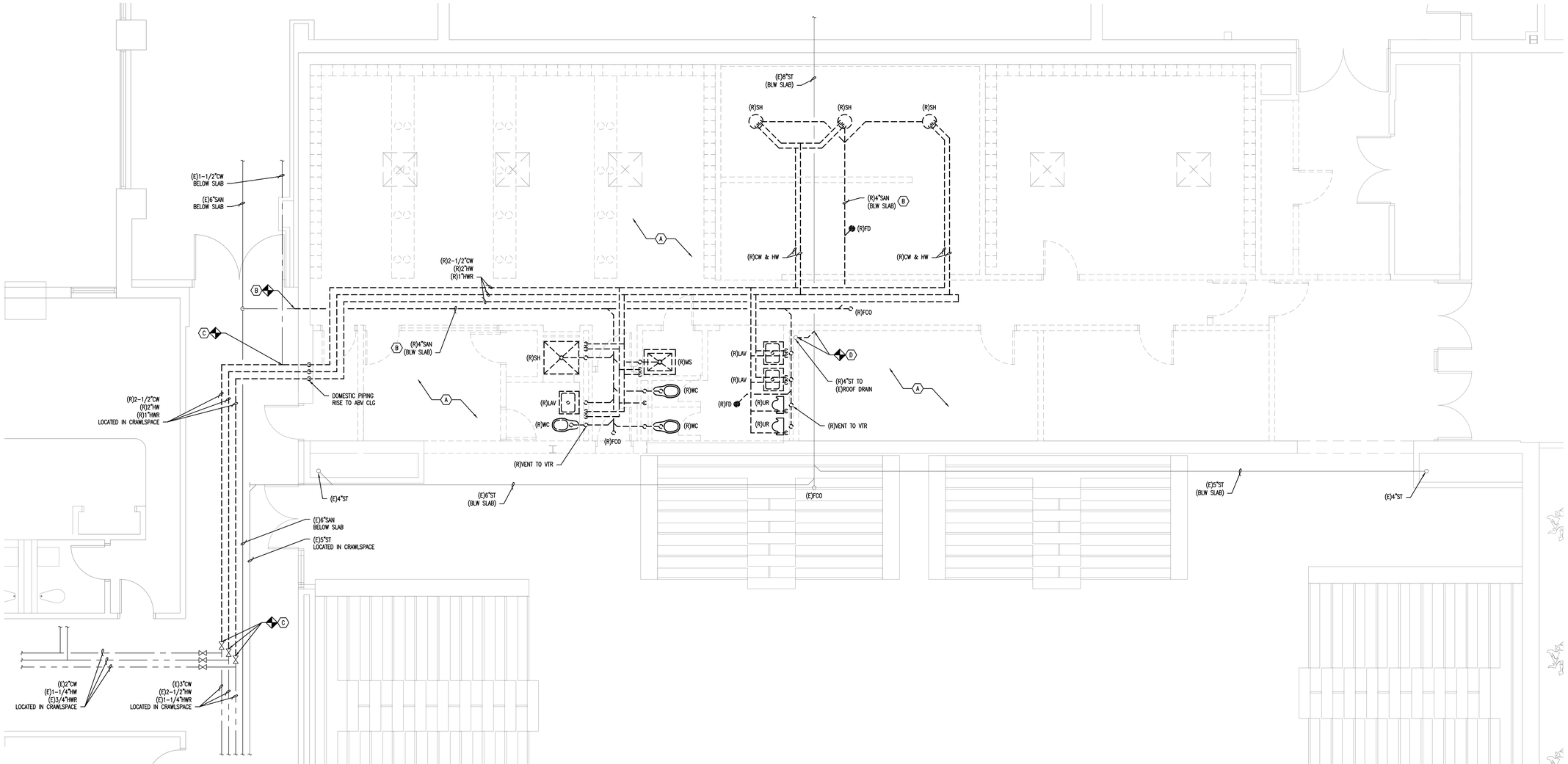
⟨C⟩ DEMOLISH AND REMOVE DOMESTIC WATER PIPING WITHIN LOCKER ROOM TO ALL PLUMBING FIXTURES. DISCONNECT DOMESTIC PIPING FROM MAINS WITHIN CRAWLSPACE. CONTRACTOR SHALL VERIFY EXACT LOCATION OF DISCONNECT IN FIELD.

⟨D⟩ EXISTING STORM WATER RISER TO BE RELOCATED TO ACCOMMODATE NEW FLOOR PLAN. DEMOLISH STORM PIPING FROM MAIN BACK TO ROOF DRAIN. EXISTING ROOF DRAIN TO REMAIN.



1 PD-101 PLUMBING DEMOLITION FLOOR PLAN – BOYS LOCKER ROOM
SCALE: 1/4" = 1'-0"

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

MEP ENGINEER:

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No.	Date	Description
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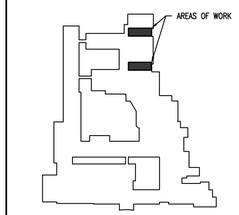
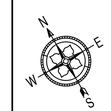
REVISIONS:

KEY PLAN:





John A. Marchiafava P. E.
New Jersey P. E. No. 24GE04992500

Professional Engineer
John A. Marchiafava P. E.

PROJECT: REF21-09-8267

LRHSD REFERENDUM
PHASE 1 HVAC PROJECTS

LENAPE HIGH SCHOOL

235 HARTFORD RD
MEDFORD, NEW JERSEY

DRAWING TITLE:

PLUMBING DEMOLITION FLOOR PLAN
BOYS LOCKER ROOM

DRAWN BY: MSV	SCALE: AS NOTED	DWG SIZE: 42x30
CHECKED BY: CEG	DRAWING NO. PD-101	REVISION 0
DATE: 05/20/2022		
PROJECT NO.: 8C22002		

PLUMBING DEMOLITION NOTES:

GENERAL NOTES:

1. REFER TO PLUMBING LEAD SHEET, P-001 FOR 'NOTES' THAT PERTAIN TO THE SCOPE OF THIS PROJECT.
2. EXISTING CONCEALED AND EXPOSED EQUIPMENT AND MATERIALS THAT WILL BECOME ABANDONED DUE TO NEW WORK SHALL BE REMOVED BACK TO ACTIVE RISER AND MAIN AND PROPERLY PLUGGED OR CAPPED BEHIND FINISHED SURFACES.
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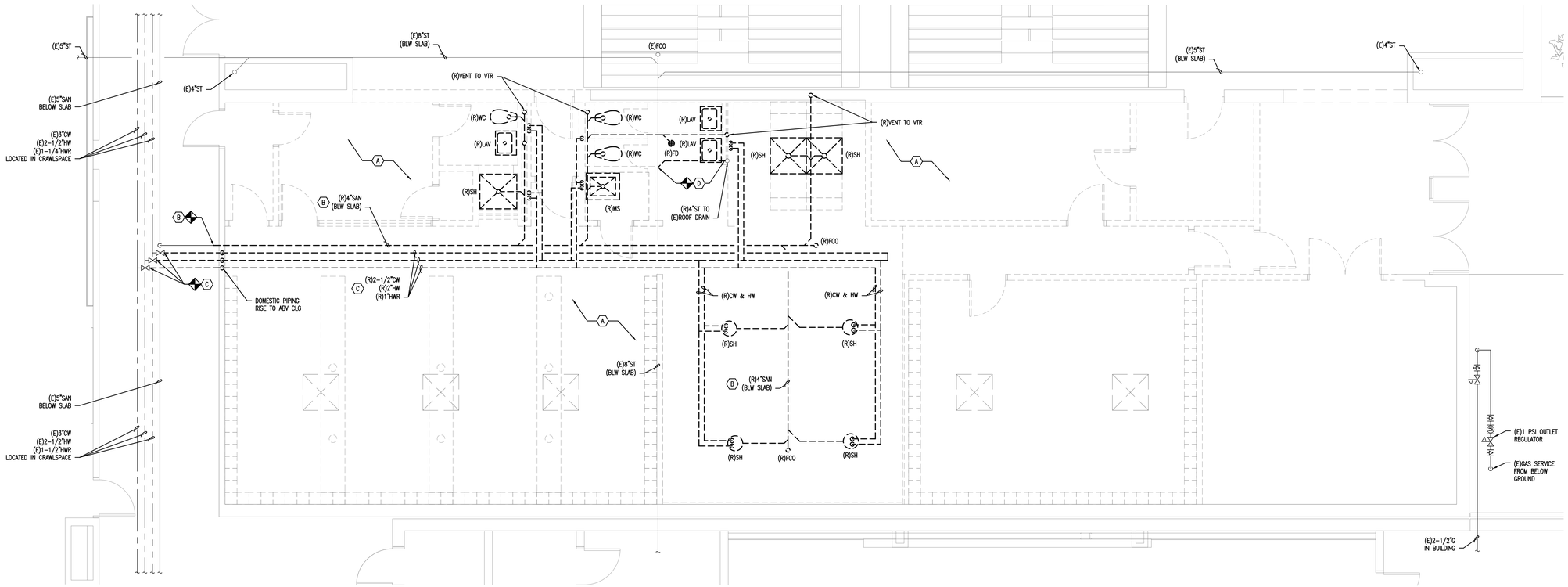

1 PD-102 PLUMBING DEMOLITION FLOOR PLAN – GIRLS LOCKER ROOM

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

SCALE BAR: 1/4"=1'-0" (0', 1', 2', 4', 8')

MEP ENGINEER:

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Phila. Business License No. 107707

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(856) 427-0200

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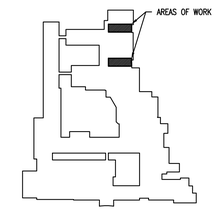
No.	Date	Description
0	01/12/2024	ISSUED FOR BID

REVISIONS:

KEY PLAN:



John A. Marchiafava P. E.
New Jersey P. E. No. 24GE04992500

Professional Engineer
John A. Marchiafava P. E.

