MAINE TURNPIKE

MAINE TURNPIKE

THE GOLD STAR
MEMORIAL HIGHWAY

MAINE TURNPIKE AUTHORITY

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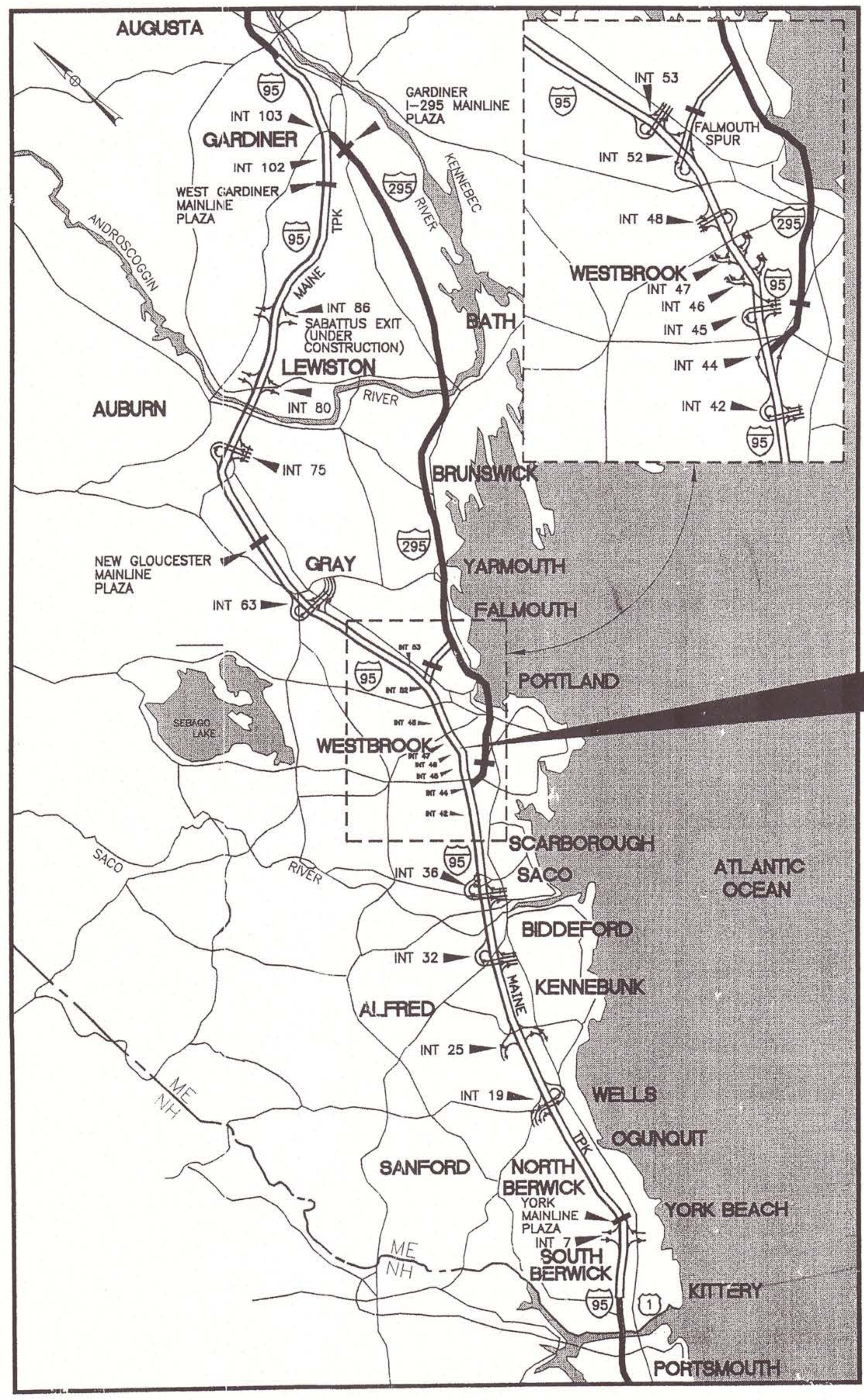

LOCATION MAP

CONTRACT 2007.07
MAINE TURNPIKE AUTHORITY
ADMINISTRATION BUILDING
SET 2 OF 2

CONTRACT 2007.07

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

COMMISSIONER _______________ DATE

BUREAU DIRECTOR AND CHIEF ENGINEER _______________ DATE

GENERAL CONTRACTOR

BUSINESS NAME

OFFICER _______________ TITLE

DATE

APPROVED:

MAINE TURNPIKE AUTHORITY

CHAIRMAN

EXECUTIVE DIRECTOR

DATE

GENERAL STRUCTURAL NOTES

A1. All work shall conform to the requirements of the International Building Code (2003 IBC) and other codes having jurisdiction.

A2. The structural design of the building is based on the full interaction of all its connected parts, including all reinforced concrete. No provisions have been made for any temporary conditions that may arise during construction prior to the completion of the structure. The contractor shall be responsible for adequate design and construction of all forms, shoring and temporary bracing during the progress of the project.

A3. The information shown on the structural drawings is intended for this project only and shall not be used for any other purpose. Changes to structural documents (including notes, details, plans, and specifications) shall not be made without written approval from Price Structural Engineers, Inc. (PSE).

A4. Contractor(s) shall provide experienced jobsite supervision to ensure that components are installed in accordance with the structural drawings and standards of quality workmanship.

A5. The structural documents for this project (including notes, details, drawings, and specifications) are interdependent. Use of some but not all of the structural documents or changes to structural documents without the written approval of PSE is not permitted.

A6. Principal openings through structural components are shown on these drawings. The Contractor shall examine the project drawings for the required openings, as he shall provide for all openings whether or not shown on the structural drawings, and shall verify size and location of all openings with other project requirements. Any deviation from the openings shown on the structural drawings shall be brought to PSE's attention for approval.

A7. Alternate connection details may be used if such details are submitted to PSE for review and written acceptance is granted. However, PSE shall be the sole judge of acceptability and the contractor's bid shall anticipate the use of those specific details shown on the drawings. The contractor shall be responsible for the design of any alternate details which he proposes.

A8. Work not indicated on a part of the drawings but reasonably implied to be similar to that shown at corresponding places, shall be included. Do not scale from drawings.

A9. The contractor shall be completely responsible for the safety of adjacent structures, property, and the public. The contractor shall comply with all Federal, State, and Local requirements.

A10. All contractors are required to examine the drawings and specifications carefully, visit the site and fully inform themselves as to all existing conditions and limitations, prior to submitting their bid. Failure to visit the site and familiarize themselves with the existing conditions and limitations will in no way relieve the successful bidder from furnishing any materials or performing any work in accordance with drawings and specifications (with no additional cost to the Owner).

A11. Except where noted on the structural drawings, see architectural drawings for dimensions and locations of new materials.

A12. See drawing S1.1 for abbreviations. See project specifications for additional requirements.

A13. Where conflicts exist between codes, specifications, or drawings, the more stringent requirements shall govern. Notify PSE immediately when such conflicts are discovered.

A14. Fire code provisions are not contained on structural drawings. See other project documents for requirements.

A15. Substitutions for specified manufactured materials shall not be made without written approval from PSE. Manufactured materials shall be installed in accordance with manufacturer's requirements and recommendations.

A16. Submittals containing variations from the structural documents shall have such variations boldly labeled so that they may be specifically reviewed by PSE. Variations not labeled in this manner shall not be considered approved, regardless of the status indicated by the shop drawing submittal stamp.

A17. Stored materials shall be stacked on pallets in a manner that prevents distortion or damage, above the ground, covered and kept in a dry condition. New materials shall be installed plumb, level and square, unless noted otherwise.

A18. Include provision and installation of equipment support beams, support posts, seismic restraints, guide rails, embedments, inserts, and other materials required by equipment manufacturer as part of project bid, and/or as part of a complete and fully functioning equipment installation. This requirement pertains to elevators, HVAC units and other project related equipment.

A19. PSE has performed the structural design of the structural components only for this project, as designated by the structural drawings. Structural documents do not contain provisions for non-structural features including fire protection, ADA disability access, drainage, emergency egress requirements, flashing, finishes, ventilation, watertightness, soundproofing, or any other sitework, architectural, mechanical, electrical or environmental features.

A20. See Architectural drawings for handrail and guardrail requirements at balconies, stairs, and exterior decks. Add structural reinforcement so that rails can support either a continuous load of 50 lb./ft. in any direction or a concentrated load of 200 lb. in any direction.

A21. Structural special inspections shall be provided by the owner during construction as required by IBC 2003, Chapter 17. Refer to the Schedule of Special Inspections for the required inspections scope.

REINFORCING FOR CONCRETE

D1. All concrete reinforcing bars shall conform to ASTM A615, Grade 60 except where noted. All reinforcing bars to be welded shall conform to ASTM A706.

D2. All welded wire fabric (w.w.f.) shall conform to ASTM A-185. W.W.F. shall be provided in flat sheets.

D3. Detailing of concrete reinforcement and accessories shall be in accordance with ACI 315 - "Manual of Standard Practice for Detailing Reinforced Concrete Structures," latest edition.

D4. Provide and schedule with the shop drawings, all necessary accessories to hold reinforcing securely in position. Reinforcement supports shall be spaced not more than 4'-0" on center and shall consist of pre-manufactured chairs.

D5. All laps in W.W.F. shall be 1 1/2 mesh spaces or 1'-0", whichever is larger, and shall be wired together.

D6. Reinforcing bars may not be welded except where designated by the structural engineer.

D7. Concrete protection for reinforcement shall be provided as follows (UON):

a. Surfaces cast against and permanently exposed to earth .... 3 inches (clear)

b. Formed surfaces exposed to earth or weather
#6 through #18 bars .... 2 inches
#5 bars and smaller .... 1 1/2 inches

c. Formed surfaces not exposed to earth or weather
Slabs, walls, joists .... 3/4 inch
Beams, columns (including stirrups and ties) .... 1 1/2 inches

See ACI 318 for conditions not listed.

D8. All hooks shown on drawings shall be standard hooks unless noted otherwise. Rotate hooks where necessary to provide adequate concrete cover.

D9. Where continuous bars are called for, they shall run continuously around corners and lapped at necessary splices, or hooked at discontinuous ends. Lap lengths shall be as given in the splice and development table. Lap beam top bars at mid-span and beam bottom bars at supports, unless noted otherwise.

D10. Show foundation wall control joints and construction joints on rebar shop drawings.

D11. Notify owner's representative in a timely manner so that installed reinforcement can be inspected. Installation of reinforcement shall be completed 24 hours before scheduled concrete placement.

D12. Reinforcement shop drawings shall be checked for potential reinforcement interferences and adequate concrete cover at all locations prior to being submitted for review.

D13. Mechanical or welded splices may be used only if they develop 125% (min.) of bar yield strength and are approved by PSE in writing prior to fabrication of components.

FOUNDATIONS

B1. Foundation design is based on the geotechnical report, dated September 6, 2006, prepared by Sebago Technics for this project. Foundation backfill and subgrade below foundations shall be in conformance with the recommendations contained within this document.

B2. Blasting shall not proceed until a written blasting plan has been submitted by the contractor to the owner's geotechnical engineer and approval obtained. The contractor shall notify the geotechnical engineer in a timely manner so that onsite monitoring of the blasting by the geotechnical engineer can be scheduled.

B3 No foundations shall be placed in water or on frozen ground.

B4. All footing excavations are to be finished by hand. All finished foundation excavations shall be inspected by the project foreman before any concrete is placed. Bedrock surfaces shall be swept clean and loose debris removed prior to placement of footings on bedrock.

B5. Structural fill below slabs, adjacent to foundation walls and fill below footings shall conform to:

SCREEN OR SIEVE SIZE	PERCENT FINER BY WEIGHT
3 inch	100%
No. 4	30% - 90%
No. 40	10% - 50%
No. 200	0% - 8%

B6 Structural fill shall be compacted in 8" (max) lifts (loose measure) to 95% of its maximum dry density in accordance with ASTM D1557. Hand vibratory equipment shall be used to compact backfill at confined areas and adjacent to basement using 6" lifts (loose measure).

B7. Crushed stone shall consist of clean angular fragments of quarried rock with uniform quality and conform to MDOT 703.22 Type C. Maximum stone size shall be 1".

B8. Unless otherwise noted, all foundation units shall be centered under supported members.

B9. Where foundation elements are to have fill on both sides, each side shall be filled and compacted simultaneously, maintaining a common elevation such that compacted fill on one side of the foundation does not exceed more than 12" above the compacted fill on the other side.

B10. Contractor shall provide continuous drainage by mechanical methods to control surface and underground water as required during construction, so that all excavations are dry. See geotechnical report.

B11. Perforated underdrain shall be placed around entire building perimeter exterior at wall footings and also beneath slab on grade (see detail F7 / S3.3). Underdrains shall be sloped continuously at 1/16" per foot and discharge to daylight or manhole (see site drawings). Underdrains shall be schedule 35 PVC.

B12. Holes for utilities in foundation walls shall have plastic sleeves. Coordinate size and locations of sleeves prior to placing concrete. Sleeves larger than 10" diameter shall have additional (2) #4 x 5'-0" rebar on 4 sides of sleeves.

B13. Basement foundation walls shall have high performance foundation waterproofing system applied to outside surface. See architectural drawings.

B14. Shoring, bracing, or sheeting used to provide lateral support of excavations shall remain in place until all permanent structural systems at and below ground level are complete.

B15. Drain pipes shall not pass under or through wall footings. Lower footing by stepping to avoid interference (see typical stepped footing detail).

B16. Sufficient bedrock shall be removed such that:

a. Bedrock surface is free draining (no subsurface ponding) at all areas beneath the building and building foundation;

b. Bedrock slope is not steeper than 4 horizontal to 1 vertical nor flatter than 100 horizontal to 1 vertical.

B17. Bedrock elevation contours are approximated within the geotechnical report prepared for this project.

B18. Bedrock shall be defined as, "Any material geologically classified as rock and required drilling and blasting to excavate." Boulders shall not be considered bedrock.

N/A B19 At locations where continuous wall footings transition from bedrock onto soil, a structural fill cushion at least one foot thick (compacted to 95%) shall underlie the footing in the transition zone. The transition zone should be a minimum of 10 feet long starting at the point of where soil support for the footing begins.

B20. Unless otherwise noted, isolated spread footings shall bear either entirely on bedrock or entirely on crushed stone (minimum 6" thick) over structural fill compacted to 95%. Remove sufficient bedrock to accommodate this requirement. At locations where spread footings bear on crushed stone over compacted structural fill, extend stone and compacted fill a minimum of 2'-0" beyond all sides of the spread footing.

Pan Stair Mix Design
RFI-227 4000 3/8
no Air

RFI-106
3000 psi to 4000 PSI
For interior
Footer if needed

see spec. section
03300-10

FST Footers
≥5000 PSI mix
RFI 92

CONCRETE

C1. All concrete work shall conform to the latest edition of the ACI Building Code (ACI 318), Specifications for Structural Concrete for Buildings (ACI 301) and to the 2003 IBC. In case of conflict, the more stringent requirements shall govern.

C2. For locations listed below, concrete shall have 3/4" aggregate, 2"-4" slump, Type I or II ASTM C-150 Portland Cement and designated compressive strength (fc) in 28 days as follows:

Location	f'c (psi)	Air Entrainment	Polypropolene Fibers
Footings	3000	None	None
Foundation Walls, Piers RFI-49 RFI 34	~~3000~~ 4000	4% - 7%	None
Retaining Walls	4000	4% - 7%	None
Interior Slabs on Grade	4000	None	1 5. lb / c.y.
Elevated Slabs	4000	None	None
Storage Shed & Exterior Slab on Grade	4000	4% - 7%	1.5 lb / c.y.

Contractor shall not proceed with concrete placement until concrete mix design submittal has been reviewed and approved by the structural engineer. Water shall not be added to the concrete mix at the jobsite.

?

C3. A "foundation wall" shall be considered a "retaining wall" if final grade elevation on one side of wall is more than 15 inches above the final grade on the opposite side of wall.

C4. All garage slabs and concrete permanently exposed to the weather shall contain ~~5%~~ 4% - 7% air entrainment admixture.

C5. All footings shall be placed monolithically. See typical details for construction joint requirements.

C6. Pipes or conduits placed in slabs on grade shall not be placed closer than 3 diameters on center and shall have an outside diameter less than 1/3 of the slab thickness.

C7. All keys shall be 2" x 4" (nominal) unless otherwise shown on the drawings.

C8. No concrete shall be cast until review and written approval of the reinforcing and embedded items have been obtained from the owner's representative.

C9. All exposed edges of concrete members shall be chamfered 3/4" unless shown otherwise on drawings.

C10. See architectural drawings for door and window openings, drips, washes, reglet, concrete finishes, masonry anchors, and for miscellaneous embedded plates, bolts, anchors, angles, etc. Refer to mechanical, electrical, and site drawings for other embedment requirements.

C11. See Architectural Drawings for top of slab elevations. See K1 / S3.0 for Typical Interior Slab on Grade Detail.

C12. Calcium chloride, aluminum or copper components shall not be placed in concrete. No conduits shall be placed in slabs on metal deck.

C13. All embedments in concrete, including anchor bolts, shall be firmly secured by tie wire to prevent movement during concrete placement. Welding of embedments is not permitted.

C14. All concrete materials, reinforcement and forms shall be free from frost or debris.

* C15. Concrete shall be maintained above 50 degrees F, and in moist condition for at least the first seven days after placement. Contractor shall provide blankets, tenting, and heat as necessary to ensure this condition exists. Contractor shall keep two operable concrete thermometers on site throughout concrete construction when temperatures are predicted to be less than 40 degrees F.

C16. Consolidate all concrete with a vibrator or other means recommended by ACI 301. Honeycombed surfaces will not be permitted.

C17. See architectural drawings for locations of floor drains. Slope slabs uniformly to drains (UON).

* C18. Control joints in slabs on grade are mandatory. See typical details. Control joints in foundation walls, basement walls, and retaining walls are mandatory. See typical details.

C19. Coordinate concrete finish on floor slabs with owner's requirements and specifications.

C20. See specifications for concrete testing requirements.

Guage

C21. Concrete slabs, including those on steel deck, shall be placed so that slab thickness equals or exceeds thickness specified on drawings. This will require that slabs may not be dead level where supported by beams or trusses with camber.

RFI-50
when Placeed
it will Be
a gage Job
@ 5 3/8 total
Depth of
Concrete

C22. Length of time to cure concrete slabs and materials applied to slab surfaces shall be compatible with floor finishes.

C23. Maximum freefall of wet concrete during placement shall not exceed 5'-0".

C24. Slabs on grade shall contain ASTM C1116, Type III, 1/2" - 1 1/2" long polypropolene fibers at a rate of 1.5 pounds (min.) per cubic yard unless steel reinforcement is specified.

C25. Surfaces of concrete construction joints, including exposed reinforcement, shall be cleaned and laitence removed. New concrete shall not be placed against existing hardened concrete until existing hardened concrete surface has been moistened (without standing water).

C26. All concrete slabs shall completely encase columns on all sides except where prevented by designated slab openings.

C27. Isolation joints in concrete slab shall be 3/8" thick pre-formed, closed, cell foam joint material and top 1/2" of joint shall contain sealant with tooled joint surface.

AS BUILT
Owner Copy

SMRT

Price Structural Engineers, Inc.

STATE OF MAINE
DAVID PRICE
No. 6401
LICENSED
PROFESSIONAL ENGINEER

PROJECT NORTH
MAG. NORTH

PROJECT TITLE:
MAINE TURNPIKE AUTHORITY
ADMINISTRATION BUILDING
PORTLAND, MAINE

ISSUED FOR BIDDING / CONSTRUCTION
7-9-07

REV	DESCRIPTION	DATE
0	BIDDING/CONSTRUCTION	7-9-07

GRAPHIC SCALE:
0" 1"

SCALE: ---
PROJECT MANAGER: SLB
JC/DRAWN BY: TCM/TDP
A/E OF RECORD: DAP
CAD FILE: MTA/S1.0/116-06
PROJECT NO: 06015
DATE: 7-9--07
SHEET TITLE:
GENERAL STRUCTURAL NOTES
SHEET No.
S1.0

STRUCTURAL STEEL

E1. All structural steel work shall conform to the recommendations and requirements contained in the "Manual of Steel Construction, Load and Resistance Factor Design" (AISC Third Edition), and "Structural Welding Code - Steel" (AWS D1.1, latest edition). Steel fabricator shall be an AISC certified plant for complex steel structures or scheduled to be AISC certified within six months of being awarded the project. Non-certified fabricator shall provide documents indicating status of AISC certification to owner within five business days after bid. If fabricator is not certified at time of fabrication of steel for this project, it will be subject to rigorous additional special inspections not required for certified fabricators. The non-certified fabricator shall anticipate reimbursing the owner for the cost of these additional special inspections.

E2. Structural steel rolled shapes, plates, and bars shall conform to the following ASTM designations:

ASTM A-992 .... All wide flange sections ("W Shapes"), fy = 50 ksi.
ASTM A-36 .... Other rolled shapes, plates and bars unless otherwise noted. fy = 36 ksi.
ASTM A-500, Grade B .... Steel tubes. fy = 46 ksi.
ASTM A-53, Grade B .... Steel pipe. fy = 35 ksi.
ASTM A-325, Type SC or N ...... All bolts for connecting structural members, unless otherwise noted.
ASTM A-307 .... All anchor bolts, unless otherwise noted.
ASTM A-36 .... Threaded rods, unless otherwise noted.
ASTM 1554 .... fy = 105 ksi. High strength threaded rod where noted.

E3. Note: A325 bolts shall be limited to 3/4" and 1" diameter (UON), with two bolts (minimum) at each connection. A325 bolts shall be "TC Bolts" (Tension Control). Holes for bolts shall be 1/16" larger than bolt diameter (UON).

E4. All steel and steel connection material exposed to weather shall be hot-dip galvanized.

E5. No change in size or position of the structural elements shall be made without prior written approval of the Structural Engineer.

E6. Nonshrink grout shall be 5000 psi (min.) compressive strength.

E7. Temporary erection bracing shall be provided to hold structural steel securely in position. Remove temporary bracing and connections only after permanent members are in place and final connections are in place.

E8. Shop connections unless otherwise noted, shall be made by welding. Pretensioned and slip critical high strength bolts shall be Tension-Control" type bolts (Twist-off TC-Bolts or approved equal). Bolted connections shall be "slip critical" type at moment connections (where indicated), fully pretensioned "shear/bearing" type connections at bracing bays, and may be "snug tight" type elsewhere (UON).

E9. All shop and field welds shall be made by certified welders, and shall conform to the American Welding Society Code, AWS D1.1, latest edition. Carefully control welding technique to avoid distortion, including clamping prior to welding.

E10. Electrodes for all field and shop welding shall conform to AWS E70-XX. Minimum weld size shall be 3/16" fillet (UON).

E11. Field welding shall be inspected by qualified welding inspectors.

E12. All structural steel shall be shop primed except (a) structural steel to be fireproofed shall not be primed (see architectural drawings for locations); and (b) top flanges of beams to which metal deck is welded shall not be primed.

E13. Connections shown on these drawings are generally schematic. They are intended to define the spatial relationship of the framed members and show a feasible method of making the connection. Where partial information is given on these drawings, it shall be the minimum requirement for the connection. Where bolts are shown but no number is given, the connection has not been completely detailed. Any connection that is not shown or is not completely detailed on the structural drawings shall be designed by a professional engineer registered in the State of Maine retained by the fabricator Completely detailed means the following information is shown on the shop detail drawings:

a. All plate dimensions and grades.
b. All weld sizes, pitches, and returns.
c. All hole sizes and spacings.
d. Number and types of bolts.
e. Painting / Galvanizing requirements.

E14. Design calculations for all beam connections (including beams within bracing bays and steel stairs) shall be submitted to the Structural Engineer for review and written approval prior to fabrication. Calculations shall be stamped by a structural engineer retained by the fabricator and licensed in the state of Maine.

E15. Substantial alterations of schematic connection details may impact architectural concept and shall not be made without prior written approval of the Structural Engineer.

E16. Minimum connection plate thickness and stiffener plate thickness shall be 1/4 inch.

E17. See framing plans for beam reactions.

E18. Cuts, holes, coping, etc., required for work of other trades shall be shown on the shop drawings and made in the shop. Cuts or burning of holes in structural steel members in the field will not be permitted, unless approved in writing by the Structural Engineer.

E19. All beams and columns encased in masonry (or concrete) or below finish grade shall be covered with a coal tar epoxy coating, 1/8" thick, or shall be galvanized.

E20. Provide galvanized steel angle lintels over all openings in brick wall, unless othewise noted on drawings. Use one angle for each 4 inches of wall thickness. Lintels shall have a minimum of 8" bearing on each side of opening. As a minimum, angles shall be as follows (UON):

L4 x 3 1/2 x 5/16 for clear spans less than 4'-0"
L5 x 3 1/2 x 5/16 for clear spans 4'-0" to less than 6'-0"
L6 x 3 1/2 x 3/8 for clear spans 6'-0" to less than 8'-6"
L6 x 4 x 7/16 for clear spans 8'-6" to less than 10'-0"
L7 x 4 x 7/16 for clear spans 10'-0" to less than 11'-6".

see RFI 134
For Gal. Lintels

E21. Structural steel members shown on plans but not identified as to size, section or material grade shall be included in the bid price for the work by assuming sizes, sections or material grades shown for similarly loaded members having approximately the same overall length. All such members and their associated costs shall be identified in the bid for the work.

E22. STAIRS

a. Channel stringers for stairs shall be C12x20.7, typical.

b. Stairs shall be designed for dead load plus the worst case of 100 psf uniform live load, 100 psf non-uniform live load, or 300 lbs. concentrated live load at any location. Provide additional support members not shown in design documents to support loads at no additional cost to the owner.

c. Contractor shall submit shop drawings for stairs showing all field connection requirements including weld sizes and bolts.

d. Hangers for stair landings shall be HSS 3x3x1/4 (minimum).

E23. Camber shall be by cold-form process conforming with the AISC specifications and tolerances.

E24. Provide stiffeners "finished to bear" at locations where members frame over columns, underneath load concentrations on supporting members, and where shown on drawings.

E25. Ends of columns at bearing connections and at column splices shall be "finished to bear" to ensure unifrom bearing.

E26. Holes for utilities in structural steel shall not exceed 2" diameter in webs and shall not exceed 1/16" diameter in flanges without written approval from the structural engineer. Penetrations shall be drilled.

E27. Place and cure nonshrink grout under all column base plates and leveling plates before adding any vertical loads (UON).

STRUCTURAL STEEL (CONTINUED)

E28. Metal deck shall conform to the following (UON):

a. All work and materials pertaining to metal deck shall conform to Steel Deck Institute codes, specifications, and recommendations.

b. Metal roof deck shall be galvanized.

c. Metal roof deck shall be 1 1/2" thick, wide rib (Type B), Fy = 33 ksi (min.), 20 gage, 3 span minimum.

d. Metal roof deck shall be fastened as follows unless noted otherwise:

1. At all end supports, intermediate supports, and sides of deck adjacent to walls: 5/8" diameter puddle welds at 6" o.c. (36/7 pattern)

2. At sidelaps: (3) #10 tek screw sidelap fasteners per span.

e. Composite floor deck shall be 2-inch, 20 gage, three span minimum, Fy = 40 ksi.

f. Composite floor deck shall be fastened unless noted otherwise:

1. At all end and intermediate supports: 5/8" diameter puddle welds at 11" o.c. (33/4 pattern)

2. At sidelaps: #10 tek screws at equal spaces between supports at 24" o.c.

E29. Open web steel bar joists shall conform to the following (UON):

a. All work and materials pertaining to open web steel joists shall conform to Steel Joist Institute "Standard Specifications for Open Web Steel Joists" and "Recommended Code of Standard Practice for Steel Joists and Joist Girders."

b. Items attached to steel joists shall be attached to panel points of joists only, or an additional diagonal web member shall be added to the joist from the location of the concentrated load to a panel point (see typical details).

c. Provide bridging at the first panel point of roof joists to accommodate wind uplift loads. Provide additional bridging in accordance with SJI requirements for steel bar joists. Joist manufacturer shall verify all bridging sizes, types, and locations for gravity and uplift loads. All required joist bridging shall be specified and provided by the joist fabricator.

d. All bridging and bridging anchors shall be completely installed before construction loads are placed on the joists. Bridging shall support the top chord against lateral movement during the construction period and shall hold the joist in approximate location as shown on the plans.

e. Steel joists shall be shop primed per specifications.

f. Bottom chords of all joists shall be designed to support a service load of 10 psf or an equivalent concentrated load, one per panel, located at any point along bottom chord panels.

E30. Twist-off tension control bolt assemblies shall conform to ASTM F1852. All bolts shall be lubricated.

E31. Concrete slabs shall encase all columns on all sides except at designated stair, elevator, or mechanical chase openings. Add deck support angles or brackets where necessary to accommodate this requirement.

E32. The fabricator and erector of the structural steel frame shall submit a "Statement of Responsibility" in accordance with IBC section 1705.3.

E33. Structural Steel Erector shall notify the owner's special inspector in a timely manner so that scheduling of independent continuous inspection can be performed during the placement of slip-critical bolts, field fillet welds larger than 5/16 inch, and multi-pass field welds of any type (per IBC table 1704.3).

E34. Structural steel shop drawings shall be submitted in at most two phases for the entire project. Each phase shall be a complete "stand alone" package containing all stamped calculations, erection drawings, piece drawings, and other specified items. Specific questions pertaining to the shop drawings, design criteria, or other items shall be submitted to the architect in writing for review and comment.

COLD-FORMED METAL FRAMING

F1. Contractor shall submit erection drawings for exterior cold-formed framing based on architectural drawings, specifications, and these notes (uon). Submittal shall indicate all field connection details showing size / quantity of fasteners, size/gauge/location of clip angles, blocking, framing sizes/gages, tracks, and other pertinent information.

F2. All stud walls connected to bottom flanges of beams shall have slip tracks at top which permit vertical beam deflection of span/240 at floor framing and span/180 at roof framing.

F3. Splices in exterior or axially loaded studs shall not be permitted. Exterior wall studs shall be 18 ga. minimum.

F4. Contractor shall submit stamped calculations for cold-formed framing at exterior walls and for cold form trusses. Structural engineer shall be currently registered in Maine. Maximum horizontal deflection of wall studs shall not exceed 1/360 of wall height at EIFS (or metal) wall panels or 1/600 of wall height at walls with masonry veneer.

F5. The structural engineer retained by the cold form contractor shall perform at least one site visit to observe installation of engineered cold form framing. The cold form engineer shall document the site visit by sending a brief letter to the architect stating that the installed cold-form framing appears to be in general conformance with the approved cold form submittal and that observed items needing correction have been corrected.

F6. All exterior wall studs shall be marked with the manufacturer's name and gage size of material, and it shall be incumbent upon this contractor to notify the manufacturer, in writing, of this requirement. In lieu of this requirement, the contractor may submit a written quality control statement for review and approval describing how framing of different gauges is distinguished.

F7. All studs shall be formed from steel having a minimum G-60 galvanized coating, in conformance with the requirements of ASTM A-525.

F8. All galvanized studs 12, 14, and 16 gage shall be formed from steel that corresponds to the minimum requirements of ASTM A-446, Grade D with a minimum yield of 50,000 psi. All galvanized 18 gage studs, all galvanized track, bridging end closures, and accessories shall be formed from steel that corresponds to the requirements of ASTM A-446, Grade A with a minimum of 33,000 psi.

F9. All work shall meet the requirements of the latest edition of the following standards:

a. American Iron and Steel Institute (AISI) Specification for the Design of Cold-Formed Steel Structural Members.

b. American Welding Society (AWS) D1.3 Structural Welding Code - Sheet Steel.

c. American Society for Testing and Materials (ASTM).

d. All pertinent federal, state, and local codes.

F10. All fasteners connecting light gage members and accessories shall be a minimum of No. 12 size screws spaced not closer than 0.75 inch on center. Number of fasteners shall be as shown on details. All fasteners shall be galvanized or cadmium plated. → RFI-58

F11. All studs shall be seated squarely in tracks and have full bearing against inside track web (top and bottom) prior to stud and track attachment. Tracks shall be attached to a common structural element.

F12. Minimum 10" unpunched steel is required at both ends of joists and studs. When field cutting reduces this minimum 10" unpunched steel, web stiffener shall be installed.

F13. Anchorage of cold-formed metal framing to adjacent structural components, including foundations, shall be included in cold-formed engineering calculations and clearly detailed on cold-formed metal framing shop drawings.

Anchor Bolts see Detail G12/S3.2

F14. Exterior wall studs shall not be installed until concrete slabs have been placed.

F15. Power driven fasteners shall be .145" diameter (min.) to structural steel and .177" diameter to concrete. → RFI-58

F16. See Detail E8 / S5.2 for additional requirements pertaining to cold form trusses.

DESIGN LOADS

G1. Floor Live Loads

a. Typical Floor = 100 psf.
b. Typical Floor Corridor = 100 psf.
c. Stairs = 100 psf.
d. Mechanical Equipment Room = 125 psf or equipment weight.

G2. Snow Load

a. Pf = 51 psf (plus drift loads).
b. Ce = 1.0.
c. Is = 1.2.
d. Ct = 1.0.

G3. Wind Load

a. Basic Wind Speed = 100 mph.
b. Iw = 1.15.
c. Exposure = "C."
d. Main wind-force resisting system (horiz.) = 29 psf (max.).
e. Components & Cladding:
Walls: 39 psf (max.).
Roof: 58 psf corner uplift.
47 psf perimeter uplift.
25 psf interior uplift.

G4. Seismic

a. IE = 1.5.
b. Spectral Response Accelerations:
Ss = .376.
S1 = .100.
c. Spectral Response Coefficients:
SDS = .251.
SD1 = .067.
d. Seismic Design Category = "C."
e. Seismic Force Resisting Systems:
Structural Steel System Not Specifically Detailed for Seismic Resistance
f. Design Base Shear:
E (N/S) = 328k.
E (E/W) = 328k.
Cs (N/S) = .071.
Cs (E/W) = .071.
g. R (N/S) = 3.0.
R (E/W) = 3.0.
h. Design Procedure = "Equivalent Lateral Force."
i. Seismic Use Group = III.

G5. Geotechnical Parameters

a. Bearing Capacity = 8000 psf at spread footings.
Bearing Capacity = 5000 psf at strip footings.
b. Frost Depth = 4'-0".
c. Retaining Wall Parameters
* "Active:" Ka = 0.33.
* "At-Rest:" Ko = 0.45.
* "Passive:" Kp = 3.0.
* Soil Unit Weight = 125 pcf.
* Sliding Coefficient = 0.40.
d. IBC Seismic Soil Site Class: "B."

G6. Mechanical Equipment Loads: As shown on drawings.

LIST OF ABBREVIATIONS

&	And
@	At
ADDL	Additional
ALT	Alternate
ALUM	Aluminum
AB	Anchor Bolt
ARCH	Architectural
BCX	Bottom Chord Extension
BOT	Bottom
BO	Bottom of
BOF	Bottom of Footing
BOS	Bottom of Steel
BM	Beam
BRG	Bearing
BPL	Bearing Plate
BS	Both Sides
BTWN	Between
CIP	Cast in Place Concrete
CL	Center Line
CLR	Clear
COL	Column
CONC	Concrete
CJ	Control Joist
CMU	Concrete Masonry Unit
COORD	Coordinate
CONT	Continuous
DBA	Deformed Bar Anchor
DET	Detail
DIA	Diameter
DIAG	Diagonal
DIM	Dimension
DWGS	Drawings
EA	Each
EXPANSION	Expansion
EF	Each Face
EL	Elevation
EMBT	Embedment
EQ	Equally Spaced
EW	Each Way
EXG	Existing
FD	Floor Drain
FDN	Foundation
FF	Far Face
FG	Final Grade
FIN FLR	Finish Floor
FFE	Finish Floor Elevation
FT	Foot
FTG	Footing
GA	Gauge
GALV	Galvanized
GC	General Contractor
HDG	Hot Dip Galvanized
HOR	Horizontal
HP	High Point
HSS	Hollow Structural Sections
HVAC	Heating, Ventilating, or Air Conditioning
ID	Inside Diameter
IF	Inside Face
JS	Joist Substitute
JT	Joint
KIP	Kilopound (1000 pounds)
L	Angle
LB	Pound
LG	Long
LLH	Long Leg Horizontal
LLV	Long Leg Vertical
LOCNS	Locations
LP	Low Point
MAS	Masonry
MAX	Maximum
MDOT	Maine Dept. of Transportation
MECH	Mechanical
MFR	Manufacturer
MIN	Minimum
MISC	Miscellaneous
N&W	Nut & Washer
NF	Near Face
NIC	Not in Contract
NTS	Not to Scale
OC	On Center
OD	Outside Diameter
OF	Outside Face
OH	Opposite Hand
OPNG	Opening
PAF	Powder Activated Fastener
PCF	Pounds per Cubic Foot
PJF	Preformed Joint Filler
PLY	Plywood
PROJ	Projection
PSF	Pounds per Square Foot
PSI	Pounds per Square Inch
PVC	Polyvinyl Chloride
RAD	Radius
RD	Roof Drain
REINF	Reinforcement
REQD	Required
SCHED	Schedule
SECT	Section
SF	Square Foot
SIM	Similar
SP	Spaces
SPEC	Specification
SQ	Square
SS	Stainless Steel
STD	Standard
STL	Steel
T&B	Top and Bottom
TCS	Top Chord Extension
TEMP	Temperature
THD	Threaded
TJ	Tie Joist
TO	Top of
TOC	Top of Concrete
TOF	Top of Footing
TOG	Top of Grout
TOP	Top of Pier
TOW	Top of Wall
TYP	Typical
UON	Unless Otherwise Noted
VERT	Vertical
VIF	Verify in Field
W/	With
W/O	Without
WP	Working Point
WWF	Welded Wire Fabric

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SMRT

Price Structural Engineers, Inc.

STATE OF MAINE
DAVID PRICE
No. 6401
LICENSED
PROFESSIONAL ENGINEER

PROJECT NORTH
MAG NORTH

PROJECT TITLE:
MAINE TURNPIKE AUTHORITY
ADMINISTRATION BUILDING
PORTLAND, MAINE

ISSUED FOR BIDDING / CONSTRUCTION
7-9-07

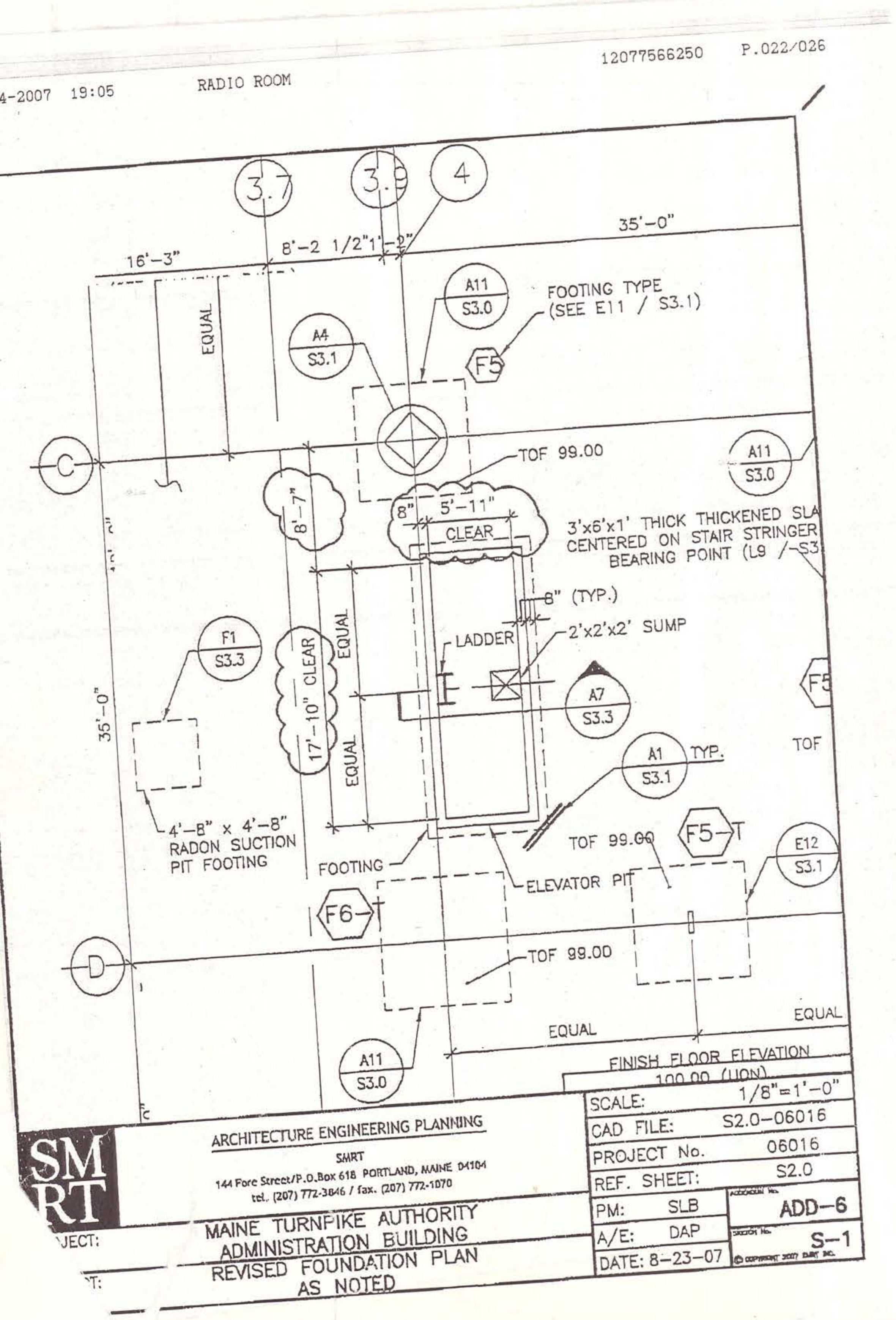
REV	DESCRIPTION	DATE
0	BIDDING/CONSTRUCTION	7-9-07

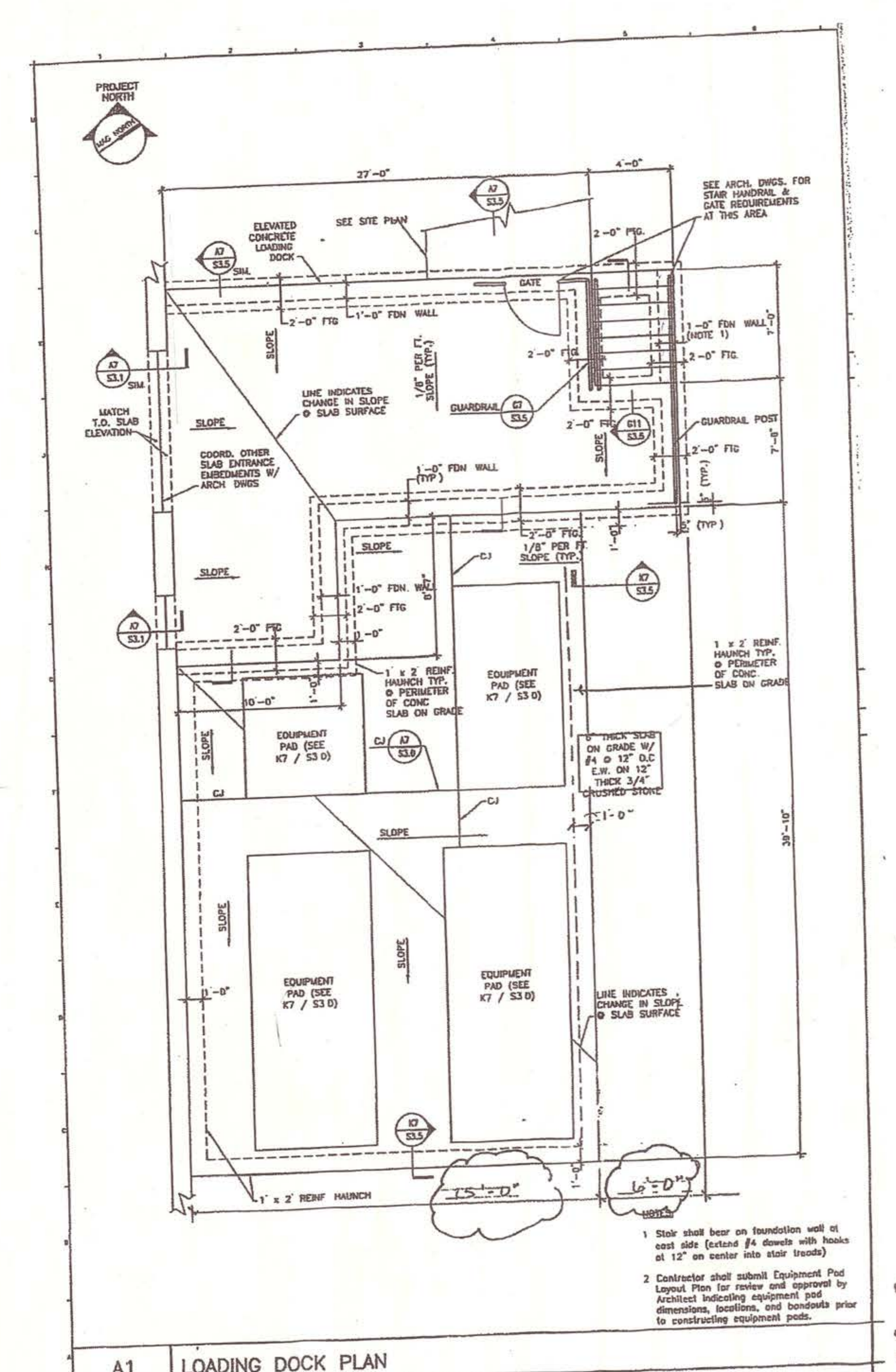
GRAPHIC SCALE: 0" 1"

SCALE:	--
PROJECT MANAGER:	SLB
JC/DRAWN BY:	TCM/TDP
A/E OF RECORD:	DAP
CAD FILE:	MTA/S1.1/116-06
PROJECT NO:	06016
DATE:	7-9-07

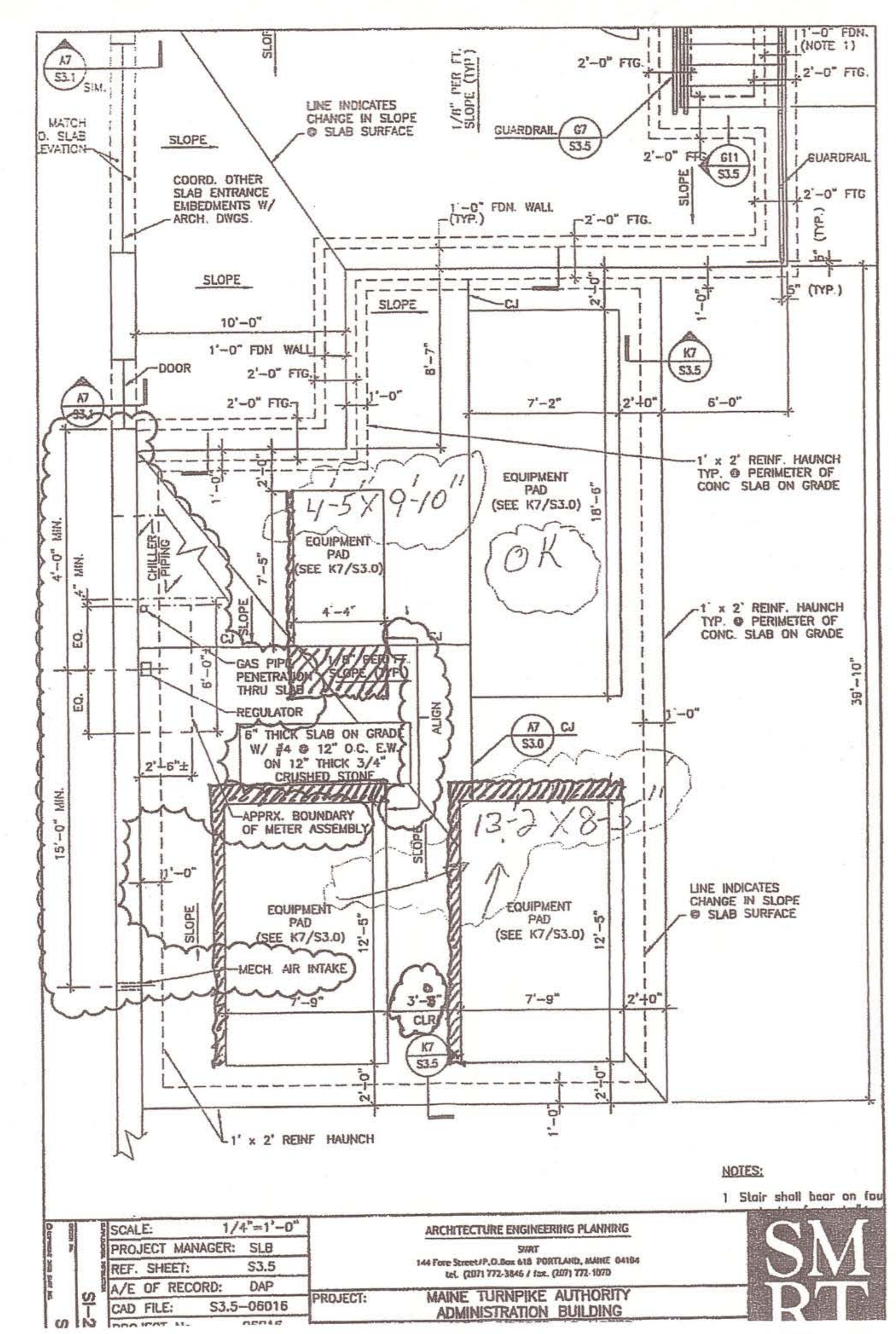
SHEET TITLE:
GENERAL STRUCTURAL NOTES

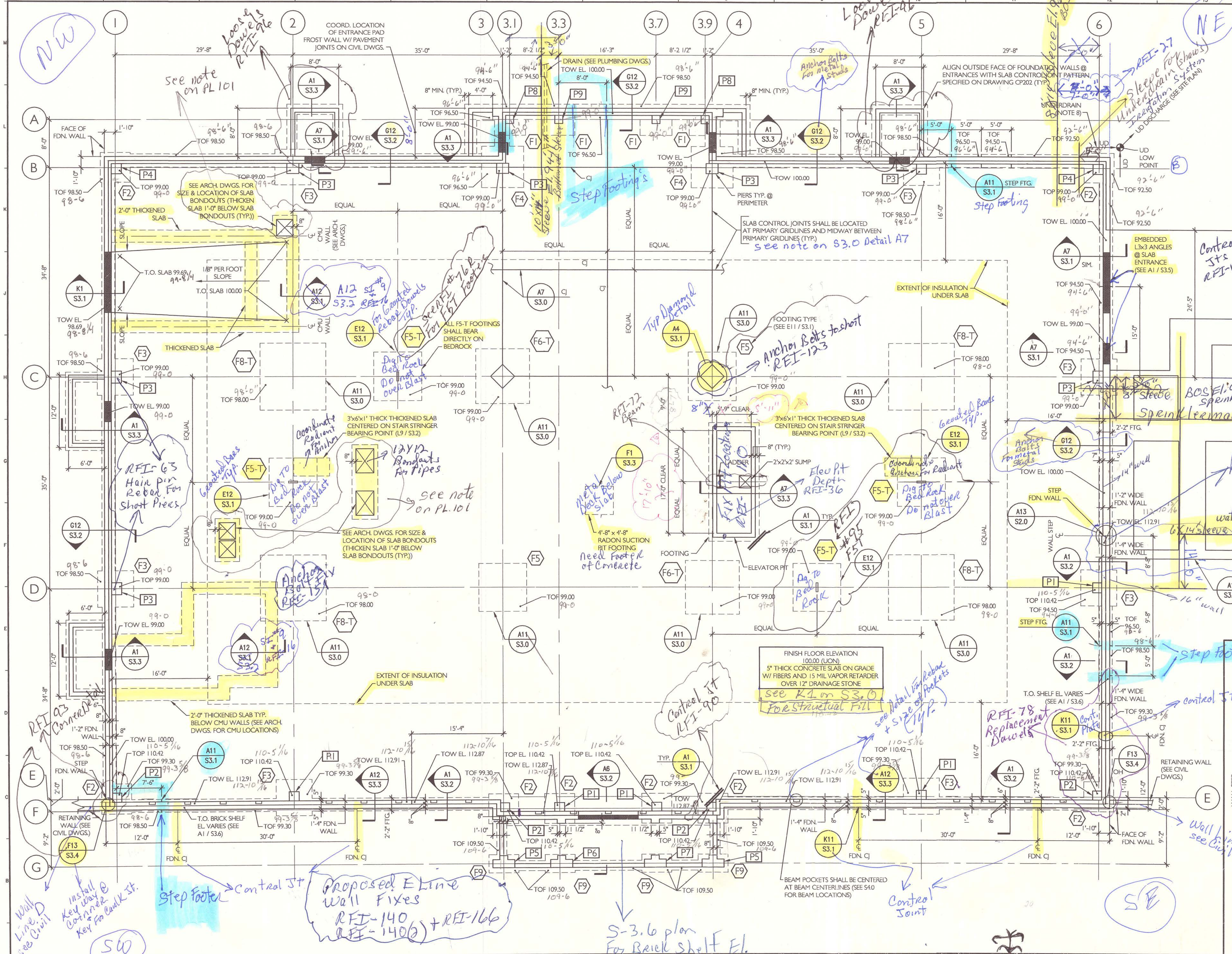
SHEET No.
S1.1


4-2007 19:05
RADIO ROOM
12077566250
P.022/026
16'-3"
8'-2 1/2"
35'-0"
FOOTING TYPE (SEE E11 / S3.1)
TOF 99.00
3'x6'x1' THICK THICKENED SLAB CENTERED ON STAIR STRINGER BEARING POINT
CLEAR
LADDER
2'x2'x2' SUMP
4'-8" x 4'-8" RADON SUCTION PIT FOOTING
FOOTING
ELEVATOR PIT
TOF 99.00
EQUAL
FINISH FLOOR ELEVATION
100.00 (UON)
SCALE: 1/8"=1'-0"
CAD FILE: S2.0-06016
PROJECT No. 06016
REF. SHEET: S2.0
ARCHITECTURE ENGINEERING PLANNING
SMRT
144 Fore Street/P.O.Box 618 PORTLAND, MAINE 04104
tel. (207) 772-3846 / fax. (207) 772-1070
MAINE TURNPIKE AUTHORITY
ADMINISTRATION BUILDING
REVISED FOUNDATION PLAN
AS NOTED
PM: SLB
A/E: DAP
DATE: 8-23-07
ADD-6
S-1


A1
LOADING DOCK PLAN
1/4" = 1'-0"

CCD-1
S-1

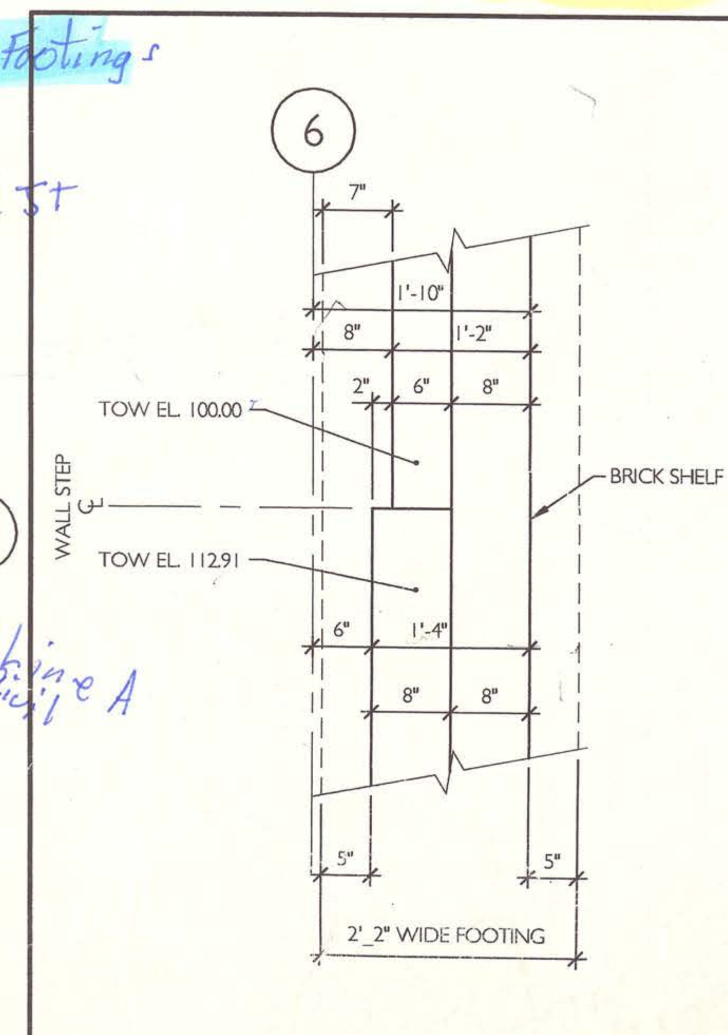

LINE INDICATES CHANGE IN SLOPE @ SLAB SURFACE
SLOPE
COORD. OTHER SLAB ENTRANCE EMBEDMENTS W/ ARCH. DWGS.
GUARDRAIL
1'-0" FDN. WALL
2'-0" FTG.
EQUIPMENT PAD (SEE K7/S3.0)
4-5 X 9'-10"
OK
13-2 X 8-5
1' x 2' REINF. HAUNCH TYP. @ PERIMETER OF CONC SLAB ON GRADE
GAS PIPE PENETRATION THRU SLAB
REGULATOR
6" THICK SLAB ON GRADE W/ #4 @ 12" O.C. E.W. ON 12" THICK 3/4" CRUSHED STONE
APPRX. BOUNDARY OF METER ASSEMBLY
MECH. AIR INTAKE
1' x 2' REINF HAUNCH
NOTES:
1 Stair shall bear on fou
SCALE: 1/4"=1'-0"
PROJECT MANAGER: SLB
REF. SHEET: S3.5
A/E OF RECORD: DAP
CAD FILE: S3.5-06016
ARCHITECTURE ENGINEERING PLANNING
SMRT
144 Fore Street/P.O.Box 618 PORTLAND, MAINE 04104
tel. (207) 772-3846 / fax. (207) 772-1070
PROJECT: MAINE TURNPIKE AUTHORITY
ADMINISTRATION BUILDING



A1 FOUNDATION PLAN

1/8" = 1'-0"

PL-101



A13 FDN. PART PLAN

NTS

NOTES:

1. See Drawings S1.0 and S1.1 for additional notes and requirements.
2. See Drawings S3.0 and S3.1 for required typical details.
3. See A7 / S3.0 for control joint requirements in basement (contractor to lay out CJ locations not shown).
4. Elevations specified on foundation plan are based on basement top of slab-on-grade datum El. 100.00'. Coordinate foundation dimensions with architectural drawings.
5. F4 indicates Footing Type. See E7 / S3.1 for footing schedule.
6. Top of footing elevations ("TOF") and top of wall elevations ("TOW") shall remain constant between elevations shown.
7. Basement foundation wall (grids E / 1 to E / 6 and E / 6 to D / 6) shall not be backfilled above El. 100.00 until basement slab on grade and second flooor composite slab have been placed.
8. See Detail F7 / S3.3 for Underdrain Layout Plan. See A1 / S3.6 for Brick Shelf Elevation Plan.
9. P8 indicates Pier Type. See schedule below for corresponding detail:

PIER TYPE	DETAIL
P1	J1 / S3.4
P2	J4 / S3.4
P3	J7 / S3.4
P4	J10 / S3.4
P5	J13 / S3.4
P6	F1 / S3.4
P7	F4 / S3.4
P8	F7 / S3.4
P9	F10 / S3.4

see OCD-1 S-1 For Size of Loading Dock. see Post on opposite page +SI 23

PROJECT NORTH

SMRT

Price Structural Engineers, Inc.

STATE OF MAINE DAVID A. PRICE No. 6401 LICENSED PROFESSIONAL ENGINEER

PROJECT TITLE:

MAINE TURNPIKE AUTHORITY ADMINISTRATION BUILDING

PORTLAND, MAINE

ISSUED FOR BIDDING / CONSTRUCTION 7-9-07

REV	DESCRIPTION	DATE
0	BIDDING/CONSTRUCTION	7-9-07

GRAPHIC SCALE: 0" 1"

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

PROJECT MANAGER: SLB

JC/DRAWN BY: TCM/TDP

A/E OF RECORD: DAP

CAD FILE: MTA/S2.0/116-06

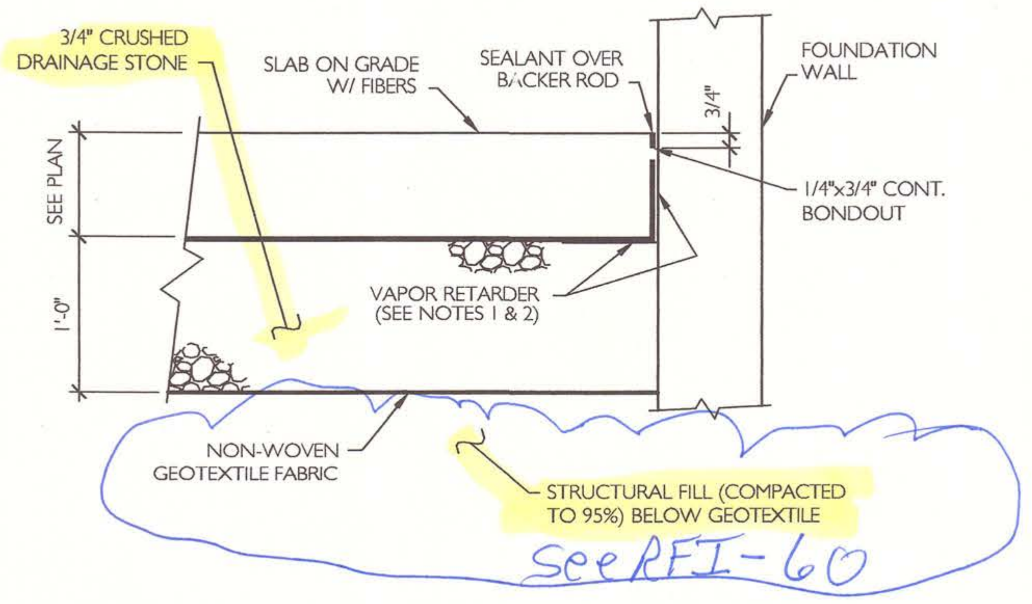
PROJECT NO: 06016

DATE: 7-9-07

SHEET TITLE: FOUNDATION PLAN

SHEET No. S2.0

existing

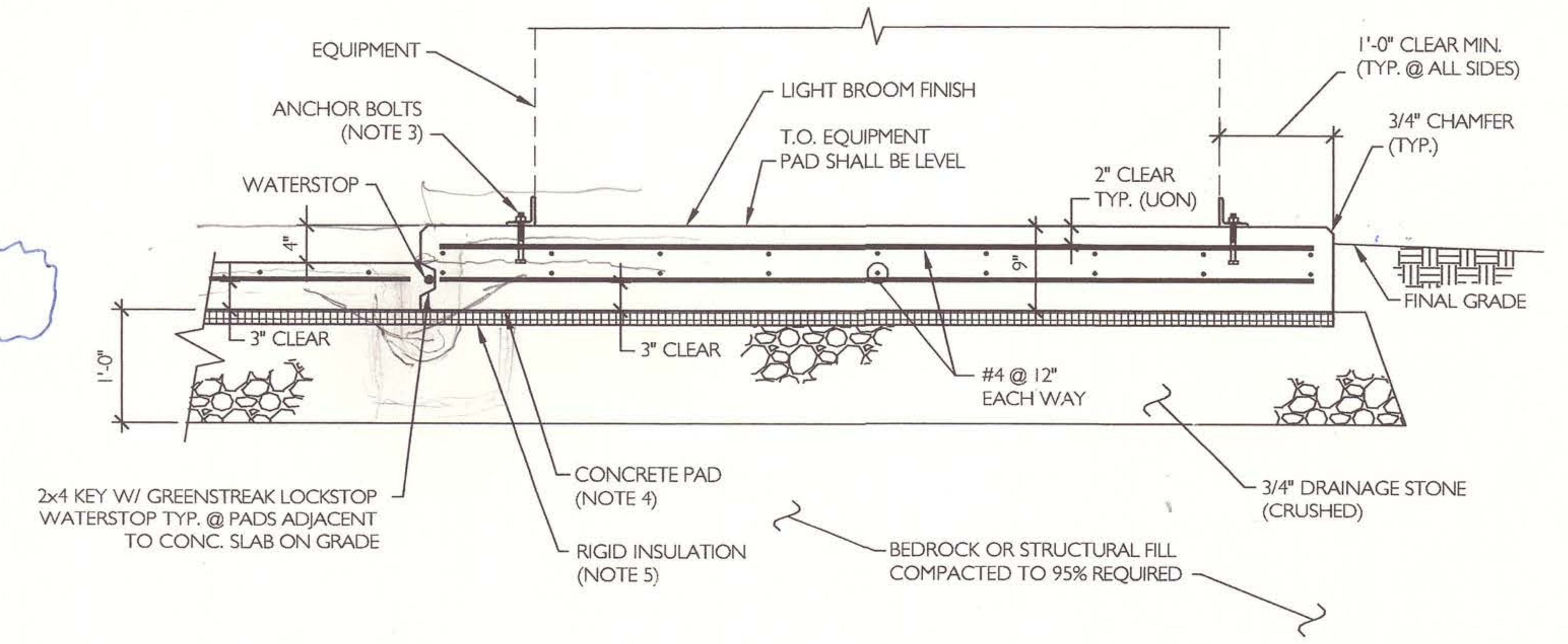


NOTES:

1. Tape all joints, install pipe boots, and seal all vapor retarder penetrations per manufacturer's recommendations. Verify that permeance of vapor retarder conforms to the limitations and requirements set by the manufacturer furnishing floor finish materials.
2. Vapor retarder shall be Stego-Wrap (15 mil thickness) by Stega Industries, LLC (tel. 207-775-5764) polyolefin geomembrane, or SocoShield VB-15 (tel. 888-276-2672) polyolefin geomembrane or approved equal. RFI # 20
3. Water shall not be added to concrete for slab at project site. Remove bleedwater prior to trowelling. Avoid overtrowelling during finishing.
4. Construct wind barriers if winds greater than 10 mph are expected either during concrete placement or within 24 hours after placement.
5. Continuous moist curing of slab surface shall begin as soon as possible after placement (within 12 hours) and continue for 7 days. Dissipating curing compound may be used only if it is verified to be compatible with floor finish materials prior to slab installation.

K1 TYPICAL SLAB ON GRADE DETAIL

NOT TO SCALE

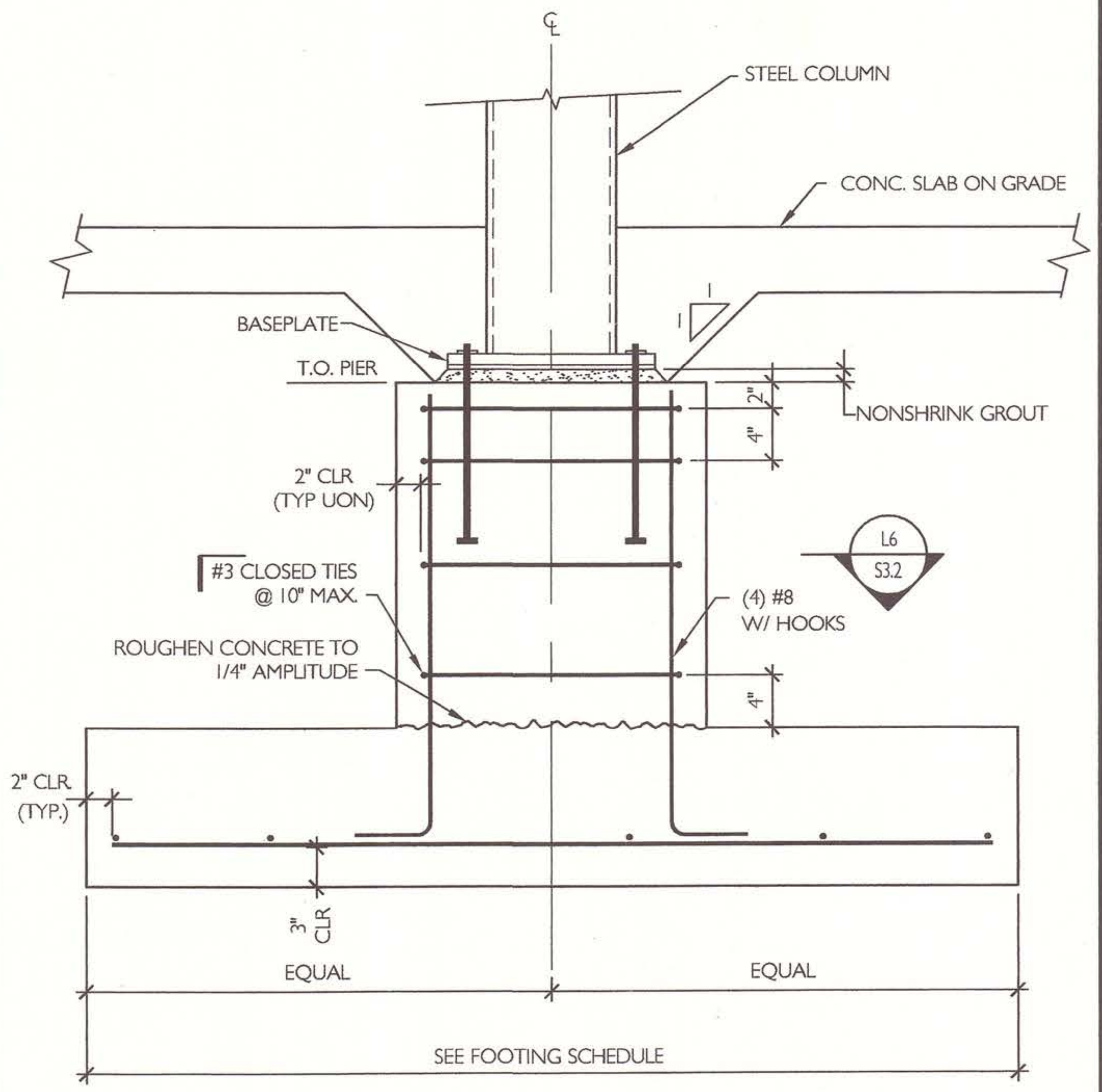


NOTES:

1. See project drawings and equipment specifications for slab bondout and other requirements.
2. Operating weight of transformer, including associated equipment and fuel, shall not exceed 5000 pounds.
3. Size and location of anchor bolts shall be as specified by equipment manufacturer.
4. Coordinate pad dimensions with equipment shop drawings.
5. See Mechanical and Architectural Drawings for Snow Melt System requirements and details.

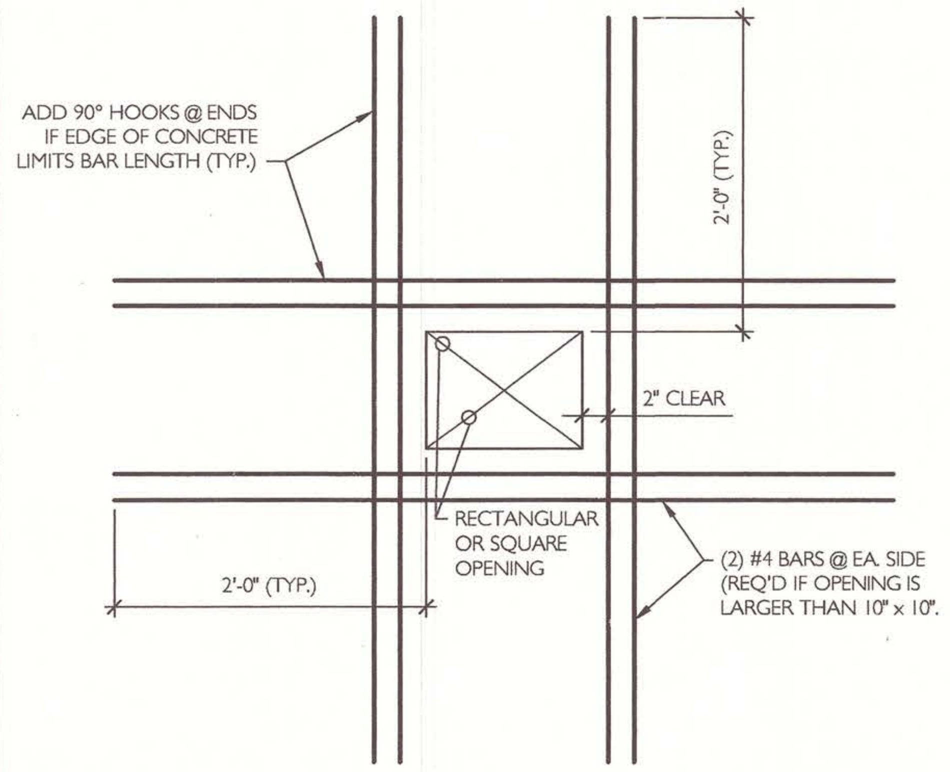
K7 TYPICAL EQUIPMENT PAD DETAIL

NOT TO SCALE



E1 SECTION

NOT TO SCALE

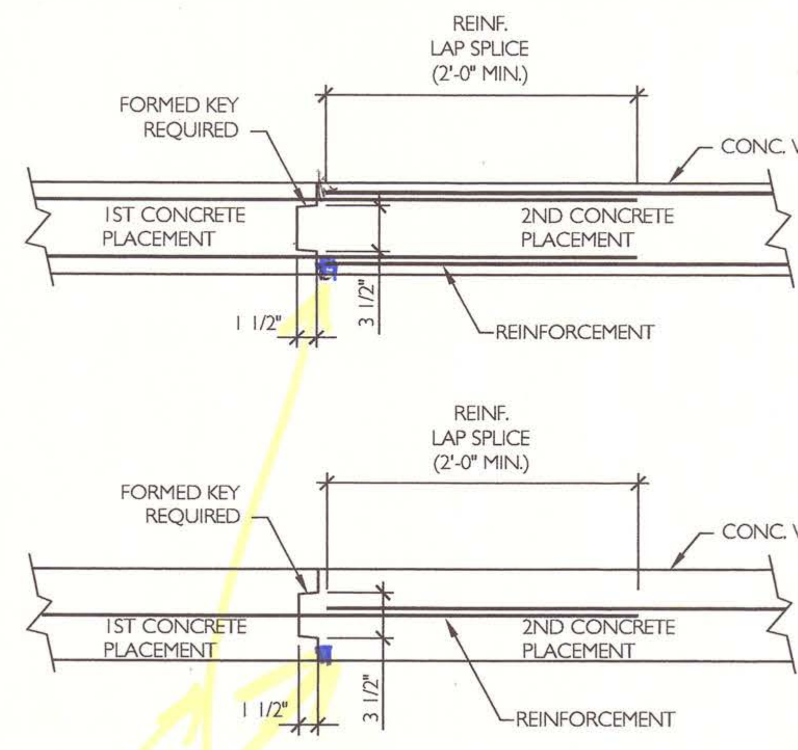


NOTES:

1. All openings in concrete shall be formed during concrete placement (see note B12 / S1.0).
2. Openings shall be located between reinforcement specified in other details.
3. Notify PSE prior to concrete placement if any side of opening exceeds 1'-2".

E4 TYP. DETAIL IN CONCRETE FOUNDATION WALLS

NOT TO SCALE

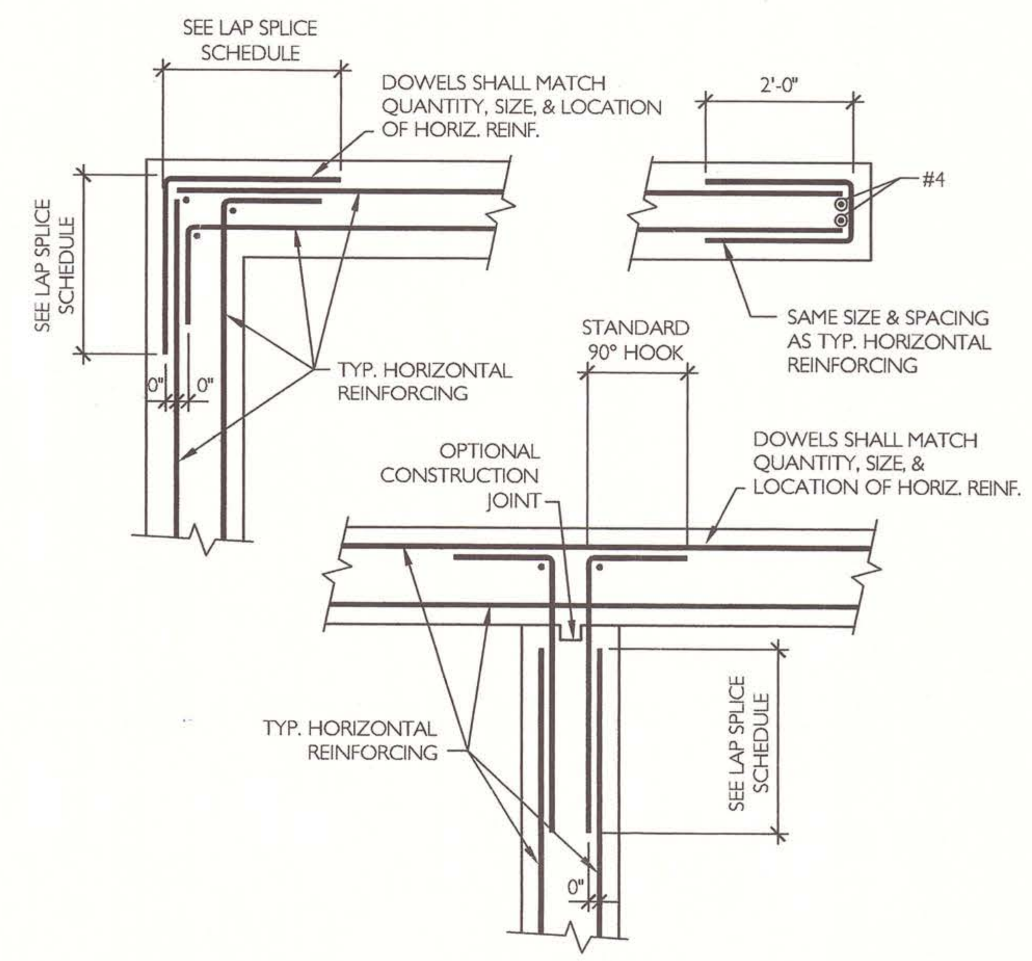


NOTES:

1. It is mandatory that exposed reinforcement from first placement be thoroughly cleaned prior to second placement.
2. Face of hardened concrete shall be moistened (without ponding) immediately prior to second concrete placement.
3. Locate wall construction joints at wall control joint locations - see Detail K11 / S3.1. At basement and retaining walls, provide sealant at both sides of wall in accordance with A4 / S3.0.

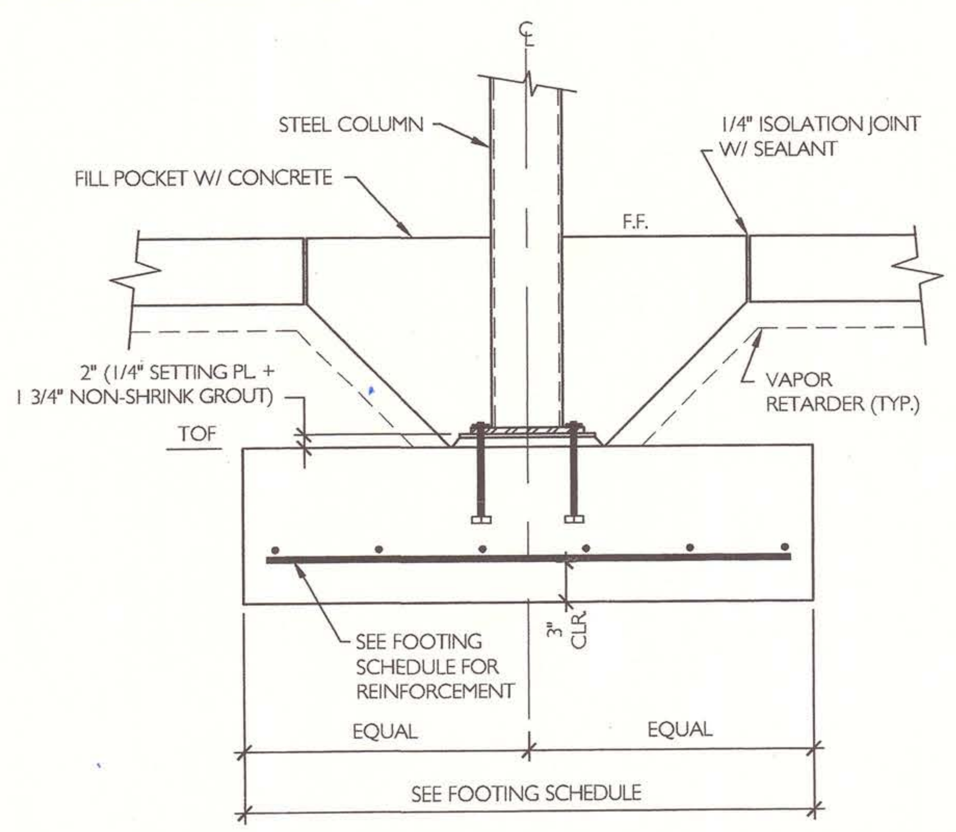
E7 TYP. WALL CONSTRUCTION JT.

NOT TO SCALE



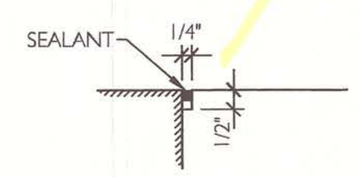
E11 TYPICAL DETAILS AT WALL CORNERS AND INTERSECTIONS

NOT TO SCALE



A1 SECTION

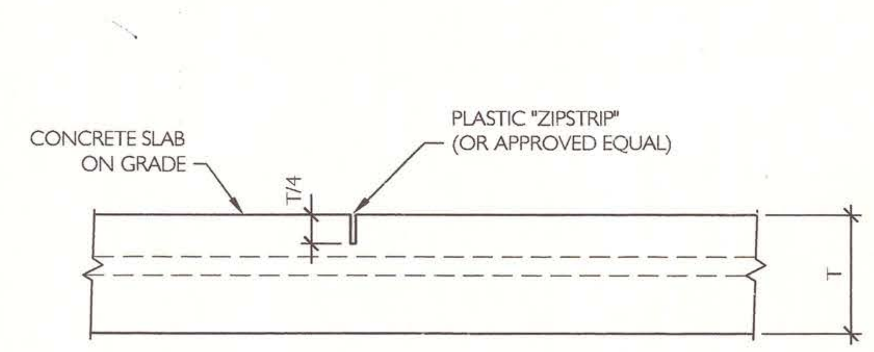
NOT TO SCALE



REFERENCE: E7 / S3.0

A4 DETAIL

NOT TO SCALE

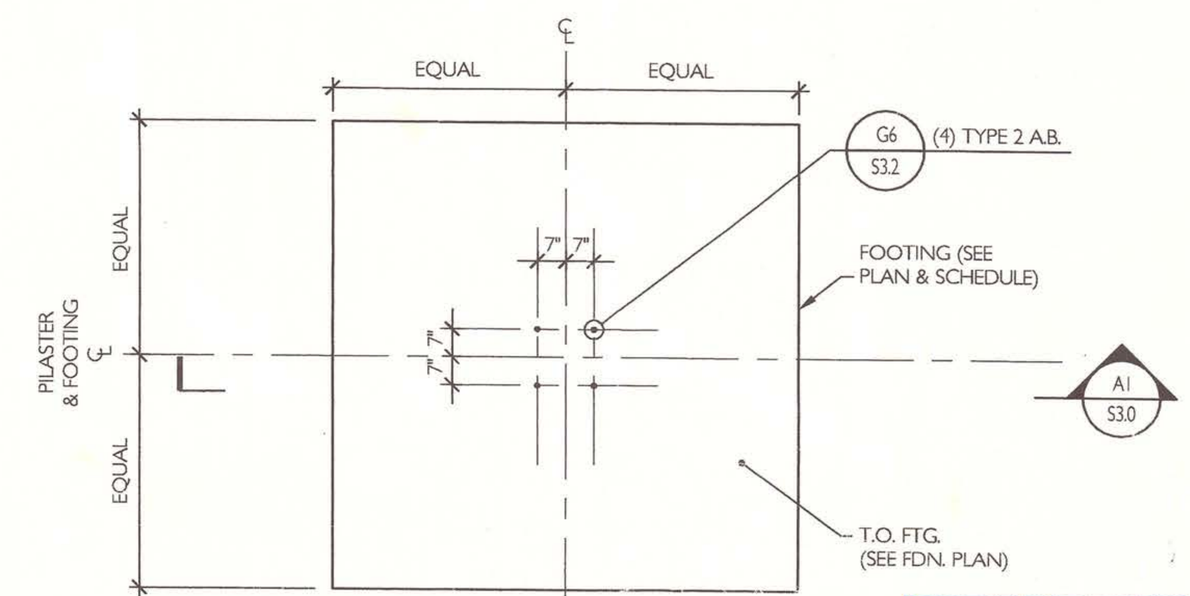


NOTES:

1. Control joints shall be straight (± 1/4" tolerance).
2. Spacing between control joints shall not exceed 18'-0" o.c. (UON).
3. Sawcut control joints shall be cut within 12 hours after concrete placement but shall not dislodge aggregate during cutting.
4. Control joints shall NOT be sawcut in floors containing In-Floor Heating Tubes.

A7 TYP. CONC. SLAB CONTROL JT.

NOT TO SCALE



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A11 SPREAD FOOTING PLAN

NOT TO SCALE

SM
RT

Price Structural Engineers, Inc.

STATE OF MAINE
DAVID A. PRICE
No. 6401
LICENSED
PROFESSIONAL ENGINEER

PROJECT NORTH
MAG NORTH

PROJECT TITLE:
MAINE TURNPIKE AUTHORITY
ADMINISTRATION BUILDING
PORTLAND, MAINE

ISSUED FOR BIDDING / CONSTRUCTION
7-9-07

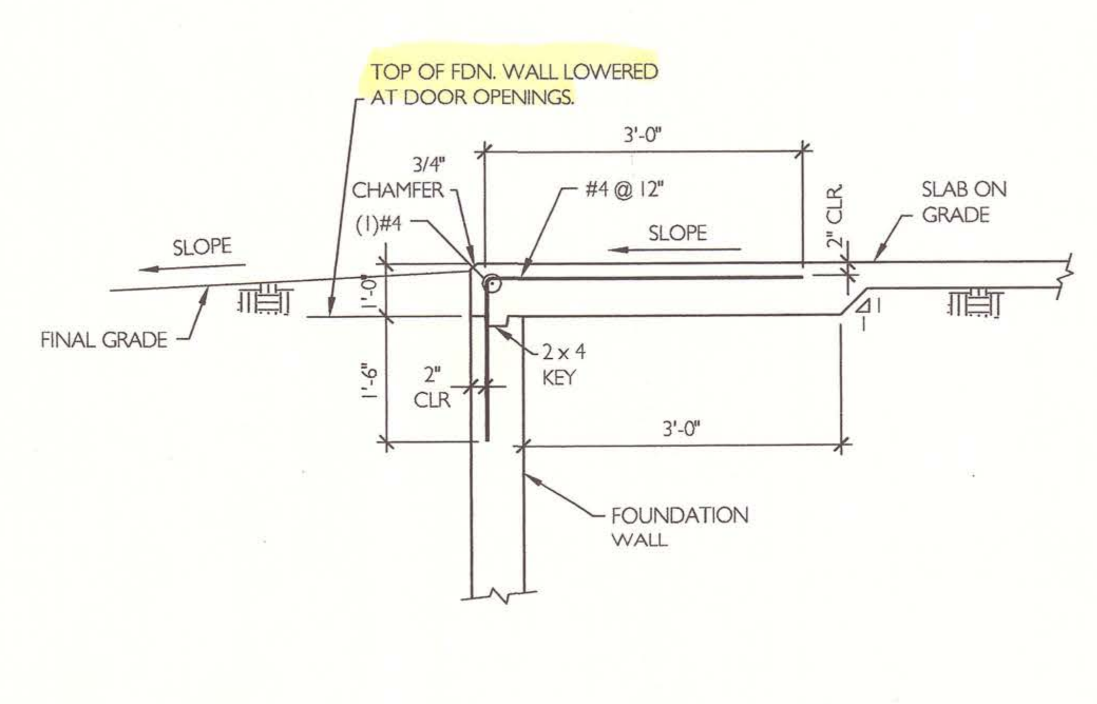
REV	DESCRIPTION	DATE
0	BIDDING/CONSTRUCTION	7-9-07

GRAPHIC SCALE: 0" 1"

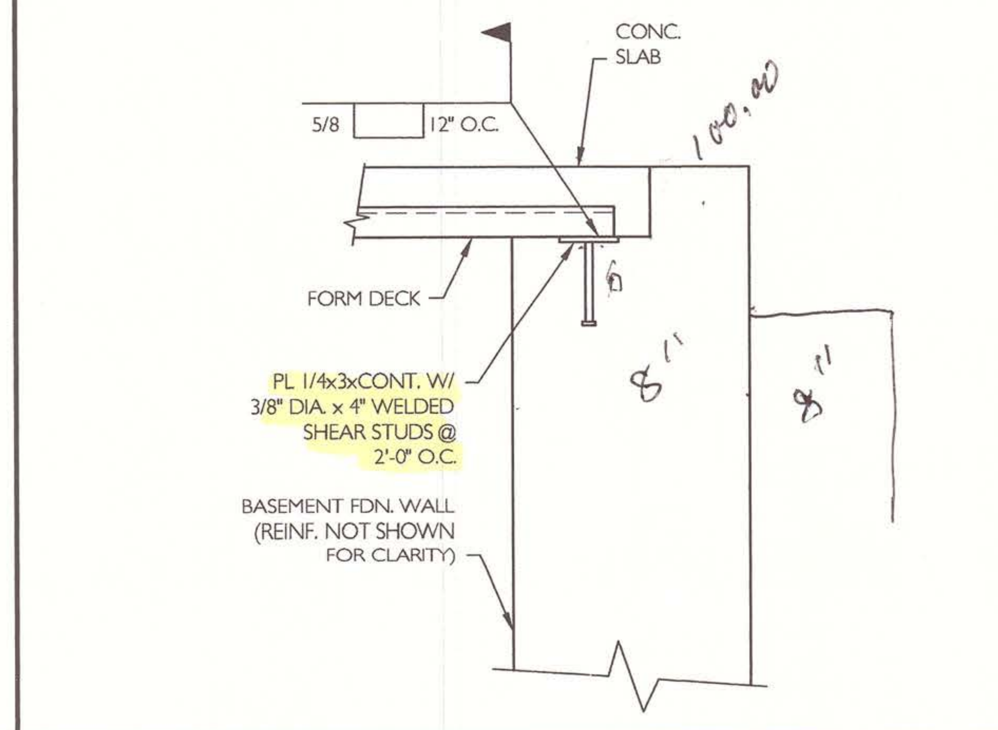
SCALE:	AS NOTED
PROJECT MANAGER:	SLB
JC/DRAWN BY:	TCM/TDP
A/E OF RECORD:	DAP
CAD FILE:	MTA/S3.0/116-06
PROJECT NO:	06016
DATE:	7-9-07

SHEET TITLE:
FOUNDATION SECTIONS & DETAILS

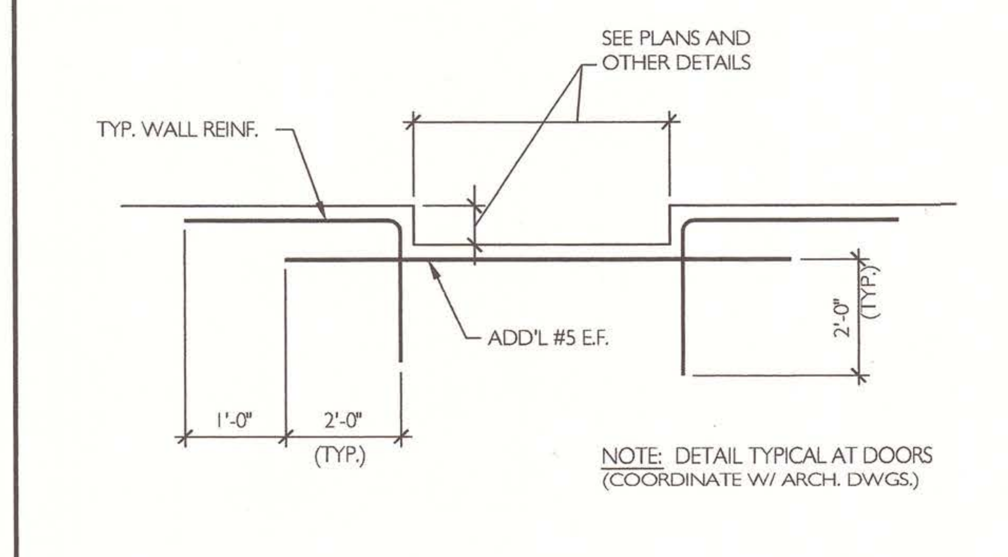
SHEET No.
S3.0



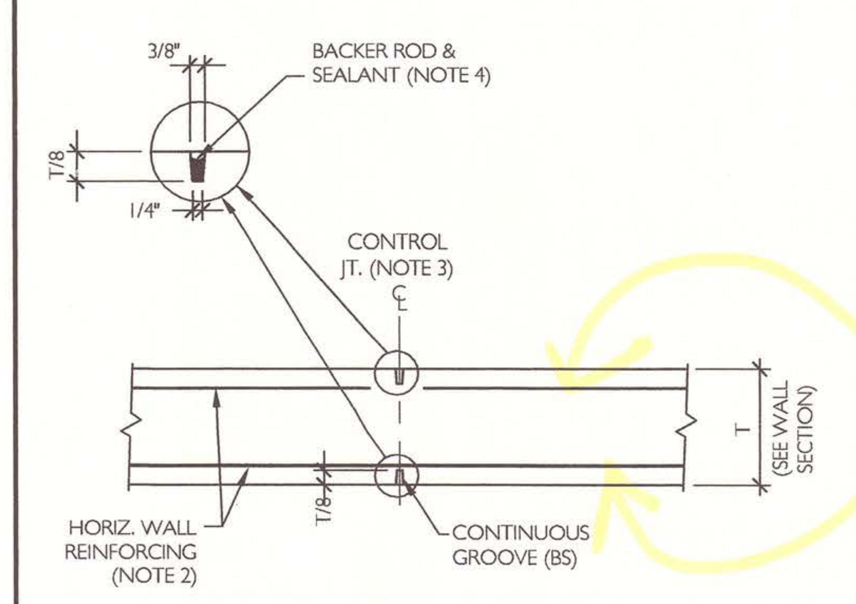
K1	SECTION
NTS	



K4	SECTION
NOT TO SCALE	



K7	TYPICAL STEP IN TOP OF FOUNDATION WALL
NOT TO SCALE	



NOTES:

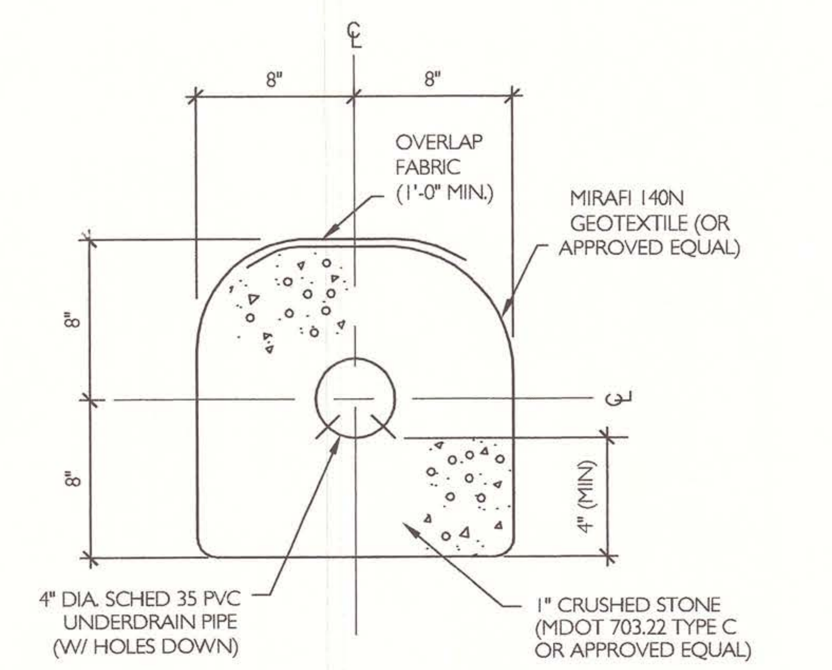
1. Wall control joints shall be located as follows:
   a. 12'-0" from building corners.
   b. 30'-0" o.c. maximum spacing.
   c. At foundation wall notches adjacent to doors (where possible).
2. Cut and stop every other horizontal bar extending through control joint.
3. Locations of wall control joints shall be clearly dimensioned on rebar shop drawings.
4. Backer rod and sealant required at basement and retaining walls only. Sealant shall be Sonneborn NP-2 or approved equal.

K11	TYPICAL FOUNDATION WALL CONTROL JOINT
NOT TO SCALE	

REBAR LAP SPLICE LENGTH SCHEDULE

BAR SIZE	3000 PSI CONCRETE	4000 PSI CONCRETE
#3	1'-4"	1'-4"
#4	1'-10"	1'-7"
#5	2'-3"	2'-0"
#6	2'-8"	2'-4"
#7	3'-2"	2'-9"
#8	3'-7"	3'-1"
#9	4'-0"	3'-6"
#10	4'-10"	4'-2"
#11	6'-0"	5'-2"

E1	TYP. LAP SPLICE SCHEDULE
–	



NOTES:
1. Underdrain pipe shall slope down continuously at 1/16" per foot (UNO) to either daylight outlet or pumped outlet.
2. Install perforated PVC pipe below slab and adjacent to footing. Install solid PVC pipe to outlets.
3. Install backflow preventer at beginning of outlet solid pipe sections (required at slab underdrain outlets and also exterior perimeter underdrain outlet).
4. Roof drains shall not be connected to underdrains.

E4	TYP. UNDERDRAIN (UD) & SLAB UNDERDRAIN (SUD) DETAIL
NOT TO SCALE	

FOOTING SCHEDULE

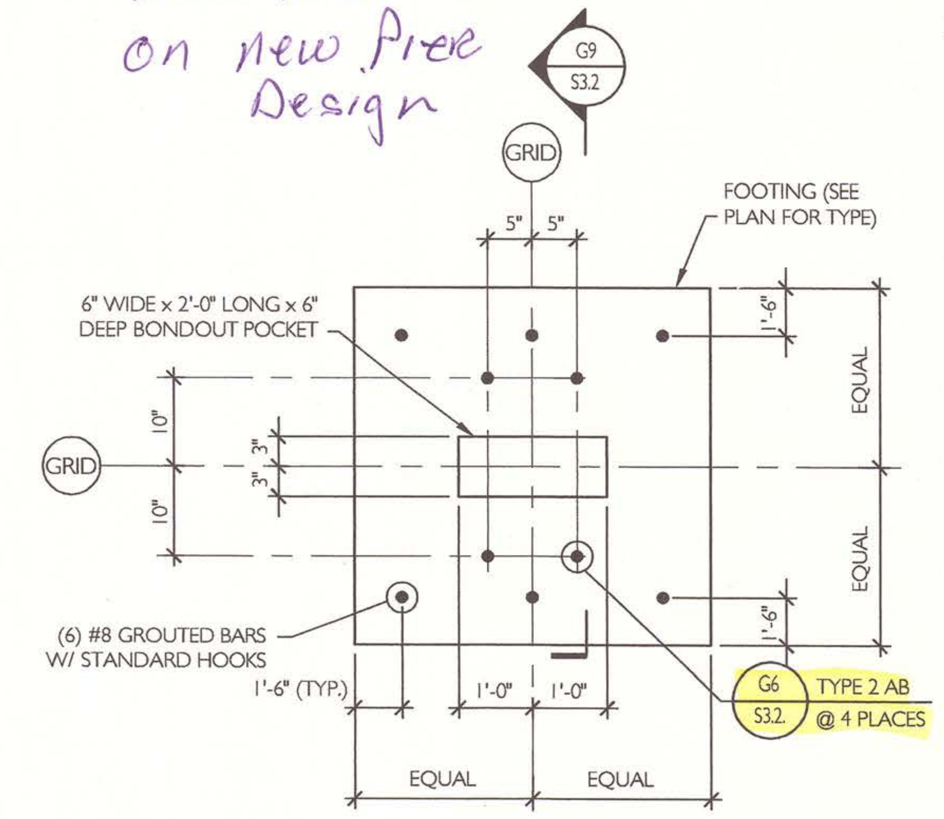
TYPE	LENGTH	WIDTH	THICKNESS	BOTTOM REINFORCEMENT (NOTE 1)	TOP REINFORCEMENT (NOTE 1)
F1	4'-0"	4'-0"	1'-2"	(5) #4 EACH WAY	NONE
F2	5'-0"	5'-0"	1'-4"	(6) #5 EACH WAY	NONE
F3	6'-0"	6'-0"	1'-4"	(7) #5 EACH WAY	NONE
F4	7'-0"	7'-0"	1'-4"	(8) #5 EACH WAY	NONE
F5	8'-0"	8'-0"	1'-9"	(9) #5 EACH WAY	NONE
F5-T	8'-0"	8'-0"	1'-10"	(9) #5 EACH WAY	(9) #4 EACH WAY
F6-T	9'-0"	9'-0"	1'-10"	(11) #6 EACH WAY	#4 @ 12" E.W.
F7	10'-0"	10'-0"	1'-10"	(11) #6 EACH WAY	NONE
F8-T	11'-0"	11'-0"	2'-0"	(12) #7 EACH WAY	#4 @ 12" E.W.
F9	5'-0"	3'-0"	1'-0"	(5) #4 EACH WAY	NONE

See RFI #76R For Footers

NOTES:
1. Reinforcement shall be spaced uniformly across entire width of spread footing.
2. Spread footings shall be centered below columns, typical (UON).

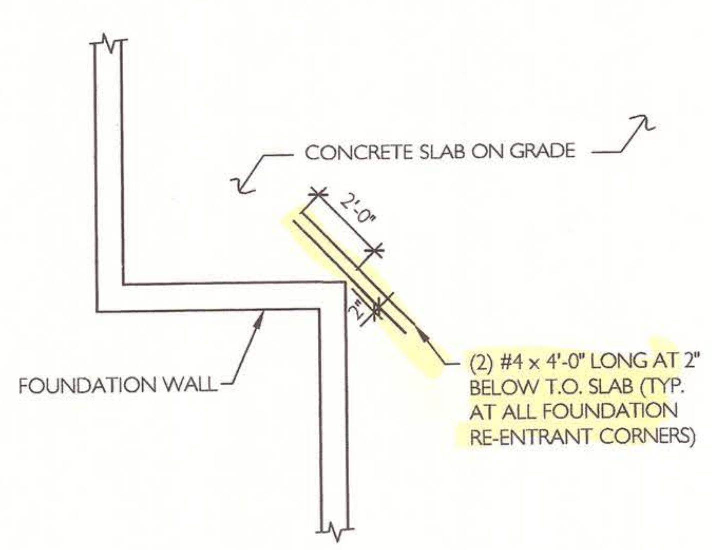
E7	FOOTING SCHEDULE
–	–

See RFI-76 on new Pier Design

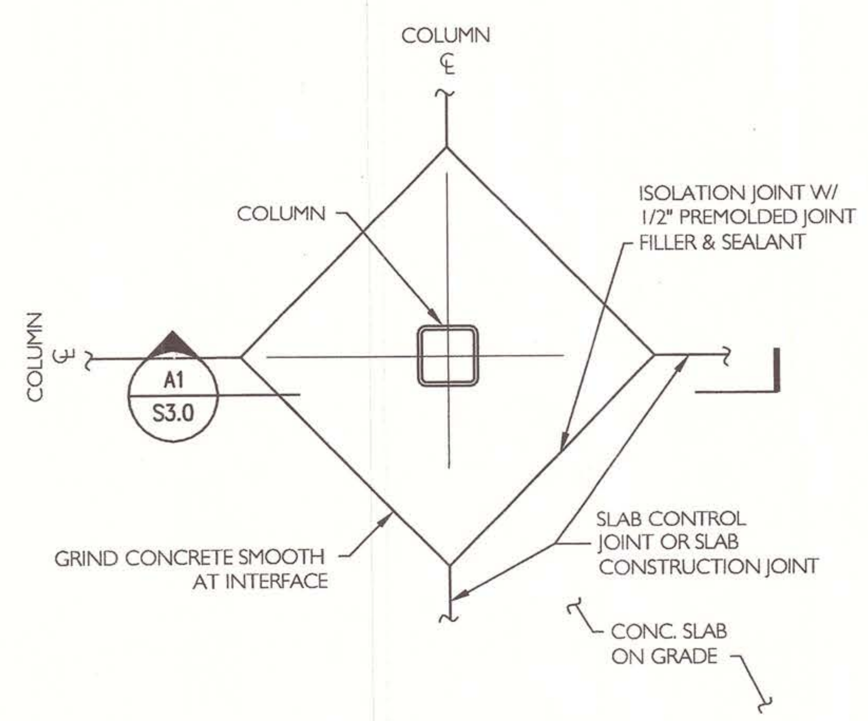


NOTES:
1. Contractor shall exercise extreme care not to overblast bedrock at F5-T footings. F5-T footings shall bear directly on sound bedrock.

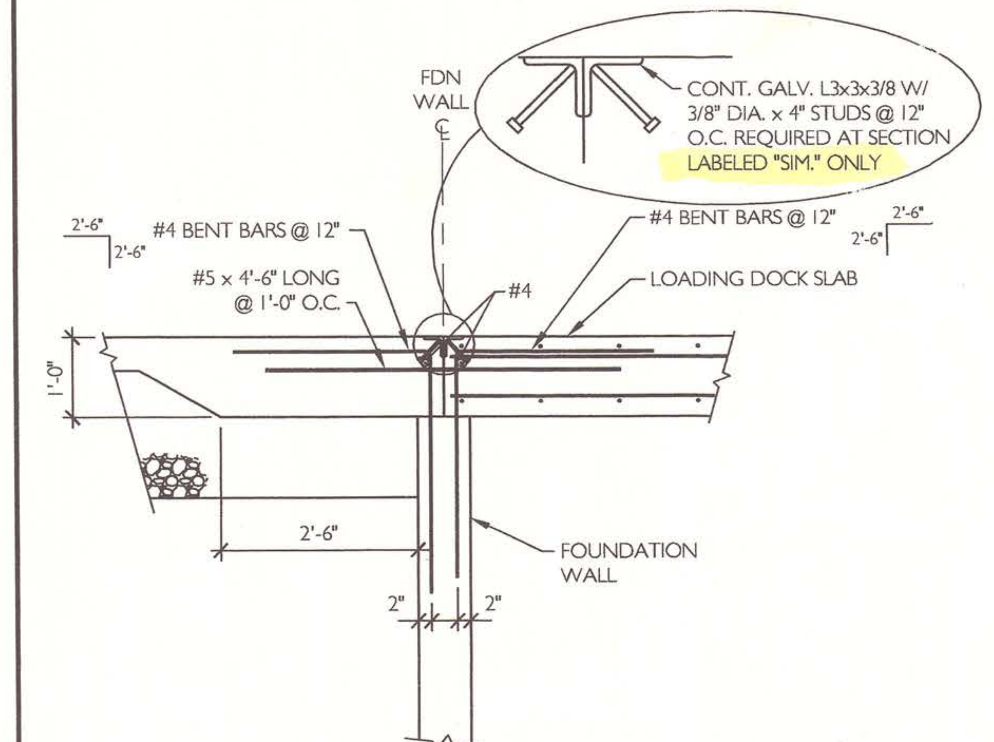
E12	FOOTING F5–T DETAIL
NOT TO SCALE	



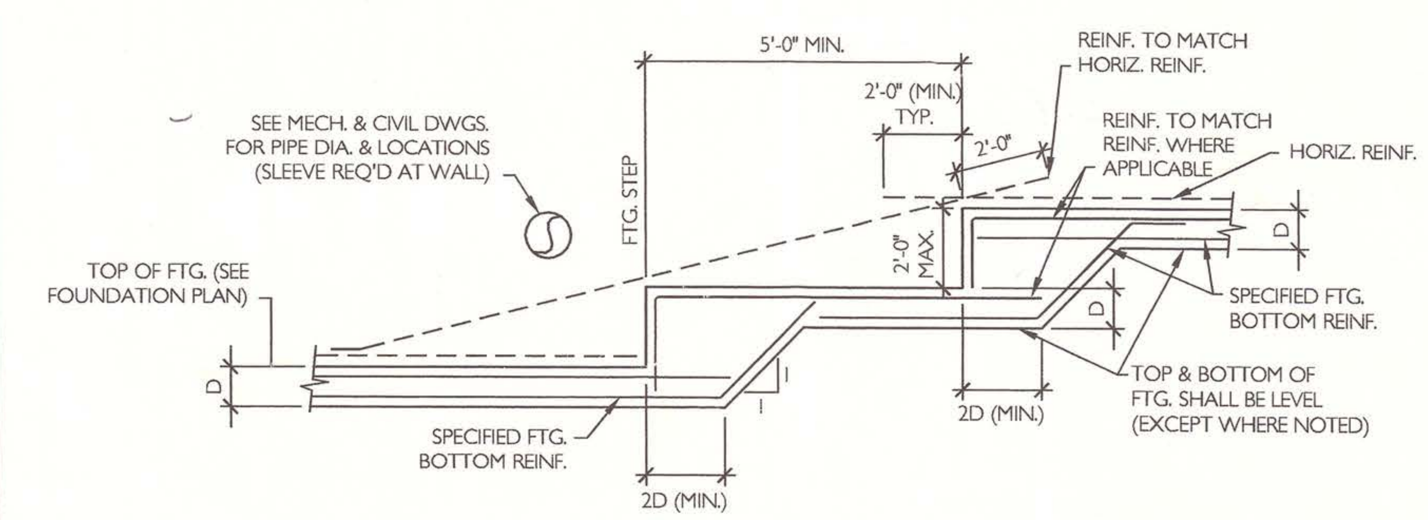
A1	TYP. CONCRETE SLAB REINF. AT FDN. WALL RE–ENTRANT CORNERS
NOT TO SCALE	



A4	TYP. COLUMN / SLAB BONDOUT DETAIL
NOT TO SCALE	



A7	SECTION
NOT TO SCALE	



NOTE:
Step the footing where necessary to accommodate footing frost depth requirements.

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A11	TYP. ELEVATION OF STEPPED WALL FOOTING DETAIL
NOT TO SCALE	

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DAVID PRICE
No. 8401
LICENSED
PROFESSIONAL ENGINEER

PROJECT NORTH
MAG NORTH

PROJECT TITLE:
MAINE TURNPIKE AUTHORITY ADMINISTRATION BUILDING
PORTLAND, MAINE

ISSUED FOR BIDDING / CONSTRUCTION
7-9-07

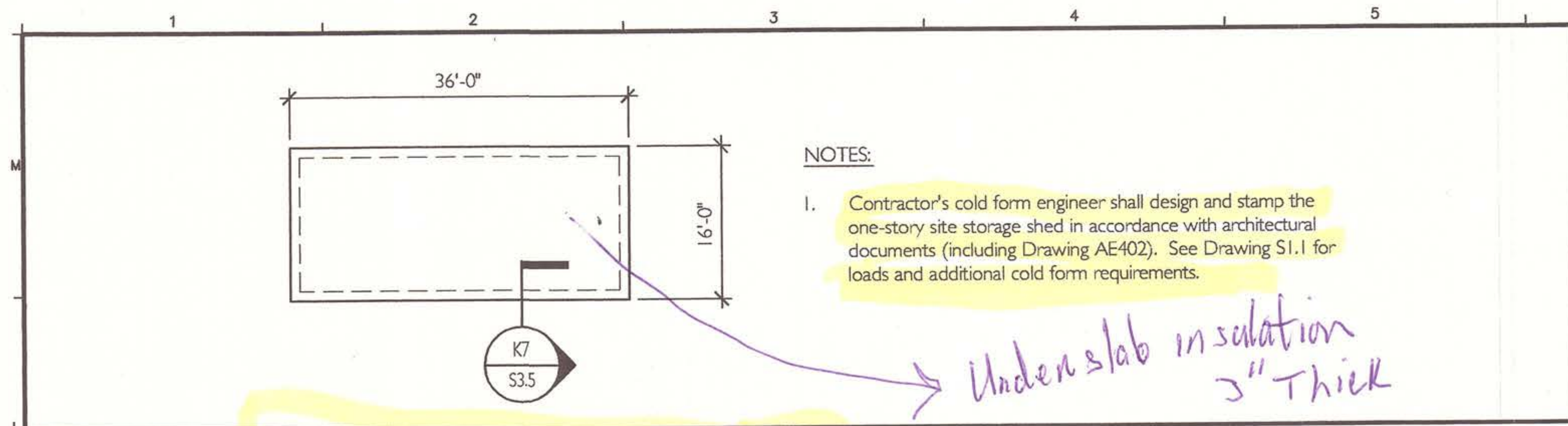
REV	DESCRIPTION	DATE
0	BIDDING/CONSTRUCTION	7-9-07

GRAPHIC SCALE: 0" 1"

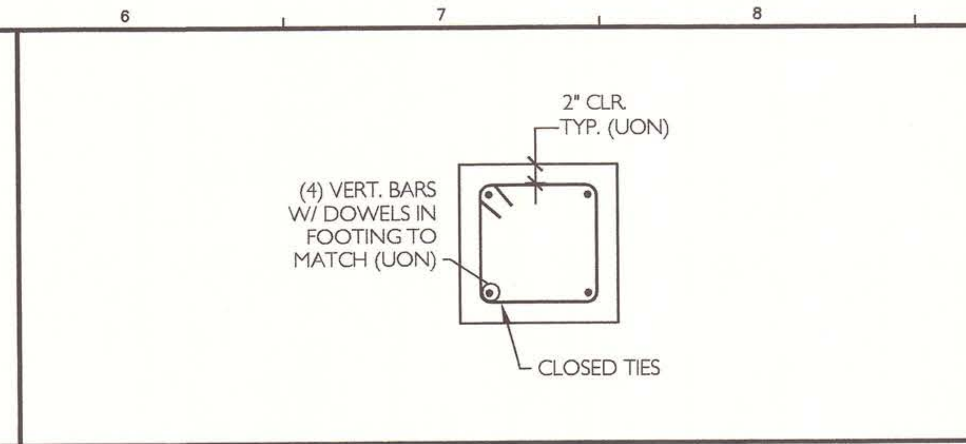
SCALE:	AS NOTED
PROJECT MANAGER:	SLB
JC/DRAWN BY:	TCM/TDP
A/E OF RECORD:	DAP
CAD FILE:	MTA/S3.1/116-06
PROJECT NO:	06016
DATE:	7-9-07

SHEET TITLE:
FOUNDATION SECTIONS & DETAILS

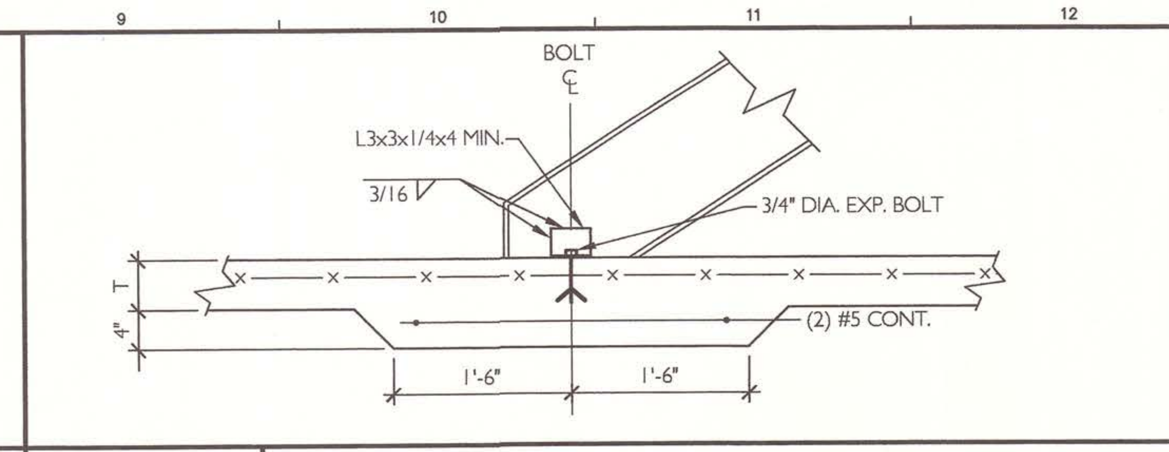
SHEET No.
S3.1



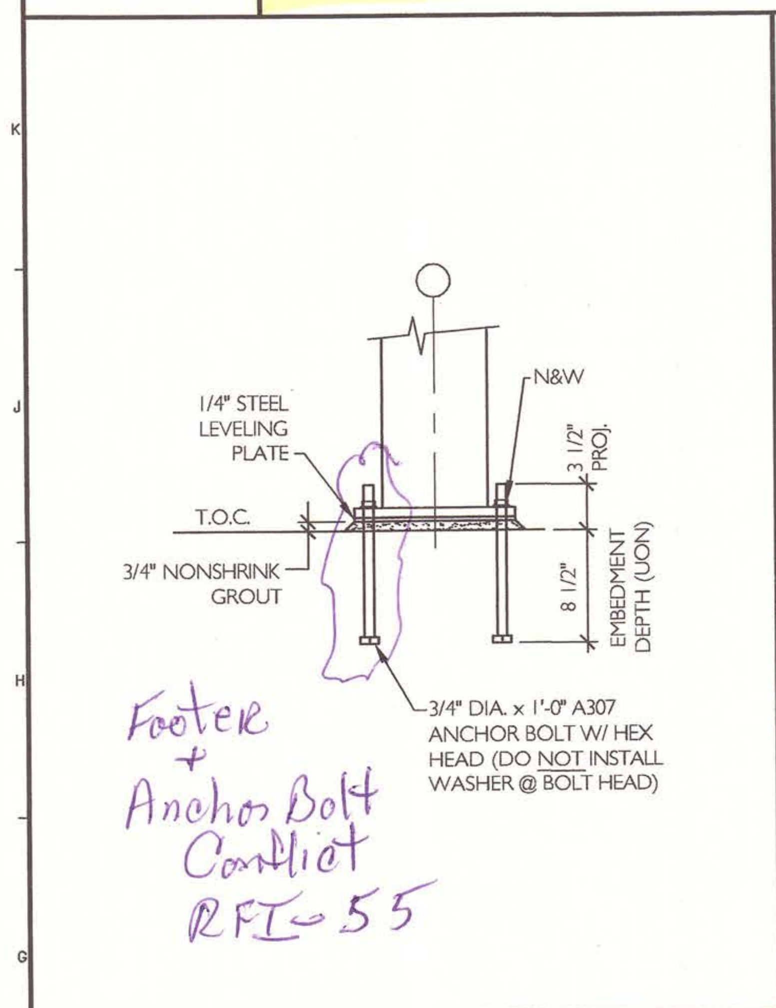
L1 STORAGE SHED PLAN
NOT TO SCALE



L6 SECTION
NOT TO SCALE

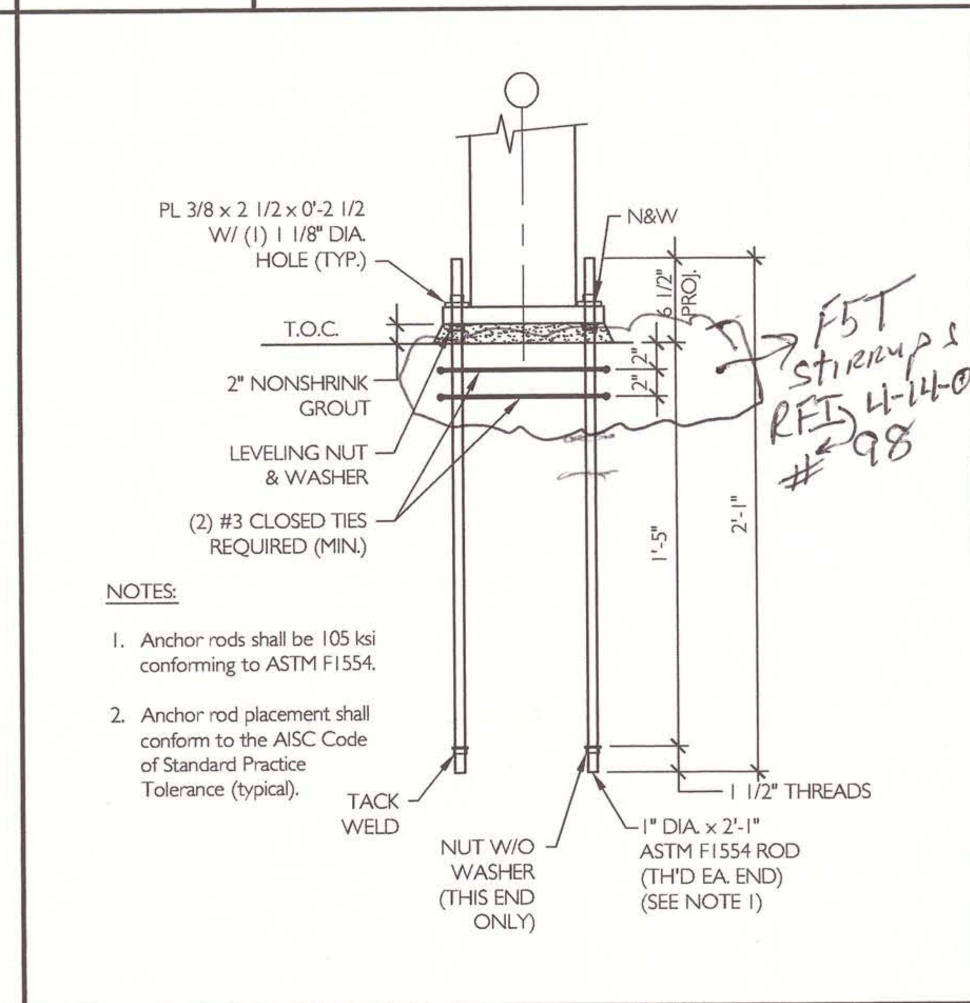


L9 TYP. STRINGER TO SLAB CONN.
NOT TO SCALE

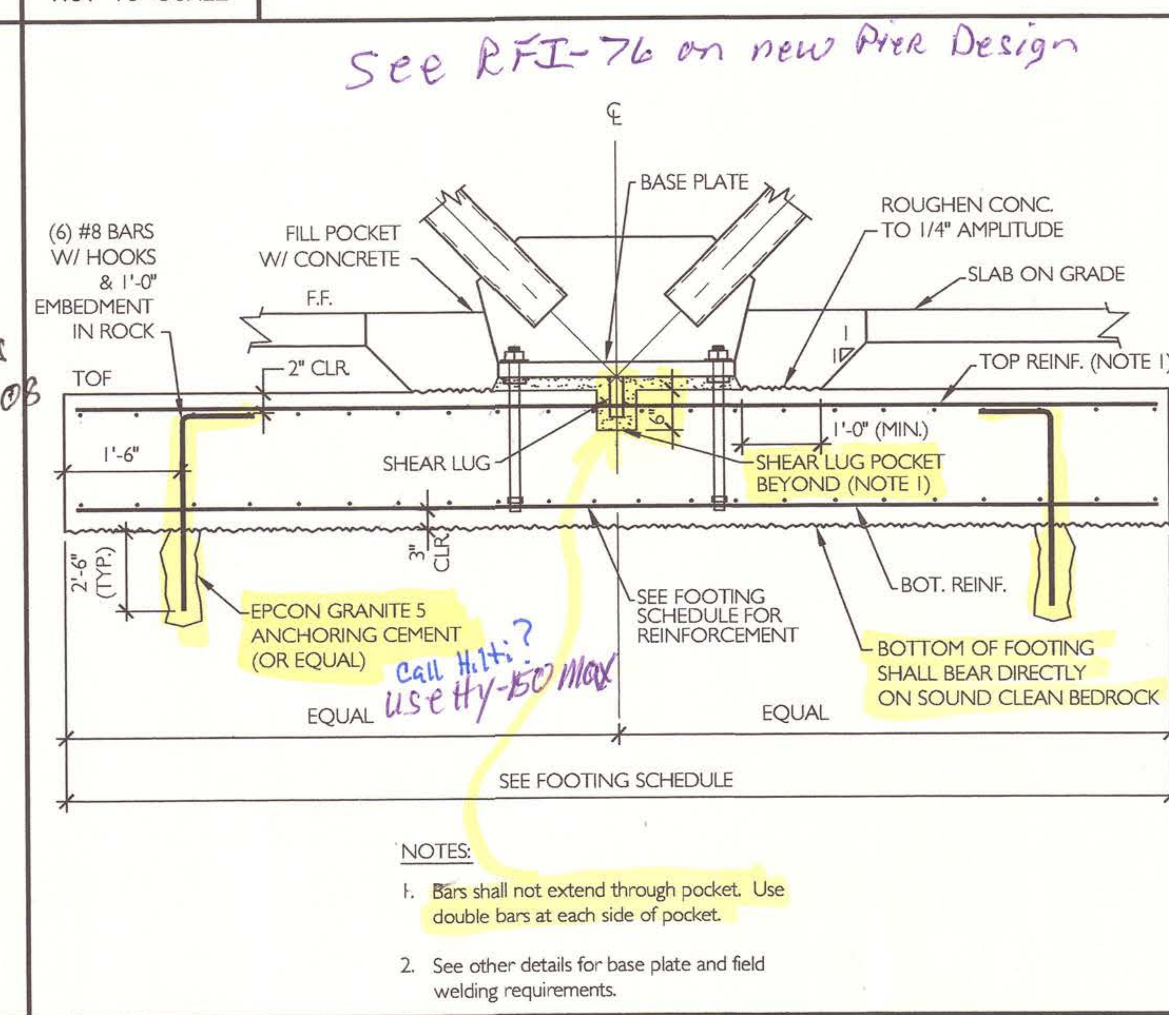


G1 TYPE 1 A.B.
NOT TO SCALE

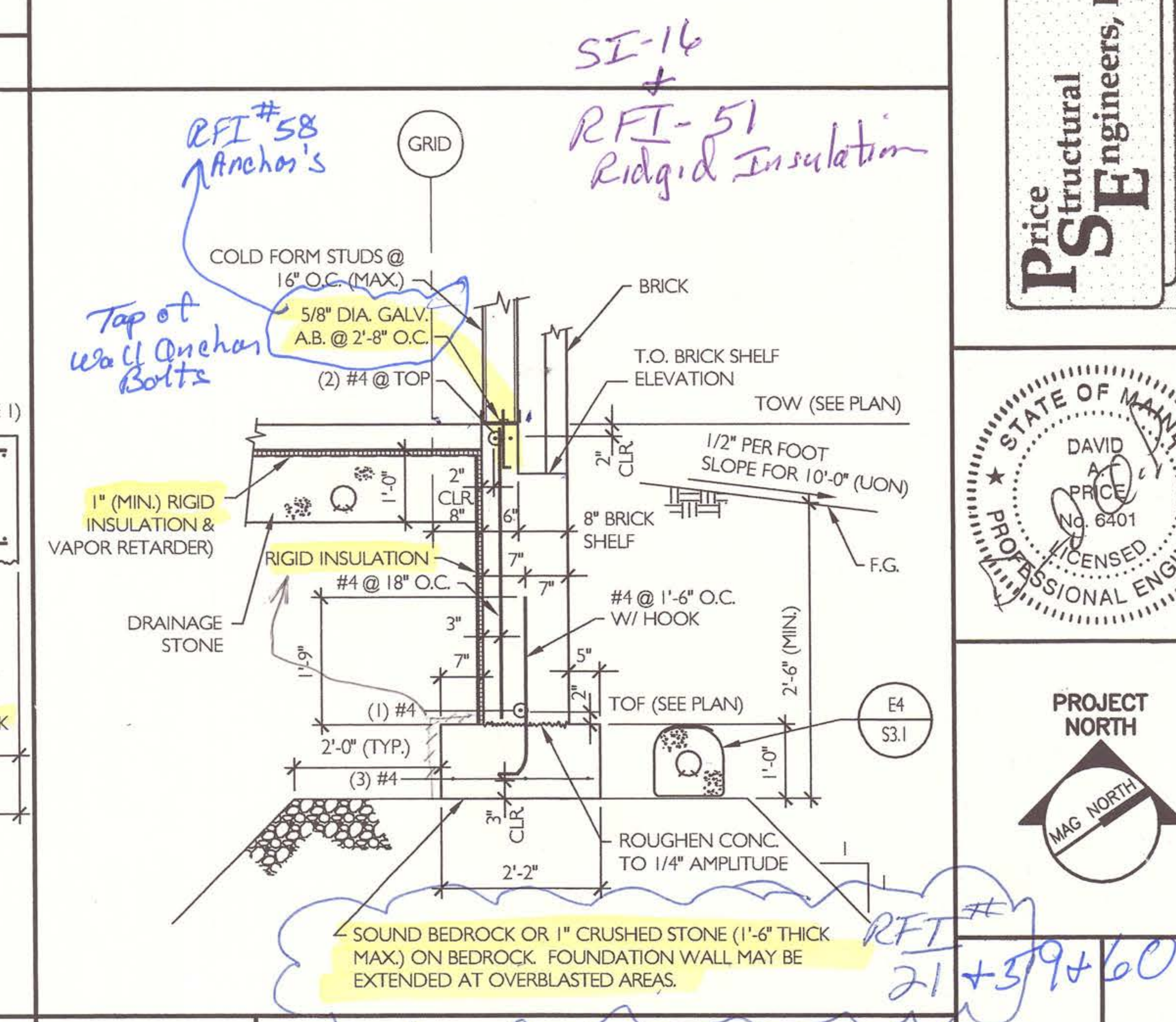
G3 –
NOT TO SCALE



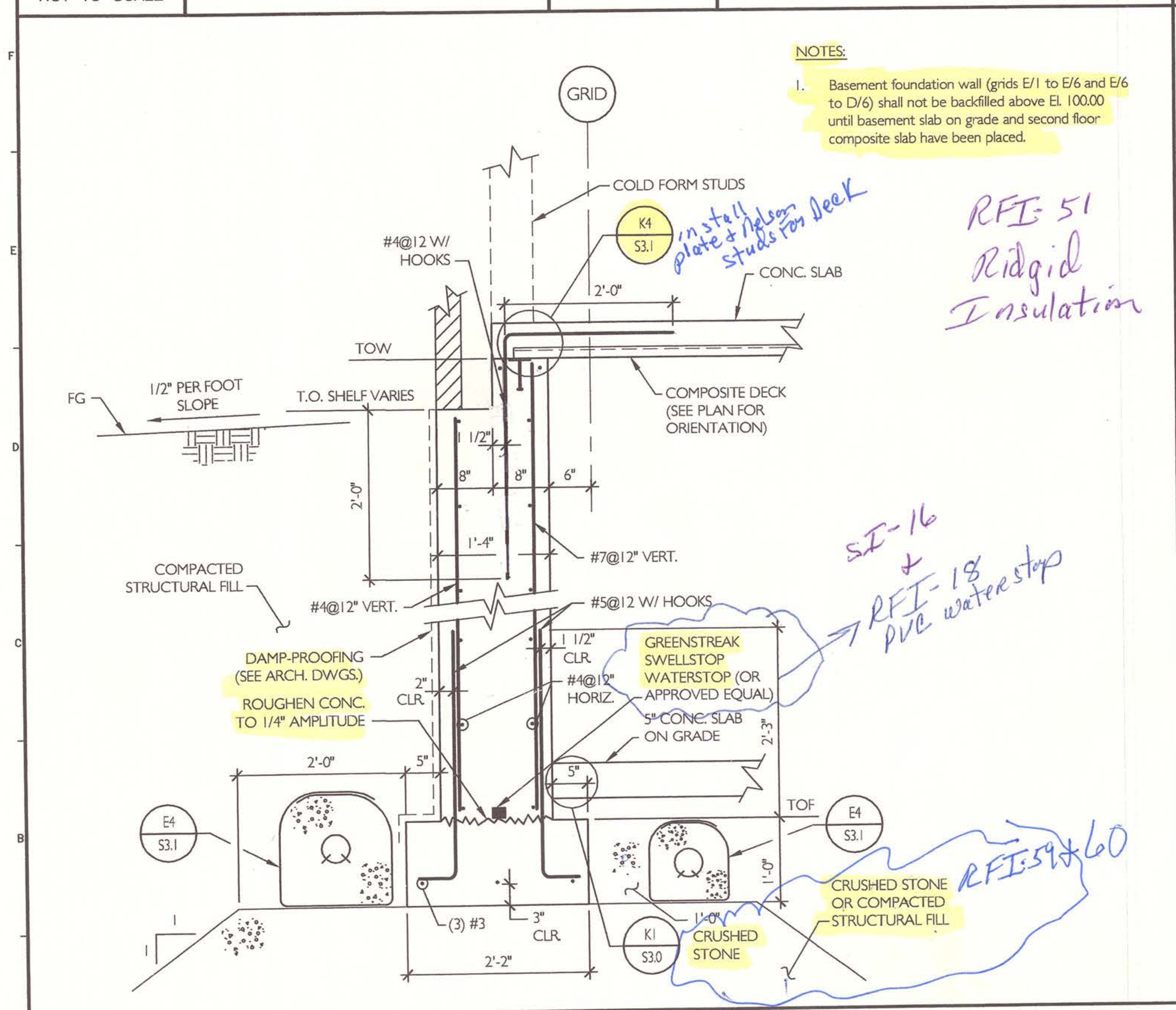
G6 TYPE 2 ANCHOR BOLT
NOT TO SCALE



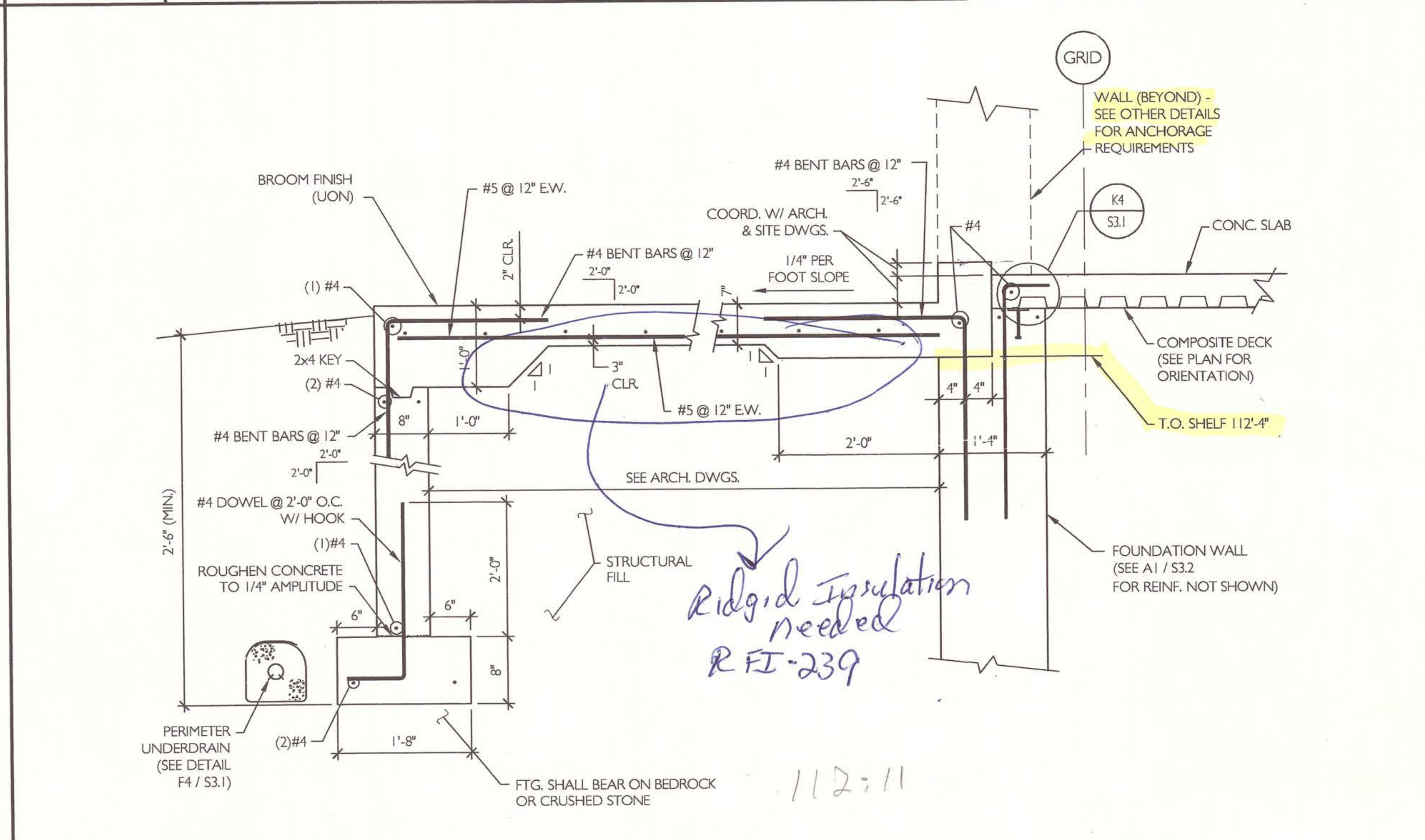
G9 SECTION
NOT TO SCALE



G12 SECTION
NOT TO SCALE

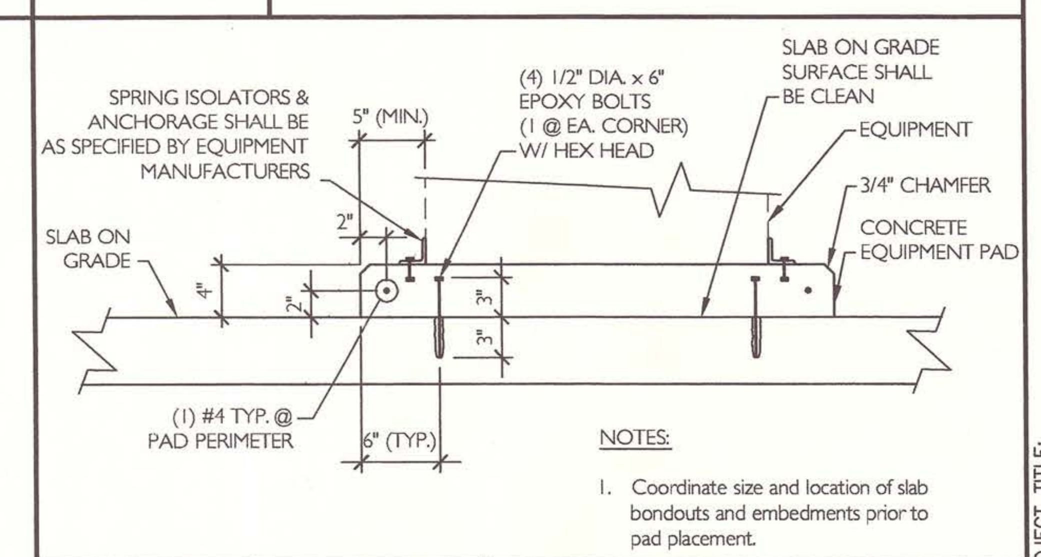


A1 SECTION
NOT TO SCALE

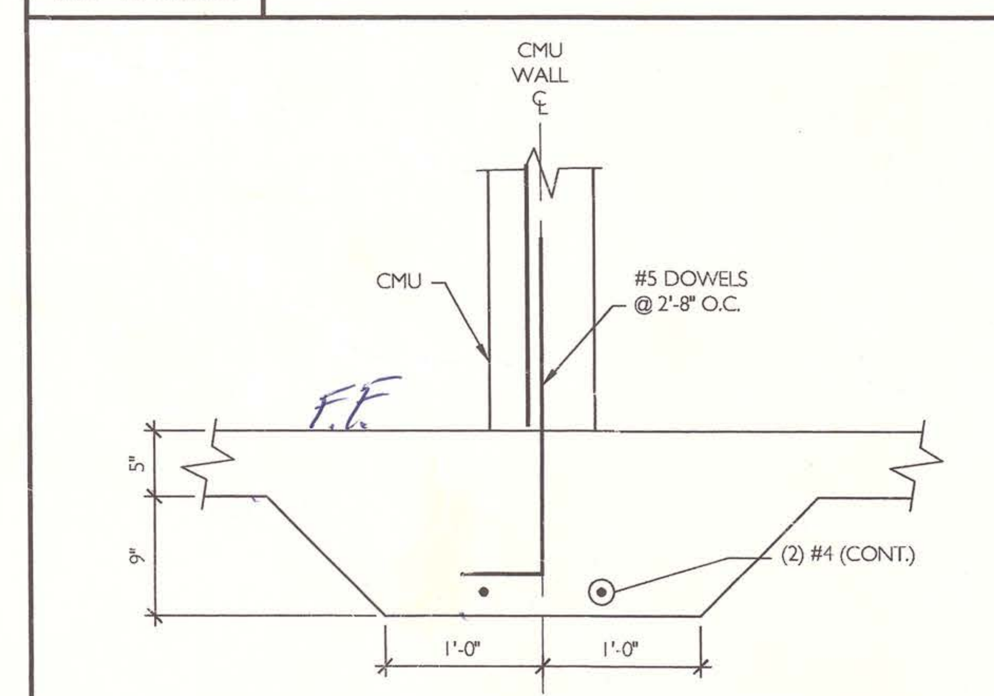


NOTES: 1. The ground immediately adjacent to the foundation shall be sloped away from the building at a slope of 1/2" vertical to 12" horizontal for a minimum distance of 8'-0". This condition shall exist after settlement of backfill has occurred (condition does not occur at section labeled "SIM.").

A6 SECTION
NOT TO SCALE



D12 TYPICAL INTERIOR EQUIPMENT "HOUSEKEEPING" PAD
NOT TO SCALE



A12 TYPICAL DETAIL
NOT TO SCALE

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PROJECT NORTH

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ISSUED FOR BIDDING / CONSTRUCTION 7-9-07

REV	DESCRIPTION	DATE
0	BIDDING/CONSTRUCTION	7-9-07

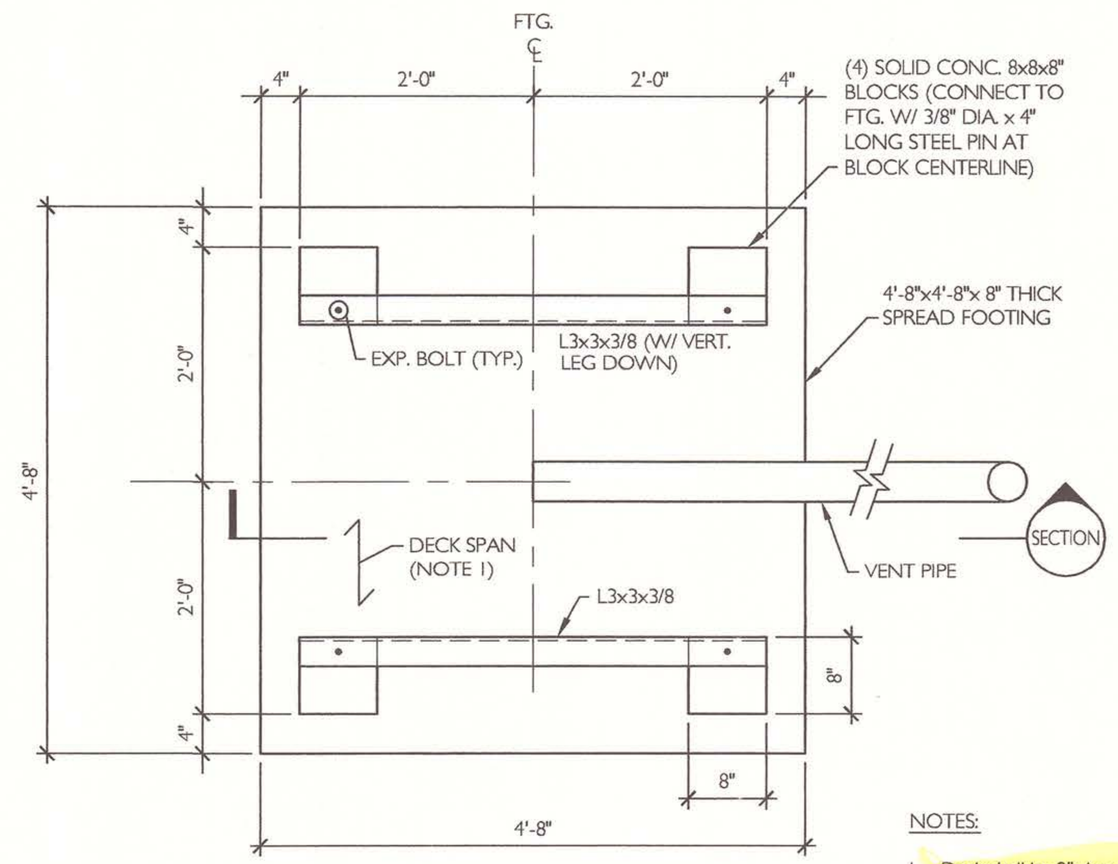
GRAPHIC SCALE: 0" 1"

SCALE:	AS NOTED
PROJECT MANAGER:	SLB
JC/DRAWN BY:	TCM/TDP
A/E OF RECORD:	DAP
CAD FILE:	MTA/S3.2/11E-06
PROJECT NO:	06016
DATE:	7-9-07

SHEET TITLE: FOUNDATION SECTIONS & DETAILS

SHEET No. S3.2

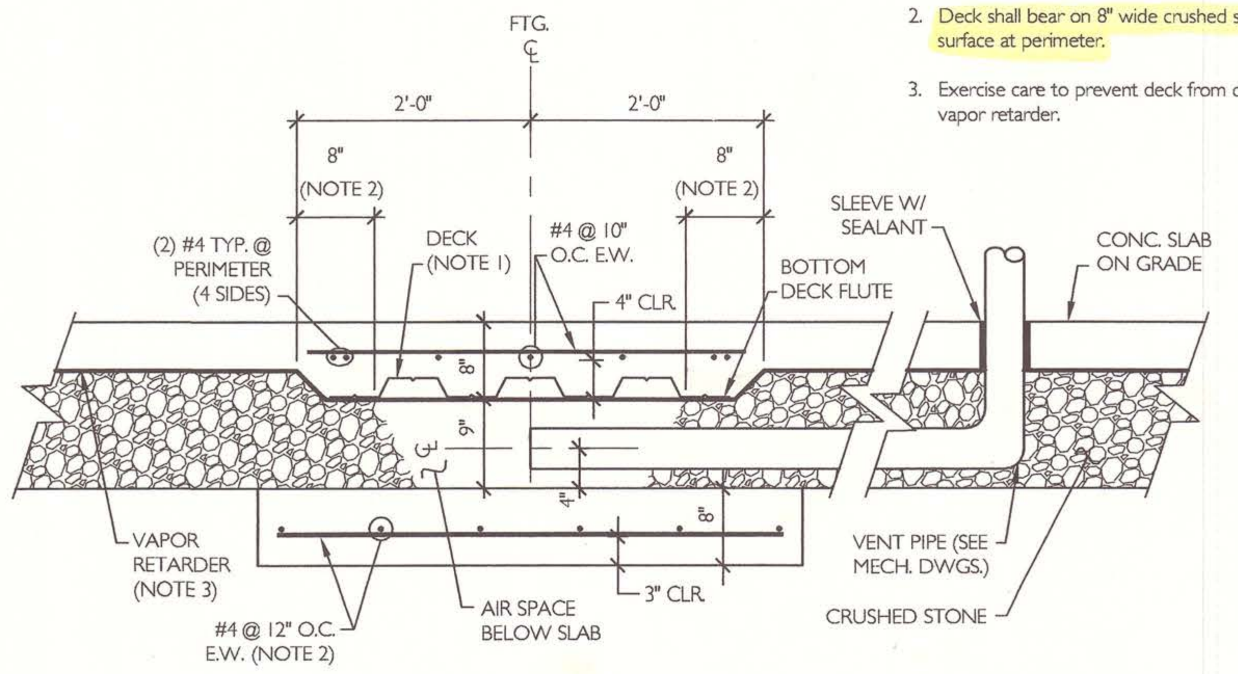
AS BUILT Owner Copy



PLAN

NOTES:

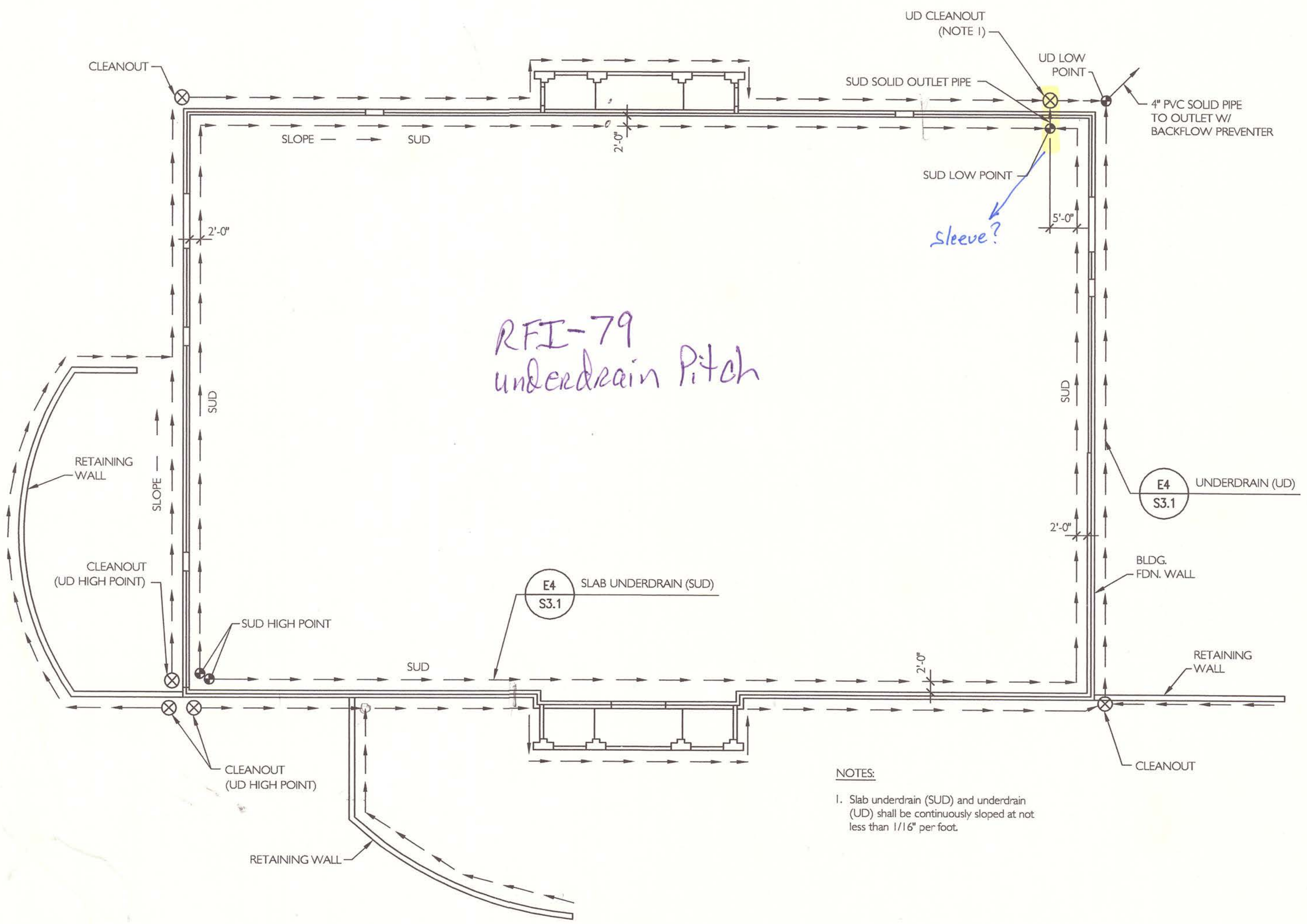
1. Deck shall be 2" deep 20-gage composite deck (supported by & tack-welded to L3x3 at each end).
2. Deck shall bear on 8" wide crushed stone surface at perimeter.
3. Exercise care to prevent deck from cutting vapor retarder.



SECTION

F1 RADON SUCTION PIT DETAIL

3/4" = 1'-0"

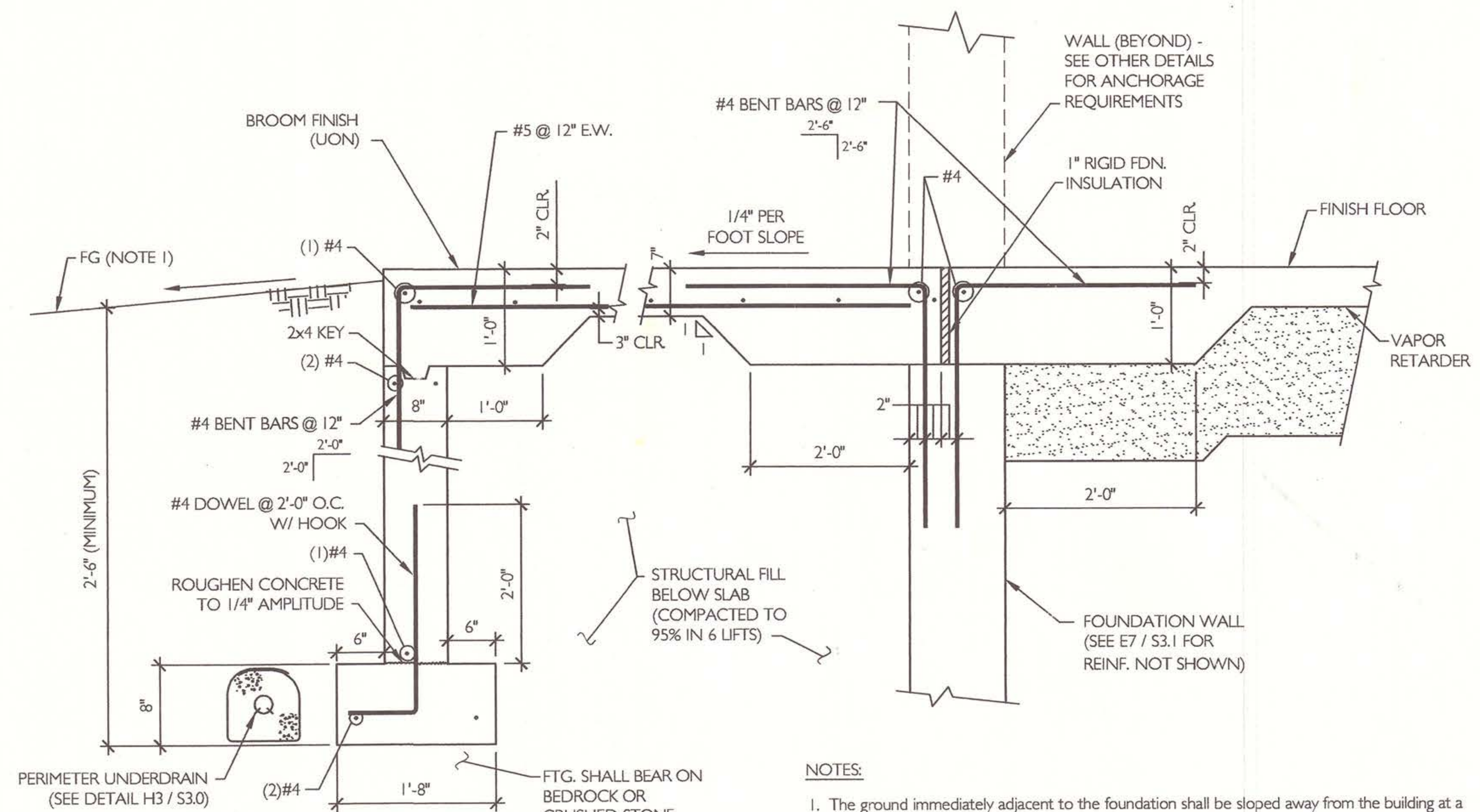


NOTES:

1. Slab underdrain (SUD) and underdrain (UD) shall be continuously sloped at not less than 1/16" per foot.

F7 UNDERDRAIN LAYOUT PLAN

NOT TO SCALE

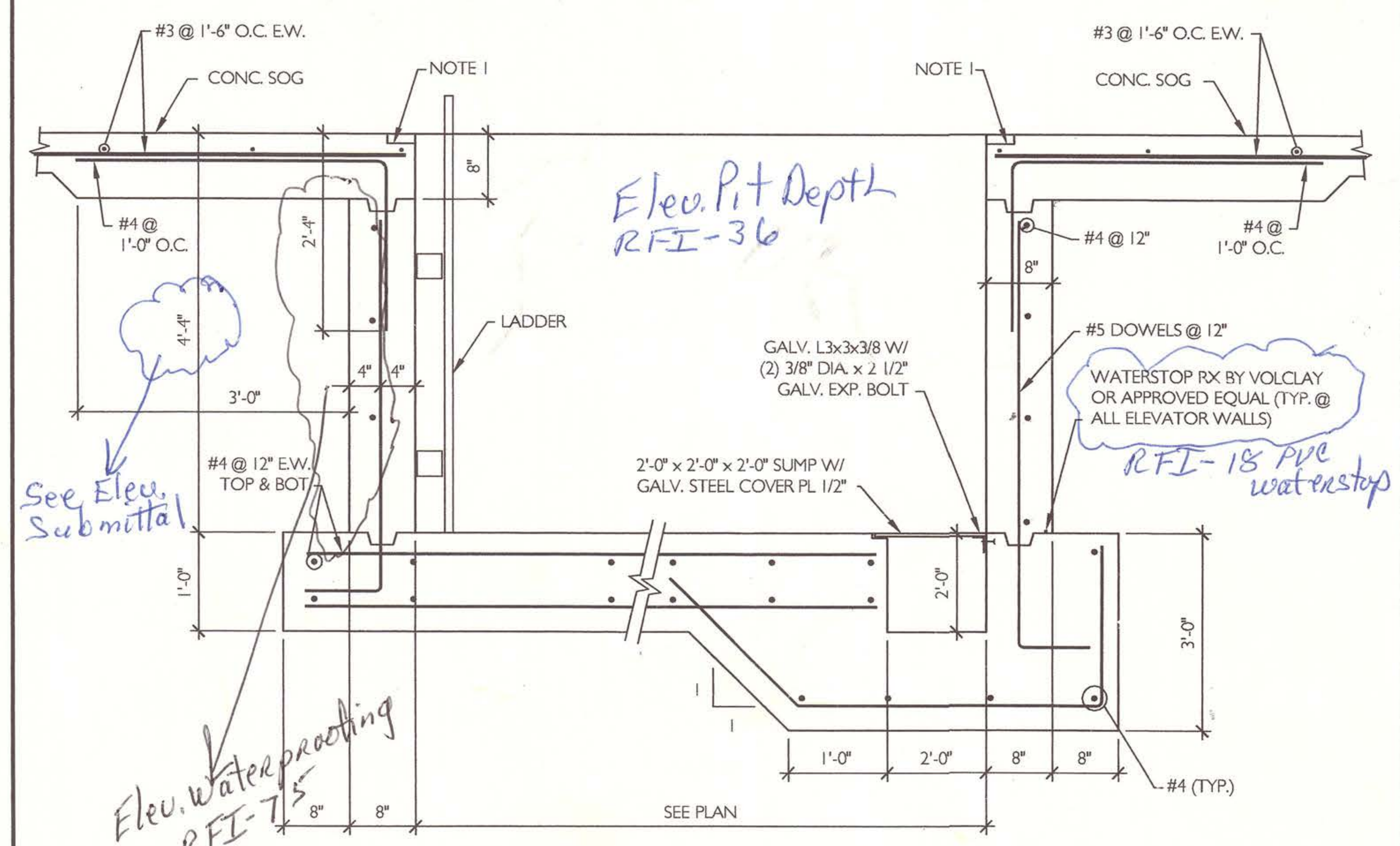


NOTES:

1. The ground immediately adjacent to the foundation shall be sloped away from the building at a slope of 1/2" vertical to 12" horizontal for a minimum distance of 8'-0". This condition shall exist after settlement of backfill has occurred (condition does not occur at section labeled "SIM.").
2. Coordinate surface pattern on slab with Civil Drawings.
3. 1st floor entrance shown - see other details for 2nd floor entrance.

