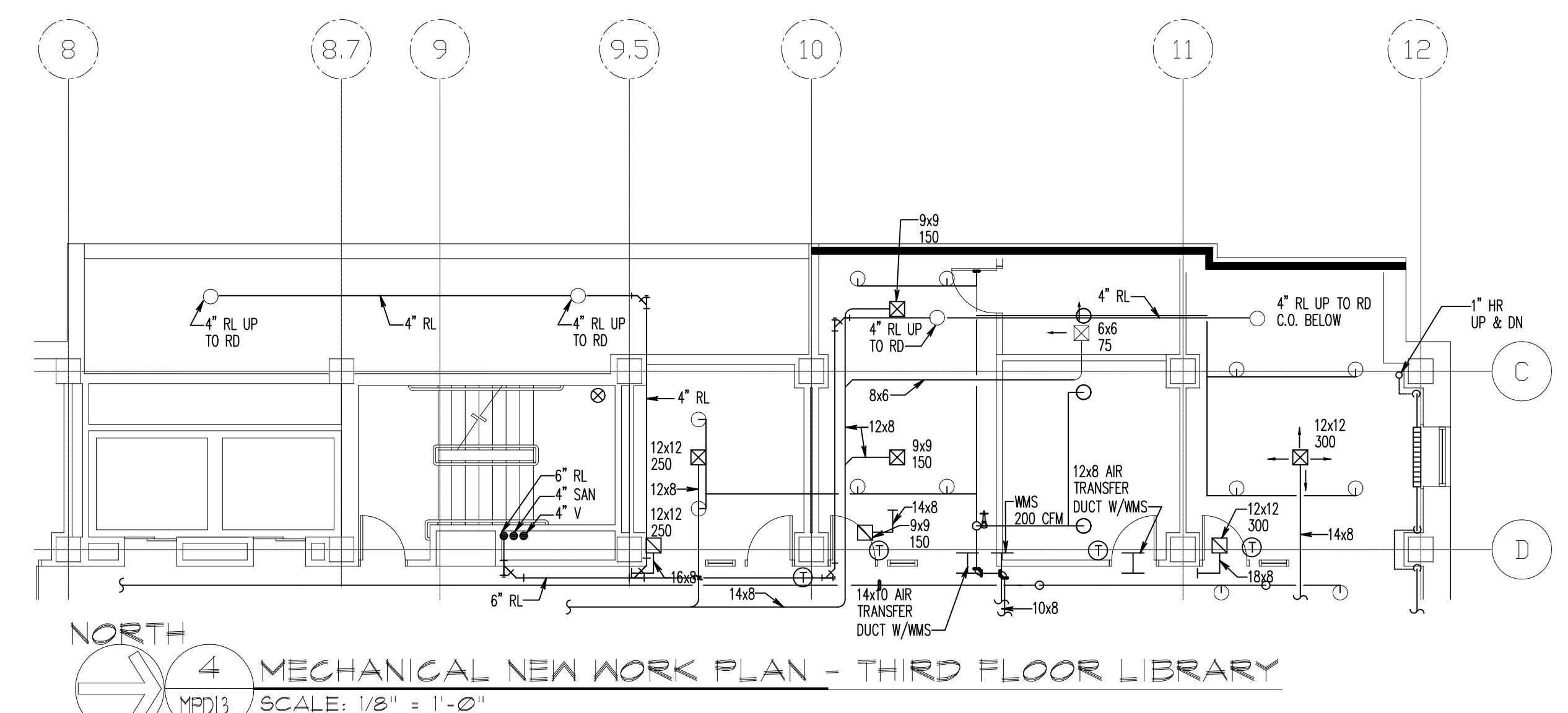
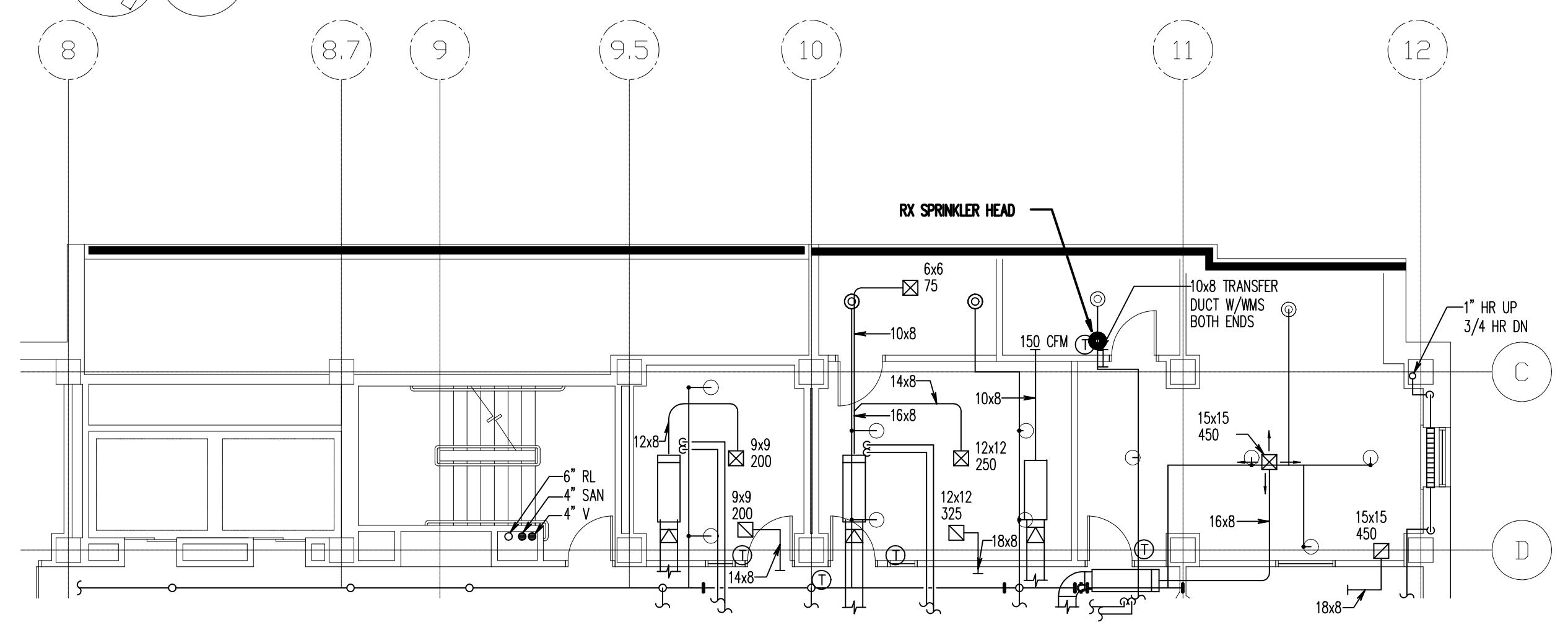
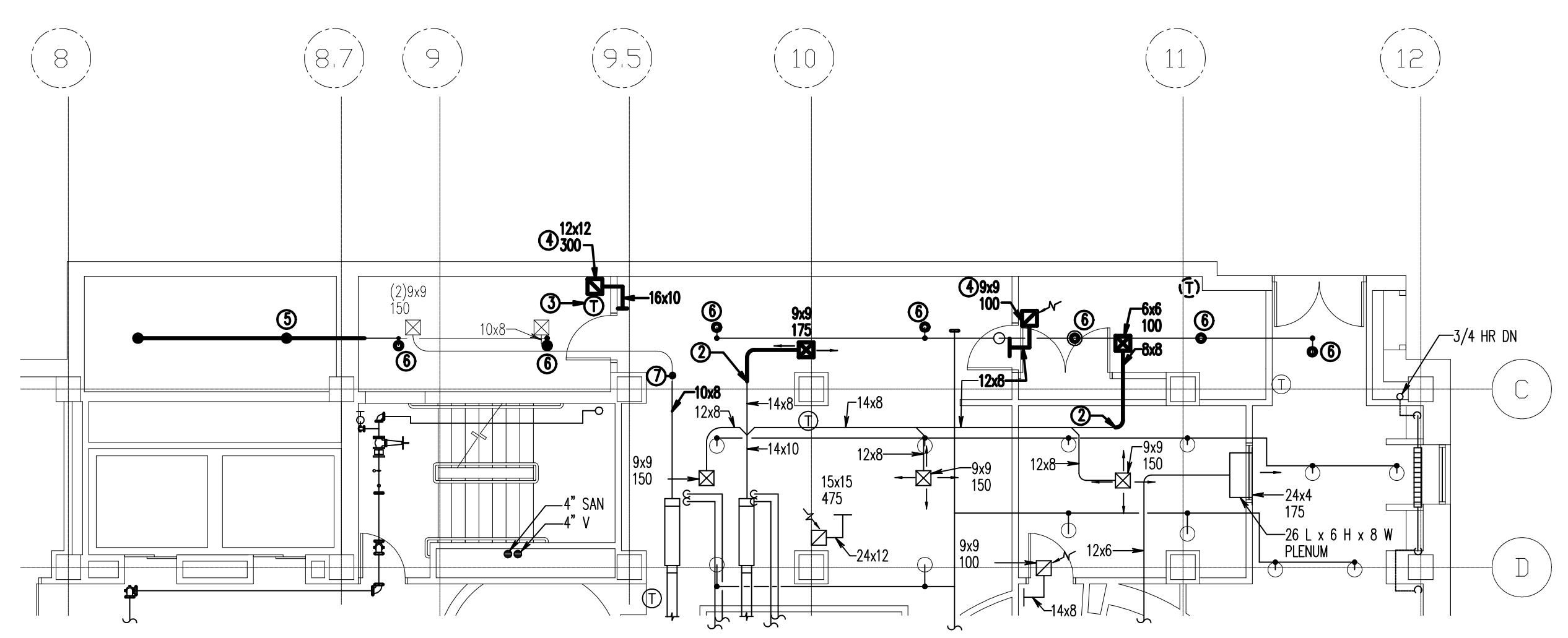
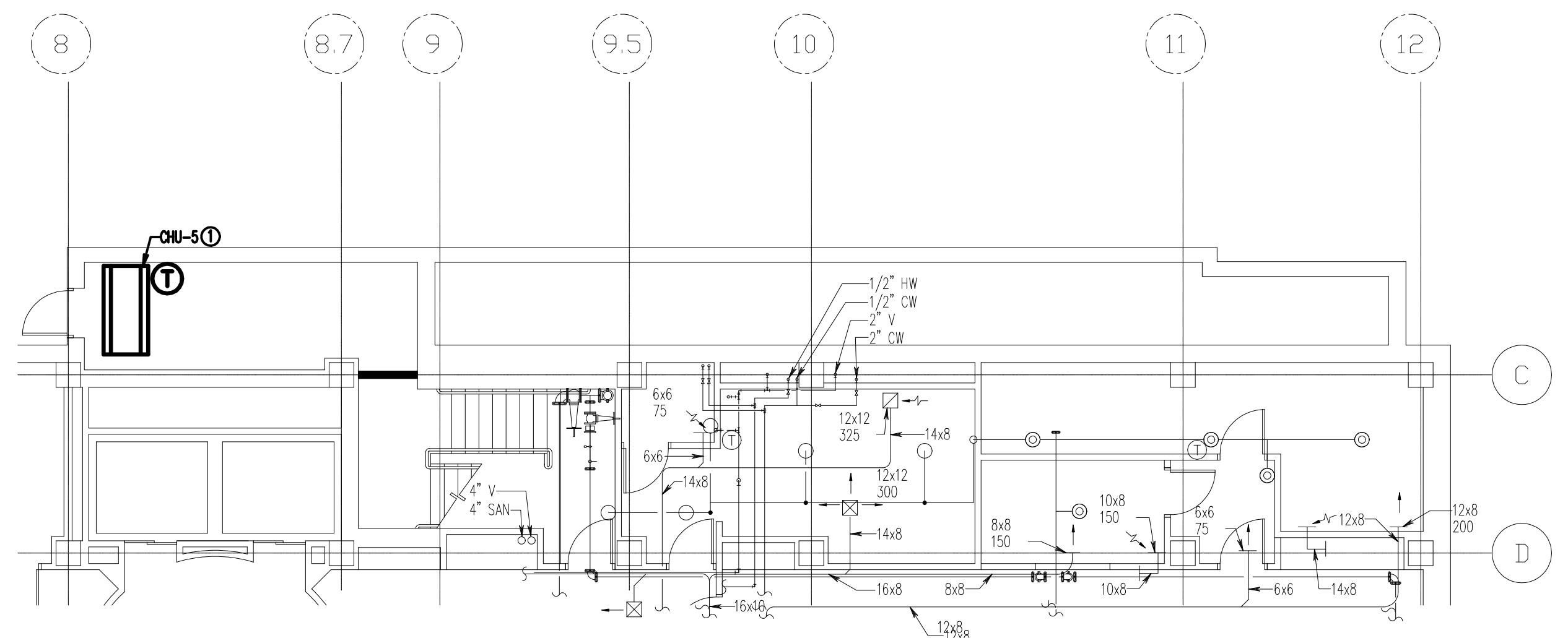
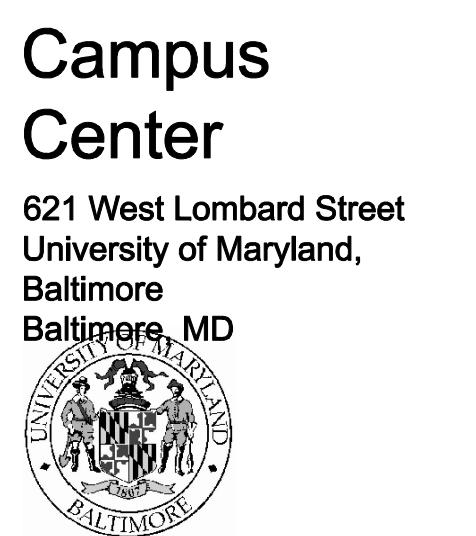


SPECIAL NOTES: (APPLICABLE TO THIS DRAWING ONLY)
1. CLEAN AND BALANCE ALL SYSTEMS WITHIN THE CONSTRUCTION AREA.
SPECIAL NOTES: (APPLICABLE TO THIS DRAWING ONLY)
① RE-INSTALL CABINET UNIT HEATER AND ASSOCIATED THERMOSTAT IN ORIGINAL LOCATION.
② RE-INSTALL SUPPLY DUCTWORK AND DIFFUSERS IN ORIGINAL LOCATION.
③ RE-INSTALL EXISTING THERMOSTAT IN ORIGINAL LOCATION.
④ REMOVE SEALS FROM EXISTING DUCTWORK AND RE-INSTALL IN CEILING GRID.
⑤ INSTALL SPRINKLER PIPING AND SPRINKLER HEADS.
⑥ RX SPRINKLER HEAD, AND INSTALL IN ORIGINAL POSITION.
⑦ RX FIRE DAMPER.



1 01/29/10 Record Drawing
0 0 0/0/08 Issued for Bid
Rev. D Comment:
Issued: May 26, 2007



Key Plan
HS/HSL
New
Work
Plan

PLAN REVISIONS
05/09/08

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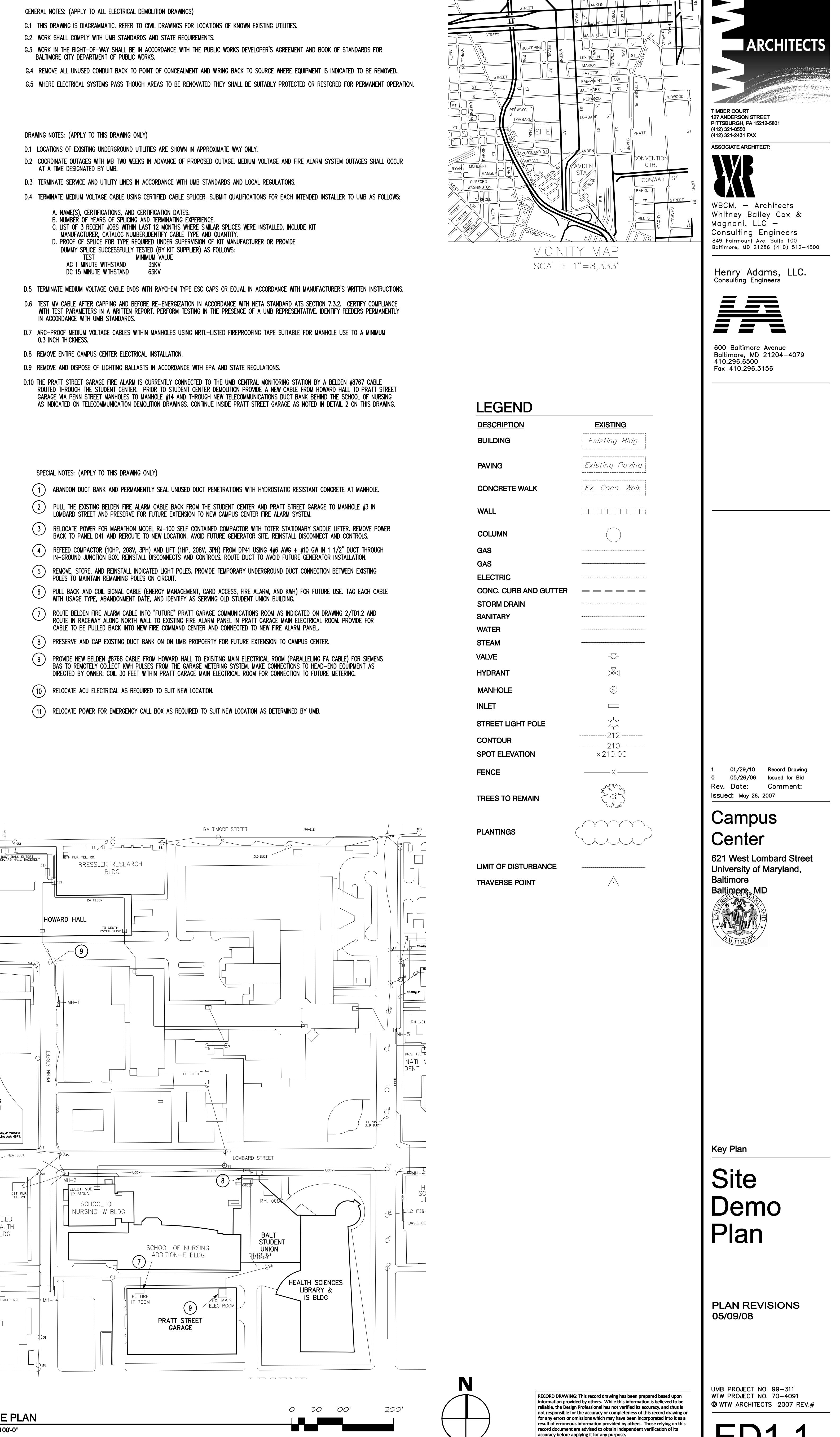
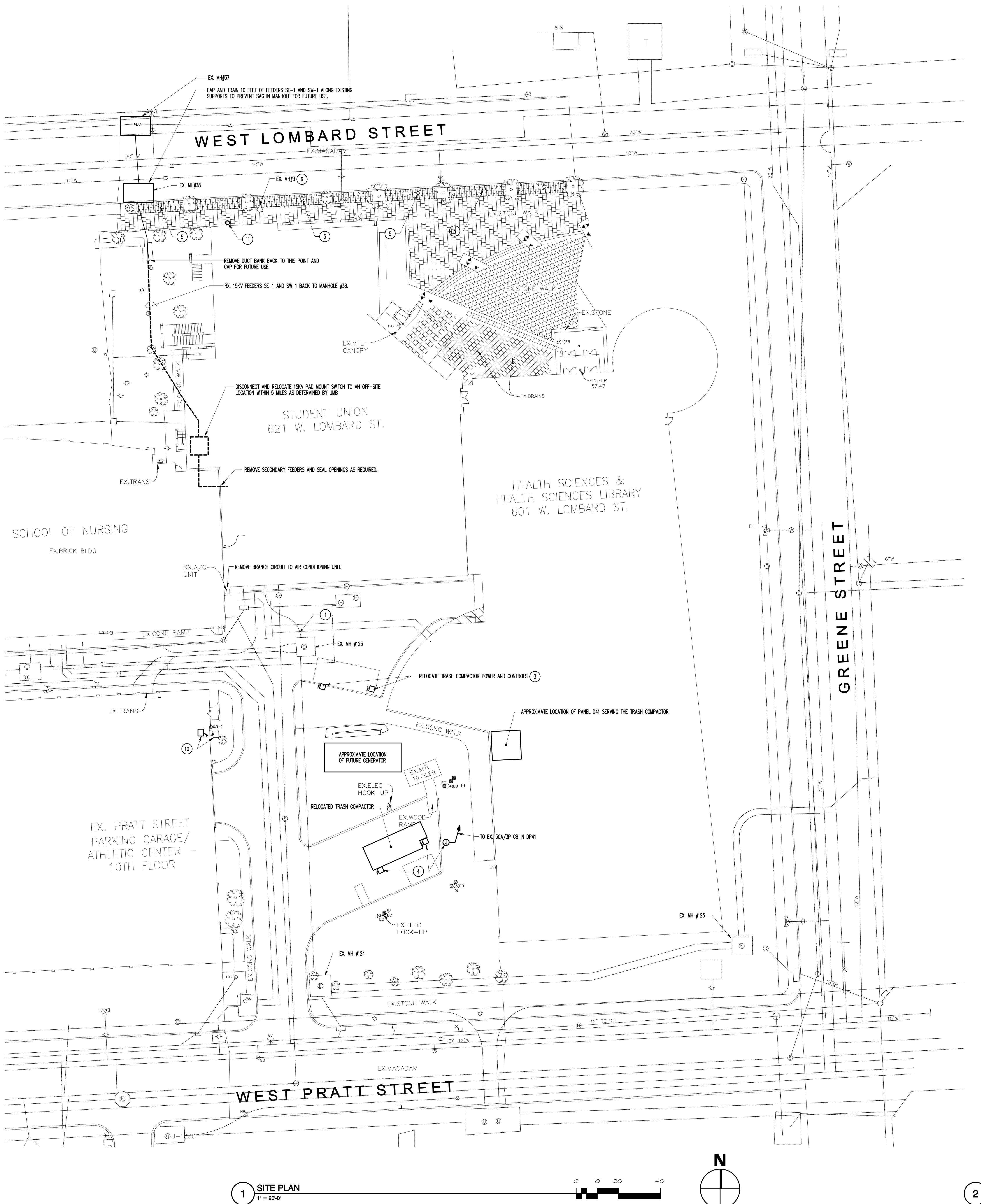
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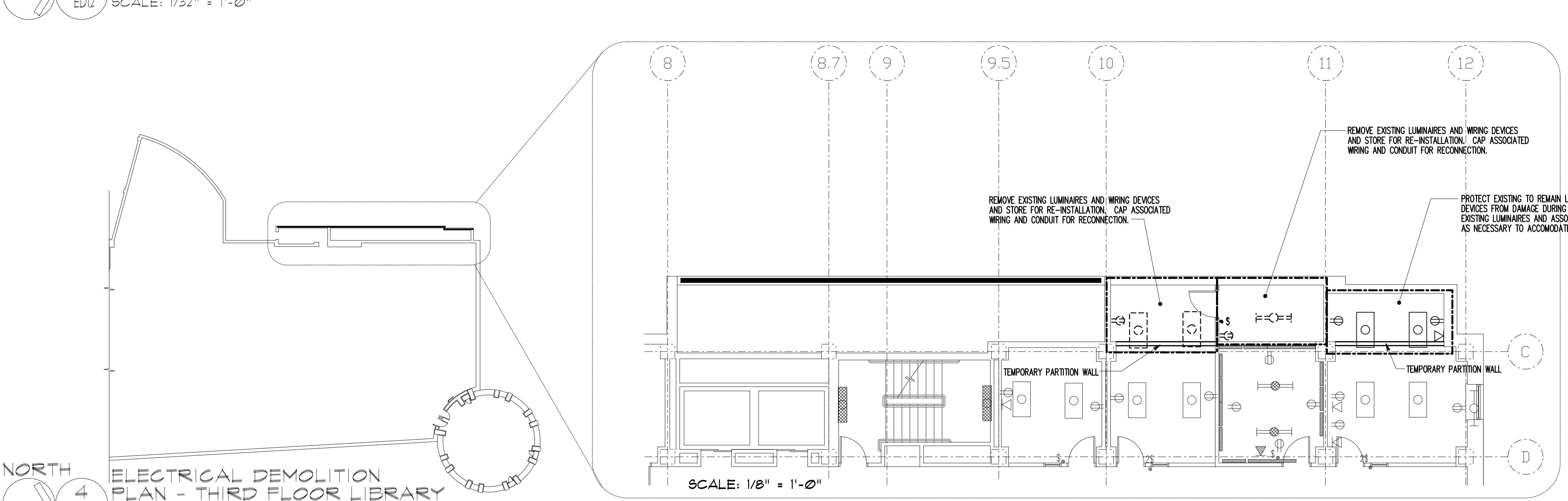
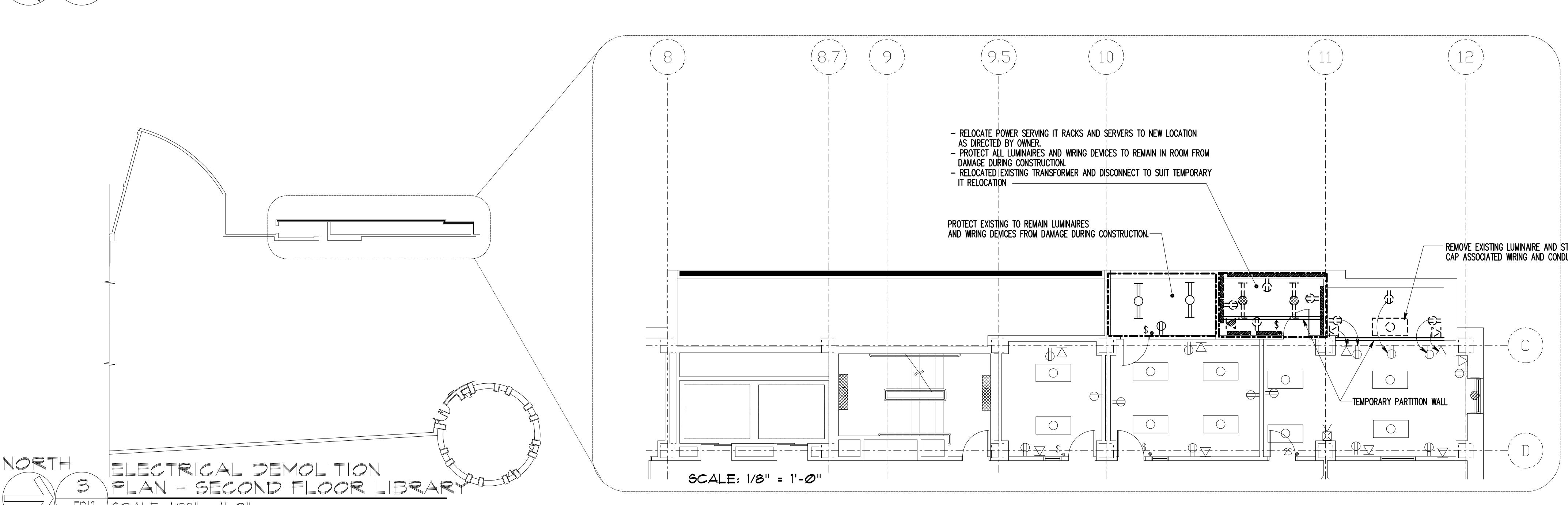
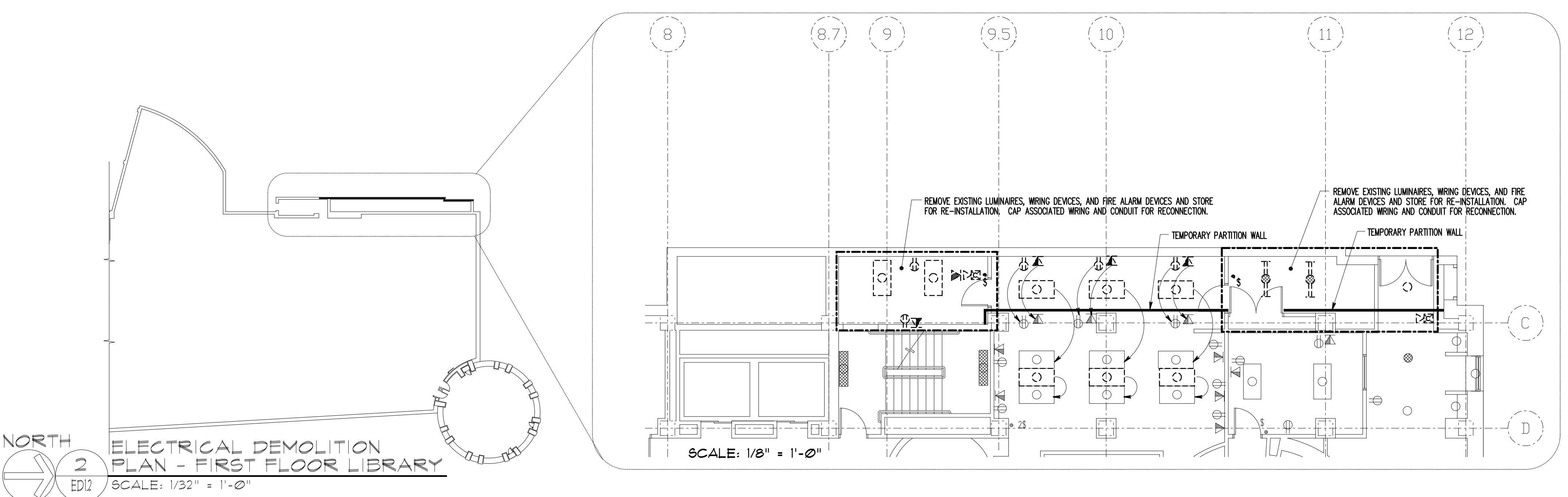
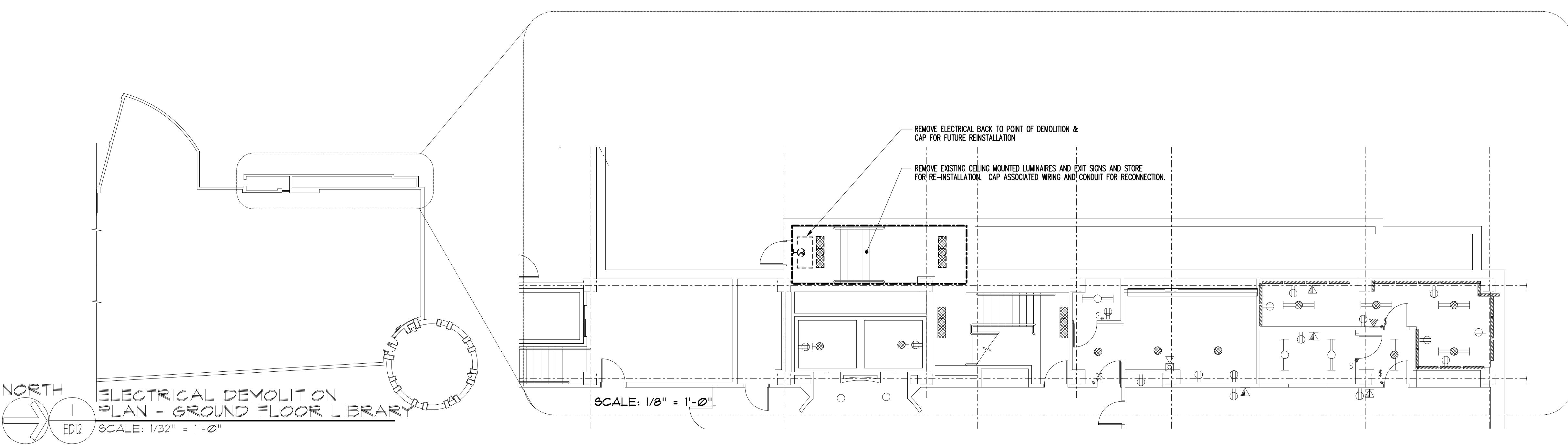
UMB PROJECT NO. 99-311
WTW PROJECT NO. 70-4091
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MD1.3

HALC JOB NO: U04720



DRAWING NOTES: (APPLY TO THIS SHEET ONLY)
D.1. ALL WIRING AND CONDUIT PASSING THROUGH CONSTRUCTION AREAS SHALL BE PROTECTED TO AVOID DAMAGE.
D.2. WHERE ELECTRICAL IT, OR FIRE ALARM SYSTEMS PASS THROUGH THE CONSTRUCTION AREAS TO SERVE EXISTING EQUIPMENT, THEY SHALL BE SUITABLY PROTECTED OR RELOCATED AND THE SYSTEMS RESTORED TO NORMAL OPERATIONS.
D.3. ANY OUTAGES IN SYSTEMS SHALL BE COORDINATED WITH THE OWNER TWO WEEKS IN ADVANCE OF PROPOSED OUTAGE, WHERE DURATION OF PROPOSED OUTAGES CANNOT BE TOLERATED BY THE OWNER, PROVIDE TEMPORARY CONNECTION AS REQUIRED TO MAINTAIN SERVICE. AN OUTAGE IS DEFINED AS PROHIBITING OR RESTRICTING MECHANICAL, ELECTRICAL, OR OPERATIONAL SERVICE FROM ROUTINE OPERATION.
D.4. ALL ELECTRICAL WORK INDICATED TO REMAIN IN CONSTRUCTION AREAS SHALL BE SUITABLY PROTECTED TO AVOID DAMAGE.
D.5. WHERE LUMINAIRES ARE SHOWN AS BEING RELOCATED, MODIFY SWITCHING TO MAINTAIN NORMAL OPERATION OF LUMINAIRES.
D.6. STORE HS/SL MATERIALS ON EMPTY CHILLER PAD IN HS/SL BASEMENT. TAG ITEMS WITH ROOM NUMBER AND FLOOR FROM WHICH IT WAS TAKEN.



ELECTRICAL LEGEND		
SYMBOL	DESCRIPTION	MOUNTING HEIGHT
	LUMINAIRE - SEE SCHEDULE FOR TYPE (NOMINAL 2X4)	--
	LUMINAIRE - SEE SCHEDULE FOR TYPE (INDUSTRIAL)	--
	LUMINAIRE - SEE SCHEDULE FOR TYPE (NOMINAL 1X4)	--
	ILLUMINATED EXIT SIGN, DOUBLE FACE - SEE SCHEDULE FOR TYPE (CEILING AND WALL MOUNTED)	-- / 90°
	SINGLE POLE TOGGLE SWITCH	46"
	RECEPTACLE - NEMA CONFIGURATION 5-20R DUPLEX	18"
	RECEPTACLE - NEMA CONFIGURATION 5-20R QUAD	18"
	FIRE ALARM SYSTEM - COMBINATION SPEAKER/HORN AND FLASHING LIGHT	88"
	COMMUNICATIONS OUTLET, WALL MOUNTED	18"
	SAFETY SWITCH	60° TO TOP
	PANELBOARD	78° TO TOP
	MOTOR	--
	JUNCTION BOX IN CEILING	--
	JUNCTION BOX - WALL MOUNTED	AS NOTED
	SURVEILLANCE CAMERA, PAN - TILT - ZOOM	AS NOTED

NOTES: (APPLICABLE TO ELECTRICAL LEGEND ONLY)

1. THE MOUNTING HEIGHTS GIVEN ON THIS SHEET IN THE ELECTRICAL LEGEND ARE GENERAL AND SHALL BE USED UNLESS OTHERWISE NOTED. MOUNTING HEIGHTS CANNOT BE ESTABLISHED BY REFERENCE TO DETAILS, ELEVATIONS, AND NOTES ON THE DRAWINGS.
2. ALL MOUNTING HEIGHTS, UNLESS OTHERWISE NOTED, SHALL BE MEASURED FROM THE FINISHED FLOOR TO THE CENTERLINE OF THE OUTLET OR DEVICE.
3. HEIGHTS OF ALL ITEMS NOT COVERED BY THE ELECTRICAL LEGEND AND NOT SHOWN ON THE DRAWINGS SHALL BE AS DIRECTED BY THE ARCHITECT OR ENGINEER.
4. WHERE PLACING ANY ITEM AT THE HEIGHTS LISTED OR NOTED WILL CAUSE INTERFERENCE WITH THE WORK OF OTHER TRADES, OR IS NOT PHYSICALLY POSSIBLE OR DESIRABLE FOR ONE REASON OR ANOTHER, THE ITEM SHALL BE MOVED TO A LOCATION APPROVED BY THE ARCHITECT OR ENGINEER.

ELECTRICAL CONVENTIONS	
REFERENCE	
	SPECIAL NOTE (APPLIES WHERE INDICATED ON THE DRAWING)
	DRAWING NOTE (APPLIES TO ENTIRE DRAWING)
	GENERAL NOTE - APPLIES TO ENTIRE DRAWING SET
WIRING	
	NO TICK MARKS IN POWER CIRCUIT REPRESENT TWO BRANCH CIRCUIT CONDUCTORS WITH INSULATED GREEN GROUND WIRE IN RACEWAY. UNLESS OTHERWISE INDICATED, SEE SPECIFICATION FOR MINIMUM WIRE AND RACEWAY SIZE.
	TICK MARKS INDICATE THE NUMBER OF BRANCH CIRCUIT CONDUCTORS IN RACEWAY. UNLESS OTHERWISE INDICATED, SEE SPECIFICATION FOR MINIMUM WIRE AND RACEWAY SIZE.
	INDICATES GROUND WIRE (INSULATED GREEN) IN RACEWAY WITH NO TICK MARKS. UNLESS OTHERWISE INDICATED, SIZE SHALL BE IN ACCORDANCE WITH SECTION 250 OF THE NATIONAL ELECTRICAL CODE.
PRESENTATION	
	ELECTRICAL EQUIPMENT DESIGNATED BY SOLID HEAVY LINEWORK INDICATES NEW WORK TO BE PROVIDED.
	ELECTRICAL EQUIPMENT DESIGNATED BY SOLID LIGHT LINEWORK INDICATES EXISTING EQUIPMENT TO REMAIN, UNLESS OTHERWISE INDICATED.
	ELIMINATED EQUIPMENT DESIGNATED BY DASHED HEAVY LINEWORK REPRESENTS EXISTING EQUIPMENT TO BE REMOVED, DISPOSED, UNLESS INDICATED TO BE REMOUNTED, RELOCATED, OR TURNED OVER TO OWNER.
	RELOCATE TO NEW POSITION AS INDICATED

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0 4 8 16 24 FT
1/8" = 1'-0"

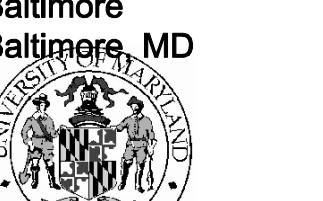
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1 01/29/10 Record Drawings
2 01/29/10 Issued for Bid
Rev. D Comment:
Issued: May 26, 2007

Campus Center

621 West Lombard Street
University of Maryland,
Baltimore
Baltimore, MD



Key Plan

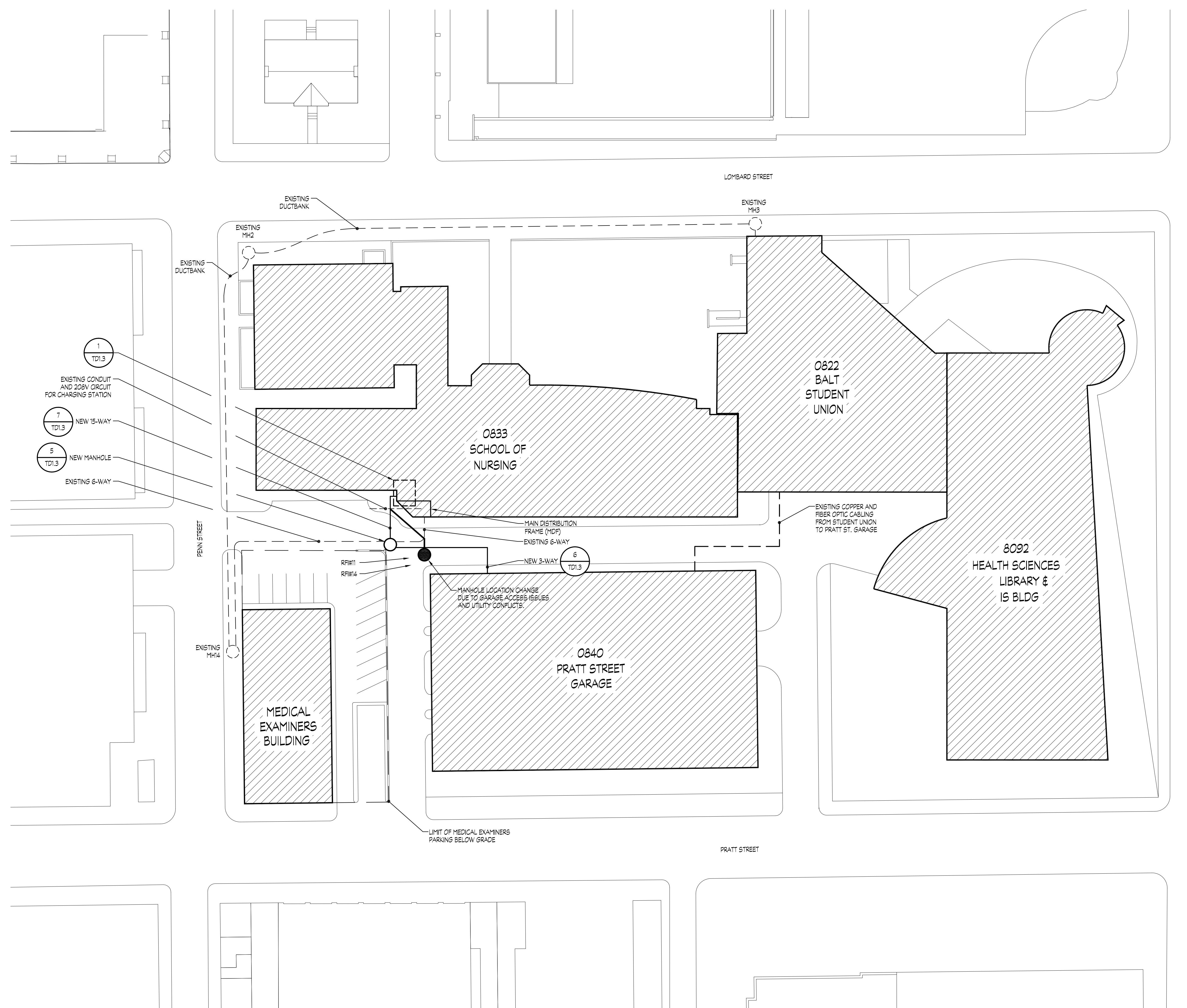
HS/HSL Demo Plan

PLAN REVISIONS
05/09/08

UMB PROJECT NO. 99-311
WTW PROJECT NO. 70-4091
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ED1.2