PROJECT: REF21-09-8267

LRHSD REFERENDUM
PHASE 1 HVAC PROJECTS

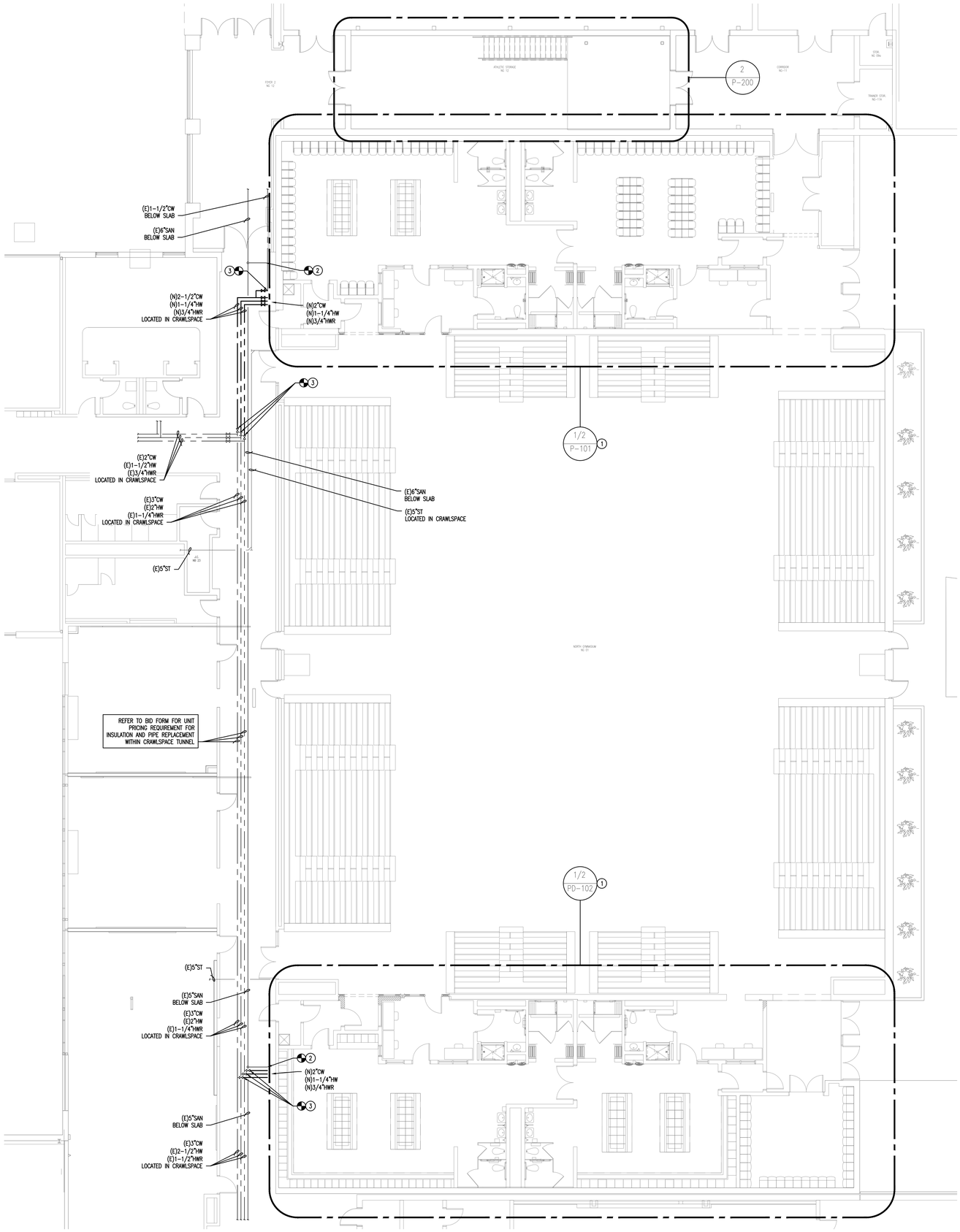
LENAPE HIGH SCHOOL

235 HARTFORD RD
MEDFORD, NEW JERSEY

DRAWING TITLE:

PLUMBING DEMOLITION FLOOR PLAN
GIRLS LOCKER ROOM

DRAWN BY: MSV	SCALE: AS NOTED	DWG SIZE: 42x30	
CHECKED BY: CEC	DRAWING NO. PD-102	REVISION 0	
DATE: 05/20/2022			
PROJECT NO.: 8C22002			



1 P-100 **PLUMBING OVERALL NEW WORK FLOOR PLAN**

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

0' 2' 4' 8' 16'

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

PLUMBING NEW WORK NOTES:

GENERAL NOTES:

1. REFER TO PLUMBING LEAD SHEET, P-001 FOR 'NOTES' THAT PERTAIN TO THE SCOPE OF THIS PROJECT.
2. EXISTING CONCEALED AND EXPOSED EQUIPMENT AND MATERIALS THAT WILL BECOME ABANDONED DUE TO NEW WORK SHALL BE REMOVED BACK TO ACTIVE RISER AND MAIN AND PROPERLY PLUGGED OR CAPPED BEHIND FINISHED SURFACES.
3. WHERE PIPING PENETRATES AN EXISTING WALL OR SURFACE AND IS BEING ABANDONED IN PLACE, THE PIPING SHALL BE CUT BEYOND THE EXTERIOR SURFACE OF THE MATERIAL AND CAPPED. ONCE CAPPED, THE SURFACE SHALL BE PATCHED TO MATCH EXISTING SURFACES.
4. IN THE REMOVAL OF ANY PART OF A DRAINAGE OR WATER SYSTEM, DEAD ENDS SHALL BE AVOIDED EXCEPT WHERE NECESSARY TO EXTEND TO A CLEANOUT SO AS TO BE ACCESSIBLE.
5. CONTRACTOR SHALL VERIFY LOCATION, SIZE, AND ROUTING OF ALL PIPING PRIOR TO DEMOLITION. PLUMBING DRAWINGS ARE DIAGRAMMATIC AND MAY NOT BE AN EXACT REPRESENTATION OF FIELD CONDITIONS.
6. CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING AND VERIFYING SHUTOFF VALVES FOR DOMESTIC AND NATURAL GAS PIPING TO ISOLATE THE AREA OF WORK PRIOR TO DEMOLITION.
7. REMOVED EQUIPMENT AND MATERIALS NOT DESIRED BY OWNER SHALL BECOME PROPERTY OF CONTRACTOR AND SHALL BE PROMPTLY REMOVED FROM SITE. EQUIPMENT AND MATERIALS DESIRED BY OWNER SHALL BE DELIVERED BY CONTRACTOR TO AN ON-SITE LOCATION DESIGNATED BY OWNER.

NEW WORK KEYED NOTES:

GENERAL: NEW WORK NOTES ARE INDICATED WITH THE FOLLOWING SYMBOL (~) AND ARE NUMBERED AS FOLLOWS:

(1) REFER TO ENLARGED PLANS FOR WORK WITHIN LOCKER ROOM. INSTALL ALL SANITARY, VENT, COLD WATER, AND HOT WATER PIPING TO ALL NEW PLUMBING FIXTURES WITHIN LOCKER ROOM. PROVIDE RELATED PIPING, ACCESSORIES, AND APPURTENANCES AS NEEDED FOR A COMPLETE WORKING SYSTEM.

(2) INSTALL NEW SANITARY PIPING WITHIN LOCKER ROOM TO ALL PLUMBING FIXTURES AND FLOOR DRAINS. CONNECT NEW SANITARY PIPE TO EXISTING MAIN WITHIN CRAWLSPACE. CONTRACTOR SHALL DETERMINE BEST METHOD AND ROUTING OF REMOVING AND INSTALLING NEW SANITARY PIPE TO MINIMIZE SAW-CUTTING OF FLOOR. CONTRACTOR MAY REUSE EXISTING VENT THROUGH ROOF PENETRATIONS FOR NEW WORK. ANY ROOF PENETRATIONS NOT USED SHALL BE PATCHED AND SEALED WATERTIGHT.

(3) INSTALL NEW DOMESTIC WATER PIPING WITHIN LOCKER ROOM TO ALL PLUMBING FIXTURES. CONNECT NEW DOMESTIC PIPING TO MAINS WITHIN CRAWLSPACE.

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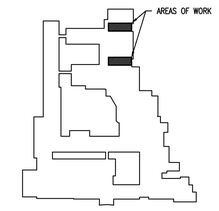
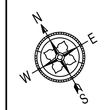
No.	Date	Description
0	01/12/2024	ISSUED FOR BID

REVISIONS:

KEY PLAN:





John A. Marchiafava P. E.
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Professional Engineer
John A. Marchiafava P. E.

PROJECT: REF21-09-8267

LRHSD REFERENDUM
PHASE 1 HVAC PROJECTS

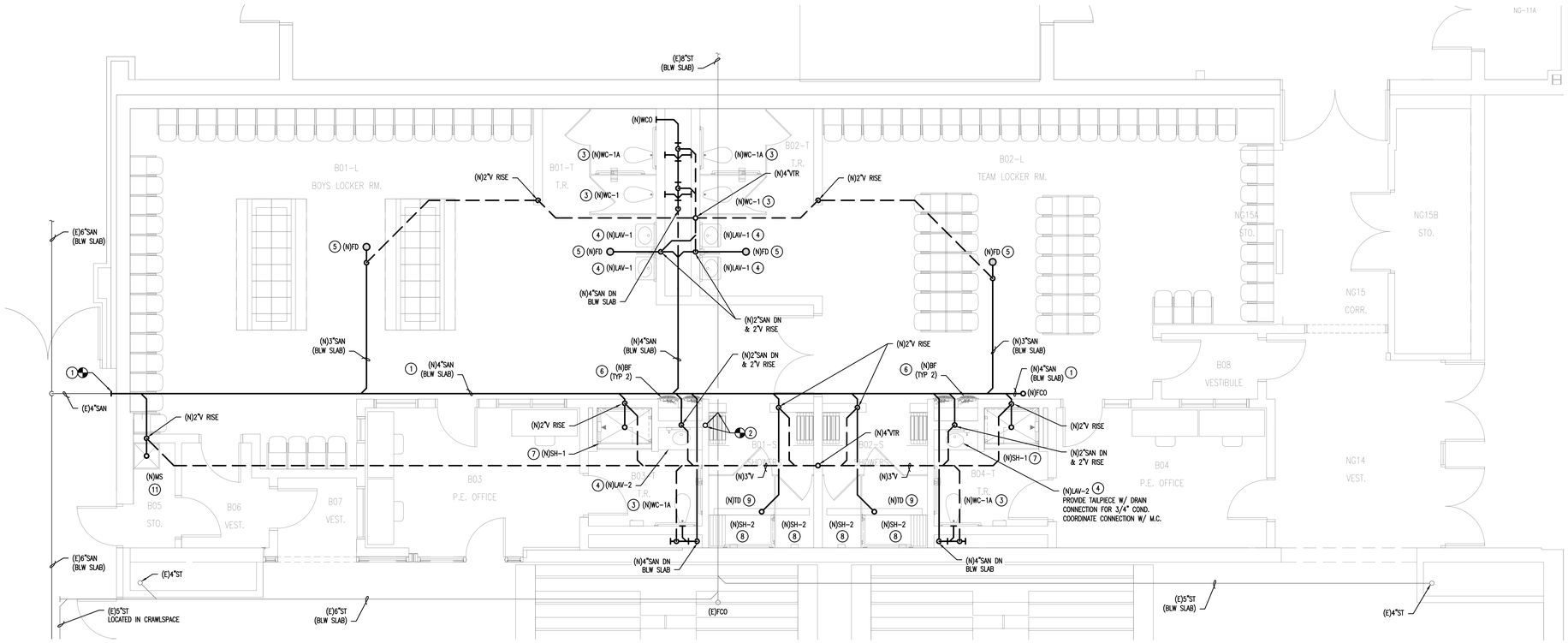
LENAPE HIGH SCHOOL

235 HARTFORD RD
MEDFORD, NEW JERSEY

DRAWING TITLE:

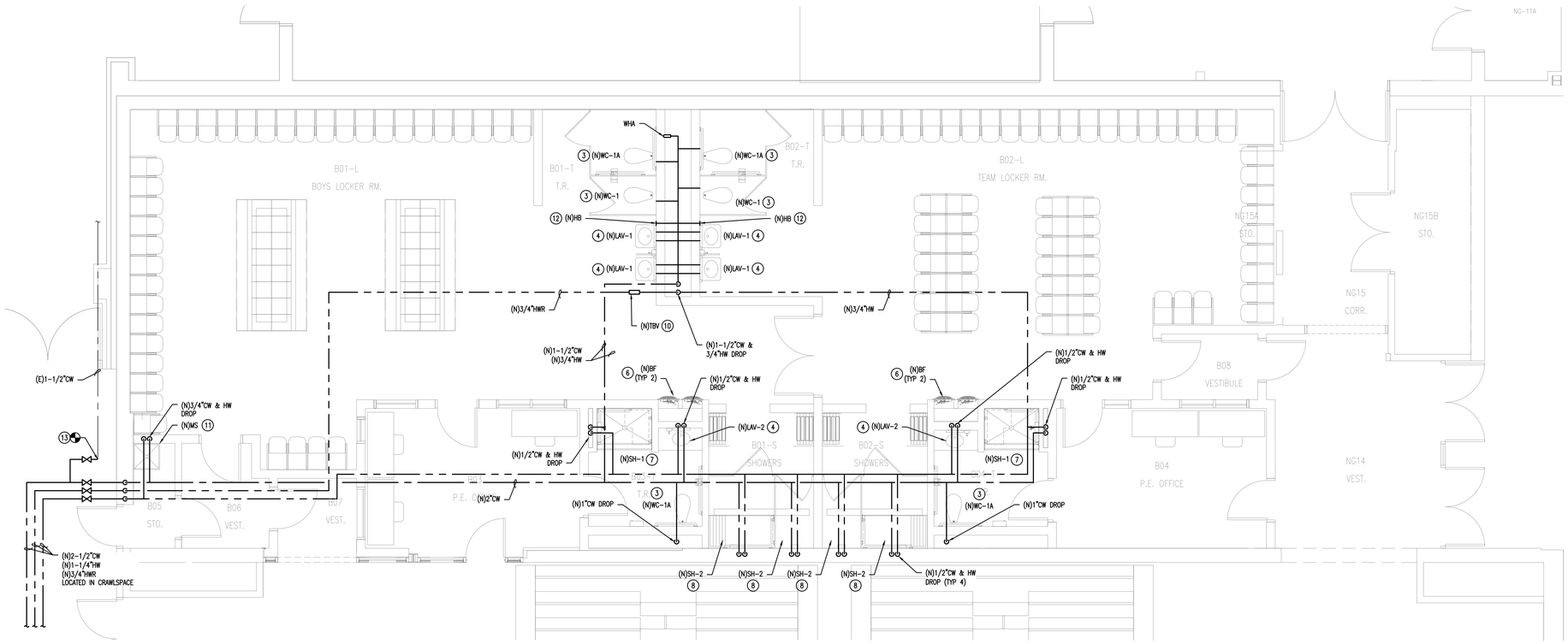
PLUMBING OVERALL
NEW WORK FLOOR PLAN

DRAWN BY: MSV	SCALE: AS NOTED	DWG SIZE: 42x30	
CHECKED BY: CEG	DRAWING NO. P-100	REVISION 0	
DATE: 05/20/2022			
PROJECT NO.: 8C22002			



1 P-101 **PLUMBING NEW WORK DRAINAGE FLOOR PLAN – BOYS LOCKER ROOM**
SCALE: 1/4" = 1'-0"

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



2 P-101 **PLUMBING NEW WORK SERVICE FLOOR PLAN – BOYS LOCKER ROOM**
SCALE: 1/4" = 1'-0"

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

PLUMBING NEW WORK NOTES:

GENERAL NOTES:

1. REFER TO PLUMBING LEAD SHEET, P-001 FOR 'NOTES' THAT PERTAIN TO THE SCOPE OF THIS PROJECT.
2. EXISTING CONCEALED AND EXPOSED EQUIPMENT AND MATERIALS THAT WILL BECOME ABANDONED DUE TO NEW WORK SHALL BE REMOVED BACK TO ACTIVE RISER AND MAIN AND PROPERLY PLUGGED OR CAPPED BEHIND FINISHED SURFACES.
3. WHERE PIPING PENETRATES AN EXISTING WALL OR SURFACE AND IS BEING ABANDONED IN PLACE, THE PIPING SHALL BE CUT BEYOND THE EXTERIOR SURFACE OF THE MATERIAL AND CAPPED. ONCE CAPPED, THE SURFACE SHALL BE PATCHED TO MATCH EXISTING SURFACES.
4. IN THE REMOVAL OF ANY PART OF A DRAINAGE OR WATER SYSTEM, DEAD ENDS SHALL BE AVOIDED EXCEPT WHERE NECESSARY TO EXTEND TO A CLEANOUT SO AS TO BE ACCESSIBLE.
5. CONTRACTOR SHALL VERIFY LOCATION, SIZE, AND ROUTING OF ALL PIPING PRIOR TO DEMOLITION. PLUMBING DRAWINGS ARE DIAGRAMMATIC AND MAY NOT BE AN EXACT REPRESENTATION OF FIELD CONDITIONS.
6. CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING AND VERIFYING SHUTOFF VALVES FOR DOMESTIC AND NATURAL GAS PIPING TO ISOLATE THE AREA OF WORK PRIOR TO DEMOLITION.
7. REMOVED EQUIPMENT AND MATERIALS NOT DESIRED BY OWNER SHALL BECOME PROPERTY OF CONTRACTOR AND SHALL BE PROMPTLY REMOVED FROM SITE. EQUIPMENT AND MATERIALS DESIRED BY OWNER SHALL BE DELIVERED BY CONTRACTOR TO AN ON-SITE LOCATION DESIGNATED BY OWNER.

NEW WORK KEYED NOTES:

GENERAL: NEW WORK NOTES ARE INDICATED WITH THE FOLLOWING SYMBOL (–) AND ARE NUMBERED AS FOLLOWS:

1. INSTALL NEW 4" SANITARY PIPING WITHIN LOCKER ROOM TO ALL NEW PLUMBING FIXTURES AND FLOOR DRAINS. CONNECT NEW 4" SANITARY PIPING TO SANITARY MAIN LOCATED WITHIN CRAWLSPACE.
2. INSTALL NEW 4" STORM PIPING UP TO EXISTING ROOF DRAIN. CONNECT NEW 4" STORM PIPING TO MAIN BELOW SLAB.
3. INSTALL NEW WALL-MOUNTED WATER CLOSET. PROVIDE 4" SAN AND 2" VENT PIPING FROM WATER CLOSET CARRIER. PROVIDE 1" CW PIPING IN CHASE TO FLUSH VALVE.
4. INSTALL NEW LAVATORY. PROVIDE 1-1/4" SAN, 1/2" CW, AND 1/2" HW PIPING TO LAVATORY. PROVIDE 2" SAN DOWN BELOW SLAB AND 2" VENT RISE.
5. INSTALL NEW FLOOR DRAIN. PROVIDE 3" SAN PIPING FROM FLOOR DRAIN.
6. INSTALL NEW BOTTLE FILLTER. PROVIDE 1-1/2" SAN AND 1/2" CW PIPING TO BF. PROVIDE 2" SAN DOWN BELOW SLAB AND 2" VENT RISE.
7. INSTALL NEW SHOWER. PROVIDE 2" SAN FROM SHOWER DRAIN AND 1/2" CW & HW TO SHOWER VALVE.
8. INSTALL NEW SHOWER. PROVIDE 1/2" CW & HW TO SHOWER VALVE.
9. INSTALL NEW TRENCH DRAIN. PROVIDE 3" SAN FROM OUTLET OF TRENCH DRAIN.
10. INSTALL NEW THERMOSTATIC BALANCING VALVE. PROVIDE 1/2" SELF-REGULATING BALANCING VALVE, CIRCUIT SOLVER CSUAS-1/2 OR EQUAL.
11. INSTALL NEW MOP SINK. PROVIDE 3/4" CW & HW PIPING DOWN IN WALL TO MS FAUCET. PROVIDE 3" SANITARY FROM OUTLET OF MS.
12. INSTALL NEW HOSE BIBB BELOW SINK. PROVIDE 3/4" CW FROM CHASE TO HB.
13. CONNECT NEW 1-1/2" CW WITH SHUTOFF VALVE TO EXISTING 1-1/2" CW PIPING IN CRAWLSPACE.

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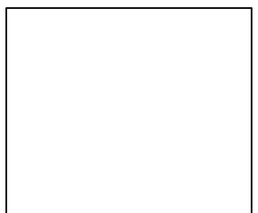
No.	Date	Description
0	01/12/2024	ISSUED FOR BID

REVISIONS:

KEY PLAN:



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New Jersey P. E. No. 24GE04992500

Professional Engineer
John A. Marchiafava P. E.

PROJECT: REF21-09-8267

LRHSD REFERENDUM
PHASE 1 HVAC PROJECTS

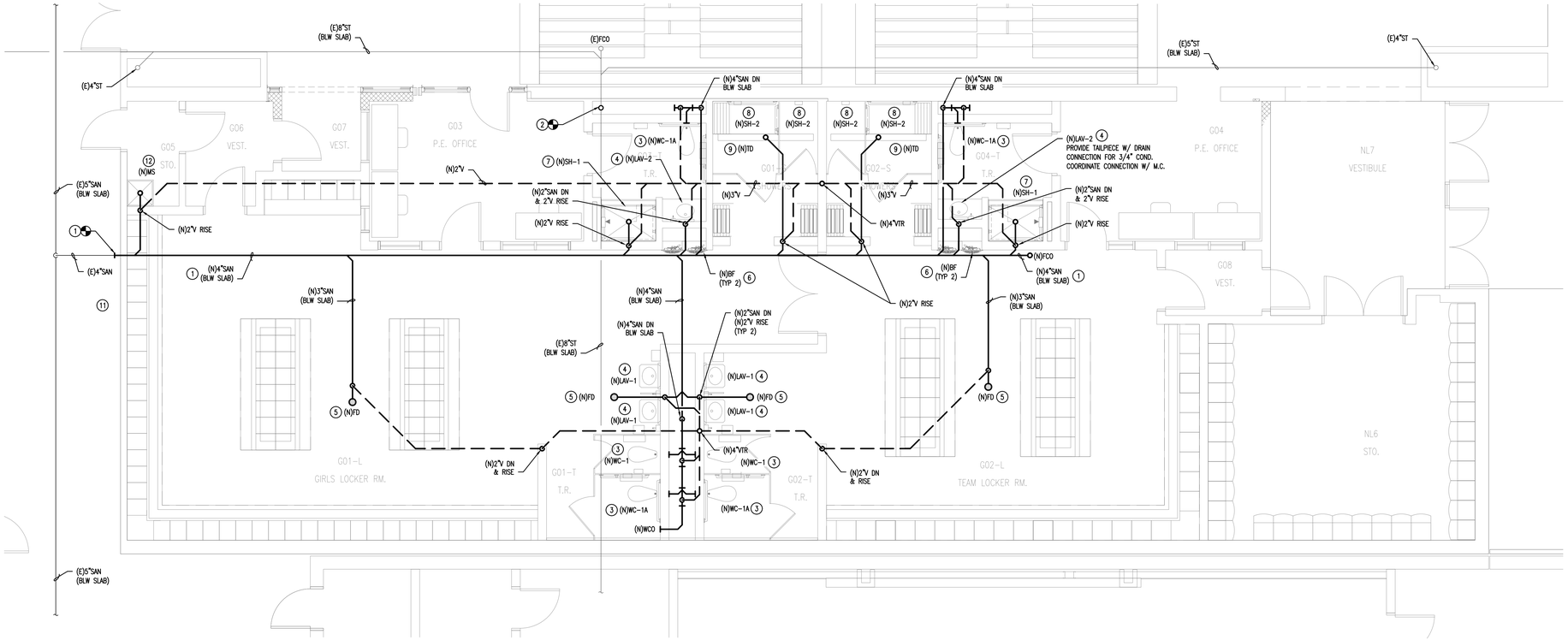
LENAPE HIGH SCHOOL

235 HARTFORD RD
MEDFORD, NEW JERSEY

DRAWING TITLE:

PLUMBING NEW WORK FLOOR PLANS
BOYS LOCKER ROOM

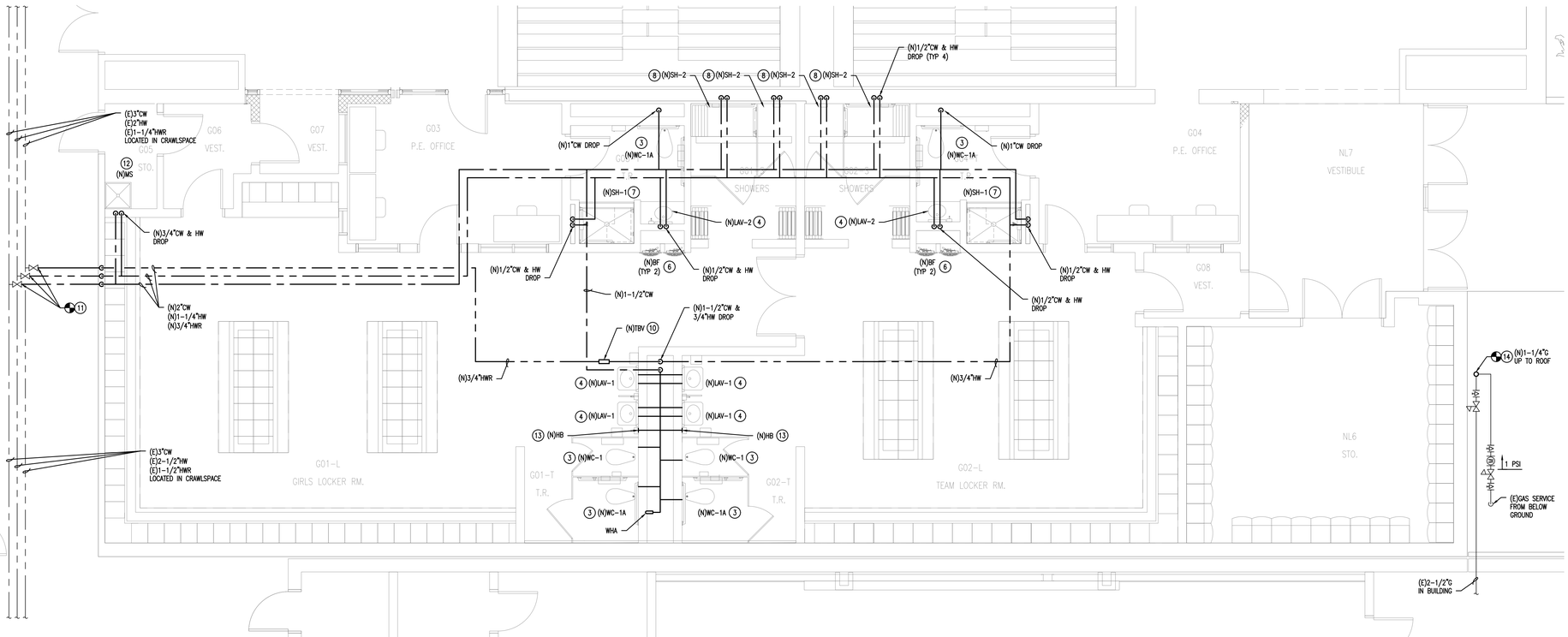
DRAWN BY: MSV	SCALE: AS NOTED	DWG SIZE: 42x30	
CHECKED BY: CEG	DRAWING NO. P-101	REVISION 0	
DATE: 05/20/2022			
PROJECT NO.: 8C22002			



1 P-102 **PLUMBING NEW WORK DRAINAGE FLOOR PLAN – GIRLS LOCKER ROOM**

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

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



2 P-102 **PLUMBING NEW WORK SERVICE FLOOR PLAN – GIRLS LOCKER ROOM**

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

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

PLUMBING NEW WORK NOTES:

GENERAL NOTES:

1. REFER TO PLUMBING LEAD SHEET, P-001 FOR 'NOTES' THAT PERTAIN TO THE SCOPE OF THIS PROJECT.
2. EXISTING CONCEALED AND EXPOSED EQUIPMENT AND MATERIALS THAT WILL BECOME ABANDONED DUE TO NEW WORK SHALL BE REMOVED BACK TO ACTIVE RISER AND MAIN AND PROPERLY PLUGGED OR CAPPED BEHIND FINISHED SURFACES.
3. WHERE PIPING PENETRATES AN EXISTING WALL OR SURFACE AND IS BEING ABANDONED IN PLACE, THE PIPING SHALL BE CUT BEYOND THE EXTERIOR SURFACE OF THE MATERIAL AND CAPPED. ONCE CAPPED, THE SURFACE SHALL BE PATCHED TO MATCH EXISTING SURFACES.
4. IN THE REMOVAL OF ANY PART OF A DRAINAGE OR WATER SYSTEM, DEAD ENDS SHALL BE AVOIDED EXCEPT WHERE NECESSARY TO EXTEND TO A CLEANOUT SO AS TO BE ACCESSIBLE.
5. CONTRACTOR SHALL VERIFY LOCATION, SIZE, AND ROUTING OF ALL PIPING PRIOR TO DEMOLITION. PLUMBING DRAWINGS ARE DIAGRAMMATIC AND MAY NOT BE AN EXACT REPRESENTATION OF FIELD CONDITIONS.
6. CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING AND VERIFYING SHUTOFF VALVES FOR DOMESTIC AND NATURAL GAS PIPING TO ISOLATE THE AREA OF WORK PRIOR TO DEMOLITION.
7. REMOVED EQUIPMENT AND MATERIALS NOT DESIRED BY OWNER SHALL BECOME PROPERTY OF CONTRACTOR AND SHALL BE PROMPTLY REMOVED FROM SITE. EQUIPMENT AND MATERIALS DESIRED BY OWNER SHALL BE DELIVERED BY CONTRACTOR TO AN ON-SITE LOCATION DESIGNATED BY OWNER.

NEW WORK KEYED NOTES:

GENERAL: NEW WORK NOTES ARE INDICATED WITH THE FOLLOWING SYMBOL (–) AND ARE NUMBERED AS FOLLOWS:

(1) INSTALL NEW 4" SANITARY PIPING WITHIN LOCKER ROOM TO ALL NEW PLUMBING FIXTURES AND FLOOR DRAINS. CONNECT NEW 4" SANITARY PIPING TO SANITARY MAIN LOCATED WITHIN CRAWLSPACE.

(2) INSTALL NEW 4" STORM PIPING UP TO EXISTING ROOF DRAIN. CONNECT NEW 4" STORM PIPING TO MAIN BELOW SLAB.

(3) INSTALL NEW WALL-MOUNTED WATER CLOSET. PROVIDE 4" SAN AND 2" VENT PIPING FROM WATER CLOSET CARRIER. PROVIDE 1" CW PIPING IN CHASE TO FLUSH VALVE.

(4) INSTALL NEW LAVATORY. PROVIDE 1-1/4" SAN, 1/2" CW, AND 1/2" HW PIPING TO LAVATORY. PROVIDE 2" SAN DOWN BELOW SLAB AND 2" VENT RISE.

(5) INSTALL NEW FLOOR DRAIN. PROVIDE 3" SAN PIPING FROM FLOOR DRAIN.

(6) INSTALL NEW BOTTLE FILLER. PROVIDE 1-1/2" SAN AND 1/2" CW PIPING TO BF. PROVIDE 2" SAN DOWN BELOW SLAB AND 2" VENT RISE.

(7) INSTALL NEW SHOWER. PROVIDE 2" SAN FROM SHOWER DRAIN AND 1/2" CW & HW TO SHOWER VALVE.

(8) INSTALL NEW SHOWER. PROVIDE 1/2" CW & HW TO SHOWER VALVE.

(9) INSTALL NEW TRENCH DRAIN. PROVIDE 3" SAN FROM OUTLET OF TRENCH DRAIN.

(10) INSTALL NEW THERMOSTATIC BALANCING VALVE. PROVIDE 1/2" SELF-REGULATING BALANCING VALVE, CIRCUIT SOLVER CSUAS-1/2 OR EQUAL.

(11) CONNECT NEW CW, HW, AND HWR PIPING TO EXISTING SHUTOFF VALVES.

(12) INSTALL NEW MOP SINK. PROVIDE 3/4" CW & HW PIPING DOWN IN WALL TO MS FAUCET. PROVIDE 3" SANITARY FROM OUTLET OF MS.

(13) INSTALL NEW HOSE BIBB BELOW SINK. PROVIDE 3/4" CW FROM CHASE TO HB.

(14) INSTALL NEW 1-1/4"GAS TO EXISTING 5" GAS SERVICE. RUN NEW 1-1/4" GAS UP WALL TO ROOF,

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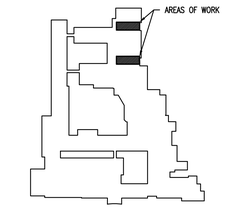
No.	Date	Description
0	01/12/2024	ISSUED FOR BID

REVISIONS:

KEY PLAN:



John A. Marchiafava P. E.
New Jersey P. E. No. 24GE04992500

Professional Engineer
John A. Marchiafava P. E.