A1 TYPICAL SECTION @ DOOR ENTRANCES (UON)

NOT TO SCALE

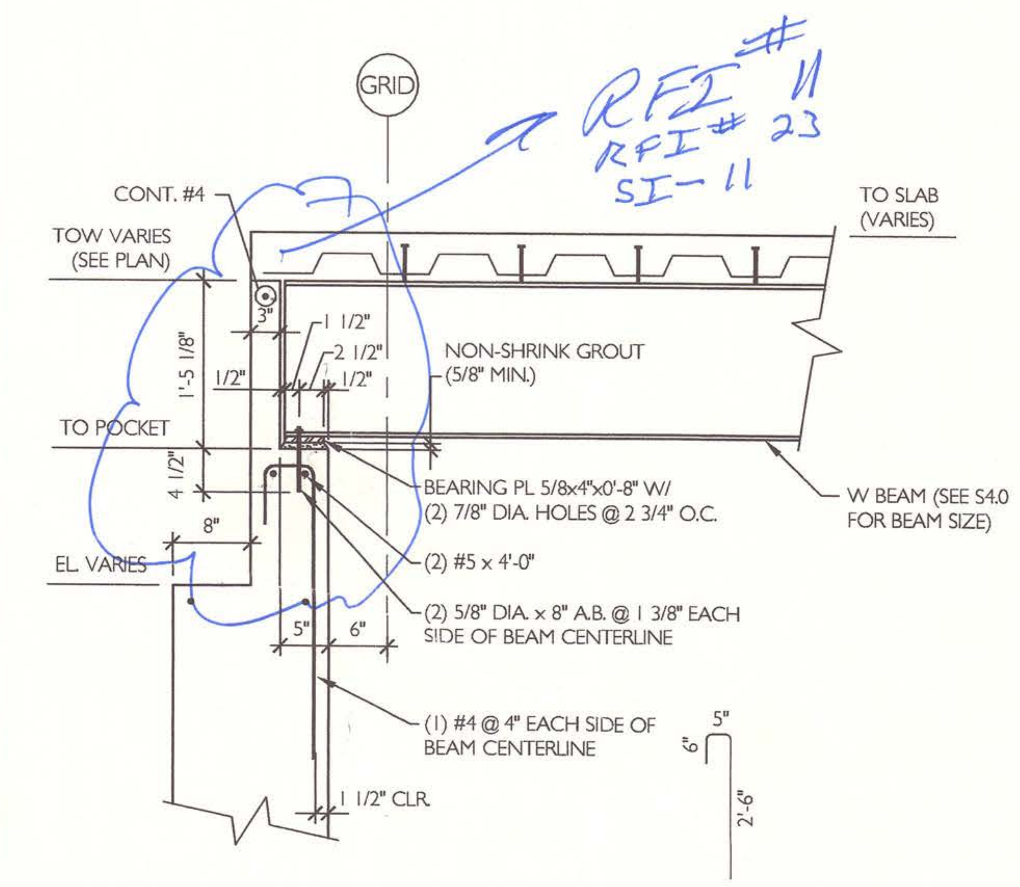


NOTES:

1. Coordinate hydraulics bondout with elevator manufacturer.
2. Provide additional bondouts and embedments as specified by elevator manufacturer.

A7 SECTION

NOT TO SCALE



NOTES:

1. Pockets shall be 12" wide x 5" deep.
2. Wall reinforcing shown is in addition to typical wall reinforcing specified elsewhere.

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A12 TYPICAL BEAM POCKET

NOT TO SCALE

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DAVID A. PRICE
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PROJECT TITLE:

MAINE TURNPIKE AUTHORITY ADMINISTRATION BUILDING
PORTLAND, MAINE

ISSUED FOR BIDDING / CONSTRUCTION 7-9-07

REV	DESCRIPTION	DATE
0	BIDDING/CONSTRUCTION	7-9-07

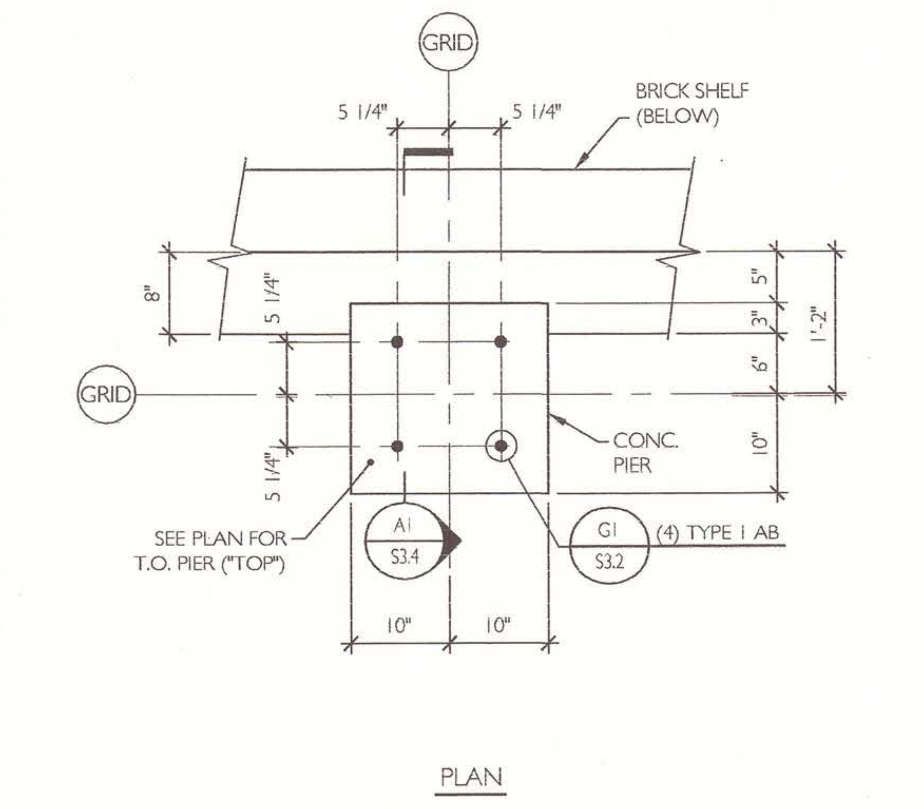
GRAPHIC SCALE:

SCALE:	AS NOTED
PROJECT MANAGER:	SLB
JC/DRAWN BY:	TCM/TDP
A/E OF RECORD:	DAP
CAD FILE:	MTA/S3.3/116-06
PROJECT NO:	06016
DATE:	7-9-07

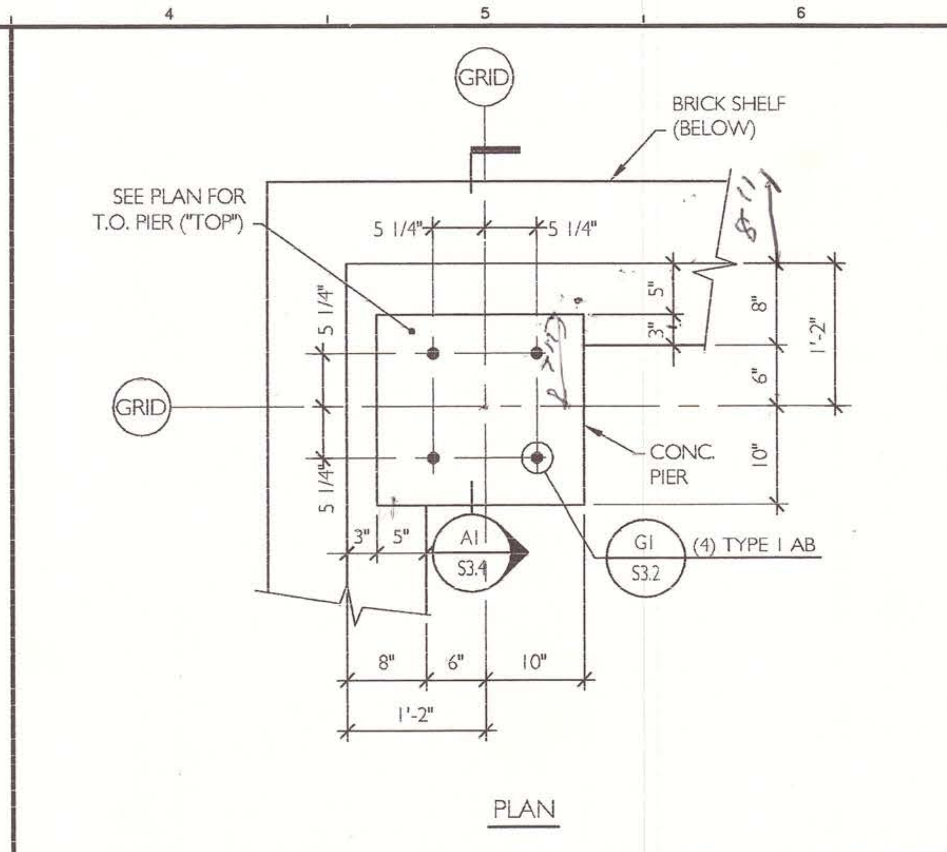
SHEET TITLE:

FOUNDATION SECTIONS & DETAILS

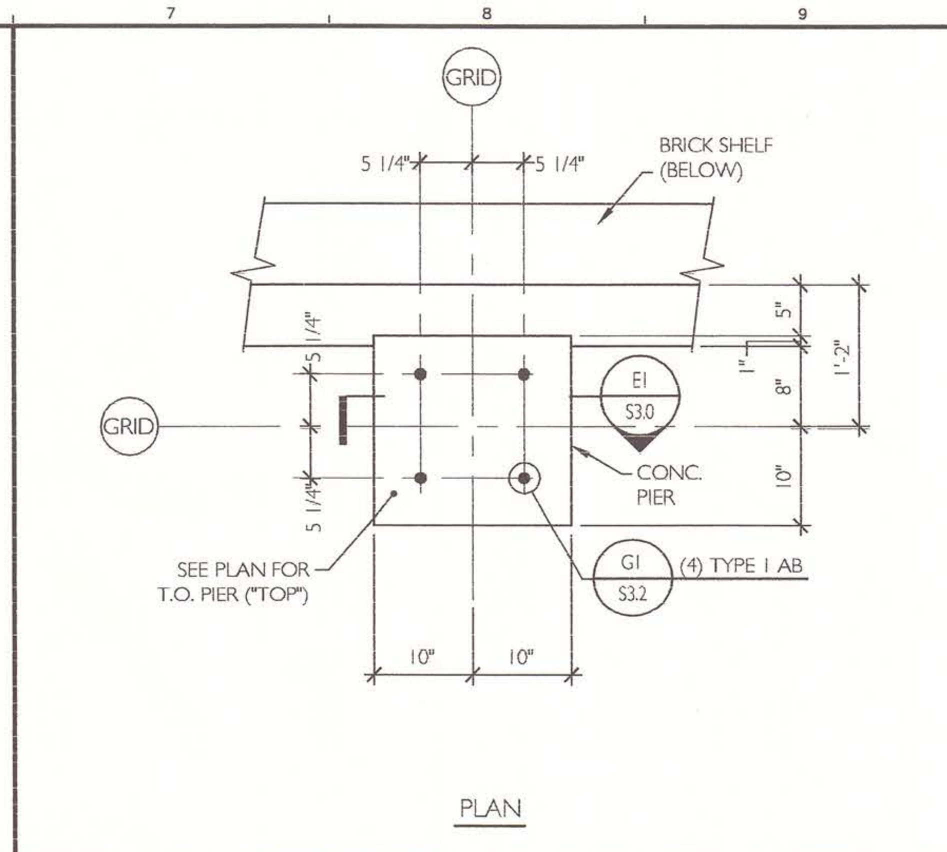
SHEET No. S3.3



J1 PIER TYPE P1
NOT TO SCALE



J4 PIER TYPE P2
NOT TO SCALE



J7 PIER TYPE P3
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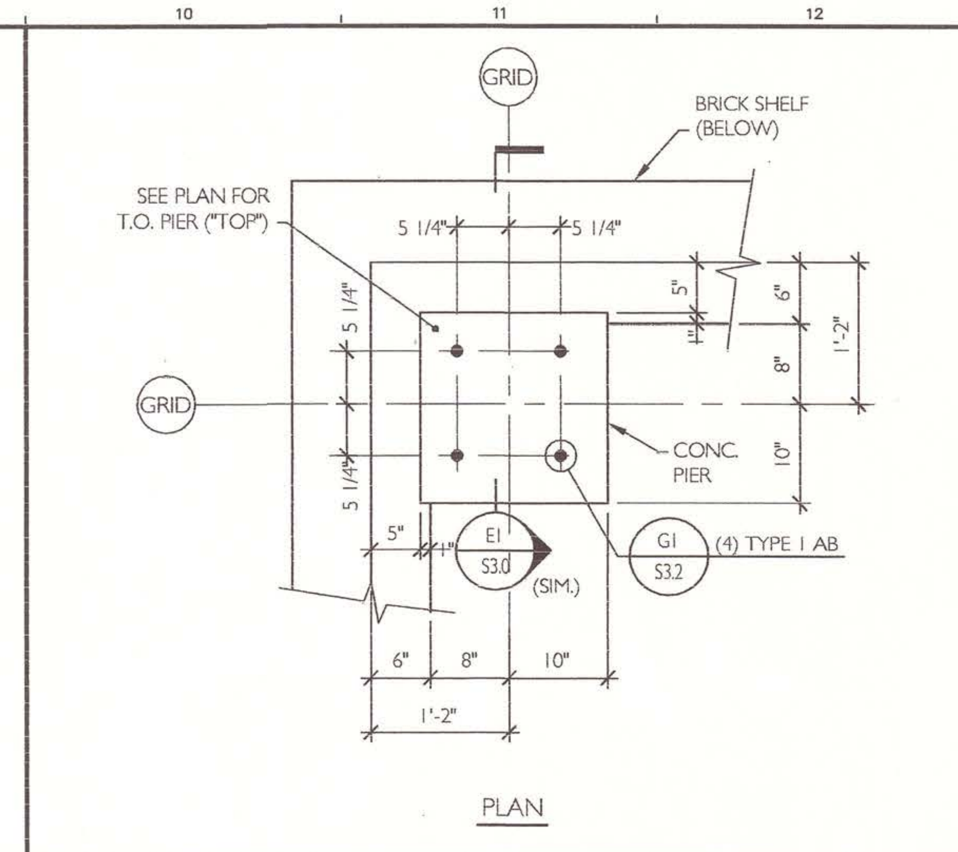
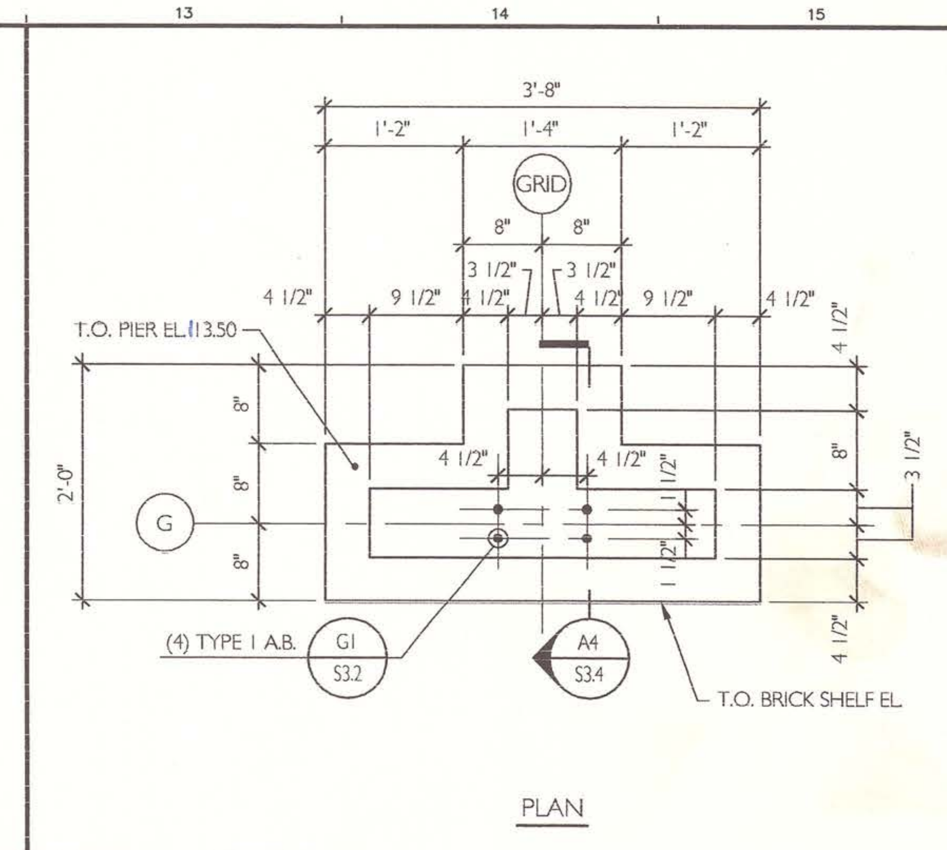
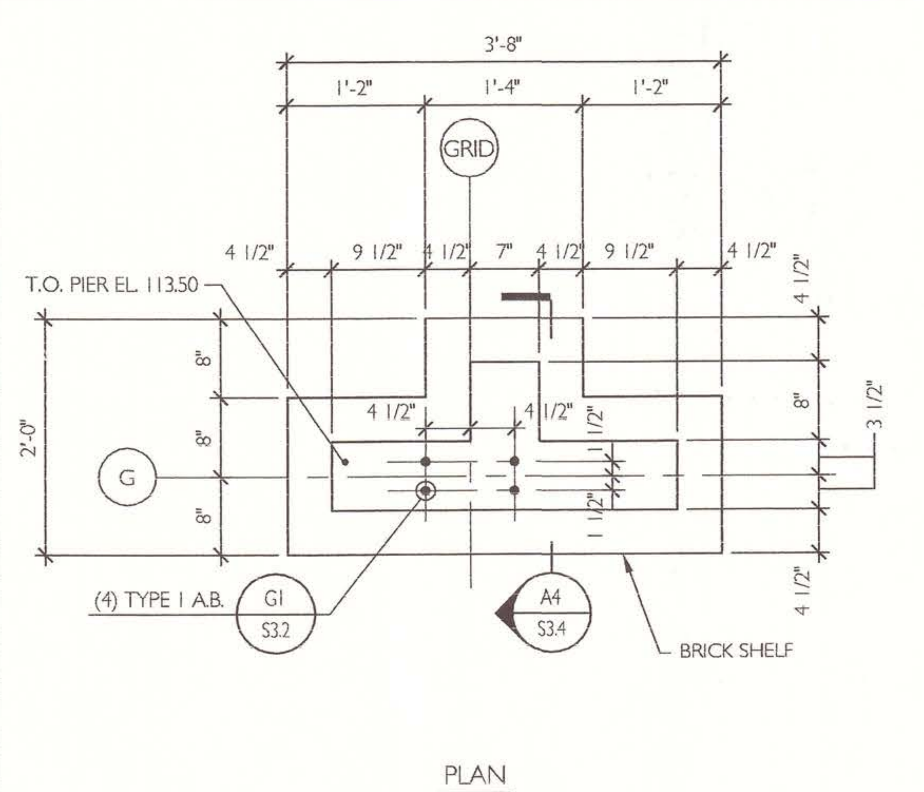


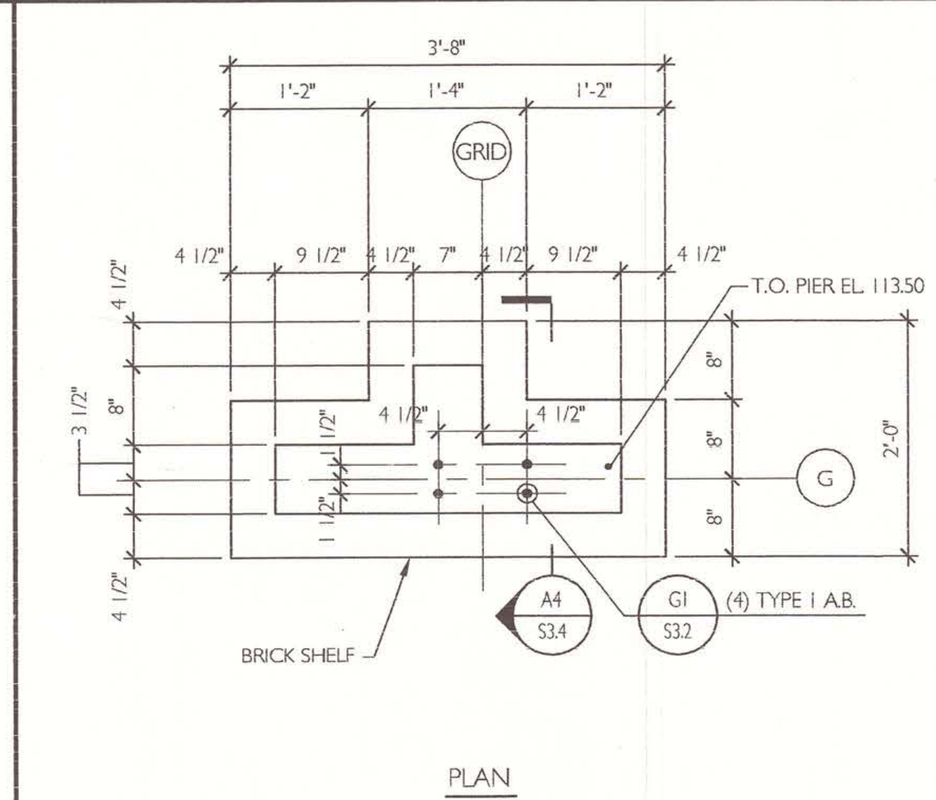
J10 PIER TYPE P4
NOT TO SCALE



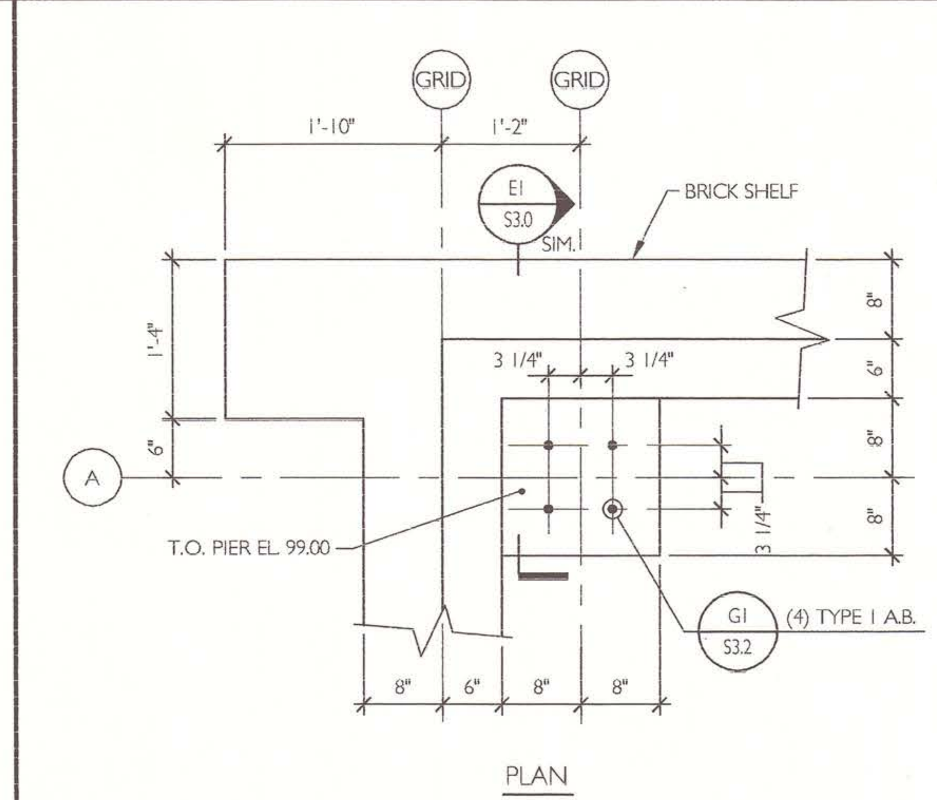
J13 PIER TYPE P5
NOT TO SCALE



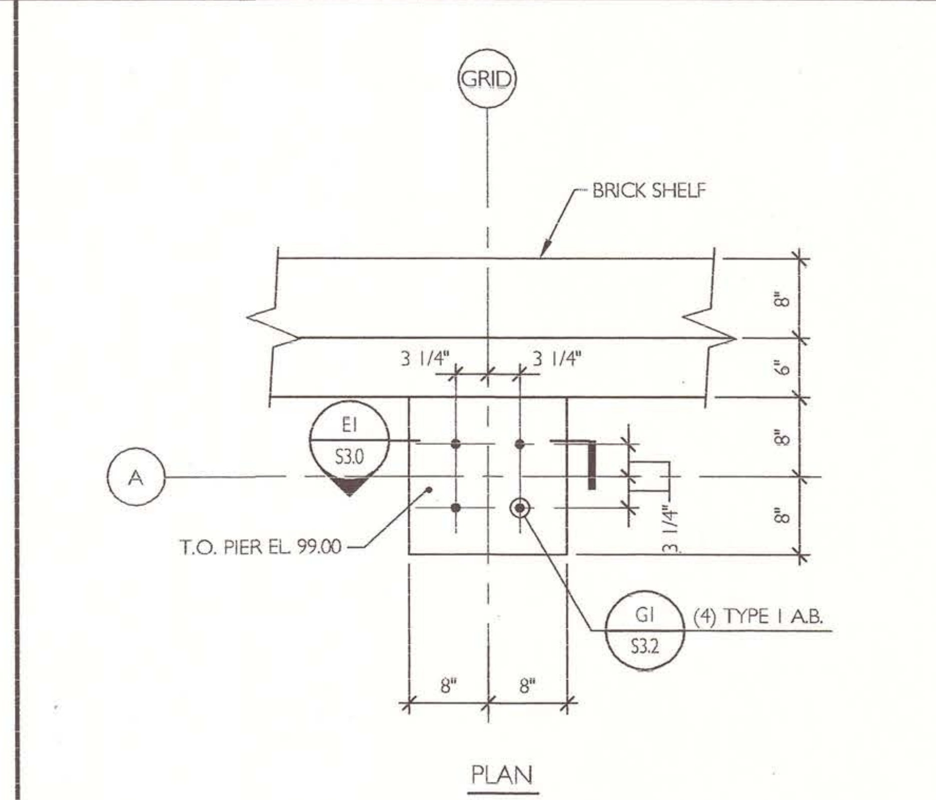
F1 PIER TYPE P6
NOT TO SCALE



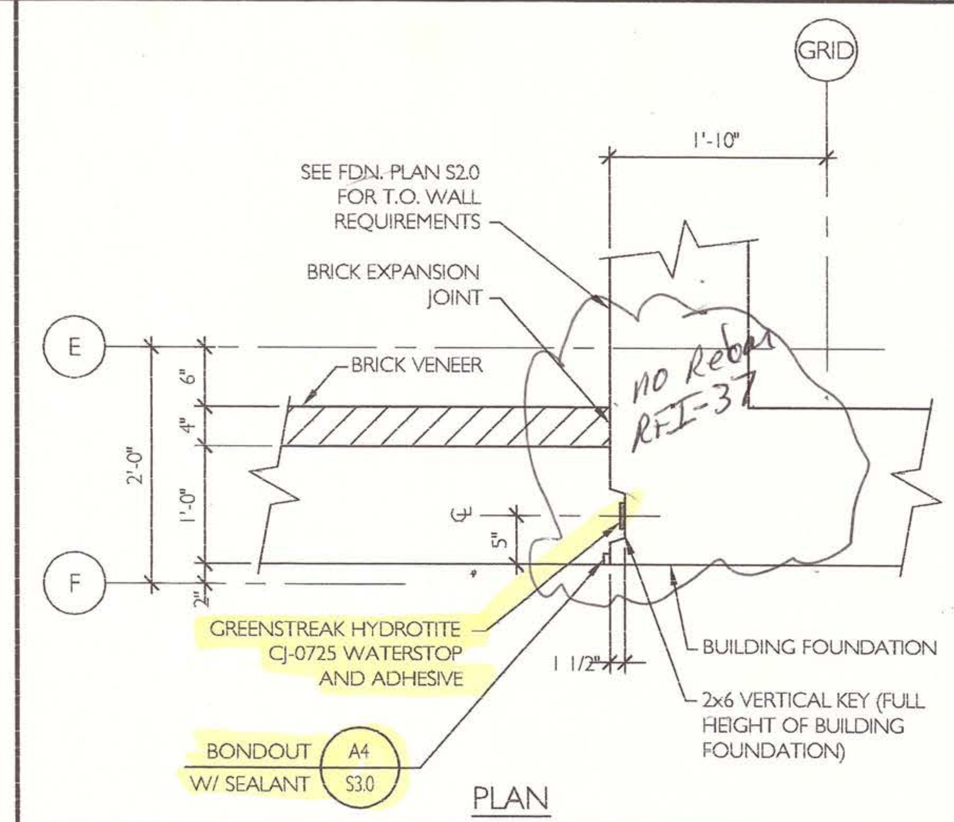
F4 PIER TYPE P7
NOT TO SCALE



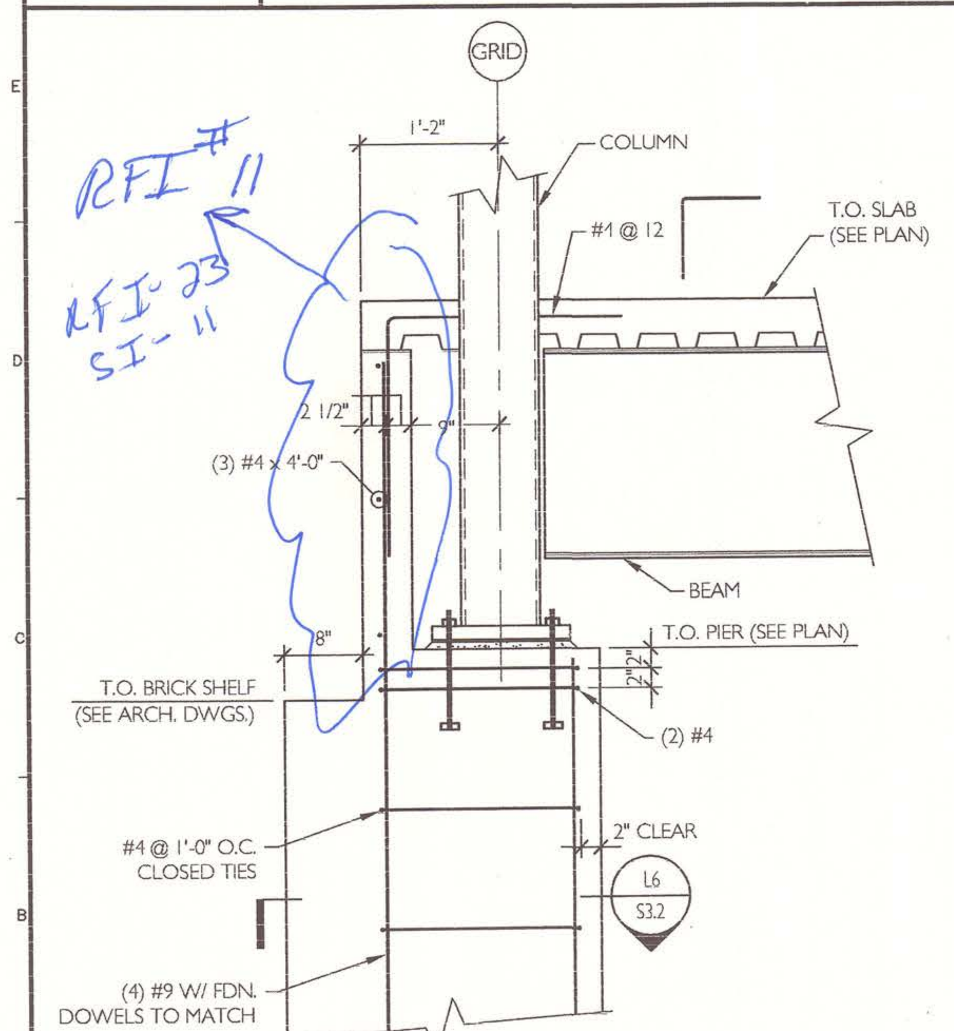
F7 PIER TYPE P8
NOT TO SCALE



F10 PIER TYPE P9
NOT TO SCALE



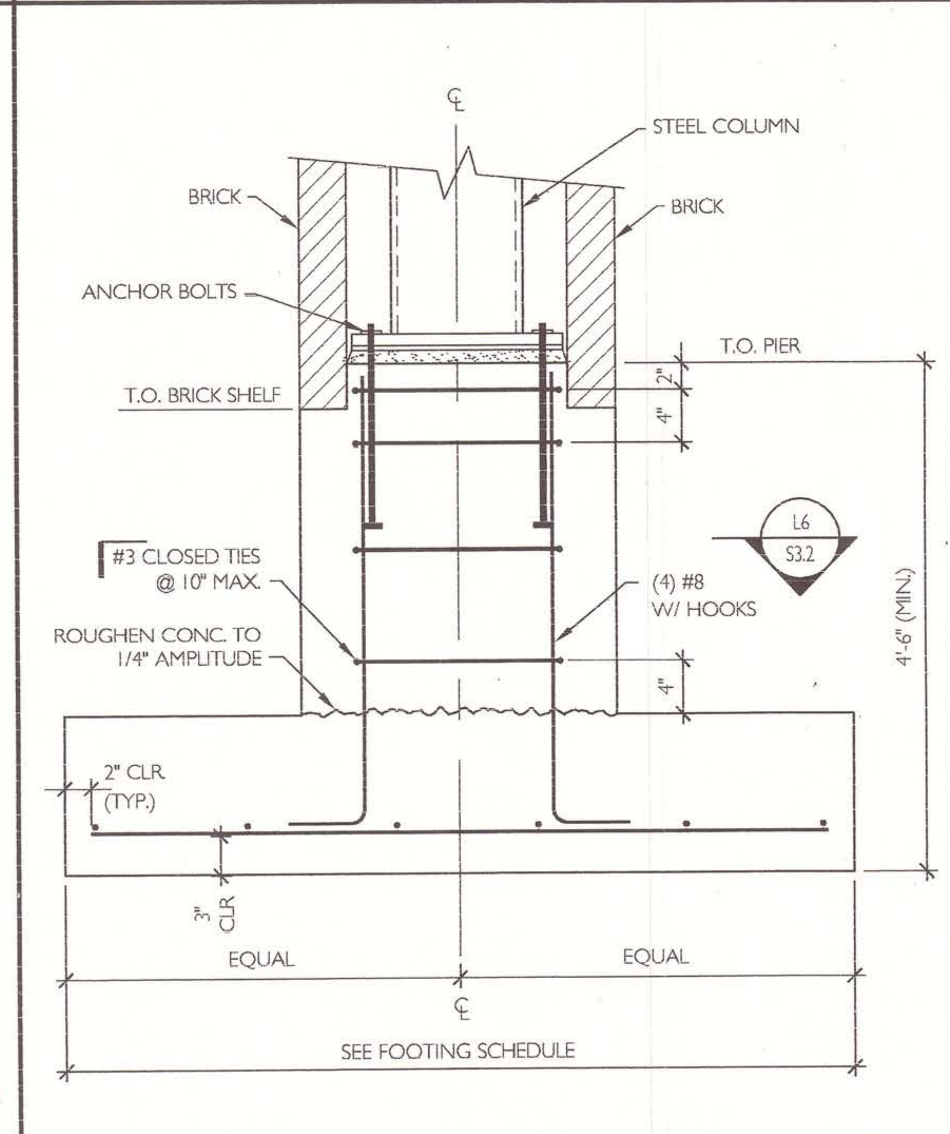
F13 DETAIL
NOT TO SCALE



NOTES:

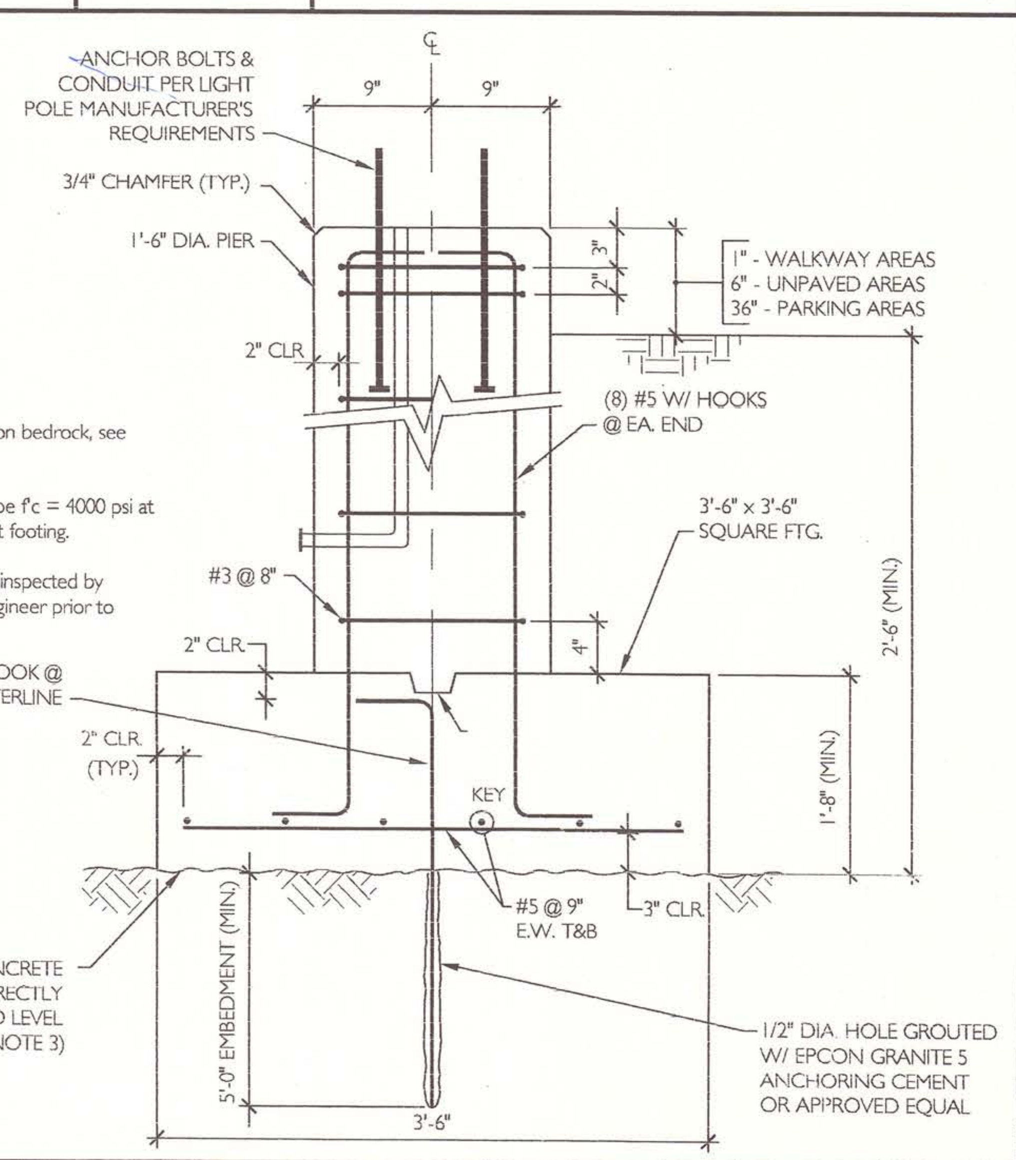
1. Horizontal foundation wall reinforcing (not shown) shall be continuous through pier.

A1 SECTION
NOT TO SCALE



A4 ENTRANCE PIER DETAIL
NOT TO SCALE

A7 –



NOTES:

1. For light pole bases not on bedrock, see detail A1 / C502.
2. Concrete strength shall be f'c = 4000 psi at pier and f'c = 3000 psi at footing.
3. Bedrock surface shall be inspected by owner's geotechnical engineer prior to drilling holes for anchors.

A11 TYPICAL LIGHT POLE BASE ON BEDROCK
NOT TO SCALE

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STATE OF MAINE
DAVID PRICE
No. 6401
LICENSED
PROFESSIONAL ENGINEER

PROJECT NORTH

PROJECT TITLE:
MAINE TURNPIKE AUTHORITY ADMINISTRATION BUILDING
PORTLAND, MAINE

ISSUED FOR BIDDING / CONSTRUCTION 7-9-07

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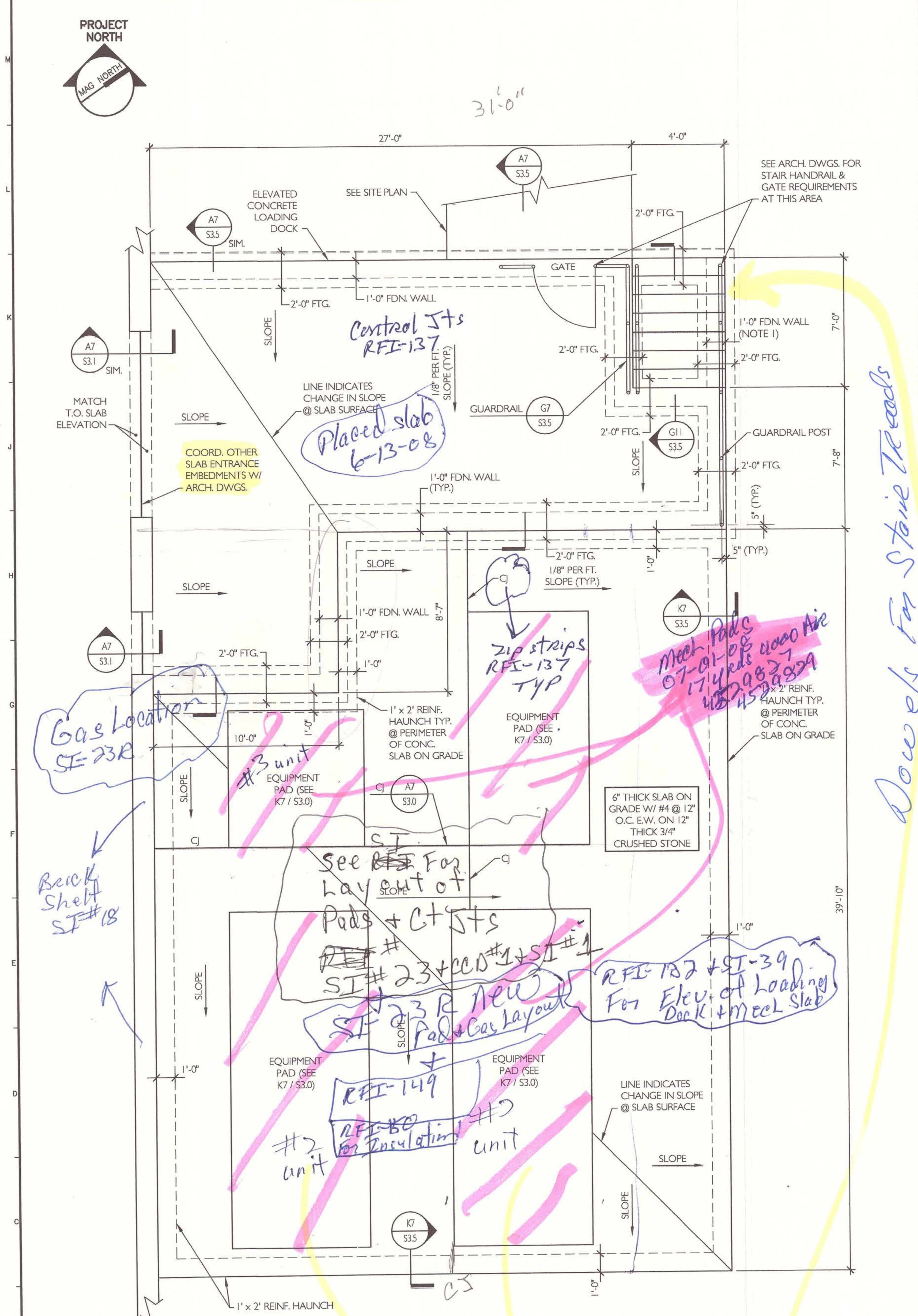
GRAPHIC SCALE: 0" 1"

SCALE:	AS NOTED
PROJECT MANAGER:	SLB
JC/DRAWN BY:	TCM/TDP
A/E OF RECORD:	DAP
CAD FILE:	MTA/S3.4/116-06
PROJECT NO:	06016
DATE:	7-9-07

SHEET TITLE:
FOUNDATION PIERS & DETAILS

SHEET No. S3.4

AS BUILT Owner Copy

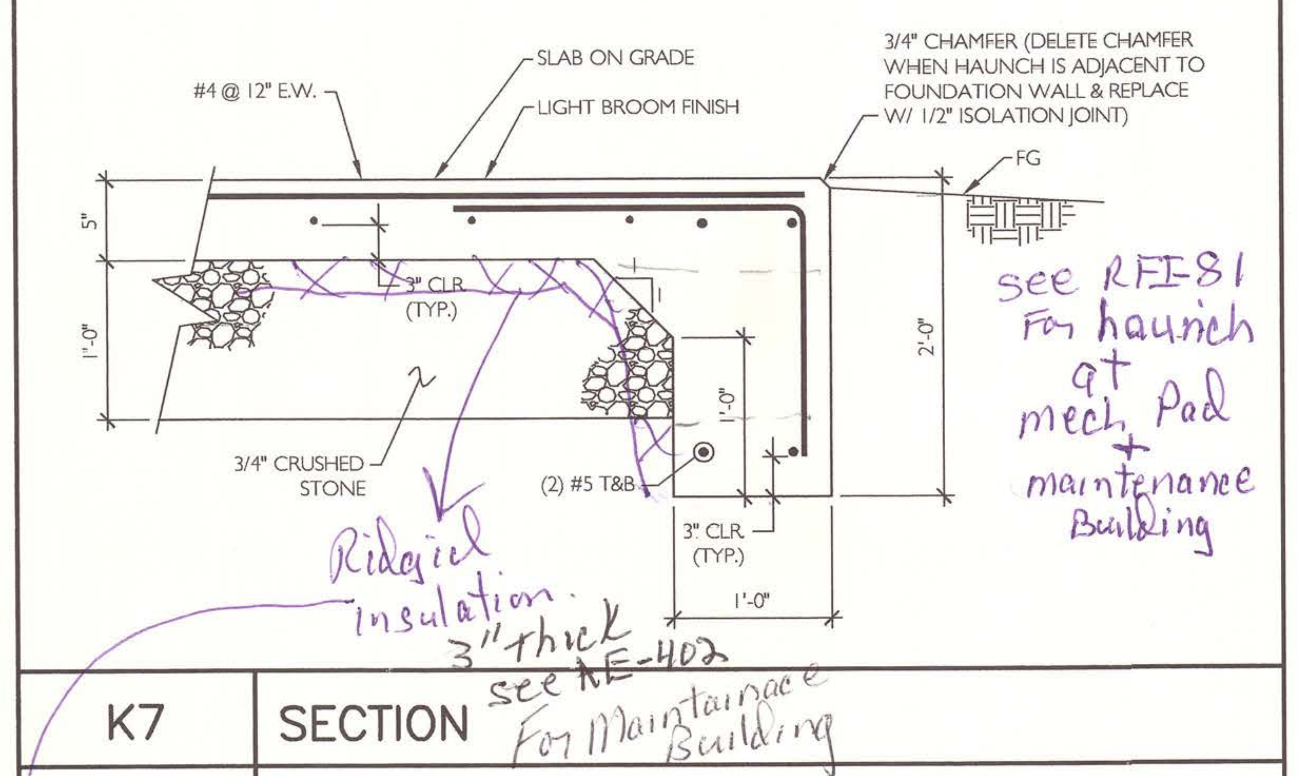


NOTES:

1. Stair shall bear on foundation wall at east side (extend #4 dowels with hooks at 12" on center into stair treads).
2. Contractor shall submit Equipment Pad Layout Plan for review and approval by Architect indicating equipment pad dimensions, locations, and bondouts prior to constructing equipment pads.

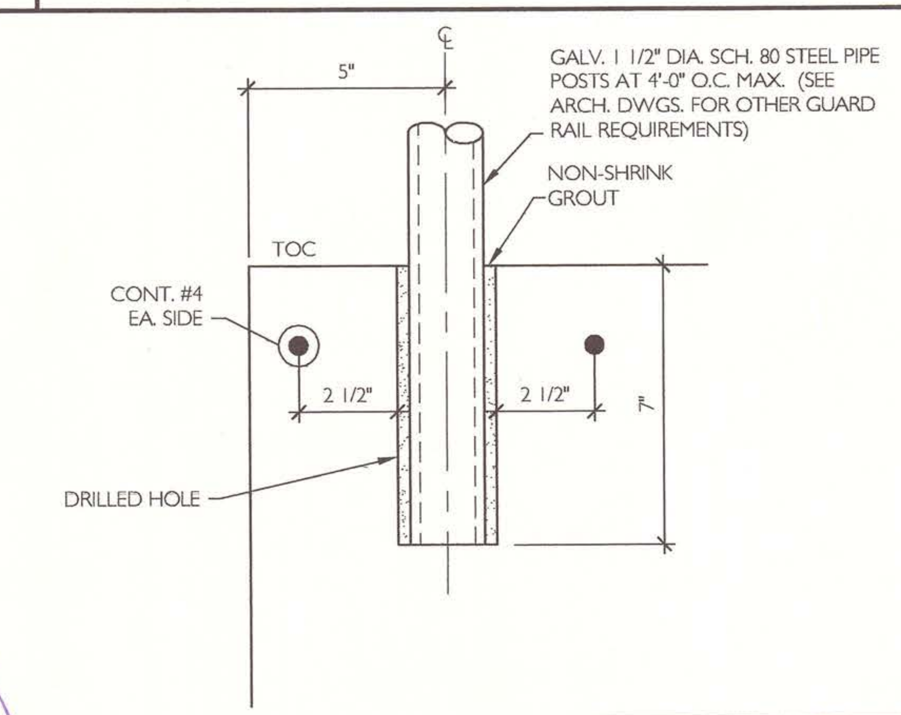
A1 LOADING DOCK PLAN

1/4" = 1'-0"



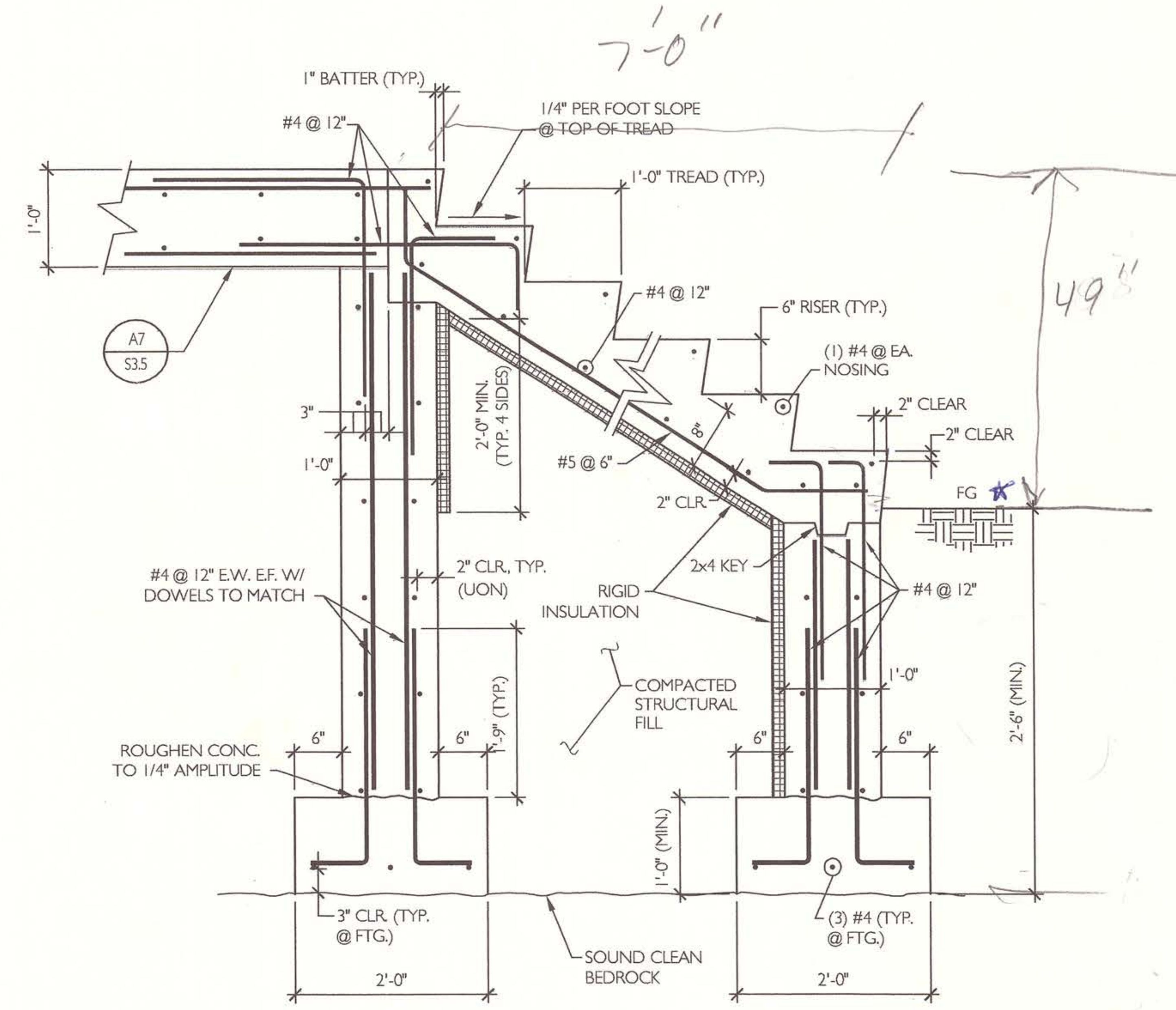
K7 SECTION

NOT TO SCALE



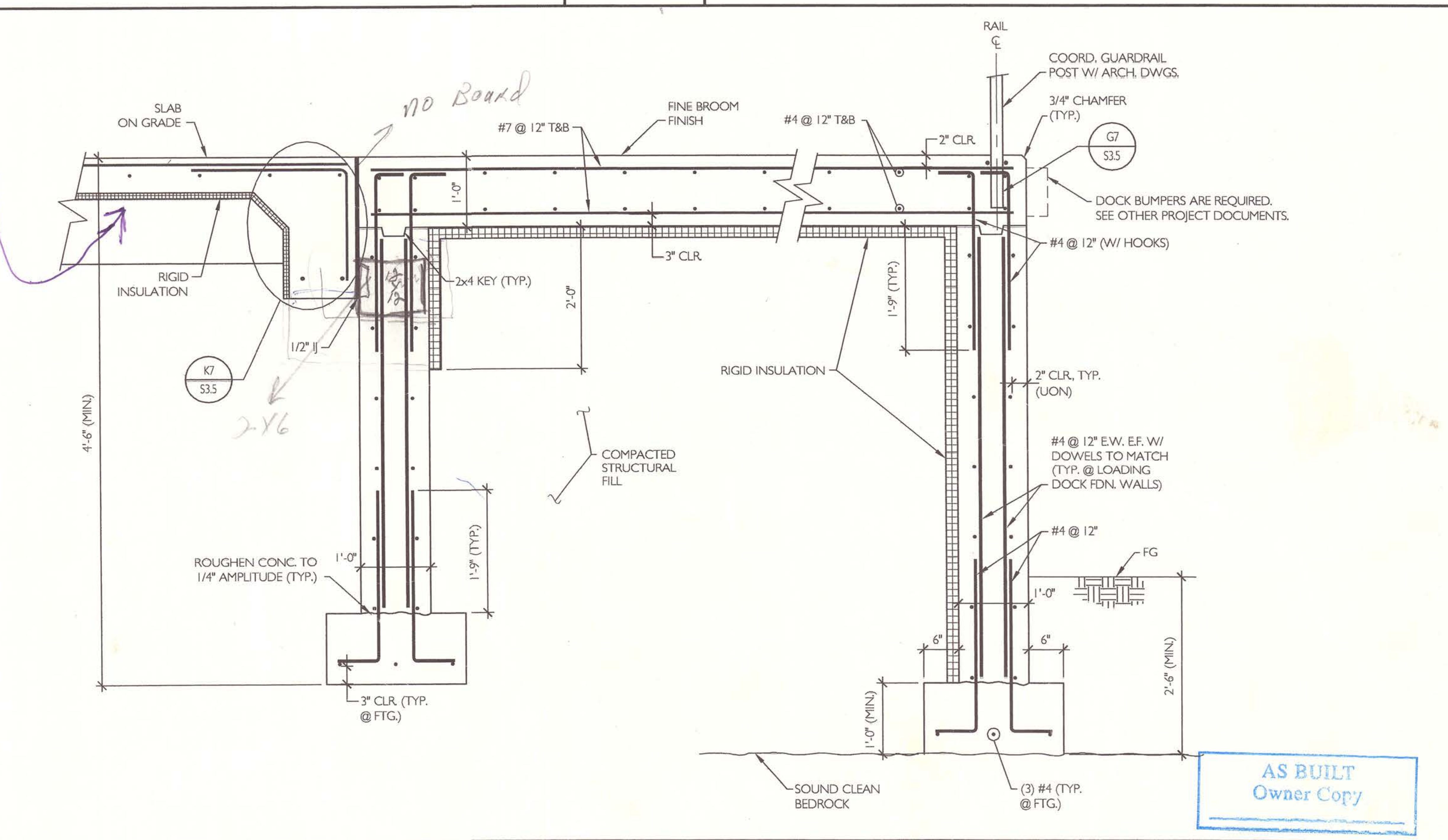
G7 GUARD RAIL POST DETAIL

NOT TO SCALE



G11 SECTION

NOT TO SCALE



A7 ENTRANCE PIER DETAIL

NOT TO SCALE

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No. 6401
LICENSED PROFESSIONAL ENGINEER

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PROJECT TITLE:
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PORTLAND, MAINE

ISSUED FOR BIDDING / CONSTRUCTION 7-9-07

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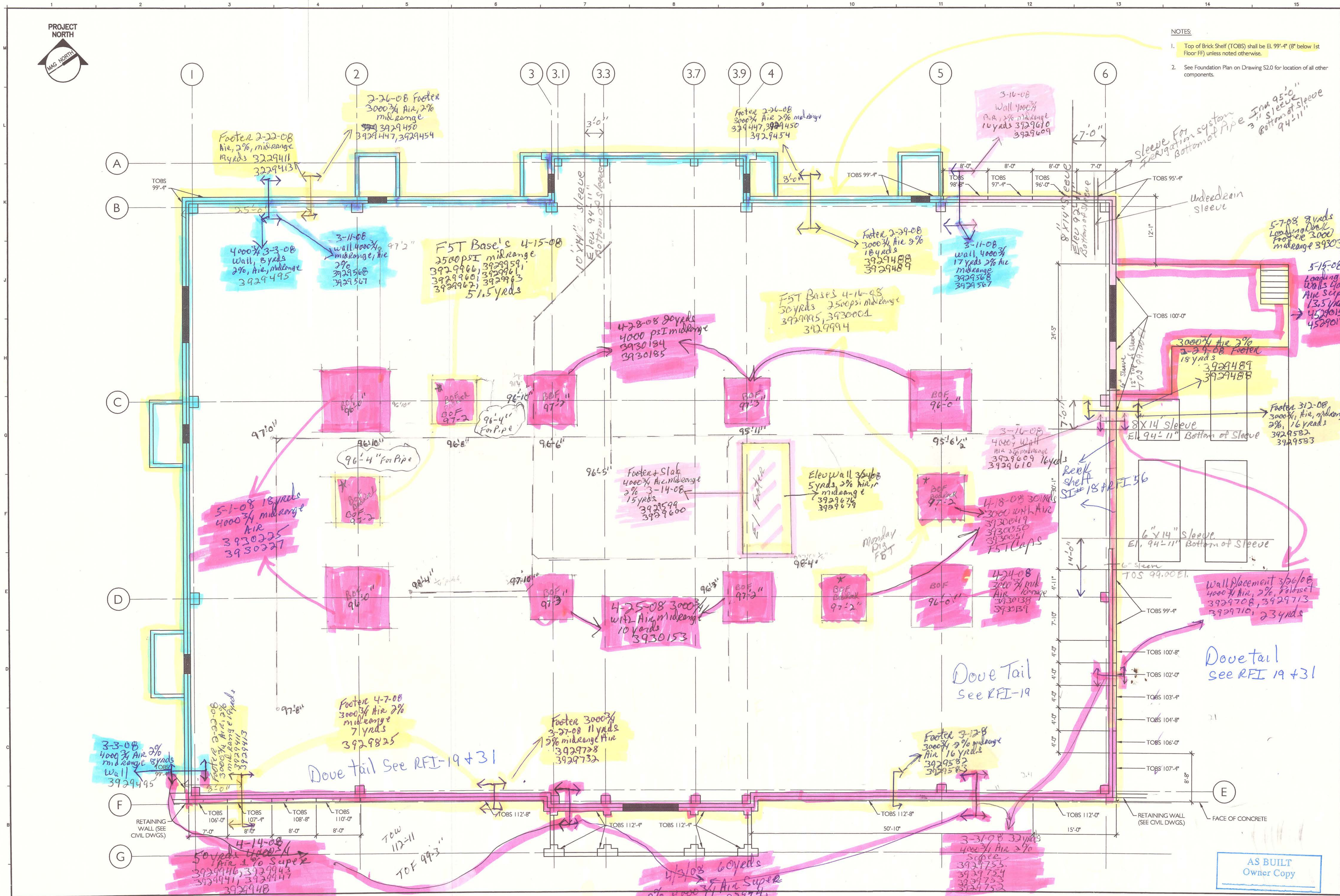
GRAPHIC SCALE: 0" 1"

SCALE:	AS NOTED
PROJECT MANAGER:	SLB
JC/DRAWN BY:	TCM/TDP
A/E OF RECORD:	DAP
CAD FILE:	MTA/S3.5/116-06
PROJECT NO:	06016
DATE:	7-9-07

SHEET TITLE:
FOUNDATION SECTIONS & DETAILS

SHEET No. S3.5



NOTES:

1. Top of Brick Shelf (TOBS) shall be EL 99'-4" (8" below 1st Floor FF) unless noted otherwise.
2. See Foundation Plan on Drawing S2.0 for location of all other components.

A1 BRICK SHELF ELEVATION PLAN

1/8" = 1'-0"

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PROJECT NORTH

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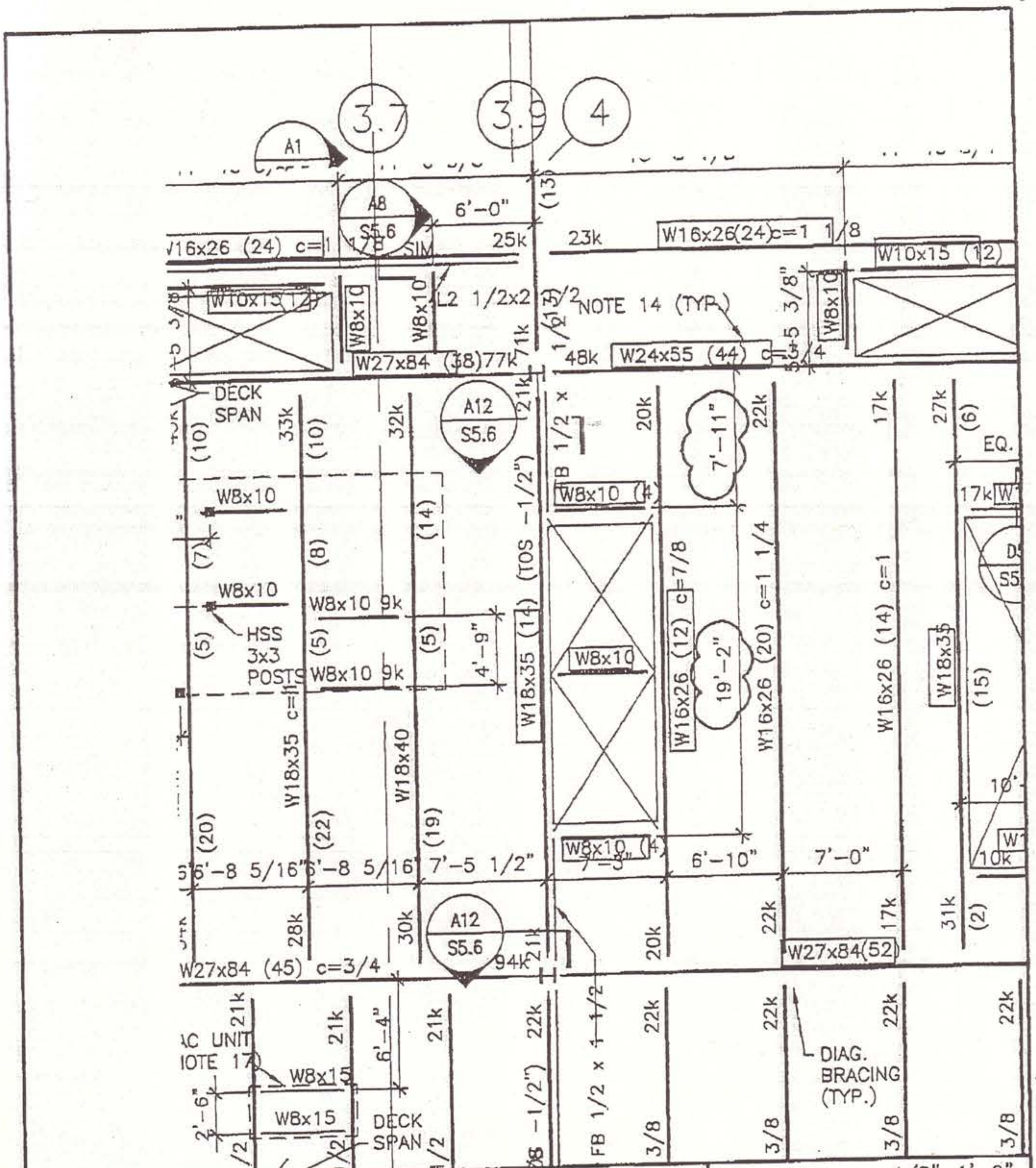
REV	DESCRIPTION	DATE
0	BIDDING/CONSTRUCTION	7-9-07

GRAPHIC SCALE: 0" 1"

SCALE:	AS NOTED
PROJECT MANAGER:	SLB
JC/DRAWN BY:	TCM/TDP
A/E OF RECORD:	DAP
CAD FILE:	MTA/S3.6/116-06
PROJECT NO:	06016
DATE:	7-9-07

SHEET TITLE: BRICK SHELF ELEVATION PLAN

SHEET No. S3.6



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144 Fore Street/P.O.Box 618 PORTLAND, MAINE 04104
tel. (207) 772-3846 / fax. (207) 772-1070

PROJECT: MAINE TURNPIKE AUTHORITY ADMINISTRATION BUILDING
SUBJECT: REVISED SECOND FLOOR FRAMING PLAN AS NOTED

SCALE: 1/8"=1'-0"
CAD FILE: S4.0-06016
PROJECT No. 06016
REF. SHEET: S4.0
PM: SLB
A/E: DAP
DATE: 8-23-07
ADDENDUM No. ADD-6
SKETCH No. S-2
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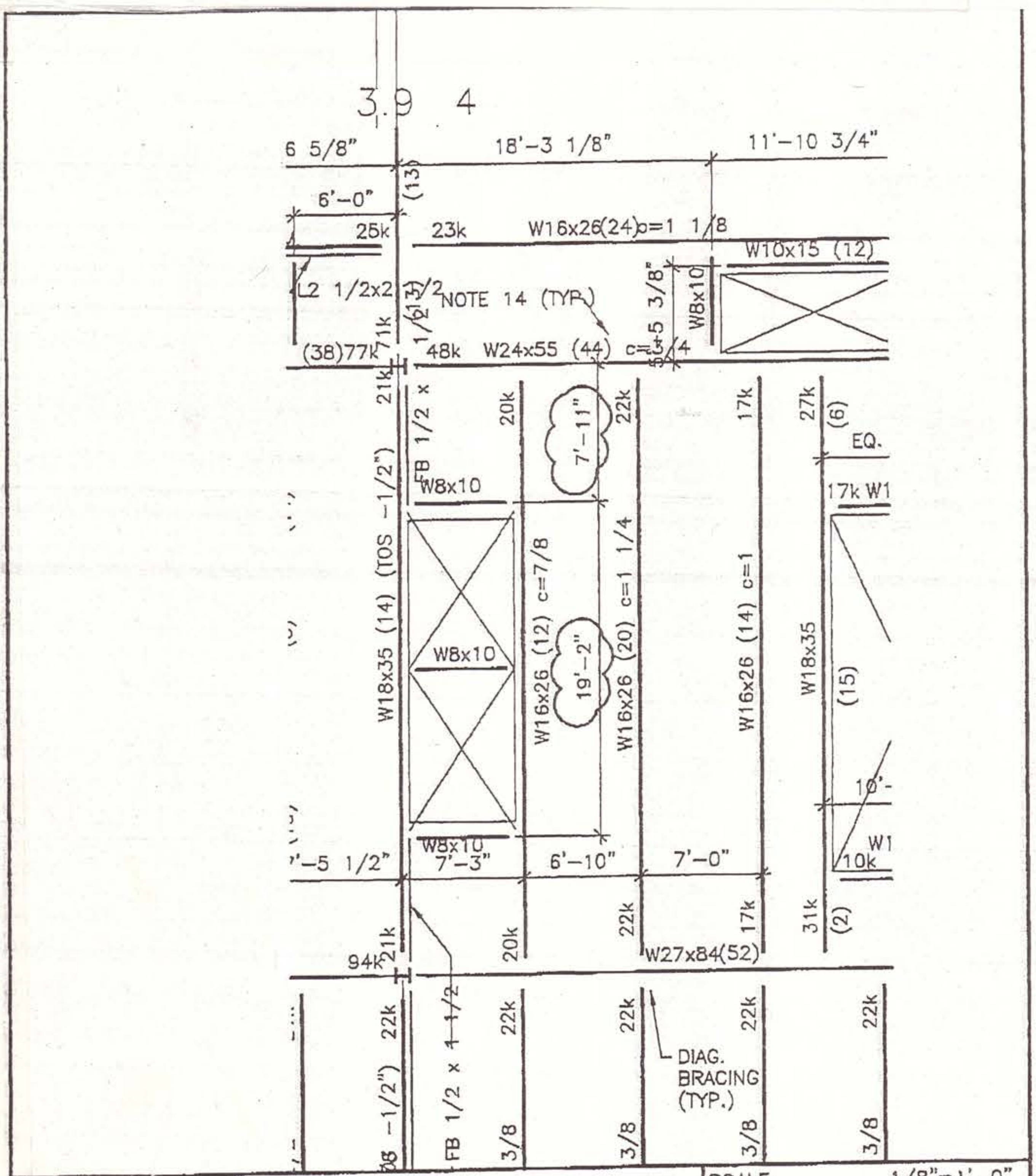

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ARCHITECTURE ENGINEERING PLANNING
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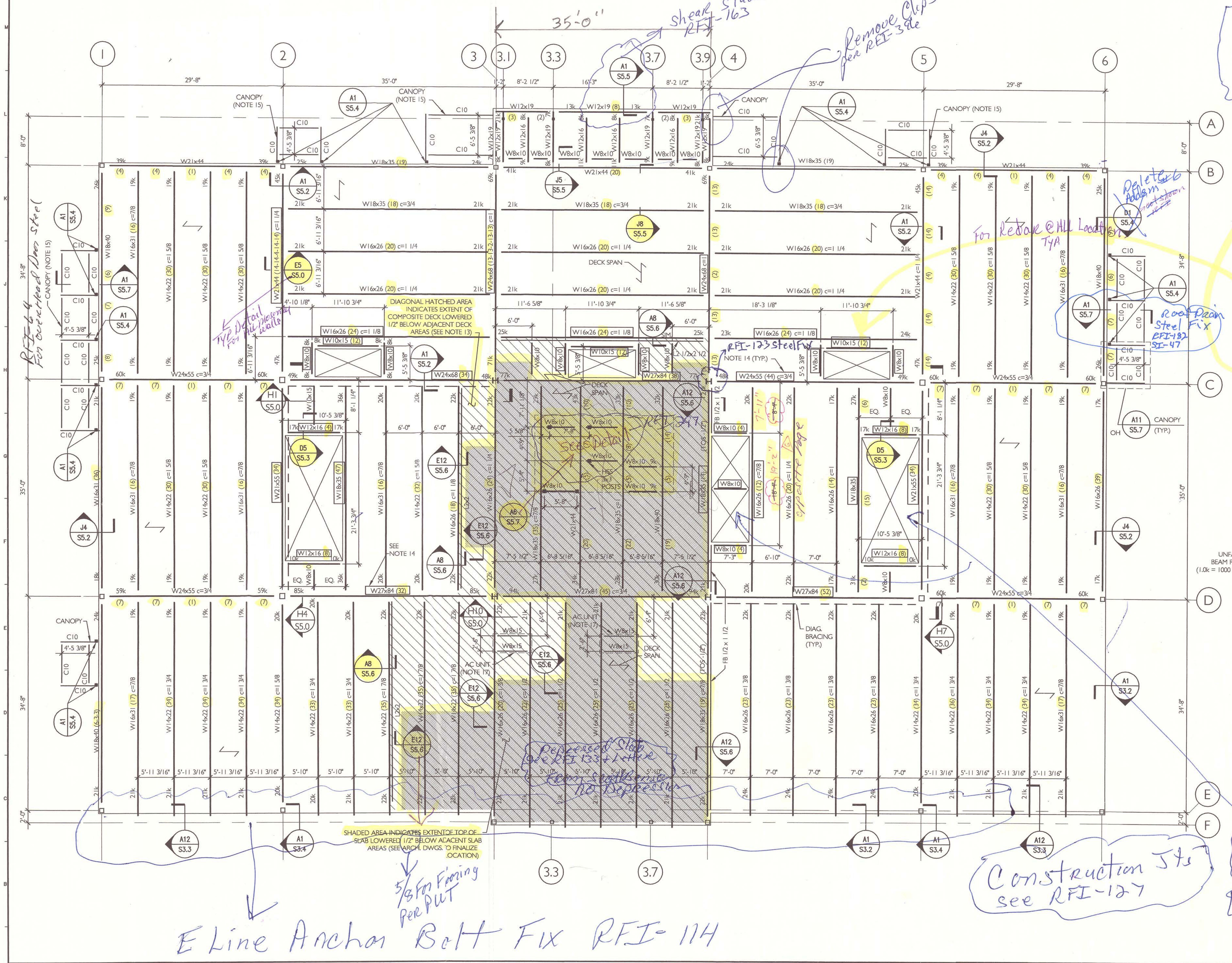
144 Fore Street/P.O.Box 618 PORTLAND, MAINE 04104
tel. (207) 772-3846 / fax. (207) 772-1070

PROJECT: MAINE TURNPIKE AUTHORITY ADMINISTRATION BUILDING
SUBJECT: REVISED THIRD FLOOR FRAMING PLAN AS NOTED

SCALE: 1/8"=1'-0"
CAD FILE: S4.1-06016
PROJECT No. 06016
REF. SHEET: S4.1
PM: SLB
A/E: DAP
DATE: 8-23-07
ADDENDUM No. ADD-6
SKETCH No. S-3



A1 SECOND FLOOR FRAMING PLAN

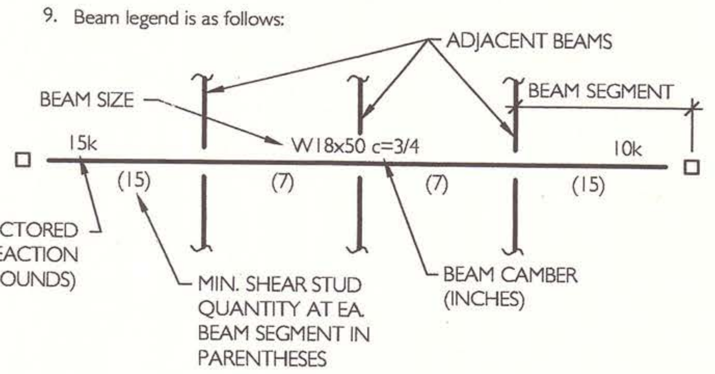
1/8" = 1'-0"

Bracing Question's Before Placement of Concrete Slabs RFI-147

Need steel Inspection Done Before Placement of Slab

NOTES:

1. Top of steel shall be El. 112'-11" unless noted otherwise by a "+" or "-" from this elevation. Specified top of steel shall be bottom of floor deck. Elevations specified on framing plans are based on basement top of slab datum El. 100'-0".
2. See D12 / S5.3 for typical details at equipment and deck openings.
3. See Drawings S1.0 and S1.1 for additional notes and requirements.
4. See Drawings S5.0 through S5.6 for required typical details.
5. See Architectural Drawings for dimensions not shown.
6. Total slab thickness shall be 5" (A12 / S5.3) unless otherwise noted. Under no circumstances shall slab be placed until welding of all permanent building bracing has been completed.
7. Ductwork, plumbing, and other utilities extending from floor to floor inside mechanical chases shall be vertically and laterally supported at each floor level unless otherwise approved in writing by PSE. Lateral and vertical support connections for all mechanical components shall be designed by the mechanical contractor's engineer.
8. Prior to fabrication of new materials, the final positions of structural steel located at edges of openings or used to support equipment shall be coordinated by the General Contractor in accordance with approved applicable shop drawings and requirements specified by other project documents.
9. Beam legend is as follows:



10. As much as possible, shear studs shall be placed at uniform spacing within each beam segment. See detail H11 / S5.4 and A12 / S5.3 for additional composite beam requirements.
11. See Architectural Drawings for additional structural steel components at overhead doors.
12. See note E20 on Drawing S1.1 for brick lintel requirements (typical).
13. Steel beams within hatched area shall have top of steel elevation lowered 0'- 1/2". See sections on this plan for requirements of beams located at hatched area.
14. Beams designated within rectangular box shall not be primed or otherwise painted.
15. Canopy dimensions indicate distance between outside faces of channel webs (see Detail A11 / S5.7).
16. Beam reactions ("k" = kips) shown on this plan are based on unfactored loads (minimum reaction = 8.0k, UON). See Drawing S5.0 for beam reactions at bracing bays.
17. General contractor shall verify that AC operating weights do not exceed 600 pounds.

RFI-119 Pour Stop

Nelson Steel Fix RFI-141

SMRT

Price Structural Engineers, Inc.

STATE OF MAINE · DAVID A. PRICE · No. 6401 · LICENSED · PROFESSIONAL ENGINEER

PROJECT NORTH

MAG NORTH

PROJECT TITLE:

MAINE TURNPIKE AUTHORITY ADMINISTRATION BUILDING
PORTLAND, MAINE

ISSUED FOR BIDDING / CONSTRUCTION 7-9-07

REV	DESCRIPTION	DATE
0	BIDDING/CONSTRUCTION	7-9-07

GRAPHIC SCALE: 0" 1"

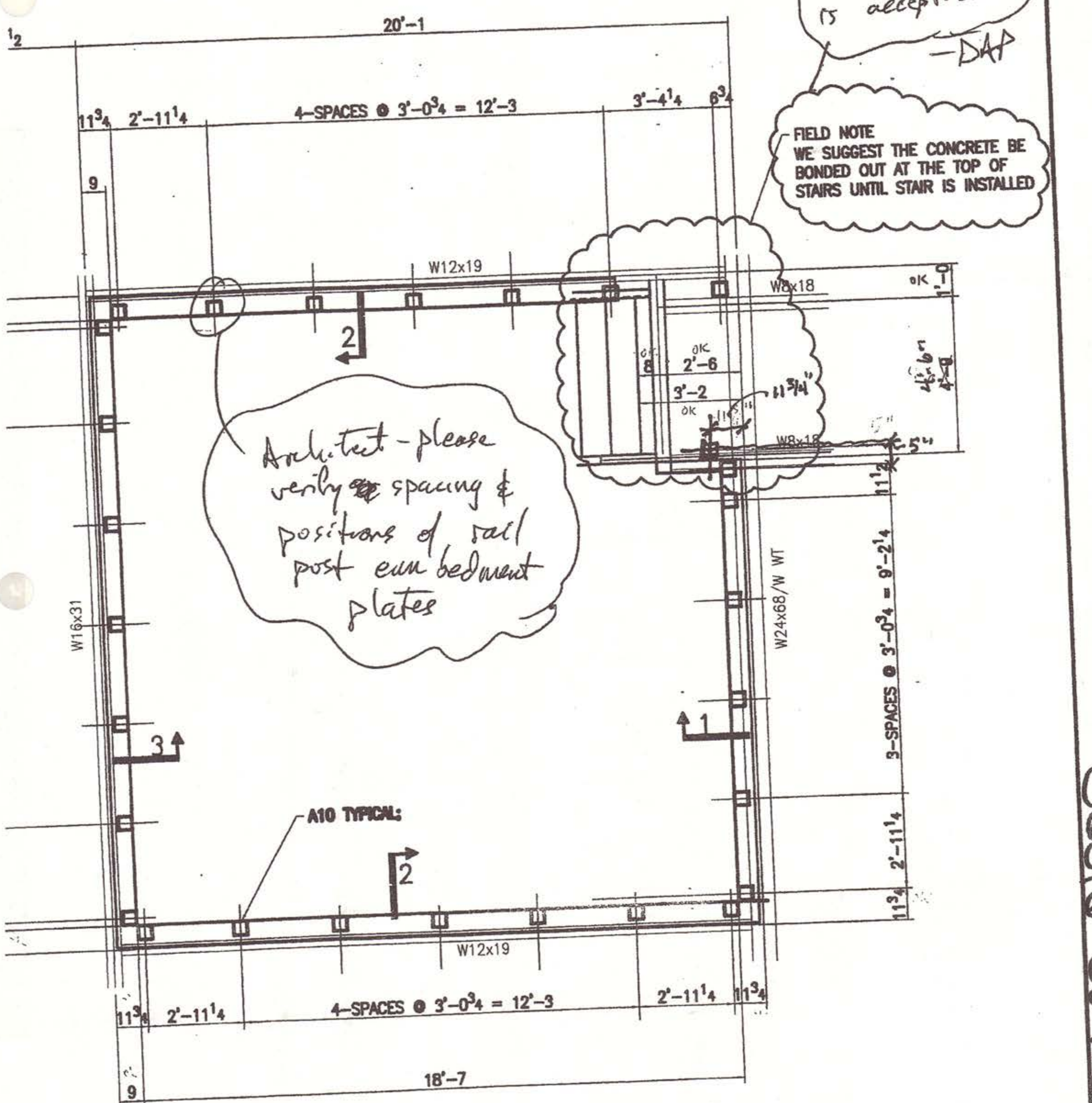
SCALE:	1/8" = 1'-0"
PROJECT MANAGER:	SLB
JC/DRAWN BY:	TCM/TDP
A/E OF RECORD:	DAP
CAD FILE:	MTA/S4.0/116-06
PROJECT NO:	06016
DATE:	7-9-07

SHEET TITLE: SECOND FLOOR FRAMING PLAN

SHEET No. S4.0

AS BUILT Owner Copy

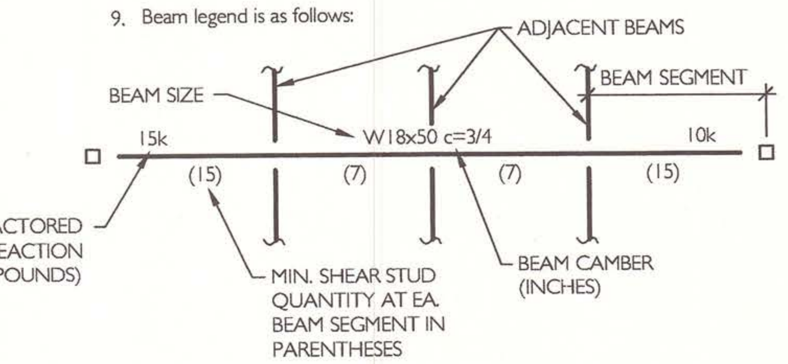
Post on Plan



PLAN @ GALLERY 301 RAIL LAYOUT

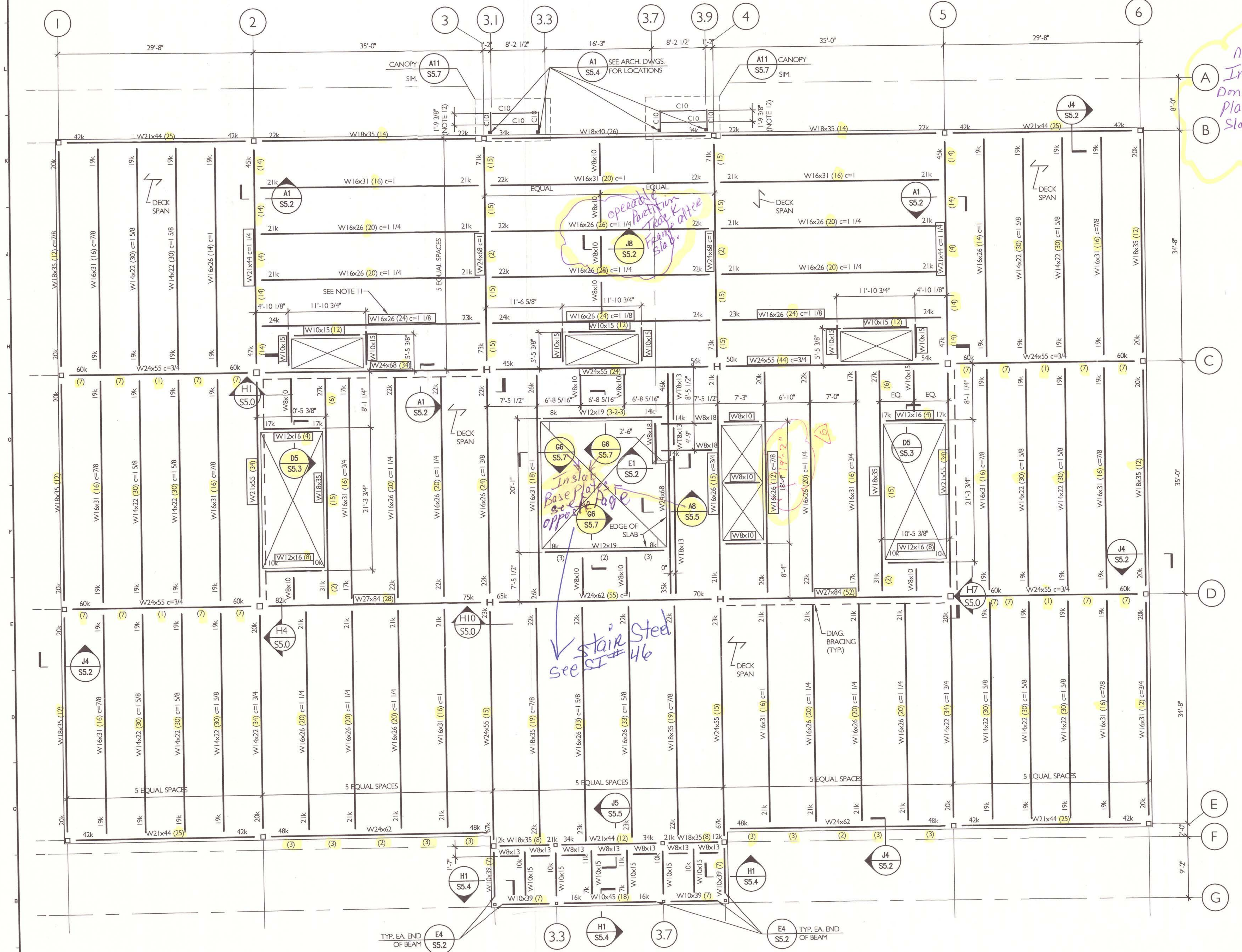
NOTES:

1. Top of steel shall be El. 126'-3" unless noted otherwise by a "+" or "-" from this elevation. Specified top of steel shall be bottom of floor deck. Elevations specified on framing plans are based on basement top of slab datum El. 100'-0".
2. See D12 / S5.3 for typical details at equipment and deck openings.
3. See Drawings S1.0 and S1.1 for additional notes and requirements.
4. See Drawings S5.0 through S5.6 for required typical details.
5. See Architectural Drawings for dimensions not shown.
6. Total slab thickness shall be 5" (see A12 / S5.3). Under no circumstances shall slab be placed until welding of all permanent building bracing has been completed.
7. Ductwork, plumbing, and other utilities extending from floor to floor inside mechanical chases shall be vertically and laterally supported at each floor level unless otherwise approved in writing by PSE. Lateral and vertical support connections for all mechanical components shall be designed by the mechanical contractor's engineer.
8. Prior to fabrication of new materials, the final positions of structural steel located at edges of openings or used to support equipment shall be coordinated by the General Contractor in accordance with approved applicable shop drawings and requirements specified by other project documents.
9. Beam legend is as follows:



10. As much as possible, shear studs shall be placed at uniform spacing within each beam segment. See detail H11 / S5.4 and A12 / S5.3 for additional composite beam requirements.
11. Beams designated within a rectangular box shall not be primed or otherwise painted.
12. Canopy dimensions indicate distance between outside faces of channel webs (see Detail A11 / S5.7).
13. Beam reactions ("k" = kips) shown on this plan are based on unfactored loads (minimum reaction = 8.0k, UON). See Drawing S5.0 for beam reactions at bracing bays.

need steel Inspection Done Before Placement of Slab



RFI-119 Pour Stops

Construction Jts See RFI 127

Nelson Stud Fix RFI-141

Bracing Questions Before Placement of Concrete Slabs RFI 147

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A1 THIRD FLOOR FRAMING PLAN

1/8" = 1'-0"

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STATE OF MAINE
DAVID A. PRICE
No. 6401
LICENSED PROFESSIONAL ENGINEER

PROJECT NORTH
MAG NORTH

PROJECT TITLE:
MAINE TURNPIKE AUTHORITY ADMINISTRATION BUILDING
PORTLAND, MAINE

ISSUED FOR BIDDING / CONSTRUCTION 7-9-07

REV	DESCRIPTION	DATE
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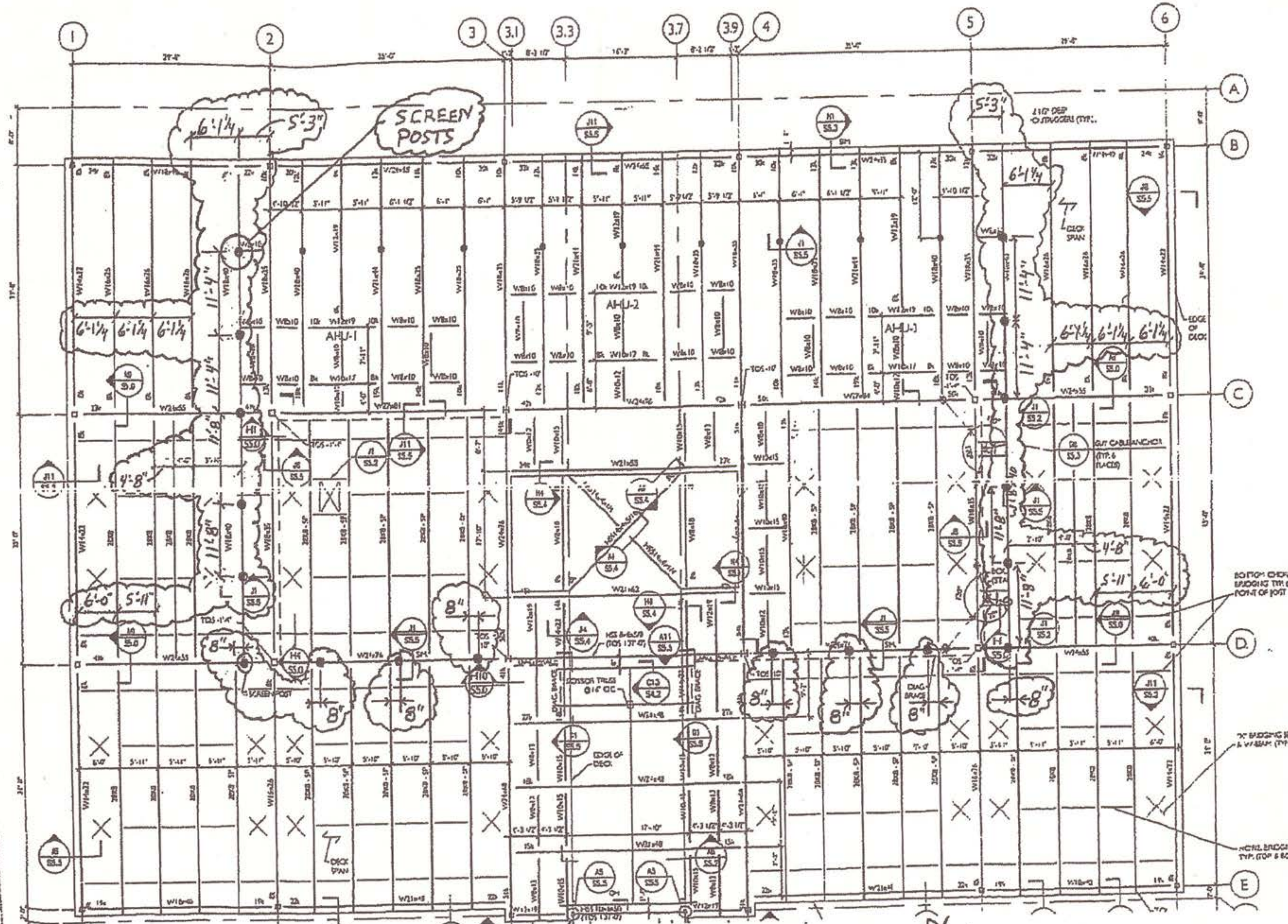
GRAPHIC SCALE: 0" 1"

SCALE:	1/8" = 1'-0"
PROJECT MANAGER:	SLB
JC/DRAWN BY:	TCM/TDP
A/E OF RECORD:	DAP
CAD FILE:	MTA/S4.1/116-06
PROJECT NO:	06016
DATE:	7-9-07

SHEET TITLE:
THIRD FLOOR FRAMING PLAN

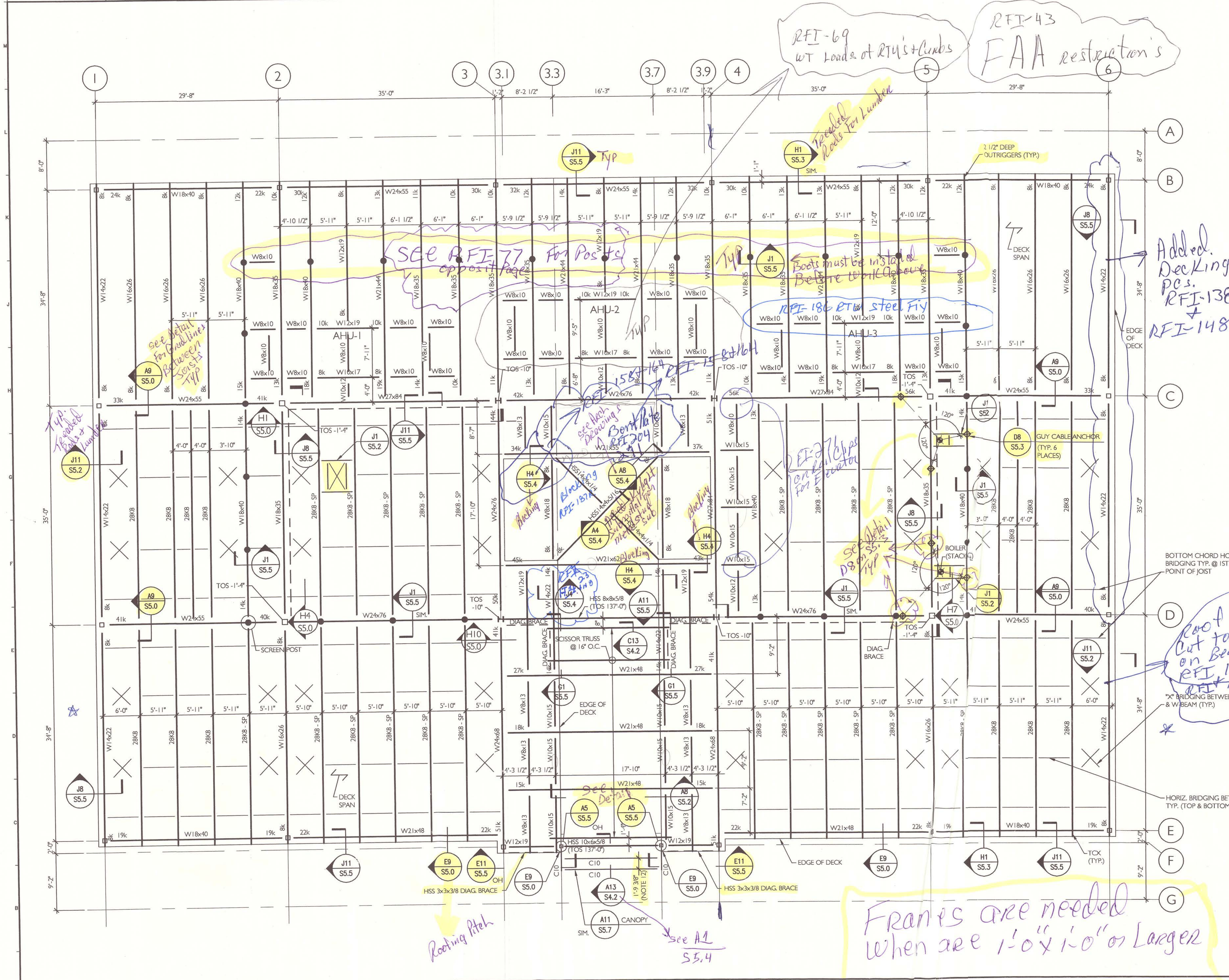
SHEET No.
S4.1

Response to RFI #77 - Relocate screen posts and framing at clouded locations as shown. Beam sizes and other items to remain unchanged.



S-8 MTA - Roof Framing Dimension changes - Plan

NTS



A1 ROOF FRAMING PLAN

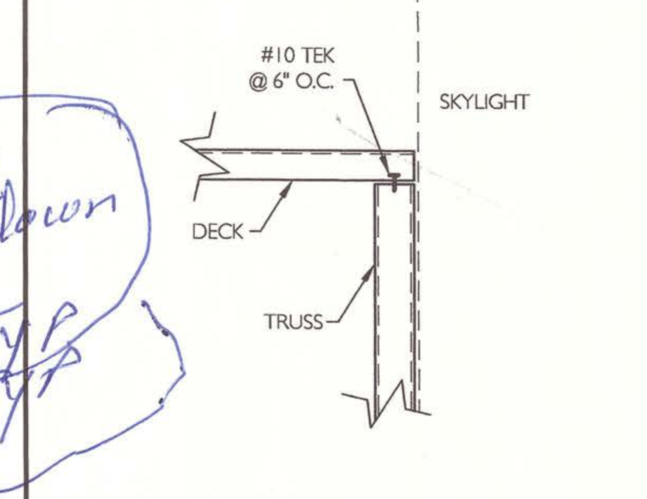
1/8" = 1'-0"

NOTES:

1. Top of steel shall be El. 140'-8" unless noted otherwise by a "+" or "-" from this elevation. Specified top of steel shall be bottom of roof deck. Roof framing shall slope uniformly between elevations specified. Elevations specified on framing plans are based on basement top of slab datum El. 100'-0".
2. Roof framing is designed for mechanical units as indicated below. Vibration isolators shall be designed by other qualified professionals (typ. all units). Mechanical units shall be sufficiently anchored to framing to resist wind and seismic loads. General Contractor shall check equipment shop drawings to verify that these weights are not exceeded.

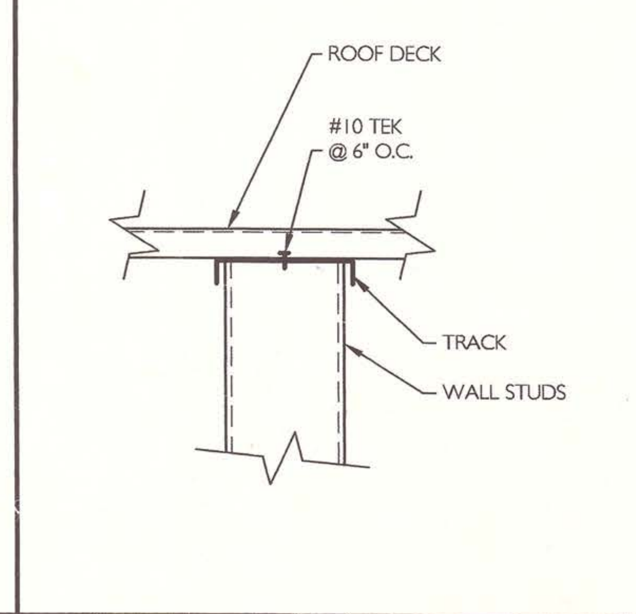
Unit	Maximum Operating Weight (Including Roof Curb)	Approximate Dimensions
RTU-1	9000 pounds	26' x 8' x 5'
RTU-2	10000 pounds	30' x 9' x 6'
RTU-4	10000 pounds	26' x 8' x 5'

3. All K joists shall have 2 1/2" seats.
4. See A4 / S5.2 for typical details at equipment and deck openings.
5. Under no circumstances shall sprinklers (or other piping and equipment) be suspended from metal roof deck. These items shall be connected to bar joists at panel point locations or to structural steel beams. See typical details for bar joist reinforcement requirements when equipment hangers do not align with bar joist panel points.
6. See Drawings S1.0 and S1.1 for additional notes and requirements.
7. Install bridging where specified. Add additional bridging as necessary to accommodate uplift. Bridging shall not be interrupted for ductwork or other components without approval from Price Structural Engineers, Inc.
8. See Drawings S5.0 through S5.6 for required typical details.
9. See Architectural Drawings for dimensions not shown.
10. Prior to the fabrication of new materials, the final positions of structural steel located at edges of openings or used to support equipment shall be coordinated by the General Contractor in accordance with approved applicable shop drawings and requirements specified by other project documents.
11. Beam reactions shown on this plan are based on unfactored loads (minimum 8.0k UON). See Drawing S5.0 for beam reactions at bracing bays.
12. Canopy dimensions indicate distance between outside faces of channel webs (see Detail A11 / S5.7).



C13 SECTION

1 1/2" = 1'-0"



A13 SECTION

1 1/2" = 1'-0"

SMRT

Price Structural Engineers, Inc.

STATE OF MAINE
DAVID PRICE
No. 6401
LICENSED
PROFESSIONAL ENGINEER

PROJECT NORTH

MAG NORTH

PROJECT TITLE:

MAINE TURNPIKE AUTHORITY ADMINISTRATION BUILDING
PORTLAND, MAINE

ISSUED FOR BIDDING / CONSTRUCTION 7-9-07

REV	DESCRIPTION	DATE
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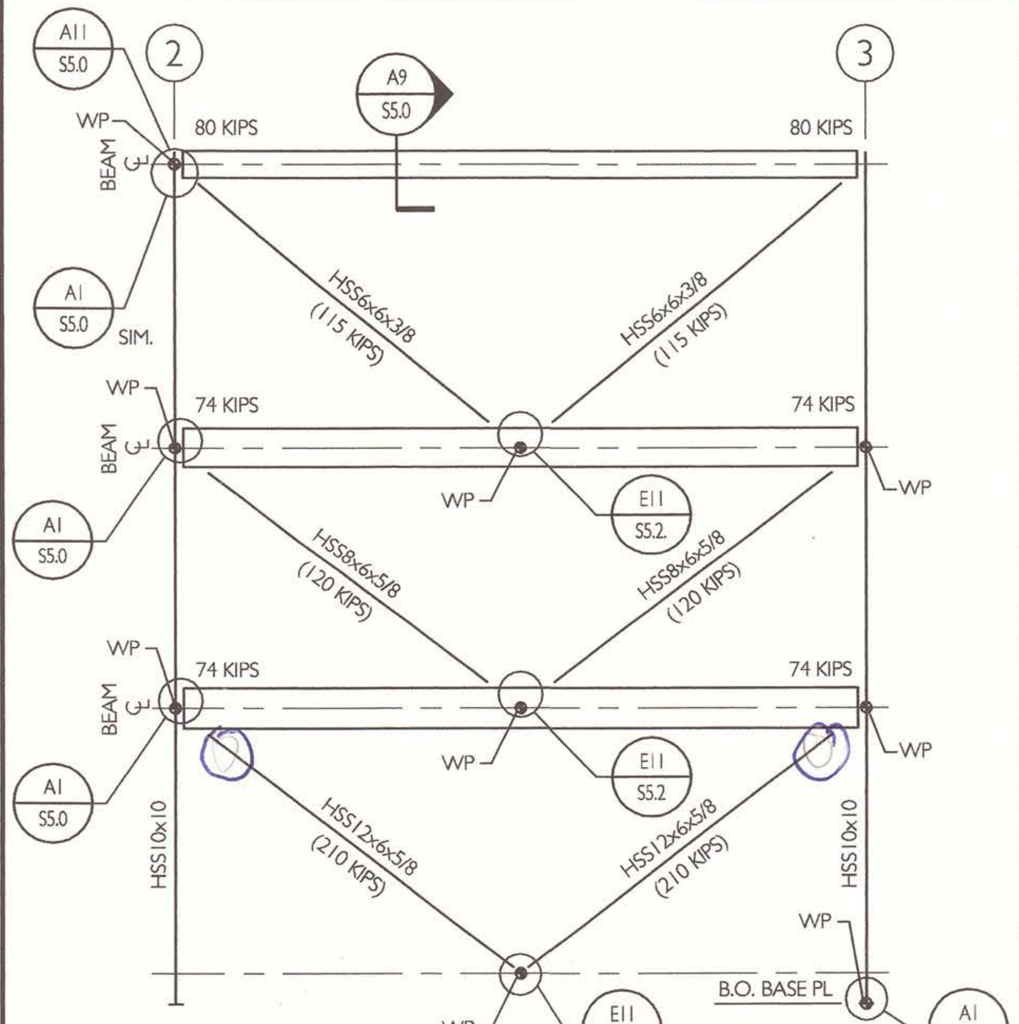
SCALE:	1/8" = 1'-0"
PROJECT MANAGER:	SLB
JC/DRAWN BY:	TCM/TDP
A/E OF RECORD:	DAP
CAD FILE:	MTA/S4.2/116-06
PROJECT NO:	06016
DATE:	7-9-07

SHEET TITLE:

ROOF FRAMING PLAN

SHEET No. S4.2

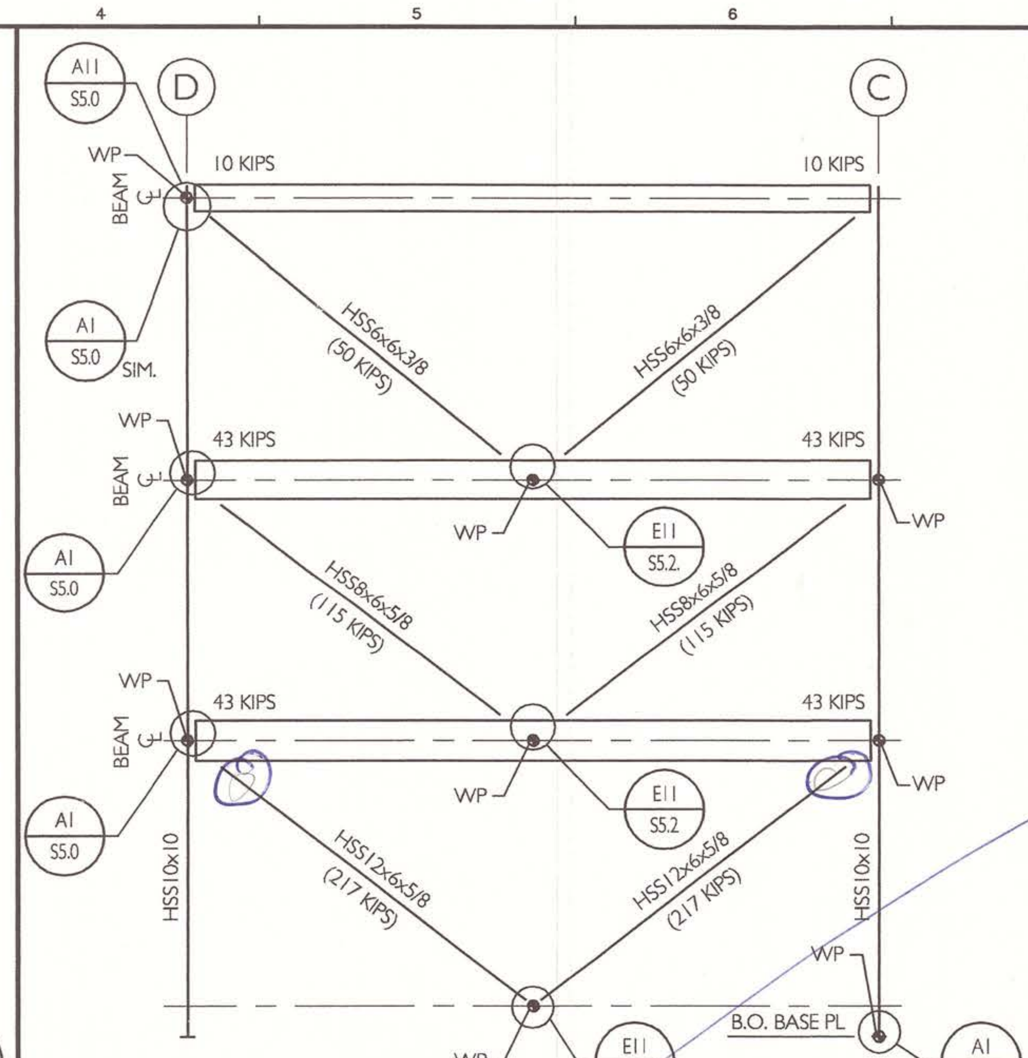


NOTES:

1. Bracing bay axial brace forces and beam reactions shown are factored loads per LRFD. Brace forces shown occur in either axial tension or compression.
2. As a minimum, beam to column connections shall be sized assuming brace is not present.

H1 BRACING ELEVATION AT LINE C

1/8" = 1'-0"

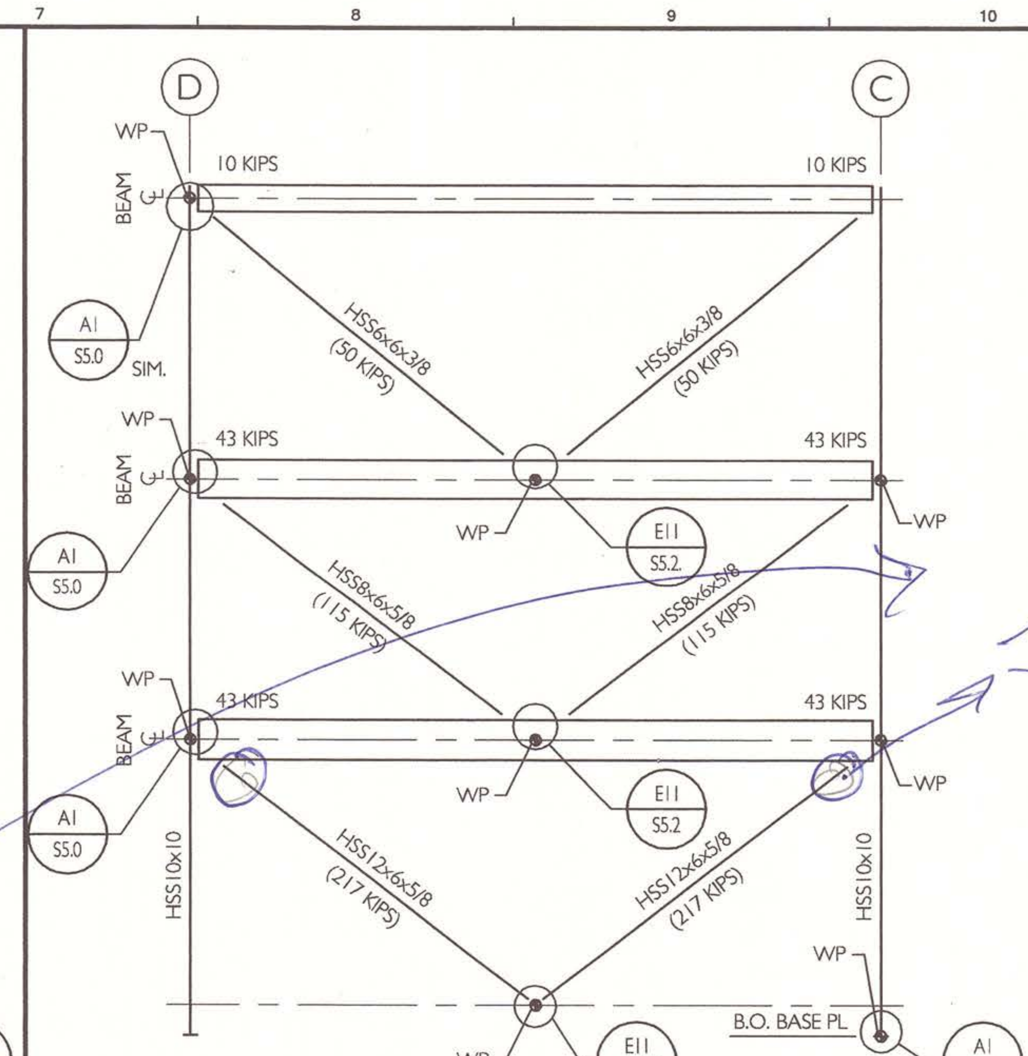


NOTES:

1. Bracing bay axial brace forces and beam reactions shown are factored loads per LRFD. Brace forces shown occur in either axial tension or compression.
2. As a minimum, beam to column connections shall be sized assuming brace is not present.

H4 BRACING ELEVATION AT LINE 2

1/8" = 1'-0"

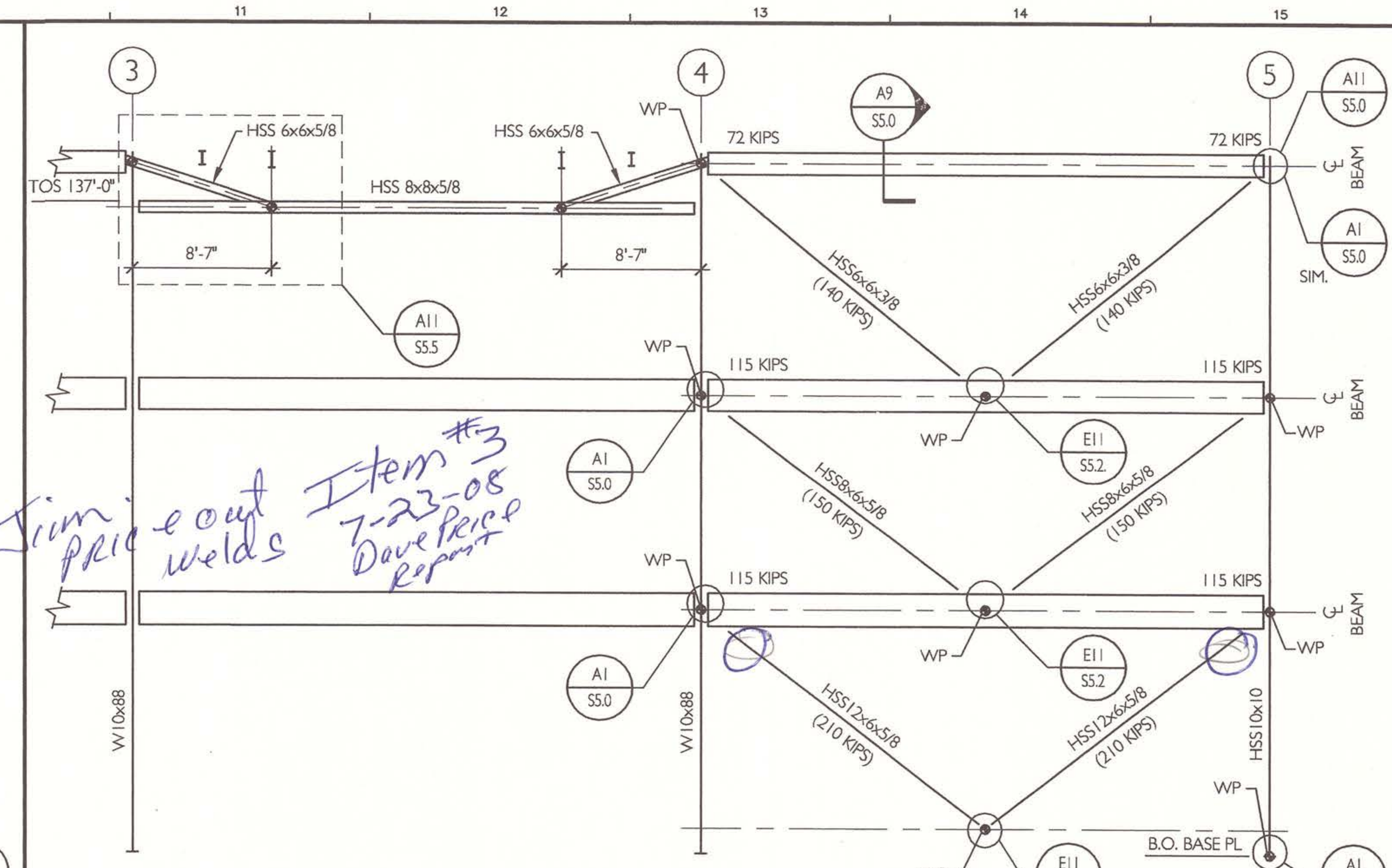


NOTES:

1. Bracing bay axial brace forces and beam reactions shown are factored loads per LRFD. Brace forces shown occur in either axial tension or compression.
2. As a minimum, beam to column connections shall be sized assuming brace is not present.

H7 BRACING ELEVATION AT LINE 5

1/8" = 1'-0"

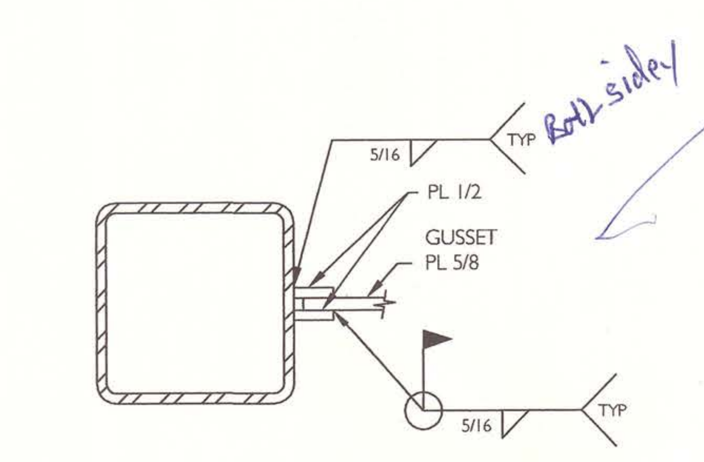


NOTES:

1. Bracing bay axial brace forces and beam reactions shown are factored loads per LRFD. Brace forces shown occur in either axial tension or compression.
2. As a minimum, beam to column connections shall be sized assuming brace is not present.

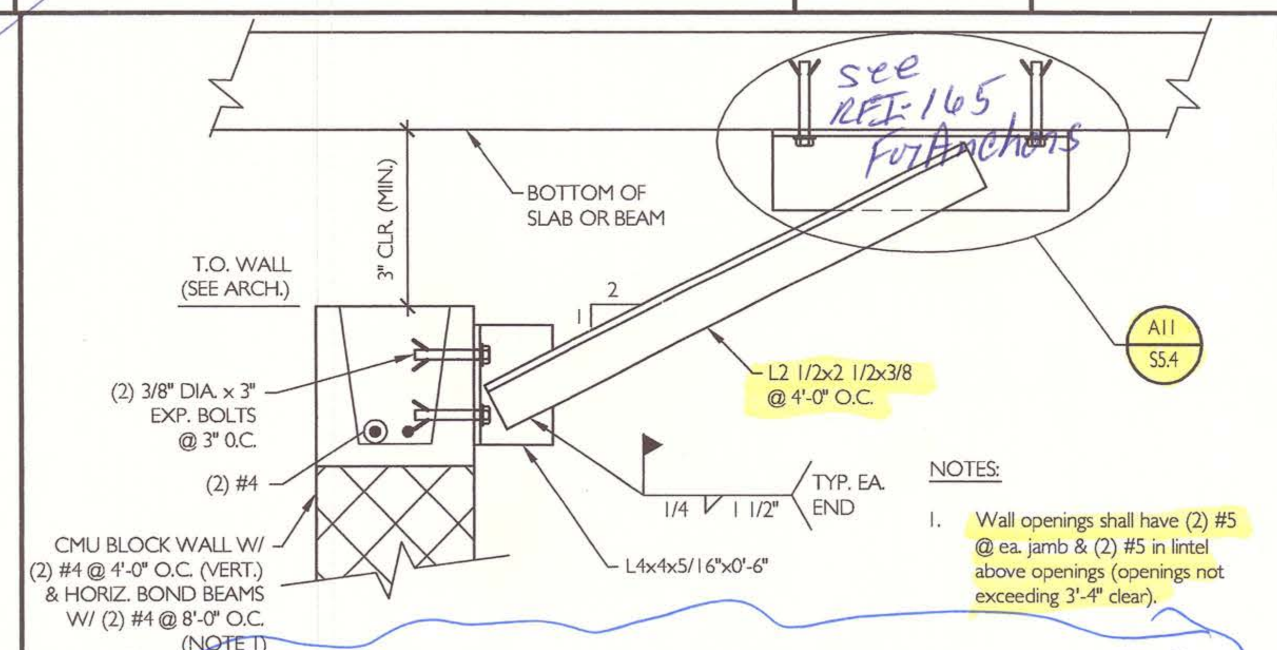
H10 BRACING ELEVATION AT LINE D

1/8" = 1'-0"



E1 DETAIL

1 1/2" = 1'-0"

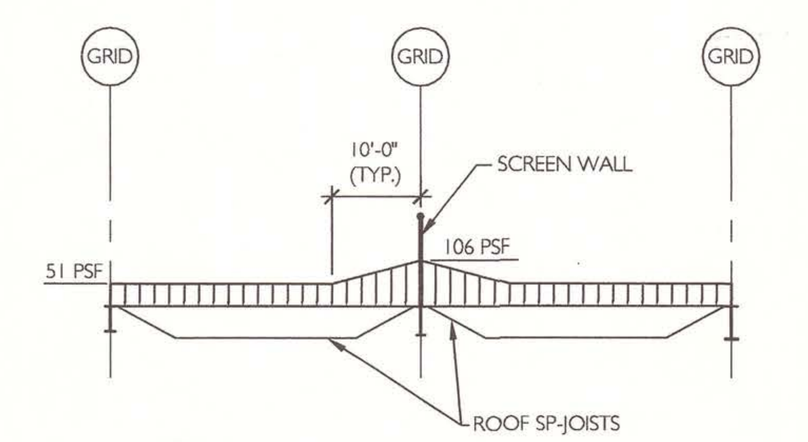


NOTES:

1. Wall openings shall have (2) #5 @ ea. jamb & (2) #5 in lintel above openings (openings not exceeding 3'-4" clear).

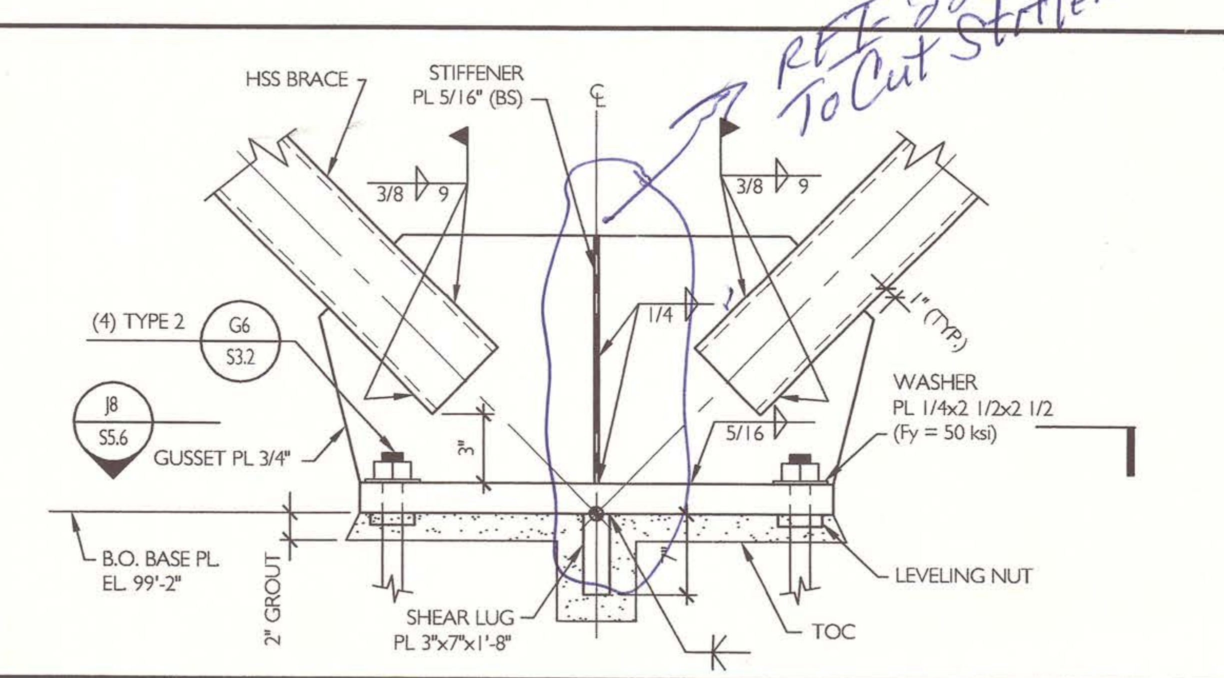
E5 TYP. CMU WALL BRACING

see RFI 23 + SI 11



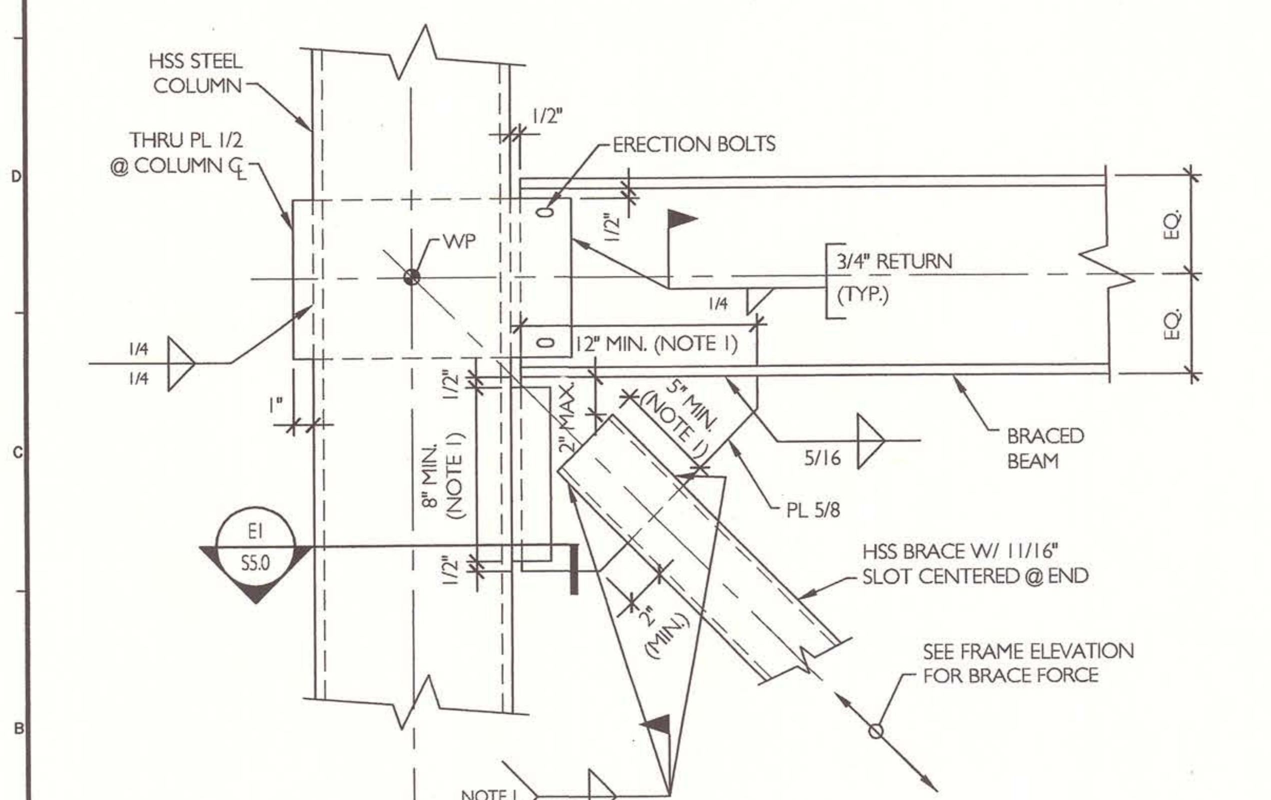
E9 SPECIAL JOIST SNOW LOADS

NOT TO SCALE



E11 SECTION

NOT TO SCALE

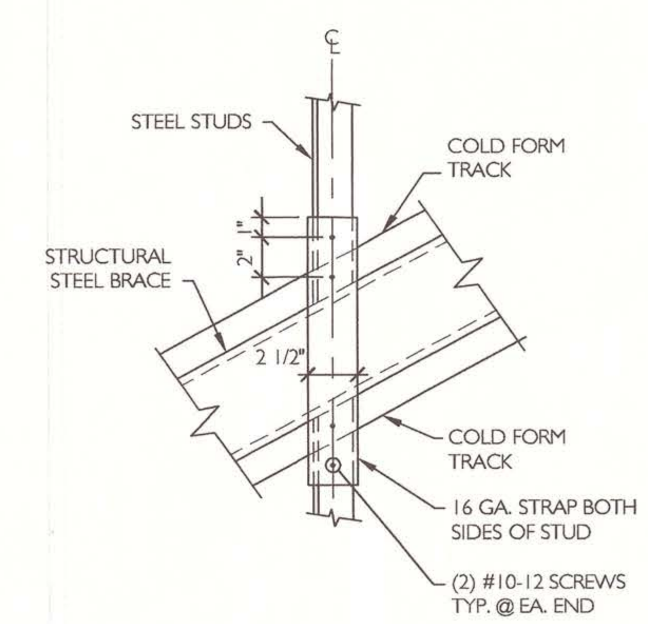


NOTES:

1. Provide weld length as required for specified brace forces. Weld length shall not be less than connecting plate length.

A1 DETAIL

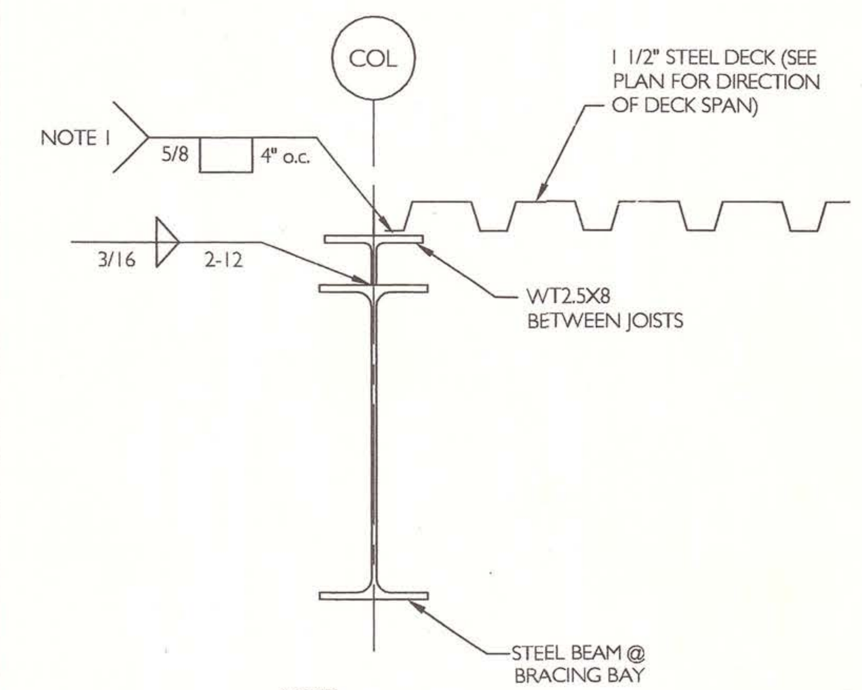
1 1/2" = 1'-0"



TYPICAL STEEL WALL STUDS @ STRUCTURAL STEEL BRACE DETAIL

A5 DETAIL

1 1/2" = 1'-0"

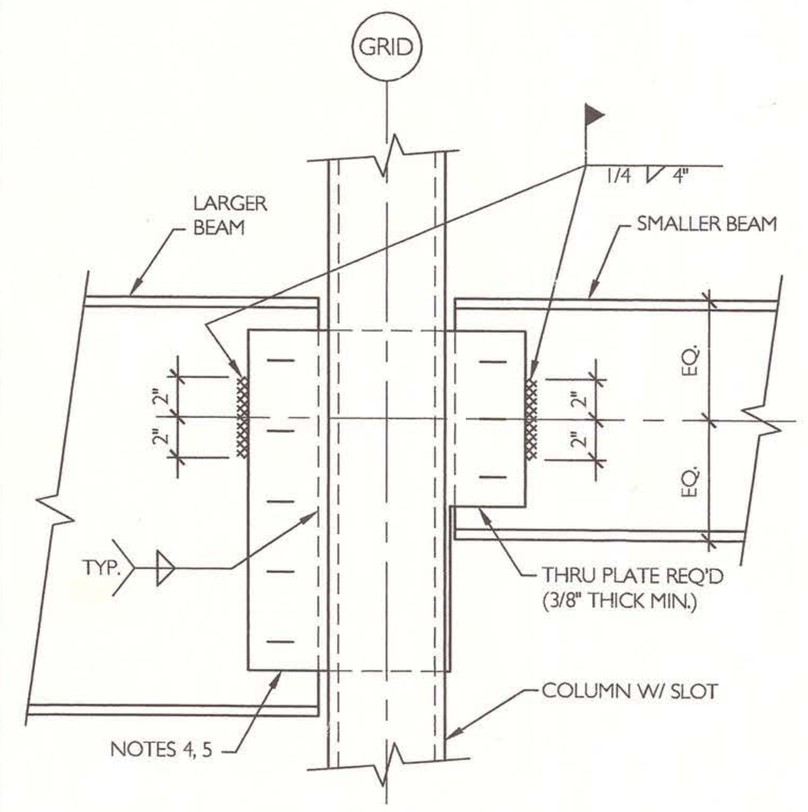


NOTE: DECK FABRICATOR SHALL LAY OUT DECK FLUTES TO ACCOMMODATE FIELD WELD @ WT AS SHOWN.

NOTE: Detail typical from grid C-1 to C-6, D-1 to D-3, and from grid D-4 to D-6 at roof only.

A9 TYPICAL SECTION

1 1/2" = 1'-0"



TYPICAL FIELD WELD AT ROOF BEAMS ALIGNED W/ BRACING BAYS OR AT BUILDING PERIMETER

NOTES:

1. Other beams and details not shown for clarity.
2. Weld after permanent loads are in place.
3. This detail is NOT typical and shall apply only where specified.
4. Connection requirements shown are a minimum. Fabricator's engineer shall complete the connection design.
5. To the extent possible, connections for beams at building perimeter or in line with bracing bays shall be bolted the full height of the beam web.

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A11 DETAIL

1 1/2" = 1'-0"

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Price Structural Engineers, Inc.

STATE OF MAINE DAVID A. PRICE No. 8401 LICENSED PROFESSIONAL ENGINEER

PROJECT NORTH

PROJECT TITLE: MAINE TURNPIKE AUTHORITY ADMINISTRATION BUILDING PORTLAND, MAINE

ISSUED FOR BIDDING / CONSTRUCTION 7-9-07

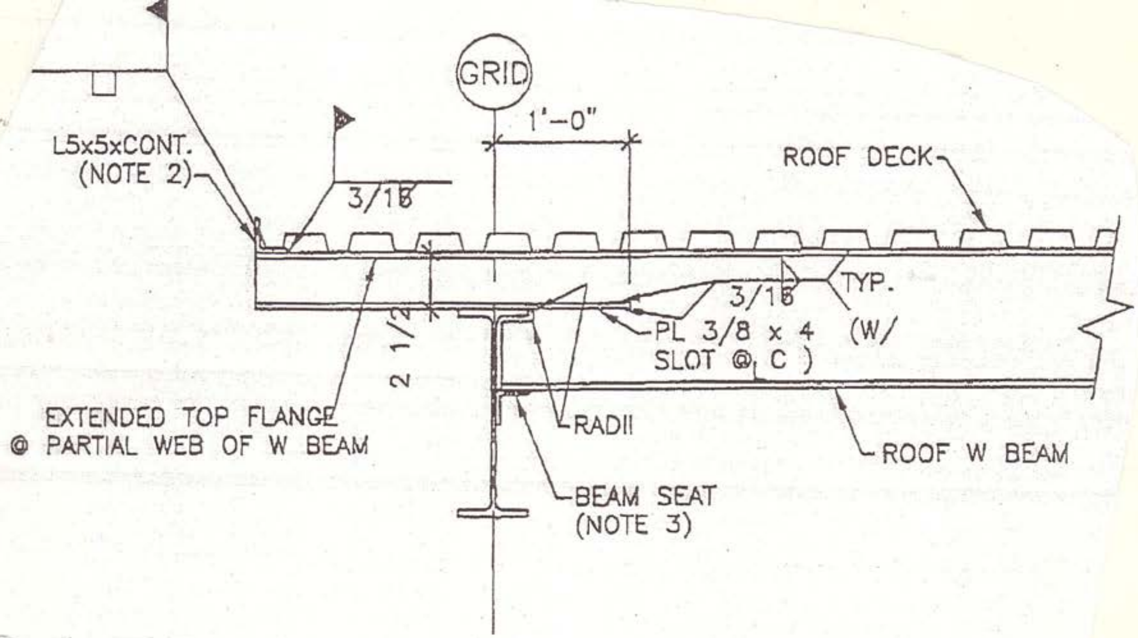
REV	DESCRIPTION	DATE
0	BIDDING/CONSTRUCTION	7-9-07

GRAPHIC SCALE: 0" 1"

SCALE:	AS NOTED
PROJECT MANAGER:	SLB
JC/DRAWN BY:	TCM/TDP
A/E OF RECORD:	DAP
CAD FILE:	MTA/S5.0/116-06
PROJECT NO:	06016
DATE:	7-9-07

SHEET TITLE: STEEL BRACING ELEVATIONS & DETAILS

SHEET No. S5.0



NOTES:

1. Each L5x5 shall be connected to the adjacent L5x5 w/ splice plates capable of resisting 10,000 pounds (tension or compression).
2.
3. Section typical @ roof W beams w/ cantilevered top flange.
4. See roof plan for unfactored reactions @ beam seat.

See H1 / S5.3 for additional requirements.

SMRT

ARCHITECTURE ENGINEERING PLANNING

SMRT
144 Fore Street/P.O.Box 618 PORTLAND, MAINE 04104
tel. (207) 772-3846 / fax. (207) 772-1070

PROJECT:	MAINE TURNPIKE AUTHORITY ADMINISTRATION BUILDING	SCALE:	N.T.S.
SUBJECT:	ADDED A13/S5.1 SECTION	CAD FILE:	S5.1–06016
		PROJECT No.	06016
		REF. SHEET:	S5.1
		PM: SLB	ADDENDUM No. ADD–6
		A/E: DAP	SKETCH No. S–4
		DATE: 8-23-07	

COLUMN GRID	A-3.1	A-3.3	A-3.7	A-3.9	B-1	B-2	B-3	B-4	B-5	B-6	C-1	C-6	D-1	E-1	D-6	E-2	E-5	E-6	F-3
COLUMN SIZE	HSS 4x4x1/4	HSS 4x4x1/4	HSS 4x4x1/4	HSS 4x4x1/4	HSS 8x8x5/16	HSS 8x8x1/2	HSS 8x8x5/8	HSS 8x8x5/8	HSS 8x8x1/2	HSS 8x8x5/16	HSS 8x8x1/2	HSS 8x8x1/2	HSS 8x8x1/2	HSS 8x8x5/16	HSS 8x8x1/2	HSS 8x8x1/2	HSS 8x8x1/2	HSS 8x8x5/16	HSS 8x8x5/8
ROOF STEEL LEVEL																			
3RD FLOOR STEEL LEVEL																			
2ND FLOOR STEEL LEVEL																			
1ST FLOOR SLAB ON GRADE																			
BOT OF BASE PLATE EL.	EL. 99'-1"	EL. 99'-1"	EL. 99'-1"	EL. 99'-1"	EL. 99'-1"	EL. 99'-1"	EL. 99'-1"	EL. 99'-1"	EL. 99'-1"	EL. 99'-1"	EL. 99'-1"	EL. 99'-1"	EL. 99'-1"	EL. 110'-6"	EL. 110'-6"	EL. 110'-6"	EL. 110'-6"	EL. 110'-6"	EL. 110'-6"
BASE PLATE TYPE (SEE DWG. S5.6)	TYPE 2	TYPE 2	TYPE 2	TYPE 2	TYPE 1	TYPE 1	TYPE 1	TYPE 1	TYPE 1	TYPE 1	TYPE 1	TYPE 1	TYPE 1	TYPE 1	TYPE 1	TYPE 1	TYPE 1	TYPE 1	TYPE 1
ANCHOR BOLT QTY / TYPE (SEE NOTE 2)	4 / 1	4 / 1	4 / 1	4 / 1	4 / 1	4 / 1	4 / 1	4 / 1	4 / 1	4 / 1	4 / 1	4 / 1	4 / 1	4 / 1	4 / 1	4 / 1	4 / 1	4 / 1	4 / 1

COLUMN GRID	F-3.3	F-3.7	F-4	G-3	G-3.3	G-3.7	G-4	C-2	C-3	C-4	C-5	D-2	D-3	D-4	D-5
COLUMN SIZE	HSS 6x6x1/2	HSS 6x6x1/2	HSS 8x8x5/8	HSS 4x4x1/4	HSS 4x4x1/4	HSS 4x4x1/4	HSS 4x4x1/4	HSS 10x10x5/8	W10x88	W10x88	HSS 10x10x5/8	HSS 10x10x5/8	W10x88	W10x88	HSS 10x10x5/8
ROOF STEEL LEVEL															
3RD FLOOR STEEL LEVEL															
2ND FLOOR STEEL LEVEL															
1ST FLOOR SLAB ON GRADE															
BOT OF BASE PLATE EL.	EL. 110'-6"	EL. 110'-6"	EL. 110'-6"	EL. 113'-7"	EL. 113'-7"	EL. 113'-7"	EL. 113'-7"	EL. 98'-2"	EL. 99'-2"	EL. 99'-2"	EL. 98'-2"	EL. 98'-2"	EL. 99'-2"	EL. 99'-2"	EL. 98'-2"
BASE PLATE TYPE (SEE DWG. S5.6)	TYPE 1	TYPE 1	TYPE 1	TYPE 6	TYPE 6	TYPE 6	TYPE 6	TYPE 4	TYPE 5	TYPE 5	TYPE 4	TYPE 4	TYPE 5	TYPE 5	TYPE 4
ANCHOR BOLT QTY / TYPE (SEE NOTE 2)	4 / 1	4 / 1	4 / 1	4 / 1	4 / 1	4 / 1	4 / 1	4 / 2	4 / 2	4 / 2	4 / 2	4 / 2	4 / 2	4 / 2	4 / 2

NOTES:

1. Column caps required at all columns. Use 3/8" plate at W-flange columns. See detail A8 / S5.3 for HSS columns.
2. See detail G1 / S3.2 for Type 1 Anchor Bolts. See detail G6 / S3.2 for Type 2 Anchor Bolts.

DETAIL A13/S5.1
SEE SK S-4 OPP. PAGE
6

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A1 COLUMN SCHEDULE

SMRT

Price Structural Engineers, Inc.

STATE OF MAINE
DAVID PRICE
No. 6401
LICENSED
PROFESSIONAL ENGINEER

PROJECT NORTH
MAG NORTH

PROJECT TITLE:
MAINE TURNPIKE AUTHORITY
ADMINISTRATION BUILDING
PORTLAND, MAINE

ISSUED FOR BIDDING / CONSTRUCTION
7-9-07

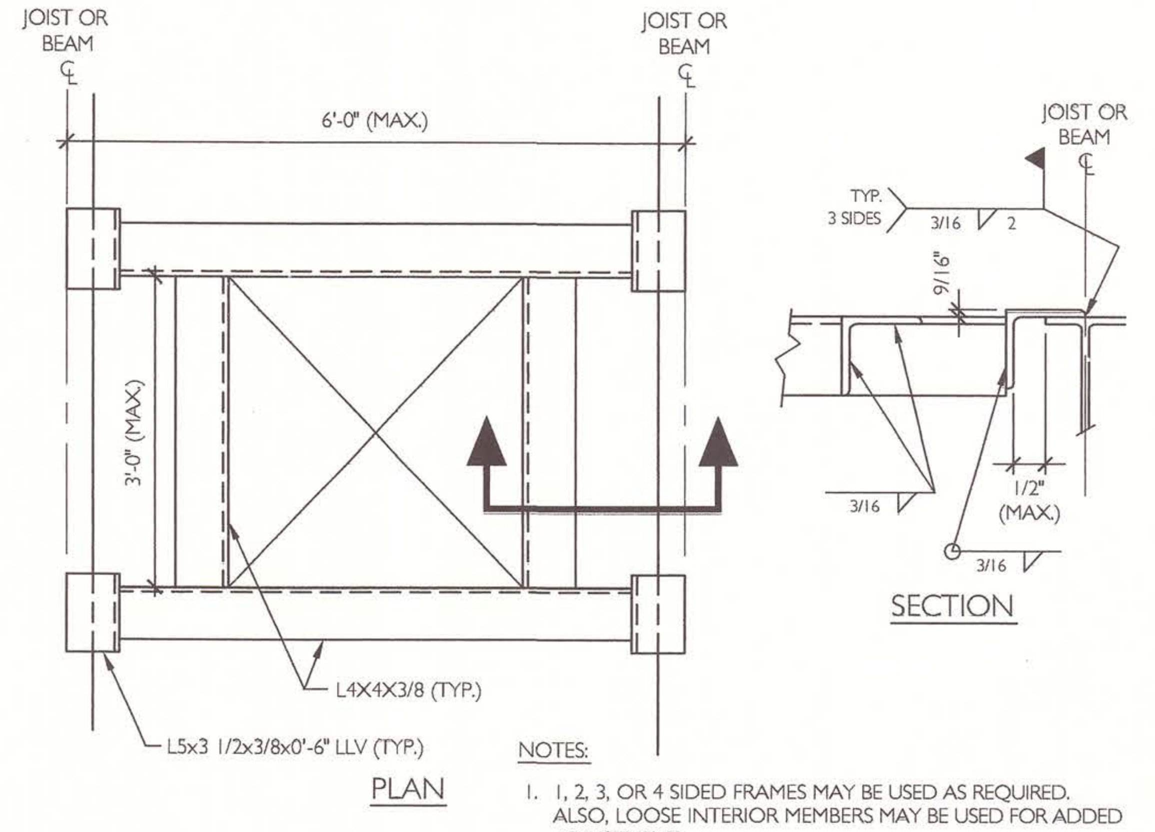
REV	DESCRIPTION	DATE
0	BIDDING/CONSTRUCTION	7-9-07

GRAPHIC SCALE: 0" 1"

SCALE:	–
PROJECT MANAGER:	SLB
JC/DRAWN BY:	TCM/TDP
A/E OF RECORD:	DAP
CAD FILE:	MTA/S5.1/116-06
PROJECT NO:	06016
DATE:	7-9-07

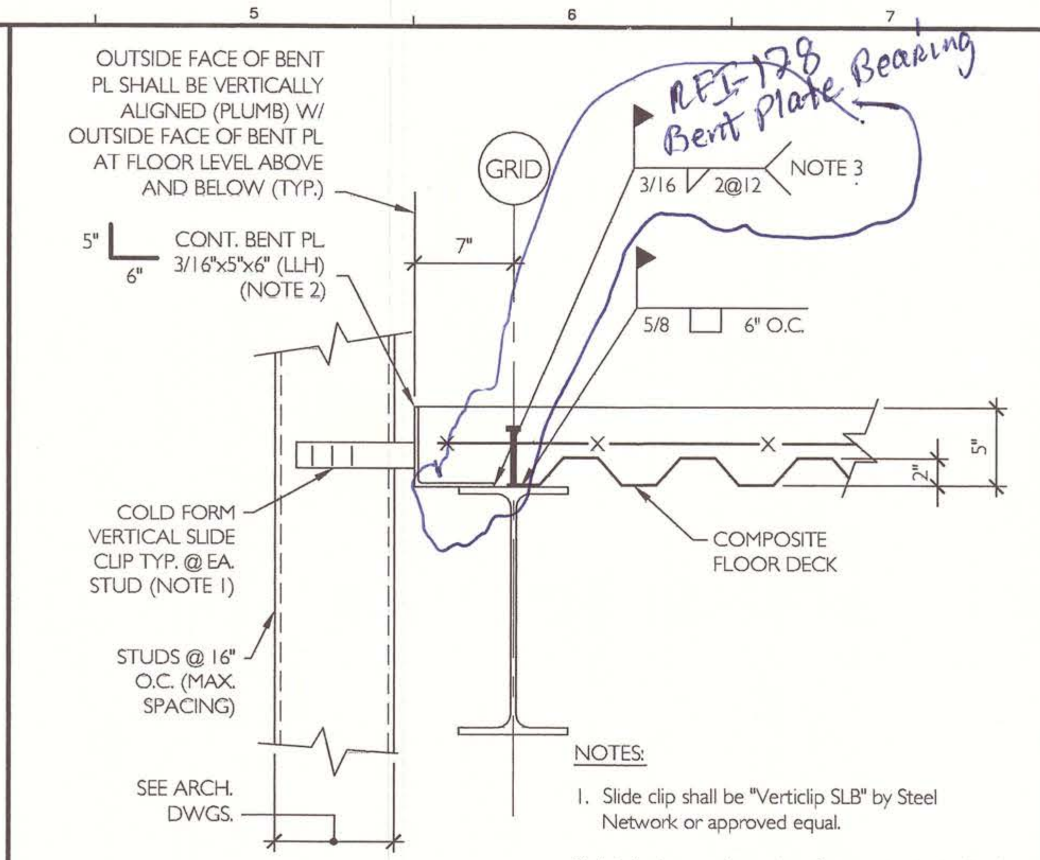
SHEET TITLE:
COLUMN SCHEDULE

SHEET No.
S5.1



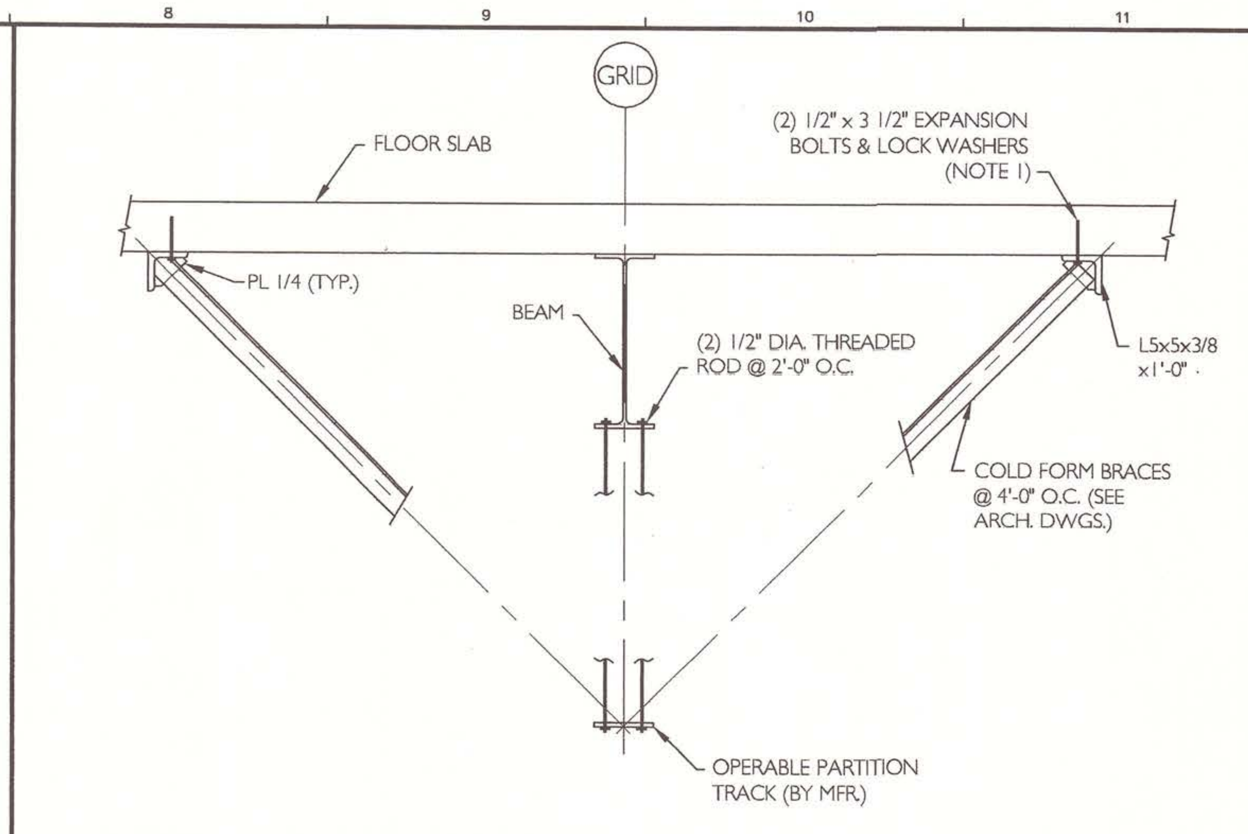
NOTES:
1. 1, 2, 3, OR 4 SIDED FRAMES MAY BE USED AS REQUIRED. ALSO, LOOSE INTERIOR MEMBERS MAY BE USED FOR ADDED ADJUSTMENT.
2. FRAME REQ'D AT ROOF DRAINS (CLEAR OPNG. 2'-4"x2'-0").
3. FRAMES REQ'D AT ALL OTHER OPENINGS IN DECK LARGER THAN 1'-0" DIAMETER AND ALSO WHERE SPECIFIED.

J1 TYPICAL DETAIL @ FRAMED OPENINGS — 1" = 1'-0"



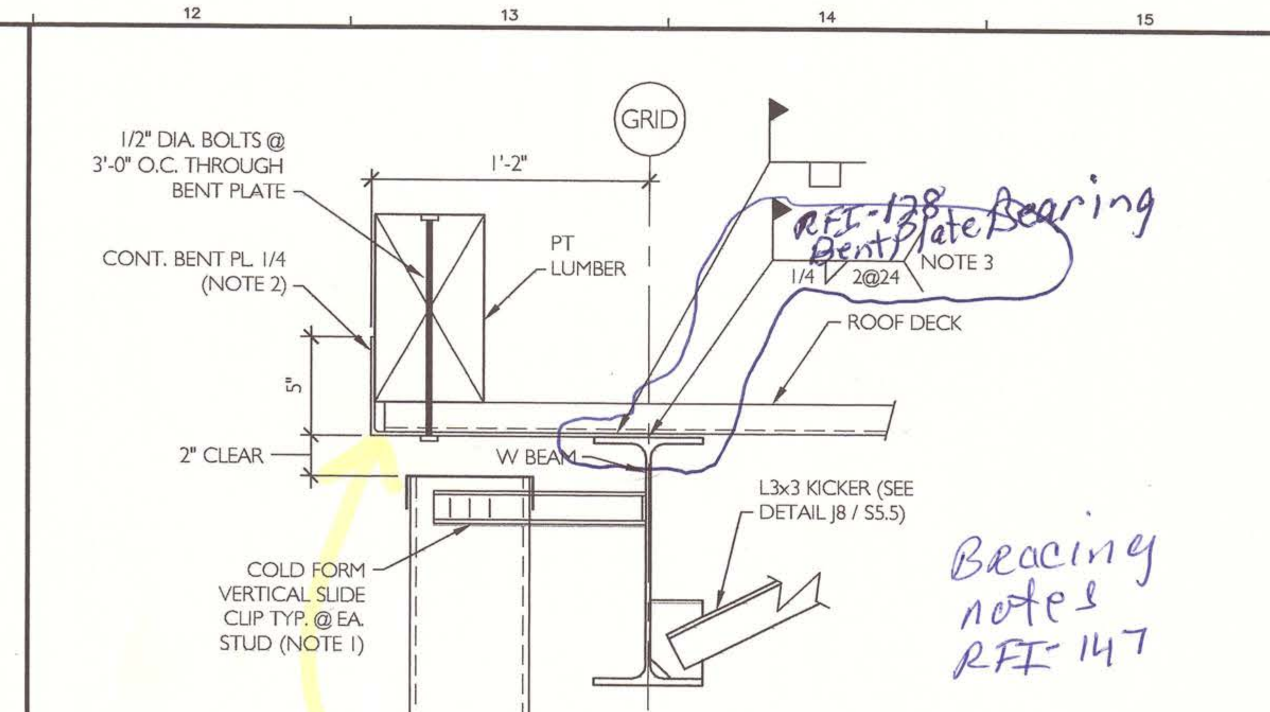
NOTES:
1. Slide clip shall be "Verticlip SLB" by Steel Network or approved equal.
2. Horiz. leg may have slots for erection bolts (typ.).
3. Bent plate shall not be welded until welding of all permanent building bracing and metal decking at floors / roof has been completed.