HALC JOB NO: U04720



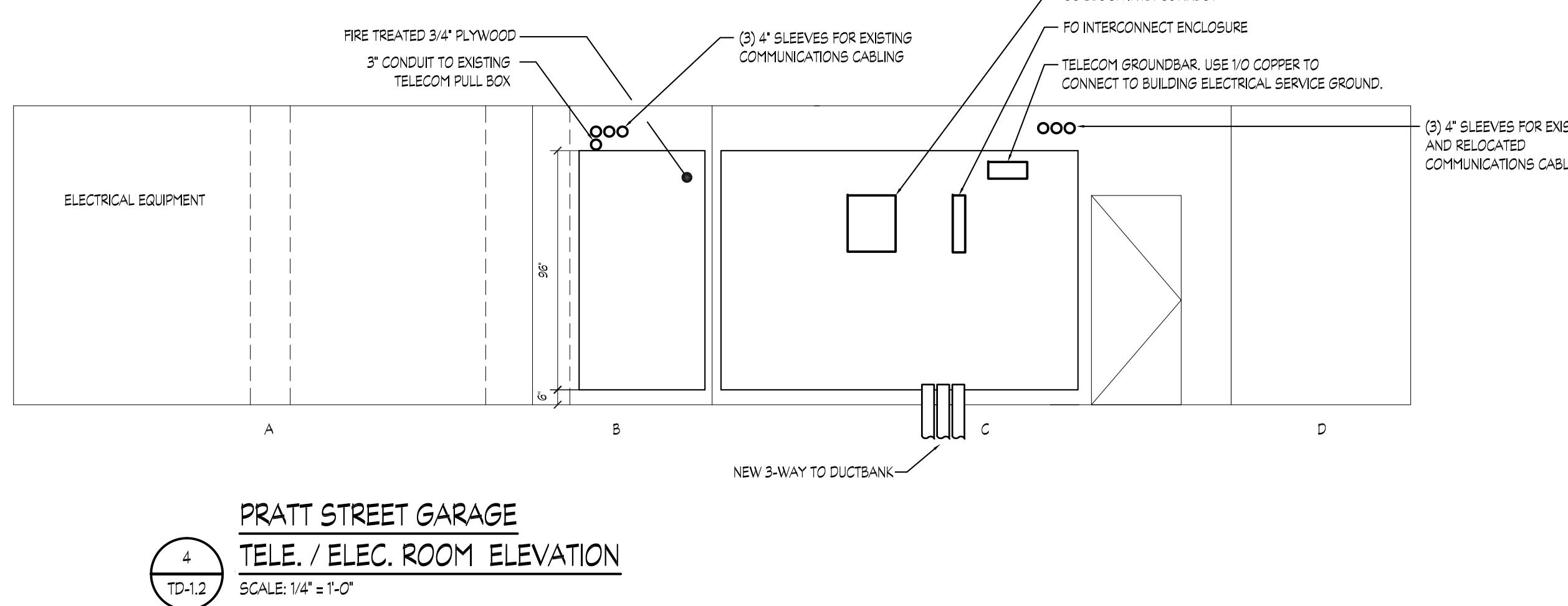
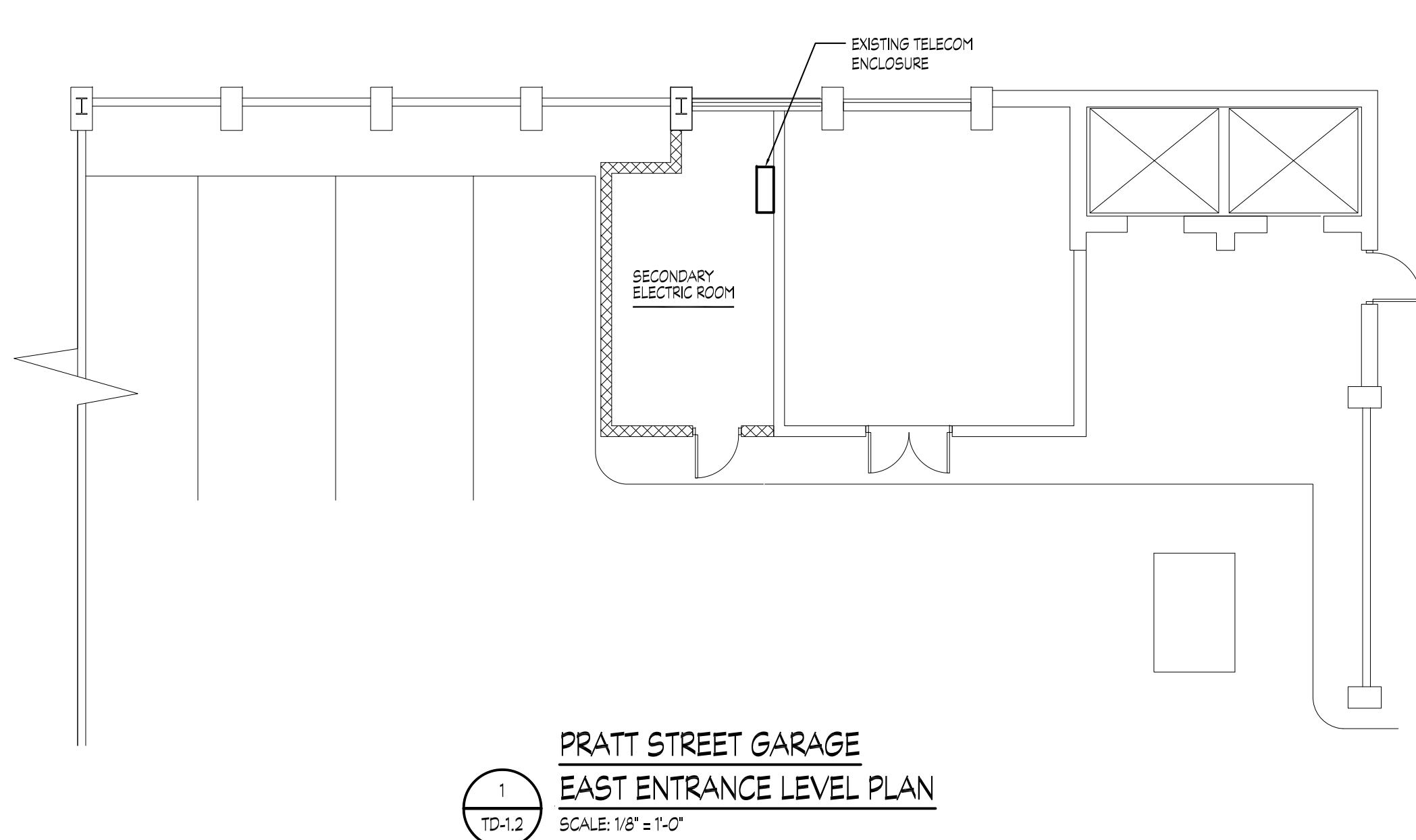
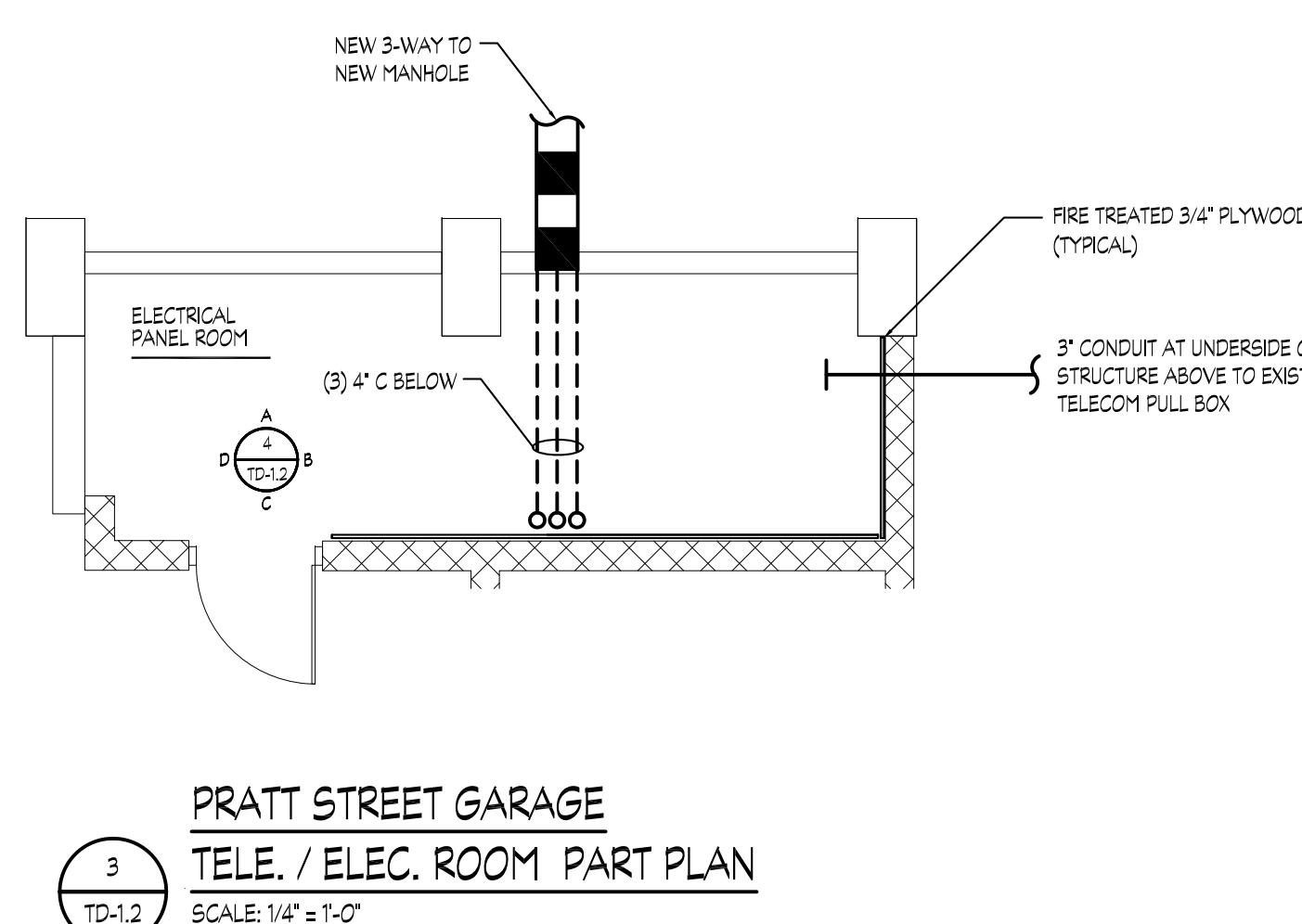
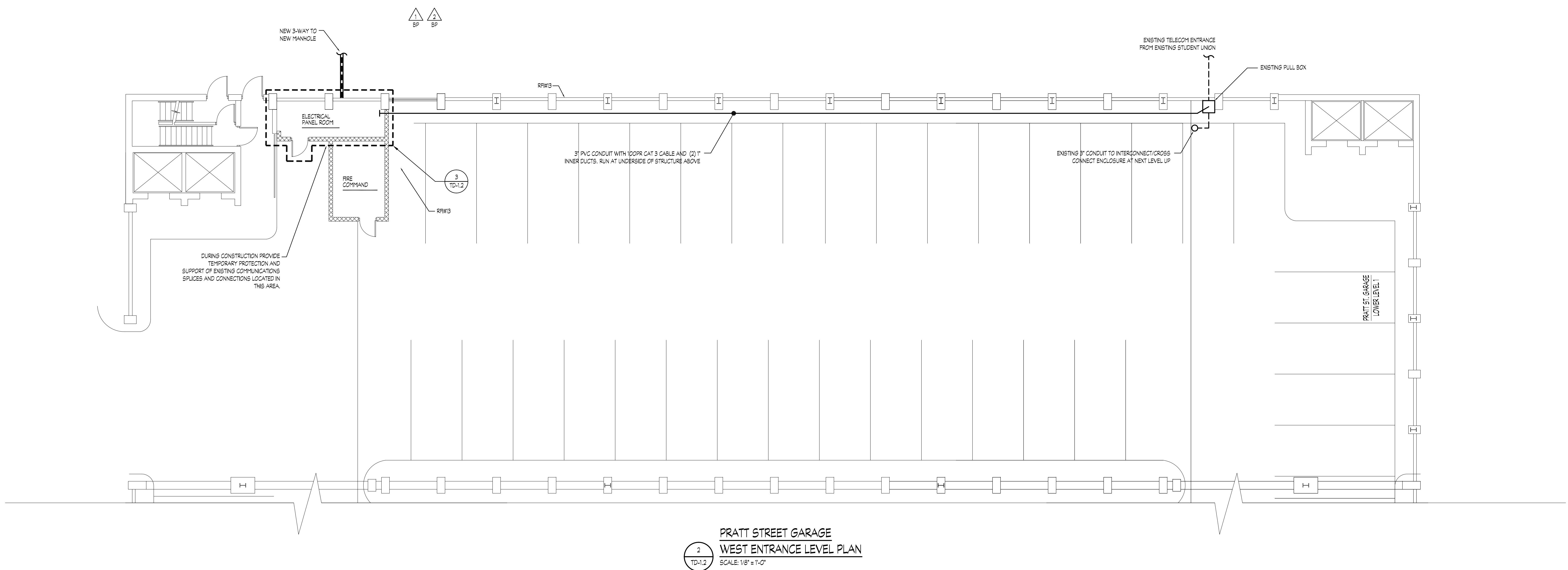


Telecom- Pratt Street Garage Part Plans Demolition

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TD1.2



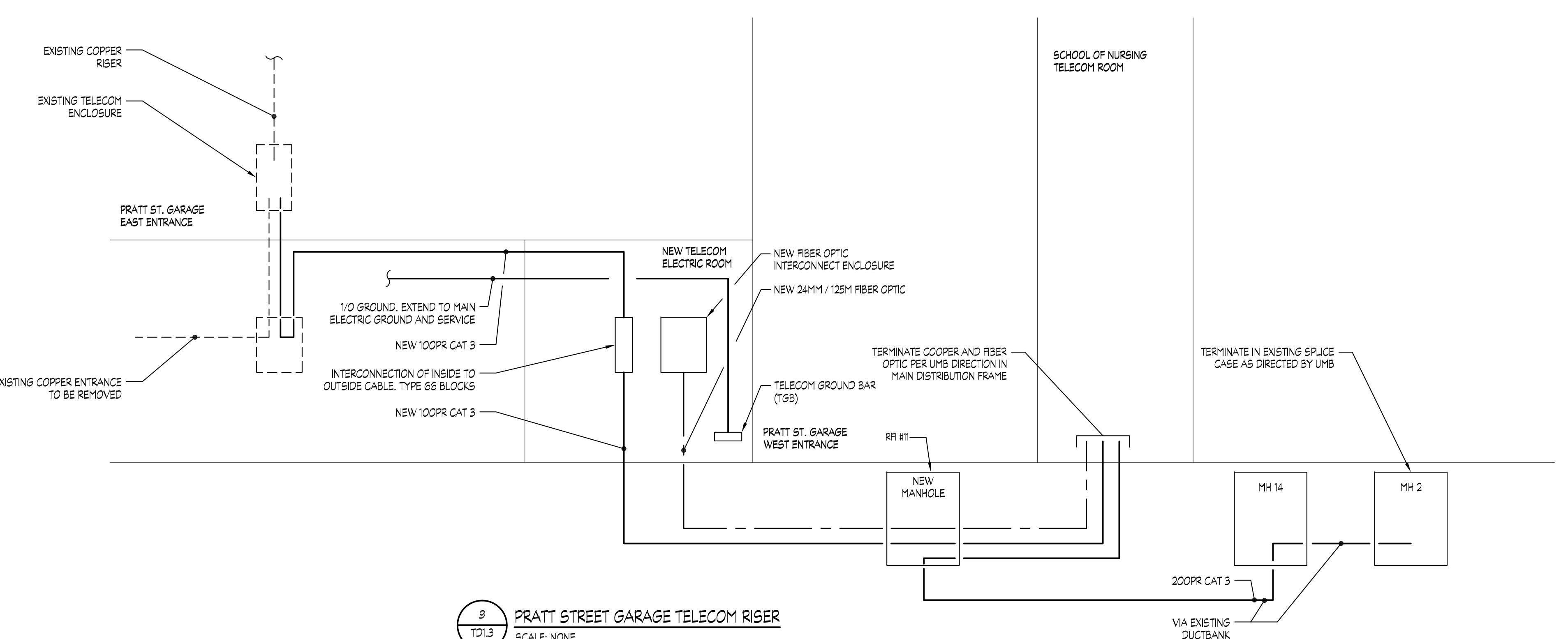
TD1.2

TD1.2

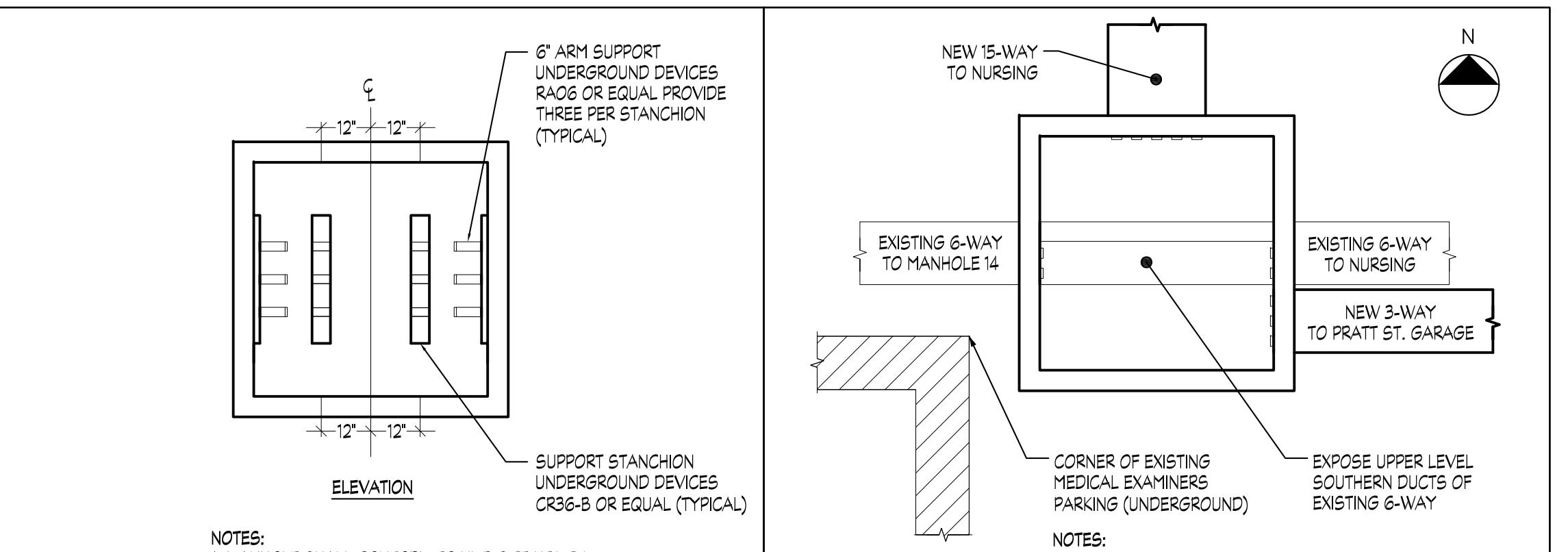


Telecom- Details Demolition

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DOCUMENTS

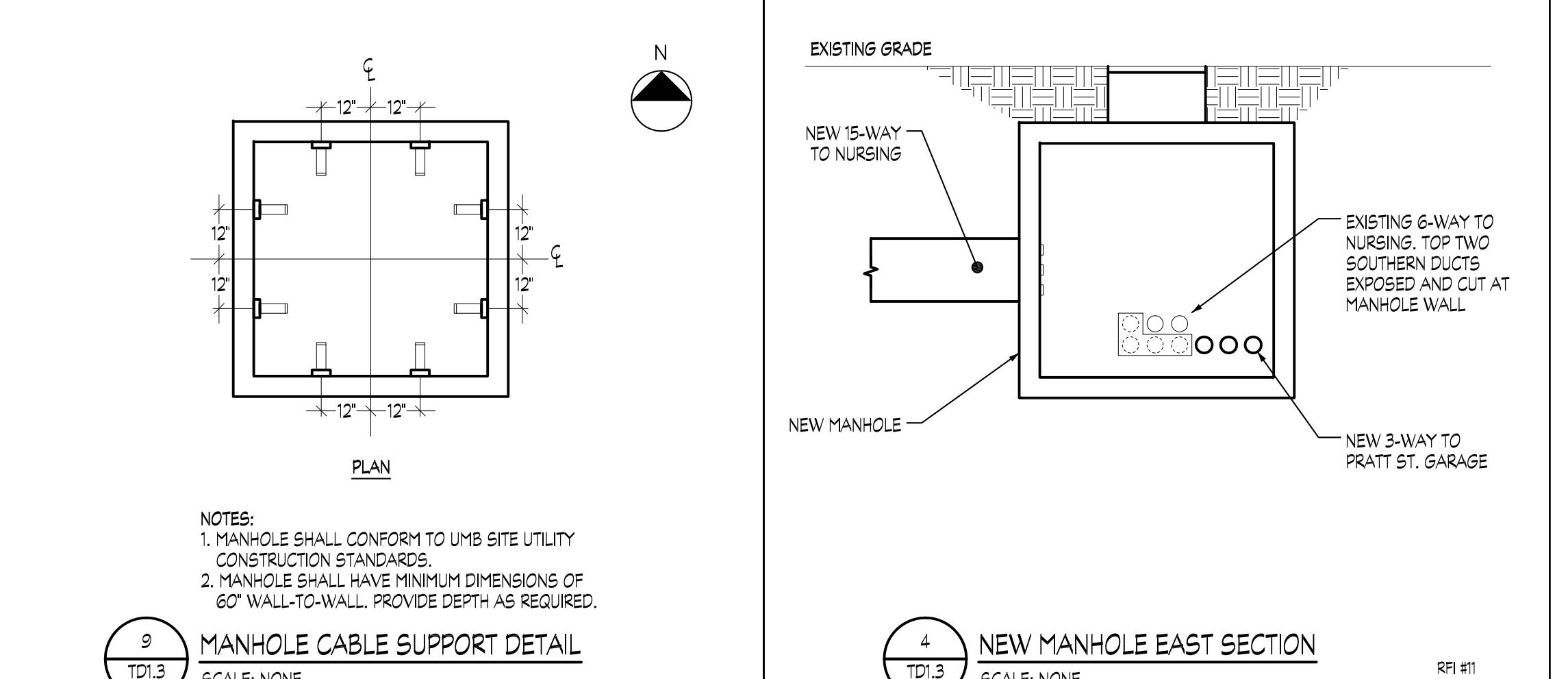


PRATT STREET GARAGE TELECOM RISER
SCALE: NONE



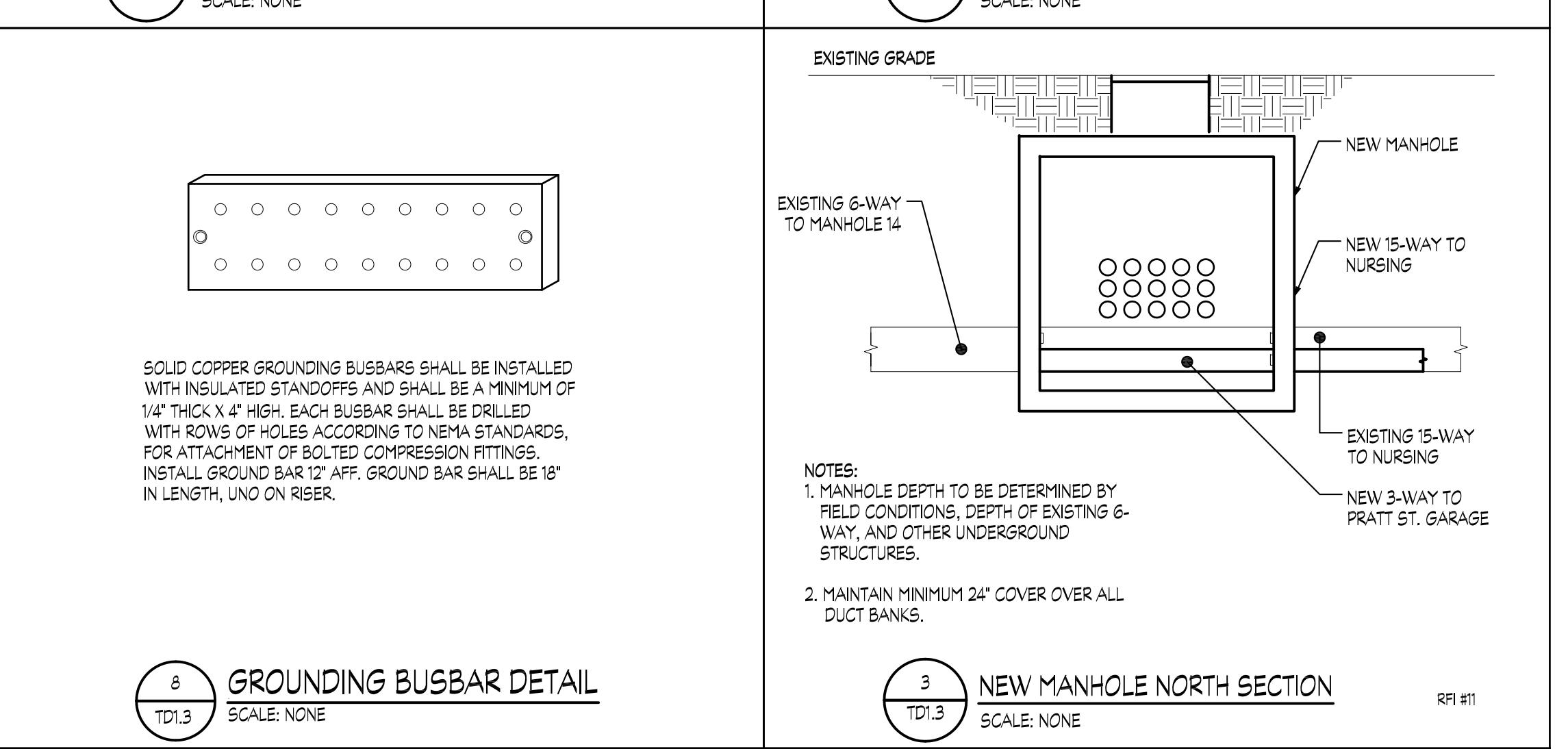
MANHOLE CABLE SUPPORT DETAIL
TD1.3
SCALE: NONE

NEW MANHOLE DETAIL - PLAN
TD1.3
SCALE: NONE



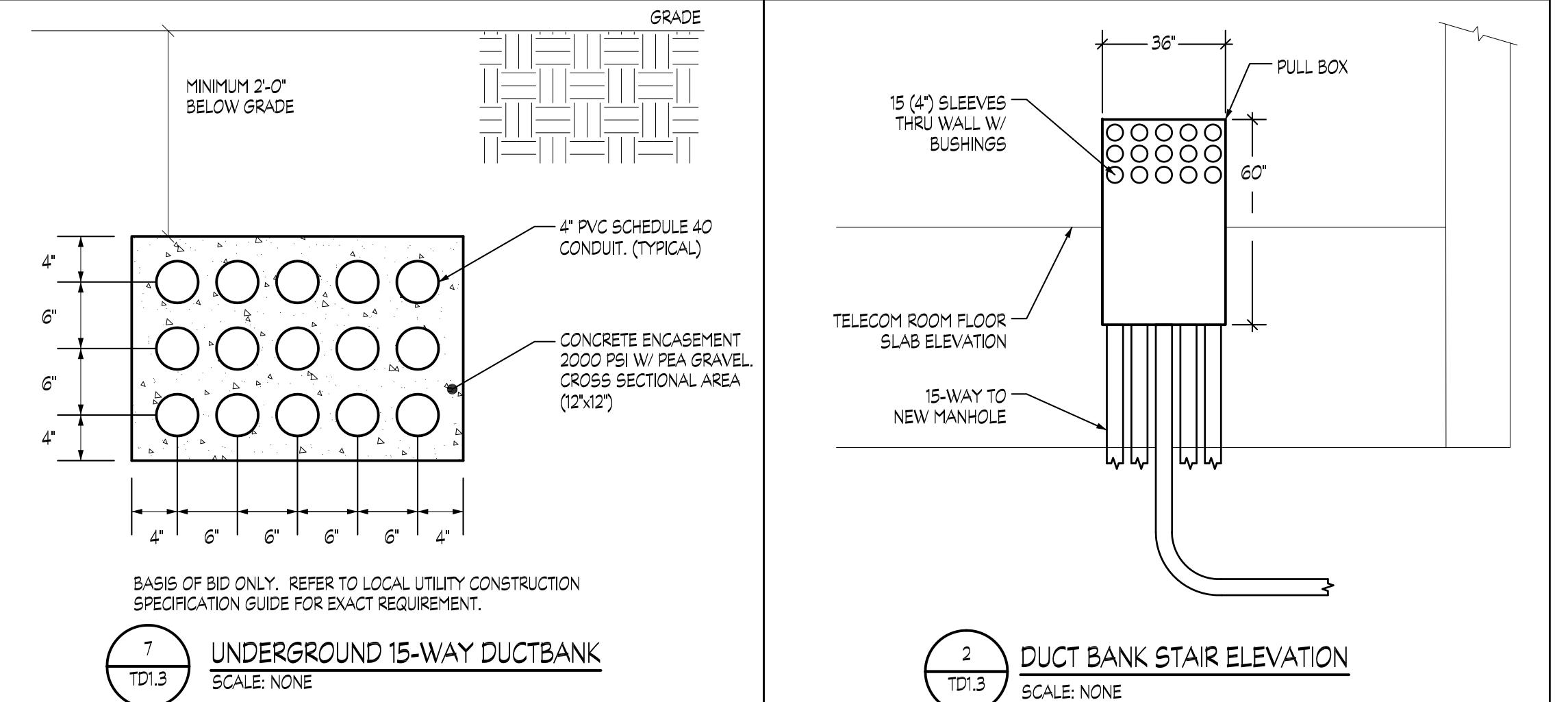
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TD1.3
SCALE: NONE

NEW MANHOLE EAST SECTION
TD1.3
SCALE: NONE



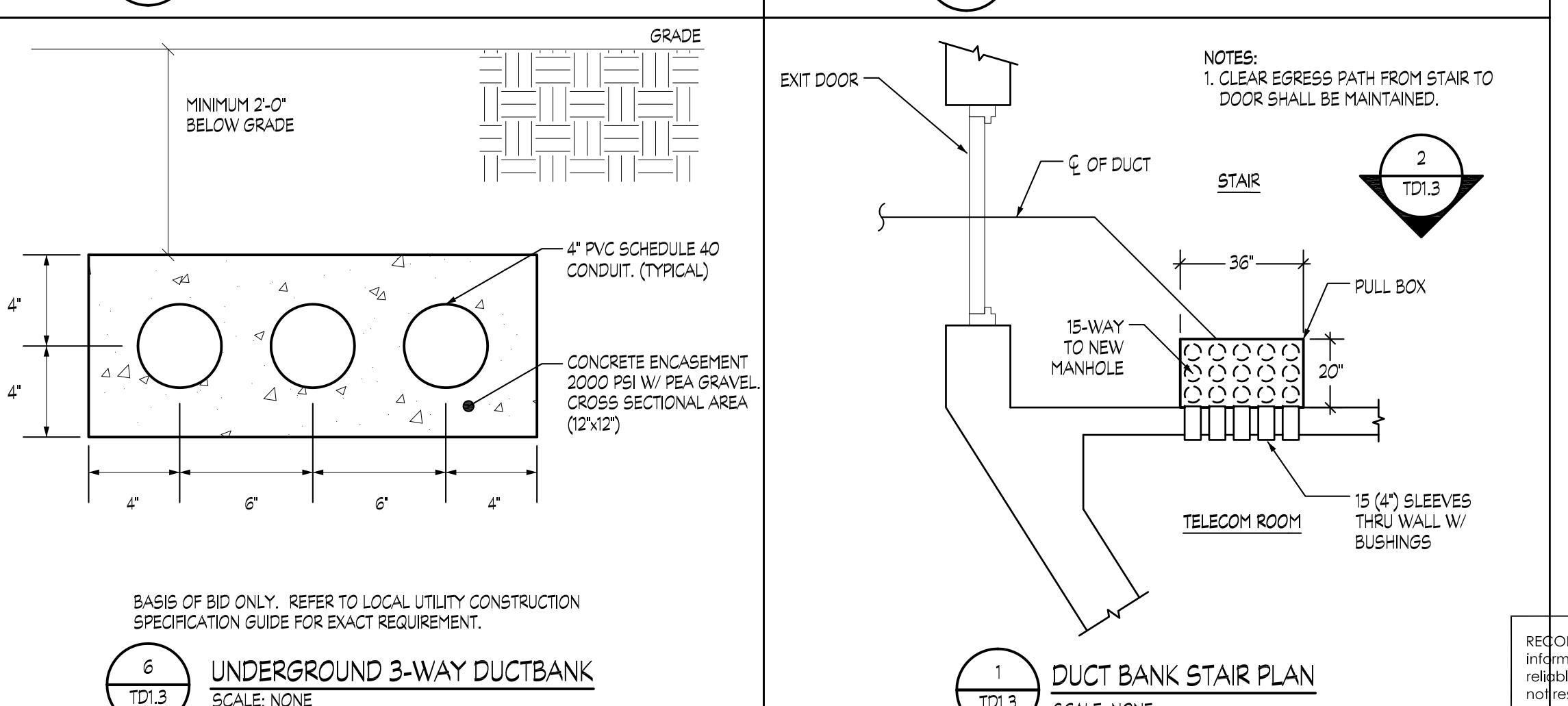
GROUNDING BUSBAR DETAIL
TD1.3
SCALE: NONE

NEW MANHOLE NORTH SECTION
TD1.3
SCALE: NONE



UNDERGROUND 15-WAY DUCTBANK
TD1.3
SCALE: NONE

DUCT BANK STAIR ELEVATION
TD1.3
SCALE: NONE



UNDERGROUND 3-WAY DUCTBANK
TD1.3
SCALE: NONE

DUCT BANK STAIR PLAN
TD1.3
SCALE: NONE

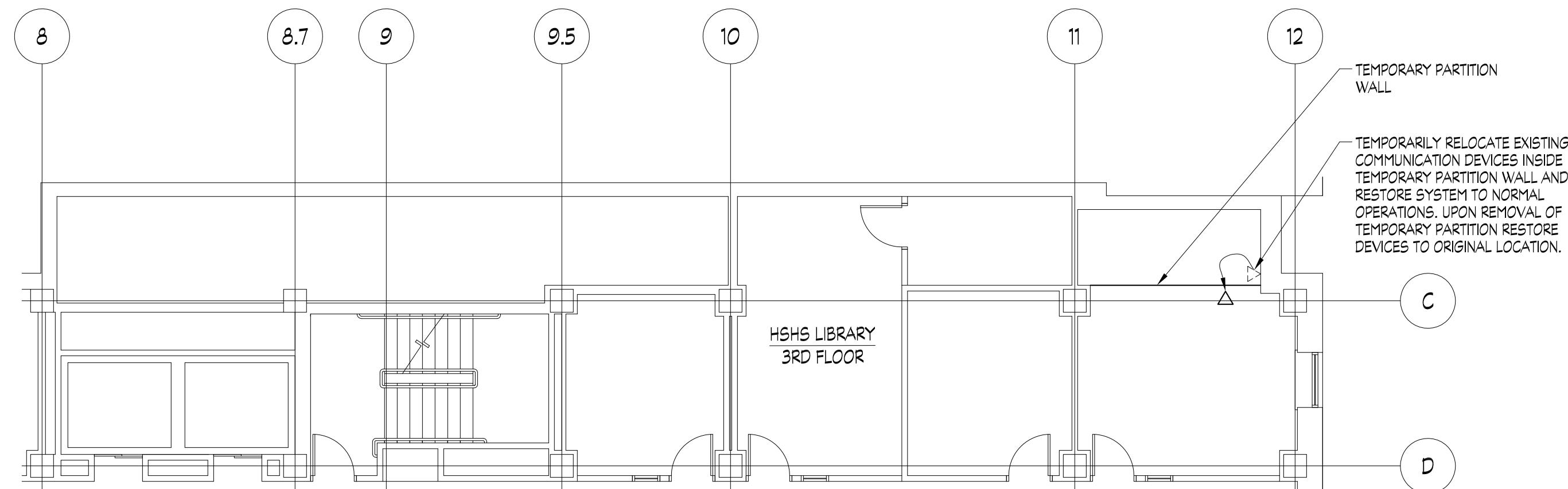
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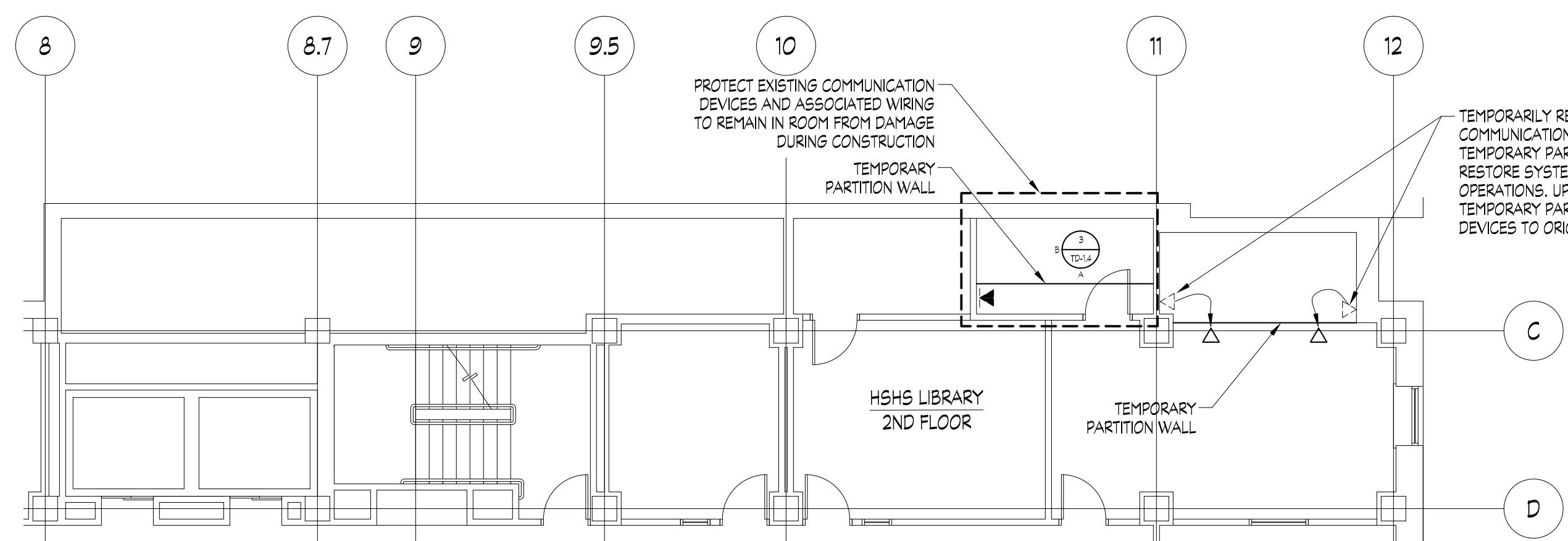


Telecom-Demolition Partial Plans HSHS Library

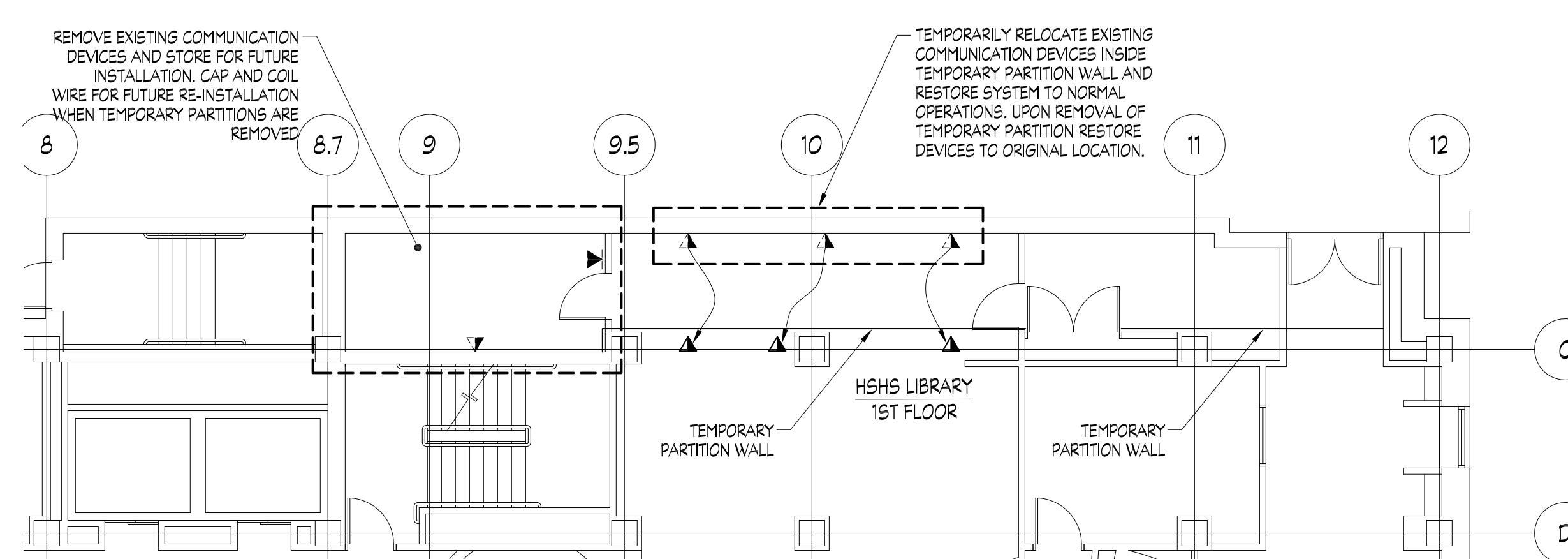
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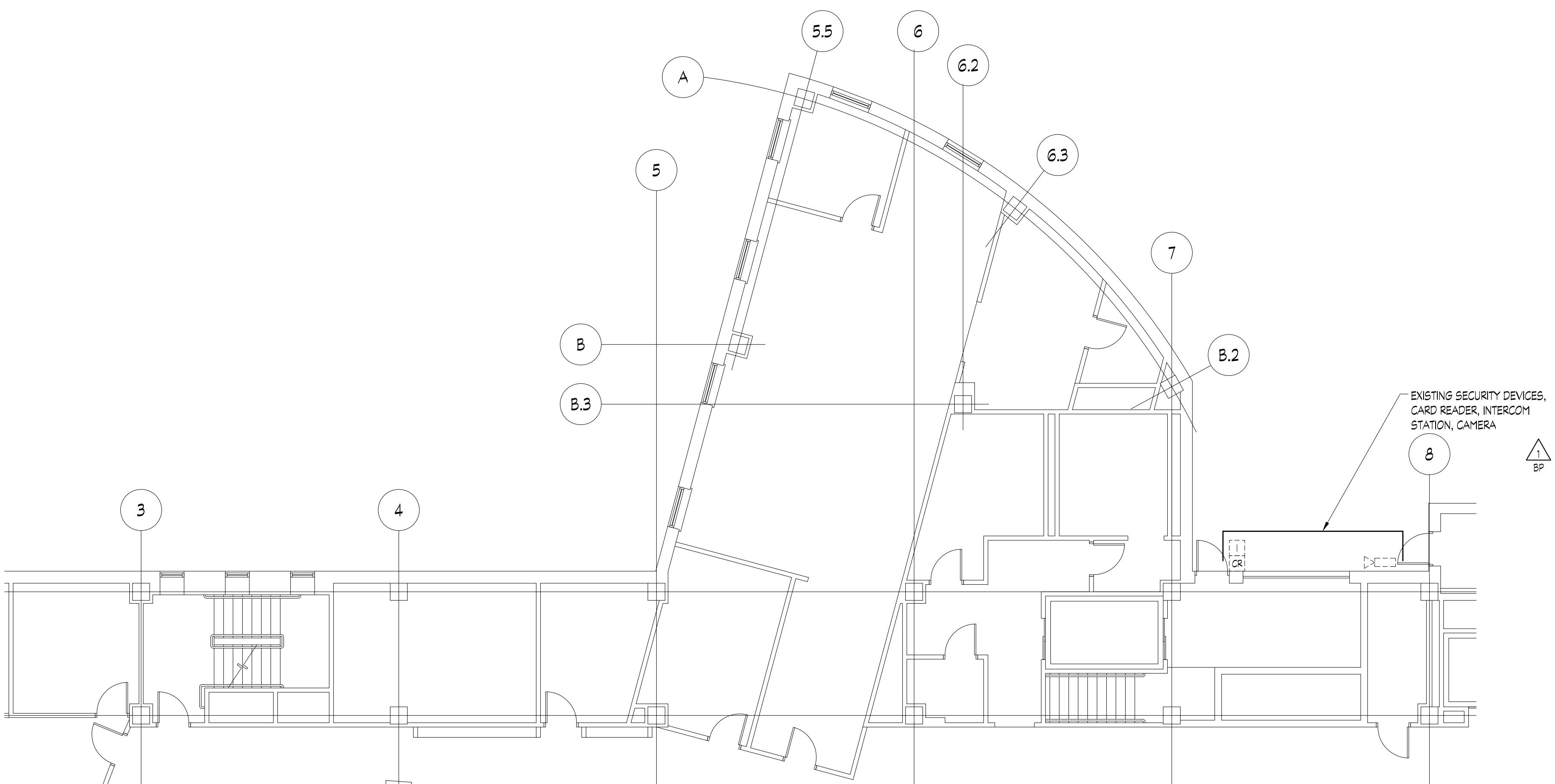
5 TELECOM PLAN - THIRD FLOOR LIBRARY PARTIAL PLAN
 TD1.4 SCALE: 1/8" = 1'-0"



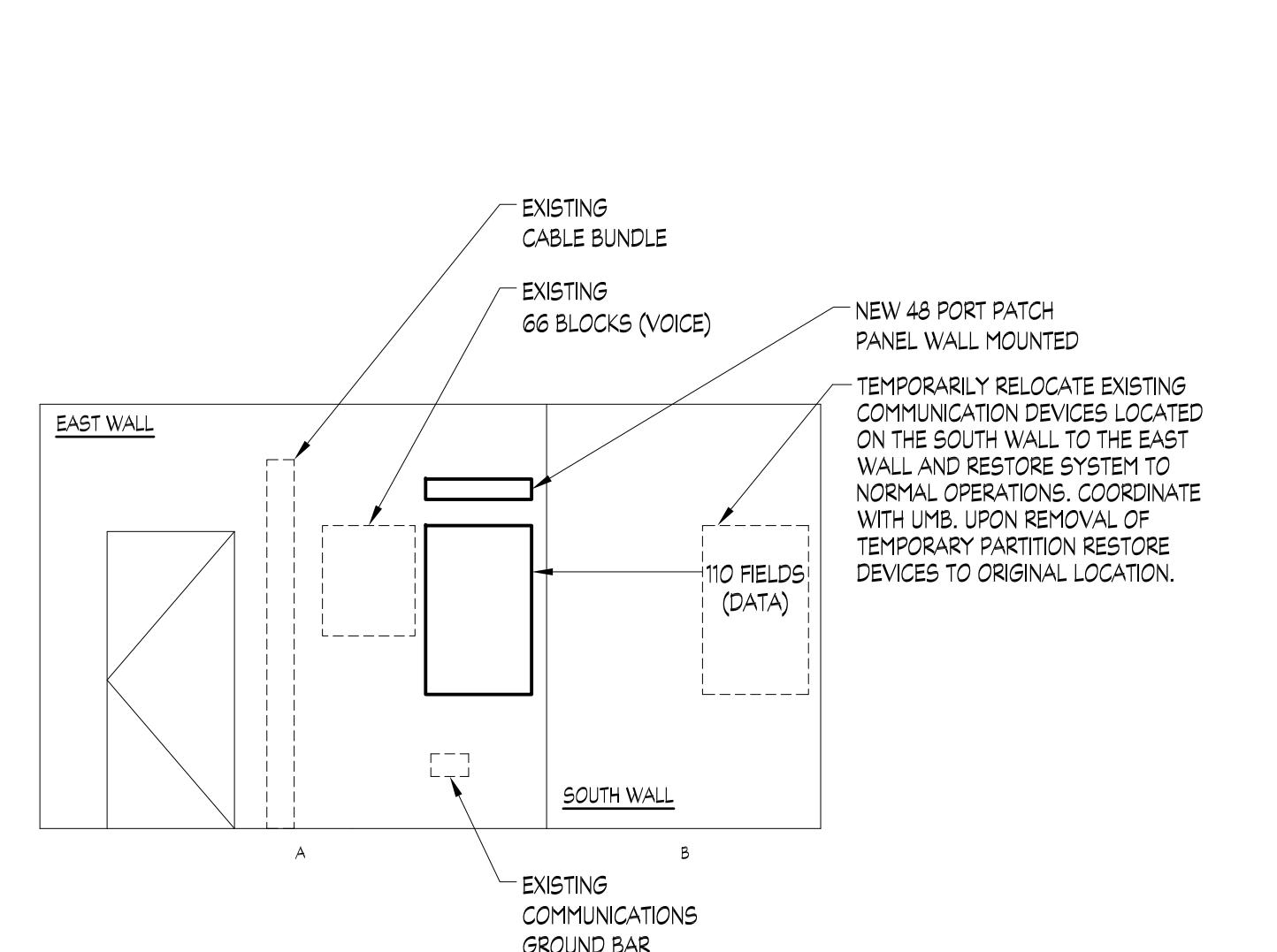
3 TELECOM PLAN - SECOND FLOOR LIBRARY PARTIAL PLAN
 TD1.4 SCALE: 1/8" = 1'-0"



2 TELECOM PLAN - FIRST FLOOR LIBRARY PARTIAL PLAN
 TD1.4 SCALE: 1/8" = 1'-0"



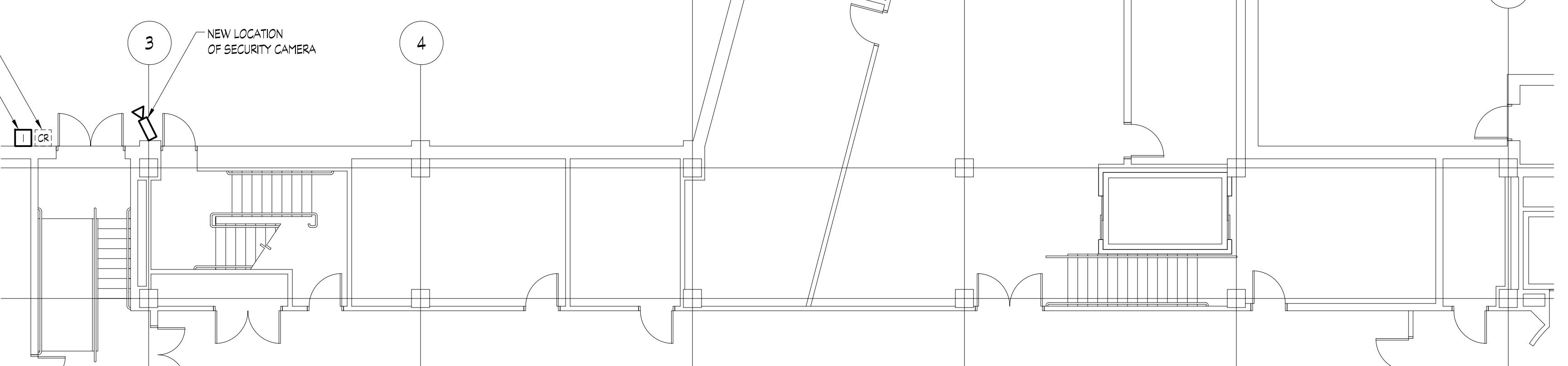
4 TELECOM PLAN - FIRST FLOOR LIBRARY PARTIAL PLAN
 TD1.4 SCALE: 1/8" = 1'-0"



3 HS/HS LIBRARY TELECOM ROOM ELEVATION
 TD1.4 SCALE: 1/4" = 1'-0"

HS/HS LIBRARY TELECOM ROOM NOTES:

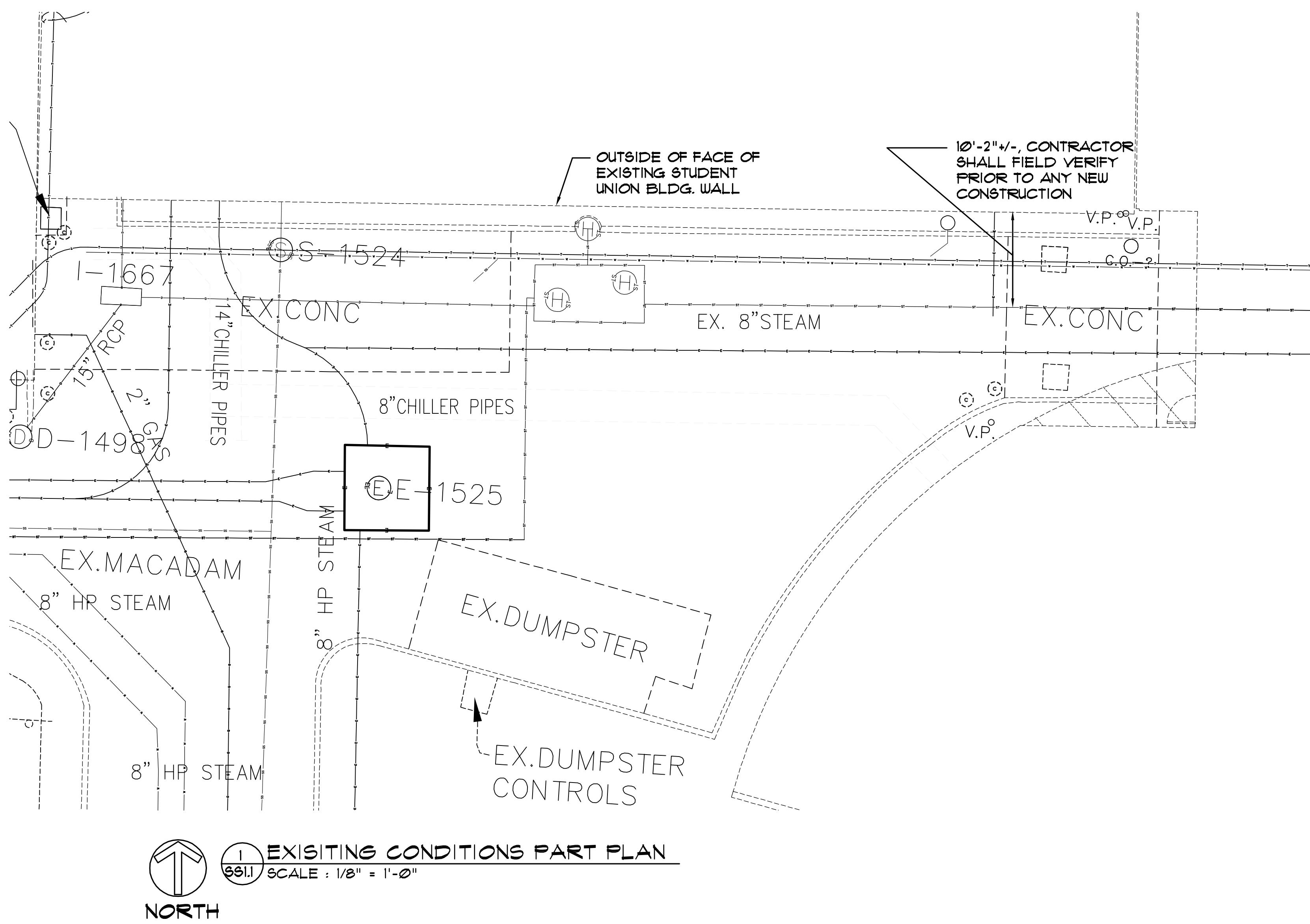
1. INSTALL (TERMINATE AND TEST) 48 CATEGORY 5E/6 CABLES, TERMINATED ON NEW PATCH PANELS, BETWEEN THE 2ND FLOOR NORTH TR EAST WALL AND THE 3RD FLOOR NORTH TR WEST WALL.
2. SCHEDULE DOWNTIME TO MOVE EXISTING 10 FIELDS FROM THE SOUTH WALL TO THE EAST WALL, LEAVING AS MUCH INTACT AS POSSIBLE.
3. UMB WILL MAKE ALL CROSS CONNECTIONS FOR DATA AND THEN REMOVE ALL EQUIPMENT, INCLUDING THE RACK FROM THE 2ND FLOOR NORTH TR.
4. AFTER CONSTRUCTION IS FINISHED, MOVE 10 FIELDS FROM EAST WALL TO SOUTH WALL. (REPLACE TO ORIGINAL POSITION).
5. UMB WILL RESTORE CONNECTIONS FOR DATA AND REPLACE ALL EQUIPMENT, INCLUDING THE RACK TO THE 2ND FLOOR NORTH TR.



