College of San Mateo

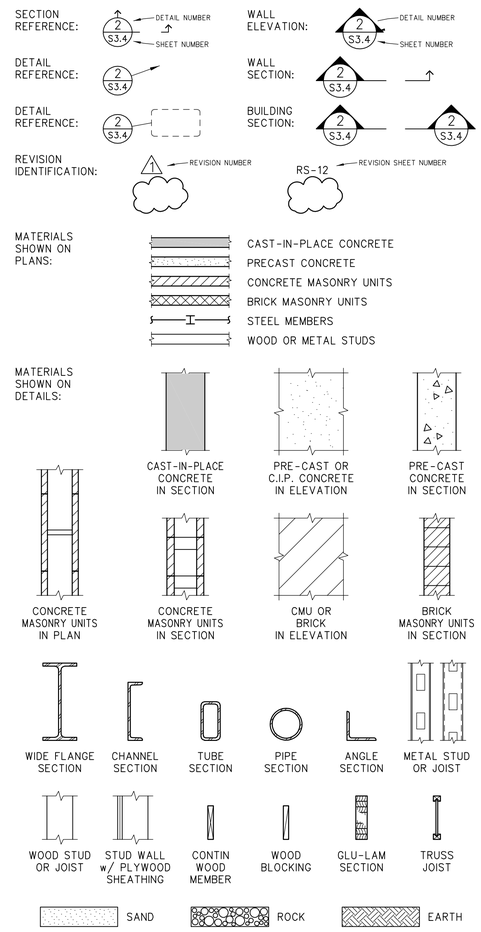
Building 34 Modernization

San Mateo County Community College District

ABBREVIATIONS

A.B.	Anchor Bolt	GA	Gage	R	Radius
ACI	American Concrete Institute	GALV	Galvanized	R.D.	Roof Drain
A.D.	Area Drain	G.B.	Grade Beam	RDWD	Redwood
ADDL	Additional	GLB	Glued Laminated Beam	REF	Reference
ADJ	Adjacent	GLC	Glued Laminated Column	REINF	Reinforcing
A.F.F.	Above Finish Floor	GR	Grade	REQD	Required
AISC	American Institute of Steel Construction	GYP	Gypsum	REV	Revision
ALT	Alternate			RF	Roof
APPROX	Approximately	HDR	Header	RM	Room
ARCH	Architect or Architectural	HGR	Hanger	R.O.	Rough Opening
ASPH	Asphalt	HK	Hook		
ASTM	American Society of Testing and Materials	HORIZ	Horizontal	S	Section Modulus
A.C.	Asphaltic Concrete, Air Condition	H.P.	High Point	S.A.D.	See Architectural Drawings
		H.R.	Hard Rock	S.C.D.	See Civil Drawings
BAL	Balance	HT	Height	SCHED	Schedule
B.L.	Bottom Lower			S.E.D.	See Electrical Drawings
BLDG	Building	I	Moment of Inertia	SF	Square Feet
BLK	Block	I.D.	Inside Diameter	SHT	Sheet
BLKG	Blocking	I.F.	Inside Face	SHTG	Sheathing
BM	Beam	INFO	Information	SIM	Similar
B.O.	Bottom of	INSUL	Insulation	S.J.	Shrinkage Joint, Seismic Joint or Slip Joint
BOT	Bottom	INT	Interior		
B.P.	Break Point			S.L.D.	See Landscape Drawings
BRD	Board	JST	Joist	S.M.D.	See Mechanical Drawings
BRG	Bearing	JT	Joint	S.M.F.	Special Moment Frames
BRKT	Bracket			S.M.S.	Sheet Metal Screw
BTWN	Between	KIPS	1000 Pounds	S.O.G.	Slab On Grade
B.U.	Bottom Upper	KSF	KIPS Per Square Foot	SP	Space or Spacing
				S.P.D.	See Plumbing Drawings
C	Channel	L	Angle	SPEC	Specification
CBC	California Building Code	LBS	Pounds	SQ.	Square
C.I.P.	Cast In Place	LL	Live Load	S.S.D.	See Structural Drawings
C.J.	Construction or Control Joint	LLH	Long Leg Horizontal	STAGG	Staggered
CLG	Ceiling	LLV	Long Leg Vertical	STD	Standard
℄	Center Line	LONGIT	Longitudinal	STIFF	Stiffener
CLR	Clear	L.P.	Low Point	STL	Steel
CMU	Concrete Masonry Unit	L.S.	Low Shrinkage	STRUCT	Structural
COL	Column	LSL	Laminated Strand Lumber	SYM	Symmetric
CONC	Concrete	LT	Light		
CONN	Connection	LVL	Laminated Veneer Lumber	T & B	Top and Bottom
CONSTR	Construction	LTWT	Light Weight	T & G	Tongue and Groove
CONTIN	Continuous			T.B.	Tie Beam
C.J.P.	Complete Joint Penetration	MACH	Machine	THK	Thick
CTR	Center	MAS	Masonry	THRU	Through
CTRD	Centered	MATL	Material	T.L.	Top Lower
CTRSNK	Countersink	MAX	Maximum	T.O.	Top Of
		M.B.	Machine Bolt	T.O. CONC	Top of Concrete
d	Penny weight	MC	Miscellaneous Channel	T.O. PAR	Top of Parapet
DBL	Double	M.D.	Mid-depth	T.O. PLY	Top of Plywood
DEPR	Depression	MECH	Mechanical	T.O. PL	Top of Plate
D.F.	Douglas Fir	M.F.	Moment Frame	T.O. SLAB	Top of Slab
DIA or ø	Diameter	MFR	Manufacturer	T.O. STL	Top of Steel
DIAG	Diagonal	MIN	Minimum	T.O. WALL	Top of Wall