J4 SECTION — NOT TO SCALE



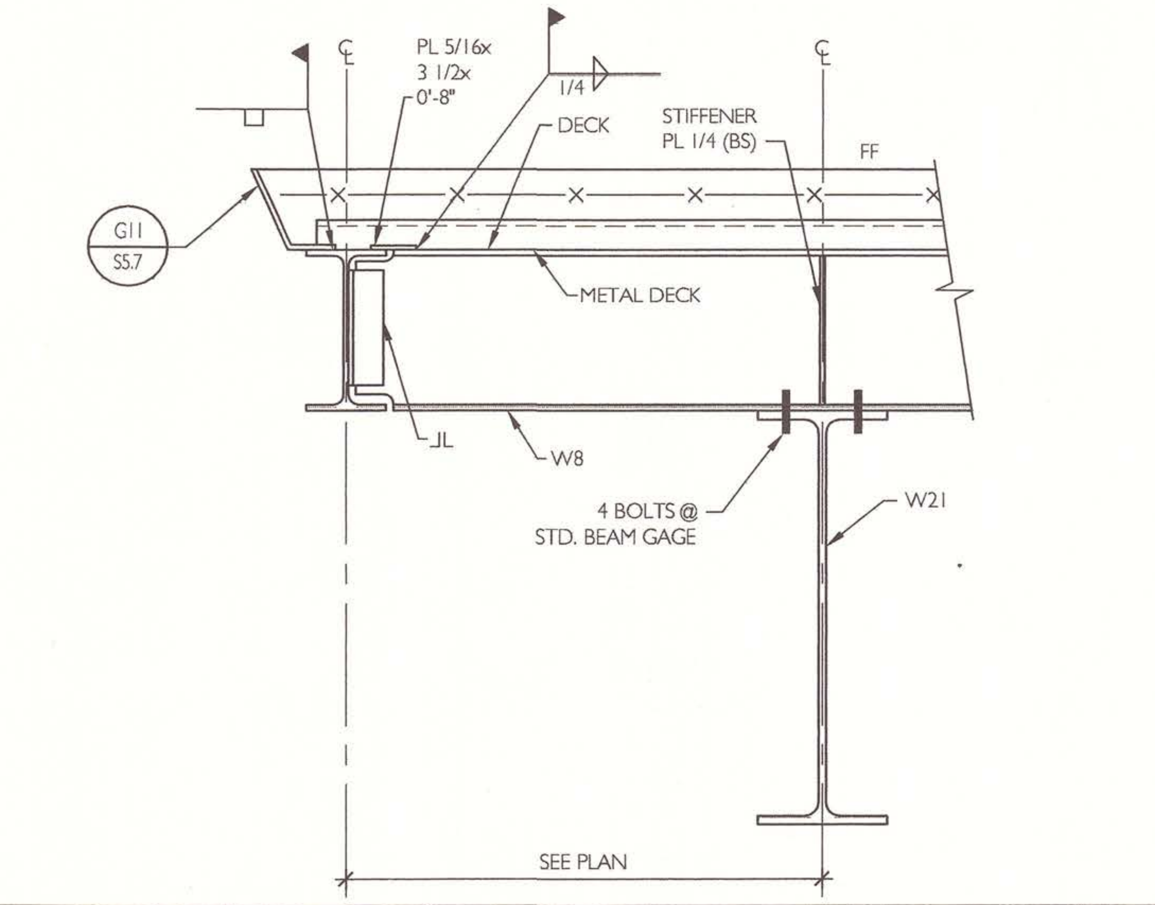
NOTES
1. L5x5 shall be aligned such that expansion bolts are installed in bottom of deck flutes only.

J8 SECTION AT OPERABLE PARTITION — 1/8" = 1'-0"

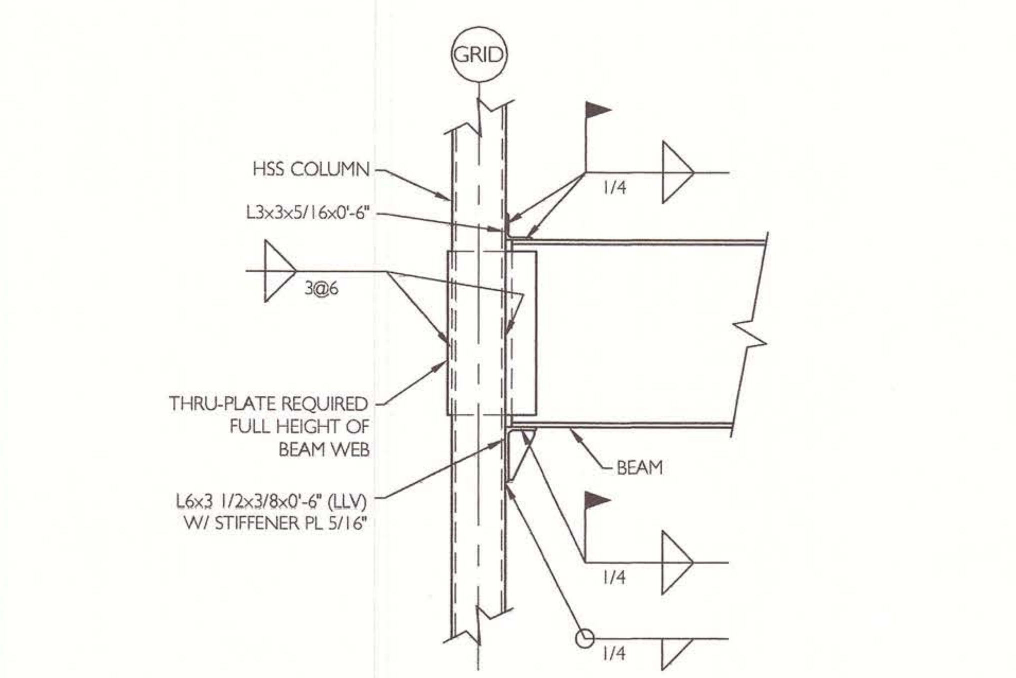


NOTES:
1. Slide clip shall be "Verticlip SLB-600" by Steel Network or approved equal.
2. Horiz. leg of bent plate may have slots for erection bolts.
3. Bent plate shall not be welded until welding of all permanent building bracing and metal decking at floors / roof has been completed.

J11 SECTION — NOT TO SCALE



E1 SECTION — 1 1/2" = 1'-0"

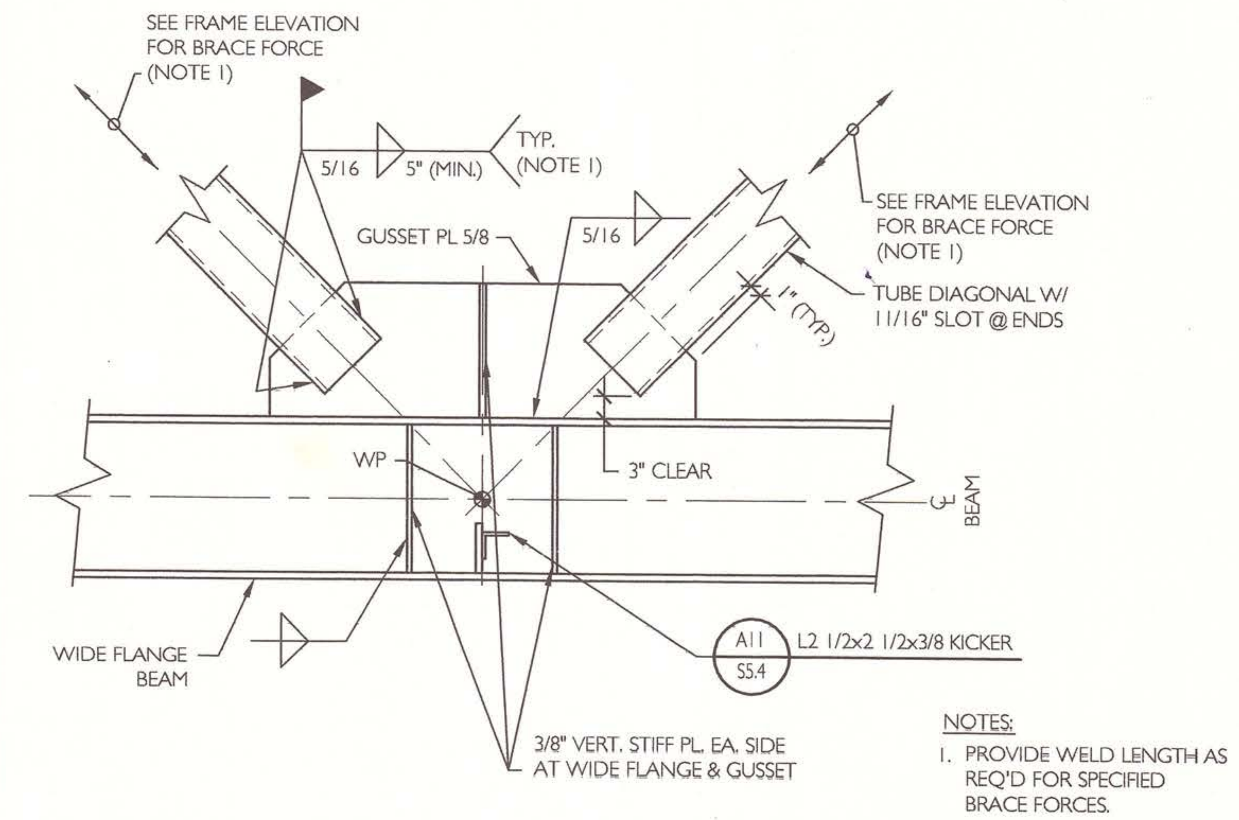


E4 SECTION — 3/4" = 1'-0"

COLD-FORM TRUSSES

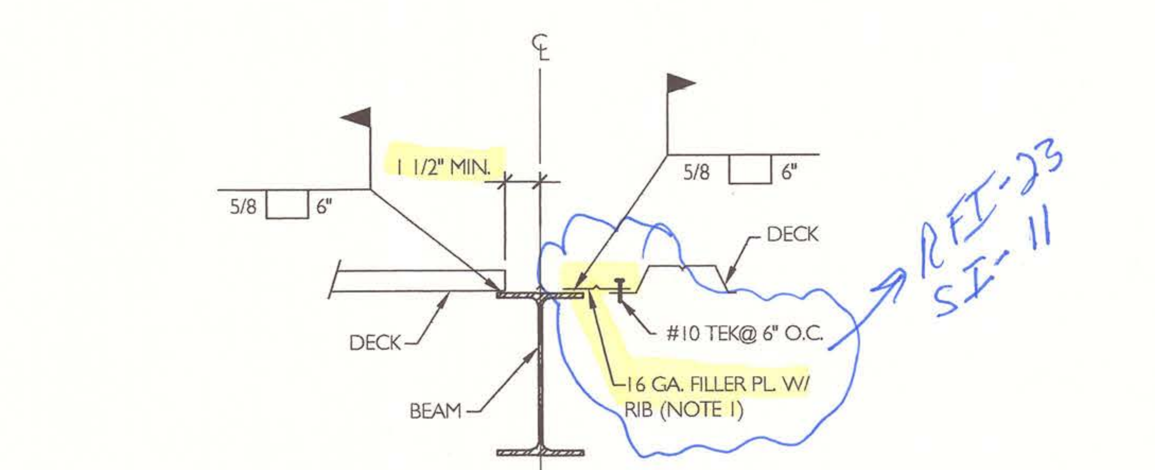
1. Trusses shall not be released from crane cables until truss top chord is straight, adequately braced, and truss is plumb.
2. Minimum steel gauge for trusses shall be 18 gauge. Wall studs shall be located in exterior walls such that at least one stud is located below the centerline of each truss bearing point.
3. Coordinate requirements for truss bracing with truss designer. Truss bracing shown is a minimum. Provide additional bracing as specified by fabricator's truss designer at no additional expense to the Owner. Bracing shall be installed during truss erection.
4. Except where specified otherwise on drawings, roof trusses shall be designed for the following loads (loads shown do not include truss self-weight):
5. a. Uniform snow load distributed over a horizontal projection of the roof surface = 51 psf.
   b. Unbalanced snow loads = 76 psf distributed over a horizontal projection at one side of the ridge while snow load at the other side of the ridge = 0 psf. Unbalanced snow may occur on either side of ridge.
   c. Uniform top chord dead load = 10 psf. Uniform bottom chord dead load = 10 psf.
   d. Net uplift load of 15 psf.
   e. Horizontal wind load of 30 psf.
6. Trusses and truss to truss connections, including "Hold-Down Anchors" at each end of truss, shall be designed by the truss fabricator's structural engineer, licensed in Maine. Stamped shop drawings and calculations shall be submitted for approval prior to fabrication. Shop drawing submittal shall provide clear erection drawings, instructions, and details describing truss erection requirements. It is mandatory that truss to truss connection requirements be indicated on stamped shop drawings.
7. Roof trusses shall be designed such that snow load deflection does not exceed span/360.
8. Truss drawings and trusses delivered to the field shall have all permanent truss bracing locations clearly marked where necessary to prevent buckling of truss compression members.

E8 COLD–FORM TRUSS NOTES — –



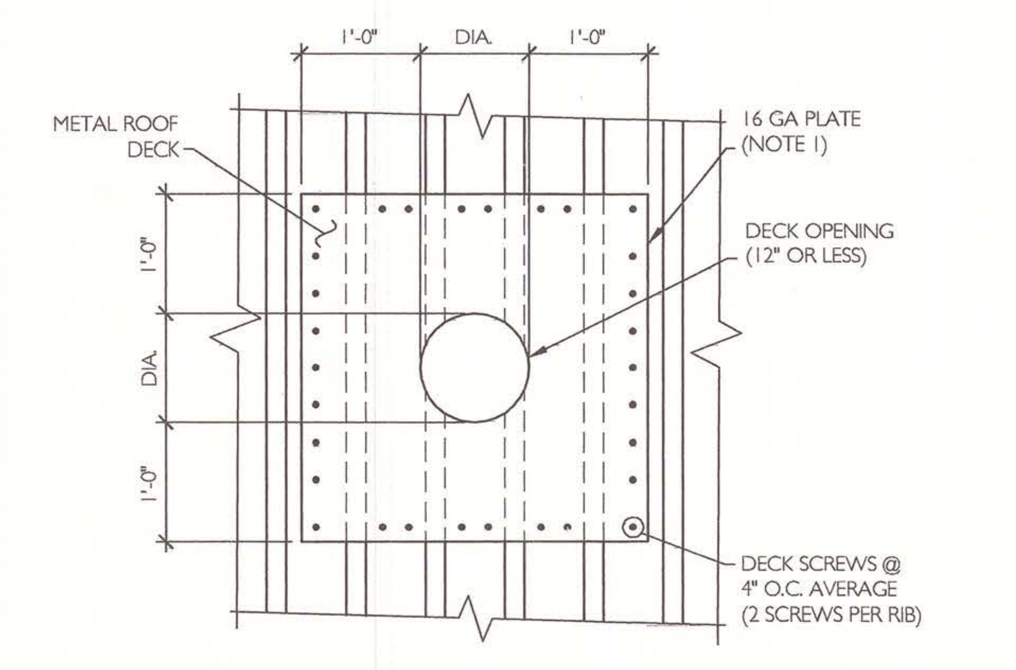
NOTES:
1. PROVIDE WELD LENGTH AS REQ'D FOR SPECIFIED BRACE FORCES.

E11 DETAIL — 1" = 1'-0"



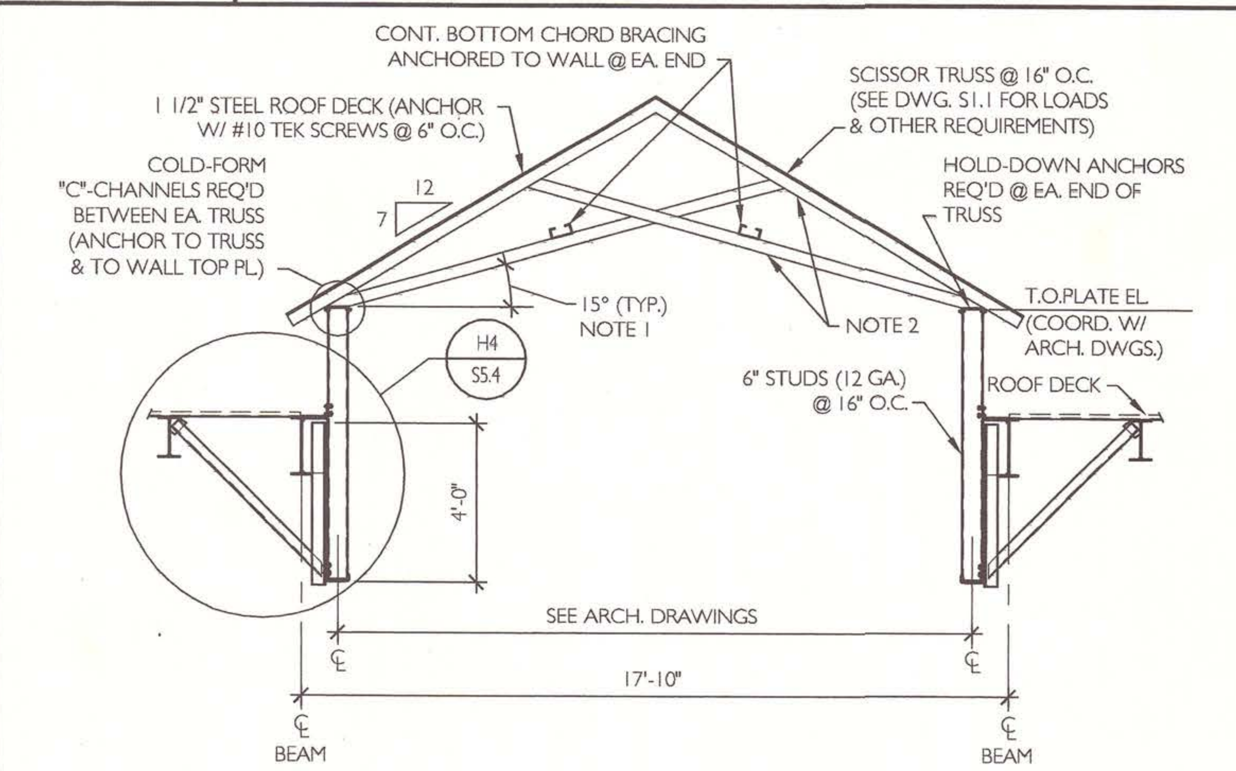
NOTES:
1. Concrete for floors shall be full depth entire length of beam (with minimum dimensions as noted) at girders which are parallel (or partially parallel) to deck flutes. Adjust deck layout, or cut deck where necessary with added filler plate, to accommodate this requirement.

A1 TYPICAL DECK CHANGE DETAIL — NOT TO SCALE



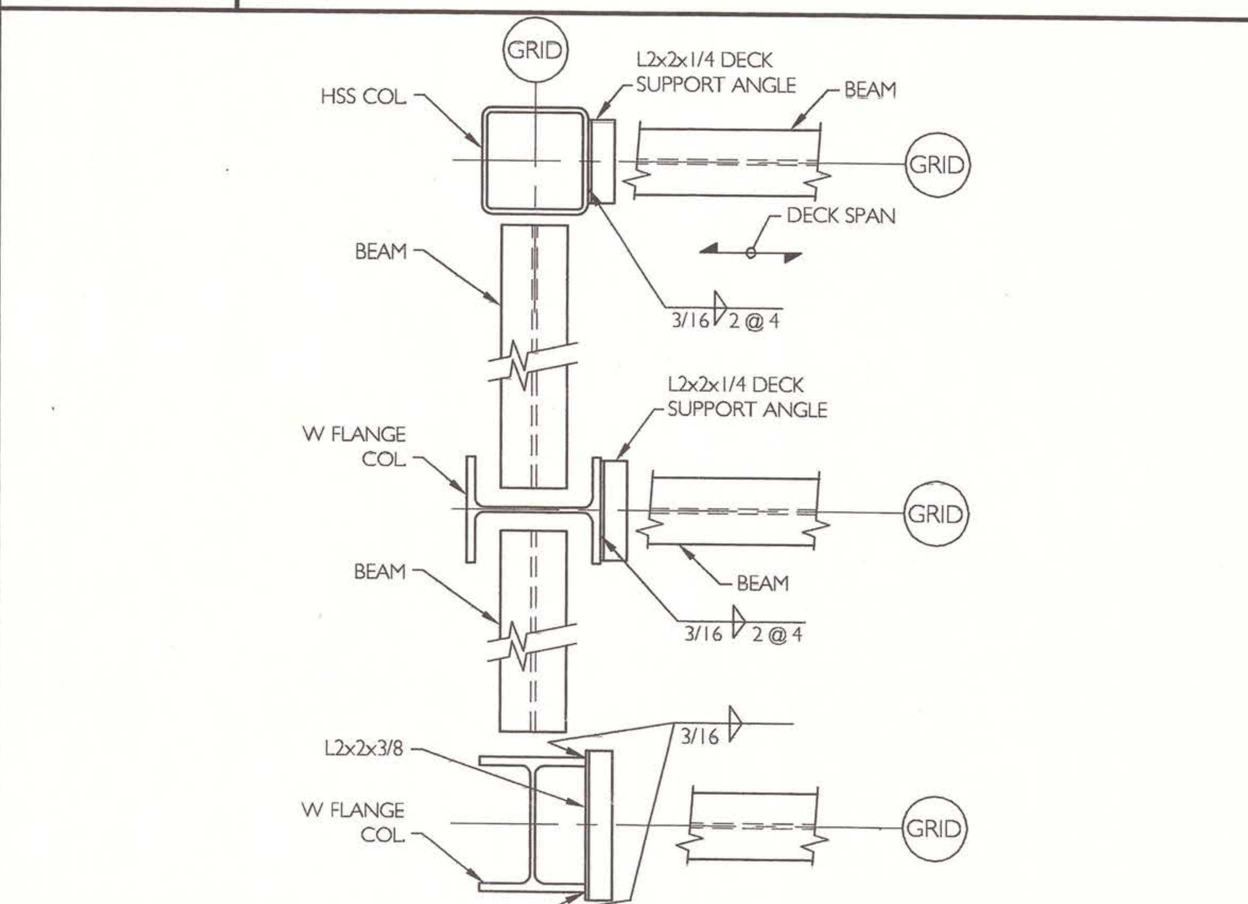
NOTES:
1. Plate may be deleted if opening does not penetrate bottom deck flutes.

A4 TYPICAL DETAIL @ ROOF OPENING — NOT TO SCALE



NOTES:
1. Coordinate truss slopes, profile, and overhang requirements with architectural drawings. Bottom chord slope shall not be steeper than 1/2 top chord slope.
2. Chords shall be 2" wide and be 18 gage (min.).

A8 SECTION — 1/4" = 1'-0"



A11 TYPICAL DECK SUPPORT DETAILS — 1" = 1'-0"

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Price Structural Engineers, Inc.

STATE OF MAINE — DAVID A. PRICE — No. 6401 — LICENSED PROFESSIONAL ENGINEER

PROJECT NORTH — MAG NORTH

PROJECT TITLE:
MAINE TURNPIKE AUTHORITY ADMINISTRATION BUILDING
PORTLAND, MAINE

ISSUED FOR BIDDING / CONSTRUCTION 7-9-07

REV	DESCRIPTION	DATE
0	BIDDING/CONSTRUCTION	7-9-07

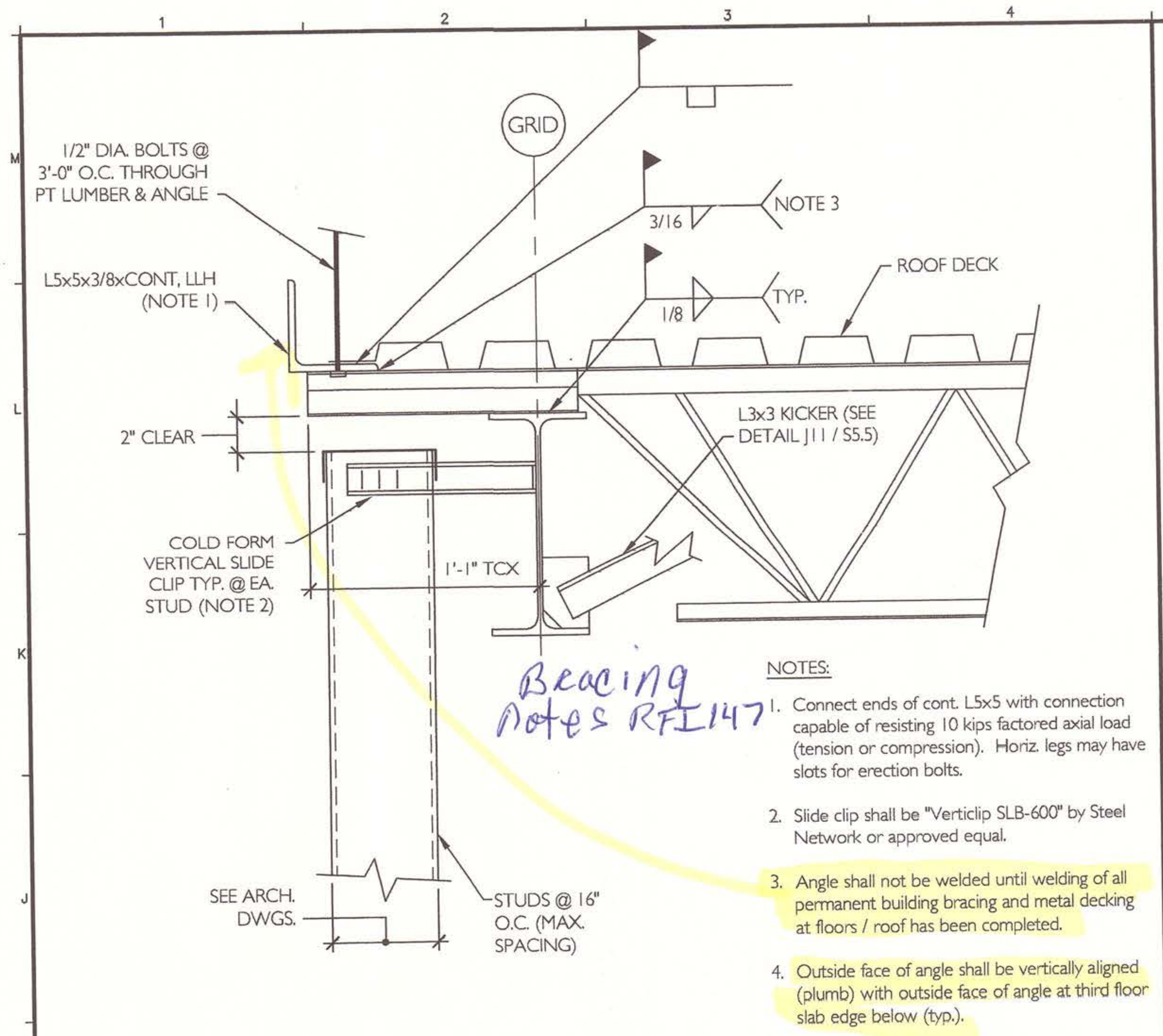
GRAPHIC SCALE: 0" 1"

SCALE:	AS NOTED
PROJECT MANAGER:	SLB
JC/DRAWN BY:	TCM/TDP
A/E OF RECORD:	DAP
CAD FILE:	MTA/S5.2/116-06
PROJECT NO:	06016
DATE:	7-9-07

SHEET TITLE: STEEL FRAMING SECTIONS & DETAILS

SHEET No. S5.2

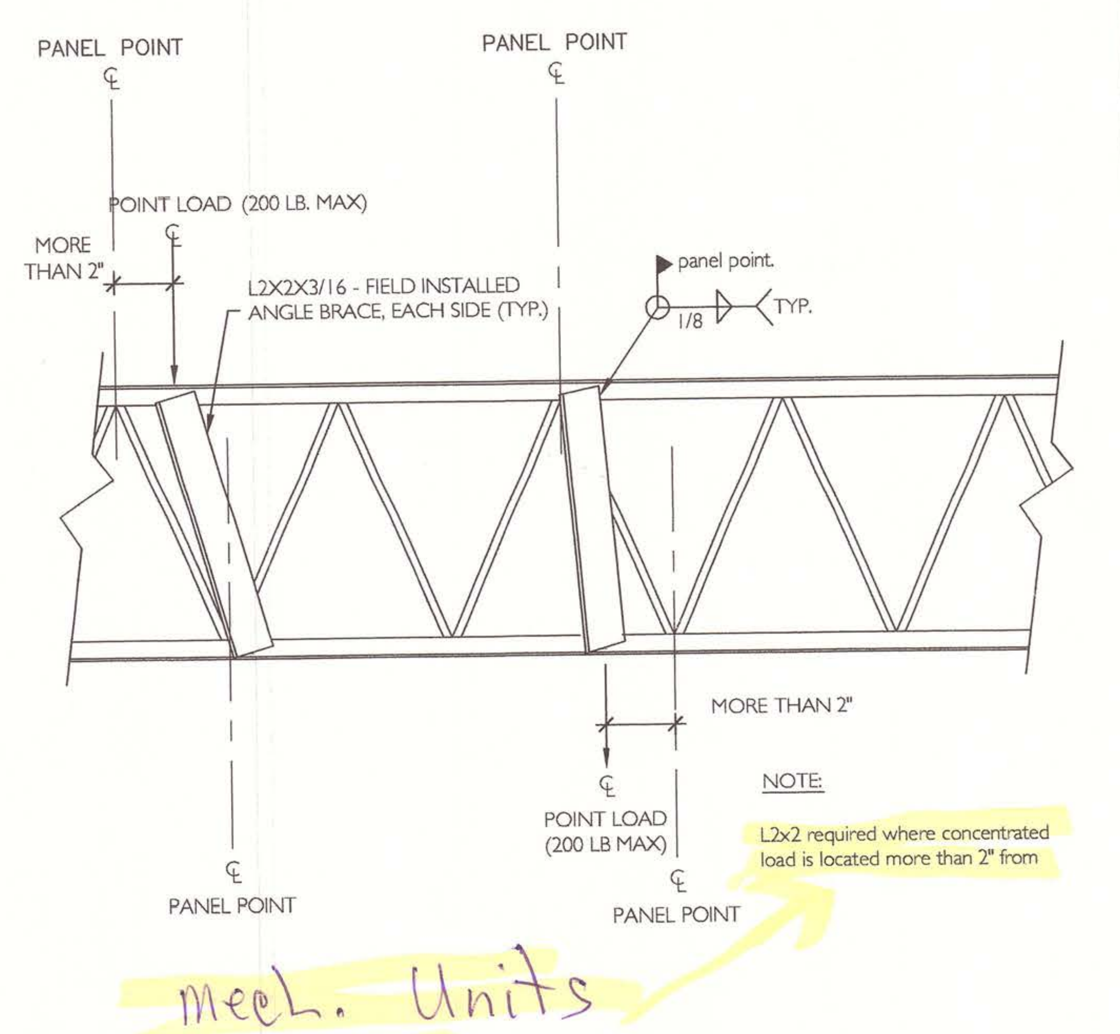
AS BUILT Owner Copy



NOTES:

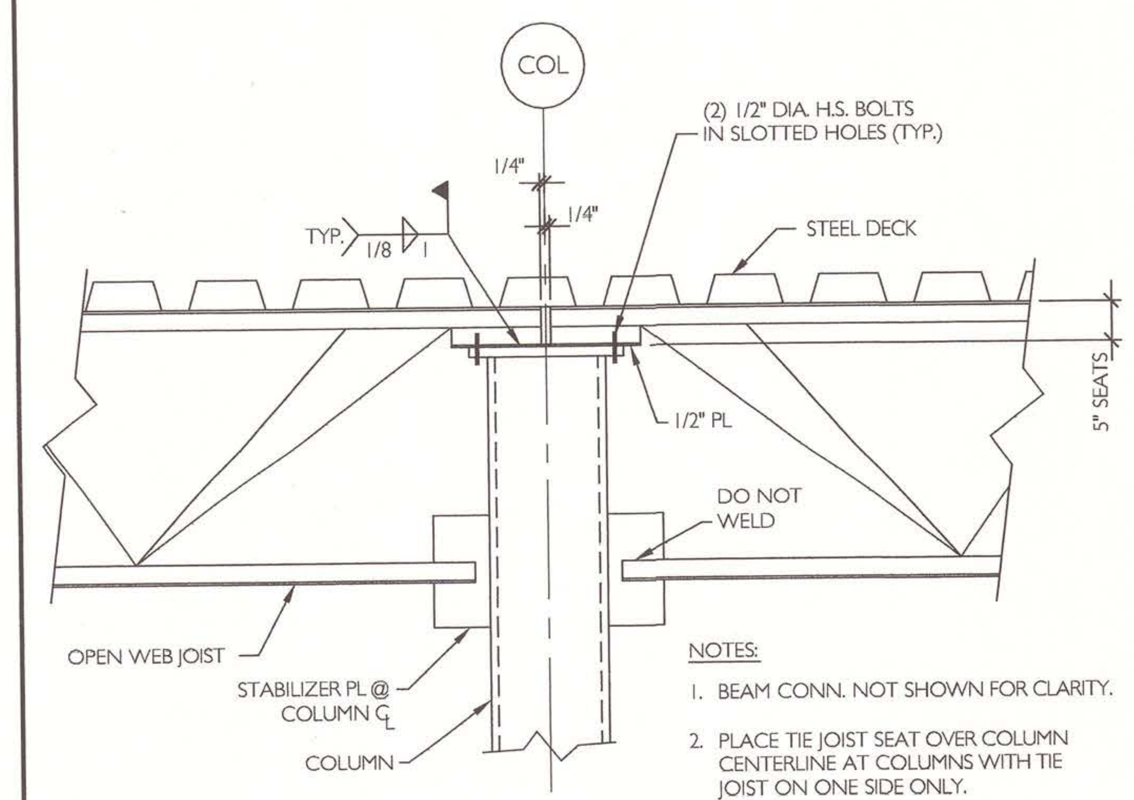
1. Connect ends of cont. L5x5 with connection capable of resisting 10 kips factored axial load (tension or compression). Horiz. legs may have slots for erection bolts.
2. Slide clip shall be "Verticlip SLB-600" by Steel Network or approved equal.
3. Angle shall not be welded until welding of all permanent building bracing and metal decking at floors / roof has been completed.
4. Outside face of angle shall be vertically aligned (plumb) with outside face of angle at third floor slab edge below (typ.).

H1 SECTION
NOT TO SCALE



NOTE:
L2x2 required where concentrated load is located more than 2" from

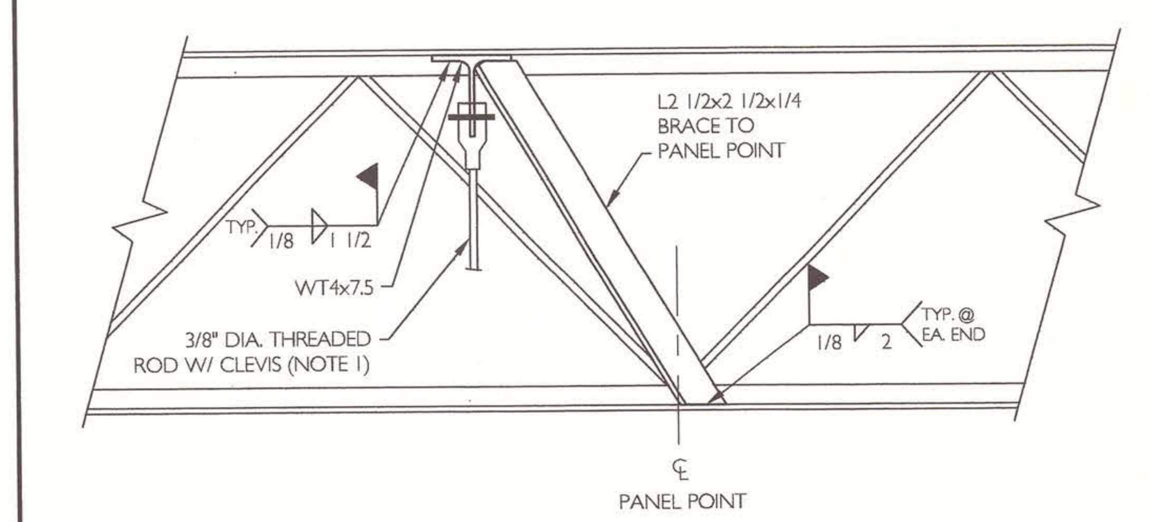
H5 TYPICAL JOIST REINFORCEMENT
1 1/2" = 1'-0"



NOTES:

1. BEAM CONN. NOT SHOWN FOR CLARITY.
2. PLACE TIE JOIST SEAT OVER COLUMN CENTERLINE AT COLUMNS WITH TIE JOIST ON ONE SIDE ONLY.

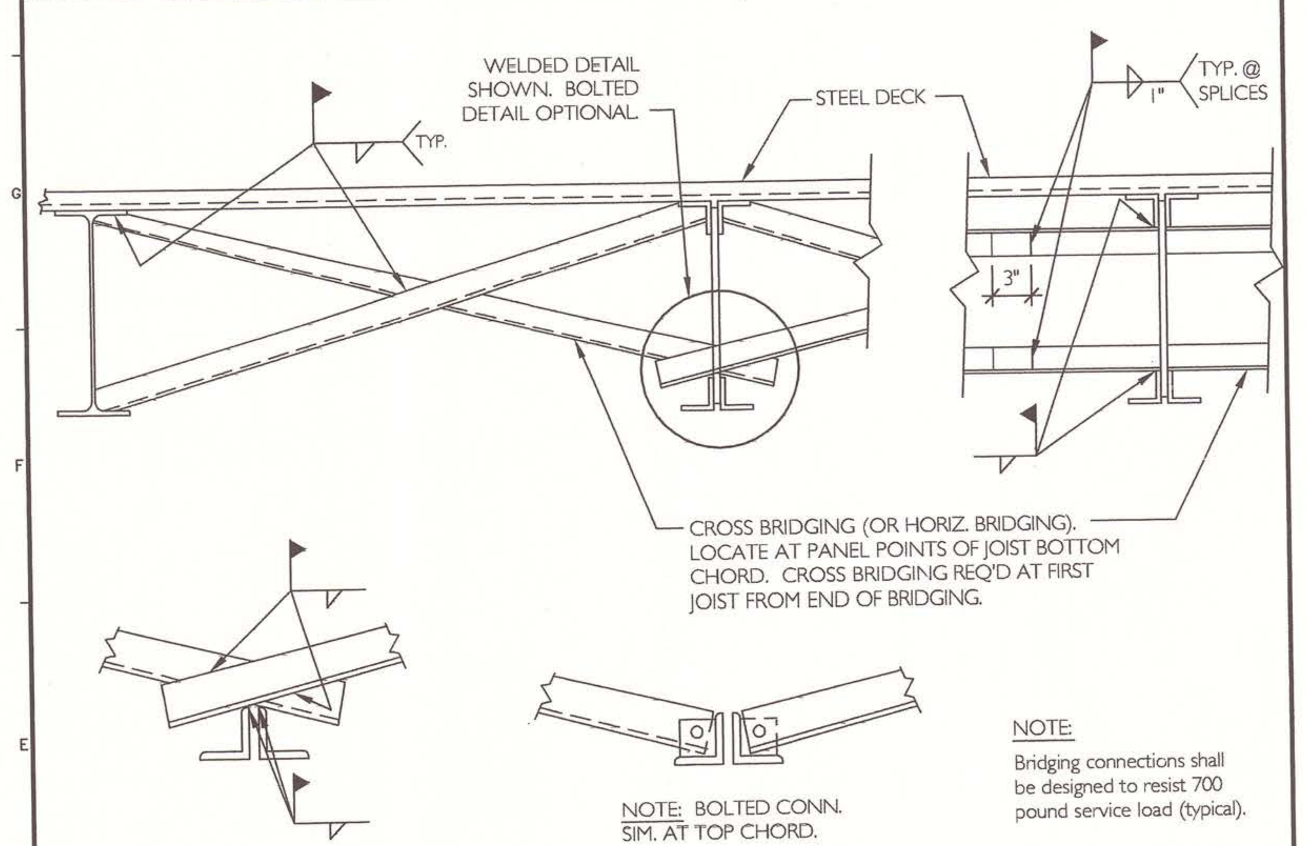
H8 TYPICAL SECTION
NOT TO SCALE



NOTES:

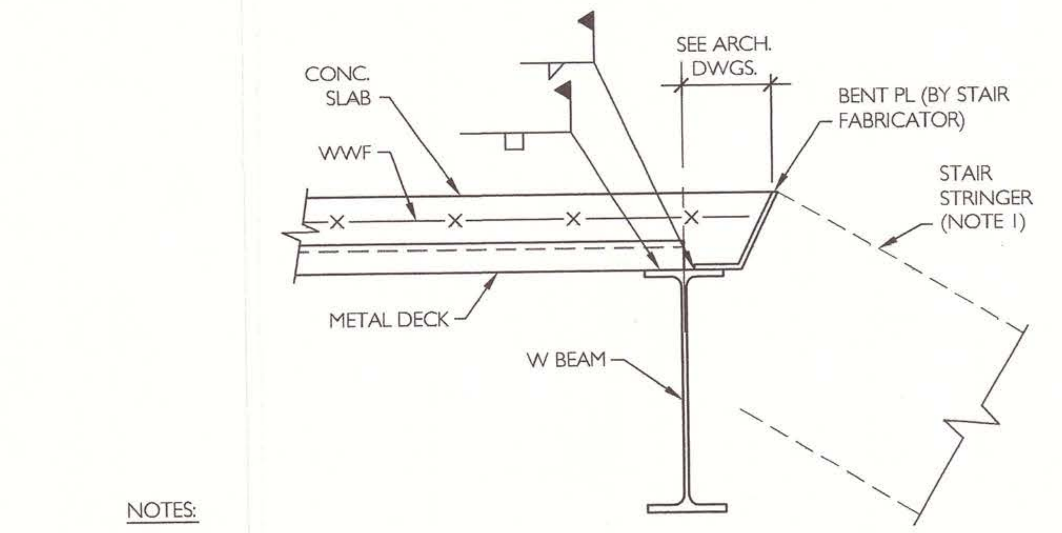
1. Max. concentrated load at joist = 200 lbs. Use for support of cabinet heaters, unit ventilators, cabinet fans, and kitchen exhaust hood. See mechanical drawings for locations and coordinate with equipment suppliers.
2. Contractor shall exercise extreme care to avoid notching joist components at field weld locations.

H12 TYP. SECTION @ EQUIPMENT HANGER
1 1/2" = 1'-0" (BETWEEN JOISTS)



NOTE:
Bridging connections shall be designed to resist 700 pound service load (typical).

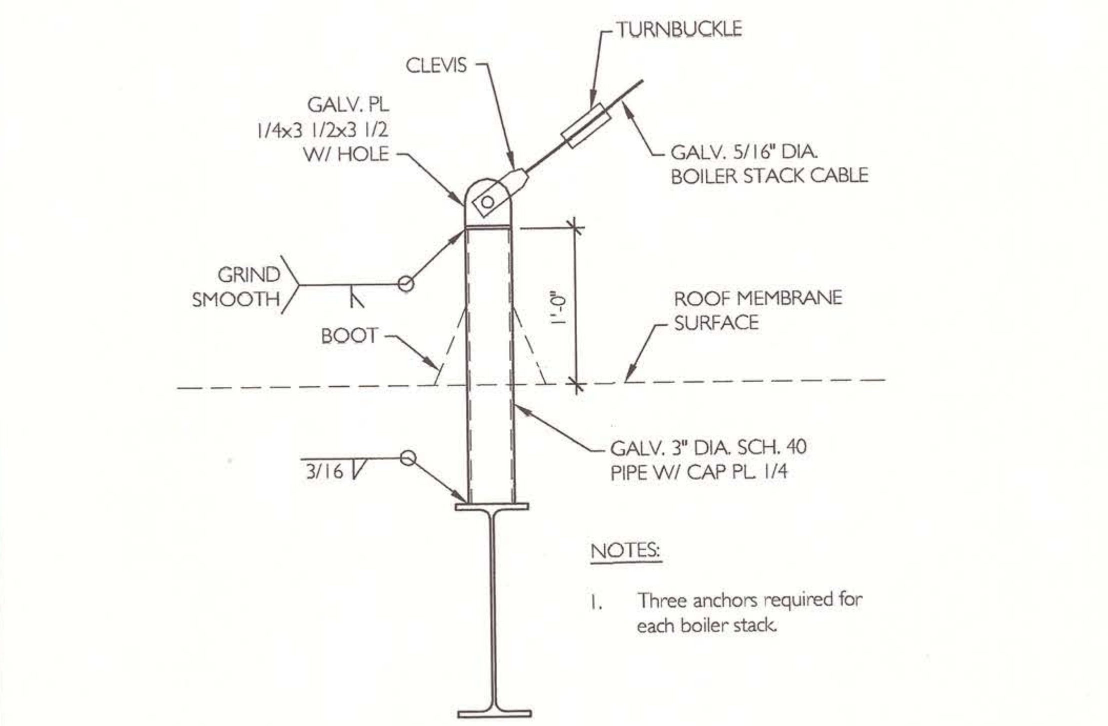
D1 TYPICAL BRIDGING DETAILS
1" = 1'-0"



NOTES:

1. Design of all stair framing, including stringer connection to W beam, shall be by stair fabricator. See Arch. Dwgs. for stair geometry and other stair requirements.

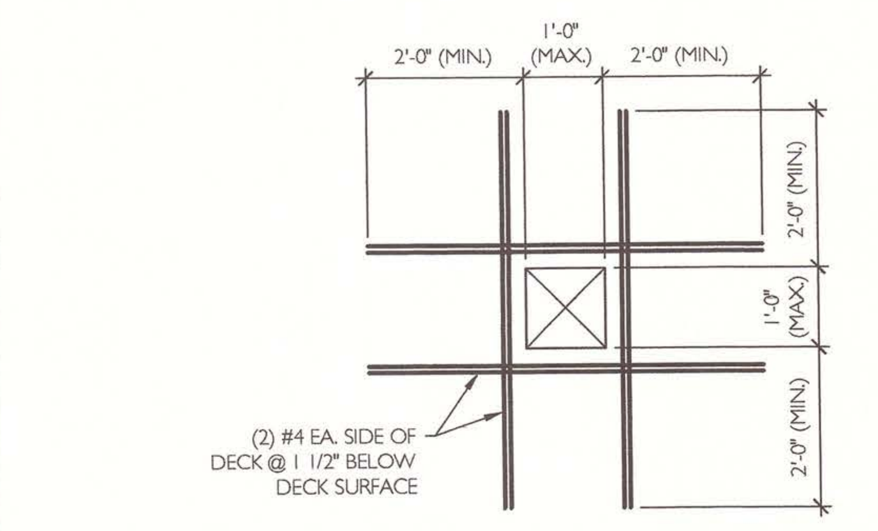
D5 TYPICAL STAIR DETAIL
NOT TO SCALE



NOTES:

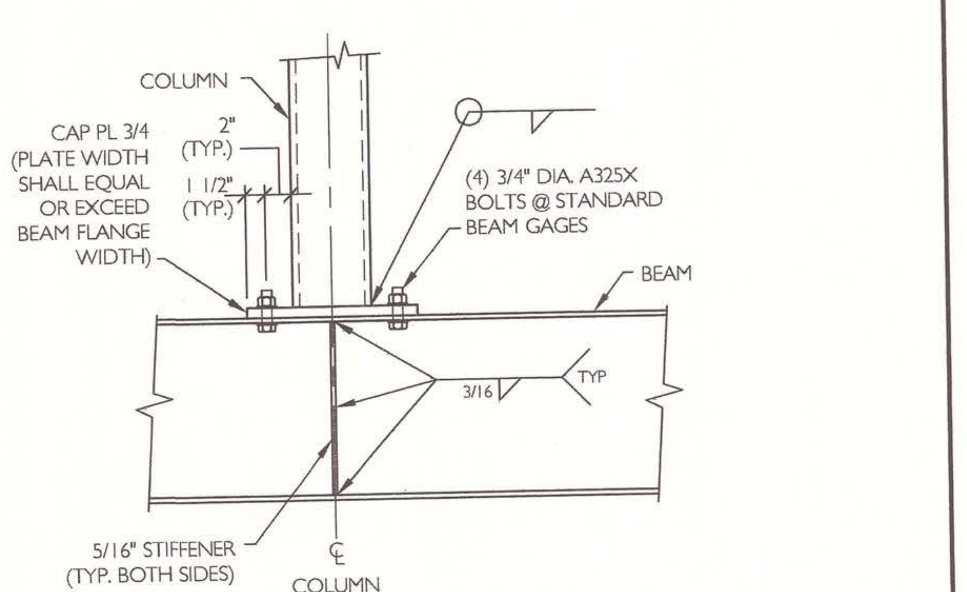
1. Three anchors required for each boiler stack.

D8 BOILER CABLE ANCHOR DETAIL
NOT TO SCALE

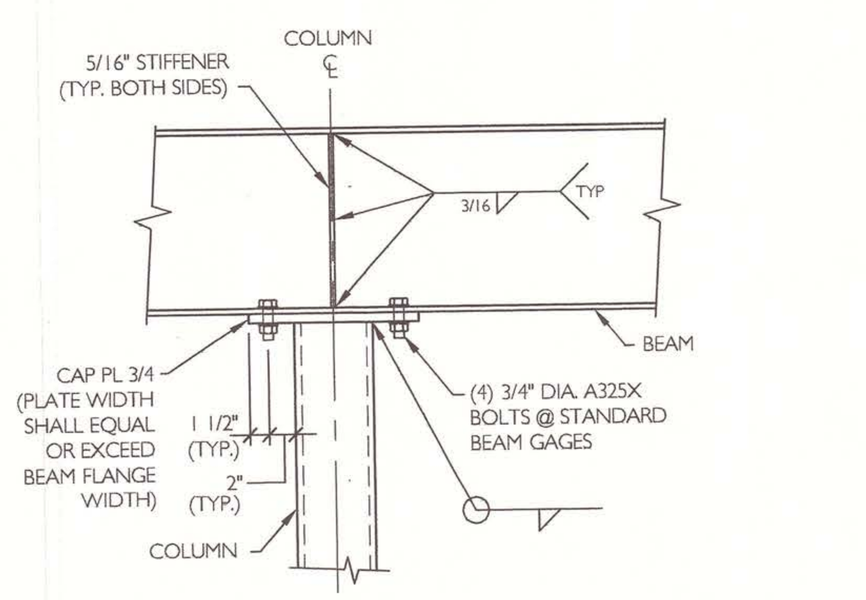


NOTE: Shore deck at opening as required until concrete reaches 28-day strength.

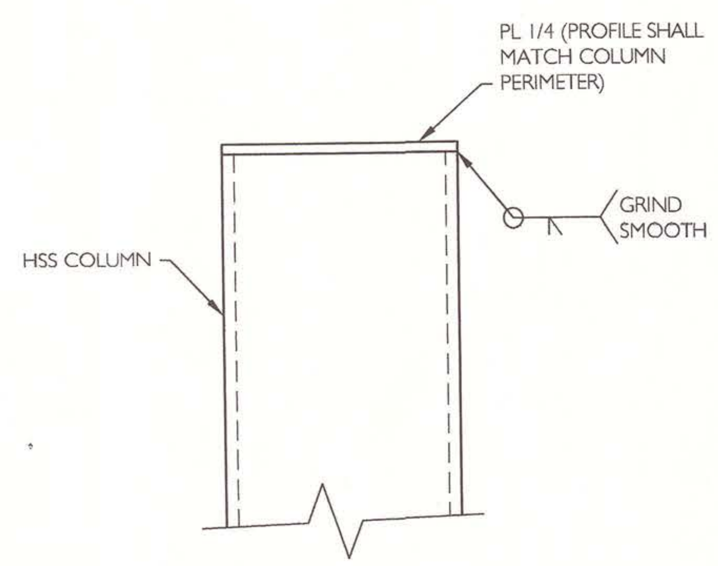
D12 TYPICAL OPENING IN FLOOR DECK
NOT TO SCALE



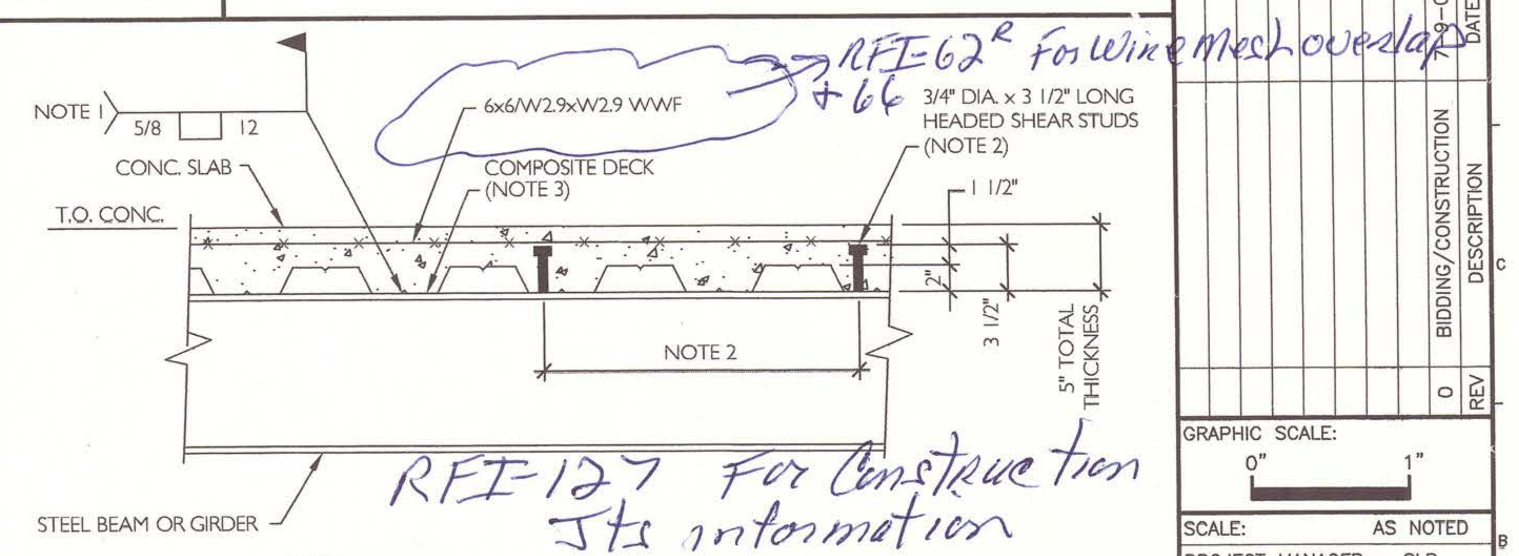
A1 TYP. COLUMN BEARING ON BEAM DETAIL
1" = 1'-0"



A5 TYPICAL BEAM ON COLUMN DETAIL
1" = 1'-0"



A8 TYPICAL HSS COLUMN CAP PLATE
NOT TO SCALE



NOTES:

1. Each welded shear stud may replace one deck weld.
2. See plan and other details for shear stud quantity and placement requirements. Shear studs and stud placement shall conform to AISC and ASW D1.1 requirements.
3. Composite deck shall be 2" deep x 20 gauge (3 span minimum) with Ip min = .418 in.^{4} Sn min. = .415 in.^{3} and Fy = 40 ksi.

A12 TYP. SECTION @ ELEVATED SLAB
NOT TO SCALE

SMRT

Price Structural Engineers, Inc.

STATE OF MAINE — DAVID PRICE — No. 6401 — LICENSED — PROFESSIONAL ENGINEER

PROJECT NORTH
MAG. NORTH

PROJECT TITLE:
MAINE TURNPIKE AUTHORITY ADMINISTRATION BUILDING
PORTLAND, MAINE

ISSUED FOR BIDDING / CONSTRUCTION
7-9-07

REV	DESCRIPTION	DATE
0	BIDDING/CONSTRUCTION	7-9-07

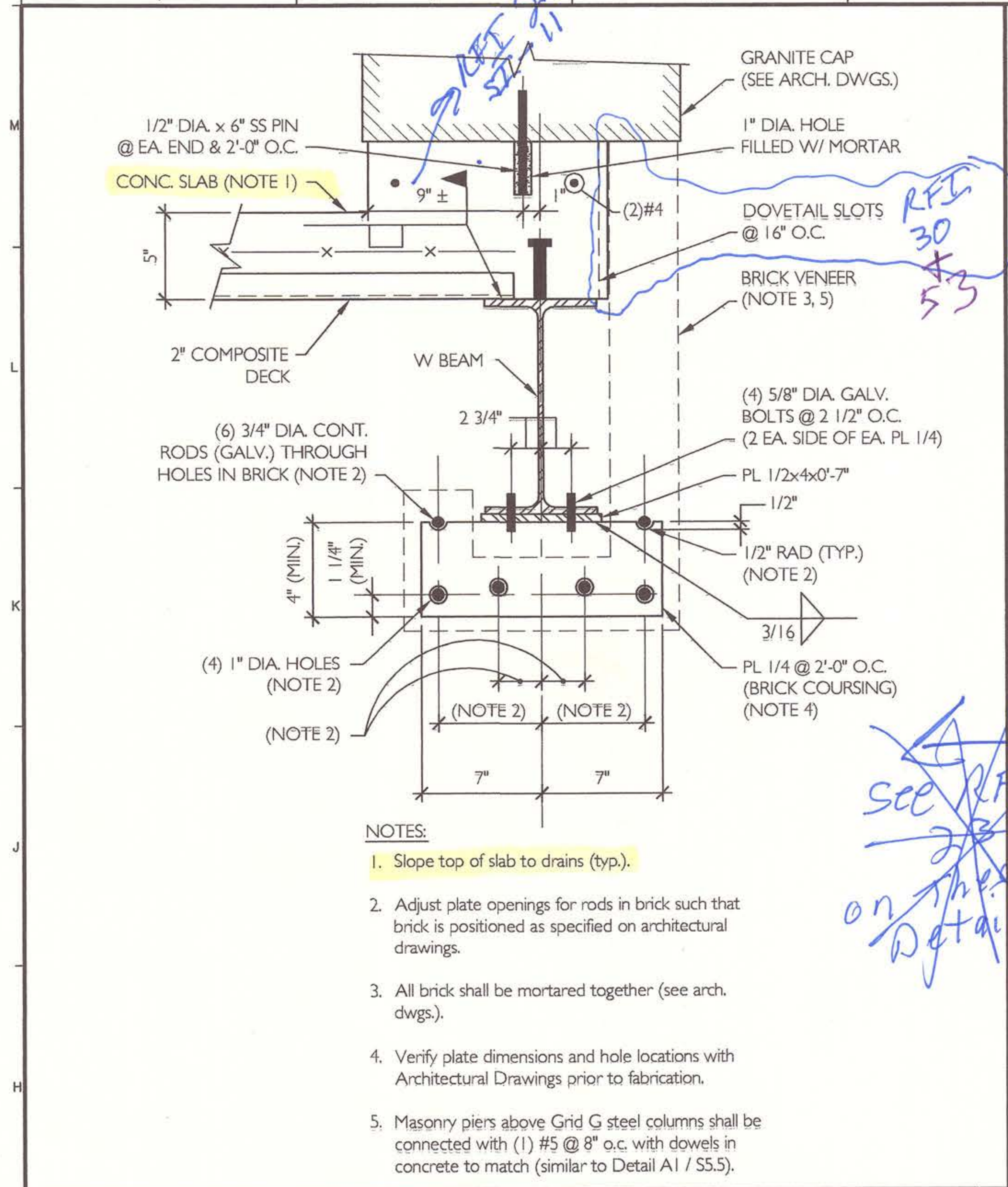
GRAPHIC SCALE: 0" 1"

SCALE:	AS NOTED
PROJECT MANAGER:	SLB
JC/DRAWN BY:	TCM/TDP
A/E OF RECORD:	DAP
CAD FILE:	MTA/S5.3/116-06
PROJECT NO:	06016
DATE:	7-9-07

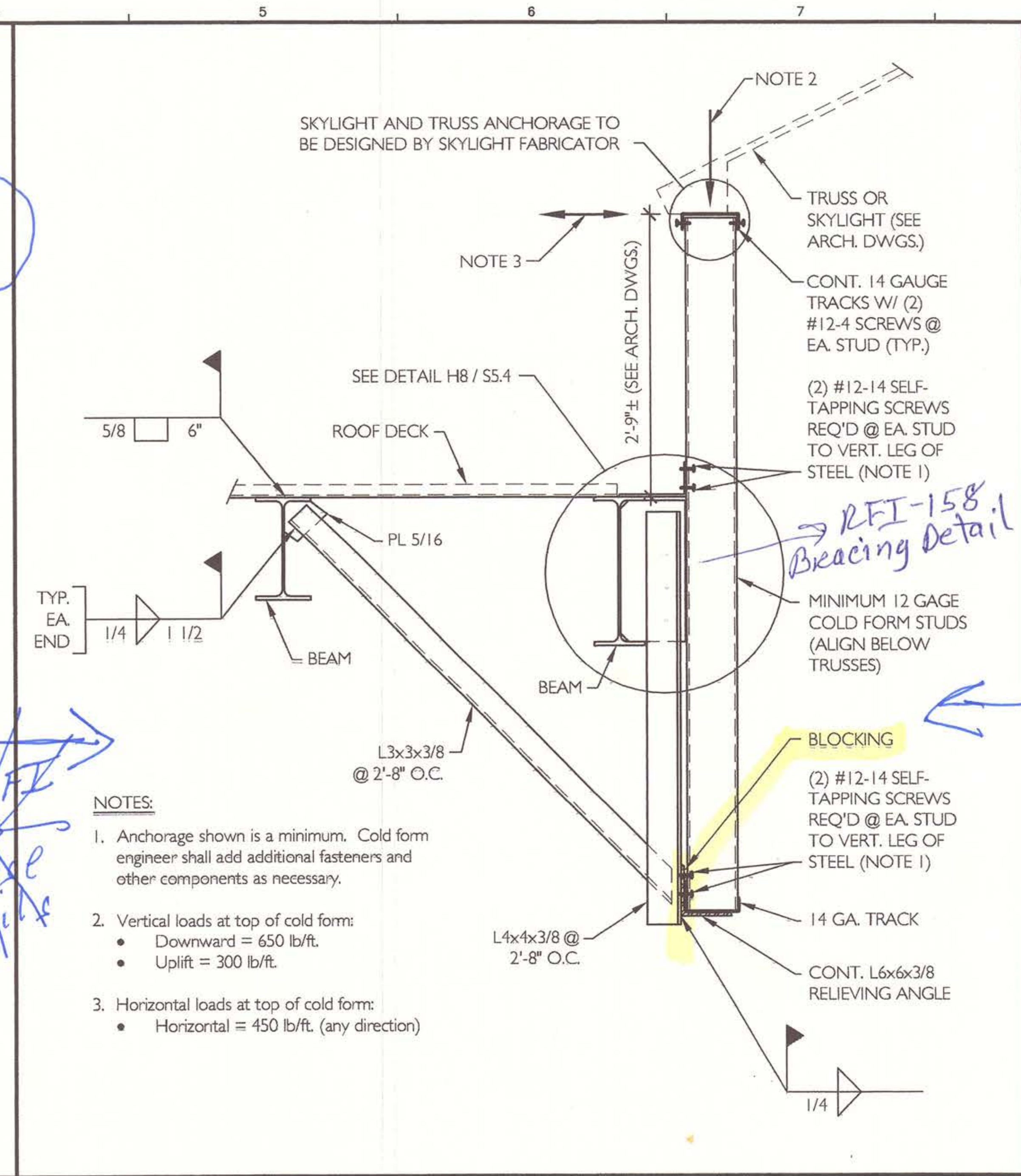
SHEET TITLE:
STEEL FRAMING SECTIONS & DETAILS

SHEET No. S5.3

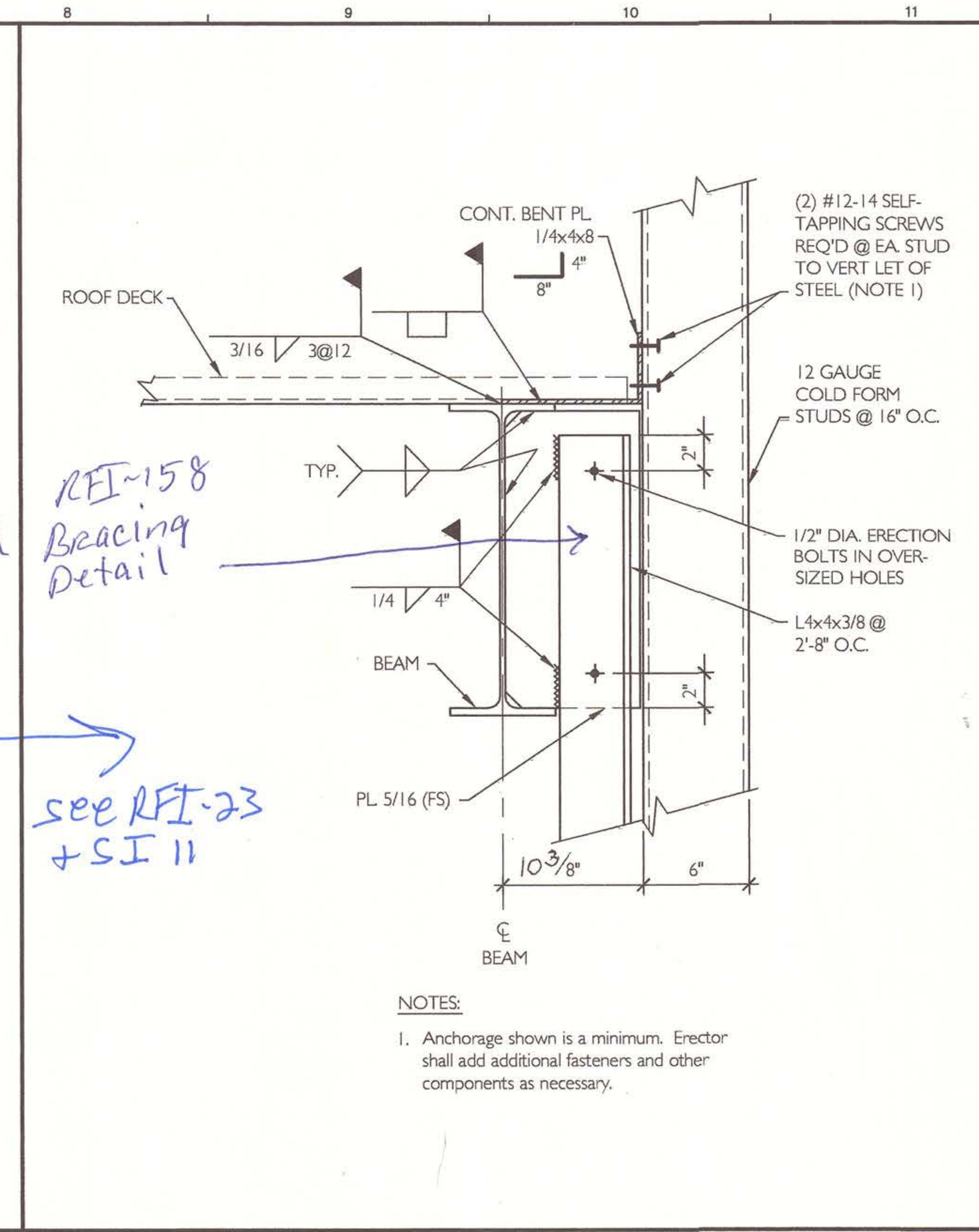
AS BUILT Owner Copy



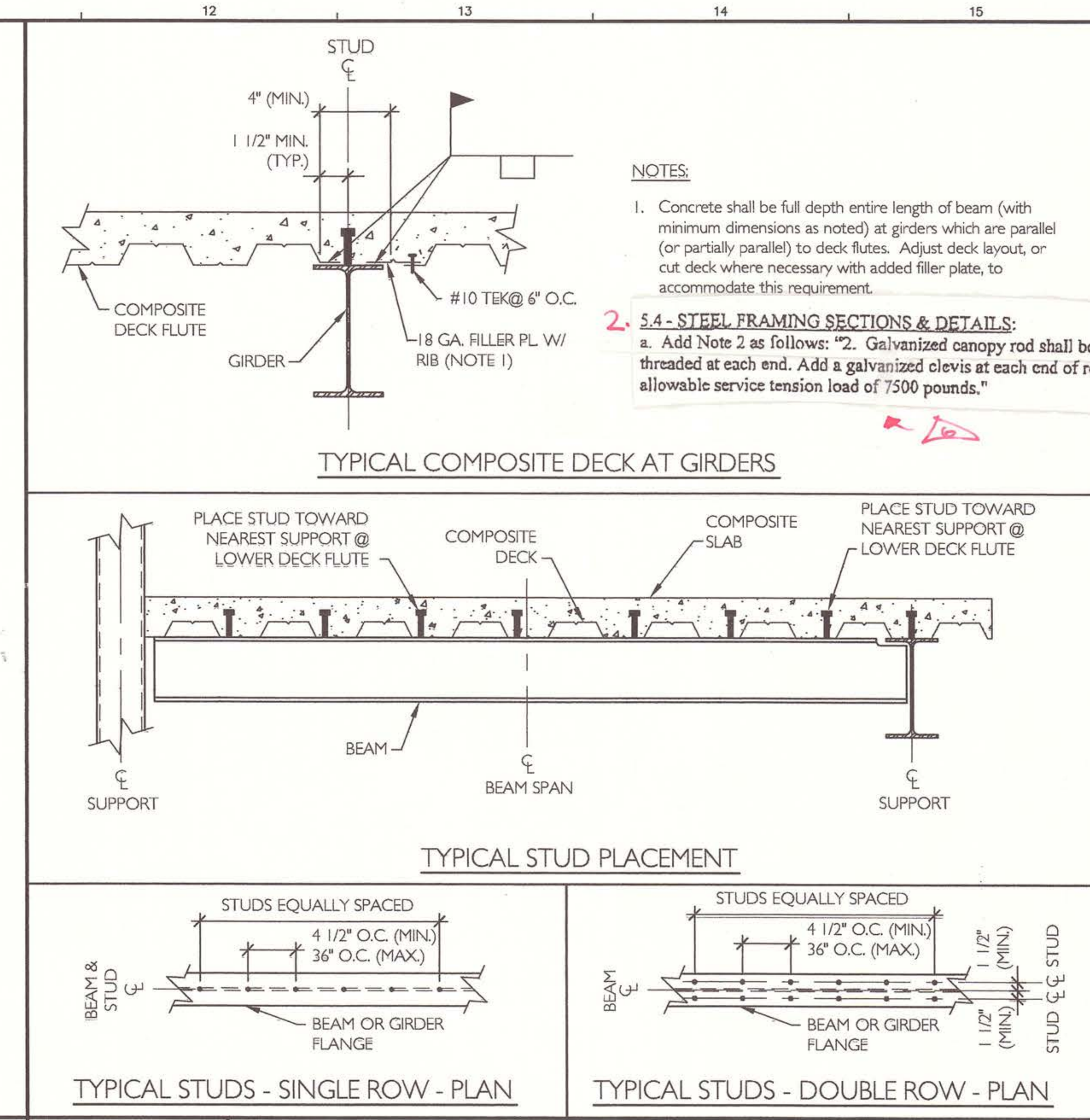
H1	ENTRANCE BEAM SECTION
1 1/2" = 1'-0"	



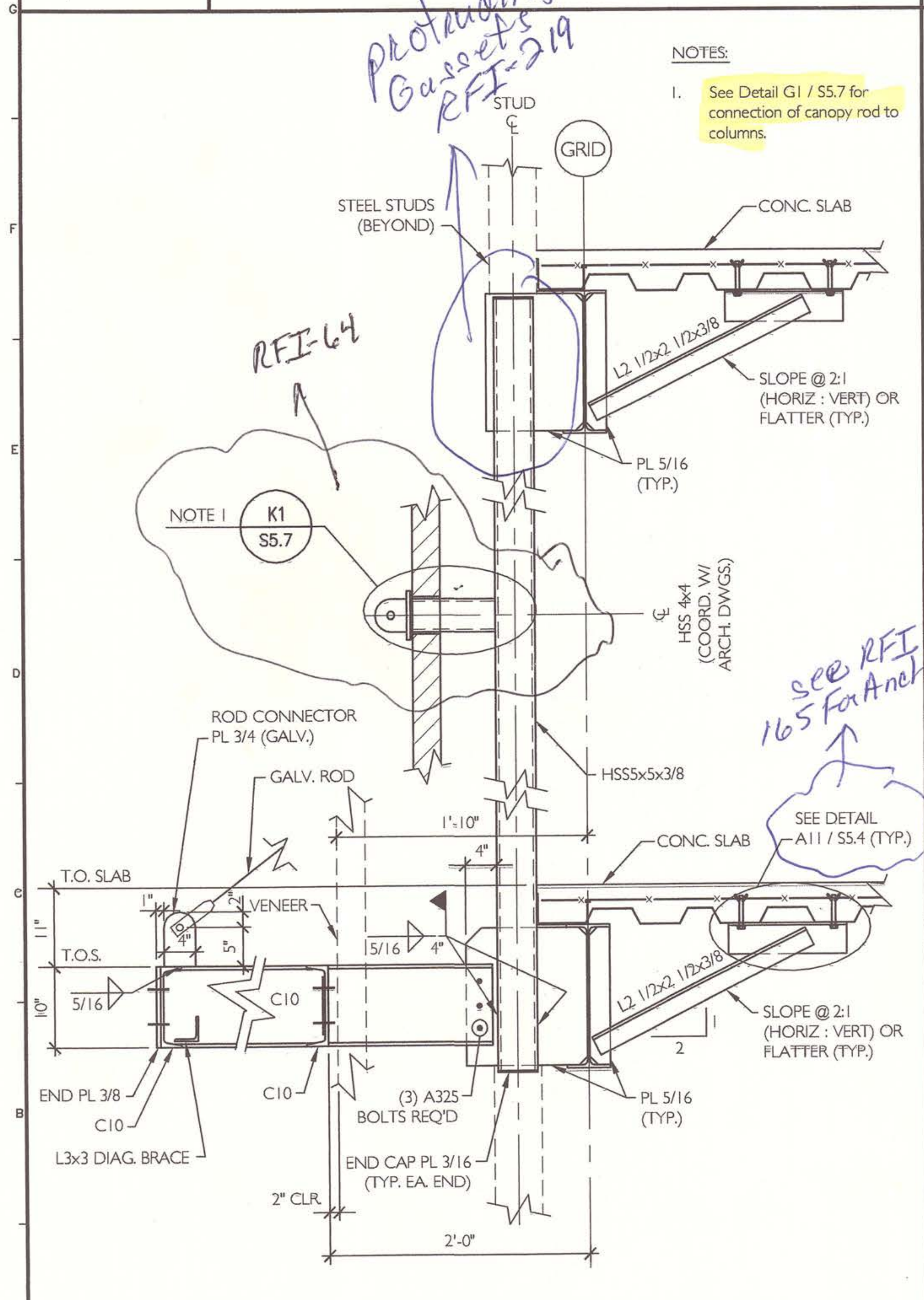
H4	SKYLIGHT & TRUSS DETAIL (TYP.)
3/4" = 1'-0"	



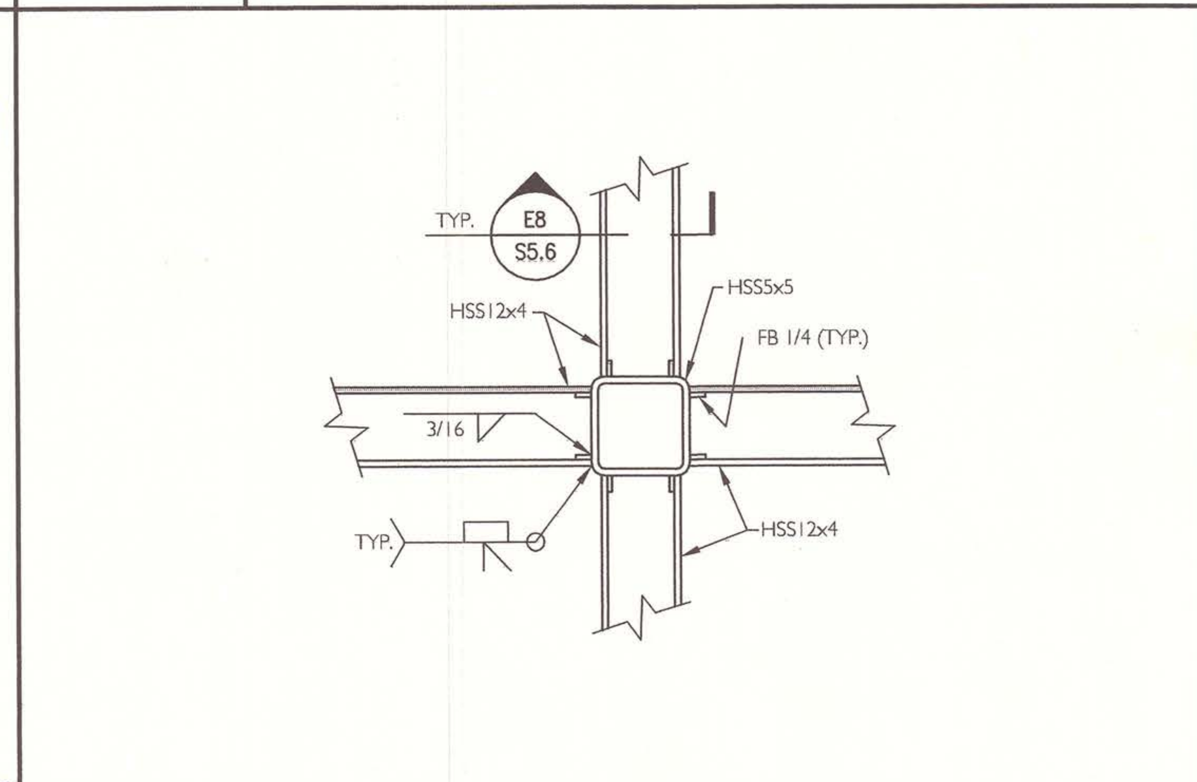
H8	DETAIL
1 1/2" = 1'-0"	



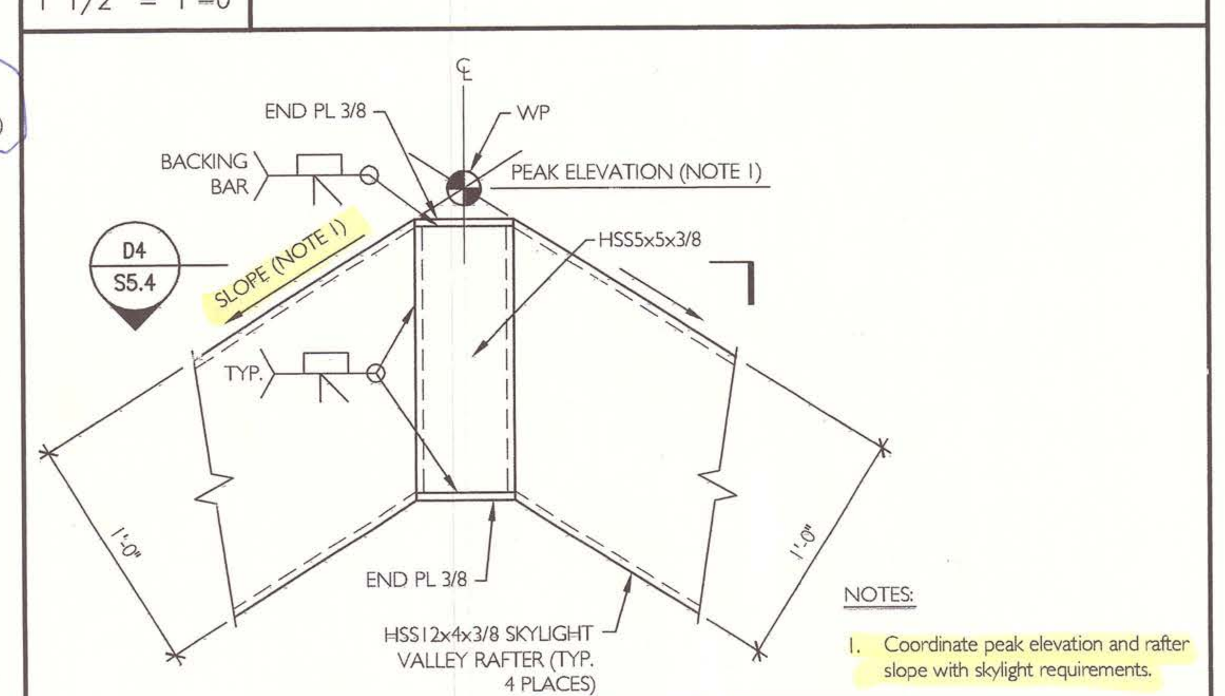
H11	COMPOSITE BEAM TYPICAL DETAILS
NOT TO SCALE	



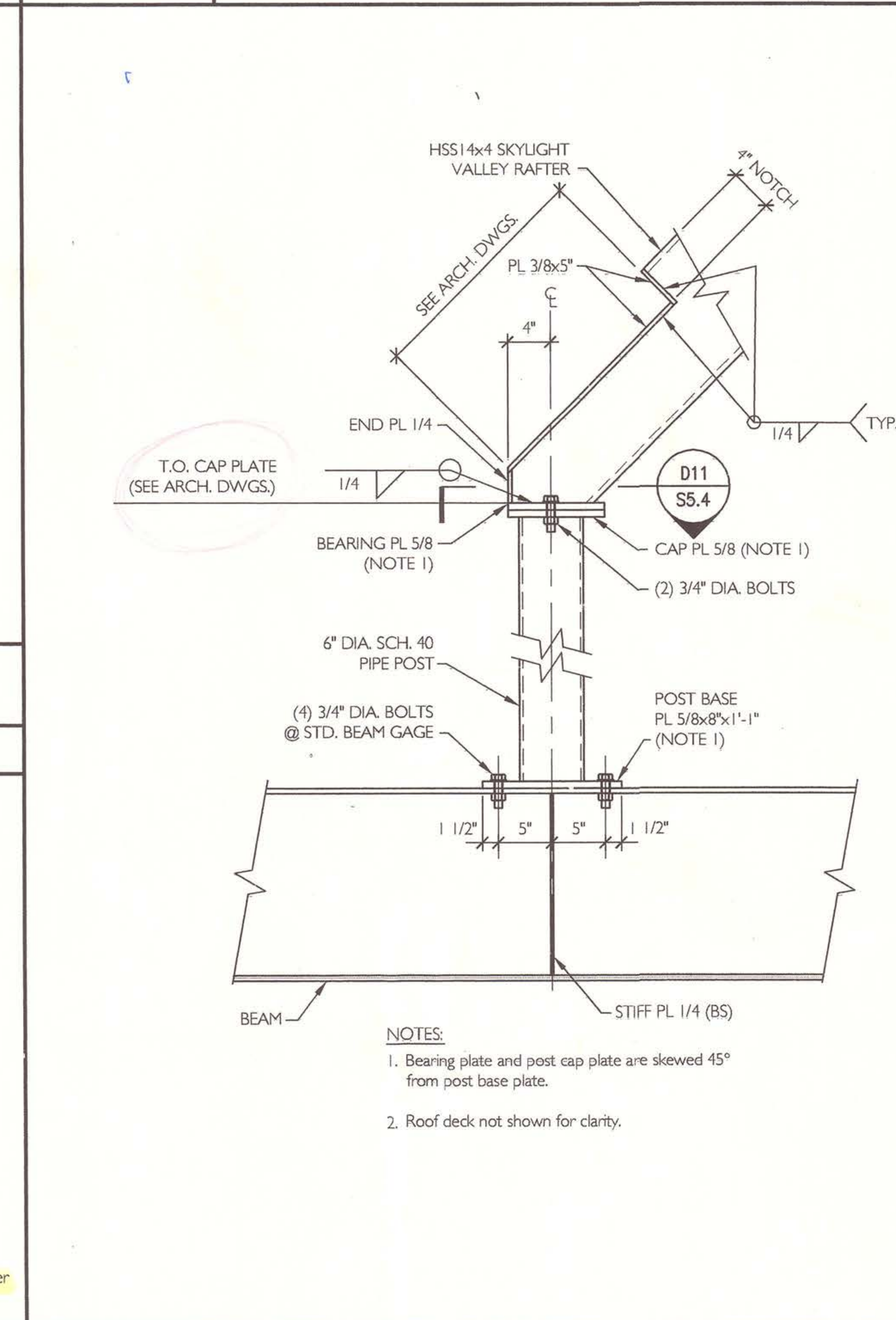
A1	TYP. CANOPY ROD SUPPORT DETAIL
NOT TO SCALE	



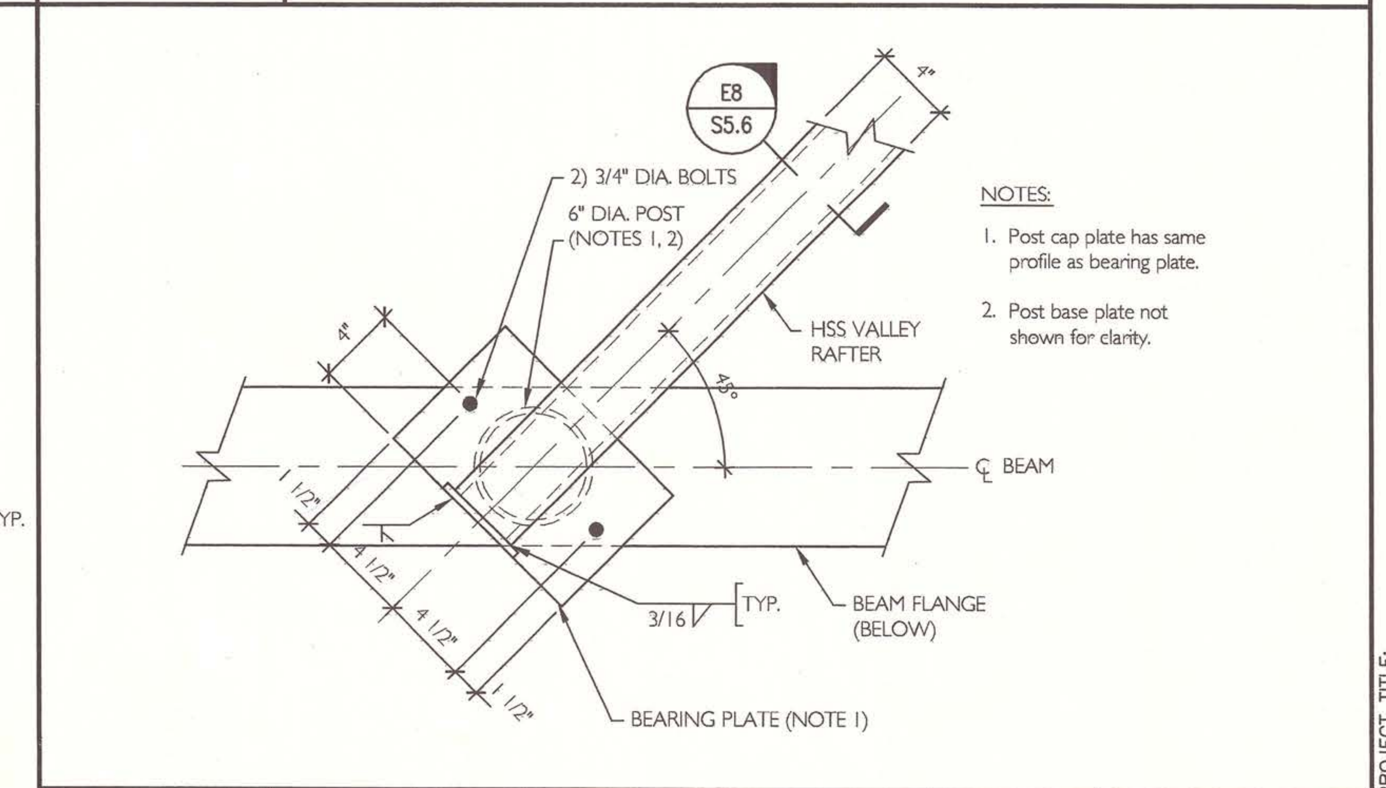
D4	PLAN
1 1/2" = 1'-0"	



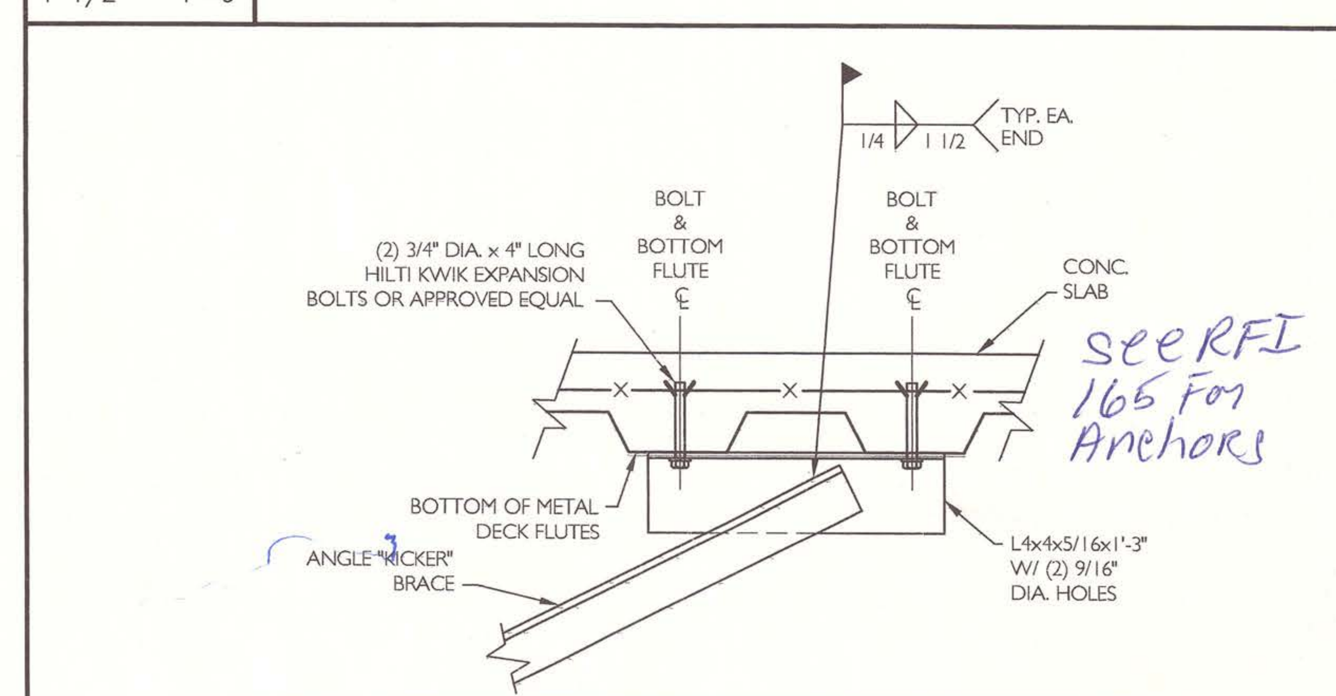
A4	SKYLIGHT VALLEY RAFTER / PEAK CONNECTION
1 1/2" = 1'-0"	



A8	SKYLIGHT VALLEY RAFTER BEARING POST
1" = 1'-0"	



D11	DETAIL
1 1/2" = 1'-0"	



A11	TYPICAL DETAIL (UON)
1 1/2" = 1'-0"	

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Price Structural Engineers

STATE OF MAINE DAVID PRIDE No. 6401 LICENSED PROFESSIONAL ENGINEER

PROJECT NORTH

PROJECT TITLE:
MAINE TURNPIKE AUTHORITY ADMINISTRATION BUILDING
PORTLAND, MAINE

ISSUED FOR BIDDING / CONSTRUCTION 7-9-07

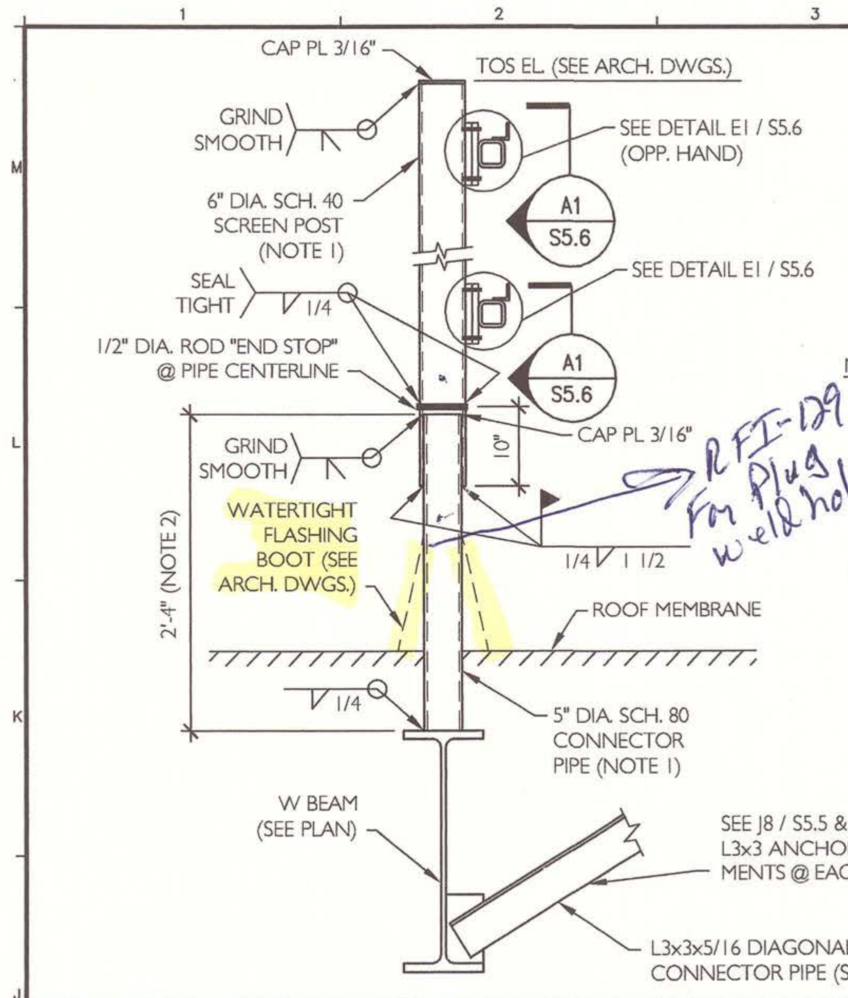
REV	DESCRIPTION	DATE
0	BIDDING/CONSTRUCTION	7-9-07

GRAPHIC SCALE: 0" 1"

SCALE:	AS NOTED
PROJECT MANAGER:	SLB
JC/DRAWN BY:	TCM/TDP
A/E OF RECORD:	DAP
CAD FILE:	MTA/S5.4/116-06
PROJECT NO:	06016
DATE:	7-9-07

SHEET TITLE:
STEEL FRAMING SECTIONS & DETAILS

SHEET No.
S5.4



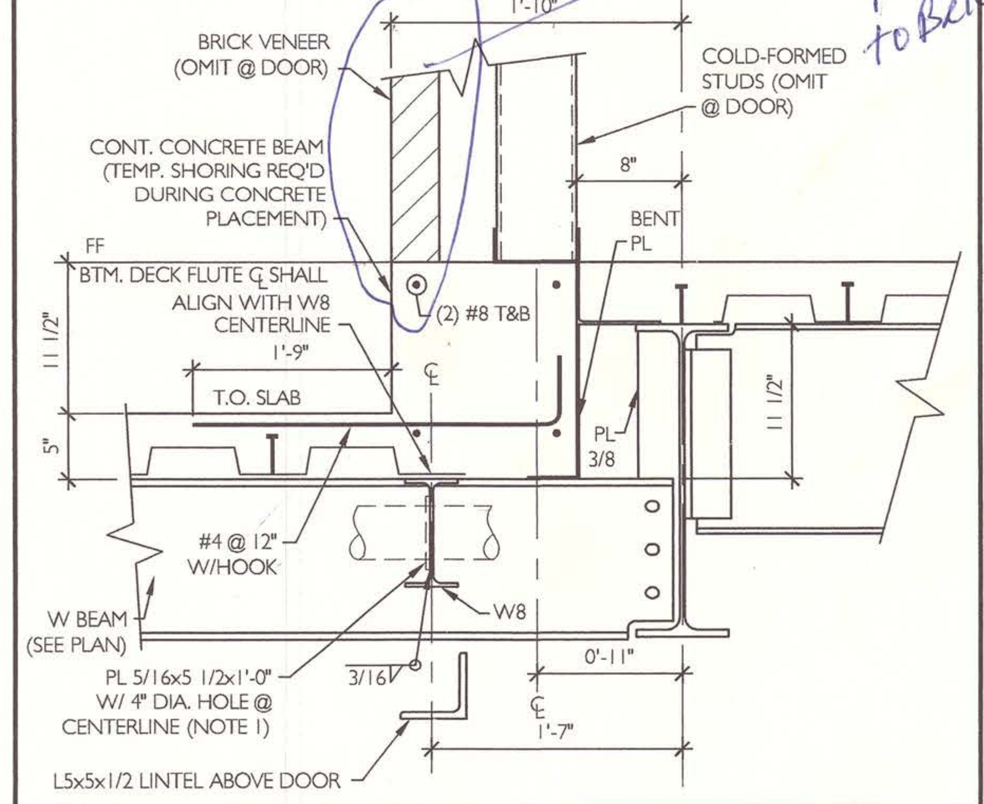
NOTES:

1. Pipe and other exposed steel shall be coated with Tnemec 90-97 primer, epoxy 2nd coat, and polyurethane final coat in accordance with Tnemec recommendations. Final color selected by Architect (clean and touch up at field tack weld).
2. General Contractor shall verify that length of connector pipe is adequate to accommodate flashing boot prior to fabrication.
3. Pipe and screen post accessories shall be galvanized.

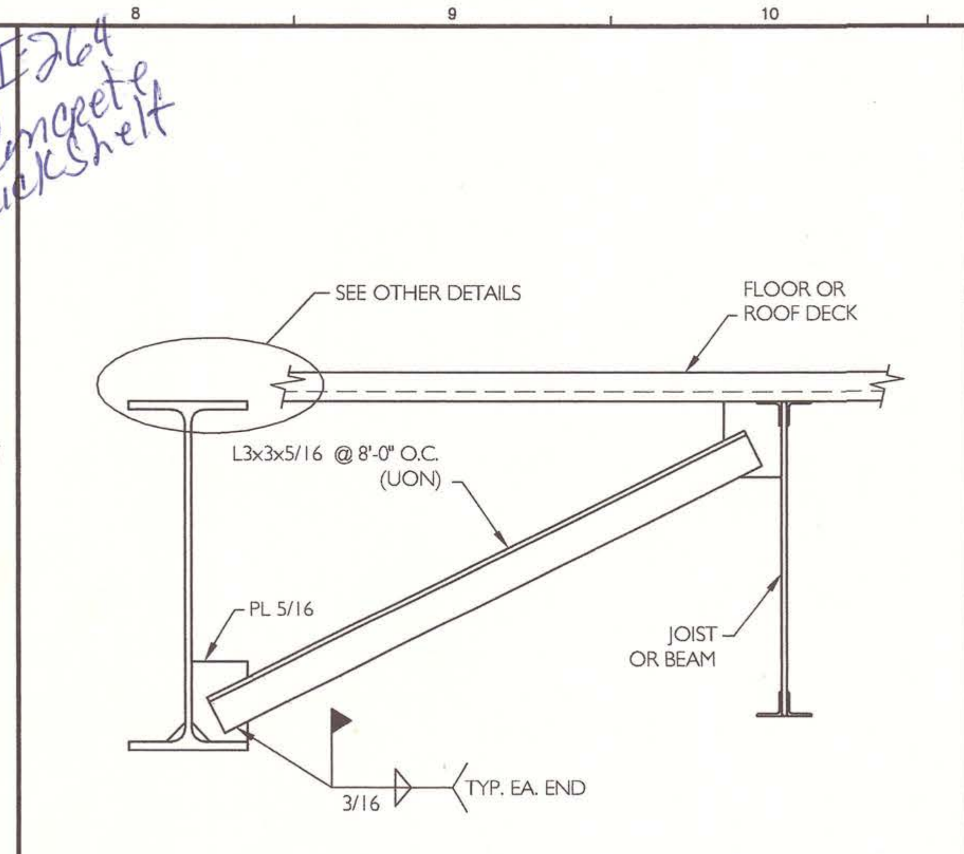
J1	SECTION
NOT TO SCALE	

NOTES:

1. Provide 4" dia. hole in beam web at roof drain piping (see piping drawings). Reinforce hole perimeter w/ pl. 5/16 as specified. Hole dia. center-line shall be at least 1'-0" from ends of beams.

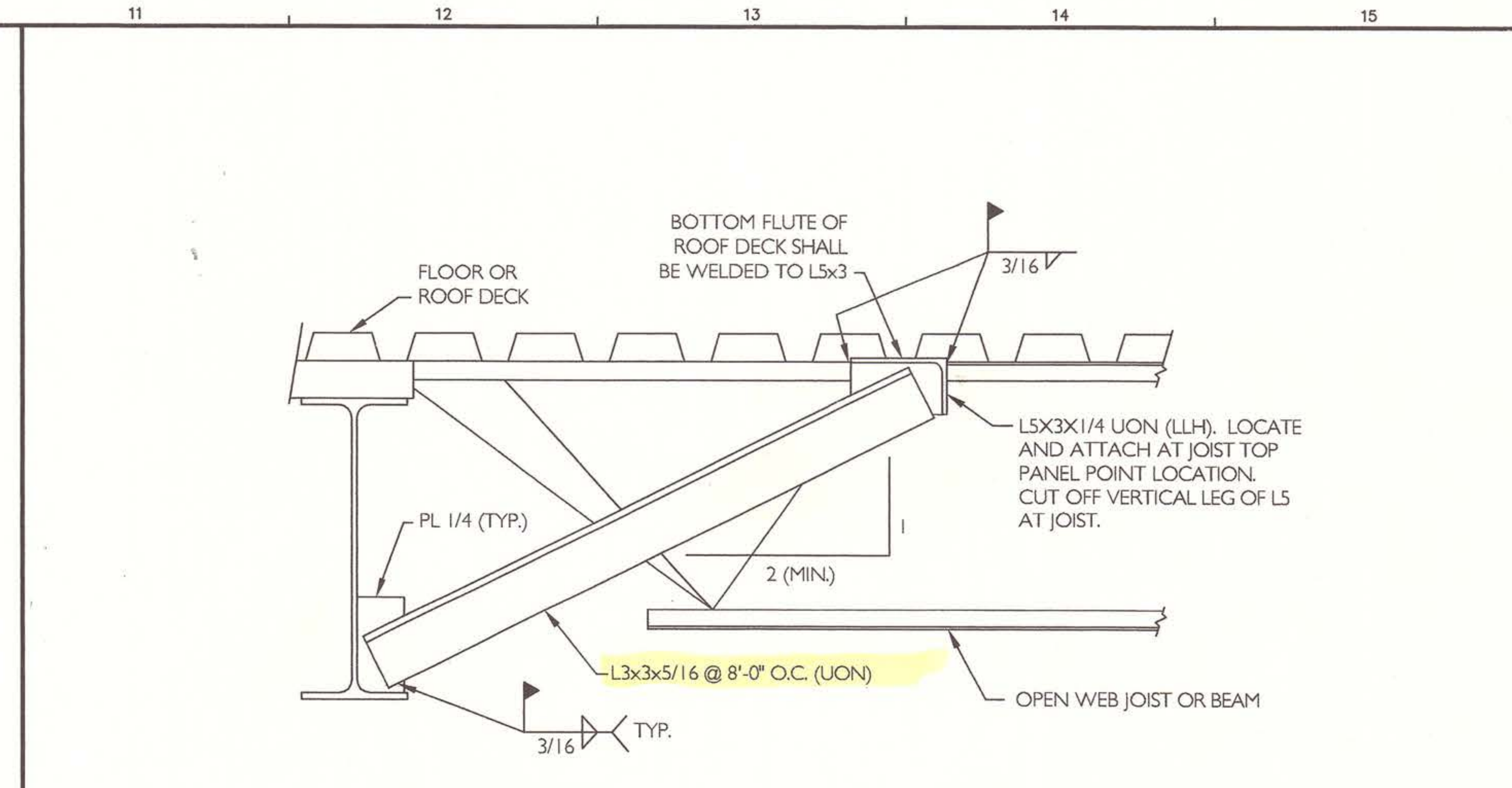


J5	SECTION
NOT TO SCALE	



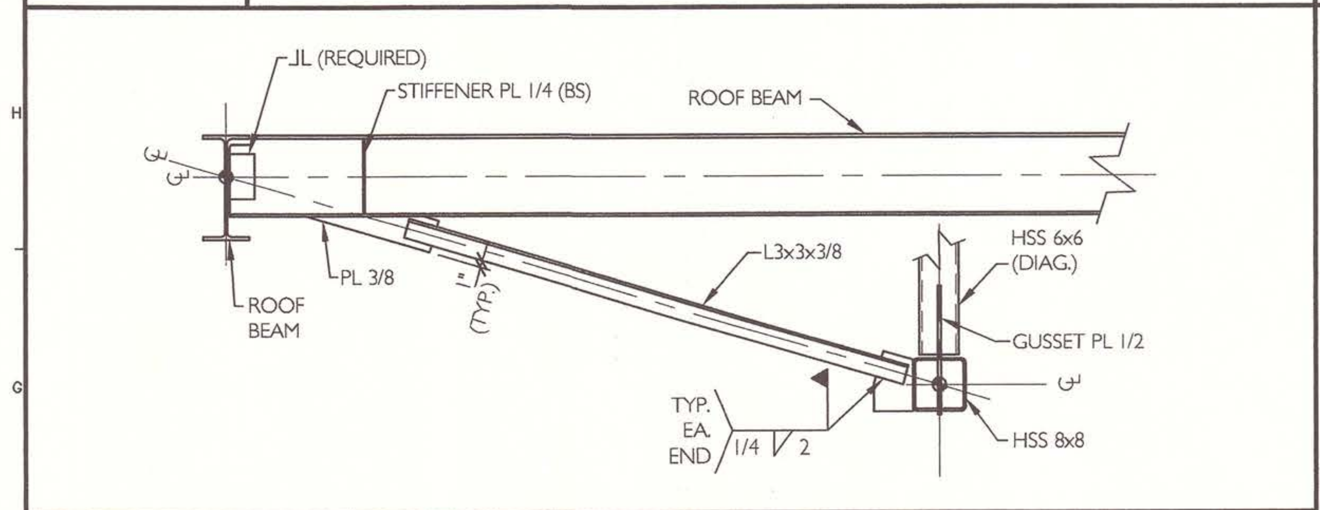
NOTE: This detail typical at roof perimeter and where specified.

J8	DETAIL
NOT TO SCALE	

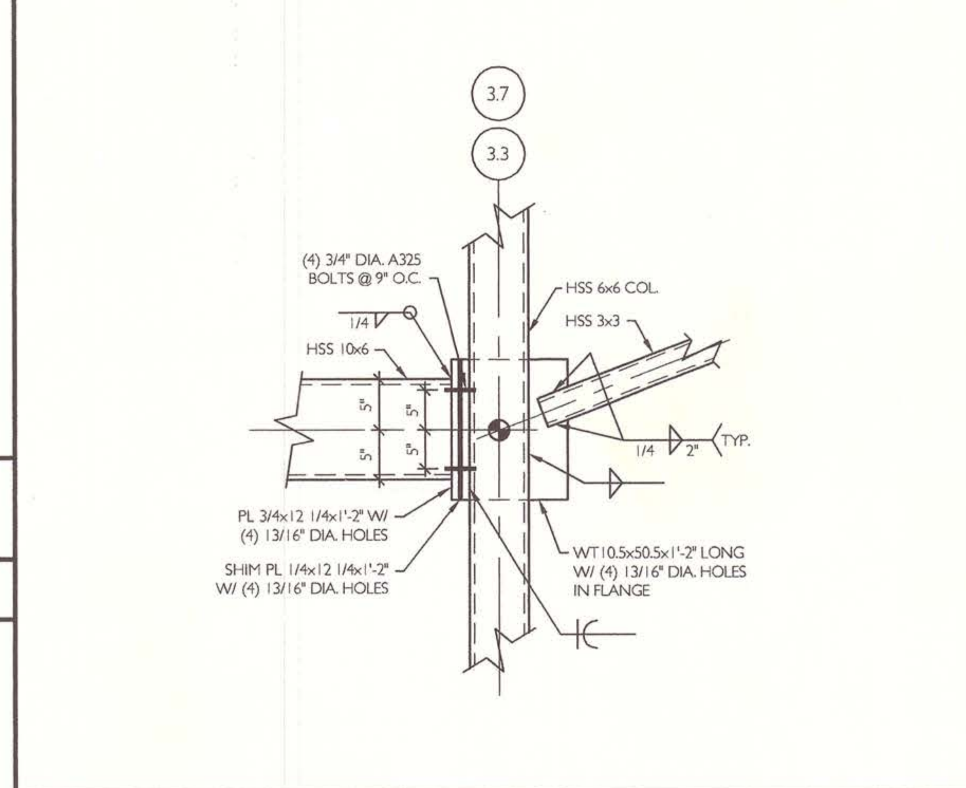


NOTE: This detail typical at roof perimeter and where specified.

J11	SECTION
NOT TO SCALE	



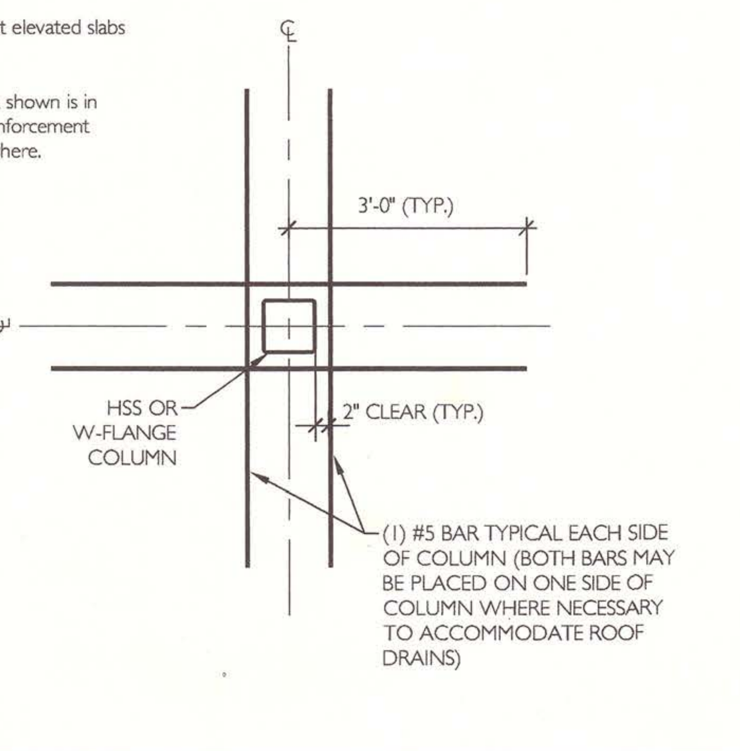
G1	DETAIL
1/2" = 1'-0"	



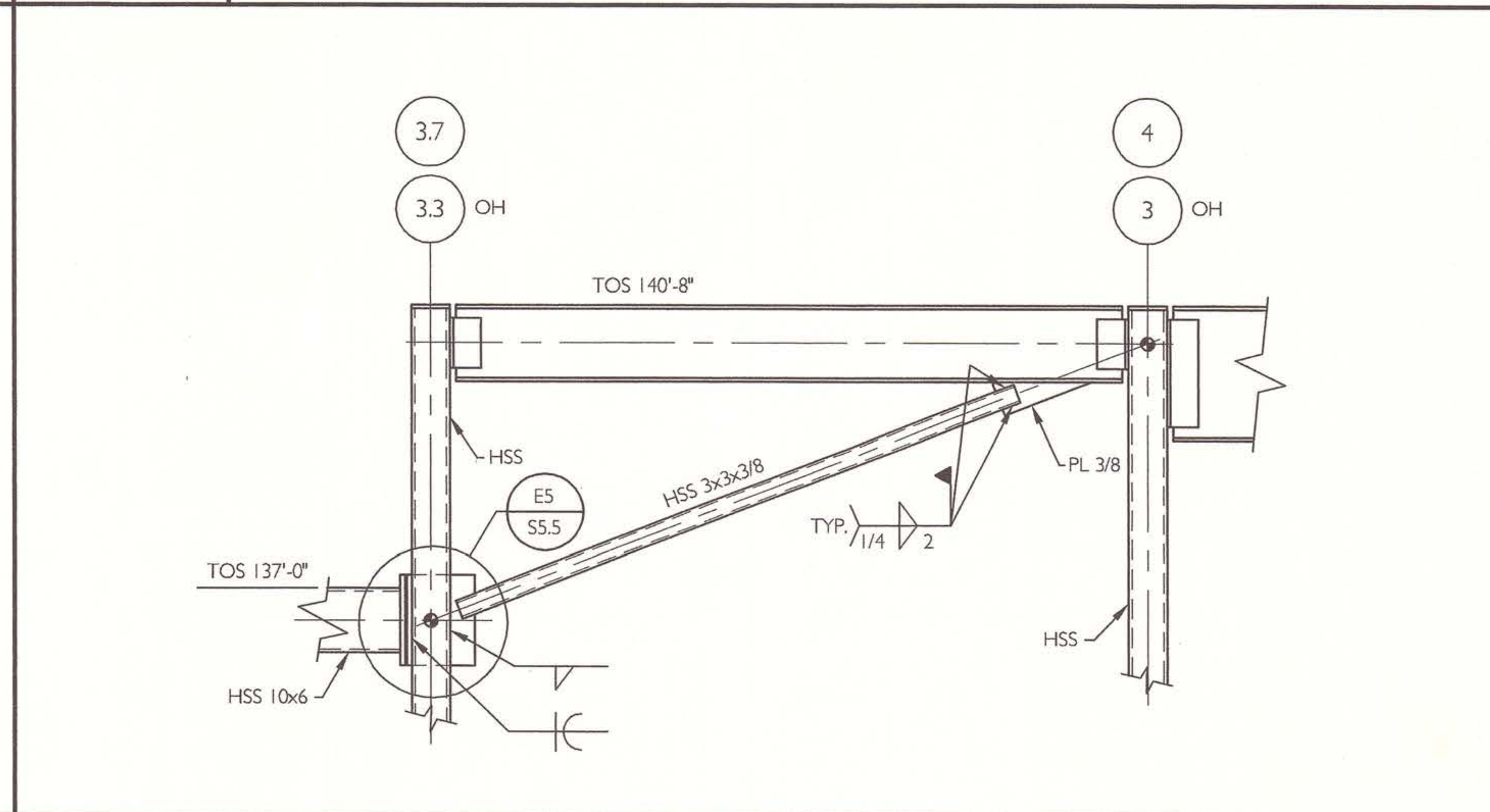
E5	DETAIL
1" = 1'-0"	

NOTES

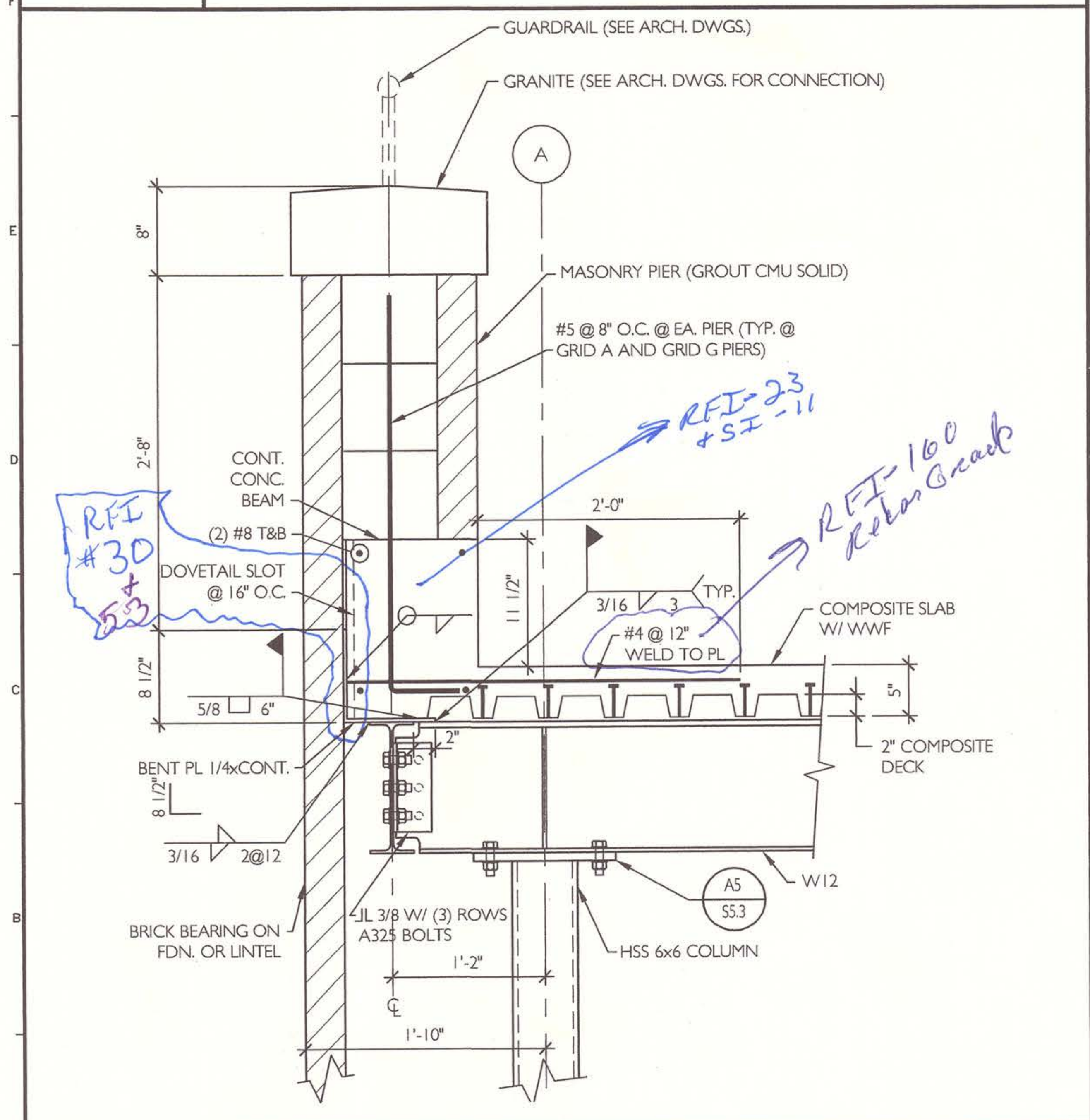
1. Detail typical at elevated slabs only.
2. Reinforcement shown is in addition to reinforcement specified elsewhere.



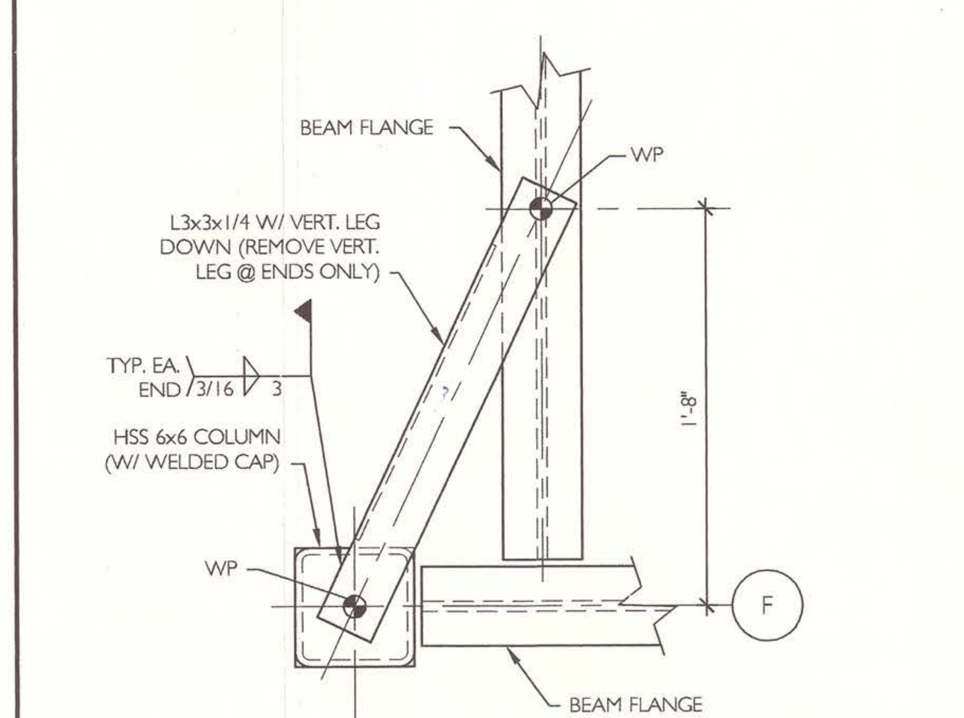
E8	DETAIL
NTS	



E11	DETAIL AT GRID F
1/2" = 1'-0"	



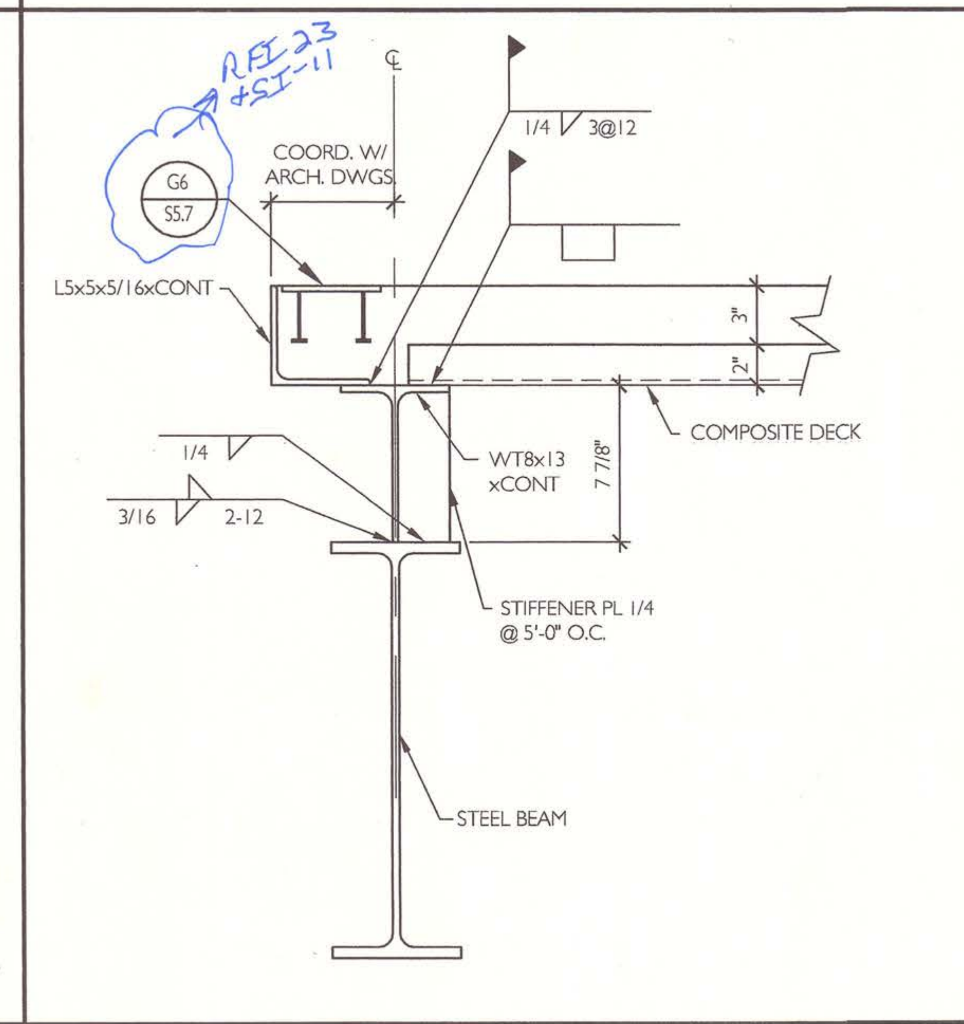
A1	SECTION
1" = 1'-0"	



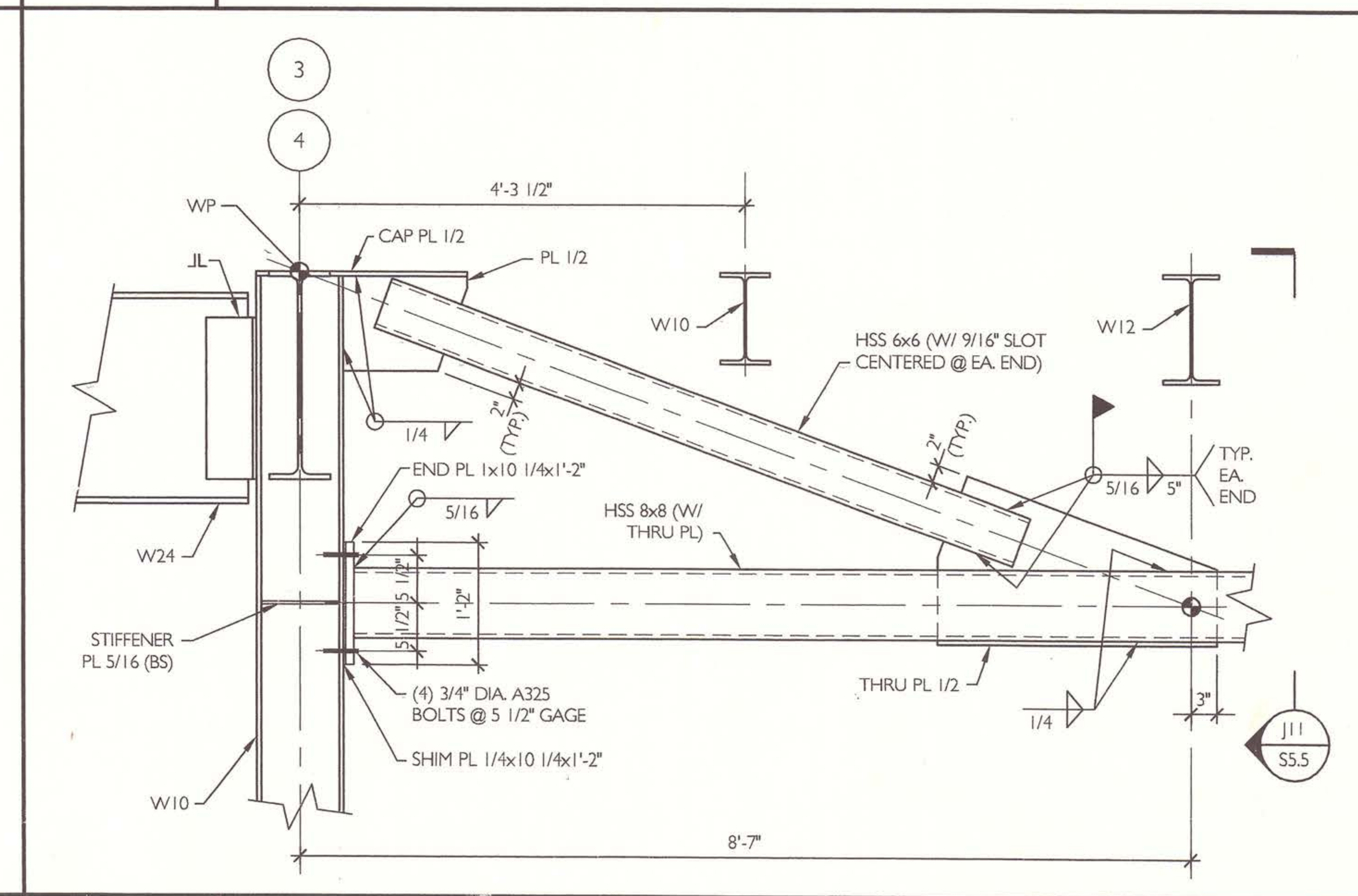
NOTES:

1. Detail at Grid 3.3 shown. Detail at Grid 3.7 is opposite hand.

A5	PLAN
1 1/2" = 1'-0"	



A8	DETAIL
1 1/2" = 1'-0"	



A11	DETAIL
3/4" = 1'-0"	

SMRT

Price Structural Engineers, Inc.

STATE OF MAINE DAVID PRICE No. 6401 LICENSED PROFESSIONAL ENGINEER

PROJECT NORTH

MAG. NORTH

PROJECT TITLE:

MAINE TURNPIKE AUTHORITY ADMINISTRATION BUILDING
PORTLAND, MAINE

ISSUED FOR BIDDING / CONSTRUCTION 7-9-07

REV	DESCRIPTION	DATE
0	BIDDING/CONSTRUCTION	7-9-07

GRAPHIC SCALE: 0" 1"

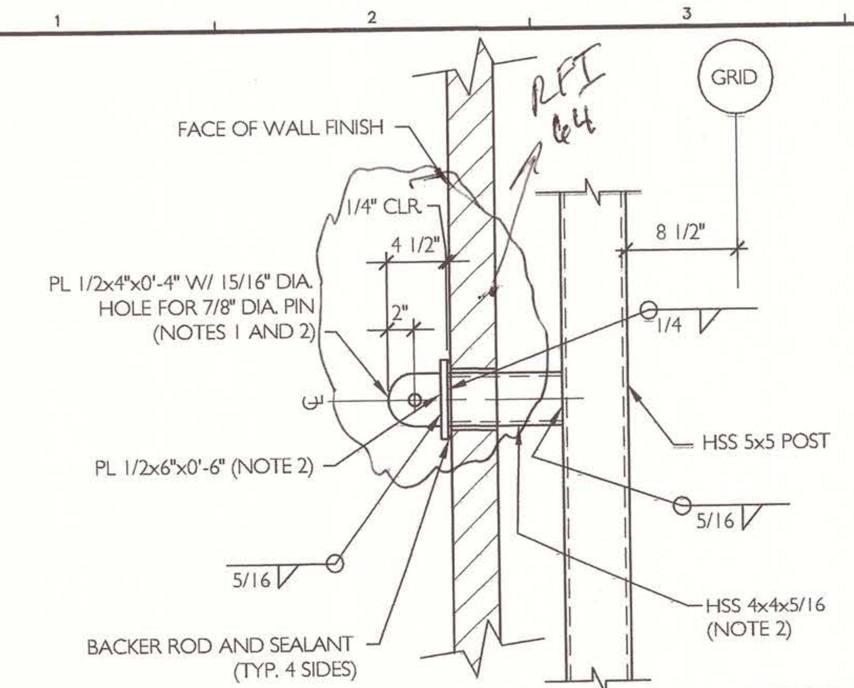
SCALE:	AS NOTED
PROJECT MANAGER:	SLB
JC/DRAWN BY:	TCM/TDP
A/E OF RECORD:	DAP
CAD FILE:	MTA/S5.5/116-06
PROJECT NO:	06016
DATE:	7-9-07

SHEET TITLE:

STEEL FRAMING SECTIONS & DETAILS

SHEET No. S5.5

AS BUILT Owner Copy

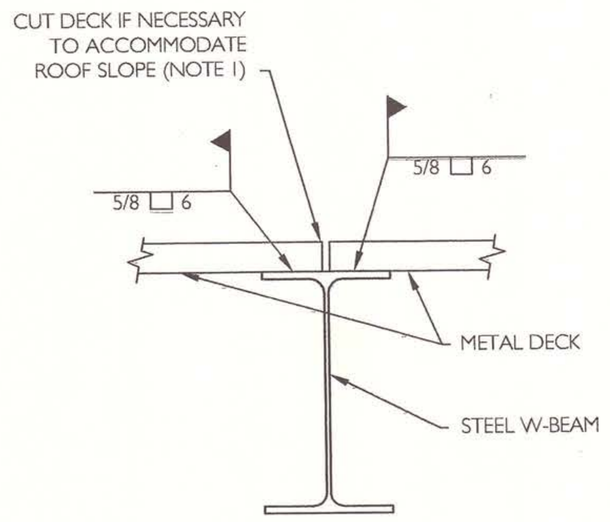


NOTES:

1. Rod connection clevis shall have 7500 pound safe working load capacity.
2. Plates and HSS shall be coated with Tnemec 90-97 primer, Epoxy second coat, and Polyurethane final coat.

K1 CANOPY ROD TO POST DETAIL

NOT TO SCALE

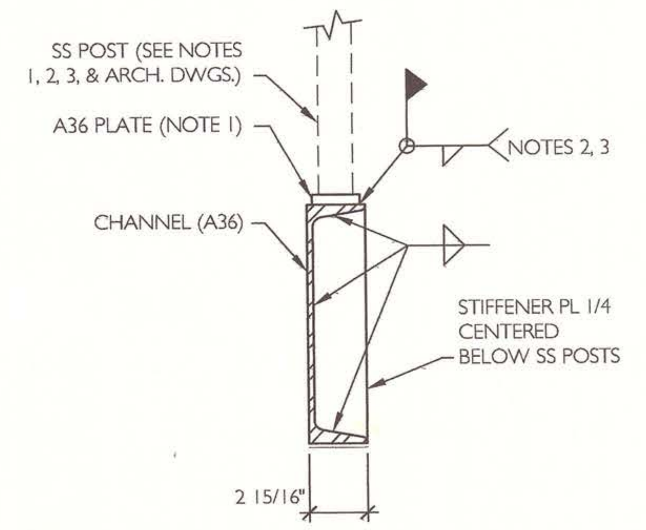


NOTES:

1. Deck may be cut at beam centerline provided the deck at each side is welded to beam as specified in this detail.

K6 TYP. WELDING AT CUT DECK (IF NECESSARY)

NOT TO SCALE

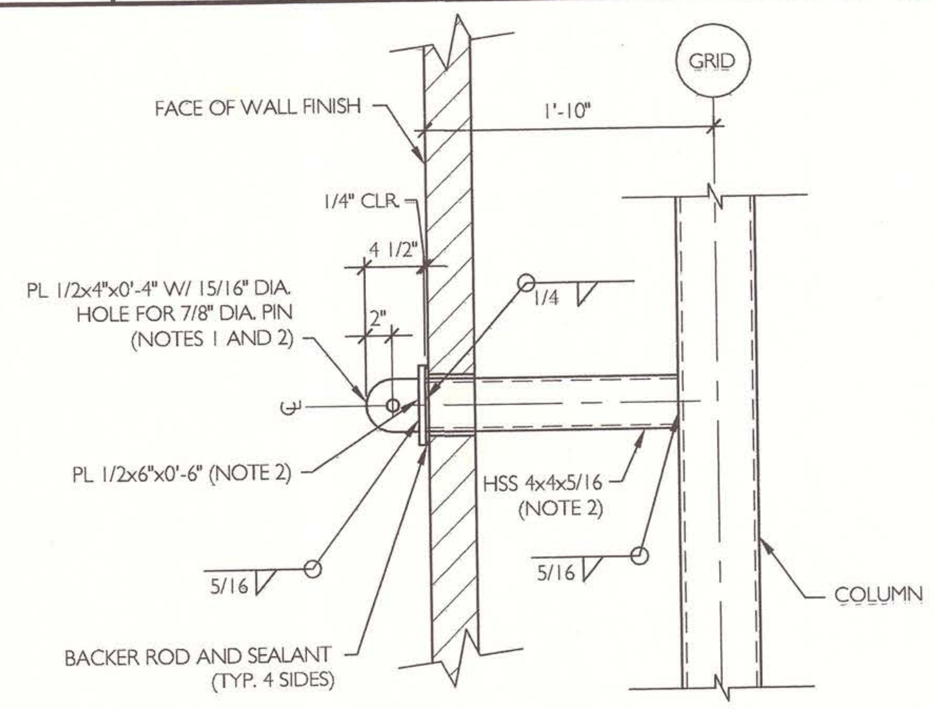


NOTES:

1. Stainless steel posts shall be shop connected to A36 steel baseplates that shall be field welded to A36 steel per AWS D1.1.
2. As a minimum, fabricator shall design stainless steel guardrail and handrail system (including connections) to conform with ASCE 7-02 Section 4.4.
3. Care shall be taken during field welding to prevent heat discoloration or other damage to stainless steel components.

K11 SECTION

NOT TO SCALE

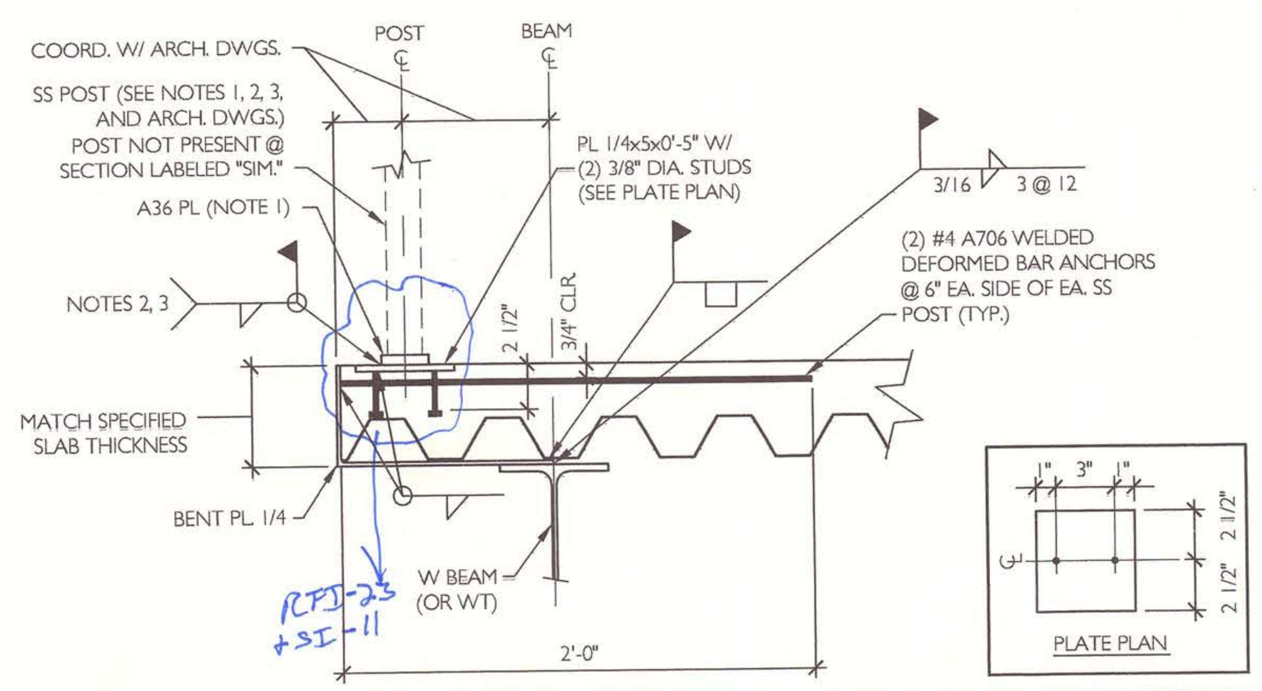


NOTES:

1. Rod connection clevis shall have 7500 pound safe working load capacity.
2. Plates and HSS shall be coated with Tnemec 90-97 primer, Epoxy second coat, and Polyurethane final coat.

G1 CANOPY ROD TO COLUMN DETAIL

NOT TO SCALE

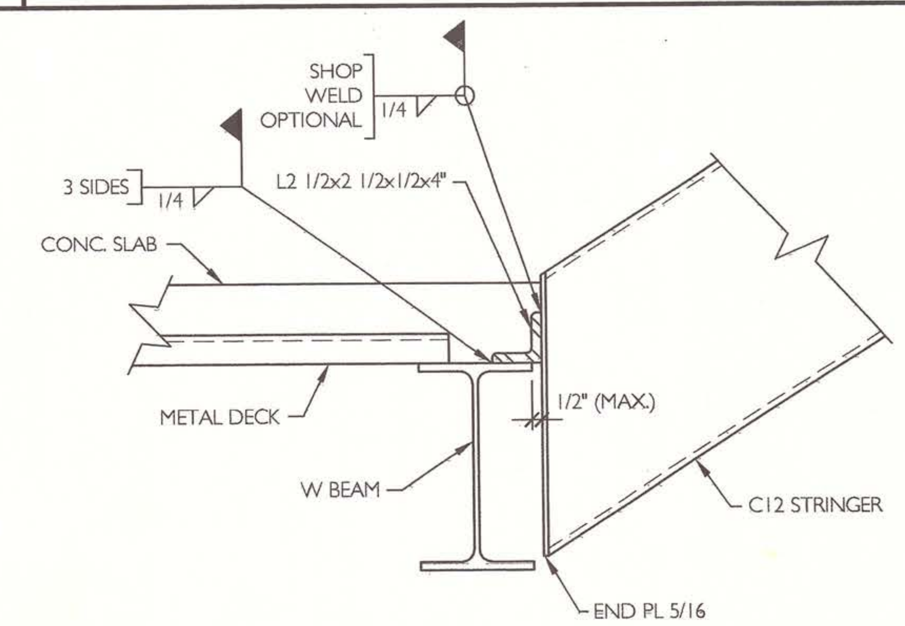


NOTES:

1. Stainless steel posts shall be shop connected to A36 steel baseplates that shall be field welded to A36 steel per AWS D1.1.
2. As a minimum, fabricator shall design stainless steel guardrail and handrail system (including connections) to conform with ASCE 7-02 Section 4.4.
3. Care shall be taken during field welding to prevent heat discoloration or other damage to stainless steel components.

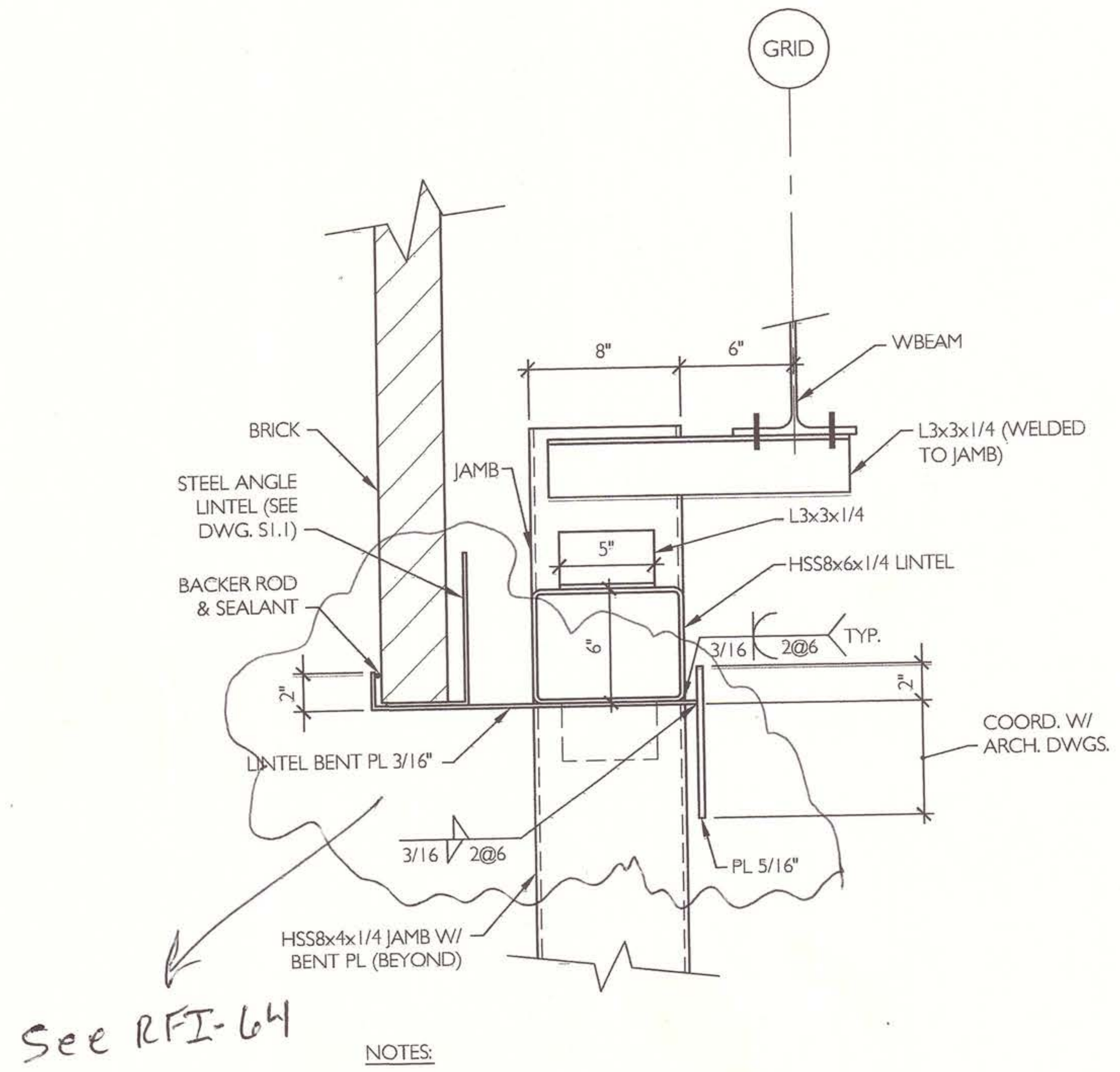
G6 SECTION

NOT TO SCALE



G11 SECTION

NOT TO SCALE

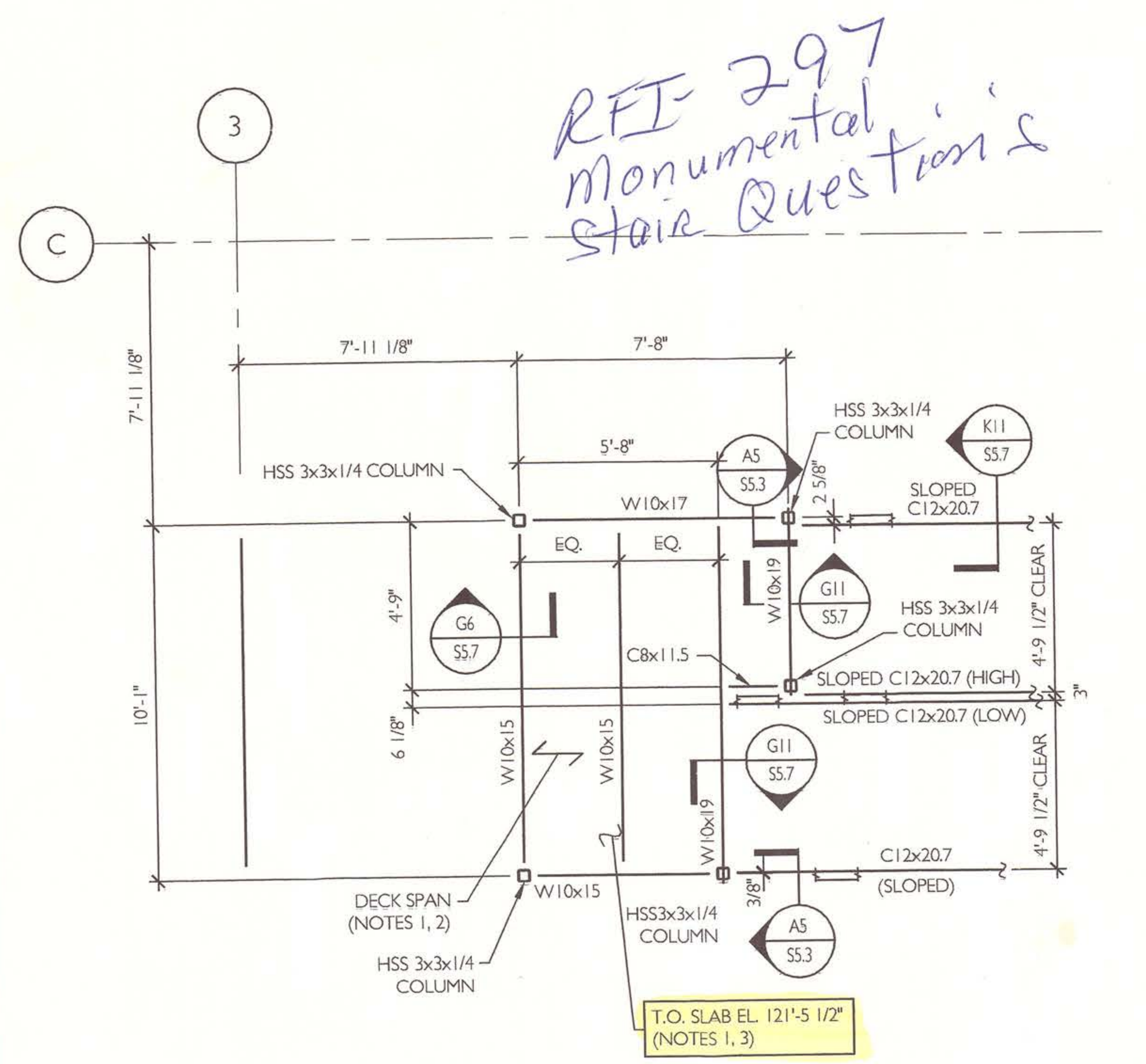


NOTES:

1. See Arch. Dwgs. for other dimensions not shown.

A1 SECTION

NTS

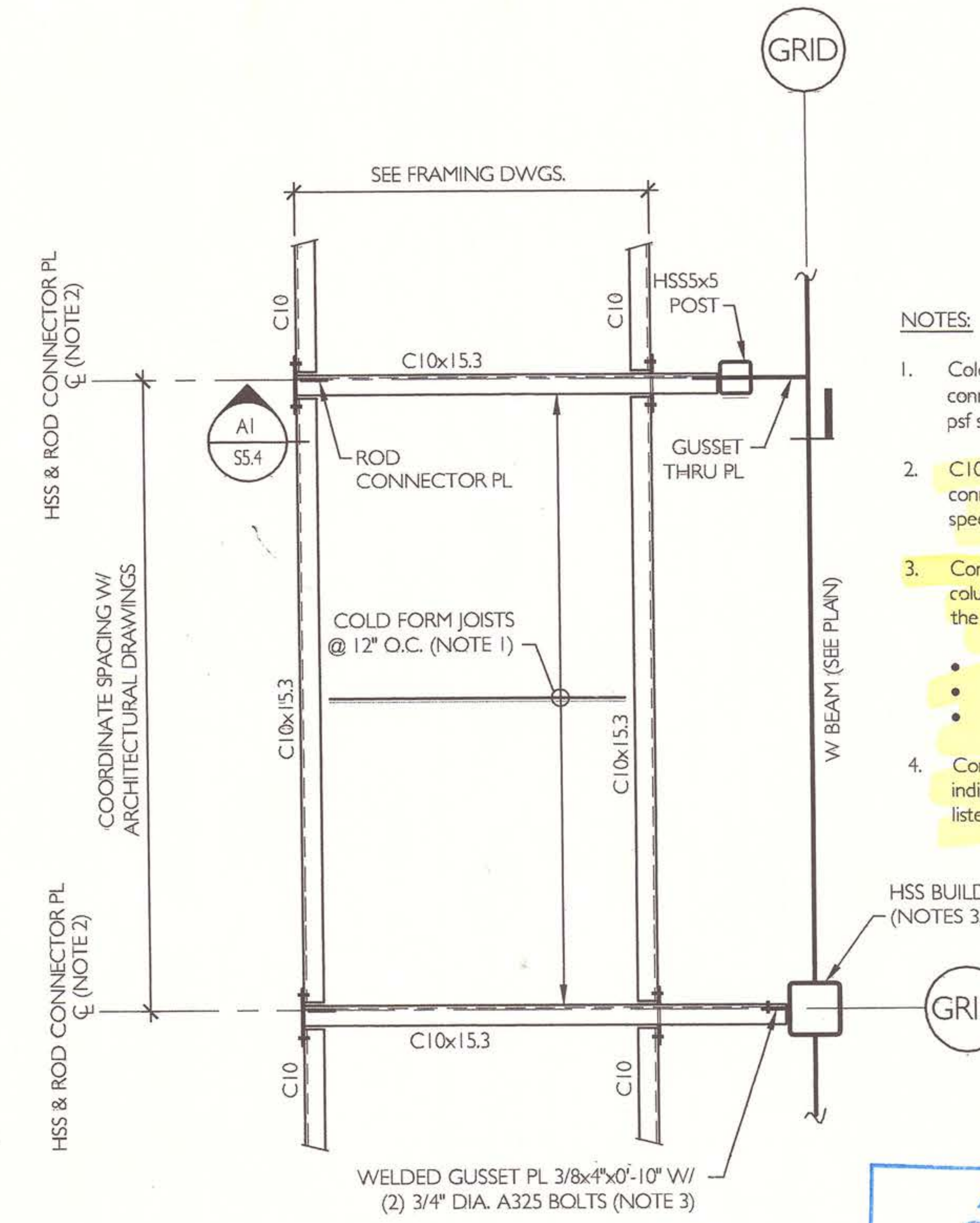


NOTES:

1. Concrete landing shall be 3 1/2" total slab thickness on 22 gage 1.0 C22 Vulcraft (or approved equal) 1" deep form deck with 6x6 / W2.9xW2.9 WWF.
2. Weld deck at all supports with 5/8" diameter welds at 1'-0" o.c.
3. Coordinate final location of stair landing framing, including Top of Steel, with landing details indicated on Architectural Drawings.
4. As a minimum, structural steel submittal for central stair shall include beams, columns, stringers, connections, and stair pans. Fabricator shall adjust dimensions shown as necessary to accommodate field fit-up and requirements specified in architectural documents.

A6 CENTRAL STAIR LANDING – PLAN

1/4" = 1'-0"



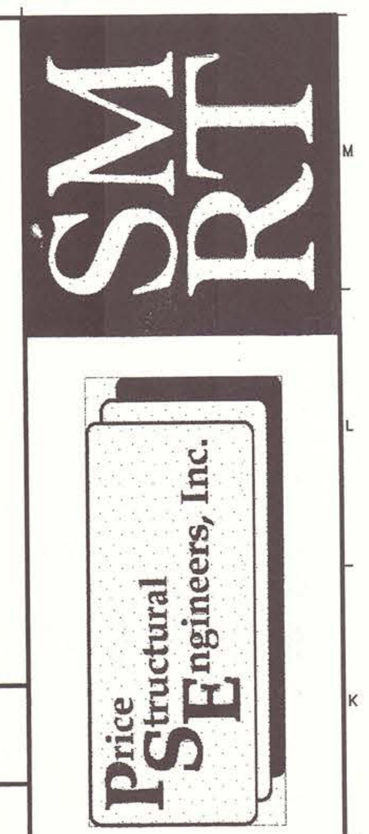
NOTES:

1. Cold form joists and joist connections shall be designed for 120 psf snow drift load.
2. C10s shall be located such that rod connector plates occur where specified on Architectural Drawings.
3. Connect C10s directly to building columns as shown on this detail at the following locations only:
   - 2nd Floor - Grid C / 6
   - Roof Plan - Grid F / 3.3
   - Roof Plan - Grid F / 3.7
4. Connect rods to columns as indicated on G1 / S5.7 at columns listed in note 3 above.

AS BUILT
Owner Copy

A11 CANOPY PART. PLAN

1/2" = 1'-0"



STATE OF MAINE
DAVID PRICE
No. 6401
LICENSED PROFESSIONAL ENGINEER

PROJECT NORTH

MAG NORTH

PROJECT TITLE:

MAINE TURNPIKE AUTHORITY ADMINISTRATION BUILDING
PORTLAND, MAINE

ISSUED FOR BIDDING / CONSTRUCTION 7-9-07

REV	DESCRIPTION	DATE
0	BIDDING/CONSTRUCTION	7-9-07

GRAPHIC SCALE:
0" 1"

SCALE:	AS NOTED
PROJECT MANAGER:	SLB
JC/DRAWN BY:	TCM/TDP
A/E OF RECORD:	DAP
CAD FILE:	MTA/S5.7/116-06
PROJECT NO:	06016
DATE:	7-9-07

SHEET TITLE:
STEEL FRAMING SECTIONS & DETAILS

SHEET No. S5.7

AIR DISTRIBUTION SYMBOLS

12x16	RECTANGULAR DUCT. (FIRST NUMBER IS SIDE SHOWN) DIMENSIONS IN INCHES
12"ø	12 INCH ROUND DUCT
MD	MOTORIZED DAMPER
	FLEXIBLE DUCT
	DUCT FLEXIBLE CONNECTOR (FC)
D / R	DUCT DROPS AND RISES IN DIRECTION OF AIR FLOW
	RETURN DUCT TURNED UP OR DOWN (DASHED)
	SUPPLY DUCT TURNED UP OR DOWN (DASHED)
	EXHAUST DUCT TURNED UP OR DOWN (DASHED)
	ACOUSTICAL LINING (DUCT DIM. FOR NET FREE AREA)
	ROUND DUCT ELBOW DOWN
	ROUND DUCT ELBOW UP
	SQUARE TO ROUND TRANSITION
	CAP (DUCT AND/OR PIPE)
	INDICATES DUCT, PIPING, EQUIPMENT TO BE REMOVED.
—EA—	EXHAUST AIR
—RA—	RETURN AIR
—SA—	SUPPLY AIR
	VOLUME DAMPER
	FIRE DAMPER
	SMOKE DAMPER TAG NO.
	COMBINATION SMOKE/FIRE DAMPER TAG NO.
	RECTANGULAR ELBOW W/TURNING VANES
	DIRECTION OF AIR FLOW (IN)
	DIRECTION OF AIR FLOW (OUT)
H	HUMIDISTAT OR HUMIDITY SENSOR
T	THERMOSTAT (T'STAT) OR TEMP. SENSOR
CO	CARBON DIOXIDE SENSOR
SD	SMOKE DETECTOR

S-3 / 300, TYP. 3	DIFFUSER, REGISTER OR GRILLE TAG; CFM AIR FLOW; QUANTITY
FTR-2 / 20	FINNED TUBE TAG; LENGTH OF FINNED ELEMENT
A1 / MH401	DETAIL NO.; SHEET NO. WHERE DETAIL IS LOCATED
CUH / 2	EQUIPMENT TAG; EQUIPMENT NO.