1 TELECOM PLAN - GROUND FLOOR LIBRARY PARTIAL PLAN
 TD1.4 SCALE: 1/8" = 1'-0"

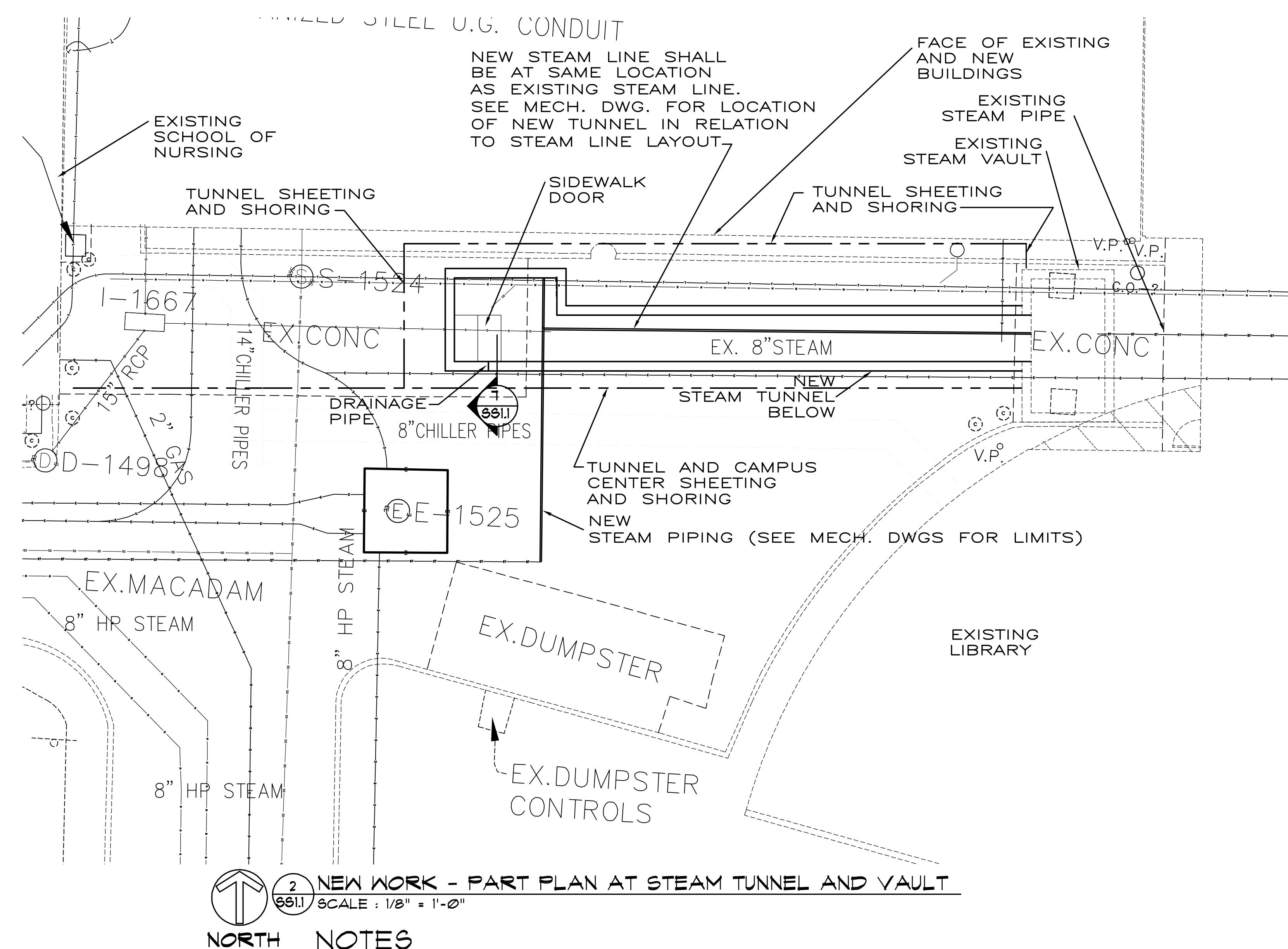
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NOTES

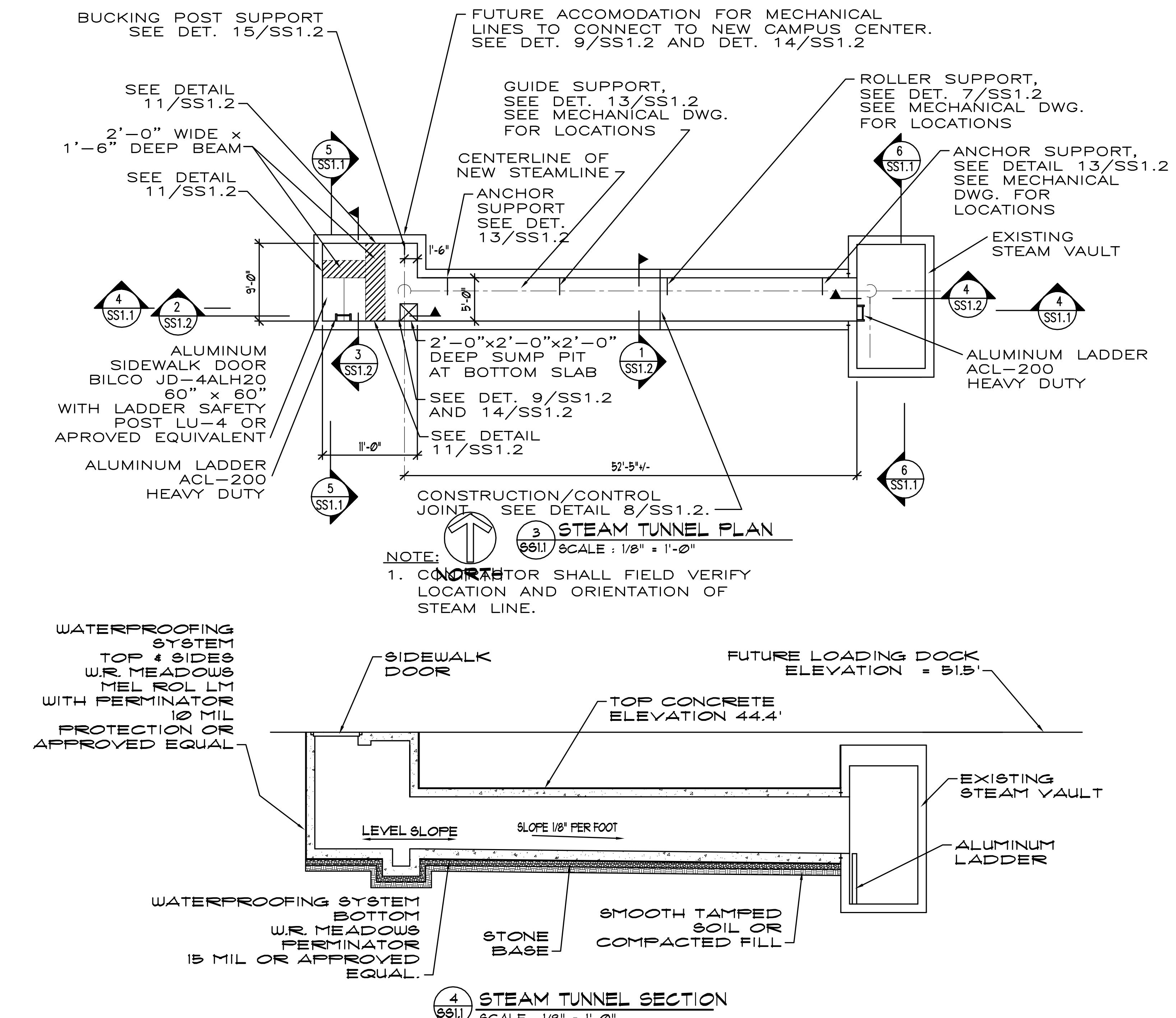
1. SEE MECHANICAL DRAWINGS FOR STEAM PIPING.
2. SEE SITE AND CIVIL DRAWINGS FOR SITE CONDITIONS.
3. SEE DEMOLITION DRAWINGS FOR OTHER WORK IN THIS AREA.
4. SEE MECHANICAL, ELECTRICAL, AND TELECOM DRAWINGS FOR WORK IN THIS AREA.



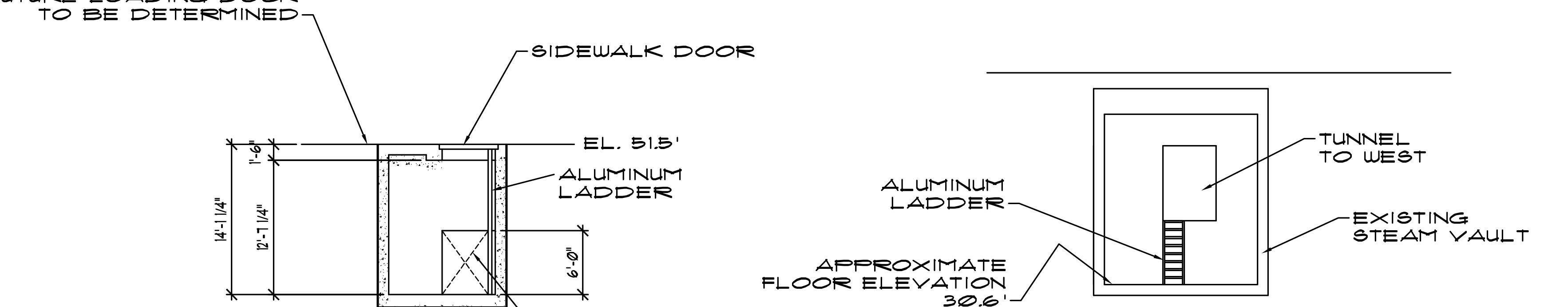
NORTH

NOTES

1. PROVIDE 8" LAYER OF #57 STONE UNDER TUNNEL AND VAULT SLAB.
2. DEWATER CONSTRUCTION SITE UNTIL ALL BACKFILL (INCLUDING BACKFILL OVERSTOP OF NEW TUNNEL) IS IN PLACE.
3. SEE DETAIL 10/SSI.2 FOR TYPICAL CONCRETE WALL CORNER REINFORCING.

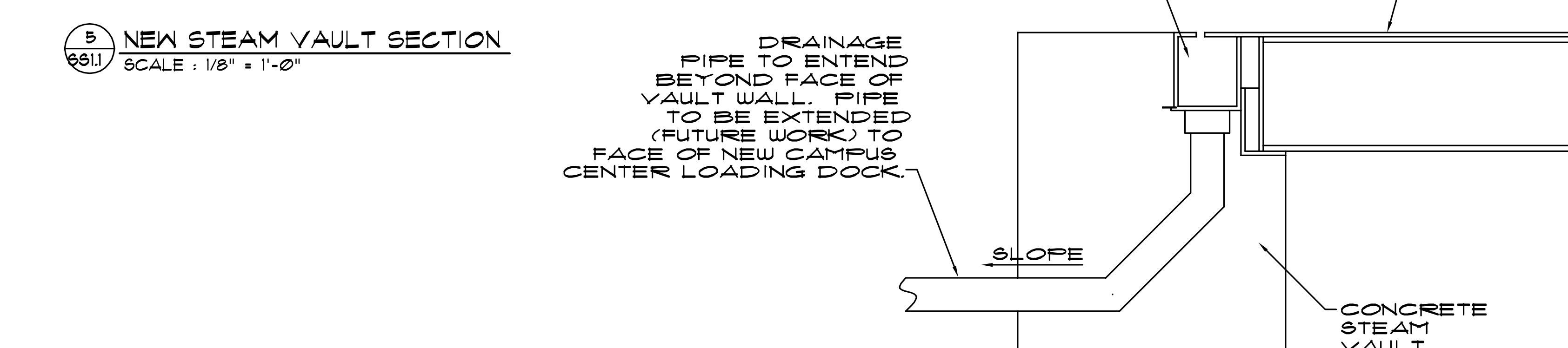


**SECTION - ELEVATION O
FLOOR - LOADING DOCK**



SMOOTH TAMPED
SOIL OR
COMPACTED FILL

STONE BASE -
WATERPROOFING SYSTEM
BOTTOM
W.R. MEADOW
PERMINATOR
15 MIL OR APPROVED



DRAINAGE
PIPE TO EXTEND
BEYOND FACE OF
VAULT WALL. PIPE
TO BE EXTENDED
(FUTURE WORK) TO
FACE OF NEW CAMPUS
CENTRAL LOADING DOCK

Steam Tunnel Plan And Section

100% CONSTRUCTION DOCUMENTS

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WTW PROJECT NO. 70-40
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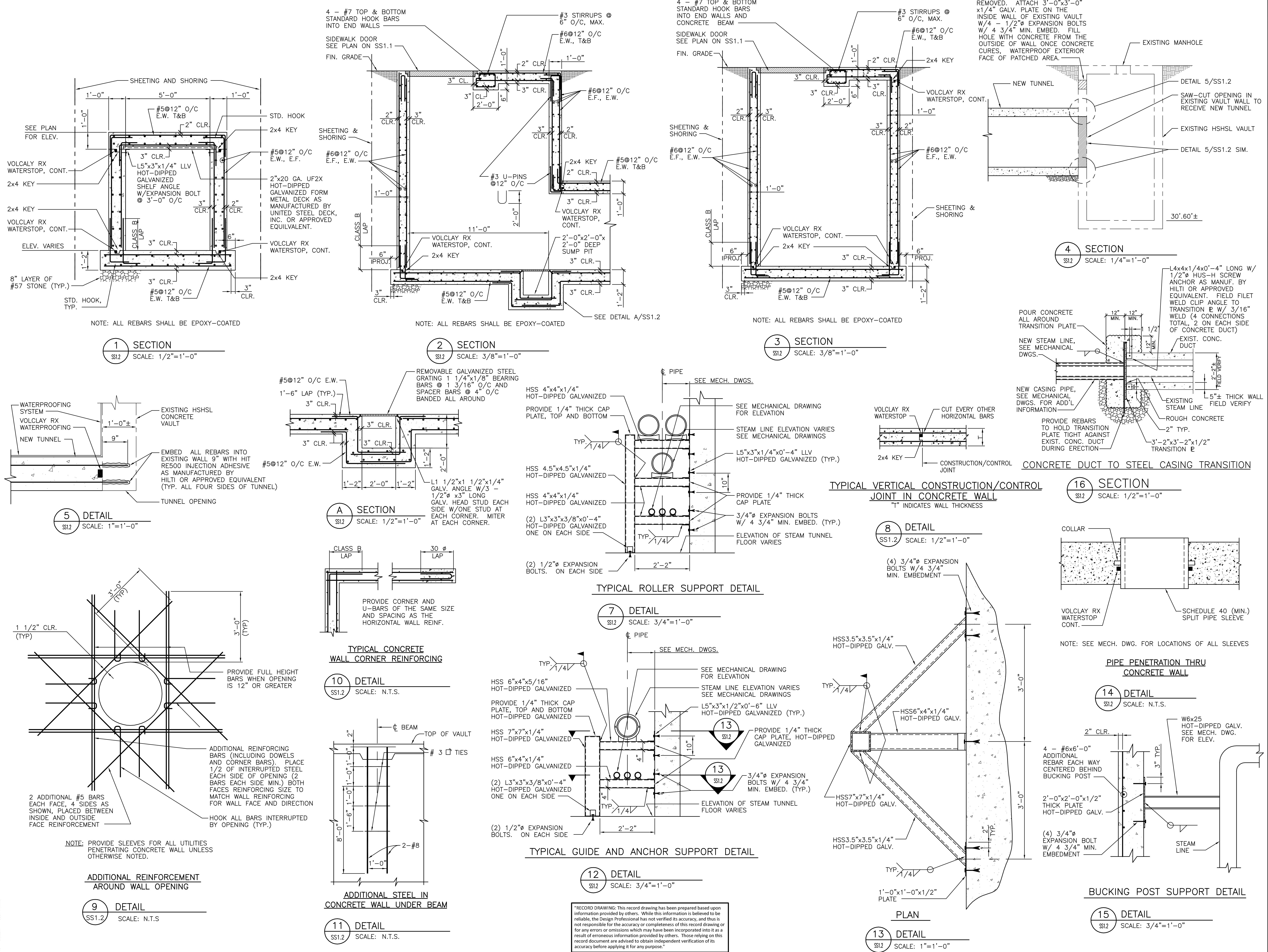


Steam Tunnel Sections And Details

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 DOCUMENTS

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 WTW PROJECT NO. 70-4091
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SS1.2



GENERAL NOTES

CODE:

- ALL WORK SHALL CONFORM WITH THE PROVISIONS OF THE 2003 IBC CODE.

DESIGN LOADS:

- TUNNEL AND VAULT DESIGNED FOR HS-20 LOADING.

BACKFILL:

- ALL EXCAVATION SHALL BE BACKFILLED WITH CR6 STONE. TAMP STONE IN 1 FOOT LIFTS.

GENERAL:

- THE CONTRACTOR SHALL FIELD CHECK AND VERIFY ALL DIMENSIONS AND ELEVATIONS OF EXISTING WORK PRIOR TO FABRICATION OF ANY NEW MATERIALS.
- THE CONTRACTOR IS ADVISED THAT ALL PLANS, DIMENSIONS, AND DETAILS DEPICT FIELD CONDITION AS SHOWN. MINOR VARIATIONS ARE TO BE EXPECTED AND ANY DEVIATIONS FROM THE CONTRACT DOCUMENTS SHALL BE APPROVED BY THE ENGINEER IN WRITING PRIOR TO PROCEEDING.

CONCRETE:

- ALL CONCRETE WORK SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF ACI SPECIFICATIONS, ACI 301 AND ACI 318.
- ALL CONCRETE PROVIDED SHALL HAVE A MINIMUM SPECIFIED 28 DAY COMPRESSIVE STRENGTH OF 5000 PSI. CONCRETE SHALL BE PROVIDED WITH TYPE 1-S PORTLAND BLAST FURNACE CEMENT, PROVIDE 60% PORTLAND CEMENT AND 40% NEWCEM, WITH 3% MAX. AIR ENTRAINMENT. WATER CEMENT RATIO SHALL NOT EXCEED .40 AFTER ADDING CORROSION INHIBITOR AND ADMIXTURES. SLUMP SHALL BE 8 INCHES WITH VERIFIED SLUMP OF 2 TO 4 INCHES BEFORE ADDING HIGH-RANGE WATER-REDUCING ADMIXTURE OR PLASTICIZING ADMIXTURE, PLUS OR MINUS 1 INCH.
- * CONCRETE FOR TUNNEL AND VAULT TOP SLABS SHALL BE PROVIDED WITH A CORROSION INHIBITOR. PROVIDE 4 GALLONS OF CORROSION INHIBITOR TO EACH CUBIC YARD OF CONCRETE. MANUFACTURER'S DIRECTION AND RECOMMENDATION SHALL BE STRICTLY FOLLOWED.
- * TOTAL AMOUNT OF WATER PROVIDED IN THE MIX DESIGN SHALL BE ADJUSTED TO COMPENSATE FOR THE WATER PROVIDED IN THE CORROSION INHIBITOR ADMIXTURE. WATER CEMENT RATIO AFTER THE CORROSION INHIBITOR IS ADDED SHALL NOT EXCEED .40.
- * APPROVED CORROSION INHIBITOR
 - 1) DCI-S AS MANUFACTURED BY W.R. GRACE.
 - 2) RHEOCRETE CNI AS MANUFACTURED BY MASTER BUILDER TECHNOLOGIES.
- * CONCRETE SHALL BE PROVIDED TO SITE SOON AS PRACTICAL.

- REINFORCING STEEL SHALL BE DEFORMED GRADE 60 BARS CONFORMING TO ASTM A-615. ALL REINFORCING STEEL SHALL BE EPOXY COATED IN ACCORDANCE WITH ASTM A-775. TOUCH UP SCRATCHED OR DAMAGED EPOXY COATING IN FIELD IN ACCORDANCE WITH EPOXY COATING MANUFACTURER'S RECOMMENDATION PRIOR TO CLOSING UP FORMWORK AND PLACING CONCRETE.
- SUBMIT CONCRETE MIX DESIGNS AND REINFORCING SHOP DRAWINGS FOR REVIEW BY ENGINEER. FIELD VERIFY ALL DIMENSIONS PRIOR TO REBAR FABRICATION. FIELD BENDING AND CUTTING OF REBAR IS PROHIBITED. CONCRETE CYLINDERS TO BE TAKEN AND TESTED BY AN INDEPENDENT TESTING FIRM.
- ALL EXPOSED CORNERS SHALL BE CHAMFERED 1" X 1". ALL KEYS ARE NOMINAL TIMBER SIZES.

- NON-SHRINK GROUT SHALL BE A HIGH STRENGTH NON-SHRINK GROUT CONSISTING OF A PREPACKAGED, NON-SHRINK HYDRAULIC CEMENT MIXTURE WITH A 7-DAY COMPRESSIVE STRENGTH OF 5,000 PSI MINIMUM. GROUT SHALL BE MASTERFLOW 713 BY MASTER BUILDERS OR EQUIVALENT APPROVED BY THE ENGINEER.
- MATERIALS, PROPORTIONING, PLACING, MIXING, FINISHING AND CURING SHALL BE IN ACCORDANCE WITH "STANDARD SPECIFICATIONS FOR STRUCTURAL CONCRETE FOR BUILDINGS" (ACI 301).

- APPLY TWO COATS OF HIGH SOLID PIGMENTED CURING COMPOUND TO TOP SIDE OF VAULT ROOF SLAB. COATS SHALL BE APPLIED IN OPPOSITE DIRECTIONS. CURING COMPOUND SHALL BE APPLIED UNDILUTED, DIRECTLY FROM LABELED CONTAINERS, AND IN STRICT ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS.
- UNLESS OTHERWISE NOTED, ALL SPLICES, BENDS, STANDARD HOOKS, AND OTHER DETAILING OF REINFORCING BARS SHALL BE DONE AS RECOMMENDED IN "DETAILS AND DETAILING OF CONCRETE REINFORCEMENT" (ACI 315).

9. WATERPROOFING: WATERPROOFING SHALL BE PROVIDED AS NOTED:

- WHERE PANEL ABUTS OR TERMINATES AGAINST CONCRETE WALLS, PROVIDE VOLCLAY HYDROBAR TUBES ALL AROUND.
- PROVIDE VOLCLAY WATERSTOP - RX PERFORMED BENTONITE WATERSTOP SYSTEM AT ALL CONSTRUCTION JOINTS IN THE CONCRETE WORK, AND AROUND ALL PIPE SLEEVES.
 - * PROVIDE Rx 101-3/4"x1" FOR CONCRETE THICKNESS GREATER THAN 8".
 - * PROVIDE Rx 102-3/8"x3/4" FOR CONCRETE THICKNESS 8" OR LESS.
- INSTALL ALL WATERPROOFING PER MANUFACTURER INSTALLATION INSTRUCTIONS AND RECOMMENDATIONS.

STRUCTURAL AND MISCELLANEOUS STEEL:

- ALL STRUCTURAL AND MISCELLANEOUS STEEL SHALL CONFORM TO ASTM A36 HAVING A MINIMUM YIELD STRENGTH OF 36,000 PSI OR ASTM-992 HAVING A MINIMUM YIELD STRENGTH OF 50,000 PSI. STEEL TUBES SHALL CONFORM TO ASTM A500 GRADE B, Fy=46,000 PSI.
- ALL STRUCTURAL AND MISCELLANEOUS STEEL SHALL BE DESIGNED IN ACCORDANCE WITH THE LATEST "SPECIFICATION FOR THE DESIGN, FABRICATION, AND ERECTION OF STRUCTURAL STEEL FOR BUILDINGS" OF THE AMERICAN INSTITUTE OF STEEL CONSTRUCTION (9TH EDITION).
- ALL WELDING SHALL BE PERFORMED BY AWS CERTIFIED WELDERS IN ACCORDANCE WITH THE REQUIREMENTS OF THE LATEST STRUCTURAL WELDING CODE, AWS D1.1. WELDING ELECTRODES SHALL BE E70XX.
- ALL WELDED CONNECTIONS SHALL BE TOUCHED UP AND COATED WITH 3 COATS OF HIGH - ZINC - DUST - CONTENT PAINT FOR REGALVANIZING WELDS AND REPAIR GALVANIZED STEEL, WITH DRY FILM CONTAINING NOT LESS THAN 93 PERCENT ZINC DUST BY WEIGHT, AND COMPLYING WITH DDD-P-21035A OR SSPC-PAINT 20.
- ALL EXPANSION BOLTS SHALL BE KWIK BOLT II EXPANSION ANCHOR ZINC COATED WITH 4 3/4" MINIMUM EMBEDMENT AS MANUFACTURED BY HILTI OR AN APPROVED EQUIVALENT, U.N.O.
- REPAIR DAMAGE TO GALVANIZED COATINGS USING ASTM A780 ZINC RICH PAINT FOR GALVANIZING DAMAGED BY HANDLING, TRANSPORTING, CUTTING, WELDING, OR BOLTING. DO NOT HEAT SURFACES TO WHICH REPAIR PAINT HAS BEEN APPLIED.
- THE USE OF GAS-CUTTING TORCH IN THE FIELD FOR CUTTING HOLES OR FOR CORRECTING FABRICATING ERRORS WILL NOT BE PERMITTED ON NEW STRUCTURAL FRAMING MEMBERS EXCEPT WITH THE WRITTEN APPROVAL OF THE ARCHITECT FOR EACH SPECIFIC CONDITION.
- GALVANIZING SHALL CONFORM TO ASTM A123.

- FIELD STRUCTURAL STEEL TO BE INSPECTED BY QUALIFIED INSPECTORS APPROVED BY THE STRUCTURAL ENGINEER AND RETAINED BY THE CONTRACTOR. FIELD INSPECTION REPORTS TO BE FILED WITH THE STRUCTURAL ENGINEER ENGINEER WITHIN 5 DAYS OF TIME OF ACTUAL INSPECTION. INSPECTORS MUST BE NOTIFIED OF ALL PHASES OF CONSTRUCTION AND WELDING BY GENERAL CONTRACTOR.

METAL DECKING:

- ALL METAL DECKING SHALL BE DESIGNED, FABRICATED AND ERECTED IN ACCORDANCE WITH THE LATEST EDITION OF THE "SPECIFICATION OF THE STEEL DECK INSTITUTE."
- ALL METAL DECK FORM SHALL BE GALVANIZED, 2" x 20 GAGE WIDE UF2X DECKING AS MANUFACTURED BY UNITED STEEL DECK INC. OR AN APPROVED EQUIVALENT.
- STEEL FOR DECK UNITS HAVING A ZINC-COATED FINISH SHALL CONFORM TO ASTM SPECIFICATION A611, GRADE C, D OR E WITH A HOT-DIP ZINC COATING CONFORM TO ASTM A525, G60 APPLIED BEFORE FORMING.
- ALL WELD AND BURN AREAS SHALL BE CLEANED AND PAINTED WITH AN APPROVED PRIMER.
- ALL METAL DECK SHALL BE INSPECTED BY AN AGENCY RETAINED BY THE OWNER. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO INFORM THE INSPECTION AGENCY OF THE PROGRESS OF THE STEEL ERECTION AND TO NOTIFY THE AGENCY 24 HOURS PRIOR TO A REQUESTED THE CONTRACTOR SHALL PROVIDE ANY ASSISTANCE REQUIRED BY THE INSPECTOR FOR THE COMPLETION OF HIS DUTIES.
- SHOP DRAWINGS FOR ALL WORK INCLUDING THIS SECTION SHALL BE PREPARED BY THE SUPPLIER OF THE METAL DECK. OBTAIN APPROVAL OF DRAWINGS PRIOR TO FABRICATING ANY MATERIAL OR PROCEEDING WITH ANY OF THE WORK INSPECTION. INSPECTION. THE CONTRACTOR SHALL PROVIDE ANY ASSISTANCE REQUIRED BY THE INSPECTOR FOR THE COMPLETION OF HIS DUTIES.
- SHOP DRAWINGS SHALL INDICATE SIZE AND LOCATION OF FRAMING SUPPORTS AND LOCATION, LENGTH AND MARKINGS OF DECK UNITS TO CORRESPOND WITH THE SEQUENCE OF INSTALLATION. DRAWINGS SHALL INDICATE FASTENING METHODS FOR DECK UNITS, ACCESSORIES, INCLUDING CLOSURE PIECES, FITTINGS, AND THE TYPE AND SEQUENCE OF WELDED CONNECTIONS. INDICATE WELDS BY STANDARD WELDING SYMBOLS ADOPTED BY THE AMERICAN WELDING SOCIETY.
- SUBMIT MANUFACTURER'S SPECIFICATIONS AND INSTALLATION INSTRUCTIONS FOR EACH TYPE OF DECKING AND ACCESSORIES.

OTHER:

- REFER TO MECHANICAL PLANS FOR INFORMATION REGARDING STEAM PIPING PROFILES IN THE TUNNEL AND VAULT.
- CONTRACTOR IS ADVISED THAT UTILITIES ARE PRESENT IN AND AROUND THE EXCAVATION THAT IS REQUIRED TO INSTALL THE NEW WORK. CONTRACTOR SHALL PROCEED WITH CAUTION WHEN EXCAVATING TO LOCATE ANY EXISTING UTILITIES.
- CONTRACTOR IS COMPLETELY RESPONSIBLE FOR DESIGN AND INSTALLATION OF ALL SHEETING AND SHORING SYSTEMS, SUPPORT AND MAINTENANCE OF EXISTING UTILITY SYSTEMS, MAINTENANCE OF TRAFFIC, AND COMPLIANCE WITH ALL CONSTRUCTION SAFETY REQUIREMENTS OF REGULATORY AGENCIES.
 - THE SHEETING AND SHORING DESIGN, WITH ITS CALCULATIONS, SHALL BE SIGNED AND SEALED BY A PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF MARYLAND.
 - THE SHEETING AND SHORING DESIGN SHALL INCLUDE ALL CONSTRUCTION LOADING, SURCHARGE LOADS, EARTH PRESSURE FORCES AND ANCHOR FORCES. SHEETING AND SHORING DESIGN SHALL INCLUDE CONSTRUCTION SEQUENCES.
- DO NOT BACKFILL TUNNEL UNTIL TOP OF TUNNEL IS COMPLETED AND ALL CONCRETE HAS OBTAINED SPECIFIED 28 DAY CONCRETE COMPRESSION STRENGTH AS DETERMINED BY CONCRETE CYLINDER BREAKS, SPECIFIED UNDER CONCRETE NOTE #5.
- CONTRACTOR IS ADVISED THAT THE CONCRETE TUNNEL AND VAULT MAY BECOME BUOYANT DURING CONSTRUCTION. MAINTAIN Dewatering UNTIL ALL BACKFILL (INCLUDING BACKFILL OVER TOP OF NEW TUNNEL) IS IN PLACE.
- CONTRACTOR SHALL VERIFY CLEARANCE ENVELOPE AND ALL DIMENSIONS FOR ALL PIPING, AND ACCESSORIES IN TUNNEL AND VAULT PRIOR TO BEGINNING CONSTRUCTION. OBTAIN APPROVAL OF ENGINEER FOR ANY INTERFERENCE OR CHANGES REQUIRED FOR INSTALLATION OF STEAM PIPING SYSTEM.
- CONTRACTOR SHALL UTILIZE SAFETY EQUIPMENT AND PERSONAL PROTECTIVE EQUIPMENT AT ALL TIMES.
- CONTRACTOR SHALL PERFORM ALL WORK NEEDED TO COMPLETE THIS PROJECT. THIS INCLUDES, BUT IS NOT LIMITED TO, EXCAVATIONS FOR NEW EQUIPMENT, REMOVAL OF OLD EQUIPMENT, AND ANY OTHER WORK THAT NEEDS TO BE COMPLETED.
- CONTRACTOR SHALL SET UP AND IMPLEMENT APPROPRIATE LANE CLOSURE AND NEW TRAFFIC PATTERN SIGNS, WALKWAY CLOSURE, WARNING DEVICES, ETC.
- CONTRACTOR SHALL PROVIDE CONCRETE BARRICADES AND CHAIN LINK FENCING AS REQUIRED TO PROTECT THE PUBLIC.
- CONTRACTOR SHALL BE RESPONSIBLE FOR THE REMOVAL OF ANY UNDERGROUND STRUCTURES THAT ARE IN THE EXCAVATION.
- THE EXCAVATION MAY CONTAIN FLOWABLE FILL MATERIAL THAT WILL NEED TO BE REMOVED.
- CONTRACTOR SHALL MAINTAIN EXCAVATION Dewatering.
- CONTRACTOR SHALL INSTALL FOAM GLASS INSULATION PROVIDED BY TRIGEN OVER NEW WORK.
- CONTRACTOR WILL CLEAN THE AREA AND REMOVE ALL DEBRIS FOR COMPLETION OF WORK.

0 6/27/06 Issued for Bid
 Rev. Date: Comment:
 Issued: June 27, 2006

Campus Center

West Lombard Street
 University of Maryland, Baltimore
 Baltimore, MD



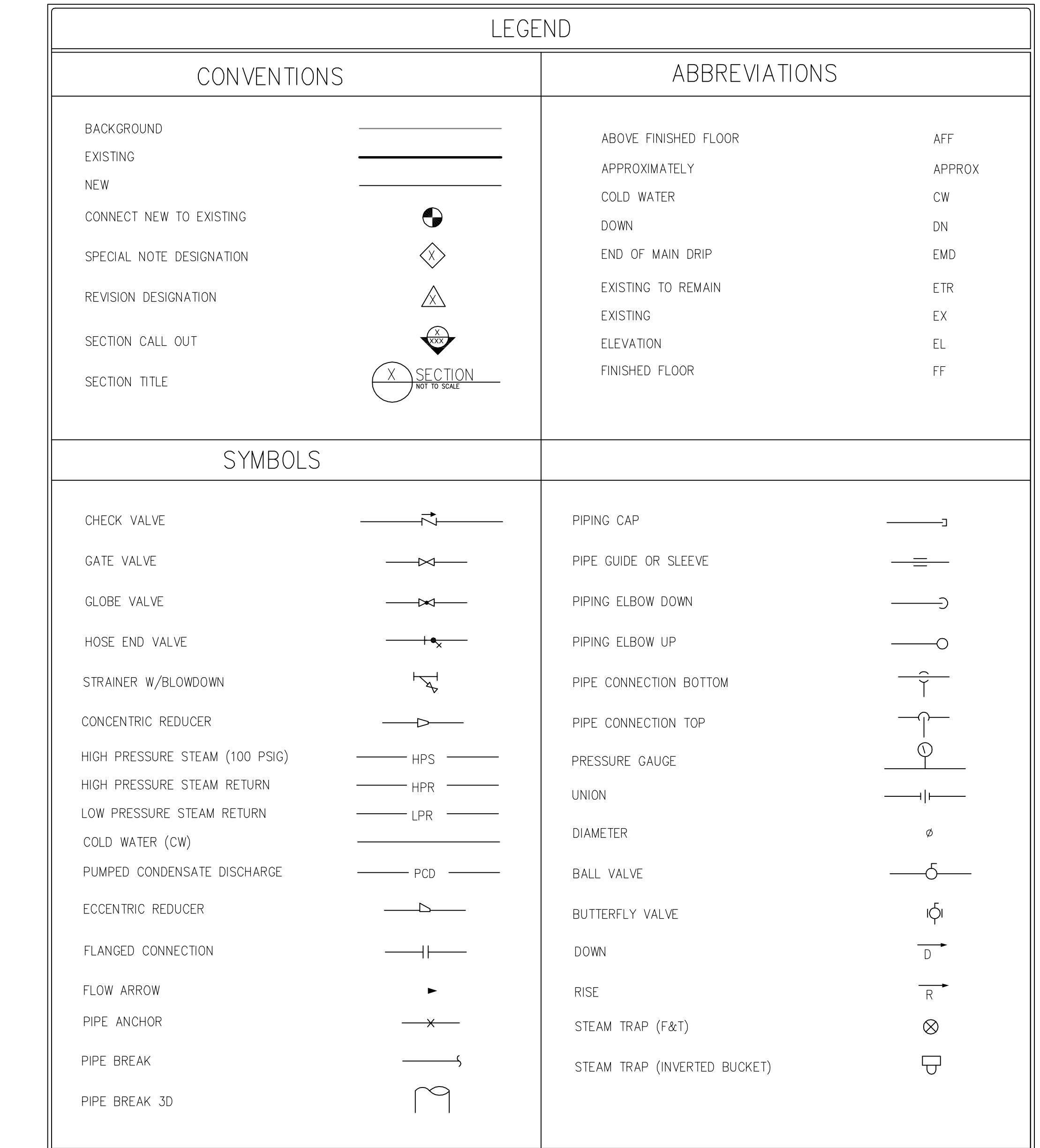
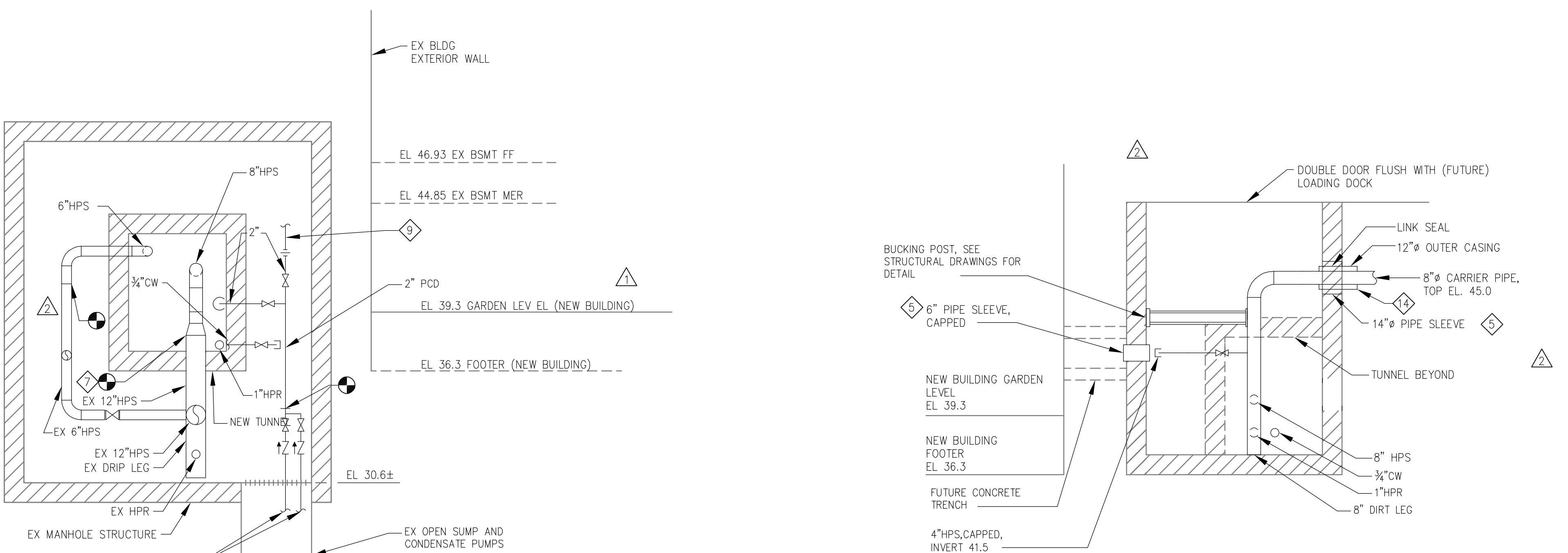
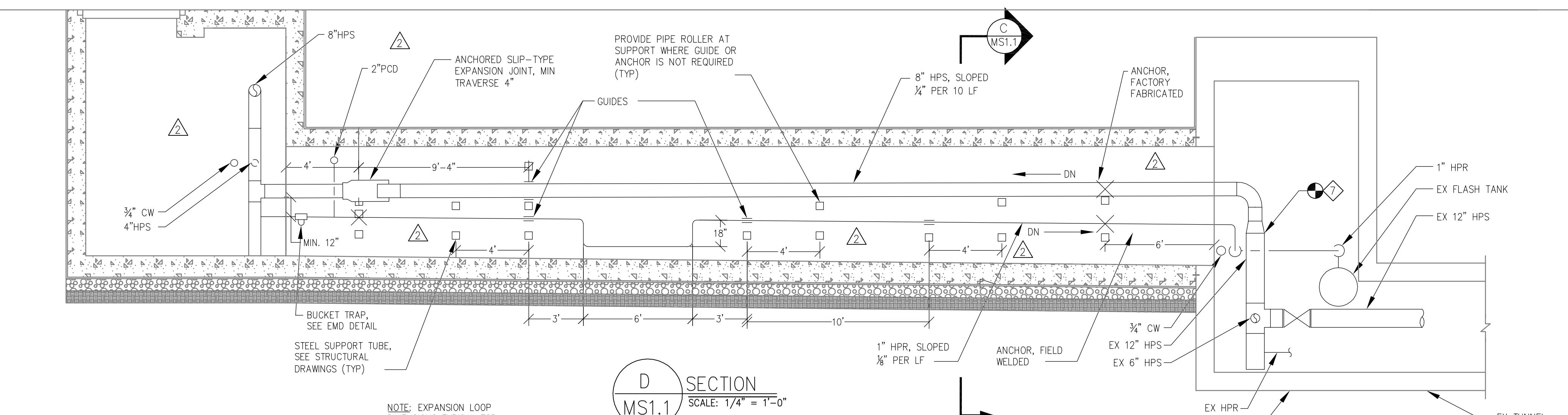
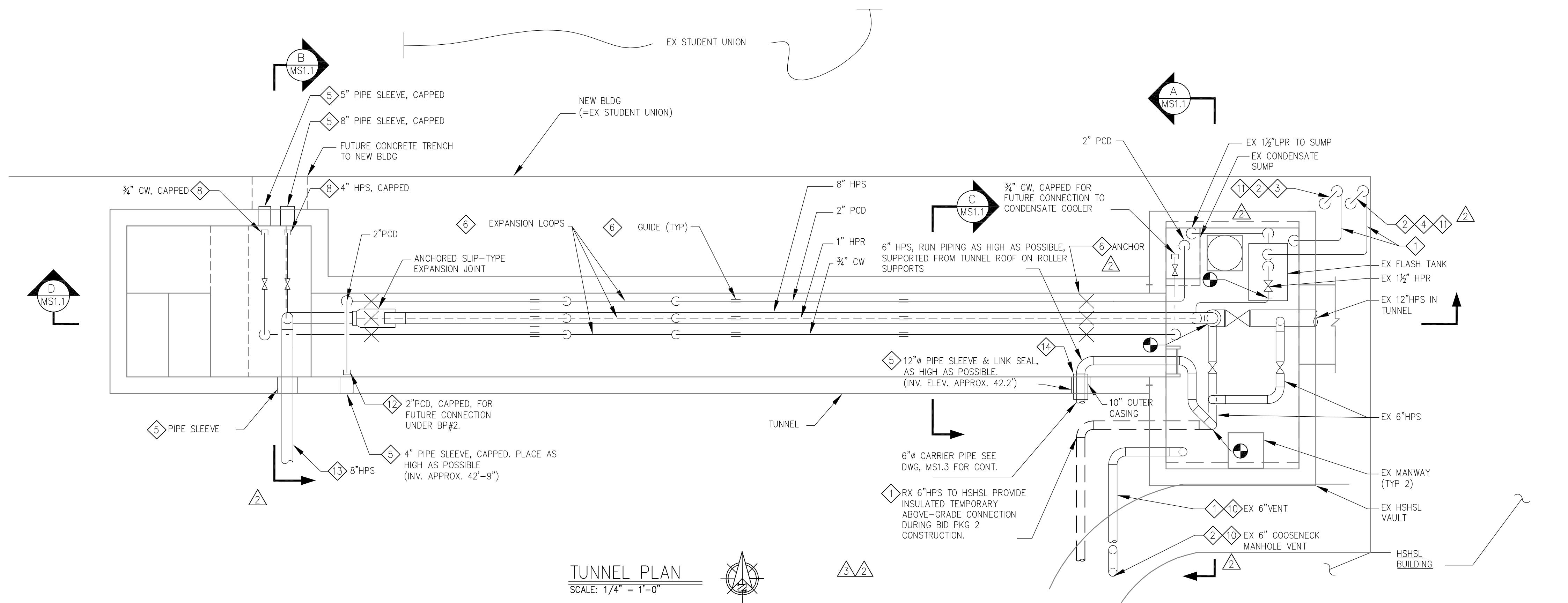
Steam Tunnel General Notes

100%
 CONSTRUCTION DOCUMENTS

UMB PROJECT NO. 99-311
 WTW PROJECT NO. 70-4091
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IF THIS DRAWING DOES NOT MEASURE EXACTLY 30" X 42", IT HAS BEEN REDUCED OR ENLARGED. PLEASE DO NOT SCALE THIS DRAWING.