PROJECT: REF21-09-8267

LRHSD REFERENDUM
PHASE 1 HVAC PROJECTS

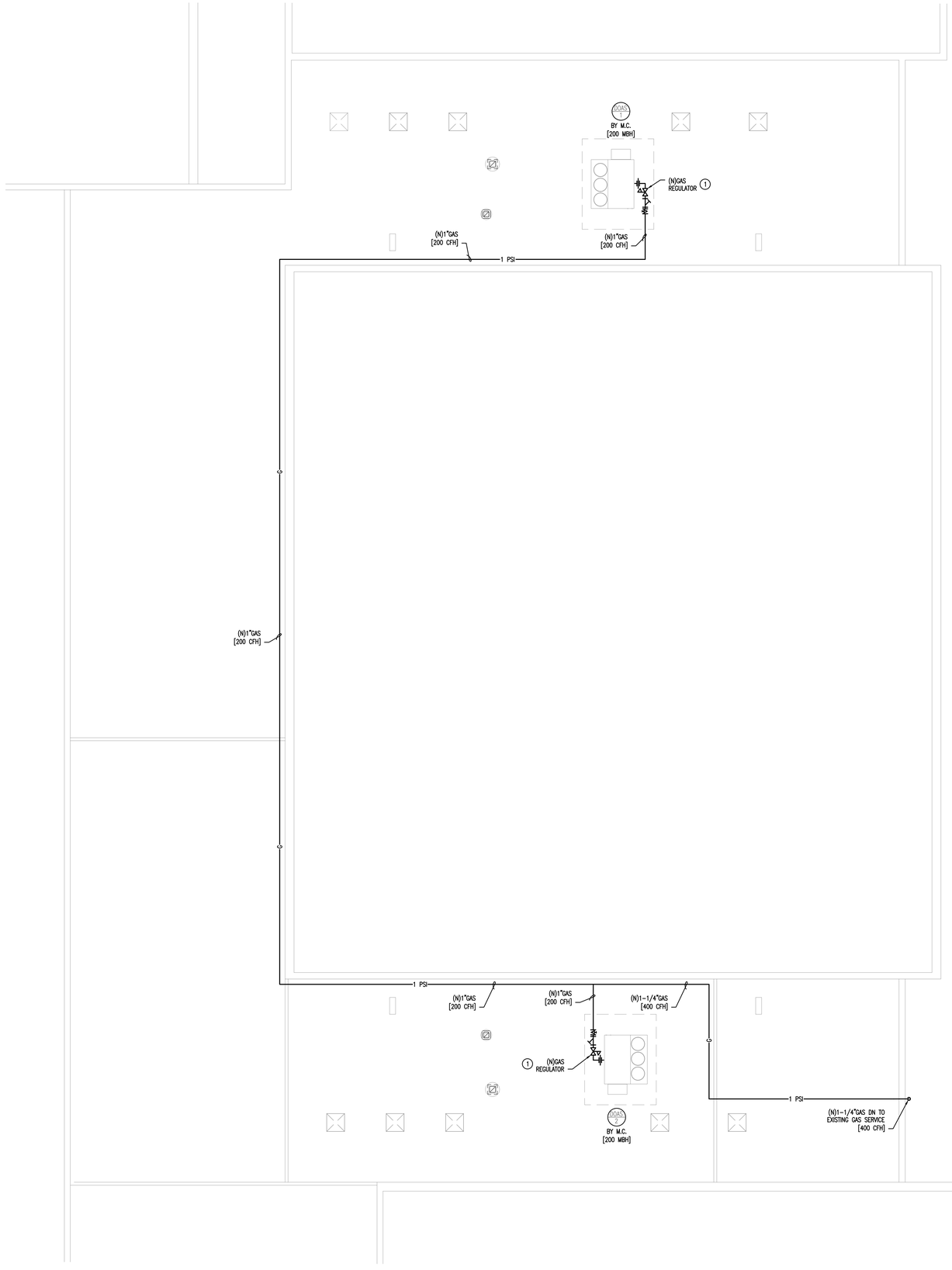
LENAPE HIGH SCHOOL

235 HARTFORD RD
MEDFORD, NEW JERSEY

DRAWING TITLE:

PLUMBING NEW WORK FLOOR PLANS
GIRLS LOCKER ROOM

DRAWN BY: MSV	SCALE: AS NOTED	DWG SIZE: 42x30	
CHECKED BY: CEG	DRAWING NO. P-102	REVISION 0	
DATE: 05/20/2022			
PROJECT NO.: 8C22002			



1 P-200 **PLUMBING NEW WORK ROOF PLAN**
SCALE: 1/8" = 1'-0"
0' 2' 4' 8' 16'
SCALE BAR: 1/8"=1'-0"

PLUMBING NEW WORK NOTES:

GENERAL NOTES:

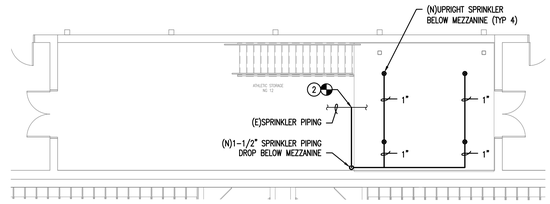
1. REFER TO PLUMBING LEAD SHEET, P-001 FOR 'NOTES' THAT PERTAIN TO THE SCOPE OF THIS PROJECT.
2. EXISTING CONCEALED AND EXPOSED EQUIPMENT AND MATERIALS THAT WILL BECOME ABANDONED DUE TO NEW WORK SHALL BE REMOVED BACK TO ACTIVE RISER AND MAIN AND PROPERLY PLUGGED OR CAPPED BEHIND FINISHED SURFACES.
3. WHERE PIPING PENETRATES AN EXISTING WALL OR SURFACE AND IS BEING ABANDONED IN PLACE, THE PIPING SHALL BE CUT BEYOND THE EXTERIOR SURFACE OF THE MATERIAL AND CAPPED. ONCE CAPPED, THE SURFACE SHALL BE PATCHED TO MATCH EXISTING SURFACES.
4. IN THE REMOVAL OF ANY PART OF A DRAINAGE OR WATER SYSTEM, DEAD ENDS SHALL BE AVOIDED EXCEPT WHERE NECESSARY TO EXTEND TO A CLEANOUT SO AS TO BE ACCESSIBLE.
5. CONTRACTOR SHALL VERIFY LOCATION, SIZE, AND ROUTING OF ALL PIPING PRIOR TO DEMOLITION. PLUMBING DRAWINGS ARE DIAGRAMMATIC AND MAY NOT BE AN EXACT REPRESENTATION OF FIELD CONDITIONS.
6. CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING AND VERIFYING SHUTOFF VALVES FOR DOMESTIC AND NATURAL GAS PIPING TO ISOLATE THE AREA OF WORK PRIOR TO DEMOLITION.
7. REMOVED EQUIPMENT AND MATERIALS NOT DESIRED BY OWNER SHALL BECOME PROPERTY OF CONTRACTOR AND SHALL BE PROMPTLY REMOVED FROM SITE. EQUIPMENT AND MATERIALS DESIRED BY OWNER SHALL BE DELIVERED BY CONTRACTOR TO AN ON-SITE LOCATION DESIGNATED BY OWNER.

NEW WORK KEYED NOTES:

GENERAL: NEW WORK NOTES ARE INDICATED WITH THE FOLLOWING SYMBOL (-) AND ARE NUMBERED AS FOLLOWS:

(1) PROVIDE NEW GAS REGULATOR W/ OPD SET TO 10" W.C. - MAXITROL 325-5L600. INSTALL SHUTOFF VALVE, STRAINER, DRIP LEG, AND UNION PRIOR TO CONNECTION TO MECHANICAL UNIT.

(2) CONNECT NEW 1-1/2" SPRINKLER PIPING TO EXISTING SPRINKLER PIPING WITHIN STORAGE ROOM. DROP NEW 1-1/2" SPRINKLER PIPE DOWN WALL BELOW MEZZANINE TO NEW UPRIGHT SPRINKLERS.



2 P-200 **STORAGE MEZZANINE SPRINKLER PLAN**
SCALE: 1/8" = 1'-0"
0' 2' 4' 8' 16'
SCALE BAR: 1/8"=1'-0"

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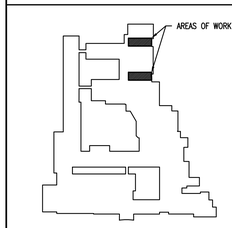
No.	Date	Description
0	01/12/2024	ISSUED FOR BID

REVISIONS:

KEY PLAN:



John A. Marchiafava P. E.
New Jersey P. E. No. 24GE04692500
Professional Engineer
John A. Marchiafava P. E.

PROJECT: REF21-09-8267

LRHSD REFERENDUM
PHASE 1 HVAC PROJECTS

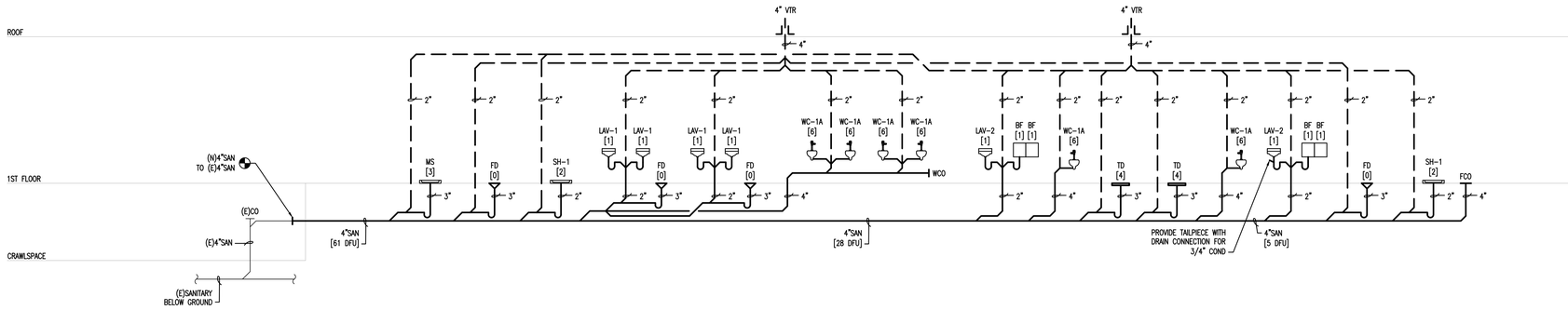
LENAPE HIGH SCHOOL

235 HARTFORD RD
MEDFORD, NEW JERSEY

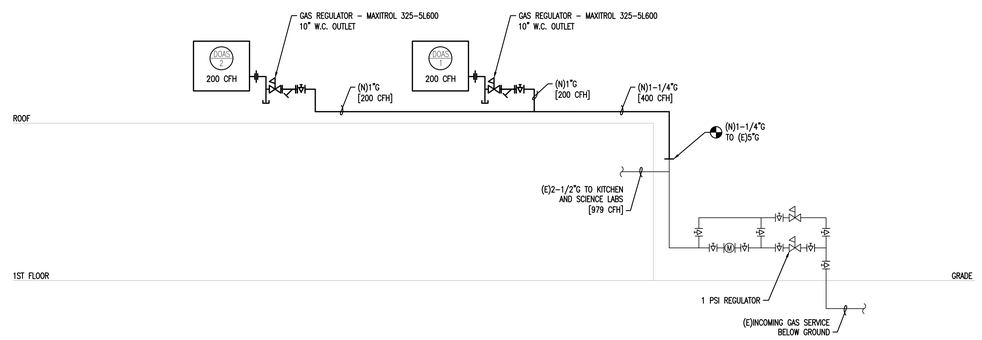
DRAWING TITLE:

PLUMBING NEW WORK ROOF PLAN

DRAWN BY: MSV	SCALE: AS NOTED	DWG SIZE: 42x30	
CHECKED BY: CEG	DRAWING NO. P-200	REVISION 0	
DATE: 05/20/2022			
PROJECT NO.: 8C22002			



1 P-301 **SANITARY RISER DIAGRAM – BOYS/GIRLS LOCKER ROOM**
SCALE: N.T.S.



2 P-301 **NATURAL GAS RISER DIAGRAM – BOYS/GIRLS LOCKER ROOM**
SCALE: N.T.S.

1. ALL REGULATORS HAVING 1 PSI INLET PRESSURE SHALL BE EQUIPPED WITH AN OVERPRESSURE PROTECTION DEVICE.

2. GAS SYSTEM SIZING IS BASED ON IFGC TABLE 402.4(4)
   INLET PRESSURE – LESS THAN 2 PSI
   PRESSURE DROP – 6.0 IN. W.C.
   SPECIFIC GRAVITY – 0.60
   LENGTH – 500 LF

MEP ENGINEER:

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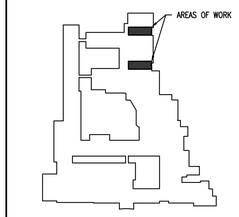
No.	Date	Description
0	01/12/2024	ISSUED FOR BID

REVISIONS:

KEY PLAN:



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Professional Engineer
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PROJECT: REF21-09-8267