PIPING SYMBOLS

UNION
FLANGE
PIPE ANCHOR
PIPE GUIDE OR SLEEVES
PIPE ELBOW TURNED DOWN
PIPE ELBOW TURNED UP
PIPING TEE-DOWN
PIPING TEE-UP
PIPE RISER
FLOOR CLEAN OUT
CLEAN OUT
WALL CLEAN OUT
PIPE PITCHES DOWN
GENERIC VALVE, SEE SPECIFICATIONS FOR TYPE
GATE VALVE
BALL VALVE
BUTTERFLY VALVE (MANUAL)
2-WAY CONTROL VALVE
3-WAY CONTROL VALVE
BALANCING VALVE (CIRCUIT SETTER)
CHECK VALVE
PLUG VALVE
GLOBE VALVE
NEEDLE VALVE
BACK FLOW PREVENTER
SOLENOID VALVE
PRESSURE REDUCING OR REGULATING VALVE
PRESSURE RELIEF VALVE
STRAINER
STRAINER W/BLOWDOWN
MANUAL AIR VENT
AUTOMATIC AIR VENT

PS	PRESSURE SWITCH
FS	FLOW SWITCH
PG	PRESSURE GAUGE AND COCK
	THERMOMETER AND WELL
	TEMPERATURE & PRESSURE TAP (PETE'S PLUG)
	HOSE END DRAIN VALVE WITH CAP
	ORIFICE FLOWMETER
	FLEXIBLE PIPE CONNECTOR
	EXPANSION JOINT
F&T	STEAM TRAP (FLOAT AND THERMOSTATIC INDICATED T.T. THERMOSTAT, B.T. BUCKET TRAP, T.D. THERMODYNAMIC TRAP)
	CONCENTRIC REDUCER/INCREASER
	ECCENTRIC REDUCER/INCREASER
	HOSE BIBB
	WALL HYDRANT
	DIRECTION OF FLOW
	FIRE DEPARTMENT CONNECTION
	PUMP
	WATER HAMMER SUPPRESSER
	FINNED TUBE BASEBOARD
H	HUMIDIFIER
DP	DIFFERENTIAL PRESSURE TRANSMITTER
	SPRINKLER HEAD
	GAS TURRET
	MEDICAL OXYGEN OUTLET
	MEDICAL VACUUM INLET
	MEDICAL AIR OUTLET
	NITROUS OXIDE OUTLET

ABBREVIATIONS

AAV	AUTOMATIC AIR VENT
ACC	AIR COOLED CONDENSER
ACU	AIR CONDITIONING UNIT
ACV	AREA CONTROL VALVE
AD	ACCESS DOOR
AE	ACID EXHAUST
AFF	ABOVE FINISHED FLOOR
AFMS	AIR FLOW MEASURING STATION
AHU	AIR HANDLING UNIT
AP	ACCESS PANEL
ATC	AUTOMATIC TEMPERATURE CONTROL
AV	AIR VENT
BA	BREATHING COMPRESSED AIR
BB	BASEBOARD
BDD	BACKDRAFT DAMPER
BG	BLAST GATE
BFP	BACKFLOW PREVENTER
BLDG	BUILDING
BOD	BOTTOM OF DUCT
BOP	BOTTOM OF PIPE
BTU	BRITISH THERMAL UNIT
CBD	COUNTER BALANCED DAMPER
CD	CEILING DIFFUSER
CFF	CAPPED FOR FUTURE
CFM	CUBIC FEET PER MINUTE
CLG	CEILING
CO	CLEANOUT
CONT	CONTINUATION
COORD	COORDINATE
CP	CONDENSATE PUMP & RECEIVER
CT	COOLING TOWER
CTE	CONNECT TO EXISTING
CU	COPPER
CUH	CABINET UNIT HEATER
CV	CONTROL VALVE
CW	COLD WATER
CW-P	CITY WATER-PROCESS
DC	DOUBLE CONTAINED
DDC	DIRECT DIGITAL CONTROL
DIA	DIAMETER
DIC	DOWN IN CHASE
DIW	DOWN IN WALL
DN	DOWN
DS	DOWNSPOUT
DT	DROP & TRANSITION
DWG	DRAWING
DWH	DOMESTIC WATER HEATER
EA	EXHAUST AIR
EF	EXHAUST FAN
ENC	ENCLOSURE
ER	EXHAUST REGISTER
(E)	EXISTING
EXIST.	EXISTING
FBO	FURNISHED BY OWNER
FBP	FACE & BYPASS
FC	FLEXIBLE CONNECTION
FCO	FLOOR CLEANOUT
FD-#	FLOOR DRAIN TAG
FD	FIRE DAMPER
FG	FIBERGLASS
F & T	FLOAT & THERMOSTATIC
FO	FLAT OVAL
FRHB	FREEZE RESISTANT HOSE BIBB
FTR	FINNED TUBE RADIATION
FS	FAN STATUS
FSW	FLOW SWITCH
GC	GENERAL CONTRACTOR
GPM	GALLONS PER MINUTE
H	HUMIDIFIER
HB	HOSE BIB
HRU	HEAT RECOVERY UNIT
HTR	HEATER
H & V	HEATING & VENTILATION
HVAC	HEATING, VENTILATING & AIR CONDITIONING
HW	HOT WATER
HX	HEAT EXCHANGER
IN WG	INCHES WATER GAUGE
LD	LINED DUCT
MAU	MAKE UP AIR UNIT
MAX	MAXIMUM
MBH	1000 BTU/HR.
ME	MECHANICAL ENGINEER
MFR	MANUFACTURER
MIN	MINIMUM
MD	MOTOR OPERATED DAMPER
MPV	MULTI-PURPOSE VALVE
MTD	MOUNTED
MUA	MAKE UP AIR
NPW	NON-POTABLE WATER
NTS	NOT TO SCALE
P-#	PLUMBING FIXTURE TAG
PEA	ALKALI EXHAUST
PEH	HEAT EXHAUST
OA	OUTSIDE AIR
OBD	OPPOSED BLADE DAMPER
OED	OPEN ENDED DUCT
P-#	PLUMBING FIXTURE TAG
PAE	PROCESS ACID EXHAUST
PHE	PROCESS HEAT EXHAUST
PSE	PROCESS SOLVENT EXHAUST
PP	POLY-PROPYLENE
PPE	PRE PURCHASED EQUIPMENT
PRS	PRESSURE REDUCING STATION
PRV	PRESSURE REDUCING VALVE
PVD	PNEUMATIC VOLUME DAMPER
(R)	REMOVE
RA	RETURN AIR
RD	ROOF DRAIN
(REL.)	RELOCATED
RF	RETURN FAN
RFM	RADIANT FLOOR MANIFOLD
RG	RETURN GRILLE
RHC	REHEAT COIL
RM	ROOM
RPZ	REDUCED PRESSURE ZONE BFP
RR	RETURN REGISTER
RV	RELIEF VALVE
SA	SUPPLY AIR
SCV	SELF CONTAINED VALVE
SD	SMOKE DETECTOR
SF	SUPPLY FAN
SG	SUPPLY GRILLE
SGR	SOIL GAS REMEDIATION
SMM	SNOW MELT MANIFOLD
SR	SUPPLY REGISTER
SS	STAINLESS STEEL
TE	TEMPERATURIZED ELEMENT (SENSOR)
TG	TRANSFER GRILLE
TOD	TOP OF DUCT
TOP	TOP OF PIPE
TTS	TIGHT TO STEEL
TV	TURNING VANE(S)
TW	TEMPERED WATER
TYP	TYPICAL
UH	UNIT HEATER
UIC	UP IN CHASE
UIW	UP IN WALL
UV	UNIT VENTILATOR
VAV	VARIABLE AIR VOLUME BOX
VB	VACUUM BREAKER
VTR	VENT THRU ROOF
VD	MANUAL VOLUME DAMPER
VCFF	VALVED & CAPPED FOR FUTURE
VOC	VOLATILE ORGANIC COMPOUNDS
VFD	VARIABLE FREQUENCY DRIVE
W/	WITH
WCO	WALL CLEANOUT
WH	WALL HYDRANT

PIPING SYSTEMS

—10:1 HF—	10:1 HF
— AV —	ACID VENT
— AD —	ACID DRAIN
- - - AD - - -	ACID DRAIN (BELOW SLAB)
— BA —	BREATHING AIR
— CD —	CONDENSATE DRAIN
—CDA—	COMPRESSED DRY AIR
—CHWS—	CHILLED WATER SUPPLY
- - CHWR - -	CHILLED WATER RETURN
—CWS—	CONDENSER WATER SUPPLY
- - - CWR - - -	CONDENSER WATER RETURN
—DB—	DISTRIBUTION VALVE BOX
—DIS—	DEIONIZED WATER SUPPLY
- - - DIR - - -	DEIONIZED WATER RETURN
—EKCD—	EKC DRAIN
—ESEW—	EYEWASH
— FCS —	FREE COOLING SUPPLY
- - - FCR - - -	FREE COOLING RETURN
— FOS —	FUEL OIL SUPPLY
- - - FOR - - -	FUEL OIL RETURN
— FOV —	FUEL OIL VENT
- - - GCR - - -	GRAVITY STEAM CONDENSATE RETURN
—GLY—	GLYCOL
— GV —	GAS VENT
— H —	HYDROGEN
—H2O2—	HYDROGEN PEROXIDE
- - - HCR - - -	HOT/ CHILLED WATER RETURN
—HCS—	HOT/ CHILLED WATER SUPPLY
—HCV—	HOUSE CLEAN VACUUM
—HG—	HOT GAS
—HPS—	HIGH PRESSURE STEAM
- - - HPR - - -	HIGH PRESSURE CONDENSATE RETURN
—HWS—	HOT WATER SUPPLY
- - - HWR - - -	HOT WATER RETURN
— IAD —	ISOPROPYL ALCOHOL DRAIN
—LP—	LIQUID PROPANE GAS
—HLP—	HIGH PRESSURE LIQUID PROPANE GAS
—LPS—	LOW PRESSURE STEAM
- - - LPR - - -	LOW PRESSURE RETURN
—LTWR—	LOW TEMPERATURE WATER RETURN
—LTWS—	LOW TEMPERATURE WATER SUPPLY
—MA—	MEDICAL AIR
—MPS—	MEDIUM PRESSURE STEAM
- - - MPR - - -	MEDIUM PRESSURE RETURN
— MV —	MEDICAL VACUUM
—N2NP—	NON-PROCESS NITROGEN
— N2 —	PROCESS NITROGEN
—NG—	NATURAL GAS
—HNG—	HIGH PRESSURE NATURAL GAS
—NO2—	NITROUS OXIDE
—NEG. SOLV.—	NEGATIVE SOLVENT DRAIN
—NPW—	NON POTABLE COLD WATER
—O2—	OXYGEN
—OFA —	OIL FREE COMPRESSED AIR
- - PCWR - -	PROCESS COOLING WATER RETURN
— PC —	PUMPED STEAM CONDENSATE
— PD —	PUMPED DISCHARGE
POS. SOLV.—	POSITIVE SOLVENT DRAIN
—PW—	POTABLE WATER
— R —	RELIEF LINE
—RL—	REFRIGERANT LIQUID
—RS—	REFRIGERANT SUCTION
—SLD—	MIXED SOLVENT DRAIN
— SV —	SOLVENT
— SP —	SPRINKLER
—TWS—	TEMPERED CHILLED WATER SUPPLY
- - - TWR - - -	TEMPERED CHILLED WATER RETURN
—VAC—	PLANT VACUUM
— ZB —	ZONE VALVE BOX
—TEMP—	DOMESTIC HOT WATER (TEMP °F)
—TEMP—	RECIRC. DOMESTIC HOT WATER (TEMP °F)
	DOMESTIC COLD WATER
	DOMESTIC HOT WATER
- - - RCW - - -	RECIRCULATED DOMESTIC HOT WATER
—S, W or KW—	S SANITARY, W WASTE & KW KITCHEN WASTE
—S, W or KW—	S SANITARY, W WASTE & KW KITCHEN WASTE (EXIST.)
—S, W or KW—	S SANITARY, W WASTE & KW KITCHEN WASTE (BELOW SLAB)
—S, W or KW—	S SANITARY, W WASTE & KW KITCHEN WASTE (BELOW SLAB-EXIST.)
—SD—	SD STORM DRAIN
—SD—	SD STORM DRAIN (EXIST.)
—SD—	SD STORM DRAIN (BELOW SLAB)
—SD—	SD STORM DRAIN (BELOW SLAB-EXIST.)
	V SANITARY VENT
	V SANITARY VENT (EXIST.)
	V SANITARY VENT (BELOW SLAB)
	V SANITARY VENT (BELOW SLAB-EXIST.)

GENERAL NOTE

1. ALL GENERAL NOTES, SYMBOL LISTS, AND DETAILS ARE TO BE CONSIDERED AS APPLICABLE TO ALL HVAC AND PLUMBING DRAWINGS FOR THIS PROJECT. SYMBOLS AND ABBREVIATIONS SHOWN ON THIS SHEET ARE FOR REFERENCE ONLY AND DO NOT INDICATE THEIR INCORPORATION INTO THE DESIGN.

SMRT
ARCHITECTURE ENGINEERING PLANNING
SMRT
144 Fore Street/P.O. Box 618
Portland, Maine 04104
tel. (207) 772-3846
fax. (207) 772-1070

STATE OF MAINE
RONNIE M. WILLEY
NO. 11029
LICENSED PROFESSIONAL ENGINEER
6/28/07

PROJECT TITLE:
MAINE TURNPIKE AUTHORITY ADMINISTRATION BUILDING
PORTLAND, MAINE

CURRENT ISSUE STATUS:
ISSUED FOR BIDDING/CONSTRUCTION 7-9-07

REV	DESCRIPTION	DATE
0	BIDDING/CONSTRUCTION	7-9-07

GRAPHIC SCALE: 0" 1"

SCALE:	NOT TO SCALE
PROJECT MANAGER:	SLB
JC/DRAWN BY:	TCM/BGG
A/E OF RECORD:	RMW
CAD FILE:	M-001-06016
PROJECT NO:	06016
DATE:	7-9-07

SHEET TITLE:
LEGEND AND ABBREVIATIONS

SHEET No. M-001

WR

Wright-Ryan Construction Inc
REQUEST FOR INFORMATION

10 Danforth Street

Portland, ME 04101

Phone: 207-773-3625
Fax: 207-773-5173

No.: 00335
Date: 12/8/2008

TO: Attn: Scott Benson
SMRT
144 Fore Street
Portland, ME 04101
Phone: 207 772-3846 Fax: 207 772-1070

PROJECT: MTA Administration Building
JOB: 0721

Subject: VAV Supply Line Sizes

1. REQUEST:

From Warren Mechanical:

During the meeting on 12/5/08 on site it was stated that the supply duct serving the VAV's needs to be oversized up to 6 feet from the unit. Please provide the duct size for each of these VAV's based on total CFM's for the room.

Information Requested By: Craig Hill

Clarification/Action: Please respond by or before **12/15/2008** in order to minimize delay or interference with the ability to proceed with the work.

2. ANSWER:

Provide ducts sized as follows:

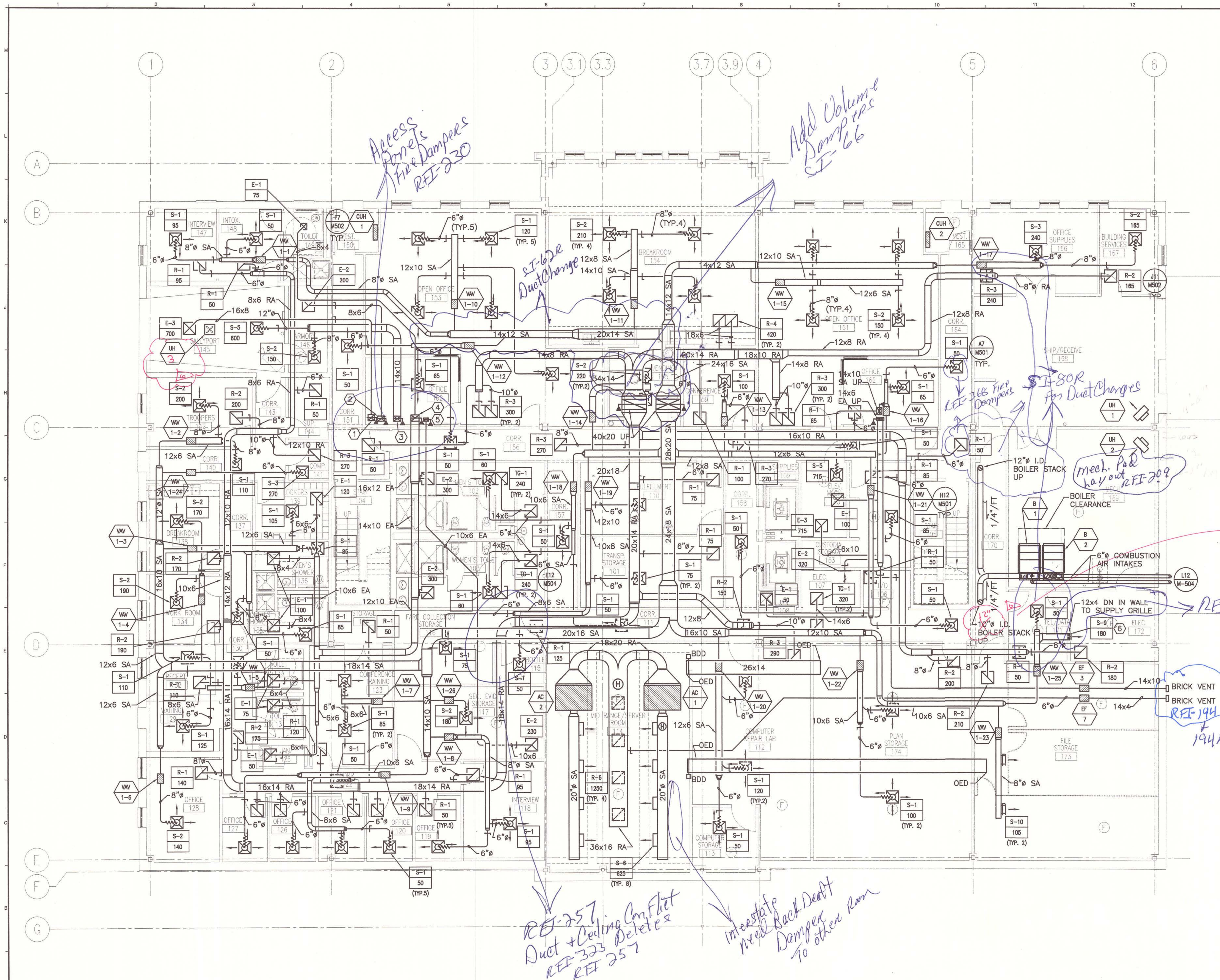
6" dia. up to 125 cfm
8" dia. 126 to 250 cfm
10" dia. 251 to 425 cfm
12" dia. 426 to 700 cfm
14" dia. 701 to 1000 cfm
16" dia. 1001 to 1450 cfm

Answered By: SMRT

Date: DEC. 10, 2008

Signed: Scott Benson

Scott Benson



NOTE:

1. SEE SHEET M-001 FOR LEGEND AND ABBREVIATIONS.
2. ALL DUCTWORK ROUTED ACROSS CORRIDORS #151 & #164 MUST BE CONTAINED WITHIN THE LIMITS OF HORIZONTAL FIRE-RATED SHAFT LOCATED ABOVE THE SUSPENDED CEILING. COORDINATE LAYOUT OF DUCTWORK ACCORDINGLY WITH WORK OF OTHER TRADES.

KEYED NOTES:

(1) 12x12 EA UP
(2) 8x6 EA UP
(3) 14x10 SA UP
(4) 16x12 EA UP
(5) 10x6 EA UP
(6) MOUNT DIFFUSER 12" AFF.

RFI 290 Flex Connector's For VAV's
Duct + Smoke Detector's RFI-337
VAV Supply Line Sizes See Opposite Page RFI-335

15' From Air Intake

DESIGN INTENT REQUIRES 2, 12" diameter stacks

1/4" Clearance Confirm with Scott Benson
194 Revised

SMRT
ARCHITECTURE ENGINEERING PLANNING
SMRT
144 Fore Street/P.O. Box 618
Portland, Maine 04104
tel. (207) 772-3846
fax. (207) 772-1070

STATE OF MAINE
RONNIE M. WILLEY
NO. 11029
PROFESSIONAL ENGINEER
6/28/07

PROJECT NORTH

PROJECT TITLE:
MAINE TURNPIKE AUTHORITY
ADMINISTRATION BUILDING
PORTLAND, MAINE

CURRENT ISSUE STATUS:
ISSUED FOR BIDDING/CONSTRUCTION
7-9-07

REV	DESCRIPTION	DATE
0	BIDDING/CONSTRUCTION	7-9-07

GRAPHIC SCALE:
0" 1"

SCALE:	1/8"=1'-0"
PROJECT MANAGER:	SLB
JC/DRAWN BY:	TCM/BGG
A/E OF RECORD:	RMW
CAD FILE:	MH101-06016
PROJECT NO:	06016
DATE:	7-9-07

SHEET TITLE:
FIRST FLOOR HVAC DUCTWORK PLAN

SHEET No.
MH101

AS BUILT
Owner Copy

WR

Wright-Ryan Construction Inc
REQUEST FOR INFORMATION

No.: 00335
Date: 12/8/2008

10 Danforth Street
Portland, ME 04101

Phone: 207-773-3625
Fax: 207-773-5173

TO: Attn: Scott Benson
SMRT
144 Fore Street
Portland, ME 04101
Phone: 207 772-3846 Fax: 207 772-1070

PROJECT: MTA Administration Building
JOB: 0721

Subject: VAV Supply Line Sizes

1. REQUEST:

From Warren Mechanical:

During the meeting on 12/5/08 on site it was stated that the supply duct serving the VAV's needs to be oversized up to 6 feet from the unit. Please provide the duct size for each of these VAV's based on total CFM's for the room.

Information Requested By: Craig Hill

Clarification/Action: Please respond by or before **12/15/2008** in order to minimize delay or interference with the ability to proceed with the work.

2. ANSWER:

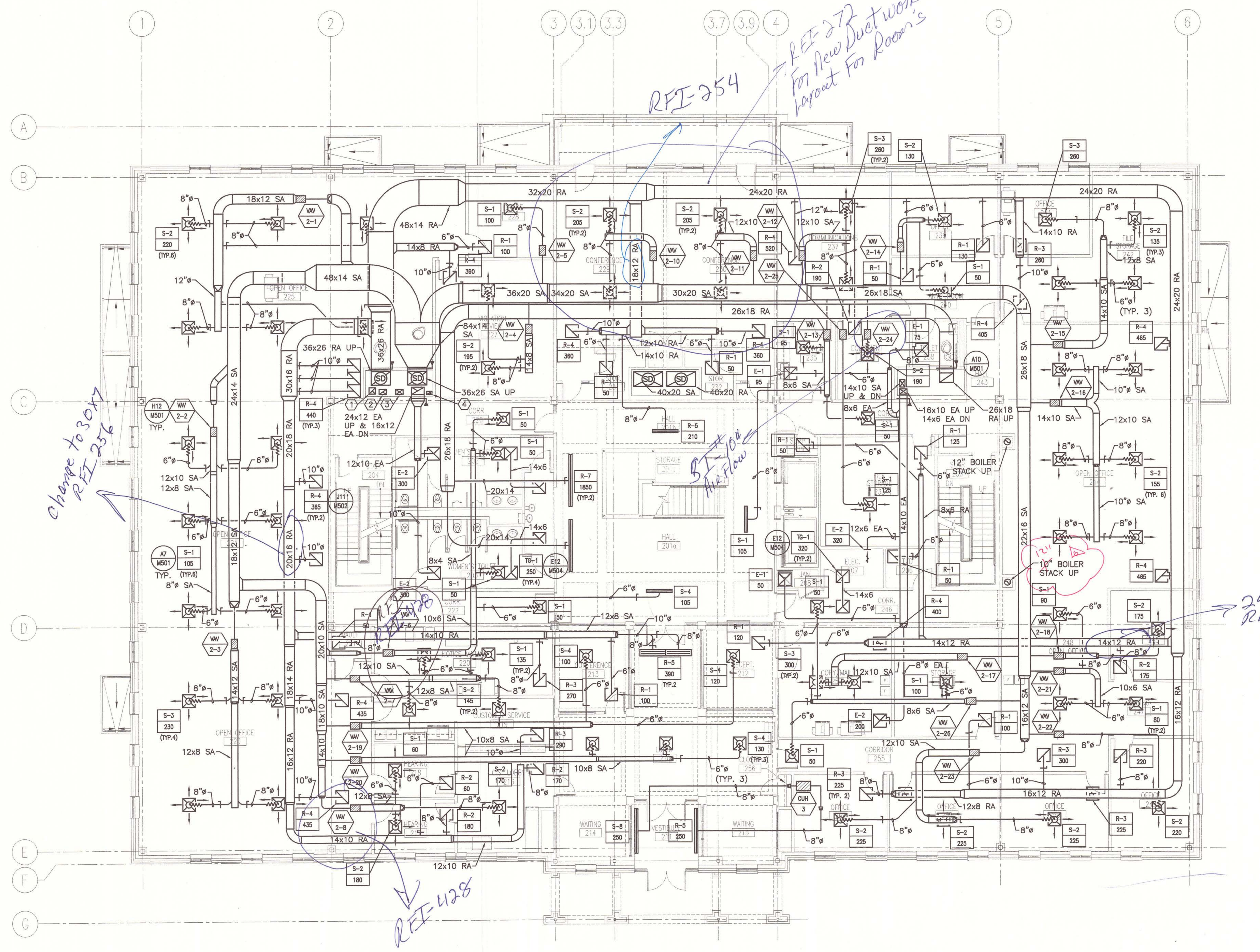
Provide ducts sized as follows:

6" dia. up to 125 cfm
8" dia. 126 to 250 cfm
10" dia. 251 to 425 cfm
12" dia. 426 to 700 cfm
14" dia. 701 to 1000 cfm
16" dia. 1001 to 1450 cfm

Answered By: SMRT

Signed: Scott Benson

Date: DEC. 10, 2008



A1 SECOND FLOOR PLAN

1/8" = 1'-0"

NOTE:

1. SEE SHEET M-001 FOR LEGEND AND ABBREVIATIONS.

KEYED NOTES:

(1) 12x12 EA UP
(2) 8x6 EA UP
(3) 14x10 SA UP
(4) 10x6 EA UP

RFI 290
Flex Connector's For VAV's

Duct + Smoke Detector's
RFI- 337+357

VAV Supply line Sizes
RFI-335
See opposite Page

SMRT
ARCHITECTURE ENGINEERING PLANNING
SMRT
144 Fore Street/P.O. Box 618
Portland, Maine 04104
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STATE OF MAINE
RONNIE M. WILLEY
NO. 11029
LICENSED PROFESSIONAL ENGINEER
6/28/07

PROJECT NORTH

MAG. NORTH

PROJECT TITLE:
MAINE TURNPIKE AUTHORITY ADMINISTRATION BUILDING
PORTLAND, MAINE

CURRENT ISSUE STATUS:
ISSUED FOR BIDDING/CONSTRUCTION 7-9-07

REV	DESCRIPTION	DATE
0	BIDDING/CONSTRUCTION	7-9-07

GRAPHIC SCALE:
0" 1"

SCALE:	1/8"=1'-0"
PROJECT MANAGER:	SLB
JC/DRAWN BY:	TCM/BGG
A/E OF RECORD:	RMW
CAD FILE:	MH102-06016
PROJECT NO:	06016
DATE:	7-9-07

SHEET TITLE:
SECOND FLOOR HVAC DUCTWORK PLAN

SHEET No.
MH102

AS BUILT
Owner Copy

WR

10 Danforth Street

Portland, ME 04101

Wright-Ryan Construction Inc

REQUEST FOR INFORMATION

Phone: 207-773-3625
Fax: 207-773-5173

No.: 00335
Date: 12/8/2008

TO: Attn: Scott Benson
SMRT
144 Fore Street
Portland, ME 04101
Phone: 207 772-3846 Fax: 207 772-1070

PROJECT: MTA Administration Building
JOB: 0721

Subject: VAV Supply Line Sizes

1. REQUEST:

From Warren Mechanical:

During the meeting on 12/5/08 on site it was stated that the supply duct serving the VAV's needs to be oversized up to 6 feet from the unit. Please provide the duct size for each of these VAV's based on total CFM's for the room.

Information Requested By: Craig Hill

Clarification/Action: Please respond by or before **12/15/2008** in order to minimize delay or interference with the ability to proceed with the work.

2. ANSWER:

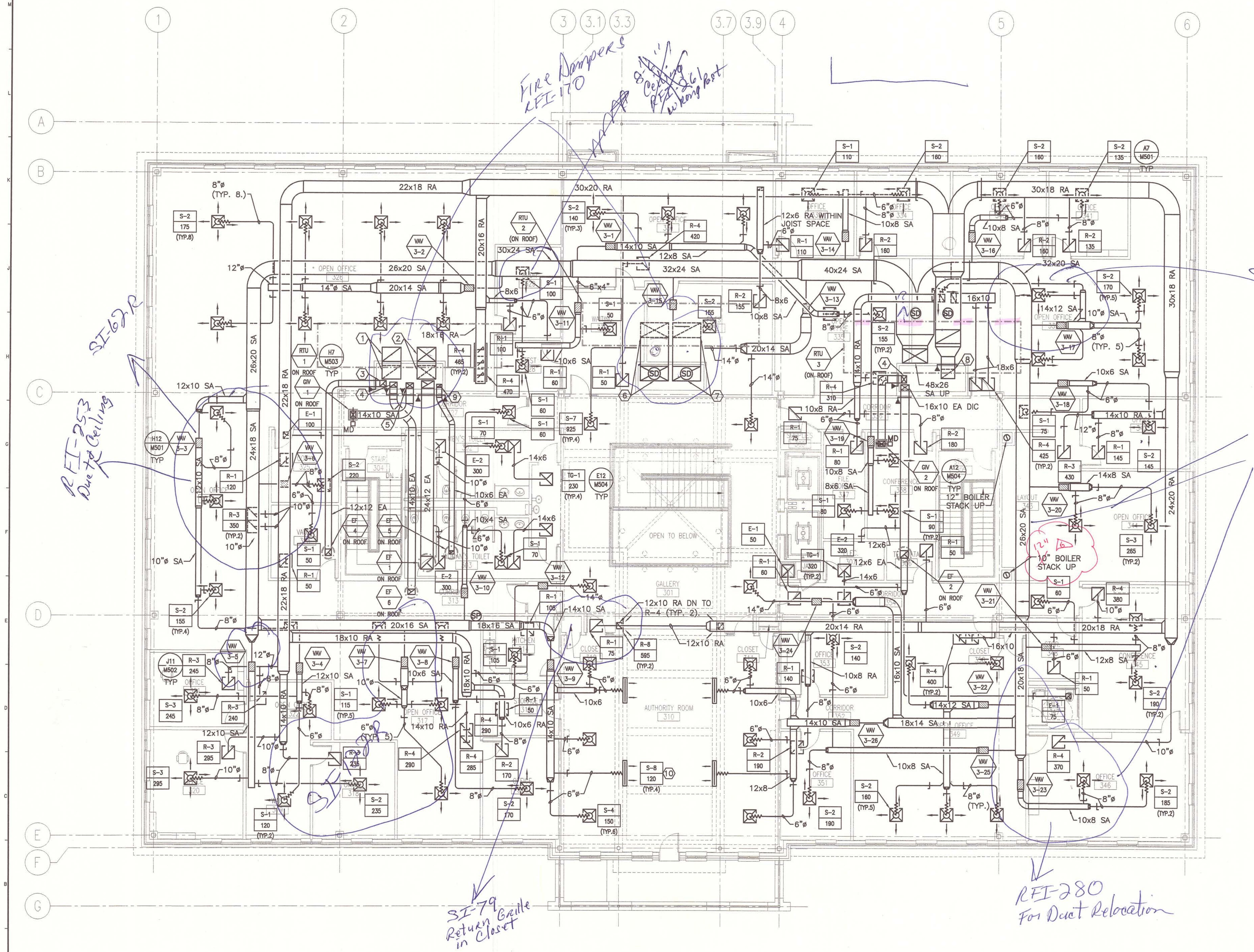
Provide ducts sized as follows:

6" dia. up to 125 cfm
8" dia. 126 to 250 cfm
10" dia. 251 to 425 cfm
12" dia. 426 to 700 cfm
14" dia. 701 to 1000 cfm
16" dia. 1001 to 1450 cfm

Answered By: SMRT

Date: DEC. 10, 2008

Signed: Scott Benson



A1 THIRD FLOOR PLAN

1/8" = 1'-0"

NOTE:

1. SEE SHEET M-001 FOR LEGEND AND ABBREVIATIONS.

KEYED NOTES:

1. 36x26 RA UP TO RTU-1 AND 36x26 RA DOWN IN CHASE.
2. 36x26 SA UP TO RTU-1 AND 36x26 SA DOWN IN CHASE.
3. 12x12 EA DOWN IN CHASE.
4. 8x6 EA DOWN IN CHASE.
5. 14x10 SA DOWN IN CHASE.
6. 40x20 SA UP TO RTU-2 AND 40x20 SA DOWN IN CHASE.
7. 40x20 RA UP TO RTU-2 AND 40x20 RA DOWN IN CHASE.
8. 26x18 RA DOWN IN CHASE.
9. 10x6 EA DOWN IN CHASE.
10. DIRECT AIRFLOW FROM (4) LINEAR SLOT DIFFUSERS UPWARD.

RFI-261
Ceiling Ht-8'-6"

RFI-253
Duct & Ceiling

RFI-290 Flex Connector's For VAV's

Duct & Smoke Detectors
RFI-337

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fax. (207) 772-1070

STATE OF MAINE
RONNIE M. WILLEY
NO. 11029
LICENSED PROFESSIONAL ENGINEER
6/28/07

PROJECT NORTH
MAG NORTH

PROJECT TITLE:
MAINE TURNPIKE AUTHORITY
ADMINISTRATION BUILDING
PORTLAND, MAINE

CURRENT ISSUE STATUS:
ISSUED FOR BIDDING/CONSTRUCTION
7-9-07

REV	DESCRIPTION	DATE
0	BIDDING/CONSTRUCTION	7-9-07

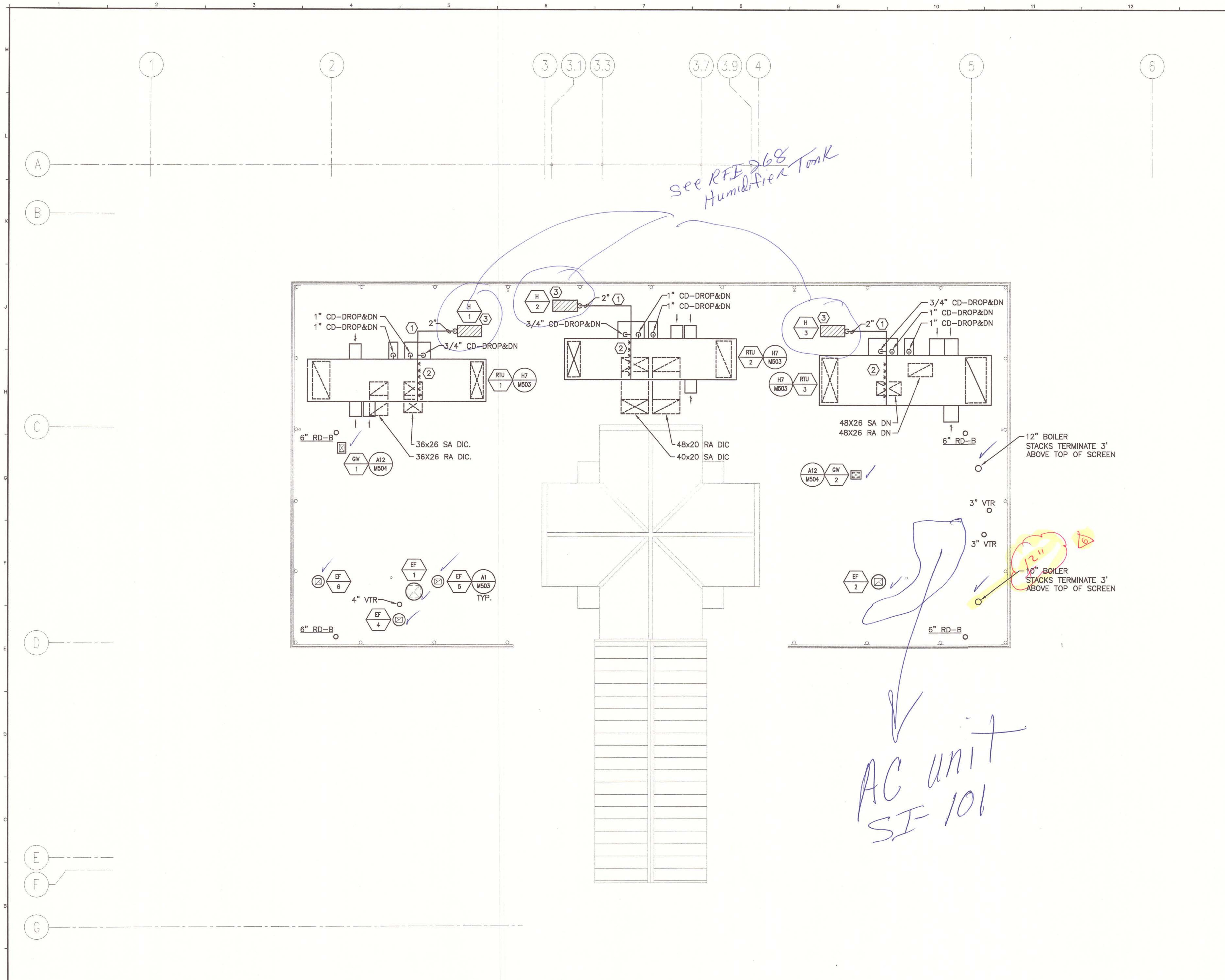
GRAPHIC SCALE:
0" 1"

SCALE:	1/8"=1'-0"
PROJECT MANAGER:	SLB
JC/DRAWN BY:	TCM/BGG
A/E OF RECORD:	RMW
CAD FILE:	MH103-06016
PROJECT NO:	06016
DATE:	7-9-07

SHEET TITLE:
THIRD FLOOR HVAC DUCTWORK PLAN

SHEET No.
MH103

AS BUILT
Owner Copy



A1	ROOF PLAN
1/8" = 1'-0"	-

NOTE:

1. SEE SHEET M-001 FOR LEGEND AND ABBREVIATIONS.

KEYED NOTES:

1. INSTALL HUMIDIFIER DISPERSION ASSEMBLY PER MANUFACTURERS WRITTEN INSTRUCTIONS. PIPING CONNECTION FROM HUMIDIFIER TO DIPERSION GRID TO BE HARD PIPED WITH SCH.40 STEEL. PROVIDE 2" THICK FIBERGLASS INSULATION WITH PVC JACKET.
2. PROVIDE SS DRAIN PAN TO EXTEND FULL LENGTH OF HUMIDIFIER MODULE WITHIN AHU.
3. TERMINATE FLUE 5 FT ABOVE HUMIDIFIER.

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STATE OF MAINE
RONNIE M. WILLEY
NO. 11029
LICENSED PROFESSIONAL ENGINEER
6/25/07

PROJECT NORTH
MAG. NORTH

PROJECT TITLE:
MAINE TURNPIKE AUTHORITY
ADMINISTRATION BUILDING
PORTLAND, MAINE

CURRENT ISSUE STATUS:
ISSUED FOR BIDDING/CONSTRUCTION
7-9-07

REV	DESCRIPTION	DATE
0	BIDDING/CONSTRUCTION	7-9-07

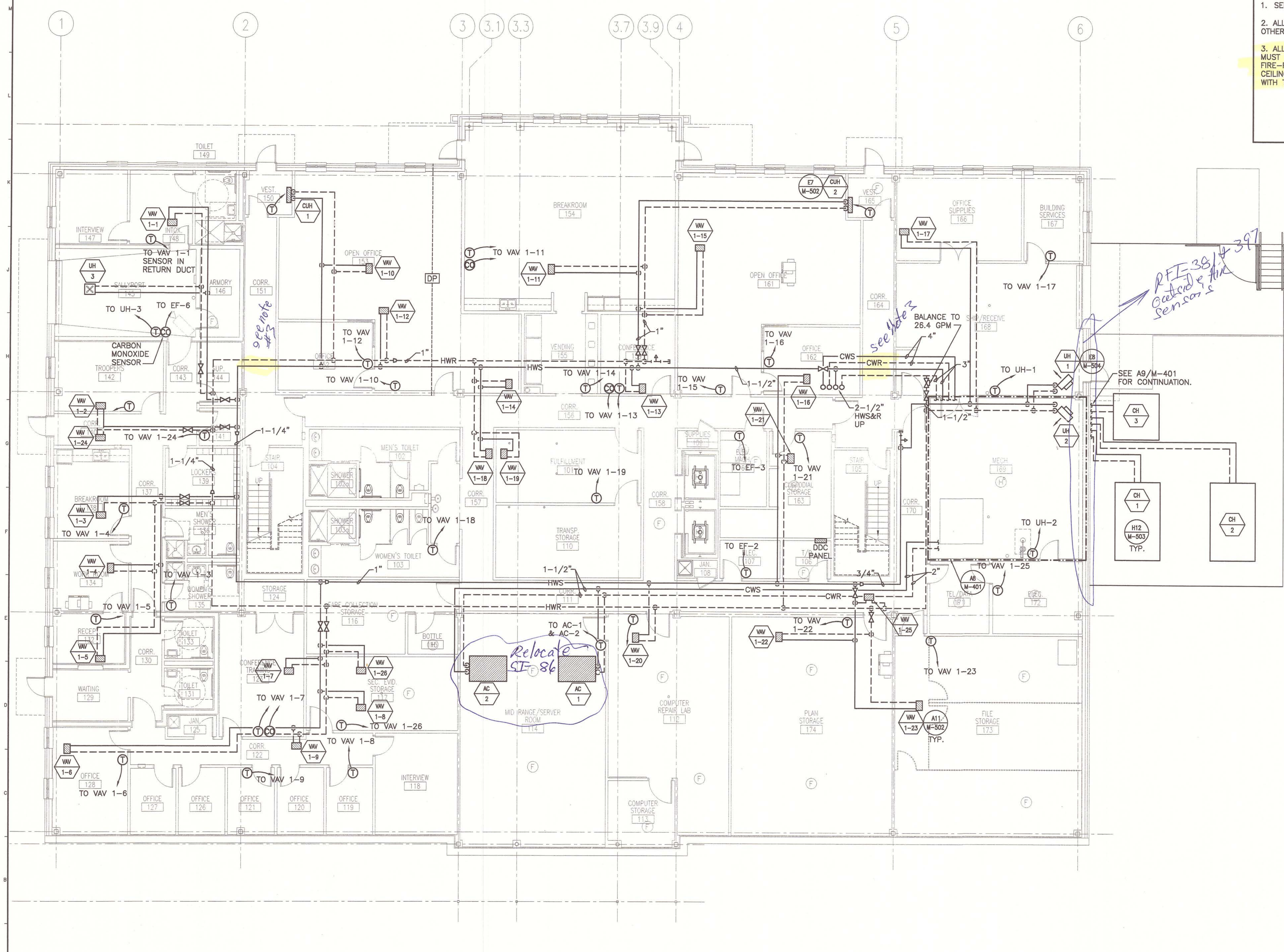
GRAPHIC SCALE:
0" 1"

SCALE:	AS NOTED
PROJECT MANAGER:	SLB
JC/DRAWN BY:	TCM/BGG
A/E OF RECORD:	RMW
CAD FILE:	MH104-06016
PROJECT NO:	06016
DATE:	7-9-07

SHEET TITLE:
ROOF
HVAC DUCTWORK
PLAN

SHEET No.
MH104

AS BUILT
Owner Copy



NOTE:

1. SEE SHEET M-001 FOR LEGEND AND ABBREVIATIONS.
2. ALL PIPING RUNOUT TO BE 3/4" UNLESS NOTED OTHERWISE.
3. ALL PIPING ROUTED ACROSS CORRIDORS #151 & #164 MUST BE CONTAINED WITHIN THE LIMITS OF HORIZONTAL FIRE-RATED SHAFT LOCATED ABOVE THE SUSPENDED CEILING. COORDINATE LAYOUT OF PIPING ACCORDINGLY WITH THE WORK OF OTHER TRADES.

A1 FIRST FLOOR PLAN

1/8" = 1'-0"

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6/28/07

PROJECT NORTH
MAG NORTH

PROJECT TITLE:
MAINE TURNPIKE AUTHORITY ADMINISTRATION BUILDING
PORTLAND, MAINE

CURRENT ISSUE STATUS:
ISSUED FOR BIDDING/CONSTRUCTION 7-9-07

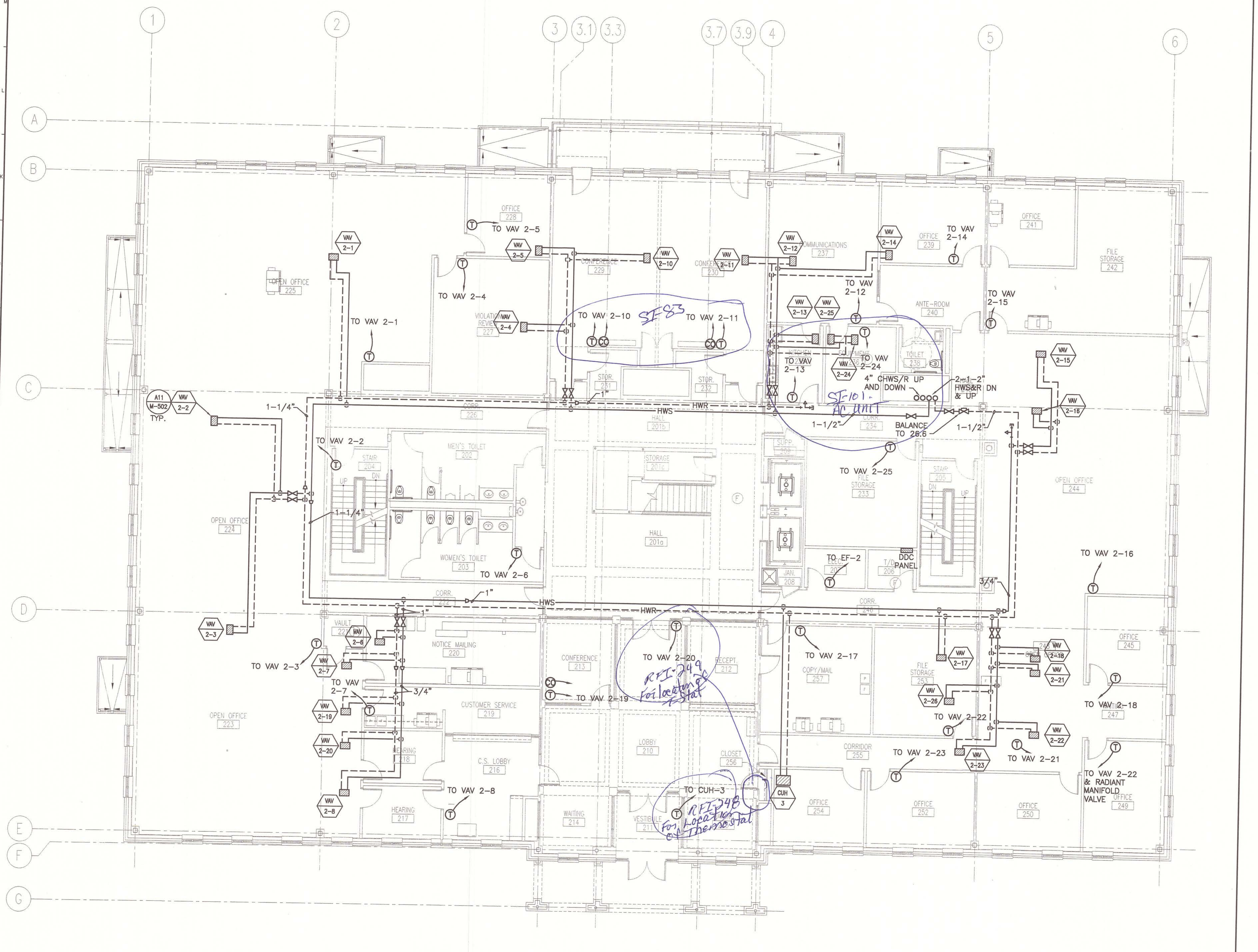
REV	DESCRIPTION	DATE
0	BIDDING/CONSTRUCTION	7-9-07

GRAPHIC SCALE: 0" 1"

SCALE:	1/8"=1'-0"
PROJECT MANAGER:	SLB
JC/DRAWN BY:	TCM/BGG
A/E OF RECORD:	RMW
CAD FILE:	MP101-06016
PROJECT NO:	06016
DATE:	7-9-07

SHEET TITLE:
FIRST FLOOR HVAC PIPING PLAN

SHEET No. MP101



A1 SECOND FLOOR PLAN

1/8" = 1'-0"

NOTE:

1. SEE SHEET M-001 FOR LEGEND AND ABBREVIATIONS.
2. ALL PIPING RUNOUTS TO BE 3/4" UNLESS NOTED OTHERWISE.

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STATE OF MAINE
RONNIE M. WILLEY
NO. 11029
LICENSED PROFESSIONAL ENGINEER
6/28/07

PROJECT NORTH

MAG NORTH

PROJECT TITLE:
MAINE TURNPIKE AUTHORITY ADMINISTRATION BUILDING
PORTLAND, MAINE

CURRENT ISSUE STATUS:
ISSUED FOR BIDDING/CONSTRUCTION
7-9-07

REV	DESCRIPTION	DATE
0	BIDDING/CONSTRUCTION	7-9-07

GRAPHIC SCALE: 0" 1"

SCALE:	1/8"=1'-0"
PROJECT MANAGER:	SLB
JC/DRAWN BY:	TCM/BGG
A/E OF RECORD:	RMW
CAD FILE:	MP102-06016
PROJECT NO:	06016
DATE:	7-9-07

SHEET TITLE:
SECOND FLOOR HVAC PIPING PLAN

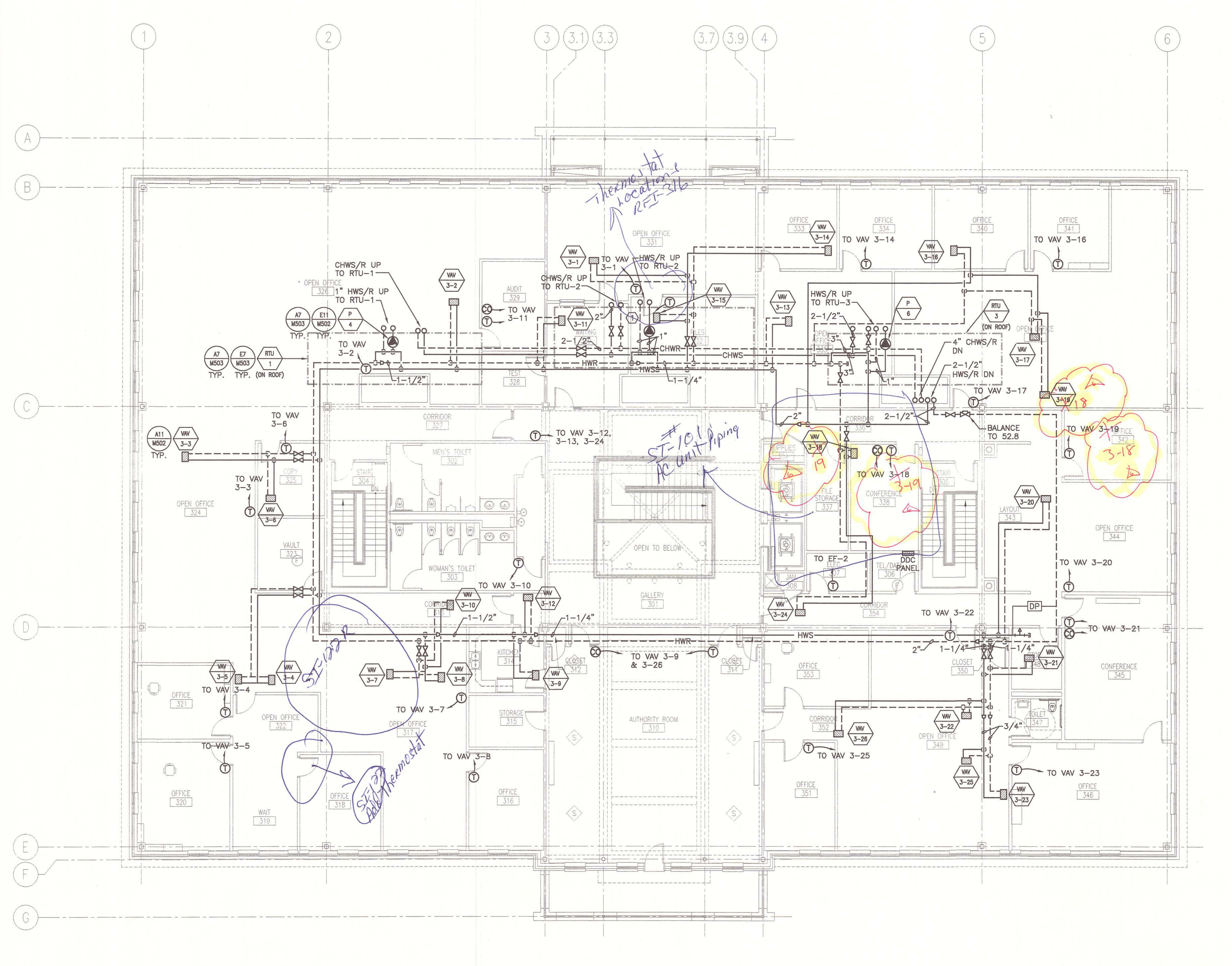
SHEET No.
MP102

NOTE:

1. SEE SHEET M-001 FOR LEGEND AND ABBREVIATIONS.
2. ALL PIPING RUNOUT TO BE 3/4" UNLESS NOTED OTHERWISE.

KEYED NOTES:

1 P-5



A1 THIRD FLOOR PLAN
1/8" = 1'-0"

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STATE OF MAINE
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PROFESSIONAL ENGINEER
6/28/07

PROJECT NORTH

PROJECT TITLE:
MAINE TURNPIKE AUTHORITY
ADMINISTRATION BUILDING
PORTLAND, MAINE

CURRENT ISSUE STATUS:
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7-9-07

REV	DESCRIPTION	DATE
0	BIDDING/CONSTRUCTION	7-9-07

GRAPHIC SCALE: 0" 1"

SCALE:	1/8"=1'-0"
PROJECT MANAGER:	SLB
JC/DRAWN BY:	TCM/BGG
A/E OF RECORD:	RMW
CAD FILE:	MP103-06016
PROJECT NO:	06016
DATE:	7-9-07

SHEET TITLE:
THIRD FLOOR HVAC PIPING PLAN

SHEET No.
MP103

AS BUILT
Owner Copy

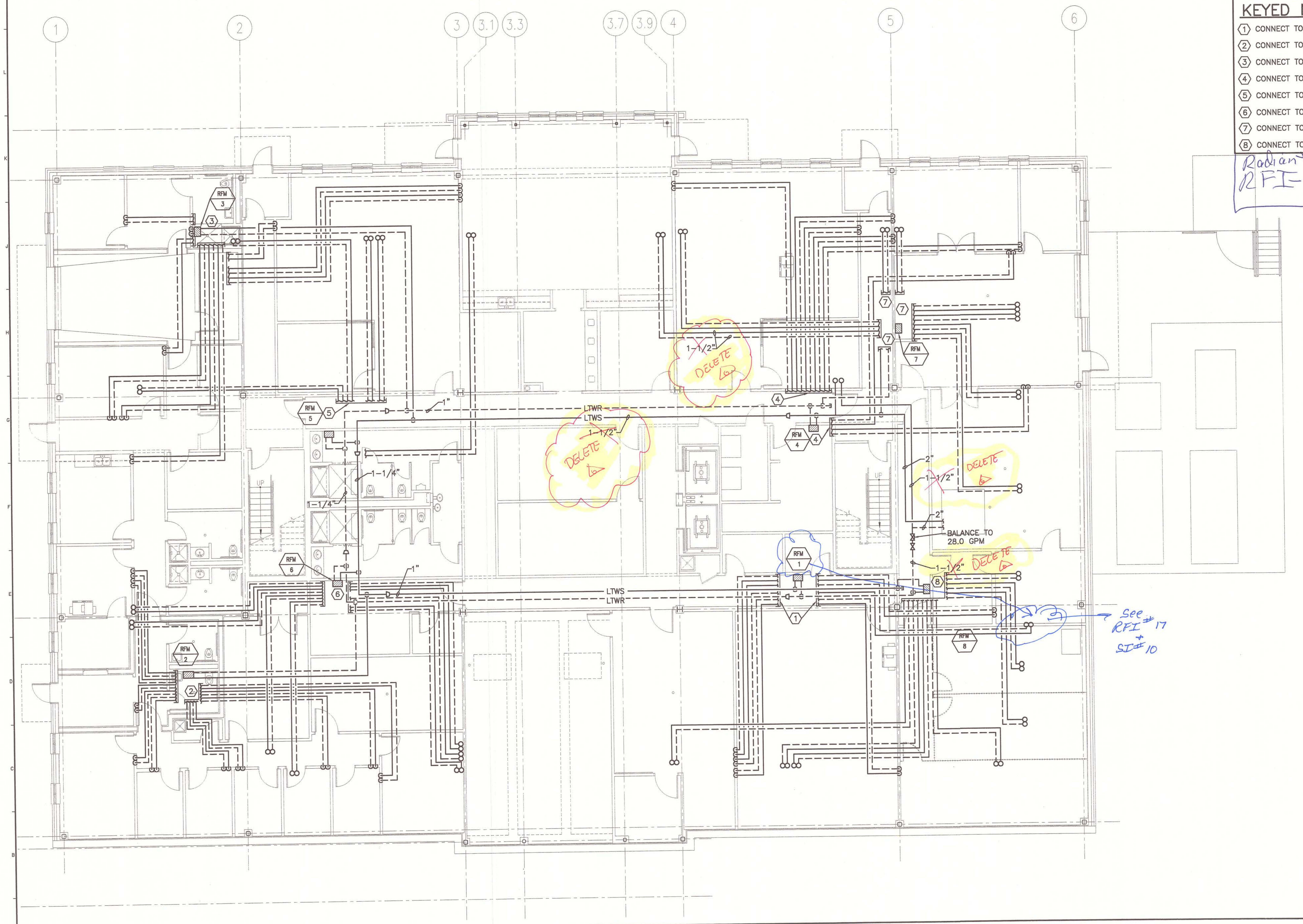
NOTE:

1. SEE SHEET M-001 FOR LEGEND AND ABBREVIATIONS.
2. INSULATE ALL RADIANT FLOOR RUNOUTS WITH 1/2" FLEXIBLE ELASTOMERIC. RFI 25

KEYED NOTES:

1. CONNECT TO RFM-1.
2. CONNECT TO RFM-2.
3. CONNECT TO RFM-3.
4. CONNECT TO RFM-4.
5. CONNECT TO RFM-5.
6. CONNECT TO RFM-6.
7. CONNECT TO RFM-7.
8. CONNECT TO RFM-8.

Radiant Room Sensor Locations
RFI-296



AS BUILT
Owner Copy

A1 FIRST FLOOR PLAN
1/8" = 1'-0"

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6/28/07

PROJECT NORTH

MAG NORTH

PROJECT TITLE:
MAINE TURNPIKE AUTHORITY ADMINISTRATION BUILDING
PORTLAND, MAINE

CURRENT ISSUE STATUS:
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REV	DESCRIPTION	DATE
0	BIDDING/CONSTRUCTION	7-9-07

GRAPHIC SCALE:
0" 1"

SCALE:	1/8"=1'-0"
PROJECT MANAGER:	SLB
JC/DRAWN BY:	TCM/BGG
A/E OF RECORD:	RMW
CAD FILE:	MP111-06016
PROJECT NO:	06016
DATE:	7-9-07

SHEET TITLE:
FIRST FLOOR RADIANT FLOOR PIPING PLAN

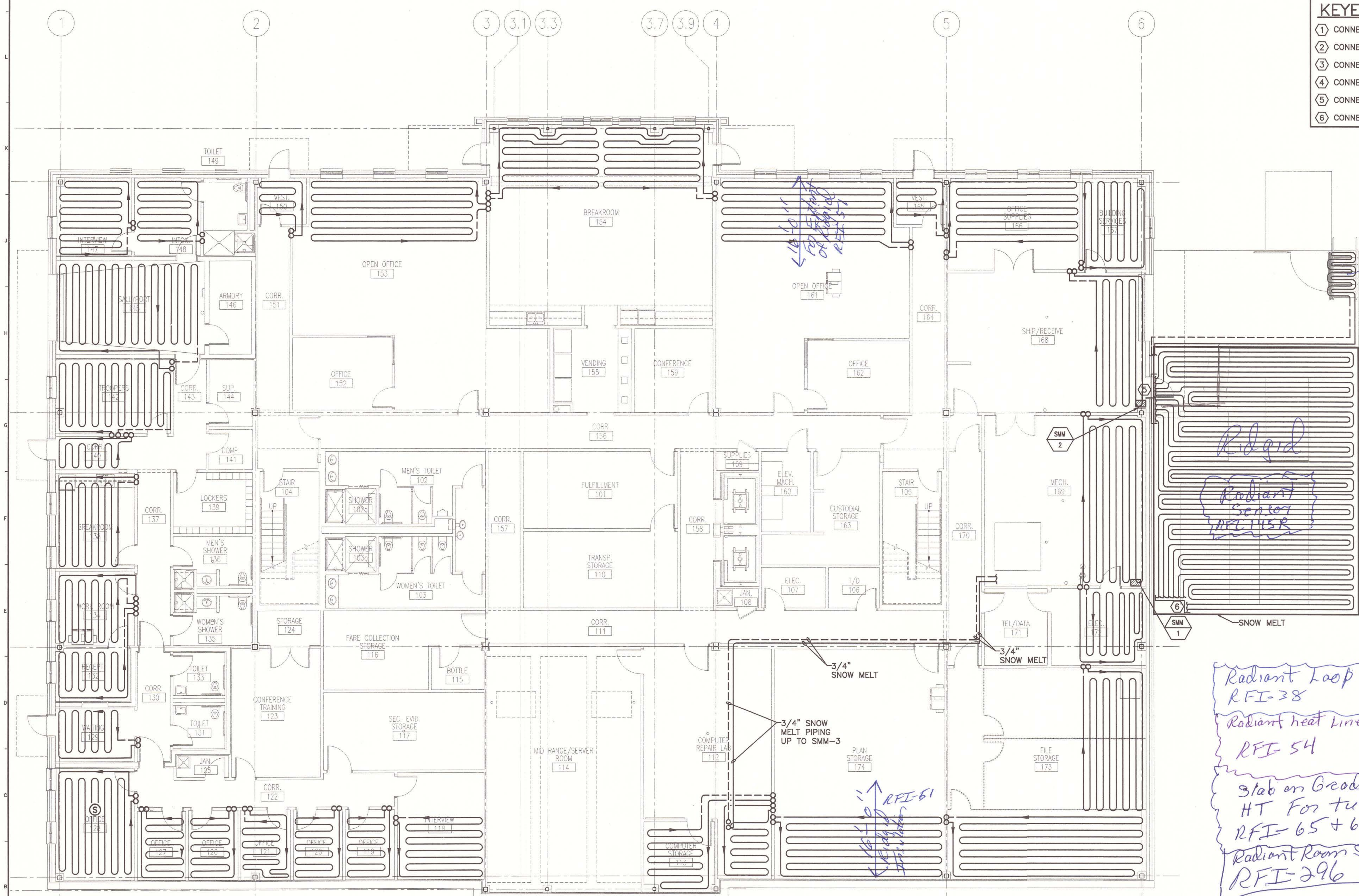
SHEET No.
MP111

NOTE:

1. SEE SHEET M-001 FOR LEGEND AND ABBREVIATIONS.
2. INSULATE ALL RADIANT FLOOR RUNOUTS WITH 1/2" FLEXIBLE ELASTOMERIC. RFI 25

KEYED NOTES:

1. CONNECT TO RFM-1.
2. CONNECT TO RFM-2.
3. CONNECT TO RFM-3.
4. CONNECT TO RFM-4.
5. CONNECT TO SMM-2.
6. CONNECT TO SMM-1.



Radiant Loop Lengths
RFI-38

Radiant heat Line Tie downs
RFI-54

Slab on Grade Radinant HT For tubing
RFI-65 + 67

Radiant Room Sensor Locations
RFI-296

AS BUILT
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A1 FIRST FLOOR PLAN

1/8" = 1'-0"

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LICENSED PROFESSIONAL ENGINEER
6/28/07

PROJECT NORTH

PROJECT TITLE:
MAINE TURNPIKE AUTHORITY ADMINISTRATION BUILDING
PORTLAND, MAINE

CURRENT ISSUE STATUS:
ISSUED FOR BIDDING/CONSTRUCTION 7-9-07

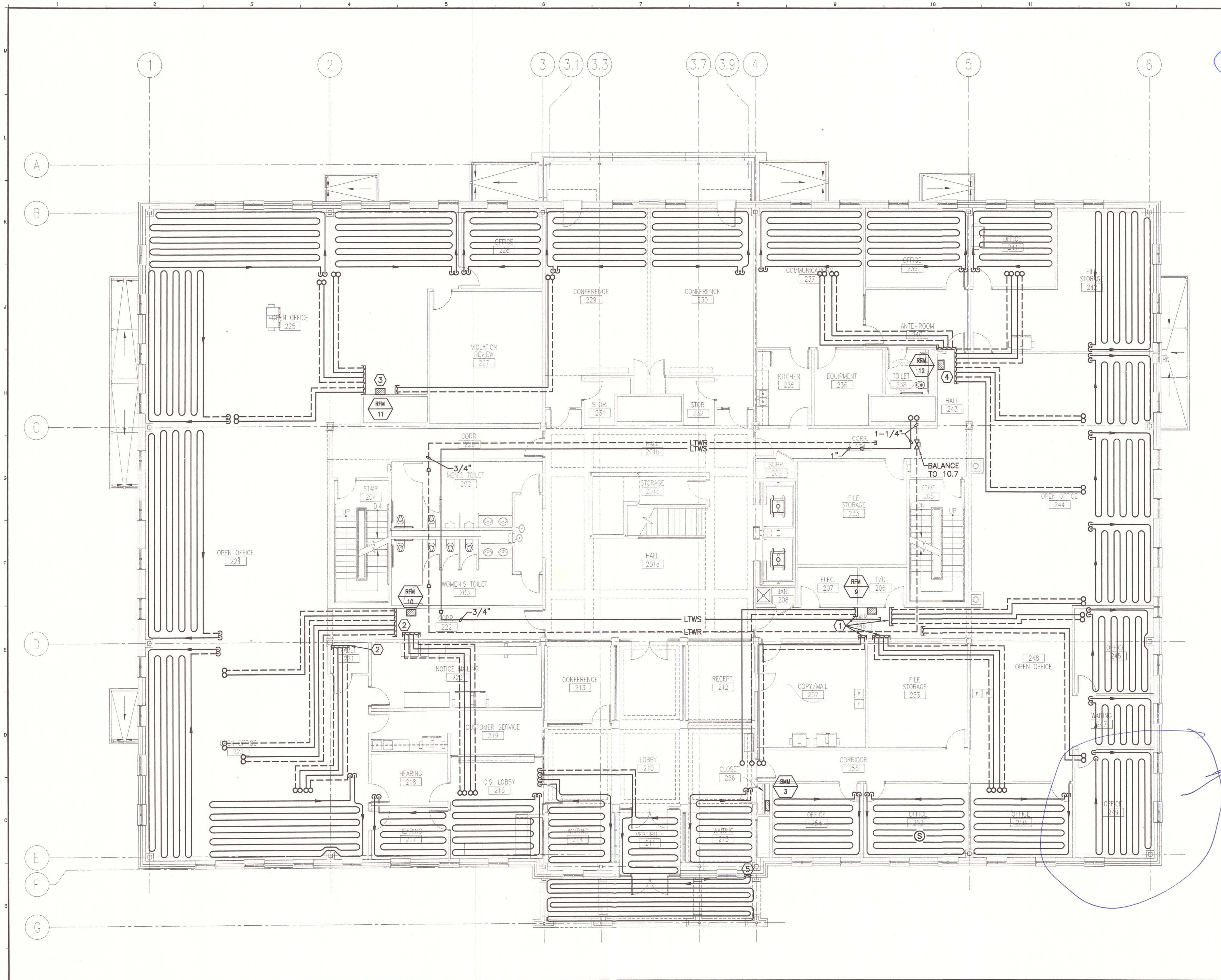
REV	DESCRIPTION	DATE
0	BIDDING/CONSTRUCTION	7-9-07

GRAPHIC SCALE:

SCALE:	1/8"=1'-0"
PROJECT MANAGER:	SLB
JC/DRAWN BY:	TCM/BGG
A/E OF RECORD:	RMW
CAD FILE:	MP111A-06016
PROJECT NO:	06016
DATE:	7-9-07

SHEET TITLE:
FIRST FLOOR INSLAB RADIANT FLOOR PIPING PLAN

SHEET No.
MP111A



A1 FLOOR PLAN

1/8" = 1'-0"

NOTE:

1. SEE SHEET M-001 FOR LEGEND AND ABBREVIATIONS.
2. INSULATE ALL RADIANT FLOOR RUNOUTS WITH 1/2" FLEXIBLE ELASTOMERIC. RFI 25

KEYED NOTES:

1. CONNECT TO RFM-9.
2. CONNECT TO RFM-10.
3. CONNECT TO RFM-11.
4. CONNECT TO RFM-12.
5. CONNECT TO SMM-3.

RFI-38
Radiant Loop Lengths

RFI-62R
For HT of tubing + Mesh

Radiant Room Sensor Locations
RFI-296

Radiant Room Sensor Location
RFI-296

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LICENSED PROFESSIONAL ENGINEER
6/28/07

PROJECT NORTH
MAG. NORTH

PROJECT TITLE:
MAINE TURNPIKE AUTHORITY
ADMINISTRATION BUILDING
PORTLAND, MAINE

CURRENT ISSUE STATUS:
ISSUED FOR BIDDING/CONSTRUCTION
7-9-07

REV	DESCRIPTION	DATE
0	BIDDING/CONSTRUCTION	7-9-07

GRAPHIC SCALE: 0" 1"

SCALE:	1/8"=1'-0"
PROJECT MANAGER:	SLB
JC/DRAWN BY:	TCM/BGG
A/E OF RECORD:	RMW
CAD FILE:	MP112-06016
PROJECT NO:	06016
DATE:	7-9-07

SHEET TITLE:
SECOND FLOOR RADIANT FLOOR PIPING PLAN

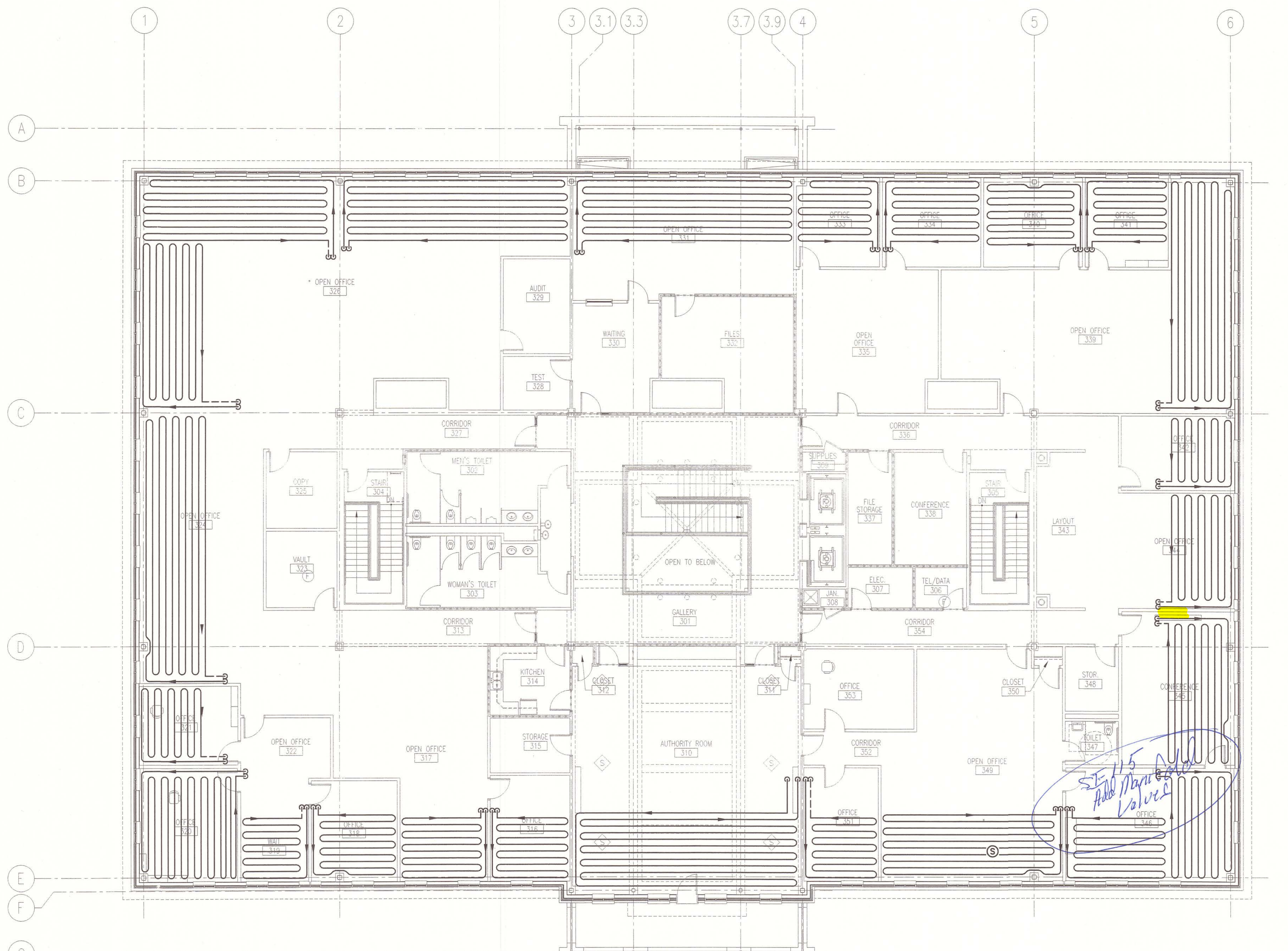
SHEET No. MP112

AS BUILT
Owner Copy

NOTE:

1. SEE SHEET M-001 FOR LEGEND AND ABBREVIATIONS.
2. INSULATE ALL RADIANT FLOOR RUNOUTS WITH 1/2" FLEXIBLE ELASTOMERIC. RFI-25

RFI-38
Radiant Loop Lengths



A1 FLOOR PLAN
1/8" = 1'-0"

AS BUILT
Owner Copy

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6/28/07

PROJECT NORTH
MAG NORTH

PROJECT TITLE:
MAINE TURNPIKE AUTHORITY ADMINISTRATION BUILDING
PORTLAND, MAINE

CURRENT ISSUE STATUS:

REV	DESCRIPTION	DATE
0	BIDDING/CONSTRUCTION	7-9-07

GRAPHIC SCALE:
0" 1"

SCALE:	1/8"=1'-0"
PROJECT MANAGER:	SLB
JC/DRAWN BY:	TCM/BGG
A/E OF RECORD:	RMW
CAD FILE:	MP113-06016
PROJECT NO:	06016
DATE:	7-9-07

SHEET TITLE:
THIRD FLOOR RADIANT FLOOR PIPING PLAN

SHEET No.
MP113

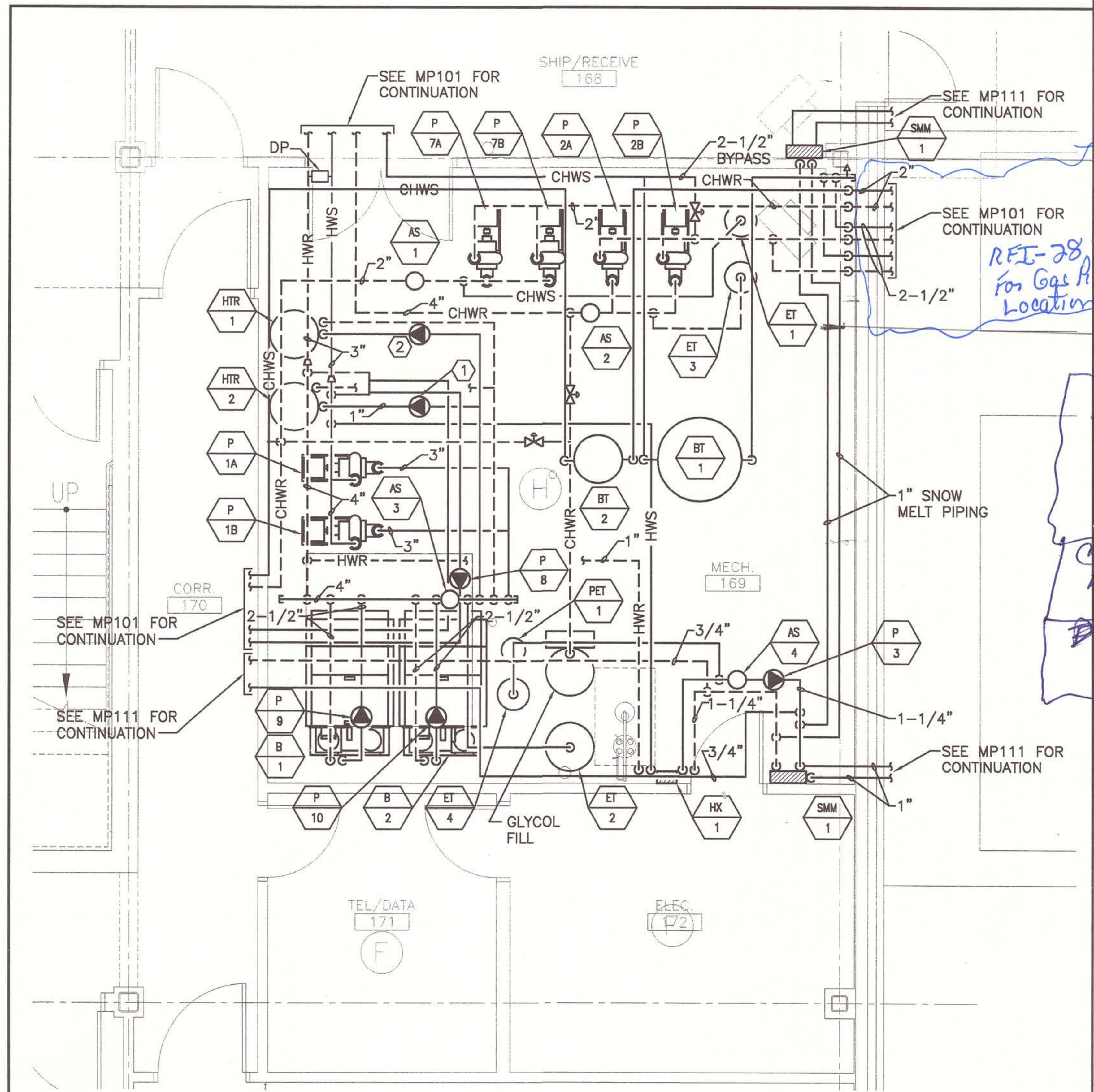
NOTE:

1. SEE SHEET M-001 FOR LEGEND AND ABBREVIATIONS.

KEYED NOTES:

(1) P-11.

(2) P-12.



RFI-38 For Gas Pipe Location +SI 232

7'-0" For sprinkler line

Boiler Piping arrangments See RFI-244

Chilled Water ByPass Location RFI-245

Diff Pressure Switch Location RFI-365

A8	MECHANICAL ROOM PART PLAN
1/4" = 1'-0"	

AS BUILT
Owner Copy

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NO. 11029
LICENSED PROFESSIONAL ENGINEER
6/28/07

PROJECT NORTH

MAG NORTH

PROJECT TITLE:
MAINE TURNPIKE AUTHORITY ADMINISTRATION BUILDING
PORTLAND, MAINE

CURRENT ISSUE STATUS:
ISSUED FOR BIDDING/CONSTRUCTION
7-9-07

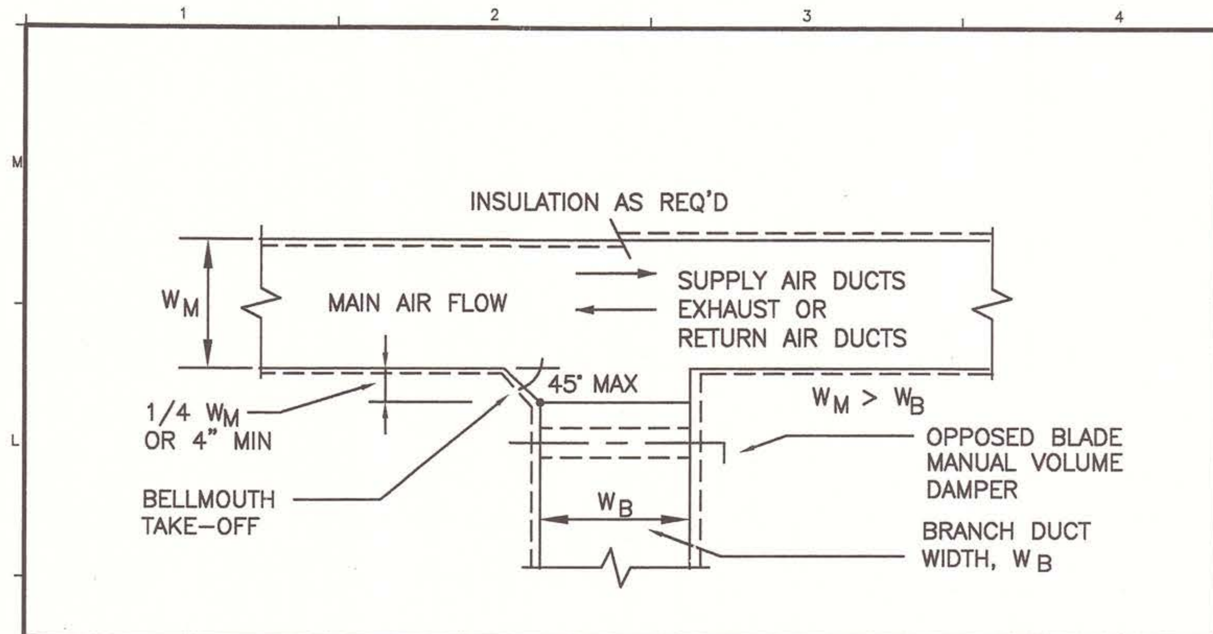
REV	DESCRIPTION	DATE
0	BIDDING/CONSTRUCTION	7-9-07

GRAPHIC SCALE:
0" 1"

SCALE:	1/4"=1'-0"
PROJECT MANAGER:	SLB
JC/DRAWN BY:	TCM/BGG
A/E OF RECORD:	RMW
CAD FILE:	M-401-06016
PROJECT NO:	06016
DATE:	7-9-07

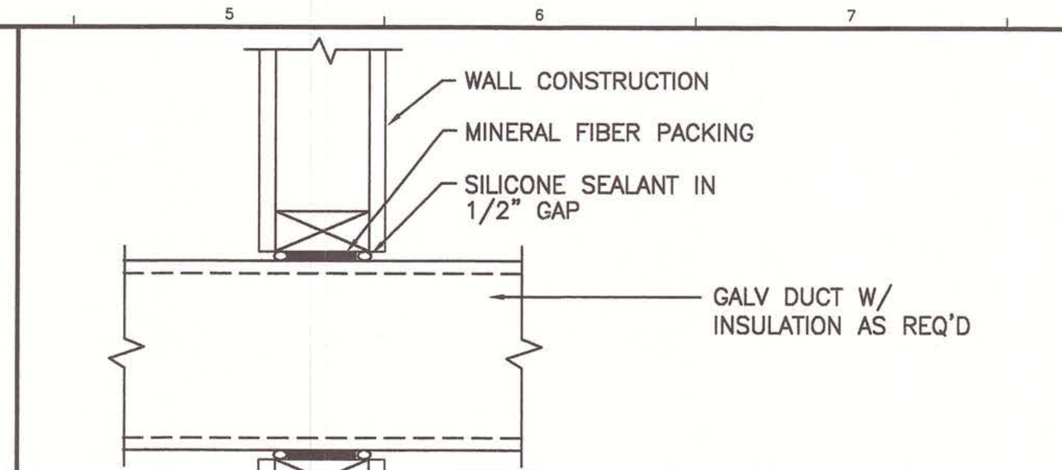
SHEET TITLE:
MECHANICAL ROOM PART PLAN

SHEET No.
M-401



K1 DUCT MAIN AND BRANCH TAKE OFFS

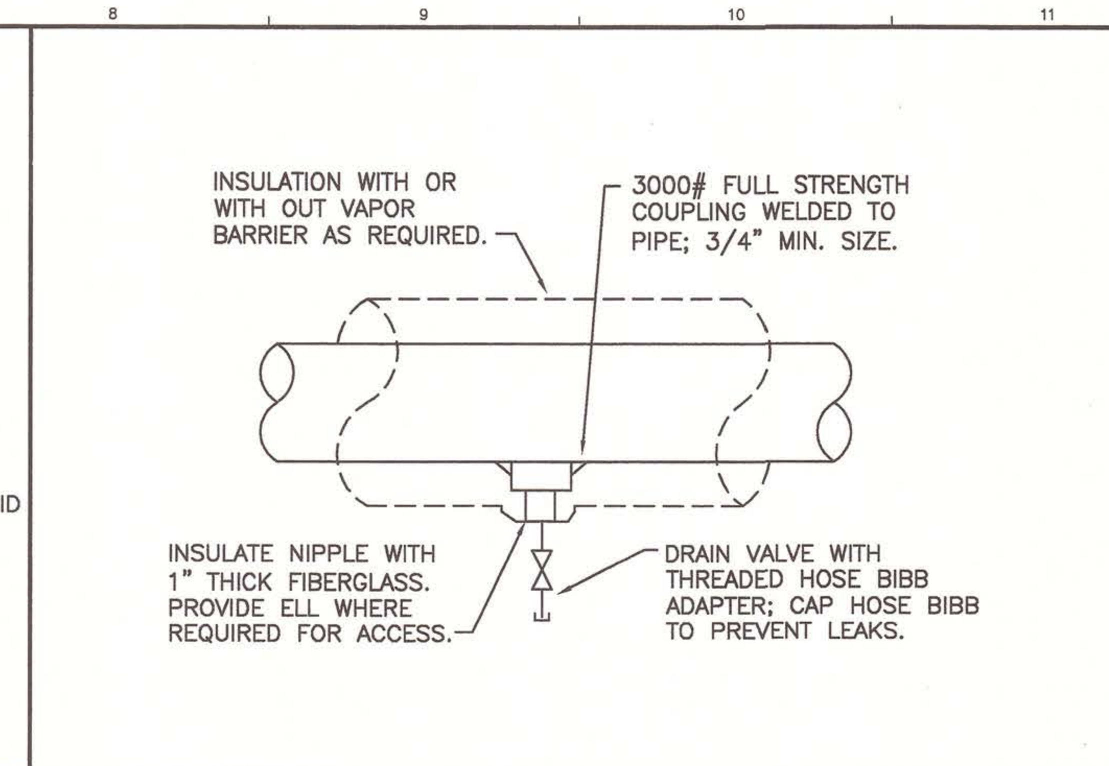
NOT TO SCALE



NOTES:
1. DRYWALL, METAL STUDS OR ANY OTHER RIGID MATERIAL MUST NOT TOUCH DUCT.
2. SUPPORT DUCT FROM HANGERS ON EITHER SIDE OF WALL. DO NOT LET DUCT "LOAD" ONTO WALL
3. PENETRATION MUST BE SEALED 100% AIR TIGHT
4. USE FIRE SEALANT AT FIRE WALLS.

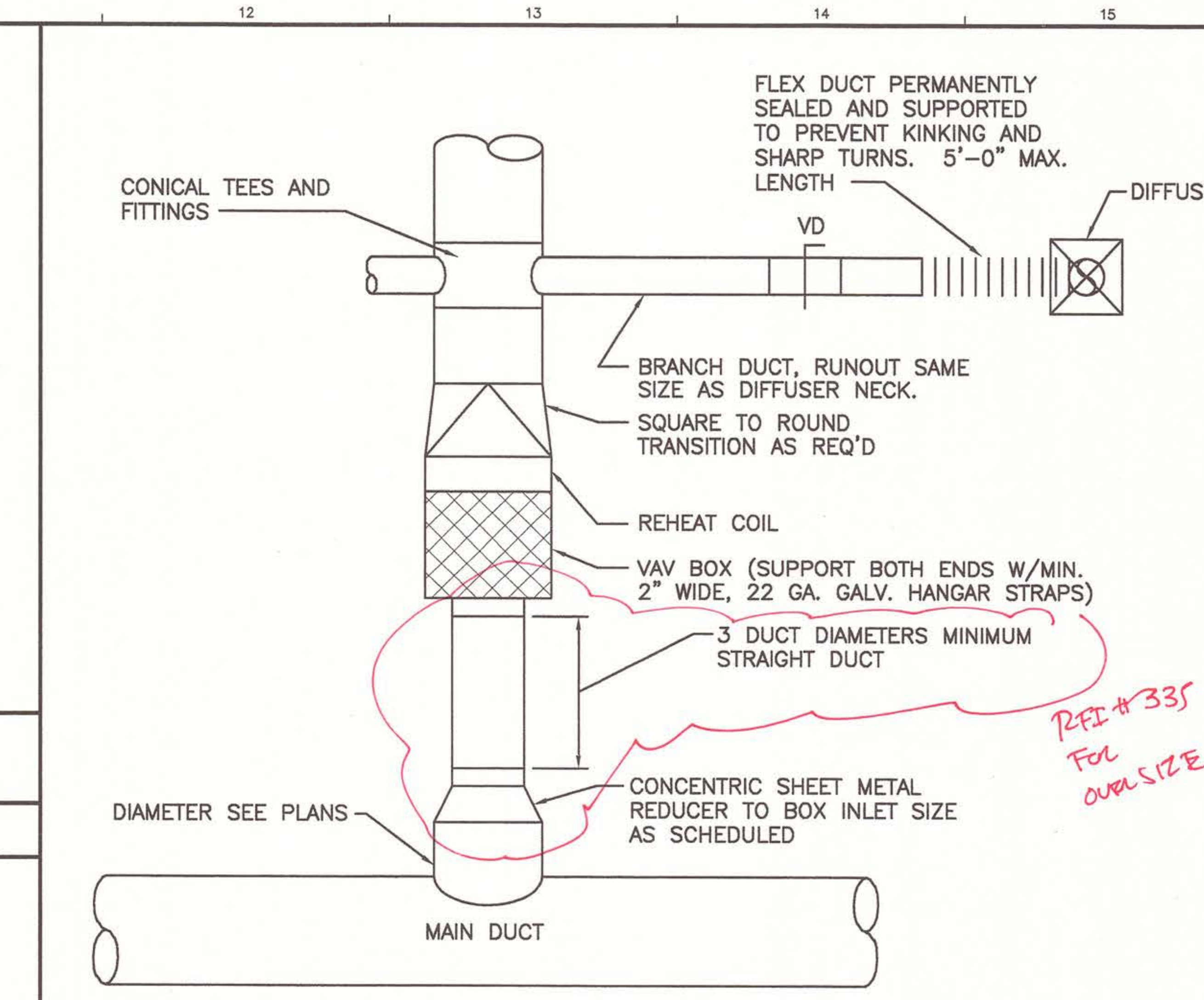
J5 METAL DUCT WALL PENETRATION

NOT TO SCALE



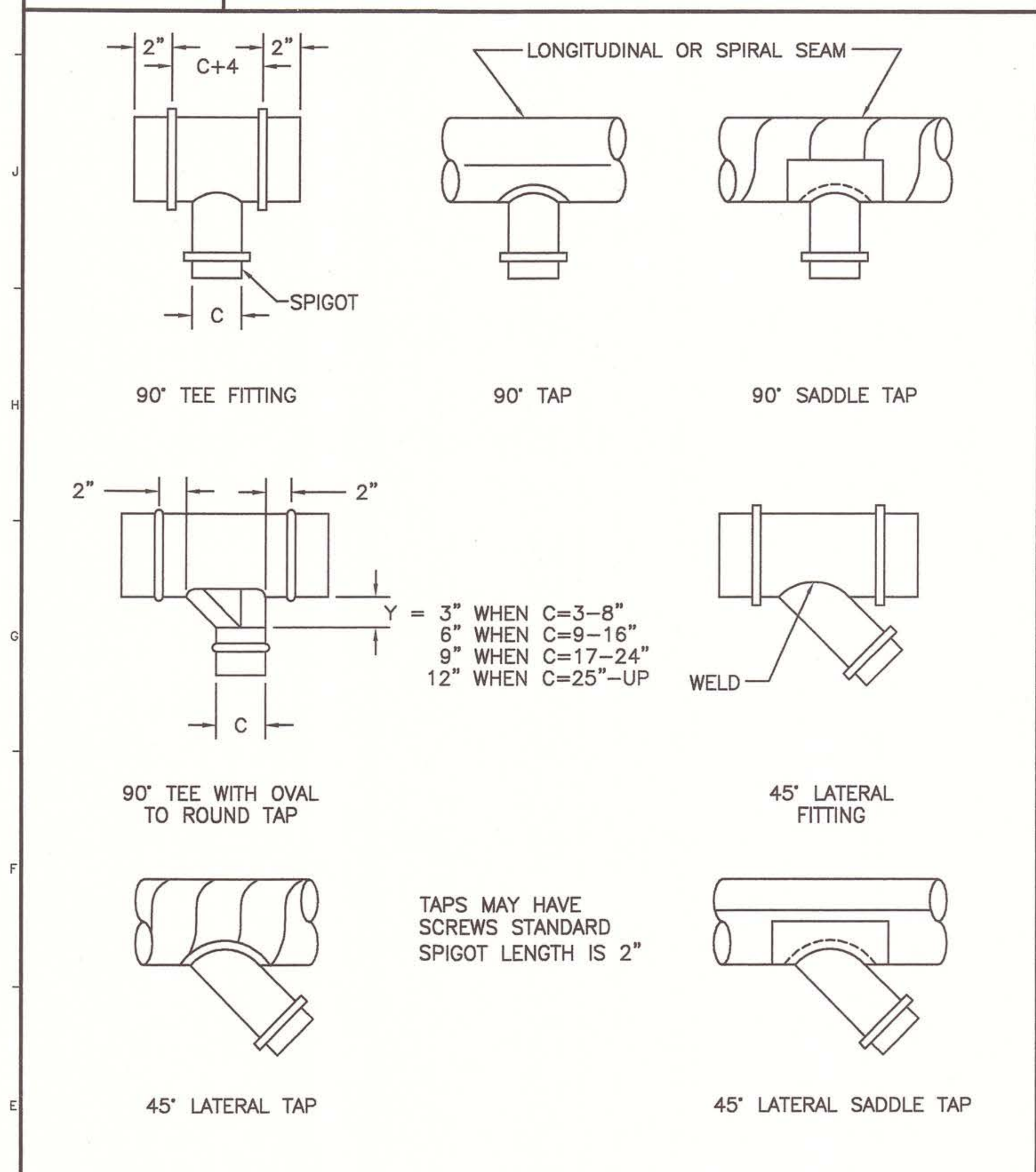
J8 DRAIN VALVE INSTALLATION DETAIL

NOT TO SCALE



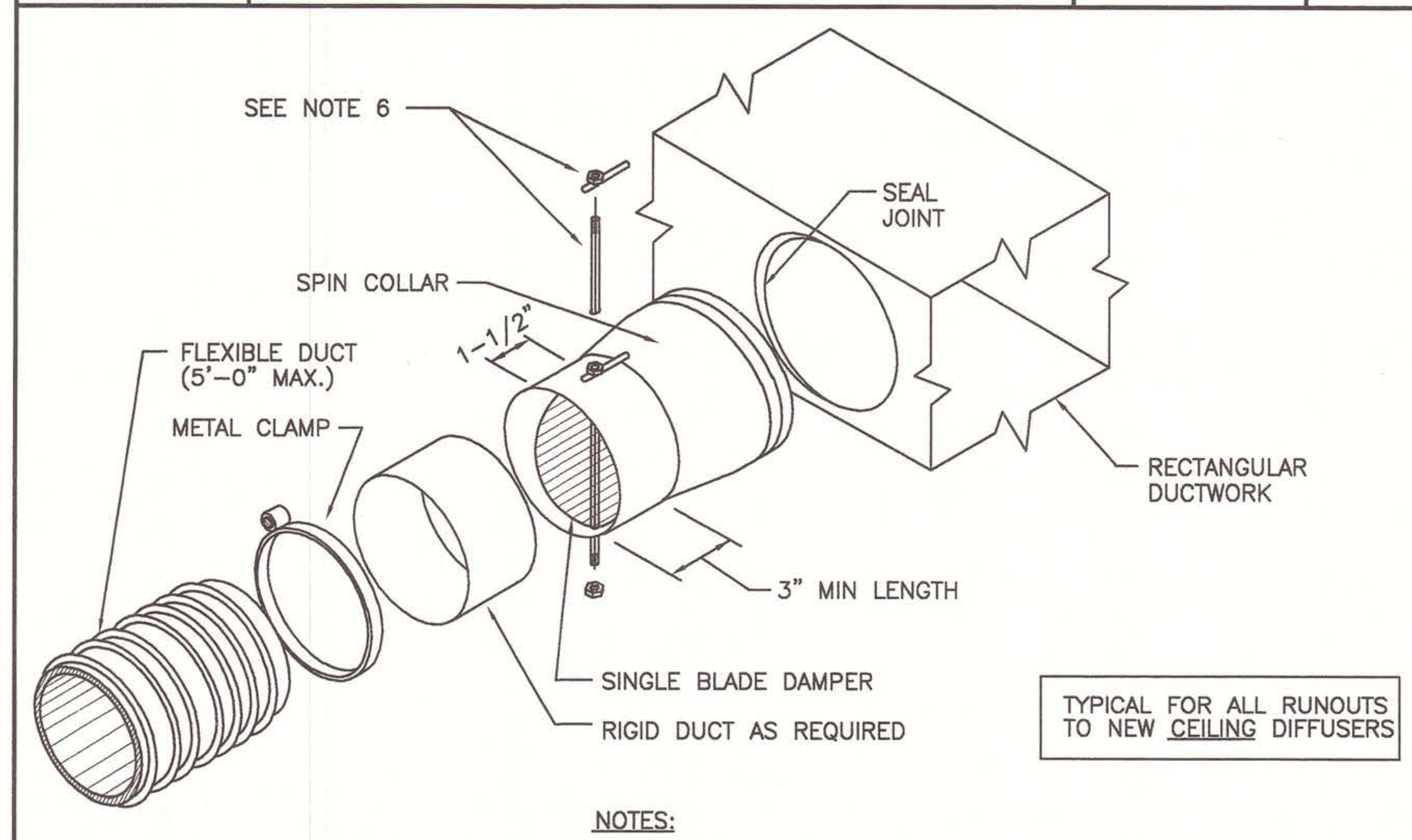
H12 VAV BOX SCHEMATIC

NOT TO SCALE



D1 TEES AND LATERALS

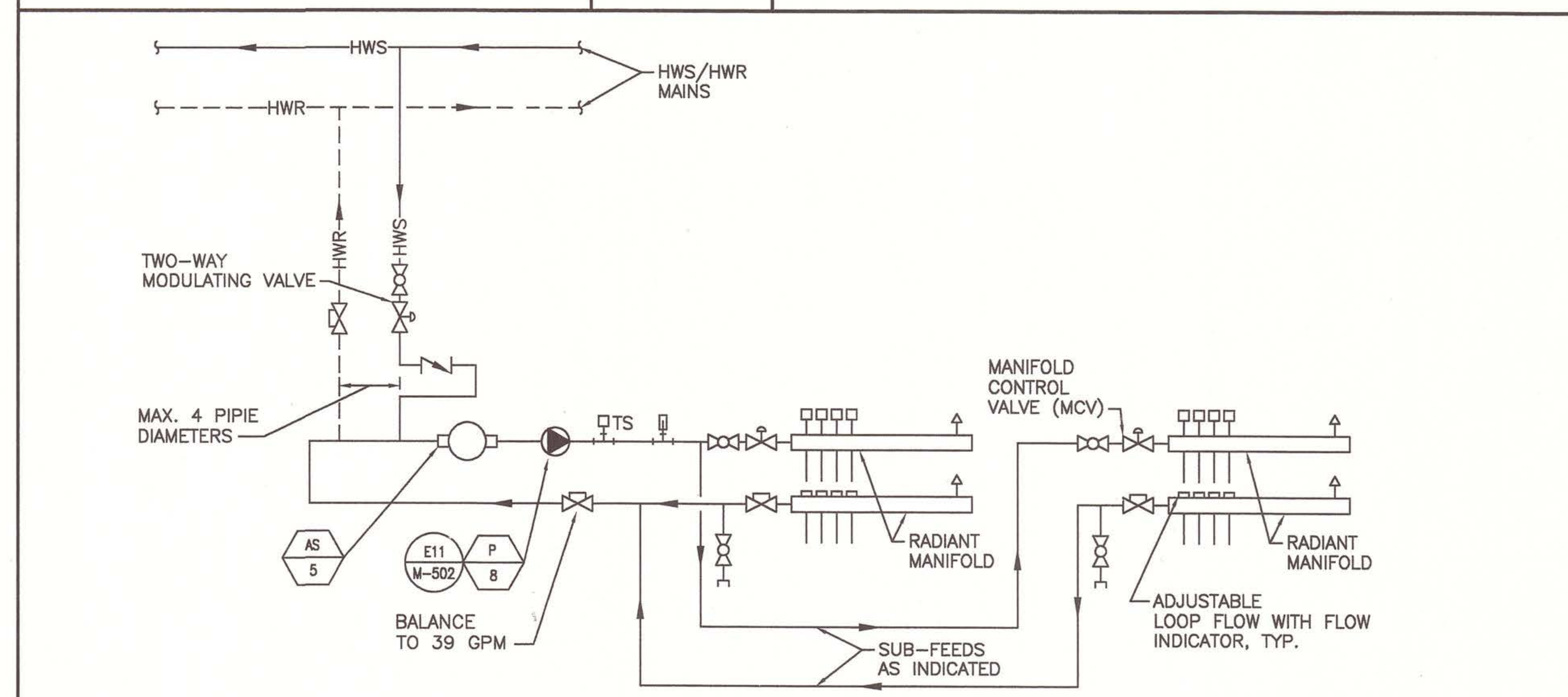
NOT TO SCALE



NOTES:
1. SUPPORT AS REQUIRED
2. BAND FLEX TO COLLAR 1/2" MINIMUM FROM OUTBOARD END OF COLLAR.
3. INSTALL SPIN COLLAR DAMPER IN OPEN POSITION; FINAL ADJUSTMENT BY ADJUSTING CONTRACTOR.
4. POP RIVET OR SHEET METAL SCREWS, MINIMUM 3 EA AT 120° INTERVALS, CONNECTING STOVEPIPE TO COLLAR. ENSURE RIVETS OR SCREWS DO NOT INTERFERE W/DAMPER.
5. TAPE AND SEAL ALL JOINTS TO PREVENT LEAKAGE.
6. INSTALL LOCKING QUADRANT AND HANDLE ON BOTTOM OF DUCT FOR EASY SERVICE (SHOWN ON TOP FOR EASE OF ILLUSTRATION ONLY).

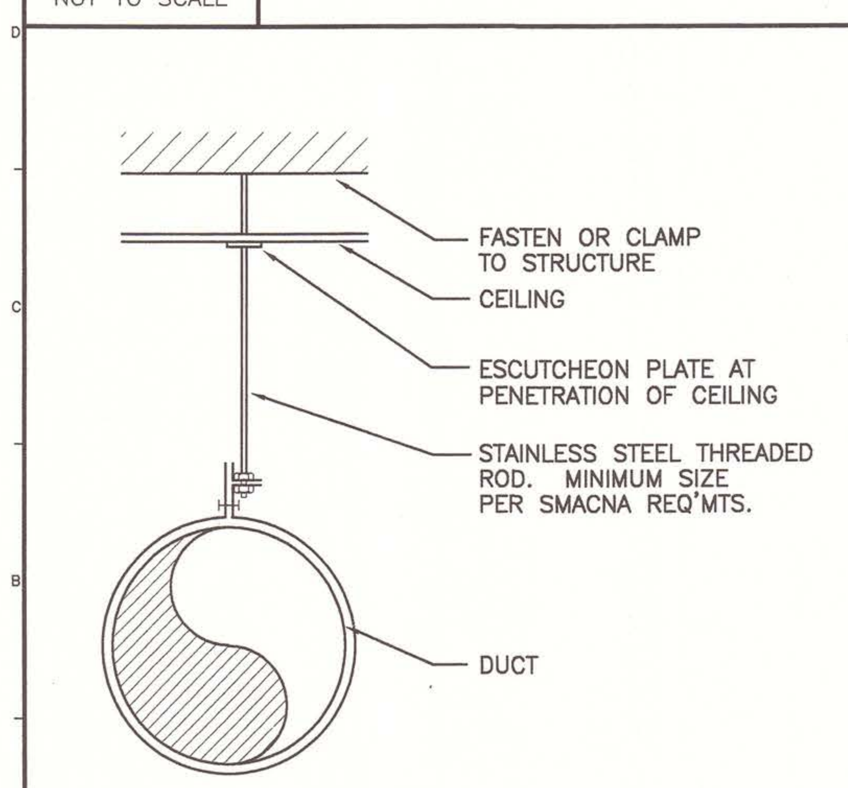
D5 SPIN COLLAR DUCT CONNECTOR WITH DAMPER

NOT TO SCALE



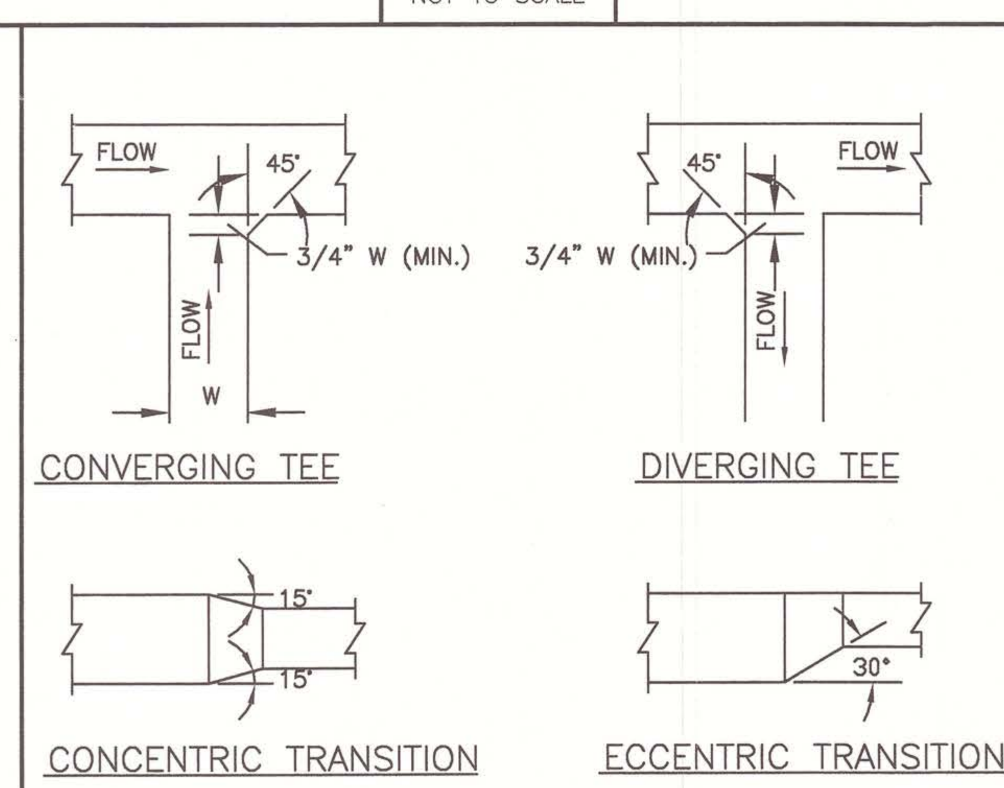
D9 RADIANT FLOOR PIPING & CONTROL SCHEMATIC

NOT TO SCALE



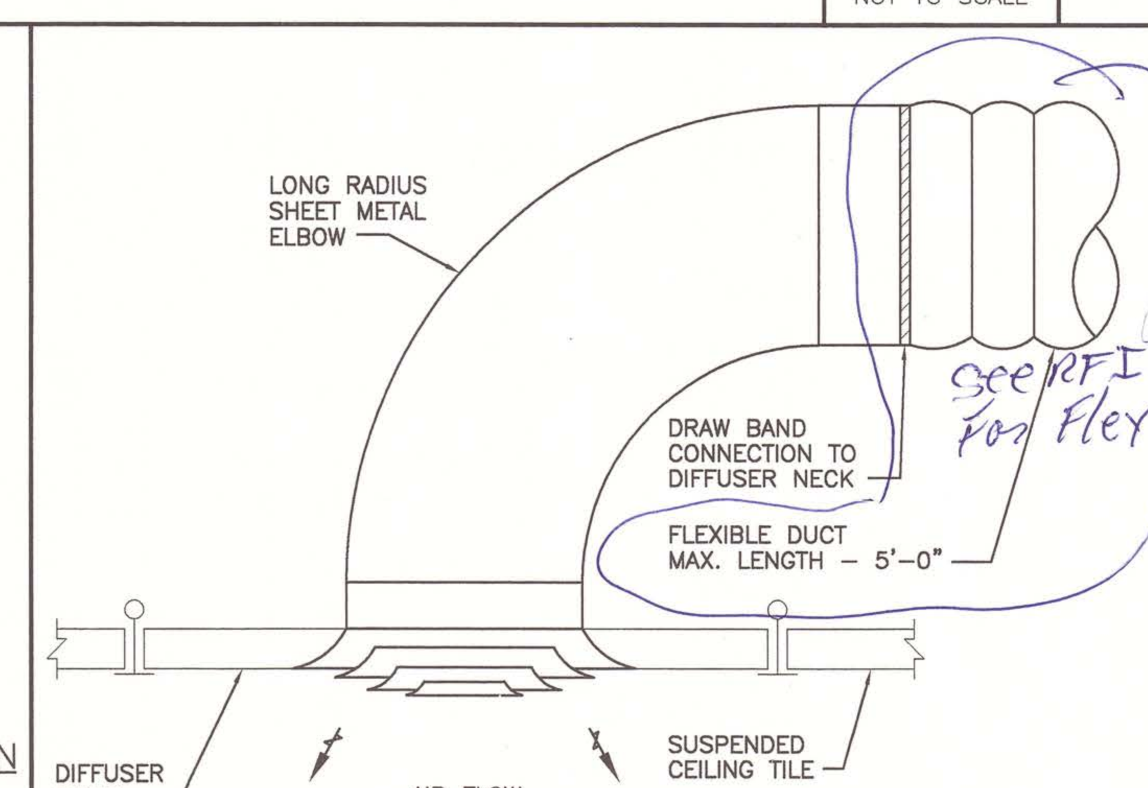
A1 DUCT HANGER

NOT TO SCALE



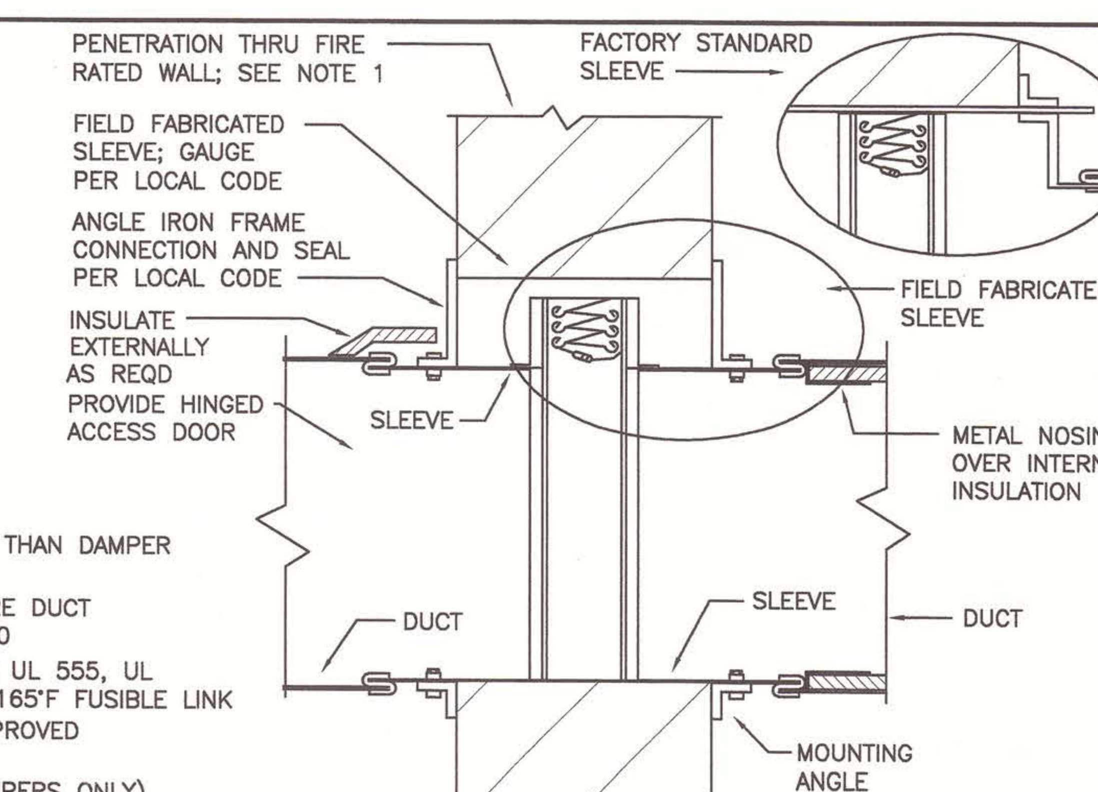
A4 DUCT TRANSITION

NOT TO SCALE



A7 FLEXIBLE DUCT

NOT TO SCALE



NOTES:
1. MAKE OPENING 1/8" PER FOOT LARGER THAN DAMPER DIMENSIONS WITH 1/4" MIN REQD
2. SLEEVE GAUGE ≥ GAUGE OF DUCT WHERE DUCT CONSTRUCTION AND JOINTS PER NFPA 90
3. DAMPER CONSTRUCTED AND TESTED PER UL 555, UL LABELED, 1-1/2 HOUR FIRE RATING W/165°F FUSIBLE LINK
4. SEAL BETWEEN WALL AND SLEEVE W/APPROVED FIRE STOP MATERIAL
5. DUCT DETECTOR BY DIV 16 (SMOKE DAMPERS ONLY)

A10 FIRE DAMPER

NOT TO SCALE

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STATE OF MAINE
RONNIE M. WILLEY
NO. 11029
LICENSED PROFESSIONAL ENGINEER
6/28/07

PROJECT TITLE:
MAINE TURNPIKE AUTHORITY ADMINISTRATION BUILDING
PORTLAND, MAINE

CURRENT ISSUE STATUS:
ISSUED FOR BIDDING/CONSTRUCTION 7-9-07

REV	DESCRIPTION	DATE
0	BIDDING/CONSTRUCTION	7-9-07

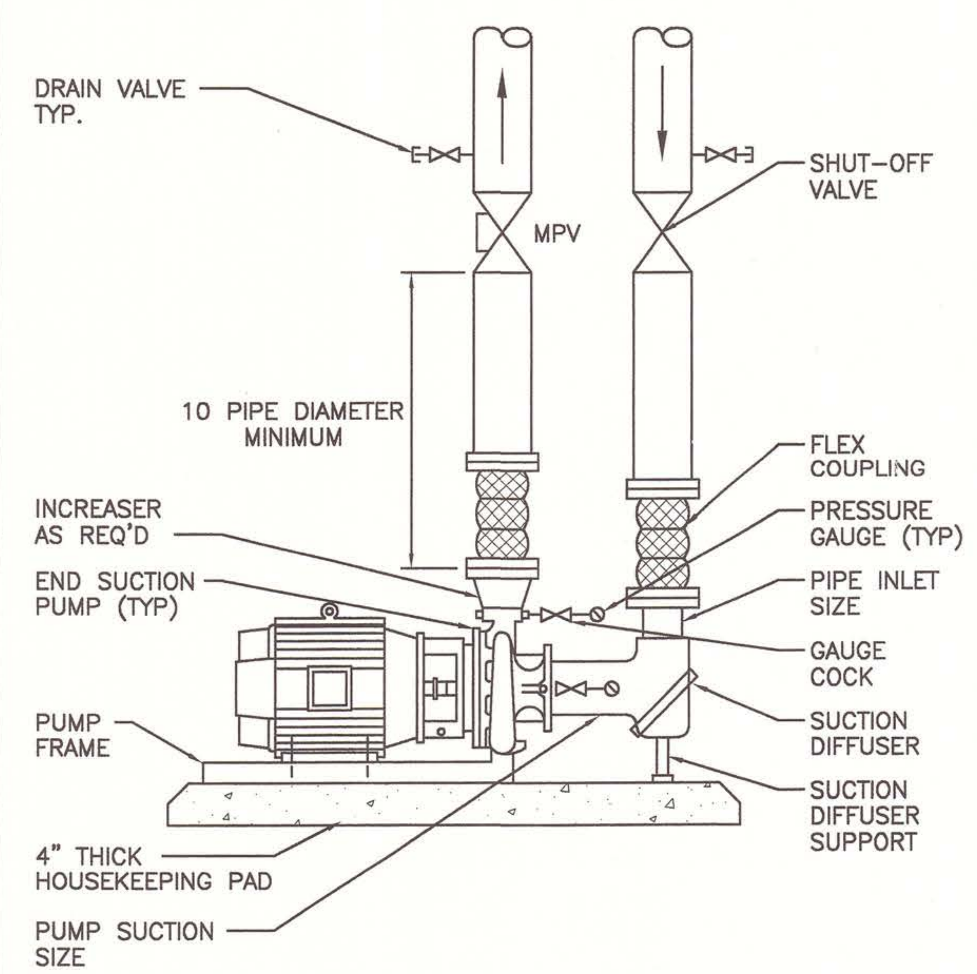
GRAPHIC SCALE: 0" 1"

SCALE:	AS NOTED
PROJECT MANAGER:	SLB
JC/DRAWN BY:	TCM/BGG
A/E OF RECORD:	RMW
CAD FILE:	M-501-06016
PROJECT NO:	06016
DATE:	7-9-07

SHEET TITLE: DETAILS

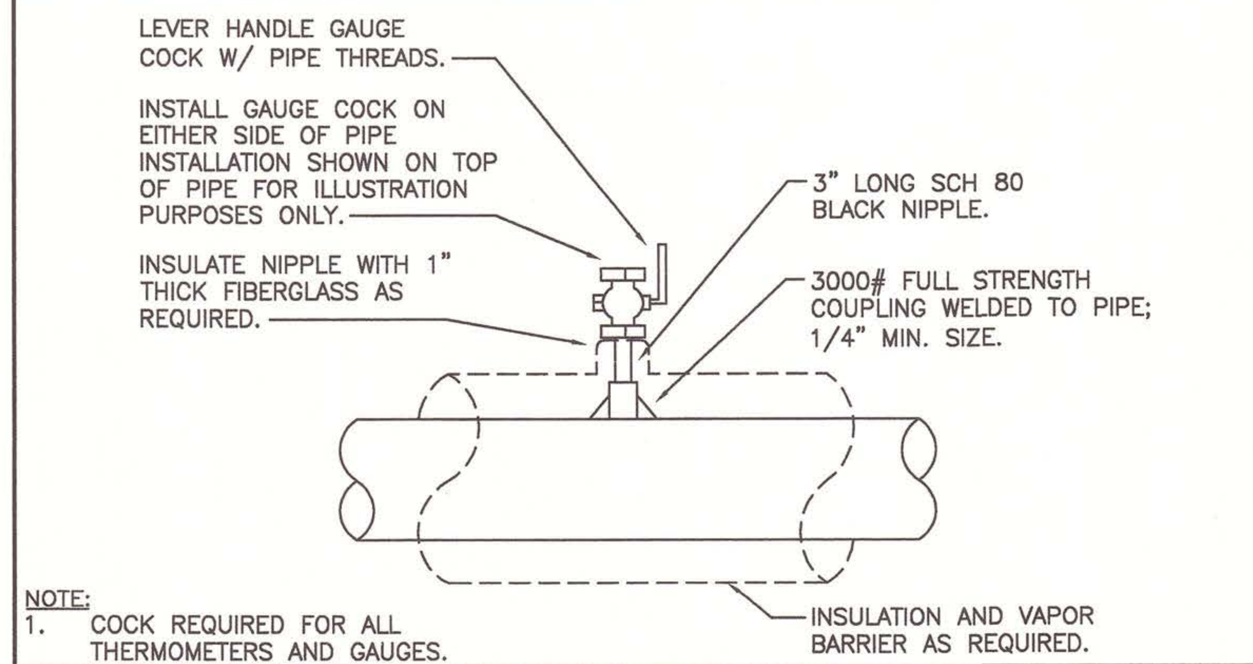
SHEET No. M-501

AS BUILT
Owner Copy



H1 BASE MOUNTED PUMP DETAIL

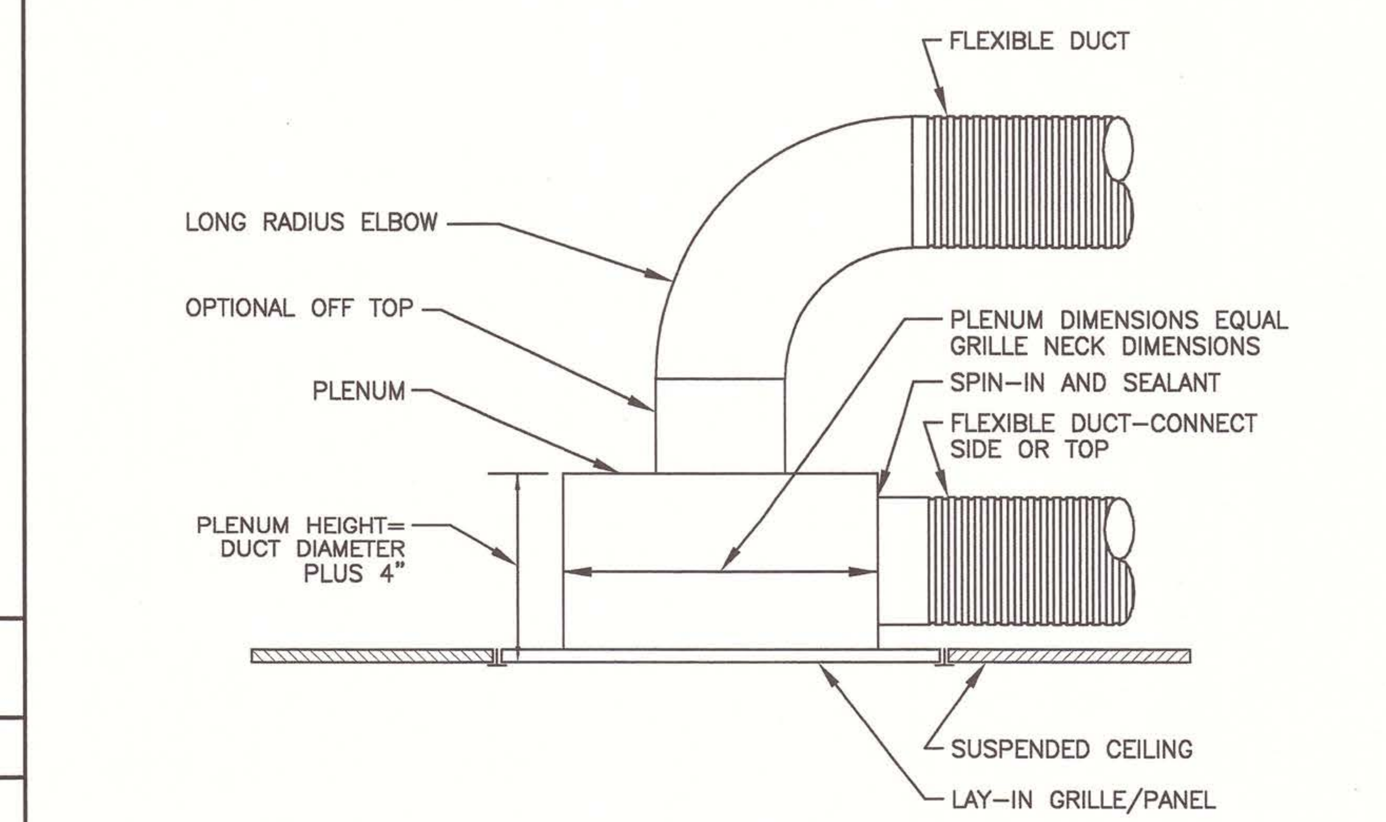
NOT TO SCALE



NOTE:
1. COCK REQUIRED FOR ALL THERMOMETERS AND GAUGES.

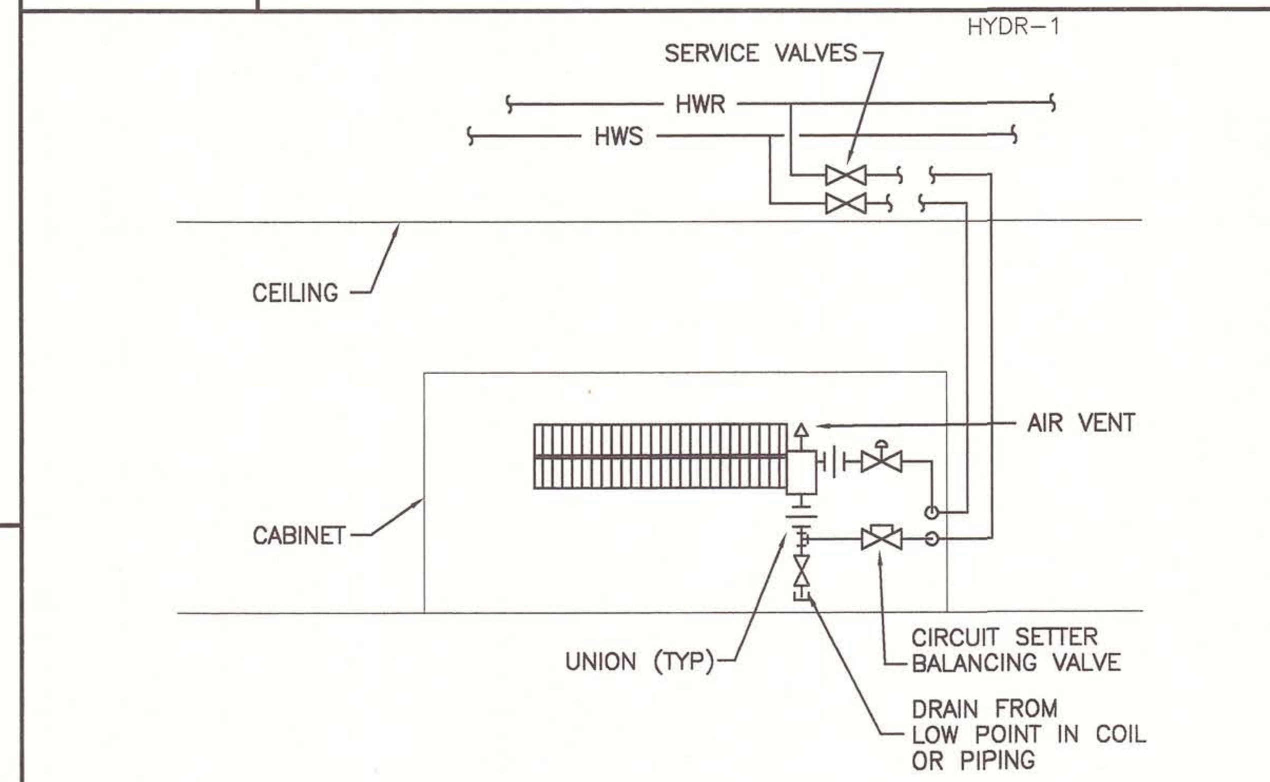
K7 GAUGE COCK INSTALLATION DETAIL

NOT TO SCALE



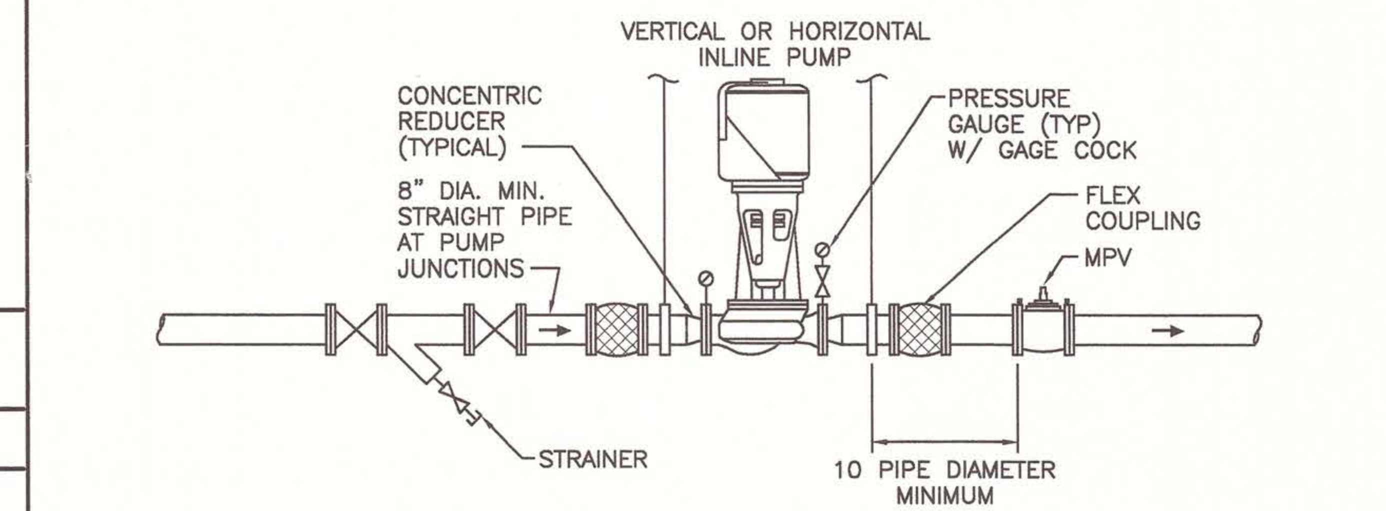
J11 TYP. RETURN & TRANSFER GRILLE PLENUM

NOT TO SCALE



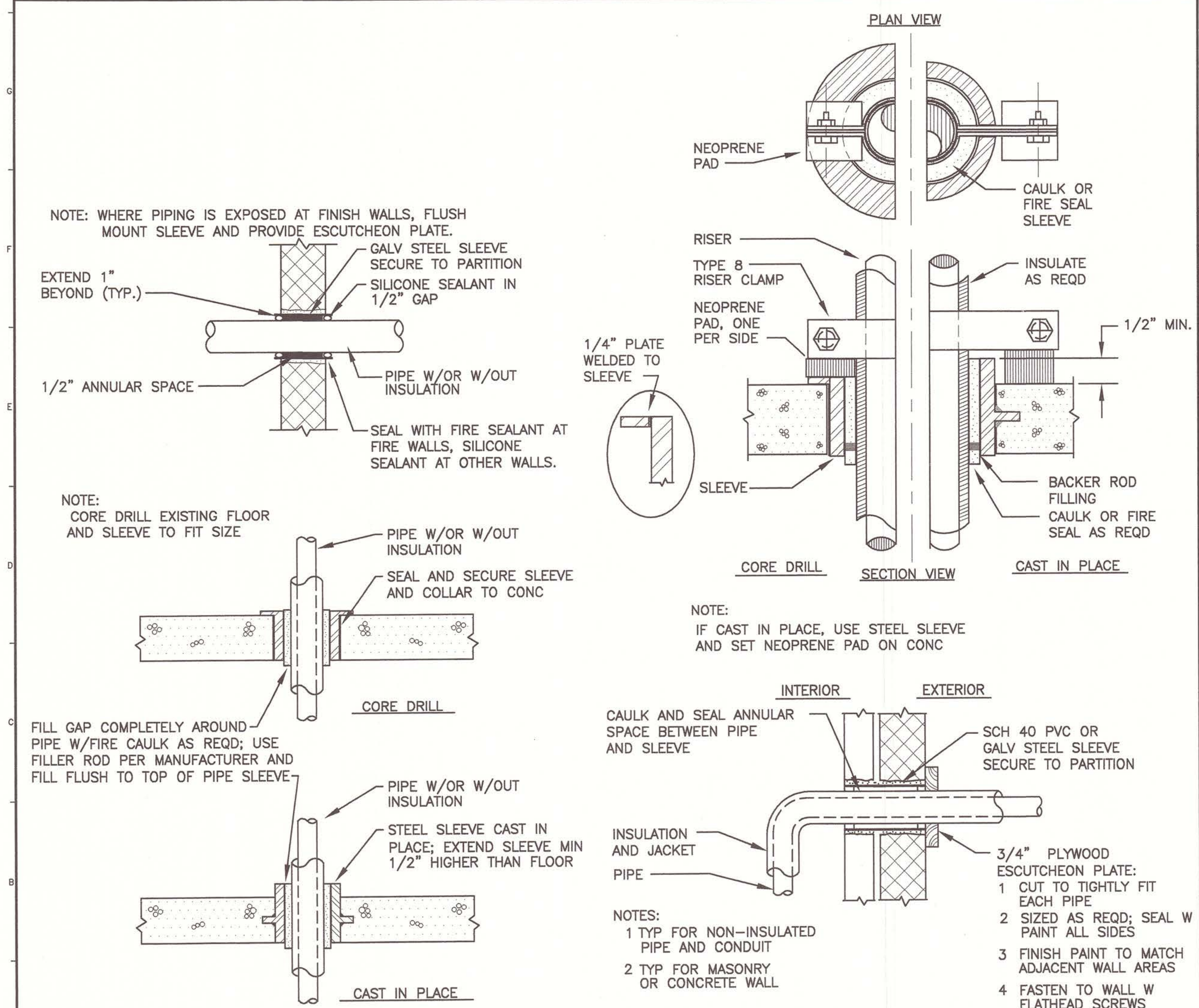
F7 CABINET UNIT HEATER PIPING DETAIL

NOT TO SCALE



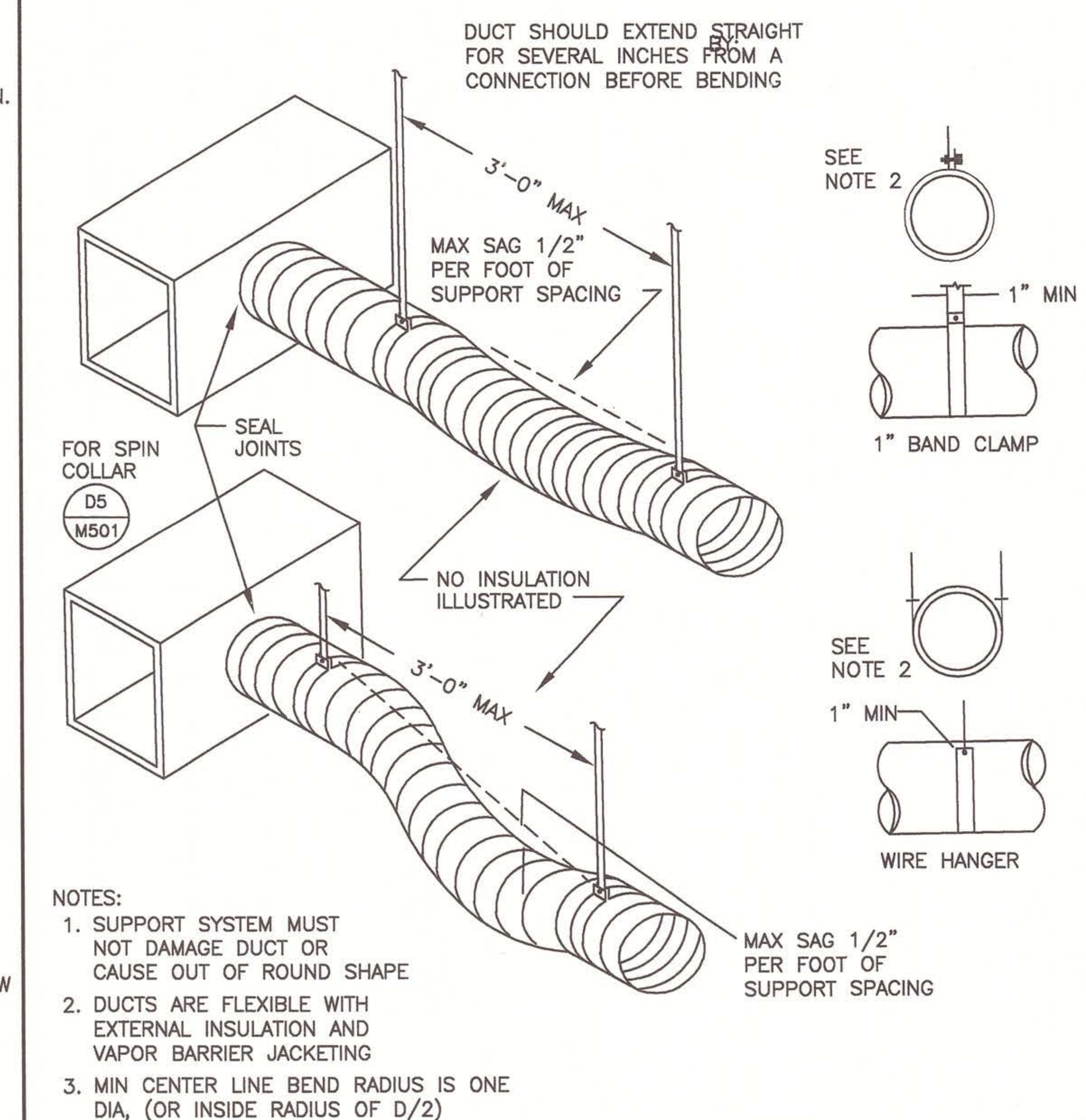
E11 VERTICAL & HORIZONTAL INLINE PUMP DETAIL

NOT TO SCALE



A1 PIPE PENETRATION DETAILS

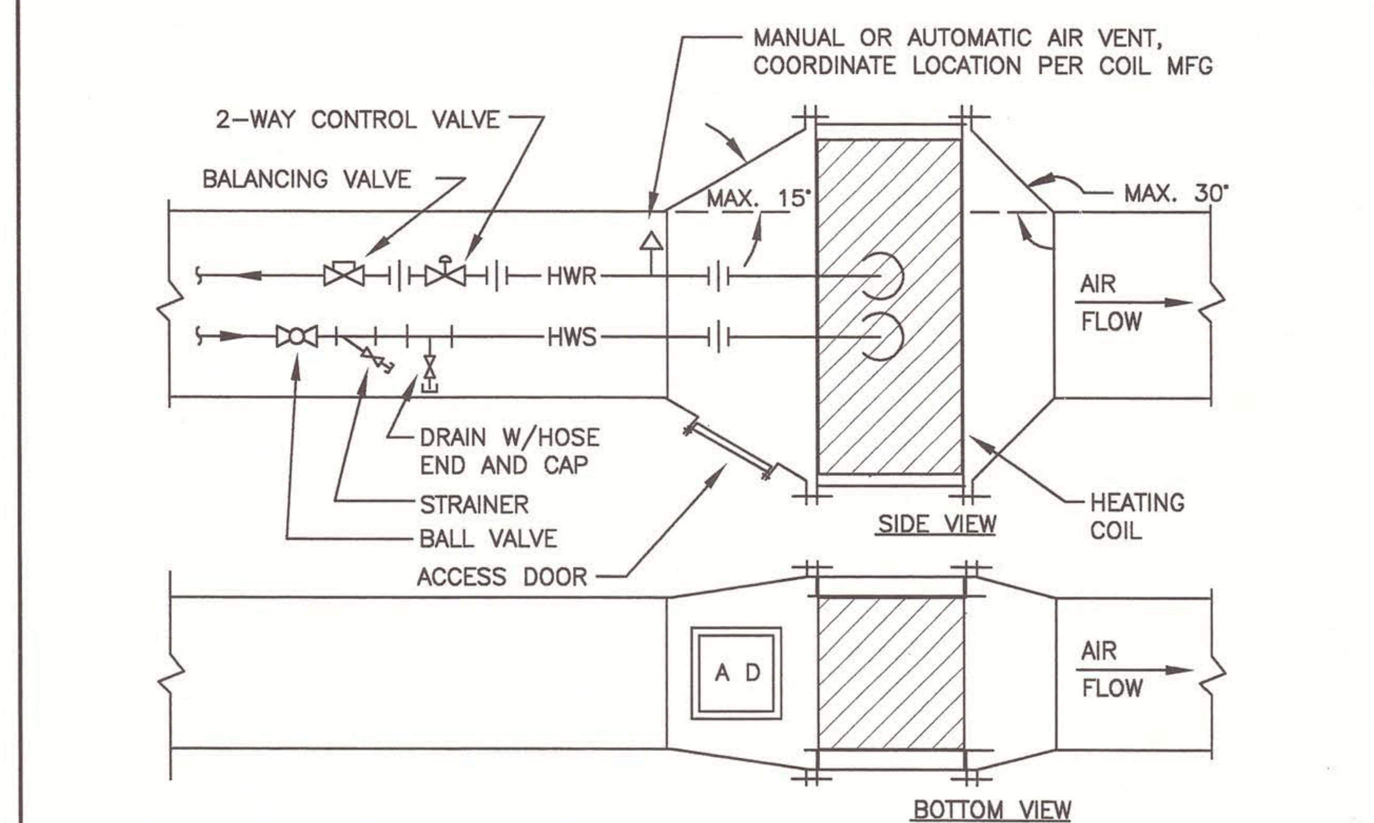
NOT TO SCALE



NOTES:
1. SUPPORT SYSTEM MUST NOT DAMAGE DUCT OR CAUSE OUT OF ROUND SHAPE
2. DUCTS ARE FLEXIBLE WITH EXTERNAL INSULATION AND VAPOR BARRIER JACKETING
3. MIN CENTER LINE BEND RADIUS IS ONE DIA, (OR INSIDE RADIUS OF D/2)

A7 STRAIGHT SECTION FLEXIBLE DUCT SUPPORT REQUIREMENTS

NOT TO SCALE



A11 DUCT HEATING COIL PIPING SCHEMATIC

NOT TO SCALE

TYPICAL FOR VAV REHEAT COILS

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STATE OF MAINE
RONNIE M. WILLEY
NO. 11029
LICENSED PROFESSIONAL ENGINEER
6/28/07

PROJECT TITLE:
MAINE TURNPIKE AUTHORITY ADMINISTRATION BUILDING
PORTLAND, MAINE

CURRENT ISSUE STATUS:
ISSUED FOR BIDDING/CONSTRUCTION
7-9-07

REV	DESCRIPTION	DATE
0	BIDDING/CONSTRUCTION	7-9-07

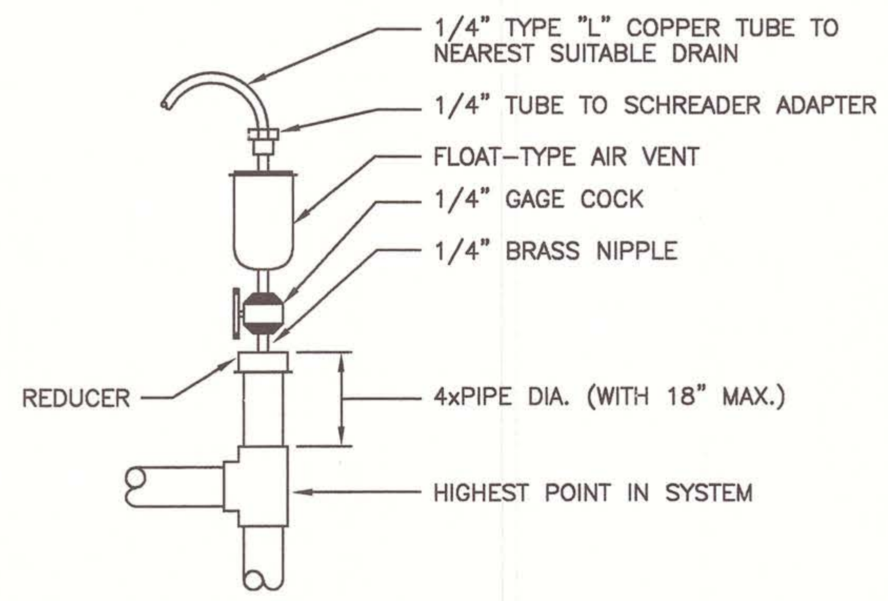
GRAPHIC SCALE:
0" 1"

SCALE:	AS NOTED
PROJECT MANAGER:	SLB
JC/DRAWN BY:	TCM/BGG
A/E OF RECORD:	RMW
CAD FILE:	M-502-06016
PROJECT NO:	06016
DATE:	7-9-07

SHEET TITLE:
DETAILS

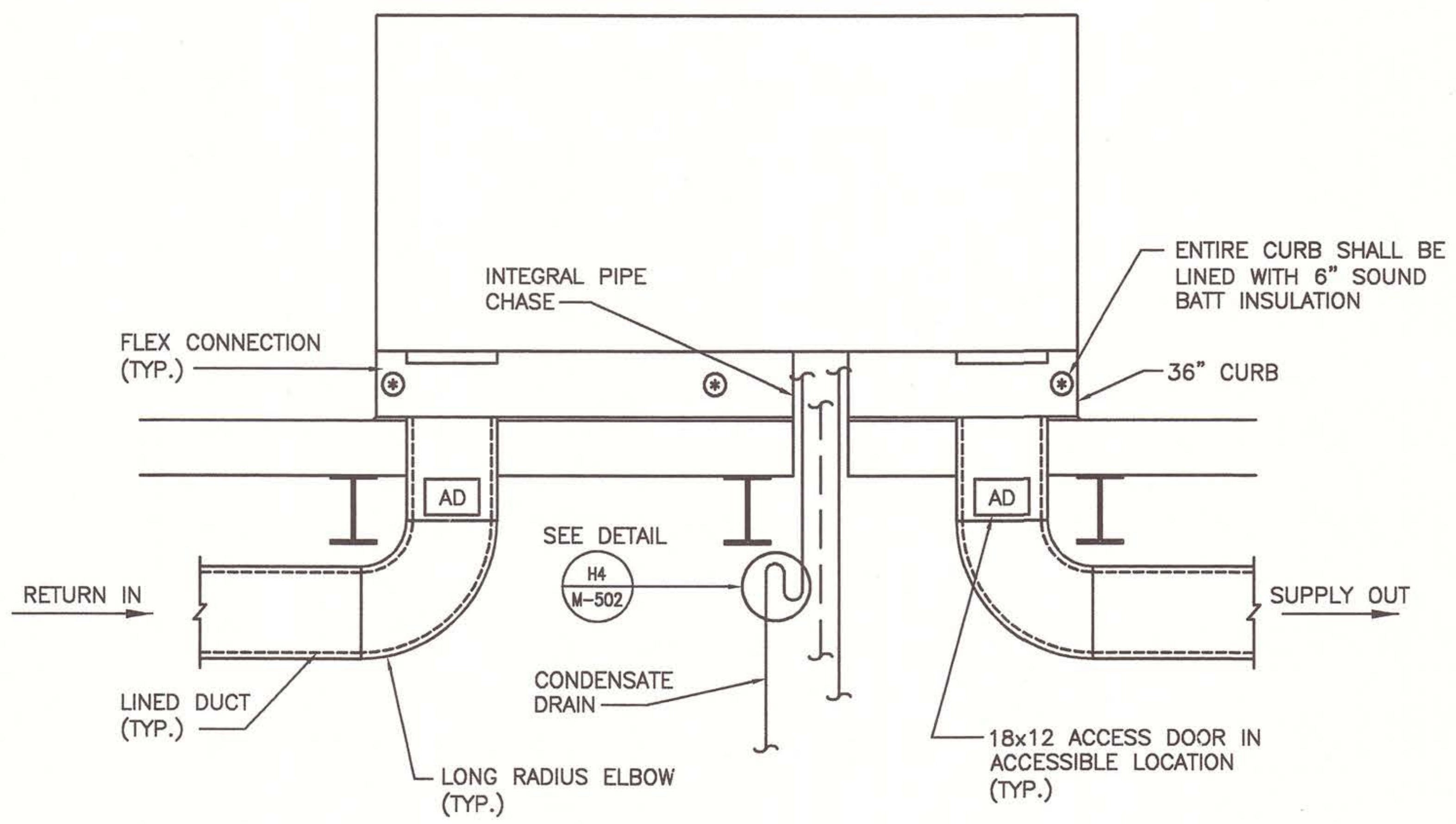
SHEET No.
M-502

AS BUILT
Owner Copy



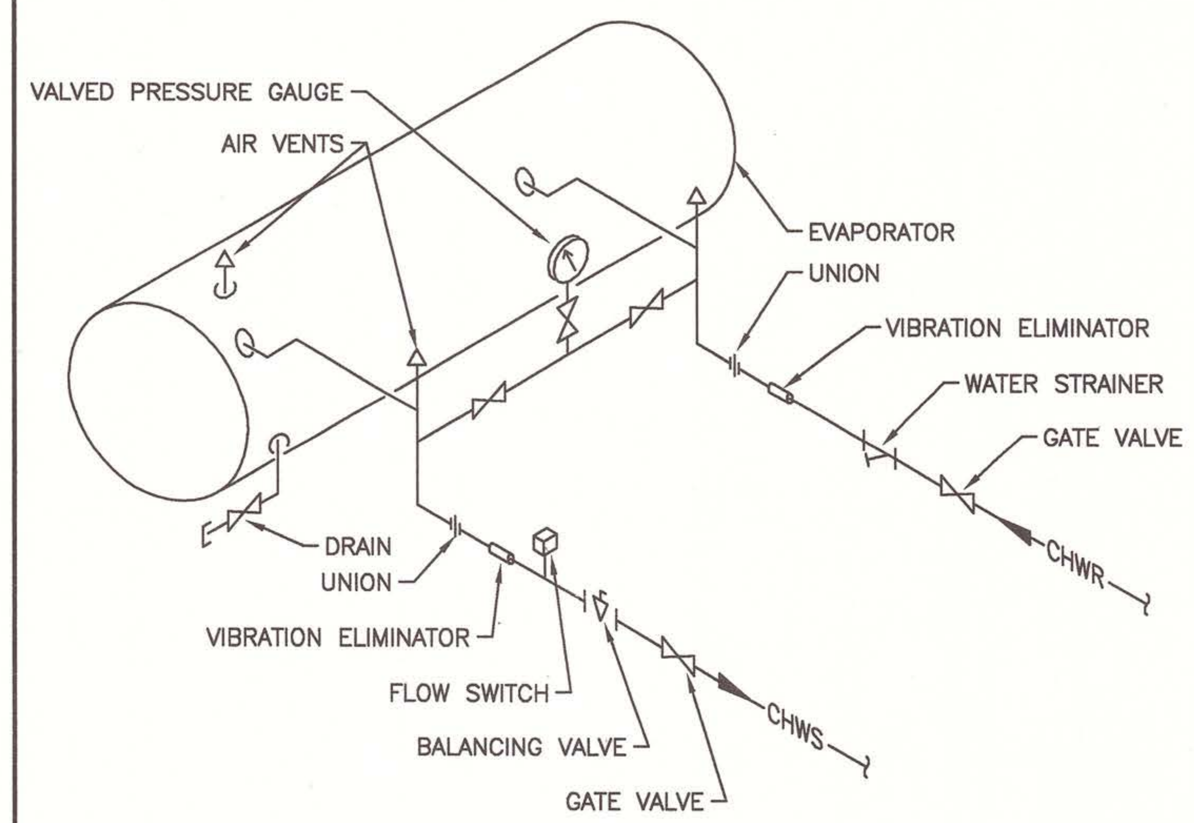
K4 | AUTOMATIC AIR VENT ASSEMBLY

NOT TO SCALE



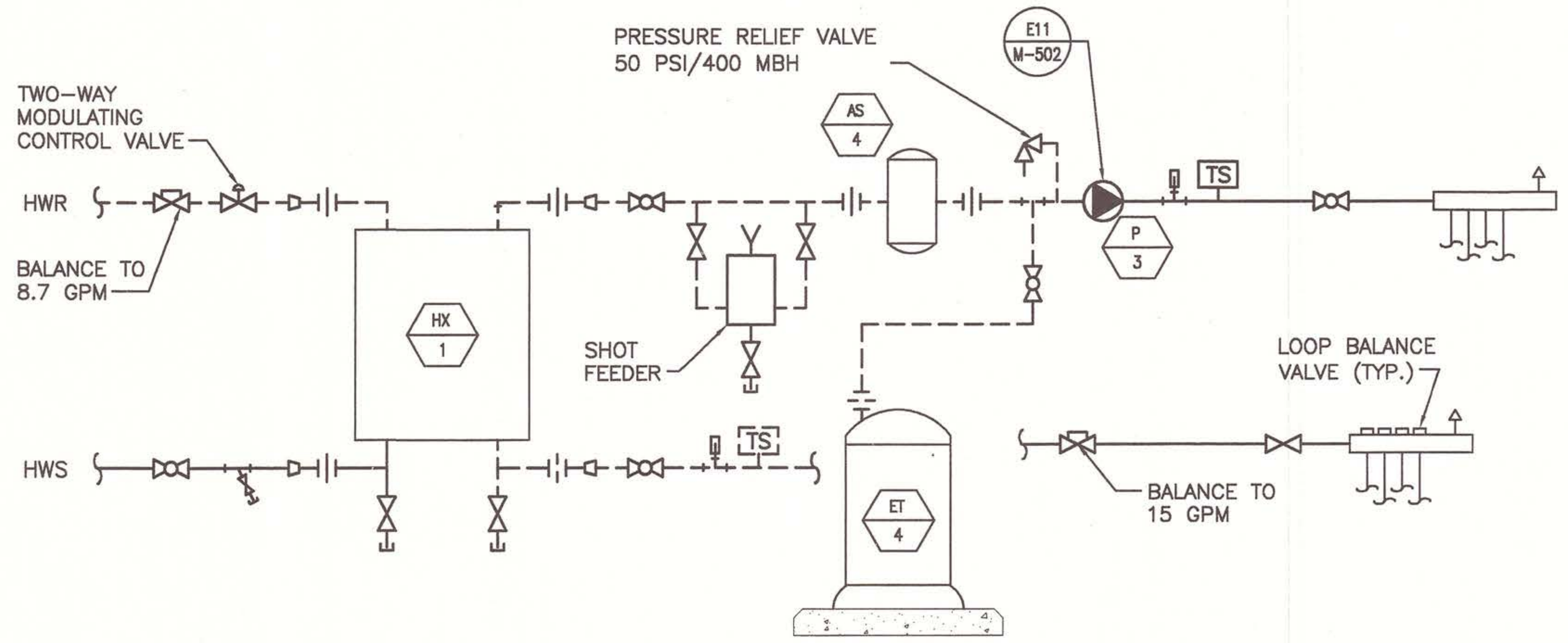
H7 | SECTION THRU TYPICAL ROOFTOP RTU

NOT TO SCALE



H12 | CHILLER PIPING SCHEMATIC

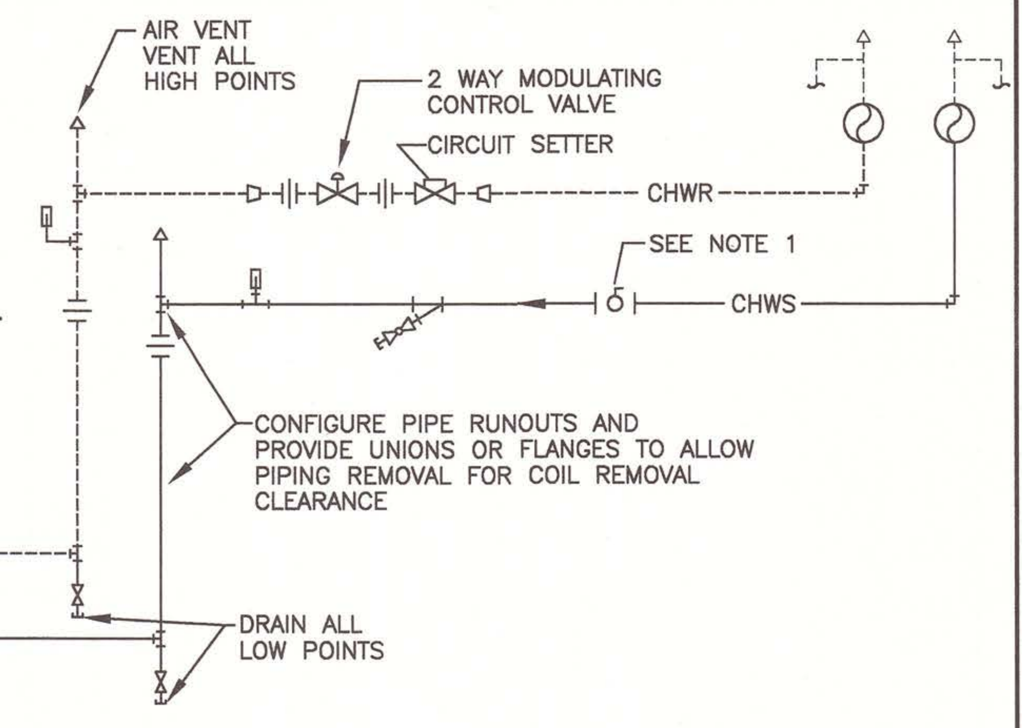
NOT TO SCALE | TYP. FOR AIR COOLED



E1 | SNOW MELTING SYSTEM SCHEMATIC

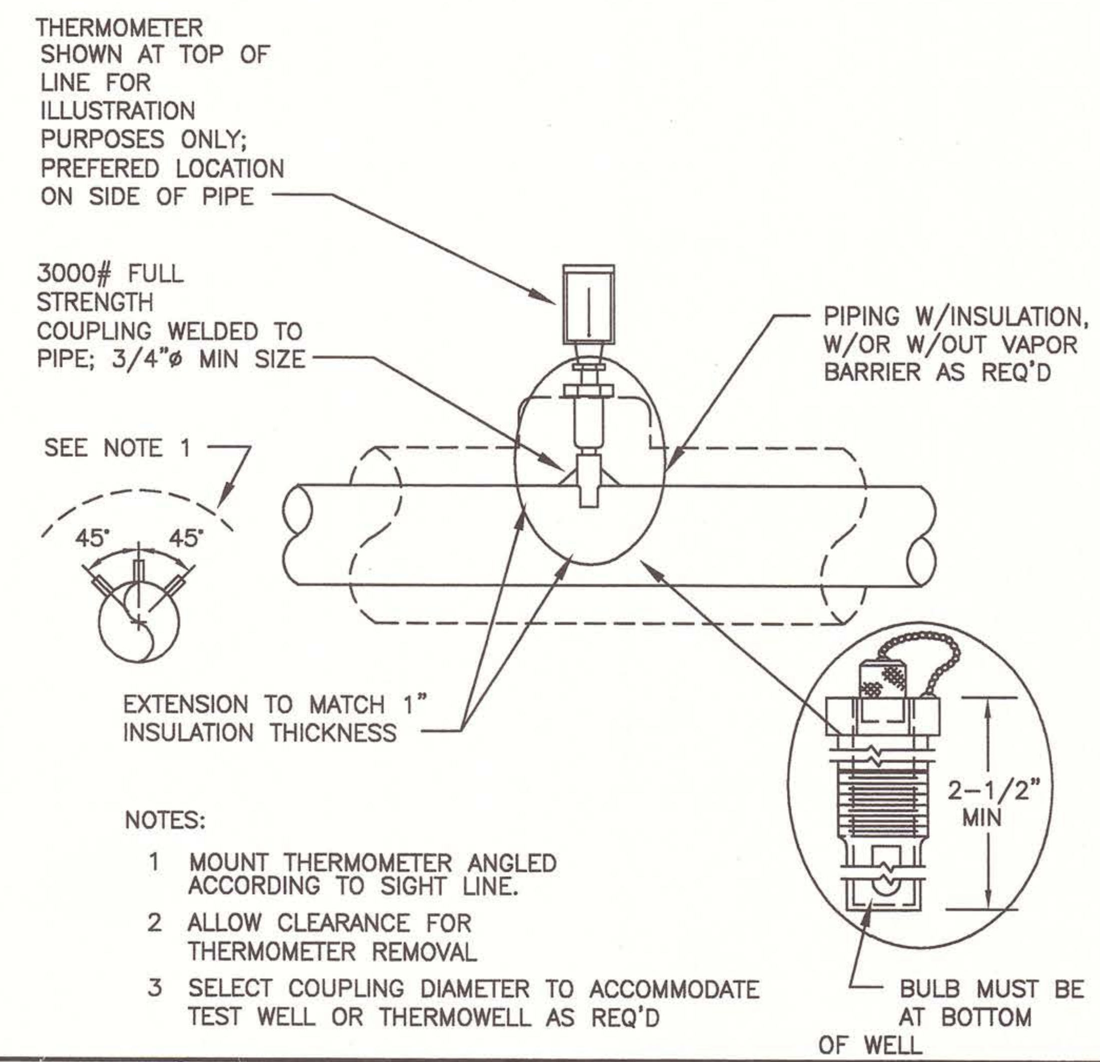
NOT TO SCALE

NOTES:
1. SHUTOFF VALVES: BALL VALVE FOR 2" AND SMALLER, BUTTERFLY VALVES FOR 2-1/2" AND LARGER.
2. CONNECT THE WATER SUPPLY TO THE AIR LEAVING SIDE AND THE WATER RETURN TO THE AIR ENTERING SIDE
3. PROVIDE DIELECTRIC UNIONS OR FLANGES WHERE DISSIMILAR METALS OCCUR.
4. MINIMUM 5 PIPE DIA. OF STRAIGHT PIPE AT INLET AND OUTLET OF CIRCUIT SETTERS.