SS1.3



◆ SPECIAL NOTES:

1 BELOW GRADE

2 ABOVE GRADE

3 EX 6" GOOSENECK MANHOLE VENT

4 EX 3" GOOSENECK FLASH TANK VENT

5 SEE STRUCTURAL DRAWINGS FOR WATERSTOP AND WATERPROOFING DETAIL.

6 FACTORY FABRICATED. SEE STRUCTURAL DRAWINGS FOR SUPPORTS.

7 CONTRACTOR SHALL COORDINATE REMOVAL OF EXISTING 12" HPS WITH DEMOLITION WORK INDICATED ON DWG. MPD1.1.

8 FINAL CONNECTIONS TO BE PROVIDED UNDER BID PACKAGE 3.

9 TEMPORARY 2" HIGH-TEMPERATURE FLEX HOSE TO TEMPORARY SKID-MOUNTED CONDENSATE HOLDING TANK. HOSE SHALL BE PROTECTED FROM DAMAGE DUE TO SITE WORK IN THE AREA.

a. TANK SHALL BE CARBON STEEL, NON-CODE VESSEL, FACTORY SKID-MOUNTED, MIN CAPACITY 2000 GAL (APPROX 12'Lx6'Ø), WITH (2) MANWAY ACCESS MANHOLES AND A 2" THREADED CONNECTION NEAR BOTTOM FOR DRAIN HOSE AND/OR PUMPOUT EQUIPMENT CONNECTION. TANK LOCATION SHALL BE CONTRACTOR-COORDINATED TO ACCOMMODATE ONGOING SITE WORK AND ACCESS FROM STREET FOR PUMPOUT (APPROX ONCE PER WEEK UNTIL NEW STEAM LINE IS ACTIVE, THEN TWICE PER WEEK). TANK SHALL BE AS MANUFACTURED BY CEMLINE CORPORATION OR APPROVED EQUAL.

b. TANK SHALL BE FIELD INSULATED WITH 1" FLEXIBLE BLANKET TYPE FIBERGLASS INSULATION, MANVILLE 800 SPIN-GLAS SERIES OR APPROVED EQUAL, WITH ALUMINUM JACKETING, 0.016" MINIMUM THICKNESS, SEALED AND POINTED AGAINST WATER INCURSION.

c. TANK SHALL BE ELECTRICALLY HEAT TRACED TO MAINTAIN TANK SURFACE TEMPERATURE OF 40F. POWER SHALL BE PROVIDED BY CONTRACTOR FROM TEMPORARY POWER SOURCE (ONE 20A CIRCUIT AT 120V). HEAT TRACING CABLE SHALL BE SELF-REGULATING TYPE, MODEL LIMITRACE-HLT BY NELSON HEAT TRACE OR APPROVED EQUAL, SUITABLE FOR NON-INTERMITTENT METAL TEMPERATURES UP TO 225F. THERMOSTATIC CONTROL SHALL BE NELSON MODEL TA4X140, WHICH SHALL TURN ON HEAT TRACING WHEN AMBIENT TEMPERATURES ARE BELOW FREEZING. HEAT TRACE CABLING SHALL BE RATED FOR 5W/FT AT 120V, INSTALLED ON LOWER HALF OF TANK WITH MAXIMUM 6" BETWEEN CABLE RUNS (APPROX 250LF).

10 REPLACE WITH TEMPORARY ABOVE-GRADE PIPING DURING BID PACKAGE 2 CONSTRUCTION. PERMANENT REPLACEMENT WILL BE UNDER BID PKG 3.

11 TO BE REPLACED UNDER BID PKG 3.

12 SEE BID PKG 2 DRAWINGS FOR CONTINUATION AND INVERT.

13 SEE DWG. MS1.3 FOR CONTINUATION.

14 TERMINATE AND VENT OUTER CASING PER

PS

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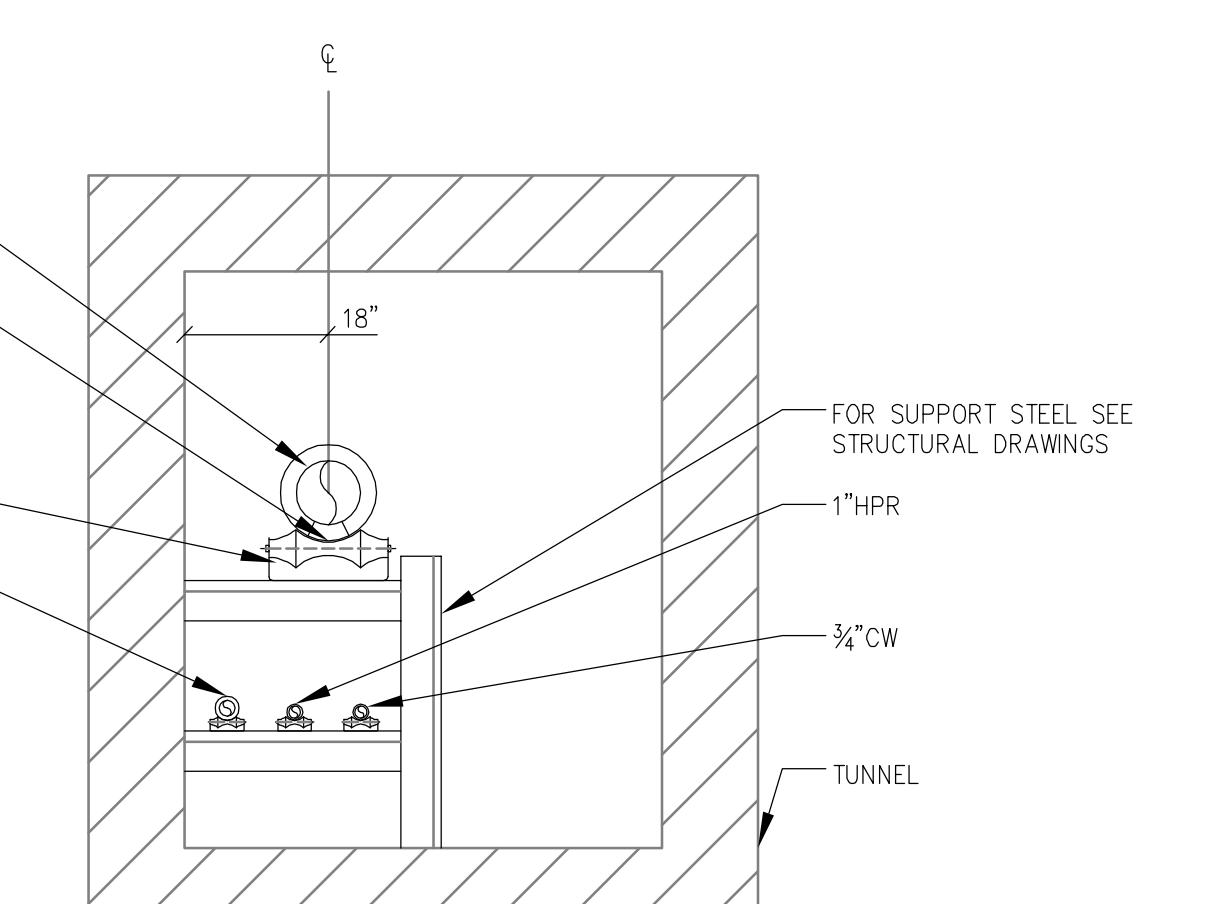
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NOTE: CONTRACTOR SHALL ADJUST HEIGHT OF HORIZONTAL STEEL SUPPORTS TO ACCOMODATE VARYING HEIGHTS OF PIPE ROLLERS, ANCHORS, GUIDES AND PIPE SLOPE REQUIREMENTS.

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1. GENERAL:

- A. VERIFY ALL EXISTING UTILITIES AND POINTS OF CONNECTION BEFORE STARTING NEW WORK.
- B. ALL MATERIAL SHALL BE NEW AND SHALL BE OF FIRST QUALITY. THE QUALITY OF WORKMANSHIP SHALL BE THE FINEST AND INDEX OF QUALITY IN EACH TRADE. WORKMANSHIP SHALL BE ACCEPTABLE TO THE OWNER AND HIS DECISION AS TO ACCEPTABLE QUALITY IS FINAL; UNACCEPTABLE WORK SHALL BE REMOVED AND REPLACED AT THE CONTRACTOR'S EXPENSE.
- C. THE CONTRACT DRAWINGS ARE DIAGRAMMATIC AND INDICATE THE GENERAL ARRANGEMENT OF SYSTEMS AND WORK INCLUDED IN THE CONTRACT. DO NOT SCALE THE DRAWINGS. FIELD VERIFY EXISTING CONDITIONS.
- D. THE CONTRACTOR SHALL MAKE EVERY EFFORT TO SEE FORTH IN THE CONSTRUCTION AND CONDUCT DOWNTIME AS PER THE SCOPE OF THE WORK. THE CONTRACTOR IS HEREBE CAUTIONED THAT MINOR OMISSIONS OR ERRORS IN THE DRAWINGS AND/OR SPECIFICATIONS SHALL NOT EXCUSE SAID CONTRACTOR FROM COMPLETING THE PROJECT IN ACCORDANCE WITH THE INTENT OF THESE DRAWINGS.

- E. THOROUGHLY EXAMINE THE ARCHITECTURAL, STRUCTURAL AND CIVIL DRAWINGS PRIOR TO COMMENCEMENT OF ANY WORK. COORDINATE WORK WITH ALL OTHER TRADES.
- F. WORK OCCURS IN AN OCCUPIED AREA. ALL AREAS ADJACENT TO THE CONSTRUCTION SITE WILL REMAIN OCCUPIED. CONTRACTOR SHALL MAINTAIN ALL UTILITY SERVICES TO ADJACENT AREAS.
- G. UTILITY SHUTDOWNS SHALL OCCUR ONLY WITH PRIOR APPROVAL OF THE OWNER. SUBMIT PROPOSED SCHEDULE AT LEAST 10 DAYS PRIOR TO SHUTDOWN DATE. UTILITY SHUTDOWNS SHALL BE IMPLEMENTED ONLY BY THE OWNER.

2. CODES, REGULATIONS AND PERMITS:

- A. PERFORM ALL MECHANICAL WORK IN ACCORDANCE WITH ALL APPLICABLE CODES AND UNIVERSITY OF MD REQUIREMENTS.

3. GUARANTEE:

- A. THE CONTRACTOR GUARANTEES BY HIS ACCEPTANCE OF THE CONTRACT THAT ALL WORK PROVIDED SHALL BE FREE FROM DEFECTS IN WORKMANSHIP AND MATERIALS FOR A PERIOD OF TWO (2) YEARS AFTER DATE OF CERTIFICATE OF COMPLETION AND ACCEPTANCE OF WORK BY THE OWNER.
- B. ANY DEFECTS IN WORKMANSHIP, MATERIALS OR PERFORMANCE, WHICH APPEAR WITHIN THE GUARANTEE PERIOD, SHALL BE CORRECTED BY THE CONTRACTOR WITHOUT ADDITIONAL COST TO THE OWNER.

4. SHOP DRAWINGS:

- A. SUBMIT FOR APPROVAL MINIMUM COPIES OF EACH SHOP DRAWING AS SPECIFIED, SEE DIVISION 1 SPECIFICATIONS. EACH ITEM OF EQUIPMENT AND MATERIALS PROPOSED SHALL BE A STANDARD CATALOG PRODUCT OF THE APPROVED MANUFACTURER. SHOP DRAWINGS SHALL BE CLEARLY MARKED TO INDICATE WHAT OPTIONS ARE BEING PROVIDED. INSTALL WORK ONLY AFTER SHOP DRAWINGS ARE RECEIVED MARKED "APPROVED" OR "COMMENTS NOTED".

- B. SHOP DRAWINGS SHALL INCLUDE THE FOLLOWING MATERIALS AND EQUIPMENT AT A MINIMUM. ADDITIONAL SUBMITTALS MAY BE REQUIRED AT THE ENGINEER'S DISCRETION:

- 1) PIPING AND SPECIALTIES
- 2) VALVES
- 3) PIPE INSULATION
- 4) ANCHORS, GUIDES, PIPE SUPPORTS
- 5) EXPANSION JOINTS

- 6) WELDER QUALIFICATION CERTIFICATES, APPLICABLE TO ACTUAL PERSONNEL TO BE USED ON THE PROJECT. DOCUMENTATION MUST INCLUDE RECORD OF SIMILAR WORK OR RE-QUALIFICATION, HAVING OCCURRED WITHIN THE LAST SIX MONTHS.

- 7) PRIOR TO INSTALLATION OF PIPING, CONTRACTOR SHALL SUBMIT A SCALE COORDINATION DRAWING OF PIPING IN NEW TUNNEL (MINIMUM 1/2" SCALE), BASED ON SECTION D ON DWG. MS1.1, SHOWING ALL PIPING SUPPORTS, ANCHORS, GUIDES, AND REQUIRED SLOPE FOR HPS AND HPR PIPING.

5. AS-BUILT DRAWINGS:

- A. CONTRACTOR SHALL KEEP ACCURATE RECORDS OF ALL DEVIATIONS IN WORK AS ACTUALLY INSTALLED FROM WORK INDICATED.
- B. WHEN WORK IS COMPLETE, CONTRACTOR SHALL MAKE ONE (1) COMPLETE "AS-BUILT" SET OF MARK-UP PRINTS AND DELIVER TO THE ARCHITECT FOR APPROVAL, WITH CONTRACTOR'S SIGNATURE CERTIFYING "AS-BUILT" CONDITIONS.

6. WELDING:

- A. WELDING PIPING SHALL COMPLY WITH THE PROVISIONS OF THE LATEST REVISION OF THE ASME CODE FOR PRESSURE PIPING, ANSI/ASME B31.1 – POWER PIPING, AND ANSI/ASME B31.9 – BUILDING SERVICE PIPING.

- 1) REQUIREMENTS FEDERAL, STATE OR LOCAL AGENCIES HAVING LEGAL JURISDICTION MAY REQUIRE THAT SUCH PIPING CODES BE FOLLOWED IN LIEU OF THE ABOVE ANSI/ASME CODES.

- B. ALL STATE, COUNTY, AND CITY FIRE PREVENTION CODE REQUIREMENTS, FIRE AND SAFETY REGULATIONS, AND NFPA 241 SHALL BE COMPLIED WITH, INCLUDING THE PROVISION OF APPROPRIATE PORTABLE FIRE EXTINGUISHERS.

- C. TEMPORARY VENTILATION SHALL BE PROVIDED IN THE TUNNEL DURING WELDING ACTIVITIES.

- D. PROVIDE SINGLE-VEE TYPE BUTT WELDS. BUTT WELD JOINTS SHALL BE MADE WITH BACKING RIBS OF MATERIALS COMPATIBLE WITH MATERIALS BEING JOINED. JOINT CONFIGURATION SHALL CONFORM TO ANSI B16.25.

- E. BEFORE ANY WELDER SHALL PERFORM ANY WELDING, SUBMIT TO THE OWNER, OR HIS AUTHORIZED REPRESENTATIVE, A COPY OF THE WELDING COMPANY'S RECORD OF WELDER OR WELDING OPERATOR QUALIFICATION TESTS AS REQUIRED BY SECTION IX OF THE ASME BOILER AND PRESSURE VESSEL CODE.

- F. THE TYPES AND EXTENT OF NON-DESTRUCTIVE EXAMINATIONS REQUIRED FOR PIPE WELDS ARE AS PROVIDED IN TABLE 12.2 OF THE ASME CODE FOR PRESSURE PIPING, ANSI/ASME B31.1-POWER PIPING. IF REQUIREMENTS FOR NONDESTRUCTIVE EXAMINATIONS ARE TO BE OTHER THAN THAT STATED ABOVE, THE DEGREE OF EXAMINATION AND BASIS OF REJECTION SHALL BE A MATTER OF PRIOR WRITTEN AGREEMENT BETWEEN THE FABRICATOR OR CONTRACTOR AND THE PURCHASER.

- G. WHEN REQUESTED BY THE ENGINEER, SUBMIT IDENTIFYING STENCILED TEST COUPONS MADE BY ANY WELDER IN QUESTION. THE CONTRACTOR SHALL REQUIRE ANY WELDER TO RETAKE THE TESTS WHEN, IN THE OPINION OF THE ENGINEER, THE WORK OF THE WELDER INDICATES A REASONABLE DOUBT AS TO HIS PROFESSIONALITY. TESTS WHEN REQUESTED SHALL BE CONDUCTED AT NO ADDITIONAL EXPENSE TO THE OWNER; AND THE WELDER IN QUESTION SHALL NOT BE PERMITTED TO WORK AS A WELDER ON THIS PROJECT UNTIL HE HAS BEEN REQUALIFIED.

- H. WITHOUT COST TO THE OWNER, CHECK WELDS BY RADIOPGRAPH, ULTRASONIC TESTING, SECTIONING OR A COMBINATION OF THESE METHODS WHENEVER THERE IS A QUESTION RAISED BY THE ENGINEER AS TO THE QUALITY OF A WELD; EXAMINATION OF EXISTING WELDS SHALL NOT BE CONDUCTED UNLESS RELATED TO OTHER SYSTEM TESTS SPECIFIED. WELDS SHALL HAVE PENETRATION COMPLETE TO THE INSIDE DIAMETER OF THE PIPE AND THE RECOMMENDED SPACING AND BEVELS. BETWEEN ENDS OF PIPE PRIOR TO WELDING SHALL BE USED IN ALL CASES TO ASSURE FULL PENETRATION.

7. ALTERATIONS AND REMOVAL:

- A. EXISTING MECHANICAL EQUIPMENT, PIPING, AND DUCTWORK, ETC., AFFECTED BY REMOVAL, NEW WORK INSTALLATION AND REQUIRED TO REMAIN IN SERVICE SHALL BE REINSTALLED OR SUPPORTED AS REQUIRED IN ACCORDANCE WITH NEW WORK SPECIFICATION. ALL WORK SHALL BE COMPLETED TO THE ARCHITECT'S SATISFACTION AND AT NO ADDITIONAL COST TO THE OWNER.

- B. EXISTING CONDITIONS INDICATED (E.G. DUCTWORK, PIPING, EQUIPMENT, ETC.), WERE OBTAINED FROM AVAILABLE RECORD DRAWINGS AND FIELD VERIFIED TO THE EXTENT PRACTICABLE. THEY ARE NOT WARRANTED TO BE COMPLETE OR CORRECT. CONTRACTOR SHALL VERIFY EXACT LOCATION OF ALL DUCTWORK, PIPING, AND STRUCTURAL ELEMENTS ETC., IN THE FIELD PRIOR TO STARTING ANY WORK.

- C. UNDER NO CONDITIONS SHALL EXISTING PIPING SYSTEMS BE LEFT OPEN FOR ANY EXTENDED PERIOD OF TIME. CAP EXISTING PIPING IMMEDIATELY.

- D. WHERE EXISTING WORK IS TO BE REMOVED, REMOVAL SHALL INCLUDE ALL ASSOCIATED HANGARS, SUPPORTS, ACCESSORIES, PIPING SPECIALTIES, CONTROLS, MOTORS, ELECTRICAL CONNECTIONS, ETC.

- E. WHERE PATCHING OF EXISTING OPENINGS IS REQUIRED BY THE WORK, ETC., SUCH WORK SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR AND ALL COSTS SHALL BE INCLUDED IN THE CONTRACT.

8. CUTTING AND PATCHING:

- A. CUTTING AND PATCHING ASSOCIATED WITH NEW AND EXISTING WORK SHALL BE PERFORMED IN A NEAT AND WORKMANLIKE MANNER. EXISTING SURFACES WHICH ARE DAMAGED BY THE CONTRACTOR SHALL BE REPAVED OR PROVIDED WITH NEW MATERIALS TO MATCH EXISTING. STRUCTURAL MEMBERS SHALL NOT BE CUT OR PENETRATED.
- B. ALL PATCHING SHALL BE DONE WITH MATERIALS AND METHODS SIMILAR TO EXISTING ADJACENT WORK, SUBJECT TO APPROVAL OF THE ARCHITECT AND OWNER. WHOSE DECISION SHALL BE FINAL.
- C. CONCRETE AND MASONRY SHALL BE CUT BY RECIPROCATING OR ROTARY, NON-PERCUSIVE METHODS. CONTRACTOR SHALL PERFORM SUCH WORK AT TIMES DESIGNATED BY THE OWNER.

9. SLEEVES AND PLATES:

- A. SLEEVES SHALL BE PROVIDED FOR ALL PIPES PASSING THROUGH BUILDING CONSTRUCTION MATERIALS. PIPING SLEEVES THROUGH CONCRETE AND MASONRY SHALL BE SCHEDULE 40 STEEL PIPE. SEE STRUCTURAL DRAWING SS1.2 FOR FURTHER INFORMATION.
- B. PIPES WITHIN SLEEVES SHALL BE SEALED WATERTIGHT WITH UNISEAL OR EQUAL MODULAR SEAL SUITABLE FOR TEMPERATURES UP TO 400°.

10. ACCESSIBILITY:

- A. LOCATE ALL EQUIPMENT WHICH MUST BE SERVICED, OPERATED OR MAINTAINED IN FULLY ACCESSIBLE POSITIONS.

11. OPERATING AND MAINTENANCE INSTRUCTIONS AND MANUALS:

- A. CONTRACTOR SHALL FURNISH TO THE OWNER THREE (3) COMPLETE BOUND SETS OF APPROVED SHOP DRAWINGS AND MANUFACTURER'S STANDARD INSTRUCTIONS FOR OPERATING AND MAINTAINING ALL SYSTEMS AND EQUIPMENT INCLUDED IN THIS CONTRACT.

12. IDENTIFICATION:

- A. PIPING SHALL BE IDENTIFIED WITH ENGRAVED LAMINATED BLACK AND WHITE PHENOLIC PLATES, OR OTHER MATERIALS SUITABLE FOR HIGH TEMPERATURE ENVIRONMENTS (UP TO 225°F). LABELS SHALL BE HUNG ON PIPING USING SMALL STAINLESS STEEL HANGERS. EACH PLATE SHALL BE LOCATED AT THE MIDPOINT OF THE TUNNEL. LABELS SHALL HAVE MINIMUM 1" HIGH LETTERS WITH DIRECTION OF FLOW INDICATED, AND DESIGNATIONS SHALL BE AS FOLLOWS:

SERVICE, COLOR, DESIGNATION
DOMESTIC, COLD, WATER, GREEN, COLD, WATER
HIGH PRESSURE, STEAM, YELLOW, HPS
HIGH PRESSURE, STEAM, CONDENSATE, YELLOW, HPR
PUMPED CONDENSATE, YELLOW, PUMPED CONDENSATE

13. PIPE, FITTINGS AND JOINTS:

- A. PIPING SHALL BE RUN PARALLEL WITH THE LINES OF THE BUILDING UNLESS OTHERWISE SPECIFIED OR NOTED ON DRAWINGS. DIFFERENT SERVICE LINES, VALVES AND FITTINGS SHALL BE LOCATED AS FAR APART AS POSSIBLE. THERE WILL BE NOT LESS THAN 1/2 INCH CLEAR SPACE BETWEEN THE FINISHED COVERING AND OTHER WORK, AND BETWEEN THE FINISHED COVERING OF PARALLEL ADJACENT PIPES.

- B. DOMESTIC COLD WATER: SEAMLESS COPPER WATER TUBE, ASTM B88, TYPE L, HARD TEMPERED WITH WROUGHT COPPER SOLDER JOINT, PRESSURE FITTINGS, 150 LB. (WATER), ANSI B16.22 AND SOLDERED JOINTS, ASTM B32, TN-ANTIMONY 95-5.

- C. STEAM, HIGH PRESSURE: BLACK STEEL PIPE, ASTM A53 GRADE B SCHEDULE 40, WITH STEEL BUTT-WELD FITTINGS USING LONG-RADIUS ELLS, ASTM 234, PRESSURE CLASS 300. WELDING SHALL BE IN ACCORDANCE WITH THE LATEST REVISION OF SECTION IX, ASME BOILER AND PRESSURE VESSEL CODE AS SPECIFIED ABOVE.

- D. STEAM CONDENSATE, PUMPED CONDENSATE: BLACK STEEL PIPE, ASTM A53 GRADE B SCHEDULE 80, FITTINGS SHALL BE CAST IRON, SCREWED FITTINGS (ANSI B16.3) AND THREADED JOINTS (ANSI B21), PRESSURE 250 LB.

- E. STEAM, HIGH PRESSURE, BURIED: PRE-INSULATED PIPING SYSTEM AS MANUFACTURED BY ROVANO HI-TEMP CONDUIT, OR APPROVED EQUAL. SYSTEM SHALL BE FACTORY-FABRICATED TO INCLUDE THE FOLLOWING:

- CARRIER PIPE AND FITTINGS SHALL BE BLACK STEEL AS SPECIFIED FOR HIGH PRESSURE, 300 LB.
- INSULATION SHALL BE 2" CALCIUM SILICATE.
- OUTER CASING SHALL BE MIN 10 GAUGE, STEEL, COATED WITH NOMINAL 20 MIL THICK "RHINOCAUT" EPOXY COATING BY ROVANO.
- OUTER CASING SHALL BE PROVIDED COMPLETE WITH JOINT INSULATION AND STEEL SLEEVES OF SAME THICKNESS AS CASING, WITH SHRINK SLEEVES TO MAKE OUTER CASING COMPLETELY WATERTIGHT.

14. PIPING SPECIALTIES:

- A. UNIONS SHALL BE PROVIDED WHERE INDICATED, AND AS REQUIRED FOR EQUIPMENT, CONTROL VALVE OR PIPING REMOVAL. UNIONS FOR STEEL PIPE SHALL BE 250 LB. MALLEABLE IRON BRASS SEAT TYPE, SUITABLE FOR TEMPERATURE OF 350°F.

- B. STRAINERS: PIPELINE "Y" STRAINERS SHALL BE MUELLER STEAM SPECIALTY COMPANY, INC. MODEL NO. 11M OR APPROVED EQUAL. SCREENS SHALL BE STAINLESS STEEL WITH 3/64" PERFORATIONS. PROVIDE VALVED BLOWDOWN CONNECTIONS ON EACH STRAINER CONSISTING OF A GATE VALVE SET BETWEEN TWO SHORT NIPPLES. BUSH STRAINER OUTLET AS REQUIRED FOR 3/4" MINIMUM CONNECTION AND CAP.

- C. STEAM TRAPS: PROVIDE SPIRAX SARCO, ARMSTRONG, OR APPROVED EQUAL INVERTED BUCKET TRAPS EQUAL TO SPIRAX SARCO B SERIES. TRAPS SHALL BE SUITABLE FOR STEAM PRESSURES ENCOUNTERED (MIN 100 PSIG) AND SHALL HAVE CAPACITY AS INDICATED ON THE DRAWINGS.

- D. ALL PIPES SHALL BE ANCHORED WHERE SPECIFIED HEREIN, INDICATED ON DRAWINGS, AND WHERE REQUIRED TO PREVENT UNCONTROLLED MOVEMENT. ANCHORS SHALL PREVENT BOTH AXIAL AND LATERAL MOVEMENT OF THE PIPES. ANCHORS SHALL BE FIELD FABRICATED OR FACTORY FABRICATED, AS INDICATED ON THE DRAWINGS.

- E. FIELD-FABRICATED ANCHORS SHALL BE CONSTRUCTED OF STEEL SECTIONS AND PLATES, ASSEMBLED BY WELDING AND SECURED TO PIPING SUPPORT STRUCTURE BY MEANS OF WELDING. STRUCTURAL MEMBERS SHALL NOT BE CUT OR DRILLED. SUBMIT DETAILS OF ANCHORS TO ARCHITECT FOR APPROVAL.

- F. FACTORY FABRICATED ANCHORS SHALL BE RATED TO WITHSTAND ANCHOR FORCES AS INDICATED ON THE DRAWINGS, AND SHALL BE FIELD WELDED TO THE PIPE AND ITS ASSOCIATED SUPPORT STEEL. ANCHORS SHALL BE BY PIPE SHIELDS, TRI-STATE INDUSTRIES, OR APPROVED EQUAL.

E. GUIDES:

- 1) PROVIDE PIPE GUIDES WHERE INDICATED ON DRAWINGS OR WHERE REQUIRED FOR PROPER INSTALLATION OF EXPANSION LOOPS AND EXPANSION JOINTS. LIMIT USE OF GUIDES TO POINT SHOWN OR WHERE REQUIRED TO PREVENT BUCKLING OF PIPE WHETHER INDICATED OR NOT. DO NOT USE PIPE GUIDES AS PIPE SUPPORTS.

- 2) PROVIDE FACTORY-FABRICATED GUIDES OF CAST SEMI-STEEL OR FABRICATED STEEL PLATE, CONSISTING OF BOLTED TWO-SECTION CYLINDER AND BANDS, ONE SECTION QUADRANT SPANNING 90°, OR BOLTED TOGETHER AROUND THE PIPE. UNIT SHALL BE OF SUFFICIENT SIZE TO CLEAR PIPE INSULATION AND LONG ENOUGH TO PREVENT OVER-TRAVEL OF SPIDER IN CYLINDER. FURNISH A GUIDE SLEEVE OF A LENGTH NOT LESS THAN THE LENGTH OF PIPE EXPANSION, PLUS THE SPIDER LENGTH. GUIDES FOR PIPING 2" AND UNDER SHALL BE TOLCO (NIBCO) FIG. 422 OR EQUAL GUIDE FOR LARGER PIPING SHALL BE TOLCO (NIBCO) FIG. 420 LONG TRAVERSE GUIDE OR EQUAL.

- 3) GUIDES SHALL BE KEFLEX, ADSCO OR FLEXONICS.

F. EXPANSION JOINTS:

- 1) EXPANSION JOINT SHALL BE ADSCO SLIP-TYPE MODEL RBJ, NO SUBSTITUTIONS ALLOWED. JOINT SHALL BE EXTERNALLY/INTERNALY GUIDED, RATED UP TO 1000 PSIG AND 875°F. JOINT SHALL BE DESIGNED SUCH THAT PACKING CAN BE ADDED OR REMOVED. LIQUID PROOFING OR PACKING CAN BE REPLACED WITHOUT REMOVING EXPANSION JOINT FROM PIPING. JOINT SHALL CONFORM TO MIL-E-17814E, TYPE IV-FORM B, SINGLE CLASS 1.

15. VALVES:

- A. VALVES SHALL BE PROVIDED WHERE INDICATED ON DRAWINGS AND AS HEREIN SPECIFIED. VALVES SHALL BE PLACED IN SUCH A MANNER AS TO BE EASILY ACCESSIBLE FOR OPERATION AND STUFFING MAINTENANCE. VALVE PIPE CONNECTIONS SHALL BE SCREW, SOLDER, OR FLANGED AS REQUIRED TO BE CONSISTENT WITH OTHER PARTS OF THE PIPING SYSTEM.

- C. SHUT-OFF SERVICE IN STEAM, CONDENSATE AND PUMPED CONDENSATE PIPING SHALL BE KEROSTEEL API-602 HIGH PERFORMANCE BELLWORM GATE VALVE, OR EQUAL. VALVE SHALL HAVE ANSI 800 LB SOCKET WELD ENDS, ASTM A-105 FORGED STEEL BODY, FULL STELLUS SEAT AND GATE AND 316SS BELLWORM.

- D. SHUT-OFF SERVICE IN COLD WATER PIPING SHALL BE BRONZE BODY CLASS 125 SCREW-IN BONNET RISING STEM SOLID WEDGE GATE TYPE, MODEL S-111 BY NIBCO OR APPROVED EQUAL.

16. HANGERS AND SUPPORTS:

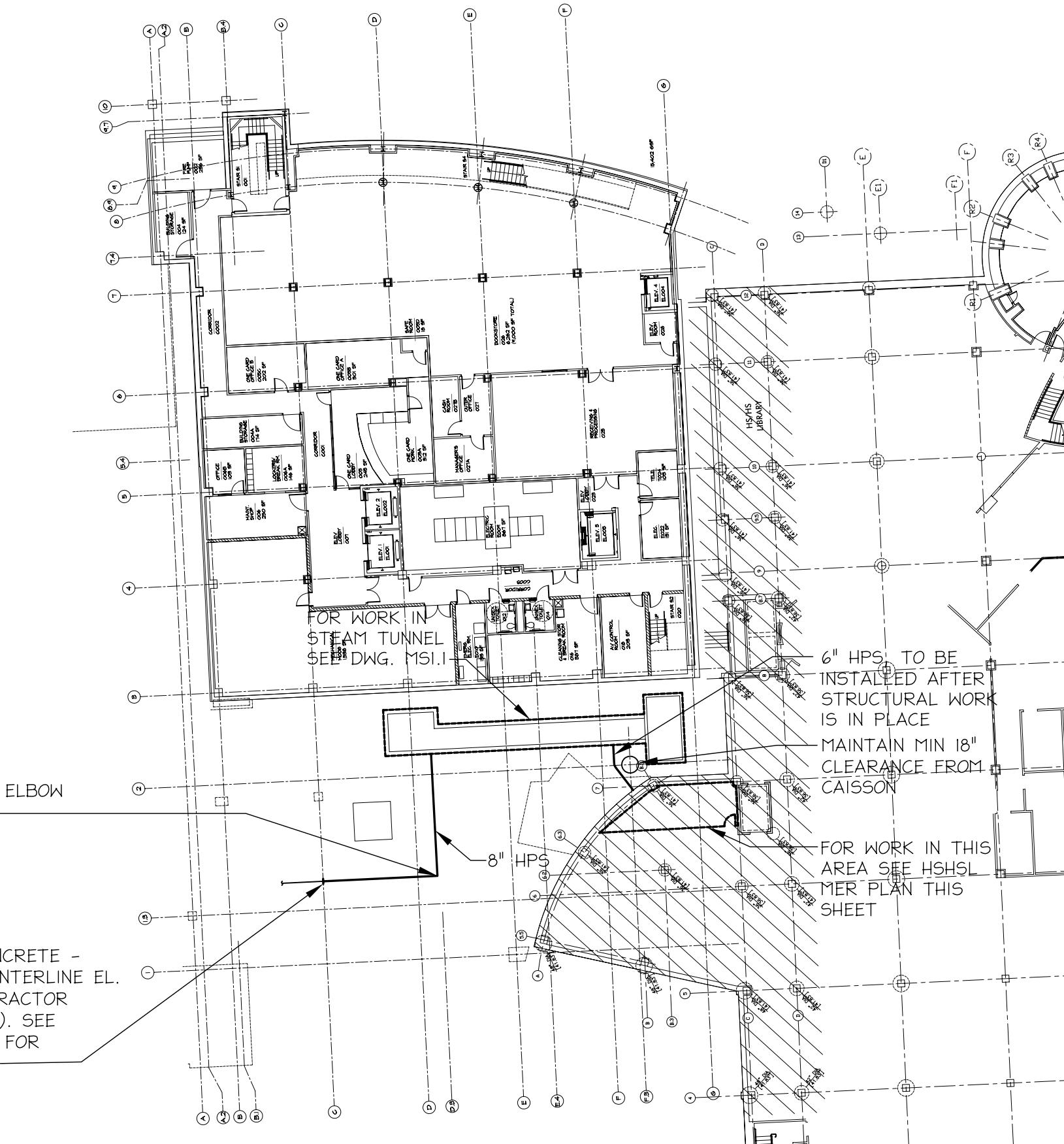
- A. ALL PIPING WITHIN TUNNEL SHALL BE SUPPORTED FROM STEEL SUPPORTS AS SPECIFIED ON THE STRUCTURAL DRAWINGS, WITH ROLLERS, ANCHORS AND GUIDES AS SPECIFIED HEREIN.

- 1) ANCHORS AND GUIDES SHALL BE AS SPECIFIED ABOVE.

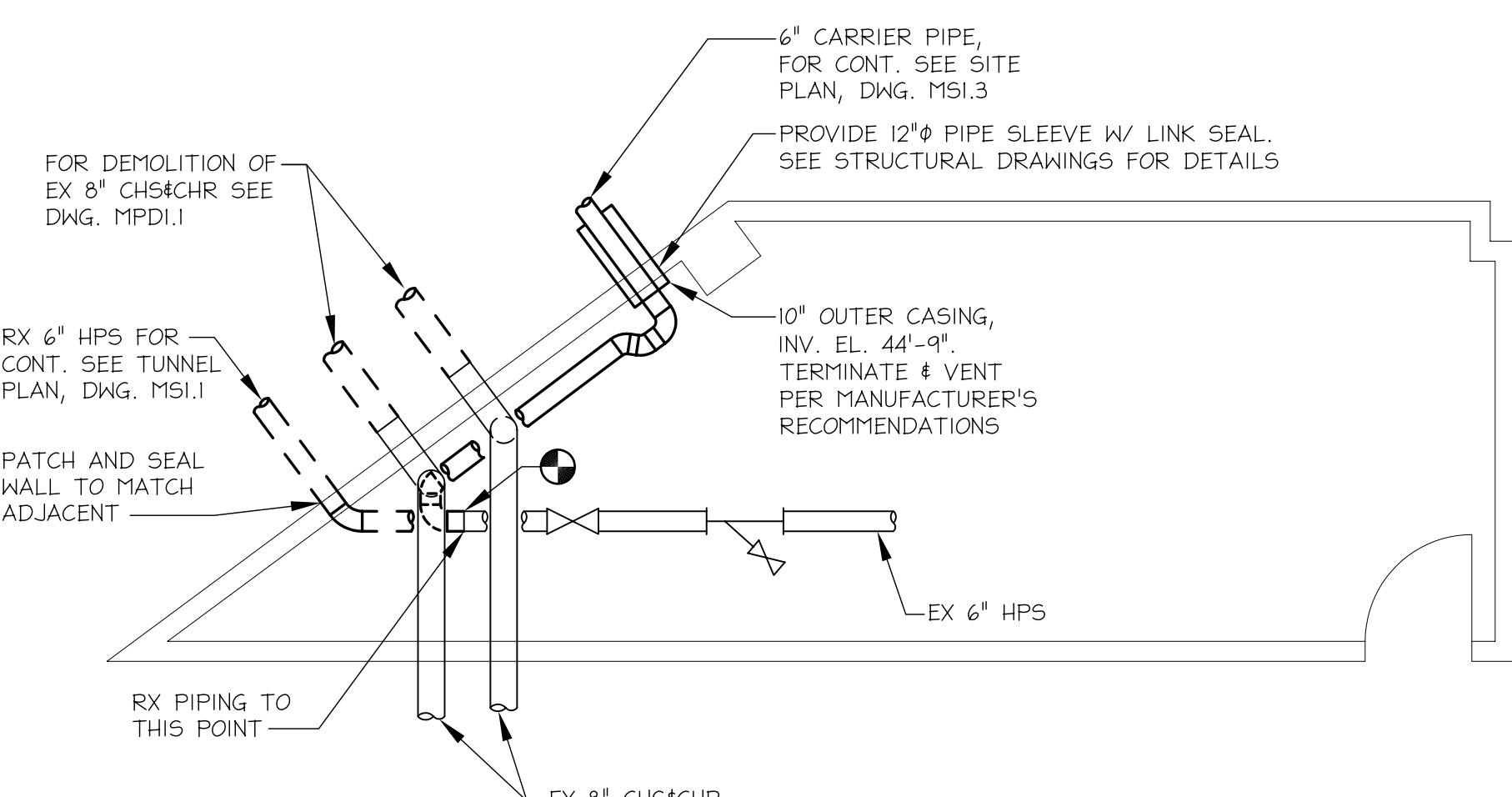
- 2) ROLLER SUPPORTS SHALL BE PROVIDED ON ADJUSTABLE CARRIERS, WELDED OR BOLTED TO STRUCTURAL STEEL SUPPORTS. ROLLERS SHALL BE SIZED FOR SIZE OF PIPE PLUS ASSOCIATED INSULATION.

- B. SMALL DIAMETER PIPING WITHIN MANHOLES SHALL BE SUPPORTED IN ACCORDANCE WITH RECOGNIZED ENGINEERING PRACTICES, USING STANDARD, COMMERCIALY ACCEPTED PIPE HANGERS AND SUSPENSION EQUIPMENT.

- C. THE DESIGN OF ALL HANGERS AND SUPPORTS SHALL BE IN ACCORDANCE WITH THE PROVISION OF CURRENT ISSUE OF MSS-SP-58 AND SP-69 DOCUMENT DEVELOPED AS A STANDARD BY THE MANUFACTURERS' STANDARDIZATION SO



SITE PLAN - NEW WORK - STEAM
SCALE: 1" = 50'



HSHSL MER PLAN
SCALE: 1/4" = 1'-0"



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Campus Center

621 West Lombard Street
University of Maryland, Baltimore
Baltimore, MD



Landscape Site Plan

100% CONSTRUCTION DOCUMENTS

UMB PROJECT NO. 99-311
WTW PROJECT NO. 70-4091
© WTW ARCHITECTS REV

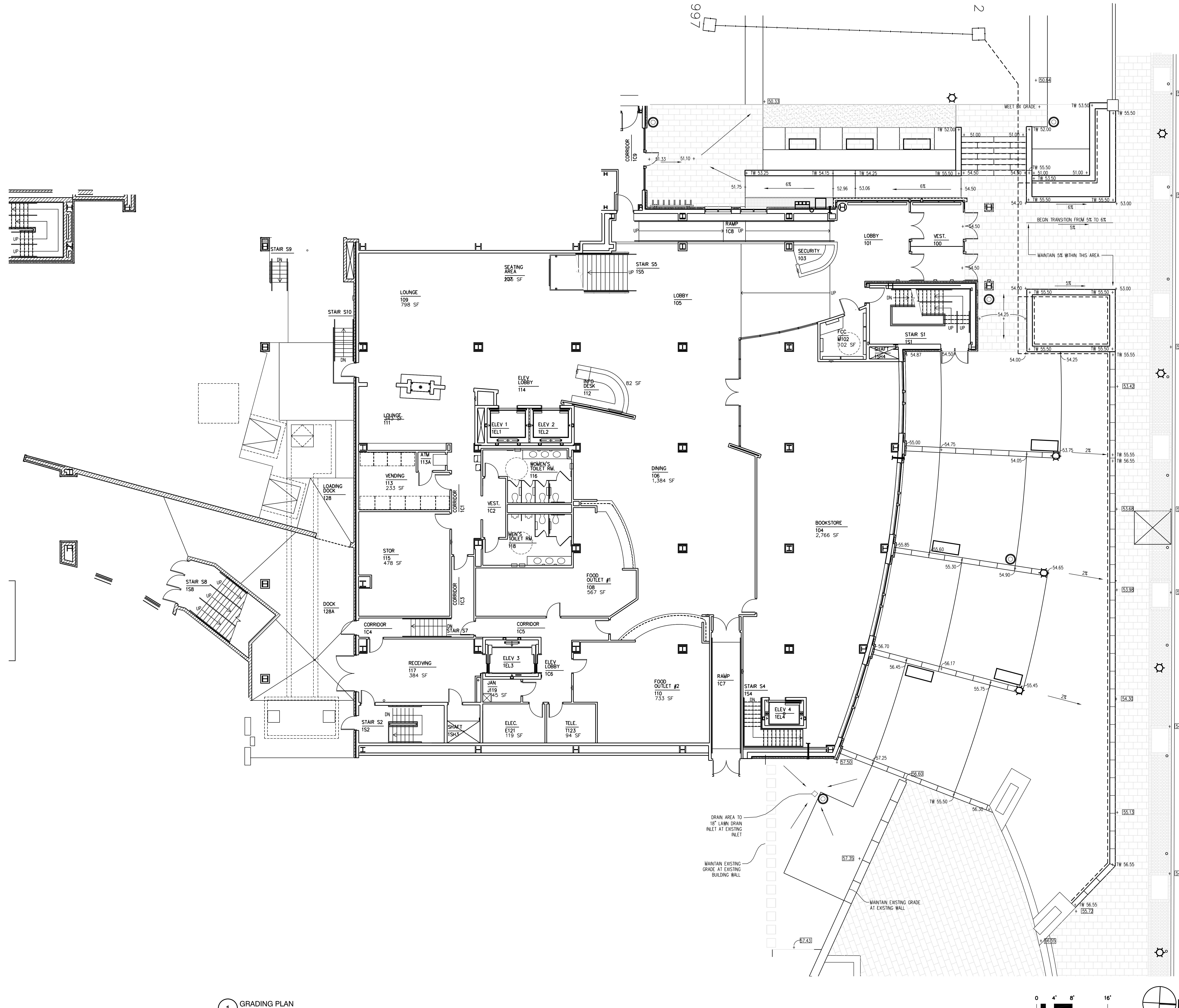
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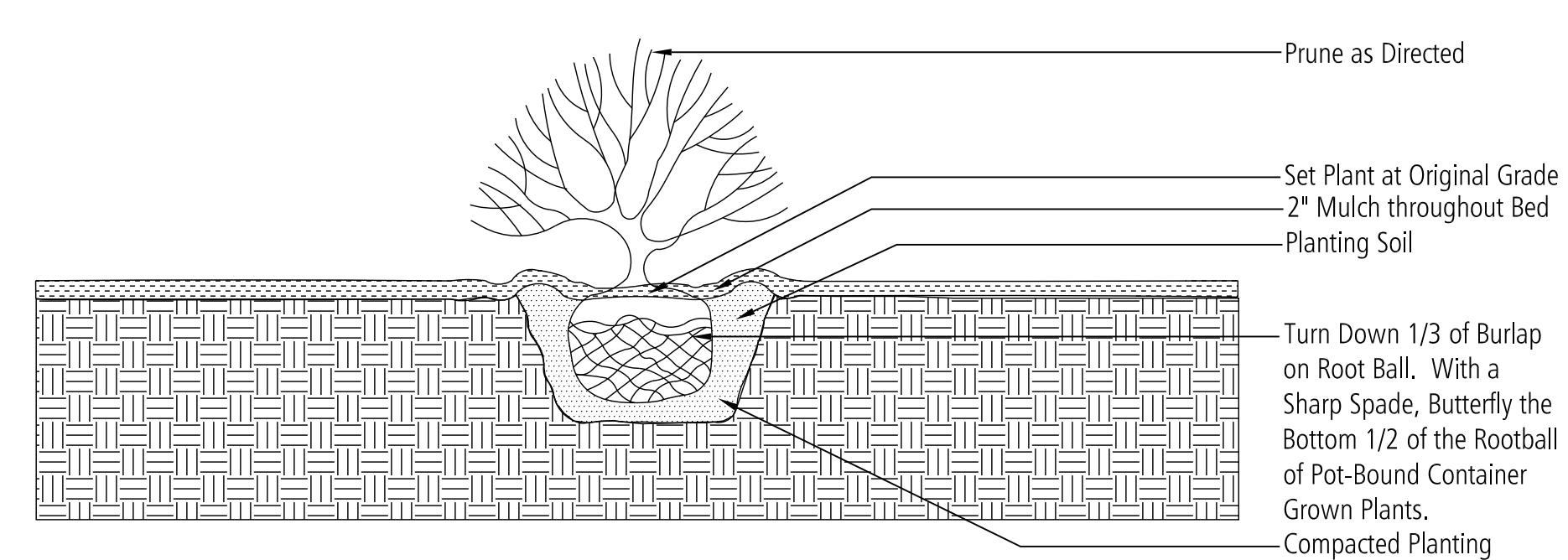
This technical diagram illustrates a cross-section of a building's exterior wall and roof. The wall is composed of several layers: an outer layer with diagonal hatching, a thick central layer, and an inner layer with vertical hatching. A horizontal beam or joist is shown running across the top of the wall. The roof above is also depicted with diagonal hatching. A small vertical detail on the right side shows a cross-section of a corner or a vertical element within the wall structure.