DIM	Dimension	MISC	Miscellaneous	TRANS	Transverse
DL	Dead Load	MTL	Metal	TS	Tube Steel
DN	Down			T.U.	Top Upper
do	Ditto	(N)	New	TYP	Typical
D.W.F.	Deformed Wire Fabric	N.A.	Not Applicable		
DWG	Drawing	N.I.C.	Not In Contract	UBC	Uniform Building Code
		NO.	Number	U.N.O.	Unless Noted Otherwise
(E)	Existing	N.P.	No Profile		
EA	Each	N.S.	Near Side	V.B.	Vapor Barrier
E.F.	Each Face	N.T.S.	Not To Scale	VENT	Ventilation
E.J.	Expansion Joint			VERT	Vertical
EL	Elevation	o.c.	On Center	V.I.F.	Verify In Field
ELEC	Electrical	O.D.	Outside Diameter		
ELEV	Elevator	O.F.	Outside Face	W	Wide Flange
EMBED	Embedment	O.H.	Opposite Hand	w/	With
E.N.	Edge Nail	OPNG	Opening	w/o	Without
ENCL	Enclosure	OPP.	Opposite	WD	Wood
ENGR	Engineer	OSB	Oriented Strand Board	WF	Wide Flange
E.O.	Edge of	O.W.S.G.	Open Web Steel Girder	W.P.	Work Point
E.O. MAS	Edge of Masonry	O.W.S.J.	Open Web Steel Joist	W.P.J.	Weakened Plane Joint
E.O. PL	Edge of Plate			WT	Weight or Structural T
E.O. SLAB	Edge of Slab	PAR	Parapet	W.W.F.	Welded Wire Fabric
EQ	Equal	PC	Piece		
EQPT	Equipment	P/C	Precast		
E.W.	Each Way	PCF	Pounds per Cubic Foot		
EXP	Expansion	P.D.F.	Powder Driven Fastener		
EXT	Exterior	P.D.P.	Powder Driven Pin		
		ℙ	Property Line		
F.D.	Floor Drain	PL	Plate		
FDN	Foundation	PLF	Pounds per Linear Foot		
F.F.	Finish Floor	PLY	Plywood		
FIN	Finish	PLYWD	Plywood		
FLR	Floor	P.J.P.	Partial Joint Penetration		
F.O.	Face of	PSF	Pounds per Square Foot		
F.O. CONC	Face of Concrete	PSI	Pounds per Square Inch		
F.O. MAS	Face of Masonry	PSL	Parallel Strand Lumber		
F.O. STUD	Face of Stud	P/T	Post-Tensioned		
FRMG	Framing	P.T.	Pressure Treated		
F.S.	Far Side	P.T.D.F.	Pressure Treated Douglas Fir		
FT	Foot or Feet				
FTG	Footing				

SYMBOLS



DRAWING INDEX

SHEET INDEX

#	TITLE	ISSUE LOG: 50% CD	90% CD	CONSTRUCTION DOCUMENTS	CONSTRUCTION DOCUMENTS
S0.00	TITLE PAGE & SHEET INDEX	✓	✓	✓	✓
S1.00	GENERAL NOTES	✓	✓	✓	✓
S1.01	GENERAL NOTES	—	✓	✓	✓
S2.11	BUILDING 34 - FOUNDATION PLAN	✓	✓	✓	✓
S2.12	BUILDING 34 - ROOF PLAN	✓	✓	✓	✓
S3.01	ELEVATIONS, SECTIONS & DETAILS	✓	✓	✓	✓
S3.02	ELEVATIONS, SECTIONS & DETAILS	✓	✓	✓	✓
S3.03	SECTIONS & DETAILS	✓	✓	✓	✓
S3.04	SECTIONS & DETAILS	—	✓	✓	✓

ISSUE LOG KEY:
' ✓ ' ISSUED AS PART OF A SET
' — ' NOT A PART OF ISSUED SET
' * ' ISSUED FOR INFORMATION ONLY

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CONSTRUCTION DOCUMENTS

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SHEET TITLE

TITLE PAGE & SHEET INDEX

REVISIONS

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GENERAL NOTES

GENERAL

Dimensions refer to rough concrete surfaces, face of studs, face of concrete block, top of sheathing, or top of slab, unless otherwise indicated. The Contractor shall verify all dimensions prior to the start of construction. The Architect shall be notified of any discrepancies or inconsistencies.