LRHSD REFERENDUM
PHASE 1 HVAC PROJECTS

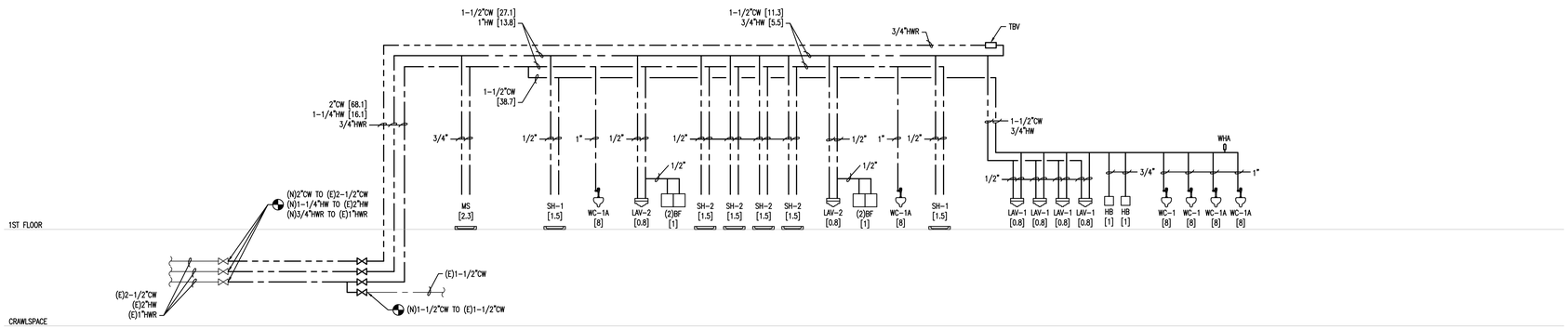
LENAPE HIGH SCHOOL

235 HARTFORD RD
MEDFORD, NEW JERSEY

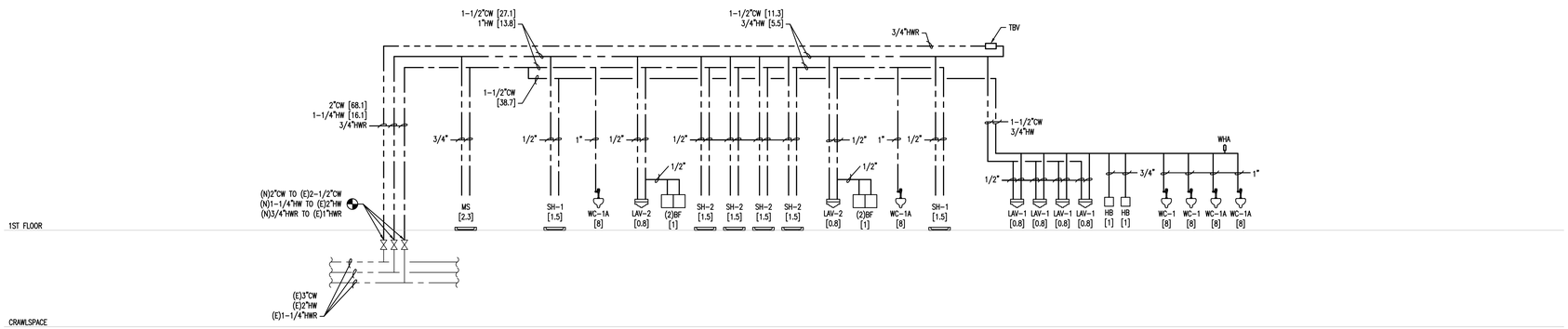
DRAWING TITLE:

PLUMBING SANITARY AND
NATURAL GAS RISER DIAGRAMS

DRAWN BY: MSV	SCALE: AS NOTED	DWG SIZE: 42x30	
CHECKED BY: CEG	DRAWING NO. P-301	REVISION 0	
DATE: 05/20/2022			
PROJECT NO.: 8C22002			



1 P-302 **DOMESTIC WATER RISER DIAGRAM – BOYS LOCKER ROOM**
SCALE: N.T.S.



2 P-302 **DOMESTIC WATER RISER DIAGRAM – GIRLS LOCKER ROOM**
SCALE: N.T.S.

MEP ENGINEER:

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No.	Date	Description
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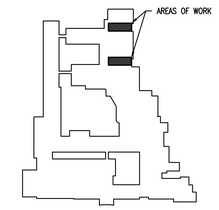
REVISIONS:

KEY PLAN:



John A. Marchiafava P. E.
New Jersey P. E. No. 24GE04992500
Professional Engineer
John A. Marchiafava P. E.

PROJECT: REF21-09-8267

LRHSD REFERENDUM
PHASE 1 HVAC PROJECTS

LENAPE HIGH SCHOOL

235 HARTFORD RD
MEDFORD, NEW JERSEY

DRAWING TITLE:

PLUMBING DOMESTIC WATER
RISER DIAGRAMS

DRAWN BY: MSV	SCALE: AS NOTED	DWG SIZE: 42x30	
CHECKED BY: CEG	DRAWING NO. P-302	REVISION 0	
DATE: 05/20/2022			
PROJECT NO.: 8C22002			

STRUCTURAL NOTES

GENERAL NOTES:

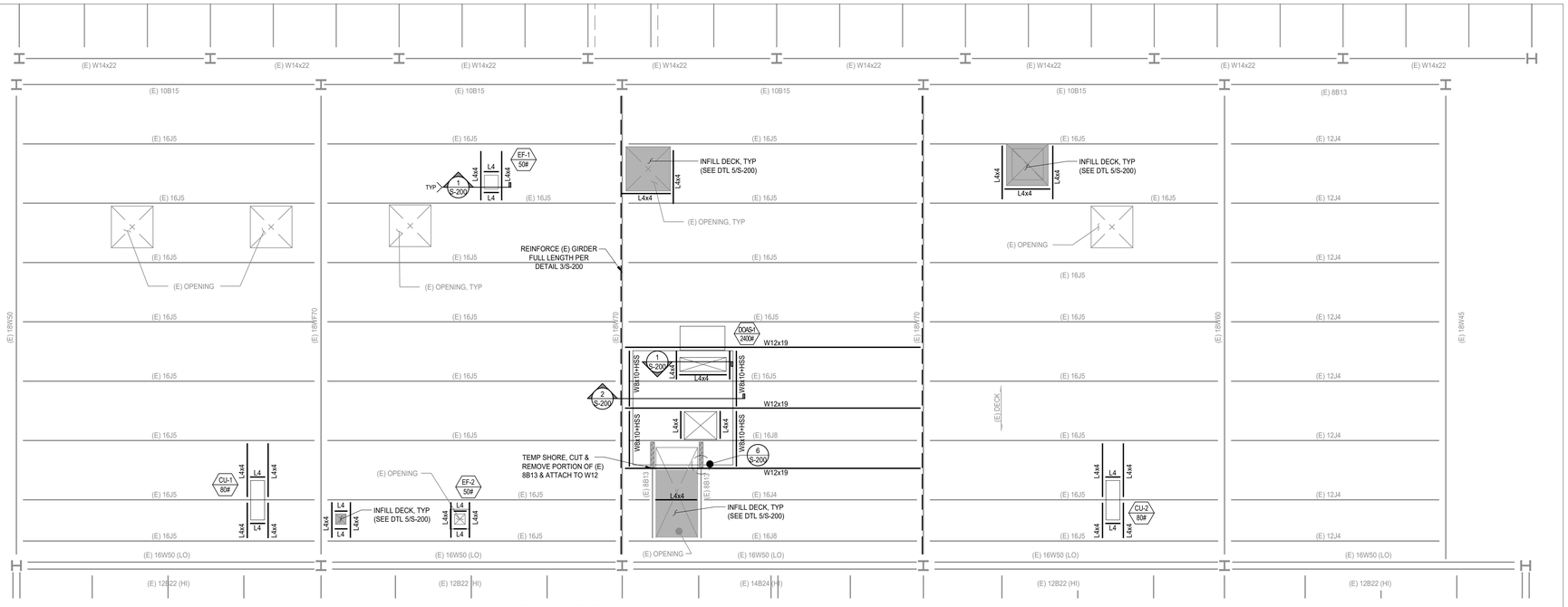
1. THIS PROJECT HAS BEEN DESIGNED USING THE 2021 INTERNATIONAL BUILDING CODE, NEW JERSEY EDITION.
2. STRUCTURAL SPECIAL INSPECTIONS ARE A REQUIREMENT FOR THIS PROJECT. A QUALIFIED INDEPENDENT INSPECTION AGENCY SHALL BE SELECTED TO PERFORM THIS SERVICE. ALL INSPECTIONS AS REQUIRED BY CHAPTER 17 OF THE INTERNATIONAL BUILDING CODE (SEE THE FOLLOWING TABULAR REFERENCES) ARE REQUIRED AT A MINIMUM. FOR STEEL CONSTRUCTION REFER TO TABLE 1704.3, FOR CONCRETE CONSTRUCTION SEE TABLE 1704.4, FOR MASONRY CONSTRUCTION SEE TABLE 1704.5.3, FOR SOILS SEE TABLE 1704.7. SEE THE NOTES ON THIS DRAWING FOR ANY ADDITIONAL INSPECTIONS REQUIRED.
3. ALL CONTRACTORS AND SUBCONTRACTORS ARE RESPONSIBLE FOR ADHERING TO THE REQUIREMENTS AS INDICATED IN THE NOTES FOR THIS JOB. FAILURE OF THE CONTRACTOR TO READ THE STRUCTURAL NOTES DOES NOT PERMIT THE CONTRACTOR TO DEVIATE FROM THEIR REQUIREMENTS.
4. NO FIELD MODIFICATIONS TO ANY STRUCTURAL COMPONENTS SHALL BE MADE WITHOUT PRIOR APPROVAL BY THE STRUCTURAL ENGINEER. THIS INCLUDES, BUT IS NOT LIMITED TO REVISIONS DUE TO MIS-LOCATION, MISFIT, OR ANY OTHER CONSTRUCTION ERRORS.
5. ALL CONSTRUCTION AND DEMOLITION SHALL COMPLY WITH ALL APPLICABLE NATIONAL, STATE, AND LOCAL CODES INCLUDING ALL OSHA REGULATIONS.
6. CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO PROTECT ALL PEOPLE WHO MAY BE ON OR NEAR THE WORK AREA, BY MAINTAINING A SAFE WORK AREA, SAFE WORKING CONDITIONS, AND LIMITING ACCESS TO THE WORK AREA.
7. CONTRACTOR IS FULLY RESPONSIBLE FOR HIS WORKERS' SAFETY, SAFETY EQUIPMENT, FIRST AID, AND EMERGENCY HANDLING PROCEDURES.
8. CONTRACTOR SHALL PERSONALLY SUPERVISE THE WORK AND SHALL BE PRESENT AT THE WORK SITE AT ALL TIMES DURING CONSTRUCTION WORK. CONTRACTOR SHALL PROVIDE ADEQUATE PERSONNEL FOR THE PROPER COORDINATION AND EXPEDITING OF THE WORK.
9. THESE DRAWINGS SHALL NOT BE SCALED FOR PURPOSES OF CONSTRUCTION.
10. TYPICAL DETAILS ARE NOT NECESSARILY REFERENCED ON EVERY DRAWING SHEET AND SHALL BE USED BY THE CONTRACTOR AS REQUIRED FOR ALL CONDITIONS WHERE APPLICABLE.
11. IN CASE OF CONFLICT BETWEEN STRUCTURAL DRAWINGS AND OTHER DRAWINGS OF THIS PROJECT, CONTRACTOR SHALL IMMEDIATELY CONTACT THE MECHANICAL ENGINEER FOR CLARIFICATION PRIOR TO START OF WORK.
12. ALL COLUMN LINE AND WALL DIMENSIONS SHOWN ON STRUCTURAL DRAWINGS ARE FOR REFERENCE AND SHALL FIRST BE VERIFIED WITH THE ARCHITECTURAL DRAWINGS PRIOR TO THE START OF THE PROJECT.
13. THE CONTRACTOR IS RESPONSIBLE FOR SURVEYING AND VERIFICATION OF EXISTING CONDITIONS INCLUDING BUT NOT LIMITED TO THE LOCATION, ELEVATIONS AND DIMENSIONS OF EXISTING WALLS AND FRAMING.
14. THE CONTRACTOR IS RESPONSIBLE FOR THE DESIGN, INSTALLATION, AND TEMPORARY SHORING OF THE EXCAVATIONS AND BUILDING STRUCTURE AS REQUIRED DURING CONSTRUCTION. THE CONTRACTOR IS RESPONSIBLE FOR THE MEANS AND METHODS OF CONSTRUCTION. DESIGN OF SHEETING, SHORING, SCAFFOLDING, FORM WORK, AND OTHER MEANS AND METHODS STRUCTURES SHALL BE DESIGNED BY ENGINEERS HIRED BY THE CONTRACTOR.
15. SECTIONS SHOWN ON PLANS APPLY TO SIMILAR CONDITIONS THROUGHOUT THE BUILDING.
16. THE CONTRACTOR IS RESPONSIBLE FOR COORDINATING WITH ALL DRAWINGS FOR THE PROJECT FOR THE FOLLOWING INFORMATION.
    - A. LOCATION OF ALL REQUIRED OPENINGS IN WALLS, FLOORS, ROOF, ETC. ALL OPENINGS MAY NOT BE INDICATED ON STRUCTURAL DRAWINGS.
    - B. SIZE AND LOCATION OF ALL SLEEVES, INSERTS, AND DEPRESSIONS.
    - C. LOCATION AND SIZE OF ALL EQUIPMENT HOUSE KEEPING PADS.