RECORD DRAWING:

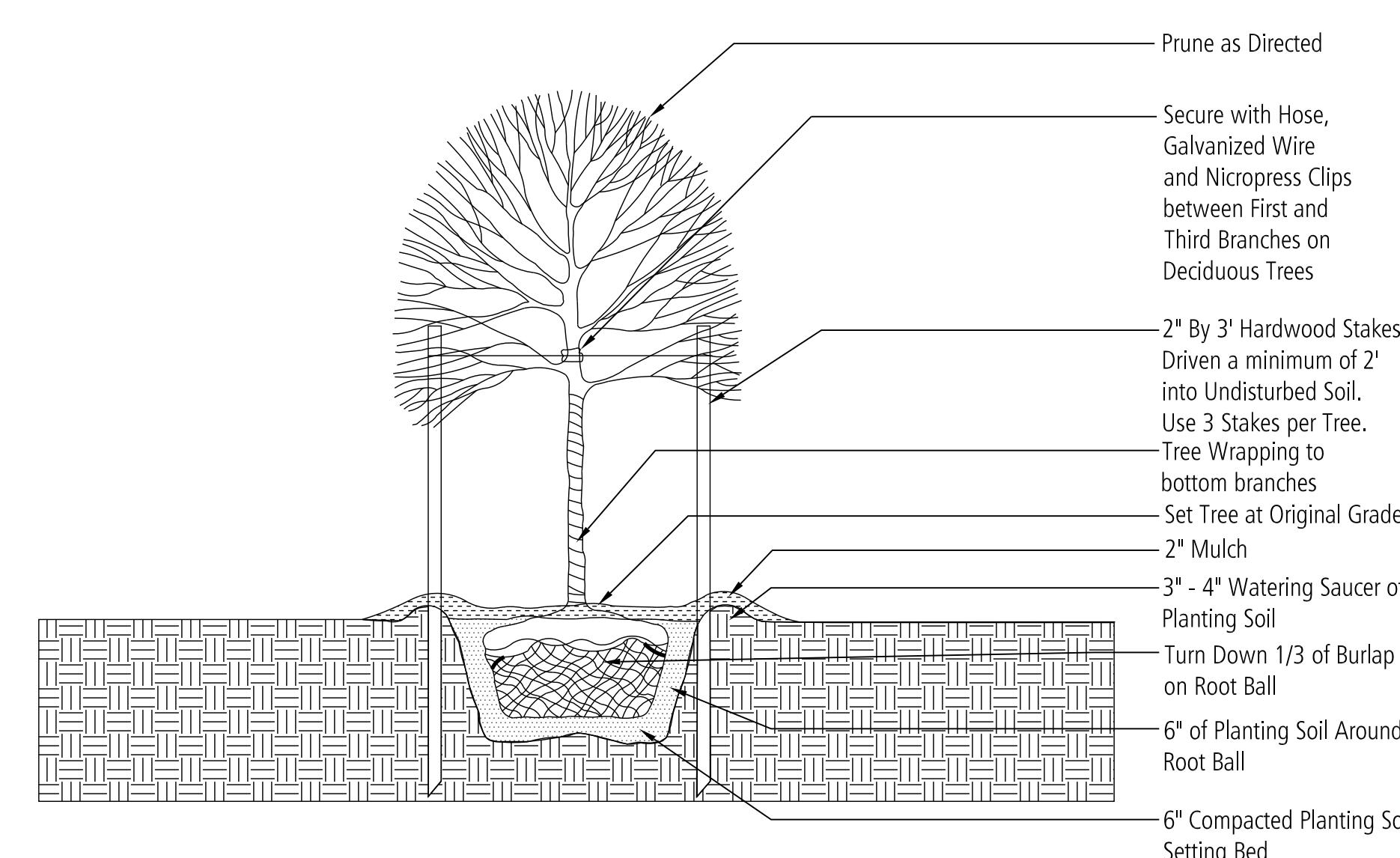
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THIS DRAWING DOES NOT MEASURE EXACTLY
X 42", IT HAS BEEN REDUCED OR ENLARGED.
PLEASE DO NOT SCALE THIS DRAWING.





5 DETAIL SHRUB PLANTING



4 DETAIL SHADE TREE PLANTING

Shade Trees					
Symbol	Quantity	Botanical Name	Common Name	Size	Note
OP	1	Quercus phellos	Willow Oak	6" cal.	B&B
TC	7	Tilia cordata	Littleleaf Linden	4" cal.	B&B

Ornamental Trees					
Symbol	Quantity	Botanical Name	Common Name	Size	Note
PR	5	Prunus x campanulata 'Okame'	Okame Cherry	2 1/2" cal.	B&B

Shrubs					
Symbol	Quantity	Botanical Name	Common Name	Size	Note
DG	30	Duetzia gracilis	Slender Deutzia	18" - 24" spr.	cont.
HQ	4	Hydrangea quercifolia 'Snow Queen'	Snow Queen Oakleaf Hydrangea	30" - 36" ht.	cont.
IC	27	Ilex crenata 'Helleri'	Helleri Japanese Holly	18" - 24" ht.	cont.
RY	13	Rhododendron 'Yaku Princess'	Yaku Princess Azalea	18" - 24" ht.	cont.
SN	9	Spiraea nipponica 'Snowmound'	Snowmound Nippon Spirea	30" - 36" ht.	cont.
SI	27	Spiraea japonica 'Little Princess'	Little Princess Spirea	15" - 18" spr.	cont.
TM	18	Taxus x media 'Hicksii'	Hicksii Yew	30" - 36" ht.	cont.

Vines, Groundcovers, and Perennials					
Symbol	Quantity	Botanical Name	Common Name	Size	Note
AC	15	Astilbe chinensis 'Pumila'	Astilbe	1 gal.	12" o.c.
AH	55	Anemone hupehensis 'Prince Henry'	Windflower	1 gal.	12" o.c.
AN	15	Athyrium niponicum pictum	Japanese Painted Fern	1 qt.	12" o.c.
AS	53	Aster cordifolius	Blue Wood Aster	1 qt.	12" o.c.
BA	3	Baptisia australis 'Purple Smoke'	False Indigo	1 qt.	12" o.c.
BM	31	Brunnera macrophylla 'Jack Frost'	Siberian Bugloss	1 qt.	12" o.c.
CH	20	Cyclamen hederifolium	Cyclamen	1 qt.	12" o.c.
DE	40	Dicentra eximia 'Snowflakes'	Bleeding Heart	1 qt.	12" o.c.
FJ	34	Farfugium japonicum 'Aureomaculatum'	Ligularia	1 gal.	24" o.c.
GM	18	Geranium macrorrhizum	Geranium	1 qt.	12" o.c.
HA	24	Heuchera 'Amber Waves'	Coral Bells	1 qt.	12" o.c.
HM	84	Hosta 'montana' 'Montana'	Hosta	1 gal.	12" o.c.
HR	13	Heuchera 'Rachel'	Coral Bells	1 qt.	12" o.c.
IS	13	Iris sibirica 'Caesars Brother'	Iris	1 gal.	12" o.c.
LMM	225	Liriope 'Monroe White'	Monroe White Lilyturf	1 qt.	12" o.c.
LMB	557	Liriope muscari 'Big Blue'	Big Blue Lilyturf	1 qt.	12" o.c.
RI	30	Rohdea japonica 'Marginata'	Lily of China	1 gal.	12" o.c.
TC	35	Tiarella var. collina	Foamflower	1 qt.	12" o.c.

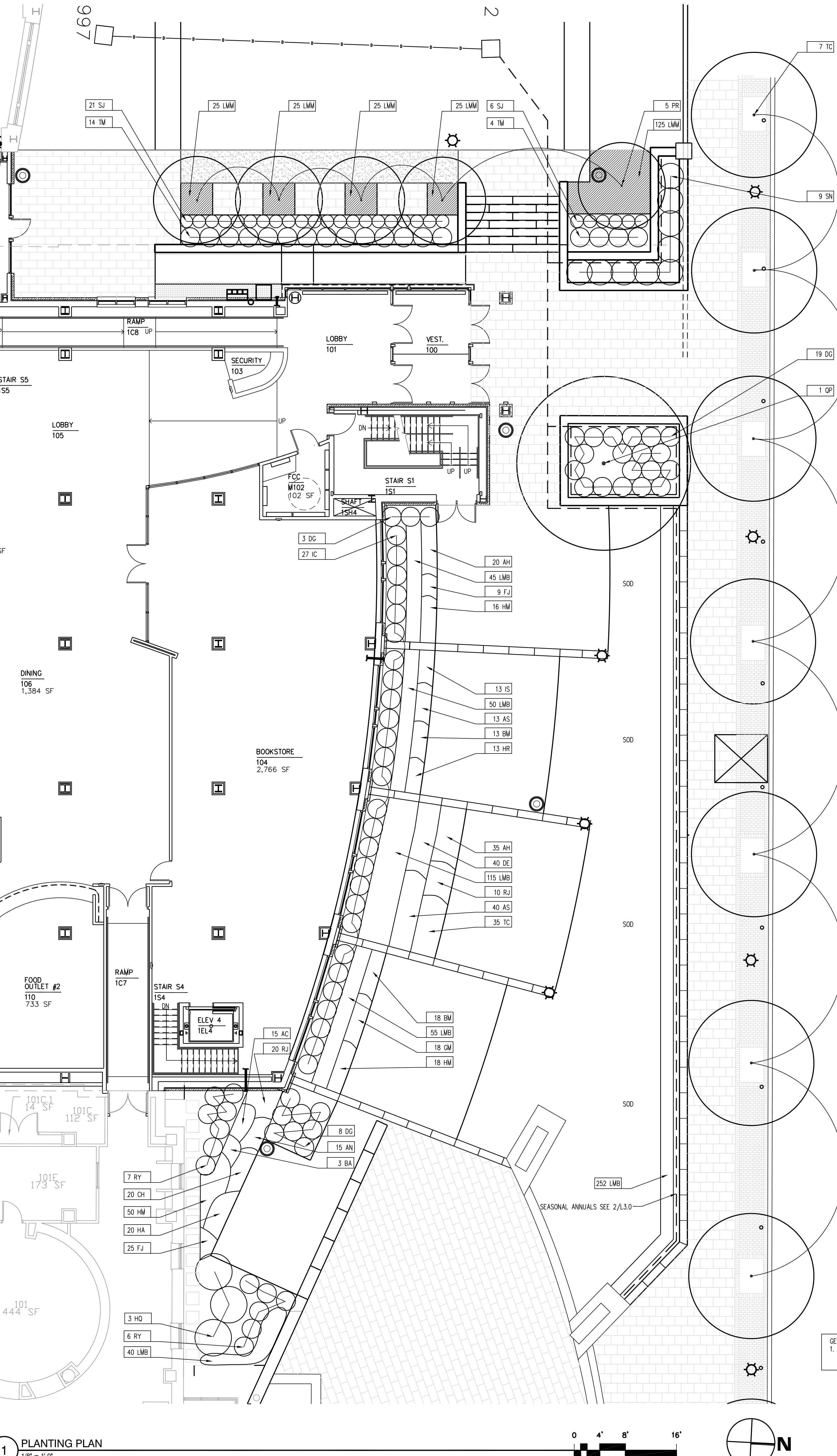
3 PLANT SCHEDULE

Season	Quantity	Botanical Name	Common Name	Size	Spacing
Spring	282	Viola tricolor	Pansy	4"	8" O.C.
Summer	282	New Guinea Impatiens	Impatiens	4"	8" O.C.
Fall	55	Chrysanthemum	Chrysanthemum	1Q	18" O.C.

2 ANNUALS PLANT SCHEDULE

NOTE: CONTRACTOR TO INSTALL ANNUALS BASED ON PLANTING SEASON AT TIME OF INSTALLATION

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1 PLANTING PLAN

GENERAL NOTE:
1. CONTRACTOR TO LAYOUT BEDS IN THE FIELD
FOR APPROVAL BY LANDSCAPE ARCHITECT
PRIOR TO INSTALLATION.

100% CONSTRUCTION DOCUMENTS

UMB PROJECT NO. 99-311
WTW PROJECT NO. 70-4091
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REV. #

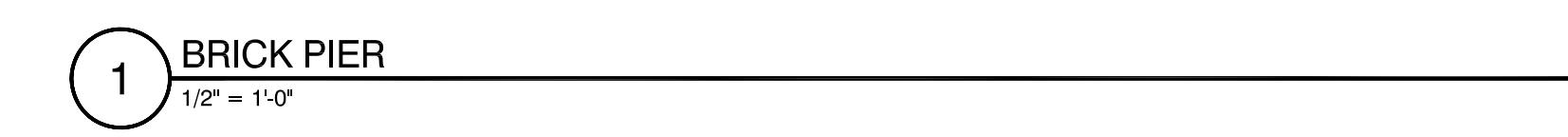
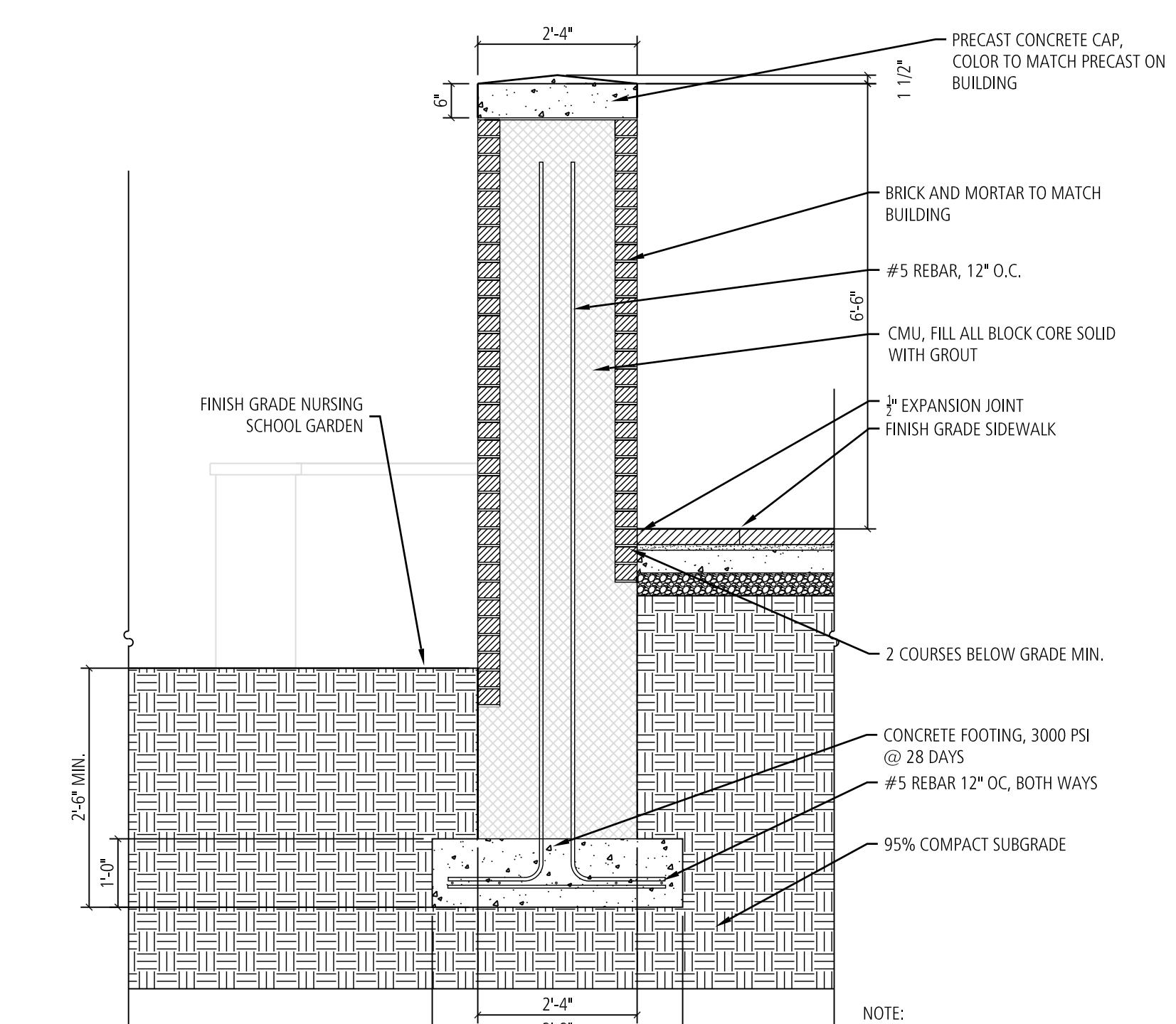
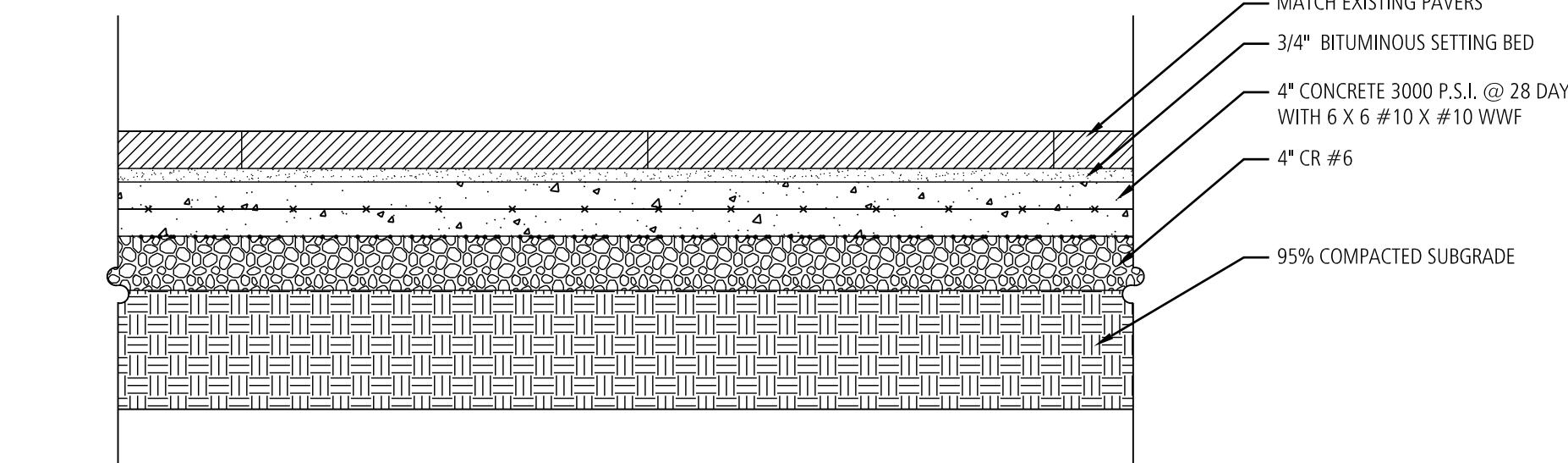
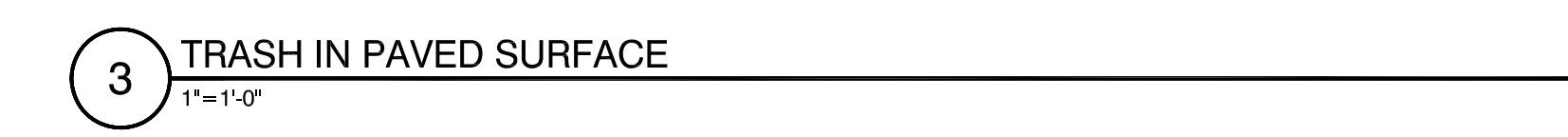
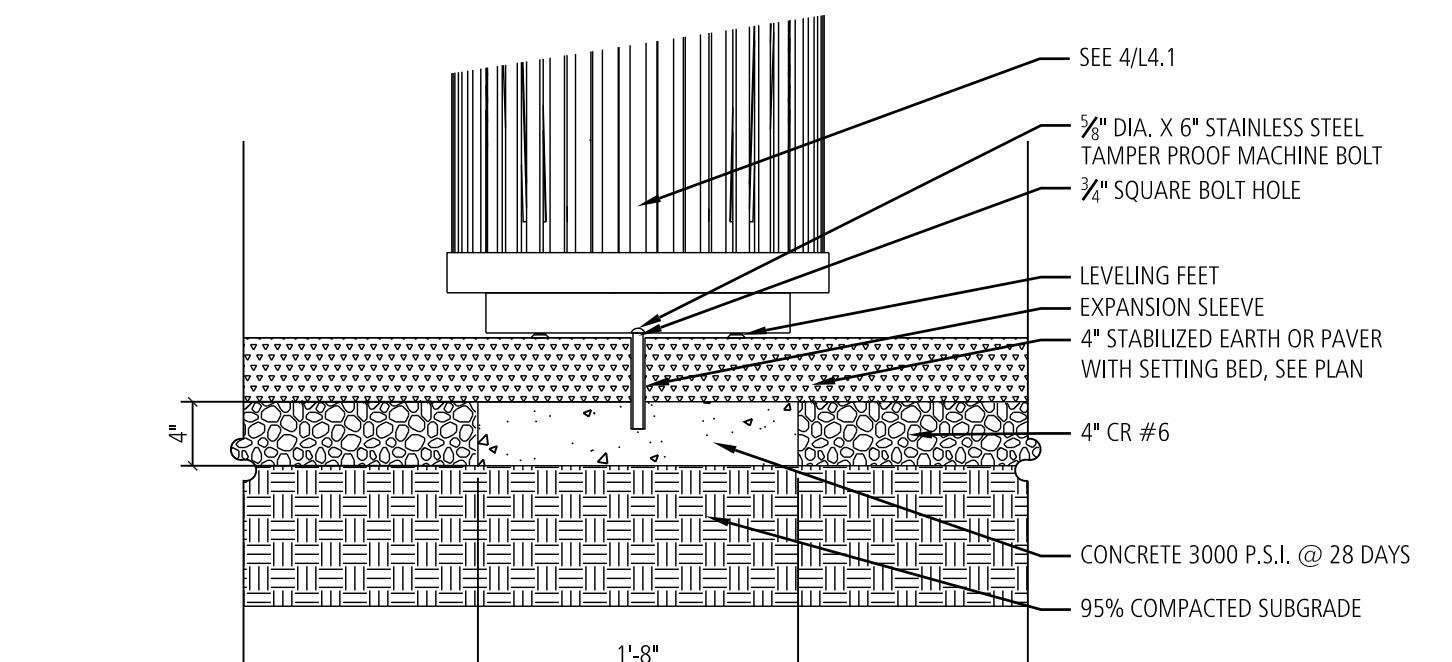
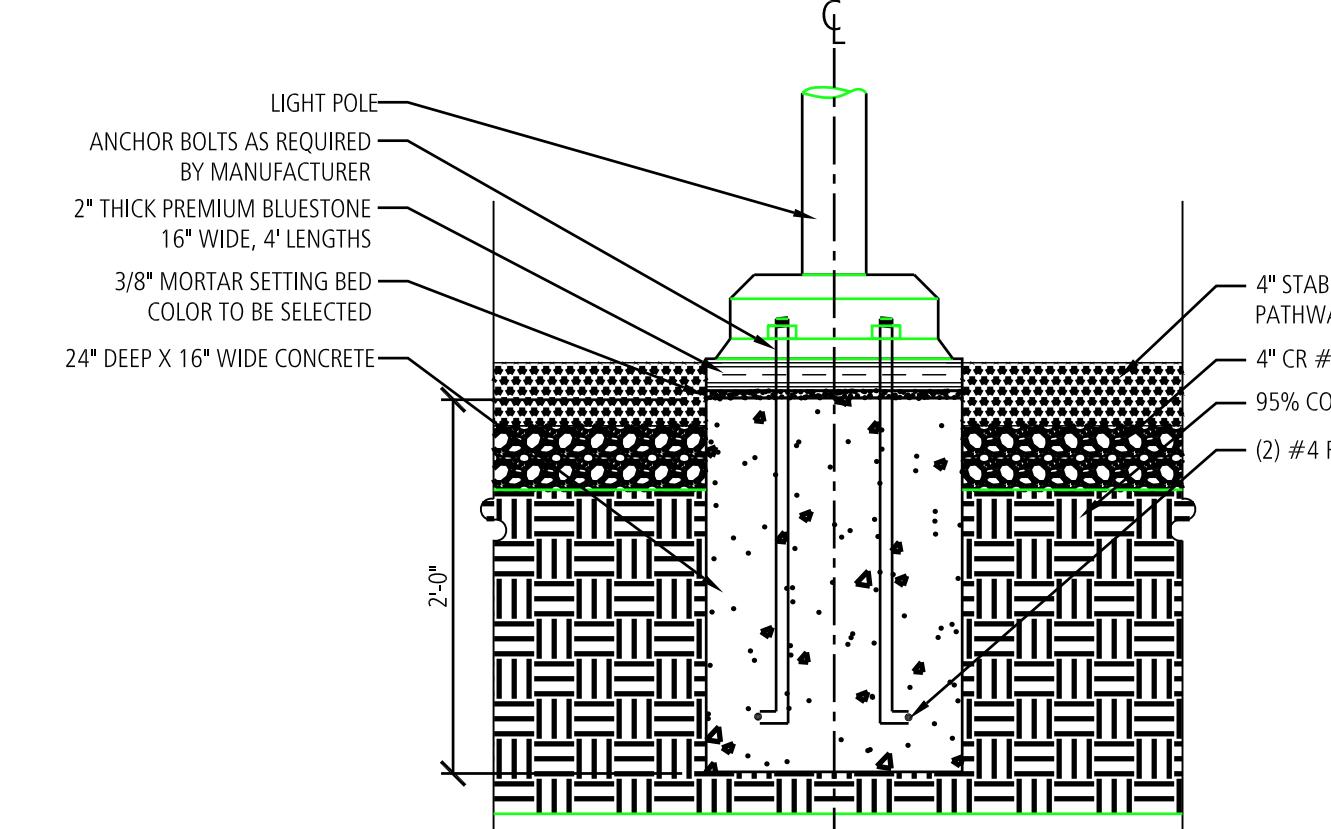
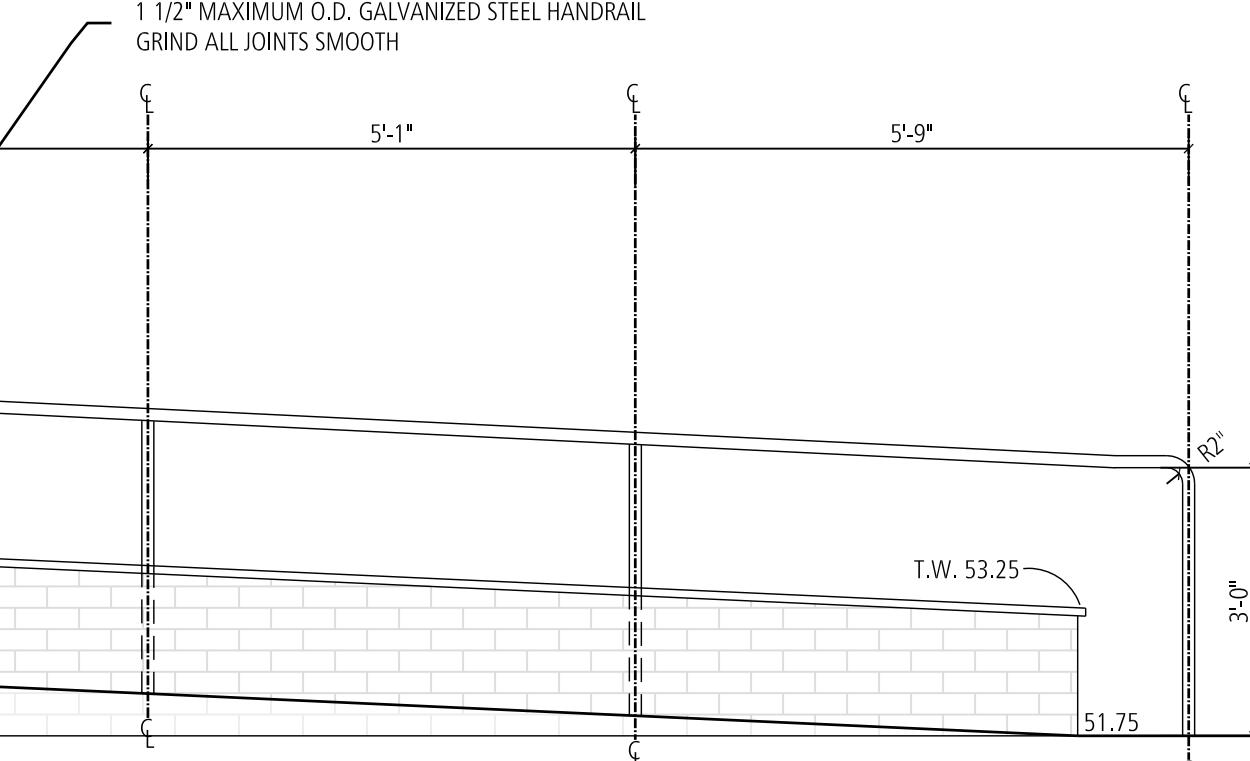
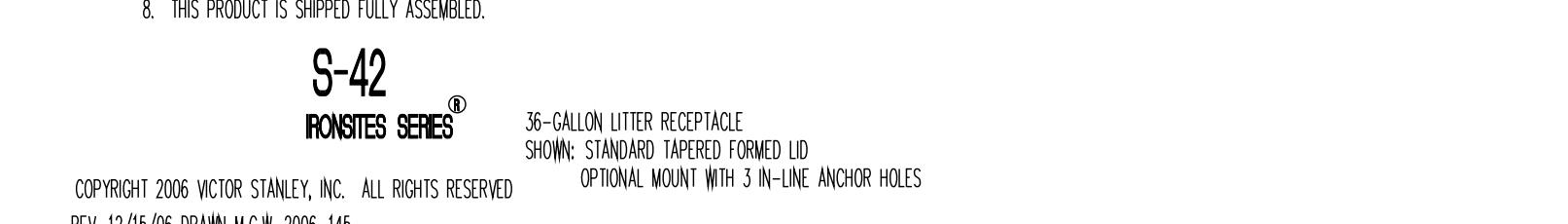
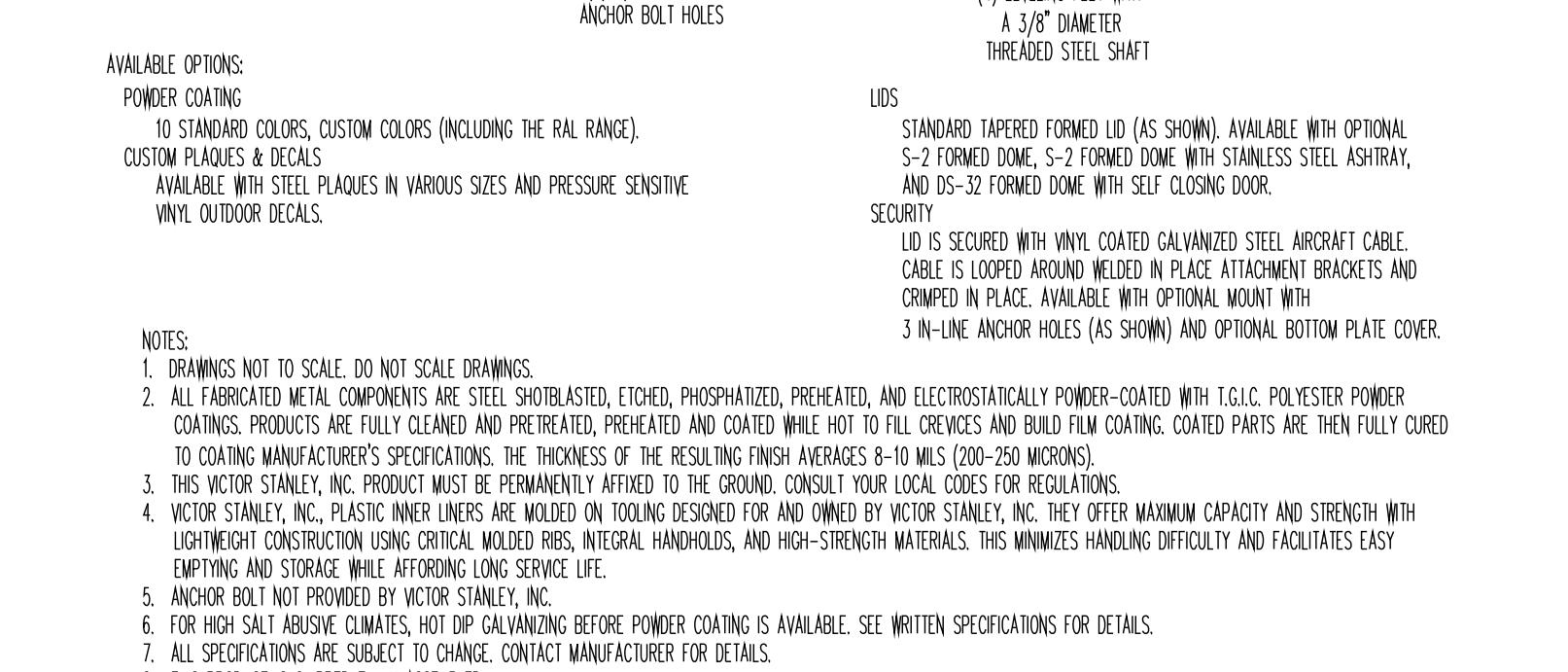
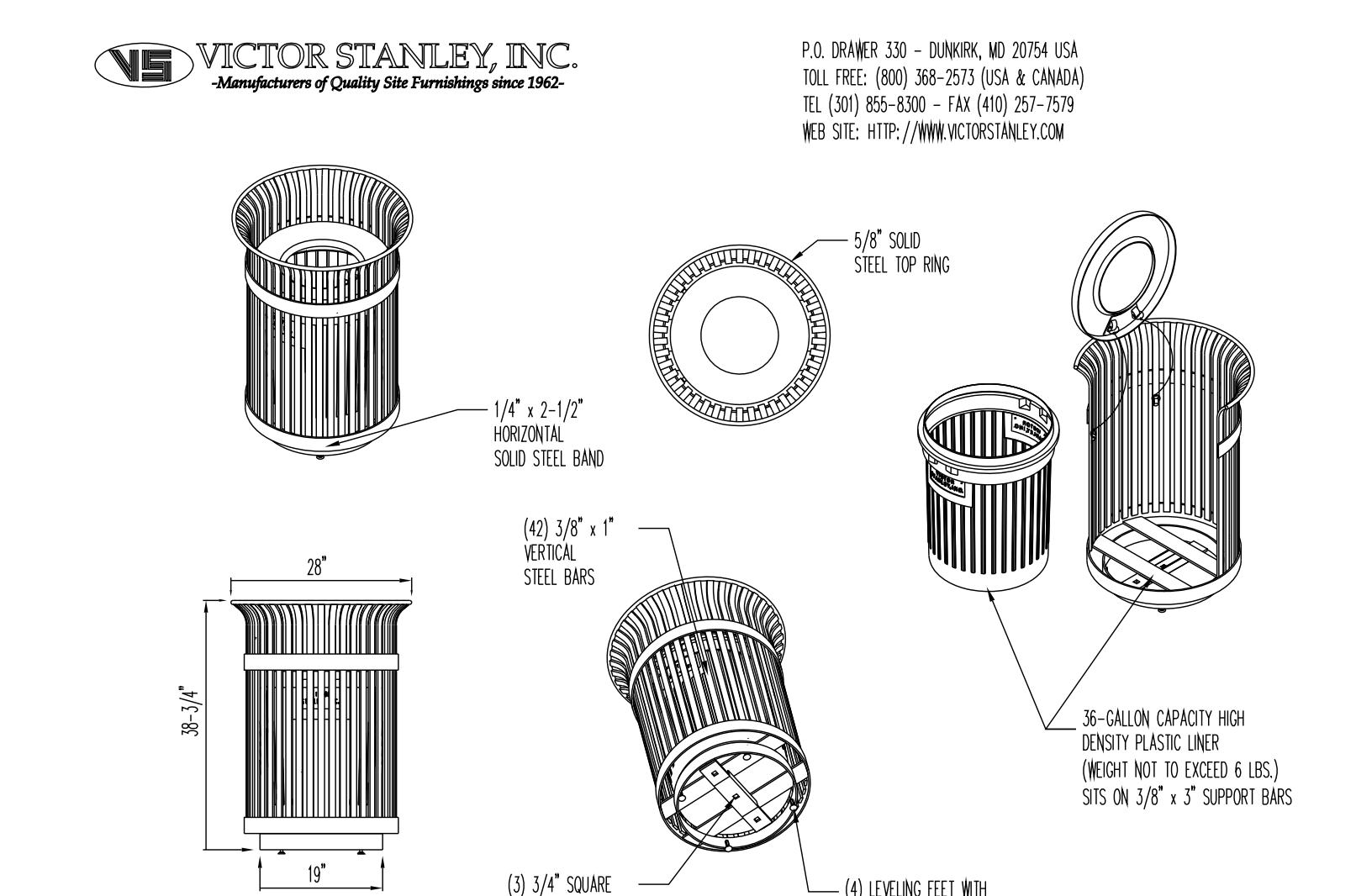
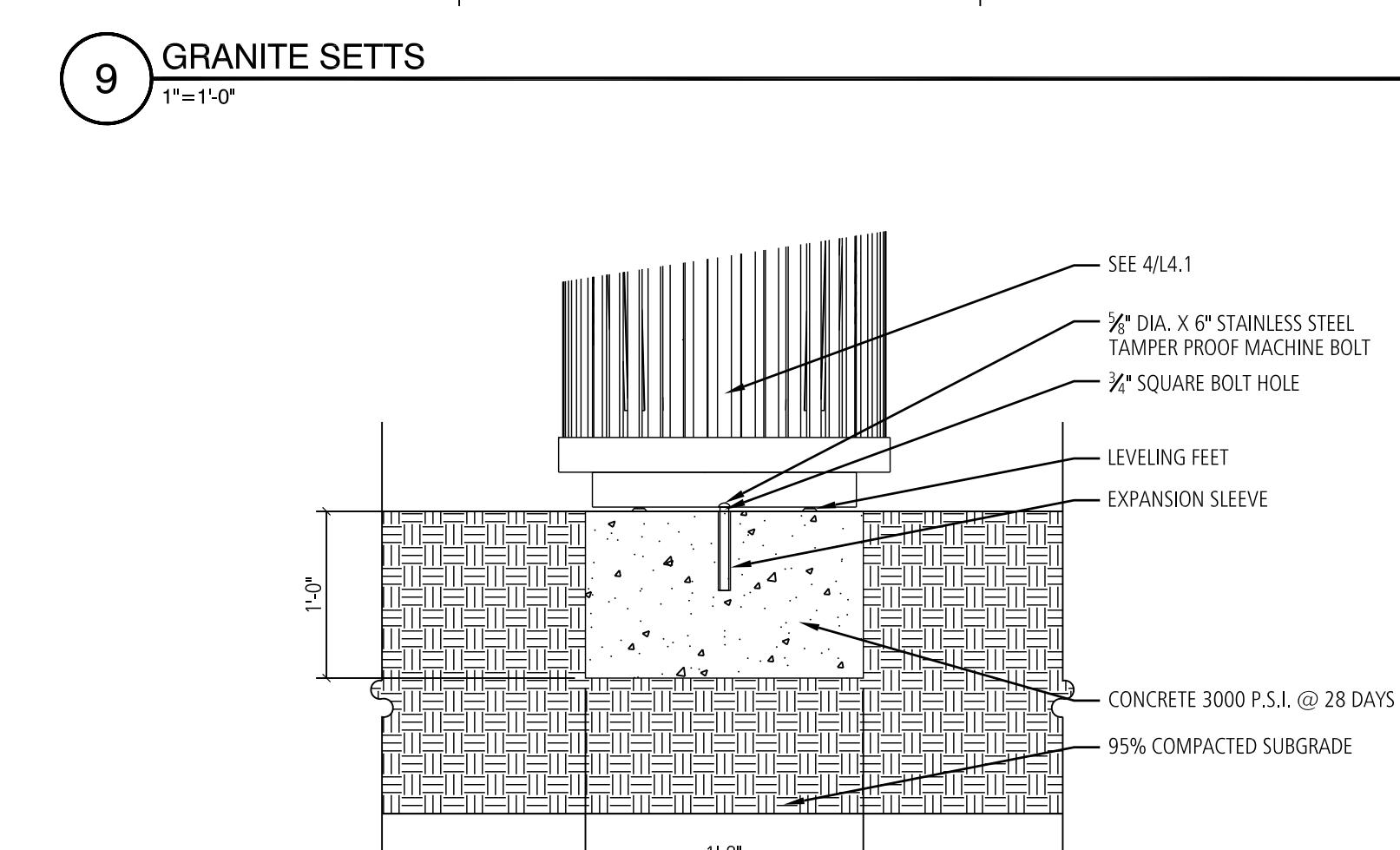
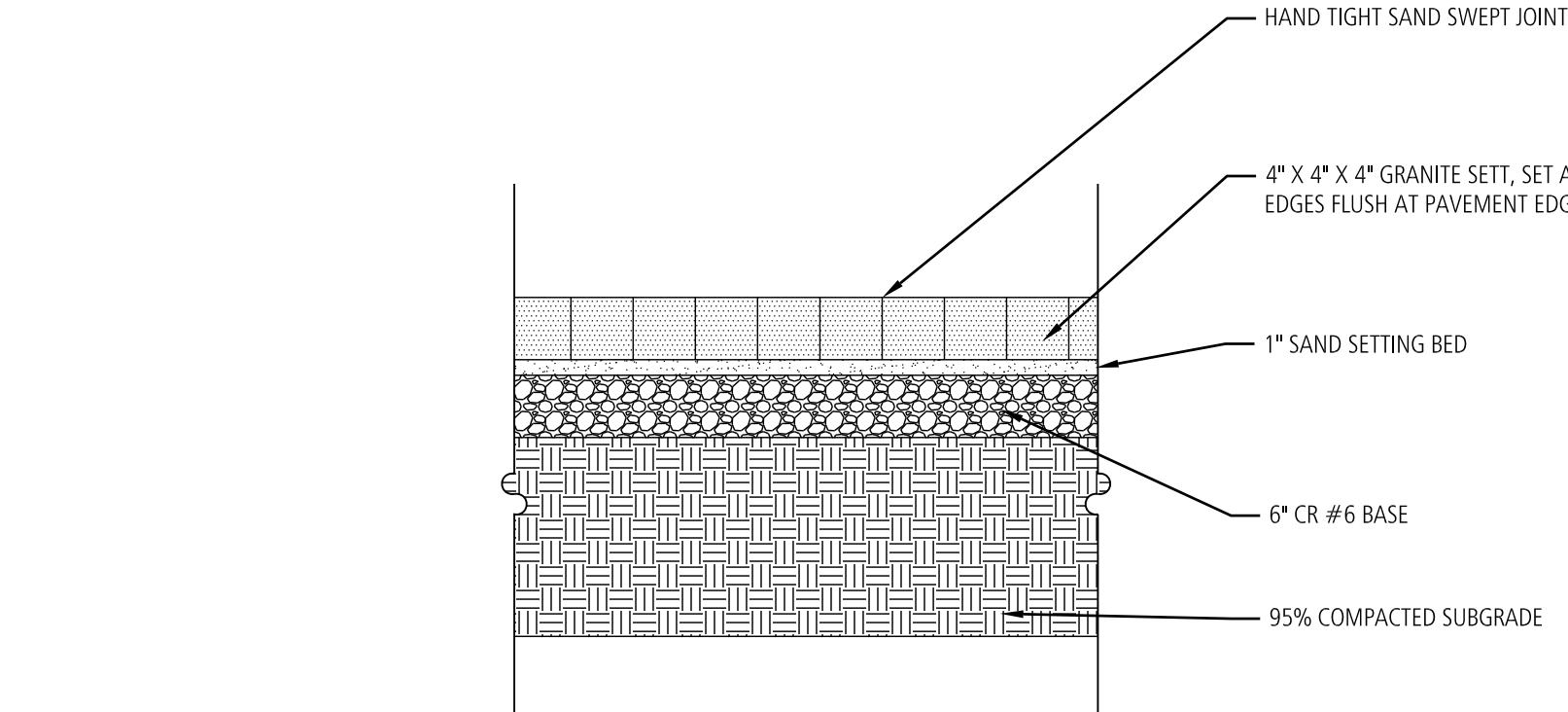
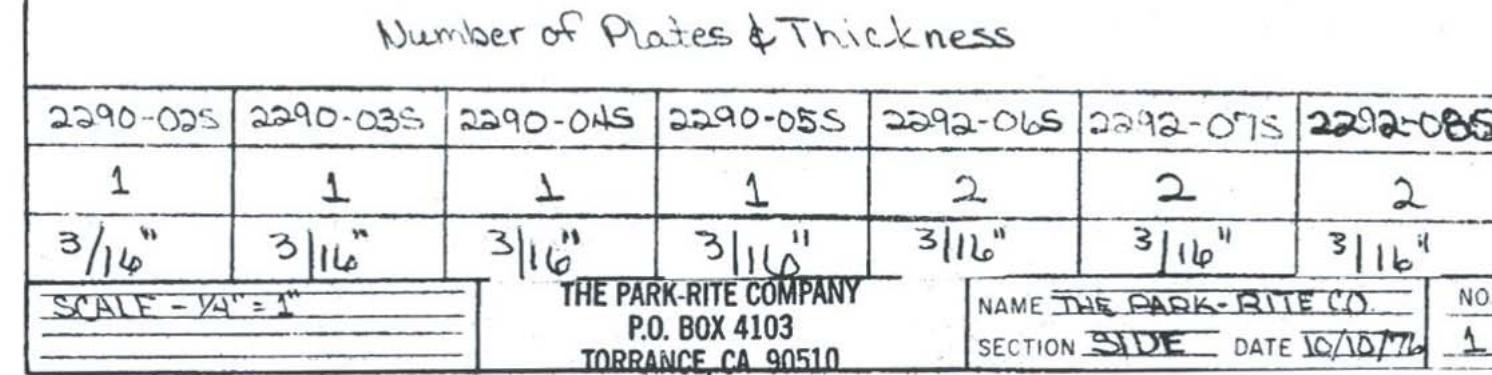
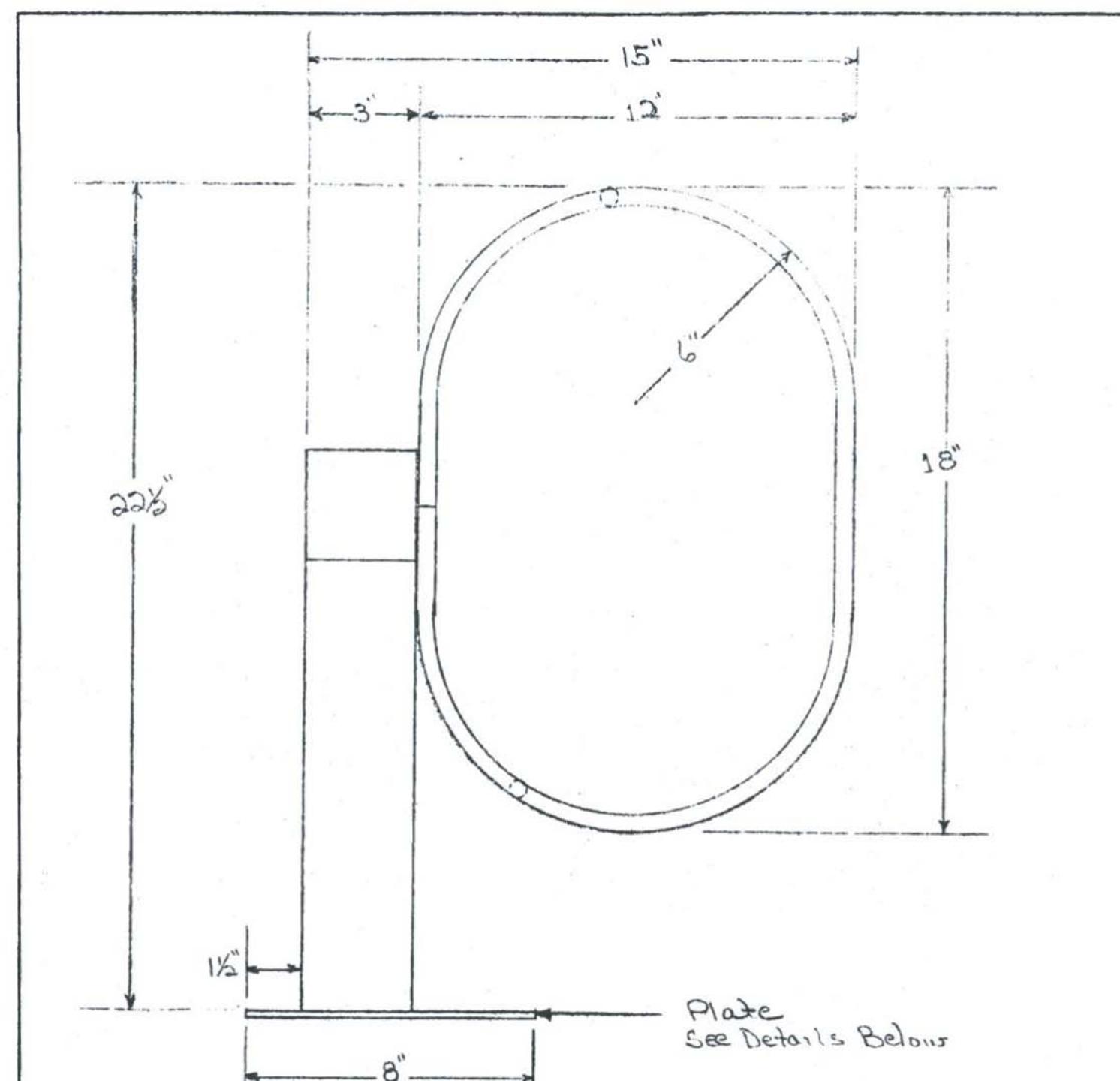
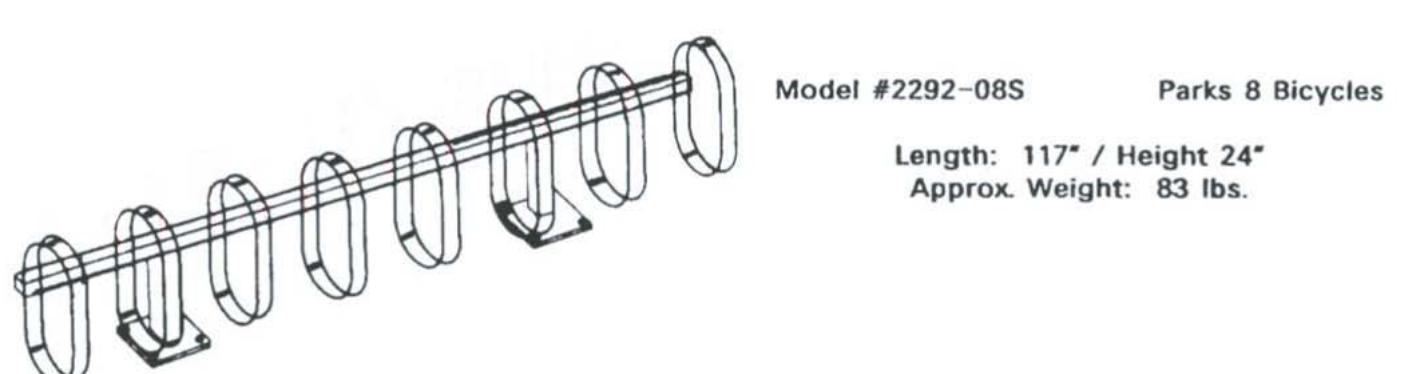
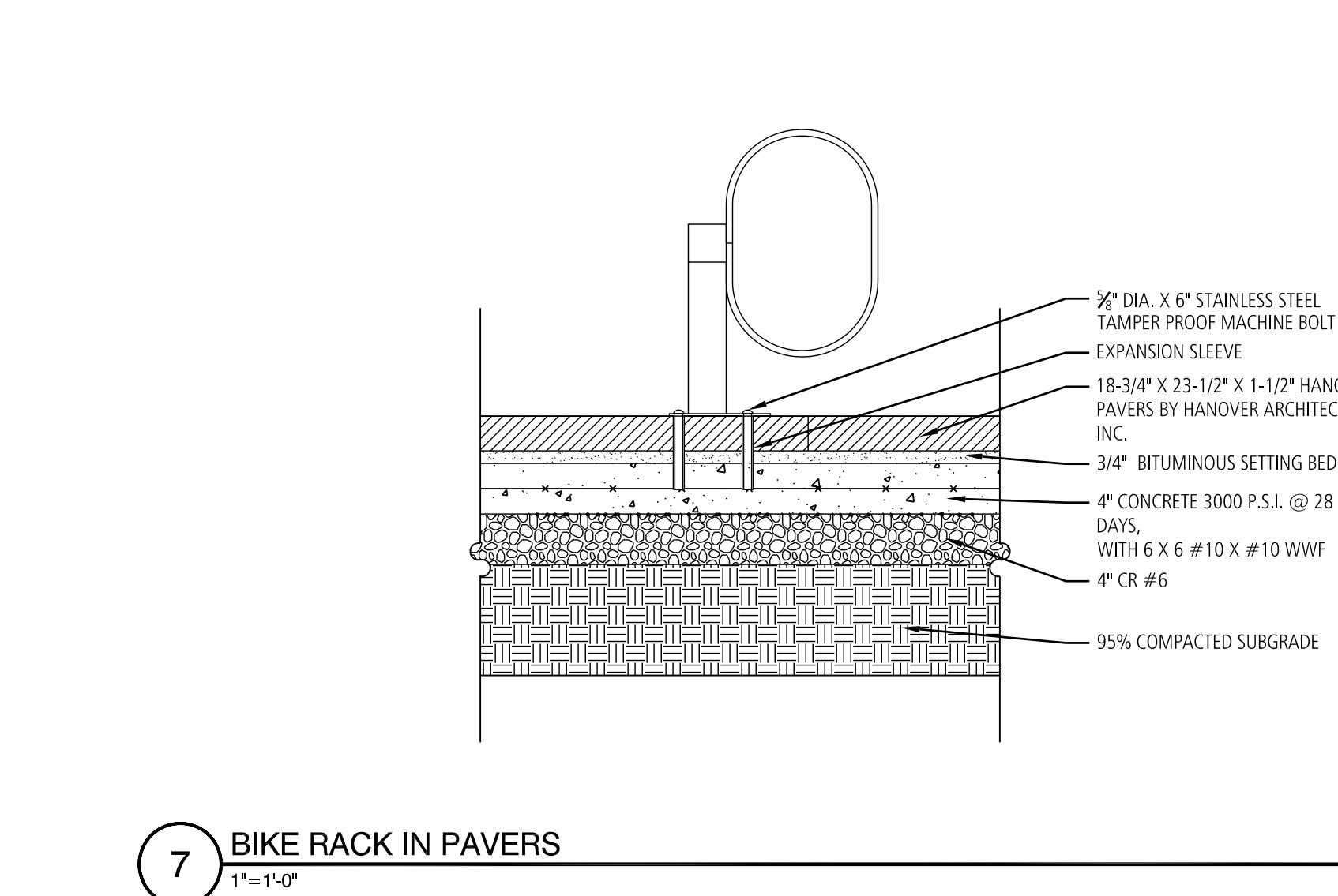
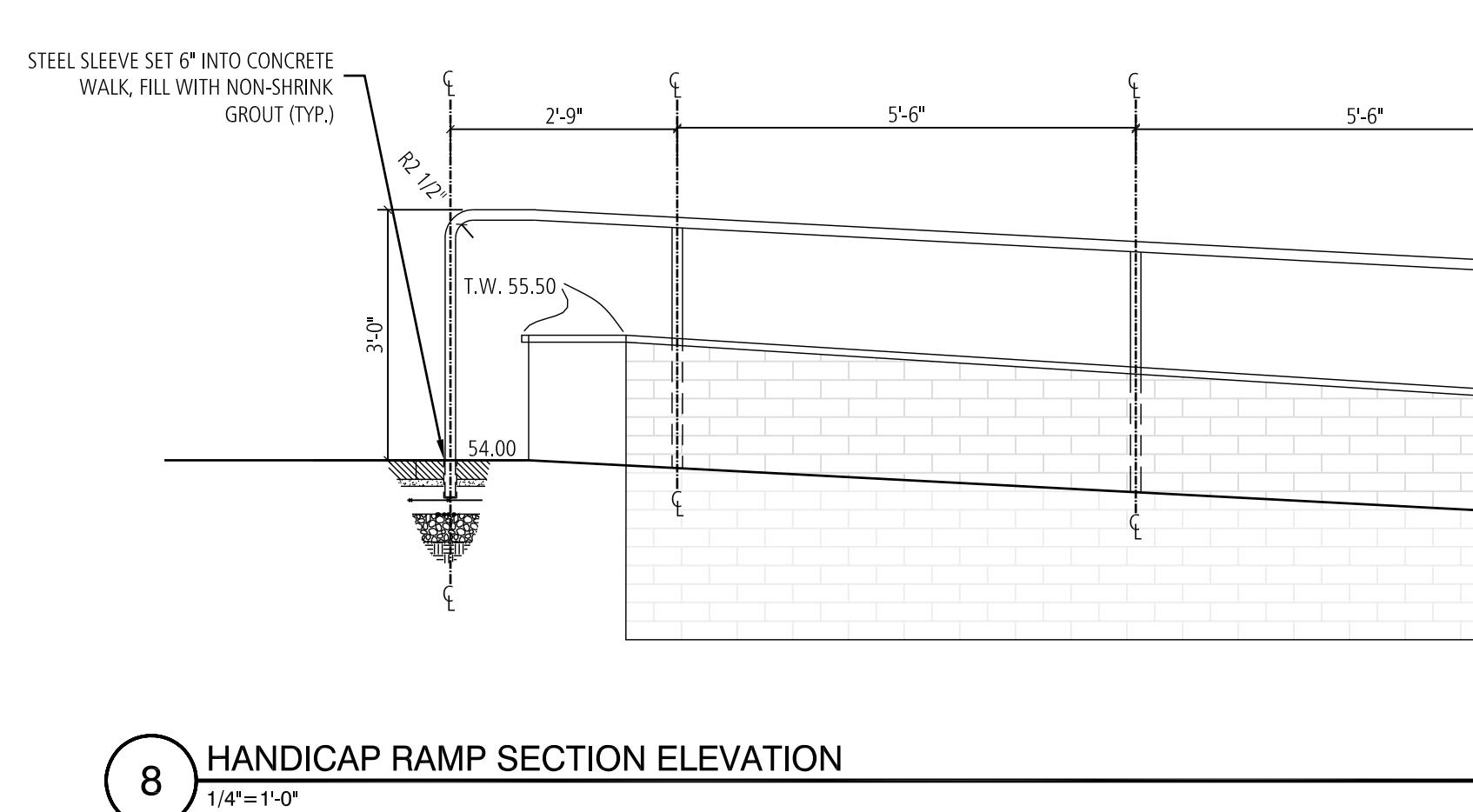
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LIFE SAFETY SYMBOL LEGEND