All drawings are considered to be a part of the contract documents. The Contractor shall be responsible for the review and coordination of all drawings and specifications prior to the start of construction. Any discrepancies that occur shall be brought to the attention of the Architect prior to the start of construction so that a clarification can be issued. Any work performed in conflict with the contract documents or any code requirements shall be corrected by the Contractor at his own expense and at no expense to the owner or Architect.

Notes and details on the structural drawings shall take precedence over general notes and typical details. Where no details are given, construction shall be as shown for similar work.

All work shall conform to the minimum standards of the following codes:

2007 California Building Code, which comprises Title 24, Part 2 of the California Code of Regulations, as adapted by the California Building Standards Commission referred to here as "The California Building Code, 2007 Edition" or "the code", and any other regulating agencies which have authority over any portion of the work, including the State of California Division of Industrial Safety, and those additional codes and standards including, but not limited to, the following incorporated codes listed below, and in these structural notes and specifications.

American Society of Civil Engineers: ASCE 7-05 Minimum Design Loads for Buildings and Other Structures including Supplement No. 1

American Concrete Institute (ACI): ACI-318-05 Bldg. Code Requirements for Structural Concrete and Requirements for Structural Concrete and Commentary

American Concrete Institute (ACI): ACI-530-05 Building Code Requirements for Masonry Structures & ACI-530.1-05 Specifications for Masonry Structures (Combined in 1 book)

American Institute of Steel Construction (AISC): AISC 341-05 Seismic Provisions for Structural Steel Buildings, including Supplement No. 1 dated 2006

American Institute of Steel Construction (AISC): AISC 325-05 Steel Construction Manual 13th edition

American Institute of Steel Construction (AISC): AISC 358-05 Prequalified Connections for Special Moment Frames for Seismic Applications

American Welding Society: AWS D1.1:2006 Structural Welding Code - Steel

American Welding Society: AWS D1.3:2006 Structural Welding Code - Sheet Steel

American Welding Society: AWS D1.4:2006 Structural Welding Code - Reinforcing

American Forest & Paper Association (AF&PA): NDS-05 National Design Specification (NDS) for Wood Construction with 2005 Supplement

ASTM specifications on the structural drawings shall be of the latest revision.
Refer to the architectural drawings for the following:

- Dimensions not shown on the structural drawings.
- Size and location of all floor and roof openings, except as noted.
- Size and location of all interior and exterior non-bearing partitions.
- Size and location of all door and window openings, except as noted.
- Size and location of inserts for cladding or ornamentation.
- Size and location of all concrete curbs, equipment pads, pits, floor drains, slopes, depressed areas, change in level, chamfers, grooves, inserts, etc.
- Floor and roof finishes.

Refer to the mechanical, plumbing, and electrical drawings for the following:

- Pipe runs, sleeves, hangers, trenches, wall and slab openings, etc., except as noted.
- Electrical conduit runs, boxes, and outlets in walls and slabs.
- Concrete inserts for electrical, mechanical, or plumbing fixtures.
- Size and location of machine or equipment bases or anchor bolts for motor mounts.

The contract structural drawings and specifications represent the finished structure. They do not indicate the method of construction. The Contractor shall provide all measures necessary to protect the structure during construction. Such measures shall include, but not be limited to, bracing and shoring for loads due to construction equipment, etc. Observation visits to the site by the Engineer shall not include inspection of the aforementioned items.

Contractor shall investigate the site, during clearing and earthwork operations, for filled excavations or buried structures, such as cesspools, cisterns, foundations, etc. If any such structures are found, the Engineer shall be notified immediately.

Openings, pockets, etc., larger than 6" shall not be placed in concrete slabs, decks, or walls, unless specifically detailed on the structural drawings. Notify the Engineer when drawings by others show openings, pockets, etc., larger than 6" not shown on the structural drawings, but which are located in structural members. For any further restrictions on openings in structural elements, see applicable sections below.

Construction material shall be spread out if placed on framed roof or floor. Load shall not exceed the design live load per square foot. Provide adequate shoring and/or bracing where the structure has not attained the design strength.

Specifications and detailing of all waterproofing and drainage items, although sometimes indicated on the structural drawings for general information purposes only, are solely the design responsibility of others.

Shop drawings, special inspections, and material sampling and testing, when required, are specified in their respective tables in the general notes and in the specifications.

DESIGN

Design conforms to the California Building Code, 2007 Edition.