E7 | CHILLED WATER PIPING DETAIL, 1 TIER, TWO-WAY VALVE

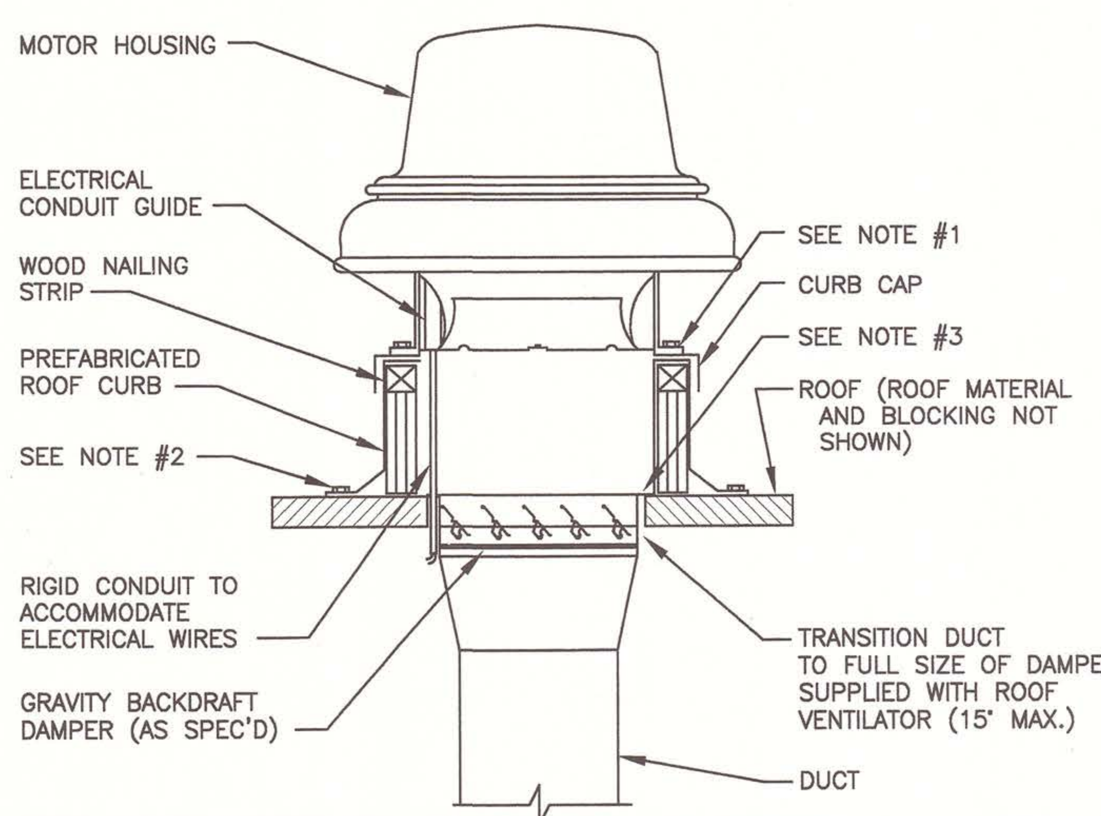
NOT TO SCALE | TYP. FOR AIR HANDLER MOUNTED COILS



NOTES:
1 MOUNT THERMOMETER ANGLED ACCORDING TO SIGHT LINE.
2 ALLOW CLEARANCE FOR THERMOMETER REMOVAL
3 SELECT COUPLING DIAMETER TO ACCOMMODATE TEST WELL OR THERMOWELL AS REQ'D

D12 | THERMOMETER AND THERMOWELL INSTALLATION

NOT TO SCALE

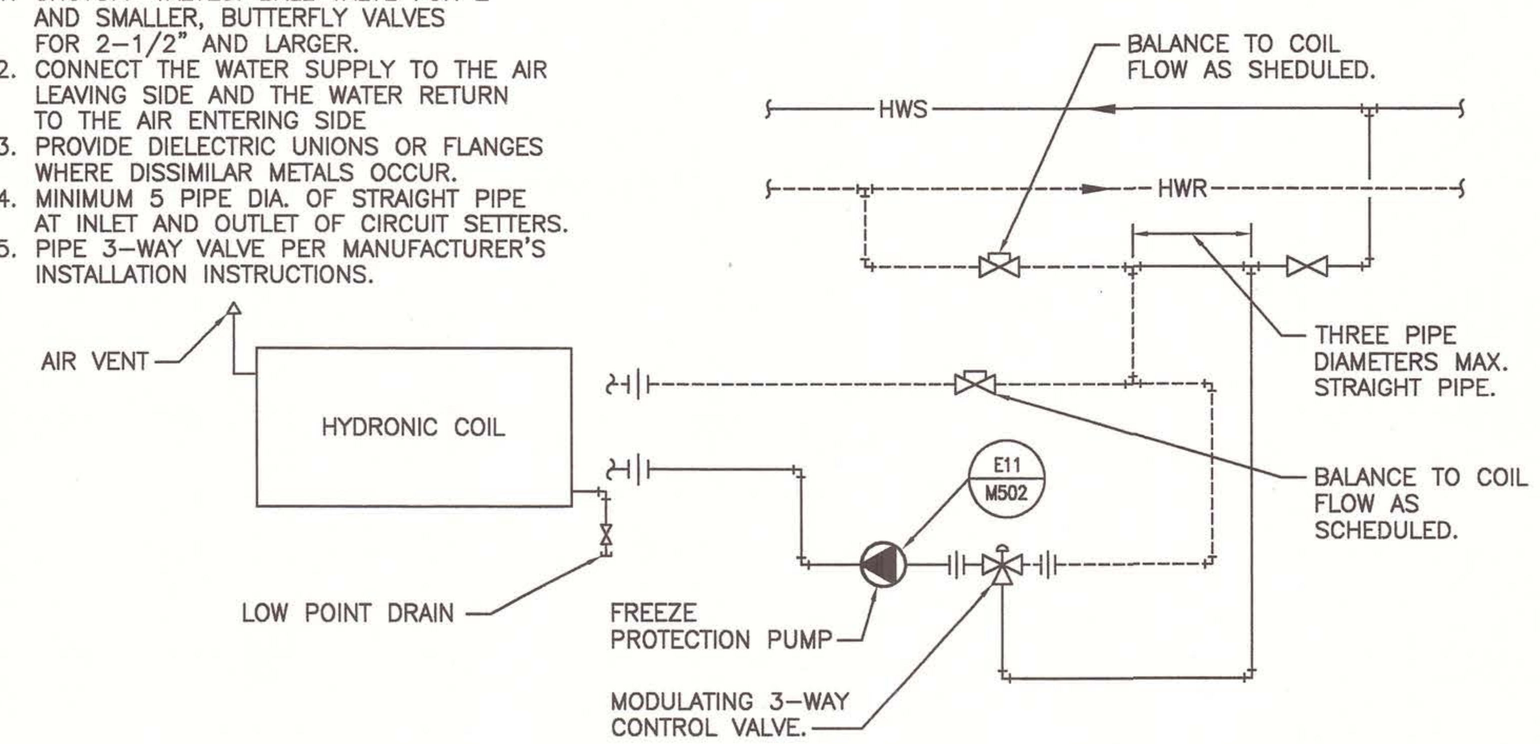


NOTES:
1. SECURE CURB CAP TO WOOD NAILING STRIP WITH 3/8" CADMIUM PLATED LAG BOLTS NOT OVER 12" ON CENTER.
2. SECURE ROOF CURB, DUCTWORK AND DAMPER TO ROOF BLOCKING.
3. SIZE OF DUCT THROUGH ROOF SHALL NOT BE LARGER THAN CURB SUPPLIED WITH ROOF VENTILATOR.
4. RUN ELECTRIC LINES THROUGH CLEARANCE HOLE PROVIDED IN GRAVITY DAMPER, THEN THROUGH VENTILATOR ELECTRICAL CONDUIT GUIDE.

A1 | ROOF VENTILATOR DETAIL

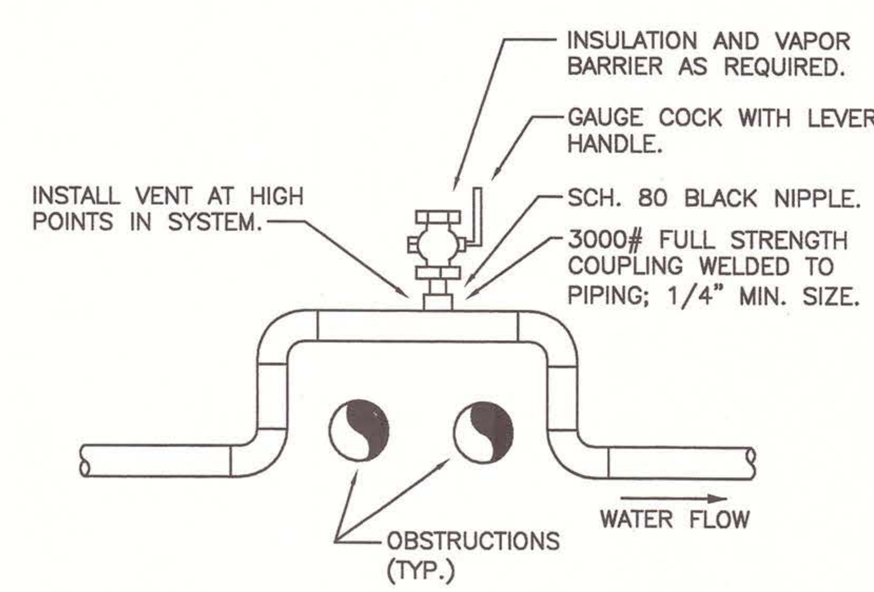
NOT TO SCALE

NOTES:
1. SHUTOFF VALVES: BALL VALVE FOR 2" AND SMALLER, BUTTERFLY VALVES FOR 2-1/2" AND LARGER.
2. CONNECT THE WATER SUPPLY TO THE AIR LEAVING SIDE AND THE WATER RETURN TO THE AIR ENTERING SIDE
3. PROVIDE DIELECTRIC UNIONS OR FLANGES WHERE DISSIMILAR METALS OCCUR.
4. MINIMUM 5 PIPE DIA. OF STRAIGHT PIPE AT INLET AND OUTLET OF CIRCUIT SETTERS.
5. PIPE 3-WAY VALVE PER MANUFACTURER'S INSTALLATION INSTRUCTIONS.



A7 | THREE-WAY VALVE HYDRONIC COIL W/ FREEZE PROTECTION PUMP DETAIL

NOT TO SCALE | TYP. FOR AIR HANDLER MOUNTED COILS



A12 | HIGH POINT MANUAL AIR VENT DETAIL

NOT TO SCALE

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LICENSED PROFESSIONAL ENGINEER
6/25/07

PROJECT TITLE:
MAINE TURNPIKE AUTHORITY ADMINISTRATION BUILDING
PORTLAND, MAINE

CURRENT ISSUE STATUS:
ISSUED FOR BIDDING/CONSTRUCTION
7-9-07

REV	DESCRIPTION	DATE
0	BIDDING/CONSTRUCTION	7-9-07

GRAPHIC SCALE:
0" 1"

SCALE:	AS NOTED
PROJECT MANAGER:	SLB
JC/DRAWN BY:	TCM/BGG
A/E OF RECORD:	RMW
CAD FILE:	M-503-06016
PROJECT NO:	06016
DATE:	7-9-07

SHEET TITLE:
DETAILS

SHEET No.
M-503

AS BUILT
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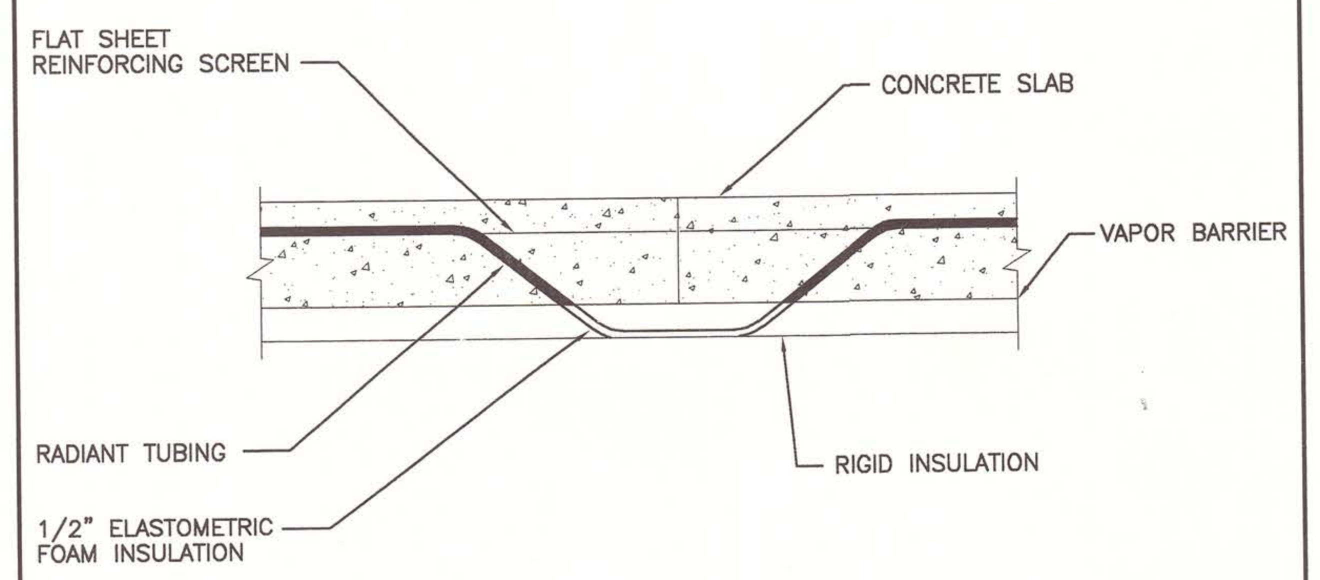
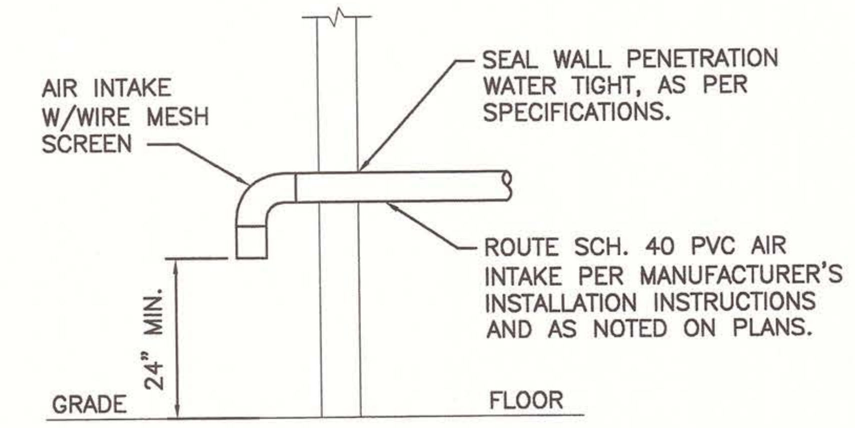


NOTE:
THIS DETAIL APPLIES ONLY FOR SEPARATE POUR CONTROL JOINTS. DO NOT USE FOR SAW CUT JOINTS.

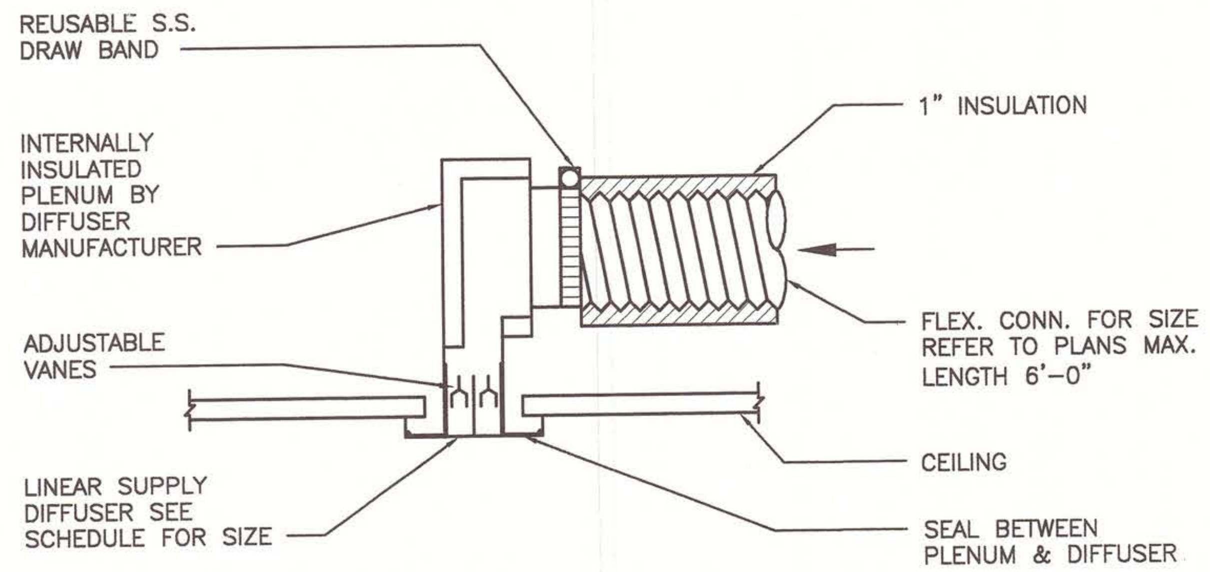
K8 SLAB CONTROL JOINT DETAIL

NOT TO SCALE



L12 AIR INTAKE PENETRATION DETAIL

NOT TO SCALE

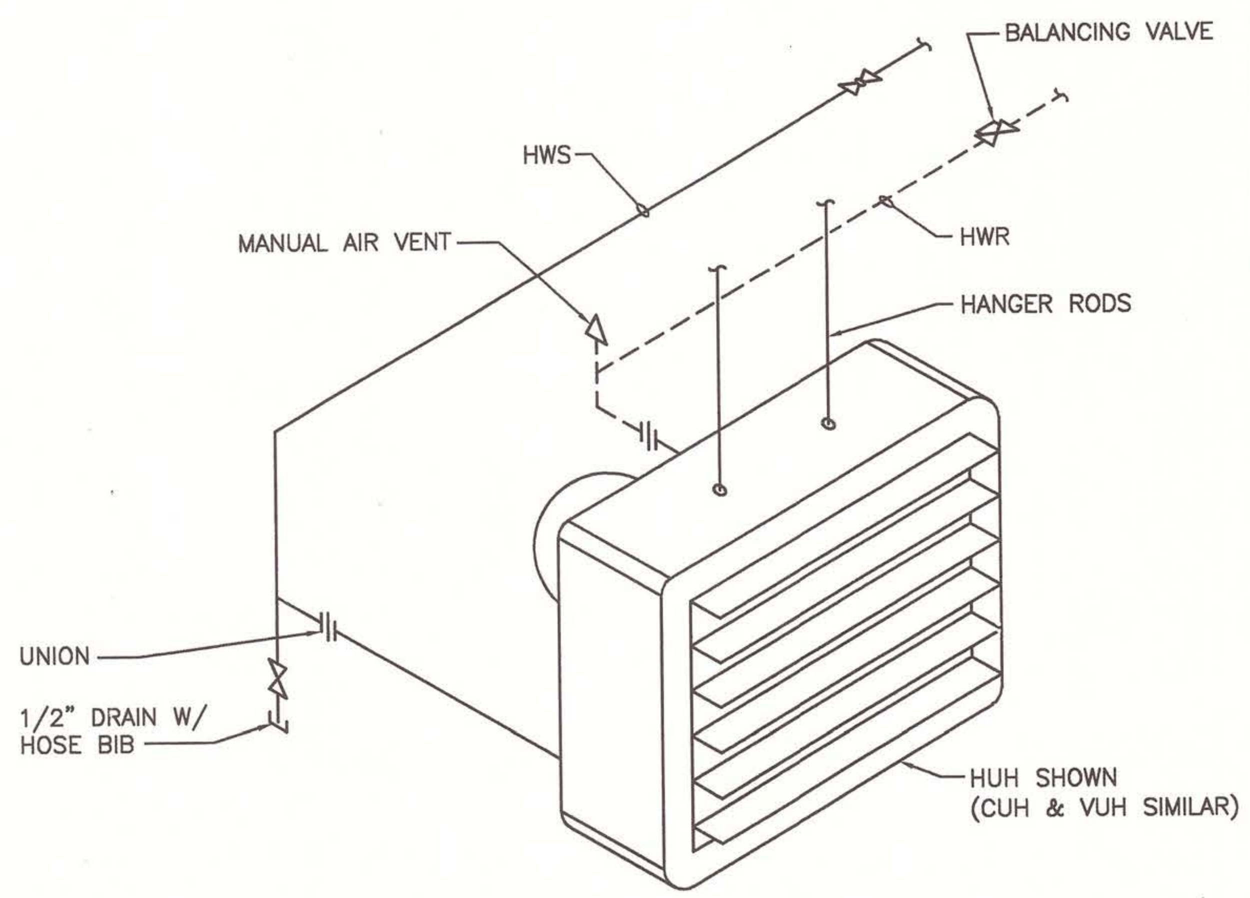


NOTES:

1. OFFSETS W/ FLEX DUCT SHALL NOT EXCEED 30" & SHALL BE GRADUAL. OFFSETS IN EXCESS OF 30" SHALL BE HARD DUCTED.
2. FLEX DUCT SHALL NOT HAVE MORE THAN 1/3" SAG/FT.
3. FOR PLENUM LENGTH REFER TO PLANS.

E3 TYPICAL LINEAR DIFFUSER

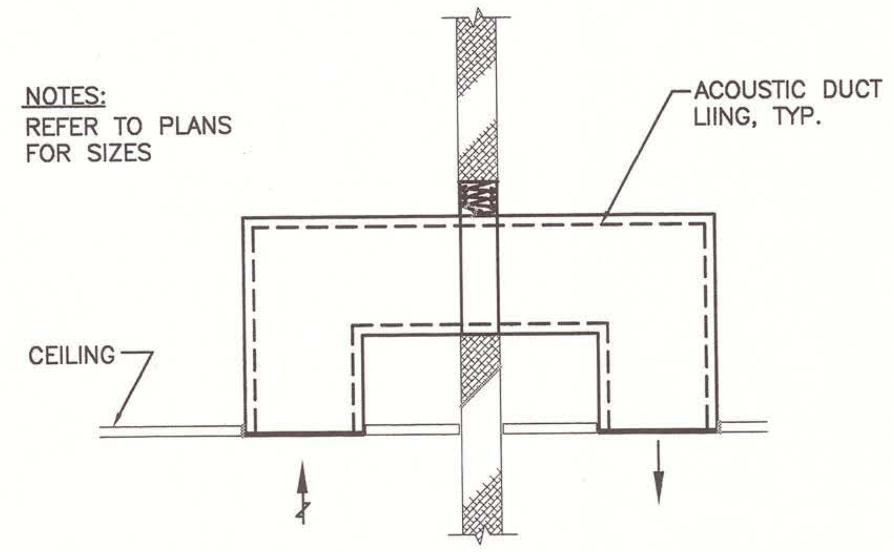
NOT TO SCALE



E8 UNIT HEATER PIPING SCHEMATIC

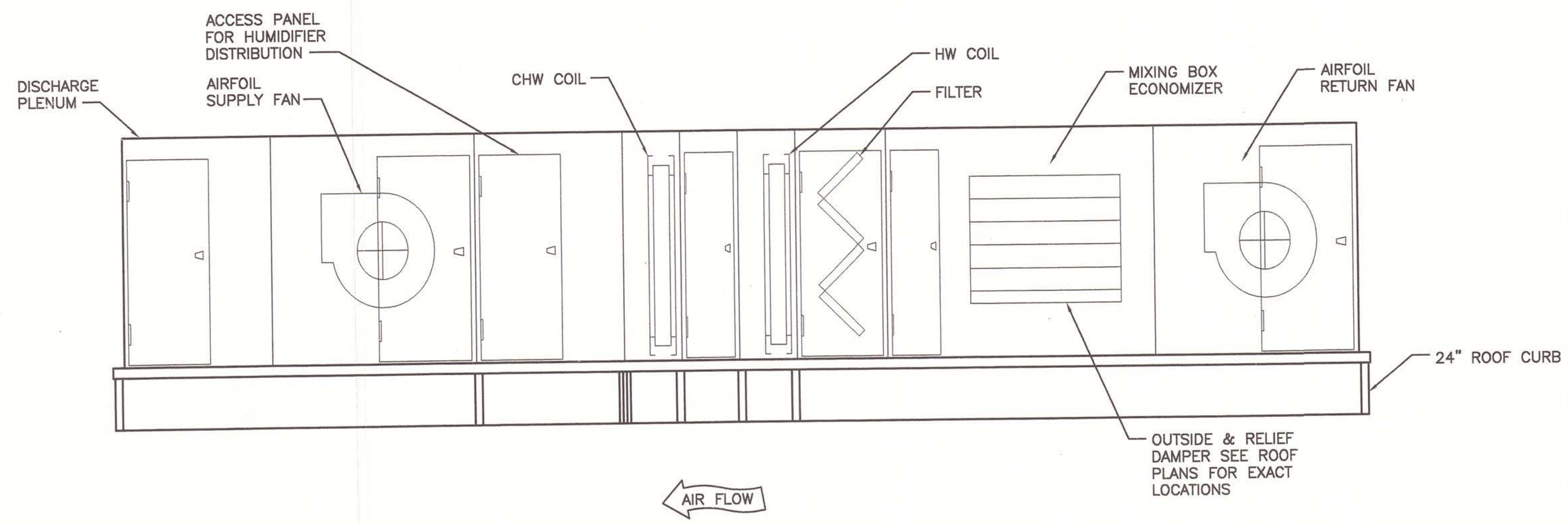
NOT TO SCALE

NOTES:
REFER TO PLANS FOR SIZES



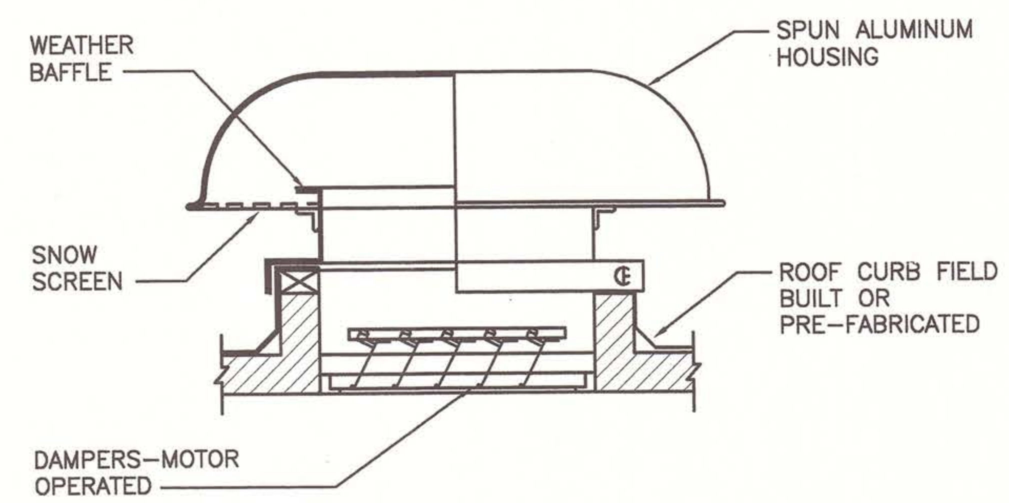
E12 TRANSFER DUCT

NOT TO SCALE



A3 RTU ELEVATION (TYPICAL) 1, 2 & 3

NOT TO SCALE



A12 GRAVITY ROOF VENT

NOT TO SCALE

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STATE OF MAINE
RONNIE M. WILLEY
NO. 11029
LICENSED PROFESSIONAL ENGINEER
6/28/07

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MAINE TURNPIKE AUTHORITY ADMINISTRATION BUILDING
PORTLAND, MAINE

CURRENT ISSUE STATUS:
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7-9-07

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GRAPHIC SCALE:
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SCALE:	AS NOTED
PROJECT MANAGER:	SLB
JC/DRAWN BY:	TCM/BGG
A/E OF RECORD:	MBD
CAD FILE:	M-504-06016
PROJECT NO:	06016
DATE:	7-9-07

SHEET TITLE:
DETAILS

SHEET No.
M-504

VARIABLE AIR VOLUME (VAV) TERMINAL SCHEDULE

TAG	INLET SIZE	OUTLET SIZE	CFM MAX	CFM MIN	HEATING CFM	APD	INLET STATIC PRESSURE	HOT WATER HEATING COIL MBH	EAT. °F	LAT. °F	GPM 140 EWT	WPD FT HD	TYPICAL UNIT MFG & MODEL NO.	NOTES:
VAV-1-1	4"ø	10x8	145	90	90	0.04	0.50	3.9	55	95	0.5	0.5	VCWF04	
VAV-1-2	5"ø	10x8	310	110	110	0.08	0.50	4.3	55	91	0.5	0.5	VCWF05	
VAV-1-3	5"ø	10x8	325	130	130	0.10	0.50	4.9	55	90	0.75	0.4	VCWF05	
VAV-1-4	6"ø	10x8	360	145	145	0.23	0.50	5.4	55	90	1.0	1.8	VCWF06	
VAV-1-5	5"ø	10x8	285	110	110	0.08	0.50	4.3	55	91	0.5	0.5	VCWF05	
VAV-1-6	4"ø	10x8	140	90	90	0.05	0.50	3.9	55	95	0.5	0.5	VCWF04	
VAV-1-7	4"ø	10x8	170	90	90	0.04	0.50	3.9	55	95	0.5	0.5	VCWF04	
VAV-1-8	4"ø	10x8	145	90	90	0.09	0.50	3.9	55	95	0.5	0.5	VCWF04	
VAV-1-9	5"ø	10x8	250	125	125	0.07	0.50	4.8	55	90	0.7	1.0	VCWF05	
VAV-1-10	8"ø	11x10	600	200	200	0.20	0.50	7.6	55	90	1.25	3.5	VCWF08	
VAV-1-11	10"ø	14x10	840	250	250	0.29	0.50	31.9	55	90	3.5	2.0	VCWF10	1
VAV-1-12	4"ø	10x8	165	100	100	0.04	0.50	4.1	55	93	0.5	0.5	VCWF04	
VAV-1-13	4"ø	10x8	150	90	90	0.03	0.50	3.9	55	95	0.5	0.5	VCWF04	1
VAV-1-14	8"ø	11x10	440	135	135	0.12	0.50	5.4	55	92	0.5	0.75	VCWF08	
VAV-1-15	8"ø	11x10	600	400	400	0.20	0.50	7.6	55	90	1.25	3.5	VCWF08	
VAV-1-16	4"ø	10x8	115	90	90	0.02	0.50	3.9	55	95	0.5	0.5	VCWF04	
VAV-1-17	8"ø	11x10	405	125	125	0.10	0.50	5.3	55	94	0.7	0.75	VCWF08	see SI-80R
VAV-1-18	4"ø	10x8	220	150	150	0.06	0.50	5.7	55	90	1.25	2.6	VCWF04	
VAV-1-19	4"ø	10x8	275	120	120	0.06	0.50	4.6	55	90	0.6	0.7	VCWF04	
VAV-1-20	5"ø	10x8	290	160	160	0.09	0.50	6.1	55	90	1.75	4.8	VCWF05	
VAV-1-21	4"ø	10x8	185	100	100	0.04	0.50	4.1	55	93	0.5	0.5	VCWF04	
VAV-1-22	4"ø	10x8	200	125	125	0.05	0.50	4.7	55	90	0.7	0.9	VCWF04	
VAV-1-23	4"ø	10x8	210	130	130	0.06	0.50	4.9	55	90	0.75	1.1	VCWF04	
VAV-1-24	5"ø	10x8	270	110	110	0.08	0.50	4.3	55	91	0.5	0.5	VCWF05	
VAV-1-25	5"ø	10x8	230	80	80	0.06	0.50	3.9	55	95	0.5	0.5	VCWF05	
VAV-1-26	4"ø	10x8	180	180	180	0.04	0.50	5.9	55	85	0.9	1.4	VCWF04	
VAV-2-1	12"ø	17x14	1320	410	410	0.22	0.50	15.6	55	90	3.3	6.1	VCWF12	
VAV-2-2	8"ø	11x10	630	215	215	0.22	0.50	8.2	55	90	1.7	6.1	VCWF08	
VAV-2-3	10"ø	14x12	920	280	280	0.20	0.50	10.6	55	90	1.2	4.6	VCWF10	
VAV-2-4	6"ø	10x8	390	140	140	0.27	0.50	5.3	55	90	1.0	1.7	VCWF06	
VAV-2-5	4"ø	10x8 RFI #24	100	90	90	0.01	0.50	3.9	55	95	0.5	0.5	VCWF04	
VAV-2-6	5"ø	10x8	200	150	150	0.09	0.50	5.7	55	90	1.3	2.8	VCWF05	
VAV-2-7	8"ø	11x10	560	170	170	0.18	0.50	6.6	55	90	0.7	1.4	VCWF08	
VAV-2-8	8"ø	11x10	210	230	230	0.18	0.50	8.7	55	90	0.75	0.1	VCWF08	
VAV-2-9	NOT USED													
VAV-2-10	8"ø	11x10	410	125	125	0.18	0.50	15.6	55	90	1.75	0.3	VCWF08	1
VAV-2-11	8"ø	11x10	410	125	125	0.18	0.50	15.6	55	90	1.75	0.3	VCWF08	1
VAV-2-12	8"ø	11x10	520	155	155	0.15	0.50	5.9	55	90	0.6	0.9	VCWF08	
VAV-2-13	5"ø	10x8	250	150	150	0.07	0.50	5.7	55	90	1.3	2.8	VCWF05	

VARIABLE AIR VOLUME (VAV) TERMINAL SCHEDULE

TAG	INLET SIZE	OUTLET SIZE	CFM MAX	CFM MIN	HEATING CFM	APD	INLET STATIC PRESSURE	HOT WATER HEATING COIL MBH	EAT. °F	LAT. °F	GPM 140 EWT	WPD FT HD	TYPICAL UNIT MFG & MODEL NO.	NOTES:
VAV-2-14	4"ø	10x8	180	100	100	0.04	0.50	4.1	55	93	0.5	0.5	VCWF04	
VAV-2-15	8"ø	11x10	665	205	205	0.24	0.50	7.8	55	90	1.4	4.2	VCWF08	
VAV-2-16	10"ø	14x12	930	280	280	0.21	0.50	10.6	55	90	1.2	4.6	VCWF10	
VAV-2-17	8"ø	11x10	600	180	180	0.20	0.50	6.8	55	90	0.9	1.9	VCWF08	
VAV-2-18	4"ø	10x8	175	90	90	0.04	0.50	3.9	55	95	0.5	0.5	VCWF04	
VAV-2-19	4"ø	10x8	220	90	90	0.06	0.50	3.9	55	95	0.5	0.5	VCWF04	1
VAV-2-20	6"ø	10x8	390	160	160	0.27	0.50	6.1	55	90	1.75	4.8	VCWF06	
VAV-2-21	5"ø	10x8	160	100	100	0.07	0.50	4.1	55	93	0.5	0.5	VCWF05	
VAV-2-22	4"ø	10x8	220	90	90	0.06	0.50	3.9	55	95	0.5	0.5	VCWF04	
VAV-2-23	10"ø	14x12	675	210	210	0.24	0.50	8.0	55	90	1.5	5.1	VCWF10	
VAV-2-24	4"ø SI #104	10x8	190	90	90	0.04	0.50	3.9	55	95	0.5	0.5	VCWF04	
VAV-2-25	4"ø	10x8	125	90	90	0.02	0.50	3.9	55	95	0.5	0.5	VCWF04	
VAV-2-26	4"ø	10x8	200	100	100	0.05	0.50	4.1	55	93	0.5	0.5	VCWF04	
VAV-3-1	10"ø	14x12	730	220	220	0.14	0.50	8.4	55	90	0.6	1.5	VCWF10	
VAV-3-2	14"ø	19x18	1400	450	450	0.09	0.50	17.1	55	90	1.5	0.7	VCWF14	
VAV-3-3	8"ø	11x10	620	190	190	0.21	0.50	7.2	55	90	1.0	2.6	VCWF08	
VAV-3-4	8"ø	11x10	485	150	150	0.14	0.50	5.7	55	90	0.5	0.8	VCWF08	
VAV-3-5	8"ø	11x10	530	160	160	0.16	0.50	6.1	55	90	0.6	1.0	VCWF08	
VAV-3-6	5"ø	10x8	270	100	100	0.08	0.50	4.1	55	93	0.5	0.5	VCWF05	
VAV-3-7	8"ø	11x10	575	190	190	0.20	0.50	7.2	55	90	1.0	2.6	VCWF08	
VAV-3-8	5"ø	10x8	275	90	90	0.08	0.50	3.9	55	95	0.5	0.5	VCWF05	
VAV-3-9	8"ø	11x10	690	210	210	0.25	0.50	26.2	55	90	7.4	3.8	VCWF08	1
VAV-3-10	4"ø	10x8	200	100	100	0.05	0.50	4.1	55	93	0.5	0.5	VCWF04	
VAV-3-11	4"ø	10x8	210	100	100	0.06	0.50	4.1	55	93	0.5	0.5	VCWF04	1
VAV-3-12	10"ø	10x8	925	210	210	0.20	0.50	8.0	55	90	0.6	1.3	VCWF10	
VAV-3-13	14"ø	19x18	1850	420	420	0.14	0.50	16.0	55	90	1.25	0.54	VCWF14	
VAV-3-14	5"ø	10x8	270	100	100	0.08	0.50	4.1	55	93	0.5	0.5	VCWF05	
VAV-3-15	4"ø	10x8	155	90	90	0.03	0.50	3.9	55	95	0.5	0.5	VCWF04	
VAV-3-16	5"ø	10x8	295	90	90	0.09	0.50	3.9	55	95	0.5	0.5	VCWF05	
VAV-3-17	10"ø	14x12	850	260	260	0.18	0.50	9.9	55	90	1.0	3.1	VCWF10	
VAV-3-18	4"ø	10x8	220	100	100	0.06	0.50	4.1	55	93	0.5	0.5	VCWF04	
VAV-3-19	5"ø	10x8	260	90	90	0.13	0.50	9.9	55	90	0.8	0.4	VCWF05	1
VAV-3-20	8"ø	10x8	530	160	160	0.16	0.50	6.1	55	90	0.6	1.0	VCWF08	
VAV-3-21	8"ø	11x10	440	160	160	0.22	0.50	17.8	55	90	2.3	0.4	VCWF08	1
VAV-3-22	10"ø	14x12	800	240	240	0.16	0.50	9.1	55	90	0.8	2.2	VCWF10	
VAV-3-23	6"ø	10x8	370	135	135	0.25	0.50	5.1	55	90	0.9	1.4	VCWF06	
VAV-3-24	10"ø	14x12	925	210	210	0.20	0.50	8.0	55	90	0.6	1.3	VCWF10	
VAV-3-25	5"ø	10x8	330	160	160	0.11	0.50	6.1	55	90	1.75	4.8	VCWF05	
VAV-3-26	8"ø	11x10	690	210	210	0.25	0.50	26.2	55	90	7.4	3.8	VCWF08	1

NOTES:

1. HEATING COIL CAPACITY BASED ON MAX CFM FOR DEMAND VENTILATION CONTROL.

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STATE OF MAINE
RONNIE M. WILLEY
NO. 11029
LICENSED PROFESSIONAL ENGINEER
6/26/07

PROJECT TITLE:
MAINE TURNPIKE AUTHORITY ADMINISTRATION BUILDING
PORTLAND, MAINE

CURRENT ISSUE STATUS:
ISSUED FOR BIDDING/CONSTRUCTION 7-9-07

REV	DESCRIPTION	DATE
0	BIDDING/CONSTRUCTION	7-9-07

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JC/DRAWN BY:	TCM/BGG
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PROJECT NO:	06016
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SHEET TITLE:
SCHEDULES

AS BUILT
Owner Copy

SHEET No.
M-601

NOTE:

1. SEE SHEET M-001 FOR LEGEND AND ABBREVIATIONS.

CHILLER SCHEDULE – AIR COOLED

TAG	NOM TON	GPM	% PROP GLYCOL	EWT °F	LWT °F	WPD FT-WC	FOUL FACTOR	ELECTRICAL DATA KW	ELECTRICAL DATA VOLTS/ø	MCA	MOP	EER	IPLV	TYP. UNIT MANUF. & MODEL NO.	NOTES:
CH-1	60	103.4	30	56	42	5.6	0.0001	62.9	480/3	133	175	9.5	13.7	SMARDT A0280-1C-2F	1
CH-2	60	103.4	30	56	42	5.6	0.0001	62.9	480/3	98	110	–	14.5	SMARDT A0280-1C-2F	1
CH-3	15	34	30	57	42	8.0	0.0001	10.4	480/3	32.7	45	9.4	–	TRANE CGA180	

NOTES: 1 PROVIDE LOW AMBIENT CONTROL FOR OPERATION TO 0°F.

UNIT HEATER SCHEDULE

TAG	LOCATION	TYPE	CFM	HP	MBH	GPM	ΔP	EAT/LAT°F	WATER ΔT	VOLT/ø	TYPICAL UNIT MFG & MODEL NO.	NOTES:
UH-1	SHIPPING/ RECIEVING	HORIZONTAL	590	1/20	8.7	0.75	0.2	60	60	120/1	TRANE 42-S	1
UH-2	MECHANICAL 169	HORIZONTAL	545	1/20	8.9	0.75	0.2	60	60	120/1	TRANE 38-S	1
UH-3	SALLYPORT 145	VERTICAL	990	1/20	16.3	1.0	0.1	60	60	120/1	TRANE 64-P	1
CUH-1	VESTIBULE 150	INVERTED VERTICAL	220	60W	9.4	0.5	1.6	60/99	37.5	120/1	TRANE FFMB02	1
CUH-2	VESTIBULE 165	INVERTED VERTICAL	220	60W	9.4	0.5	1.6	60/99	37.5	120/1	TRANE FFMB02	1
CUH-3	VESTIBULE 211	HORIZONTAL CONCEALED	250	60W	9.4	0.5	1.6	60/99	37.5	120/1	TRANE FFCB02	1

NOTES: 1 BASED ON 140°F EWT

HUMIDIFIER SCHEDULE

TAG	SERVICE	AIRFLOW CFM MAX.	AIRFLOW CFM MIN.	EAT (°F/%RH)	GAS INPUT (MBH)	CAPACITY PPH	MAX. ABSORPTION DIST. (IN.)	VOLT/ø	FLA (AMPS)	WEIGHT (LBS)	TYPICAL UNIT MFR & MODEL NO.	NOTES:
H-1	RTU-1	9080	4240	55/39	200	80.9	19"	120/1	16.8	600	DRI-STEEM GTS-200	1 2 3 4
H-2	RTU-2	7020	5220	55/37	200	89.3	14"	120/1	16.8	600	DRI-STEEM GTS-200	1 2 3 4
H-3	RTU-3	12165	6035	55/37	200	75.6	16"	120/1	16.8	600	DRI-STEEM GTS-200	1 2 3 4

NOTES: 1 PROVIDE 14" ROOF CURB AND WEATHER PROOF ENCLOSURE WITH INTERNAL HEATERS.
2 PROVIDE DUCT MOUNTED HIGH LIMIT HUMIDISTAT, LOCATE DOWNSTREAM OF HUMIDIFIER.
3 PROVIDE DRAIN QUENCHING ASSEMBLY, SUPPLIED BY HUMIDIFIER MANUFACTURER TO LIMIT WASTE TEMPERATURE TO 140°F.
4 W/ ULTRA-SORB DISPERSION TUBE. MOUNT DISPERSION TUBE WITHIN AHU MODULE, UPSTREAM OF SUPPLY FAN.

BOILER SCHEDULE – HOT WATER

TAG	FUEL	INPUT MBH	GAS CFH	OUTPUT MBH	VOLT/ø	FLUE SIZE	OPERATING WT. LBS.	TYPICAL UNIT MFG AND MODEL NO.	NOTES:
B-1	NAT. GAS	1500	1500	1332	120/1	12"ø	2200	CLEAVER BROOKS CLEARFIRE-1500	
B-2	NAT. GAS	1500	1500	1332	120/1	12"ø	2200	CLEAVER BROOKS CLEARFIRE-1500	

NOTES: 1

COMPUTER ROOM UNIT SCHEDULE

TAG	SERVICE	TYPE	COOLING MBH TOTAL	COOLING MBH SENS	MAX CFM	CHILLER WATER COIL GPM	WPD	EWT	LWT	EAT °F	LAT °F	ROWS	FACE AREA	ESP IN. WC	REHEAT MBH	REHEAT KW	HUMIDIFIER 1 LB/HR	HUMIDIFIER KW	ELECTRICAL DATA FLA	VOLTS/ø	FAN HP	WEIGHT LBS.	TYPICAL UNIT MFG & MODEL NO.	NOTES
AC-1	MID RANGE COMPUTER ROOM	UP FLOW	62.1	55.1	2500	17	15.7	42	57	72	55	3	12.2	0.5	–	15	10	3.2	22.0	460/3	1.5	550	DATA AIRE DALC-0634	
AC-2	MID RANGE COMPUTER ROOM	UP FLOW	62.1	55.1	2500	17	15.7	42	57	72	55	3	12.2	0.5	–	15	–	–	22.0	460/3	1.5	550	DATA AIRE DALC-0634	

NOTES: 1 PROVIDE HUMIDIFIER IN AC-1 ONLY.

MODULAR AIR HANDLING UNIT SCHEDULE (REFER TO SHEET M-504 FOR UNIT CONFIGURATION)

TAG	LOCATION	SERVES	AIRFLOW (CFM)	MIN. OA. (CFM)	MAX. OA. (CFM)	SUPPLY FAN: FAN TYPE	T.S.P. (IN. WG)	E.S.P. (IN. WG)	FAN DIA. (INCHES)	RPM	BHP/HP	RETURN/EXHAUST FAN: FAN TYPE	T.S.P. (IN. WG)	E.S.P. (IN. WG)	FAN DIA. (INCHES)	RPM	BHP/HP
RTU-1	ROOF	SECOND FLOOR	9080	2890	9080	AF	3.7	1.6	22"	1422	8.0/10	AF	2.3	1.2	22"	1220	5.3/7.5
RTU-2	ROOF	FIRST FLOOR	7020	3200	7020	AF	3.4	1.5	20"	1530	5.7/7.5	AF	2.1	1.13	20"	1309	3.7/5
RTU-3	ROOF	THIRD FLOOR	12165	2695	12165	AF	3.4	1.5	25"	1252	10/15	AF	2.2	1.2	25"	1101	7.0/7.5

TAG	HOT WATER COIL: MBH	FACE AREA (SQ. FT.)	ROWS	EAT °F	LAT °F	APD (IN-W.C.)	GPM	WPD (FT-W.C.)	CHILLED WATER COOLING COIL (30% PROPYLENE GLYCOL): TOTAL MBH	SENS MBH	FACE AREA (SQ. FT.)	ROWS	EAT °F (DB/WB)	LAT °F (DB/WB)	APD (IN/WB)	GPM	WPD (FL-MC)	OPERATING WEIGHT (LBS.)	ELECTRICAL DATA V/PH	VFD(S)	TRANE MODEL NO.	NOTES:
RTU-1	178.2	19.3	1	44.6	62.7	0.08	6.0	1.8	344.2	255.8	20.8	6	78.5	53	0.57	54	11.6	8300	480/3	YES	T-SERIES SIZE 21	1 2 3 4
RTU-2	208.6	16.0	1	33.7	61.1	0.12	7.0	0.6	294.4	208.8	16.8	6	80	53	0.55	46	12.3	7570	480/3	YES	T-SERIES SIZE 17	1 2 3 4
RTU-3	155.6	27.0	1	52.6	64.4	0.06	5.2	1.5	428.9	326.5	29	6	77.4	53	0.49	67	16.5	9330	480/3	YES	T-SERIES SIZE 30	1 2 3 4

NOTES: 1 HUMIDIFIER DISTRIBUTION BY HUMIDIFIER SUPPLIER. PROVIDE ACCESS MODULE WITH DRAIN PAN AND COORDINATE INSTALLATION. 2 PROVIDE FACTORY MOUNTED VFD'S AND NON-FUSED DISCONNECT FOR SINGLE POINT POWER CONNECTION. 3 PROVIDE 24" PLENUM CURB.
4 PROVIDE INTEGRAL PIPE CHASES FOR HOT AND CHILLED WATER COILS AND HUMIDIFIER DRAIN.

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STATE OF MAINE
RONNIE M. WILLEY
NO. 11029
LICENSED PROFESSIONAL ENGINEER
6/28/07

PROJECT TITLE:
MAINE TURNPIKE AUTHORITY ADMINISTRATION BUILDING
PORTLAND, MAINE

CURRENT ISSUE STATUS:
ISSUED FOR BIDDING/CONSTRUCTION 7-9-07

REV	DESCRIPTION	DATE
0	BIDDING/CONSTRUCTION	7-9-07

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PROJECT MANAGER:	SLB
JC/DRAWN BY:	TCM/BGG
A/E OF RECORD:	RMW
CAD FILE:	M-602-06016
PROJECT NO:	06016
DATE:	7-9-07

SHEET TITLE: SCHEDULES

SHEET No. M-602

NOTE:

1. SEE SHEET M-001 FOR LEGEND AND ABBREVIATIONS.

AIR SEPARATOR SCHEDULE

TAG	LOCATION	SERVED	GPM	SIZE (IN)	DIA. (IN)	LNG. (IN)	TYPICAL UNIT MFG AND MODEL No.	NOTES:
AS-1	MECH ROOM	COMP. RM CHILLED WATER	34	2"	–	–	TACO VRTX200	
AS-2	MECH ROOM	BUILDING CHILLED WATER	184	4"	10-3/4	25-1/4	TACO 4904AD	
AS-3	MECH ROOM	BUILDING HEATING WATER	128	4"	10-3/4	25-1/4	TACO 4904AD	
AS-4	MECH ROOM	SNOW MELT	16	1-1/2"	–	–	TACO VRTX150	
AS-5	MECH ROOM	RADIANT FLOOR	39	1-1/2"	–	–	TACO VRTX200	

NOTES:

REGISTER, DIFFUSER & GRILLE SCHEDULE

TAG	MAX. CFM	NECK SIZE	TYPE	ΔP	MAX NC	TYPICAL UNIT MFG & MODEL NO.	NOTES
S-1	125	6x6	DIRECTIONAL	0.11	25	PRICE SMCD	1
S-2	225	8x8	DIRECTIONAL	0.11	25	PRICE SMCD	1
S-3	350	10x10	DIRECTIONAL	0.11	25	PRICE SMCD	1
S-4	150	6"ø	PLAQUE	0.04	<20	PRICE SPD 24x24	1
S-5	715	12"ø	4-WAY	0.08	30	PRICE SCDA 24x24	
S-6	625	18x8	ROUND DUCT LOUVERED	0.1	25	PRICE RDR	4
S-7	925	15"ø	PLAQUE	0.03	25	PRICE SPD 24x24	
S-8	120	10"ø	SLOT	0.06	<20	PRICE SDA 75 48" LONG, 2 SLOT	3
S-9	180	12x4	LOUVERED	0.1	20	PRICE 520	
S-10	110	10x4	LOUVERED	0.1	<20	PRICE RDR	4
R-1	145	8x6	LOUVERED	0.1	20	PRICE 535	2
R-2	210	8x8	LOUVERED	0.1	20	PRICE 535	2
R-3	315	10x10	LOUVERED	0.1	25	PRICE 535	2
R-4	520	18x10	LOUVERED	0.1	25	PRICE 535	2
R-5	400	10"ø	SLOT	0.1	<20	PRICE SDR 75 48" LONG 2 SLOT	3
R-6	1250	24x20	LOUVERED	0.1	25	PRICE 535	
R-7	1850	20x14	SLOT	0.07	30	PRICE SPD 100 96" LONG, 6 SLOT	3
R-8	690	12x18	LOUVERED	0.1	30	PRICE 535	5
E-1	130	8x6	LOUVERED	0.1	25	PRICE 535	2
E-2	345	12x10	LOUVERED	0.1	25	PRICE 535	2
E-3	720	16x16	EGG CRATE	0.03	<20	PRICE 80	
TG-1	320	14x12	LOUVERED	0.03	<20	PRICE 535	2

NOTES: 1 PROVIDE TYPE 3P MOUNTING PANEL FOR LAY-IN CEILING. 3 PROVIDE INTEGRAL LINED PLENUM
2 PROVIDE TYPE TBP MOUNTING PANEL FOR LAY-IN CEILING. 4 PROVIDE INTEGRAL OPPOSED BLADE DAMPER
5 PROVIDE TYPE 6 FRAME FOR DRYWALL MOUNTING.

GRAVITY VENTILATOR SCHEDULE

TAG	LOCATION	SERVICE	THROAT AREA (SQ. FT.)	HOOD AREA (SQ. FT.)	SP (IN. W.G.)	TYPICAL UNIT MFG & MODEL NO.	NOTES:
GIV-1	ROOF	EF-6 MAKE UP AIR	1.5	5.5	0.02	LOREN COOK GI-18X12	1
GIV-2	ROOF	EF-3 MAKE UP AIR	1.5	5.5	0.02	LOREN COOK GI-18X12	1

NOTES: 1 PROVIDE 14" ROOF CURB

EXPANSION TANK SCHEDULE

TAG	LOCATION	SERVED	ACCEPT GAL.	DIA. (IN.)	HEIGHT (IN.)	WEIGHT FULL (LBS.)	TYPICAL UNIT MFG & MODEL NO.	NOTES
ET-1	MECH ROOM	BUILDING CHILLED WATER	37	20	46	503	TACO CA-140	
ET-2	MECH ROOM	BUILDING HEATING WATER	140	24	87	1586	TACO CA-500	
ET-3	MECH ROOM	COMPUTER CHILLED WATER	37	20	46	503	TACO CA-140	
ET-4	MECH ROOM	SNOW MELT	37	20	46	503	TACO CA-140	

NOTES:

HEAT EXCHANGER SCHEDULE – BRAZED PLATE

TAG	TYPE	BOILER LOOP (SHELL)				50% GLYCOL LOOP (TUBE)					TYPICAL UNIT MFG AND MODEL No.	NOTES:
		GPM	EWT	LWT	ΔP FT-H2O	GPM	EWT	LWT	ΔP FT-H2O	MBH		
HX-1	BRAZED PLATE	8.7	140	100	1.6	15.0	95	120	4.2	172.7	TACO TFP10x20-24	

NOTES:

PUMP SCHEDULE

TAG	LOCATION	SERVICE	GPM	HD (FT.)	BHP	ELECTRICAL DATA					TYPICAL UNIT MFG & MODEL NO.	NOTES:
						HP	RPM	VOLTS	PH	VFD		
P-1A P-1B	MECH ROOM	HOT WATER HEATING	132	60	3.1	5.0	1760	480	3	YES	TACO FI2009	
P-2A P-2B	MECH ROOM	CHILLED WATER	167	77	5.3	7.5	1760	480	3	YES	TACO FI2509	2
P-3	MECH ROOM	SNOW MELT	15	26	0.31	1/2	1750	120	1	NO	TACO 1615	1
P-4	THIRD FLOOR	RTU-1 PH COIL	6	20	–	1/6	3450	120	1	NO	TACO 1400-10	
P-5	THIRD FLOOR	RTU-2 PH COIL	7	20	–	1/6	3450	120	1	NO	TACO 1400-10	
P-6	THIRD FLOOR	RTU-3 PH COIL	5.2	21	–	1/6	3450	120	1	NO	TACO 1400-10	
P-7A P-7B	MECH ROOM	COMPUTER ROOM UNIT CHILLED WATER	34	68	1.25	1.5	3500	480	3	YES	TACO FI1206	2
P-8	MECH ROOM	RADIANT FLOOR	39	57	1.25	1.5	1750	480	3	NO	TACO 1619	
P-9	MECH ROOM	B-1	66	10	0.38	1/2	1760	480	3	YES	TACO KV2006	
P-10	MECH ROOM	B-2	66	10	0.38	1/2	1760	480	3	YES	TACO KV2006	
P-11	MECH ROOM	HTR-2	7	15	–	1/8	3250	120	1	NO	TACO 0014	
P-12	MECH ROOM	HTR-1	7	15	–	1/8	3250	120	1	NO	TACO 0014	

NOTES: 1 50% P.G. 2 30% P.G.

FAN SCHEDULE

TAG	LOCATION	SERVICE	TYPE	ROOF OPENING	CFM	SP IN W.G.	DIAMETER IN.	RPM	ELECTRICAL DATA				TYPICAL UNIT MFG & MODEL NO.	NOTES
									BHP / HP	VOLTS	PH	VFD		
EF-1	ROOF	RESTROOMS	DOWNBLAST	20x20	2495	0.50	16.5"	1055	0.47 / 0.75	208	3	NO	LOREN COOK 165C5B	2
EF-2	ROOF	ELECTRICAL ROOMS	DOWNBLAST	16x16	1655	0.50	13.5"	1109	0.21 / 0.25	120	1	NO	LOREN COOK 165C5B	2
EF-3	FILE STORAGE 173	ELEVATOR MACHINE ROOM	INLINE	——	715	0.3	——	1325	0.2 / 1/4	120	1	NO	LOREN COOK GN-720	1
EF-4	ROOF	VEHICLE SALLYPORT	DOWNBLAST	14X14	700	0.5	10"	1614	0.15 / 1/6	120	1	NO	LOREN COOK 100C2B	2
EF-5	ROOF	SECURE EVIDENCE	DOWNBLAST	14X14	230	0.5	7"	1603	0.16 / 1/6	120	1	NO	LOREN COOK 70C2B	2
EF-6	ROOF	ARMORY	DOWNBLAST	14X14	200	0.5	7"	1504	0.13 / 1/6	120	1	NO	LOREN COOK 70C2B	2
EF-7	FILE STORAGE 173	SERVER ROOM	INLINE	–	60	0.25	–	800	48W	120	1	NO	LOREN COOK GN-122	1

NOTES: 1 PROVIDE BRICK VENT & BACKDRAFT DAMPER 2 PROVIDE 14" ROOF CURB AND HINGED BASE.

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STATE OF MAINE
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6/28/07

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CURRENT ISSUE STATUS:
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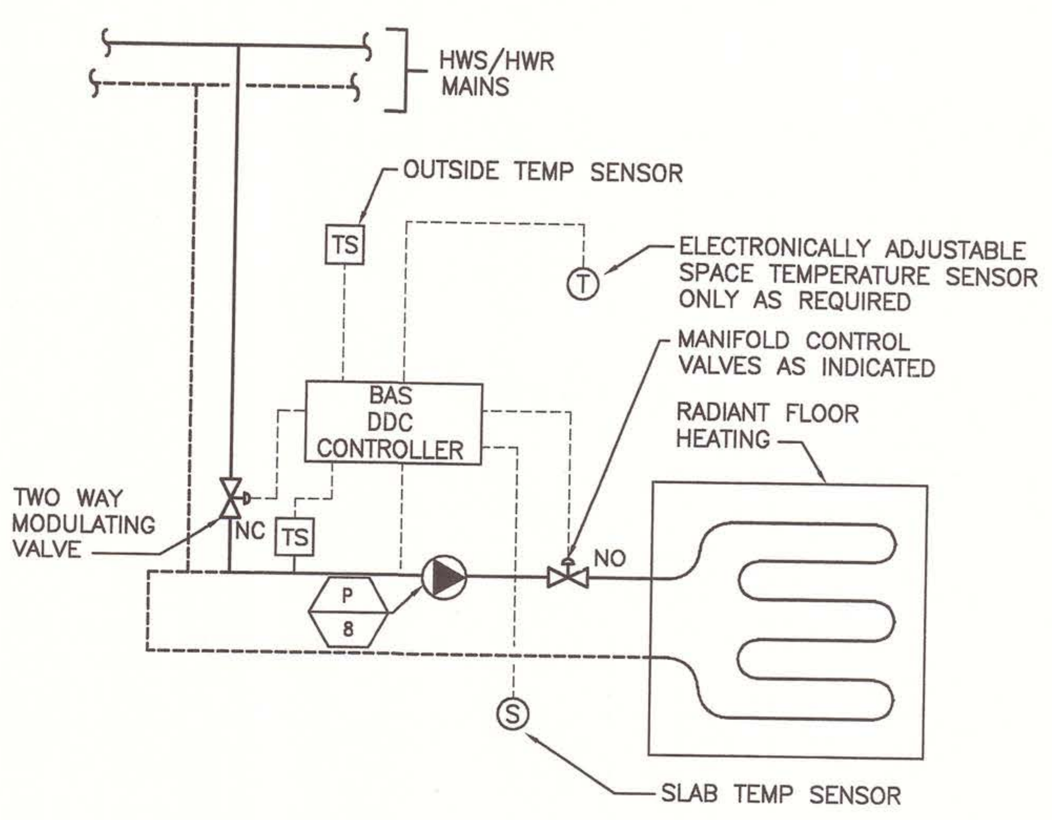


SEQUENCE OF OPERATION

A. THE BAS SHALL REGULATE THE INDOOR AIR TEMPERATURE SERVED BY THE FLOOR HEATING ZONES BY THE AMOUNT OF BOILER WATER INJECTED INTO THE CONTINUOUSLY CIRCULATING RADIANT FLOOR HEATING SYSTEM. THE TWO-WAY MODULATING HEAT INJECTION VALVE SHALL CYCLE DEPENDING ON THE QUANTITY OF HEAT REQUIRED FOR THE SPACE SERVED. THE RADIANT HEATING SYSTEM WATER TEMPERATURE SHALL BE REGULATED BASED ON THE OUTSIDE AIR TEMPERATURE AND UTILIZING A PROPORTIONAL-INTEGRAL-DIFFERENTIAL CONTROL SCHEME.

B. THE CONTROLLERS SHALL LIMIT THE HEATING SYSTEM SUPPLY WATER TEMPERATURE TO A MAXIMUM OF 120 DEGREES F.

C. THE CONTROLLER SHALL OPERATE IN RESET MODE VARYING THE HEATING PANEL SUPPLY WATER TEMPERATURE BASED ON OUTSIDE AIR TEMPERATURE. THE CONTROLLER SHALL BE CAPABLE OF PROVIDING AN ADJUSTABLE HEATING CURVE.
   a. THE BASE RESET SCHEDULE SHALL BE 120 DEGREES F SUPPLY WATER TEMPERATURE AT -20 DEGREES OUTSIDE AIR TEMPERATURE AND 70 DEGREES F SUPPLY WATER TEMPERATURE AT 60 DEGREES F OUTSIDE AIR TEMPERATURE.
   b. THE CONTROLLERS SHALL USE THE OUTSIDE AIR TEMPERATURE SENSOR TO VARY THE SYSTEM WATER SUPPLY TEMPERATURE TO SATISFY THE ROOM HEAT LOAD REQUIREMENTS. IF THE RESET WATER TEMPERATURE AS SCHEDULED DOES NOT SATISFY THE HEATING SET POINT FOR THE SPACE DURING A 24-HOUR (ADJUSTABLE) PERIOD OF OPERATION, THE BAS SHALL AUTOMATICALLY ADJUST THE RESET SCHEDULE UP OR DOWN TO SATISFY THE SPACE SET POINT.

D. THE CONTROLLER SHALL PROVIDE WARM WEATHER SHUTDOWN TO STOP THE SYSTEM PUMP (P-8) AND CLOSE THE HEATING VALVE(S) WHEN OUTSIDE AIR TEMPERATURES NO LONGER REQUIRE SPACE HEATING.

E. PROVIDE TEMPERATURE SENSING AT THE MIXING STATION FOR WATER TEMPERATURE AND AS INDICATED IN THE DRAWING FOR FLOOR SURFACE TEMPERATURE.

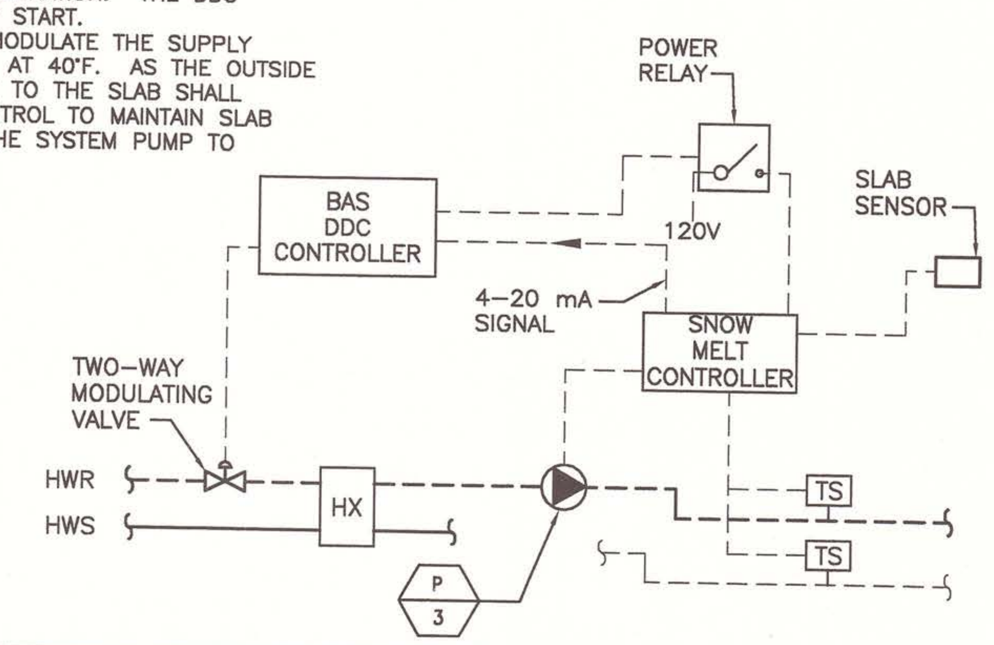
H1	RADIANT FLOOR HEATING CONTROL SCHEMATIC AND SEQUENCE OF OPERATION
NOT TO SCALE	

SEQUENCE OF OPERATION

SEQUENCE OF OPERATION

A. NOTE: THE BAS CONTRACTOR SHALL BE RESPONSIBLE FOR THIS COMPLETE SYSTEM AND INSTALLATION.

B.
A. AN OPERATOR INPUT SIGNAL AT THE DDC GRAPHICAL INTERFACE SHALL ENERGIZE THE SNOW MELTING SYSTEM CONTROLLER. THE DDC SYSTEM SHALL ALLOW A MANUALLY INPUT TOTAL RUN TIME (IN HOURS) FOR THE SNOW MELT OPERATION. THE DDC CONTROLLER SHALL BE CAPABLE OF UP TO A 5 DAY DELAY START.
B. ONCE ACTIVATED THE SNOW MELTING CONTROLLER SHALL MODULATE THE SUPPLY GLYCOL TEMPERATURE TO MAINTAIN THE SLAB TEMPERATURE AT 40°F. AS THE OUTSIDE AIR TEMPERATURE DROPS THE SUPPLY WATER TEMPERATURE TO THE SLAB SHALL INCREASE USING THE RESET CAPABILITY OF THE MIXING CONTROL TO MAINTAIN SLAB TEMPERATURE. THE MIXING CONTROL SHALL ALSO CYCLE THE SYSTEM PUMP TO MAINTAIN SLAB TEMPERATURE.



H10	SNOW MELT SYSTEM CONTROL SCHEMATIC & SEQUENCE OF OPERATION
NOT TO SCALE	

SEQUENCE OF OPERATION:

A. GENERAL:
1. WITH THE H-O-A SWITCH IN THE "AUTO" POSITION, UNIT SHALL START THROUGH THE BAS SYSTEM PROVIDED THE SAFETIES HAVE BEEN SATISFIED.
2. BAS PROGRAMMING SHALL DEFINE OCCUPIED AND UNOCCUPIED SCHEDULING.
3. IN THE EVENT THAT THE UNIT IS DISABLED THE OUTSIDE AIR DAMPER AND CHILLED WATER VALVE SHALL CLOSE THE RETURN DAMPER AND HOT WATER VALVE SHALL OPEN 100%. THE FREEZE PROTECTION PUMP SHALL START.

B. OCCUPIED PERIODS: SYSTEM SUPPLY AND RETURN FANS SHALL RUN CONTINUOUSLY. SUPPLY AND RETURN FANS SHALL BE INTERLOCKED.

C. UNOCCUPIED PERIODS: SYSTEM SUPPLY AND RETURN FANS SHALL CYCLE TO MAINTAIN THE HEATING SET POINTS IN EACH OF THE SPACES SERVED. THE SYSTEM SHALL PROVIDE AN ADJUSTABLE ANTI-SHORT CYCLE TIMER TO PREVENT EXCESSIVE FAN STARTS/STOPS.
1. DURING UNOCCUPIED PERIODS THE OUTDOOR AIR (OA) DAMPER SHALL CLOSE AND THE RETURN AIR DAMPER SHALL OPEN.

D. OPTIMUM START/STOP: THE SYSTEM FANS SHALL BE STARTED/STOPPED BASED ON THE OCCUPANCY SCHEDULE, WHICH SHALL BE ADJUSTABLE BY OPTIMUM START AND STOP CALCULATIONS. THE TEMPERATURE AT THE END OF THE OCCUPIED PERIOD WILL BE ALLOWED TO DRIFT A MAXIMUM OF 2°F ABOVE OR BELOW TEMPERATURE SET POINT. HEATING AND COOLING COIL VALVES SHALL BE CLOSED. THE SUPPLY AND RETURN FAN WILL CONTINUE TO OPERATE. HISTORICAL PERFORMANCE DATA SHALL BE USED TO DETERMINE HOW QUICKLY THE SPACE HEATS OR COOLS AND WILL START THE SYSTEM AS LATE AS POSSIBLE IN THE MORNING TO ACHIEVE OCCUPIED TEMPERATURE SETPOINT. HISTORICAL DATA WILL ALSO DETERMINE THE EARLIEST POSSIBLE TIME THE SYSTEM CAN STOP TO ALLOW THE MAXIMUM TEMPERATURE DRIFT.

E. MORNING WARM UP: THE UNIT SHALL OPERATE IN THE MORNING WARM-UP MODE WHEN THE RETURN AIR TEMPERATURE IS BELOW THE WARM-UP MODE SET POINT, 68 DEG F (ADJ.), AS MEASURED BY THE RETURN DUCT TEMPERATURE SENSOR.
1. THE OA DAMPER AND RELIEF AIR DAMPER SHALL CLOSE TO 0% AND THE RETURN AIR DAMPER SHALL OPEN TO 100%.
2. THE HOT WATER PREHEAT COIL VALVE SHALL MODULATE TO MAINTAIN A SUPPLY AIR TEMPERATURE OF 85 DEG F (ADJ.).
3. ALL VAV BOXES SHALL OPEN TO 100% UNTIL OCCUPIED SET POINT TEMPERATURE IS ESTABLISHED. AS ZONES REACH OCCUPIED MODE SET POINT THEY SHALL MODULATE TO PREVENT OVERHEATING.

F. MORNING COOL DOWN: THE UNIT SHALL OPERATE IN THE MORNING COOL DOWN MODE WHEN THE RETURN AIR TEMPERATURE IS ABOVE THE COOL DOWN MODE SET POINT, 75 DEG F (ADJ.), AS MEASURED BY THE RETURN AIR DUCT TEMPERATURE SENSOR.
1. THE OA DAMPER AND RELIEF AIR DAMPER SHALL CLOSE TO 0% AND THE RETURN AIR DAMPER SHALL OPEN 100%.
2. THE CHILLED WATER COIL VALVE SHALL MODULATE TO MAINTAIN A SUPPLY AIR TEMPERATURE OF 55 DEG F (ADJ.).
3. ALL VAV BOXES SHALL OPEN TO 100% UNTIL OCCUPIED SET POINT TEMPERATURE IS ESTABLISHED. AS ZONES REACH OCCUPIED MODE SET POINT THEY SHALL MODULATE TO PREVENT OVER COOLING.

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G. SUPPLY FAN CONTROL: THE UNIT SUPPLY FAN SPEED SHALL MODULATE, THROUGH ITS VFD, TO MAINTAIN A SUPPLY DUCT STATIC PRESSURE BETWEEN 0.5" W.G. AND THE MAXIMUM STATIC PRESSURE DETERMINED FROM THE SYSTEM TAB (ADJ.)
1. THE STATIC PRESSURE SET POINT SHALL BE RESET TO MAINTAIN THE VAV BOX CFM REQUIRING THE MOST STATIC PRESSURE AT 90% OPEN.
2. ALL VAV BOX DAMPER POSITIONS SHALL BE CONTINUOUSLY POLLED TO DETERMINE THE VAV BOX THAT IN THE MOST OPEN.
3. THE STATIC PRESSURE SENSOR SHALL BE LOCATED AS SHOWN ON MECHANICAL DRAWINGS BUT NOT LESS THAN THE DISTANCE OF THE LONGEST SUPPLY DUCT RUN.
4. FINAL STATIC PRESSURE SET POINT SHALL BE DETERMINED DURING TESTING AND BALANCING OF THE SYSTEM.

H. RETURN FAN CONTROL: THE SYSTEM RETURN FAN SHALL OPERATE WHEN THE ASSOCIATED SUPPLY FAN IS PROVEN ON. THE RETURN FAN SPEED SHALL MODULATE, THROUGH ITS VFD, TO MAINTAIN DISCHARGE STATIC PRESSURE AT SET POINT. THE STATIC PRESSURE SENSOR SHALL BE LOCATED APPROXIMATELY BETWEEN THE RETURN FAN DISCHARGE AND THE RELIEF DAMPER. THE RETURN FAN DISCHARGE STATIC PRESSURE SET POINT SHALL BE THE LARGER OF THE TWO FOLLOWING CONDITIONS.
1. THE STATIC PRESSURE REQUIRED TO DELIVER THE DESIGN RETURN AIR VOLUME ACROSS THE RETURN DAMPER WHEN THE SUPPLY AIR FAN IS AT DESIGN AIRFLOW AND THE OUTSIDE AIR DAMPER IS SET TO ITS MINIMUM POSITION
2. THE STATIC PRESSURE REQUIRED TO EXHAUST ENOUGH AIR TO MAINTAIN SPACE PRESSURE AT SET POINT (0.05" W.G. ADJ.) WHEN THE SUPPLY AIR FAN IS AT DESIGN AIR FLOW AND THE OUTSIDE AIR DAMPER IS AT 100% OUTSIDE AIR. SEE BUILDING PRESSURE CONTROL BELOW.
3. FINAL STATIC PRESSURE SET POINT SHALL BE DETERMINED DURING TESTING AND BALANCING OF THE SYSTEM.

I. BUILDING PRESSURE CONTROL: THE RELIEF/EXHAUST AIR DAMPER SHALL MODULATE TO MAINTAIN A BUILDING STATIC PRESSURE SET POINT OF 0.05" W.C. BUILDING STATIC PRESSURE SHALL BE TIME AVERAGED WITH A SLIDING FIVE MINUTE WINDOW.

J. ECONOMIZER CONTROL: ECONOMIZER CYCLE OPERATION SHALL BE INTEGRATED WITH MECHANICAL COOLING TO ACT AS THE FIRST STAGE OF COOLING.
1. THE ECONOMIZER CYCLE SHALL BE ENABLED WHEN THE OA ENTHALPY IS EQUAL TO OR LESS THAN 28 BTU/LB.
2. OA DAMPER SHALL MODULATE BETWEEN MINIMUM POSITION AND 100% OPEN TO MAINTAIN SUPPLY AIR TEMPERATURE SET POINT OF 55 DEG F (ADJ.).
3. THE RETURN AIR DAMPER SHALL OPERATE IN INDIRECT PROPORTION WITH THE OA DAMPER.
4. IF THE DISCHARGE AIR TEMPERATURE RISES ABOVE THE SET POINT BY 1.5°F FOR 5 MIN. AND THE OUTSIDE DAMPER IS 100% OPEN THE COOLING COIL VALVE SHALL MODULATE OPEN.

K. VENTILATION CONTROL: THE OA MINIMUM DAMPER POSITION SHALL BE DYNAMIC AND ESTABLISHED BY MODULATING THE RETURN AIR DAMPER TO MAINTAIN THE DIFFERENTIAL PRESSURE SET POINT ACROSS THE OUTSIDE AIR DAMPER. THE RETURN DAMPER SHALL MODULATE TO MAINTAIN THE SYSTEM MINIMUM VENTILATION RATE INDICATED IN THE AIR HANDLER SCHEDULE. T-A-B CONTRACTOR SHALL DETERMINE DP SET POINT.

L. DISCHARGE AIR TEMPERATURE CONTROL:
1. WHEN SUPPLY AIR TEMPERATURE RISES ABOVE THE 55 DEG F SET POINT (ADJ.), THE CHILLED WATER VALVE SHALL MODULATE OPEN TO MAINTAIN SET POINT.
2. WHEN THE SUPPLY AIR TEMPERATURE DROPS BELOW THE 55 DEG F SET POINT (ADJ.), THE HOT WATER PREHEAT COIL VALVE SHALL MODULATE OPEN TO MAINTAIN SET POINT.
3. THE HOT WATER PREHEAT VALVE SHALL BE DISABLED ABOVE OA TEMPERATURES OF 50 DEG F (ADJ.).

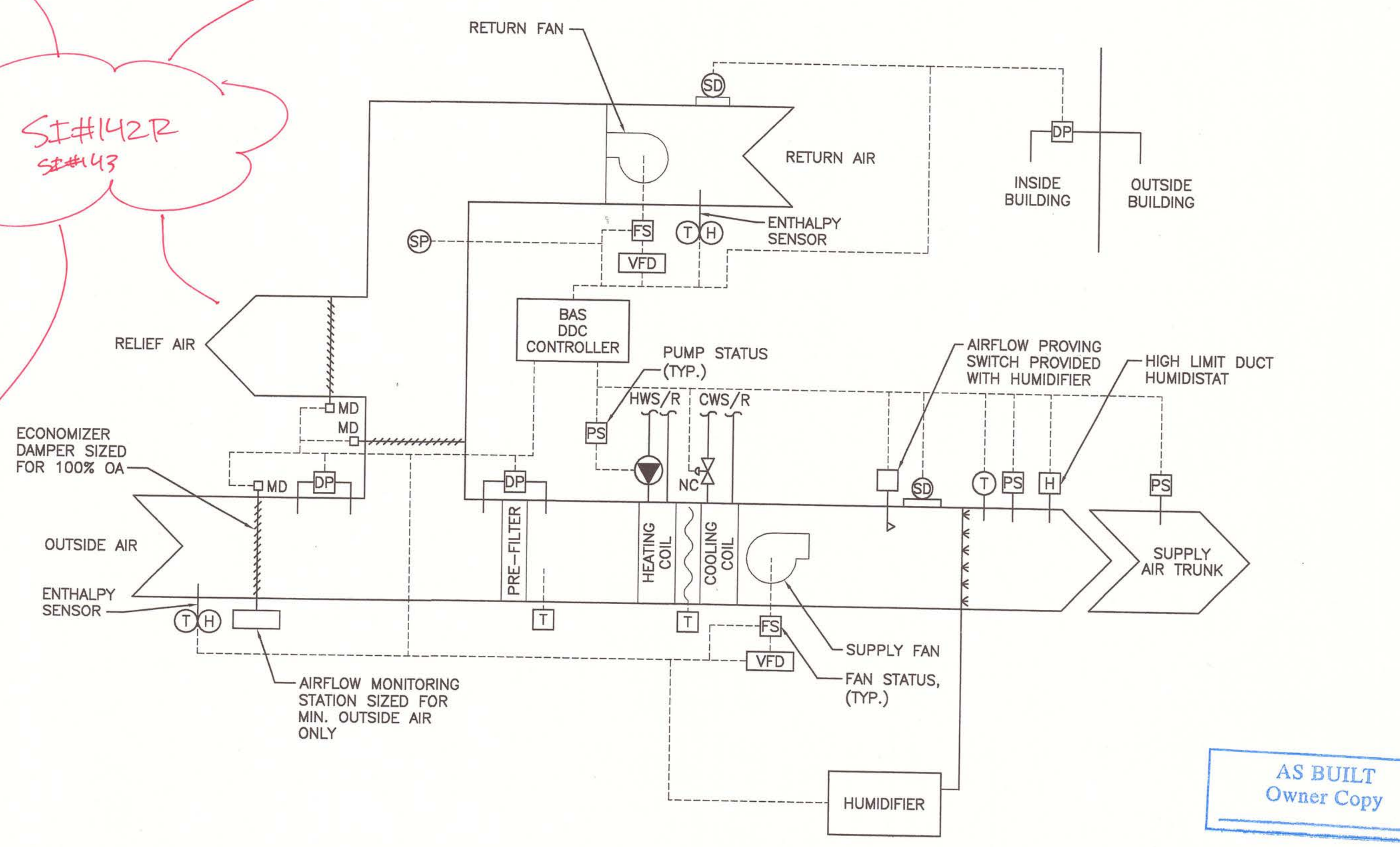
M. HOT WATER COIL FREEZE PROTECTION PUMP: AT OUTDOOR AIR TEMPERATURES BELOW 45°F, OR ON A CALL FOR HEATING, THE COIL FREEZE PROTECTION PUMP SHALL OPERATE. ALARM SHALL ENABLE IF PUMP STATUS INDICATES A FAILURE AND THE UNIT SHALL BE DISABLED.

N. DEHUMIDIFICATION: THE CHILLED WATER COOL VALVE SHALL MODULATE TO MAINTAIN A RETURN DUCT RELATIVE HUMIDITY SET POINT OF 60% RH (ADJ.). IF RETURN AIR RELATIVE HUMIDITY RISES ABOVE 60% RH THE UNIT DISCHARGE TEMPERATURE SHALL BE RESET LOWER BY 1°F. IF THE RETURN AIR RELATIVE HUMIDITY REMAINS ABOVE 60% FOR 5 MIN. THE DISCHARGE AIR TEMPERATURE SHALL CONTINUE TO BE RESET LOWER BY 1°F EVERY 5 MIN. UNTIL RH DROPS BELOW 60%. DISCHARGE AIR TEMPERATURE SHALL NOT BE RESET BELOW 52°F.

O. HUMIDIFICATION: UNIT HUMIDIFIER SHALL MODULATE TO MAINTAIN A RETURN DUCT RELATIVE HUMIDITY SET POINT OF 35% RH (ADJ.).
1. THE HUMIDIFIER SHALL BE ENABLED BY THE DUCT MOUNTED AIRFLOW PROVING SWITCH.
2. THE HUMIDIFIER SHALL BE DISABLED ABOVE A HIGH HUMIDITY ALARM SET POINT OF 70 % RH (ADJ.).

P. SAFETY DEVICES:
1. SMOKE DETECTORS LOCATED IN THE SUPPLY AND RETURN DUCTS SHALL STOP THE UNIT FANS AND CLOSE THE OUTSIDE AIR DAMPERS IF SMOKE IS DETECTED.
2. FREEZE STAT SERPENTINED ACROSS THE HEATING COIL FACE SHALL STOP UNIT FANS, CLOSE DAMPERS AND SETS ALARM AT A TEMPERATURE BELOW 38 DEG F (ADJ.).
3. DUCT HIGH STATIC PRESSURE SENSOR SHALL DISABLE UNIT FANS WHEN MEASURED PRESSURE EXCEEDS 6" W.C. (ADJ.).
4. DUCT LOW STATIC PRESSURE SENSOR SHALL DISABLE UNIT FANS WHEN MEASURED PRESSURE DROPS BELOW -6" W.C. (ADJ.).

Q. OTHER DEVICES:
1. THE UNIT AIR FILTER STATUS SHALL BE MEASURED AND INDICATED ON THE GRAPHICAL INTERFACE TO INDICATE THE STATIC PRESSURE AND PRESSURE DROP ACROSS THE UNIT FILTERS AND PROVIDE NOTIFYING CONDITIONS INDICATING THE NEED FOR FILTER CHANGE-OUT.
2. FAN AND PUMP STATUS SHALL BE DETERMINED BY CURRENT SENSING DEVICE.



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A1	VAV AIR HANDLER CONTROL SCHEMATIC & SEQUENCE OF OPERATION
NOT TO SCALE	TYPICAL FOR RTU-1, RTU-2, RTU-3

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PROJECT TITLE:
MAINE TURNPIKE AUTHORITY ADMINISTRATION BUILDING
PORTLAND, MAINE

CURRENT ISSUE STATUS:
ISSUED FOR BIDDING/CONSTRUCTION 7-9-07

REV	DESCRIPTION	DATE
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DATE:	7-9-07

SHEET TITLE:
SCHEMATICS

SHEET No.
M-651

EF-1 RFI-425

A. TERMINAL UNITS (UH, CUH)
1. CABINET UNIT HEATER, HYDRONIC:
a. THREE-WAY CONTROL VALVE SHALL MODULATE TO MAINTAIN ROOM TEMPERATURE.
b. STRAP-ON AQUASTAT ON RETURN WATER PIPE SHALL PREVENT THE OPERATION OF THE FAN UNLESS HOT WATER OF ADEQUATE TEMPERATURE (140 DEG F) IS AVAILABLE.
2. UNIT HEATER, HYDRONIC:
a. THREE-WAY CONTROL VALVE SHALL MODULATE TO MAINTAIN ROOM TEMPERATURE.
b. STRAP-ON AQUASTAT ON RETURN WATER PIPE SHALL PREVENT THE OPERATION OF THE FAN UNLESS HOT WATER OF ADEQUATE TEMPERATURE (140 DEG F) IS AVAILABLE.

B. GENERAL EXHAUST FANS
1. TOILET ROOMS, JANITOR ROOMS, LOCKER ROOMS AND SIMILAR SPACES: EXHAUST FANS SHALL BE STARTED AND STOPPED VIA THE SAME OCCUPANCY SCHEDULE AS THE ASSOCIATED AIR HANDLING SYSTEM. EXCEPTION: EF-4,5,6 SHALL RUN CONTINUOUSLY.

C. ELECTRICAL ROOM VENTILATION (EF-2)
1. SPACES INCLUDING:
A. MAIN ELECTRICAL A138, A138A
2. WHEN SPACE TEMPERATURE EXCEEDS 80 DEGREES F, OPEN INTAKE MOTORIZED DAMPERS. WHEN ROOM TEMPERATURE EXCEEDS 85 DEGREES F, START ROOM EXHAUST FAN. WHEN ROOM TEMPERATURE DROPS BELOW 70 DEGREES, STOP EXHAUST FAN AND CLOSE INTAKE DAMPERS.
3. IF SPACE TEMPERATURE EXCEEDS 100 DEGREES, SIGNAL ALARM.

D. ELEVATOR MACHINE ROOM EXHAUST (EF-7)
1. SPACES INCLUDING:
A. MAIN ELECTRICAL 107, 207, 307.
2. WHEN ROOM TEMPERATURE EXCEEDS 85 DEGREES F, START ROOM EXHAUST FAN. WHEN ROOM TEMPERATURE DROPS BELOW 70 DEGREES, STOP EXHAUST FAN.
3. IF SPACE TEMPERATURE EXCEEDS 100 DEGREES, SIGNAL ALARM.

J1 GENERAL SEQUENCES OF OPERATION

NOT TO SCALE

COMPUTER ROOM UNIT SEQUENCE OF OPERATION

A. GENERAL:
1. UNIT SHALL BE PROVIDED WITH FACTORY MOUNTED CONTROLS WITH INTERFACE TO COMMUNICATE WITH BAS SYSTEM.
2. WITH THE H-O-A SWITCH IN THE "AUTO" POSITION, UNIT SHALL START THROUGH THE BAS SYSTEM PROVIDED THE SAFETIES HAVE BEEN SATISFIED.
3. BAS PROGRAMMING SHALL DEFINE OCCUPIED AND UNOCCUPIED SCHEDULING.
4. PROVIDE REMOTE START/STOP.

B. SUPPLY FAN CONTROL: THE UNIT SUPPLY FAN SPEED SHALL RUN AT A CONSTANT SPEED.

C. DISCHARGE AIR TEMPERATURE CONTROL:
1. WHEN SUPPLY AIR TEMPERATURE RISES ABOVE THE 55 DEG F SET POINT (ADJ.), THE CHILLER SHALL ENABLE TO MAINTAIN TEMPERATURE AT ITS SET POINT.

D. DEHUMIDIFICATION: THE CHILLED WATER COOL VALVE SHALL MODULATE TO MAINTAIN A RETURN DUCT RELATIVE HUMIDITY SET POINT OF 60% RH (ADJ.). IN THE DEHUMIDIFICATION MODE THE HOT GAS REHEAT COIL SHALL ENABLE TO MAINTAIN THE SPACE TEMPERATURE AT ITS SETPOINT.

E. HUMIDIFICATION: UNIT HUMIDIFIER SHALL MODULATE TO MAINTAIN A RETURN DUCT RELATIVE HUMIDITY SET POINT OF 35% RH (ADJ.).
1. THE HUMIDIFIER SHALL BE ENABLED BY THE DUCT MOUNTED AIRFLOW PROVING SWITCH.
2. THE HUMIDIFIER SHALL BE DISABLED ABOVE A HIGH HUMIDITY ALARM SET POINT OF 70 % RH (ADJ.).

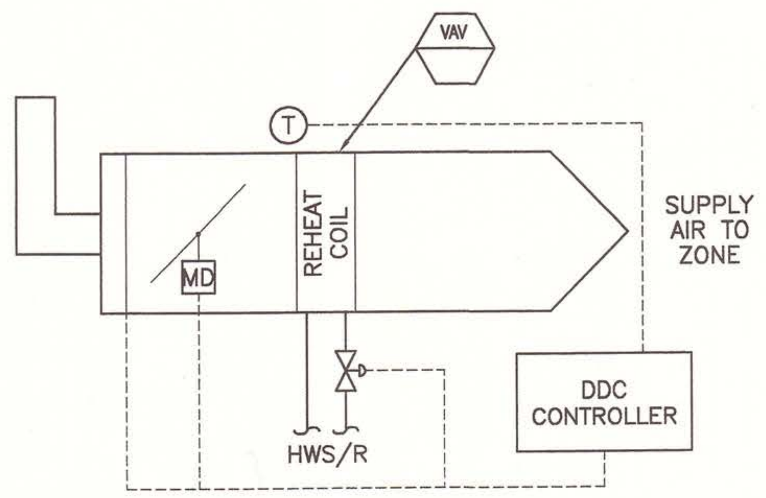
F. SAFETY DEVICES:
1. FREEZE STAT SERPENTINED ACROSS THE HEATING COIL FACE SHALL STOP UNIT FANS, CLOSES DAMPERS AND SETS ALARM AT A TEMPERATURE BELOW 38 DEG F (ADJ.).
2. FAN FAILURE ALARM.
3. ROOM HIGH TEMPERATURE ALARM.
4. HIGH AND LOW HUMIDITY ALARM.
5. CONDENSATE PAN OVERFLOW FLOAT SWITCH.

J8 COMPUTER ROOM COOLING

NOT TO SCALE

NOTE:

1. SEE SHEET M-001 FOR LEGEND AND ABBREVIATIONS.

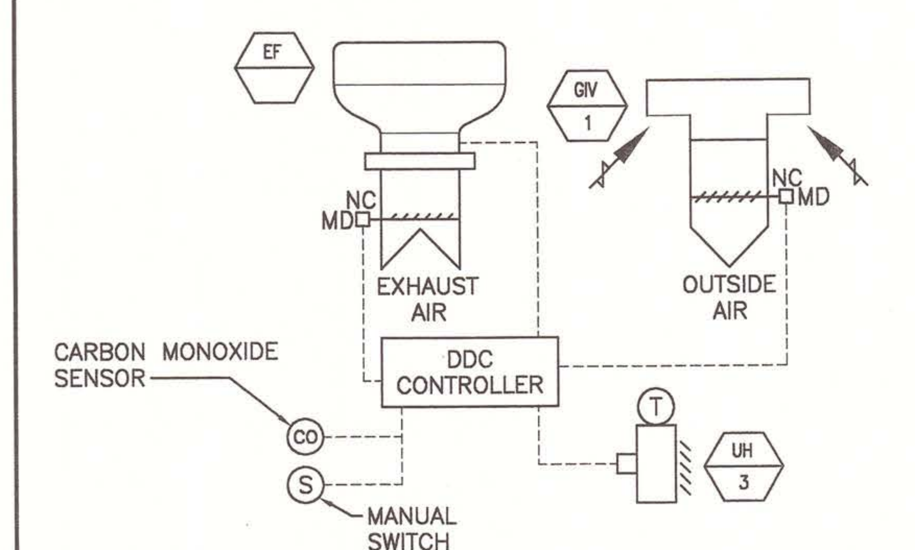


VARIABLE AIR VOLUME BOX SEQUENCE OF OPERATION

1. OFFICE SPACE VAV CONTROL: DUAL TEMPERATURE THERMOSTAT SET AT 75°F (ADJUSTABLE) MAINTAINS CONSTANT SPACE TEMPERATURE BY MODULATING THE VARIABLE AIR VOLUME DAMPER OPERATOR. ON A RISE OF TEMPERATURE ABOVE THE COOLING SET POINT (75°F ADJUSTABLE), THE VAV TERMINAL UNIT SHALL MODULATE TO ITS MAXIMUM CFM. AS THE TEMPERATURE DROPS BELOW THE COOLING SET POINT, THE TERMINAL UNIT SHALL MODULATE TO ITS MINIMUM CFM. AS THE SPACE TEMPERATURE CONTINUES TO FALL TO THE HEATING SET POINT (70°F ADJUSTABLE), THE PROPORTIONAL HOT WATER VALVE SHALL MODULATE OPEN.
2. PROVIDE NIGHT SETBACK AND MORNING WARM-UP AS REQUIRED BY THE ASSOCIATED SYSTEM.
3. CONFERENCE ROOM VAV CONTROL: SEQUENCE FOR HEATING, COOLING AND SETBACK SHALL BE AS DESCRIBED ABOVE FOR OFFICE SPACES. HOWEVER, UPON AN INCREASE IN CO2 THE VARIABLE AIR VOLUME DAMPER SHALL MODULATE OPEN TO ITS MAXIMUM CFM TO MAINTAIN CO2 BELOW 1000 PPM. IF THE CO2 CONTINUES TO INCREASE ABOVE THE 1000 PPM THEN THE OUTSIDE AIR DAMPER AT THE AIR HANDLER SHALL MODULATE OPEN TO PROVIDE MORE OUTSIDE AIR.

F1 VAV BOX SEQUENCE OF OPERATION

NOT TO SCALE



VEHICLE TRAP SEQUENCE OF OPERATION:

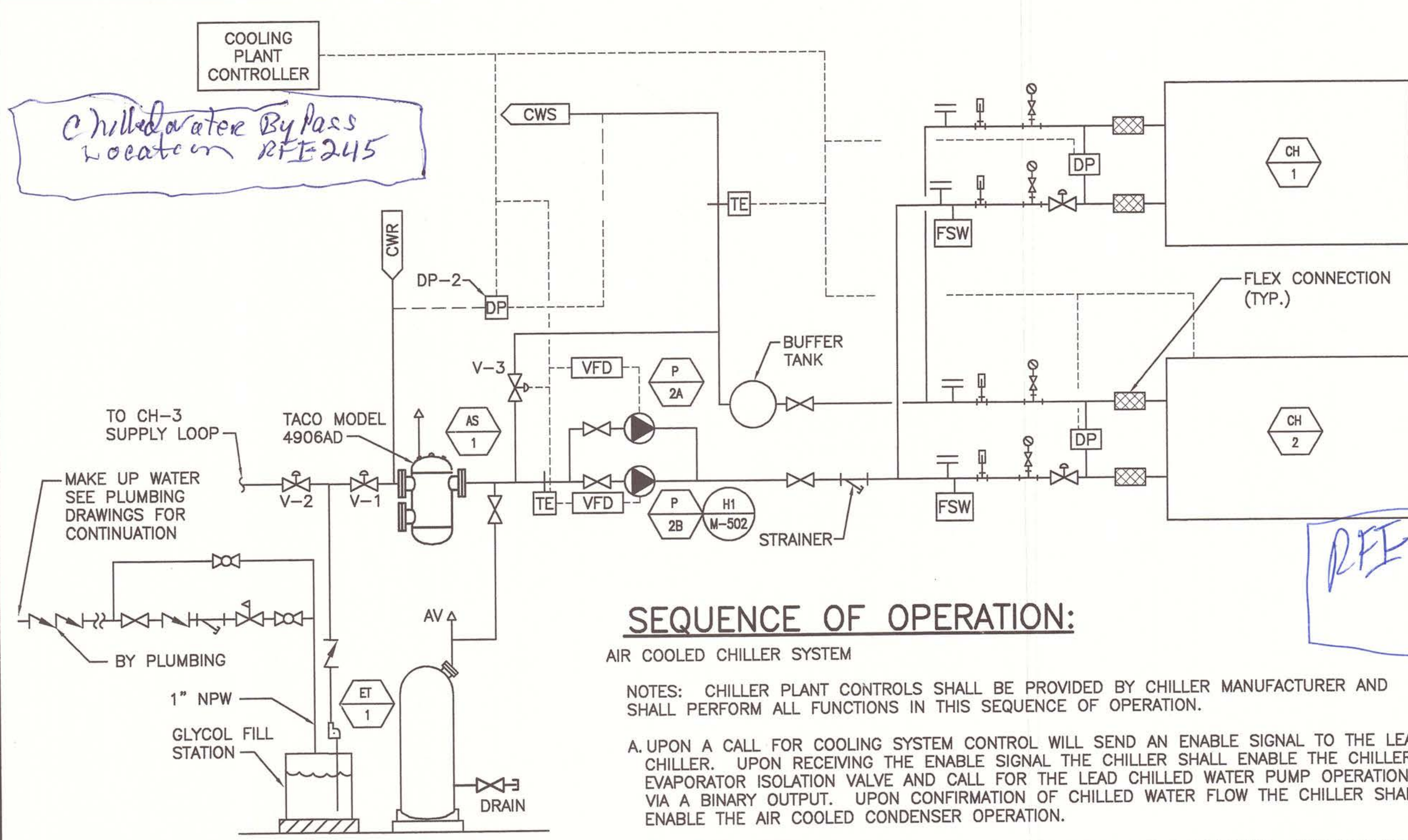
A. THE UNIT HEATER SHALL CYCLE TO MAINTAIN THE HEATING SET POINT OF 60 DEGREES F (ADJUSTABLE) UTILIZING THE CABINET UNIT HEATER/UNIT HEATER SEQUENCE OF OPERATION.

B. THE SPACE CARBON MONOXIDE (CO) LEVELS SHALL BE MONITORED AT ALL TIMES. AT SPACE CO LEVELS AT OR ABOVE 100 PPM (ADJUSTABLE), THE VENTILATION SYSTEM SHALL BE ACTIVATED AND AN ALARM SHALL FLASH ON THE GRAPHICAL INTERFACE. ALARM SHALL AUTOMATICALLY RESET WHEN CO LEVELS DROP BELOW 100 PPM. ACTIVATION OF THE VENTILATION SYSTEM SHALL OPEN THE MOTOR OPERATED DAMPER AT GRAVITY VENTILATOR GIV-B1 AND A DAMPER END SWITCH SHALL ENERGIZE EXHAUST FAN EF-B6. AT CO LEVELS BELOW 100 PPM, THE GRAVITY VENTILATOR DAMPER SHALL BE CLOSED AND THE EXHAUST FAN SHALL BE DE-ENERGIZED.

C. THE SPACE VENTILATION SYSTEM SHALL BE CAPABLE OF BEING MANUALLY ACTIVATED BY PRESSING A SECURE WALL MOUNTED SWITCH. PRESSING THE BUTTON SHALL START THE VENTILATION SEQUENCE DESCRIBED ABOVE AND SHALL REMAIN ACTIVE FOR A PERIOD OF 15 MINUTES (ADJUSTABLE).

F8 H & V SYSTEM AT THE VEHICLE TRAP CONTROL SCHEMATIC & SEQUENCE OF OPERATION

NOT TO SCALE



SEQUENCE OF OPERATION:

AIR COOLED CHILLER SYSTEM

NOTES: CHILLER PLANT CONTROLS SHALL BE PROVIDED BY CHILLER MANUFACTURER AND SHALL PERFORM ALL FUNCTIONS IN THIS SEQUENCE OF OPERATION.

A. UPON A CALL FOR COOLING SYSTEM CONTROL WILL SEND AN ENABLE SIGNAL TO THE LEAD CHILLER. UPON RECEIVING THE ENABLE SIGNAL THE CHILLER SHALL ENABLE THE CHILLER EVAPORATOR ISOLATION VALVE AND CALL FOR THE LEAD CHILLED WATER PUMP OPERATION VIA A BINARY OUTPUT. UPON CONFIRMATION OF CHILLED WATER FLOW THE CHILLER SHALL ENABLE THE AIR COOLED CONDENSER OPERATION.

B. THE SYSTEM SETPOINT SHALL BE 42 DEGREES F ADJ. BY THE OPERATOR. THE CHILLER SEQUENCING SOFTWARE SHALL CONTROL INDIVIDUAL CHILLER SETPOINTS TO MAINTAIN THE SYSTEM SUPPLY WATER TEMPERATURE AT SETPOINT.

C. WHEN THE CHILLED WATER TEMPERATURE EXCEEDS 1.5 F (OPERATOR ADJUSTABLE) ABOVE THE SETPOINT CONTINUOUSLY FOR 5 MINUTES (ADJ.) THE LAG CHILLER SHALL BE ENABLED. PRIOR TO THE START OF THE LAG CHILLER THE LEAD CHILLER SHALL UNLOAD TO 0%. FOLLOWING CONFIRMATION OF LAG CHILLER OPERATION BOTH CHILLERS SHALL BE ALLOWED TO RELOAD. LAG CHILLER SHALL START IN A SIMILAR MANNER TO THE LEAD CHILLER START SEQUENCE.

D. THE LAG CHILLER SHALL BE DISABLED WHENEVER THE LOAD ON OPERATING CHILLERS DROPS TO A LEVEL LOW ENOUGH SO THAT THE CHILLER CAN BE TURNED OFF AND THE REMAINING CHILLER CAN CARRY THE LOAD. THE LOAD ON THE OPERATING CHILLER(S) SHALL BE DETERMINED BASED ON THE MONITORED ACTUAL CURRENT DRAW (% AMPS). WHEN THE TOTAL LOAD ON OPERATING CHILLERS ARE LESS THAN 85% CONTINUOUSLY FOR 15 MINUTES THE SYSTEM SHALL DISABLE THE NEXT CHILLER IN THE SEQUENCE.

E. THE CHILLER SEQUENCING SOFTWARE SHALL NOT SHUTDOWN A CHILLER PUMP UNTIL ALL CHILLERS ARE PROVEN OFF INDICATED BY THE FLOW SWITCH.

F. UPON SENSING A LEAD CHILLER FAILURE THE CHILLER SEQUENCING SOFTWARE SHALL LOCKOUT THAT CHILLER AND IMMEDIATELY INITIATE THE START OF THE LAG CHILLER.

G. CHILLER LEAD/LAG SEQUENCING: ROTATION SHALL BE INITIATED BASED ON AN OPERATOR ENTERED DAY INTERVAL. THE METHOD OF SEQUENCE SHALL BE OPERATOR SELECTABLE. CHILLERS MAY BE FORCED INTO A NEW ROTATION SEQUENCE BY CYCLING CHILLERS AT THE TIME OF INITIATION. ALTERNATIVELY CHILLER CYCLING CAUSED BY NORMAL SYSTEM LOAD FLUCUATIONS SHALL CAUSE THE CHILLERS TO CHANGE ROTATION SEQUENCE THEREFORE ELIMINATING UNNECESSARY CHILLER CYCLING.

RFI 417

H. THE CHILLED WATER PUMPS, P-2A/2B SHALL OPERATE SUBJECT TO DIFFERENTIAL PRESSURE SENSOR DP-2. AS THE BYPASS VALVE OR INDIVIDUAL COIL CONTROL VALVE OPENS THE PUMP SHALL BE RAMPED UP TO MAINTAIN DIFFERENTIAL PRESSURE IN THE "SECONDARY" LOOP. PROVIDE LEAD/LAG PUMP AUTOMATIC SWITCHOVER EVERY 7 -DAYS AND ALARM FOR PUMP FAILURE. PUMP SPEED SHALL NOT DROP BELOW THAT REQUIRED TO MAINTAIN MINIMUM FLOW THROUGH CHILLER(S). UPON FAILURE OF LEAD PUMP, LAG PUMP SHALL START AND ALARM SHALL NOTIFY OF PUMP FAILURE.

I. CHILLER SOFT START – THE CHILLER SEQUENCING SOFTWARE WILL PROVIDE A USER ADJUSTABLE LOADING TIME AT SYSTEM START-UP. THIS PREVENTS THE UNNECESSARY OPERATION OF CHILLERS AND LIMITS SYSTEM ELECTRICAL DEMAND DURING CHILLED WATER LOOP PULLDOWN.

J. CHILLER MINIMUM FLOW BY-PASS VALVE CONTROL

1. THE CHILLER MINIMUM FLOW BY-PASS LINE AND VALVE SHALL BE SIZED TO ALLOW FOR THE MANUFACTURER'S RECOMMENDED MINIMUM FLOW, WITH ALL LOAD CONTROL VALVES CLOSED, FOR THE LARGEST CHILLER IN THE SYSTEM.

2. THE "CHILLER MINIMUM FLOW BY-PASS VALVE" SHALL BE A NORMALLY OPEN VALVE.

3. THE "CHILLER MINIMUM FLOW BY-PASS VALVE" SHALL BE MODULATED TO THE FULLY OPEN POSITION WHEN THE SYSTEM IS SHUTDOWN. THIS SHALL BE DONE TO PREVENT WATER HAMMER WHEN A PUMP IS STARTED [AND TO ALLOW FOR MINIMUM FLOW IN THE EVENT THE CHILLER CALLS FOR PUMP OPERATION].

4. FOLLOWING THE CONFIRMED START OF THE LEAD CHILLER AND WHENEVER SYSTEM IS ENABLED CHILLER SEQUENCING SYSTEM SHALL MODULATE THE "CHILLER MINIMUM FLOW BY-PASS VALVE" SUCH THAT THE CHILLED WATER FLOW THROUGH ANY OPERATING CHILLER(S) SHALL NOT DROP BELOW THE MANUFACTURERS RECOMMENDED MINIMUM FLOW.

5. THE CHILLER MINIMUM FLOW SHALL BE DETERMINED BASED ON THE PRESSURE DROP ACROSS THE CHILLER EVAPORATOR BARREL USING A HIGH ACCURACY PRESSURE DIFFERENTIAL SENSOR (1% OF THE PRESSURE RANGE). THE DIFFERENTIAL PRESSURE SETPOINT SHALL BE DETERMINED BASED ON THE MANUFACTURERS CHILLER PRESSURE DROP RATING CURVES.

K. MONITORING POINTS AND ALARMS

1. SYSTEM WATER SUPPLY AND RETURN TEMPERATURE
2. AMBIENT REFRIGERANT TEMPERATURE
3. SYSTEM CHILLED WATER FLOW
4. SYSTEM CHILLER ENABLE/DISABLE
5. SYSTEM PUMP ON/OFF
6. CHILLED WATER SETPOINT
7. SYSTEM DEMAND SETPOINT
8. CHILLER FAILURE
9. PUMP FAILURE
10. HIGH TEMPERATURE WATER
11. LOW TEMPERATURE WATER
12. FLOW NOT PROVED
13. HIGH PRESSURE ALARM
14. LOW PRESSURE ALARM
15. LOW GLYCOL FILL LEVEL ALARM
16. GLYCOL PUMP FAILURE.

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L. GLYCOL FILL SEQUENCE → See RFI # 15 more info

1. UPON LOSS OF SYSTEM PRESSURE FOR BUILDING CHILLED WATER LOOP CONTROL VALVE V-1 SHALL OPEN UNTIL SYSTEM IS RECHARGED TO OPERATING PRESSURE.
2. UPON LOSS OF SYSTEM PRESSURE FOR SERVER ROOM CHILLED WATER LOOP CONTROL VALVE V-2 SHALL OPEN UNTIL SYSTEM IS RECHARGED TO OPERATING PRESSURE.
3. WHEN BOTH SYSTEM PRESSURES ARE AT OPERATING PRESSURE CONTROL VALVES V-1 AND V-2 SHALL BE CLOSED.

A1 COOLING SYSTEM SCHEMATIC

NOT TO SCALE

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PROJECT TITLE: MAINE TURNPIKE AUTHORITY ADMINISTRATION BUILDING
PORTLAND, MAINE

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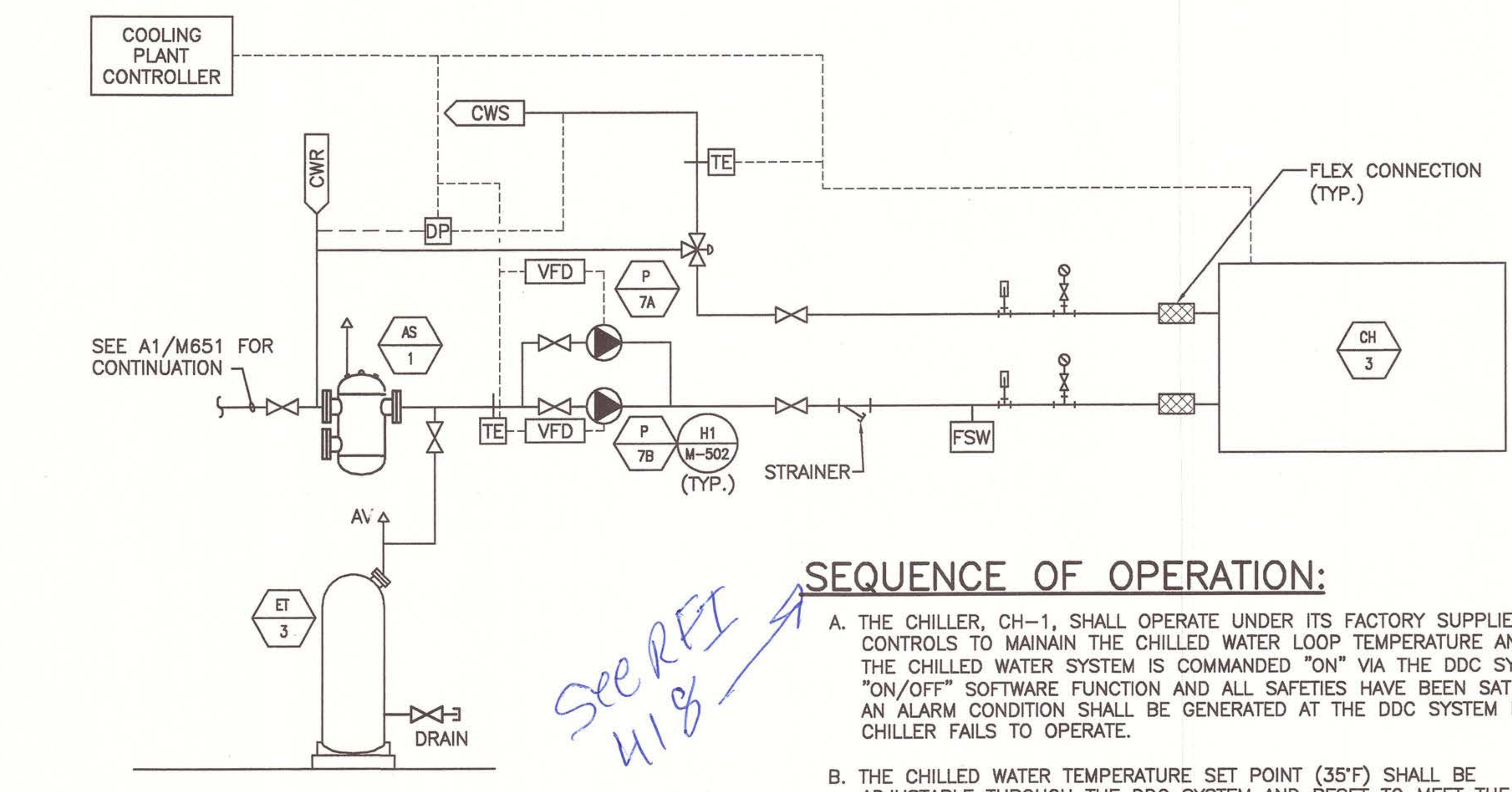
JC/DRAWN BY:	TCM/BGG
A/E OF RECORD:	RMW
CAD FILE:	M-652-06016
PROJECT NO:	06016
DATE:	7-9-07

SHEET TITLE: SCHEMATICS

SHEET No. M-652



See RFI 418

SEQUENCE OF OPERATION:

A. THE CHILLER, CH-1, SHALL OPERATE UNDER ITS FACTORY SUPPLIED CONTROLS TO MAINAIN THE CHILLED WATER LOOP TEMPERATURE ANYTIME THE CHILLED WATER SYSTEM IS COMMANDED "ON" VIA THE DDC SYSTEM "ON/OFF" SOFTWARE FUNCTION AND ALL SAFETIES HAVE BEEN SATISFIED. AN ALARM CONDITION SHALL BE GENERATED AT THE DDC SYSTEM IF THE CHILLER FAILS TO OPERATE.

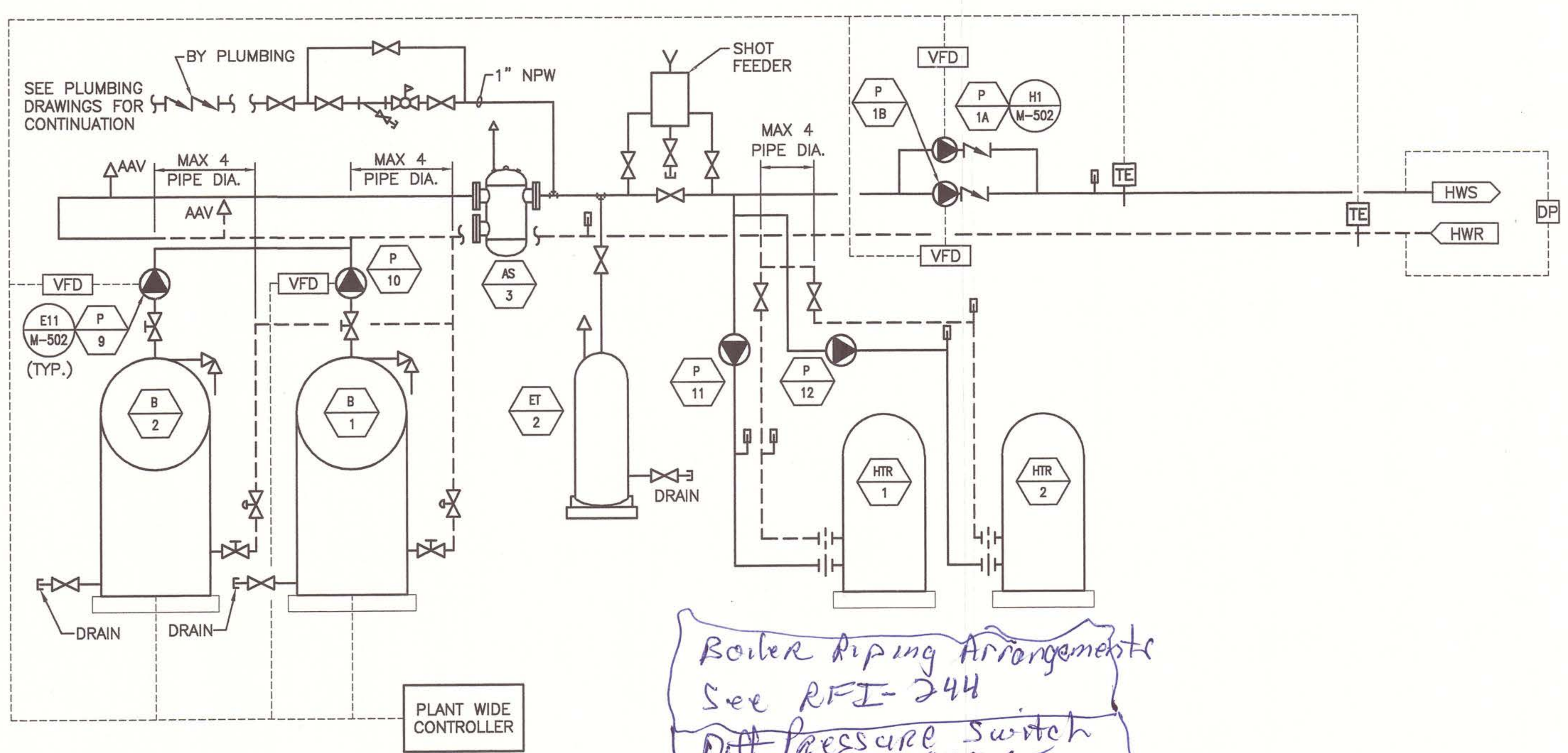
B. THE CHILLED WATER TEMPERATURE SET POINT (35°F) SHALL BE ADJUSTABLE THROUGH THE DDC SYSTEM AND RESET TO MEET THE COOLING LOADS. THE LOOP WATER SHALL BE CONTINUOUSLY MONITORED AND AN ALARM CONDITION SHALL BE GENERATED IF THE TEMPERATURE FALLS OUT OF ITS SET POINT RANGE.

C. THE CHILLER CONTROLS\SHALL PROVIDE AN OUTPUT TO CONTROL THE CHILLED WATER PUMPS. WHEN COMMANDED "ON" BY THE CHILLER, PUMP SHALL RUN CONTINUOUSLY. A CURRENT SENSOR SHALL MONITOR THE PUMP STATUS. A CONTACT CLOSURE FROM EITHER PUMP'S CURRENT SENSOR SHALL ALLOW CHILLER OPERATION IF A LOAD EXISTS. A SCHEDULE SHALL AUTOMATICALLY ROTATE THE PUMPS FOR EVEN RUN TIME. FAILURE OF EITHER PUMP SHALL ACTIVATE AN ALARM CONDITION.

D. A FLOW SWITCH PROVIDED BY THE CHILLER MANUFACTURER SHALL PROVE WATER FLOW AND ENABLE COMPRESSOR OPERATION.

F1 COMPUTER ROOM CHILLER SCHEMATIC

NOT TO SCALE



Boiler Piping Arrangements See RFI-244

~~Diff Pressure~~ Switch Location RFI 365

A1 HEATING SYSTEM SCHEMATIC

NOT TO SCALE

SEQUENCE OF OPERATION:

MODULATING LEAD/LAG CONTROLLER

HOT WATER BOILER PUMPS, AND PRIMARY PUMPS, AND DHW PRIORITY MODULATING LEAD/LAG CONTROLLER

1. APPLICATION
SUPPLY A FULLY INTEGRATED BOILER CONTROL SYSTEM TO COORDINATE THE OPERATION OF TWO (SELECT UP TO SEVEN) FULLY MODULATING HOT WATER BOILERS AND BOILER PRIMARY WATER CIRCULATING PUMPS IN ORDER TO MAINTAIN THE HOT WATER SUPPLY (HWS) TEMPERATURE AT SETPOINT. THE CONTROL SYSTEM SHALL BE MICROPROCESSOR-BASED AND SUITABLE FOR WALL MOUNTING.

2. BOILER MODULATION
THE CONTROL SYSTEM SHALL INCORPORATE A HWS HEADER TEMPERATURE PID CONTROL SCHEME. BOILERS SHALL BE MODULATED IN "UNISON" (ALL AT THE SAME FIRING RATE). MODULATION SIGNALS SHALL BE 4-20 MADC OR 0-135 OHM (AS REQUIRED BY THE BOILER AND SHALL BE ELECTRICALLY ISOLATED CHANNEL-CHANNEL AND CHANNEL-GROUND.

3. HOT WATER SUPPLY (HWS) TEMPERATURE SETPOINT
WHEN THE HWS TEMPERATURE CONTROL LOOP IS IN THE "AUTOMATIC" MODE, THE CONTROL SYSTEM SHALL ESTABLISH THE HWS TEMPERATURE SETPOINT BASED ON THE TIME OF DAY, DAY OF THE WEEK AND THE OUTSIDE AIR TEMPERATURE. WHEN IN "MANUAL" MODE THE OPERATOR MAY SET THE HWS TEMPERATURE VIA A FRONT PANEL DISPLAY. ALL TEMPERATURES AND TIME/DATE DATA MUST BE FIELD ADJUSTABLE THROUGH "FILL-IN-THE-BLANKS" STYLE DISPLAYS. ALTERNATELY, THE CONTROL SYSTEM SHALL ACCEPT A 4-20 MADC OUTDOOR AIR TEMPERATURE RESET SETPOINT SIGNAL FROM AN EXTERNAL BUILDING AUTOMATION SYSTEM (BAS).

4. BOILER SEQUENCE
THE CONTROL SYSTEM SHALL UTILIZE BOTH HWS TEMPERATURE AND BOILER FIRING RATE PERCENT TO START AND STOP THE BOILERS AND SHALL MINIMIZE THE TOTAL NUMBER OF BOILERS IN OPERATION. THE CONTROLLER SHALL START AND STOP BOILERS WHEN THE HWS TEMPERATURE IS OUTSIDE THE ADJUSTABLE TEMPERATURE LIMIT FOR LONGER THAN THE ADJUSTABLE TIME DELAY. IN ORDER TO MINIMIZE HEADER TEMPERATURE DEVIATIONS, THE CONTROL SYSTEM SHALL START AND STOP THE NEXT BOILER WHEN THE "LEAD" BOILER IS AT AN ADJUSTABLE FIRING RATE LIMIT FOR LONGER THAN THE ADJUSTABLE TIME DELAY. THE CONTROL SYSTEM SHALL MONITOR BOTH BOILER LOCKOUT AND LIMIT CIRCUITS TO AUTOMATICALLY SKIP OVER THOSE BOILERS THAT ARE POWERED DOWN FOR MAINTENANCE, TRIPPED OR OTHERWISE WILL NOT START. THE LEAD BOILER SHALL EITHER AUTOMATICALLY ROTATE EVERY 1 TO 168 HOURS OR SHALL BE MANUALLY SELECTED BY THE OPERATOR. THE BOILER SHALL BE RUN AT LOW FIRE FOR WARM-UP FOR A PRESET LOW FIRE HOLD TIME. THE BASE LOAD RAMP RATE SHALL BE FIELD ADJUSTABLE. THE CONTROL SYSTEM SHALL REDUCE THE FIRING RATE TO A MINIMUM BEFORE STOPPING A BOILER TO PREVENT ACCUMULATION OF FUEL IN THE FURNACE.

5. BOILER PUMP SEQUENCE
INDEPENDENTLY OPERATED BOILER WATER PUMP CONTROL TO ALLOW VARIABLE SPEED OPERATION BASED UPON TEMPERATURE DIFFERENTIAL ACROSS THE BOILER. PROVIDE SEQUENCE TO WARM UP COLD BOILERS, AND ADJUSTABLE COOL DOWN PERIOD AFTER THE BOILER HAS STOPPED; THE PUMP SHALL IMMEDIATELY STOP IF ANY TRIPS OCCUR DURING PRE-PURGE, PILOT, OR MAIN FLAME TRIAL FOR IGNITION.

6. PRIMARY PUMP SEQUENCE
PRIMARY PUMPS TO BE ENERGIZED BY OUTDOOR AIR TEMPERATURE LIMIT SETPOINT. PUMP SPEED TO BE CONTROLLED BY A PRIMARY ZONE PRESSURE DIFFERENTIAL SENSOR. PRIMARY PUMP SEQUENCING PER LOAD DEMAND.

7. DOMESTIC HOT WATER PRIORITY
A TEMPERATURE SWITCH CONTACT CLOSURE INPUT WILL OVERRIDE THE OUTDOOR RESET AND SETBACK PORTION OF THE PROGRAM AND FORCE THE HWS TEMPERATURE SETPOINT TO A DOMESTIC HOT WATER SETPOINT. A RELAY OUTPUT SHALL START THE DOMESTIC HOT WATER PUMP.

8. COMMUNICATION
THE CONTROL SYSTEM SHALL INCLUDE SIMULTANEOUS COMMUNICATION TO A DATA ACQUISITION SYSTEM (DAS), BUILDING AUTOMATION SYSTEM (BAS) OR BUILDING MANAGEMENT SYSTEM (BMS) VIA RS485 MODBUS PROTOCOL AND TO A PERSONAL COMPUTER AND AN ALPHANUMERIC PAGER VIA STANDARD TELEPHONE LINES. THE INDIVIDUAL BOILER LIMITS, LOCKOUT, START/STOP, WARM STANDBY, AND FIRING RATE STATUS SHALL BE READABLE. HEADER SETPOINT, PLANT FIRING RATE, BOILER QUANTITY CALLED TO START, BOILER SELECTED AS LEAD AND ALL SETUP PARAMETERS SHALL BE READABLE AND WRITABLE.

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STATE OF MAINE
RONNIE M. WILLEY
NO. 11029
LICENSED PROFESSIONAL ENGINEER
6/28/07

PROJECT TITLE:
MAINE TURNPIKE AUTHORITY ADMINISTRATION BUILDING
PORTLAND, MAINE

CURRENT ISSUE STATUS:
ISSUED FOR BIDDING/CONSTRUCTION 7-9-07

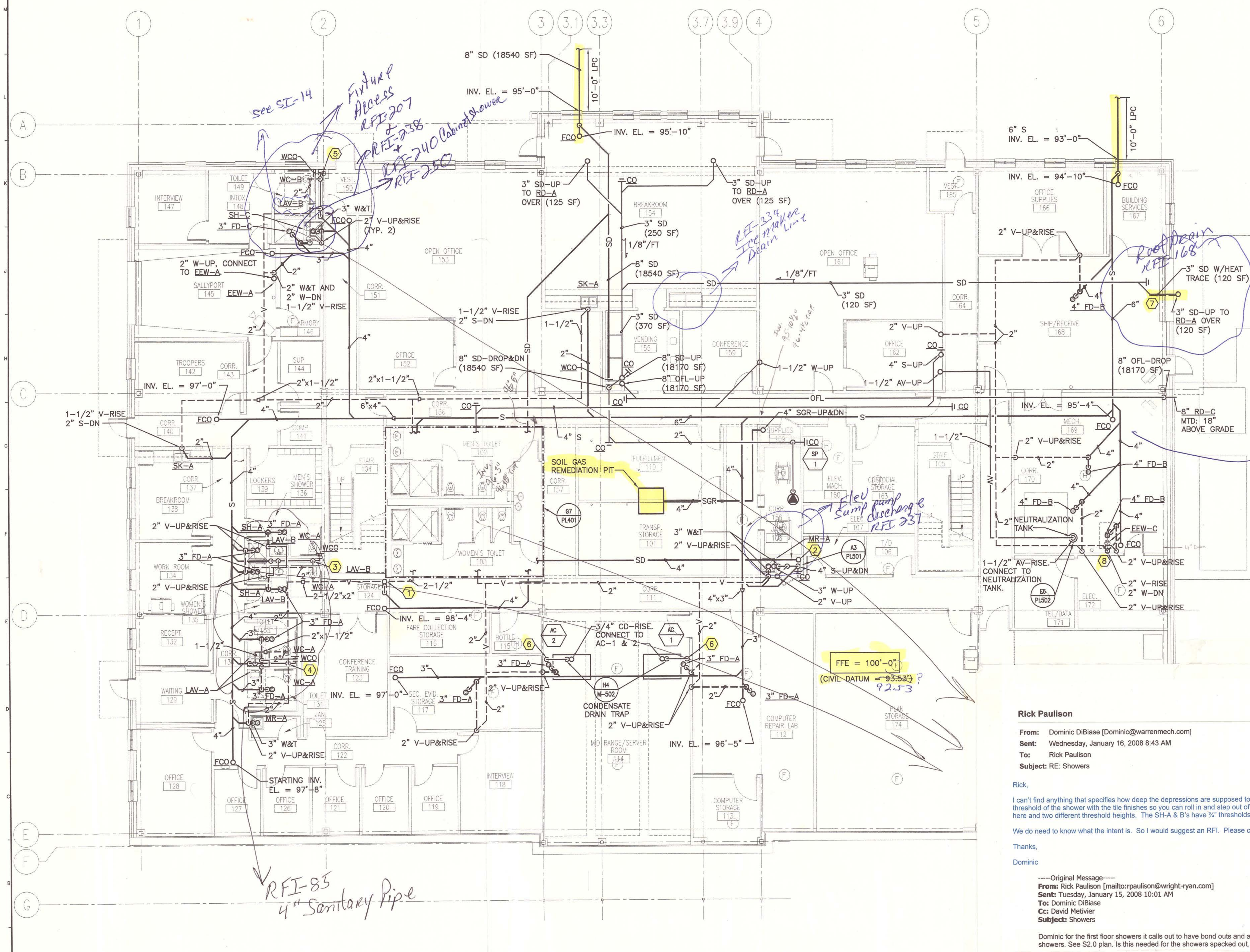
REV	DESCRIPTION	DATE
0	BIDDING/CONSTRUCTION	7-9-07

GRAPHIC SCALE: 0" 1"

SCALE:	AS NOTED
PROJECT MANAGER:	SLB
JC/DRAWN BY:	TCM/BGG
A/E OF RECORD:	RMW
CAD FILE:	M-653-06016
PROJECT NO:	06016
DATE:	7-9-07

SHEET TITLE:
SCHEMATICS

SHEET No.
M-653



A1 FIRST FLOOR PLAN

1/8" = 1'-0"

Page 1 of 1

Rick Paulison

From: Dominic DiBiase [Dominic@warrenmech.com]
Sent: Wednesday, January 16, 2008 8:43 AM
To: Rick Paulison
Subject: RE: Showers

Rick,

I can't find anything that specifies how deep the depressions are supposed to be. Typically they match the threshold of the shower with the tile finishes so you can roll in and step out of it. We have three different showers here and two different threshold heights. The SH-A & B's have ¾" thresholds and the SH-C is 2".

We do need to know what the intent is. So I would suggest an RFI. Please copy me on the response.

Thanks,

Dominic

-----Original Message-----
From: Rick Paulison [mailto:rpaulison@wright-ryan.com]
Sent: Tuesday, January 15, 2008 10:01 AM
To: Dominic DiBiase
Cc: David Metivier
Subject: Showers

Dominic for the first floor showers it calls out to have bond outs and a thickened slab to 1 foot under these showers. See S2.0 plan. Is this needed for the showers specked out. If not I will RFI it.

AS BUILT
Owner Copy

NOTE:

1. SEE SHEET M-001 FOR LEGEND AND ABBREVIATIONS.

KEYED NOTES:

1. 4" STAND DRAIN FOR FIRE DEPARTMENT EQUIPMENT DRAINS. SEE DETAIL A12/PL501. (RE: FIRE PROTECTION PLANS).
2. PROVIDE CLEAN-OUT AT BASE OF 4" STAND PIPE. STARTING INVERT = 97'-6"
3. (2) 2" V-RISE 4" S-DN
4. 2" V-RISE (2) 2" V-UP&RISE 1-1/2" V-RISE 4" S-DN
5. 2" V-RISE 1-1/2" V-RISE 4" S-DN
6. ROUTE CONDENSATE DRAIN PIPING TO WITHIN 2" OF FD-A. SLOPE ALL HORIZONTAL PIPING AT 1/4"/FT.
7. ELECTRICALLY HEAT TRACE AND INSULATE PIPING. (RAYCHEM #5XL-1, 120V, AND 1" FIBERGLASS INSULATION.) PROVIDE LINE TEMPERATURE SENSING THERMOSTAT AND SENSOR. (AMC-F5) INSTALL PER MANUFACTURERS WRITTEN INSTRUCTIONS.
8. CONNECT 2" WASTE TO EE-C.

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6/26/07

PROJECT NORTH

MAG. NORTH

PROJECT TITLE:
MAINE TURNPIKE AUTHORITY
ADMINISTRATION BUILDING
PORTLAND, MAINE

CURRENT ISSUE STATUS:
ISSUED FOR BIDDING/CONSTRUCTION
7-9-07

REV	DESCRIPTION	DATE
0	BIDDING/CONSTRUCTION	7-9-07

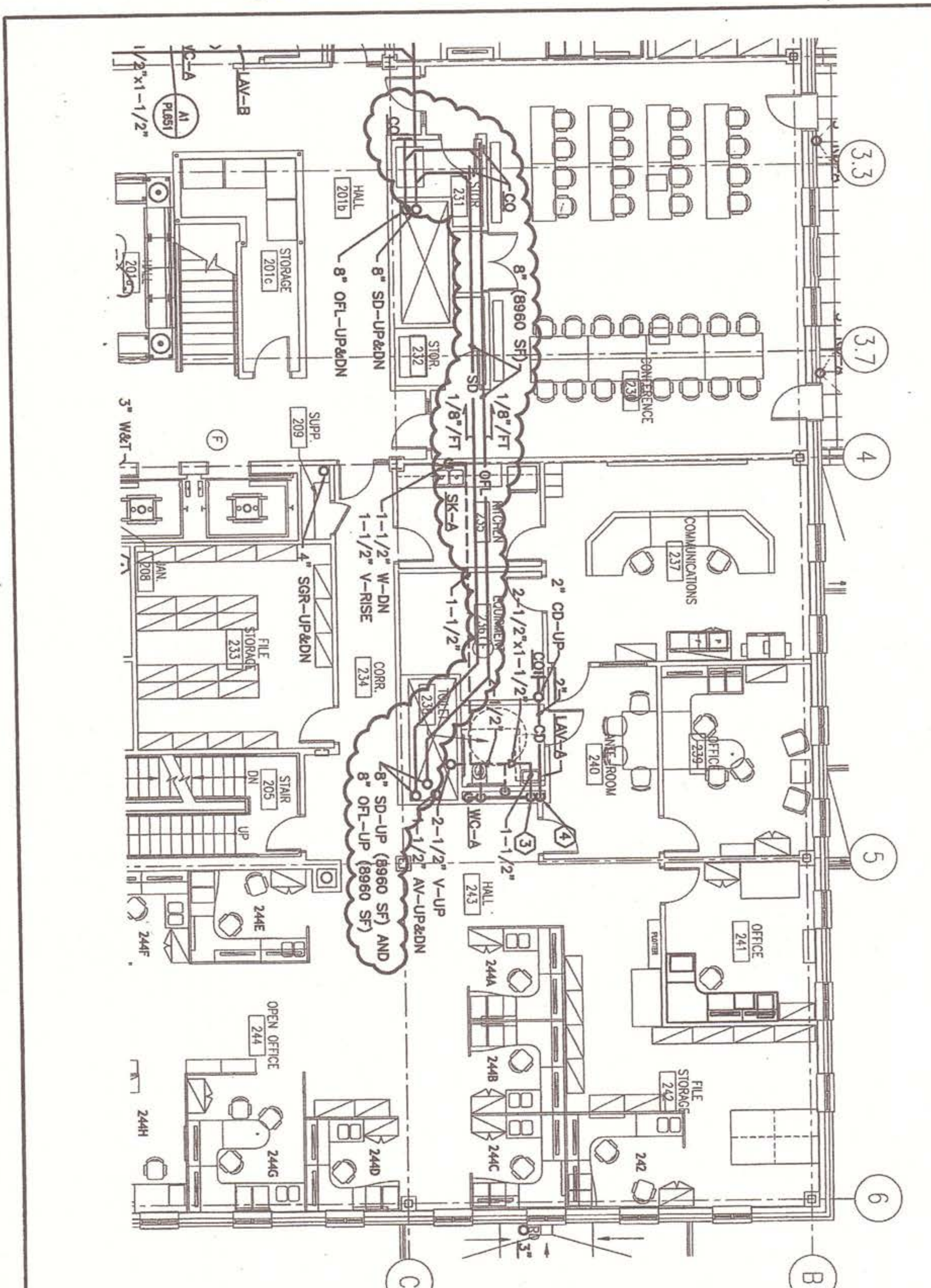
GRAPHIC SCALE:
0" 1"

SCALE:	1/8"=1'-0"
PROJECT MANAGER:	SLB
JC/DRAWN BY:	TCM/BGG
A/E OF RECORD:	RMW
CAD FILE:	PL101-06016
PROJECT NO:	06016
DATE:	7-9-07

SHEET TITLE:
FIRST FLOOR DWV PIPING PLAN

SHEET No.
PL101

SI-53



SCALE:	1/8"=1'-0"
PROJECT MANAGER:	SLB
REF. SHEET:	PL102
A/E OF RECORD:	RMW
CAD FILE:	PL102-06016
PROJECT No.	06016
DATE:	7-28-08

SI-53

P-1

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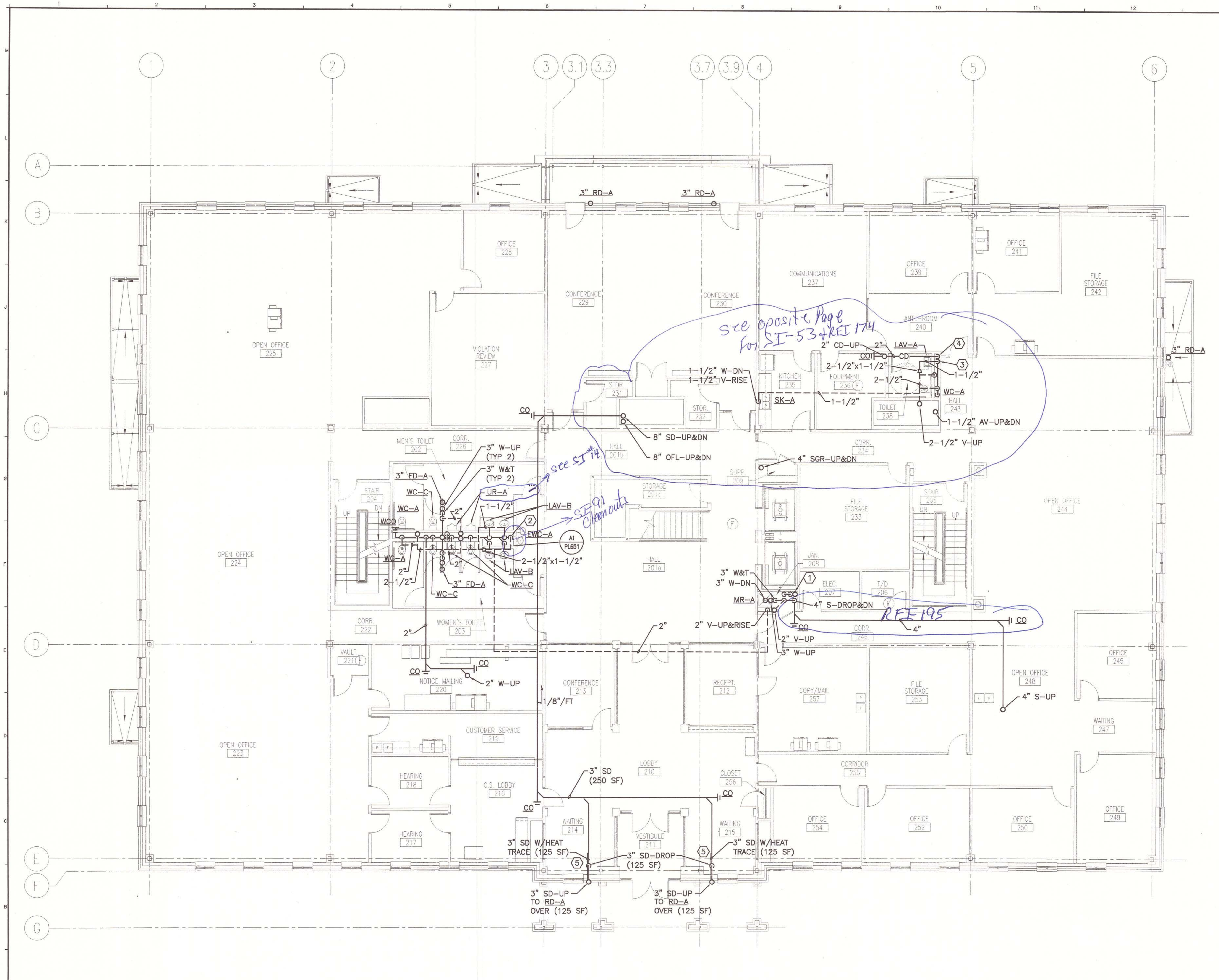
PROJECT: MAINE TURNPIKE AUTHORITY ADMINISTRATION BUILDING

SUBJECT: SECOND FLOOR DWV PIPING REVISIONS

SMRT



A1 SECOND FLOOR PLAN

1/8" = 1'-0"

NOTE:

1. SEE SHEET M-001 FOR LEGEND AND ABBREVIATIONS.

KEYED NOTES:

(1) 4" STAND DRAIN FOR FIRE DEPARTMENT EQUIPMENT DRAINS. SEE DETAIL A12/PL501. (RE: FIRE PROTECTION PLANS).

(2) (5) 1-1/2" V-RISE
2" V-RISE
(2) 2" V-UP
2" V-RISE
(2) 2" V-UP&RISE
4" S-UP&DN
2" V-RISE
2" W-DROP
4" V-UP&DN
2" V-RISE

(3) 1-1/2" V-RISE
2" V-UP&RISE
2" V-RISE
4" S-DN

(4) 2" CD-DROP IN CHASE. ROUTE CD TO INDIRECT WASTE. SEE DETAIL A7/PL501.

(5) ELECTRICALLY HEAT TRACE AND INSULATE PIPING. (RAYCHEM #5XL-1, 120V, AND 1" FIBERGLASS INSULATION.) PROVIDE LINE TEMPERATURE SENSING THERMOSTAT AND SENSOR. (AMC-F5) INSTALL PER MANUFACTURERS WRITTEN INSTRUCTIONS.

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STATE OF MAINE
RONNIE M. WILLEY
NO. 11029
PROFESSIONAL ENGINEER
6/25/07

PROJECT NORTH

MAG NORTH

PROJECT TITLE: MAINE TURNPIKE AUTHORITY ADMINISTRATION BUILDING
PORTLAND, MAINE

CURRENT ISSUE STATUS: ISSUED FOR BIDDING/CONSTRUCTION 7-9-07

REV	DESCRIPTION	DATE
0	BIDDING/CONSTRUCTION	7-9-07

GRAPHIC SCALE:

SCALE:	1/8"=1'-0"
PROJECT MANAGER:	SLB
JC/DRAWN BY:	TCM/BGG
A/E OF RECORD:	RMW
CAD FILE:	PL102-06016
PROJECT NO:	06016
DATE:	7-9-07

SHEET TITLE: SECOND FLOOR DWV PIPING PLAN

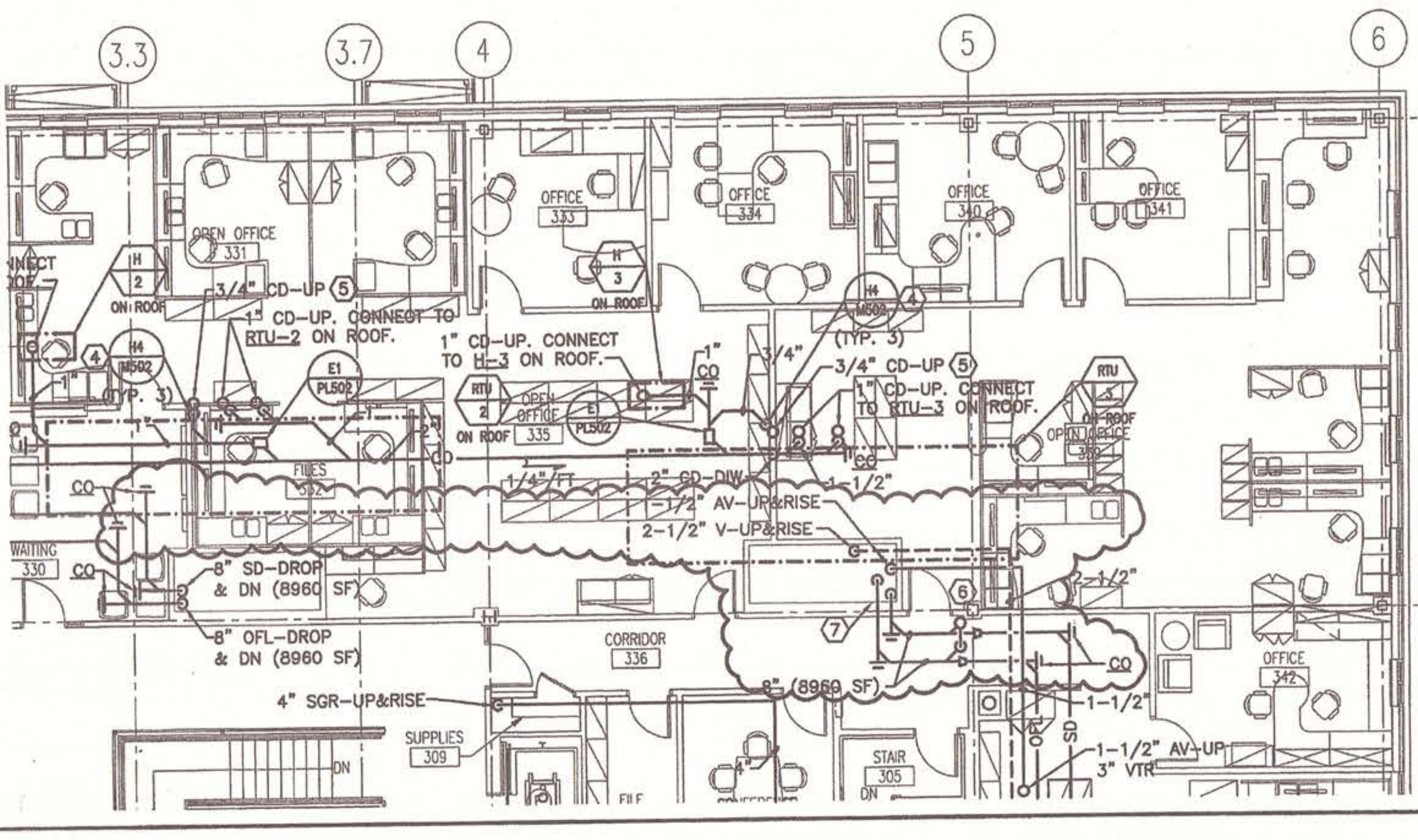
AS BUILT
Owner Copy

SHEET No. PL102

SI-53

KEYED NOTE:

5. CONNECT CONDENSATE DRAIN TO HUMIDIFICATION DISPERSION TUBE DRAIN ON ROOF.
6. 6" SD-UP TO 6" RD-B OVER (4480 SF) AND 6" OFL-RISE & OVER (4480 SF).
7. 8" SD-DROP & DOWN (8960 SF) AND 8" OFL-DROP & DOWN (8960 SF).



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PROJECT MANAGER:	SLB
REF. SHEET:	PL103
A/E OF RECORD:	RMW
CAD FILE:	PL103-06016
PROJECT No.	06016
DATE:	7-28-08

SI-53

P-2

ARCHITECTURE ENGINEERING PLANNING

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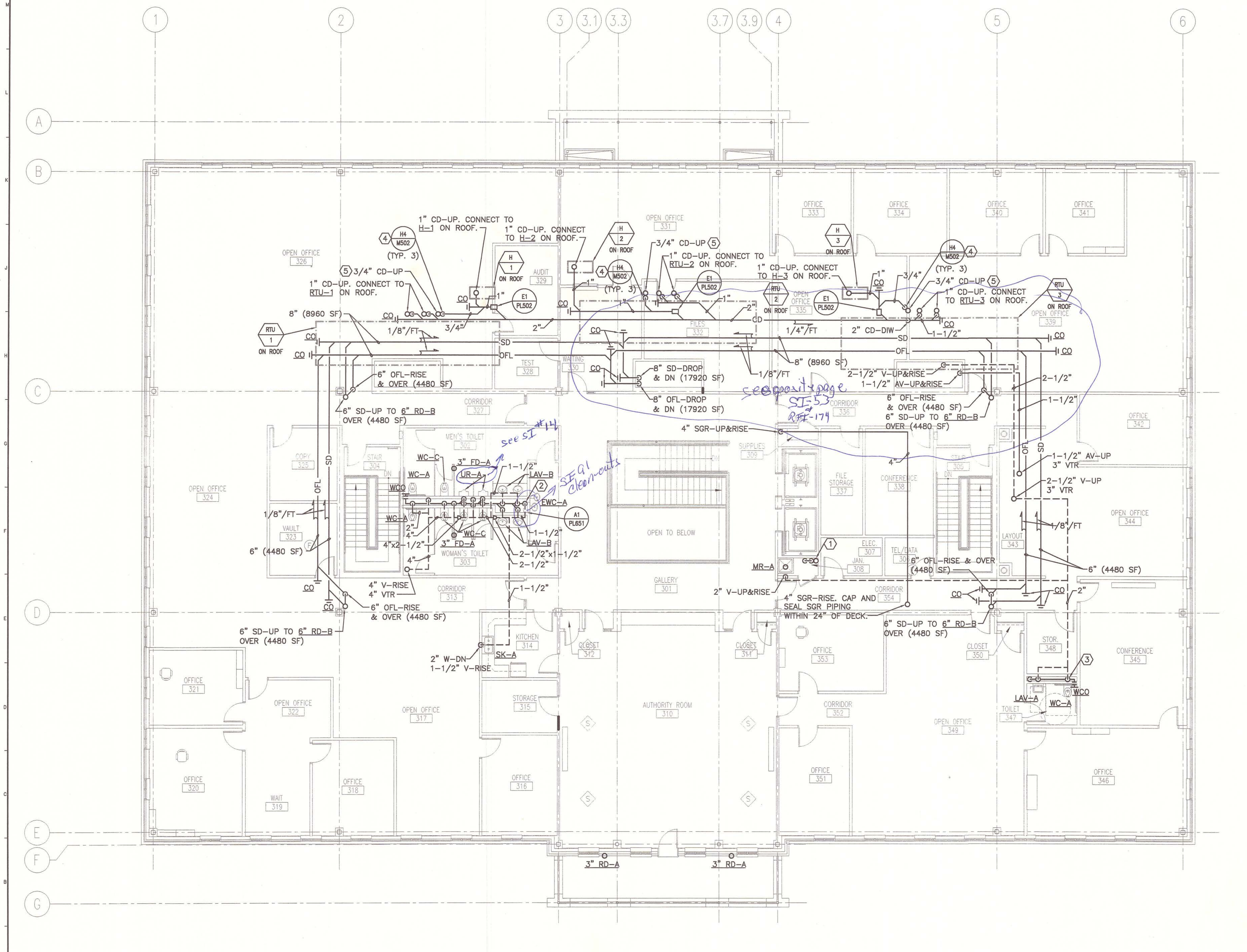
PROJECT: MAINE TURNPIKE AUTHORITY ADMINISTRATION BUILDING

SUBJECT: THIRD FLOOR DWV PIPING REVISIONS

SMRT



A1 THIRD FLOOR PLAN

1/8" = 1'-0"

NOTE:

1. SEE SHEET M-001 FOR LEGEND AND ABBREVIATIONS.

KEYED NOTE:

1. 4" STAND DRAIN FOR FIRE DEPARTMENT EQUIPMENT DRAINS. SEE DETAIL A12/PL501. (RE: FIRE PROTECTION PLANS).
2. (5) 1-1/2" V-RISE
   (2) 2" V-RISE
   (2) 2" V-UP & RISE
   (2) 2" V-RISE
   4" V-RISE AND 4" S-DN
   2" V-RISE
   4" V-UP & RISE
   2" V-RISE
3. 2" V-RISE
   1-1/2" V-RISE
   4" S-DN
4. CONDENSATE DRAIN TRAPS SHALL BE LOCATED WITHIN THE BUILDING ENVELOPE.
5. CONNECT CONDENSATE DRAIN TO HUMIDIFICATION DISPERSION TUBE DRAIN ON ROOF.

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STATE OF MAINE
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6/25/07

PROJECT NORTH

PROJECT TITLE:
MAINE TURNPIKE AUTHORITY ADMINISTRATION BUILDING
PORTLAND, MAINE

CURRENT ISSUE STATUS:
ISSUED FOR BIDDING/CONSTRUCTION
7-9-07

REV	DESCRIPTION	DATE
0	BIDDING/CONSTRUCTION	7-9-07

GRAPHIC SCALE:
0" 1"

SCALE:	1/8"=1'-0"
PROJECT MANAGER:	SLB
JC/DRAWN BY:	TCM/BGG
A/E OF RECORD:	RMW
CAD FILE:	PL103-06016
PROJECT NO:	06016
DATE:	7-9-07

SHEET TITLE:
THIRD FLOOR DWV PIPING PLAN

SHEET No.
PL103

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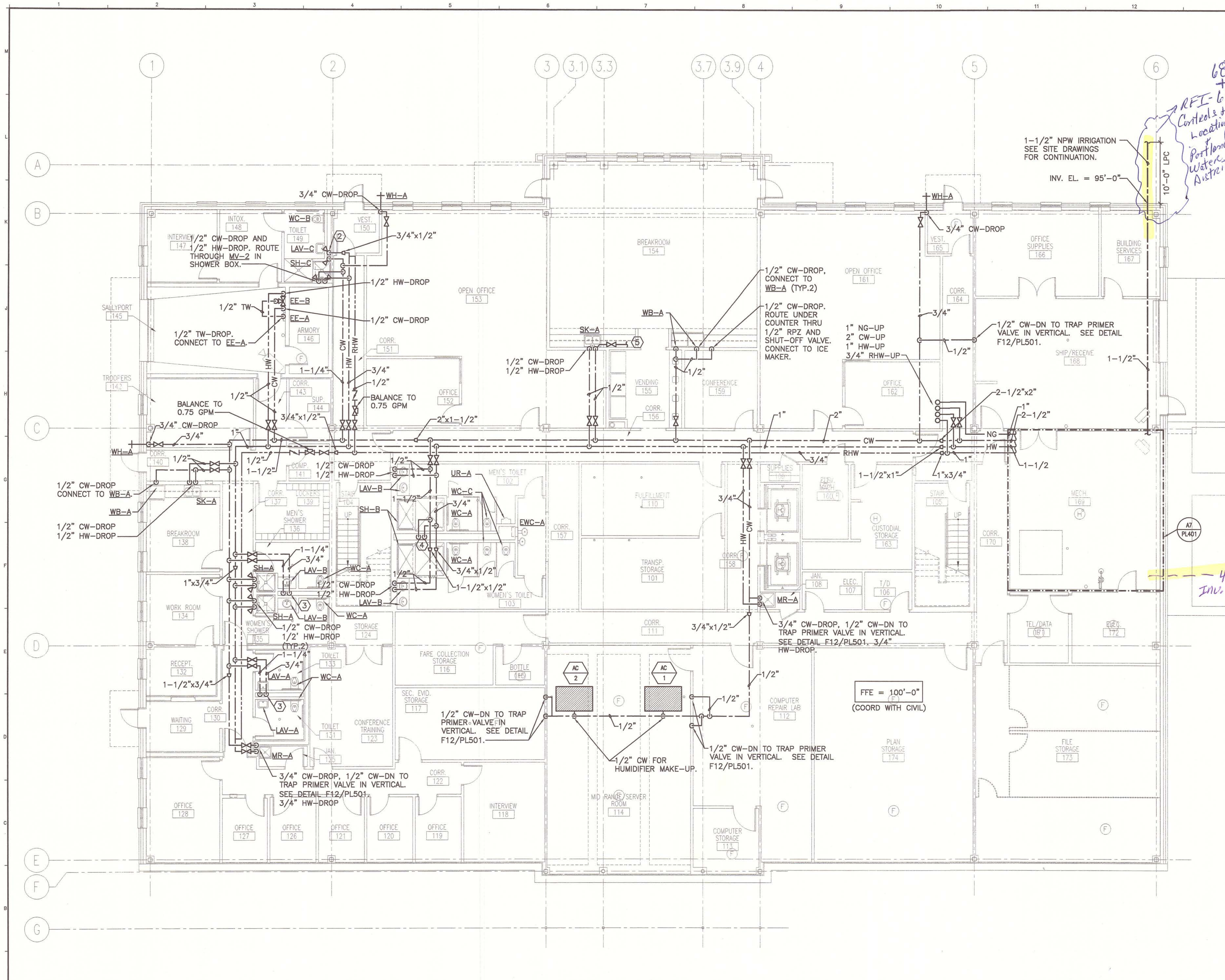

A1 FIRST FLOOR PLAN

1/8" = 1'-0"

NOTE:

1. SEE SHEET M-001 FOR LEGEND AND ABBREVIATIONS.

KEYED NOTES:

1. SEE SITE DRAWINGS FOR CONTINUATION.
2. 1-1/4" CW AND 1/2" HW-DROP. ROUTE FULL-SIZE WITHIN CHASE. CONNECT 1/2" CW AND 1/2" HW TO LAV. CONNECT 1" CW TO WC. CONNECT 1/2" CW TO TRAP PRIMER VALVE IN VERTICAL, SEE DETAIL F12/PL501.
3. 1-1/4" CW AND 3/4" HW-DROP. ROUTE FULL-SIZE WITHIN CHASE. CONNECT 1/2" CW AND 1/2" HW TO LAV. CONNECT 1" CW TO WC. CONNECT 1/2" CW TO TRAP PRIMER VALVE IN VERTICAL, SEE DETAIL F12/PL501.
4. 1-1/2" CW AND 3/4" HW-DROP. ROUTE FULL SIZE WITHIN CHASE. CONNECT 1/2" CW AND 1/2" HW TO EACH SH. CONNECT 1" CW TO EACH WC. CONNECT 3/4" CW TO UR. CONNECT 1" CW TO EWC. CONNECT 1/2" CW TO TRAP PRIMER VALVE IN VERTICAL, SEE DETAIL F12/PL501.
5. ROUTE 1/2" CW UNDER COUNTER FOR COFFEE MAKER CONNECTION.