SMOKE RATED PARTITION

1 HR. FIRE-RATED PARTITION

2 HR. FIRE-RATED PARTITION

DIRECTION OF EGRESS TRAVEL

344

OCCUPANT LOAD

GENERAL LIFE SAFETY NOTES

- SEE IBC AND NFPA 101 CODE ANALYSIS FOR MORE DETAILED CALCULATIONS AND INFORMATION.
- OCCUPANCY AND EGRESS CALCULATIONS ARE BASED ON 2003 NFPA 101 LIFE SAFETY CODE REQUIREMENTS.

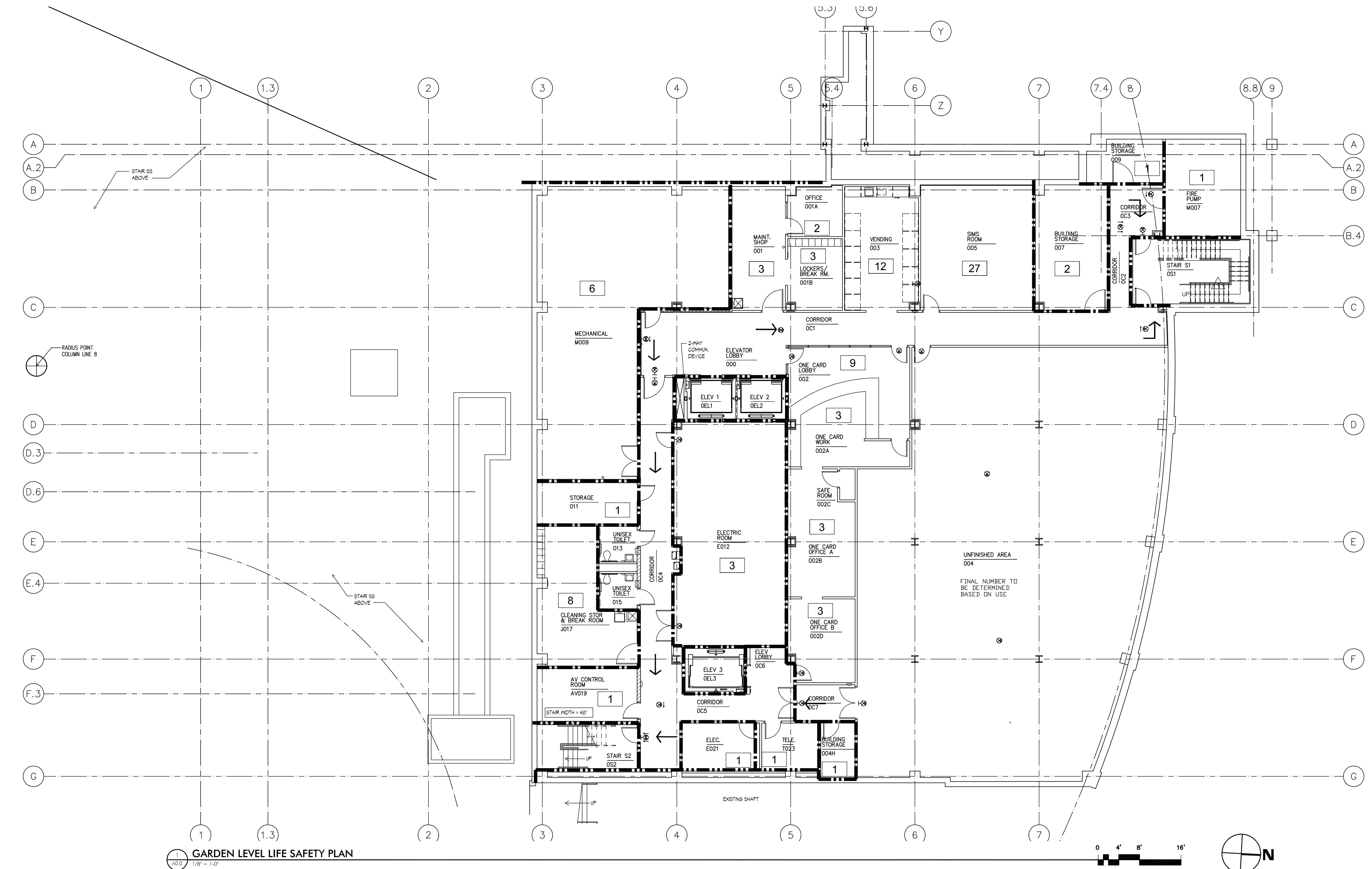
EGRESS CALCULATIONS

GARDEN LEVEL OCCUPANT LOAD		MIN. NO. OF EXITS REQUIRED	TOTAL EGRESS WIDTH REQUIRED	45'	2
1ST FLOOR OCCUPANT LOAD					
2ND FLOOR OCCUPANT LOAD	241	2	241'	2	2
3RD FLOOR OCCUPANT LOAD	253	3	253'	3	3
4TH FLOOR OCCUPANT LOAD	355	2	355'	2	2
5TH FLOOR OCCUPANT LOAD	223	2	223'	2	2
PENTHOUSE OCCUPANT LOAD	0	1	40'	1	1

SCHEDULE OF UL ASSEMBLIES			
Element	Rating	UL #	Notes
Construction Type 1B			
Structural Frame (including columns, girders, etc.)	2 hour	X790	
Floor construction including beams	2 hour	D902	
Roof construction including beams	1 hour	P723	1
Bearing walls			2
Exterior Walls			
>= 5' from property line	2 hour	U415	
>= 5' & < 30' from property line	1 hour	U415	
>= 30' from property line	0 hour		
Interior Construction			
GWB Smoke partitions	20 minute	U419	
GWB Fire partitions	1-2 hour	U419	
GWB Stair partitions	2 hour	U419	
GWB Shaft partitions	2 hour	U415	
GWB Chase partitions	1-2 hour	U420	
CMU Fire partitions	1-2 hour	U903	

1. Roof construction 20' above finish floor - 0 hour

2. Not applicable, not included in project

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TAMBER COURT
127 N. ALLEGHENY STREET
PITTSBURGH, PA 15212-5801
(412) 221-0550
(412) 221-0550 FAX

ASSOCIATE ARCHITECT:


WBCM, Inc. Architects
 Whitney Bailey Cox &
 Magnani, LLC - Consulting Engineers
 849 Fallmount Ave, Suite 100
 Baltimore, MD 21286 (410) 512-4500

RECORD DRAWING

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3 1/29/10 RECORD DRAWING
2 04/29/09 Bulletin #109
1 05/09/08 Bulletin #31
0 05/06/07 For Construction
Rev. Date: Comment:
Issued: May 2, 2007

Campus Center

621 West Lombard Street
University of Maryland
Baltimore, MD

PLAN REVISIONS
05/09/08

Garden Level Life Safety Plan

LIFE SAFETY SYMBOL LEGEND

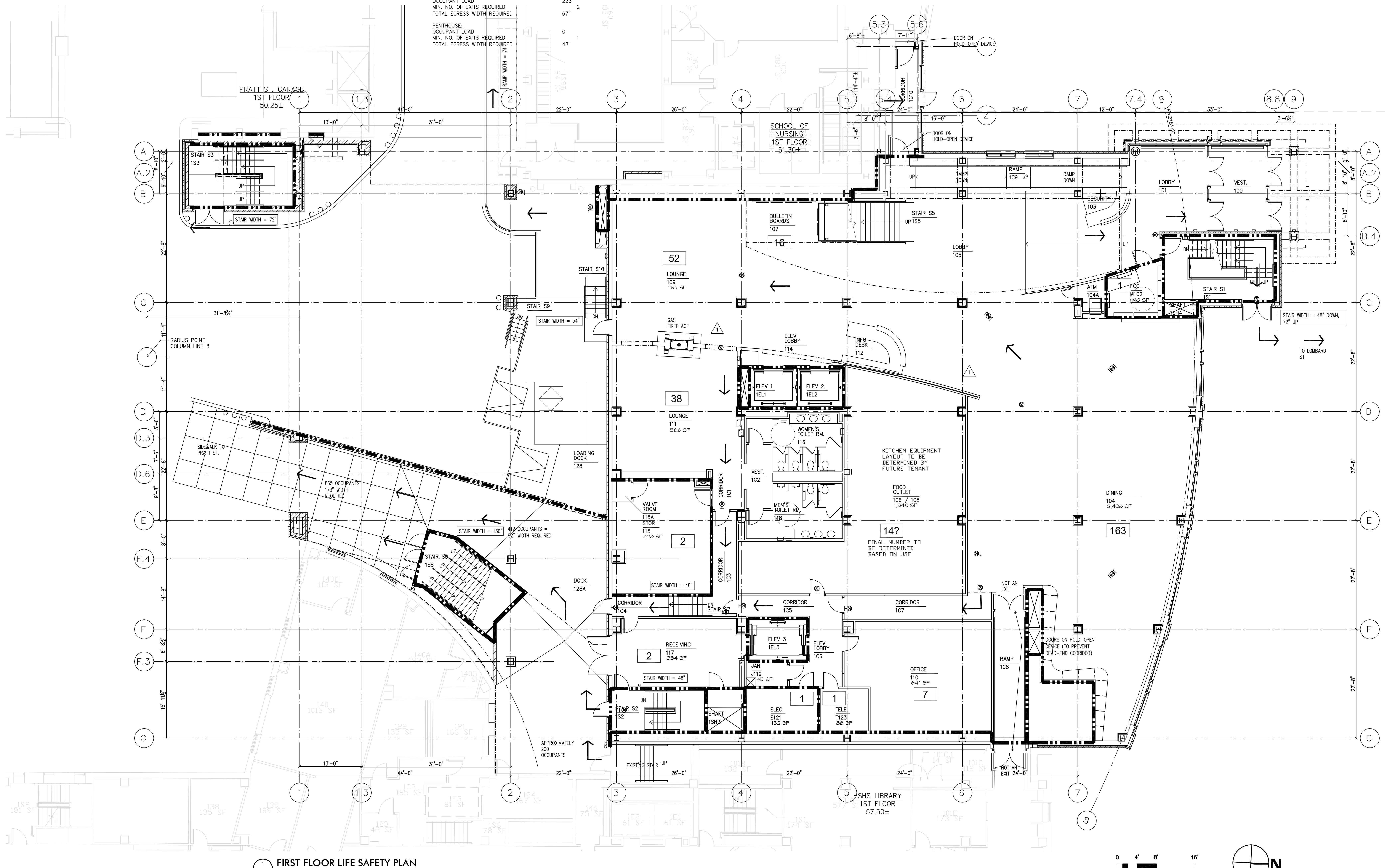
GENERAL LIFE SAFETY NOTES

- SEE IBC AND NFPA 101 CODE ANALYSIS FOR MORE DETAILED CALCULATIONS AND INFORMATION.
- OCCUPANCY AND EGRESS CALCULATIONS ARE BASED ON 2003 NFPA 101 LIFE SAFETY CODE REQUIREMENTS.

EGRESS CALCULATIONS

GARDEN LEVEL		Element	Rating	UL #	Notes
OCCUPANT LOAD	148				
MIN. NO. OF EXITS REQUIRED	2				
TOTAL EGRESS WIDTH REQUIRED	45"				
1ST FLOOR					
OCCUPANT LOAD	297				
MIN. NO. OF EXITS REQUIRED	2				
TOTAL EGRESS WIDTH REQUIRED	90"				
2ND FLOOR					
OCCUPANT LOAD	853				
MIN. NO. OF EXITS REQUIRED	3				
TOTAL EGRESS WIDTH REQUIRED	256"				
3RD FLOOR					
OCCUPANT LOAD	717				
MIN. NO. OF EXITS REQUIRED	2				
TOTAL EGRESS WIDTH REQUIRED	215"				
LOWER PARK LEVEL					
OCCUPANT LOAD	0				
MIN. NO. OF EXITS REQUIRED	2				
TOTAL EGRESS WIDTH REQUIRED	32"				
4TH FLOOR					
OCCUPANT LOAD	355				
MIN. NO. OF EXITS REQUIRED	2				
TOTAL EGRESS WIDTH REQUIRED	107"				
5TH FLOOR					
OCCUPANT LOAD	223				
MIN. NO. OF EXITS REQUIRED	2				
TOTAL EGRESS WIDTH REQUIRED	67"				
PENTHOUSE					
OCCUPANT LOAD	0				
MIN. NO. OF EXITS REQUIRED	2				
TOTAL EGRESS WIDTH REQUIRED	32"				

SCHEDULE OF UL ASSEMBLIES					
Construction Type 1B					
Element	Rating	UL #	Notes		
Structural Frame (including columns, girders, etc.)	2 hour	X790			
Columns	1 hour	D902			
Floor construction including beams	2 hour	P723	1		
Roof construction including beams	1 hour		2		
Bearing walls					
Exterior Walls					
> 6' & < 30' from property line	2 hour	U415			
> 30' from property line	1 hour	U415			
> 30' from property line	0 hour				
Interior Construction					
GWB Smoke partitions	20 minute	U410			
GWB Fire partitions	1-2 hour	U419			
GWB Stair partitions	2 hour	U419			
GWB Shaft partitions	2 hour	U415			
GWB Chase partitions	1-2 hour	U420			
CMU Fire partitions	1-2 hour	U905			



LIFE SAFETY SYMBOL LEGEND

- SMOKE RATED PARTITION
- 1 HR. FIRE-RATED PARTITION
- 2 HR. FIRE-RATED PARTITION
- ← DIRECTION OF EGRESS TRAVEL
- 344 OCCUPANT LOAD

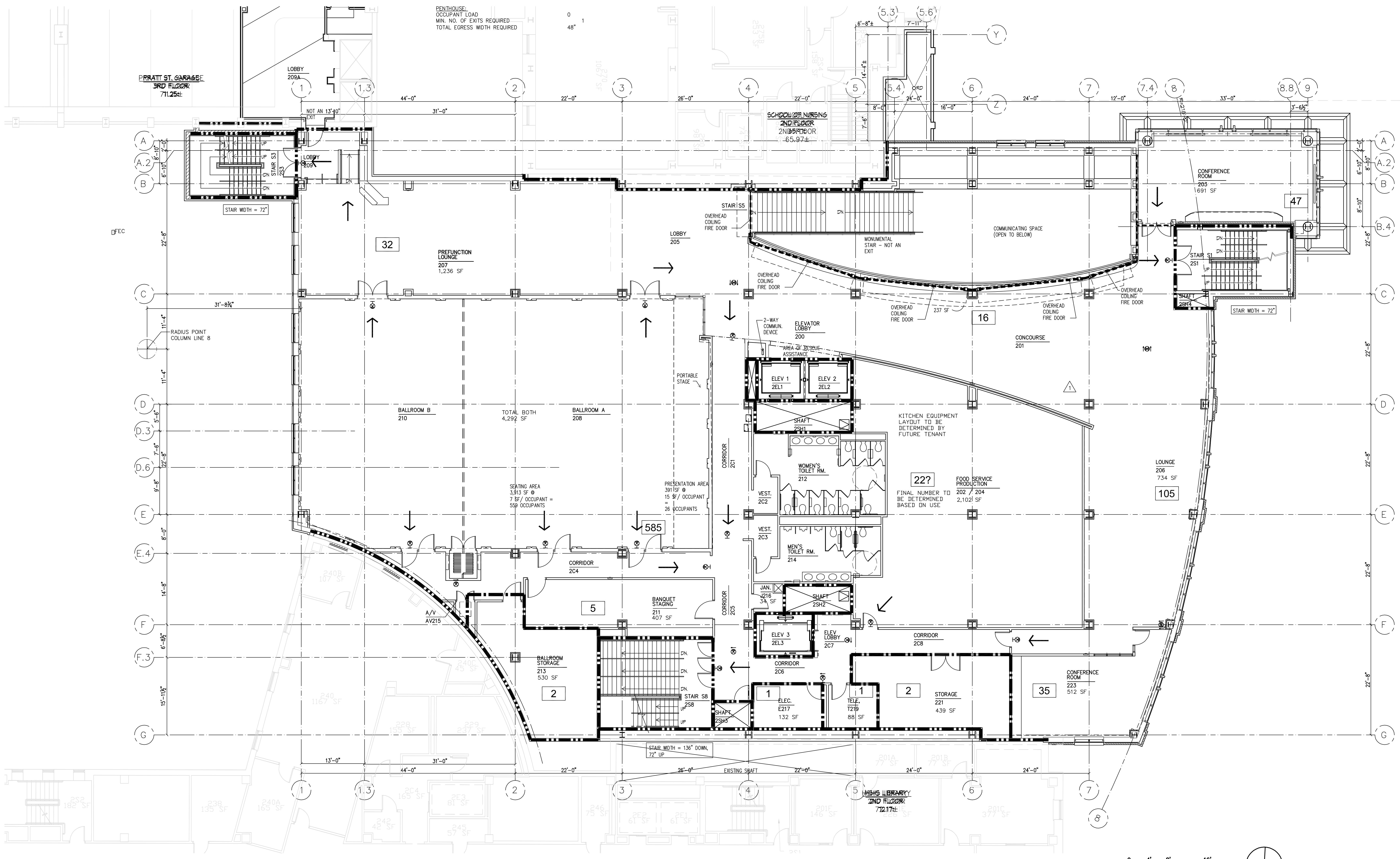
GENERAL LIFE SAFETY NOTES

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2. OCCUPANCY AND EGRESS CALCULATIONS ARE BASED ON 2003 NFPA 101 LIFE SAFETY CODE REQUIREMENTS.

EGRESS CALCULATIONS

GARDEN LEVEL:	OCCUPANT LOAD	148	2
	MIN. NO. OF EXITS REQUIRED		45"
1ST FLOOR:	OCCUPANT LOAD	297	2
	MIN. NO. OF EXITS REQUIRED		90"
2ND FLOOR:	OCCUPANT LOAD	853	3
	MIN. NO. OF EXITS REQUIRED		256"
3RD FLOOR:	OCCUPANT LOAD	717	3
	MIN. NO. OF EXITS REQUIRED		215"
LOWER POOL LEVEL:	OCCUPANT LOAD	0	
	MIN. NO. OF EXITS REQUIRED		32"
4TH FLOOR:	OCCUPANT LOAD	355	2
	MIN. NO. OF EXITS REQUIRED		107"
5TH FLOOR:	OCCUPANT LOAD	223	2
	MIN. NO. OF EXITS REQUIRED		67"
PENTHOUSE:	OCCUPANT LOAD	0	1
	MIN. NO. OF EXITS REQUIRED		48"
	TOTAL EGRESS WIDTH REQUIRED		

SCHEDULE OF UL ASSEMBLIES				
Construction Type 1B	Element	Rating	UL #	Notes
Structural Frame (including columns, girders, etc.)	Columns	2 hour	X790	
	Floor construction including beams	2 hour	R902	
	Roof construction including beams	1 hour	P723	1
	Bearing walls			2
Exterior Walls	<5' from property line	2 hour	U415	
	5' < <30' from property line	1 hour	U415	
	>30' from property line	0 hour		
Interior Construction	GWB Smoke partitions	20 minute	U419	
	GWB Fire doors	1/2 hour	U419	
	GWB Glass partitions	2 hour	U419	
	GWB Shaft partitions	2 hour	U415	
	GWB Chase partitions	1-2 hour	U420	
	CMU Fire partitions	1-2 hour	U905	
	1. Roof construction 20' above finish floor - 0 hour			
	2. Not applicable, not included in project			



LIFE SAFETY SYMBOL LEGEND

- SMOKE RATED PARTITION
- 1 HR. FIRE-RATED PARTITION
- 2 HR. FIRE-RATED PARTITION
- DIRECTION OF EGRESS TRAVEL
- OCCUPANT LOAD

344

GENERAL LIFE SAFETY NOTES

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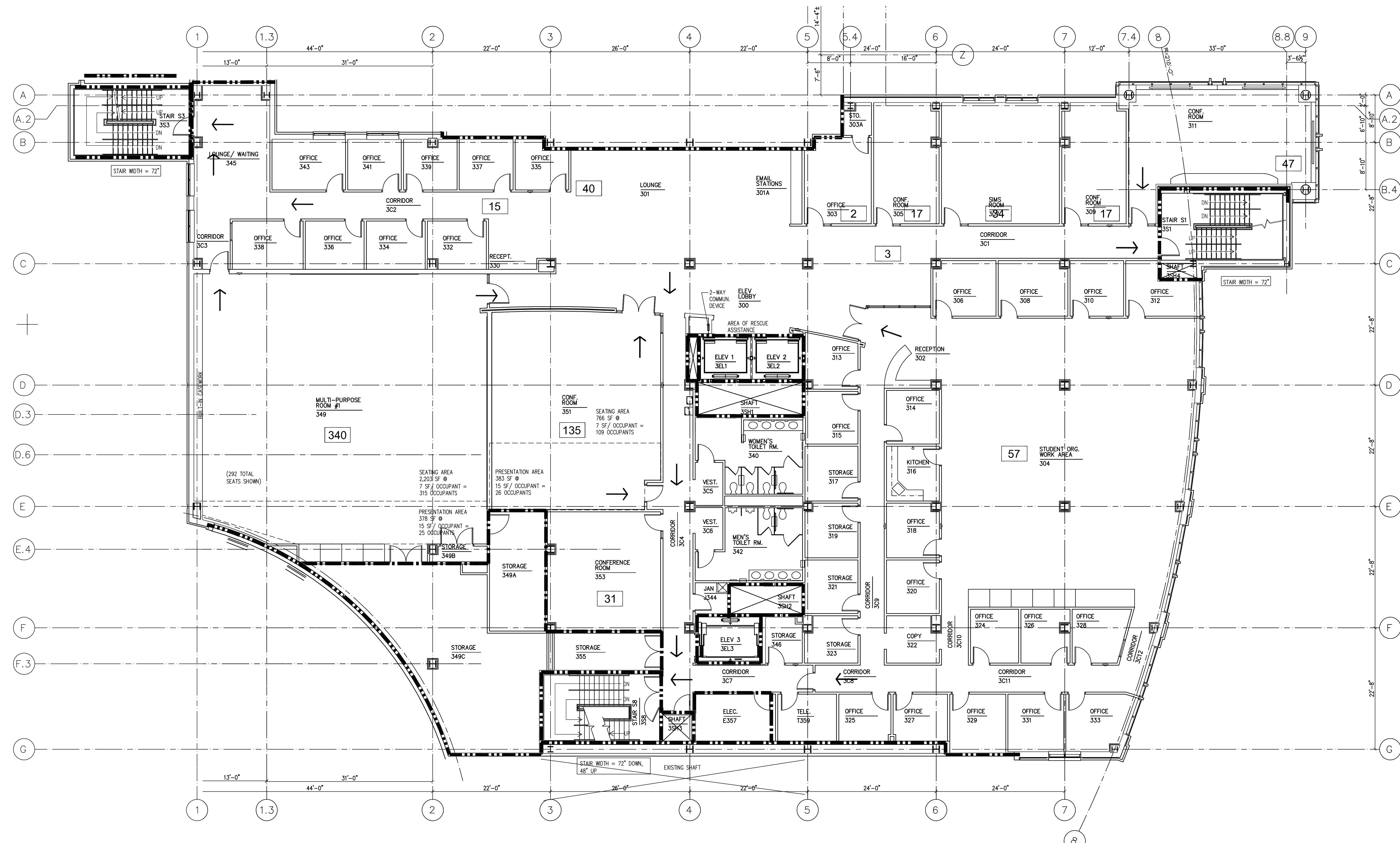
EGRESS CALCULATIONS

GARDEN LEVEL OCCUPANT LOAD	148	2
MIN. NO. OF EXITS REQUIRED		
TOTAL EGRESS WIDTH REQUIRED	45"	2
1ST FLOOR OCCUPANT LOAD	297	2
MIN. NO. OF EXITS REQUIRED		
TOTAL EGRESS WIDTH REQUIRED	90"	2
2ND FLOOR OCCUPANT LOAD	853	3
MIN. NO. OF EXITS REQUIRED		
TOTAL EGRESS WIDTH REQUIRED	256"	3
3RD FLOOR OCCUPANT LOAD	717	3
MIN. NO. OF EXITS REQUIRED		
TOTAL EGRESS WIDTH REQUIRED	215"	3
LOWER PARK LEVEL OCCUPANT LOAD	0	
MIN. NO. OF EXITS REQUIRED		
TOTAL EGRESS WIDTH REQUIRED	32"	2
4TH FLOOR OCCUPANT LOAD	355	2
MIN. NO. OF EXITS REQUIRED		
TOTAL EGRESS WIDTH REQUIRED	107"	2
5TH FLOOR OCCUPANT LOAD	223	2
MIN. NO. OF EXITS REQUIRED		
TOTAL EGRESS WIDTH REQUIRED	67"	2
PENTHOUSE OCCUPANT LOAD	0	
MIN. NO. OF EXITS REQUIRED		
TOTAL EGRESS WIDTH REQUIRED	48"	1

SCHEDULE OF UL ASSEMBLIES			
Element	Rating	UL #	Notes
Structural Frame (including columns, girders, etc.)	2 hour	X990	
Column construction	2 hour	D9902	
Roof construction including beams	2 hour	P720	1
Bearing walls			2
Exterior Walls			
>= 5' & < 30' from property line	2 hour	U415	
>= 5' & < 30' from property line	1 hour	U415	
>= 30' from property line	0 hour		
Interior Construction			
GWB Smoke partitions	20 minute	U418	
GWB Fire partitions	1.2 hour	U418	
GWB Stair partitions	2 hour	U419	
GWB Shaft partitions	2 hour	U415	
GWB Chase partitions	1.2 hour	U420	
CMU Fire partitions	1.2 hour	U905	

1. Roof construction 20' above finish floor - 0 hour

2. Not applicable, not included in project



LIFE SAFETY SYMBOL LEGEND

- SMOKE RATED PARTITION
- 1 HR. FIRE-RATED PARTITION
- 2 HR. FIRE-RATED PARTITION
- DIRECTION OF EGRESS TRAVEL
- 344 OCCUPANT LOAD

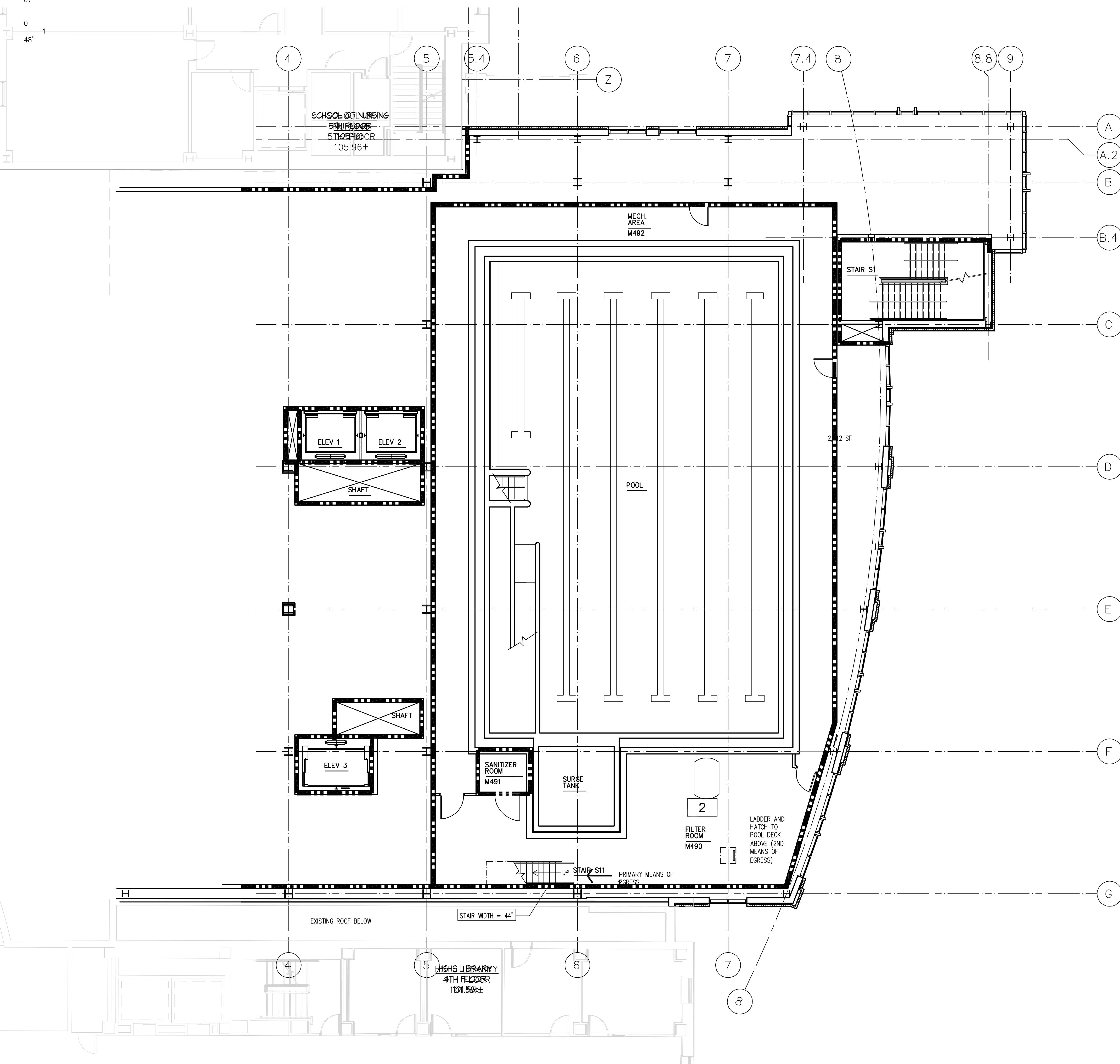
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EGRESS CALCULATIONS

GARDEN LEVEL OCCUPANT LOAD	148	2
MIN. NO. OF EXITS REQUIRED		
TOTAL EGRESS WIDTH REQUIRED	45"	
1ST FLOOR OCCUPANT LOAD	297	2
MIN. NO. OF EXITS REQUIRED		
TOTAL EGRESS WIDTH REQUIRED	90"	
2ND FLOOR OCCUPANT LOAD	853	3
MIN. NO. OF EXITS REQUIRED		
TOTAL EGRESS WIDTH REQUIRED	256"	
3RD FLOOR OCCUPANT LOAD	717	3
MIN. NO. OF EXITS REQUIRED		
TOTAL EGRESS WIDTH REQUIRED	215"	
LOWER POOL LEVEL OCCUPANT LOAD	0	2
MIN. NO. OF EXITS REQUIRED		
TOTAL EGRESS WIDTH REQUIRED	32"	
4TH FLOOR OCCUPANT LOAD	355	2
MIN. NO. OF EXITS REQUIRED		
TOTAL EGRESS WIDTH REQUIRED	107"	
5TH FLOOR OCCUPANT LOAD	223	2
MIN. NO. OF EXITS REQUIRED		
TOTAL EGRESS WIDTH REQUIRED	67"	
PENTHOUSE OCCUPANT LOAD	0	1
MIN. NO. OF EXITS REQUIRED		
TOTAL EGRESS WIDTH REQUIRED	48"	

SCHEDULE OF UL ASSEMBLIES			
Construction Type 1B	Element	Rating	UL #
Structural Frame (including columns, girders, etc.)			
Concrete		2 hour	X780
Floor construction including beams		2 hour	D992
Roof construction including beams		1 hour	P723
Bearing walls			1
Exterior Walls			
<5' from property line		2 hour	U415
>5' & <30' from property line		1 hour	U415
>30' from property line		0 hour	
Interior Construction			
GWB Smoke partitions	20 minute	U419	
GWB Fire partitions	1-2 hour	U419	
GWB Stair partitions	2 hour	U419	
GWB Shaft partitions	2 hour	U415	
GWB Chase partitions	1-2 hour	U420	
CMU Fire partitions	1-2 hour	U905	

1 LOWER POOL LEVEL LIFE SAFETY PLAN
(A0.3A) 1/8" = 1'-0"

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1 1/29/10 RECORD DRAWING
Rev. Date: Comment:
Issued: May 2, 2007

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Baltimore, MD



Lower Pool Level Life Safety Plan

UMB PROJECT NO. 98-311
WTW PROJECT NO. 70-4091

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LIFE SAFETY SYMBOL LEGEND

- SMOKE RATED PARTITION
- 1 HR. FIRE-RATED PARTITION
- 2 HR. FIRE-RATED PARTITION
- ← DIRECTION OF EGRESS TRAVEL
- 344 OCCUPANT LOAD

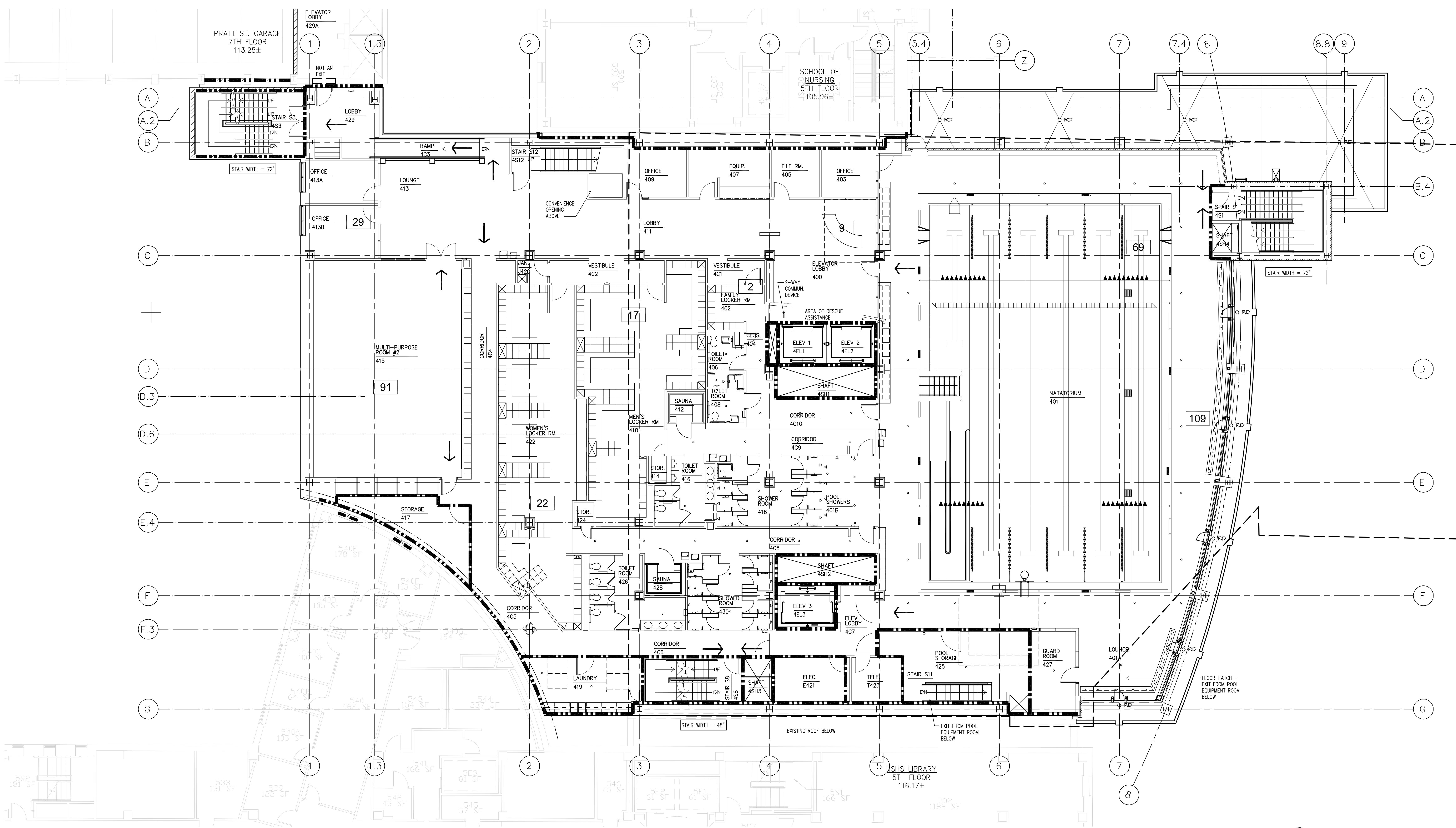
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EGRESS CALCULATIONS

GARDEN LEVEL OCCUPANT LOAD	148	2
MIN. NO. OF EXITS REQUIRED		
TOTAL EGRESS WIDTH REQUIRED	45"	2
1ST FLOOR OCCUPANT LOAD	297	2
MIN. NO. OF EXITS REQUIRED		
TOTAL EGRESS WIDTH REQUIRED	90"	2
2ND FLOOR OCCUPANT LOAD	853	3
MIN. NO. OF EXITS REQUIRED		
TOTAL EGRESS WIDTH REQUIRED	256"	3
3RD FLOOR OCCUPANT LOAD	717	3
MIN. NO. OF EXITS REQUIRED		
TOTAL EGRESS WIDTH REQUIRED	215"	3
LOWER POOL LEVEL OCCUPANT LOAD	0	2
MIN. NO. OF EXITS REQUIRED		
TOTAL EGRESS WIDTH REQUIRED	32"	2
4TH FLOOR OCCUPANT LOAD	355	2
MIN. NO. OF EXITS REQUIRED		
TOTAL EGRESS WIDTH REQUIRED	107"	2
5TH FLOOR OCCUPANT LOAD	223	2
MIN. NO. OF EXITS REQUIRED		
TOTAL EGRESS WIDTH REQUIRED	67"	2
PENTHOUSE OCCUPANT LOAD	0	1
MIN. NO. OF EXITS REQUIRED		
TOTAL EGRESS WIDTH REQUIRED	48"	1

SCHEDULE OF UL ASSEMBLIES			
Construction Type 1B	Element	Rating	UL #
Structural Frame (including columns, girders, etc.)	Columns	2 hour	X790
Floor construction including beams	2 hour	D902	
Floor construction including beams	1 hour	P723	1
Bearing walls			2
Exterior Walls			
< 9' from property line	2 hour	U415	
> 9' & < 30' from property line	1 hour	U415	
> 30' from property line	0 hour		
Interior Construction			
GWB Smoke partitions	20 minute	U419	
GWB Fire partitions	1-2 hour	U419	
GWB Stair partitions	2 hour	U419	
GWB Shaft partitions	2 hour	U415	
GWB Chase partitions	1-2 hour	U420	
CMU Fire partitions	1-2 hour	U805	
Roof construction 20' above finish floor - 0 hour			
Not applicable, not included in project			



Fourth Floor Life Safety Plan

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Rev. Date: May 2, 2007
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LIFE SAFETY SYMBOL LEGEND

- SMOKE RATED PARTITION
- 1 HR. FIRE-RATED PARTITION
- 2 HR. FIRE-RATED PARTITION
- DIRECTION OF EGRESS TRAVEL
- OCCUPANT LOAD

344

GENERAL LIFE SAFETY NOTES

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- OCCUPANCY AND EGRESS CALCULATIONS ARE BASED ON 2003 NFPA 101 LIFE SAFETY CODE REQUIREMENTS.