Live loads:

Roof (flat) .... 20 psf

Wind Analysis:

Basic wind speed, V_{3S}	(CBC Figure 1609)	V_{3S} = 85 mph
Wind Importance Factor, I_W..............	(ASCE 7 Table 6-1)	I_W = 1.0
Exposure	(CBC, Section 1609.4.3)	= C
Internal Pressure Coefficient, GCPI	(ASCE 7, Figure 6-5)	GCPI = 0.18

Seismic Analysis:

Seismic Importance Factor, I	(ASCE 7, Table 11.5-1)	I = 1.0
Occupancy Category	(CBC Table 1604.5)	= II
Site Location, Latitude	37° 31' 55"	
Site Location, Longtitude	-122° 20' 7"	
Spectra Accel., Short Period, S_S	(IBC Figure 1613.5(3))	S_S = 2.13 g
Spectra Accel., Long Period, S_1	(IBC Figure 1613.5(4))	S_1 = 1.18 g
Site Classification	(CBC Table 1613.5.2)	= D
Design Response, Short Period, S_{DS}......	(CBC Section 1613.5.4)	S_{DS} = 1.42 g
Design Response, Long Period, S_{D1}	(CBC Section 1613.5.4)	S_{D1} = 1.18 g
Seismic Design Category	(CBC Table 1613.5.6(1))	= D
Seismic Response Coefficient, C_s........	(ASCE 7,Section 12.8.1)	C_s = 0.402
Response Modification, Factor, ...	(ASCE 7,Section 12.2.1)	R = 3.5
System Overstrength Factor, Ω_0	(ASCE 7, Table 12.2-1)	Ω_0 = 3
Lateral System	(ASCE 7, Table 12.2-1(C)4) Ordinary Moment Frame	

Base Shear, V ....V = 65.1 Kips (N-S)

EXISTING CONSTRUCTION

Existing construction shown on the structural drawings was obtained from the original construction documents. The Contractor shall verify all existing conditions and shall notify the Architect of all exceptions before proceeding with the work.

The removal, cutting, drilling, etc. of existing work shall be performed with great care and small tools in order not to jeopardize the structural integrity of the building. If existing structural members, not indicated for removal, interfere with the new work, the Engineer shall be notified immediately, and approval obtained, before removal of the existing members.

The Contractor shall safely shore existing construction wherever existing supports are removed to allow installation of the new work. The existing construction shall be connected and/or embedded into the new construction as shown or specified.

FOUNDATIONS

Foundations conform to CBC Table 1804.2, Item 5:

Spread Foundations:

Maximum allowable soil pressure = 1500 PSF DL + LL
= 2000 PSF DL + LL + Lateral

The surface shall be free of debris & form material, and shall be compacted to 90% of the dry density as determined by ASTM D1557. All work shall be done under the observation of the Special Inspector.

The Contractor shall provide for the design and installation of all cribbing, sheathing, and shoring required and shall be solely responsible for all excavation procedures including lagging, shoring, and the protection of adjacent property, structures, streets, and utilities in accordance with all national, state, and local safety ordinances.

Footings

Footings shall extend to such depth as to bear upon firm, undisturbed native soil or compacted fill. All abandoned footings, utilities, etc. shall be removed. All footings shall be founded at a depth at least 18" below the lowest adjacent grade. Footing depths shown on the structural drawings are minimum depths. Footings may be poured in neat excavated trenches.

Excavations for footings shall be observed by the Geotechnical Engineer prior to placing reinforcing and concrete. The Contractor shall notify the Geotechnical Engineer when the excavations are ready for observation.

Compacted Fill

Compacted fill below footings shall be compacted to 90% relative compaction as determined by the ASTM D1557 compaction test method and under the observation of the Special Inspector.

Slabs On Grade

For the sub capillary break, provide 2" of moist sand over 10 mil vapor barrier over 4" rock course under slabs on grade. Rock course shall be rolled to a smooth surface.

Backfill

All excavations shall be properly backfilled. Do not place backfill behind retaining walls before the concrete or grout has attained full design strength. The Contractor shall brace or protect all building and pit walls below grade from lateral loads until the attaching floors are completely in place and have attained full strength. The Contractor shall provide for the design, permits, and installation of such bracing.

Footing backfill and utility trench backfill within the building area shall be mechanically compacted in 8" layers and observed by the Inspector. Flooding will not be permitted.

REINFORCING STEEL

Reinforcing Steel detailing, fabrication, and placement shall conform to the "California Building Code", Chapter 19A; the "Manual of Standard Practice of the Western Concrete Reinforcing Steel Institute", latest edition; and the "Building Code Requirements for Structural Concrete and Commentary", ACI 318-05; unless otherwise noted.

Standards: Reinforcing steel shall conform to the following standards:

Deformed Bars, #3	ASTM A615, Grade 40
Deformed Bars, #4 and larger	ASTM A615, Grade 60
Welded reinforcement, when specified by Engineer	ASTM A706
Welded Wire Fabric, WWF (smooth wire)	ASTM A185
Smooth wire in WWF	ASTM A185
Deformed Wire Fabric, DWF (deformed wire)	ASTM A497
Deformed wire in DWF	ASTM A496
Spiral Reinforcement, smooth	ASTM A615
Spiral Reinforcement, deformed	ASTM A615
Epoxy Coated Reinforcing, when specified by Engineer	ASTM A775 and A615

Placing: All steel reinforcement shall be securely tied in place so as to maintain their exact position before and during the placement of concrete. Reinforcing steel shall be securely tied in place with #16 annealed iron wire. Bars in beams and slabs shall be supported on well-cured concrete blocks or approved plastic tipped metal chairs, as specified by CRSI Manual of Standard Practice, MSP-1. Accessories for epoxy-coated reinforcing, where shown on plans, shall be as noted in the Specifications. Wire fabric in slabs shall be securely fastened to supporting devices to maintain their position during concrete placement.