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STATE OF MAINE RONNIE M. WILLEY NO. 11029 LICENSED PROFESSIONAL ENGINEER 6/28/07

PROJECT NORTH

MAG NORTH

PROJECT TITLE:
MAINE TURNPIKE AUTHORITY ADMINISTRATION BUILDING
PORTLAND, MAINE

CURRENT ISSUE STATUS:
ISSUED FOR BIDDING/CONSTRUCTION 7-9-07

REV	DESCRIPTION	DATE
0	BIDDING/CONSTRUCTION	7-9-07

GRAPHIC SCALE: 0" 1"

SCALE:	1/8"=1'-0"
PROJECT MANAGER:	SLB
JC/DRAWN BY:	TCM/BGG
A/E OF RECORD:	RMW
CAD FILE:	PL111-06016
PROJECT NO:	06016
DATE:	7-9-07

SHEET TITLE:
FIRST FLOOR SUPPLY PIPING PLAN

SHEET No. PL111

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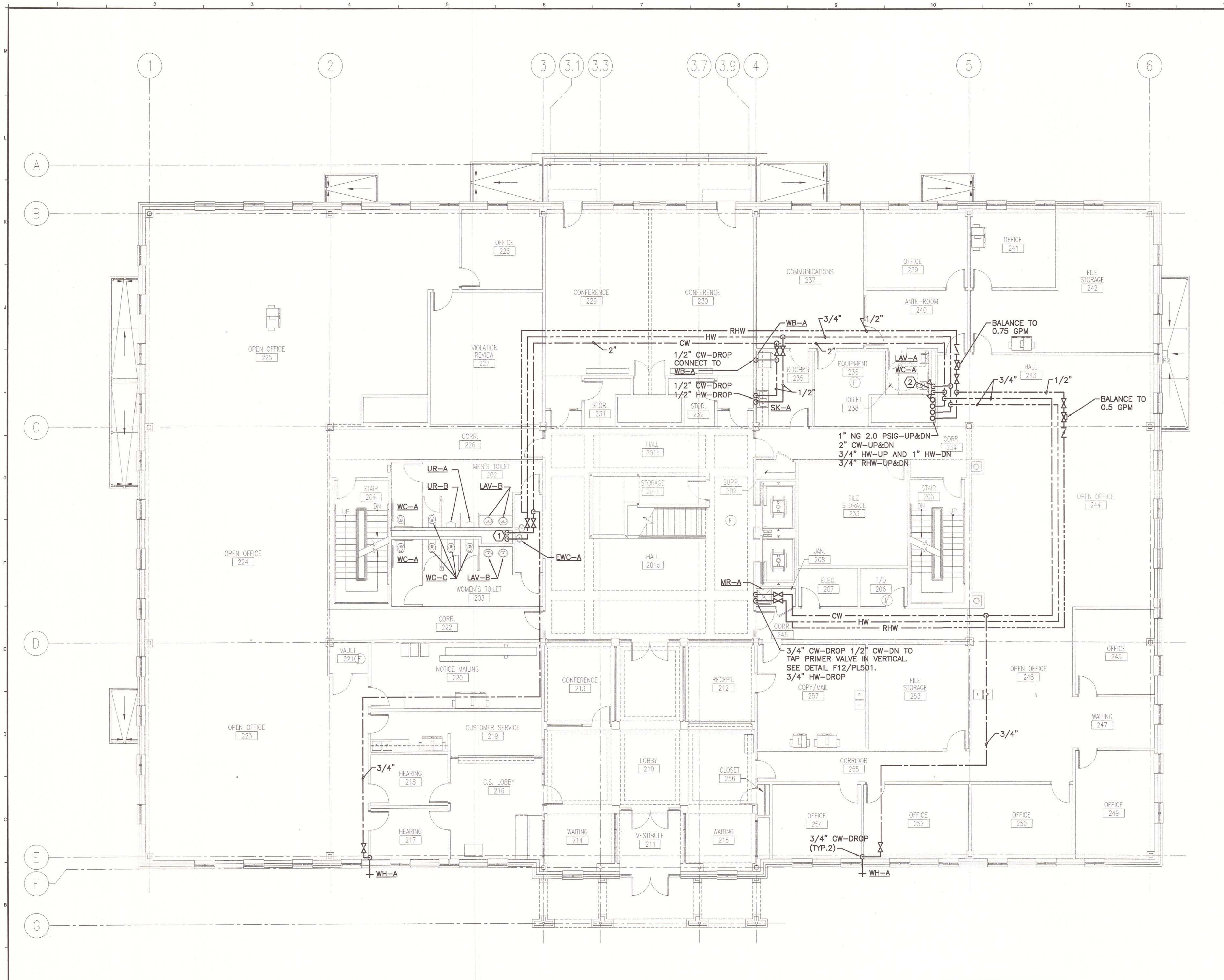

A1 SECOND FLOOR PLAN

1/8" = 1'-0"

NOTE:

1. SEE SHEET M-001 FOR LEGEND AND ABBREVIATIONS.

KEYED NOTES:

1. 2" CW AND 3/4" HW-DROP. ROUTE FULL SIZE WITHIN CHASE. CONNECT 1/2" CW TO EWC. CONNECT 1/2" CW AND 1/2" HW TO EACH LAV. CONNECT 3/4" CW TO EACH UR. CONNECT 1" CW TO EACH WC. CONNECT 1/2" CW TO TRAP PRIMER VALVE IN VERTICAL. SEE DETAIL F12/PL501.
2. 1-1/4" CW AND 1/2" HW-DROP. ROUTE FULL-SIZE WITHIN CHASE. CONNECT 1" CW TO WC. CONNECT 1/2" HW TO LAV.

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STATE OF MAINE
RONNIE M. WILLEY
NO. 11029
LICENSED PROFESSIONAL ENGINEER
6/28/07

PROJECT NORTH

PROJECT TITLE:
MAINE TURNPIKE AUTHORITY ADMINISTRATION BUILDING
PORTLAND, MAINE

CURRENT ISSUE STATUS:
ISSUED FOR BIDDING/CONSTRUCTION 7-9-07

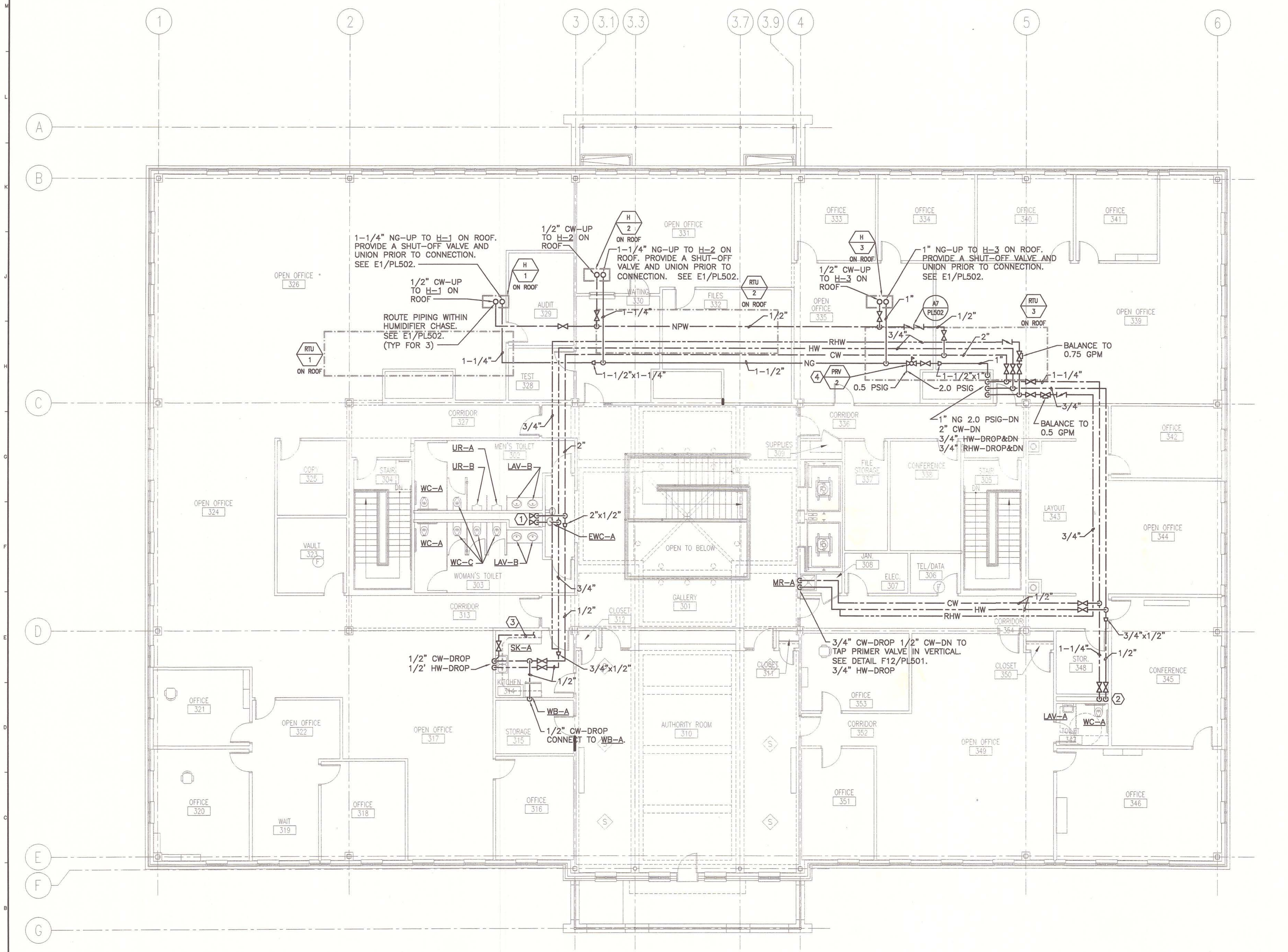
REV	DESCRIPTION	DATE
0	BIDDING/CONSTRUCTION	7-9-07

GRAPHIC SCALE:

SCALE:	1/8"=1'-0"
PROJECT MANAGER:	SLB
JC/DRAWN BY:	TCM/BGG
A/E OF RECORD:	RMW
CAD FILE:	PL112-06016
PROJECT NO:	06016
DATE:	7-9-07

SHEET TITLE:
SECOND FLOOR SUPPLY PIPING PLAN

SHEET No.
PL112



A1 THIRD FLOOR PLAN

1/8" = 1'-0"

NOTE:

1. SEE SHEET M-001 FOR LEGEND AND ABBREVIATIONS.

KEYED NOTES:

1. 2" CW AND 3/4" HW-DROP. ROUTE FULL SIZE WITHIN CHASE. CONNECT 1/2" CW TO EWC. CONNECT 1/2" CW AND 1/2" HW TO EACH LAV. CONNECT 3/4" CW TO EACH UR. CONNECT 1" CW TO EACH WC. CONNECT 1/2" CW TO TRAP PRIMER VALVE IN VERTICAL. SEE DETAIL F12/PL501.
2. 1-1/4" CW AND 1/2" HW-DROP. ROUTE FULL SIZE WITHIN CHASE. CONNECT 1" CW TO WC. CONNECT 1/2" CW AND 1/2" HW TO LAV.
3. ROUTE 1/2" CW UNDER COUNTER FOR COFFEE MAKER CONNECTION.
4. PRESSURE REDUCING VALVE SHALL BE INSTALLED PER MANUFACTURERS WRITTEN INSTRUCTIONS, ACCESSIBLE. PROVIDE SEDIMENT TRAP PRIOR TO VALVE CONNECTION.

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STATE OF MAINE
RONNIE M. WILLEY
NO. 11029
LICENSED PROFESSIONAL ENGINEER
6/28/07

PROJECT NORTH

PROJECT TITLE:
MAINE TURNPIKE AUTHORITY ADMINISTRATION BUILDING
PORTLAND, MAINE

CURRENT ISSUE STATUS:
ISSUED FOR BIDDING/CONSTRUCTION 7-9-07

REV	DESCRIPTION	DATE
0	BIDDING/CONSTRUCTION	7-9-07

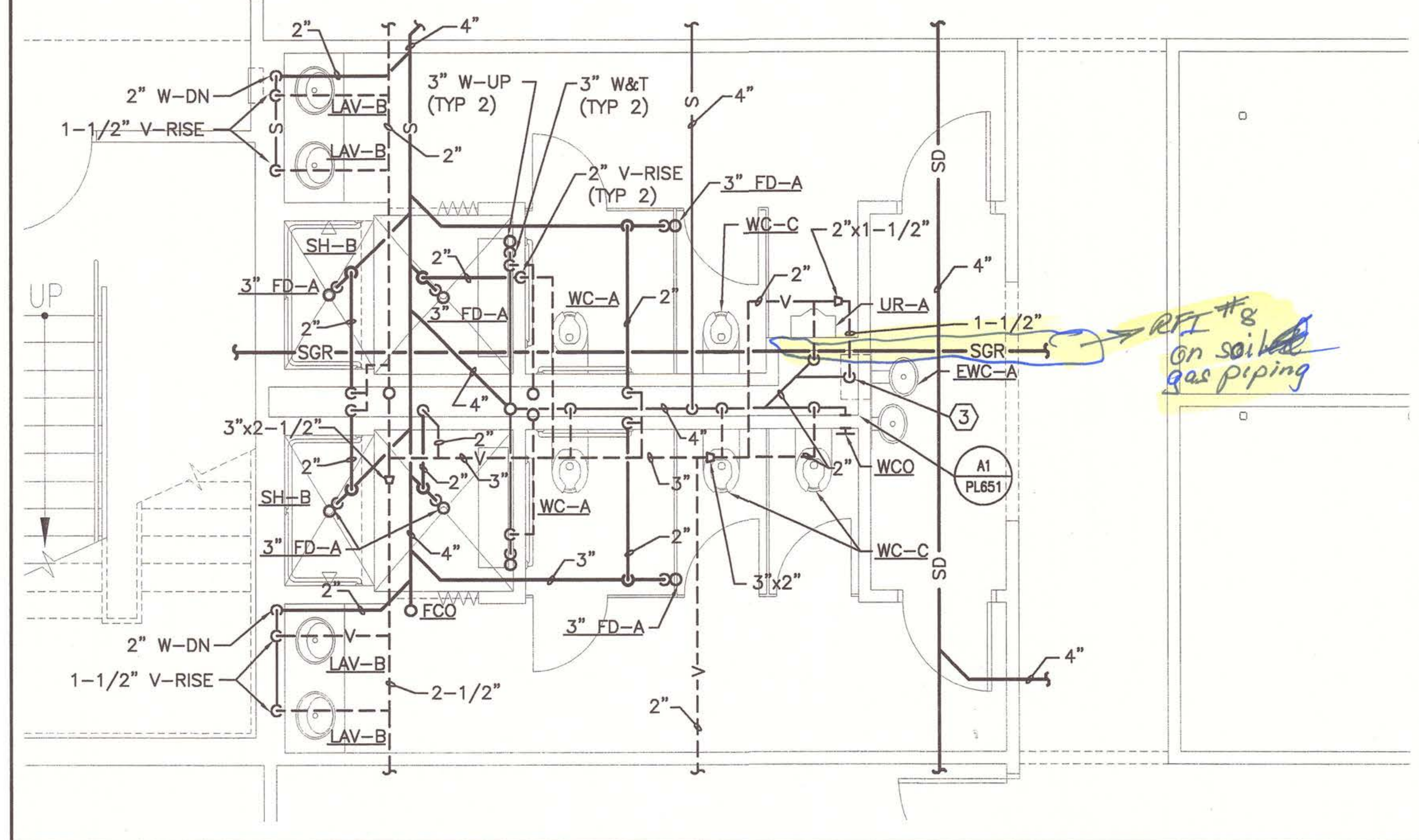
GRAPHIC SCALE: 0" 1"

SCALE:	1/8"=1'-0"
PROJECT MANAGER:	SLB
JC/DRAWN BY:	TCM/BGG
A/E OF RECORD:	RMW
CAD FILE:	PL113-06016
PROJECT NO:	06016
DATE:	7-9-07

SHEET TITLE:
THIRD FLOOR SUPPLY PIPING PLAN

SHEET No. PL113

AS BUILT
Owner Copy



G7 MEN" AND WOMEN'S TOILET DWV PART PLAN

1/4" = 1'-0"

SUPPLEMENTAL INSTRUCTION

☒	Owner: Scott Warchol, MTA	Email: swarchol@maineturnpike.com
☒	Architect: Scott Benson, SMRT	Email: sbenson@smrtinc.com
☒	Contractor: Derek Converse, Wright-Ryan Construction	Email: dconverse@wright-ryan com
☒	Engineer: Robert Driscoll, HNTB	Email: : rdriscoll@HNTB.com
☐	Consultant: David Price, Price Structural Engineers	Email: PriceEngrs@aol.com
☒	Other: BW, LW, File 06016/44.1	

AIA DOCUMENT G710

PROJECT:
Maine Turnpike Authority
Administration Building

SUPPLEMENTAL
INSTRUCTION NO: 005

OWNER: Scott Warchol
Maine Turnpike Authority
430 Riverside Street
Portland, ME 04103

DATE OF ISSUANCE: Nov. 30, 2007

ARCHITECT: SMRT, Inc.
144 Fore Street, P.O. Box 618
Portland, ME 04104-0618

TO:
Derek Converse
Wright-Ryan Construction, Inc
10 Danforth Street
Portland, ME 04101

MTA CONTRACT NO.: 2007 07
A/E PROJECT NO.: 06016

CONTRACT FOR: Construction

CONTRACT DATED: October 5, 2007

REFERENCES CONTRACTOR'S RFI NO. 9
(if applicable)

The work shall be carried out in accordance with the following information which is issued as a clarification or interpretation of the contract documents. This is not a direction to proceed with work which modifies the Contract Sum or Contract Time. Proceeding with the Work in accordance with this supplemental instruction indicates your acknowledgement that there is no change in Contract Sum or Contract Time.

Description:
Provide:
1.4 CHILLED WATER BUFFER TANK

A. Description: 200-Gallon, steel buffer tank with internal baffle, air vent and tank drain tappings.

1. Insulation: 2-Inch thick flexible elastomeric.
2. Mounting legs for vertical installation.
3. ASME rated for 125 psig working pressure.
4. Connections: 2-Inch NPT.

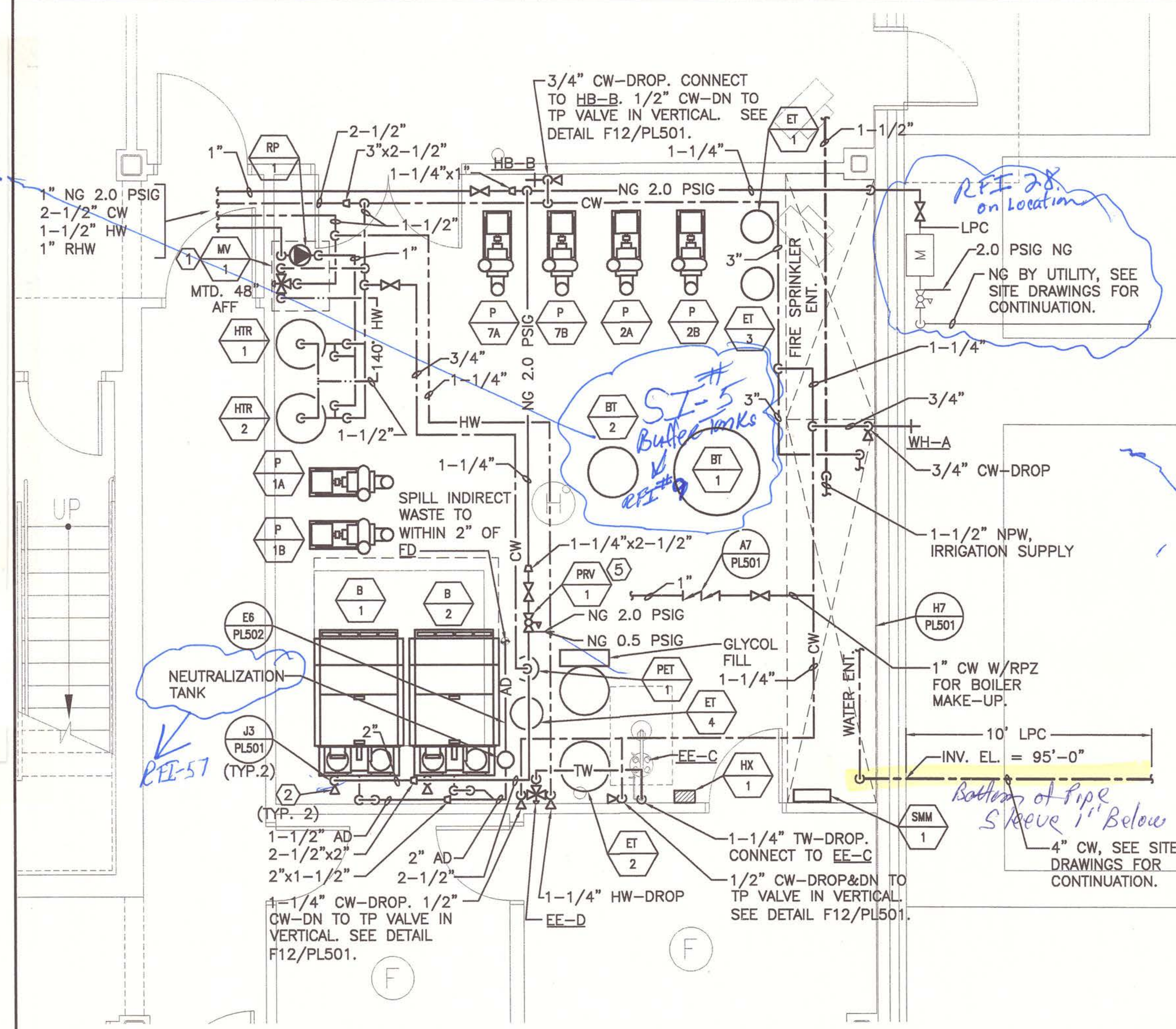
Basis of Design is Cemline.

BT-1 is model number V500CWB-4F
BT-2 is model number V120CWB-2G

Reason: Response to RFI #9

ISSUED BY:
SMRT, INC
Scott L. Benson
Architect: Scott L. Benson

11.30.07
Date



A7 MECHANICAL ROOM PART PLAN

1/4" = 1'-0"

NOTE:

1. SEE SHEET M-001 FOR LEGEND AND ABBREVIATIONS.

KEYED NOTES:

(1) PROVIDE 3/4" CDX PLYWOOD BACKER FOR MIXING VALVE INSTALLATION. PAINT PLYWOOD WITH TWO COATS OF WHITE ENAMEL PAINT.

(2) 2" NG-DROP WITH SHUT-OFF VALVE. CONNECT TO BOILER GAS TRAIN, PROVIDED BY MANUFACTURER. PROVIDE GAS TRAIN VENT AS/IF NEEDED BY MANUFACTURER. COORDINATE WITH MANUFACTURER'S WRITTEN INSTALLATION INSTRUCTIONS. TERMINATE EACH GAS VENT INDIVIDUALLY AND GOOSENECK, SEE DETAIL A1/PL502.

(3) 1-1/2" V-RISE
(3) 2" V-RISE.
4" S-DROP
(2) 2" V-UP&RISE
2" V-RISE
(2) 2" V-UP
4" S-UP&DN
2" V-UP&RISE
4" V-UP
(2) 2" V-UP&RISE

(4) BLADDER TANK PROVIDED WITH BOOSTER PUMP PACKAGE.

(5) PRESSURE REDUCING VALVE SHALL BE INSTALLED PER MANUFACTURES WRITTEN INSTRUCTIONS, ACCESSIBLE. PROVIDE SEDIMENT TRAP PRIOR TO VALVE CONNECTION.

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STATE OF MAINE
RONNIE M. WILLEY
NO. 11029
LICENSED PROFESSIONAL ENGINEER
6/28/07

PROJECT NORTH
MAG NORTH

PROJECT TITLE:
MAINE TURNPIKE AUTHORITY ADMINISTRATION BUILDING
PORTLAND, MAINE

CURRENT ISSUE STATUS:
ISSUED FOR BIDDING/CONSTRUCTION
7-9-07

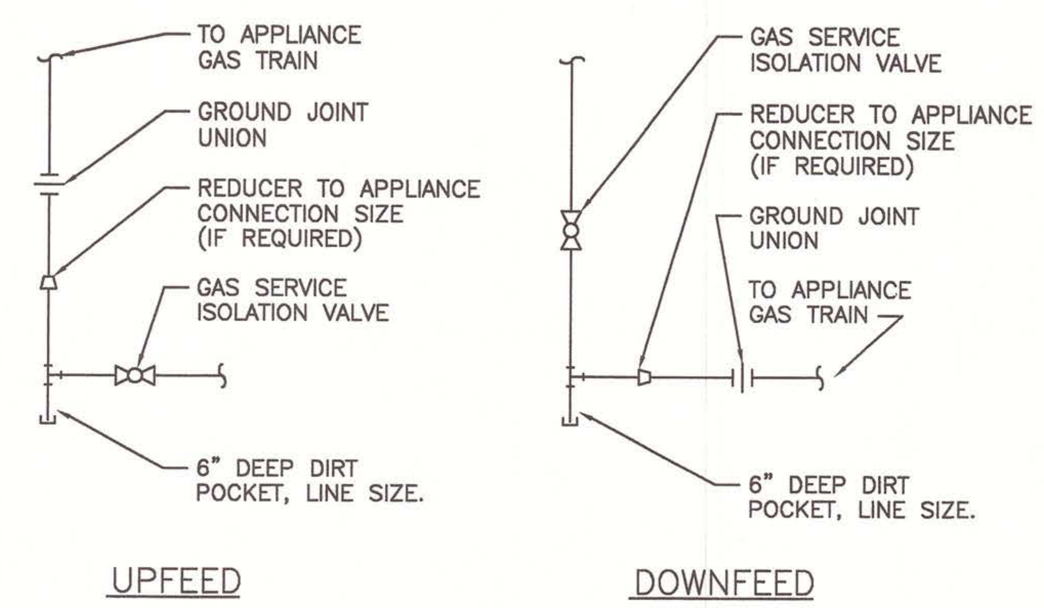
REV	DESCRIPTION	DATE
0	BIDDING/CONSTRUCTION	7-9-07

GRAPHIC SCALE: 0" 1"

SCALE:	1/4"=1'-0"
PROJECT MANAGER:	SLB
JC/DRAWN BY:	TCM/BGG
A/E OF RECORD:	RMW
CAD FILE:	PL401-06016
PROJECT NO:	06016
DATE:	7-9-07

SHEET TITLE:
MECHANICAL ROOM PART PLAN

SHEET No. PL401



NOTE:
APPLIANCES WITH REGULATORS: LOCATE PIPING SHOWN HEREIN UPSTREAM OF THE APPLIANCE REGULATOR. PROVIDE A TEST PLUG DOWNSTREAM OF THE APPLIANCE REGULATOR. DO NOT INSTALL ISOLATION VALVES ABOVE CEILINGS OR IN CONFINED AREAS.

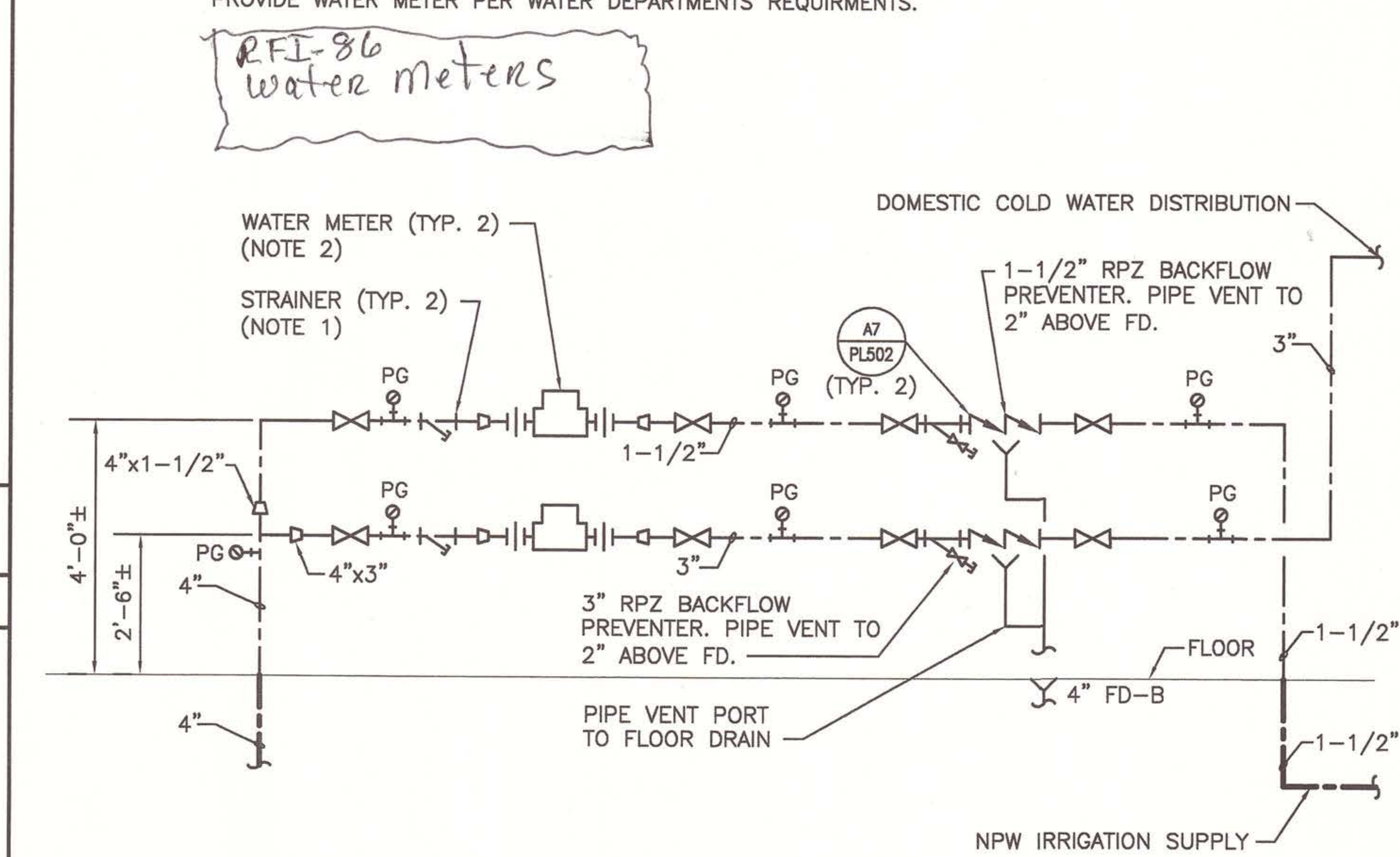
J3 GAS PIPING CONNECTION DETAIL

NOT TO SCALE

NOTES:

1. PROVIDE STRAINER INTEGRAL WITH THE METER, UNLESS NOT ALLOWED BY THE UTILITY PROVIDER.
2. PROVIDE VALVE BY-PASS AROUND METER IF REQUIRED BY UTILITY PROVIDER, PROVIDE WATER METER PER WATER DEPARTMENTS REQUIRMENTS.

RFI-86
water meters

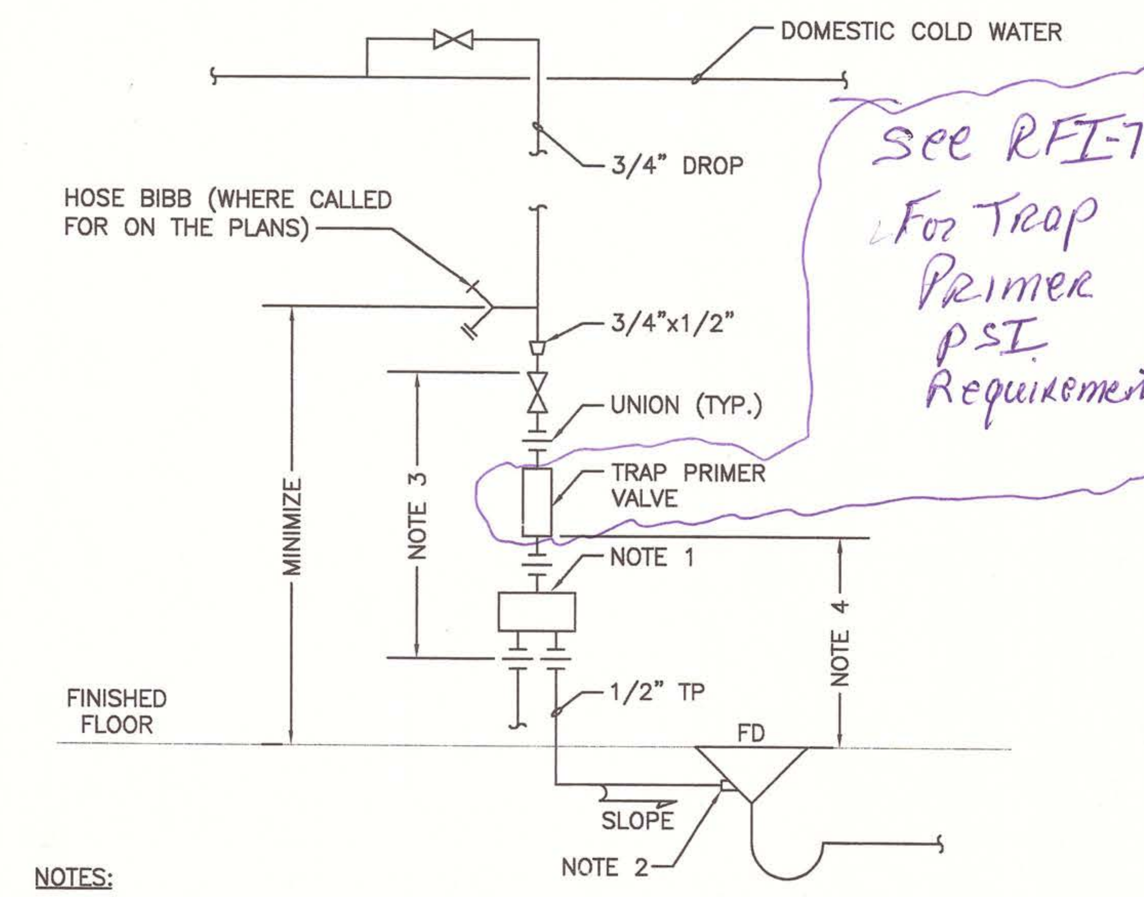


H7 WATER ENTRANCE SCHEMATIC

NOT TO SCALE

NOTE:

1. SEE SHEET M-001 FOR LEGEND AND ABBREVIATIONS.



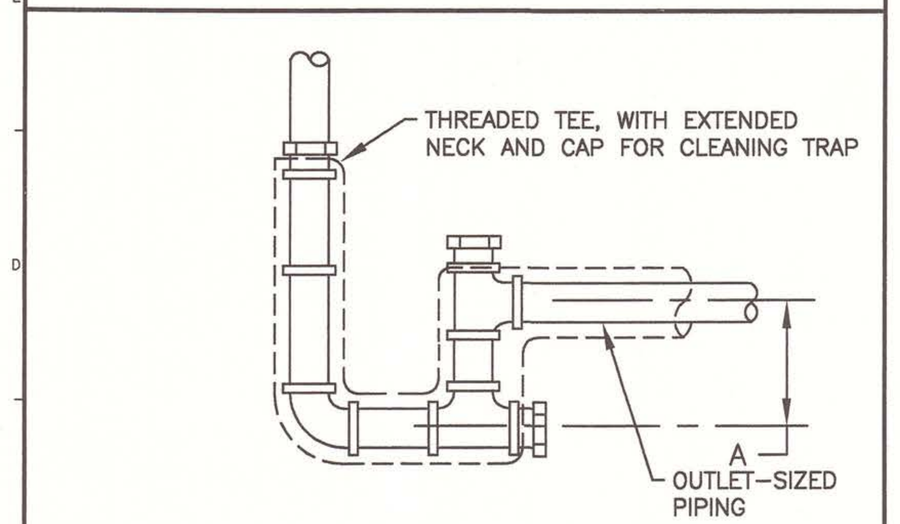
See RFI-74
For Trap Primer PSI Requirement

NOTES:

1. FOR MULTIPLE TRAP PRIMER APPLICATION. GROUP PRIMERS TOGETHER WHEREVER POSSIBLE.
2. PROVIDE 3/4"x1/2" THREAD AND SWEAT FITTING WHERE DRAIN BODY REQUIRES.
3. WHERE PIPING DROP IS NOT EXPOSED, PROVIDE ACCESS PANEL.
4. INSTALL VALVE AT A MINIMUM DISTANCE ABOVE THE FLOOR AS REQUIRED BY TRAP PRIMER MANUFACTURER, BUT NO LOWER THAN 1 FOOT AFF FOR EACH 20 FEET OF TRAP PRIMER PIPING.

F12 TRAP SEAL PRIMER DETAIL

NOT TO SCALE

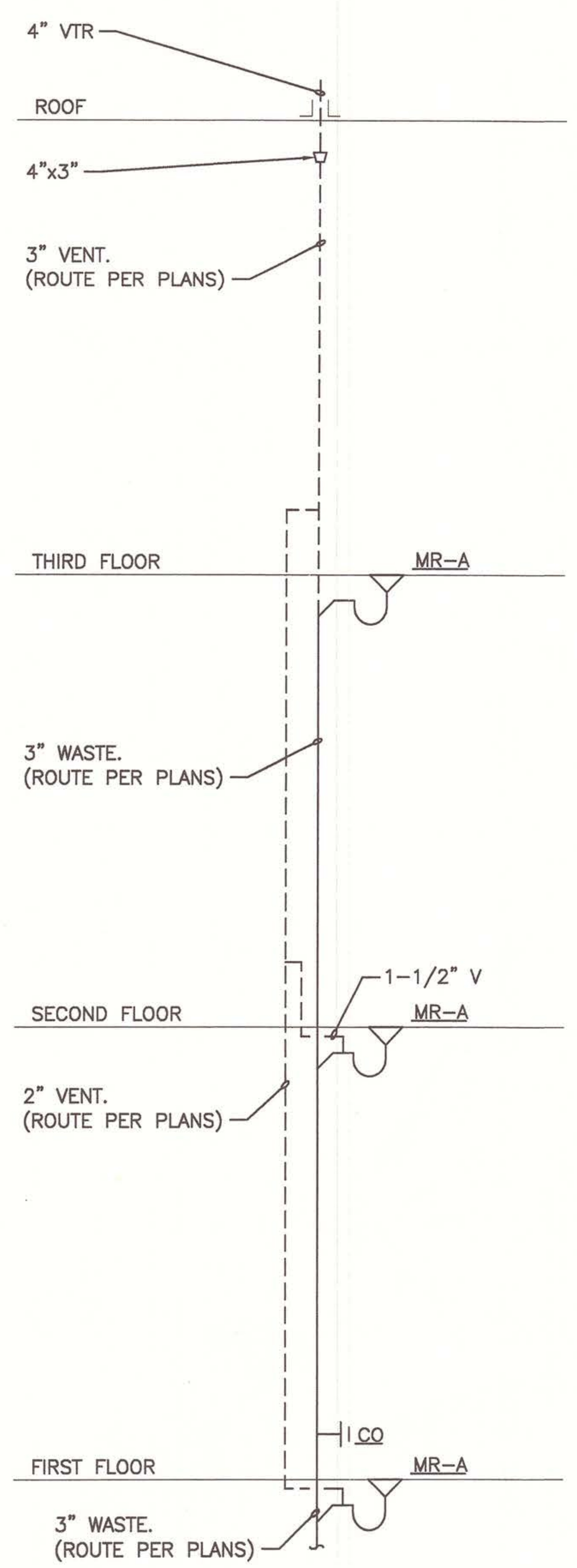


DRAWTHRU
A = GREATER OF 2" OR 1" PLUS AHU TOTAL PRESSURE IN INCHES-WC

NOTES:
1. 1"ø MIN PIPE SIZE OR SIZE PER DRAIN TAP IN AHU INSULATE FOR CONDENSATE CONTROL AS REQD
2. PROVIDE MINIMUM OF 5" WATER SEAL FOR HUMIDIFIER DISPERSION TUBE CONDENSATE DRAINS.

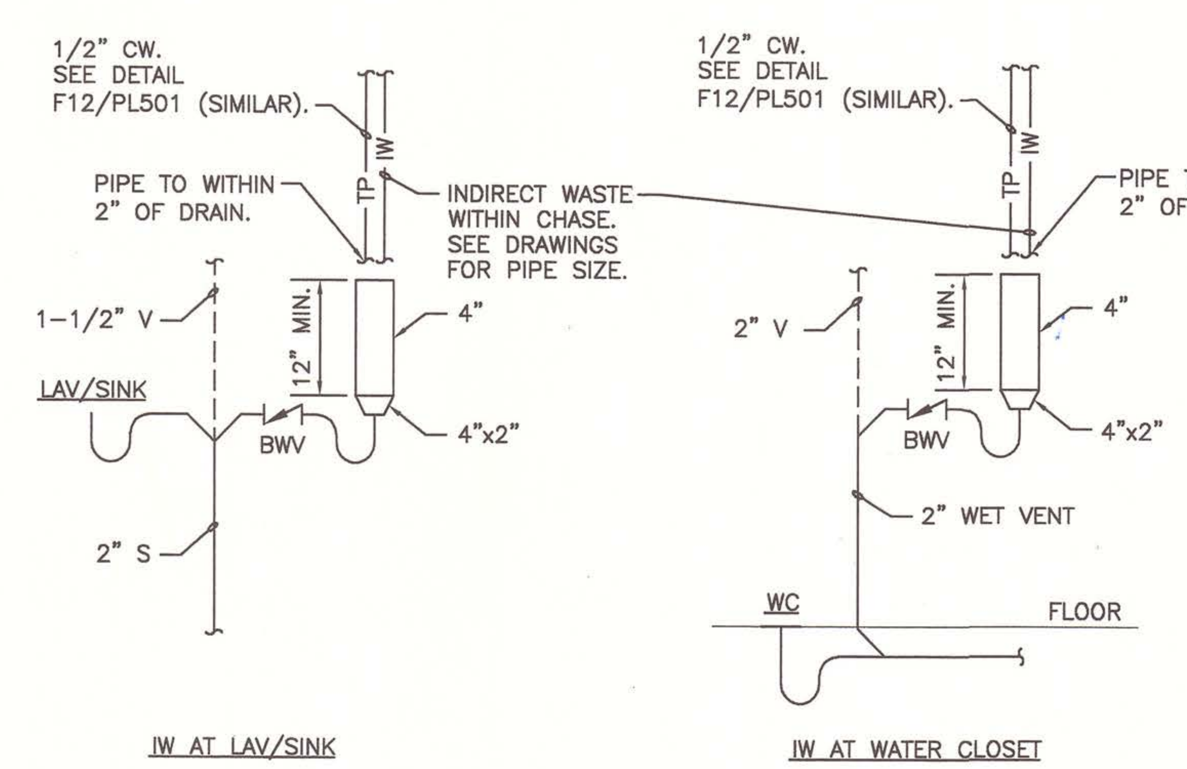
A1 CONDENSATE DRAIN TRAP

NOT TO SCALE



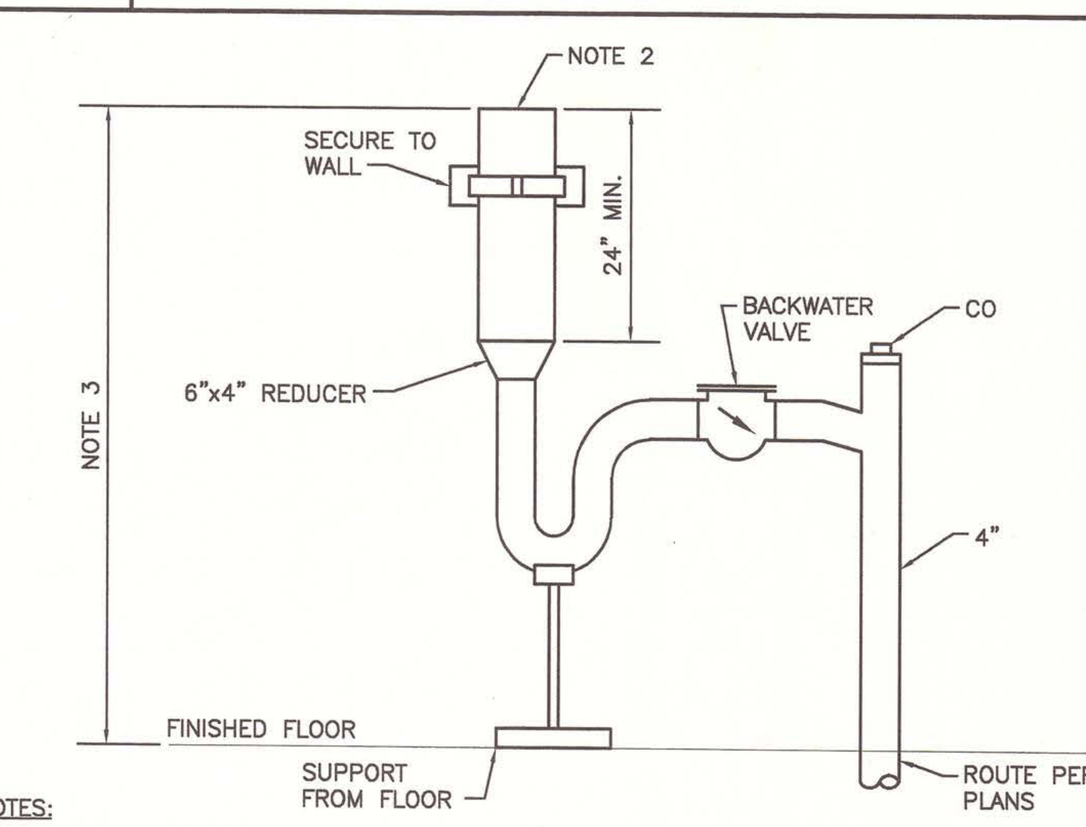
A3 MOP RECEPTOR RISER DIAGRAM

NOT TO SCALE



A7 INDIRECT WASTE CONNECTION

NOT TO SCALE



NOTES:
1. INSTALL UNIT AS TIGHT TO THE ADJACENT WALL AS POSSIBLE.
2. PROVIDE TRAP PRIMER, (F12/PL501 SIMILAR).
3. COORDINATE DRAIN HEIGHT, CONFIGURATION, ORIENTATION AND ACCESS WITH FIRE SPRINKLER CONTRACTOR, (RE: FP101).

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A12 STORM STAND DRAIN

NOT TO SCALE

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STATE OF MAINE
RONNIE M. WILLEY
NO. 11029
PROFESSIONAL ENGINEER
6/28/07

PROJECT TITLE:
MAINE TURNPIKE AUTHORITY ADMINISTRATION BUILDING
PORTLAND, MAINE

CURRENT ISSUE STATUS:
ISSUED FOR BIDDING/CONSTRUCTION 7-9-07

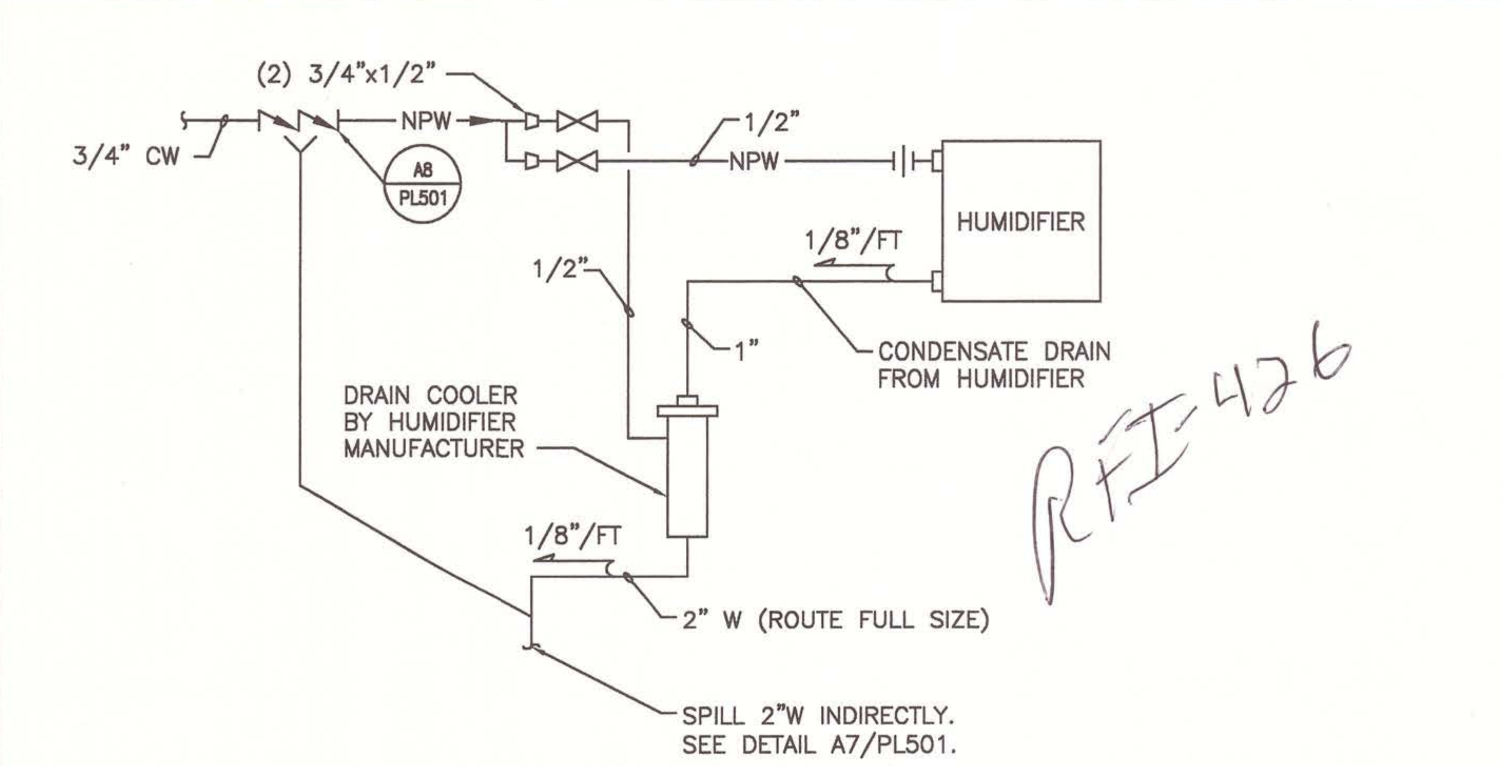
REV	DESCRIPTION	DATE
0	BIDDING/CONSTRUCTION	7-9-07

GRAPHIC SCALE:
0" 1"

SCALE:	NOT TO SCALE
PROJECT MANAGER:	SLB
JC/DRAWN BY:	TCM/BGG
A/E OF RECORD:	RMW
CAD FILE:	PL501-06016
PROJECT NO:	06016
DATE:	7-9-07

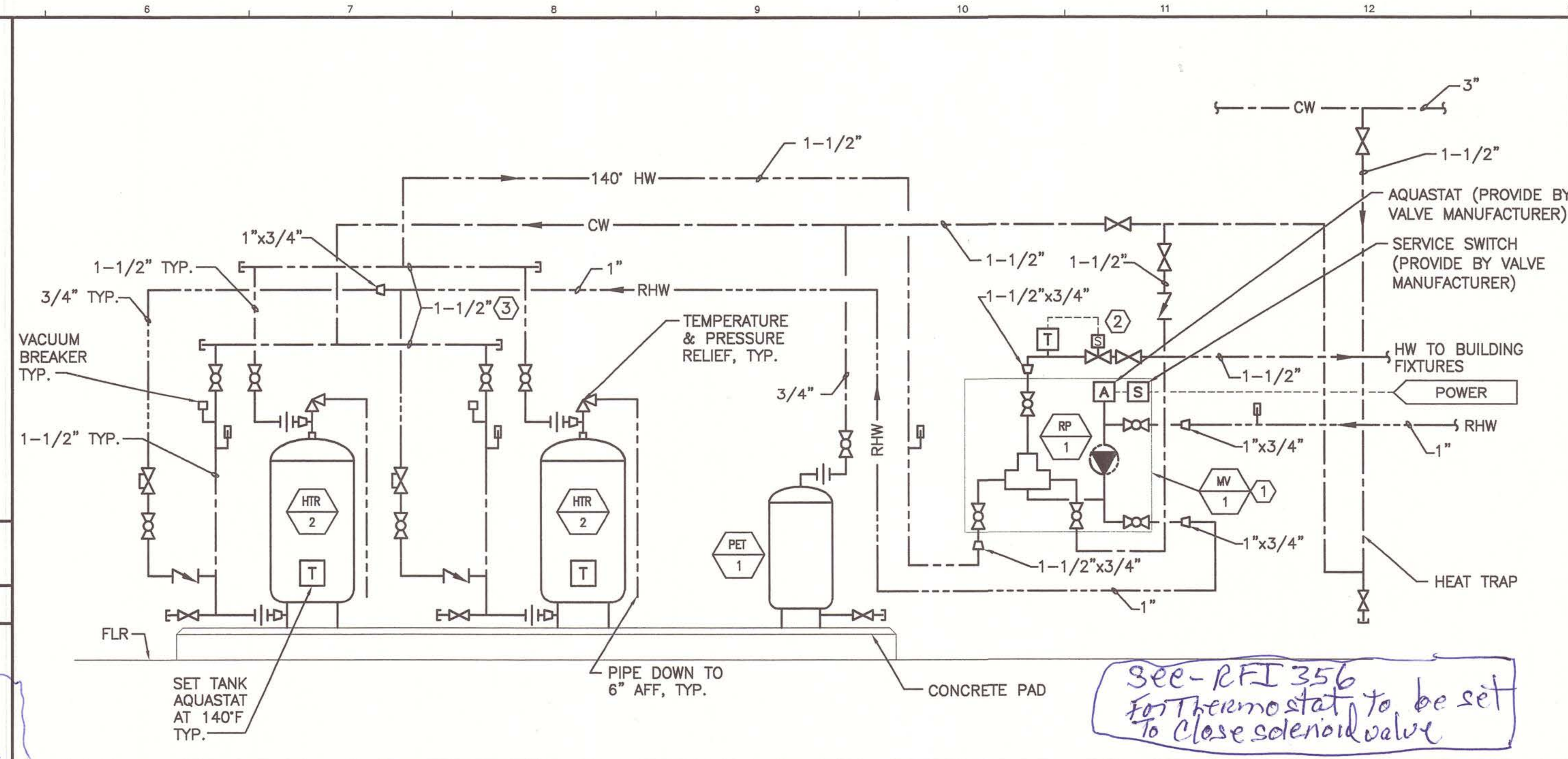
SHEET TITLE:
DETAILS

SHEET No.
PL501



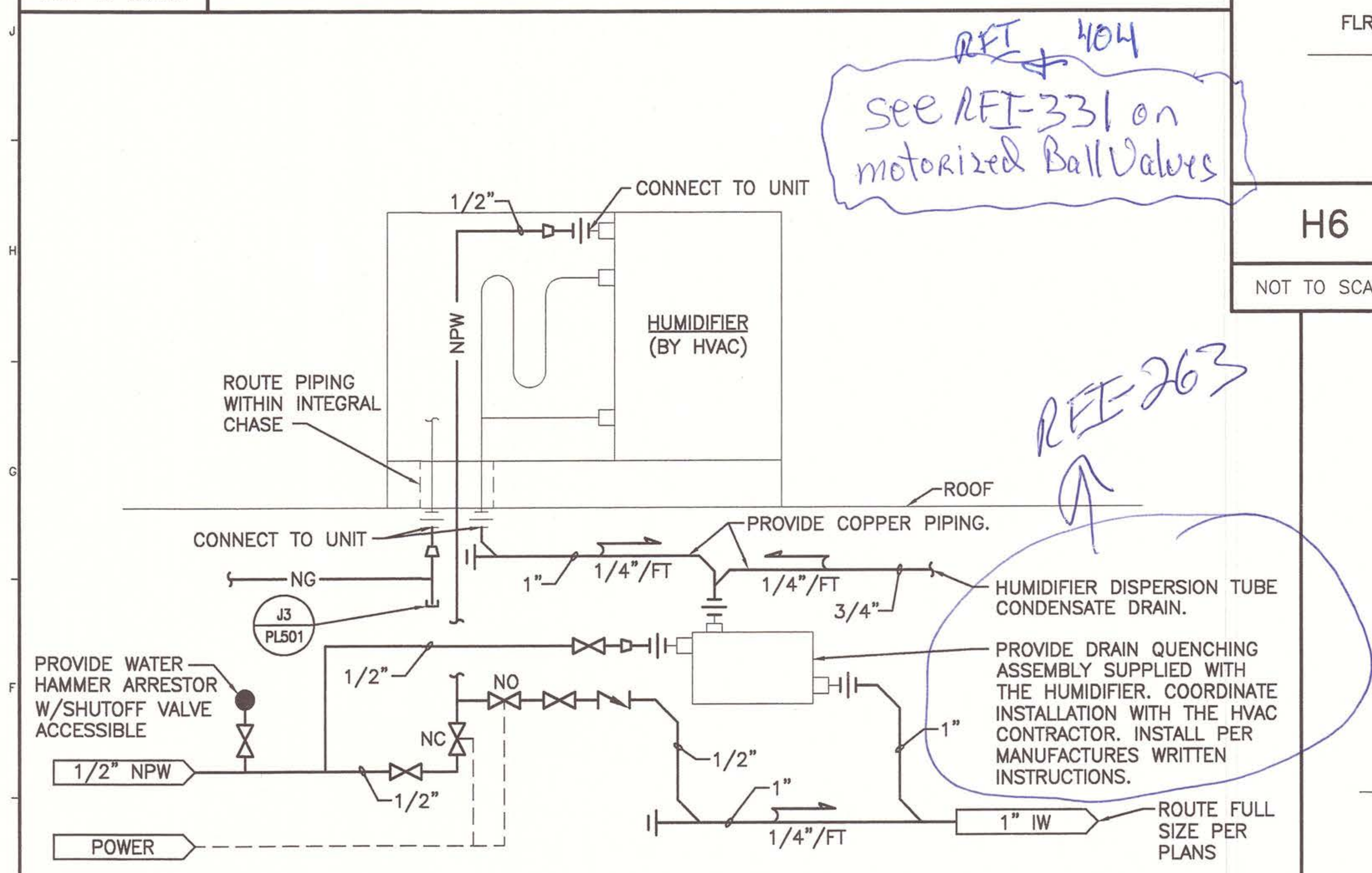
A1 HUMIDIFIER CONNECTION DETAIL

NOT TO SCALE



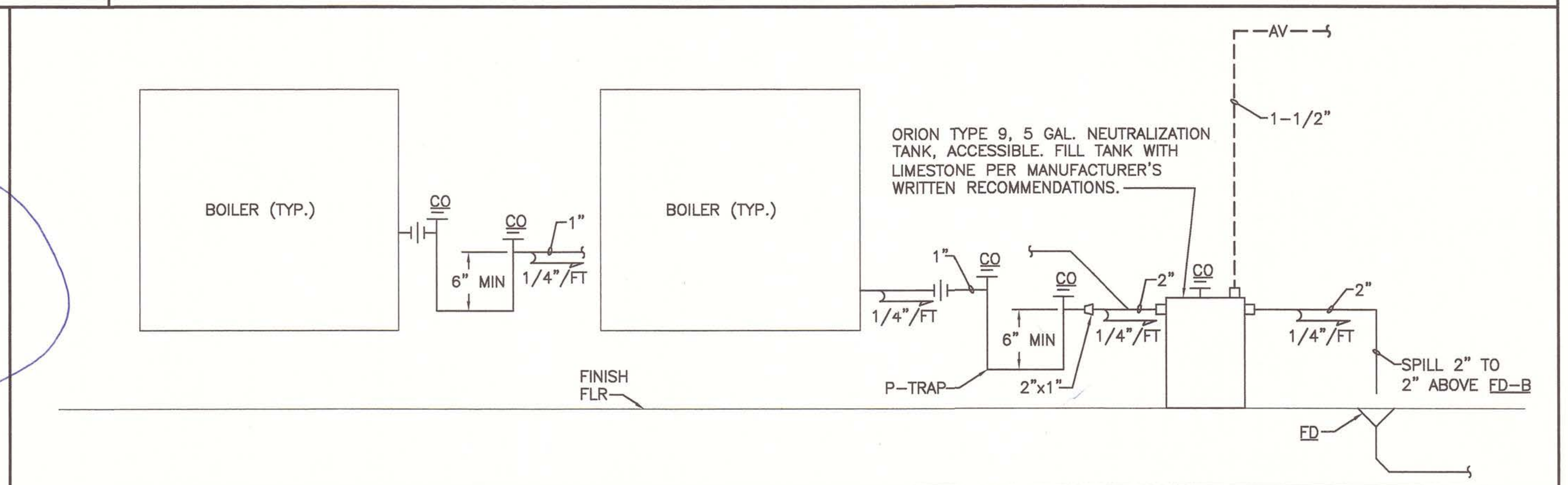
H6 DOMESTIC WATER PIPING

NOT TO SCALE



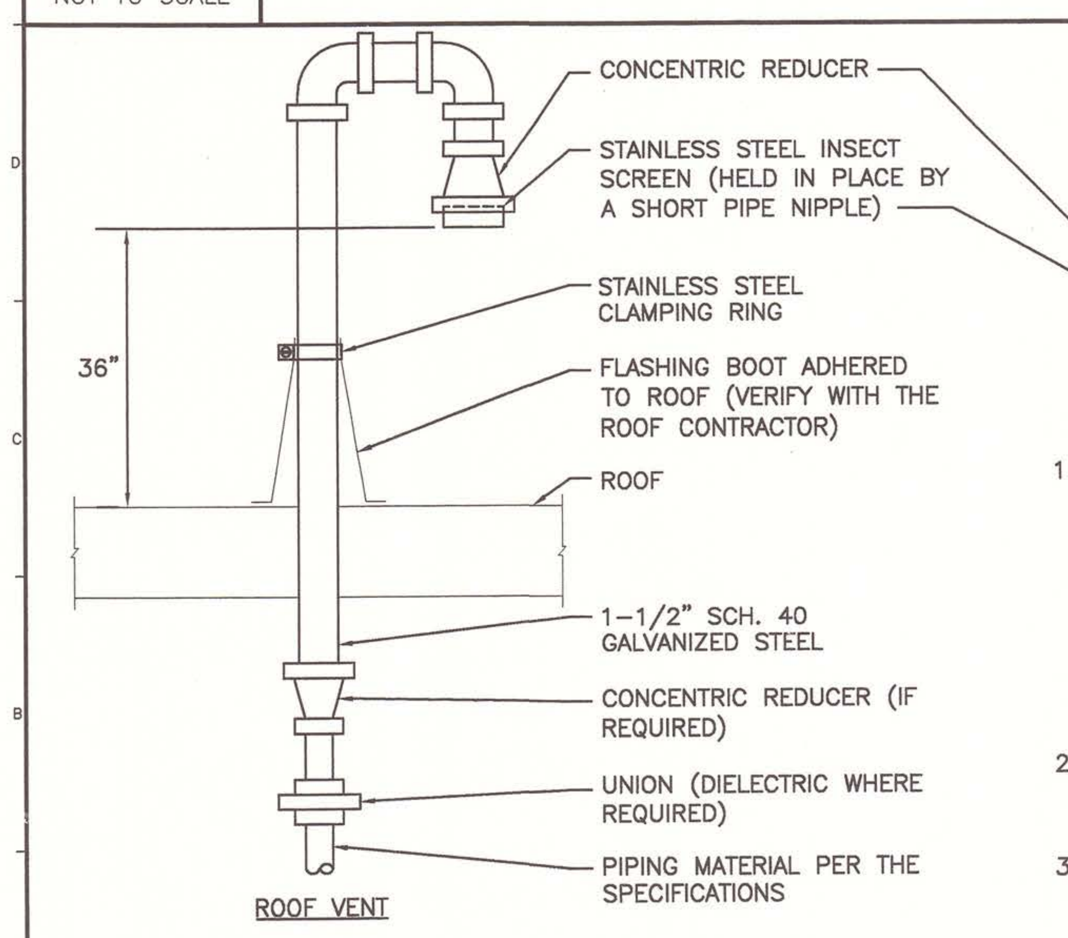
E1 PIPING AT HUMIDIFIER

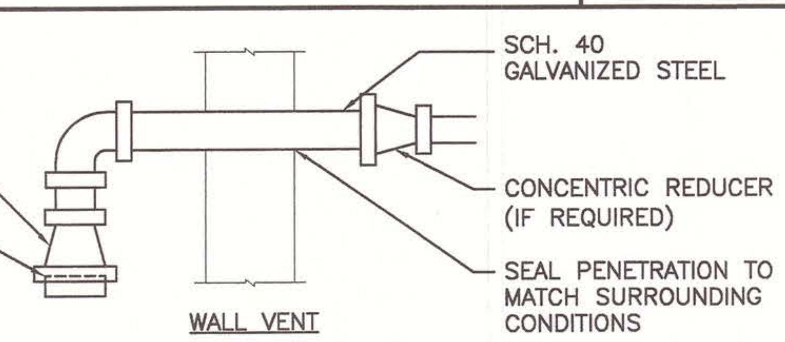
NOT TO SCALE



E6 BOILER CONDENSATE DRAIN DETAIL

NOT TO SCALE





NOTES:

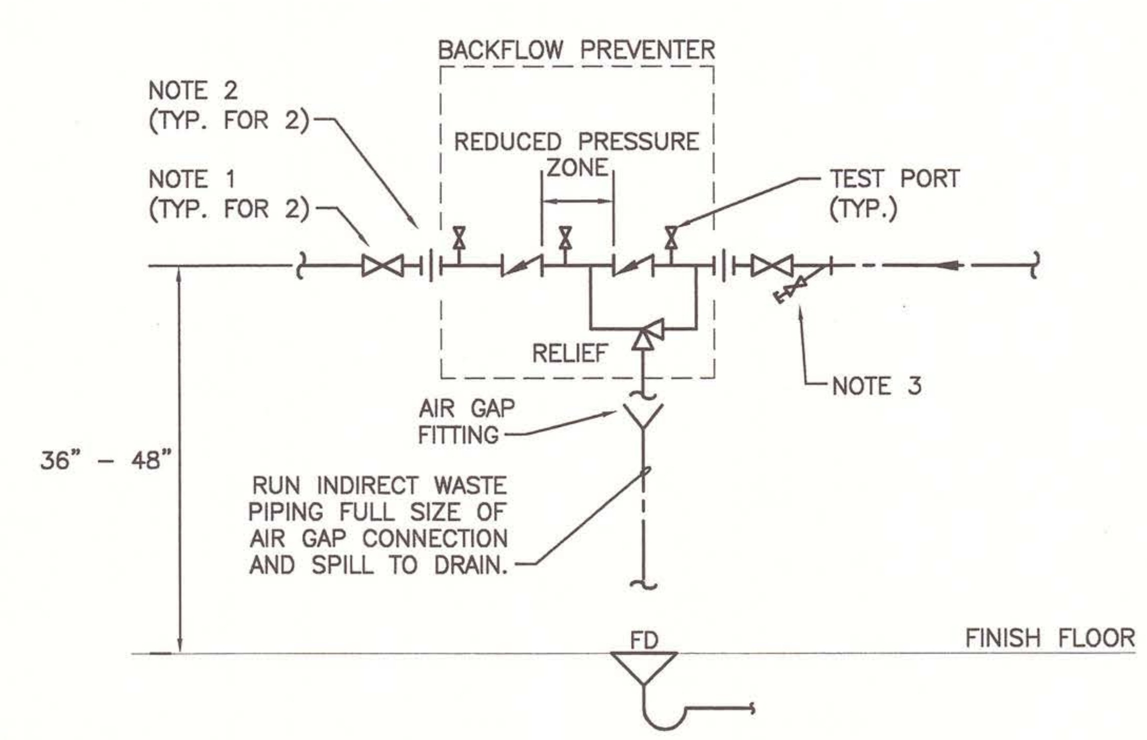
1. EXTEND GAS VENT PIPING OUT-OF-DOORS. VENT PIPE SIZE SHALL BE IN ACCORDANCE WITH THE FOLLOWING SCHEDULE, BUT NO SMALLER THAN THE REGULATOR RELIEF PORT SIZE OR REGULATOR MANUFACTURER RECOMMENDATIONS.

TOTAL EQUIVALENT LENGTH OF VENT PIPING RUN (FT)	0-40	0-100	0-200
MINIMUM RELIEF VENT PIPE SIZE (IN)	3/4"	1"	1-1/2"

2. LOCATE VENT TERMINATION MINIMUM OF 10' FROM ANY AIR INTAKE, INCLUDING WINDOWS OR OPENINGS IN THE BUILDING ENVELOPE.
3. PROVIDE INDIVIDUAL VENTS PER MANUFACTURES WRITTEN INSTRUCTIONS.

A1 NATURAL GAS VENT THROUGH ROOF (GVTR)

NOT TO SCALE



NOTES:

1. SHUT-OFF VALVE PROVIDED WITH DEVICE, BALL OR GATE STYLE.
2. FOR NON-FLANGED DEVICES, DISASSEMBLE AND INSTALL UNIONS WHERE SHOWN.
3. PROVIDE 3/4" BALL VALVE AND MALE HOSE THREAD END FOR STRAINERS 2-1/2" AND LARGER.
4. PROVIDE A MINIMUM CLEARANCE OF 12" BEHIND DEVICE. PROVIDE 36" CLEAR FLOOR SPACE IN FRONT OF DEVICE, FOR ACCESS AND TESTING.
5. SUPPORT DEVICE IN ACCORDANCE WITH MANUFACTURER'S WRITTEN INSTRUCTIONS. SUPPORTS SHALL IN NO MANNER INTERFERE WITH THE OPERATION, TESTING AND SERVICING OF THE DEVICE, INCLUDING THE RELIEF VALVE AND DRAIN. AT A MINIMUM, SUPPORTS SHALL CONSIST OF:
   - (2) FLOOR SUPPORTED PIPE STANDS OR WALL MOUNT STRUT WITH ANGLE BRACES FOR DEVICES 2-1/2" AND LARGER.
   - (2) SPLIT RING TYPE, WALL MOUNT PIPE CLAMP ASSEMBLIES FOR DEVICES 2" AND SMALLER.

A7 REDUCED PRESSURE ZONE BACKFLOW PREVENTER

NOT TO SCALE

NOTE:

1. SEE SHEET M-001 FOR LEGEND AND ABBREVIATIONS.

KEYED NOTE:

1. PIPE MIXING VALVE CONTROL STATION IN ACCORDANCE WITH MANUFACTURER'S WRITTEN INSTRUCTIONS.
2. PROVIDE NORMALLY OPEN SOLENOID VALVE, 5 PSI PRESSURE DROP @ 100 GPM W/ SENSOR TO CLOSE VALVE WHEN SUPPLY WATER TEMPERATURE EXCEEDS 120°F, ADJUSTABLE.
3. MANIFOLDING SHALL BE OF EQUAL LENGTH TO EACH WATER HEATER. INSTALL USING TWO UNIT MANIFOLD KIT, SEE PL-601.

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STATE OF MAINE
RONNIE M. WILLEY
NO. 11029
LICENSED PROFESSIONAL ENGINEER
6/28/07

PROJECT TITLE:
MAINE TURNPIKE AUTHORITY ADMINISTRATION BUILDING
PORTLAND, MAINE

CURRENT ISSUE STATUS:
ISSUED FOR BIDDING/CONSTRUCTION
7-9-07

REV	DESCRIPTION	DATE
0	BIDDING/CONSTRUCTION	7-9-07

GRAPHIC SCALE: 0" 1"

SCALE:	NOT TO SCALE
PROJECT MANAGER:	SLB
JC/DRAWN BY:	TCM/BGG
A/E OF RECORD:	RMW
CAD FILE:	PL502-06016
PROJECT NO:	06016
DATE:	7-9-07

SHEET TITLE:
DETAILS

SHEET No.
PL502

DRAIN SCHEDULE

TAG	APPLICATION	TYPICAL UNIT MFG & MODEL NO.	DESCRIPTION	TRAP PRIMER	NOTES
FD-A	FINISHED PUBLIC SPACES	ZURN ZN-415-6B-P	FLOOR AND SHOWER DRAIN COATED CAST IRON BODY ADJUSTABLE NICKEL BRONZE STRAINER	PRECISION PLUMBING PRODUCTS #PO-500	①③⑦
FD-B	UNFINISHED EQUIPMENT SPACES	ZURN Z-554-P	MEDIUM DUTY DRAIN, CAST IRON BODY & GRATE, 3/4" TRAP PRIMER CONNECTION		①②③⑦
FD-C	INTAKE SPACES	ZURN ZN-415-6B-Y-VP-P	FLOOR DRAIN COATED CAST IRON BODY ADJUSTABLE NICKEL BRONZE STRAINER		①②③⑦
RD-A	ROOF DRAIN	ZURN ZA-125-DP	ROOF DRAIN, ALUMINUM DOME, COATED CAST IRON BODY, DECK PLATE		④⑤⑥
RD-B	ROOF DRAIN	FROET 100C6LP-OFS-DC	ROOF DRAIN, CAST IRON BODY, SUMP RECEIVER, CLAMP		④⑤⑥
RD-C	DOWNSPOUT NOZZLE	ZURN ZAB-199	DOWNSPOUT NOZZLE, POLISHED BRONZE BODY, THREADED INLET, OUTLET NOZZLE		

NOTES:
1. 1/2" TRAP PRIMER CONNECTION. PROVIDE TRAP PRIMER VALVE AND SUPPLY PIPING COMPLETE FOR ALL DRAINS, (SHOWER DRAIN TRAP PRIMERS ARE NOT REQUIRED AND AND THE PORT SHALL BE CAPPED AND SEALED).
2. SEDIMENT BUCKET.
3. SLAB ON GRADE – CAULK OUTLET.
4. ROOF/MEZZANINE – NO HUB OUTLET.
5. EXPANSION JOINT – REQUIRED WHERE PIPING CONNECTION TO THE DRAIN DOES NOT IMMEDIATELY OFFSET TO THE HORIZONTAL AND RUN MORE THAN 5 FEET. PROVIDE ZURN #Z-190.
6. REFER TO MECHANICAL ROOF PLAN FOR ROOF DRAIN LOCATIONS.
7. PROVIDE SHUT-OFF VALVE UPSTREAM OF EACH TRAP PRIMER VALVE.

MIXING VALVE SCHEDULE

TAG	SERVICE	MIN. FLOW (GPM)	DESIGN FLOW (GPM)	OUTLET TEMP. SET POINT DEG. F	MAX. PRESS. DROP @ DESIGN FLOW (PSI)	INLETS (IN)	OUTLET (IN)	TYPICAL UNIT MFG & MODEL NO.	RECIRC (IN)	RECIRC PUMP	NOTES
MV-1	DOM. HW GENERAL USE	1	18	120	10	3/4	1	LEONARD MEGATRON 1N	3/4	RP-1	①②
MV-2	SECURE SHOWER	0.5	5	110	10	1/2	1/2	SYMMONS 5-120-NI-CK	–	–	

NOTES: ① PROVIDE SPARE REBUILD KIT. ② FACTORY PRE-PIPED/PRE-ASSEMBLED.

PLUMBING SPECIALTIES SCHEDULE

TAG	APPLICATION	TYPICAL UNIT MFG & MODEL NO.	DESCRIPTION	NOTES
HB-A	INTERIOR HOSE BIBB FINISHED SPACES	CHICAGO FAUCET #952	INTEGRAL VACUUM BREAKER, LOOSE KEY, SMOOTH CHROME FINISH, 3/4" CONNECTION.	
HB-B	INTERIOR HOSE BIBB UNFINISHED SPACES	CHICAGO FAUCET #998	INTEGRAL VACUUM BREAKER, LOOSE KEY, ROUGH CHROME FINISH, 3/4" CONNECTION.	
WH-A	EXTERIOR WALL HYDRANT	ZURN #Z-1300-3/4x14	FREEZE RESISTANT AUTOMATIC DRINKING, POLISHED BRONZE WALL PLATE, INTEGRAL BACKFLOW PREVENTER, 3/4" CONNECTION.	
WB-A	ICE MAKER WALL BOX	GUY GRAY #BIM875	GALVANIZED STEEL RECESSED ICE MAKER BOX, 1/2" CONNECTION.	
EE-A	EMERGENCY EYE/FACE WASH	GUARDIAN #GBF-1736DP	BARRIER FREE, SWING DOWN, EYE/FACE WASH UNIT WITH DRAIN PAN, SURFACE MOUNTED.	②
EE-B	EMERGENCY EYE/FACE WASH MIXING VALVE	LEONARD #TA-300-STSTL-REC-EXP	EXPOSED LOCKING CABINATE, FAIL COLD, 10 PSIG MAX. DROP AT 4 GPM FLOWING.	
EE-C	EMERGENCY SHOWER/ EYE WASH STATION	GUARDIAN #GBF-1994	BARRIER FREE, COMBINATION SHOWER AND EYE/FACE WASH UNIT, STAY OPEN VALVE.	①③
EE-D	EMERGENCY SHOWER MIXING VALVE	LEONARD #TM-850	FAIL COLD, 10 PSIG MAX. DROP AT 29 GPM FLOWING.	

NOTES: ① PROVIDE SIGNAGE AND TEST EQUIPMENT, (GUARDIAN #AP250-008G & #AP250-005). ② PROVIDE SIGNAGE (GUARDIAN #AP250-007G).
③ PROVIDE CHROME PLATED BRASS TAILPIECE AND TRAP, (GUARDIAN #AP250-017).

PRESSURE REDUCING STATION SCHEDULE

TAG	PRV FLOW RANGE (CFH)	PRV PRESS. RED. RANGE (PSIG)	PRV SIZE	PSI INLET	PSI OUTLET	SERVICE	NOTES:
PRV-1	2500	2-0.5	2-1/2"	2	0.5	NATURAL GAS	
PRV-2	600	2-0.5	1-1/2"	2	0.5	NATURAL GAS	

NOTES:

EXPANSION TANK SCHEDULE

TAG	LOCATION	SERVED	ACCEPT GAL.	DIA. (IN.)	HEIGHT (IN.)	WEIGHT FULL (LBS)	TYPICAL UNIT MFG MODEL NO.	NOTES
PET-1	MECH. ROOM	DOM. HW SYSTEM	8.0	12	20	110	AMTROL ST-20V-C	①

NOTES: ① FDA APPROVED INTERIOR LINING AND BLADDER.

PLUMBING FIXTURE CONNECTION SCHEDULE

FIXTURE	CW	HW	WASTE	VENT	NOTES
FLUSH VALVE WATER CLOSET	1"	–	4"	2"	③
FLUSH VALVE URINAL	3/4"	–	2"	2"	③
LAVATORY	1/2"	1/2"	1-1/2"	1-1/2"	④
SINK	1/2"	1/2"	1-1/2"	1-1/2"	④
SERVICE SINK/ MOP RECEPTOR	3/4"	3/4"	3"	2"	④⑤
WATER COOLER/ DRINKING FOUNTAIN	1/2"	–	1-1/2"	1-1/2"	①
SHOWER	1/2"	1/2"	–	–	②④

NOTES:
1. DUAL HEIGHT UNITS REQUIRE (2) WASTE CONNECTIONS.
2. WASTE AND VENT SIZES AS PER THE PLANS.
3. PROVIDE SHOCK ABSORBER W/ ISOLATION VALVE, ACCESSIBLE, FOR EACH CHASE WHERE FLUSH VALVES ARE INSTALLED, UNLESS OTHERWISE NOTED ON THE PLANS. INSTALL PER PDI STANDARDS, PDI-WH 201.
4. PROVIDE AIR CHAMBERS ON HW & CW CONNECTIONS. See RFI 243 Air Chambers
5. PROVIDE CHECK VALVES, ACCESSIBLE.

PLUMBING FIXTURE SCHEDULE

TAG	DESCRIPTION	FIXTURE	FAUCET/DRAIN	TRIM	SUPPORT	NOTES
WC-A	WALL MOUNTED WATER CLOSET – ADA	AMERICAN STANDARD #2257.103 "AFWALL" VITREOUS CHINA, SIPHON JET TYPE, 1-1/2" TOP SPUD, 1.6GPF	SLOAN ROYAL #153-1.6 ES-S CONCEALED HYDRAULIC FLUSH VALVE, 1.6 GPF	CHURCH #9400-SSC SEAT – WHITE	ZURN #Z-1203 AND #Z-1204	⑥⑦
WC-B	FLOOR MTD WATER CLOSET FRONT ACCESS – ADA	WILLOUGHBY #ETWS-1490-FM-BS-TWE(4"C.I.)-HC(18")-FVT-FV-AP-FA-HPS-LF-T4-BOWLPRO, BLOW-OUT, 1-1/2" BACK SPUD, 1.6 GPF	SLOAN ROYAL#9603-1.6-MBPM CONCEALED HYDRAULIC FLUSH VALVE-1.6 GPF ⑨	SLOAN #WB-1-A WALL BOX AND WILLOUGHBY #RTH2R	WILLOUGHBY "-WS" WALL SLEEVE	⑦
WC-C	WALL MOUNTED WATER CLOSET	AMERICAN STANDARD #2257.103 "AFWALL" VITREOUS CHINA, SIPHON JET TYPE, 1-1/2" TOP SPUD, 1.6GPF	SLOAN ROYAL #153-1.6 ES-S CONCEALED HYDRAULIC FLUSH VALVE, 1.6 GPF	CHURCH #9400-SSC SEAT – WHITE	ZURN #Z-1203 AND #Z-1204	⑥
UR-A	WALL MOUNTED URINAL – ADA	AMERICAN STANDARD #6520.003 "INNSBROOK" VITREOUS CHINA, 1/2" BACK SPUD, 0.5 GPF	INTEGRAL 120 VAC PROXIMITY FLUSH SYSTEM. 0.5 GPF	–	ZURN #Z-1222	④
UR-B	WALL MOUNTED URINAL	AMERICAN STANDARD #6520.003 "INNSBROOK" VITREOUS CHINA, 1/2" BACK SPUD, 0.5 GPF	INTEGRAL 120 VAC PROXIMITY FLUSH SYSTEM. 0.5 GPF	–	ZURN #Z-1222	④
LAV-A	WALL MOUNTED LAVATORY ADA	AMERICAN STANDARD #0355.012 "LUCERNE" VITREOUS CHINA, 20"x18", FAUCET ON 4" CENTERS	SLOAN #ETF-600-BFAUCET, CHICAGO #327XCP GRID DRAIN AND OFFSET TAIL, CHROME PLATED FINISHES	MCGUIRE LOOSE KEY ANGLE STOPS, ESCUTCHEONS AND RISERS-CHROME PLATED	ZURN #Z-1231	①⑤⑫
LAV-B	COUNTER MOUNTED LAVATORY ADA	LAV INTEGRAL WITH COUNTERTOP, SEE ARCHITECTURAL.	SLOAN #ETF-600-B FAUCET, CHICAGO #327XCP GRID DRAIN AND OFFSET TAIL, CHROME PLATED FINISHES	MCGUIRE LOOSE KEY ANGLE STOPS, ESCUTCHEONS AND RISERS-CHROME PLATED	–	①⑤⑫⑬
LAV-C	WALL MOUNTED LAVATORY ADA	WILLOUGHBY #HS-1013-46-HC-BPH-PM2-PT-WS STAINLESS STEEL LAVATORY	INTEGRAL BUBBLER AND DUAL TEMP. PNEUMATIC FAUCET	INTEGRAL	WILLOUGHBY "-WS" WALL SLEEVE	
SH-A	SHOWER – ADA	AQUA BATH #C4136 BF-FUS 3/4"	SYMMONS #1-117-FS-X "SAFETYMIX" PRESSURE BALANCED ADA PACKAGE	SLIDE BAR, DIVERTER VALVE AND HAND SPRAY PROVIDED	–	②③
SH-B	ROLL IN SHOWER – ADA	AQUA BATH #C6536 BF 3/4"	SYMMONS #1-117-FS-X "SAFETYMIX" PRESSURE BALANCED ADA PACKAGE	SLIDE BAR, DIVERTER VALVE AND HAND SPRAY PROVIDED	–	②③
SH-C	FRONT ACCESS CABINET SHOWER – ADA	WILLOUGHBY #US-3636-PM1-SD-2HD-HC-FA	INTEGRAL STAINLESS STEEL, FRONT MOUNTED, RECESSED SHOWER PANEL, FRONT ACCESS, SINGLE TEMP PNEUMATIC VALVE, 2" CAULK DRAIN, ADA PACKAGE	INTEGRAL FIXED SHOWERHEADS, DIVERTER VALVE AND RECESSED SOAP DISH	–	⑧⑪
SK-A	DOUBLE BOWL SINK – ADA	ELKAY #LRAD-3322-6-1/2"-4 18 GAUGE, 304 SS SELF-RIMMING SINK – 4 HOLES	CHICAGO #1102-317 FAUCET, ELKAY #LKAD35 BASKET DRAIN & OFFSET TAIL	MCGUIRE LOOSE KEY ANGLE STOPS, ESCUTCHEONS AND RISERS-CHROME PLATED	INTEGRAL	①
MR-A	MOP RECEPTOR	FIAT #MSB-2424 MOLDED STONE BASIN WITH #E-77-AA BUMPER GUARDS, #MSG-2424 WALL GUARDS	CHICAGO #897-RCF SERVICE SINK FAUCET WITH INTEGRAL SUPPLY CHECK VALVES	FIAT #832-AA HOSE AND BRACKET, #889-CC MOP HANGER, ALL WALL GUARDS	–	
EWC-A	DUAL HEIGHT DRINKING FOUNTAIN – ADA	HALSEY TAYLOR #OVL-II SER-Q BI-LEVEL, BARRIER FREE, FRONT PUSHBAR, 18 GAUGE, 304 SS.	–	–	–	⑩

NOTES:
1. INSULATE EXPOSED PIPING – TRUEBRO #102G.
2. INCLUDE 1" STAINLESS STEEL CURTAIN ROD, ANTI-BACTERIAL WHITE SHOWER CURTAIN, HOOKS, AND FULL WATER RETENTION STRIP.
3. REFER TO ARCHITECTURAL DRAWINGS FOR CEILING HEIGHT AND SHOWER HEAD MOUNTING HEIGHT.
4. PROVIDE AMERICAN STANDARD MULTI-BOARD (A950489-0070A), MULTI-BOARD CASE ASSEMBLY (738807-0070A), 10' CONNECTION CABLE EXTENSION (A922265-0070A) AND 120V AC PLUG-IN POWER SUPPLY (M950169-0070A). ONE POWER SUPPLY WILL SERVE UP TO 15 URINALS.
5. PROVIDE SLOAN TRANSFORMER #EL-248-40 (120 VAC/24 VAC 40 VA), BOX MOUNT, ONE TRANSFORMER WILL OPERATE 2 FAUCETS.
6. PROVIDE SLOAN TRANSFORMER #EL-154 (120 VAC/24 VAC 50 VA), BOX MOUNT, ONE TRANSFORMER WILL OPERATE 10 FLUSHOMETERS.
7. PROVIDE SHIPPING COVER ON WATER CLOSET BOWL.
8. SHOWER TO OPERATE FOR 3 MINUTES BEFORE SHUTTING OFF.
9. PROVIDED BY WILLOUGHBY "-FV".
10. CONTRACTOR TO COORDINATE INSTALLATION OF WATER COOLER WITH ARCHITECTURAL CHASE.
11. PROVIDE VANDAL PROOF DRAIN.
12. PROVIDE SLOAN BELOW DECK THERMOSTATIC MIXING VALVE #BDT.
13. COORDINATE FAUCET/DRAIN ARRANGEMENT WITH COUNTERTOP MANUFACTURER.

SHOCK ABSORBER SCHEDULE

TYPE	FIXTURE UNIT RATING	BASIS OF DESIGN MANUF.	BASIS OF DESIGN FIGURE NO.
'A'	1-10	ZURN	100
'B'	12-32	ZURN	200
'C'	33-60	ZURN	300
'D'	61-113	ZURN	400
'E'	114-154	ZURN	500
'F'	155-330	ZURN	600

DOMESTIC WATER HEATER SCHEDULE

TAG	INPUT (BTU/hr)	RECOVERY RATE GPH 40°-140°F	STORAGE TANK SIZE (GAL.)	OPERATING WEIGHT (lbs.)	TYPICAL UNIT MFR. & MODEL NO.	NOTES
DWH-1	100,000	120	60	680	AMTROL BOILERMATE WH-60ZCDW	①②
DWH-2	100,000	120	60	680	AMTROL BOILERMATE WH-60ZCDW	①②

NOTES: ① PERFORMANCE BASED ON 30 ΔT. ② MAXIMUM HEAT EXCHANGER PRESSURE DROP – 15FT HEAD.

PLUMBING PUMP SCHEDULE

TAG	LOCATION	SERVICE	GPM	HD (FT)	ELECTRICAL DATA HP	RPM	VOLTS	PH	FLA	TYP. UNIT MANUF. & MODEL NO.	NOTES:
RP-1	MECHANICAL ROOM	DHW RECIRC PUMP	4	12.5	1/25	3250	115	1	0.84	TACO 008	①②③
SP-1	ELEVATOR SHAFT	ELEVATOR SUMP	64	22	0.4	3600	115	1	5	STANCOR OIL-MINDER SE-40	⑥
BP-1	MECHANICAL ROOM	DOMESTIC COLD WATER	130	88	5	3500	480	3	16.2	SYNCROFLO #55DC53V PACKAGED SKID	④⑤
BP-2	MECHANICAL ROOM	DOMESTIC COLD WATER	130	88	5	3500					

NOTES:
1. PROVIDE SPARE PUMP COMPLETE. FURNISH TO OWNER.
2. RP TO RUN CONSTANTLY.
3. PROVIDE PUMP WITH BRONZE CASING/IMPELLER.
4. PACKAGE TO INCLUDE SYNCROFLO #170 BLADDER TANK.
5. TOTAL SYSTEM PRESSURE IS 63 PSIG. DESIGN BASED ON MINIMUM MUNICIPAL PRESSURE OF 30 PSIG.
6. OIL RETAINING PUMP SYSTEM.

AS BUILT
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STATE OF MAINE
RONNIE M. WILLEY
NO. 11029
LICENSED PROFESSIONAL ENGINEER
6/28/07

PROJECT TITLE:
MAINE TURNPIKE AUTHORITY
ADMINISTRATION BUILDING
PORTLAND, MAINE

CURRENT ISSUE STATUS:
ISSUED FOR BIDDING/CONSTRUCTION
7-9-07

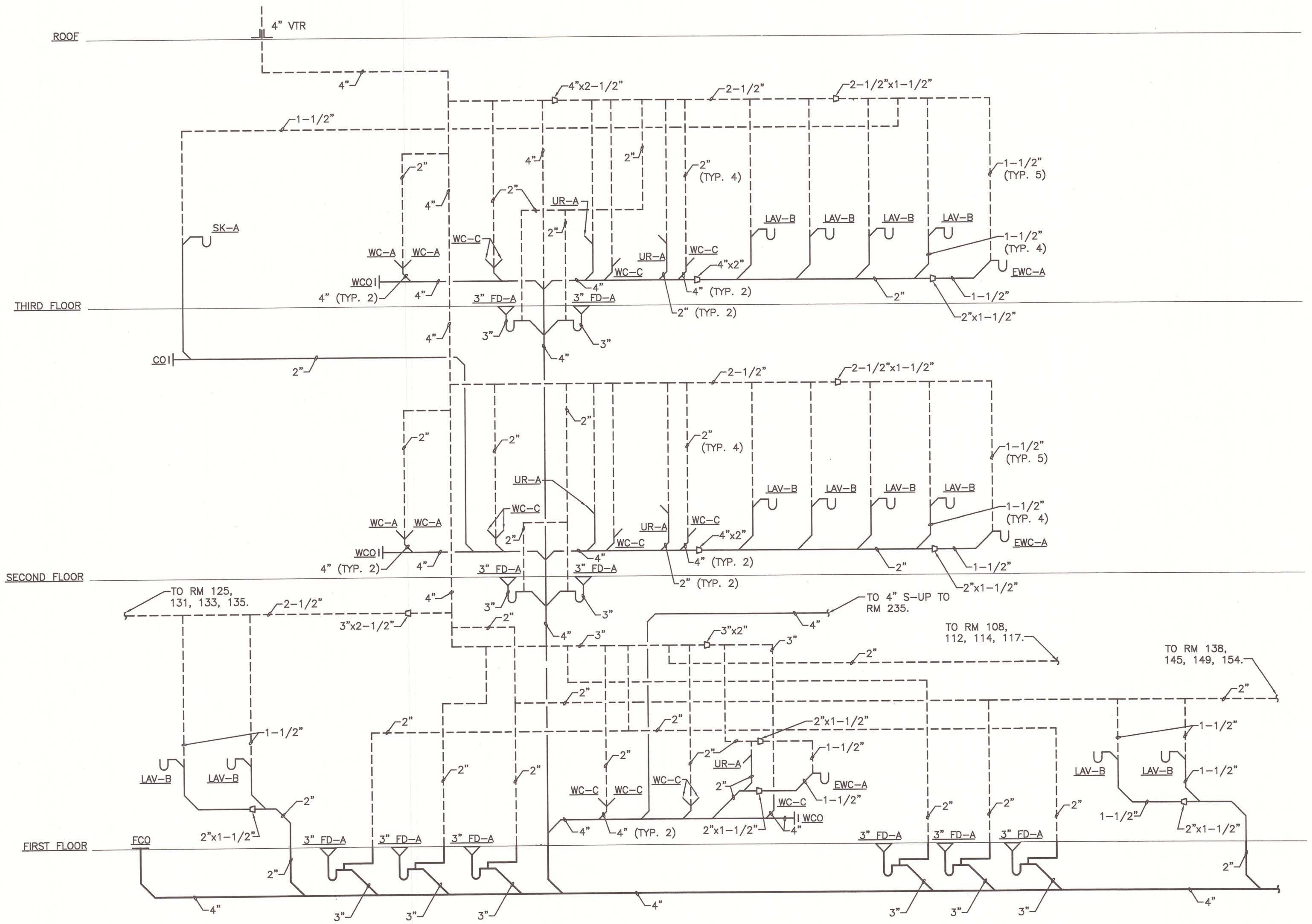
REV	DESCRIPTION	DATE
0	BIDDING/CONSTRUCTION	7-9-07

GRAPHIC SCALE: 0" 1"

SCALE:	NOT TO SCALE
PROJECT MANAGER:	SLB
JC/DRAWN BY:	TCM/BGG
A/E OF RECORD:	RMW
CAD FILE:	PL601-06016
PROJECT NO:	06016
DATE:	7-9-07

SHEET TITLE:
SCHEDULES

SHEET No. PL601



NOTE:

1. SEE SHEET M-001 FOR LEGEND AND ABBREVIATIONS.

A1 DRAIN, WASTE, AND VENT RISER DIAGRAM – MEN'S & WOMEN'S TOILET/SHOWER ROOM STACK

NOT TO SCALE

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STATE OF MAINE
RONNIE M. WILLEY
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6/28/07

PROJECT NORTH
MAG NORTH

PROJECT TITLE:
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PORTLAND, MAINE

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PROJECT NO:	06016
DATE:	7-9-07

SHEET TITLE:
RIDER DIAGRAM

SHEET No. PL651

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LIGHTING

- 2x4 FLUORESCENT FIXTURE
- Ab — ASSOCIATED CONTROL DEVICE
- FIXTURE TYPE (SEE LIGHT FIXTURE SCHEDULE)
- 1x4 FLUORESCENT FIXTURE
- 2x2 FLUORESCENT FIXTURE
- FIXTURE WIRED TO UNSWITCHED NORMAL CIRCUIT
- FIXTURE WIRED TO UNSWITCHED EMERGENCY CIRCUIT
- FIXTURE WIRED TO SWITCHED EMERGENCY CIRCUIT
- DOWN LIGHT
- FLUORESCENT STRIP
- WALL MOUNTED FIXTURES
- TRACK LIGHTING
- POLE MOUNTED SITE LIGHTING FIXTURE
- ab — FIXTURE TYPE (SEE LIGHT FIXTURE SCHEDULE)
- FLOOD LIGHT
- WALL WASH LIGHT FIXTURE
- EXIT SIGN, CEILING MOUNTED ARROW INDICATES EGRESS DIRECTION SHADING INDICATES SIGN FACE
- EXIT SIGN, WALL MOUNTED SHADING INDICATES SIGN FACE
- TD — DUAL HEAD EMERGENCY LIGHT BATTERY PACK TD – TIME DELAY RESET
- REMOTE EMERGENCY LIGHTING HEAD
- WP — WALL PACK
- S_3 — 3-WAY TOGGLE SWITCH
- S_a — SINGLE POLE TOGGLE SWITCH INDICATES CONTROLLED FIXTURE
- S_4 — 4-WAY TOGGLE SWITCH
- S_{II} — DUAL LEVEL SWITCHING
- S_D — DIMMER SWITCH. INCANDESCENT OR FLUORESCENT AS REQUIRED.
- S_P — TOGGLE SWITCH WITH PILOT LIGHT
- S_T — DIGITAL TIMER SWITCH HUBBELL #TD200 OR EQUAL
- S_{DT} — SINGLE POLE DOUBLE THROW TOGGLE SWITCH, CENTER POSITION OFF
- S_{WP} — WEATHER PROOF
- S_{XP} — EXPLOSION PROOF
- S_{OS} — OCCUPANCY SENSOR SWITCH
- UNSWITCHED CONTINUATION OF BRANCH CIRCUIT
- HOME RUN
- x — OCCUPANCY SENSOR a. INDICATES SENSOR TYPE INDICATES AIMING DIRECTION
- DS x — DAYLIGHT SENSOR LIGHTS CONTROLLED BY SENSOR
- S x — SINGLE BUTTON LOW VOLTAGE SWITCH INDICATES LIGHTING CONTROL PANEL ZONE
- EPC [x] — EMERGENCY POWER CONTROL MODULE UL 924 LISTED. VISTA #PCM-277 OR EQUAL W/ NORMAL BRANCH SWITCHING INICATES NORMAL SWITCHING VIA MODULE

COMMUNICATION & DATA SYSTEMS

- TELEPHONE SYSTEM WALL JACK W–INDICATES WALL MOUNTED AT 60" AFF P–INDICATES PAYPHONE (2)–INDICATES 2 OUTLETS, SINGLE BOX
- DATA SYSTEM OUTLET
- COMBINATION VOICE/DATA SYSTEM OUTLET
- UNDERFLOOR TELEPHONE SYSTEM OUTLET
- UNDERFLOOR DATA SYSTEM OUTLET
- UNDERFLOOR VOICE & DATA OUTLET
- TV — CABLE TELEVISION SYSTEM OUTLET. MOUNT 18"AFF UNLESS OTHERWISE NOTED
- CCTV — CLOSED CIRCUIT TELEVISION OUTLET. MOUNT 18" AFF UNLESS OTHERWISE NOTED
- PA — PAGING SYSTEM CONTROL PANEL AND PAGING AMPLIFIER
- PAGING SYSTEM SPEAKER. CEILING MOUNTED
- PAGING SYSTEM SPEAKER. WALL MOUNT AT 7'-6" AFF 1. FLUSH, 2. SURFACE, 3. HORN, 4. DUAL HORN
- VC — VOLUME CONTROL
- INTERCOM SYSTEM CALL STATION
- CS — CLOCK SPEAKER
- HS — INTERCOM SYSTEM HAND SET
- WALL MOUNTED CLOCK

POWER

- (4) 30A — NON-FUSED SAFETY SWITCH AMPERE RATING NEMA ENCLOSURE RATING
- F 60AS 40AF (4) — FUSED SAFETY SWITCH. TOP NUMBER INDICATES SWITCH AMPERE RATING. LOWER NUMBER INDICATES FUSE RATING NEMA ENCLOSURE
- 1 (4) — MAGNETIC MOTOR STARTER. FVNR UNLESS INDICATED OTHERWISE NEMA ENCLOSURE RATING NEMA SIZE (TYPICAL)
- CB 20/1 — COMBINATION CIRCUIT BREAKER/MAGNETIC MOTOR STARTER FIRST NUMBER INDICATES CIRCUIT BREAKER AMPERE RATING SECOND NUMBER INDICATES NEMA STARTER SIZE
- F 60/40/1 — COMBINATION FUSED DISCONNECT/MAGNETIC MOTOR STARTER NUMBERS INDICATE DISCONNECT AMPERE RATING/FUSE RATING/NEMA STARTER SIZE
- 30/1 — NON-FUSED DISCONNECT/MAGNETIC MOTOR STARTER FIRST NUMBER INDICATES CIRCUIT BREAKER AMPERE RATING SECOND NUMBER INDICATES NEMA STARTER SIZE
- M OL — MANUAL MOTOR STARTER. TOGGLE OPERATED, 1,2 OR 3 POLE AS REQUIRED. OVERLOAD PROTECTION
- M — MANUAL MOTOR SWITCH, TOGGLE OPERATED, SINGLE PHASE. 1 OR 2 POLE AS REQUIRED (NO OVERLOAD PROTECTION)
- CB 100A — ENCLOSED CIRCUIT BREAKER AMPERE RATING
- 5 — ELECTRIC MOTOR, NUMBER INDICATES HORSEPOWER RATING
- 5 — EXPLOSION PROOF MOTOR
- VAV — VARIABLE AIR VOLUME CONTROL ACTUATORS
- HS H/O/A — LOCAL SELECTOR SWITCH H/O/A – HAND/OFF/AUTO
- EMO — EMERGENCY OFF BREAK GLASS STATION
- PB — PUSH BUTTON STATION
- J — JUNCTION BOX
- T — TRANSFORMER
- P — POWER POLE
- CONDUIT TURNING UP
- CONDUIT TURNING DOWN
- EY CONDUIT SEAL
- E — DUPLEX RECEPTACLE, NEMA 5-20R. INSTALLED ON EMERGENCY CIRCUIT (TYPICAL)
- GFI DUPLEX RECEPTACLE, NEMA 5-20R
- HOSPITAL GRADE DUPLEX RECEPTACLE, NEMA 5-20R
- HOSPITAL GRADE GFCI DUPLEX RECEPTACLE, NEMA 5-20R
- IG — HOSPITAL GRADE ISOLATED GROUND DUPLEX RECEPTACLE, NEMA 5-20R
- SINGLE RECEPTACLE, NEMA 5-20R
- SINGLE CEILING RECEPTACLE, NEMA 5-20R UNO
- DOUBLE DUPLEX (QUADRUPLEX) RECEPTACLE, NEMA 5-20R
- HOSPITAL GRADE DOUBLE DUPLEX RECEPTACLE NEMA 5-20R
- S — SWITCHED RECEPTACLE
- FLOOR OUTLET, DUPLEX RECEPTACLE, NEMA 5-20R
- POWER RECEPTACLE, 480 VOLT NEMA CONFIGURATION AS NOTED.
- POWER RECEPTACLE, 240 VOLT NEMA CONFIGURATION AS NOTED.
- PANELBOARD, NORMAL POWER
- PANELBOARD, EMERGENCY POWER
- MULTI OUTLET ASSEMBLY
- CP — CONTROL PANEL

GROUNDING

- GROUND ROD
- EXOTHERMIC WELD CONNECTION
- BOLTED CONNECTION
- ——G—— BARE COPPER CONDUCTOR RUN EXPOSED
- ----G---- BARE COPPER CONDUCTOR EMBEDDED IN CONCRETE OR BURIED

LINE TYPES

- EXISTING
- NEW
- DEMOLITION

FIRE ALARM

- FACP — FIRE ALARM CONTROL PANEL
- FAA — FIRE ALARM ANNUNCIATOR
- M — FIRE ALARM MASTER BOX
- F — FIRE ALARM MANUAL PULL STATION
- FIRE ALARM SPEAKER/STROBE UNIT
- FIRE ALARM AUDIBLE/VISIBLE NOTIFICATION APPLIANCE (GENERAL EVACUATION)
- FIRE ALARM AUDIBLE/VISIBLE NOTIFICATION APPLIANCE CLEAN ROOM NOTIFICATION (LOCAL)
- F (110) C VR — FIRE ALARM VISIBLE ONLY NOTIFICATION APPLIANCE CANDELA INTENSITY-15/75 UNLESS OTHERWISE NOTED CEILING MOUNTED PROVIDE W/ LEXAN COVER STI #1210A OR EQUAL
- P A — PHOTOELECTRIC SMOKE DETECTOR. CEILING MOUNTED INDICATES AUXILIARY CONTACT.
- H — FIXED TEMPERATURE HEAT DETECTOR. CEILING MOUNTED
- <TPP-1> — INDICATES EQUIPMENT INTERLOCKED WITH THE DETECTOR CLEAN ROOM SMOKE DETECTOR
- P1 <RC-1> — INDICATES EQUIPMENT INTERLOCKED WITH THE SMOKE DETECTOR
- H R — COMBINATION RATE-OF-RISE/FIXED TEMPERATURE HEAT DETECTOR. CEILING MOUNTED
- B — ELECTRIC BELL
- D — DUCT SMOKE DETECTOR, PHOTOELECTRIC WITH AUXILIARY CONTACT.
- FS — SPRINKLER SYSTEM FLOW SWITCH
- TS — SPRINKLER SYSTEM TAMPER SWITCH
- DH — FIRE ALARM SYSTEM MAGNETIC DOOR HOLDER
- CM — FIRE ALARM SYSTEM CONTROL MODULE
- INTERLOCK RELAY
- SD — SMOKE DAMPER
- RAI — REMOTE ALARM INDICATOR
- RTS — REMOTE TESTING STATION
- K — KNOX BOX

SECURITY SYSTEMS

- CEILING OR WALL MOUNTED FIXED CAMERA
- P — CEILING OR WALL MOUNTED PTZ CAMERA
- DOOR — DOOR CONTROL EQUIPMENT
- DC — MONITORED DOOR POSITION SWITCH AND CONTROLLED DOOR HARDWARE
- DPS — MONITORED DOOR POSITION SWITCH
- TV — CCTV CONTROL OR DISPLAY EQUIPMENT
- D — DOOR CONTACT
- CR — CARD READER
- KP — KEY PAD
- CCTV — CLOSED CIRCUIT TELEVISION CAMERA
- ES — ELECTRIC STRIKE
- ML — MAG LOCK

ONE LINE DIAGRAM

- MOLDED CASE CIRCUIT BREAKER
- ST — ST – SHUNT TRIP GF – GROUND FAULT EO – ELECTRICALLY OPERATED
- DISCONNECT, ISOLATION OR SAFETY SWITCH
- 1 — MAGNETIC MOTOR STARTER. NUMERAL INDICATES NEMA SIZE FVNR UNLESS OTHERWISE NOTED. FVR – FULL VOLTAGE REVERSING RVAT – REDUCING VOLTAGE AUTO TRANSFORMER 2S – TWO SPEED
- VFD — VARIABLE FREQUENCY DRIVE
- OA — POWER TRANSFORMER OA – LIQUID TYPE SELF COOLED AA – DRY TYPE SELF COOLED FA – FAN COOLED CONNECTION
- SHIELDED ISOLATION TRANSFORMER
- 2 480/120 — POTENTIAL TRANSFORMER RATIO NUMBER REQUIRED
- 3 600/5 — CURRENT TRANSFORMER RATIO NUMBER REQUIRED
- GROUND FAULT CURRENT TRANSFORMER
- 5 — MOTOR, NUMBER INDICATES HORSEPOWER
- GENERATOR
- N E L ATS — ATS – AUTOMATIC TRANSFER SWITCH MTS – MANUAL TRANSFER SWITCH
- A — METER A – AMMETER V – VOLTMETER W – WATTMETER WH – WATT HOURMETER KWH – KILOWATT HOUR KVAR – KILOVAR METER VAR – VAR METER HZ – FREQUENCY METER PF – POWER FACTOR METER
- DPM — DIGITAL POWER METER
- AS — METER TRANSFER SWITCH AS – AMMETER SWITCH VS – VOLTMETER SWITCH
- TVSS — TRANSIENT VOLTAGE SURGE SUPPRESSOR
- GROUND

ABBREVIATIONS

A,AMP	AMPERE
AFF	ABOVE FINISHED FLOOR
AFG	ABOVE FINISHED GRADE
AHJ	AUTHORITY HAVING JURISDICTION
AIC	AMPERE INTERRUPTING CAPACITY
AWG	AMERICAN WIRE GAUGE
BFG	BELOW FINISHED GRADE
BOS	BOTTOM OF STEEL
C	CONDUIT, CONDUCTOR
CATV	CABLE TELEVISION
CB	CIRCUIT BREAKER
CCTV	CLOSED CIRCUIT TELEVISION
CPT	CONTROL POWER TRANSFORMER
CT	CURRENT TRANSFORMER
CU	COPPER
DACT	DIGITAL ALARM COMMUNICATOR TRANSMITTER
DB	DIRECT BURIED
DISC	DISCONNECT
DN	DOWN
EMT	ELECTRICAL METALLIC TUBING
EWC	ELECTRIC WATER COOLER
FAA	FIRE ALARM ANNUNCIATOR
FACP	FIRE ALARM CONTROL PANEL
FBO	FURNISHED BY OTHERS
FU	FUSE
FWE	FURNISHED WITH EQUIPMENT
GEN	GENERATOR
GFCI	GROUND FAULT CIRCUIT BREAKER
GND	GROUND
HP	HORSEPOWER
HTR	HEATER
IG	ISOLATED GROUND
IMC	INTERMEDIATE METAL CONDUIT
K	KILO
KCMIL	THOUSAND CIRCULAR MILS
KV	KILOVOLT
KVA	KILOVOLT-AMPERE
KVAR	KILOVOLT-AMPERE REACTIVE
KW	KILOWATT
KWH	KILOWATT-HOUR
LA	LIGHTNING ARRESTER
LTG	LIGHTING
MC	METAL CLAD
MCB	MAIN CIRCUIT BREAKER
MFR	MANUFACTURER
MI	MINERAL INSULATED
MLO	MAIN LUG ONLY
MTD	MOUNTED
MV	MEDIUM VOLTAGE
NC	NORMALLY CLOSED
NEC	NATIONAL ELECTRICAL CODE
NEG	NEGATIVE
NEUT	NEUTRAL
NIC	NOT IN CONTRACT
NO	NORMALLY OPEN
NTS	NOT TO SCALE
PF	POWER FACTOR
PH	PHASE
PVC	POLYVINYL CHLORIDE
RGS	RIGID STEEL CONDUIT
RSC	RIGID STEEL CONDUIT
RTD	RESISTANCE TEMPERATURE DETECTOR
SN	SOLID NEUTRAL
STP	SHIELDED TWISTED PAIR
STT	SHIELDED TWISTED TRIPLET
SWBD	SWITCHBOARD
SWGR	SWITCHGEAR
TOS	TOP OF STEEL
TP	TAMPER PROOF
TRANSF	TRANSFORMER
TVSS	TRANSIENT VOLTAGE SURGE SUPPRESSER
UNO	UNLESS NOTED OTHERWISE
V	VOLT
VA	VOLT-AMPERE
VAR	VOLT-AMPERE REACTIVE
WM	WATT METER
WP	WEATHER PROOF
XFMR	TRANSFORMER
XP	EXPLOSION PROOF

GENERAL NOTES:

1. ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH NFPA-70, NATIONAL ELECTRICAL CODE (NEC).
2. ALL MOTOR SAFETY SWITCHES, DISCONNECTS AND MOTOR STARTERS ARE PROVIDED BY DIVISION 16000 UNLESS NOTED AS FURNISHED WITH EQUIPMENT (FWE).
3. UNLESS OTHERWISE NOTED CONVENIENCE RECEPTACLES SHALL BE MOUNTED 18-INCHES AFF, LIGHTING TOGGLE SWITCHES 48-INCHES AFF, DATA SYSTEM OUTLETS 18-INCHES AFF, FIRE ALARM NOTIFICATION DEVICES 80-INCHES AFF OR 6-INCHES BELOW CEILING, WHICHEVER IS LOWER, AND FIRE ALARM MANUAL PULL STATIONS 48-INCHES TO TOP OF DEVICE.
4. ALL PENETRATIONS THROUGH FLOORS, RATED WALLS AND PARTITIONS SHALL BE SEALED WITH UL APROVED FIRE SEALANT MATERIAL TO MAINTAIN THE RATING OF SEPARATION.
5. ALL ENCLOSURES, CONDUIT BODIES AND THEIR COVERS CONTAINING FIRE ALARM SYSTEM CONDUCTORS SHALL BE PAINTED RED.
6. AN EQUIPMENT GROUNDING CONDUCTOR SHALL BE INSTALLED WITH EVERY FEEDER AND BRANCH CIRCUIT.
7. UNLESS OTHERWISE NOTED WIRING SHALL BE 2#12 AWG CONDUCTORS AND #12 GND. HOME RUNS FED FROM 20A-1P CIRCUITS IN EXCESS OF 100 FEET SHALL BE #10 AWG.
8. FLEXIBLE CONNECTIONS TO MOTORS SHALL BE LIQUID TIGHT FLEXIBLE METAL CONDUIT, UNLESS OTHERWISE NOTED.
9. LIGHTING TOGGLE SWITCHES SHALL BE COMMERCIAL SPECIFICATION GRADE 277/120 VOLT, SIDE WIRED AND PROVIDED WITH GROUNDING SCREW. LEVITON, PASS AND SEYMOUR OR APPROVED EQUAL. COORDINATE COLOR WITH ARCHITECT.
10. CONVENIENCE RECEPTACLES SHALL BE COMMERCIAL SPECIFICATION GRADE GROUNDING TYPE NEMA 5-20R, SIDE WIRED. LEVITON, PASS AND SEYMOUR OR APPROVED EQUAL. EMERGENCY POWER DEVICES TO BE RED AND NORMAL DEVICES GREY. CLEARLY LABEL ALL DEVICES WITH PANELBOARD AND BRANCH CIRCUIT IDENTIFICATION.
11. PROVIDE WALL PLATES FOR ALL WIRING DEVICES, STAINLESS STEEL IN FINISHED AREAS AND GALVANIZED IN UNFINISHED AREAS.
12. ALL WIRING SHALL BE 600V, COPPER WITH THHN/THWN INSULATION. SERVICE ENTRANCE CONDUCTORS SHALL HAVE XHHW INSULATION.
13. UNLESS OTHERWISE NOTED THREE PHASE EQUIPMENT WIRING SHALL BE 3#12 AWG CONDUCTORS AND #12 GND. HOME RUNS IN EXCESS OF 100 FEET SHALL BE #10 AWG.

GENERAL NOTE

1. ALL GENERAL NOTES, SYMBOL LISTS, AND DETAILS ARE TO BE CONSIDERED AS APPLICABLE TO ALL ELECTRICAL DRAWINGS FOR THIS PROJECT. SYMBOLS AND ABBREVIATIONS SHOWN ON THIS SHEET ARE FOR REFERENCE ONLY AND DO NOT INDICATE THEIR INCORPORATION IN THE DESIGN.

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STATE OF MAINE — LICENSED PROFESSIONAL ENGINEER — NO. 7707 — 7/9/07 — Rev. 0

PROJECT TITLE:
MAINE TURNPIKE AUTHORITY ADMINISTRATION BUILDING
PORTLAND, MAINE

CURRENT ISSUE STATUS:
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REV	DESCRIPTION	DATE
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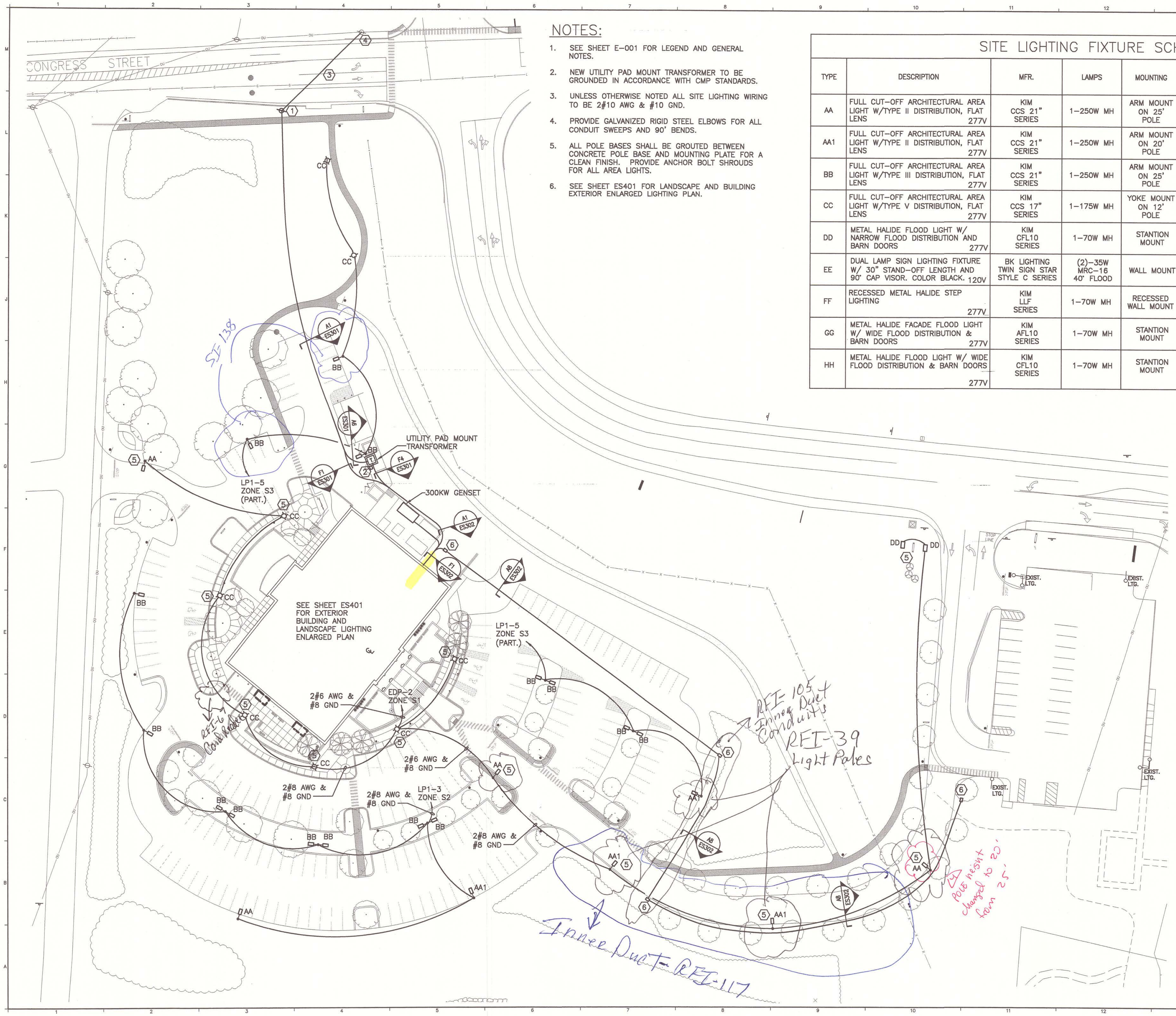
A/E OF RECORD:	JPP
CAD FILE:	E001-06016
PROJECT NO:	06016
DATE:	7-9-07

SHEET TITLE:
LEGEND AND GENERAL NOTES

SHEET No.
E001



NOTES:

1. SEE SHEET E-001 FOR LEGEND AND GENERAL NOTES.
2. NEW UTILITY PAD MOUNT TRANSFORMER TO BE GROUNDED IN ACCORDANCE WITH CMP STANDARDS.
3. UNLESS OTHERWISE NOTED ALL SITE LIGHTING WIRING TO BE 2#10 AWG & #10 GND.
4. PROVIDE GALVANIZED RIGID STEEL ELBOWS FOR ALL CONDUIT SWEEPS AND 90° BENDS.
5. ALL POLE BASES SHALL BE GROUTED BETWEEN CONCRETE POLE BASE AND MOUNTING PLATE FOR A CLEAN FINISH. PROVIDE ANCHOR BOLT SHROUDS FOR ALL AREA LIGHTS.
6. SEE SHEET ES401 FOR LANDSCAPE AND BUILDING EXTERIOR ENLARGED LIGHTING PLAN.

SITE LIGHTING FIXTURE SCHEDULE

TYPE	DESCRIPTION	MFR.	LAMPS	MOUNTING	FINISH	NOTES
AA	FULL CUT-OFF ARCHITECTURAL AREA LIGHT W/TYPE II DISTRIBUTION, FLAT LENS 277V	KIM CCS 21" SERIES	1-250W MH	ARM MOUNT ON 25' POLE	BLACK	POLE: 25' TALL, ROUND STRAIGHT ALUMINUM, W/ BOLT COVER SHROUD.
AA1	FULL CUT-OFF ARCHITECTURAL AREA LIGHT W/TYPE II DISTRIBUTION, FLAT LENS 277V	KIM CCS 21" SERIES	1-250W MH	ARM MOUNT ON 20' POLE	BLACK	POLE: 20' TALL, ROUND STRAIGHT ALUMINUM, W/ BOLT COVER SHROUD.
BB	FULL CUT-OFF ARCHITECTURAL AREA LIGHT W/TYPE III DISTRIBUTION, FLAT LENS 277V	KIM CCS 21" SERIES	1-250W MH	ARM MOUNT ON 25' POLE	BLACK	POLE: 25' TALL, ROUND STRAIGHT ALUMINUM, W/ BOLT COVER SHROUD.
CC	FULL CUT-OFF ARCHITECTURAL AREA LIGHT W/TYPE V DISTRIBUTION, FLAT LENS 277V	KIM CCS 17" SERIES	1-175W MH	YOKE MOUNT ON 12' POLE	BLACK	POLE: 12' TALL, ROUND STRAIGHT ALUMINUM, W/ BOLT COVER SHROUD.
DD	METAL HALIDE FLOOD LIGHT W/ NARROW FLOOD DISTRIBUTION AND BARN DOORS 277V	KIM CFL10 SERIES	1-70W MH	STANTION MOUNT	BLACK	LANDSCAPE: PROVIDE IN-GRADE STANTION MOUNT BASE BUILDING: PROVIDE SURFACE TENON
EE	DUAL LAMP SIGN LIGHTING FIXTURE W/ 30" STAND-OFF LENGTH AND 90° CAP VISOR. COLOR BLACK. 120V	BK LIGHTING TWIN SIGN STAR STYLE C SERIES	(2)-35W MRC-16 40° FLOOD	WALL MOUNT	ALUMINUM	PROVIDE W/ INTEGRAL CANOPY TRANSFORMER OPTION. COORD. EXACT LOCATION W/ ARCHITECT.
FF	RECESSED METAL HALIDE STEP LIGHTING 277V	KIM LLF SERIES	1-70W MH	RECESSED WALL MOUNT	ALUMINUM	INSTALL IN RETAINING WALL. COORD. W/ LANDSCAPE ARCH. & CONTRACTOR
GG	METAL HALIDE FACADE FLOOD LIGHT W/ WIDE FLOOD DISTRIBUTION & BARN DOORS 277V	KIM AFL10 SERIES	1-70W MH	STANTION MOUNT	BLACK	PROVIDE IN-GRADE STANTION MOUNT BASE
HH	METAL HALIDE FLOOD LIGHT W/ WIDE FLOOD DISTRIBUTION & BARN DOORS 277V	KIM CFL10 SERIES	1-70W MH	STANTION MOUNT	ALUMINUM	PROVIDE STANTION MOUNT BASE FOR CANOPY ROOF INSTALLATION. COORD. W/ ARCHITECT

KEYED NOTES:

1. NEW UTILITY RISER POLE. PROVIDE STAND-OFF BRACKETS, GALVANIZED RIGID STEEL POWER RISERS, AND OTHER REQUIRED HARDWARE PER UTILITY COMPANY STANDARDS. STUB TELECOMMUNICATION CONDUITS ABOVE FINISHED GRADE PER SERVICE PROVIDER STANDARDS AND CAP SPARES AT 24" AFG. COORDINATE WITH CENTRAL MAINE POWER, VERIZON, AND TIME WARNER CABLE.
2. FURNISH AND INSTALL FREE STANDING STAINLESS STEEL UNISTRUT RACK AND UTILITY COMPANY METER ENCLOSURE. PROVIDE 1-1/4" GALVANIZED RIGID STEEL CONDUIT WITH PULLSTRING FROM TRANSFORMER PAD ENCLOSURE TO METER ENCLOSURE FOR UTILITY COMPANY INSTALLED METERING EQUIPMENT. MAX DISTANCE 35'. COORDINATE METERING INSTALLATION, CLEARANCES, AND EXACT LOCATION W/ OWNER, ARCHITECT, AND UTILITY COMPANY.
3. NEW OVERHEAD PRIMARY ELECTRICAL AND TELECOMMUNICATIONS SERVICE LATERAL BY UTILITY COMPANY.
4. EXISTING OVERHEAD UTILITY POLE. NEW OVERHEAD SERVICES SHALL ORIGINATE FROM THIS POLE LOCATION. ALL WORK BY UTILITY COMPANY.
5. STANDBY POWER SITE LIGHTING BRANCH CIRCUIT FED VIA EMERGENCY POWER CONTROL MODULE (EPC) FOR NORMAL POWER SWITCHING BY LIGHTING CONTROL PANEL LC1. SEE EL651 FOR DETAILS, SCHEDULES, AND ADDITIONAL INFORMATION.
6. FURNISH AND INSTALL 36"x24"x24" POLYMER CONCRETE PULLBOX. QUAZITE #PG SERIES OR EQUAL.

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STATE OF MAINE — JOHN P. PERRUZZI — NO. 7707 — LICENSED PROFESSIONAL ENGINEER — 7/11/07
Rev. 0

NORTH

PROJECT TITLE:
MAINE TURNPIKE AUTHORITY ADMINISTRATION BUILDING
PORTLAND, MAINE

ISSUED FOR BIDDING/CONSTRUCTION 7-9-07

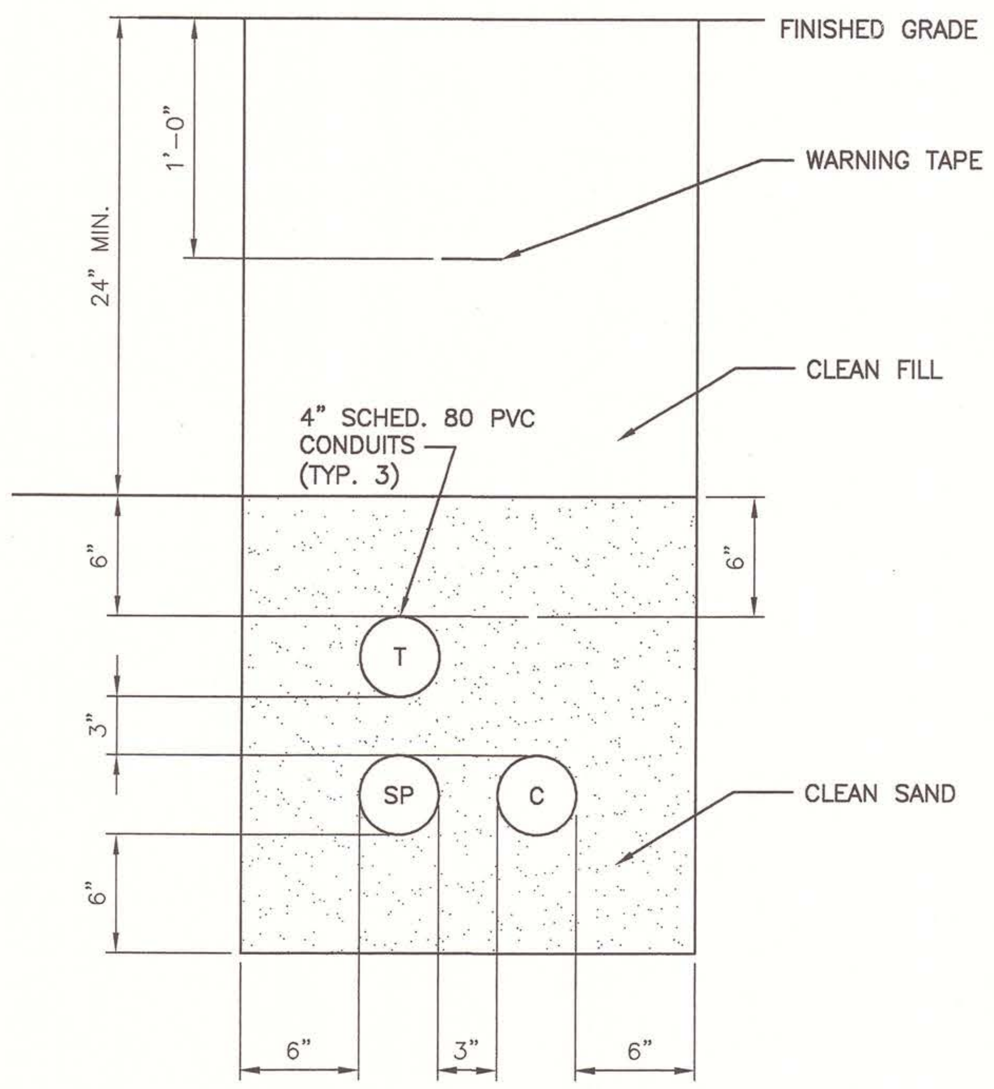
REV	DESCRIPTION	DATE
0	BIDDING/CONSTRUCTION	7-9-07

GRAPHIC SCALE: 0" 1"

SCALE:	1" = 40'-0"
PROJECT MANAGER:	SLB
JC/DRAWN BY:	TCM/PAF
A/E OF RECORD:	JPP
CAD FILE:	ES101-06016
PROJECT NO:	06016
DATE:	7-9-07

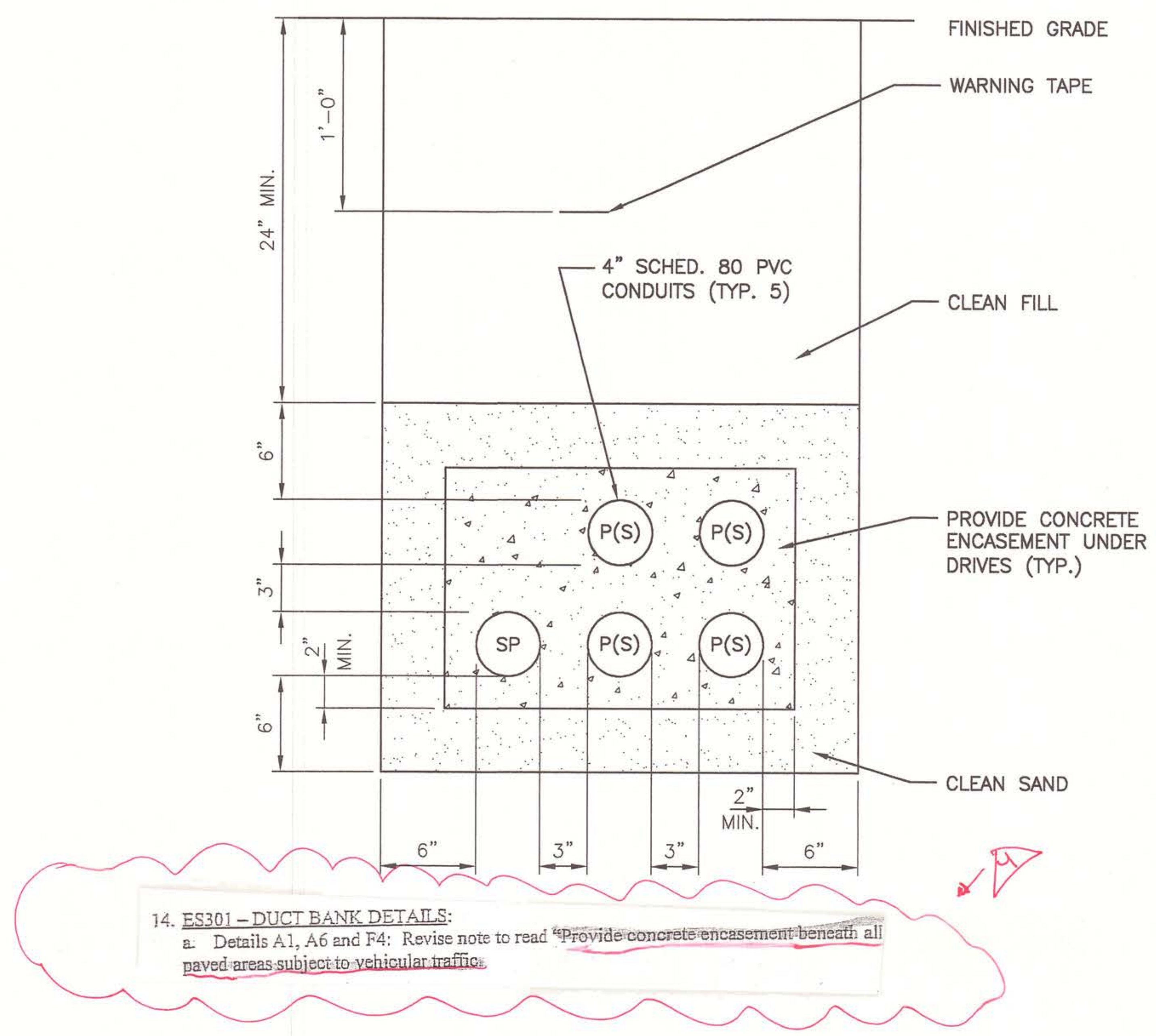
SHEET TITLE:
ELECTRICAL SITE PLAN

SHEET No.
ES101



F1 DUCTBANK DETAIL

NOT TO SCALE



F4 DUCTBANK DETAIL

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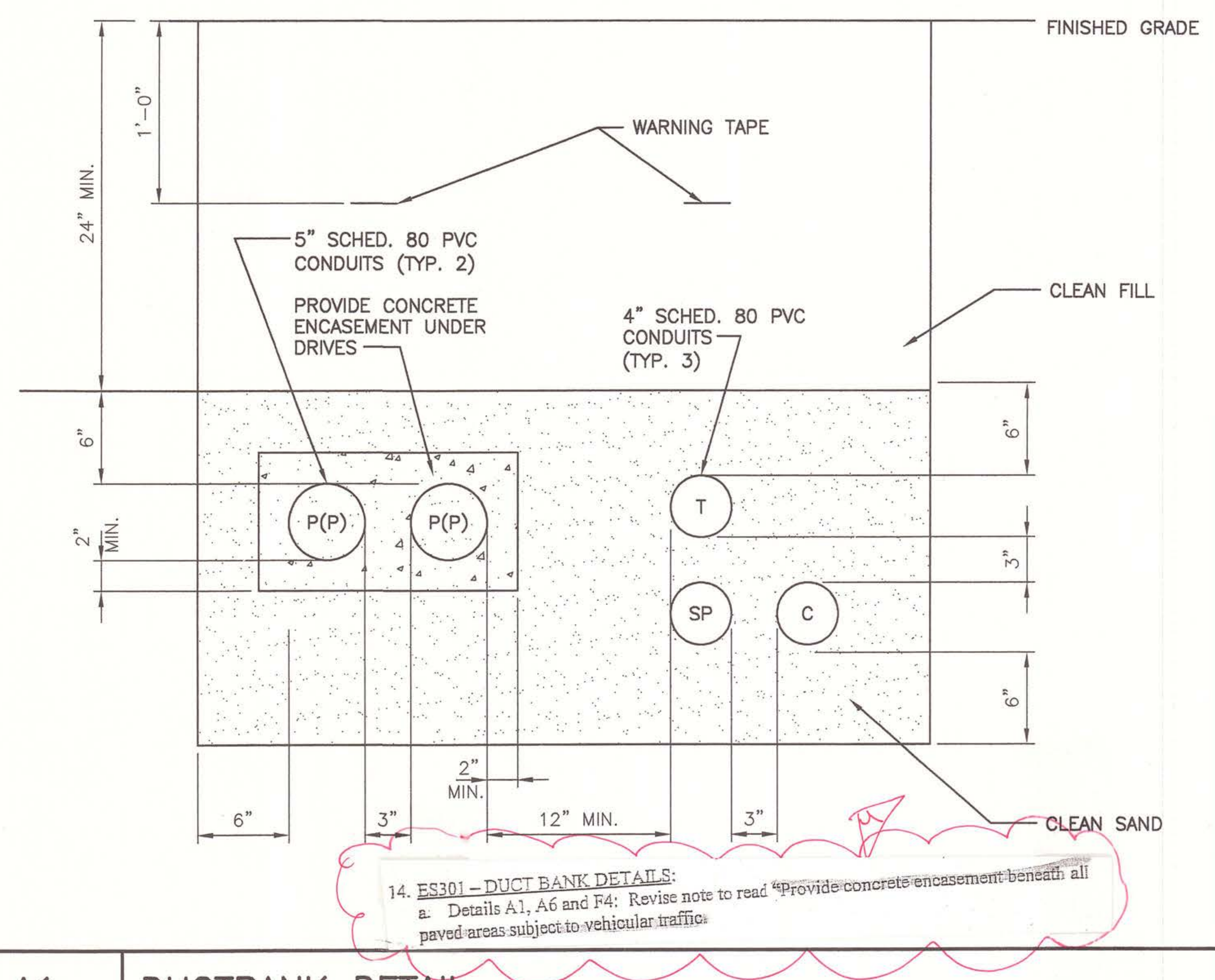
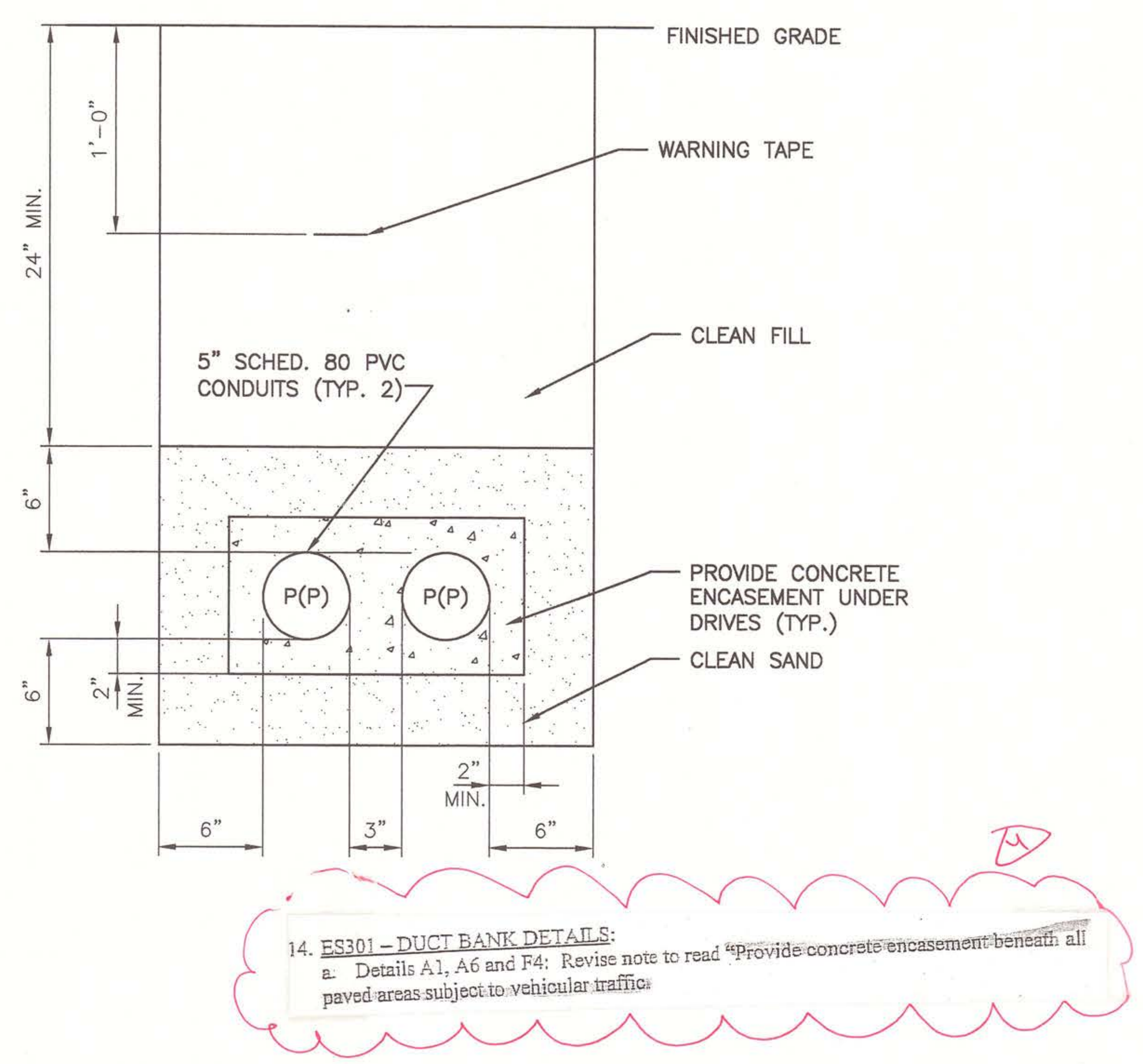


A1 DUCTBANK DETAIL

NOT TO SCALE



A6 DUCTBANK DETAIL

NOT TO SCALE

NOTES:

1. SEE SHEET E001 FOR LEGEND AND GENERAL NOTES.

KEY:

C	CABLE TELEVISION SERVICE
GA	GENERATOR AUXILLIARIES
GS	GENERATOR START CIRCUITS
P(LS)	LIFE SAFETY GENERATOR SERVICE
P(P)	PRIMARY ELECTRICAL SERICE
P(S)	SECONDARY ELECTRICAL SERVICE
P(ST)	STANDBY GENERATOR SERVICE
SP	SPARE
T	TELECOMMUNICATIONS SERVICE
UM	UTILITY COMPANY METERING

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PROJECT TITLE:
MAINE TURNPIKE AUTHORITY
ADMINISTRATION BUILDING
PORTLAND, MAINE

CURRENT ISSUE STATUS:
ISSUED FOR BIDDING/CONSTRUCTION
7-9-07

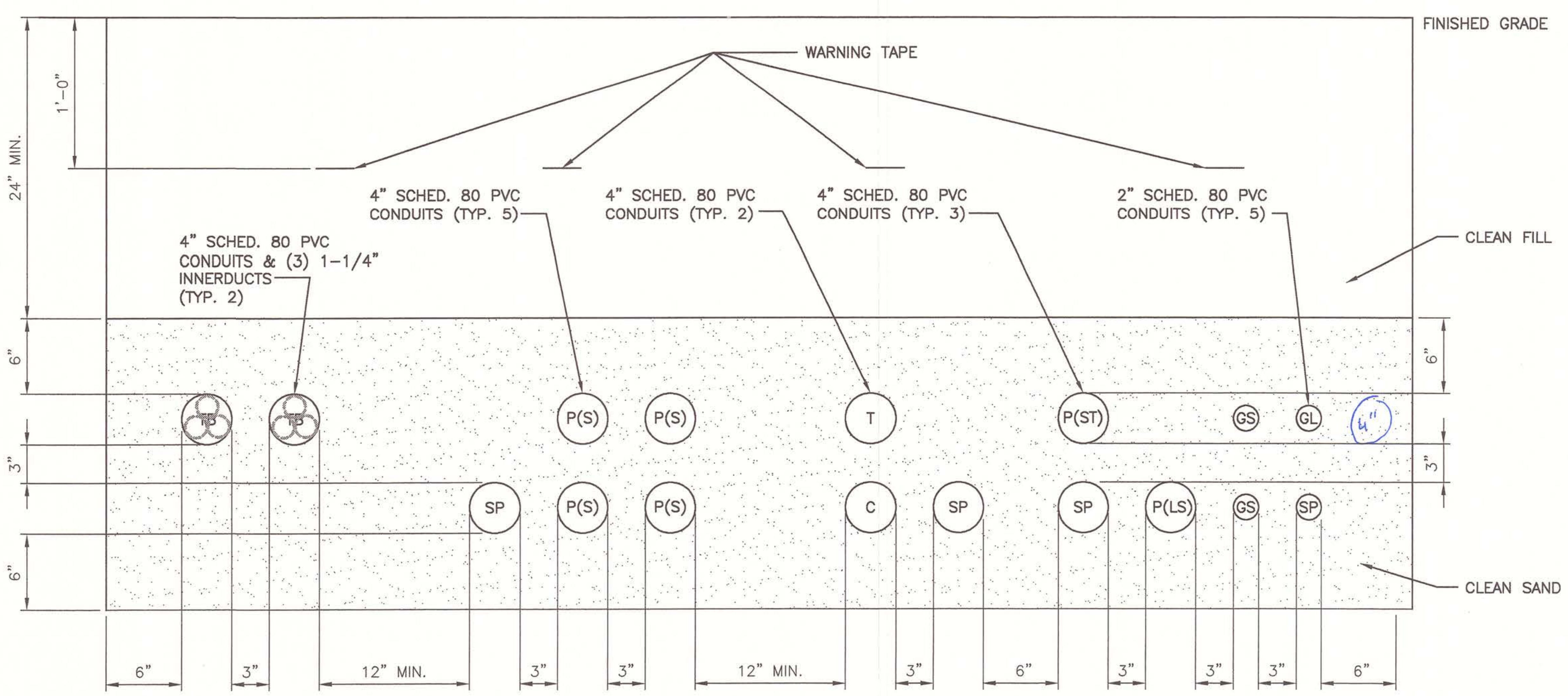
REV	DESCRIPTION	DATE
0	BIDDING/CONSTRUCTION	7-9-07

GRAPHIC SCALE: 0" 1"

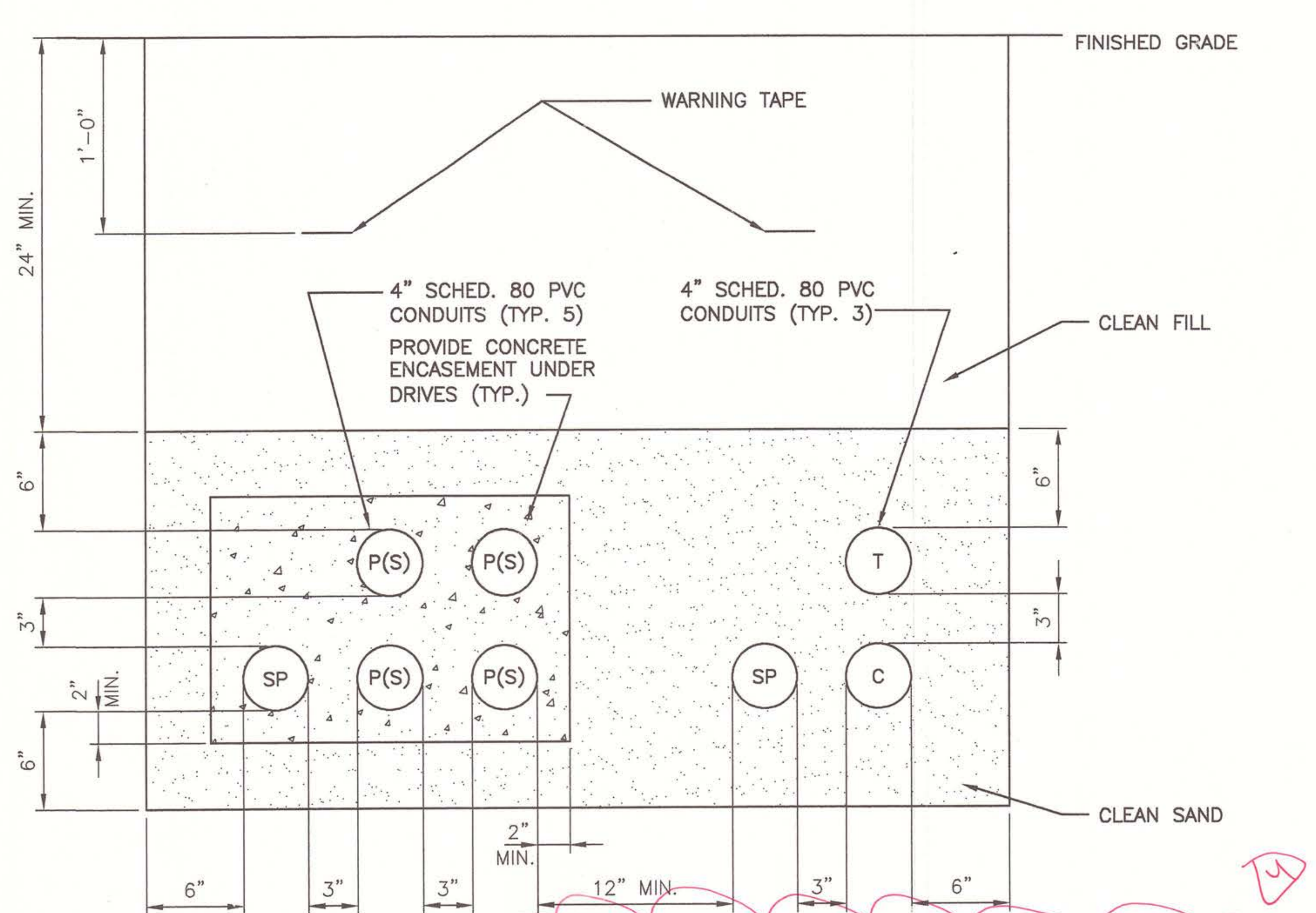
SCALE:	AS NOTED
PROJECT MANAGER:	SLB
JC/DRAWN BY:	TCM/CDS
A/E OF RECORD:	JPP
CAD FILE:	ES301-06016
PROJECT NO:	06016
DATE:	7-9-07

SHEET TITLE:
DUCT BANK DETAILS

SHEET No.
ES301

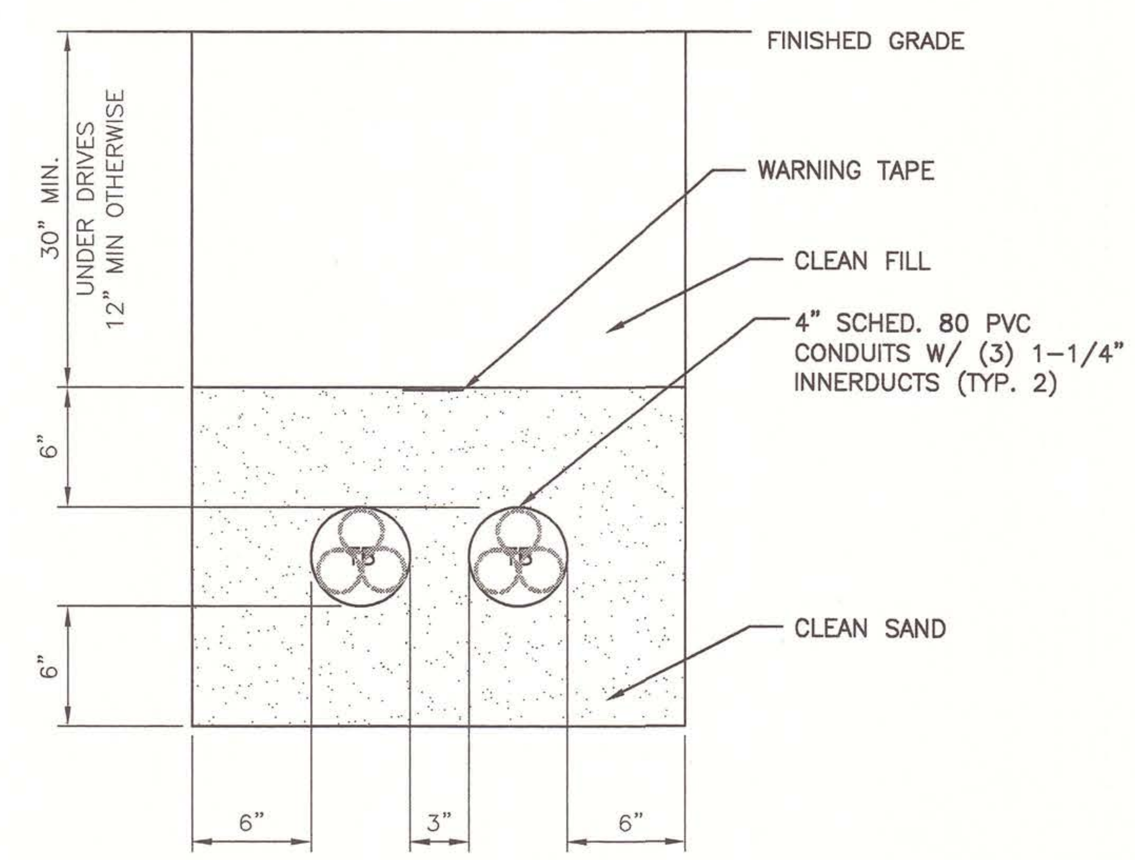


F1 | DUCTBANK DETAIL
NOT TO SCALE



15. ES302 – DUCT BANK DETAILS:
a. Detail A1: Revise note to read "Provide concrete encasement beneath all paved areas subject to vehicular traffic, including paved drives and parking areas."

A1 | DUCTBANK DETAIL
NOT TO SCALE



A8 | DUCTBANK DETAIL
NOT TO SCALE

NOTES:

1. SEE SHEET E001 FOR LEGEND AND GENERAL NOTES.

KEY:

C	CABLE TELEVISION SERVICE
GL	GENERATOR LOAD CENTER
GS	GENERATOR START CIRCUITS/AUXILIARIES
P(P)	PRIMARY ELECTRICAL SERVICE
P(S)	SECONDARY ELECTRICAL SERVICE
P(ST)	STANDBY GENERATOR SERVICE
P(LS)	LIFE SAFETY GENERATOR SERVICE
SP	SPARE
T	TELECOMMUNICATIONS SERVICE
TB	TOLL BOOTH CONDUIT CONNECTION
UM	UTILITY COMPANY METERING

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STATE OF MAINE
JON P. PERRUZZI
NO. 7707
LICENSED PROFESSIONAL ENGINEER
7/2/07
REV.0

PROJECT TITLE:
MAINE TURNPIKE AUTHORITY ADMINISTRATION BUILDING
PORTLAND, MAINE

CURRENT ISSUE STATUS:
ISSUED FOR BIDDING/CONSTRUCTION
7-9-07

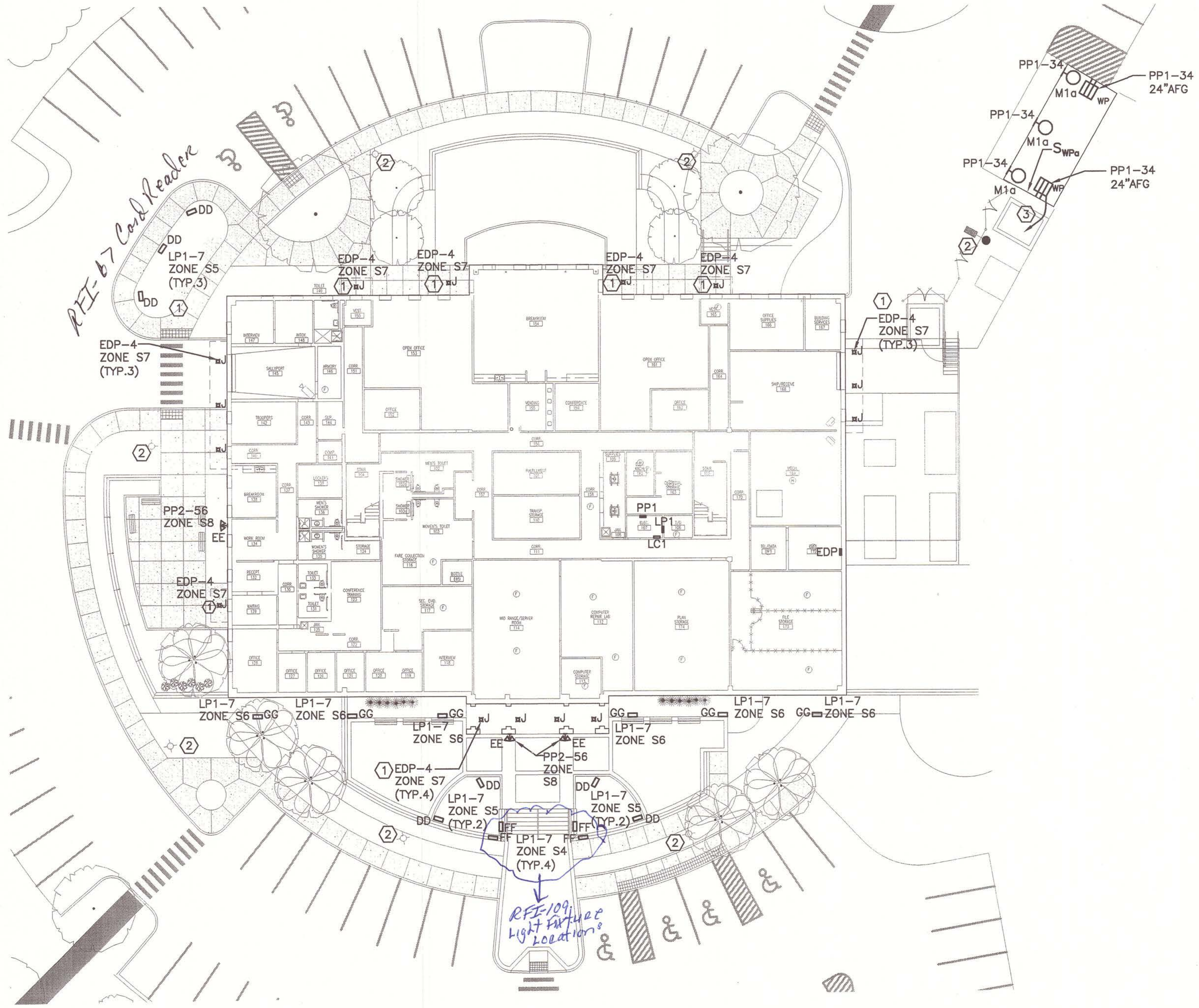
REV	DESCRIPTION	DATE
0	BIDDING/CONSTRUCTION	7-9-07

GRAPHIC SCALE:
0" 1"

SCALE:	AS NOTED
PROJECT MANAGER:	SLB
JC/DRAWN BY:	TCM/CDS
A/E OF RECORD:	JPP
CAD FILE:	ES302-06016
PROJECT NO:	06016
DATE:	7-9-07

SHEET TITLE:
DUCT BANK DETAILS

SHEET No.
ES302



NOTE:

1. SEE SHEET E001 FOR LEGEND AND ABBREVIATIONS.
2. SEE SHEET ES101 FOR OVERALL SITE PLAN AND EL651 & EL652 FOR DETAILS & SCHEDULES.
3. UNLESS OTHERWISE NOTED ALL SITE LIGHTING AND BRANCH CIRCUIT WIRING TO BE 2#10 AWG & #10 GND.
4. SEE EP102 FOR PANELBOARD PP2 LOCATION.