STEEL:

1. ALL STRUCTURAL STEEL SHALL BE DETAILED, FABRICATED AND ERECTED IN ACCORDANCE WITH AISC 360-16 (SPECIFICATION FOR STRUCTURAL STEEL BUILDINGS), AND WITH AISC 303-16 (CODE OF STANDARD PRACTICE FOR STEEL BUILDINGS AND BRIDGES). QUALITY CONTROL AND QUALITY ASSURANCE DURING STEEL FABRICATION AND ERECTION SHALL BE IN ACCORDANCE WITH CHAPTER N OF AISC 360.
2. STRUCTURAL STEEL WIDE FLANGE SHAPES SHALL CONFORM TO ASTM SPECIFICATION A992 (Fy = 50 KSI MIN.). ALL HSS RECTANGULAR SHAPES SHALL CONFORM TO ASTM SPECIFICATION A500 GRADE C (Fy = 50 KSI). ALL HSS ROUND SHAPES SHALL CONFORM TO ASTM SPECIFICATION A500 GRADE C (Fy = 46 KSI). ALL STEEL PIPE (STANDARD, EXTRA STRONG, DOUBLE EXTRA STRONG) SHALL CONFORM TO ASTM A53 GRADE B (Fy = 35 KSI). ALL CHANNELS, ANGLES AND PLATE MATERIAL SHALL CONFORM TO ASTM A36.
3. ALL BOLTS SHALL BE 3/4" DIAMETER ASTM F3125 GRADE A325 HIGH STRENGTH BOLTS, UNLESS OTHERWISE NOTED.
4. ALL ANCHOR RODS SHALL BE FABRICATED IN ACCORDANCE WITH ASTM F1554. ALL ANCHOR RODS SHALL BE 36 KSI UNLESS OTHERWISE NOTED.
5. ALL STEEL SHALL BE THOROUGHLY CLEANED BY POWER TOOL CLEANING (SSPC SP3) PRIOR TO APPLYING PRIMER OR GALVANIZING.
6. ALL STEEL SHALL HAVE A SHOP COAT OF RUST INHIBITIVE PRIMER UNLESS OTHERWISE NOTED. ALL PRIMER THAT IS DAMAGED IN THE FIELD AND ALL FIELD WELDS SHALL BE TOUCHED UP WITH FIELD APPLIED PRIMER
7. ALL CONNECTIONS SHALL BE BOLTED OR WELDED. FULL DEPTH CONNECTIONS ARE TO BE USED ON ALL GIRDER AND BEAM CONNECTIONS TO COLUMNS. BOLTS TO BE AT 3 INCH O/C VERTICAL PROVIDE A MINIMUM 3/8" THICK FULL DEPTH TAB PLATE FOR ALL TUBE COLUMN CONNECTIONS.
8. ALL BOLTED CONNECTIONS SHALL BE BEARING TYPE WITH THREADS INCLUDED IN THE SHEAR PLANE UNLESS NOTED OTHERWISE. ALL BOLTED CONNECTIONS SHALL BE BOLTED "SNUG-TIGHT" UNLESS NOTED OTHERWISE.
9. ALL SHOP AND FIELD WELDING SHALL BE PERFORMED BY WELDERS QUALIFIED, AS DESCRIBED IN "AMERICAN WELDING SOCIETY'S STANDARD QUALIFICATION PROCEDURE" (AWS D1.1), TO PERFORM THE TYPE OF WORK REQUIRED.
10. ALL STEEL WELDING RODS SHALL BE E70XX.
11. THE MINIMUM SIZE OF ALL FILLET WELDS SHOWN ON DRAWINGS SHALL BE IN ACCORDANCE WITH AISC STEEL CONSTRUCTION MANUAL TABLE J2.4 UNLESS NOTED OTHERWISE.
12. STEEL FABRICATOR IS SOLELY RESPONSIBLE FOR SURVEYING AND VERIFICATION OF EXISTING CONDITIONS INCLUDING BUT NOT LIMITED TO THE LOCATION, ELEVATION, AND DIMENSIONS OF EXISTING WALLS AND FRAMING.
13. THE STEEL CONTRACTOR SHALL PROVIDE TEMPORARY BRACING TO RESIST WIND LOADS, CONSTRUCTION LOADS, ETC. DURING CONSTRUCTION. BRACING SHALL REMAIN IN PLACE UNTIL THE STRUCTURE IS CAPABLE OF SUSTAINING ALL DESIGN LOADS
14. SUBMIT CHECKED STEEL SHOP DRAWINGS FOR REVIEW PRIOR TO ANY FABRICATION.
15. PERFORM INSPECTIONS OF STEEL CONSTRUCTION IN ACCORDANCE WITH THE REQUIREMENTS OF THE APPLICABLE BUILDING CODE.

CONCRETE:

1. THE PROVISIONS OF ACI 318-19 HAVE BEEN UTILIZED FOR THE DESIGN OF CONCRETE ELEMENTS ON THIS PROJECT.
2. FLOOR FINISH TOLERANCES FOR THE SLAB ON GRADE CONSTRUCTION SHALL BE IN ACCORDANCE WITH ACI 117. FLOOR FINISH TOLERANCE SHALL BE MEASURED USING A 10 FOOT STRAIGHTEDGE ANYWHERE ON THE SLAB AND ALLOWING IT TO REST UPON TWO HIGH SPOTS WITHIN 72 HOURS AFTER SLAB PLACEMENT. THE GAP AT ANY POINT BETWEEN THE STRAIGHT EDGE AND THE FLOOR SHALL NOT EXCEED 1/4".
3. ALL CONCRETE SHALL BE NORMAL WEIGHT, READY-MIX. ALL CONCRETE MIX DESIGNS SHALL BE DESIGNED BY ENGINEERS RETAINED BY THE CONCRETE SUPPLIER ACCORDING TO THE CRITERIA CONTAINED WITHIN THESE NOTES AND AS SHOWN ON THE CONTRACT DRAWINGS. SUBMIT ALL CONCRETE MIX DESIGNS TO THE ENGINEER FOR REVIEW AND APPROVAL PRIOR TO CONSTRUCTION. ALL SUBMITTED MIX DESIGNS SHALL INCLUDE SAMPLE CYLINDER BREAK TEST RESULTS CONFIRMING COMPRESSIVE STRENGTH OF EACH MIX DESIGN.
4. ALL CONCRETE SHALL HAVE A WATER REDUCING ADMIXTURE AS REQUIRED TO INCREASE WORKABILITY. WORKABILITY SHALL NOT BE ACHIEVED THROUGH THE ADDITION OF WATER TO THE MIX. CONCRETE SLUMP PRIOR TO ADMIXTURE ADDITION SHALL BE A MAXIMUM OF 3 INCHES. PROPORTIONS OF CONCRETE ADMIXTURES SHALL BE DETERMINED BY THE CONCRETE MIX DESIGNER.
5. DO NOT USE ADMIXTURES THAT CONTAIN CHLORIDES. FLY ASH OR OTHER POZZOLANS SHALL NOT BE USED IN ANY CONCRETE UNLESS APPROVED BY THE ENGINEER.
6. ALL CONCRETE WORK SHALL COMPLY WITH THE REQUIREMENTS OF THE LATEST EDITIONS OF THE FOLLOWING ACI PUBLICATIONS: ACI 301 (SPECIFICATIONS FOR STRUCTURAL CONCRETE FOR BUILDINGS), ACI 302.1R (GUIDE TO CONCRETE FLOOR AND SLAB CONSTRUCTION), ACI 304 (GUIDE FOR MEASURING, MIXING, TRANSPORTING AND PLACING CONCRETE), ACI 311.4 (GUIDE FOR CONCRETE INSPECTION), ACI 315 (DETAILS AND DETAILING OF CONCRETE REINFORCEMENT), ACI 318 (BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE), ACI 347R (GUIDE TO FORMWORK FOR CONCRETE), AND ACI 546R (GUIDE TO CONCRETE REPAIR). IN ADDITION, REFER TO THE CRSI - MANUAL OF STANDARD PRACTICE FOR DETAILS ON THE FABRICATION AND PLACEMENT OF CONCRETE REINFORCING.
7. ALL REINFORCING STEEL SHALL BE MANUFACTURED FROM HIGH STRENGTH BILLET STEEL CONFORMING TO ASTM DESIGNATION A615 GRADE 60. WWF SHALL BE COMPRISED OF CARBON STEEL PLAIN WIRES FABRICATED INTO SHEETS OR ROLLS IN ACCORDANCE WITH ASTM A1064
8. CONTRACTOR SHALL PROVIDE ALL BOLSTERS, CHAIRS, BAR POSITIONERS, ETC. AS REQUIRED TO SET REBAR AND SLAB WWF TO REQUIRED DIMENSIONS INDICATED ON DRAWINGS.
9. REFER TO ARCHITECTURAL DRAWINGS FOR ALL WATERPROOFING DETAILS.
10. ALL CONCRETE PLACED AT TEMPERATURES BELOW 50 DEGREES F. SHALL CONFORM TO THE REQUIREMENTS OF ACI 306R "GUIDE TO COLD WEATHER CONCRETING". ALL CONCRETE PLACED IN HOT WEATHER SHALL CONFORM TO THE REQUIREMENTS OF ACI 305R " GUIDE TO HOT WEATHER CONCRETING".
11. THE CONTRACTOR SHALL COORDINATE THE LOCATION OF ALL SLEEVES, INSERTS, ANCHOR BOLTS, AND OTHER EMBEDDED ITEMS AS REQUIRED BY OTHER TRADES.
12. ALL CONCRETE SHALL BE PROPERLY CONSOLIDATED THROUGH THE USE OF VIBRATORS. VIBRATORS SHALL NOT BE USED TO TRANSPORT CONCRETE ALONG FORMWORK.
13. CONTRACTOR SHALL FOLLOW THE GUIDELINES IN ACI 303 - GUIDE TO CAST-IN-PLACE ARCHITECTURAL CONCRETE PRACTICE TO ACHIEVE SPECIFIED SURFACE FINISHES OF EXPOSED CONCRETE. COORDINATE WITH ARCHITECTURAL DRAWINGS FOR ADDITIONAL REQUIREMENTS ON FINISH.
14. UNLESS OTHERWISE SPECIFIED, A TESTING AGENCY SHALL BE EMPLOYED FOR EVALUATION AND QUALITY CONTROL OF CONCRETE PLACED. THE TESTING AGENCY PERFORMING ACCEPTANCE TESTING SHALL COMPLY WITH ASTM C1077. CONCRETE SHALL BE TESTED IN ACCORDANCE WITH THE REQUIREMENTS OF ACI 318. FREQUENCY OF CONCRETE TESTING SHALL MEET THE REQUIREMENTS OF ACI 318 AT A MINIMUM UNLESS REQUIRED OTHERWISE BY THE APPLICABLE BUILDING CODE.