Lap bars 48 diameters, 24" minimum, unless otherwise noted.
Lap wire fabric 6" minimum.
Lap circular hoop reinforcement 48 bar diameters, 12" minimum.
Lap spiral reinforcement 2 turns.

Clear distances, steel to forms, unless noted otherwise:

Slabs not exposed to weather, joists, interior wall surfaces	3/4"
Exterior wall surfaces, slabs exposed to weather	1-1/2"
Column Ties, Beam Ties	1-1/2"
Clear distance between bars	2"
Slabs on rolled grade	1-1/2"
Formed surfaces in contact with earth	2"
Unformed surfaces in contact with earth	3"

Shop drawings shall be submitted to the Architect for review prior to fabrication. Shop drawings shall include elevations of all beams and columns showing bar and lap locations. See Shop Drawing Submittal Requirements elsewhere in General Notes. Submit mill certificates for reinforcing steel prior to rebar placement.

CONCRETE WORK

Forms shall be properly constructed conforming to concrete surfaces as shown on the drawings, sufficiently tight to prevent leakage, sufficiently strong, and braced to maintain their shape and alignment until no longer needed to support the concrete. Forms for exposed concrete shall be plywood, using sheets as large as possible, with all joints tightly fitted and blocked, and shall produce a finished concrete surface which is smooth, true, and free from blemishes according to accepted standards for architectural concrete.

Refer to architectural, electrical, and mechanical drawings for details at door and window openings, floor type hinges, etc., and for location of sleeves, pipes, and other embedded items. Openings through slabs or walls not shown on the structural drawings which would interrupt reinforcing bars shall not be made without approval of the Architect.

CONCRETE WORK (continued)

Debris should be entirely removed from forms prior to concrete placement.

Horizontal construction joints shall be located as shown on the structural drawings, and the hardened concrete surfaces shall be cleaned by sand-blasting or other approved means to expose firmly embedded aggregates prior to pouring additional concrete in contact with these surfaces. Vertical construction joints through beams or slabs shall be located only as shown on structural drawings.

Forms and shoring shall not be removed until the concrete has attained sufficient strength to withstand all loads to be imposed without excessive stress, creep, or deflection. See specifications for shoring requirements.

Concrete shall be ready mixed conforming to ASTM C94. Cement shall be Portland Cement Type II, conforming to ASTM C150. All hardrock (H.R.) concrete used in suspended slabs and slabs on grade shall be designed for low shrinkage (L.S.). Acceptable coarse aggregates for low shrinkage concrete include Orcas, Kaiser Clayton, Granite Rock, Limestone, Sechelt, or Orcas aggregates. Fine aggregates acceptable for low shrinkage concrete include Orcas or Sechelt or Orcas sands. Alternative aggregates may be submitted provided they provide a concrete mix with a shrinkage limitation of 0.040% after 28 days of drying. Submit test data to Architect for review.

Use maximum size aggregate as noted below. Use 3/8" maximum aggregate where necessary for proper placing, such as in thin or congested sections, etc. Superplasticizers may be used to improve workability in thin or congested sections. Incorporate superplasticizers into concrete mix designs.

Contractor shall submit for review of the Architect the concrete mixes proposed for use, designed by the concrete supplier and reviewed by an approved testing laboratory.

Concrete shall have the following characteristics:

Concrete Location	Max Aggregate	Strength @ 28 Days (psi)	Min Slump1 (inches)	Min Cement Content (Sacks)	Max Water Content1 (gals)	Max Water/ Cement Ratio	Flyash Content Min, Max
Footings	1-1/2" HR	3000	3-1/2	5.0	36	0.60	20%,35%
Slab on grade	1"x#4 HR-LS	3000	3-1/2	5.0	33	0.45	15%,25%

1 Slump shall be the minimum consistent with proper placing. Achieve slump with water reducing admixtures(ASTM A-494 Type A, F, or A/F) for desired workability.
2 Use high range water reducing admixture (superplasticizer) as needed.

3 Use water reducing admixtures or mid-range water reducing admixtures for desired workability.

Pipes other than electrical conduits shall not be embedded in structural concrete except where specifically approved by the Engineer. Electrical conduits embedded in concrete shall not exceed 1-1/4" O.D., without approval of the Engineer.

Conduit or sleeves, when embedded in concrete, shall be spaced with one conduit or sleeve diameter (larger conduit/sleeve) clear between adjacent conduits, sleeves, or rebar, or 1 inch, whichever is greater. Conduit or sleeves can be tied to rebar when oriented perpendicular to them, provided the location of the rebar is not affected by the conduit or sleeves. Conduit or sleeves without clearance noted above shall be submitted to the architect for review prior to installation. Added trim reinforcement will be required where clearances cannot be met, such as electric panel rooms.

The Contractor shall inform the Architect at least 3 days prior to pouring any structural concrete so that the Architect may have the opportunity of reviewing the work prior to concrete placement.