EGRESS CALCULATIONS

GARDEN LEVEL OCCUPANT LOAD	148	2
MIN. NO. OF EXITS REQUIRED		
TOTAL EGRESS WIDTH REQUIRED	45"	2
1ST FLOOR OCCUPANT LOAD	297	2
MIN. NO. OF EXITS REQUIRED		
TOTAL EGRESS WIDTH REQUIRED	90"	2
2ND FLOOR OCCUPANT LOAD	853	3
MIN. NO. OF EXITS REQUIRED		3
TOTAL EGRESS WIDTH REQUIRED	256"	3
3RD FLOOR OCCUPANT LOAD	717	
MIN. NO. OF EXITS REQUIRED		
TOTAL EGRESS WIDTH REQUIRED	215"	
LOWER POOL LEVEL OCCUPANT LOAD	0	
MIN. NO. OF EXITS REQUIRED		
TOTAL EGRESS WIDTH REQUIRED	32"	
4TH FLOOR OCCUPANT LOAD	355	2
MIN. NO. OF EXITS REQUIRED		2
TOTAL EGRESS WIDTH REQUIRED	107"	2
5TH FLOOR OCCUPANT LOAD	223	2
MIN. NO. OF EXITS REQUIRED		
TOTAL EGRESS WIDTH REQUIRED	67"	2
PENTHOUSE OCCUPANT LOAD	0	1
MIN. NO. OF EXITS REQUIRED		1
TOTAL EGRESS WIDTH REQUIRED	48"	

SCHEDULE OF UL ASSEMBLIES			
Construction Type 1B			
Element	Rating	UL #	Notes
Structural Frame (including columns, girders, etc.)	2 hour	X960	
Floor construction including beams	2 hour	D923	1
Roof construction including beams	1 hour	P723	2
Bearing walls			
<5' from property line	2 hour	U415	
>5' & <30' from property line	1 hour	U415	
>30' from property line	0 hour		
Interior Construction			
GWBS Smoke partitions	20 minute	U419	
GWBS Fire partitions	1-2 hour	U419	
GWBS Stair partitions	2 hour	U415	
GWBS Shaft partitions	2 hour	U415	
GWBS Chase partitions	1-2 hour	U420	
CMU Fire partitions	1-2 hour	U905	

1

2

3

4

5

6

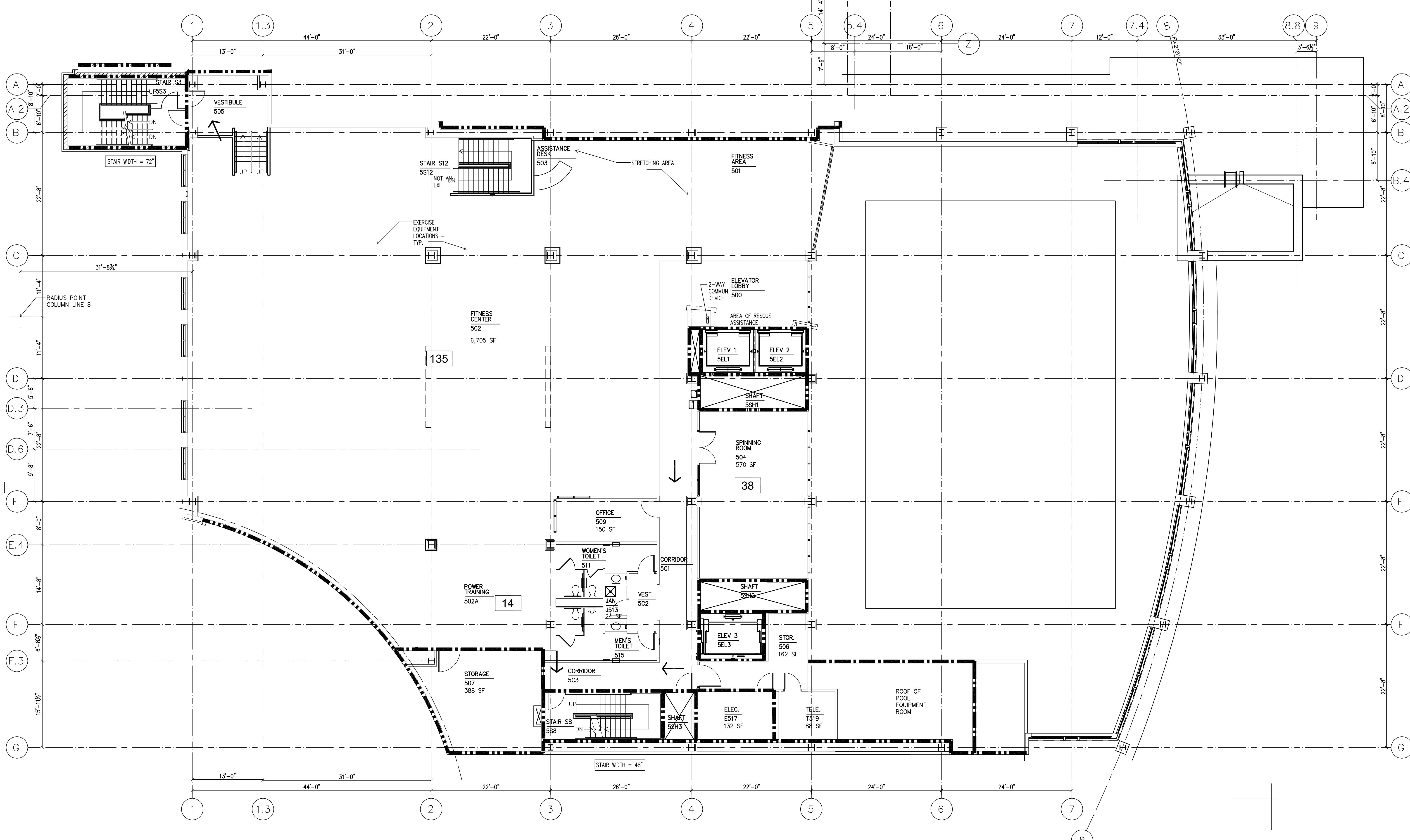
7

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Y

Z



LIFE SAFETY SYMBOL LEGEND

- SMOKE RATED PARTITION
- 1 HR. FIRE-RATED PARTITION
- 2 HR. FIRE-RATED PARTITION
- DIRECTION OF EGRESS TRAVEL
- 344 OCCUPANT LOAD

GENERAL LIFE SAFETY NOTES

- SEE IBC AND NFPA 101 CODE ANALYSIS FOR MORE DETAILED CALCULATIONS AND INFORMATION.
- OCCUPANCY AND EGRESS CALCULATIONS ARE BASED ON 2003 NFPA 101 LIFE SAFETY CODE REQUIREMENTS.

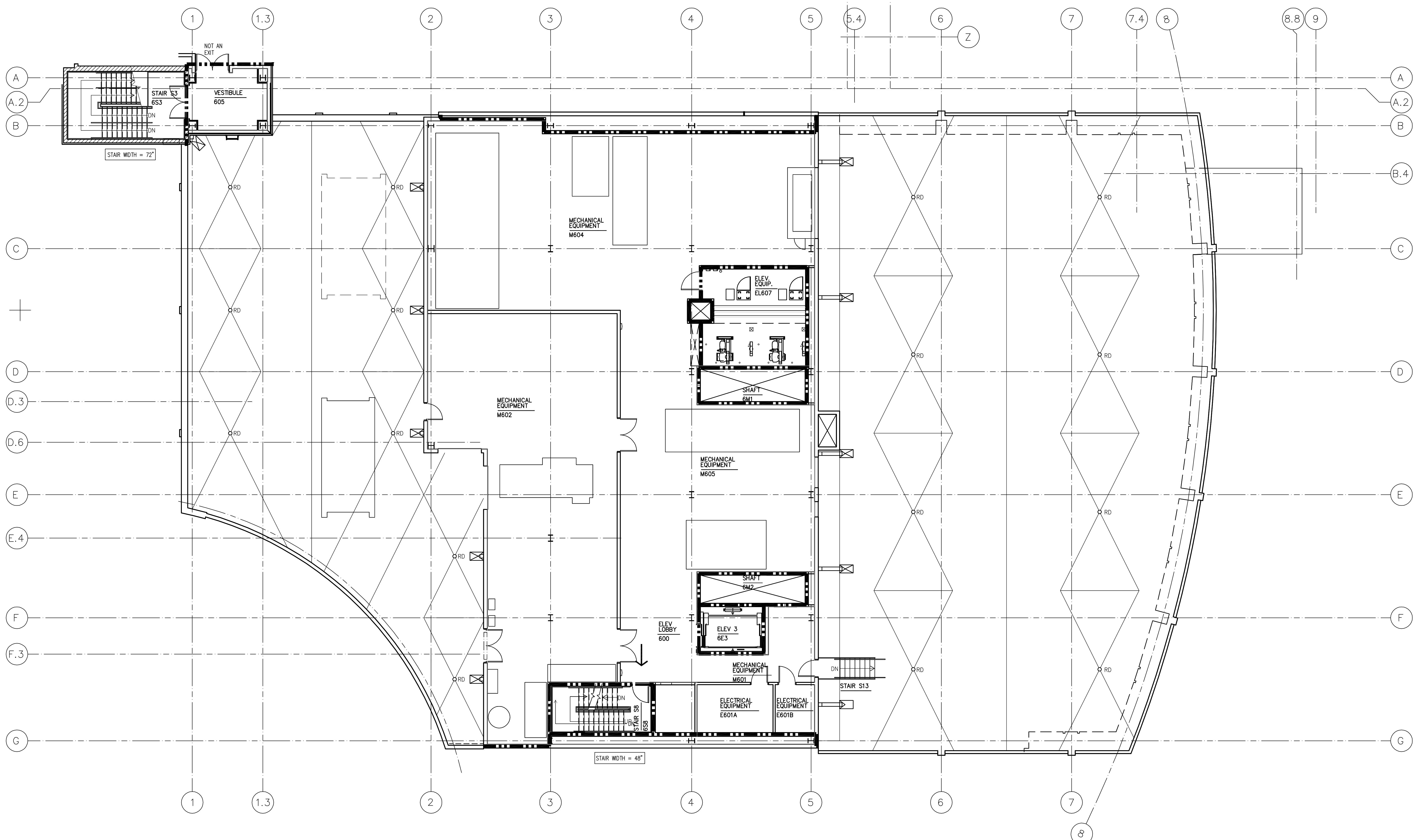
EGRESS CALCULATIONS

GARDEN LEVEL	OCCUPANT LOAD	148	2
	MIN. NO. OF EXITS REQUIRED		
	TOTAL EGRESS WIDTH REQUIRED	45"	2
1ST FLOOR	OCCUPANT LOAD	297	2
	MIN. NO. OF EXITS REQUIRED		
	TOTAL EGRESS WIDTH REQUIRED	90"	2
2ND FLOOR	OCCUPANT LOAD	853	3
	MIN. NO. OF EXITS REQUIRED		
	TOTAL EGRESS WIDTH REQUIRED	256"	3
3RD FLOOR	OCCUPANT LOAD	717	
	MIN. NO. OF EXITS REQUIRED		
	TOTAL EGRESS WIDTH REQUIRED	215"	
LOWER PARK LEVEL	OCCUPANT LOAD	0	
	MIN. NO. OF EXITS REQUIRED		
	TOTAL EGRESS WIDTH REQUIRED	32"	
4TH FLOOR	OCCUPANT LOAD	355	2
	MIN. NO. OF EXITS REQUIRED		
	TOTAL EGRESS WIDTH REQUIRED	107"	2
5TH FLOOR	OCCUPANT LOAD	223	2
	MIN. NO. OF EXITS REQUIRED		
	TOTAL EGRESS WIDTH REQUIRED	67"	2
PENTHOUSE	OCCUPANT LOAD	0	1
	MIN. NO. OF EXITS REQUIRED		
	TOTAL EGRESS WIDTH REQUIRED	48"	

SCHEDULE OF UL ASSEMBLIES			
Construction Type 1B	Element	Rating	UL #
Structural Frame (including columns, girders, etc.)	Columns	2 hour	X790
	Floor construction	2 hour	D902
	Roof construction including beams	1 hour	7723
	Bearing walls		2
Exterior Walls			
	<5' from property line	2 hour	U415
	>5' & <30' from property line	1 hour	U415
	>30' from property line	0 hour	
Interior Construction			
	GWB Smoke partitions	20 minute	U419
	GWB Fire partitions	1-2 hour	U419
	GWB Stair partitions	2 hour	U419
	GWB Shaft partitions	2 hour	U415
	GWB Chase partitions	1-2 hour	U420
	CMU Fire partitions	1-2 hour	U905

1. Roof construction 20' above finish floor - 0 hour

2. Not applicable, not included in project



PENTHOUSE FLOOR LIFE SAFETY PLAN

A0.6

1/8" = 1'-0"



LIFE SAFETY SYMBOL LEGEND

- SMOKE RATED PARTITION
- 1 HR. FIRE-RATED PARTITION
- 2 HR. FIRE-RATED PARTITION
- DIRECTION OF EGRESS TRAVEL
- OCCUPANT LOAD

344

GENERAL LIFE SAFETY NOTES

- SEE IBC AND NFPA 101 CODE ANALYSIS FOR MORE DETAILED CALCULATIONS AND INFORMATION.
- OCCUPANCY AND EGRESS CALCULATIONS ARE BASED ON 2003 NFPA 101 LIFE SAFETY CODE REQUIREMENTS.

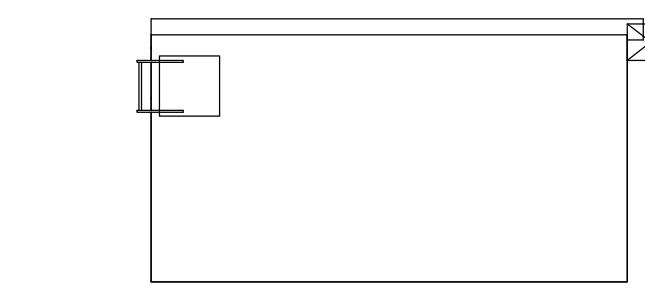
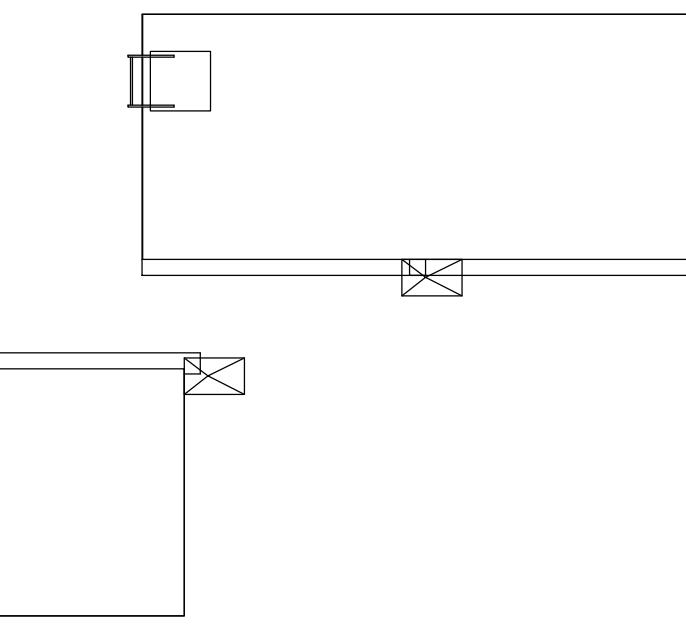
EGRESS CALCULATIONS

GARDEN LEVEL OCCUPANT LOAD	148	2
MIN. NO. OF EXITS REQUIRED		
TOTAL EGRESS WIDTH REQUIRED	45"	2
1ST FLOOR OCCUPANT LOAD	297	2
MIN. NO. OF EXITS REQUIRED		
TOTAL EGRESS WIDTH REQUIRED	90"	2
2ND FLOOR OCCUPANT LOAD	853	3
MIN. NO. OF EXITS REQUIRED		
TOTAL EGRESS WIDTH REQUIRED	256"	3
3RD FLOOR OCCUPANT LOAD	717	3
MIN. NO. OF EXITS REQUIRED		
TOTAL EGRESS WIDTH REQUIRED	215"	2
LOWER PARK LEVEL OCCUPANT LOAD	0	
MIN. NO. OF EXITS REQUIRED		
TOTAL EGRESS WIDTH REQUIRED	32"	2
4TH FLOOR OCCUPANT LOAD	355	2
MIN. NO. OF EXITS REQUIRED		
TOTAL EGRESS WIDTH REQUIRED	107"	2
5TH FLOOR OCCUPANT LOAD	223	2
MIN. NO. OF EXITS REQUIRED		
TOTAL EGRESS WIDTH REQUIRED	67"	2
PENTHOUSE OCCUPANT LOAD	0	
MIN. NO. OF EXITS REQUIRED		
TOTAL EGRESS WIDTH REQUIRED	48"	1

SCHEDULE OF UL ASSEMBLIES			
Construction Type 1B	Element	Rating	UL #
Structural Frame (including columns, girders, etc.)	Columns	2 hour	X790
	Floor construction including beams	2 hour	D902
	Roof construction including beams	1 hour	7723
	Bearing walls		1
			2
Exterior Walls			
	<5' from property line	2 hour	U415
	>5' & <30' from property line	1 hour	U415
	>30' from property line	0 hour	
Interior Construction			
	GWB Smoke partitions	20 minute	U419
	GWB Fire partitions	1-2 hour	U419
	GWB Stair partitions	2 hour	U419
	GWB Shaft partitions	2 hour	U415
	GWB Chase partitions	1-2 hour	U420
	CMU Fire partitions	1-2 hour	U905

1. Roof construction 20' above finish floor - 0 hour

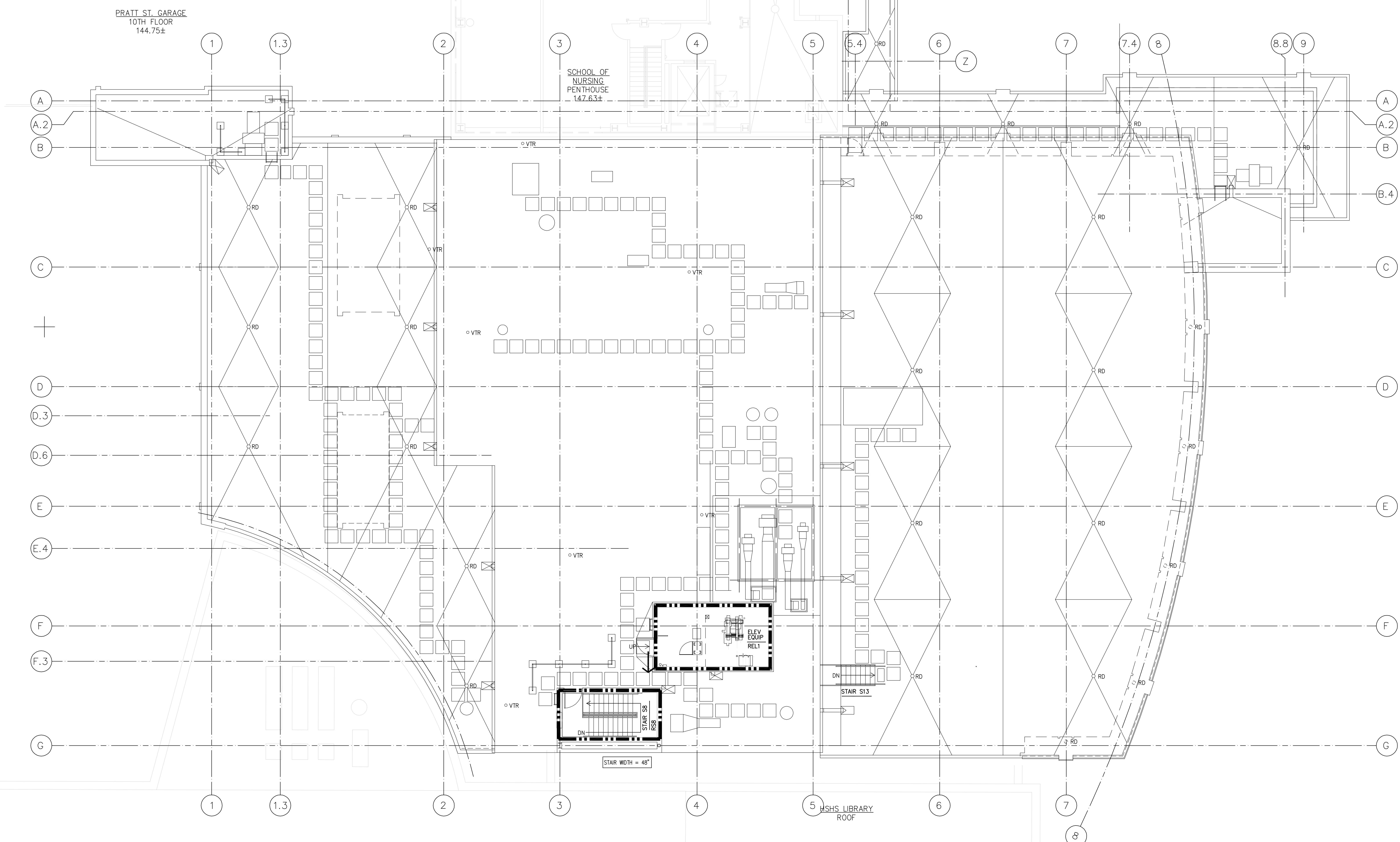
2. Not applicable, not included in project



STAIR S8 & ELEVATOR 3 PENTHOUSE ROOF LIFE SAFETY PLAN

0 4' 8' 16'

A0.7 1/8" = 1'-0"



RECORD DRAWING

This record drawing has been prepared based upon information provided by others. While this information is believed to be reliable, the DESIGN PROFESSIONAL has not verified its accuracy, and thus is not responsible for the use of any portion of this record drawing or for any errors or omissions which may have been incorporated into it as a result of erroneous information provided by others. Those relying on this record drawing should make an independent verification of its accuracy before applying it for any purpose.

1 1/29/10 RECORD DRAWING
Rev. Date: May 2, 2007
Comment: For Construction
Issued: May 2, 2007

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Roof Life Safety Plan

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WTW PROJECT NO. 70-4091
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IF THIS DRAWING DOES NOT MEASURE EXACTLY
30' X 42', IT HAS BEEN REDUCED OR ENLARGED.
PLEASE DO NOT SCALE THIS DRAWING.

A0.7

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2 01/29/10 RECORD DRAWING
 1 05/02/07 Bulid #10 Issued for Bid
 0 Rev. Date: 05/02/07
 Comment: Issued: May 2, 2007

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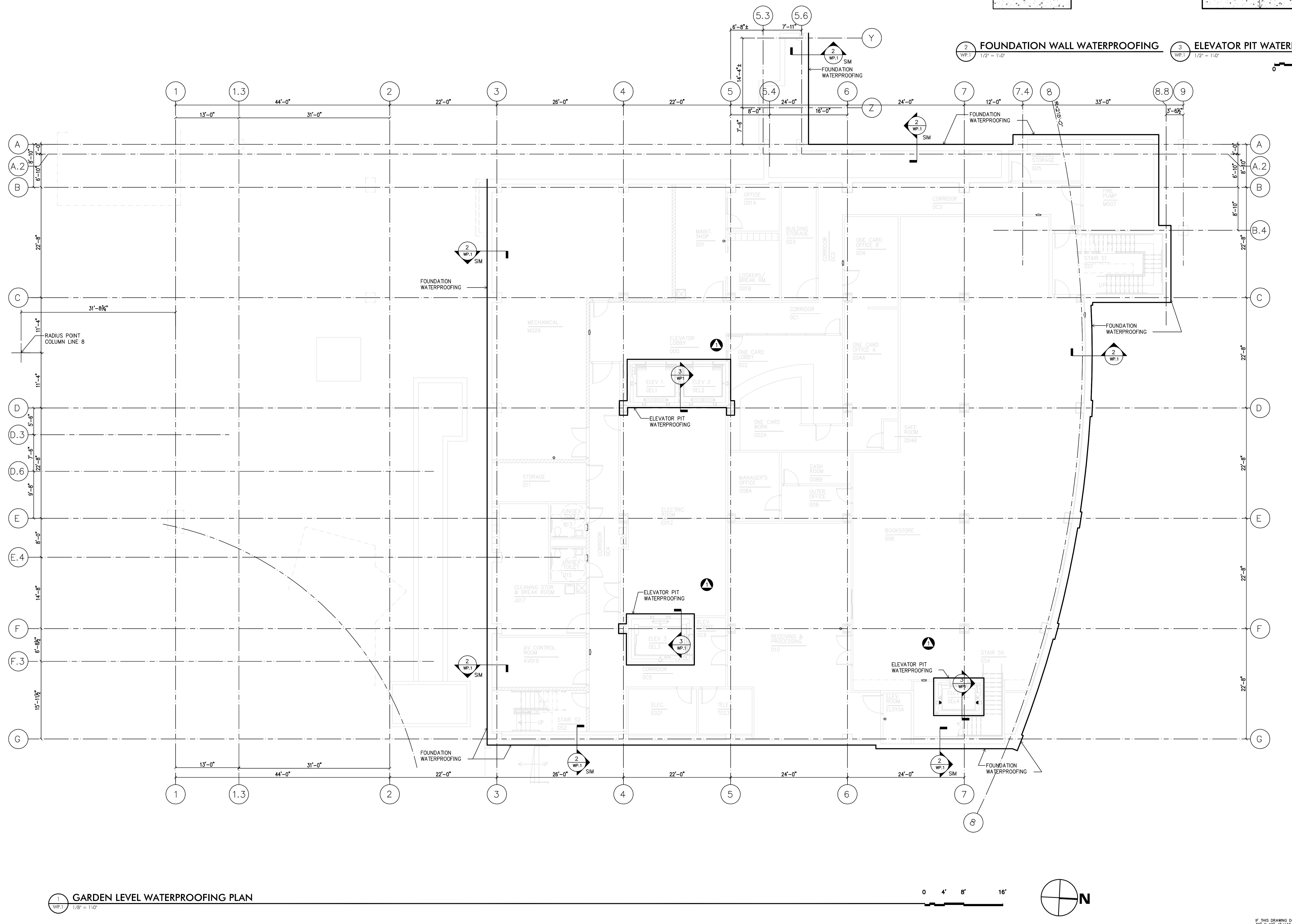
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Garden Level Water-proofing Plan

LMB PROJECT NO. 98-311
 WTW PROJECT NO. 70-4091
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WP.1



GENERAL NOTES

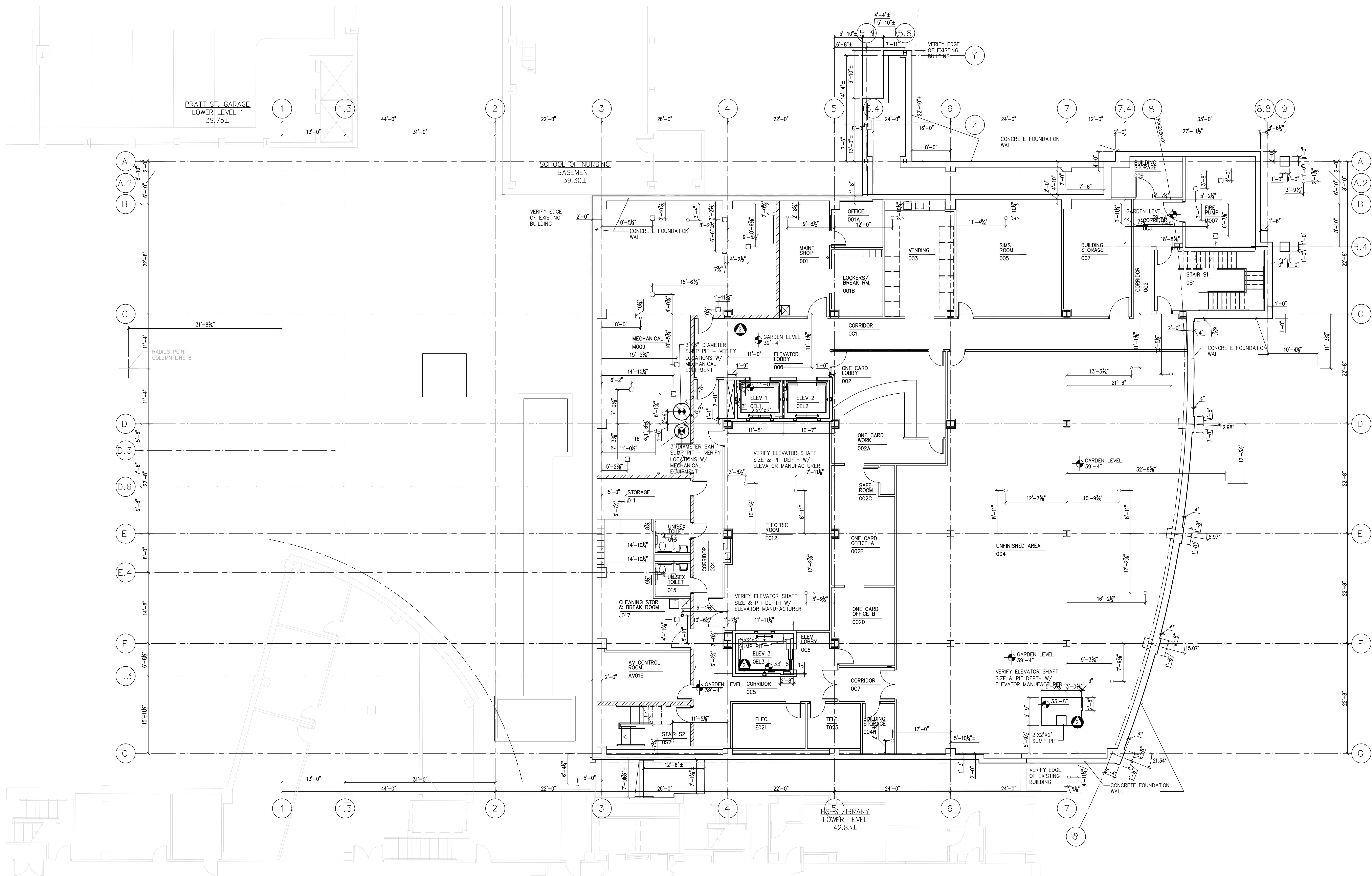
1. VERIFY LOCATION & CLEARANCES BETWEEN CONSTRUCTION AND EXISTING BUILDINGS IN THE FIELD BEFORE SETTING ADJACENT SLAB POUR STOPS.
2. VERIFY SIZES OF ELEVATOR SHAFTS BEFORE SETTING SHAFT SIZES.

SEALED HORIZONTAL FOUNDATION SLEEVE SIZES			VERTICAL FLOOR PENETRATION SLEEVE SIZES		
RIGID STEEL AND NON-METALLIC RACEWAY SIZE	WS STEEL SLEEVE SIZE	CAST OR CORE BIT DRILLED	EMT AND RIGID STEEL RACEWAY SIZE (NOMINAL)	STEEL SLEEVE SIZE	CAST OR CORE BIT DRILLED
1-INCH AND UNDER	2.5-INCH	3-INCH	1-INCH AND UNDER	2-INCH	2-INCH
1.25-INCH	3-INCH	3-INCH	1.25-INCH	2-INCH	2-INCH
1.5-INCH	3-INCH	4-INCH	1.5-INCH	3-INCH	3-INCH
2-INCH	3.5-INCH	4-INCH	2-INCH	3-INCH	3-INCH
2.5-INCH	4-INCH	4-INCH	2.5-INCH	3-INCH	3-INCH
3-INCH	5-INCH	5-INCH	3-INCH	4-INCH	4-INCH
3.5-INCH	6-INCH	6-INCH	3.5-INCH	5-INCH	5-INCH
4-INCH	6-INCH	6-INCH	4-INCH	6-INCH	6-INCH
5-INCH	8-INCH	8-INCH			

BULLETIN #9 REVISIONS

NOTE THAT THERE HAVE BEEN SIGNIFICANT CHANGES THROUGHOUT THIS SHEET INCLUDING:

- ADJUSTMENT TO SIZE AND LOCATION OF OPENINGS FOR ELEVATORS, STAIRS AND SHAFTS
- ADJUSTMENT TO THE DEPTH AND CONFIGURATION OF ELEVATOR PITS



RECORD DRAWING

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3 01/29/10 RECORD DRAWING
2 05/02/07 Bulletin #10
1 04/09/07 Issued for Bid
Rev. Date: 05/02/07
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Garden Level Geometry & Layout Plan

GENERAL NOTES

1. VERIFY LOCATION & CLEARANCES BETWEEN CONSTRUCTION AND EXISTING BUILDINGS IN THE FIELD BEFORE SETTING ADJACENT SLAB POUR STOPS.
2. VERIFY SIZES OF ELEVATOR SHAFTS BEFORE SETTING SHAFT SIZES.

ESTIMATED VERTICAL SLEEVE COUNTS FOR UPPER FLOORS															
SLEEVE COUNTS	Electrical					Telecom/AV/ and Security					HVAC				
	2-INCH STEEL SLEEVES	3-INCH STEEL SLEEVES	4-INCH STEEL SLEEVES	5-INCH STEEL SLEEVES	6-INCH STEEL SLEEVES	BUSWAY 6"X10" APPROX.	2-INCH STEEL SLEEVES	5-INCH STEEL SLEEVES	3-INCH STEEL SLEEVES	4-INCH STEEL SLEEVES	6-INCH STEEL SLEEVES	8-INCH STEEL SLEEVES	10-INCH STEEL SLEEVES		
FIRST FLOOR	24	8	0	4	2	1	10	6	14	2	6	2			
SECOND FLOOR	23	7	0	2	2	1	9	6	26	2		2			
THIRD FLOOR	23	7	0	0	2	1	8	6	50	4		2			
FOURTH FLOOR	20	11	0	0	2	1	7	6	10			2			
FIFTH FLOOR	19	11	0	0	2	1	6	6							
PENTHOUSE FLOOR	19	15	0	4	2	1	2	5			2	4			

RECORD DRAWING
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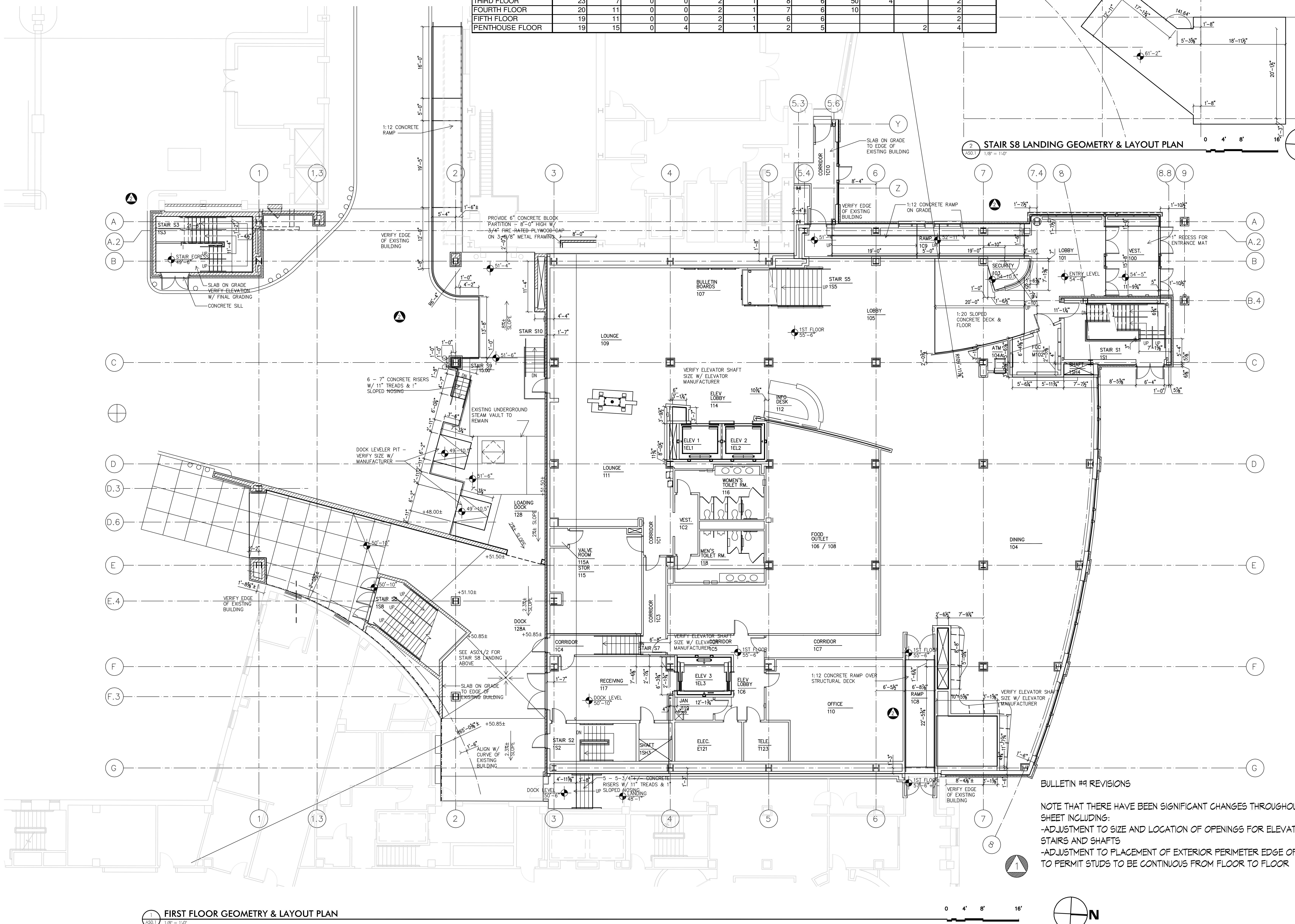
3 01/29/10 RECORD DRAWING
2 05/02/07 Bulletin #10
1 04/09/07 Bulletin #9
Rev. Date: 05/02/07
Issued for Bid: 05/02/07
Comment: May 2, 2007

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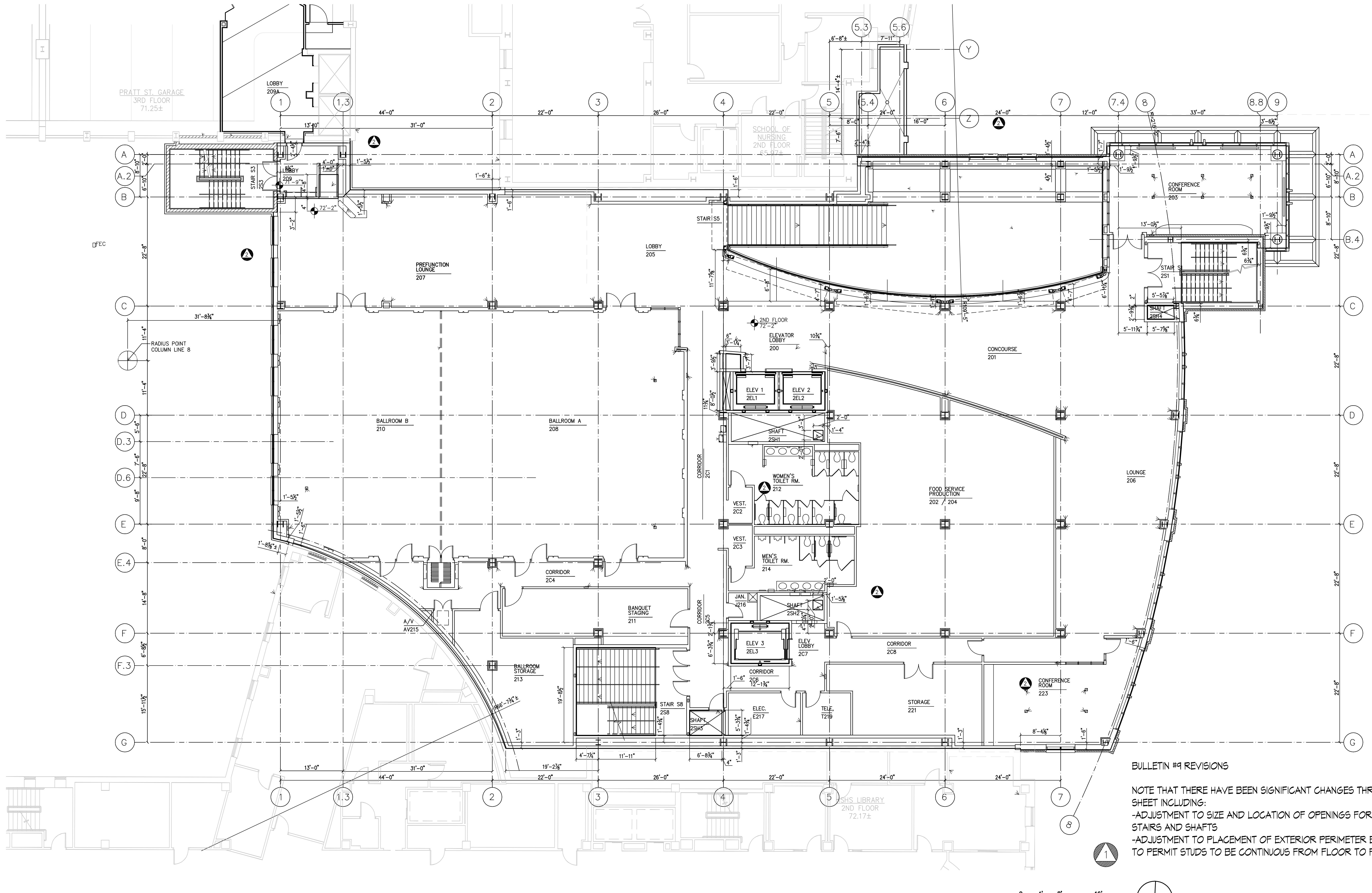
First Floor Geometry & Layout Plan



GENERAL NOTES

1. VERIFY LOCATION & CLEARANCES BETWEEN CONSTRUCTION AND EXISTING BUILDINGS IN THE FIELD BEFORE SETTING ADJACENT SLAB POUR STOPS.
2. VERIFY SIZES OF ELEVATOR SHAFTS BEFORE SETTING SHAFT SIZES.