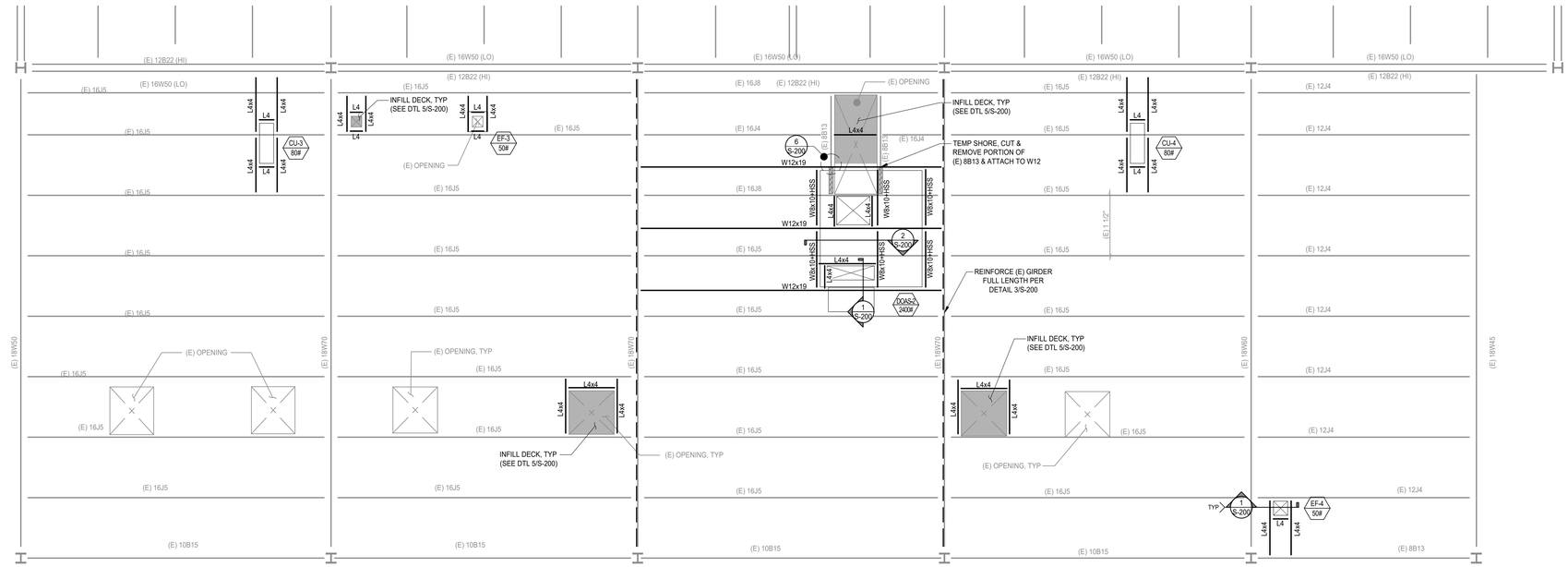


PARTIAL ROOF FRAMING PLAN

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

DESIGN LIVE LOAD = 20 PSF

1. TOP OF STEEL ELEVATIONS SHALL BE VERIFIED IN FIELD.
2. _(E) DECK_ DENOTES SPAN OF EXISTING 4" CONC SLAB ON FORM DECK.
3. ALL EXISTING STEEL BEAMS AND JOISTS SHOULD BE FIELD VERIFIED.
4. SECTIONS SHOWN ON PLAN APPLY TO SIMILAR SECTIONS THROUGHOUT THE BUILDING.
5. (VIF) DENOTES CONDITION TO BE VERIFIED IN FIELD.
6. (E) DENOTES EXISTING MEMBER.
7. SEE STRUCTURAL NOTES ON THIS DRAWING FOR FURTHER INFORMATION.
8. "L4x4" DENOTES L4x4x1/4 ANGLE TO SUPPORT NEW MECHANICAL ROOF UNIT OR OPENING. SEE SECTION 1 ON SHEET S-200 FOR CONNECTION DETAILS.
9. – – – DENOTES JOIST OR BEAM REINFORCEMENT REQ'D. SEE SECTION 3 OR 4 ON S-200 FOR DETAILS.
10. DENOTES INFILL OF EXISTING OPENING TO MATCH EXISTING. SEE SECTION 5 ON SHEET S-200 FOR DETAILS.
11. SEE MECHANICAL DRAWINGS FOR ALL ROOF TOP EQUIPMENT AND CURB ATTACHMENTS TO ROOF STRUCTURE.



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STRUCTURAL ENGINEER:

MICHAEL A. BEACH & ASSOCIATES, LLC
CONSULTING STRUCTURAL ENGINEERING
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NJ Certificate of Authorization No. 24GA27962200
Project No: 820.54

MEP ENGINEER:

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(856) 427-0200
www.concord-engineering.com

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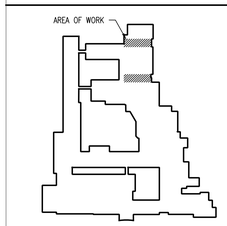
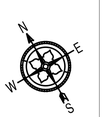
REVISIONS:

KEY PLAN:





MICHAEL A. BEACH
PROFESSIONAL ENGINEER
NJ LIC. NO. 24GE03101500

PROJECT: REF21-09-8195

LRHSD REFERENDUM
PHASE 1 HVAC PROJECTS

LENAPE HIGH SCHOOL

235 HARTFORD RD
MEDFORD, NEW JERSEY

DRAWING TITLE:

PARTIAL ROOF FRAMING PLAN

DRAWN BY:	MJS	SCALE: AS NOTED	DWG SIZE: 42x30
CHECKED BY:	MAB	DRAWING NO. S-100	REVISION 0
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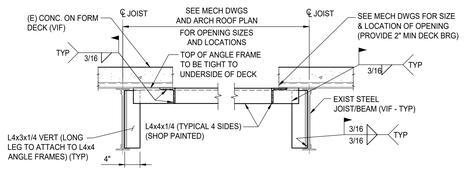
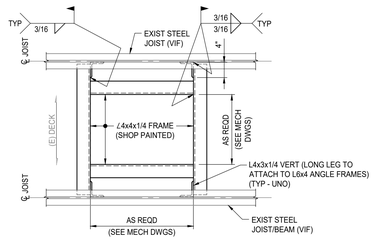


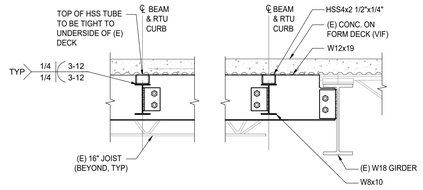
SECTION



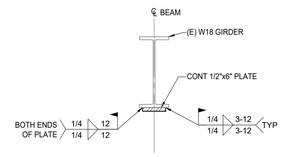
PLAN

1 S-200 TYPICAL L4x4 ROOF SUPPORT DETAIL @ JOIST
NOT TO SCALE

1. PROVIDE AT PERIMETER OF ALL ROOFTOP MECHANICAL UNITS AND ROOF OPENINGS LARGER THAN 1'-0" SQUARE.
2. REFER TO ALL CONTRACT DRAWINGS OF THIS PROJECT FOR LOCATIONS WHERE THIS DETAIL IS REQUIRED.
3. ATTACHMENT OF MECH UNIT TO CURB AND CURB TO STRUCTURAL STEEL IS DESIGNED BY OTHERS.
4. CLEAN AND PREP ALL EXISTING SURFACES PRIOR TO FIELD WELDING.

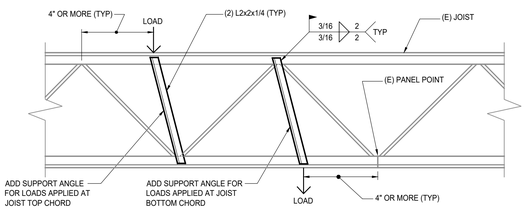


2 S-200 SECTION AT ROOF FRAMING
NOT TO SCALE



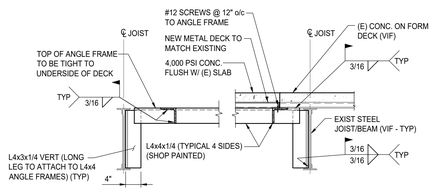
3 S-200 TYPICAL EXISTING BEAM REINFORCEMENT DETAIL
NOT TO SCALE

NOTES:
1. THE BEAM REINFORCEMENT SHOWN ABOVE APPLIES OR EXTENDS THE FULL LENGTH OF THE BEAM FROM END TO END UNLESS NOTED OTHERWISE ON PLAN.
2. CLEAN AND PREP ALL EXISTING SURFACES PRIOR TO FIELD WELDING.



4 S-200 TYPICAL JOIST REINFORCING DETAIL @ APPLIED LOADS
NOT TO SCALE

NOTES:
1. CLEAN AND PREP ALL EXISTING SURFACES PRIOR TO FIELD WELDING.



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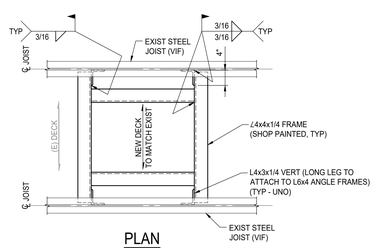
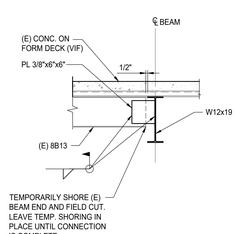


PLAN

5 S-200 TYPICAL DECK INFILL DETAIL
NOT TO SCALE



6 S-200 SECTION
NOT TO SCALE

STRUCTURAL ENGINEER:

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CONSULTING STRUCTURAL ENGINEERING
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EMAIL: mail@mabeachassoc.com
NJ Certificate of Authorization No. 24GA27962200
Project No: 820.54

MEP ENGINEER:

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(856) 427-0200
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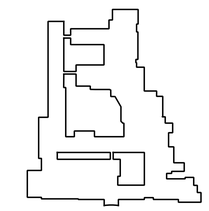

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