All concrete except slabs on grade 6" thick or less shall be mechanically vibrated so as to completely fill the forms without causing undue segregation.

Four test cylinders from each 150 yards, or fraction thereof, poured in any one day, shall be secured and tested by an independent testing agency; one to be tested at 7 days, two at 28 days, and the fourth held in reserve. For post-tensioned concrete secure five cylinders per 150 yards, or fraction thereof, poured in any one day, two sets minimum. Test one at 4 days, two at 28 days, and hold two in reserve.

The Contractor shall remove and replace any concrete which fails to attain specified strength in 28 days if so directed by the Architect. Any defects in the hardened concrete shall be satisfactorily repaired or the hardened concrete shall be replaced.

STRUCTURAL STEEL DESIGNATIONS

SLRS:

Structural Steel Members & Connections part of the "Seismic Lateral Resisting System" (SLRS) include, but are not limited to:

1. Moment Frame Beams, Columns, Base Plates & Connections
2. Cantilevered Columns, Base Plates & Connections
3. Chord & Collector Beams & Connections
4. Any other member or connection noted on plans

Non-SLRS:

All Structural Steel members & connections not designated as part of the "Seismic Lateral Resisting System" (SLRS).

STRUCTURAL STEEL AND MISCELLANEOUS METAL (FOR SLRS & NON-SLRS)

Structural Steel and Miscellaneous Iron shall be fabricated and erected according to the American Institute of Steel Construction's "Specifications for Structural Steel Buildings" (AISC 360-05), the "Code for Standard Practice for Steel Buildings and Bridges" (AISC 303-05), "Seismic Provisions for Structural Steel Buildings" (AISC 341-05), including Supplement Number 1, and the "Pre-qualified Connections for Special & Intermediate Moment Frames for Seismic Applications" (AISC 358-05).

Structural Steel and Miscellaneous Iron shall be detailed, fabricated, and erected by an approved and licensed fabricator in accordance with AISC 360-05.

Standards: All Structural Steel shall conform to the following ASTM designations, U.N.O.

WF Shapes..	A992
WT Shapes..	A992
HP Shapes..	A992
M and S Shapes...	A36
Steel Pipe...	A53, Grade B (Fy = 35 ksi)
HSS Round..	A500, Grade B (Fy = 42 ksi)
HSS Rectangular and Square.................................	A500, Grade B (Fy = 46 ksi)
Angles, C-Shapes, MC-Shapes................................	A36
Braced Frame Gusset, Shear Plates and Base Plates.........	A572, Grade 50
Steel plates	
Other Steel plates and Shapes..............................	A36

Unless otherwise shown or noted stiffener plates shall be 3/8" thick minimum.

All structural steel surfaces that are encased in concrete, masonry, or spray on fireproofing or connections with slip-critical high-strength bolts shall be left unpainted, unless noted otherwise.

Where galvanized steel is indicated on drawings, galvanize according to ASTM A123, hot dip process.

Erection clips, temporary bracing, and shoring required by the Contractor are not shown. Contractor shall comply with all OSHA requirements. Erection clips & holes or aides are not allowed within protected zones of members of the SLRS System. Erection holes are not allowed in any member which is part of the SLRS System. Erection aides shall be removed from any member which is part of the SLRS System.

Additional miscellaneous metal items such as embeds, railings, and supports for interior finishes may be shown on drawings prepared by others, see architectural drawings.

Shop drawings shall be submitted to Architect for review prior to fabrication.

STRUCTURAL STEEL AND MISCELLANEOUS METAL (FOR SLRS & NON-SLRS cont.)

Connections:

Bolted

1. Unless otherwise noted all steel to steel bolted connections shall be bolted with high strength bolts according to ASTM A325 or ASTM A490, and the "Specification for Structural Joints" using ASTM A325 or A490 bolts, as approved by the Research Council on Structural Connections. All connections shall be bearing type connections with the bolt threads excluded from the shear plane, unless noted otherwise.
2. Steel washers shall conform to ASTM A436 or A959. Nuts shall conform to ASTM A563.
3. Anchor bolts shall conform to ASTM F155 & Grade 36, 55 (weldable) or 105 as noted on the drawings, unless noted otherwise.
4. Non-steel to steel bolted connections other than anchor bolts, shall be bolted with unfinished bolts according to ASTM A307.
5. Bolts for connections are to be 7/8" diameter high-strength bolts (H.S.B.) ASTM A325X, unless noted otherwise.