KEYED NOTES:

(1) STANDBY POWER SITE LIGHTING BRANCH CIRCUIT FED VIA EMERGENCY POWER CONTROL MODEL (EPC) FOR NORMAL POWER SWITCHING BY LIGHTING CONTROL PANEL LC1. SEE EL651 FOR DETAILS, SCHEDULES, AND ADDITIONAL INFORMATION.

(2) SHOWN FOR COORDINATION ONLY. SEE ES101 FOR SITE AREA LIGHTING INFORMATION.

(3) PROVIDE 1" PVC CONDUIT FROM PANELBOARD PP1 TO SHED WALL FOR SHED BRANCH CIRCUIT WIRING.

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STATE OF MAINE
JON P. PERRUZZI
NO. 7707
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7/2/07
Rev. 0

NORTH

PROJECT TITLE:
MAINE TURNPIKE AUTHORITY
ADMINISTRATION BUILDING
PORTLAND, MAINE

ISSUED FOR BIDDING/CONSTRUCTION
7-9-07

REV	DESCRIPTION	DATE
0	BIDDING/CONSTRUCTION	7-9-07

GRAPHIC SCALE:
0" 1"

SCALE:	1"=20'
PROJECT MANAGER:	SLB
JC/DRAWN BY:	TCM/CDS
A/E OF RECORD:	JPP
CAD FILE:	06016-LP201
PROJECT NO:	06016
DATE:	7-9-07

SHEET TITLE:
ENLARGED ELECTRICAL SITE PLAN

SHEET No.
ES401

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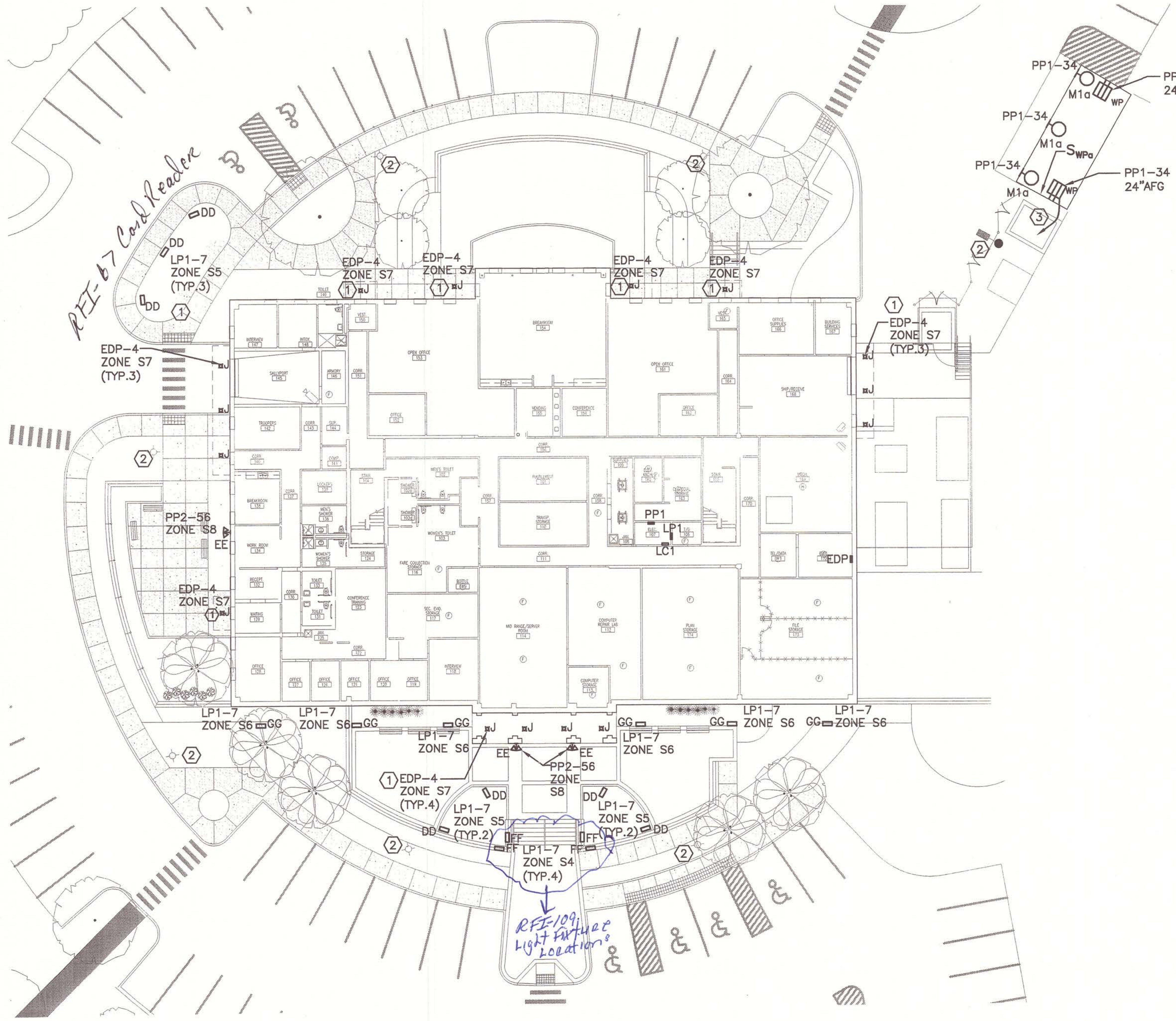
A1 ENLARGED SITE PLAN
1"=20'



NOTE:

1. SEE SHEET E001 FOR LEGEND AND ABBREVIATIONS.
2. SEE SHEET ES101 FOR OVERALL SITE PLAN AND EL651 & EL652 FOR DETAILS & SCHEDULES.
3. UNLESS OTHERWISE NOTED ALL SITE LIGHTING AND BRANCH CIRCUIT WIRING TO BE 2#10 AWG & #10 GND.
4. SEE EP102 FOR PANELBOARD PP2 LOCATION.

KEYED NOTES:

1. STANDBY POWER SITE LIGHTING BRANCH CIRCUIT FED VIA EMERGENCY POWER CONTROL MODEL (EPC) FOR NORMAL POWER SWITCHING BY LIGHTING CONTROL PANEL LC1. SEE EL651 FOR DETAILS, SCHEDULES, AND ADDITIONAL INFORMATION.
2. SHOWN FOR COORDINATION ONLY. SEE ES101 FOR SITE AREA LIGHTING INFORMATION.
3. PROVIDE 1" PVC CONDUIT FROM PANELBOARD PP1 TO SHED WALL FOR SHED BRANCH CIRCUIT WIRING.

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A1 ENLARGED SITE PLAN
1"=20'

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STATE OF MAINE JON R. PERRUZZI NO. 7707 LICENSED PROFESSIONAL ENGINEER 7/2/07 Rev. 0

NORTH

PROJECT TITLE:
MAINE TURNPIKE AUTHORITY ADMINISTRATION BUILDING
PORTLAND, MAINE

ISSUED FOR BIDDING/CONSTRUCTION 7-9-07

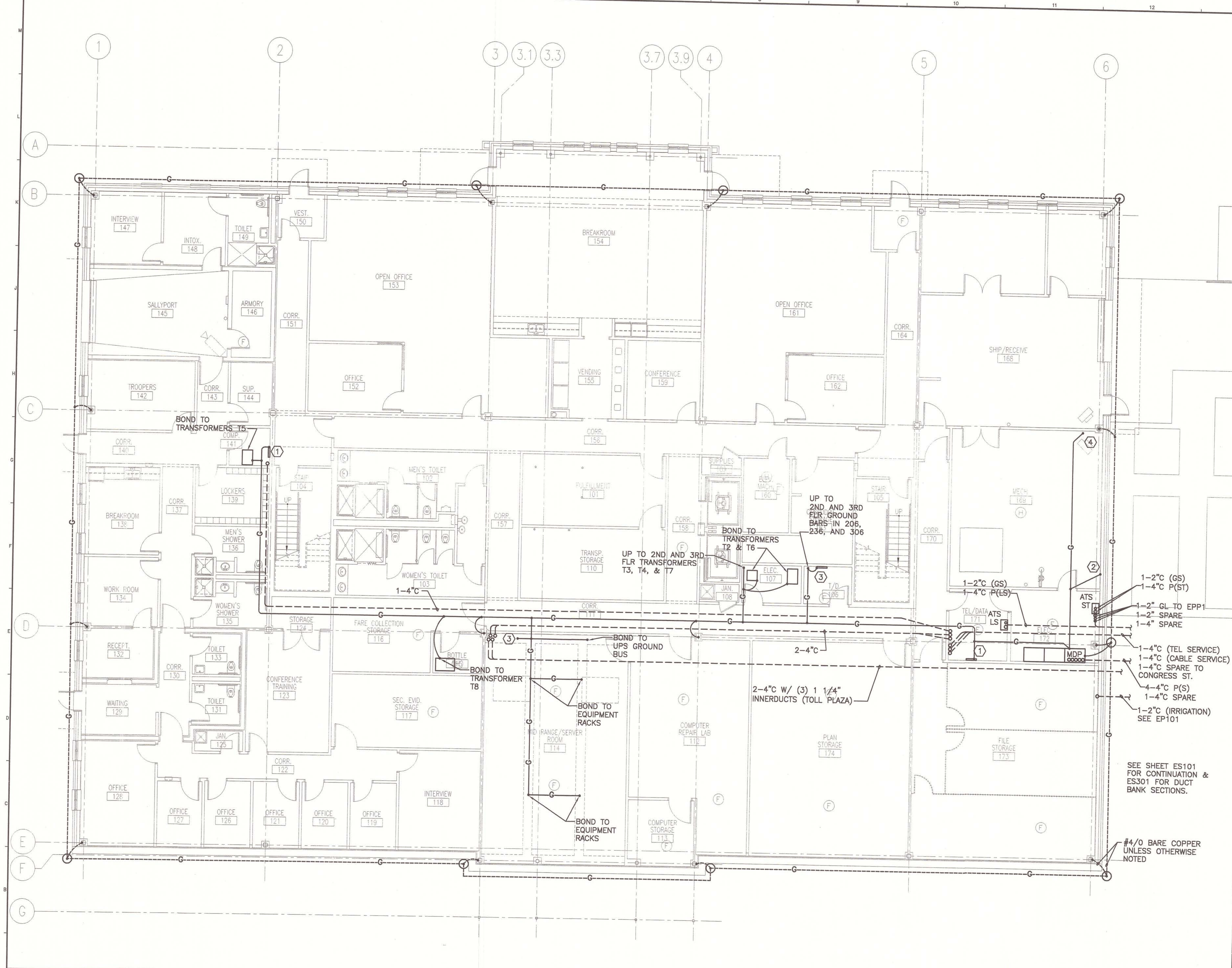
REV	DESCRIPTION	DATE
0	BIDDING/CONSTRUCTION	7-9-07

GRAPHIC SCALE: 0" 1"

SCALE:	1"=20'
PROJECT MANAGER:	SLB
JC/DRAWN BY:	TCM/CDS
A/E OF RECORD:	JPP
CAD FILE:	06016-LP201
PROJECT NO:	06016
DATE:	7-9-07

SHEET TITLE:
ENLARGED ELECTRICAL SITE PLAN

SHEET No. ES401



A1 FIRST FLOOR PLAN

1/8" = 1'-0"

NOTE:

1. SEE SHEET E001 FOR LEGEND AND GENERAL NOTES.
2. COORDINATE BONDING OF LIGHTNING PROTECTION SYSTEM CONDUCTORS TO GROUND LOOP WITH SYSTEM INSTALLER.
3. STUB UP ALL UNDERSLAB SYSTEMS CONDUITS A MIN. 6" AFF.

KEYED NOTES:

1. FURNISH AND INSTALL AN ERICO CADWELD 1/4"x4"x20" GROUND BAR (MODEL #B544A1T002) WITH INSULATORS AND #2 PIGTAIL. MOUNT GROUND BAR 48" AFF. RUN INSULATED #3/0 CONDUCTOR TO GROUND LOOP.
2. BOND TO SPRINKLER DOMESTIC WATER PIPING. COORDINATE LOCATIONS W/ PLUMBING AND FIRE PROTECTION CONTRACTORS.
3. FURNISH AND INSTALL AN ERICO CADWELD 1/4"x4"x20" GROUND BAR (MODEL #B544A1T002) WITH INSULATORS AND #2 PIGTAIL. MOUNT GROUND BAR 48" AFF. RUN INSULATED #3/0 CONDUCTOR TO GROUND LOOP. (TYPICAL OF 2ND AND 3RD FLOOR TEL/DATA AND EQUIPMENT ROOMS 206, 236, AND 306.)
4. BOND TO GAS PIPING ENTRANCES COORDINATE LOCATIONS W/ PLUMBING CONTRACTOR AND GAS COMPANY.
5. BOND TO STATIC DISSAPPATIVE FLOOR SYSTEM AS REQUIRED. COORDINATE CONNECTION LOCATIONS W/ FLOORING SYSTEM INSTALLER.

RFI-393 For Radio Equipment Grounding For Owners on Roof

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STATE OF MAINE JOHN P. PERUZZI NO. 7707 LICENSED PROFESSIONAL ENGINEER
Rev. 0 7/2/07

PROJECT NORTH
MAG NORTH

PROJECT TITLE: MAINE TURNPIKE AUTHORITY ADMINISTRATION BUILDING
PORTLAND, MAINE

CURRENT ISSUE STATUS: ISSUED FOR BIDDING/CONSTRUCTION 7-9-07

REV	DESCRIPTION	DATE
0	BIDDING/CONSTRUCTION	7-9-07

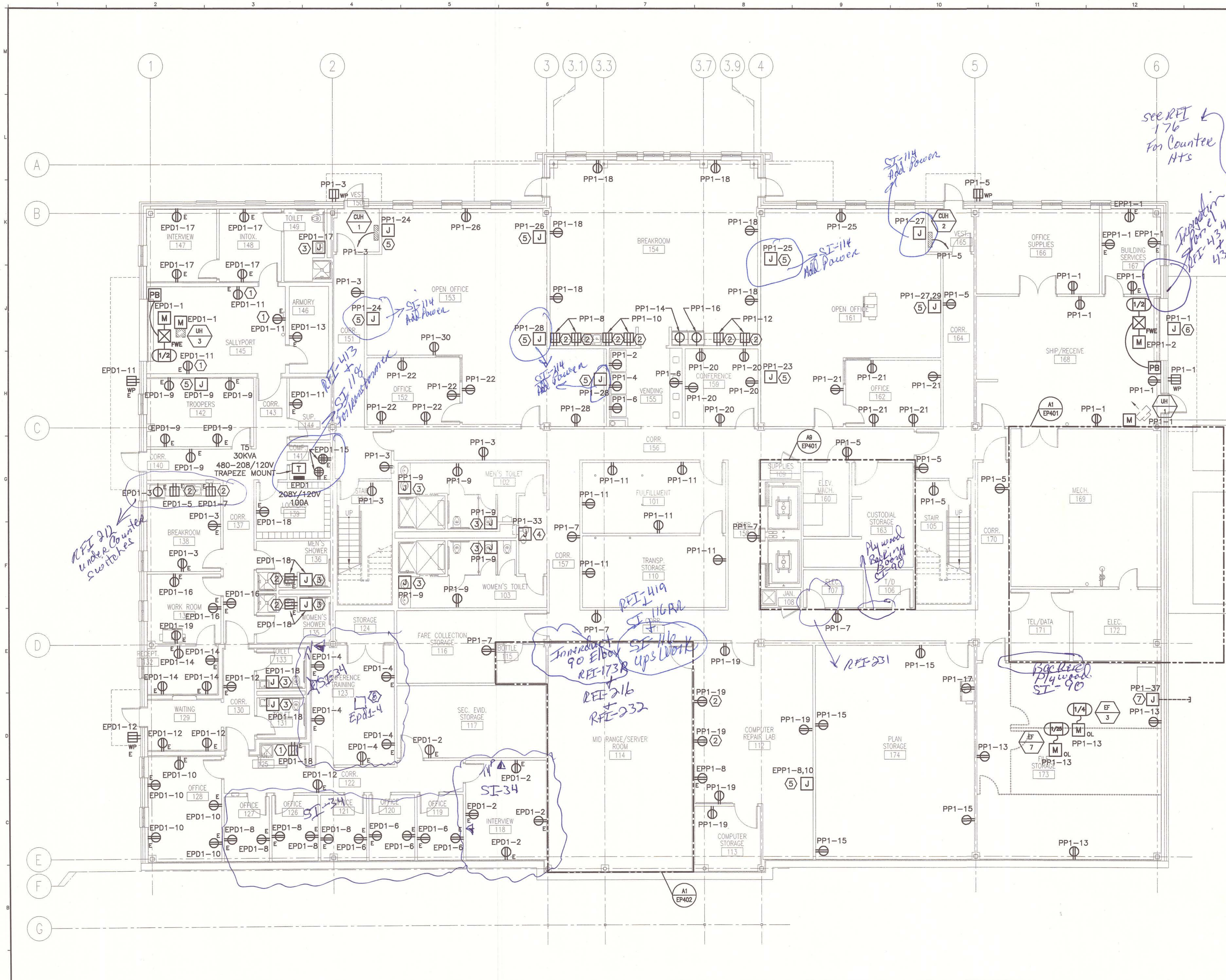
GRAPHIC SCALE: 0" 1"

SCALE:	1/8"=1'-0"
PROJECT MANAGER:	SLB
JC/DRAWN BY:	TCM/CDS
A/E OF RECORD:	JPP
CAD FILE:	EG101-06016
PROJECT NO:	06016
DATE:	7-9-07

SHEET TITLE: GROUNDING & CONDUIT PLAN

SHEET No. EG101

AS BUILT Owner Copy



A1 FIRST FLOOR PLAN

1/8" = 1'-0"

NOTE:

1. SEE SHEET E001 FOR LEGEND AND ABBREVIATIONS.

KEYED NOTES:

1. MOUNT 45" AFF TO CENTER OF DEVICE.
2. MOUNT 6" ABOVE COUNTER TO CENTER OF DEVICE.
3. PROVIDE 120V HARDWIRED OR RECEPTACLE CONNECTION TO AUTOMATIC FLUSH VALVE AND/OR FAUCET POWER SUPPLIES FURNISHED BY THE PLUMBING CONTRACTOR. COORDINATE LOCATIONS AND REQUIREMENTS W/ ARCHITECT AND PLUMBING CONTRACTOR.
4. PROVIDE 120V HARDWIRED CONNECTION TO ELECTRIC WATER COOLER. COORDINATE W/ MECHANICAL CONTRACTOR.
5. PROVIDE 4" SQUARE JUNCTION BOX FOR 120V CONNECTIONS TO PREWIRED OFFICE FURNITURE. EACH BRANCH CIRCUIT SHALL HAVE A DEDICATED NEUTRAL CONDUCTOR. COMBINE AND BALANCE PREWIRED DEVICE CIRCUITS AS REQUIRED TO CONNECT TO BRANCH CIRCUITS AS INDICATED. MAX. 8 DUPLEX DEVICES OR 3 WORKSTATIONS PER CIRCUIT. COORDINATE EXACT REQUIREMENTS, WIRING AND LOCATIONS W/ OWNER, ARCHITECT, AND OFFICE FURNITURE INSTALLER.
6. PROVIDE 120V CONNECTION TO ELECTRIC HEAT TRACE FURNISHED BY THE PLUMBING CONTRACTOR. COORDINATE W/ PLUMBING CONTRACTOR.
7. PROVIDE 120V HARDWIRED OR RECEPTACLE CONNECTION TO IRRIGATION SYSTEM CONTROLLER FURNISHED AND INSTALLED BY OTHERS. PROVIDE 1-2" SCHEDULE 80 PVC CONDUIT ROUTED FROM CONTROLLER TO 10' OUTSIDE BUILDING FOOTPRINT FOR SYSTEM CONTROL WIRING BY OTHERS. COORD. EXACT LOCATIONS AND REQUIREMENTS W/ IRRIGATION INSTALLER PRIOR TO WORK.

Door Hardware Power RFI-89 + SI #21 + SI 71R

SI-78 Wainscoating + Light Switch Conflict

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STATE OF MAINE LICENSED PROFESSIONAL ENGINEER

PROJECT NORTH

MAG NORTH

PROJECT TITLE: MAINE TURNPIKE AUTHORITY ADMINISTRATION BUILDING PORTLAND, MAINE

CURRENT ISSUE STATUS: ISSUED FOR BIDDING/CONSTRUCTION 7-9-07

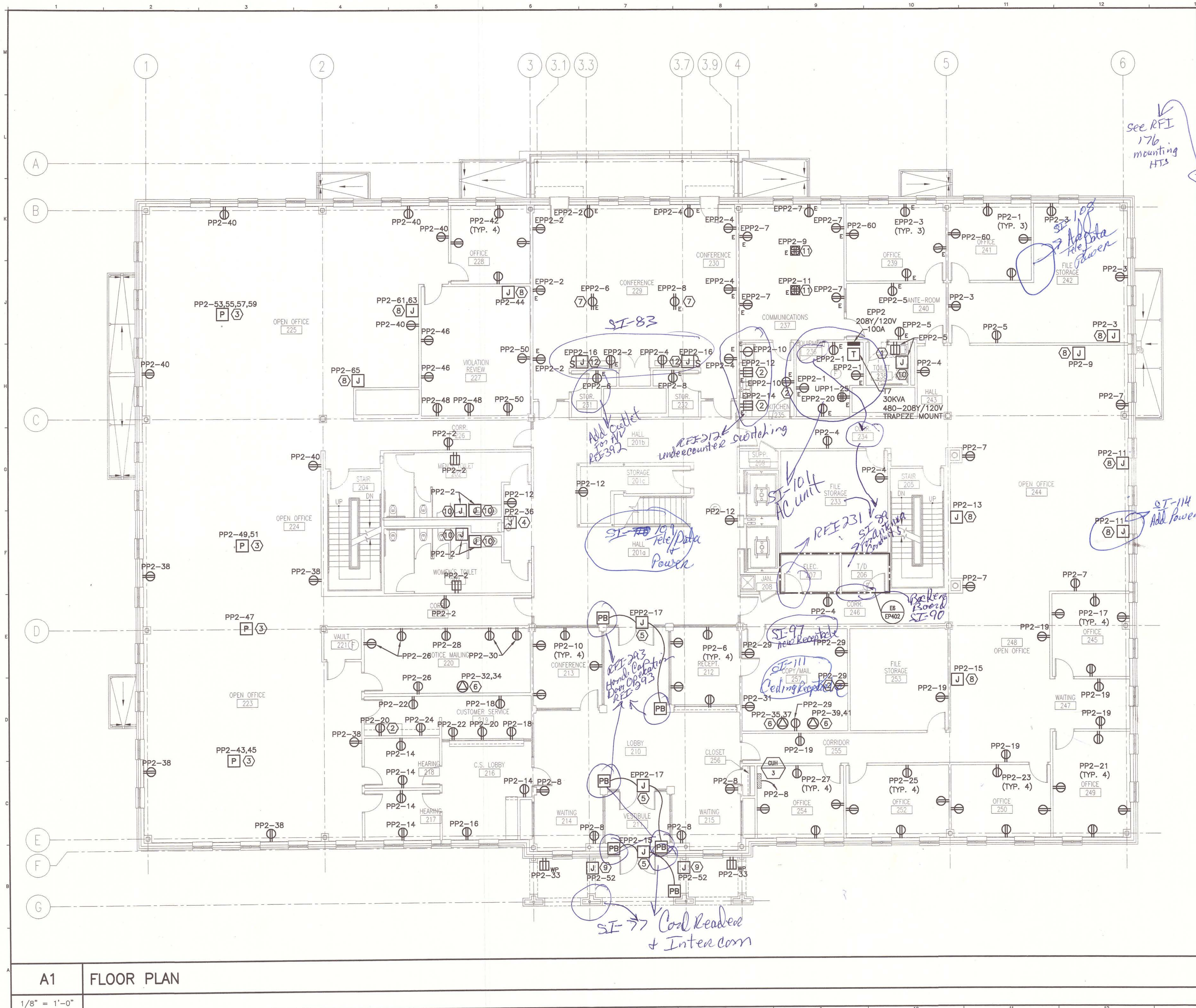
REV	DESCRIPTION	DATE
0	BIDDING/CONSTRUCTION	7-9-07

GRAPHIC SCALE: 0" 1"

SCALE:	1/8"=1'-0"
PROJECT MANAGER:	SLB
JC/DRAWN BY:	TCM/CDS
A/E OF RECORD:	JPP
CAD FILE:	EP101-06016
PROJECT NO:	06016
DATE:	7-9-07

SHEET TITLE: FIRST FLOOR POWER PLAN

SHEET No. EP101



NOTE:

1. SEE SHEET E001 FOR LEGEND AND ABBREVIATIONS.

KEYED NOTES:

1. MOUNT 45" AFF TO CENTER OF DEVICE.
2. MOUNT ✗ ABOVE COUNTER TO CENTER OF DEVICE.
3. FURNISH AND INSTALL DUAL SERVICE ALUMINUM POWER POLE FOR 120V CONNECTIONS TO PREWIRED OFFICE FURNITURE. (WIREMOLD #NP600 SERIES OR EQUAL). COMBINE AND BALANCE PREWIRED CIRCUITING AS REQUIRED TO CONNECT TO BRANCH CIRCUITS AS INDICATED. MAX. 8 DUPLEX DEVICES OR 3 WORKSTATIONS PER CIRCUIT. COORDINATE EXACT REQUIREMENTS, WIRING AND LOCATIONS W/ OWNER, ARCHITECT, AND OFFICE FURNITURE INSTALLER. SEE SHEET EY102 FOR ADDITIONAL INFORMATION.
4. PROVIDE 120V HARDWIRED CONNECTION TO ELECTRIC WATER COOLER. COORDINATE W/ MECHANICAL CONTRACTOR.
5. PROVIDE 120V CONNECTION TO MOTORIZED DOOR OPERATOR UNIT. PROVIDE 1/2" CONDUIT FROM INTERIOR SWITCHES AND 1/2" UNDERGROUND CONDUIT FROM EXTERIOR SWITCHES. COORDINATE W/ EQUIPMENT INSTALLER.
6. FURNISH AND INSTALL NEMA 6-20R, 208V,1Ø RECEPTACLE FOR CONNECTION TO OWNER PROVIDED LARGE COPIER. COORDINATE W/ OWNER, ARCHITECT, AND ACTUAL EQUIPMENT PROVIDED.
7. PROVIDE 120V CEILING MOUNT RECEPTACLE CONNECTION FOR PROJECTOR EQUIPMENT.
8. PROVIDE 4" SQUARE JUNCTION BOX FOR 120V CONNECTIONS TO PREWIRED OFFICE FURNITURE. EACH BRANCH CIRCUIT SHALL HAVE A DEDICATED NEUTRAL CONDUCTOR. COMBINE AND BALANCE PREWIRED DEVICE CIRCUITS AS REQUIRED TO CONNECT TO BRANCH CIRCUITS AS INDICATED. MAX. 8 DUPLEX DEVICES OR 3 WORKSTATIONS PER CIRCUIT. COORDINATE EXACT REQUIREMENTS, WIRING AND LOCATIONS W/ OWNER, ARCHITECT, AND OFFICE FURNITURE INSTALLER. SEE SHEET EY102 FOR ADDITIONAL INFORMATION.
9. PROVIDE 120V CONNECTION TO ELECTRIC HEAT TRACE FURNISHED BY THE PLUMBING CONTRACTOR. COORDINATE W/ PLUMBING CONTRACTOR.
10. PROVIDE 120V HARDWIRED OR RECEPTACLE CONNECTION TO AUTOMATIC FLUSH VALVE AND/OR FAUCET POWER SUPPLIES FURNISHED BY THE PLUMBING CONTRACTOR. COORDINATE LOCATIONS AND REQUIREMENTS W/ ARCHITECT AND PLUMBING CONTRACTOR.
11. FURNISH AND INSTALL CAST IN PLACE MULTI-SERVICE RECESSED FLOORBOX (WALKER #RFB4 SERIES OR EQUAL) W/ (2) DUPLEX RECEPTACLES AND CARPET COVER ASSEMBLY. PROVIDE DEDICATED BRANCH CIRCUIT IN 1" CONDUIT AND 1" SPARE FROM EPP2. COORDINATE EXACT LOCATION W/ OWNER AND ARCHITECT. SEE SHEET EY102 FOR ADDITIONAL INFORMATION.
12. PROVIDE 120V CONNECTION TO MOTORIZED PROJECTION SCREEN IN 4" SQUARE JUNCTION BOX ABOVE ACCESSIBLE CEILING. INSTALL & LABEL CONTROL SWITCH FURNISHED W/ EQUIPMENT. COORDINATE EXACT LOCATIONS W/ OWNER AND ARCHITECT.

Door Hardware Power RFI-89 + SI#22 + SI21R

SI-78 Wainscoat + Light Switch Conflict

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STATE OF MAINE — JON E. PERUZZI — NO. 7707 — LICENSED PROFESSIONAL ENGINEER — 7/2/07

PROJECT NORTH
MAG NORTH

PROJECT TITLE: MAINE TURNPIKE AUTHORITY ADMINISTRATION BUILDING
PORTLAND, MAINE

CURRENT ISSUE STATUS: ISSUED FOR BIDDING/CONSTRUCTION 7-9-07

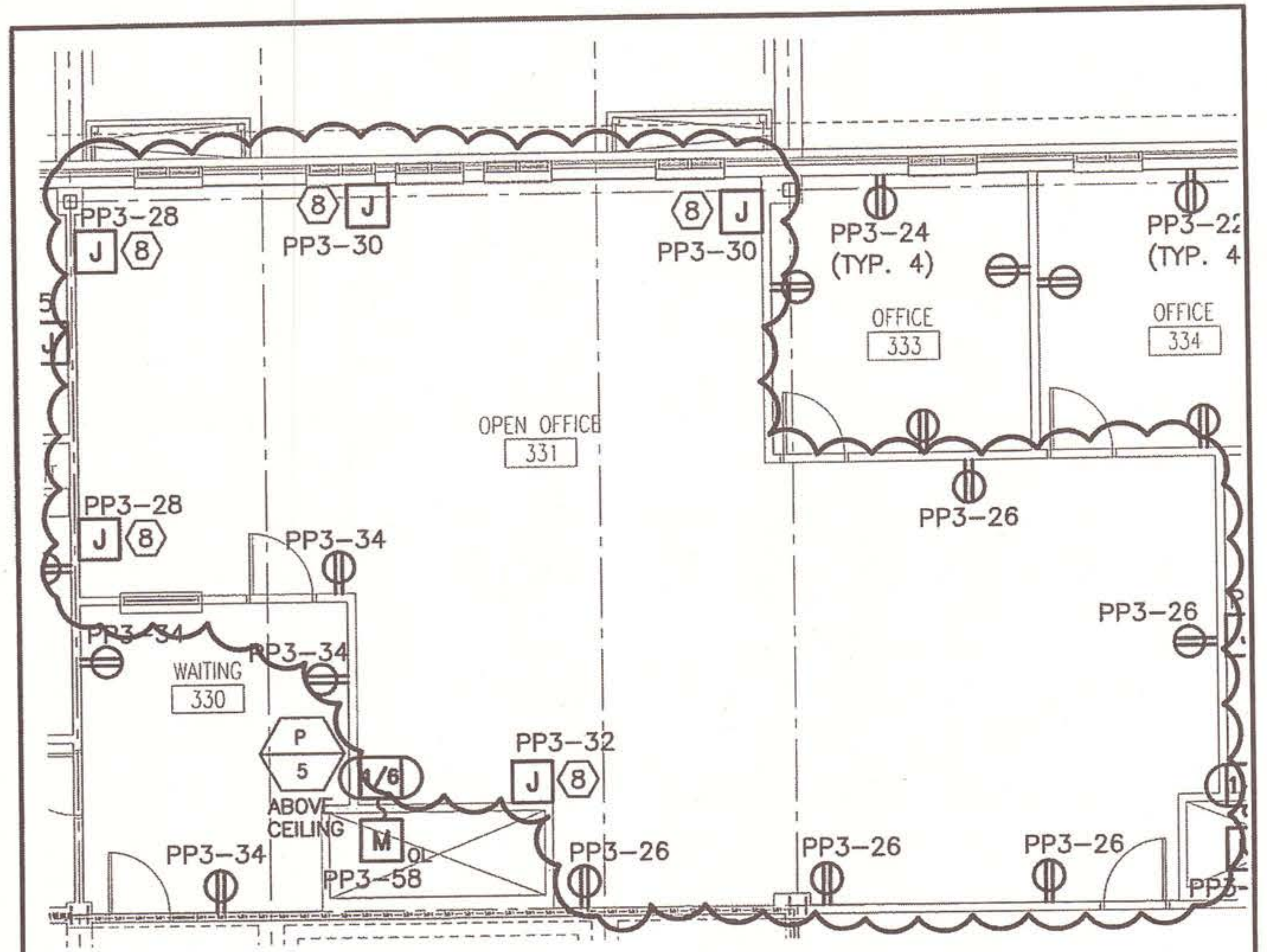
REV	DESCRIPTION	DATE
0	BIDDING/CONSTRUCTION	7-9-07

GRAPHIC SCALE: 0" 1"

SCALE:	1/8"=1'-0"
PROJECT MANAGER:	SLB
JC/DRAWN BY:	TCM/CDS
A/E OF RECORD:	JPP
CAD FILE:	EP102-06016
PROJECT NO:	06016
DATE:	7-9-07

SHEET TITLE: SECOND FLOOR POWER PLAN

SHEET No. EP102



SMRT

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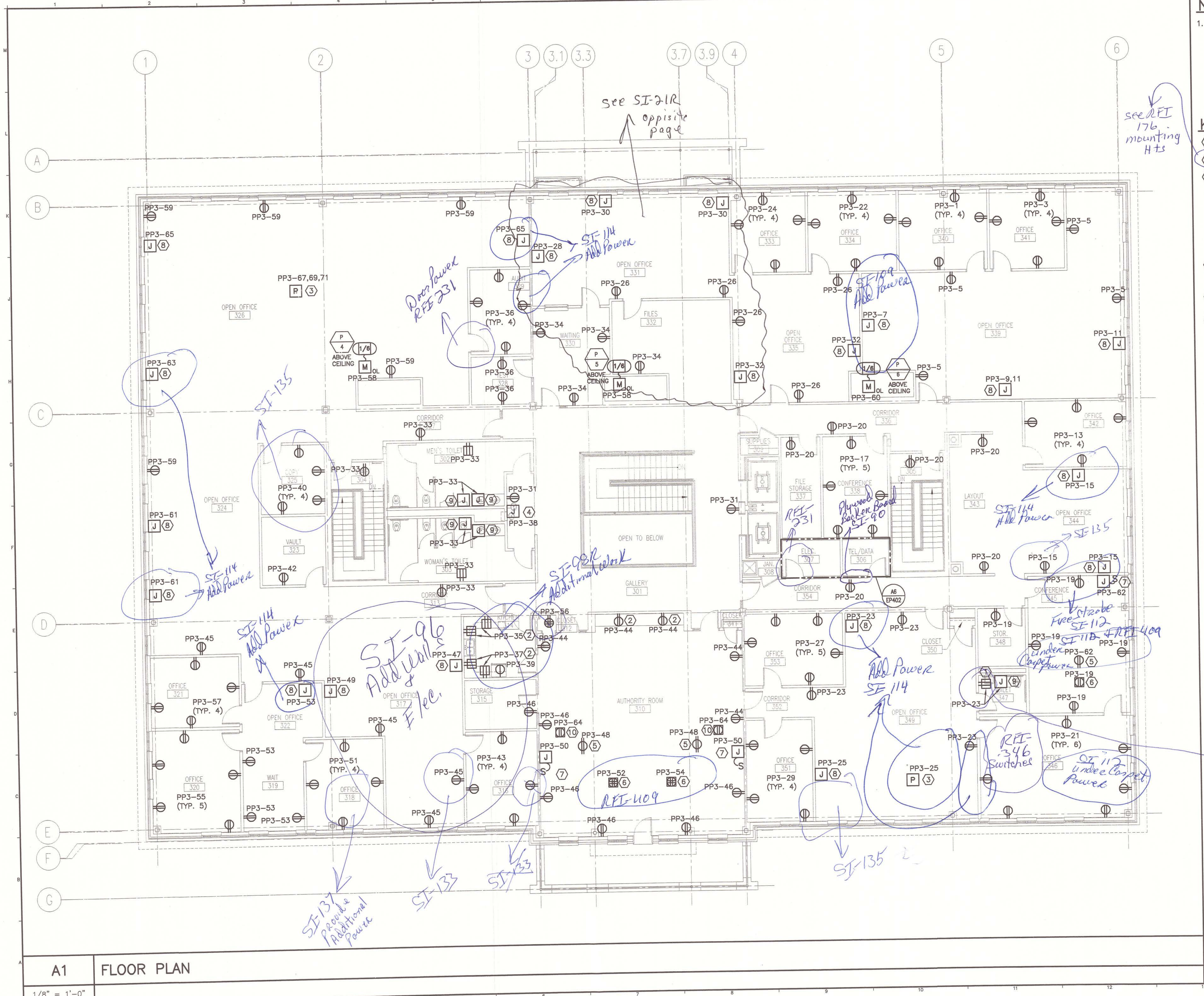
PROJECT: MAINE TURNPIKE AUTHORITY ADMINISTRATION BUILDING

SUBJECT: THIRD FLOOR POWER PLAN

SCALE:	1/8"=1'-0"
CAD FILE:	EP103-06016
PROJECT No.	06016
REF. SHEET:	EP103
PM:	SLB
A/E:	JPP
DATE:	4-01-08
ADDENDUM No.	SI-21R
SKETCH No.	E-1



A1 FLOOR PLAN

1/8" = 1'-0"

NOTE:

1. SEE SHEET E001 FOR LEGEND AND ABBREVIATIONS.

see RFI 176 mounting Hts

KEYED NOTES:

1. MOUNT 45" AFF TO CENTER OF DEVICE.
2. MOUNT ~~7~~" ABOVE COUNTER TO CENTER OF DEVICE.
3. FURNISH AND INSTALL DUAL SERVICE ALUMINUM POWER POLE FOR 120V CONNECTIONS TO PREWIRED OFFICE FURNITURE. (WIREMOLD #NP600 SERIES OR EQUAL). COMBINE AND BALANCE PREWIRED CIRCUITING AS REQUIRED TO CONNECT TO BRANCH CIRCUITS AS INDICATED. MAX. 8 DUPLEX DEVICES OR 3 WORKSTATIONS PER CIRCUIT. COORDINATE EXACT REQUIREMENTS, WIRING AND LOCATIONS W/ OWNER, ARCHITECT, AND OFFICE FURNITURE INSTALLER. SEE SHEET EY103 FOR ADDITIONAL INFORMATION.
4. PROVIDE 120V HARDWIRED CONNECTION TO ELECTRIC WATER COOLER. COORDINATED W/ MECHANICAL CONTRACTOR.
5. PROVIDE 120V CEILING MOUNT RECEPTACLE CONNECTION FOR PROJECTOR EQUIPMENT.
6. FURNISH AND INSTALL CAST IN PLACE MULTI-SERVICE RECESSED FLOORBOX (WALKER #RFB4 SERIES OR EQUAL) W/ CARPET COVER ASSEMBLY. PROVIDE 1" CONDUIT TO PP3 FOR POWER WIRING. PROVIDE FLEXIBLE POWER CONNECTION EXTENDED FROM FLOORBOX TO TABLE MOUNT RECEPTACLE DEVICES FURNISHED BY OTHERS. COORDINATE EXACT LOCATIONS AND ROUTING W/ ARCHITECT, OWNER AND TABLE INSTALLER. SEE SHEET EY103 FOR ADDITIONAL INFORMATION.
7. PROVIDE 120V CONNECTION TO MOTORIZED PROJECTION SCREEN IN 4" SQUARE JUNCTION BOX ABOVE ACCESSIBLE CEILING. INSTALL & LABEL CONTROL SWITCH FURNISHED W/ EQUIPMENT. COORDINATE EXACT LOCATIONS W/ OWNER AND ARCHITECT.
8. PROVIDE 4" SQUARE JUNCTION BOX FOR 120V CONNECTIONS TO PREWIRED OFFICE FURNITURE. EACH BRANCH CIRCUIT SHALL HAVE A DEDICATED NEUTRAL CONDUCTOR. COMBINE AND BALANCE PREWIRED DEVICE CIRCUITS AS REQUIRED TO CONNECT TO BRANCH CIRCUITS AS INDICATED. MAX. 8 DUPLEX DEVICES OR 3 WORKSTATIONS PER CIRCUIT. COORDINATE EXACT REQUIREMENTS, WIRING AND LOCATIONS W/ OWNER, ARCHITECT, AND OFFICE FURNITURE INSTALLER. SEE SHEET EY103 FOR ADDITIONAL INFORMATION.
9. PROVIDE 120V HARDWIRED OR RECEPTACLE CONNECTION TO AUTOMATIC FLUSH VALVE AND/OR FAUCET POWER SUPPLIES FURNISHED BY THE PLUMBING CONTRACTOR. COORDINATE LOCATIONS AND REQUIREMENTS W/ ARCHITECT AND PLUMBING CONTRACTOR.
10. FURNISH AND INSTALL CAST IN PLACE MULTI-SERVICE RECESSED FLOORBOX (WALKER #RFB4 SERIES OR EQUAL) W/ 1 DUPLEX RECEPTACLE CARPET COVER ASSEMBLY FOR LECTERN SERVICES. PROVIDE 1" CONDUIT TO PP3 FOR POWER WIRING. COORDINATE EXACT LOCATIONS AND ROUTING W/ ARCHITECT, OWNER AND LECTERN INSTALLER. SEE SHEET EY103 FOR ADDITIONAL INFORMATION.

Door Hardware RFI Power
RFI # 89 + SI #22 + SI-21R

SI-78 Wainscoat + Light Switch Conflict

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STATE OF MAINE — JOHN PERRUZZI — NO. 7707 — LICENSED PROFESSIONAL ENGINEER

PROJECT NORTH

MAG NORTH

PROJECT TITLE:
MAINE TURNPIKE AUTHORITY ADMINISTRATION BUILDING
PORTLAND, MAINE

CURRENT ISSUE STATUS:
ISSUED FOR BIDDING/CONSTRUCTION 7-9-07

REV.	DESCRIPTION	DATE
0	BIDDING/CONSTRUCTION	7-9-07

GRAPHIC SCALE:
0" 1"

SCALE:	1/8"=1'-0"
PROJECT MANAGER:	SLB
JC/DRAWN BY:	TCM/CDS
A/E OF RECORD:	JPP
CAD FILE:	EP103-06016
PROJECT NO:	06016
DATE:	7-9-07

SHEET TITLE:
THIRD FLOOR POWER PLAN

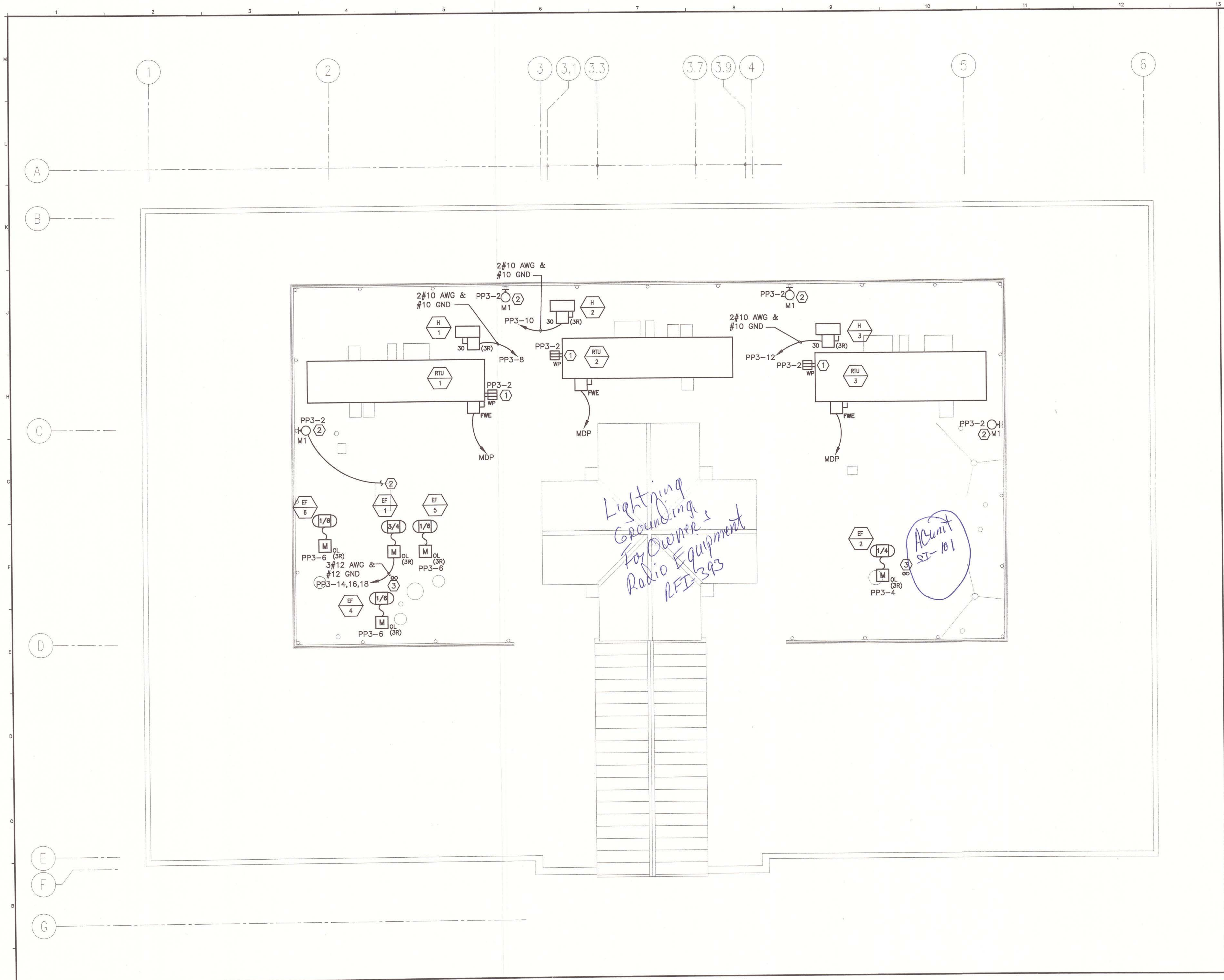
SHEET No.
EP103

GENERAL NOTES:

1. SEE SHEET E001 FOR LEGEND AND ABBREVIATIONS.

KEYED NOTES:

1. MOUNT RECEPTACLE DEVICE TO SIDE OF ROOF TOP UNIT FOR LOCAL CONVENIENCE POWER. COORDINATE INSTALLATION W/ MECHANICAL CONTRACTOR.
2. MOUNT LIGHT FIXTURE TO SIDE SCREEN WALL 60" AFF FOR ROOF MAINTENANCE LIGHTING. LIGHTING SHALL BE CONTROLLED BY A PILOT LIGHT SWITCH LOCATED BELOW ROOF ACCESS IN STAIR 304. SEE SHEET EL103 FOR SWITCH LOCATION. COORDINATE INSTALLATION W/MECHANICAL CONTRACTOR.
3. FURNISH AND INSTALL (2)–4" CONDUITS STUBBED FROM ABOVE 3RD FLOOR ACCESSIBLE CEILING TO 24" ABOVE FINISHED ROOF, SEALED, AND CAPPED FOR FUTURE ROOFTOP COMMUNICATION CABLING (BY OTHERS). COORDINATE EXACT LOCATIONS W/ ARCHITECT.



A1 ROOF PLAN

1/8" = 1'-0"

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STATE OF MAINE LICENSED PROFESSIONAL ENGINEER

PROJECT NORTH

MAG. NORTH

PROJECT TITLE: MAINE TURNPIKE AUTHORITY ADMINISTRATION BUILDING
PORTLAND, MAINE

CURRENT ISSUE STATUS: ISSUED FOR BIDDING/CONSTRUCTION 7-9-07

REV	DESCRIPTION	DATE
0	BIDDING/CONSTRUCTION	7-9-07

GRAPHIC SCALE: 0" 1"

SCALE:	AS NOTED
PROJECT MANAGER:	SLB
JC/DRAWN BY:	TCM/CDS
A/E OF RECORD:	DJT
CAD FILE:	EP104-06016
PROJECT NO:	06016
DATE:	7-9-07

SHEET TITLE: ROOF POWER PLAN

SHEET No. EP104

AS BUILT
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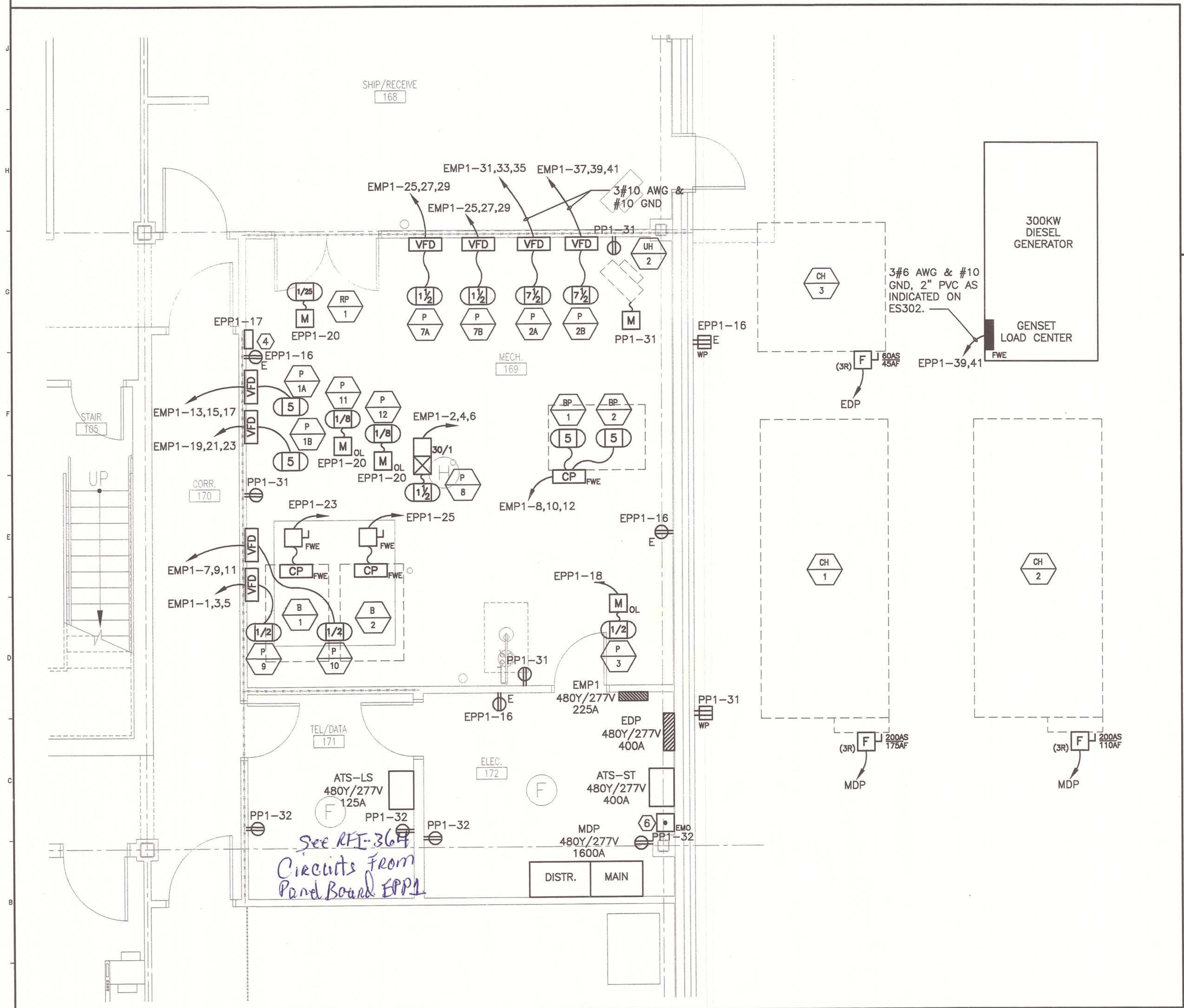
NOTE:

1. SEE SHEET E001 FOR LEGEND AND ABBREVIATIONS.

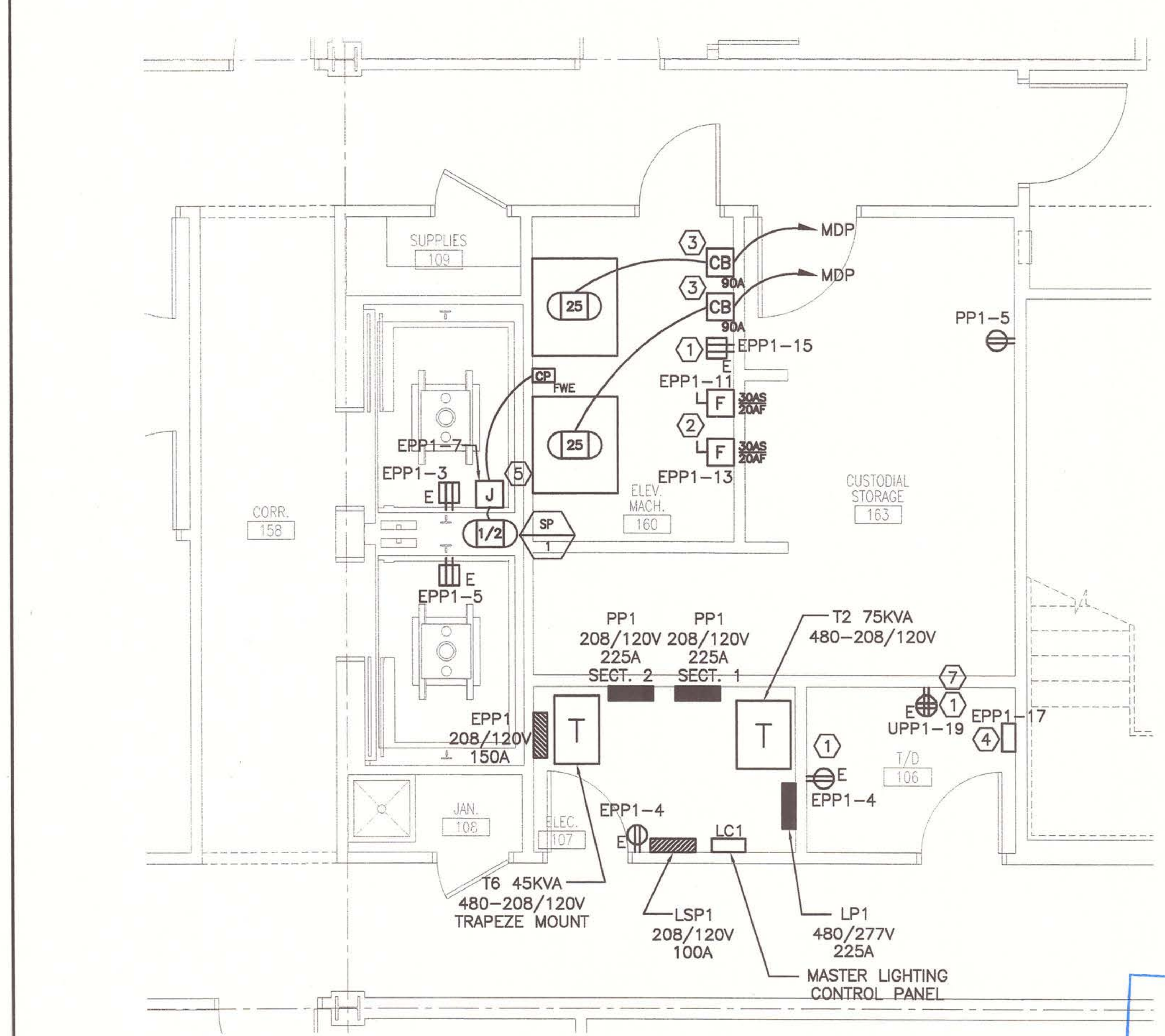
KEYED NOTES:

1. MOUNT 45" AFF TO CENTER OF DEVICE.
2. FURNISH AND INSTALL FUSED DISCONNECT SWITCHES FOR ELEVATOR CAB LIGHTING DEDICATED BRANCH CIRCUITS.
3. FURISH AND INSTALL SHUNT TRIP CIRCUIT BREAKER FOR ELEVATOR AS INDICATED. ACTIVATION OF HEAT DETECTOR(S) TO OPEN SHUNT TRIP CIRCUIT BREAKER. PROVIDE 2 SETS OF AUXILIARY CONTACTS TO DISABLE BATTERY LOWERING UNIT UPON ACTIVATION OF HEAT DETECTOR(S) OR MANUAL OPENING OF CIRCUIT BREAKER. PROVIDE 120V COIL POWER FROM EPP1-9. COORDINATE WITH ELEVATOR INSTALLER.
4. PROVIDE 120V CONNECTION TO MECHANICAL CONTROLS PANEL, HTR-1, AND HTR-2 CONTROLS AS REQUIRED. COORDINATE WITH MECHANICAL AND PLUMBING CONTRACTOR FOR EXACT LOCATIONS.
5. PROVIDE 120V HARDWIRED CONNECTION TO OIL SENSING SUMP PUMP CONTROLLER IN ELEVATOR MACHINE ROOM 169. FURNISH AND INSTALL CONDUIT AND INSTALL FLEXIBLE CORD FURNISHED WITH EQUIPMENT TO PUMP UNIT IN ELEVATOR PIT. COORDINATE WITH PLUMBING CONTRACTOR.
6. PROVIDE MUSHROOM TYPE EMERGENCY STOP SWITCH WITH LEXAN COVER (STI STOPPER II #1200 OR EQUAL) FOR GENERATOR SHUTDOWN MOUNTED 48" AFF. WIRE GENERATOR START CIRCUITS PER MANUFACTURER'S RECOMMENDATIONS.
7. PROVIDE 3#12 AWG & #12GND BRANCH CIRCUIT HOMERUN WIRING TO UPP1 PULLBOX LOCATED IN MID RANGE/SERVER ROOM 114 W/ 15 FEET EXCESS, LABELED AND NEATLY COILED FOR FUTURE EXTENSION TO UPP1 BY UPS INSTALLER.



A1 ENLARGED MECH. 169, TEL/DATA 171 AND ELEC 172 PLAN

1/4" = 1'-0"



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A9 ENLARGED ELEV. MACH 160, ELEC 107, T/D 106, CUST. 103 PLAN

1/4" = 1'-0"

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STATE OF MAINE
JON P. PERUZZI
NO. 7707
LICENSED PROFESSIONAL ENGINEER
7/2/07
REV. 0

PROJECT NORTH
MAG NORTH

PROJECT TITLE:
MAINE TURNPIKE AUTHORITY ADMINISTRATION BUILDING
PORTLAND, MAINE

CURRENT ISSUE STATUS:
ISSUED FOR BIDDING/CONSTRUCTION 7-9-07

REV	DESCRIPTION	DATE
0	BIDDING/CONSTRUCTION	7-9-07

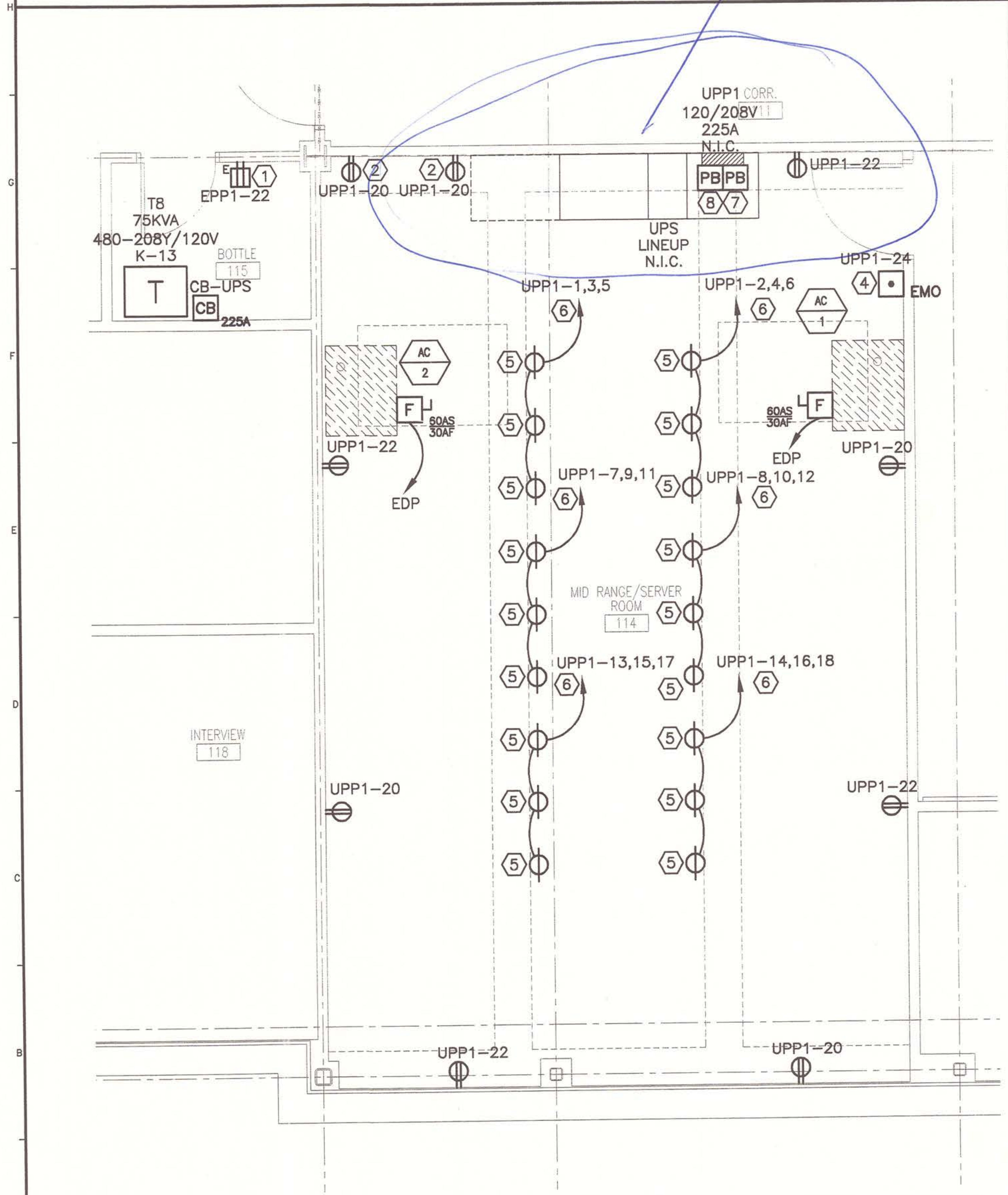
GRAPHIC SCALE: 0" 1"

SCALE:	1/8"=1'-0"
PROJECT MANAGER:	SLB
JC/DRAWN BY:	TCM/CDS
A/E OF RECORD:	JPP
CAD FILE:	EP401-06016
PROJECT NO:	06016
DATE:	7-9-07

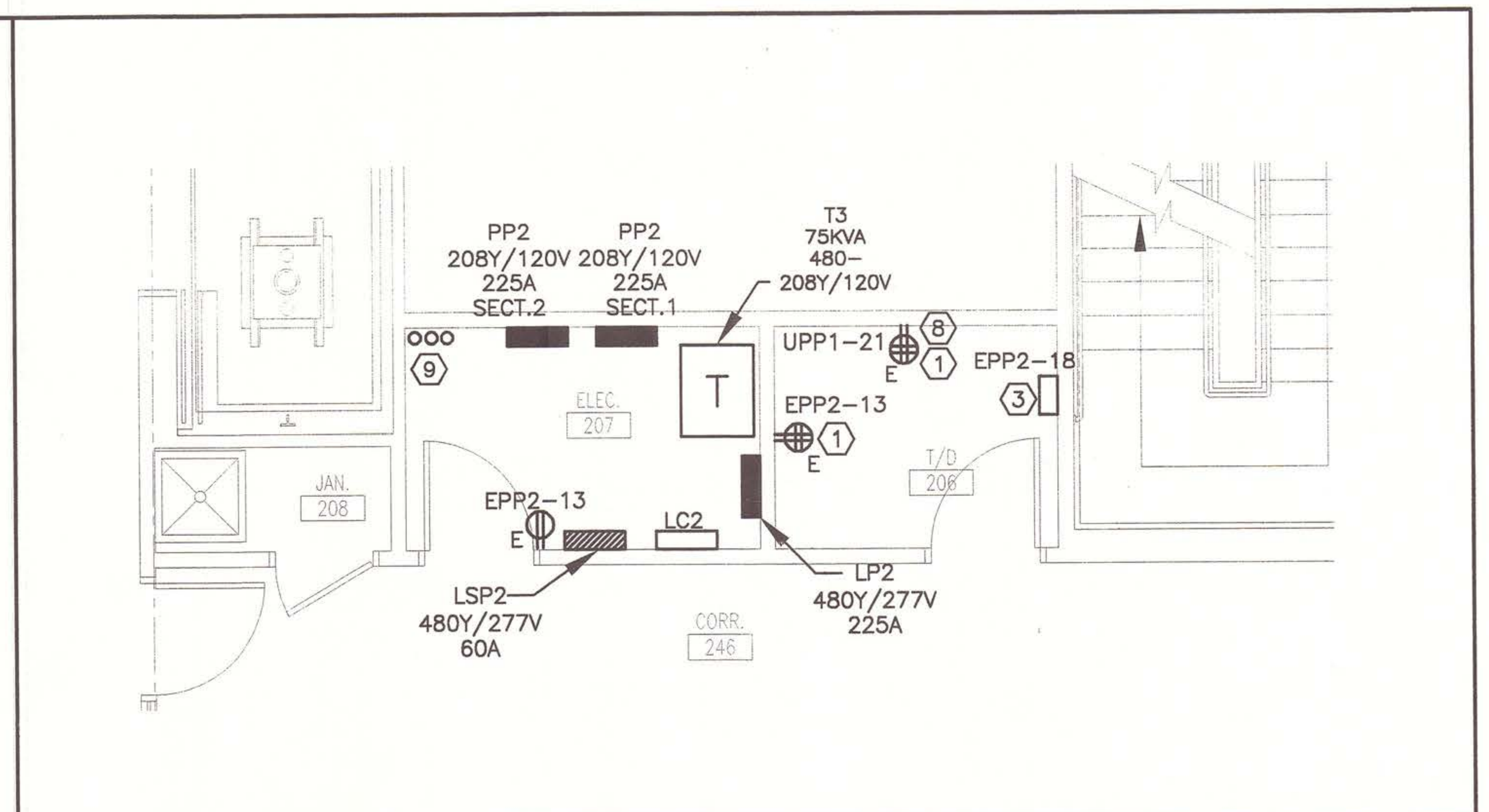
SHEET TITLE:
ENLARGED POWER PLANS

SHEET No.
EP401

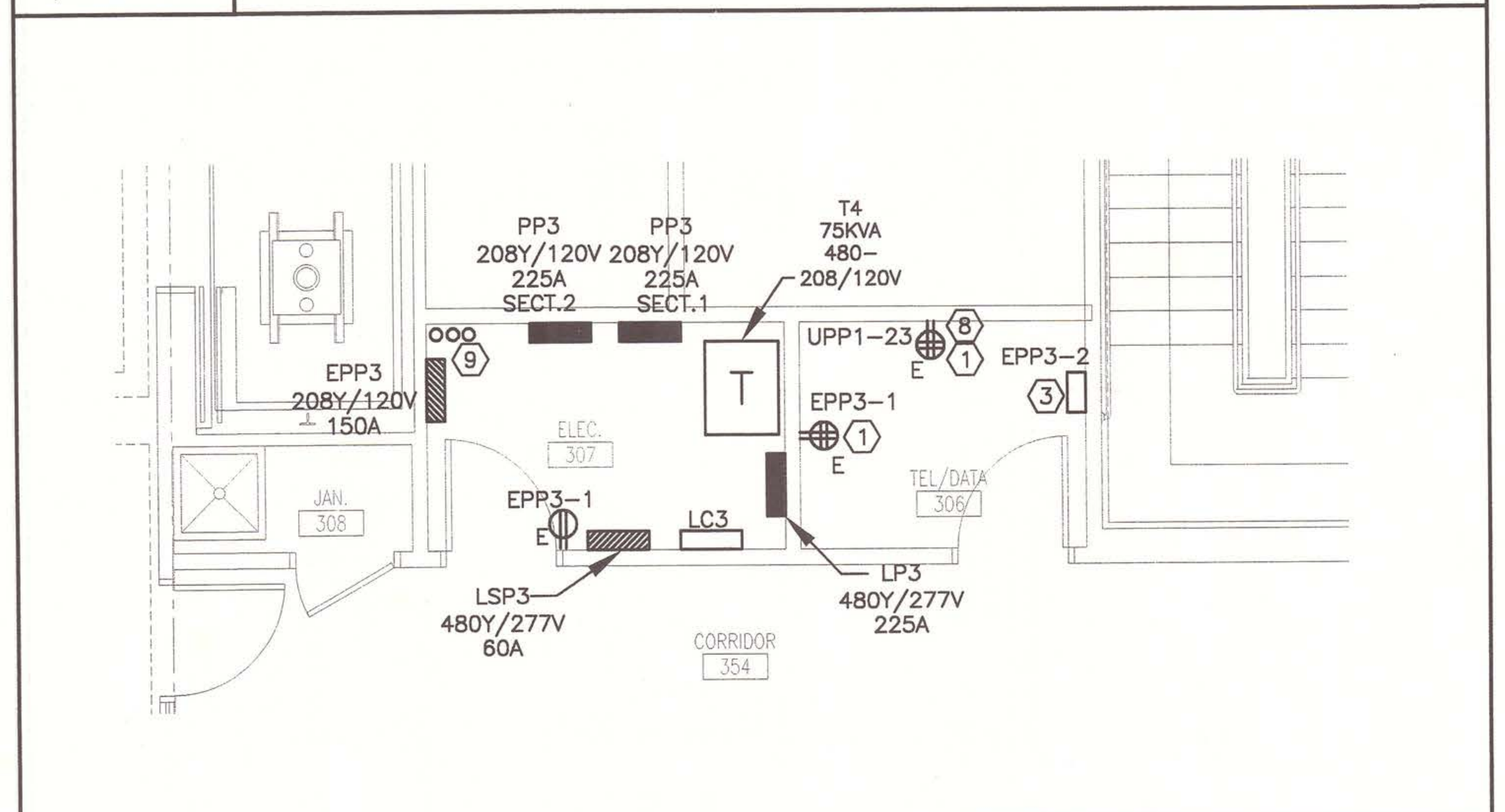
SI-116
UPS Work



A1	ENLARGED MID RANGE/SERVER ROOM 114 PLAN
1/4" = 1'-0"	



E6	ENLARGED T/D 206 AND ELEC. 207 PLAN
1/4" = 1'-0"	



A6	ENLARGED T/D 306 AND ELEC. 307 PLAN
1/4" = 1'-0"	

NOTE:

1. SEE SHEET E001 FOR LEGEND AND ABBREVIATIONS.

KEYED NOTES:

(1) MOUNT 45" AFF TO CENTER OF DEVICE.

(2) MOUNT 7" ABOVE COUNTER TO CENTER OF DEVICE.

(3) PROVIDE 120V CONNECTION TO MECHANICAL CONTROL PANEL. COORDINATE WITH MECHANICAL CONTRACTOR FOR EXACT LOCATION.

(4) DATA CENTER EMERGENCY POWER SHUT DOWN PUSHBUTTON W/ LEXAN PROTECTIVE COVER. PROVIDE 120V POWER FOR SHUNT TRIP BREAKERS SERVING AC-1 AND AC-1 AS INDICATED. SEE EP651 FOR ADDITIONAL INFORMATION.

(5) FURNISH AND INSTALL 4" DEEP JUNCTION BOX MOUNTED TO THE BOTTOM OF CABLE TRAY AND 1-NEMA L5-20R TWIST LOCK RECEPTACLE DEVICE FOR DEDICATED 120V POWER CONNECTION TO SERVER RACK. COORDINATE EXACT RECEPTACLE DEVICE REQUIREMENTS, WIRING, AND LOCATIONS W/ OWNER, ARCHITECT, AND ACTUAL EQUIPMENT PROVIDED.

(6) PROVIDE 1" EMT MOUNTED BELOW CABLE TRAY FOR ROUTING OF RECEPTACLE BRANCH CIRCUITS TO UPP1 PULLBOX AS INDICATED. PROVIDE 2#12 AWG & #10 GND PER BRANCH CIRCUIT HOMERUN ROUTED TO UPP1 PULLBOX. W/ MIN. 15 FEET OF EXCESS, LABELED, AND NEATLY COILED FOR FUTURE EXTENSION TO UPP1 BY UPS INSTALLER. PROVIDE ALL CABLE TRAY SUPPORTS, HARDWARE, AND ACCESSORIES AS REQUIRED.

(7) PROVIDE 12"WX12"HX4"D UPP1 PULLBOX SURFACE MOUNTED TO THE WALL MIN. 84" AFF TO BOTTOM FOR ROUTING OF ALL UPP1 BRANCH CIRCUIT WIRING TO DEVICES. SEE KEYED NOTE 6 AND EP651 FOR ADDITIONAL INFORMATION.

(8) PROVIDE 12"WX12"HX4"D UPS PULLBOX SURFACE MOUNTED TO THE WALL MIN. 84" AFF TO BOTTOM FOR ROUTING OF UPS FEEDER WIRING FROM CB-UPS. SEE EP651 FOR ADDITIONAL INFORMATION.

(8) PROVIDE 3#12 AWG & #12GND BRANCH CIRCUIT HOMERUN WIRING TO UPP1 PULLBOX LOCATED IN MID RANGE/SERVER ROOM 114 W/ 15 FEET EXCESS, LABELED, AND NEATLY COILED FOR FUTURE EXTENSION TO UPP1 BY UPS INSTALLER.

(9) PROVIDE (3)-4" CONDUIT SLEEVES THROUGH FLOOR DECK WITH 4" EXPOSURE ABOVE FINISHED FLOOR AND BELOW DECKING. PROVIDE REMOVABLE FIRESTOP CAPS ON BOTH ENDS.

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STATE OF MAINE — LICENSED PROFESSIONAL ENGINEER — NO. 7707 — Rev. 0 7/6/07

PROJECT NORTH

MAG. NORTH

PROJECT TITLE:
MAINE TURNPIKE AUTHORITY ADMINISTRATION BUILDING
PORTLAND, MAINE

CURRENT ISSUE STATUS:
ISSUED FOR BIDDING/CONSTRUCTION
7-9-07

REV	DESCRIPTION	DATE
0	BIDDING/CONSTRUCTION	7-9-07

GRAPHIC SCALE:
0" 1"

SCALE:	1/8"=1'-0"
PROJECT MANAGER:	SLB
JC/DRAWN BY:	TCM/CDS
A/E OF RECORD:	DJT
CAD FILE:	EP401-06016
PROJECT NO:	06016
DATE:	7-9-07

SHEET TITLE:
ENLARGED POWER PLANS

SHEET No.
EP402

DIRECTORY	kVA LOAD A	kVA LOAD B	kVA LOAD C	CKT NO.	BKR AMPS	BKR AMPS	CKT NO.	kVA LOAD A	kVA LOAD B	kVA LOAD C	DIRECTORY
LIGHTING CONTROLS, LC1	0.4			1	20	20	2	2.3			LTG. 112, 113, 166–167, 173, 174
NORMAL PARKING LTG. 1		3.0		3	20	20	4		2.6		LTG. 101–103, 108–111, 115, 116, 155–159, 163, 170
NORMAL PARKING LTG. 2			3.0	5	20	20	6			2.6	LTG. 152–154, 161, 162
EXTERIOR LANDSCAPE LTG.	1.6			7	20	20	8				SPARE
SPARE				9	20	20	10				SPARE
SPARE				11	20	20	12				SPARE
SPARE				13	20	20	14				SPARE
SPARE				15	20	20	16				SPARE
SPARE				17	20	20	18				SPARE
SPACE				19			20				SPACE
SPACE				21			22				SPACE
SPACE				23			24				SPACE
SPACE				25			26	25			
SPACE				27		125	28		25		75 KVA XFMR T2 FOR PANELBOARD PP1
SPACE				29			30			25	
SUB–TOTAL	2.0	3.0	3.0	NEUTRAL BUS / GROUND BUS				27.3	27.6	27.6	SUB–TOTAL

VOLTAGE: 480Y/277V 3 PHASE 4 WIRE 225 AMP BUS	TOTAL kVA A	29.3	PANEL NO. LP1
MAIN LUGS ONLY 225 AMP LUGS	TOTAL kVA B	30.6	
MOUNTING: SURFACE	TOTAL kVA C	30.6	LOCATION ELEC 107
SC RATING: 25,000 AIC	TOTAL kVA	90.5	

NOTES: *

DIRECTORY	kVA LOAD A	kVA LOAD B	kVA LOAD C	CKT NO.	BKR AMPS	BKR AMPS	CKT NO.	kVA LOAD A	kVA LOAD B	kVA LOAD C	DIRECTORY
RECEPTS – 166, 168, EXT GFI, UH–1	1.1			1	20	20	2	0.8			RECEPT – 155 VENDING
RECEPT – 104, 151, 156, EXT. GFI, CUH–1		1.1		3	20	20	4		0.8		RECEPT – 155 VENDING
RECEPT – 105, 156, 163, 164, 170, EXT GFI, CUH–2			1.5	5	20	20	6			1.0	RECEPT – 155 VENDING
RECEPT – 111, 116, 157, 158	0.9			7	20	20	8	0.4			RECEPT – 154 COUNTERTOP
RECEPT & FLUSH VALVES – 102, 103		0.8		9	20	20	10		0.4		RECEPT – 154 COUNTERTOP
RECEPT – 101, 110			1.1	11	20	20	12			0.4	RECEPT – 154 COUNTERTOP
RECEPT – 173, EF–3, EF–7	1.2			13	20	20	14	1.0			RECEPT – 154 REFRIGERATOR
RECEPT 174		0.8		15	20	20	16		1.0		RECEPT – 154 REFRIGERATOR
RECEPT 174 COPIER			1.5	17	20	20	18			1.1	RECEPT – 154
RECEPT 112, 113	1.1			19	20	20	20	0.9			RECEPT – 159
RECEPT – 161, 162		0.9		21	20	20	22		0.9		RECEPT – 152, 153
RECEPT – 161			0.8	23	20	20	24			0.8	RECEPT – 153
RECEPT – 161	0.9			25	20	20	26	0.8			RECEPT – 153
(2) RECEPT – 161		1.1		27	20	20	28		1.3		RECEPT – 153
(2) RECEPT – 161 COPIER			1.0	29	20	20	30			1.0	RECEPT – 153 COPIER
RECEPT – 169, UH–2, EXT. GFI	1.0			31	20	20	32	0.8			RECEPT. – 171, 172
WATER COOLER		0.5		33	20	20	34		0.7		SHED LTG & RECEPTS
(1) HEAT TRACE			0.2	35	20	20	36			0.6	DOOR HOLDERS
IRRIGATION CONTROLLER	0.2			37	20		38				SPACE
SPACE				39			40				SPACE
SPACE				41			42				SPACE
SUB–TOTAL	6.4	5.2	6.1	NEUTRAL BUS / GROUND BUS				4.7	5.1	4.9	SUB–TOTAL

VOLTAGE: 208Y/120V 3 PHASE 4 WIRE 225 AMP BUS	TOTAL kVA A	11.1	PANEL NO. PP1 SECTION 1
MAIN BREAKER: 225 AMP TRIP	TOTAL kVA B	10.3	
MOUNTING: SURFACE	TOTAL kVA C	11.0	LOCATION ELEC 107
SC RATING: 10,000 AIC	TOTAL kVA	32.4	

NOTES: PROVIDE W/ FEED THRU LUGS.
(1) PROVIDE GROUND FAULT CIRCUIT BREAKER W/ 30 mA TRIP.
(2) PROVIDE HANDLE TIE BETWEEN BREAKERS FEEDING MODULAR OFFICE FURNITURE THAT ALLOWS BOTH BREAKERS TO BE OPENED TOGETHER.

DIRECTORY	kVA LOAD A	kVA LOAD B	kVA LOAD C	CKT NO.	BKR AMPS	BKR AMPS	CKT NO.	kVA LOAD A	kVA LOAD B	kVA LOAD C	DIRECTORY
SPARE				1	20	20	2				SPARE
SPARE				3	20	20	4				SPARE
SPARE				5	20	20	6				SPARE
SPARE				7	20	20	8				SPARE
SPARE				9	20	20	10				SPARE
SPARE				11	20	20	12				SPARE
SPACE				13			14				SPACE
SPACE				15			16				SPACE
SPACE				17			18				SPACE
SPACE				19			20				SPACE
SPACE				21			22				SPACE
SPACE				23			24				SPACE
SPACE				25			26				SPACE
SPACE				27			28				SPACE
SPACE				29			30				SPACE
SPACE				31			32				SPACE
SPACE				33			34				SPACE
SPACE				35			36				SPACE
SPACE				37			38				SPACE
SPACE				39			40				SPACE
SPACE				41			42				SPACE
SUB–TOTAL	–	–	–	NEUTRAL BUS / GROUND BUS				–	–	–	SUB–TOTAL

VOLTAGE: 208Y/120V 3 PHASE 4 WIRE 225 AMP BUS	TOTAL kVA A	–	PANEL NO. PP1 SECTION 2
MAIN LUGS ONLY: 225 AMP LUGS	TOTAL kVA B	–	
MOUNTING: SURFACE	TOTAL kVA C	–	LOCATION ELEC 107
SC RATING: 10,000 AIC	TOTAL kVA	0.0	

NOTES:

DIRECTORY	kVA LOAD A	kVA LOAD B	kVA LOAD C	CKT NO.	BKR AMPS	BKR AMPS	CKT NO.	kVA LOAD A	kVA LOAD B	kVA LOAD C	DIRECTORY
	0.4			1			2	0.9			
PUMP P–9 (1/2 HP) FOR BOILER B–1		0.4		3	15	15	4		0.9		PUMP P–8 (1 1/2 HP)
			0.4	5			6			0.9	
	0.4			7			8	4.5			
PUMP P–10 (1/2 HP) FOR BOILER B–2		0.4		9	15	25	10		4.5		BOOSTER PUMP STATION BP–1 & BP–2
			0.4	11			12			4.5	
	2.7			13			14				SPACE
PUMP P–1A (5 HP)		2.7		15	15		16				SPACE
			2.7	17			18				SPACE
	2.7			19			20				SPACE
PUMP P–1B (5 HP)		2.7		21	15		22				SPACE
			2.7	23			24				SPACE
	1.7			25			26				SPACE
PUMP P–7A (1 1/2 HP) & P–7B (1 1/2 HP)		1.7		27	15		28				SPACE
			1.7	29			30				SPACE
	3.1			31			32				SPACE
PUMP P–2A (7 1/2 HP)		3.1		33	30		34				SPACE
			3.1	35			36				SPACE
	3.1			37			38				SPACE
PUMP P–2B (7 1/2 HP)		3.1		39	30		40				SPACE
			3.1	41			42				SPACE
SUB–TOTAL	14.1	14.1	14.1	NEUTRAL BUS / GROUND BUS				5.4	5.4	5.4	SUB–TOTAL

VOLTAGE: 480Y/277V 3 PHASE 4 WIRE 225 AMP BUS	TOTAL kVA A	19.5	PANEL NO. EMP1
MAIN LUGS ONLY 225 AMP LUGS	TOTAL kVA B	19.5	
MOUNTING: SURFACE	TOTAL kVA C	19.5	LOCATION ELEC 172
SC RATING: 35,000 AIC	TOTAL kVA	58.5	

NOTES: *

DIRECTORY	kVA LOAD A	kVA LOAD B	kVA LOAD C	CKT NO.	BKR AMPS	BKR AMPS	CKT NO.	kVA LOAD A	kVA LOAD B	kVA LOAD C	DIRECTORY
OVERHEAD DOOR, UH–3	1.2			1	20	20	2	0.9			RECEPT – 117, 118
RECEPT – 138		1.4		3	20	20	4		0.9		RECEPT – 123
RECEPT – 138 COUNTERTOP			0.2	5	20	20	6			0.9	RECEPT – 119, 120, 121
RECEPT – 138 COUNTERTOP	0.2			7	20	20	8	0.9			RECEPT – 121, 126, 127
RECEPT – 140, 142		1.1		9	20	20	10		0.9		RECEPT – 128
RECEPT – 144, 145, EXT. GFI			0.9	11	20	20	12			0.9	RECEPT – 122, 129, 130, EXT. GFI
RECEPT – 146 ARMORY	0.2			13	20	20	14	0.8			RECEPT – 132
RECEPT – COMP 141		0.8		15	20	20	16		0.6		RECEPT – 134, 137
RECEPT – 147, 148			0.8	17	20	20	18			1.1	RECEPT & FLUSH VALVES – 125,131,133,135,136,139
RECEPT – 134 COPIER	0.8			19	20	20	20				SPARE
SPARE				21	20	20	22				SPARE
SPARE				23	20	20	24				SPARE
SPARE				25	20	20	26				SPARE
SPARE				27	20	20	28				SPARE
SPARE				29	20	20	30				SPARE
SUB–TOTAL	2.4	3.3	1.9	NEUTRAL BUS / GROUND BUS				2.6	2.4	3.0	SUB–TOTAL

VOLTAGE: 208Y/120V 3 PHASE 4 WIRE 125 AMP BUS	TOTAL kVA A	5.0	PANEL NO. EPD1
MAIN BREAKER: 100 AMP TRIP	TOTAL kVA B	5.7	
MOUNTING: SURFACE	TOTAL kVA C	4.8	LOCATION STATE POLICE COMP 141
SC RATING: 10,000 AIC	TOTAL kVA	15.5	

NOTES:

DIRECTORY	kVA LOAD A	kVA LOAD B	kVA LOAD C	CKT NO.	BKR AMPS	BKR AMPS	CKT NO.	kVA LOAD A	kVA LOAD B	kVA LOAD C	DIRECTORY
RECEPT. BLDG. SERVICES	0.8			1	20	20	2	1.0			OVERHEAD DOOR 168
ELEV. 1 PIT LTG, RECEPT.		0.2		3	20	20	4		0.4		RECEPT – 106, 107
ELEV. 2 PIT LTG, RECEPT.			0.2	5	20	20	6			0.4	BOTTLE 116a – FIRE CONTROLS (1)
ELEV. SUMP SP–1	1.0			7	20	20	8	0.8			COMP. REPAIR 112 – RECEPT., FURNITURE
ELEV. SHUNT TRIP POWER		0.2		9	20	20	10		1.1		COMP REPAIR 112 – FURNITURE
ELEV. 1 CAB LTG.			0.2	11	20	20	12			0.4	FIRE ALARM CONTROL PANEL (1)
ELEV. 2 CAB LTG.	0.2			13	20	20	14	0.4			RM 173 – FIRE CONTROLS, ALARM BELL (1)
ELEV. MACHINE RECEPT.		0.2		15	20	20	16		0.8		RECEPT – 169, 172, EXT. GFI
MECHANICAL CONTROLS – 106,169			0.4	17	20	20	18			1.2	SNOWMELT PUMP P–3 (1/2 HP)
CARD READERS	0.8			19	20	20	20	0.8			PUMPS P–11 (1/8HP), P–12 (1/8HP), RP–1 (1/20HP)
~~CAMERAS~~ SPARE		0.8		21	20	20	22		0.2		RECEPT BOTTLE 116a
BOILER B–1			0.8	23	20	20	24				SPARE
BOILER B–2	0.8			25	20	20	26				SPARE
SPARE				27	20	20	28				SPARE
SPARE				29	20	20	30				SPARE
SPACE				31			32				SPACE
SPACE				33			34				SPACE
SPACE				35			36				SPACE
SPACE				37			38				SPACE
GENERATOR LOADCENTER		2.0		39	60		40				SPACE
			2.0	41			42				SPACE
SUB–TOTAL	3.6	3.9	3.6	NEUTRAL BUS / GROUND BUS				3.0	2.5	2.0	SUB–TOTAL

VOLTAGE: 208Y/120V 3 PHASE 4 WIRE 225 AMP BUS	TOTAL kVA A	6.6	PANEL NO. EPP1
MAIN BREAKER: 150 AMP TRIP	TOTAL kVA B	5.9	
MOUNTING: SURFACE	TOTAL kVA C	5.6	LOCATION ELEC 107
SC RATING: 10,000 AIC	TOTAL kVA	18.1	

NOTES: PROVIDE FEED THRU LUGS
(1) PROVIDE W/ LOCKING HARDWARE

SI #8

DIRECTORY	kVA LOAD A	kVA LOAD B	kVA LOAD C	CKT NO.	BKR AMPS	BKR AMPS	CKT NO.	kVA LOAD A	kVA LOAD B	kVA LOAD C	DIRECTORY
LTG. 104–105,150,151,164,165,204–205,304–305	2.0			1	20	20	2	0.9			LTG. POLICE
LTG. 112, 114, 168, 169, 171–174		2.1		3	20	20	4				SPARE
LTG. 102, 103, 106, 107, 111, 153–158, 160, 161, 170			1.0	5	20	20	6				SPARE
SPARE				7	20	20	8				SPARE
SPARE				9	20	20	10				SPARE
SPARE				11	20		12				SPARE
SPARE				13	20		14	1.9			
SPARE				15	20	60	16		1.9		SUBPANELS LSP2 & LSP3
SPARE				17	20		18			1.9	
SUB–TOTAL	2.0	2.1	1.0	NEUTRAL BUS / GROUND BUS				2.8	1.9	1.9	SUB–TOTAL

VOLTAGE: ~~480Y/277V~~ ~~3 PHASE~~ ~~4 WIRE~~ 100 AMP BUS	TOTAL kVA A	4.8	PANEL NO. LSP1
MAIN ~~BREAKER:~~ Main Lugs only 100 AMP ~~TRIP~~ Lugs	TOTAL kVA B	4.0	
~~MOUNTING: SURFACE~~	TOTAL kVA C	2.9	LOCATION ELEC 107
SC RATING: 25,000 AIC	TOTAL kVA	11.7	

NOTES: PROVIDE W/ FEED THRU LUGS

SI #8

DIRECTORY	kVA LOAD A	kVA LOAD B	kVA LOAD C	CKT NO.	BKR AMPS	BKR AMPS	CKT NO.	kVA LOAD A	kVA LOAD B	kVA LOAD C	DIRECTORY
	10.3			1		20	2	2.9			STANDBY SITE LIGHTING ZONE S1
		10.3		3		20	4		1.9		STANDBY SITE LIGHTING ZONE S7
PANELBOARD EMP1			10.3	5	225	20	6			3.5	STANDBY POLICE LIGHTING ZONE 11
	10.3			7		20	8				SPARE
		10.3		9		20	10				SPARE
			10.3	11		20	12				SPARE
	10			13			14	7.7			
30 KVA XFMR T5 FOR PANELBOARD EPD1		10		15	60	35	16		7.7		DATA CENTER AC–1 (1)
			10	17			18			7.7	
	15			19			20	7.7			
45 KVA XFMR T6 FOR PANELBOARD EPP1		15		21	90	35	22		7.7		DATA CENTER AC–2 (1)
			15	23			24			7.7	
	10			25			26				SPACE
30 KVA XFMR T7 FOR PANELBOARD EPP2		10		27	60		28				SPACE
			10	29			30				SPACE
	25			31			32				SPACE
75 KVA XFMR T8 FOR UPS		25		33	100		34				SPACE
			25	35			36				SPACE
	9.1			37			38				SPACE
CHILLER CH–3		9.1		39	50		40				SPACE
			9.1	41			42				SPACE
SUB–TOTAL	89.7	89.7	89.7	NEUTRAL BUS / GROUND BUS				18.3	17.3	18.9	SUB–TOTAL

VOLTAGE: 480Y/277V 3 PHASE 4 WIRE 225 AMP BUS	TOTAL kVA A	108	PANEL NO. EDP
MAIN LUGS ONLY 225 AMP LUGS	TOTAL kVA B	107	
MOUNTING: SURFACE	TOTAL kVA C	108.6	LOCATION ELEC 172
SC RATING: 35,000 AIC	TOTAL kVA	323.6	

NOTES: (1) PROVIDE W/ SHUNT TRIP ACCESSORY FOR REMOTE SHUT DOWN

AS BUILT
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PROJECT TITLE:
MAINE TURNPIKE AUTHORITY
ADMINISTRATION BUILDING
PORTLAND, MAINE

CURRENT ISSUE STATUS:
ISSUED FOR BIDDING/CONSTRUCTION
7-9-07

REV	DESCRIPTION	DATE
0	BIDDING/CONSTRUCTION	7–9–07

GRAPHIC SCALE: 0" 1"

SCALE:	NONE
PROJECT MANAGER:	SLB
JC/DRAWN BY:	TCM/CDS
A/E OF RECORD:	JPP
CAD FILE:	EP601–06016
PROJECT NO:	06016
DATE:	7–9–07

SHEET TITLE:
PANEL SCHEDULES

SHEET No. EP601

PANEL LP2

DIRECTORY	kVA LOAD A	kVA LOAD B	kVA LOAD C	CKT NO.	BKR AMPS	BKR AMPS	CKT NO.	kVA LOAD A	kVA LOAD B	kVA LOAD C	DIRECTORY
LTG – 222–226	3.4			1	20	20	2	2.0			LTG – 234, 243, 244, 246–248, 255
LTG – 201, 210, 214, 215		1.5		3	20	20	4		2.6		LTG–208,209,233,241,242,245,249,250,252–254,257
LTG – EXT. CANOPY, FACADE			0.2	5	20	20	6			2.3	LTG – 202, 203, 212, 213, 216–221, 227, 228
SPARE				7	20	20	8				SPARE
SPARE				9	20	20	10				SPARE
SPARE				11	20	20	12				SPARE
SPACE				13			14				SPACE
SPACE				15			16				SPACE
SPACE				17			18				SPACE
SPACE				19			20				SPACE
SPACE				21			22				SPACE
SPACE				23			24				SPACE
SPACE				25			26	25			
SPACE				27		125	28		25		75 KVA XFMR T3 FOR PANELBOARD PP2
SPACE				29			30			25	
SUB–TOTAL	3.4	1.5	0.2		NEUTRAL BUS	GROUND BUS		27.0	27.6	27.3	SUB–TOTAL

VOLTAGE: 480Y/277V 3 PHASE 4 WIRE 225 AMP BUS	TOTAL kVA A	30.4	PANEL NO.: LP2
MAIN LUGS ONLY 225 AMP LUGS	TOTAL kVA B	29.1	
MOUNTING: SURFACE	TOTAL kVA C	27.5	LOCATION: ELEC 207
SC RATING: 25,000 AIC	TOTAL kVA	87.0	

NOTES: *

PANEL PP2 SECTION 1

DIRECTORY	kVA LOAD A	kVA LOAD B	kVA LOAD C	CKT NO.	BKR AMPS	BKR AMPS	CKT NO.	kVA LOAD A	kVA LOAD B	kVA LOAD C	DIRECTORY
RECEPT 241	0.6			1	20	20	2	1.1			RECEPT & FLUSH VALVES 202,203,222,226
RECEPT 242		0.9		3	20	20	4		0.8		RECEPT 233, 234, 243, 246
RECEPT 242, COPIER			1.4	5	20	20	6			0.8	RECEPT 212
RECEPT 244	0.8			7	20	20	8	0.9			RECEPT 214, 215, CUH–3
FURNITURE 244		1.1		9	20	20	10		0.8		RECEPT 213
FURNITURE 244			1.1	11	20	20	12			0.6	RECEPT 201, 201c
FURNITURE 244	0.8			13	20	20	14	0.9			RECEPT 216, 217, 218
FURNITURE 248		0.8		15	20	20	16		0.4		RECEPT ATM
RECEPT 245			0.8	17	20	20	18			0.4	RECEPT 219
RECEPT 247, 248, 253, 255	1.1			19	20	20	20	0.4			RECEPT 219
RECEPT 249		0.8		21	20	20	22		0.4		RECEPT 219
RECEPT 250			0.8	23	20	20	24			1.4	RECEPT 219 COPIER
RECEPT 252	0.8			25	20	20	26	0.6			RECEPT 220
RECEPT 254		0.8		27	20	20	28		0.4		RECEPT 220 MAIL MACHINE
RECEPT 257			0.8	29	20	20	30			0.6	RECEPT 220 MAIL MACHINE
RECEPT 257 MAIL MACHINE	1.0			31	20	20	32	1.7			RECEPT 220 COPIER
EXT. GFI		0.4		33	20		34		1.7		
COPIER 257			1.7	35	20	20	36			0.5	WATER COOLER
	1.7			37		20	38	0.9			RECEPT 223, 224
COPIER 257		1.7		39	20	20	40		1.1		RECEPT 224, 225
			1.7	41		20	42			0.8	RECEPT 228
SUB–TOTAL	6.8	6.5	8.3		NEUTRAL BUS	GROUND BUS		6.5	5.6	5.1	SUB–TOTAL

VOLTAGE: 208Y/120V 3 PHASE 4 WIRE 225 AMP BUS	TOTAL kVA A	13.3	PANEL NO.: PP2 SECTION 1
MAIN BREAKER 225 AMP TRIP	TOTAL kVA B	12.1	
MOUNTING: SURFACE	TOTAL kVA C	13.4	LOCATION: ELEC 207
SC RATING: 10,000 AIC	TOTAL kVA	38.8	

NOTES: PROVIDE W/ FEED THRU LUGS

PANEL PP2 SECTION 2

DIRECTORY	kVA LOAD A	kVA LOAD B	kVA LOAD C	CKT NO.	BKR AMPS	BKR AMPS	CKT NO.	kVA LOAD A	kVA LOAD B	kVA LOAD C	DIRECTORY
(2) FURNITURE 223	1.1			43	20	20	44	0.4			FURNITURE 227
(2) FURNITURE 223		1.1		45	20	20	46		0.4		RECEPT 227
FURNITURE 223			0.8	47	20	20	48			0.4	RECEPT 227
(2) FURNITURE 224	1.1			49	20	20	50	0.4			RECEPT 227
(2) FURNITURE 224		1.1		51	20	20	52		0.4		HEAT TRACE (1)
(3) FURNITURE 225			1.1	53	20	20	54			0.9	TRACK LIGHTING 201
(3) FURNITURE 225	1.1			55	20	20	56	0.3			BLDG. SIGNAGE LIGHTING S & E WALLS
(3) FURNITURE 225		1.1		57	20	20	58		1.1		LTG – DISPLAY CASES 214,215
(3) FURNITURE 225 COPIER			1.4	59	20	20	60			1.0	RECEPT 241 COPIER
(2) FURNITURE 225	1.1			61	20	20	62	0.9			TRACK LIGHTING 201
(2) FURNITURE 225		1.1		63	20	20	64		0.9		TRACK LIGHTING 201
FURNITURE 225			0.8	65	20	20	66				SPARE
SPACE				67			68				SPACE
SPACE				69			70				SPACE
SPACE				71			72				SPACE
SPACE				73			74				SPACE
SPACE				75			76				SPACE
SPACE				77			78				SPACE
SPACE				79			80				SPACE
SPACE				81			82				SPACE
SPACE				83			84				SPACE
SUB–TOTAL	4.4	4.4	4.1		NEUTRAL BUS	GROUND BUS		2.0	2.8	2.3	SUB–TOTAL

VOLTAGE: 208Y/120V 3 PHASE 4 WIRE 225 AMP BUS	TOTAL kVA A	6.4	PANEL NO.: PP2 SECTION 2
MAIN LUGS ONLY 225 AMP LUGS	TOTAL kVA B	7.2	
MOUNTING: SURFACE	TOTAL kVA C	6.4	LOCATION: ELEC 207
SC RATING: 10,000 AIC	TOTAL kVA	20.0	

NOTES:
(1) PROVIDE GROUND FAULT CIRCUIT BREAKER W/ 30 mA TRIP
(2) PROVIDE HANDLE TIE BETWEEN BREAKERS FEEDING MODULAR FURNITURE THAT ALLOWS BOTH BREAKERS TO OPEN TOGETHER.
(3) PROVIDE HANDLE TIE BETWEEN BREAKERS FEEDING MODULAR FURNITURE THAT ALLOWS ALL FOUR BREAKERS TO OPEN TOGETHER.

PANEL LSP2

DIRECTORY	kVA LOAD A	kVA LOAD B	kVA LOAD C	CKT NO.	BKR AMPS	BKR AMPS	CKT NO.	kVA LOAD A	kVA LOAD B	kVA LOAD C	DIRECTORY
LTG – 201,206,207,210,211,234,242–244,246,248,255	1.0			1	20	20	2	0.6			LTG – 202, 203, 216, 222–227
LTG – 229–232, 235–240		2.5		3	20	20	4				SPARE
SPARE				5	20	20	6				SPARE
SPARE				7	20	20	8				SPARE
SPARE				9	20	20	10				SPARE
SPARE				11	20	20	12				SPARE
SUB–TOTAL	1.0	2.5	0.0		NEUTRAL BUS	GROUND BUS		0.6	0.0	0.0	SUB–TOTAL

VOLTAGE: 480Y/277V 3 PHASE 4 WIRE 125 AMP BUS	TOTAL kVA A	1.6	PANEL NO.: LSP2
MAIN LUGS ONLY 60 AMP LUGS	TOTAL kVA B	2.5	
MOUNTING: SURFACE	TOTAL kVA C	0.0	LOCATION: ELEC 207
SC RATING: 10,000 AIC	TOTAL kVA	4.1	

NOTES: PROVIDE W/ FEED THRU LUGS

PANEL EPP2

DIRECTORY	kVA LOAD A	kVA LOAD B	kVA LOAD C	CKT NO.	BKR AMPS	BKR AMPS	CKT NO.	kVA LOAD A	kVA LOAD B	kVA LOAD C	DIRECTORY
RECEPT 236	0.6			1	20	20	2	0.9			RECEPT 229
RECEPT 239		0.8		3	20	20	4		0.9		RECEPT 230
RECEPT & FLUSH VALVES 238, 240			0.8	5	20	20	6			0.4	A/V RECEPT 229, 231
RECEPT 237	0.9			7	20	20	8	0.4			A/V RECEPT 230, 232
RECEPT 237 CONSOLE		0.4		9	20	20	10		0.4		RECEPT 235 REFRIGERATOR
RECEPT 237 CONSOLE			0.4	11	20	20	12			0.2	RECEPT 235 COUNTERTOP
RECEPT 206, 207	0.6			13	20	20	14	0.2			RECEPT 235 COUNTERTOP
MOTORIZED DOOR OPENER		0.8		15	20	20	16		0.8		MOTORIZED SCREENS 229, 230
MOTORIZED DOOR OPENER			1.6	17	20	20	18			0.2	MECHANICAL CONTROLS 206
CARD READERS	0.8			19	20	20	20	0.4			~~CAMERA SYSTEM DVR & ENTRY~~ RECEPT 236
SPARE				21	20	20	22				SPARE
SPARE				23	20	20	24				SPARE
SPARE				25	20	20	26				SPARE
SPARE				27	20	20	28				SPACE
SPARE				29	20	20	30				SPACE
SUB–TOTAL	2.9	2.0	2.8		NEUTRAL BUS	GROUND BUS		1.9	2.1	0.8	SUB–TOTAL

VOLTAGE: 208Y/120V 3 PHASE 4 WIRE 125 AMP BUS	TOTAL kVA A	4.8	PANEL NO.: EPP2
MAIN LUGS ONLY 100 AMP LUGS	TOTAL kVA B	4.1	
MOUNTING: SURFACE	TOTAL kVA C	3.6	LOCATION: EQUIPMENT 236
SC RATING: 10,000 AIC	TOTAL kVA	12.5	

NOTES: *

PANEL UPP1

DIRECTORY	kVA LOAD A	kVA LOAD B	kVA LOAD C	CKT NO.	BKR AMPS	BKR AMPS	CKT NO.	kVA LOAD A	kVA LOAD B	kVA LOAD C	DIRECTORY
114 SERVER RACK RECEPT.	1.0			1	20	20	2	1.0			114 SERVER RACK RECEPT.
114 SERVER RACK RECEPT.		1.0		3	20	20	4		1.0		114 SERVER RACK RECEPT.
114 SERVER RACK RECEPT.			1.0	5	20	20	6			1.0	114 SERVER RACK RECEPT.
114 SERVER RACK RECEPT.	1.0			7	20	20	8	1.0			114 SERVER RACK RECEPT.
114 SERVER RACK RECEPT.		1.0		9	20	20	10		1.0		114 SERVER RACK RECEPT.
114 SERVER RACK RECEPT.			1.0	11	20	20	12			1.0	114 SERVER RACK RECEPT.
114 SERVER RACK RECEPT.	1.0			13	20	20	14	1.0			114 SERVER RACK RECEPT.
114 SERVER RACK RECEPT.		1.0		15	20	20	16		1.0		114 SERVER RACK RECEPT.
114 SERVER RACK RECEPT.			1.0	17	20	20	18			1.0	114 SERVER RACK RECEPT.
RECEPT. 106 T/D RACK	0.4			19	20	20	20	0.9			114 PERIMETER RECEPT.
RECEPT. 206 T/D RACK		0.4		21	20	20	22		0.8		114 PERIMETER RECEPT.
RECEPT. 306 T/D RACK			0.4	23	20	20	24			0.2	AC–1 AND AC–2 SHUNT TRIP POWER
RECEPT. 236 EQUIPMENT	0.4			25	20	20	26				SPARE
SPARE				27	20	20	28				SPARE
SPARE				29	20	20	30				SPARE
SPACE				31			32				SPACE
SPACE				33			34				SPACE
SPACE				35			36				SPACE
SPACE				37			38				SPACE
SPACE				39			40				SPACE
SPACE				41			42				SPACE
SUB–TOTAL	3.8	3.4	3.4		NEUTRAL BUS	GROUND BUS		3.9	3.8	3.2	SUB–TOTAL

VOLTAGE: 208Y/120V 3 PHASE 4 WIRE 225 AMP BUS	TOTAL kVA A	7.7	PANEL NO.: UPP1
MAIN BREAKER: 225 AMP TRIP	TOTAL kVA B	7.2	
MOUNTING: SURFACE	TOTAL kVA C	6.6	LOCATION: MID RANGE/SERVER RM 114
SC RATING: 10,000 AIC	TOTAL kVA	21.5	

NOTES: 1. PANELBOARD AND BRANCH CIRCUIT BREAKERS PROVIDED W/ OWNER FURNISHED AND INSTALLED UPS POWER DISTRIBUTION UNIT.

AS BUILT
Owner Copy

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STATE OF MAINE
JONI P. PERRUZZI
NO. 7707
LICENSED PROFESSIONAL ENGINEER
Rev. 0 7/2/07

PROJECT TITLE:
MAINE TURNPIKE AUTHORITY ADMINISTRATION BUILDING
PORTLAND, MAINE

CURRENT ISSUE STATUS:
ISSUED FOR BIDDING/CONSTRUCTION 7-9-07

REV	DESCRIPTION	DATE
0	BIDDING/CONSTRUCTION	7–9–07

GRAPHIC SCALE: 0" 1"

SCALE:	NONE
PROJECT MANAGER:	SLB
JC/DRAWN BY:	TCM/CDS
A/E OF RECORD:	DJT
CAD FILE:	EP602–06016
PROJECT NO:	06016
DATE:	7–9–07

SHEET TITLE:
PANEL SCHEDULES

SHEET No. EP602

PANEL LP3

DIRECTORY	kVA LOAD A	kVA LOAD B	kVA LOAD C	CKT NO.	BKR AMPS	BKR AMPS	CKT NO.	kVA LOAD A	kVA LOAD B	kVA LOAD C	DIRECTORY
LTG-313, 317, 324, 326, 327	3.0			1	20	20	2	2.8			LTG-330-335, 339-341
LTG-302,303,314-316,318-323,325,328,329		2.6		3	20	20	4		1.9		LTG-308, 309, 336-338, 342-348, 354
LTG-349, 351, 352, 353			1.1	5	20	20	6			0.4	LTG-EXT. CANOPY/FACADE
LTG-301	2.9			7	20	20	8	2.3			LTG-310, 311, 312
SPARE				9	20	20	10				SPARE
SPARE				11	20	20	12				SPARE
SPARE				13	20	20	14				SPARE
				15			16				
				17			18				
				19			20				
				21			22				
				23			24				
				25			26	25			
				27		125	28		25		75 KVA XFMR T4 FOR PANELBOARD PP3
				29			30			25	
SUB-TOTAL	5.9	2.6	1.1	NEUTRAL BUS		GROUND BUS		30.1	26.9	25.4	SUB-TOTAL

VOLTAGE: 480Y/277V 3 PHASE 4 WIRE 225 AMP BUS	TOTAL kVA A	36.0	PANEL NO.: LP3
MAIN LUGS ONLY 225 AMP LUGS	TOTAL kVA B	29.5	
MOUNTING: SURFACE	TOTAL kVA C	26.5	LOCATION: ELEC 307
SC RATING: 25,000 AIC	TOTAL kVA	92.0	

NOTES: *

PANEL PP3 SECTION 1

DIRECTORY	kVA LOAD A	kVA LOAD B	kVA LOAD C	CKT NO.	BKR AMPS	BKR AMPS	CKT NO.	kVA LOAD A	kVA LOAD B	kVA LOAD C	DIRECTORY
RECEPT 340	0.8			1	20	20	2	0.9			ROOF RECEPT & LIGHTS
RECEPT 341		0.8		3	20	20	4		0.7		EF-2 (1/4 HP)
RECEPT 339			0.8	5	20	20	6			1.6	EF-4 (1/6 HP), EF-5 (1/6 HP), & EF-6 (1/6 HP)
FURNITURE 339	0.8			7	20	25	8	2.1			HUMIDIFIER H-1
(1) FURNITURE 339		1.1		9	20	25	10		2.1		HUMIDIFIER H-2
(1) FURNITURE 339			1.1	11	20	25	12			2.1	HUMIDIFIER H-3
RECEPT 342	0.8			13	20		14	0.5			
RECEPT/ FURNITURE 344		1.3		15	20	15	16		0.5		EF-1 (3/4 HP)
RECEPT 338			0.9	17	20		18			0.5	
RECEPT 345, 348 & 345 FLOORBOX	1.1			19	20	20	20	1.1			RECEPT 305, 336, 337, 343, 354
RECEPT 346		1.1		21	20	20	22		0.8		RECEPT 334
RECEPTS & FLUSH VALVES 347, 349 FURNITURE			1.1	23	20	20	24			0.8	RECEPT 333
FURNITURE 349	1.1			25	20	20	26	0.9			RECEPT 331, 335
RECEPT 353		0.9		27	20	20	28		0.8		FURNITURE 331
RECEPT 351			0.8	29	20	20	30			0.8	FURNITURE 331
RECEPT 301	0.4			31	20	20	32	1.1			FURNITURE 335
RECEPTS & FLUSH VALVES 302-304, 313, 327		1.3		33	20	20	34		0.8		RECEPT 330, 332
RECEPT 314 COUNTERTOP			0.4	35	20	20	36			1.1	RECEPT 328, 329
RECEPT 314 COUNTERTOP	0.4			37	20	20	38	0.5			WATER COOLER
RECEPT 314 REFRIGERATOR		1.0		39	20	20	40		0.8		RECEPT 325
SPARE				41	20	20	42			0.2	RECEPT 323
SUB-TOTAL	5.4	7.5	5.1	NEUTRAL BUS		GROUND BUS		7.1	6.5	7.1	SUB-TOTAL

VOLTAGE: 208Y/120V 3 PHASE 4 WIRE 225 AMP BUS	TOTAL kVA A	12.5	PANEL NO.: PP3 SECTION 1
MAIN BREAKER: 225 AMP TRIP	TOTAL kVA B	14.0	
MOUNTING: SURFACE	TOTAL kVA C	12.2	LOCATION: ELEC 307
SC RATING: 10,000 AIC	TOTAL kVA	38.7	

NOTES: PROVIDE W/ FEED THRU LUGS
(1) PROVIDE HANDLE TIE BETWEEN BREAKERS FEEDING MODULAR FURNITURE THAT ALLOWS BOTH BREAKERS TO BE OPENED TOGETHER.

PANEL PP3 SECTION 2

DIRECTORY	kVA LOAD A	kVA LOAD B	kVA LOAD C	CKT NO.	BKR AMPS	BKR AMPS	CKT NO.	kVA LOAD A	kVA LOAD B	kVA LOAD C	DIRECTORY
RECEPT 316	0.8			43	20	20	44	0.9			RECEPT 310
RECEPT 317, 324		0.9		45	20	20	46		1.1		RECEPT 310, 315
FURNITURE 317			0.8	47	20	20	48			0.8	RECEPT 310 PROJECTORS
FURNITURE 317	1.1			49	20	20	50	0.8			RM 310 MOTORIZED SCREENS
RECEPT 318		0.8		51	20	20	52		0.4		RM 310 TABLE FLOORBOX
RECEPT 319, FURNITURE 322			0.9	53	20	20	54			0.4	RM 310 TABLE FLOORBOX
RECEPT 320	0.9			55	20	20	56	0.8			RECEPTS 312
RECEPT 321		0.8		57	20	20	58		1.1		PUMPS P-4 (1/6 HP) & P-5 (1/6 HP)
RECEPT 324, 332			0.9	59	20	20	60			0.6	PUMPS P-6 (1/6 HP)
FURNITURE 324, 326	1.1			61	20	20	62	0.8			RM 345 PROJECTOR & MOTORIZED SCREEN
FURNITURE 326		0.8		63	20	20	64		0.4		RM 310 LECTERN FLOORBOXES
FURNITURE 326			1.1	65	20	20	66			1.4	RM 310 LIGHTING/CONTROLS
(1) FURNITURE 326	1.1			67	20	20	68	1.4			RM 310 UPLIGHTING
(1) FURNITURE 326		1.1		69	20	20	70		1.0		RM 310 MOTORIZED SHADES
(1) FURNITURE 326			1.1	71	20	20	72				SPARE
SPARE				73	20	20	74				SPARE
SPARE				75	20	20	76				SPARE
SPARE				77	20	20	78				SPARE
SPACE				79			80				SPACE
SPACE				81			82				SPACE
SPACE				83			84				SPACE
SUB-TOTAL	5.0	4.4	4.8	NEUTRAL BUS		GROUND BUS		4.7	4.0	3.2	SUB-TOTAL

VOLTAGE: 208Y/120V 3 PHASE 4 WIRE 225 AMP BUS	TOTAL kVA A	9.7	PANEL NO.: PP3 SECTION 2
MAIN LUGS ONLY 225 AMP LUGS	TOTAL kVA B	8.4	
MOUNTING: SURFACE	TOTAL kVA C	8.0	LOCATION: ELEC 307
SC RATING: 10,000 AIC	TOTAL kVA	26.1	

NOTES: (1) PROVIDE HANDLE TIE BETWEEN BREAKERS FEEDING MODULAR FURNITURE THAT ALLOWS BOTH BREAKERS TO BE OPENED TOGETHER.

PANEL EPP3

DIRECTORY	kVA LOAD A	kVA LOAD B	kVA LOAD C	CKT NO.	BKR AMPS	BKR AMPS	CKT NO.	kVA LOAD A	kVA LOAD B	kVA LOAD C	DIRECTORY
RECEPT 306, 307	0.6			1	20	20	2	0.2			MECHANICAL CONTROLS 306
CARD READERS		0.8		3	20	20	4		0.4		PTZ ~~CAMERAS~~ SPARE
SPARE				5	20	20	6				SPARE
SPARE				7	20	20	8				SPARE
SPARE				9	20	20	10				SPARE
SPARE				11	20	20	12				SPARE
SPACE				13			14				SPACE
SPACE				15			16				SPACE
SPACE				17			18				SPACE
SPACE				19			20				SPACE
SPACE				21			22				SPACE
SPACE				23			24				SPACE
SPACE				25			26				SPACE
SPACE				27			28				SPACE
SPACE				29			30				SPACE
SUB-TOTAL	0.6	0.8	0.0	NEUTRAL BUS		GROUND BUS		0.2	0.4	0.0	SUB-TOTAL

VOLTAGE: 208Y/120V 3 PHASE 4 WIRE 225 AMP BUS	TOTAL kVA A	0.8	PANEL NO.: EPP3
MAIN LUGS ONLY 150 AMP LUGS	TOTAL kVA B	1.2	
MOUNTING: SURFACE	TOTAL kVA C	0.0	LOCATION: ELEC 307
SC RATING: 10,000 AIC	TOTAL kVA	2.0	

NOTES: *

PANEL LSP3

DIRECTORY	kVA LOAD A	kVA LOAD B	kVA LOAD C	CKT NO.	BKR AMPS	BKR AMPS	CKT NO.	kVA LOAD A	kVA LOAD B	kVA LOAD C	DIRECTORY
LTG - 301, 306, 307, 336, 343, 349, 352, 354	0.8			1	20	20	2				SPARE
SPARE				3	20	20	4				SPARE
LTG-302,303,310,313,317,322,324,326,327,330,331,335,339			0.8	5	20	20	6				SPARE
SPARE				7	20	20	8				SPARE
SPARE				9	20	20	10				SPARE
SPARE				11	20	20	12				SPARE
SUB-TOTAL	0.8	0.0	0.8	NEUTRAL BUS		GROUND BUS		0.0	0.0	0.0	SUB-TOTAL

VOLTAGE: 480Y/277V 3 PHASE 4 WIRE 100 AMP BUS	TOTAL kVA A	0.8	PANEL NO.: LSP3
MAIN LUGS ONLY 60 AMP LUGS	TOTAL kVA B	0.0	
MOUNTING: SURFACE	TOTAL kVA C	0.8	LOCATION: ELEC 307
SC RATING: 10,000 AIC	TOTAL kVA	1.6	

NOTES: *

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STATE OF MAINE
JON P. PERUZZI
NO. 7707
LICENSED PROFESSIONAL ENGINEER
Rev. 0 7/2/07

PROJECT TITLE:
MAINE TURNPIKE AUTHORITY ADMINISTRATION BUILDING
PORTLAND, MAINE

CURRENT ISSUE STATUS:
ISSUED FOR BIDDING/CONSTRUCTION
7-9-07

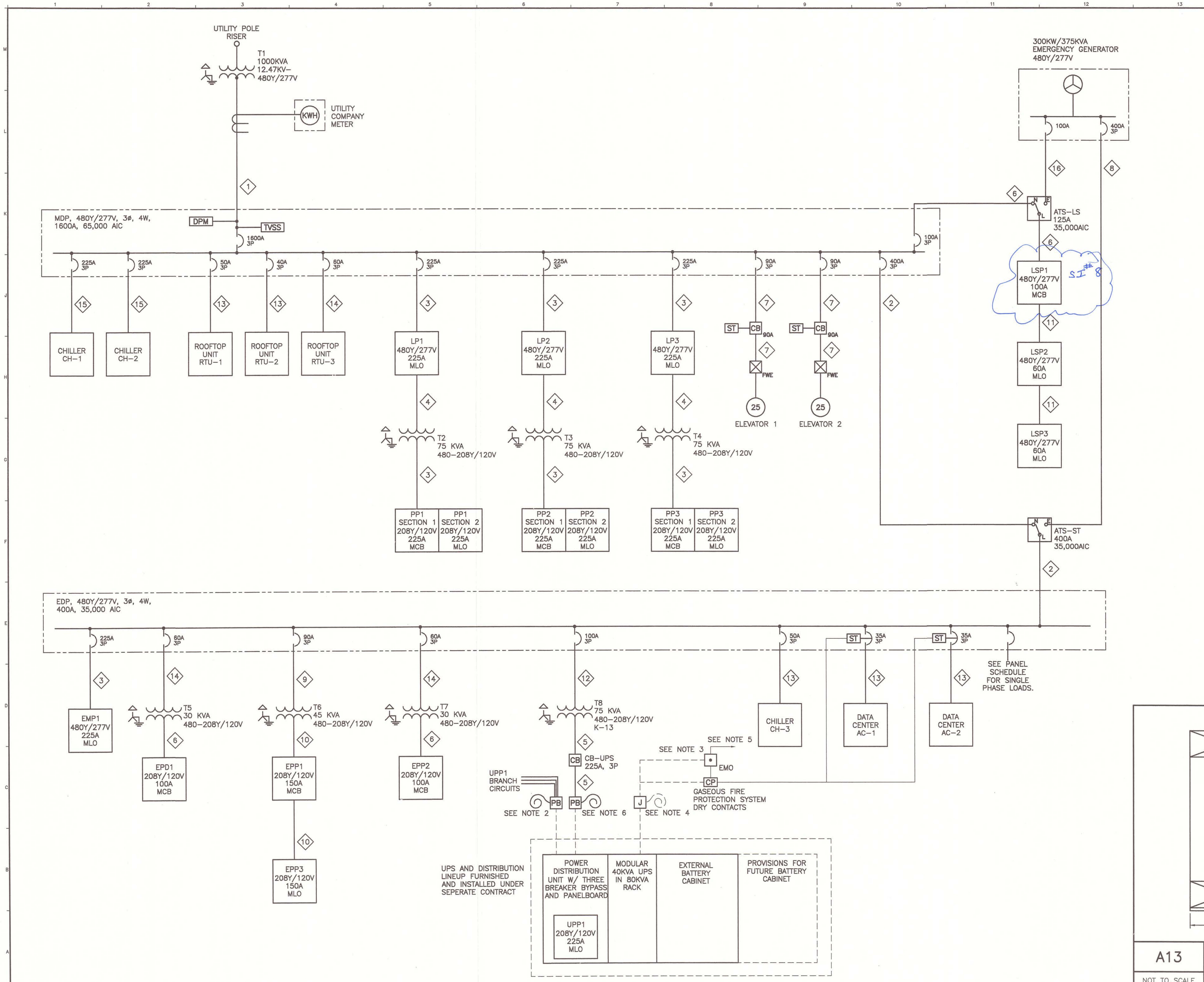
REV	DESCRIPTION	DATE
0	BIDDING/CONSTRUCTION	7-9-07

GRAPHIC SCALE: 0" 1"

SCALE:	NONE
PROJECT MANAGER:	SLB
JC/DRAWN BY:	TCM/CDS
A/E OF RECORD:	JPP
CAD FILE:	EP603-06016
PROJECT NO:	06016
DATE:	7-9-07

SHEET TITLE:
PANEL SCHEDULES

SHEET No. EP603

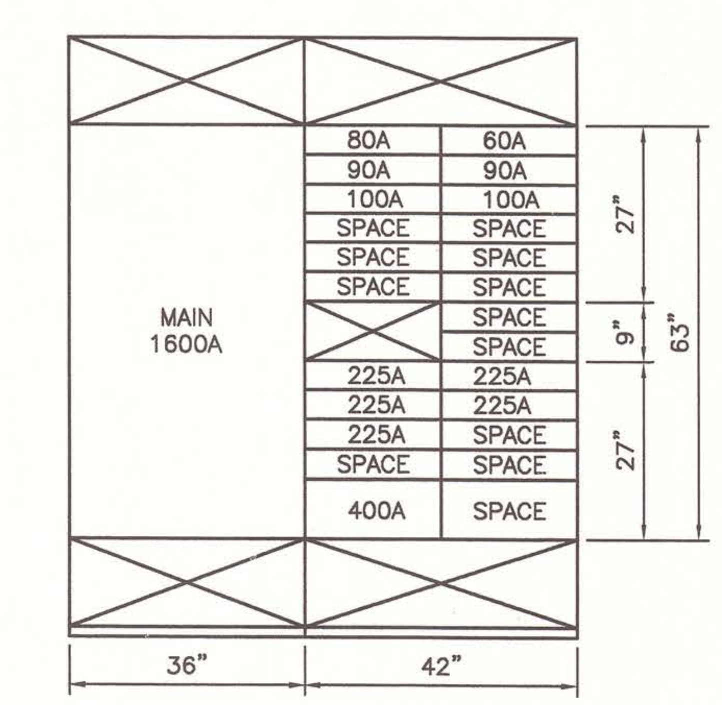


NOTE:

1. SEE SHEET E–001 FOR LEGEND AND GENERAL NOTES.
2. FURNISH AND INSTALL ALL BRANCH CIRCUIT WIRING AND DEVICES AS INDICATED ON POWER PLANS AND UPP1 PANEL SCHEDULE. ROUTE WIRING TO PULLBOX W/ 15 FEET OF EXCESS, LABEL, AND NEATLY COIL FOR FUTURE CONNECTION TO UPP1 BY UPS INSTALLER.
3. FURNISH AND INSTALL MUSHROOM TYPE EMERGENCY STOP PUSHBUTTON W/ 2 SETS OF N.O. AND N.C. CONTACTS. (STI SERIES 2000 STOPPER STATION W/ YELLOW HOUSING, PUSH TO ACTIVATE/TURN TO RESET RED PUSH BUTTON, AND LEXAN FLIP TOP COVER).
4. PROVIDE 4#18AWG UTP CONTROL WIRING FROM ONE SET OF EMERGENCY STOP PUSH BUTTON CONTACTS WIRED IN PARALLEL W/ GASEOUS FIRE PROTECTION CONTROL PANEL CONTACTS TO JUNCTION BOX MOUNTED ABOVE UPS W/ 15 FEET EXCESS, LABELLED AND COILED FOR UPS REMOTE SHUTDOWN INPUT CONNECTIONS BY UPS INSTALLER.
5. PROVIDE 120V SHUNT TRIP CONTROL POWER WIRED IN SERIES VIA NORMALLY CLOSED EMERGENCY STOP PUSHBUTTON AND GASEOUS FIRE PROTECTION CONTROL PANEL DRY CONTACTS TO AC–1 AND AC–2 SHUNT TRIP BREAKERS. ACTIVATION OF PUSHBUTTON OR GASEOUS FIRE PROTECTION SYSTEM SHALL DE–ENERGIZE AC–1 AND AC–2. SEE EP402 FOR ADDITIONAL INFORMATION.
6. FURNISH AND INSTALL UPS FEEDER WIRING TO UPS PULLBOX W/ 15 FEET OF EXCESS, LABEL, AND NEATLY COIL FOR FUTURE CONNECTION TO UPS PDU BY UPS INSTALLER.

CABLE SCHEDULE:

1. 4#600 KCMIL/ø (12 CONDUCTORS) & 4#600 KCMIL NEUTRALS, 4–#3/0 GNDS, 4–4"C
2. 4#500 KCMIL & #3 GND, 4"C
3. 4#4/0 AWG & #2 GND, 2"C
4. 3#2 AWG & #6 GND, 1–1/4"C
5. 4#4/0 AWG, 2#4/0 NEUTRALS, & #2 GND, 2–1/2"C
6. 4#2 AWG & #8 GND, 1–1/4"C
7. 3#6 AWG & #8 GND, 1"C
8. 4#500 KCMIL & #1/0 GND, 4"C
9. 3#4 AWG & #8 GND, 1"C
10. 4#1/0 AWG & #6 GND, 2"C
11. 4#6 AWG & #10 GND, 1"C
12. 3#2 AWG & #8 GND, 1–1/4"C
13. 3#8 AWG & #10 GND, 3/4"C
14. 3#6 AWG & #10 GND, 1"C
15. 3#3/0 AWG & #6 GND, 2"C
16. 4#2 AWG & #8 GND, 4"C



A13 MDP – FRONT VIEW

NOT TO SCALE DEPTH 24"

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STATE OF MAINE — JOHN H. PERRUZZI — No. 7707 — LICENSED PROFESSIONAL ENGINEER

PROJECT TITLE: MAINE TURNPIKE AUTHORITY ADMINISTRATION BUILDING, PORTLAND, MAINE

CURRENT ISSUE STATUS: ISSUED FOR BIDDING/CONSTRUCTION 7-9-07

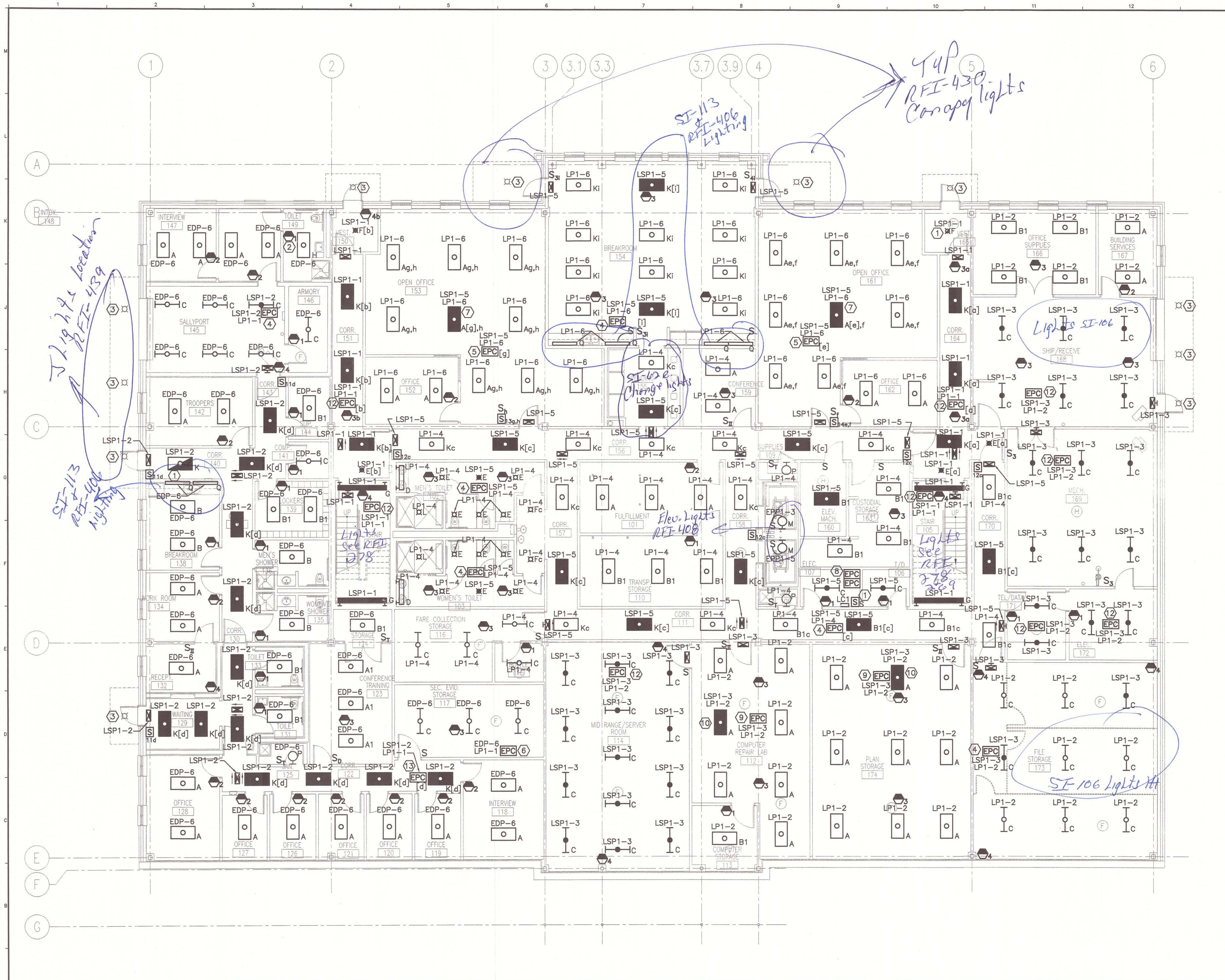
REV	DESCRIPTION	DATE
0	BIDDING/CONSTRUCTION	7-9-07

GRAPHIC SCALE: 0" 1"

SCALE:	AS NOTED
PROJECT MANAGER:	SLB
JC/DRAWN BY:	TCM/CDS
A/E OF RECORD:	DJT
CAD FILE:	EP651–06016
PROJECT NO:	06016
DATE:	7–9–07

SHEET TITLE: ELECTRICAL ONE LINE DIAGRAM

SHEET No. EP651



A1 FIRST FLOOR PLAN

1/8" = 1'-0"

NOTE:

1. SEE SHEET E001 FOR LEGEND AND ABBREVIATIONS.

KEYED NOTE:

1. CONNECT TO LIGHTING BRANCH CIRCUIT AHEAD OF SWITCHING FOR 24 HOUR OPERATION.
2. FURNISH AND INSTALL STI #9620 VANDAL RESISTANT WIRE CAGE FOR WALL SWITCH DEVICE.
3. CANOPY LIGHTING SHOWN FOR COORDINATION ONLY. SEE SHEET ES401 FOR FIXTURE TYPE AND CIRCUITING.
4. EMERGENCY POWER CONTROL MODULE FOR SINGLE LEVEL SWITCHED LIFE SAFETY LIGHTING VIA LIGHTING CONTROL PANEL AS INDICATED. SEE SHEET EL651 DETAIL J8 FOR ADDITIONAL INFORMATION.
5. EMERGENCY POWER CONTROL MODULE FOR DUAL LEVEL SWITCHED LIFE SAFETY LIGHTING THROUGH A LIGHTING CONTROL PANEL AS INDICATED. SEE SHEET EL651 DETAIL E8 FOR ADDITIONAL INFORMATION.
6. EMERGENCY POWER CONTROL MODULE FOR INTERIOR SWITCHED STANDBY LIGHTING AS INDICATED. SEE SHEET EL651 DETAIL A8 FOR ADDITIONAL INFORMATION.
7. DUAL LEVEL SWITCHED EMERGENCY FIXTURE VIA LIGHTING CONTROL PANEL. CONNECT OUTBOARD LAMPS TO SWITCHED LIFE SAFETY CIRCUIT AND CENTER LAMP TO SWITCHED NORMAL CIRCUIT AS INDICATED. SEE SHEET EL651 DETAIL E8 FOR ADDITIONAL INFORMATION.
8. EMERGENCY POWER CONTROL MODULES FOR SWITCHED STANDBY SITE LIGHTING BRANCH CIRCUITS. SEE SHEET EL651 DETAIL A12, ES101, AND ES401 FOR ADDITIONAL INFORMATION.
9. EMERGENCY POWER CONTROL MODULE FOR DUAL LEVEL SWITCHED LIFE SAFETY LIGHTING VIA LOCAL OCCUPANCY SENSOR AS INDICATED. SEE SHEET EL651 DETAIL E8 FOR ADDITIONAL INFORMATION.
10. DUAL LEVEL SWITCHED EMERGENCY FIXTURE VIA OCCUPANCY SENSOR. CONNECT OUTBOARD LAMPS TO SWITCHED LIFE SAFETY CIRCUIT AND CENTER LAMP TO SWITCHED NORMAL CIRCUIT AS INDICATED. SEE SHEET EL651 DETAIL E12 FOR ADDITIONAL INFORMATION.
11. EMERGENCY POWER CONTROL MODULE FOR SINGLE LEVEL SWITCHED LIFE SAFETY LIGHTING VIA OCCUPANCY SENSOR AS INDICATED. SEE SHEET EL651 DETAIL J12 FOR ADDITIONAL INFORMATION.
12. EMERGENCY POWER CONTROL MODULE FOR SINGLE LEVEL SWITCHED LIFE SAFETY LIGHTING ONLY AREAS VIA OCCUPANCY SENSOR AS INDICATED. SEE SHEET EL651 DETAIL A5 FOR ADDITIONAL INFORMATION.
13. EMERGENCY POWER CONTROL MODULE FOR SINGLE LEVEL SWITCHED LIFE SAFETY LIGHTING ONLY AREAS VIA LIGHTING CONTROL PANEL AS INDICATED. SEE SHEET EL651 DETAIL A1 FOR ADDITIONAL INFORMATION.

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STATE OF MAINE
JON P. PERRUZZI
NO. 7707
LICENSED PROFESSIONAL ENGINEER
7/2/07
REV. 0

PROJECT NORTH

MAG NORTH

PROJECT TITLE:

MAINE TURNPIKE AUTHORITY ADMINISTRATION BUILDING
PORTLAND, MAINE

CURRENT ISSUE STATUS:

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REV	DESCRIPTION	DATE
0	BIDDING/CONSTRUCTION	7-9-07

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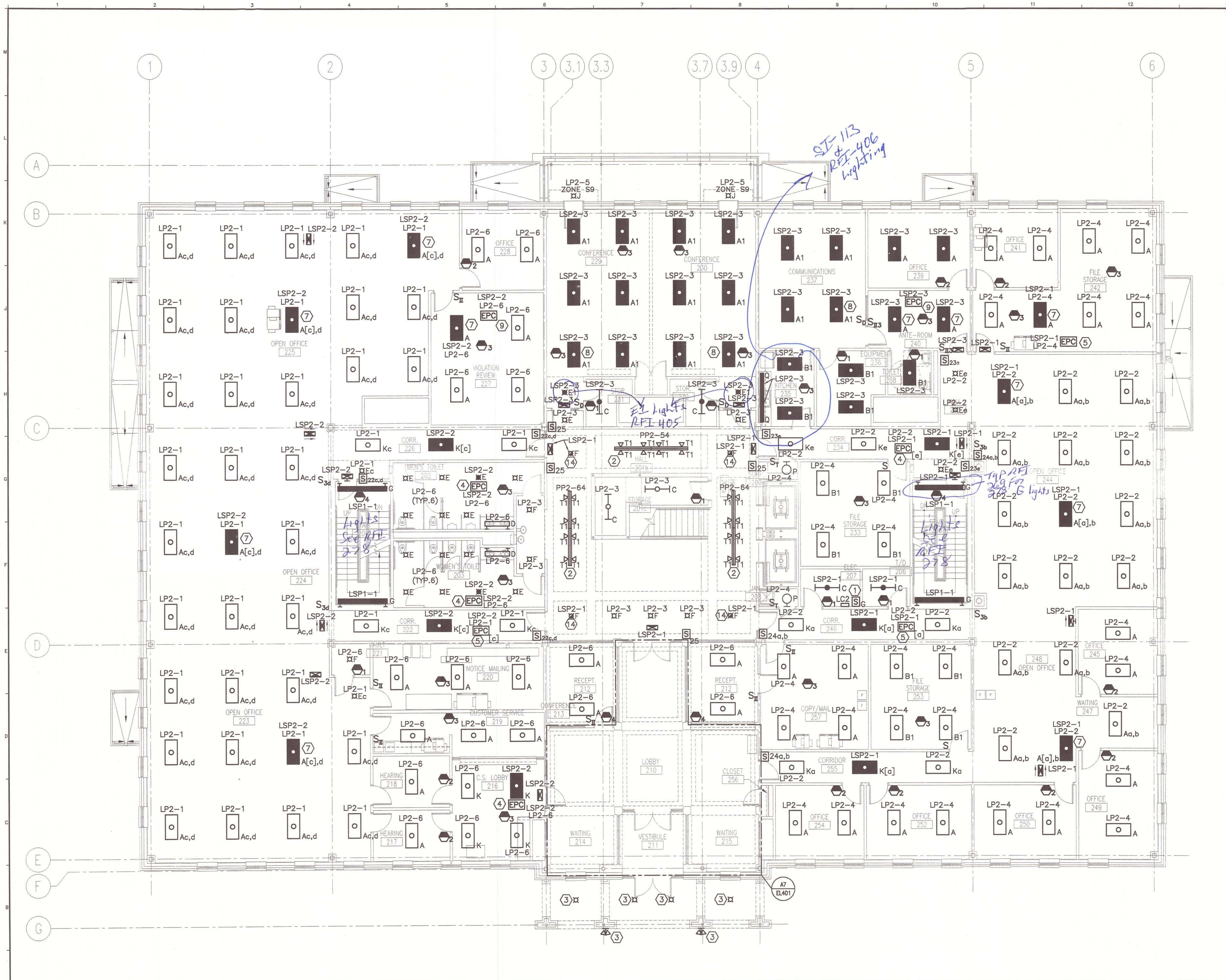
SCALE:	1/8"=1'-0"
PROJECT MANAGER:	SLB
JC/DRAWN BY:	TCM/CDS
A/E OF RECORD:	JPP
CAD FILE:	EL101-06016
PROJECT NO:	06016
DATE:	7-9-07

SHEET TITLE:

FIRST FLOOR LIGHTING PLAN

SHEET No. EL101



A1 FLOOR PLAN
1/8" = 1'-0"

NOTE:

1. SEE SHEET E001 FOR LEGEND AND ABBREVIATIONS.

KEYED NOTE:

1. LIGHTING CONTROL SYSTEM GALLERY LIGHTING ZONE OVERRIDE SWITCH.
2. FURNISH AND INSTALL 10' RECESSED TYPE 120V LIGHTING TRACK IN ACT CEILING. PROVIDE TRACK HEADS AS INDICATED FOR ILLUMINATION WALL ART. COORDINATE W/ ARCHITECT AND CEILING INSTALLER.
3. CANOPY AND FACADE/SIGNAGE LIGHTING SHOWN FOR COORDINATION ONLY. SEE SHEET ES401 FOR FIXTURE TYPE AND CIRCUITING.
4. EMERGENCY POWER CONTROL MODULE FOR SINGLE LEVEL SWITCHED LIFE SAFETY LIGHTING VIA LIGHTING CONTROL PANEL AS INDICATED. SEE SHEET EL651 DETAIL J8 FOR ADDITIONAL INFORMATION.
5. EMERGENCY POWER CONTROL MODULE FOR DUAL LEVEL SWITCHED LIFE SAFETY LIGHTING THROUGH A LIGHTING CONTROL PANEL AS INDICATED. SEE SHEET EL651 DETAIL E8 FOR ADDITIONAL INFORMATION.
6. EMERGENCY POWER CONTROL MODULE FOR INTERIOR SWITCHED STANDBY LIGHTING AS INDICATED. SEE SHEET EL651 DETAIL A8 FOR ADDITIONAL INFORMATION.
7. DUAL LEVEL SWITCHED EMERGENCY FIXTURE VIA LIGHTING CONTROL PANEL. CONNECT OUTBOARD LAMPS TO SWITCHED LIFE SAFETY CIRCUIT AND CENTER LAMP TO SWITCHED NORMAL CIRCUIT AS INDICATED. SEE SHEET EL651 DETAIL E8 FOR ADDITIONAL INFORMATION.
8. PROVIDE FIXTURE W/ BODINE #B50ST FLUORESCENT EMERGENCY BATTERY BALLAST FOR INSTANT FULL ON OPERATION OF DIMMED FIXTURE DURING POWER INTERRUPTION.
9. EMERGENCY POWER CONTROL MODULE FOR DUAL LEVEL SWITCHED LIFE SAFETY LIGHTING VIA LOCAL OCCUPANCY SENSOR AS INDICATED. SEE SHEET EL651 DETAIL E8 FOR ADDITIONAL INFORMATION.
10. DUAL LEVEL SWITCHED EMERGENCY FIXTURE VIA OCCUPANCY SENSOR. CONNECT OUTBOARD LAMPS TO SWITCHED LIFE SAFETY CIRCUIT AND CENTER LAMP TO SWITCHED NORMAL CIRCUIT AS INDICATED. SEE SHEET EL651 DETAIL E12 FOR ADDITIONAL INFORMATION.
11. EMERGENCY POWER CONTROL MODULE FOR SINGLE LEVEL SWITCHED LIFE SAFETY LIGHTING VIA OCCUPANCY SENSOR AS INDICATED. SEE SHEET EL651 DETAIL J12 FOR ADDITIONAL INFORMATION.
12. EMERGENCY POWER CONTROL MODULE FOR SINGLE LEVEL SWITCHED LIFE SAFETY LIGHTING ONLY AREAS VIA OCCUPANCY SENSOR AS INDICATED. SEE SHEET EL651 DETAIL A5 FOR ADDITIONAL INFORMATION.
13. EMERGENCY POWER CONTROL MODULE FOR SINGLE LEVEL SWITCHED LIFE SAFETY LIGHTING ONLY AREAS VIA LIGHTING CONTROL PANEL AS INDICATED. SEE SHEET EL651 DETAIL A1 FOR ADDITIONAL INFORMATION.
14. UNSWITCHED LIFE SAFETY FIXTURE WIRED FOR 24 HOUR OPERATION.

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PROJECT NORTH

PROJECT TITLE: MAINE TURNPIKE AUTHORITY ADMINISTRATION BUILDING
PORTLAND, MAINE

CURRENT ISSUE STATUS: ISSUED FOR BIDDING/CONSTRUCTION 7-9-07

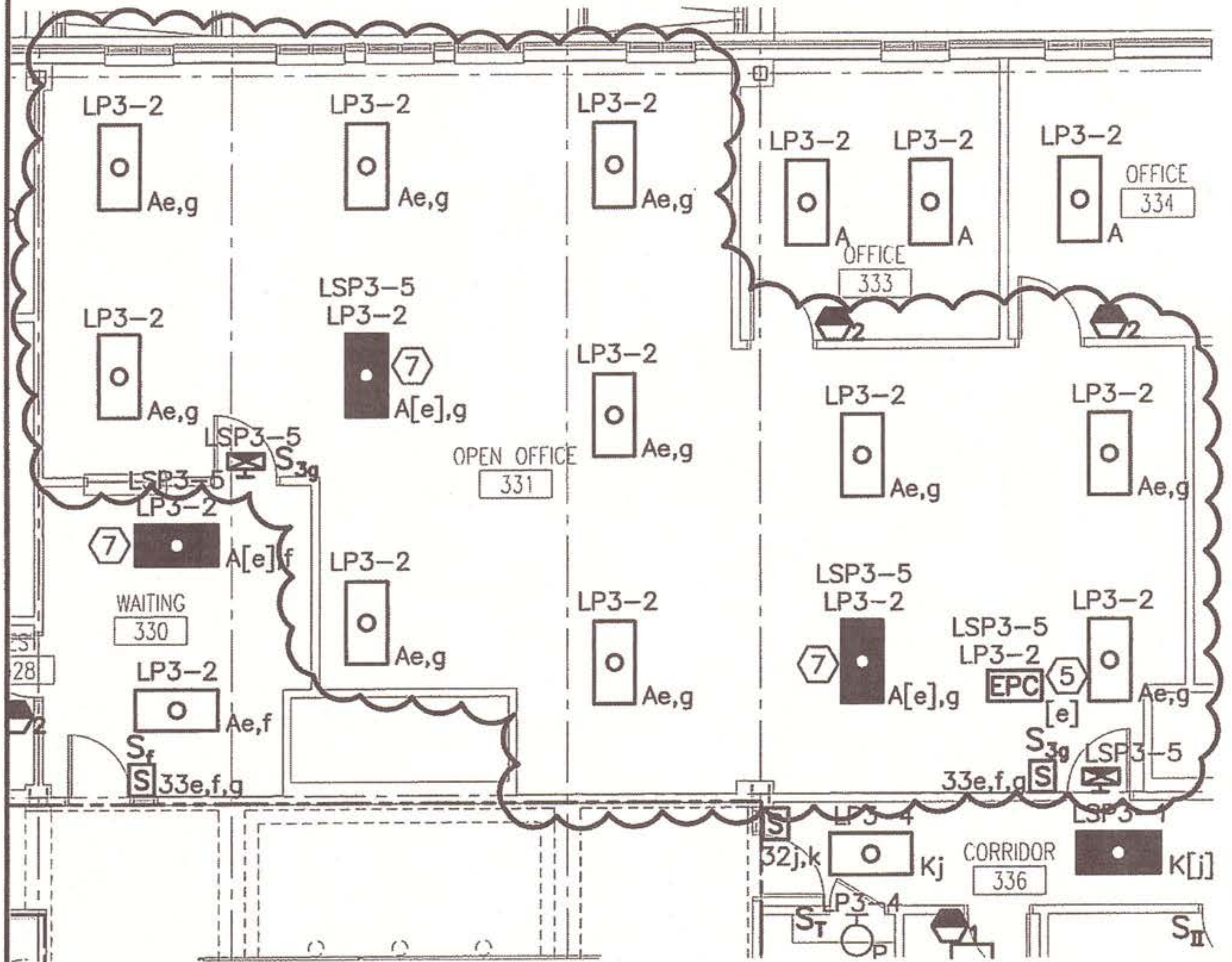
REV	DESCRIPTION	DATE
0	BIDDING/CONSTRUCTION	7-9-07

GRAPHIC SCALE: 0" 1"

SCALE:	1/8"=1'-0"
PROJECT MANAGER:	SLB
JC/DRAWN BY:	TCM/CDS
A/E OF RECORD:	JPP
CAD FILE:	EL102-06016
PROJECT NO:	06016
DATE:	7-9-07

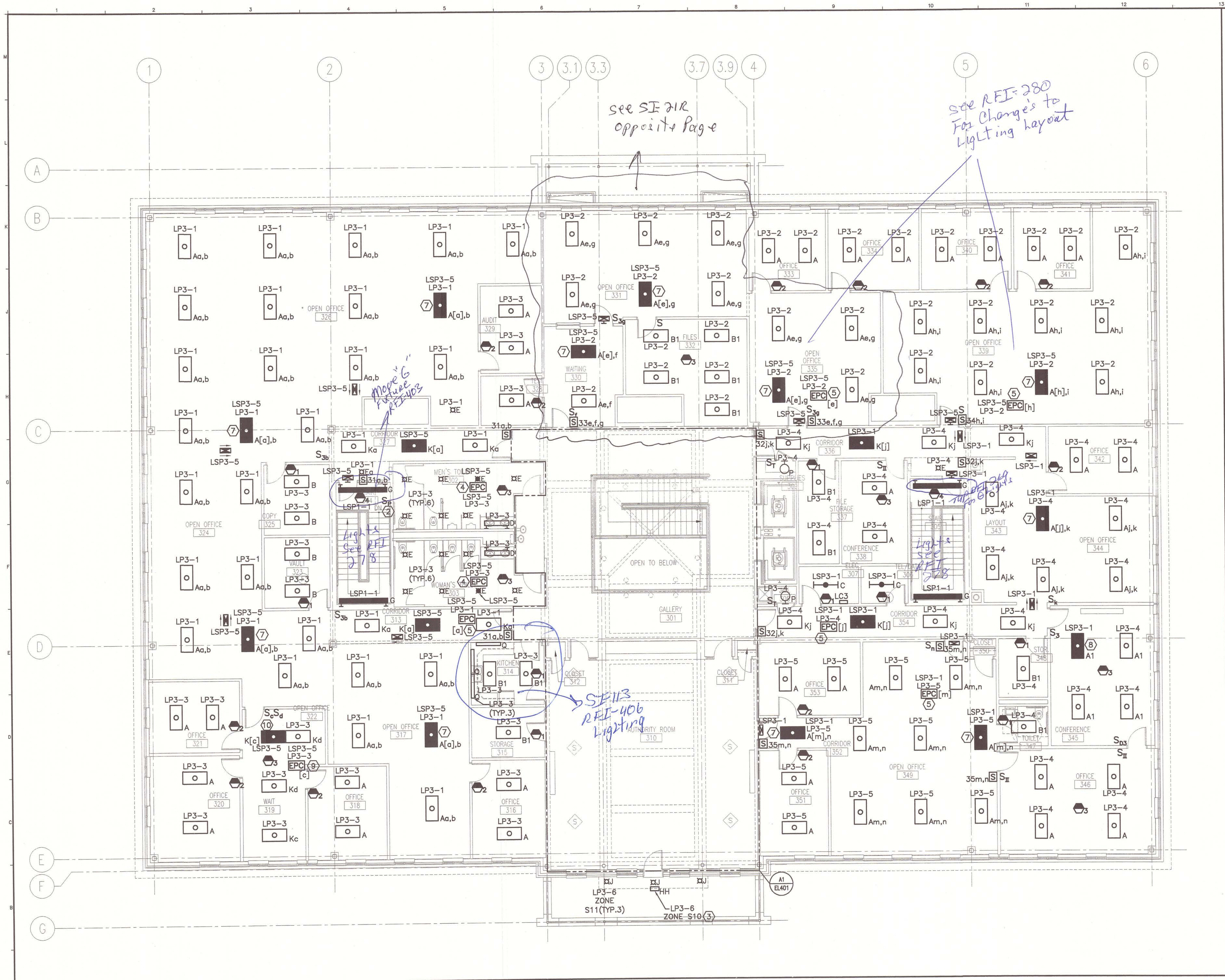
SHEET TITLE: SECOND FLOOR LIGHTING PLAN

SHEET No. EL102



SMRT	ARCHITECTURE ENGINEERING PLANNING SMRT 144 Fore Street/P.O.Box 618 PORTLAND, MAINE 04104 tel. (207) 772-3846 / fax. (207) 772-1070
PROJECT:	MAINE TURNPIKE AUTHORITY ADMINISTRATION BUILDING
SUBJECT:	THIRD FLOOR LIGHTING PLAN

SCALE:	1/8"=1'-0"
CAD FILE:	EL103-06016
PROJECT No.	06016
REF. SHEET:	EL103
PM: SLB	ADDENDUM No. SI-21R
A/E: JPP	SKETCH No. E-2
DATE: 4-01-08	



A1 FLOOR PLAN

1/8" = 1'-0"

NOTE:

1. SEE SHEET E001 EOR LEGEND AND ABBREVIATIONS.

KEYED NOTE:

(1) NOT USED

(2) FURNISH AND INSTALL PILOT LIGHT SWITCH AND LABELING FOR ROOF LIGHTING AS INDICATED ON ROOF POWER PLAN EP104.

(3) FURNISH AND INSTALL EXTERIOR FACADE LIGHT FIXTURE TO TOP OF CANOPY. COORDINATE INSTALLATION W/ ARCHITECT AND ROOFING CONTRACTOR.

(4) EMERGENCY POWER CONTROL MODULE FOR SINGLE LEVEL SWITCHED LIFE SAFETY LIGHTING VIA LIGHTING CONTROL PANEL AS INDICATED. SEE SHEET EL651 DETAIL J8 FOR ADDITIONAL INFORMATION.

(5) EMERGENCY POWER CONTROL MODULE FOR DUAL LEVEL SWITCHED LIFE SAFETY LIGHTING THROUGH A LIGHTING CONTROL PANEL AS INDICATED. SEE SHEET EL651 DETAIL E8 FOR ADDITIONAL INFORMATION.

(6) EMERGENCY POWER CONTROL MODULE FOR INTERIOR SWITCHED STANDBY LIGHTING AS INDICATED. SEE SHEET EL651 DETAIL A8 FOR ADDITIONAL INFORMATION.

(7) DUAL LEVEL SWITCHED EMERGENCY FIXTURE VIA LIGHTING CONTROL PANEL. CONNECT OUTBOARD LAMPS TO SWITCHED LIFE SAFETY CIRCUIT AND CENTER LAMP TO SWITCHED NORMAL CIRCUIT AS INDICATED. SEE SHEET EL651 DETAIL E8 FOR ADDITIONAL INFORMATION.

(8) PROVIDE FIXTURE W/ BODINE #B50ST FLUORESCENT EMERGENCY BATTERY BALLAST FOR INSTANT FULL ON OPERATION OF DIMMED FIXTURE DURING POWER INTERRUPTION.

(9) EMERGENCY POWER CONTROL MODULE FOR DUAL LEVEL SWITCHED LIFE SAFETY LIGHTING VIA LOCAL OCCUPANCY SENSOR AS INDICATED. SEE SHEET EL651 DETAIL E8 FOR ADDITIONAL INFORMATION.

(10) DUAL LEVEL SWITCHED EMERGENCY FIXTURE VIA OCCUPANCY SENSOR. CONNECT OUTBOARD LAMPS TO SWITCHED LIFE SAFETY CIRCUIT AND CENTER LAMP TO SWITCHED NORMAL CIRCUIT AS INDICATED. SEE SHEET EL651 DETAIL E12 FOR ADDITIONAL INFORMATION.

(11) EMERGENCY POWER CONTROL MODULE FOR SINGLE LEVEL SWITCHED LIFE SAFETY LIGHTING VIA OCCUPANCY SENSOR AS INDICATED. SEE SHEET EL651 DETAIL J12 FOR ADDITIONAL INFORMATION.

(12) EMERGENCY POWER CONTROL MODULE FOR SINGLE LEVEL SWITCHED LIFE SAFETY LIGHTING ONLY AREAS VIA OCCUPANCY SENSOR AS INDICATED. SEE SHEET EL651 DETAIL A5 FOR ADDITIONAL INFORMATION.