ESTIMATED VERTICAL SLEEVE COUNTS FOR UPPER FLOORS												
SLEEVE COUNTS	Electrical					6"X10" APPROX.	Telecom/AV/ and Security					
	2-INCH STEEL SLEEVES	3-INCH STEEL SLEEVES	4-INCH STEEL SLEEVES	5-INCH STEEL SLEEVES	6-INCH STEEL SLEEVES	2-INCH STEEL SLEEVES	5-INCH STEEL SLEEVES	3-INCH STEEL SLEEVES	4-INCH STEEL SLEEVES	6-INCH STEEL SLEEVES	8-INCH STEEL SLEEVES	10-INCH STEEL SLEEVES
FIRST FLOOR	24	8	0	4	2	1	10	6	14	2	6	2
SECOND FLOOR	23	7	0	2	2	1	9	6	26	2	2	2
THIRD FLOOR	23	7	0	0	2	1	8	6	50	4	2	2
FOURTH FLOOR	20	11	0	0	2	1	7	6	10	2	2	2
FIFTH FLOOR	19	11	0	0	2	1	6	6	2	2	2	2
PENTHOUSE FLOOR	19	15	0	4	2	1	2	5		2	4	

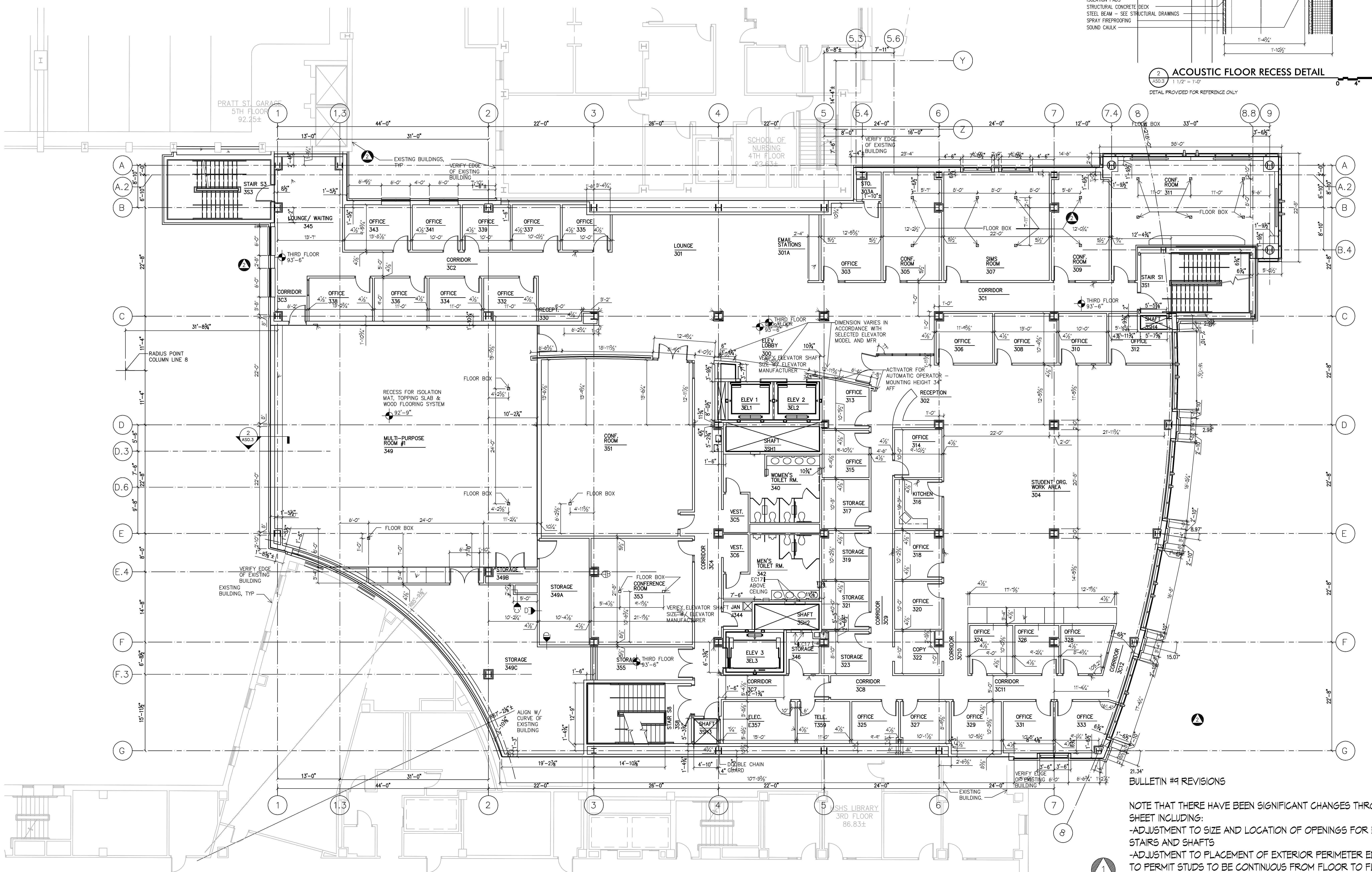


GENERAL NOTES

1. VERIFY LOCATION & CLEARANCES BETWEEN CONSTRUCTION AND EXISTING BUILDINGS IN THE FIELD BEFORE SETTING ADJACENT SLAB POUR STOPS.
2. VERIFY SIZES OF ELEVATOR SHAFTS BEFORE SETTING SHAFT SIZES.

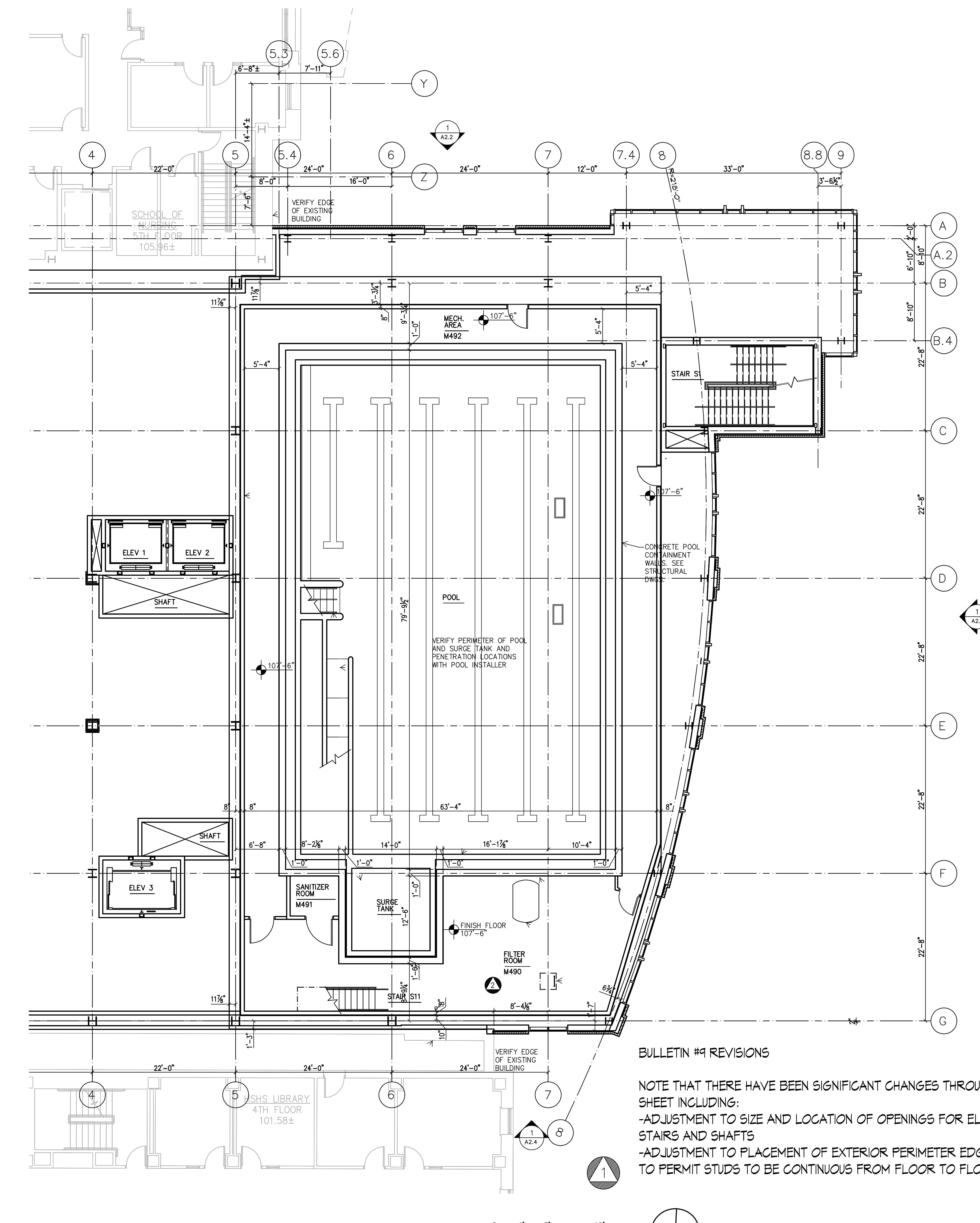
ESTIMATED VERTICAL SLEEVE COUNTS FOR UPPER FLOORS

SLEEVE COUNTS	Electrical						Telecom/AV/ and Security			HVAC			
	2-INCH STEEL SLEEVES	3-INCH STEEL SLEEVES	4-INCH STEEL SLEEVES	5-INCH STEEL SLEEVES	6-INCH STEEL SLEEVES	BUSWAY 6"X10" APPROX.	2-INCH STEEL SLEEVES	5-INCH STEEL SLEEVES	3-INCH STEEL SLEEVES	4-INCH STEEL SLEEVES	6-INCH STEEL SLEEVES	8-INCH STEEL SLEEVES	10-INCH STEEL SLEEVES
FIRST FLOOR	24	8	0	4	2	1	10	6	14	2	6	2	
SECOND FLOOR	23	7	0	2	2	1	9	6	26	2			
THIRD FLOOR	23	7	0	0	2	1	8	6	50	4			
FOURTH FLOOR	20	11	0	0	2	1	7	6	10				
FIFTH FLOOR	19	11	0	0	2	1	6	6					
PENTHOUSE FLOOR	19	15	0	4	2	1	2	5		2	4		



GENERAL NOTES

1. VERIFY LOCATION & CLEARANCES BETWEEN CONSTRUCTION AND EXISTING BUILDINGS IN THE FIELD BEFORE SETTING ADJACENT SLAB POUR STOPS
2. VERIFY SIZES OF ELEVATOR SHAFTS BEFORE SETTING SHAFT SIZES.



RECORD DRAWING
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3 01/29/10 RECORD DRAWING
2 05/02/07 Bulletin #10
1 04/09/07 Bulletin #9
0 01/07/07 Issued for Bid
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Comment: May 2, 2007

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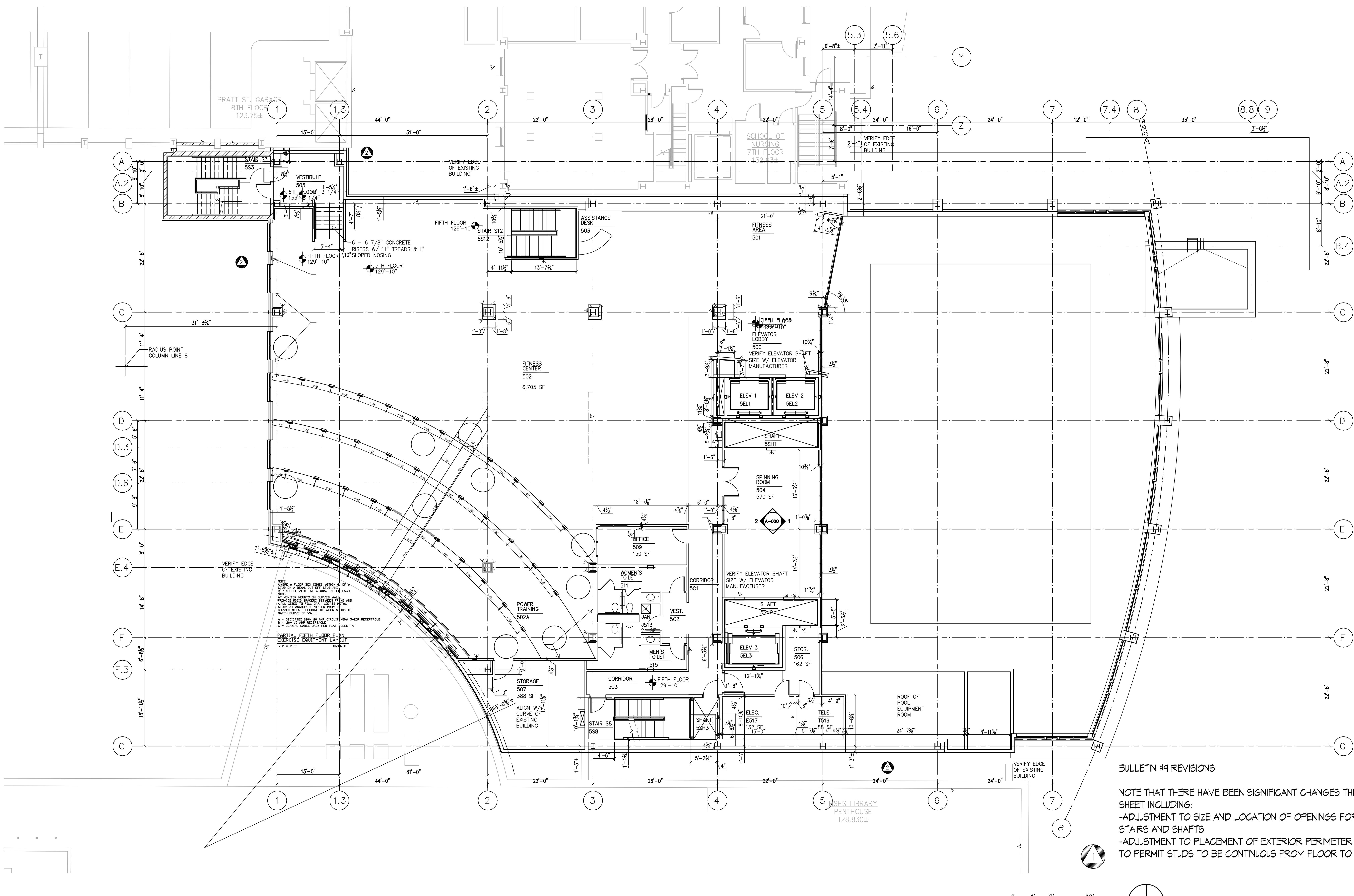
Lower Pool Level Geometry & Layout Plan

GENERAL NOTES

1. VERIFY LOCATION & CLEARANCES BETWEEN CONSTRUCTION AND EXISTING BUILDINGS IN THE FIELD BEFORE SETTING ADJACENT SLAB POUR STOPS.
2. VERIFY SIZES OF ELEVATOR SHAFTS BEFORE SETTING SHAFT SIZES.

ESTIMATED VERTICAL SLEEVE COUNTS FOR UPPER FLOORS

SLEEVE COUNTS	Electrical					Telecom/AV/ and Security	HVAC						
	2-INCH STEEL SLEEVES	3-INCH STEEL SLEEVES	4-INCH STEEL SLEEVES	5-INCH STEEL SLEEVES	6-INCH STEEL SLEEVES		2-INCH STEEL SLEEVES	5-INCH STEEL SLEEVES	3-INCH STEEL SLEEVES	4-INCH STEEL SLEEVES	6-INCH STEEL SLEEVES	8-INCH STEEL SLEEVES	10-INCH STEEL SLEEVES
FIRST FLOOR	24	8	0	4	2	1	10	6	14	2	6	2	
SECOND FLOOR	23	7	0	2	2	1	9	6	26	2		2	
THIRD FLOOR	23	7	0	0	2	1	8	6	50	4		2	
FOURTH FLOOR	20	11	0	0	2	1	7	6	10			2	
FIFTH FLOOR	19	11	0	0	2	1	6	6				2	
PENTHOUSE FLOOR	19	15	0	4	2	1	2	5			2	4	



3 01/29/10 RECORD DRAWING
2 05/02/07 Bulletin #10
1 04/06/07 Bulletin #9
Rev. Date: 05/02/07
Comment: Issued for Bid
Issued: May 2, 2007

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Fifth Floor Geometry & Layout Plan

NOTE THAT THERE HAVE BEEN SIGNIFICANT CHANGES THROUGHOUT THIS SHEET INCLUDING:
-ADJUSTMENT TO SIZE AND LOCATION OF OPENINGS FOR ELEVATORS, STAIRS AND SHAFTS
-ADJUSTMENT TO PLACEMENT OF EXTERIOR PERIMETER EDGE OF SLAB TO PERMIT STUDS TO BE CONTINUOUS FROM FLOOR TO FLOOR

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WTC PROJECT NO. 70-4091
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GENERAL NOTES

1. VERIFY LOCATION & CLEARANCES BETWEEN CONSTRUCTION AND EXISTING BUILDINGS IN THE FIELD BEFORE SAVING ADJACENT SLAB POUR STOPS.
2. VERIFY SIZES OF ELEVATOR SHAFTS BEFORE SETTING SHAFT SIZES.

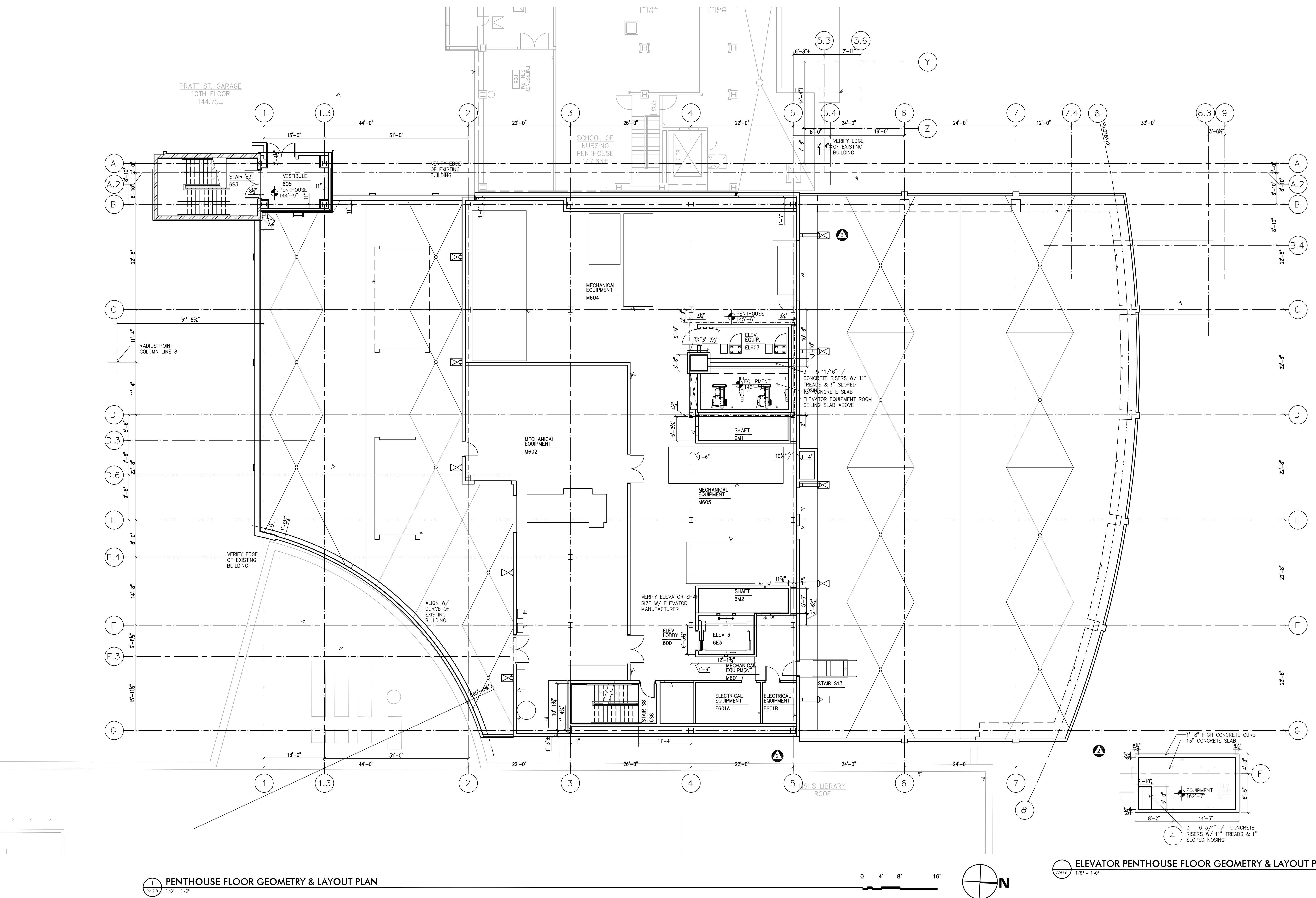
ESTIMATED VERTICAL SLEEVE COUNTS FOR UPPER FLOORS

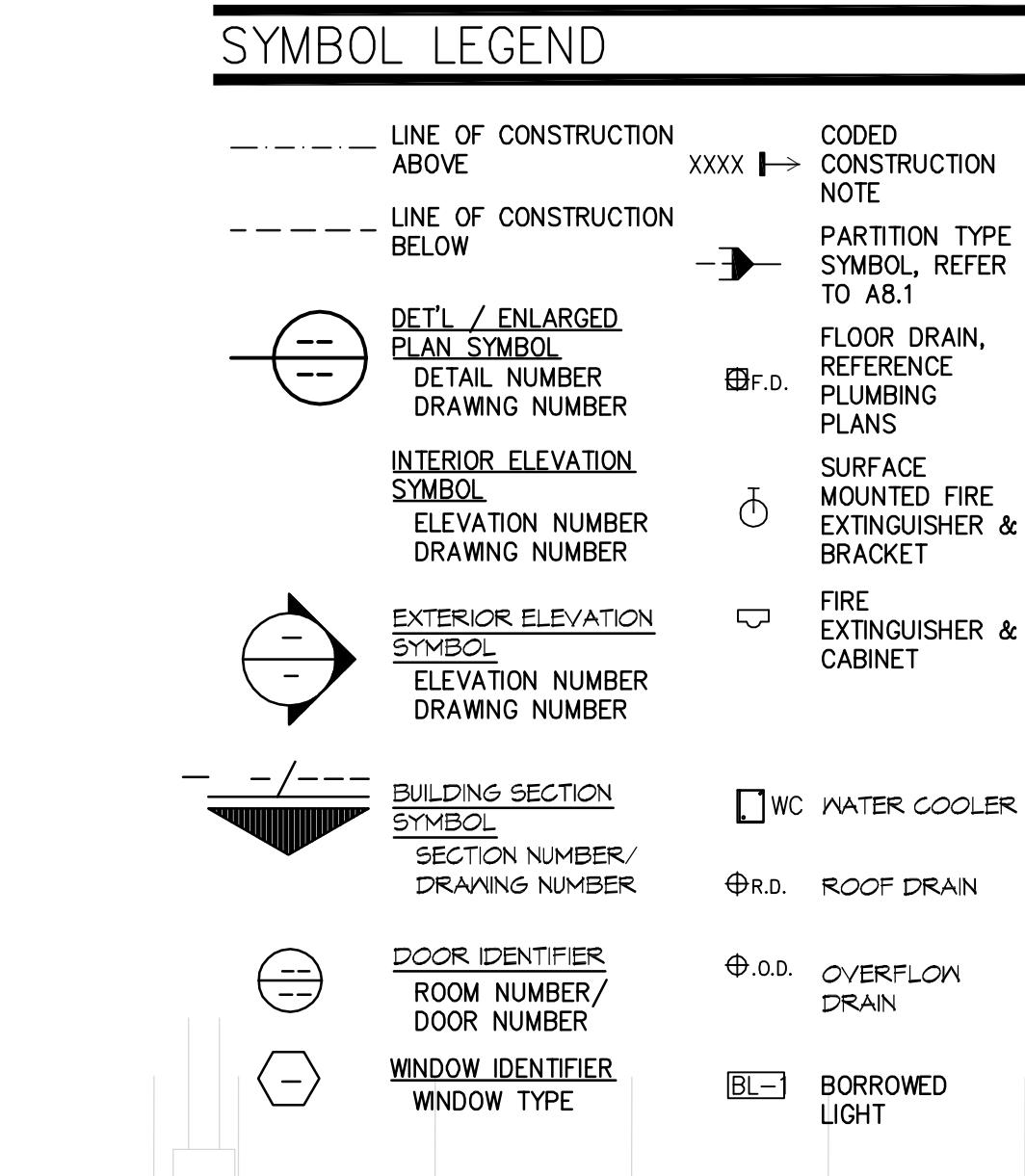
SLEEVE COUNTS	Electrical					Telecom/AV/ and Security		HVAC				
	2-INCH STEEL SLEEVES	3-INCH STEEL SLEEVES	4-INCH STEEL SLEEVES	5-INCH STEEL SLEEVES	6-INCH STEEL SLEEVES	BUSWAY 6"X10" APPROX.	2-INCH STEEL SLEEVES	5-INCH STEEL SLEEVES	3-INCH STEEL SLEEVES	4-INCH STEEL SLEEVES	6-INCH STEEL SLEEVES	8-INCH STEEL SLEEVES
FIRST FLOOR	24	8	0	4	2	1	6	14	2		6	2
SECOND FLOOR	23	7	0	2	2	1	9	6	26	2		
THIRD FLOOR	23	7	0	0	2	1	8	6	50	4		2
FOURTH FLOOR	20	11	0	0	2	1	7	6	10			2
FIFTH FLOOR	19	11	0	0	2	1	6	6				2
PENTHOUSE FLOOR	19	15	0	4	2	1	2	5			2	4

BULLETIN #9 REVISIONS

NOTE THAT THERE HAVE BEEN SIGNIFICANT CHANGES THROUGHOUT THIS SHEET INCLUDING:

- ADJUSTMENT TO SIZE AND LOCATION OF OPENINGS FOR ELEVATORS, STAIRS AND SHAFTS
- ADJUSTMENT TO PLACEMENT OF EXTERIOR PERIMETER EDGE OF SLAB TO PERMIT STUDS TO BE CONTINUOUS FROM FLOOR TO FLOOR
- ADDITION OF ELEVATOR PENTHOUSES AND ACCOMPANYING SUPPORT FOR AND PLACEMENT OF CONCRETE SLABS





GENERAL ARCHITECTURAL NOTES

- DO NOT SCALE DRAWINGS. VERIFY ALL EXISTING CONDITIONS AT SITE BEFORE PROCEEDING WITH WORK.
- ALL DRAWINGS ARE NOT TO SCALE. REFERENCED ON ALL ARCHITECTURAL PLAN DRAWINGS.
- ANY CONFLICT OR DISCREPANCY BETWEEN INFORMATION ON DRAWINGS AND ACTUAL FIELD CONDITIONS SHOULD BE BROUGHT TO ARCHITECT'S ATTENTION FOR RESOLUTION PRIOR TO COMMENCING WORK.
- PARTITION DIMENSIONS INDICATED ARE TO FACE OF GIVE CONSTRUCTION AND MANUFACTURER.
- ALL FURNITURE, FILE CABINETS AND OTHER OFFICE EQUIPMENT SHOWN IS FOR INFORMATION PURPOSES ONLY AND IS N.I.C. UNLESS OTHERWISE NOTED. SEE STRUCTURAL DRAWINGS FOR SLAB EDGE DIMENSIONS.
- APPLY SPRAY FIREPROOFING TO STRUCTURE STEEL WHERE BEAMS, COLUMNS & BRACING INTERRUPT RATED FT @ ALL FLOOR DRAIN LOCATIONS.
- CONTRACTOR TO SLOPE FLOOR 1/8" PER FT @ ALL FLOOR DRAIN LOCATIONS.

CODED CONSTRUCTION NOTES

EQUIPMENT CONSTRUCTION NOTES

- AUTOMATIC DOOR OPERATORS
- EXISTING MANHOLES TO BE RAISED. REFERENCE CIVIL DRAWINGS.
- EXISTING LOUVERS TO REMAIN. DO NOT BLOCK.
- EXISTING FIRE DEPT. CONNECTION TO REMAIN.
- ATM MACHINE FURNISHED AND INSTALLED BY OWNER. VERIFY OPENING & POWER/ DATA MOUNTING LOCATIONS W/ OWNER, TYP.
- PORTABLE STAGE, N.I.C.
- ELECT. WATER COOLER, TYP.
- VENDING MACHINES FURNISHED AND INSTALLED BY SEPARATE CONTRACTOR. VERIFY POWER/DATA MOUNTING LOCATIONS W/ OWNER, TYP.
- FOOD SERVICE EQUIPMENT N.I.C.
- SWIMSUIT EXTRACTOR
- TV ABOVE, N.I.C. FURNISHED AND INSTALLED BY A/V CONTRACTOR. VERIFY ATTACHMENT BRACKET AND POWER MOUNTING LOCATION WITH A/V CONTRACTOR. N.I.C.
- RECESSED FIRE EXTINGUISHER CABINET
- RECESSED FIRE-RATED FIRE EXTINGUISHER CABINET
- SURFACE MOUNTED FIRE EXTINGUISHER CABINET
- WALL MOUNTED FIRE EXTINGUISHER VENDOR
- 2'-0" x 2'-0" ACCESS PANEL 2'-0" AFF; COORDINATE WITH HVAC DRAWINGS.

FLOOR CONSTRUCTION NOTES

- ROOF STRUCTURE TO SLOPE, TYP.; 1/4" PER FOOT, MIN.

PARTITION CONSTRUCTION NOTES

- INSTALL HIGH STRENGTH CORNER, PITCON - SO-HSE-90 AT THIS LOCATION. REFERENCE SPECIFICATIONS

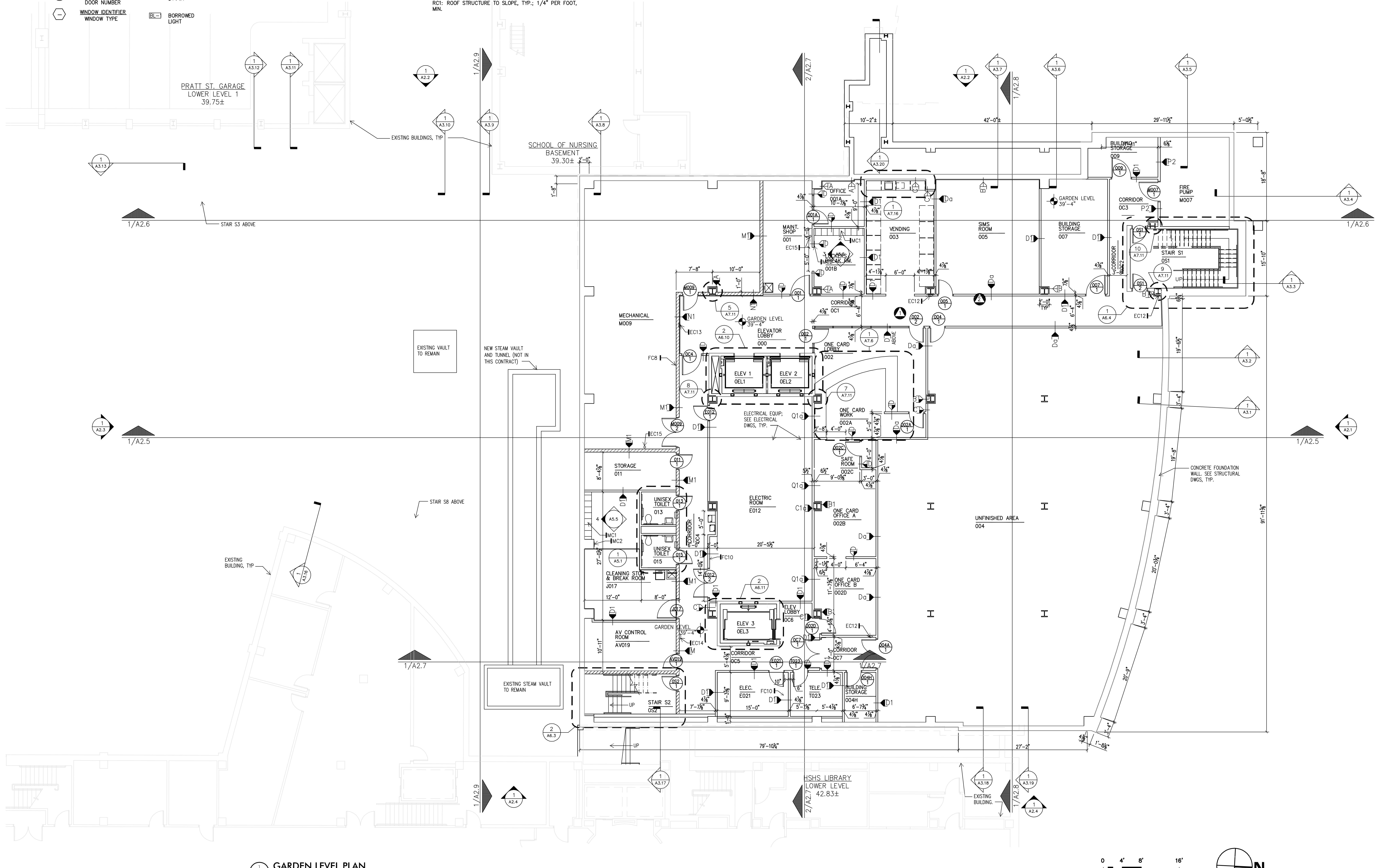
MILLWORK & MISCELLANEOUS CONSTRUCTION NOTES

- METAL LOCKERS, REFERENCE SPECIFICATIONS, TYP.
- 5' MIRROR, REFERENCE INTERIOR ELEVATION A5.2, STD. MOUNTING HEIGHTS SCHEDULE AND SPECIFICATION.
- BUILT-IN CASEWORK, REFERENCE INTERIOR ELEVATION A5.2, STD. MOUNTING HEIGHTS SCHEDULE AND SPECIFICATION.
- INSTALL 2' MIRRORS AT FRONT OF COLUMN ONLY, VERT. WIDTH IN FIELD.
- FOUR (4) 3' MIRRORS CENTERED ON WEST WALL, BOTTOM AT 28" AFF & TOP AT 86" AFF. REFERENCE INTERIOR ELEVATION AND SPECIFICATION.
- EIGHT (8) 3' MIRRORS CENTERED ON WEST WALL, BOTTOM AT 4' AFF & TOP 86" AFF. REFERENCE INTERIOR ELEVATION AND SPECIFICATION.
- FOUR (4) 3' MIRRORS CENTERED ON NORTH WALL, BOTTOM AT 28" AFF & TOP AT 86" AFF. REFERENCE SPECIFICATION.
- SIX (6) 4' MIRRORS CENTERED ON WEST WALL, BOTTOM COLUMN LINE 1.3 & 2. BOTTOM AT 24" AFF & TOP 72" AFF. REFERENCE SPECIFICATIONS

MILLWORK & MISCELLANEOUS CONSTRUCTION NOTES

- INSTALL MIRRORS AT EACH SIDE OFF COLUMN, VIF FOR SIZE. BOTTOM AT 28" AFF & TOP AT 86" AFF, REFERENCE SPECIFICATIONS.
- BUILT-IN CASEWORK, REFERENCE INTERIOR ELEVATION A5.2, STD. MOUNTING HEIGHTS SCHEDULE AND SPECIFICATION.
- FOUR (4) 3' MIRRORS CENTERED ON NORTH WALL, BOTTOM AT 28" AFF & TOP AT 86" AFF. REFERENCE INTERIOR ELEVATION AND SPECIFICATION.
- FOUR (4) 3' MIRRORS CENTERED ON NORTH WALL, BOTTOM AT 28" AFF & TOP AT 86" AFF. REFERENCE SPECIFICATION.
- INSTALLED IN STORAGE BENCH, REFERENCE INTERIOR ELEVATION AND DETAIL, TYP. (ALTERNATE #7)
- NOT USED
- BUILT-IN CASEWORK, STORAGE UNITS, REFERENCE ELEVATION AND DETAIL. SPECIFICATIONS.
- BUILT-IN E-MAIL STATION CASEWORK, REFERENCE INTERIOR ELEVATIONS AND DETAIL.
- TEN (10) 4' MIRRORS CENTERED ON WALL WHERE NOTED. BOTTOM AT 24" AFF & TOP AT 96" AFF. REFERENCE ELEVATION AND DETAIL.
- WALL MOUNTED BENCH W/ PHENOLIC BACK, REFERENCE ELEVATION AND DETAIL.
- FLOOR MOUNTED BENCH W/ PHENOLIC SEAT. (ALTERNATE #7)

W ARCHITECTS
TAMBER COURT
127 ANDREW STREET
PHILADELPHIA, PA 19102-5801
(412) 321-0550
(412) 321-2431 FAX
ASSOCIATE ARCHITECT:
WB
WBCM, Inc. Architects
Whitney Bailey Cox &
Magnani, LLC - Consulting Engineers
849 Fallmount Ave, Suite 100
Baltimore, MD 21286 (410) 512-4500

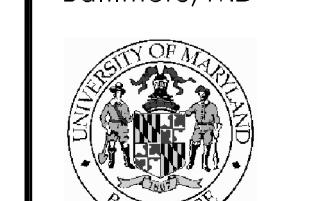


RECORD DRAWING
This record drawing has been prepared based upon information provided by others. While this information is believed to be reliable, the RECORD DRAWING has not verified accuracy, and thus is not responsible for the use of any portion of this record drawing or for any errors or omissions which may have been incorporated into it as a result of erroneous information provided by others. Those relying on this record drawing should make an independent verification of its accuracy before applying it for any purpose.

3 01/29/10 RECORD DRAWING
2 04/29/09 Building #109
1 05/09/08 Building #31
0 05/06/07 For Construction
Rev. Date: Comment:
Issued: May 2, 2007

Campus Center

621 West Lombard Street
University of Maryland, Baltimore
Baltimore, MD



PLAN REVISIONS
05/09/08

Garden Level Plan

UMB PROJECT NO. 98-311
WTW PROJECT NO. 70-4091
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IF THIS DRAWING DOES NOT MEASURE EXACTLY 30' X 42', IT HAS BEEN REDUCED OR ENLARGED. PLEASE DO NOT SCALE THIS DRAWING.

A1.0

SYMBOL LEGEND

— — LINE OF CONSTRUCTION ABOVE	XXXX → CODED CONSTRUCTION NOTE
— — LINE OF CONSTRUCTION BELOW	— → PARTITION TYPE SYMBOL, REFER TO A.8.1
DET'L / ENLARGED PLAN SYMBOL	F.D. FLOOR DRAIN, REFER TO PLUMBING PLANS
DETAIL NUMBER DRAWING NUMBER	SURFACE MOUNTED FIRE EXTINGUISHER & BRACKET
INTERIOR ELEVATION SYMBOL	FIRE EXTINGUISHER & CABINET
ELEVATION NUMBER DRAWING NUMBER	INC WATER COOLER
EXTERIOR ELEVATION SYMBOL	ROOF DRAIN
ELEVATION NUMBER DRAWING NUMBER	OVERFLOW DRAIN
DOOR IDENTIFIER ROOM NUMBER/DOOR NUMBER	BORROWED LIGHT
WINDOW IDENTIFIER WINDOW TYPE	

GENERAL ARCHITECTURAL NOTES

- DO NOT SCALE DRAWINGS, VERIFY ALL EXISTING CONDITIONS AT SITE BEFORE PROCEEDING WITH WORK.
- ALL EXISTING CONDITIONS NOT LISTED ARE REFERENCED ON ALL ARCHITECTURAL PLAN DRAWINGS.
- ANY CONFLICT OR DISCREPANCY BETWEEN INFORMATION ON DRAWINGS AND ACTUAL FIELD CONDITIONS SHOULD BE BROUGHT TO ARCHITECT'S ATTENTION FOR RESOLUTION PRIOR TO COMMENCING WORK.
- PARTITION DIMENSIONS INDICATED ARE TO FACE OF GIVE CONSTRUCTION AND MANUFACTURER.
- ALL FURNITURE, FILE CABINETS AND OTHER OFFICE EQUIPMENT SHOWN IS FOR INFORMATION PURPOSES ONLY AND IS N.I.C. UNLESS OTHERWISE NOTED. SEE STRUCTURAL DRAWINGS FOR SLAB EDGE DIMENSIONS.
- APPLY SPRAY FIREPROOFING TO STRUCTURE STEEL WHERE BEAMS, COLUMNS & BRACING INTERRUPT RATED FT @ ALL FLOOR DRAIN LOCATIONS.
- CONTRACTOR TO SLOPE FLOOR 1/8" PER FT @ ALL FLOOR DRAIN LOCATIONS.

CODED CONSTRUCTION NOTES

EQUIPMENT CONSTRUCTION NOTES

EC1: AUTOMATIC DOOR OPERATORS
EC2: EXISTING MANHOLES TO BE RAISED. REFERENCE CIVIL
EC3: EXISTING LOUVERS TO REMAIN. DO NOT BLOCK.
EC4: EXISTING FIRE DEPT. CONNECTION TO REMAIN.
EC5: ATM MACHINE FURNISHED AND INSTALLED BY OWNER. VERIFY OPENING & POWER/ DATA MOUNTING LOCATIONS W/ OWNER, TYP.
EC6: PORTABLE STAGE, N.I.C.
EC7: ELECT. WATER COOLER, TYP.
EC8: VENDING MACHINES FURNISHED AND INSTALLED BY SEPARATE CONTRACTOR. VERIFY POWER/DATA MOUNTING LOCATIONS W/ OWNER, TYP.
EC9: FOOD SERVICE EQUIPMENT N.I.C.
EC10: SWIMSUIT EXTRACTOR
EC11: TV ABOVE, N.I.C. FURNISHED AND INSTALLED BY A/V CONTRACTOR. VERIFY ATTACHMENT BRACKET AND POWER MOUNTING LOCATION WITH A/V CONTRACTOR. N.I.C.
EC12: RECESSED FIRE EXTINGUISHER CABINET
EC13: RECESSED FIRE-RATED FIRE EXTINGUISHER CABINET
EC14: SURFACE MOUNTED FIRE EXTINGUISHER CABINET
EC15: FIRE EXTINGUISHER BY FIRE EXTINGUISHER VENDOR
EC17: 2'-0" x 2'-0" ACCESS PANEL 2'-0" AFF; COORDINATE WITH HVAC DRAWINGS.

FLOOR CONSTRUCTION NOTES

RC1: ROOF STRUCTURE TO SLOPE, TYP.; 1/4" PER FOOT, MIN.

MILLWORK & MISCELLANEOUS CONSTRUCTION NOTES

MC1: METAL LOCKERS, REFER TO SPECIFICATIONS, TYP.
MC2: 5' MIRROR, REFER TO INTERIOR ELEVATION A.5.2, STD. MOUNTING HEIGHTS SCHEDULE AND SPECIFICATION.
MC3: BUILT-IN CASEWORK, REFER TO INTERIOR ELEVATION.
MC4: BUILT-IN CLOSET, REFER TO INTERIOR ELEVATION.
MC5: TWELVE (12) 3' MIRRORS CENTERED ON NORTH WALL, BOTTOM AT 14" AFF & TOP AT 86" AFF, REFERENCE INTERIOR ELEVATION AND SPECIFICATION.
MC6: EIGHT (8) 3' MIRRORS CENTERED ON WEST WALL, BOTTOM AT 14" AFF & TOP AT 86" AFF, REFERENCE INTERIOR ELEVATION AND SPECIFICATION.
MC7: BUILT-IN STORAGE BENCH, REFER TO INTERIOR ELEVATION AND DETAIL, TYP. (ALTERNATE #7)
MC8: NOT USED
MC9: BUILT-IN CASEWORK, STORAGE UNITS, REFER TO INTERIOR ELEVATION, DETAIL AND SPECIFICATIONS.
MC10: BUILT-IN E-MAIL STATION CASEWORK, REFER TO INTERIOR ELEVATION AND DETAIL.
MC11: TEN (10) 4'W MIRRORS CENTERED ON WALL WHERE NOTED, BOTTOM AT 24" AFF & TOP AT 96" AFF, REFER TO INTERIOR ELEVATION AND DETAIL.
MC12: WALL MOUNTED BENCH W/ PHENOLIC BACK, REFERENCE ELEVATION AND DETAIL.
MC13: FLOOR MOUNTED BENCH W/ PHENOLIC SEAT, (ALTERNATE #7)

MILLWORK & MISCELLANEOUS CONSTRUCTION NOTES

MC14: INSTALL MIRRORS AT EACH SIDE OFF COLUMN, VIF FOR SIZE, BOTTOM AT 28" AFF & TOP AT 86" AFF, REFERENCE SPECIFICATIONS.
MC15: INSTALL 2'W MIRRORS AT FRONT OF COLUMN ONLY, VIF WIDTH IN FIELD.
MC16: FOUR (4) MIRRORS CENTERED ON WEST WALL, BOTTOM AT 28" AFF & TOP AT 86" AFF, REFERENCE SPECIFICATION.
MC17: FOUR (4) 3' MIRRORS CENTERED ON NORTH WALL, BOTTOM AT 28" AFF & TOP AT 86" AFF, REFERENCE SPECIFICATION.
MC18: SIX (6) 4'W MIRRORS CENTERED ON WEST WALL, BOTTOM COLUMN LINE 1.3 & 2, BOTTOM AT 24" AFF & TOP 72" AFF, REFERENCE SPECIFICATIONS