Welding Requirements

1. All welded connections shall be welded according to the "Structural Welding Code - Steel" (AWS D1.1-06). All welding shall be done with electrodes having a minimum tensile strength of 70 ksi, unless noted otherwise. Shielded Metal Arc Welding (SMAW) electrodes shall be low-hydrogen type. Unless otherwise noted.
2. All welders shall be qualified in accordance with AWS D1.1 for all welds they will be performing (material thickness, welding process, filler metals used, weld joint details & welding positions).
3. The weld lengths called for on the structural drawings are the net effective length required. Where fillet weld symbol is given without indication of size, use the minimum size welds as specified in AISC 360-05, Section J2.2b.
4. All welding shall be performed in conformance with a written welding procedure specification (WPS). Submit all WPS's applicable to the project for review listing specific electrodes to be used. The submittal shall include an index of all procedures, shall identify the actual electrode to be used for each procedure, and shall include electrode data sheets describing the products, the limitations of use, the recommended welding parameters, and storage and exposure requirements. For WPS's that are not pre-qualified per AWS D1.1, submit procedure qualification record.
5. Run-off tabs per AWS D1.1 are required for complete joint penetration groove welds (C.J.P.). All welds are to be started and completed on the run-off tabs as much as practicable. Do not end welds at cope hole locations. Use of weld dams is not allowed.
6. The minimum preheat and interpass temperatures of AWS D.1 Section 3.5 must be followed.
7. All filler metal for complete joint penetration welds shall have a minimum Charpy V-Notch (CVN) toughness of 20 ft-lbs at 40 degrees F.
8. All butt welds are complete joint penetration welds.
9. Complete joint penetration welds and partial penetration welds shall be examined by Ultrasonic Testing. All testing and inspection shall conform to CBC requirements. Refer to the specifications for additional information.

SPECIAL STEEL REQUIREMENTS FOR SLRS

Lowest Anticipated Service Temperature (LAST) shall be the lowest 1 hour average temperature with a 100 year mean occurrence interval.

The steel structure comprising the SLRS will be enclosed; therefore the LAST will be above 50 degrees F.

Beam copes and weld access holes shall comply with AISC 360-05, Section J1.6.

Thermal cutting of all members shall comply with AISC 360-05, Section M2.2.

Demand Critical Welds

1. In addition to meeting the requirements of AWS D1.1, all welding shall comply with the requirements of "Structural Welding Code, Seismic Supplement" (AWS D1.8-05).
2. All welding shall be performed and inspected in accordance with AISC 341-05, appendix W, in addition to all other requirements of this section.
3. Welders performing Demand Critical welds of bottom beam flanges to column flanges through a beam web access hole shall pass the Supplemental Welder Qualification for Restricted Access Welding as prescribed in Annex C of AWS D1.8.
4. Clean up all thermal cut edges by grinding before welding.
5. FCAW filler metal wire shall be limited to 3/32" diameter maximum. SMAW welding electrodes shall be limited to 5/32" diameter maximum.
6. Welds in members and connections shall be made with a filler metal having a minimum CHARPY V-NOTCH toughness of 20 FT-LBS at minus 20 degrees F as determined by AWS classification or manufacturer's certification and 40 FT-LBS at 70 degrees F as determined by appendix X of AISC 341-05.
7. For structures with LAST greater or equal to 50 degrees F as noted above. The Demand Critical Welds shall be made with a filler metal capable of providing a minimum CVN toughness of 20 ft-lb at -20 degrees F as determined by the appropriate AWS classification test method or manufacturer certification, and 40 ft-lb at 70 degrees F as determined by AISC 341 Appendix X.
8. For additional Special Welding procedures complete penetration welds part of SLRS, see the following section.

Special Welding Procedures for SLRS Complete Penetration Welds

1. No 'weld dams' are allowed.
2. Beam flange to column welds shall be made before bolts are tensioned.
3. Welding processes should be limited to Shielded Metal Arc Welding (SMAW) and Flux Core Arc Welding (FCAW) with gas shielding, except that Submerged Arc Welding (SAW) may be used for shop welding.
4. FCAW filler metal wire shall be limited to 5/64" diameter maximum. SMAW welding electrodes shall be limited to 5/32" diameter maximum.
5. Run-off tabs per AWS D1.1 are required for the Complete Penetration (C.P.) Flange Groove Welds. All welds are to be started and completed on the run-off tabs as much as practicable.
6. The minimum preheat and interpass temperature requirements of AWS D1.1 Section 3.5, must be followed. See also the AWS D1.1 Appendix I, "Guidelines on Alternative Methods on Determining Preheat".
7. Run-off tabs and backer bars shall be removed after completion of the weld. The weld shall be ground smooth and the weld root inspected and tested for imperfections. Imperfections, if found, are to be removed by back gouging or grinding to sound material. The back gouged (ground out) area is to be rewelded.
8. These welds must be 100% ultrasonically (UT) inspected per AWS D1.1 requirements.
9. A fillet weld shall be applied to reinforce the joint (See AWS D1.1 weld type TC-U4b). The size of the reinforcing weld shall be equal to one quarter of the beam flange thickness (T), but not less than 1/4" nor more than 3/8" per Note J of Section 2.9.1 of AWS D1.1-2006.

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SHEET TITLE

GENERAL NOTES

REVISIONS

NO.	DATE	DESCRIPTION

DATE	FEBRUARY 04, 2011
DRAWN	BV
CHECKED	DR/JMW
SCALE	
KPFF JOB NO.: K109013.00	

SHEET NUMBER

S1.00

Location: I:\109013-00\BLDG-34\109013-34S1-00.dwg

GENERAL NOTES

LIGHT METAL STRUCTURAL FRAMING

Light metal structural framing shall be fabricated and erected according to manufacturer's recommendations. All structural properties shall be computed in accordance with the AISI "Specifications for the Design of Cold Formed Steel Structural Members," latest edition.