(13) EMERGENCY POWER CONTROL MODULE FOR SINGLE LEVEL SWITCHED LIFE SAFETY LIGHTING ONLY AREAS VIA LIGHTING CONTROL PANEL AS INDICATED. SEE SHEET EL651 DETAIL A1 FOR ADDITIONAL INFORMATION

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7/12/07 Rev.0

PROJECT TITLE: MAINE TURNPIKE AUTHORITY ADMINISTRATION BUILDING
PORTLAND, MAINE

CURRENT ISSUE STATUS: ISSUED FOR BIDDING/CONSTRUCTION 7-9-07

REV	DESCRIPTION	DATE
0	BIDDING/CONSTRUCTION	7-9-07

GRAPHIC SCALE: 0" 1"

SCALE:	1/8"=1'-0"
PROJECT MANAGER:	SLB
JC/DRAWN BY:	TCM/CDS
A/E OF RECORD:	JPP
CAD FILE:	EL103-06016
PROJECT NO:	06016
DATE:	7-9-07

SHEET TITLE: THIRD FLOOR LIGHTING PLAN

SHEET No. EL103

AS BUILT
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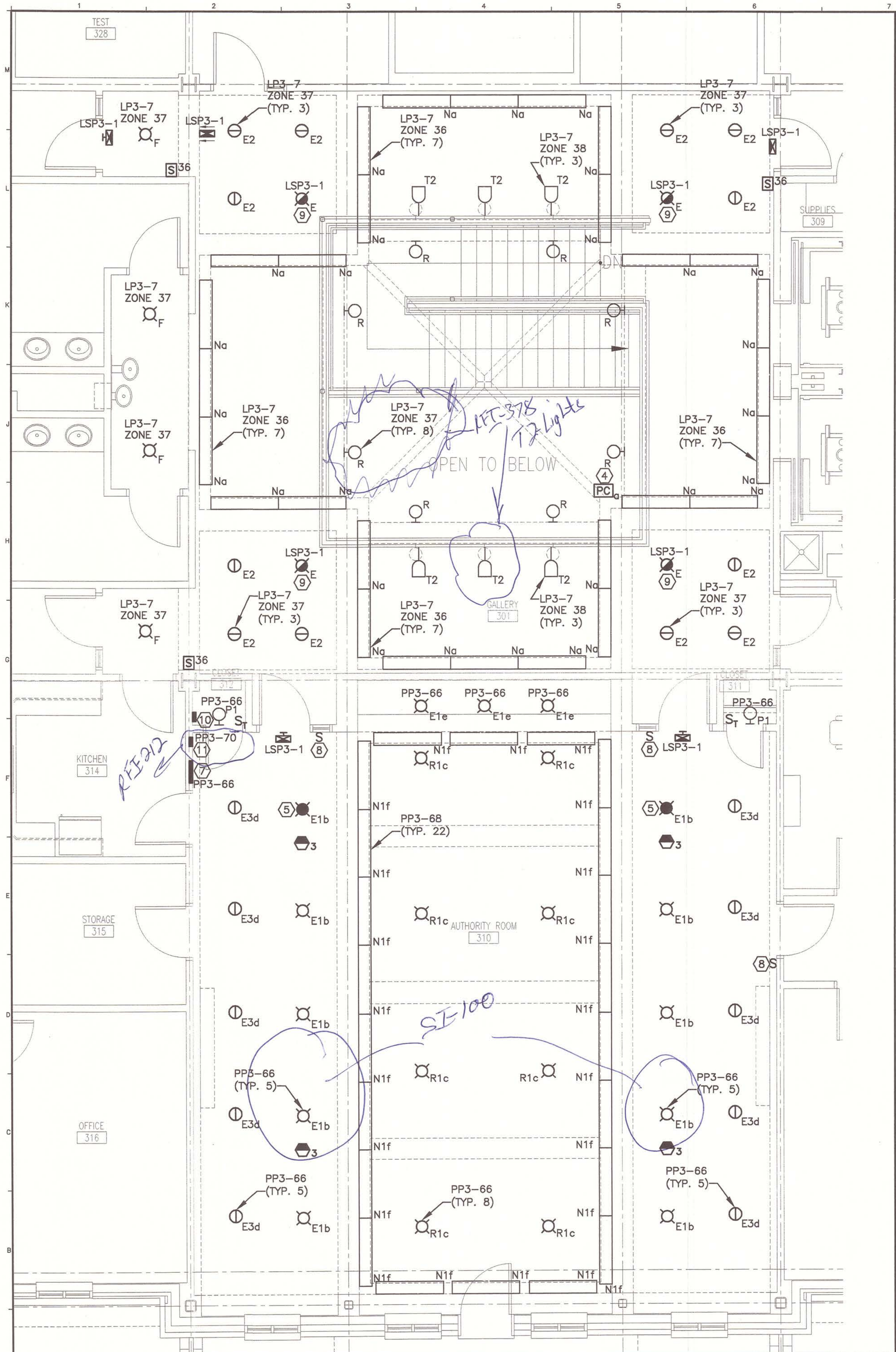
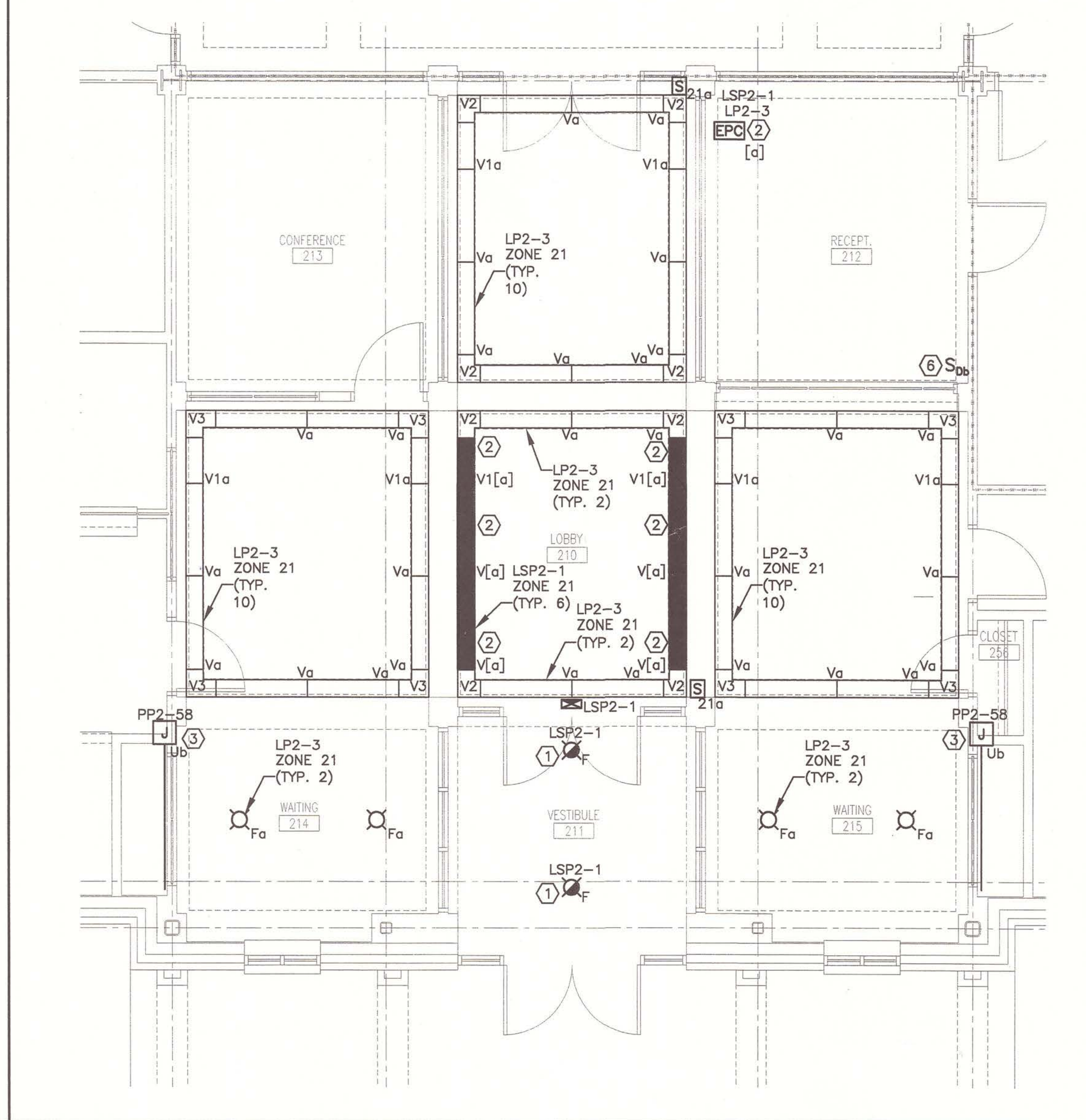


A1 FLOOR PLAN

1/8" = 1'-0"



A7 FLOOR PLAN

1/8" = 1'-0"

NOTE:

1. SEE SHEET E001 EOR LEGEND AND ABBREVIATIONS.

KEYED NOTE:

1. CONNECT TO LIGHTING BRANCH CIRCUIT AHEAD OF SWITCHING FOR 24 HOUR OPERATION.
2. EMERGENCY POWER CONTROL MODULE FOR SINGLE LEVEL SWITCHED LIFE SAFETY LIGHTING AS INDICATED. SEE SHEET EL651 DETAIL J8 FOR ADDITIONAL INFORMATION.
3. FURNISH AND INSTALL DISPLAY CASE ACCENT LIGHTING. FOR EACH CASE PROVIDE ONE LOW VOLTAGE TRANSFORMER SERVING (3)-6' LENGTHS OF LOW VOLTAGE LIGHTING. EACH SHELF LENGTH SHALL HAVE A LOW VOLTAGE QUICK CONNECT WIRING HARNESS TO ALLOW FOR FAST REMOVAL AND INSTALLATION OF ANY SHELF. COORDINATE INSTALLATION W/ ARCHITECT AND MILLWORK INSTALLER.
4. INSTALL NETWORK LIGHTING CONTROL SYSTEM PHOTOCELL SENSOR IN VAULTED CEILING AREA FOR CONTROL OF ZONE 36 UPLIGHTING. UPLIGHTING SHALL OPERATE 24 HOURS UNLESS DAYLIGHT SENSOR HAS NATURAL LIGHT ENTERING THE SPACE. COORDINATE MOUNTING LOCATION W/ ARCHITECT AND FACING NORTH
5. PROVIDE FIXTURE W/ BODINE COMPACT FLUORESCENT EMERGENCY BATTERY BALLAST FOR INSTANT FULL ON OPERATION OF DIMMED FIXTURE DURING POWER INTERRUPTION. SEE EL653 FOR ADDITIONAL INFORMATION.
6. PROVIDE LOW VOLTAGE LIGHTING DIMMER SWITCH COMPATIBLE WITH DISPLAY LIGHTING TRANSFORMER POWER SUPPLY. CORDINATE W/ MANUFACTURERS RECOMMENDATIONS.
7. AUTHORITY ROOM GRAPHIC EYE 6 CHANNEL LIGHTING CONTROLLER IN FOUR-GANG BACKBOX, FLUSH MOUNTED 48" AFF. CHANNELS SHALL BE SWITCH LEGS b,c,d,e,f AND g AS A SPARE. SEE EL653 FOR ADDITIONAL INFORMATION.
8. REMOTE SWITCH FOR AUTHORITY ROOM GRAPHIC EYE LIGHTING CONTROLLER. SWITCH SHALL TURN ALL ROOM LIGHTS ON. SEE EL653 FOR ADDITIONAL INFORMATION.
9. UNSWITCHED LIFE SAFETY FIXTURE WIRED FOR 24 HOUR OPERATION.
10. LOCATION OF AUTHORITY ROOM GRAPHIC EYE LIGHTING CONTROL INTERFACE MODULES AND ASSOCIATED DEVICES. SEE EL653 FOR ADDITIONAL INFORMATION.
11. For note #11 see RFI-212

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STATE OF MAINE — LICENSED PROFESSIONAL ENGINEER — NO. 7707
7/2/07
REV. 0

PROJECT NORTH

PROJECT TITLE:
MAINE TURNPIKE AUTHORITY ADMINISTRATION BUILDING
PORTLAND, MAINE

CURRENT ISSUE STATUS:
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SHEET TITLE:
ENLARGED LIGHTING PLANS

SHEET No.
EL401

LIGHT FIXTURE SCHEDULE

TYPE	DESCRIPTION	MANUFACTURER	LAMPS	MOUNTING	NOTES
A	2'X4', PARABOLIC TROFFER WITH 18 CELL 3" DEEP SEMI-SPECULAR LOUVER. 277V	COLUMBIA P424 SERIES	3-F32T8 3500K	CEILING RECESSED	PROVIDE MASTER-SLAVE CONFIGURATION TO ALLOW DUAL LEVEL SWITCHING.
A1	2'X4', PARABOLIC TROFFER WITH 18 CELL 3" DEEP SEMI-SPECULAR LOUVER. 277V	COLUMBIA P424 SERIES	3-F32T8 3500K	CEILING RECESSED	PROVIDE W/ LUTRON ELECTRONIC DIMMING BALLAST
B	2'x4' SPECIFICATION GRADE RECESSED TROFFER W/ PATTERN A12 ACRYLIC LENS 277V	COLUMBIA 4PS SERIES	3-F32T8 3500K	CEILING RECESSED	
B1	2'x4' SPECIFICATION GRADE RECESSED TROFFER W/ PATTERN A12 ACRYLIC LENS 277V	COLUMBIA 4PS SERIES	2-F32T8 3500K	CEILING RECESSED	
C	4' INDUSTRIAL REFLECTOR W/ MINIMUM 10% UPLIGHT. PROVIDE W/ WIRE GUARD 277V	COLUMBIA KL SERIES	2-F32T8 3500K	SURFACE/ CHAIN HUNG 7'-6" AFF	
C1	8' INDUSTRIAL REFLECTOR W/ MINIMUM 10% UPLIGHT. PROVIDE W/ WIRE GUARD 277V	COLUMBIA KL SERIES	4-F32T8 3500K	SURFACE/ CHAIN HUNG 7'-6" AFF	
D	4' VANITY FIXTURE W/ FROSTED TEXTURE LENS AND CHROME END CAP FINISH. 277V	RAE ELAN 8344 SERIES	2-F32T8 3500K	WALL MOUNT CENTERED ABOVE MIRROR	COORDINATE INSTALLATION W/ ARCHITECT
E	8" COMPACT FLUORESCENT DOWNLIGHT WITH SPECULAR CLEAR ALZAK REFLECTOR AND ELECTRONIC BALLAST. 277V	PRESCOLITE CFT8 SERIES	1-26W TRIPLE TUBE 3500K	RECESSED	
E1	8" COMPACT FLUORESCENT DOWNLIGHT WITH SPECULAR CLEAR ALZAK REFLECTOR AND ELECTRONIC BALLAST. 120V	PRESCOLITE CFT8 SERIES	1-26W TRIPLE TUBE 3500K	RECESSED	PROVIDE W/ LUTRON HIGH-LUME ELECTRONIC DIMMING BALLAST DIMMABLE TO 1%
E2	8" COMPACT FLUORESCENT WALLWASH WITH SPECULAR CLEAR ALZAK REFLECTOR AND ELECTRONIC BALLAST. 277V	PRESCOLITE CFT8 SERIES	1-26W TRIPLE TUBE 3500K	RECESSED	
E3	8" COMPACT FLUORESCENT WALLWASH WITH SPECULAR CLEAR ALZAK REFLECTOR AND ELECTRONIC BALLAST. 120V	PRESCOLITE CFT8 SERIES	1-26W TRIPLE TUBE 3500K	RECESSED	PROVIDE W/ LUTRON HIGH-LUME ELECTRONIC DIMMING BALLAST DIMMABLE TO 1%
F	8" COMPACT FLUORESCENT DOWNLIGHT WITH SPECULAR CLEAR ALZAK REFLECTOR AND ELECTRONIC BALLAST. 277V	PRESCOLITE CFT8 SERIES	1-32W TRIPLE TUBE 3500K	RECESSED	
G	8' INDIRECT/DIRECT WALL BRACKET W/ OPAL LENSED ASSYEMTRIC INDIRECT AND LOUVERED SYMETRIC DIRECT. 277V	ALERA MS6-1AU1D	4-F32T8 3500K	WALL MOUNT	MOUNT 7'6"- STAIRWELLS. COORD. W/ ARCHITECTURAL OTHERWISE.
H	1'X4' RECESSED MEDIUM SECURITY FIXTURE W/ 16 GA. COLD ROLLED STEEL HOUSING. LENSES: 0.125 PRISMATIC ACRYLIC (FIXTURE SIDE), .187 CLEAR POLYCARBONATE (ENVIRONMENTAL SIDE) 277V	MORLITE FH14 SERIES	2-F32T8 3500K	RECESSED	PROVIDE W/ GYP. CEILING FLANGE KIT
J	8" APERTURE VERTICAL LAMP LENSED METAL HALIDE DOWNLIGHT W/ UL LISTING FOR WET LOCATION. 277V	PRESCOLITE RHD8 SERIES	1-70W METAL HALIDE	RECESSED	
K	2'X4' RECESSED DIRECT/INDIRECT W/ PERFORATED BASKET 120/277V	COLUMBIA STR SERIES	2-F32T8 3500K	CEILING RECESSED	PROVIDE MASTER-SLAVE CONFIGURATION TO ALLOW DUAL LEVEL SWITCHING.
L	6" APERTURE COMPACT FLUORESCENT FLAT LENSED DOWNLIGHT LISTED FOR WET LOCATION 277V	PRESCOLITE TBXIC SERIES	1-32W TRIPLE TUBE 3500K	RECESSED	
M	NONMETALLIC COMPACT FLUORESCENT VAPORTITE JELLY JAR FIXTURE W/ STANDARD GLASS GLOBE & GUARD 120V	HUBBELL NV SERIES	1-26W TRIPLE TUBE 3500K	WALL MOUNT 60" AFF	
M1	NONMETALLIC INCANDESCENT VAPORTITE JELLY JAR FIXTURE W/ HEAT RESISTANT GLASS GLOBE & GUARD 120V	HUBBELL NV SERIES	100W A-12 ROUGH SERVICE	WALL MOUNT 60" AFF	
N	4' LINEAR INDIRECT CONCEALED COVE FIXTURE 277V	ELP CLM SERIES	1-F54T5HO 3500K	COVE	COORDINATE INSTALLATION W/ ARCHITECT
N1	4' LINEAR INDIRECT CONCEALED COVE FIXTURE. 120V	ELP CLM SERIES	1-F54T5HO 3500K	COVE	PROVIDE W/ LUTRON HI-LUME ELECTRONIC DIMMING BALLAST DIMMABLE TO 1% COORDINATE INSTALLATION W/ ARCHITECT

LIGHT FIXTURE SCHEDULE

TYPE	DESCRIPTION	MANUFACTURER	LAMPS	MOUNTING	NOTES
P	10" ROUND CEILING MOUNT FIXTURE WITH OPAL GLASS DIFFUSER. HIGH POWER FACTOR BALLAST. 277V	PRESCOLITE 9401-26	2-13W TWIN TUBE 3500K	SURFACE CEILING/WALL MOUNT	
P1	10" ROUND CEILING MOUNT FIXTURE WITH OPAL GLASS DIFFUSER. HIGH POWER FACTOR BALLAST. 120V	PRESCOLITE 9401-26	2-13W TWIN TUBE 3500K	SURFACE CEILING/WALL MOUNT	
Q	4' UNDERCABINET LIGHT W/ INTEGRAL ROCKER SWITCH. 277V	VISTA MGI SERIES	1-F32T8 3500K	UNDER CABINET	COORDINATE INSTALLATION W/ ARCHITECT AND MILLWORK INSTALLER
R	8" DIRECT WALL MOUNT CYLINDER W/ CLEAR ALZAK REFLECTOR AND MATTE WHITE FINISH 277V	PRESCOLITE CF8W SERIES	1-42W TRIPLE TUBE 3500K	WALL MOUNT TO ARCH. BEAM	COORDINATE INSTALLATION W/ ARCHITECT
R1	8" DIRECT PENDANT MOUNT CYLINDER W/ CLEAR ALZAK REFLECTOR AND MATTE WHITE FINISH 120V	PRESCOLITE CF8P SERIES	1-42W TRIPLE TUBE 3500K	PENDANT MOUNT W/ 40" STEM	PROVIDE W/ LUTRON HIGH-LUME ELECTRONIC DIMMING BALLAST DIMMABLE TO 1%
T	12' SINGLE CIRCUIT RECESSED FLANGED LIGHTING TRACK SYSTEM W/ REQUIRED CANOPY AND MOUNTING HARDWARE. MATTE WHITE FINISH 120V	LSI 120V RECESSED SERIES	N/A	RECESSED IN ARCH. CEILING	COORDINATE INSTALLATION W/ ARCHITECT
T1	4" ADJUSTABLE TRACK MOUNT ADJUSTABLE CYLINDER W/ BUILT IN SWITCH. MATTE WHITE FINISH. 120V	LSI C133 SERIES	50W PAR20 HALOGEN FLOOD	TRACK	COORDINATE AIMING W/ ARCHITECT AND ARTWORK PROVIDED
T2	4" CYLINDER CANOPY MOUNT ADJUSTABLE CYLINDER W/BUILT IN SWITCH MATTE WHITE FINISH. 120V	LSI C133 SERIES	50W PAR20 HALOGEN FLOOD	WALL MOUNT TO ARCH. BEAM	COORDINATE INSTALLATION AND AIMING W/ ARCHITECT AND ARTWORK PROVIDED
U	LOW VOLTAGE DISPLAY CASE LIGHTING. PROVIDE W/ 5 WATT LAMPS AT 2" SPACING AND 24V TRANSFORMER PER CASE. 120V	STARFIRE XENFLEX	FURNISHED WITH FIXTURE	INSIDE DISPLAY CASE	COORDINATE INSTALLATION W/ ARCHITECT AND MILLWORK INSTALLER
V	4', 1-LAMP RECESSED PERIMETER FIXTURE 277V	DAY-O-LITE JB SERIES	1-F32T8 3500K	RECESSED IN ARCH. CEILING	COORDINATE INSTALLATION W/ ARCHITECT
V1	2', 1-LAMP RECESSED PERIMETER FIXTURE 277V	DAY-O-LITE JB SERIES	1-F17T8 3500K	RECESSED IN ARCH. CEILING	COORDINATE INSTALLATION W/ ARCHITECT
V2	RECESSED PERIMETER FIXTURE CUSTOM LENGTH INTERNAL CORNER PIECE. N/A	DAY-O-LITE JB SERIES	N/A	RECESSED IN ARCH. CEILING	COORDINATE EXACT LENGTHS AND INSTALLATION W/ ARCHITECT
V3	RECESSED PERIMETER FIXTURE CUSTOM LENGTH INTERNAL CORNER PIECE. N/A	DAY-O-LITE JB SERIES	N/A	RECESSED IN ARCH. CEILING	COORDINATE EXACT LENGTHS AND INSTALLATION W/ ARCHITECT
	SINGLE FACE LED EXIT SIGN FOR AC ONLY OPERATION. RED LETTERS W/ WHITE HOUSING AND BRUSHED ALUMINUM FACE. 277V	CORNER STONE DURAMAX SERIES	LED	CEILING OR WALL 6" BELOW CEILING	
	DUAL FACE LED EXIT SIGN FOR AC ONLY OPERATION. RED LETTERS W/ WHITE HOUSING AND BRUSHED ALUMINUM FACE. 277V	CORNER STONE DURAMAX SERIES	LED	CEILING OR WALL 6" BELOW CEILING	
	EMERGENCY LIGHTING UNIT W/ MAINTENANCE FREE BATTERY AND SELF TESTING DIAGNOSTICS 277V	PRESCOLITE NV SERIES	2-5.4W HALOGEN	WALL 6" BELOW CEILING	PROVIDE W/ CAPACITY FOR ADDITIONAL 2-5.4W REMOTE HEADS

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PROJECT TITLE:
MAINE TURNPIKE AUTHORITY ADMINISTRATION BUILDING
PORTLAND, MAINE

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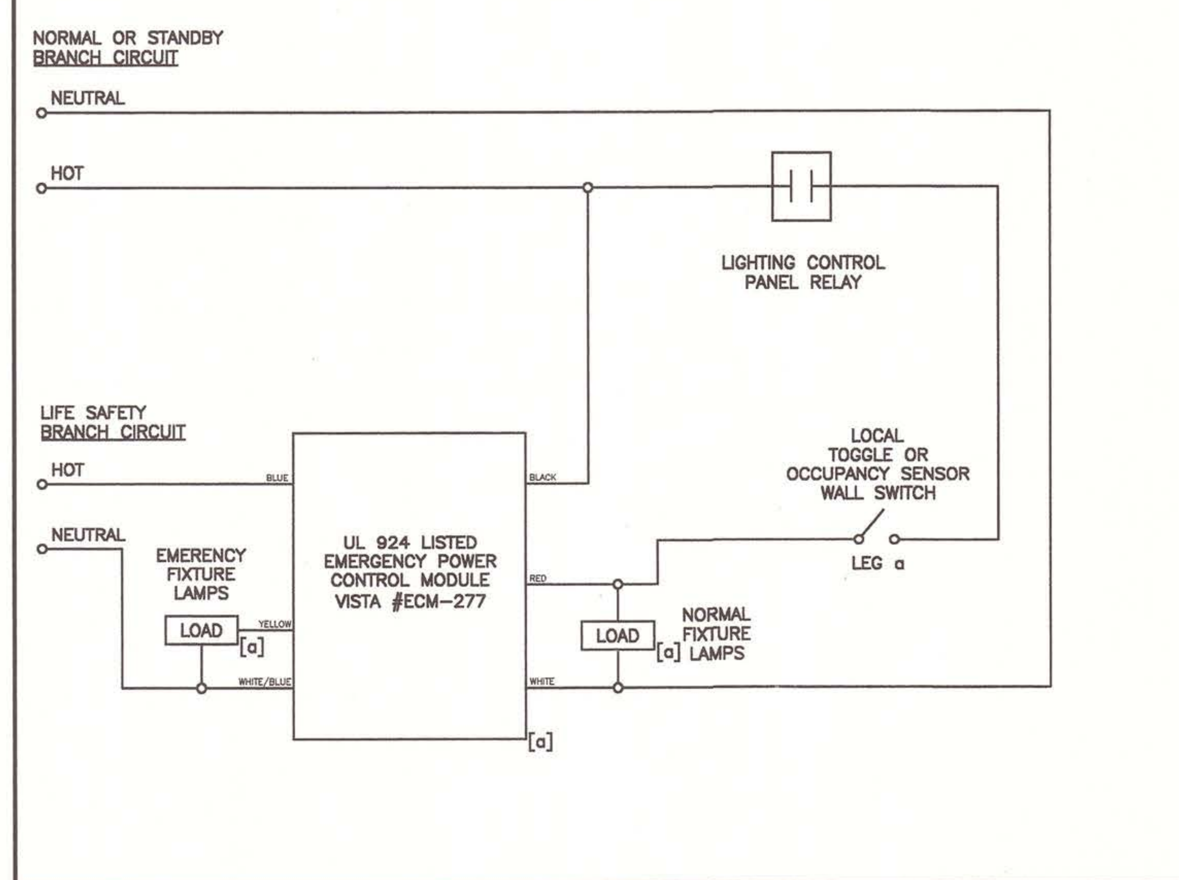
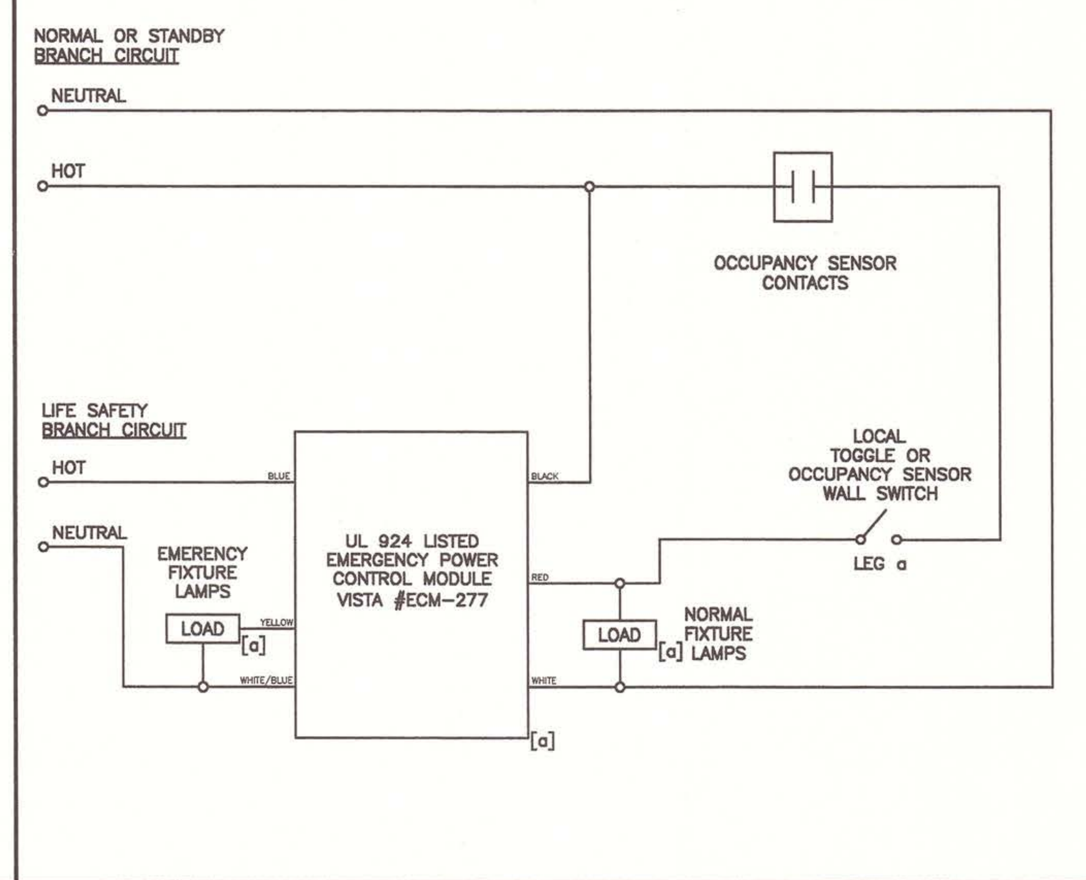
SHEET TITLE:
LIGHTING FIXTURE SCHEDULE

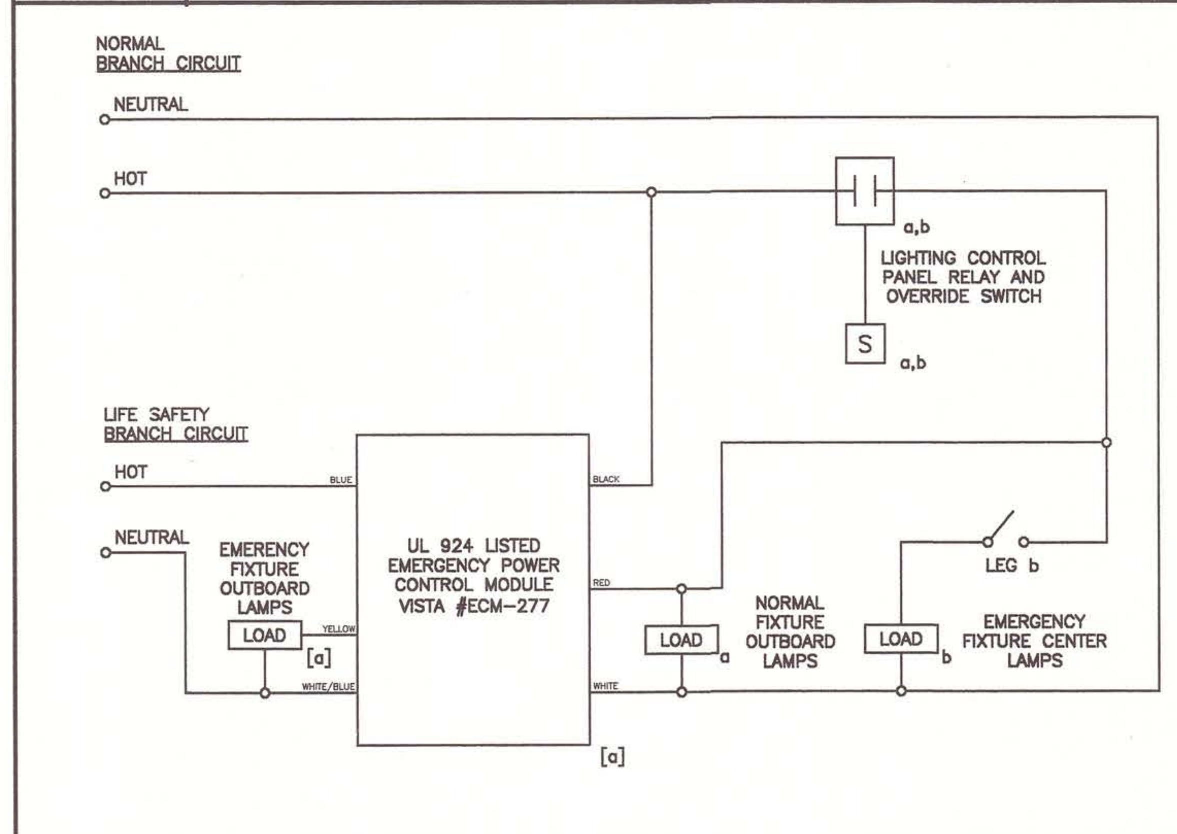
SHEET No.
EL601



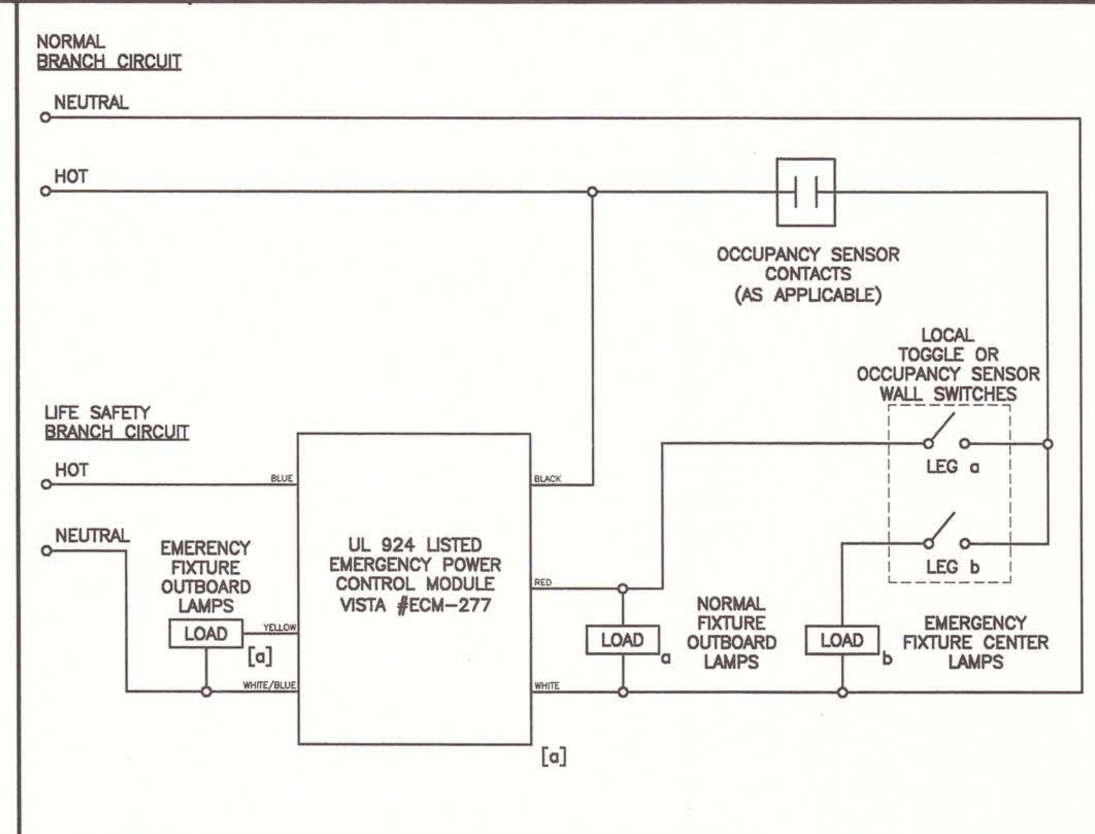
J8	EMERGENCY POWER CONTROL MODULE (EPC) SWITCHED LIFE SAFETY LIGHTING – SINGLE LEVEL VIA LIGHTING CONTROL PANEL
NOT TO SCALE	



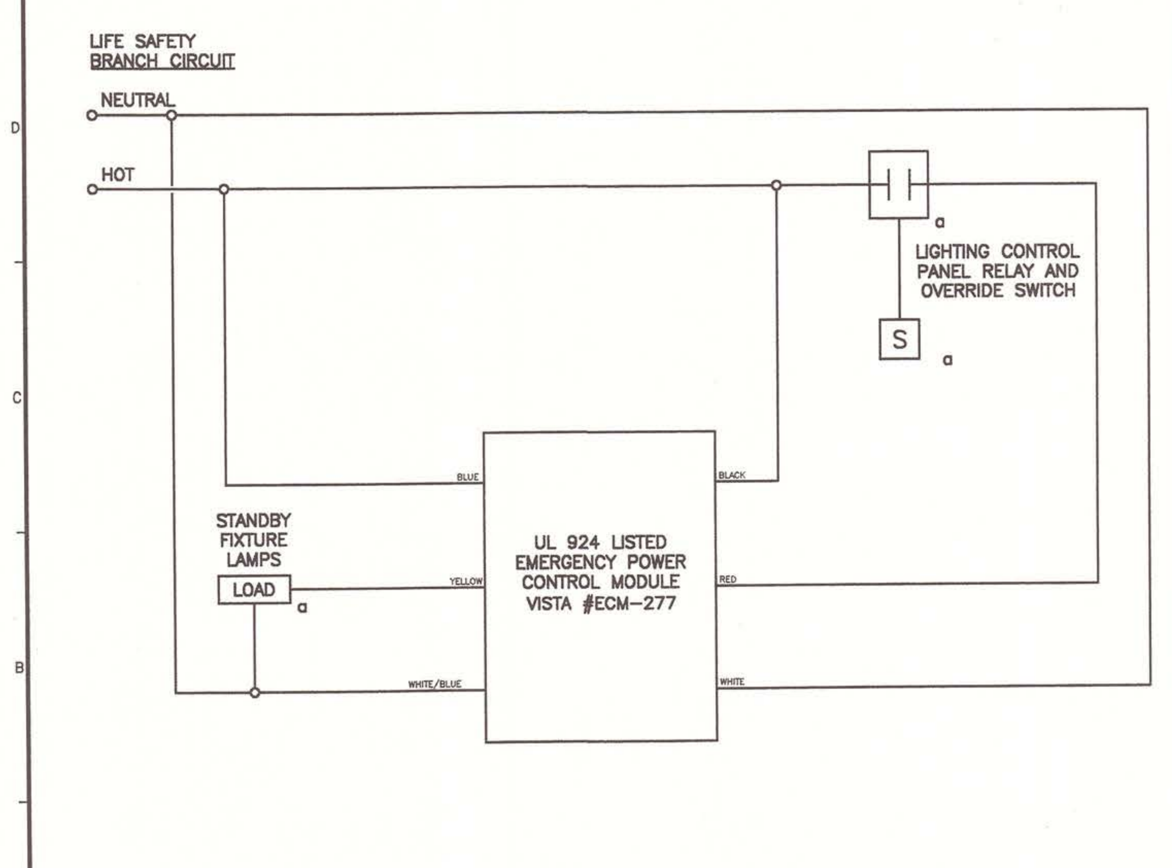
J12	EMERGENCY POWER CONTROL MODULE (EPC) SWITCHED LIFE SAFETY LIGHTING – SINGLE LEVEL VIA OCCUPANCY SENSOR
NOT TO SCALE	



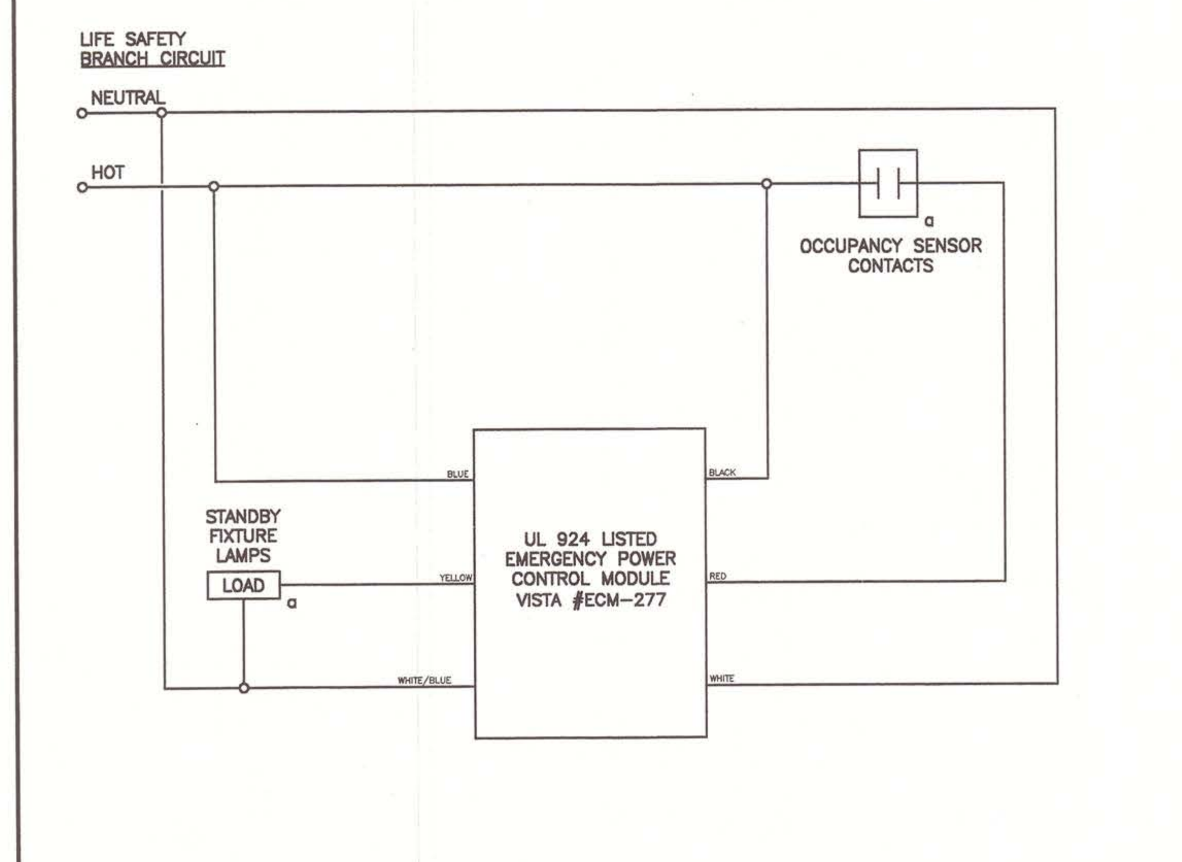
E8	EMERGENCY POWER CONTROL MODULE (EPC) SWITCHED LIFE SAFETY LIGHTING – DUAL LEVEL VIA LIGHTING CONTROL PANEL
NOT TO SCALE	



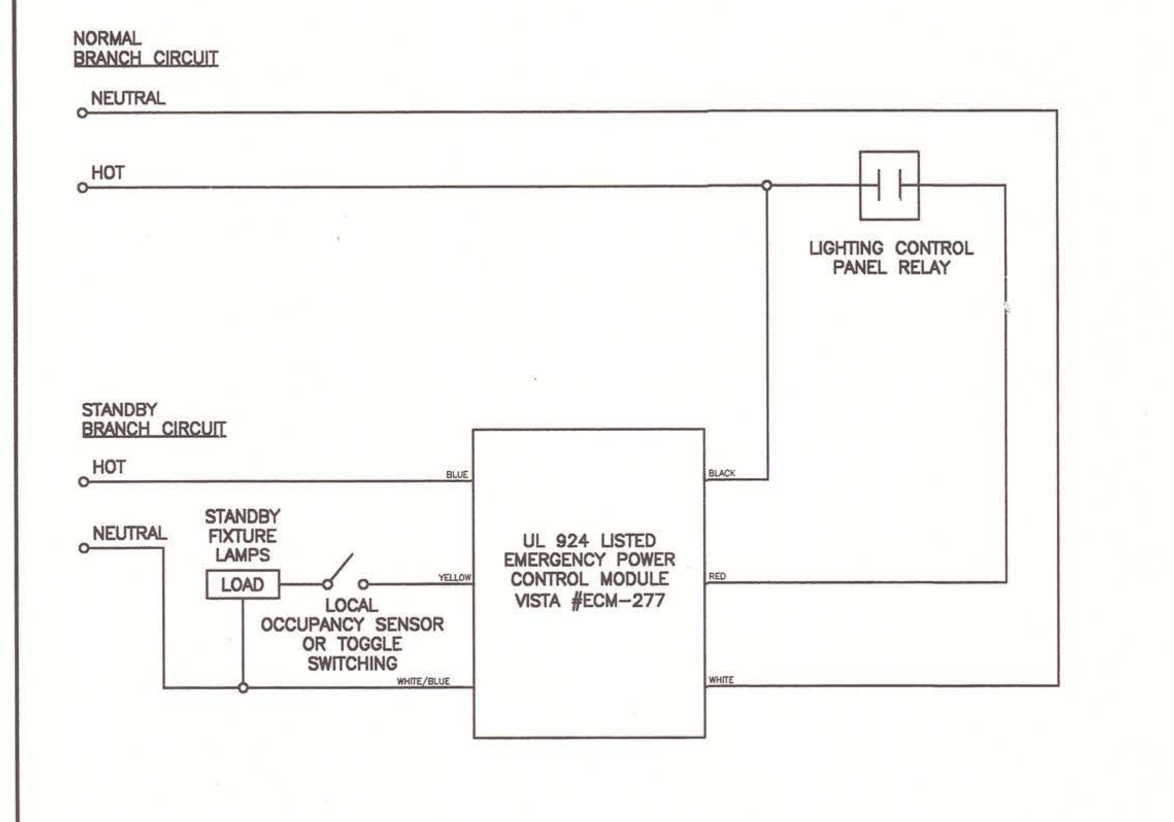
E12	EMERGENCY POWER CONTROL MODULE (EPC) SWITCHED LIFE SAFETY LIGHTING – DUAL LEVEL VIA OCCUPANCY SENSOR
NOT TO SCALE	



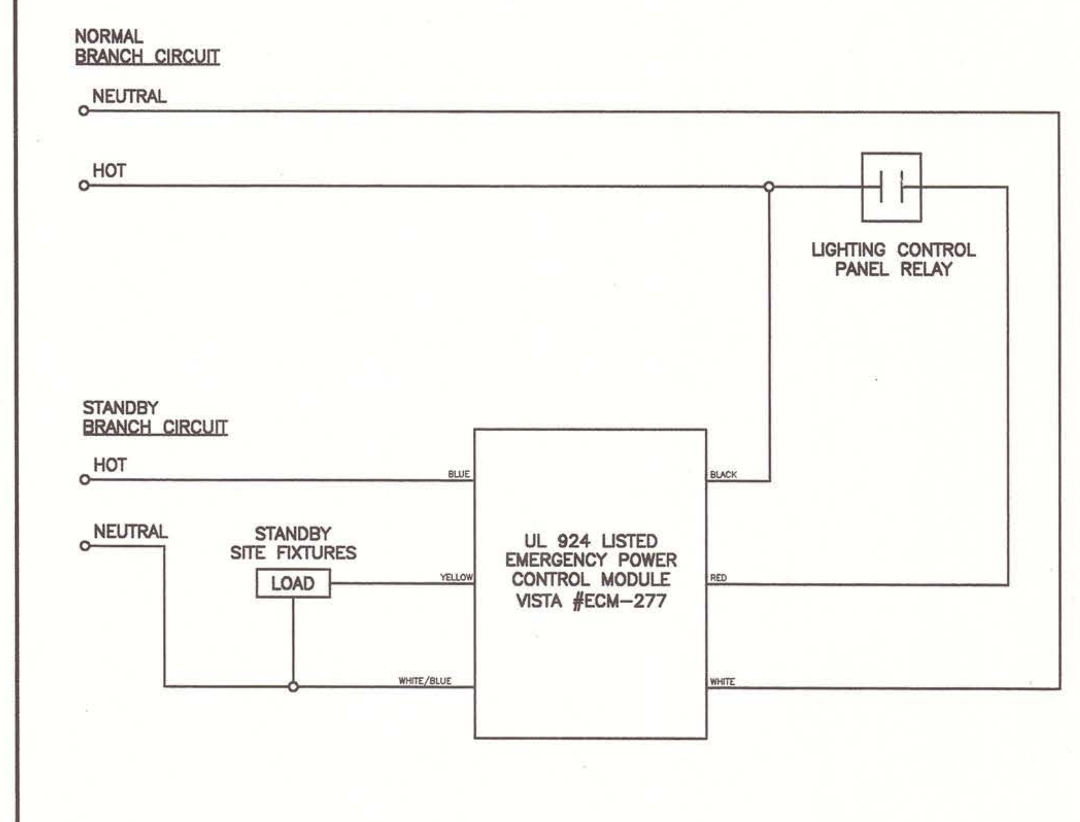
A1	EMERGENCY POWER CONTROL MODULE (EPC) SWITCHED LIFE SAFETY LIGHTING ONLY AREAS SINGLE LEVEL VIA LIGHTING CONTROL PANEL
NOT TO SCALE	



A5	EMERGENCY POWER CONTROL MODULE (EPC) SWITCHED LIFE SAFETY LIGHTING ONLY AREAS SINGLE LEVEL VIA OCCUPANCY SENSOR
NOT TO SCALE	



A8	EMERGENCY POWER CONTROL MODULE (EPC) INTERIOR SWITCHED STANDBY LIGHTING VIA LIGHTING CONTROL PANEL
NOT TO SCALE	



A12	EMERGENCY POWER CONTROL MODULE (EPC) EXTERIOR SWITCHED STANDBY LIGHTING VIA LIGHTING CONTROL PANEL
NOT TO SCALE	

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Rev. 0 7/2/07

PROJECT TITLE:
MAINE TURNPIKE AUTHORITY ADMINISTRATION BUILDING
PORTLAND, MAINE

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SHEET TITLE:
LIGHTING DETAILS

SHEET No. EL651

LIGHTING CONTROL PANEL LC1 – 16 RELAYS, MASTER PANEL W/ CENTRAL TIMECLOCK

ZONE ID	ZONE DESCRIPTION	REMOTE DEVICE ID	TOTAL LOCATIONS	RELAY #	BRANCH CIRCUIT	NORMAL HOURS	OFF-HOURS OVERRIDE	REMOTE DEVICE ENGRAVED LABEL	NOTES
11	POLICE CORRIDORS	S_{11}	3	LC1-1	LP1-1	6 AM – 7 PM	2 HOURS	"LIGHTS ON/OFF"	NOTE 1
12	1ST FLOOR CORRIDORS	S_{12}	4	LC1-2	LP1-4	6 AM – 10 PM	4 HOURS	"LIGHTS ON/OFF"	.
13	OPEN OFFICE 153	S_{13}	1	LC1-3	LP1-6	6 AM – 10 PM	4 HOURS	"LIGHTS ON/OFF"	.
14	OPEN OFFICE 161	S_{14}	1	LC1-4	LP1-6	6 AM – 10 PM	4 HOURS	"LIGHTS ON/OFF"	.
S1	STANDBY PARKING LIGHTING AND SIGNAGE	S_S	1	LC1-5	LP1-1	DUSK TO DAWN	2 HOURS	"SITE LIGHTING ON"	NOTES 2 AND 3
S2	NORMAL PARKING LIGHTING 1	S_S	1	LC1-6	LP1-3	DUSK TO 11 PM	2 HOURS	"SITE LIGHTING ON"	NOTE 3
S3	NORMAL PARKING LIGHTING 2	S_S	1	LC1-7	LP1-5	DUSK TO 11 PM	2 HOURS	"SITE LIGHTING ON"	NOTE 3
S4	LANDSCAPE	S_S	1	LC1-8	LP1-7	DUSK TO 11 PM	2 HOURS	"SITE LIGHTING ON"	NOTE 3
S5	FLAGS	S_S	1	LC1-9	LP1-7	DUSK TO DAWN	2 HOURS	"SITE LIGHTING ON"	NOTE 3
S6	FACADE	S_S	1	LC1-10	LP1-7	DUSK TO 11 PM	2 HOURS	"SITE LIGHTING ON"	NOTE 3
S7	STANDBY 1ST & 2ND FLOOR ENTRY CANOPIES	S_S	1	LC1-11	LP1-1	DUSK TO DAWN	2 HOURS	"SITE LIGHTING ON"	NOTES 2 AND 3
.	SPARE	.	.	LC1-12	.	.	.	.	.
.	SPARE	.	.	LC1-13	.	.	.	.	.
.	SPARE	.	.	LC1-14	.	.	.	.	.
.	SPARE	.	.	LC1-15	.	.	.	.	.
.	SPARE	.	.	LC1-16	.	.	.	.	.

SI 135 Pathway lights

NOTE:

1. BRANCH CIRCUIT INDICATED SERVES AS THE NORMAL POWER SWITCH LEG FOR THE EMERGENCY POWER CONTROL MODULE (EPC) SERVING ALL LIGHTING WITHIN ZONE. ZONE LIGHT FIXTURE SHALL BE FED BY LIFE SAFETY BRANCH CIRCUIT AS INDICATED ON PLANS.
2. BRANCH CIRCUIT INDICATED SERVES AS THE NORMAL POWER SWITCH LEG FOR THE EMERGENCY POWER CONTROL MODULE MOUNTED (EPC) MOUNTED ADJACENT TO LC1 PROVIDING SWITCHED STANDBY BRANCH POWER TO SITE LIGHTING.
3. SINGLE BUTTON OVERRIDE SWITCH LOCATED IN 1ST FLR ELECTRICAL ROOM 107 TO TURN ON ALL SITE AND CANOPY LIGHTING ZONES FOR 2 HRS THEN RETURN TO THE PROGRAMMED SCHEDULE.

LIGHTING CONTROL PANEL LC2 – 16 RELAYS, SLAVE PANEL

ZONE ID	ZONE DESCRIPTION	REMOTE DEVICE ID	TOTAL LOCATIONS	RELAY #	BRANCH CIRCUIT	NORMAL HOURS	OFF-HOURS OVERRIDE	REMOTE DEVICE ENGRAVED LABEL	NOTES
21	LOBBY	S_{21}	2	LC2-1	LP2-3	6 AM – 10 PM	1 HOURS	"LIGHTS ON/OFF"	.
22	2ND FLOOR WEST	S_{22}	3	LC2-2	LP2-1	6 AM – 7 PM	2 HOURS	"LIGHTING OVERRIDE"	.
23	2ND FLOOR EAST CORRIDOR 234	S_{23}	3	LC2-3	LP2-2	6 AM – 10 PM	1 HOURS	"LIGHTING OVERRIDE"	.
24	2ND FLOOR EAST	S_{24}	3	LC2-4	LP2-2	6 AM – 7 PM	2 HOURS	"LIGHTING OVERRIDE"	.
25	2ND FLOOR GALLERY	S_{25}, S_G	3,1	LC2-5	LP2-3	6 AM – 10 PM	2 HOURS	"GALLERY LIGHTS ON"	NOTE 2, NOTE 3
26	GALLERY TRACK LIGHTING	S_G	1	LC2-6	PP2-54	6 AM – 10 PM	2 HOURS	"GALLERY LIGHTS ON"	NOTE 3
27	GALLERY TRACK LIGHTING	S_G	1	LC2-7	PP2-62	6 AM – 10 PM	2 HOURS	"GALLERY LIGHTS ON"	NOTE 3
28	GALLERY TRACK LIGHTING	S_G	1	LC2-8	PP2-64	6 AM – 10 PM	2 HOURS	"GALLERY LIGHTS ON"	NOTE 3
S8	BUILDING SIGNAGE	S_S	1	LC2-9	PP2-56	DUSK TO 11 PM	2 HOURS	"SITE LIGHTING ON"	NOTE 1
S9	2ND FLOOR BALCONY CANOPIES	S_S	1	LC2-10	LP2-5	DUSK TO 11 PM	2 HOURS	"SITE LIGHTING ON"	NOTE 1
.	SPARE	.	.	LC2-11	.	.	.	.	.
.	SPARE	.	.	LC2-12	.	.	.	.	.
.	SPARE	.	.	LC2-13	.	.	.	.	.
.	SPARE	.	.	LC2-14	.	.	.	.	.
.	SPARE	.	.	LC2-15	.	.	.	.	.
.	SPARE	.	.	LC2-16	.	.	.	.	.

NOTE:

1. SINGLE BUTTON OVERRIDE SWITCH LOCATED IN 1ST FLR ELECTRICAL ROOM 107 TO TURN ON ALL SITE AND CANOPY LIGHTING ZONES FOR 2 HRS THEN RETURN TO THE PROGRAMMED SCHEDULE.
2. LINK CONTROLS TO LC3 ZONE 37 DEVICES.
3. SINGLE BUTTON OVERIDE SWITCH LOCATED IN 2ND FLR ELECTRICAL ROOM 207 TO TURN ON ALL 2ND & 3RD FLOOR GALLERY LIGHTING ZONES FOR 2 HRS THEN RETURN TO PROGRAMMED SCHEDULE.

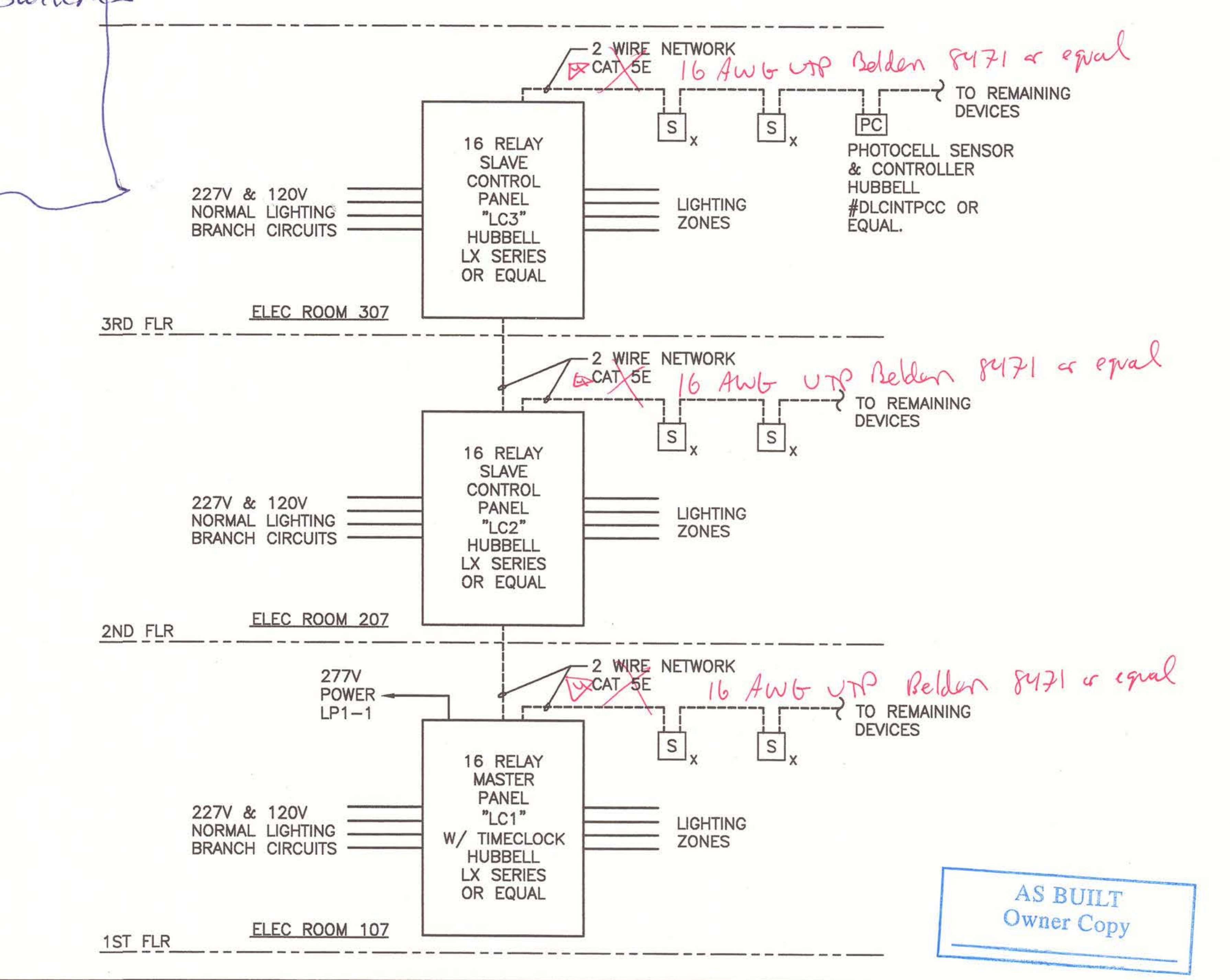
LIGHTING CONTROL PANEL LC3 – 16 RELAYS, SLAVE PANEL

ZONE ID	ZONE DESCRIPTION	REMOTE DEVICE ID	TOTAL LOCATIONS	RELAY #	BRANCH CIRCUIT	NORMAL HOURS	OFF-HOURS OVERRIDE	REMOTE DEVICE ENGRAVED LABEL	NOTES
31	3RD FLOOR WEST	S_{31}	3	LC3-1	LP3-1	6 AM – 10 PM	2 HOURS	"LIGHTS ON/OFF"	.
32	3RD FLOOR EAST CORRIDORS	S_{32}	3	LC3-2	LP3-4	6 AM – 10 PM	2 HOURS	"LIGHTS ON/OFF"	.
33	3RD FLOOR –WAITING 330, OPEN OFFICE 331, 335	S_{33}	2	LC3-3	LP3-2	6 AM – 10 PM	2 HOURS	"LIGHTS ON/OFF"	.
34	3RD FLOOR –OPEN OFFICE 339	S_{34}	1	LC3-4	LP3-2	6 AM – 10 PM	2 HOURS	"LIGHTS ON/OFF"	.
35	3RD FLOOR –OPEN OFFICE 349	S_{35}	3	LC3-5	LP3-5	6 AM – 10 PM	2 HOURS	"LIGHTS ON/OFF"	.
36	3RD FLOOR GALLERY UPLIGHTING	S_G	1	LC3-6	LP3-7	24 HOURS	2 HOURS	"GALLERY LIGHTS ON"	NOTE 3 & 4
37	3RD FLOOR GALLERY	S_{36}, S_G	3,1	LC3-7	LP3-7	6 AM – 10 PM	2 HOURS	"GALLERY LIGHTS ON"	NOTE 2, NOTE 4
38	3RD FLOOR GALLERY ART LIGHTING	S_G	1	LC3-8	LP3-7	6 AM – 10 PM	2 HOURS	"GALLERY LIGHTS ON"	NOTE 4
S10	BUILDING SIGNAGE	S_S	1	LC3-9	LP3-6	DUSK TO 11 PM	2 HOURS	"SITE LIGHTING ON"	NOTE 1
S11	3RD FLOOR BALCONY CANOPIES	S_S	1	LC3-10	LP3-6	DUSK TO 11 PM	2 HOURS	"SITE LIGHTING ON"	NOTE 1
.	SPARE	.	.	LC3-11	.	.	.	.	.
.	SPARE	.	.	LC3-12	.	.	.	.	.
.	SPARE	.	.	LC3-13	.	.	.	.	.
.	SPARE	.	.	LC3-14	.	.	.	.	.
.	SPARE	.	.	LC3-15	.	.	.	.	.
.	SPARE	.	.	LC3-16	.	.	.	.	.

NOTE:

1. SINGLE OVERRIDE SWITCH LOCATED IN 1ST FLR ELECTRICAL ROOM 107 TO TURN ON ALL SITE AND CANOPY LIGHTING ZONES FOR 2 HRS THEN RETURN TO THE PROGRAMMED SCHEDULE.
2. LINK CONTROLS TO LC2 ZONE 25 DEVICES.
3. CONTROL LIGHTING ZONE VIA SYSTEM PHOTOCELL SENSOR.
4. SINGLE BUTTON OVERIDE SWITCH LOCATED IN 2ND FLR ELECTRICAL ROOM 207 TO TURN ON ALL 2ND & 3RD FLOOR GALLERY LIGHTING ZONES FOR 2 HRS THEN RETURN TO PROGRAMMED SCHEDULE.

Program FOR Lights + Switches
see SI-87



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A9 NETWORKED LIGHTING CONTROL PANEL SCHEMATIC RISER DIAGRAM

NOT TO SCALE

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STATE OF MAINE JON P. PERRUZZI NO. 7707 LICENSED PROFESSIONAL ENGINEER

Rev. 0 7/2/07

PROJECT TITLE: MAINE TURNPIKE AUTHORITY ADMINISTRATION BUILDING PORTLAND, MAINE

CURRENT ISSUE STATUS: ISSUED FOR BIDDING/CONSTRUCTION 7-9-07

REV	DESCRIPTION	DATE
0	BIDDING/CONSTRUCTION	7-9-07

GRAPHIC SCALE: 0" 1"

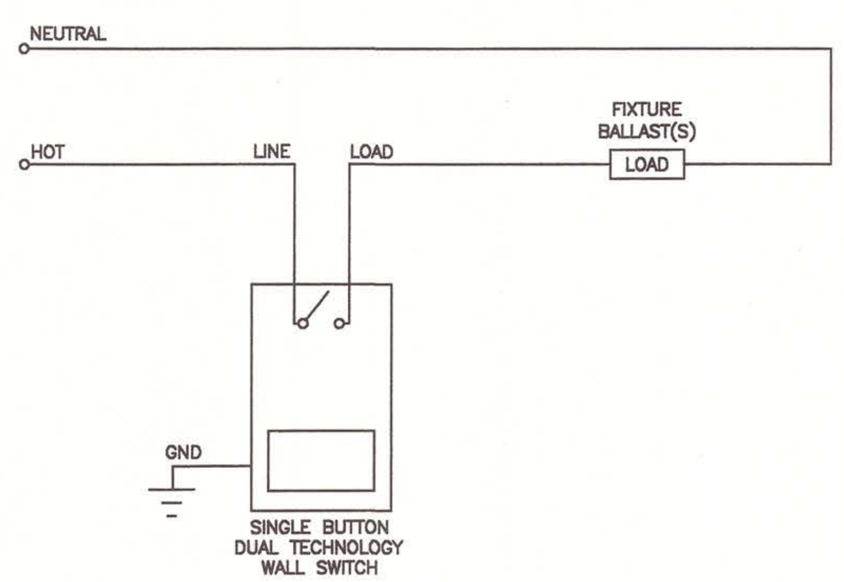
SCALE:	AS NOTED
PROJECT MANAGER:	SLB
JC/DRAWN BY:	TCM/CDS
A/E OF RECORD:	JPP
CAD FILE:	EL652-06016
PROJECT NO:	06016
DATE:	7-9-07

SHEET TITLE: LIGHTING CONTROL SCHEDULES & RISER

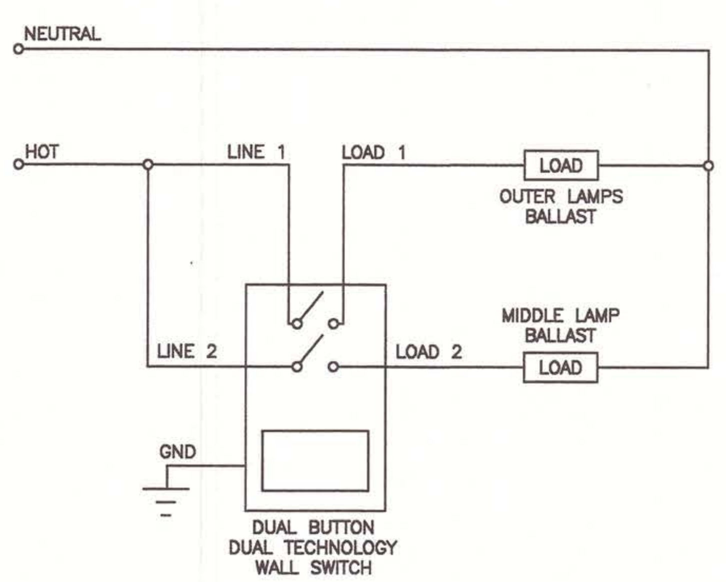
SHEET No. EL652

OCCUPANCY SENSOR SCHEDULE

TYPE	DESCRIPTION	SENSOR TECHNOLOGY	SENSOR VOLTAGE	MANUFACTURER (OR APPROVED EQUAL)			NOTES
				SENSOR	POWER PACK	COVERAGE AREA	
1	WALL SWITCH SENSOR: SINGLE CIRCUIT W/ MANUAL CONTROL AND SELF ADAPTIVE TECHNOLOGY	PASSIVE INFRARED & ULTRASONIC	LINE	HUBBELL #LHMTS1	N/A	56'x50'	PROGRAM FOR MANUAL ON, AUTO OFF OPERATION
2	WALL SWITCH SENSOR: DUAL CIRCUIT W/ MANUAL CONTROL AND SELF ADAPTIVE TECHNOLOGY	PASSIVE INFRARED & ULTRASONIC	LINE	HUBBELL #LHMTD2	N/A	56'x50'	PROGRAM FOR MANUAL ON, AUTO OFF OPERATION
3	CEILING MOUNT SENSOR W/ SELF ADAPTIVE TECHNOLOGY	PASSIVE INFRARED & ULTRASONIC	LOW	HUBBELL #OMNIDT2000	MP POWER PACK	45'x45'	–
4	WALL MOUNT SENSOR W/ SELF ADAPTIVE TECHNOLOGY	PASSIVE INFRARED & ULTRASONIC	LOW	HUBBELL #LODT	MP POWER PACK	32'x32'	–

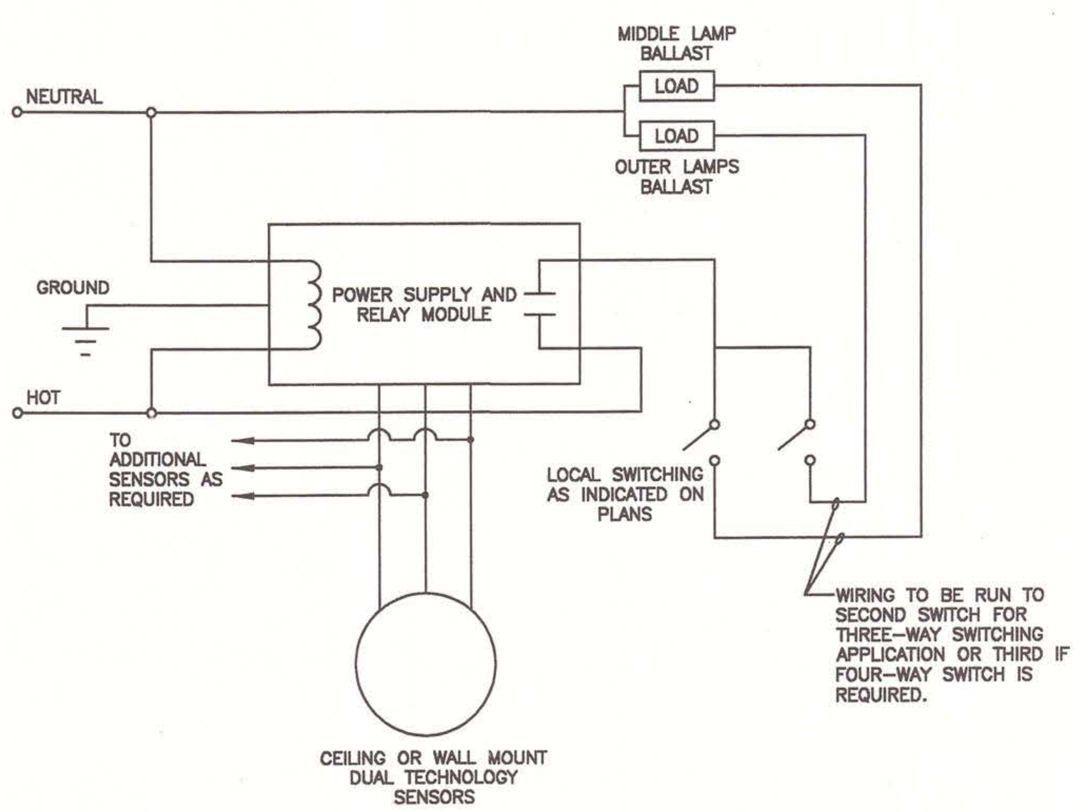


E1 OCCUPANCY SENSOR DIAGRAM TYPE 1 SINGLE LEVEL SWITCHING
NOT TO SCALE

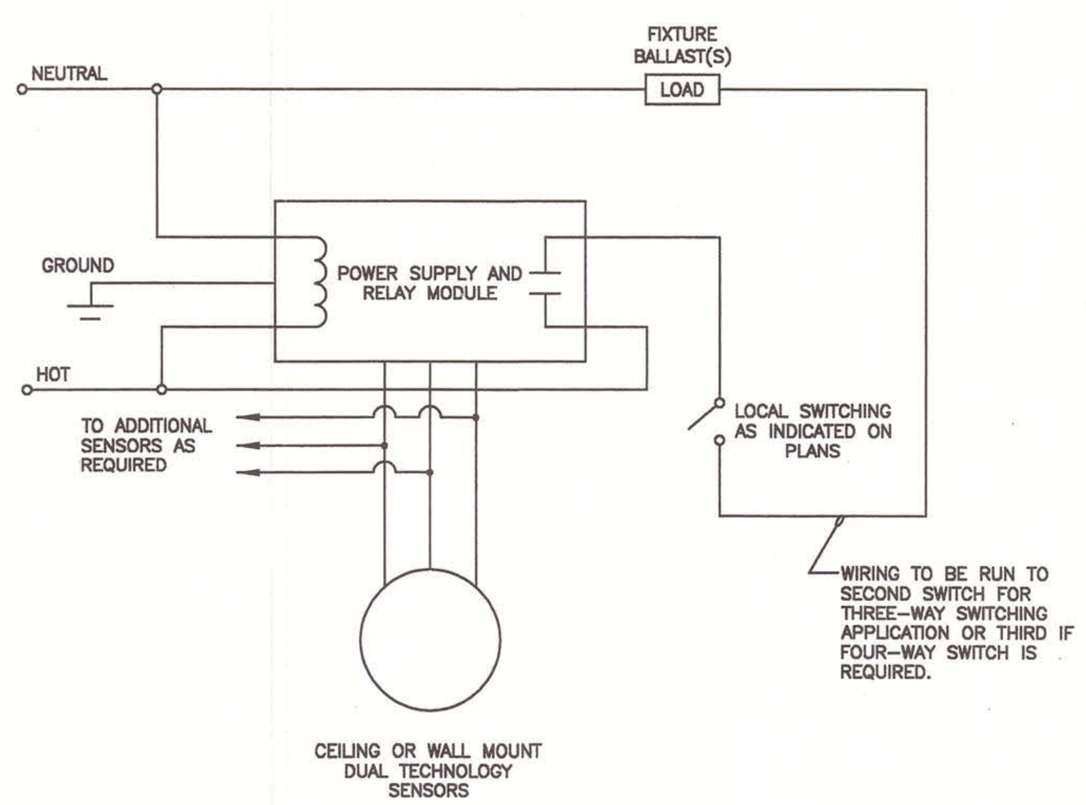


E5 OCCUPANCY SENSOR DIAGRAM TYPE 2 DUAL LEVEL SWITCHING
NOT TO SCALE

Program For Lights + Switches See SI-87

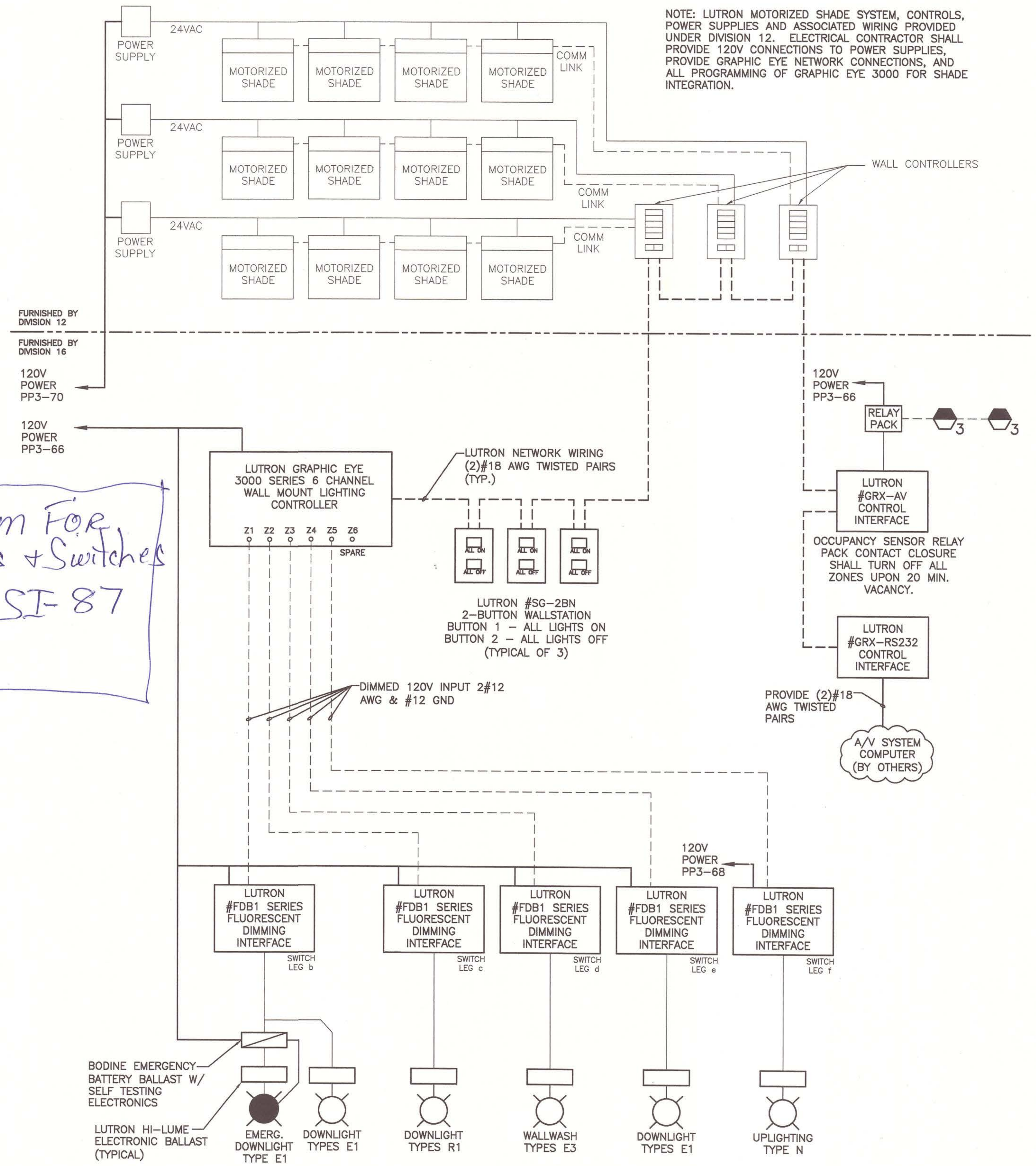


A1 OCCUPANCY SENSOR DIAGRAM TYPES 3 & 4 DUAL LEVEL SWITCHING
NOT TO SCALE



A5 OCCUPANCY SENSOR DIAGRAM TYPES 3 & 4 SINGLE LEVEL SWITCHING
NOT TO SCALE

NOTE: LUTRON MOTORIZED SHADE SYSTEM, CONTROLS, POWER SUPPLIES AND ASSOCIATED WIRING PROVIDED UNDER DIVISION 12. ELECTRICAL CONTRACTOR SHALL PROVIDE 120V CONNECTIONS TO POWER SUPPLIES, PROVIDE GRAPHIC EYE NETWORK CONNECTIONS, AND ALL PROGRAMMING OF GRAPHIC EYE 3000 FOR SHADE INTEGRATION.



NOTE: CONTRACTOR SHALL PROVIDE ALL ACCESSORIES, MOUNTING HARDWARE, WIRING, AND PROGRAMMING FOR A COMPLETE AND OPERABLE SYSTEM. COORDINATE W/ MANUFACTURER'S RECOMMENDATIONS AND INSTALLATION GUIDELINES FOR SPECIFIC WIRING DIAGRAMS AND ADDITIONAL INFORMATION. PROGRAMMING WILL INCLUDE ALL PRESENT SCENES WHICH SHALL BE COORDINATED WITH THE OWNER AND INCLUDE FULL INTEGRATION OF LIGHTING, MOTORIZED SHADES, AND RS-232 CONNECTION TO A/V SYSTEMS SOFTWARE.

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A8 AUTHORITY ROOM 310 LIGHTING CONTROL AND SHADE INTERFACE RISER DIAGRAM
NOT TO SCALE

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STATE OF MAINE – JON P. PERUZZI – No. 7707 – LICENSED PROFESSIONAL ENGINEER – 7/2/07 – Rev. 0

PROJECT TITLE: MAINE TURNPIKE AUTHORITY ADMINISTRATION BUILDING
PORTLAND, MAINE

CURRENT ISSUE STATUS: ISSUED FOR BIDDING/CONSTRUCTION 7-9-07

REV	DESCRIPTION	DATE
0	BIDDING/CONSTRUCTION	7-9-07

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SCALE:	AS NOTED
PROJECT MANAGER:	SLB
JC/DRAWN BY:	TCM/CDS
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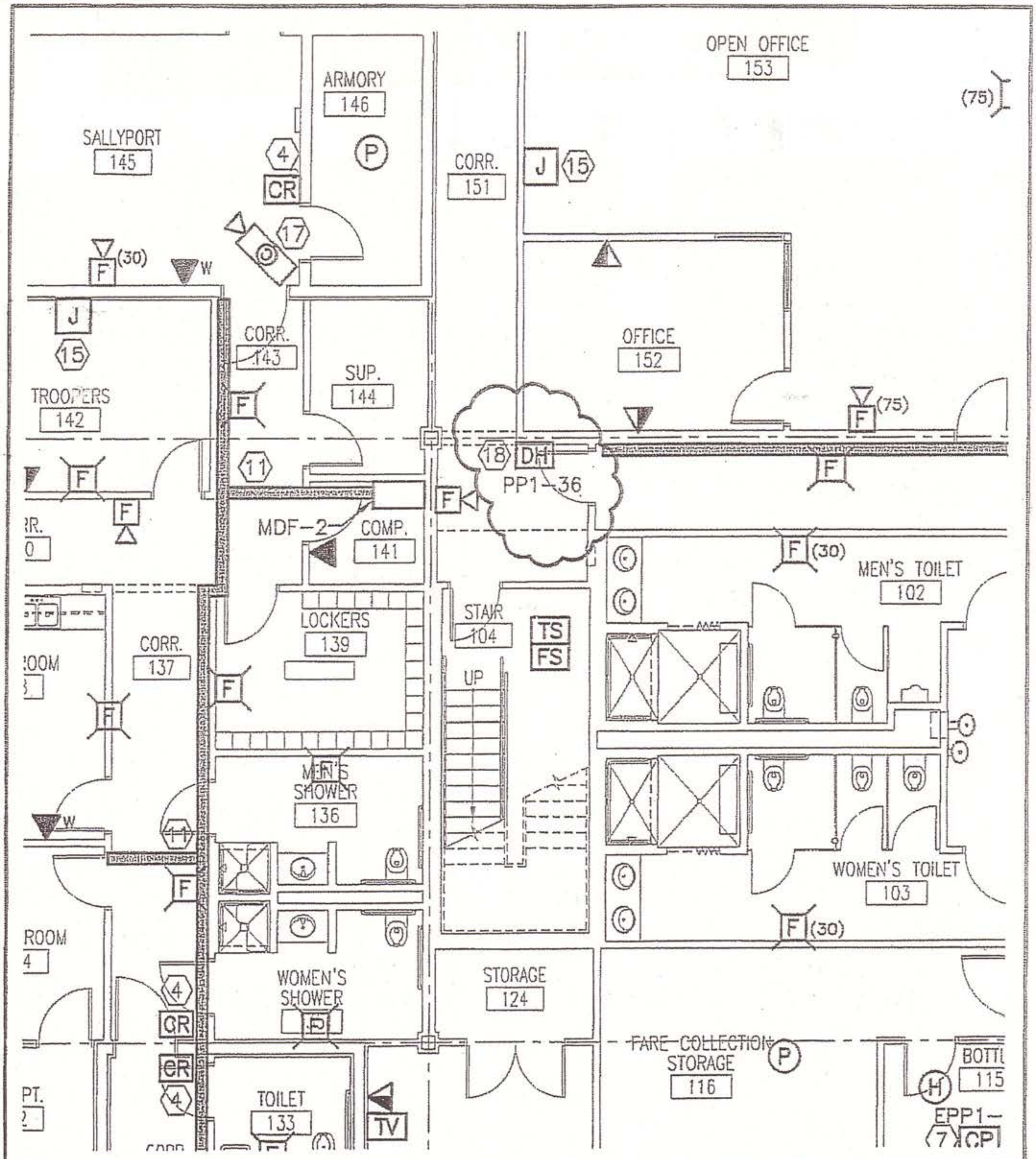
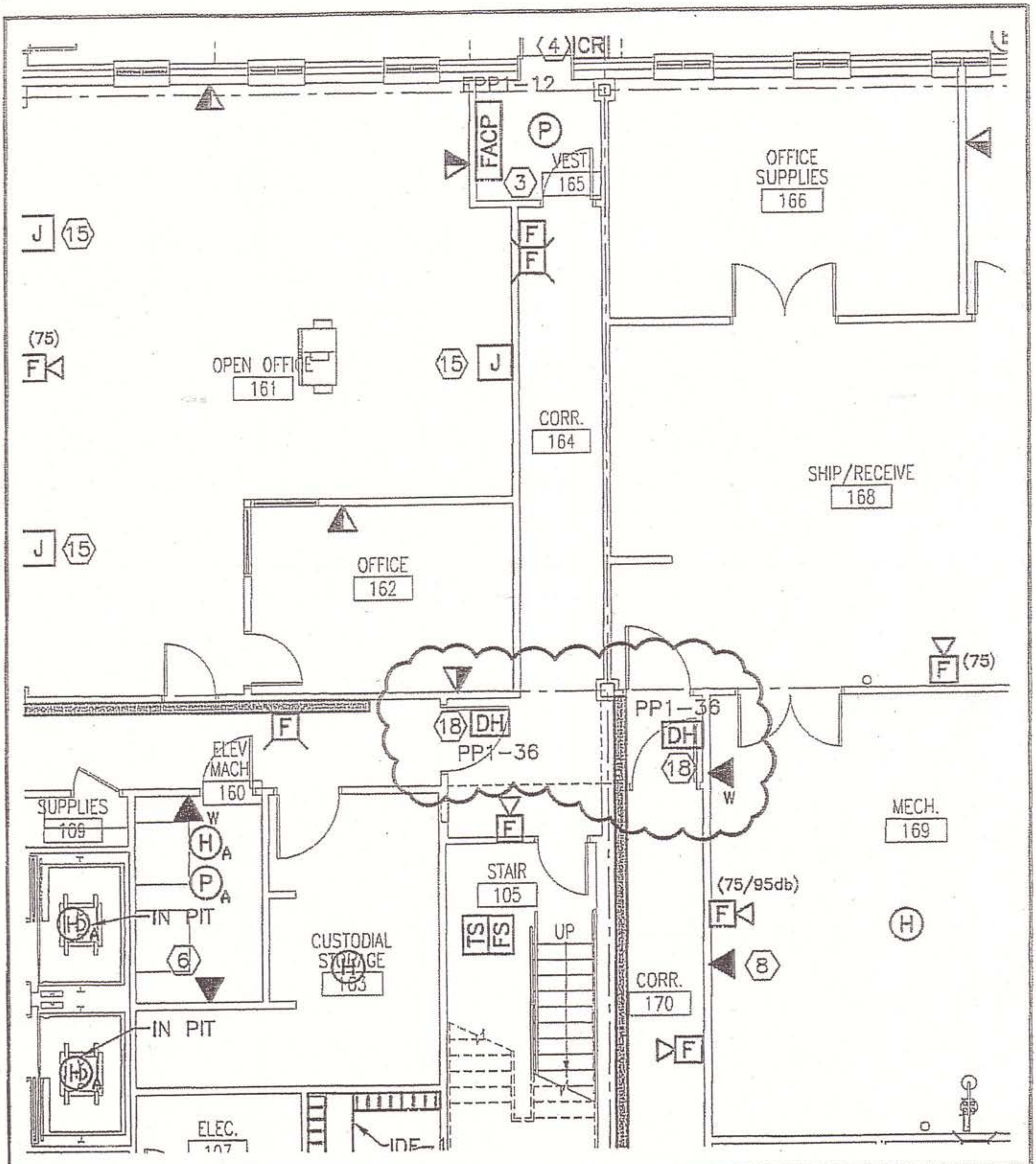
CAD FILE:	EL653-06016
PROJECT NO:	06016
DATE:	7-9-07

SHEET TITLE: LIGHTING DETAILS AND RISERS

SHEET No. EL653



SMRT	ARCHITECTURE ENGINEERING PLANNING SMRT 144 Fore Street/P.O.Box 618 PORTLAND, MAINE 04104 tel (207) 772-3846 / fax. (207) 772-1070	SCALE:	1/8"=1'-0"
		CAD FILE:	EY101-06016
		PROJECT No.	06016
		REF. SHEET:	EY101
PROJECT:	MAINE TURNPIKE AUTHORITY ADMINISTRATION BUILDING	PM: SLB A/E: JPP	ADDENDUM No. ADD-4
SUBJECT:	FIRST FLOOR SYSTEMS PLAN	DATE: 8-10-07	SKETCH No. E-1



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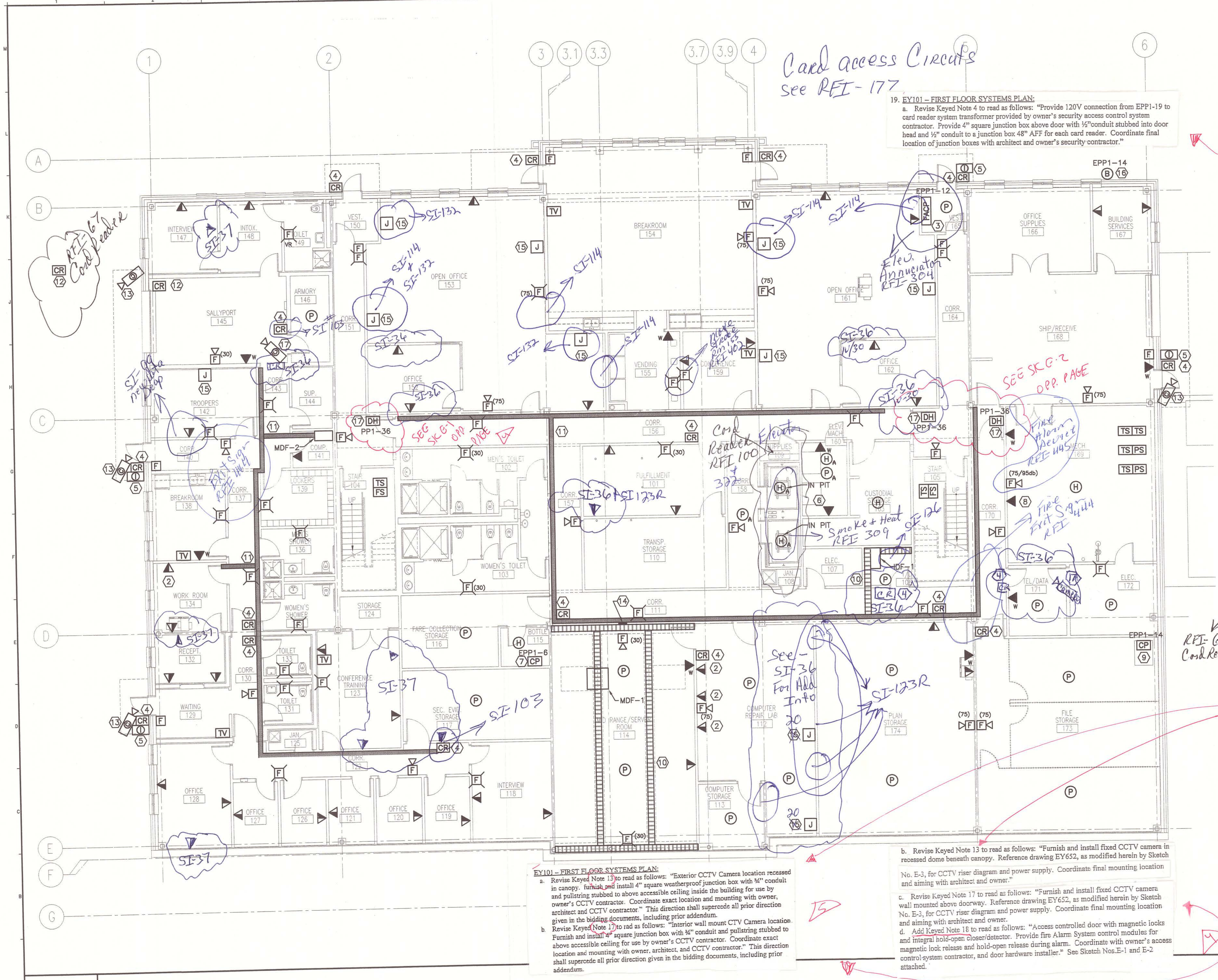
CAD FILE:	EY101-06016
PROJECT No.	06016
REF. SHEET:	EY101
PM: SLB	ADDENDUM No. ADD-4
A/E: JPP	SKETCH No. E-2
DATE: 8-10-07	

PROJECT: MAINE TURNPIKE AUTHORITY ADMINISTRATION BUILDING

SUBJECT: FIRST FLOOR SYSTEMS PLAN



19. EY101 – FIRST FLOOR SYSTEMS PLAN:
a. Revise Keyed Note 4 to read as follows: "Provide 120V connection from EPP1-19 to card reader system transformer provided by owner's security access control system contractor. Provide 4" square junction box above door with ½"conduit stubbed into door head and ½" conduit to a junction box 48" AFF for each card reader. Coordinate final location of junction boxes with architect and owner's security contractor."

EY101 – FIRST FLOOR SYSTEMS PLAN:
a. Revise Keyed Note 13 to read as follows: "Exterior CCTV Camera location recessed in canopy. furnish and install 4" square weatherproof junction box with ¾" conduit and pullstring stubbed to above accessible ceiling inside the building for use by owner's CCTV contractor. Coordinate exact location and mounting with owner, architect and CCTV contractor." This direction shall supercede all prior direction given in the bidding documents, including prior addendum.
b. Revise Keyed Note 17 to rad as follows: "Interior wall mount CTV Camera location. Furnish and install 4" square junction box with ¾" conduit and pullstring stubbed to above accessible ceiling for use by owner's CCTV contractor. Coordinate exact location and mounting with owner, architect, and CCTV contractor." This direction shall supercede all prior direction given in the bidding documents, including prior addendum.

b. Revise Keyed Note 13 to read as follows: "Furnish and install fixed CCTV camera in recessed dome beneath canopy. Reference drawing EY652, as modified herein by Sketch No. E-3, for CCTV riser diagram and power supply. Coordinate final mounting location and aiming with architect and owner."
c. Revise Keyed Note 17 to read as follows: "Furnish and install fixed CCTV camera wall mounted above doorway. Reference drawing EY652, as modified herein by Sketch No. E-3, for CCTV riser diagram and power supply. Coordinate final mounting location and aiming with architect and owner.
d. Add Keyed Note 18 to read as follows: "Access controlled door with magnetic locks and integral hold-open closer/detector. Provide fire Alarm System control modules for magnetic lock release and hold-open release during alarm. Coordinate with owner's access control system contractor, and door hardware installer." See Sketch Nos.E-1 and E-2 attached.

A1 FIRST FLOOR PLAN
1/8" = 1'-0"

NOTE:

1. SEE SHEET E001 FOR LEGEND AND ABBREVIATIONS.
2. SEE POWER PLANS FOR PANELBOARD LOCATIONS.

KEYED NOTES:

1. MOUNT 45" AFF TO CENTER OF DEVICE.
2. MOUNT 7" ABOVE COUNTER TO CENTER OF DEVICE.
3. PROVIDE 120V CONNECTION TO FIRE ALARM CONTROL PANEL AS INDICATED. PROVIDE (2) DEDICATED VOICE CONNECTIONS FOR DIGITAL COMMUNICATOR.
4. PROVIDE 120V CONNECTION FROM EPP1–19 TO CARD READER SYSTEM TRANSFORMER PROVIDED BY SECURITY CONTRACTOR. PROVIDE 4" SQUARE JUNCTION BOX ABOVE DOOR W/ 1/2" CONDUIT STUBBED INTO DOOR JAM AND 1/2" CONDUIT TO A JUNCTION BOX 48" AFF FOR EACH CARD READER. COORDINATE W/ SECURITY CONTRACTOR.
5. EXTERIOR INTERCOM CALL STATION. FURNISH AND INSTALL AIPHONE #IP–EWST IP ADDRESSABLE INTERCOM MODULE AND #IF–DA DOOR STATION. PROVIDE 4" WEATHERPROOF JUNCTION BOX W/ 3/4" CONDUIT STUBBED TO ABOVE ACCESSIBLE CEILING. PROVIDE VOICE/DATA DROP FOR INTEGRATION TO OWNER'S IP BASED PHONE SYSTEM. COORDINATE W/ OWNER AND MANUFACTURER'S RECOMMENDATIONS.
6. PROVIDE (2) DEDICATED VOICE CONNECTIONS TO ELEVATOR CONTROLLER. COORDINATE WITH MECHANICAL CONTRACTOR AND OWNER.
7. PROVIDE FIRE ALARM SYSTEM CONNECTIONS TO GASEOUS FIRE PROTECTION SYSTEM FLOW SWITCH AND CONTROL PANEL AS REQUIRED. PROVIDE 120V CONNECTION TO SYSTEM CONTROL PANEL AS INDICATED. COORDINATE W/ FIRE PROTECTION CONTRACTOR.
8. PROVIDE (2) DEDICATED VOICE CONNECTIONS TO MECHANICAL CONTROL PANEL. COORDINATE W/ MECHANICAL CONTRACTOR AND OWNER.
9. PROVIDE FIRE ALARM SYSTEM CONNECTION TO DOUBLE PRE–ACTION FIRE PROTECTION SYSTEM AND AS REQUIRED. PROVIDE 120V CONNECTION TO SYSTEM CONTROL PANEL AND ASSOCIATED AIR COMPRESSOR. COORDINATE W/ FIRE PROTECTION CONTRACTOR.
10. FURNISH AND INSTALL 3" DEEP, 12" WIDE LADDER TYPE ALUMINUM CABLE TRAY WITH 9" RUNG SPACING CEILING SUSPENDED MIN. 12" BELOW DECKING AND ABOVE ACCESSIBLE CEILINGS (B–LINE SERIES 1 OR EQUAL). PROVIDE CEILING HANGERS AS REQUIRED AND RECOMMENDED BY MANUFACTURER.
11. FURNISH AND INSTALL 4" DEEP, 8" WIDE WIRE BASKET TYPE STEEL CABLE TRAY WITH 9" RUNG SPACING WALL MOUNTED MIN. 12" BELOW DECKING AND ABOVE ACCESSIBLE CEILINGS (B–LINE WB SERIES OR EQUAL). PROVIDE CEILING HANGERS FOR SUPPORT ACROSS CORRIDORS AS REQUIRED AND RECOMMENDED BY MANUFACTURER.
12. PROVIDE 120V CONNECTION FROM EPP1–19 TO CARD READER SYSTEM TRANSFORMER PROVIDED BY SECURITY CONTRACTOR. PROVIDE 4" SQUARE JUNCTION BOX ABOVE DOOR W/ 1/2" CONDUIT STUBBED INTO DOOR JAM AND 1/2" CONDUIT TO A JUNCTION BOX 48" AFF. FROM THIS JUNCTION BOX, ROUTE A 1/2" UNDERGROUND CONDUIT TO THE REMOTE CARD READER PEDESTAL LOCATION. EXTERIOR UNIT SHALL OPEN DOOR, INTERIOR UNIT SHALL ENABLE DOOR PUSH BUTTON STATION. COORDINATE W/ SECURITY CONTRACTOR AND DOOR INSTALLER.
13. FURNISH AND INSTALL FIXED EXTERIOR CCTV CAMERA WALL MOUNTED UNDER CANOPY. SEE SHEET EY651 FOR CCTV RISER DIAGRAM. PROVIDE 120V POWER CONNECTION FROM EPP1–21 TO CAMERA POWER SUPPLY AS REQUIRED. COORDINATE EXACT MOUNTING LOCATION AND AIMING WITH OWNER AND ARCHITECT.
14. FURNISH AND INSTALL 2 HOUR RATED AIRTIGHT WALL PENETRATION DEVICE FOR CABLE TRAY. CDS SEALING SYSTEMS FSP SERIES MULTICABLE PENETRATION FIRE STOP UNIT OR EQUAL. PROVIDE SILICON BASED SEALANT FOR AIRTIGHT INSTALLATION PER MANUFACTURERS RECOMMENDATIONS.
15. PROVIDE TEL/DATA SERVICE TO OFFICE FURNITURE. FURNISH AND INSTALL 4" SQUARE JUNCTION BOX W/ 1" CONDUIT TO ABOVE ACCESSIBLE CEILING. PROVIDE FOR ONE TEL/ DATA DEVICE PER WORKSTATION. COORDINATE FURNITURE CABLE RACEWAY AND LOCATION W/ ARCHITECT AND FURNITURE INSTALLER.
16. PROVIDE 120V CONNECTION FOR SPRINKLER SYSTEM ELECTRIC BELL AS INDICATED. PROVIDE WIRING TO MECH 169 EQUIPMENT AS REQUIRED COORDINATE WITH FURNITURE INSTALLER.
17. FURNISH AND INSTALL FIXED INTERIOR CCTV CAMERA WALL MOUNTED ABOVE DOORWAY. SEE SHEET EY651 FOR CCTV RISER DIAGRAM. PROVIDE 120V POWER CONNECTION FROM EPP1–21 TO CAMERA POWER SUPPLY AS REQUIRED. COORDINATE EXACT MOUNTING LOCATION AND AIMING WITH OWNER AND ARCHITECT.
18. ADDED AT LEFT

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STATE OF MAINE
JON P. PERRUZZI
NO. 7707
LICENSED PROFESSIONAL ENGINEER
7/2/07
REV. 0

PROJECT NORTH
MAG NORTH

PROJECT TITLE:
MAINE TURNPIKE AUTHORITY ADMINISTRATION BUILDING
PORTLAND, MAINE

CURRENT ISSUE STATUS:
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REV	DESCRIPTION	DATE
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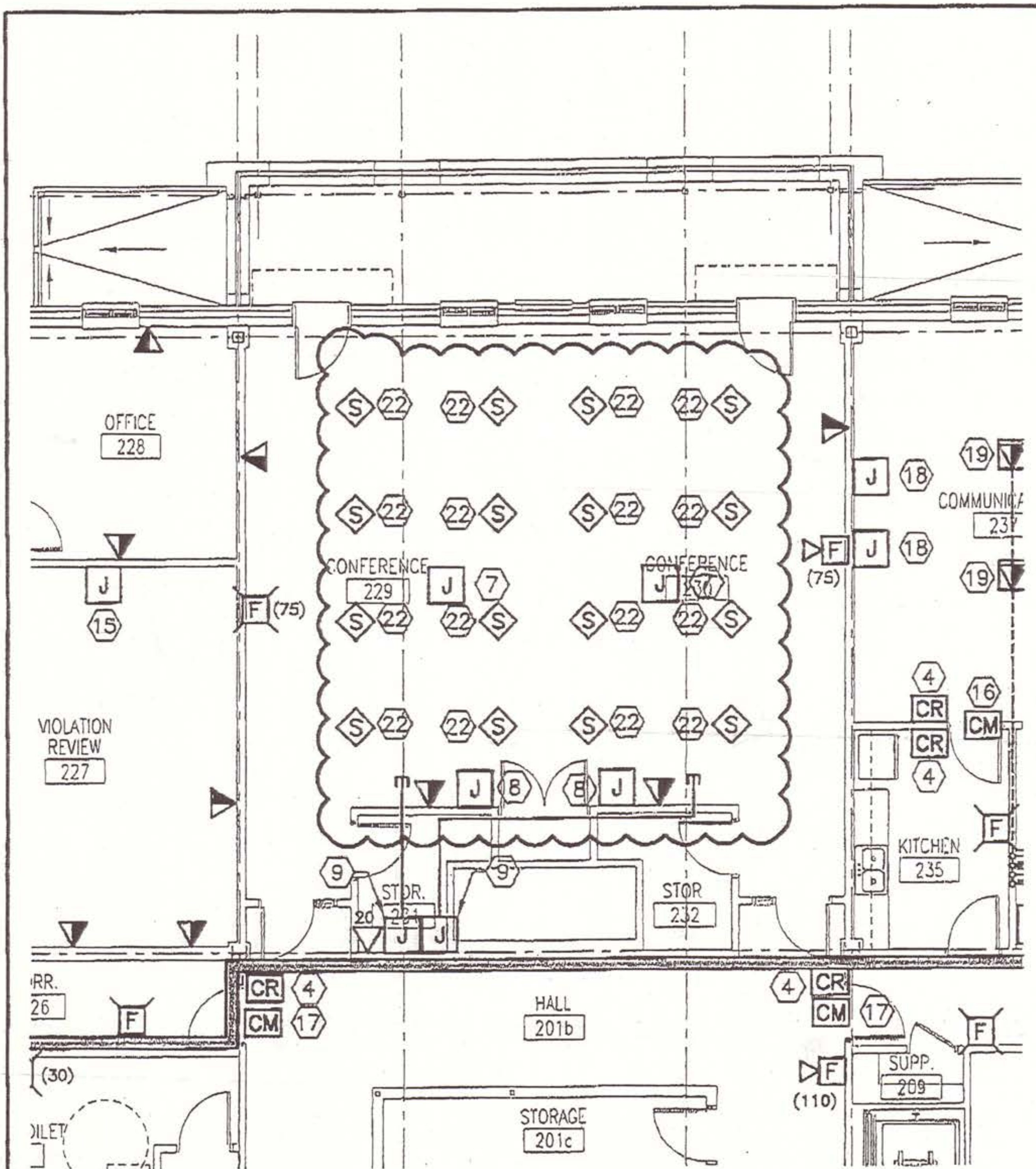
A/E OF RECORD:	JPP
CAD FILE:	EY101-06016
PROJECT NO:	06016
DATE:	7-9-07

SHEET TITLE: FIRST FLOOR SYSTEMS PLAN

SHEET No. EY101



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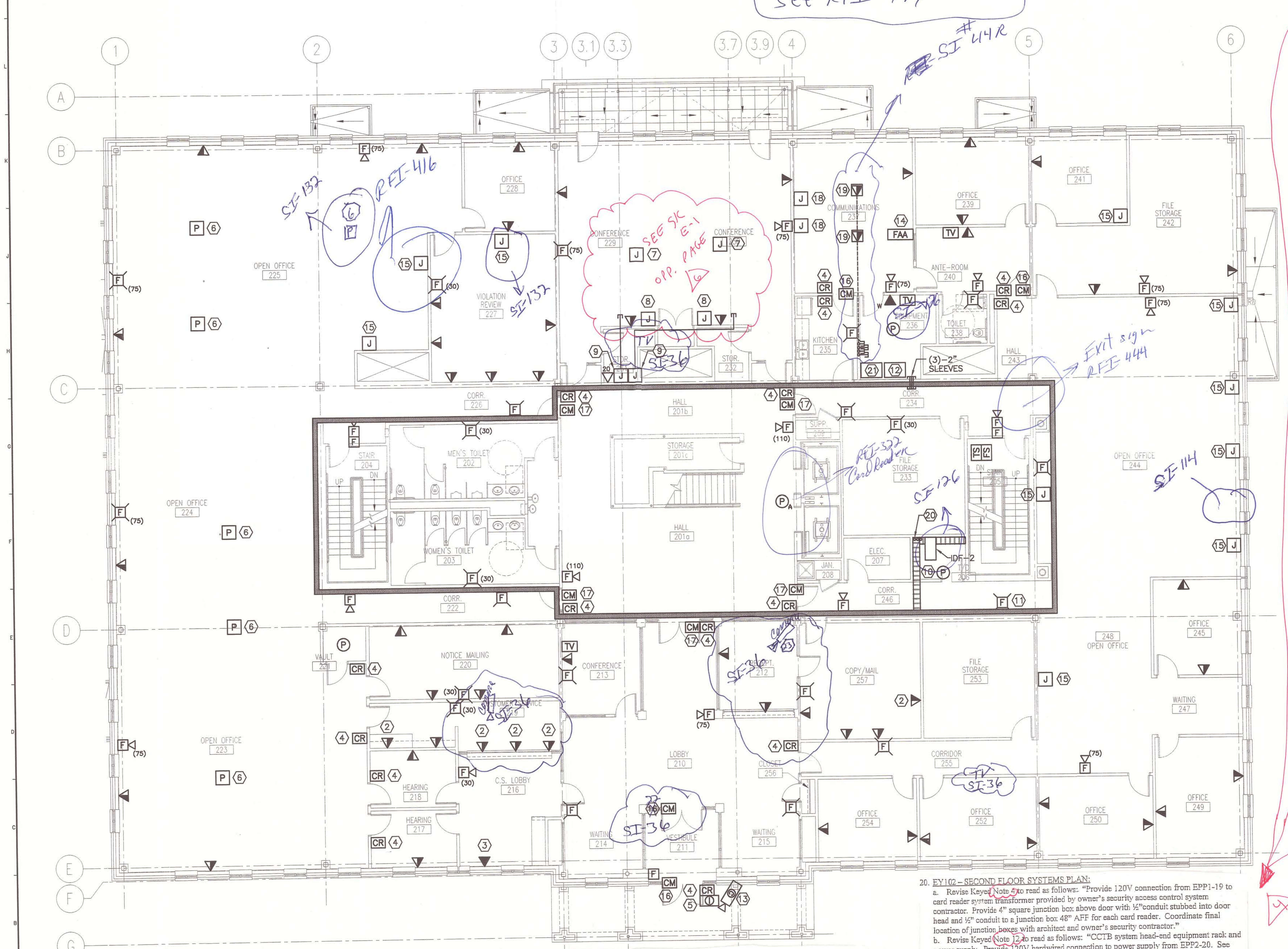
CAD FILE:	EY102-06016
PROJECT No.	06016
REF. SHEET:	EY102
PM:	SLB
A/E:	JPP
DATE:	8-24-07
ADDENDUM No.	ADD-6
SKETCH No.	E-1

PROJECT: MAINE TURNPIKE AUTHORITY ADMINISTRATION BUILDING

SUBJECT: SECOND FLOOR SYSTEMS PLAN

NOTE:

1. SEE SHEET E001 FOR LEGEND AND ABBREVIATIONS.
2. SEE POWER PLANS FOR PANELBOARD LOCATIONS.



EY102 – SECOND FLOOR SYSTEMS PLAN:

a. Revise Keyed Note 12 to read as follows: "Not Used." Associated equipment location in Equipment Room #236 shall be removed. This direction shall supercede all prior direction given in the bidding documents, including prior addendum.

b. Revise Keyed Note 13 to read as follows: "Exterior CCTV Camera location recessed in canopy. Furnish and install 4" square weatherproof junction box with ¾" conduit and pullstring stubbed to above accessible ceiling inside the building for use by owner's CCTV contractor. Coordinate exact location and mounting with owner, architect and CCTV contractor." This direction shall supercede all prior direction given in the bidding documents, including prior addendum.

5

20. EY102 – SECOND FLOOR SYSTEMS PLAN:

a. Revise Keyed Note 4 to read as follows: "Provide 120V connection from EPP1-19 to card reader system transformer provided by owner's security access control system contractor. Provide 4" square junction box above door with ½"conduit stubbed into door head and ½" conduit to a junction box 48" AFF for each card reader. Coordinate final location of junction boxes with architect and owner's security contractor."

b. Revise Keyed Note 12 to read as follows: "CCTB system head-end equipment rack and power supply. Provide 120V hardwired connection to power supply from EPP2-20. See EY652 for riser diagram and CCTV system requirements. Coordinate final mounting location and height with architect and owner."

c. Revise Keyed Note 13 to read as follows: "Furnish and install fixed CCTV camera in recessed dome beneath canopy. Reference drawing EY652, as modified herein by Sketch No. E-3, for CCTV riser diagram and power supply. Coordinate final mounting location and aiming with owner and architect.

5

A1 FLOOR PLAN

1/8" = 1'-0"

KEYED NOTES:

1. MOUNT 45" AFF TO CENTER OF DEVICE.
2. MOUNT 7" ABOVE COUNTER TO CENTER OF DEVICE.
3. PROVIDE DEDICATED VOICE CONNECTION TO ATM MACHINE. COORDINATE W/ INSTALLER AND OWNER.
4. PROVIDE 120V CONNECTION FROM EPP2-19 TO CARD READER SYSTEM TRANSFORMER PROVIDED BY SECURITY CONTRACTOR. PROVIDE 4" SQUARE JUNCTION BOX ABOVE DOOR W/ 1/2" CONDUIT STUBBED INTO DOOR JAM AND 1/2" CONDUIT TO A JUNCTION BOX 48" AFF FOR EACH CARD READER. COORDINATE W/ SECURITY CONTRACTOR.
5. EXTERIOR INTERCOM CALL STATION. FURNISH AND INSTALL AIPHONE #IP-EWST IP ADDRESSABLE INTERCOM MODULE AND #IF-DA DOOR STATION. PROVIDE 4" WEATHERPROOF JUNCTION BOX W/ 3/4" CONDUIT STUBBED TO ABOVE ACCESSIBLE CEILING. PROVIDE VOICE/DATA DROP FOR INTEGRATION TO OWNER'S IP BASED PHONE SYSTEM. COORDINATE W/ OWNER AND MANUFACTURER'S RECOMMENDATIONS.
6. DUAL SERVICE ALUMINUM POWER POLE FOR ROUTING OF TEL/DATA CABLING TO OFFICE FURNITURE. FURNISH AND INSTALL (2) VOICE/DATA DEVICE LOCATION PER WORKSTATION UTILIZING FURNITURE RACEWAY AND DEVICE BACKBOXES. COORDINATE W/ FURNITURE INSTALLER.
7. LOCATION OF A/V SYSTEM PROJECTOR. PROVIDE SYSTEM CABLING AND CONNECTIONS AS DESCRIBED IN SECTION 16800 AUDIO VISUAL SYSTEMS.
8. LOCATION OF WALL A/V TOUCH PANEL. FURNISH AND INSTALL 4" SQUARE DEEP JUNCTION BOX AT 48" AFF W/ 1" CONDUIT STUBBED ABOVE ACCESSIBLE CEILING FOR ROUTING OF SYSTEM CABLING AND CONNECTIONS AS DESCRIBED IN SECTION 16800 AUDIO VISUAL SYSTEMS.
9. LOCATION OF A/V SYSTEM HEAD END EQUIPMENT AND COMPUTER WORKSTATION. PROVIDE 4" SQUARE DEEP JUNCTION BOX 45" AFF W/ 1-1/4" CONDUIT STUBBED ABOVE CONFERENCE ROOM ACCESSIBLE CEILING FOR ROUTING OF SYSTEM CABLING AND CONNECTIONS AS DESCRIBED IN SECTION 16800 AUDIO VISUAL SYSTEMS.
10. FURNISH AND INSTALL 3" DEEP, 12" WIDE LADDER TYPE ALUMINUM CABLE TRAY WITH 9" RUNG SPACING CEILING SUSPENDED MIN. 12" BELOW DECKING AND ABOVE ACCESSIBLE CEILINGS (B-LINE SERIES 1 OR EQUAL). PROVIDE CEILING HANGERS AS REQUIRED AND RECOMMENDED BY MANUFACTURER.
11. FURNISH AND INSTALL 4" DEEP, 8" WIDE WIRE BASKET TYPE STEEL CABLE TRAY WITH 9" RUNG SPACING WALL MOUNTED MIN. 12" BELOW DECKING AND ABOVE ACCESSIBLE CEILINGS (B-LINE WB SERIES OR EQUAL). PROVIDE CEILING HANGERS FOR SUPPORT ACROSS CORRIDORS AS REQUIRED AND RECOMMENDED BY MANUFACTURER.
12. CCTV SYSTEM HEAD END EQUIPMENT AND DVR. COORDINATE EXACT INSTALLATION AND LOCATION WITH OWNER. SEE EY652 FOR ADDITIONAL INFORMATION.
13. FURNISH AND INSTALL FIXED EXTERIOR CCTV CAMERA WALL MOUNTED UNDER CANOPY. PROVIDE 120V POWER CONNECTION FROM EPP2-20 TO CAMERA POWER SUPPLY AS REQUIRED. SEE SHEET EY651 FOR CCTV RISER DIAGRAM. COORDINATE EXACT MOUNTING LOCATION AND AIMING WITH OWNER AND ARCHITECT.
14. COORDINATE LOCATION OF REMOTE FIRE ALARM ANNUNCIATOR WITH COMMUNICATIONS STAFF, ARCHITECT, AND OWNER.
15. PROVIDE TEL/DATA SERVICE TO OFFICE FURNITURE. FURNISH AND INSTALL 4" SQUARE JUNCTION BOX W/ 1" CONDUIT TO ABOVE ACCESSIBLE CEILING. PROVIDE FOR (2) TEL/DATA DEVICE LOCATION PER WORKSTATION. COORDINATE FURNITURE CABLE RACEWAY AND LOCATION W/ ARCHITECT AND FURNITURE INSTALLER.
16. PROVIDE FIRE ALARM SYSTEM CONTROL MODULE FOR ACCESS CONTROLLED EGRESS DOOR MAGNETIC LOCK RELEASE UPON ALARM. COORDINATE INTERCONNECTION W/ ACCESS CONTROL SYSTEM AND DOOR HARDWARE INSTALLERS.
17. ACCESS CONTROLLED DOOR W/ MAGNETIC LOCKS AND INTEGRAL ELECTRIC HOLD OPEN CLOSER. PROVIDE FIRE ALARM SYSTEM CONTROL MODULES FOR MAGNETIC LOCK RELEASE AND HOLD OPEN RELEASE DURING ALARM. COORDINATE W/ ACCESS CONTROL SYSTEM AND DOOR HARDWARE INSTALLERS.
18. FURNISH AND INSTALL 4" SQUARE DEEP JUNCTION BOX W/ 1 1/4" CONDUIT AND PULL STRING STUBBED ABOVE EQUIPMENT 236 ACCESSIBLE CEILING.
19. DUAL SERVICE FLOORBOX AS SPECIFIED ON EP102. PROVIDE (1)-1" TEL/DATA AND (2) 1-1/4" SPARE CONDUITS ROUTED TO ABOVE EQUIPMENT 236 ACCESSIBLE CEILING FOR TEL/DATA AND FUTURE SYSTEMS CABLING. PROVIDE 2 VOICE AND 2 DATA DEVICES. INSTALLED IN A SINGLE GANG SPACE WITHIN THE FLOORBOX.
20. PROVIDE (3)-4" CONDUIT SLEEVES THROUGH FLOOR DECK WITH 4" EXPOSURE ABOVE FINISHED FLOOR AND BELOW DECKING. PROVIDE REMOVABLE FIRESTOP CAPS ON BOTH ENDS.
21. WIRELESS CLOCK SYSTEM TRANSMITTER UNIT. PROVIDE 1" CONDUIT TO ROOF FOR GPS ANTENNA. COORDINATE EXACT INSTALLATION AND LOCATION WITH OWNER. SEE EY652 FOR ADDITIONAL INFORMATION.

5

22

EY102 – SECOND FLOOR SYSTEMS PLAN:

a. Add Keyed Note 22 to read as follows: "Location of A/V system speaker. Provide backbox, system cabling and connections as described in Section 16800 Audio Visual Systems." Reference attached Sketch No. E-1 for speaker locations.

6

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STATE OF MAINE — [illegible] — NO. 7707 — LICENSED PROFESSIONAL ENGINEER

7/26/07

Rev. 0

PROJECT NORTH

MAG. NORTH

PROJECT TITLE:

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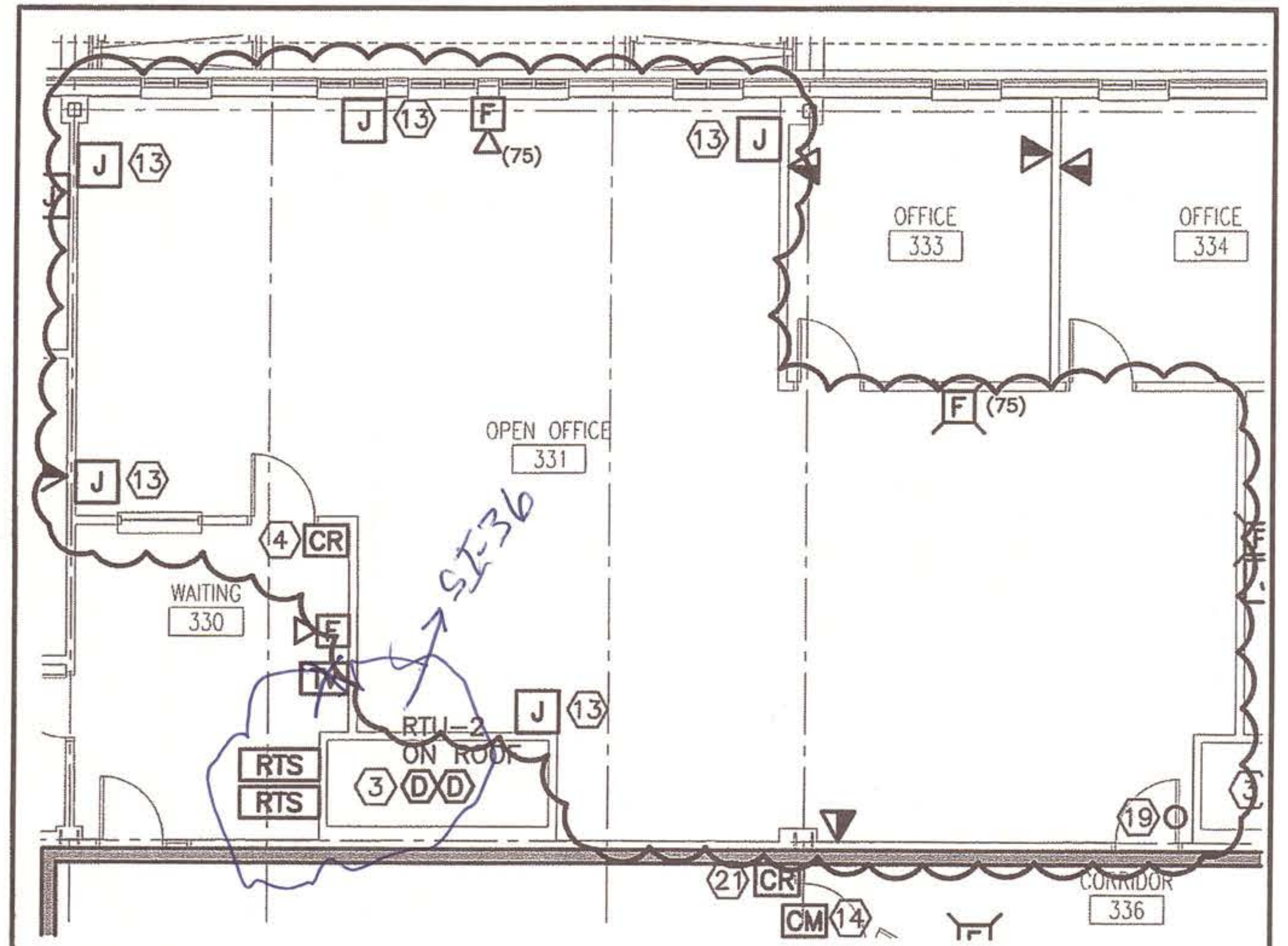
SHEET TITLE:

SECOND FLOOR SYSTEMS PLAN

SHEET No.

EY102



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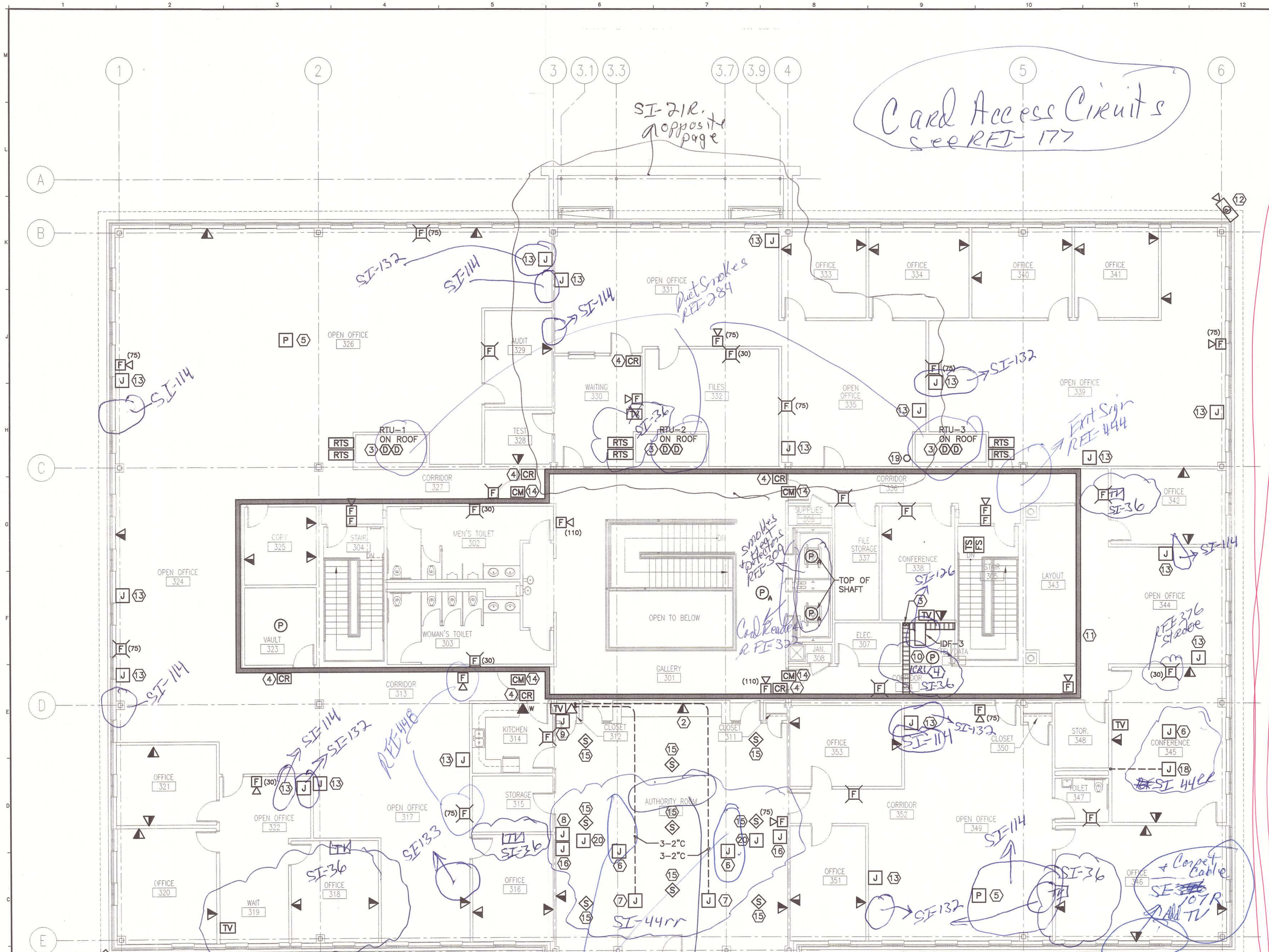
PROJECT: MAINE TURNPIKE AUTHORITY ADMINISTRATION BUILDING

SUBJECT: THIRD FLOOR SYSTEMS PLAN

SCALE:	1/8"=1'-0"
CAD FILE:	EY103-06016
PROJECT No.	06016
REF. SHEET:	EY103
PM: SLB	ADDENDUM No. SI-21R
A/E: JPP	SKETCH No. E-3
DATE: 4-01-08	© COPYRIGHT 2007 SMRT INC.



A1 FLOOR PLAN

1/8" = 1'-0"

EY103 - THIRD FLOOR SYSTEMS PLAN:

a. Revise Keyed Note 12 to read as follos: "Exterior PTZ CCTV Camera arm mounted from building corner. Furnish and install 4" square weatherproof junction box with ¾" conduit and pullstring stubbed to above accessible ceiling inside the building for use by owner's CCTV contractor. Coordinate exact location and mounting with owner, architect and CCTV contractor." This direction shall supercede all prior direction given in the bidding documents, including prior addendum.

EY103 - THIRD FLOOR SYSTEMS PLAN:

a. A1, Authority Room No. 310: Delete the junction box associated with Keyed Note 8. Control interface will be wireless as noted in Specification Section 16800.

b. Revise Keyed Note 4 to read as follows: "Provide 120V connection from EPP1-19 to card reader system transformer provided by owner's security access control system contractor. Provide 4" square junction box above door with ½" conduit stubbed into door head and ½" conduit to a junction box 48" AFF for each card reader. Coordinate final location of junction boxes with architect and owner's security contractor."

c. Revise Keyed Note 12 to read as follows: "Provide CCTV exterior PTC camera arm mounted on building corner. Reference drawing EY652, as modified herein by Sketch No. E-3, for CCTV riser diagram and power supply. Coordinate final mounting location and aiming with architect and owner."

NOTE:

1. SEE SHEET E001 FOR LEGEND AND ABBREVIATIONS.
2. SEE POWER PLANS FOR PANELBOARD LOCATIONS.

KEYED NOTES:

(1) MOUNT 45" AFF TO CENTER OF DEVICE.

(2) MOUNT 7" ABOVE COUNTER TO CENTER OF DEVICE.

(3) FURNISH AND INSTALL DUCT SMOKE DETECTORS IN SUPPLY AND RETURN DUCT FOR ROOF TOP UNIT AUTOMATIC SHUTDOWN.

(4) PROVIDE 120V CONNECTION TO CARD READER SYSTEM TRANSFORMER PROVIDED BY SECURITY CONTRACTOR. PROVIDE 4" SQUARE JUNCTION BOX ABOVE DOOR W/ 1/2" CONDUIT STUBBED INTO DOOR JAM AND 1/2" CONDUIT TO A JUNCTION BOX 48" AFF FOR EACH CARD READER. COORDINATE W/ SECURITY CONTRACTOR.

(5) DUAL SERVICE ALUMINUM POWER POLE FOR ROUTING OF TEL/DATA CABLING TO OFFICE FURNITURE. FURNISH AND INSTALL (2) VOICE/DATA DEVICE LOCATIONS PER WORKSTATION UTILIZING FURNITURE RACEWAY AND DEVICE BACKBOXES. COORDINATE W/ FURNITURE INSTALLER.

(6) LOCATION OF A/V SYSTEM PROJECTOR. PROVIDE SYSTEM CABLING AND CONNECTIONS AS DESCRIBED IN SECTION 16800 AUDIO VISUAL SYSTEMS.

(7) DUAL SERVICE FLOORBOX AS SPECIFIED ON EP103. PROVIDE (1) 2" TEL/DATA AND (2) 2" SPARE STUBBED UP 24" AFF IN CLOSET 312 FOR TEL/DATA, A/V, AND FUTURE SYSTEMS CABLING. PROVIDE EIGHT DATA OUTLET TERMINATIONS INSTALLED IN A TABLE MOUNTED SERVICE BOX FURNISHED BY OTHERS. COORDINATE CABLE ROUTING FROM FLOORBOX TO DEVICES W/ ARCHITECT, OWNER, AND TABLE INSTALLER.

(8) LOCATION OF WALL A/V TOUCH PANEL. FURNISH AND INSTALL 4" SQUARE DEEP ~~JUNCTION BOX~~ AT 48" AFF W/ 1" CONDUIT STUBBED ABOVE ACCESSIBLE CEILING FOR ROUTING OF SYSTEM CABLING AND CONNECTIONS AS DESCRIBED IN SECTION 16800 AUDIO VISUAL SYSTEMS.

DELETE

(9) LOCATION OF A/V SYSTEM HEAD END EQUIPMENT AND COMPUTER WORKSTATION. PROVIDE 4" SQUARE DEEP JUNCTION BOX 45" AFF W/ 1-1/4" CONDUIT STUBBED ABOVE AUTHORITY ROOM ACCESSIBLE CEILING FOR ROUTING OF SYSTEMS CABLING AND CONNECTIONS AS DESCRIBED IN SECTION 16800 AUDIO VISUAL SYSTEMS.

See RFI-394 Extra Conduit

(10) FURNISH AND INSTALL 3" DEEP, 12" WIDE LADDER TYPE ALUMINUM CABLE TRAY WITH 9" RUNG SPACING CEILING SUSPENDED MIN. 12" BELOW DECKING AND ABOVE ACCESSIBLE CEILINGS (B-LINE SERIES 1 OR EQUAL). PROVIDE CEILING HANGERS AS REQUIRED AND RECOMMENDED BY MANUFACTURER.

(11) FURNISH AND INSTALL 4" DEEP, 8" WIDE WIRE BASKET TYPE STEEL CABLE TRAY WITH 9" RUNG SPACING WALL MOUNTED MIN. 12" BELOW DECKING AND ABOVE ACCESSIBLE CEILINGS (B-LINE WB SERIES OR EQUAL). PROVIDE CEILING HANGERS FOR SUPPORT ACROSS CORRIDORS AS REQUIRED AND RECOMMENDED BY MANUFACTURER.

(12) FURNISH AND INSTALL CCTV EXTERIOR PTZ CAMERA MOUNTED TO TOP OF BUILDING WALL. PROVIDE 120V POWER FROM EPP3-4 TO CAMERA POWER SUPPLY. SEE SHEET EY652 FOR ADDITIONAL INFORMATION.

(13) PROVIDE TEL/DATA SERVICE TO OFFICE FURNITURE. FURNISH AND INSTALL 4" SQUARE JUNCTION BOX W/ 1" CONDUIT TO ABOVE ACCESSIBLE CEILING. PROVIDE FOR (2) TEL/DATA DEVICE LOCATIONS PER WORKSTATION. COORDINATE FURNITURE CABLE RACEWAY AND LOCATION W/ ARCHITECT AND FURNITURE INSTALLER.

(14) ACCESS CONTROLLED DOOR W/ MAGNETIC LOCKS AND INTEGRAL ELECTRIC HOLD OPEN CLOSER. PROVIDE FIRE ALARM SYSTEM CONTROL MODULES FOR MAGNETIC LOCK RELEASE AND HOLD OPEN RELEASE DURING ALARM. COORDINATE W/ ACCESS CONTROL SYSTEM AND DOOR HARDWARE INSTALLERS.

(15) LOCATION OF A/V SYSTEM SPEAKER. PROVIDE BACKBOX, SYSTEM CABLING, AND CONNECTIONS AS DESCRIBED IN SECTION 16800 AUDIO VISUAL SYSTEMS.

(16) LOCATION OF WALL A/V CONNECTIVITY PANEL. FURNISH AND INSTALL 4" SQUARE DEEP JUNCTION BOX AT 18" AFF W/ 1" CONDUIT STUBBED ABOVE ACCESSIBLE CEILING FOR ROUTING OF SYSTEM CABLING AND CONNECTIONS AS DESCRIBED IN SECTION 16800 AUDIO VISUAL SYSTEMS.

(17) PROVIDE (3)-4" CONDUIT SLEEVES THROUGH FLOOR DECK WITH 4" EXPOSURE ABOVE FINISHED FLOOR AND BELOW DECKING. PROVIDE REMOVABLE FIRESTOP CAPS ON BOTH ENDS.

(18) DUAL SERVICE FLOORBOX AS SPECIFIED ON EP103. PROVIDE (1)1" TEL/DATA AND (1) 2" A/V CONDUIT ROUTED TO ABOVE RM 345 ACCESSIBLE CEILING FOR TEL/DATA, A/V, AND FUTURE SYSTEMS CABLING. PROVIDE ONE TEL/DATA OUTLET TERMINATION INSTALLED IN A TABLE MOUNTED SERVICE BOX FURNISHED BY OTHERS. COORDINATE CABLE ROUTING FROM FLOORBOX TO DEVICES W/ ARCHITECT, OWNER, AND TABLE INSTALLER.

(19) WIRELESS CLOCK SYSTEM GPS ANTENNA MOUNTED TO MECHANICAL ROOF TOP UNIT RTU-1 ON ROOF ABOVE. COORDINATE EXACT ROUTING, MOUNTING, AND LOCATIONS W/ OWNER, ARCHITECT, MECHANICAL CONTRACTOR, AND AFFECTED TRADES.

(20) DUAL SERVICE FLOORBOX AS SPECIFIED ON EP103. PROVIDE (1)1-1/2" CONDUIT W/ PULLSTRINGS ROUTED TO ABOVE RM 345 ACCESSIBLE CEILING FOR A/V AND FUTURE SYSTEMS CABLING. COORDINATE CABLE ROUTING FROM FLOORBOX TO DEVICES W/ ARCHITECT, OWNER, AND LECTERN INSTALLER.

16 Revised

EY103 - THIRD FLOOR SYSTEMS PLAN:

a. Revise Keyed Note 16 to read as follows: "Location of Wall A/V connectivity panel. Furnish and install 4-gang deep junction box w/2-1" conduits stubbed above accessible ceiling for routing of system cabling and connections as described in Section 16800 Audio Visual Systems."

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PROJECT NORTH

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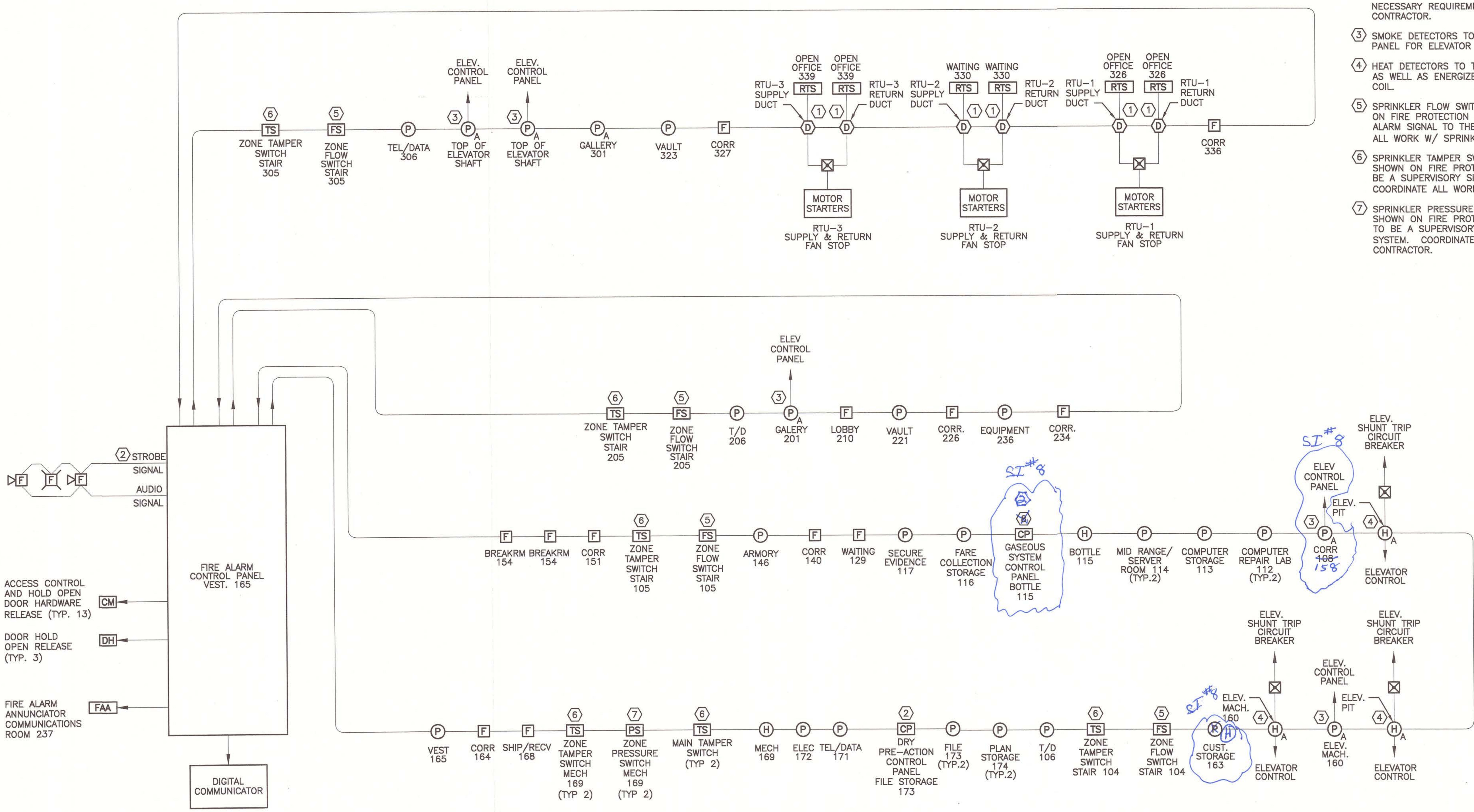
THIRD FLOOR SYSTEMS PLAN

SHEET No. EY103



NOTES:

1. SEE SHEET E-001 FOR LEGEND AND GENERAL NOTES.
2. SEE FLOORPLANS FOR NOTIFICATION LOCATIONS AND QUANTITIES.

KEYED NOTES:

1. DUCT SMOKE DETECTORS TO REPORT A SUPERVISORY SIGNAL TO THE FIRE ALARM CONTROL PANEL AND SHUT DOWN HVAC EQUIPMENT INDICATED.
2. PROVIDE SUPERVISED CONNECTION TO SPECIALIZED FIRE PROTECTION SYSTEM CONTROL PANEL. COORDINATE NECESSARY REQUIREMENTS W/ FIRE PROTECTION CONTRACTOR.
3. SMOKE DETECTORS TO TIE INTO ELEVATOR CONTROL PANEL FOR ELEVATOR RECALL FUNCTIONS.
4. HEAT DETECTORS TO TIE INTO ELEVATOR CONTROL PANEL AS WELL AS ENERGIZE SHUNT TRIP CIRCUIT BREAKER COIL.
5. SPRINKLER FLOW SWITCH ACTUAL LOCATIONS ARE SHOWN ON FIRE PROTECTION PLAN. FLOW SWITCHES TO BE ALARM SIGNAL TO THE FIRE ALARM SYSTEM. COORDINATE ALL WORK W/ SPRINKLER CONTRACTOR.
6. SPRINKLER TAMPER SWITCH ACTUAL LOCATIONS ARE SHOWN ON FIRE PROTECTION PLAN. TAMPER SWITCHES TO BE A SUPERVISORY SIGNAL TO THE FIRE ALARM SYSTEM. COORDINATE ALL WORK W/ SPRINKLER CONTRACTOR.
7. SPRINKLER PRESSURE SWITCH ACTUAL LOCATIONS ARE SHOWN ON FIRE PROTECTION PLAN. PRESSURE SWITCHES TO BE A SUPERVISORY SIGNAL TO THE FIRE ALARM SYSTEM. COORDINATE ALL WORK W/ SPRINKLER CONTRACTOR.

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A1 FIRE ALARM RISER DIAGRAM
NONE

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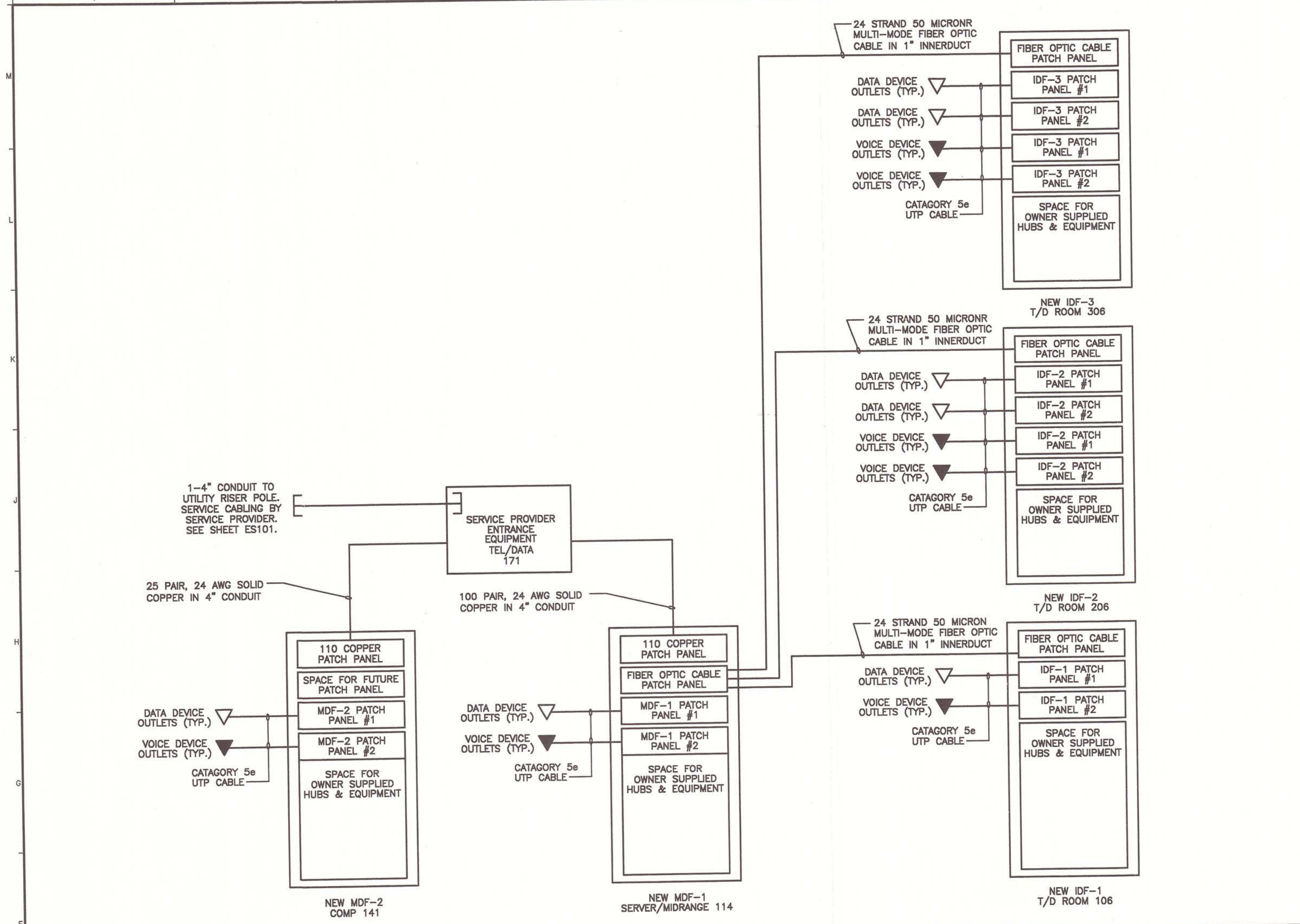
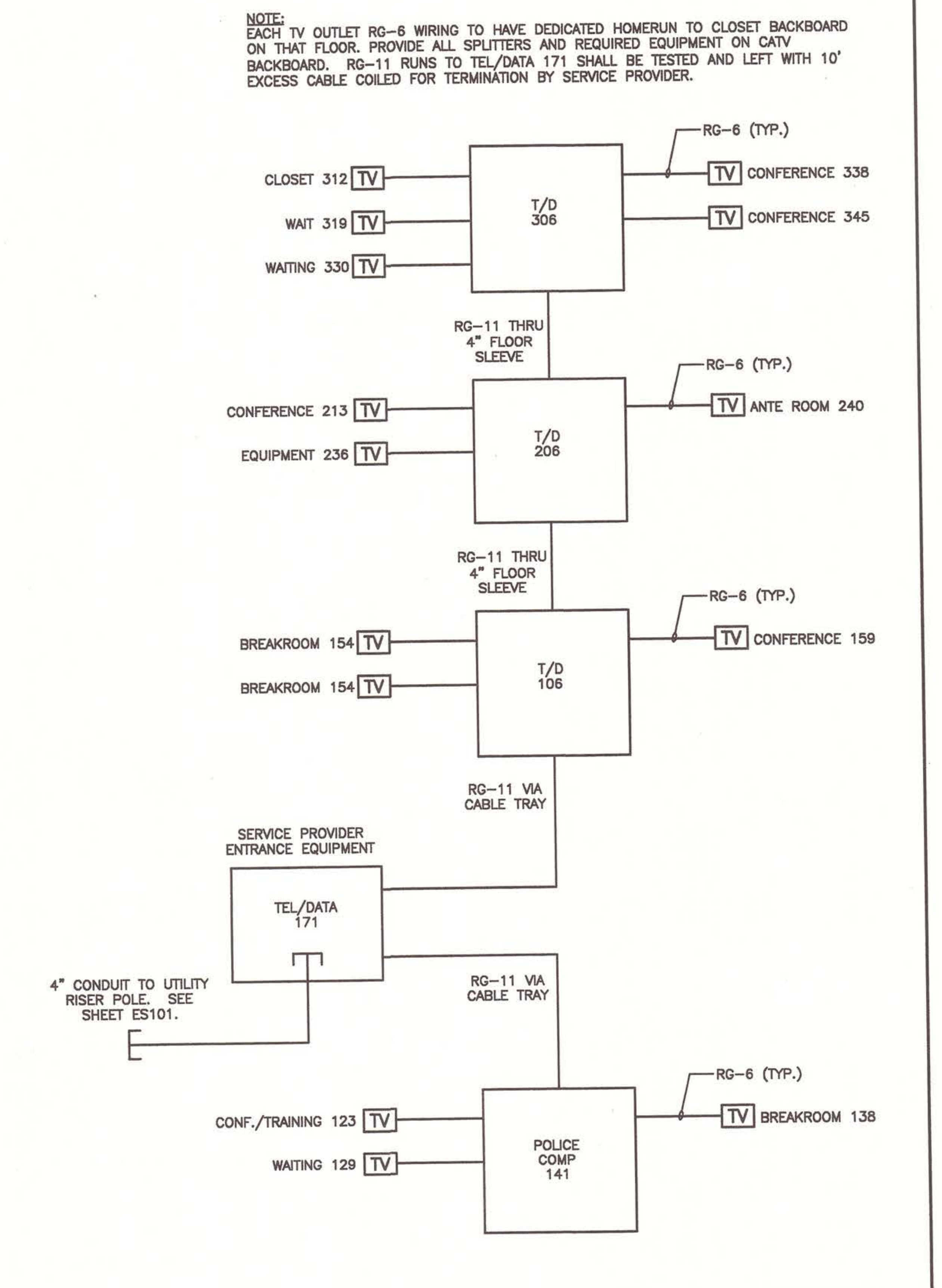
FIRE ALARM RISER DIAGRAM

SHEET No.
EY651



F1 | TEL/DATA INFRASTRUCTURE RISER DIAGRAM

NONE

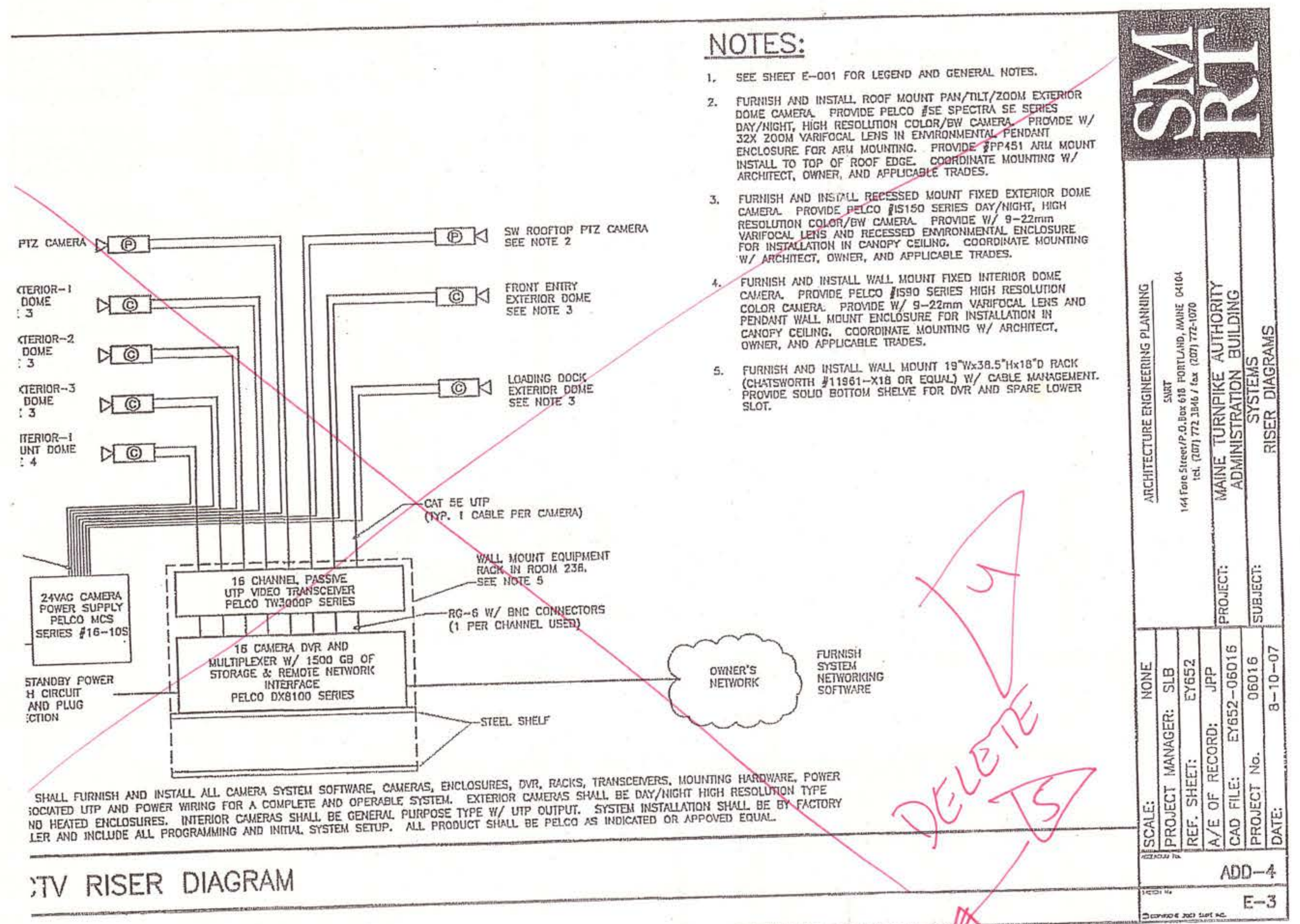


F9 | CATV RISER DIAGRAM

NOT TO SCALE

NOTES:

1. SEE SHEET E-001 FOR LEGEND AND GENERAL NOTES.



EY652 – SYSTEMS RISER DIAGRAMS:

a. a. A1: Remove entire CCTV Riser Diagram. Owner's CCTV contractor shall be responsible for system configuration. This direction shall supercede all prior direction given in the bidding documents, including prior addendum.

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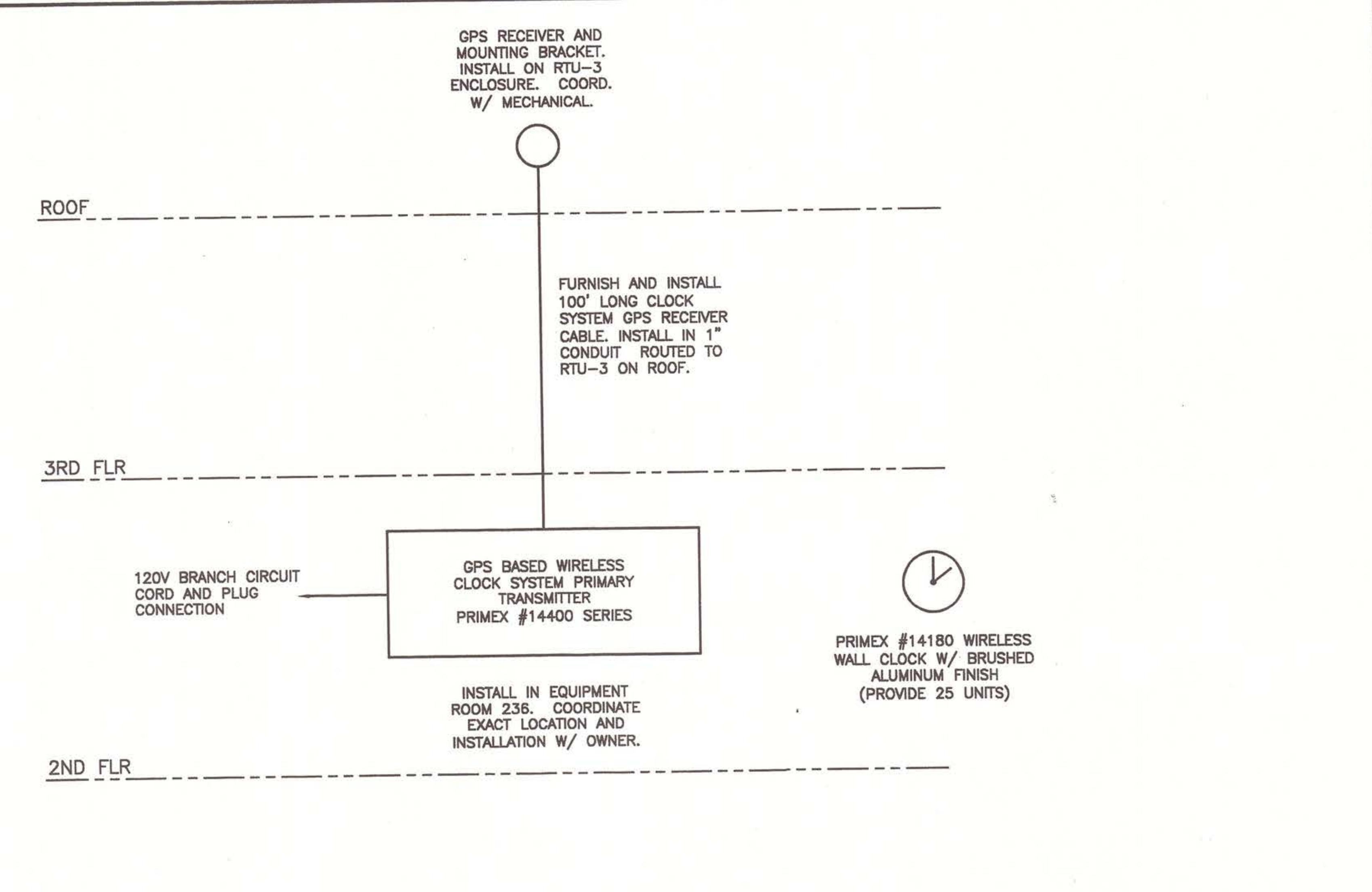

A7 | WIRELESS CLOCK SYTEM RISER DIAGRAM

NONE

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