Unless otherwise noted, steel shall conform to the following specifications:

a. Studs, runners, and joists, painted, 54 mils and heavier: ASTM A1011 Grade 50, modified to a minimum yield point of 50 ksi.

b. Studs, runners, and joists, galvanized, 54 mils and heavier: ASTM A653 Grade 50, minimum 50 ksi yield.

c. Studs, runners, and joists, painted, 43 mils and lighter: ASTM A1008 Grade 33, modified to a minimum yield point of 33 ksi.

d. Studs, runners, and joists, galvanized, 43 mils and lighter: ASTM A653 Grade 33, minimum 33 ksi yield.

For minimum stud section properties, refer to the architectural details and ICC ER-4943P.

Metal stud and metal joist bridging (V or solid) shall be provided and installed according to the manufacturer's recommendations. Align at least one metal stud under every metal joist, beam, or header.

Welding of light metal shall be with fillet welds equal in thickness to the thinner of the two sections being joined. All welded connections shall be welded as shown on the structural drawings. Double vertical studs shall be stitch welded together on both flanges with 1/16" groove welds x 1" long at 12" on center.

Shop drawings shall be submitted to the Architect for review prior to erection.

The Testing Laboratory shall send copies of all testing reports directly to the appropriate Building Inspection Department.

EPOXY

Epoxy shall be HIT-RE 500 as manufactured by Hilti, Inc. (ICC Evaluation Report ER-2322). All drilled holes shall be sized according to the manufacturer's recommendations.

EXPANSION ANCHORS

Expansion anchors shall be Kwik Bolt TZ expansion bolts for concrete applications (ICC Evaluation Report ESR-1917) as manufactured by Hilti, Inc.

Anchor diameter refers to the thread size of the anchor.

Drilled holes shall be clear and free from dust immediately prior to installation of the anchors and shall be sized according to the manufacturer's recommendation.

SHOP DRAWING SUBMITTALS

When indicated with a '✓', the following items shall have either a) shop drawings or b) certificates of conformance or c) shop drawings, calculations, and details submitted to the architect for review and approval prior to fabrication. When shop drawings, calculations, and details are required, submittals (drawings and calculations) must be signed and stamped by a Civil or Structural Engineer registered in the State of California. For additional information on the contents of the submittals, refer to the project specifications and the specific general notes sections. The Engineer will review two prints and one reproducible copy of each submittal.

Item	Shop Drawings	Certificate	Shop Dwgs, Calcs, and Details	Remarks
Concrete, reinforcing	✓			
Concrete, mixes	✓			
Concrete, cement		✓		
Concrete, fine aggregates		✓		
Concrete, coarse aggregates		✓		
Concrete, admixtures		✓		
Structural steel	✓			
Prefabricated Mezzanine			✓	

SPECIAL INSPECTION

When indicated with a '✓', the following items shall be inspected in accordance with CBC Section 1704 by a certified special inspector from an established testing agency. All inspection shall be continuous, unless otherwise noted. For material sampling and testing requirements, refer to the material sampling and testing section, the project specifications, and the specific general notes sections. The testing agency shall send copies of all structural testing and inspection reports directly to the Architect, Engineer, and Building Department. Any materials which fail to meet the project specifications shall immediately be brought to the attention of the Architect.

Item	Required	Remarks
Concrete, rebar placement	✓	Inspect final placement
Concrete, rebar welding	✓	
Concrete, rebar coupling	✓	10% with torque wrench
Concrete, anchor bolts and inserts	✓	
Concrete, concrete placement	✓	Continuous
Batch plant inspections	✓	Periodic
Expansion anchor placement	✓	
Epoxy anchor placement	✓	
Structural steel, shop welding - periodic	✓	Fillet welds
Structural steel, shop welding - continuous	✓	Partial or full penetration welds
Structural steel, field welding - periodic	✓	Single pass fillet welds ≤ 5/16"
Structural steel, field welding - continuous	✓	Partial or full penetration welds & other fillet welds
Structural steel, high strength bolting	✓	
Structural steel, welded anchors or studs	✓	
Shear wall sheathing nailing	✓	Periodic
Anchor bolt/Holdown/Metal strap placement		

MATERIAL SAMPLING AND TESTING

When indicated with a '✓', the following materials shall be sampled and/or tested by a certified inspector from an established testing agency in accordance with the project specifications, general notes, or prevailing building code, whichever is more stringent. All material sampling and testing shall be performed in accordance with ASTM requirements. For additional information on material sampling and testing, refer to the project specifications and the specific general notes sections. The testing agency shall send copies of all structural testing reports directly to the Architect, Engineer, and Building Department. Any materials which fail to meet the project specifications shall immediately be brought to the attention of the Architect.

Item	Required	Remarks
Expansion anchor installation	✓	
Epoxy anchor installation	✓	
Structural Steel, Ultrasonic testing	✓	

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SHEET TITLE

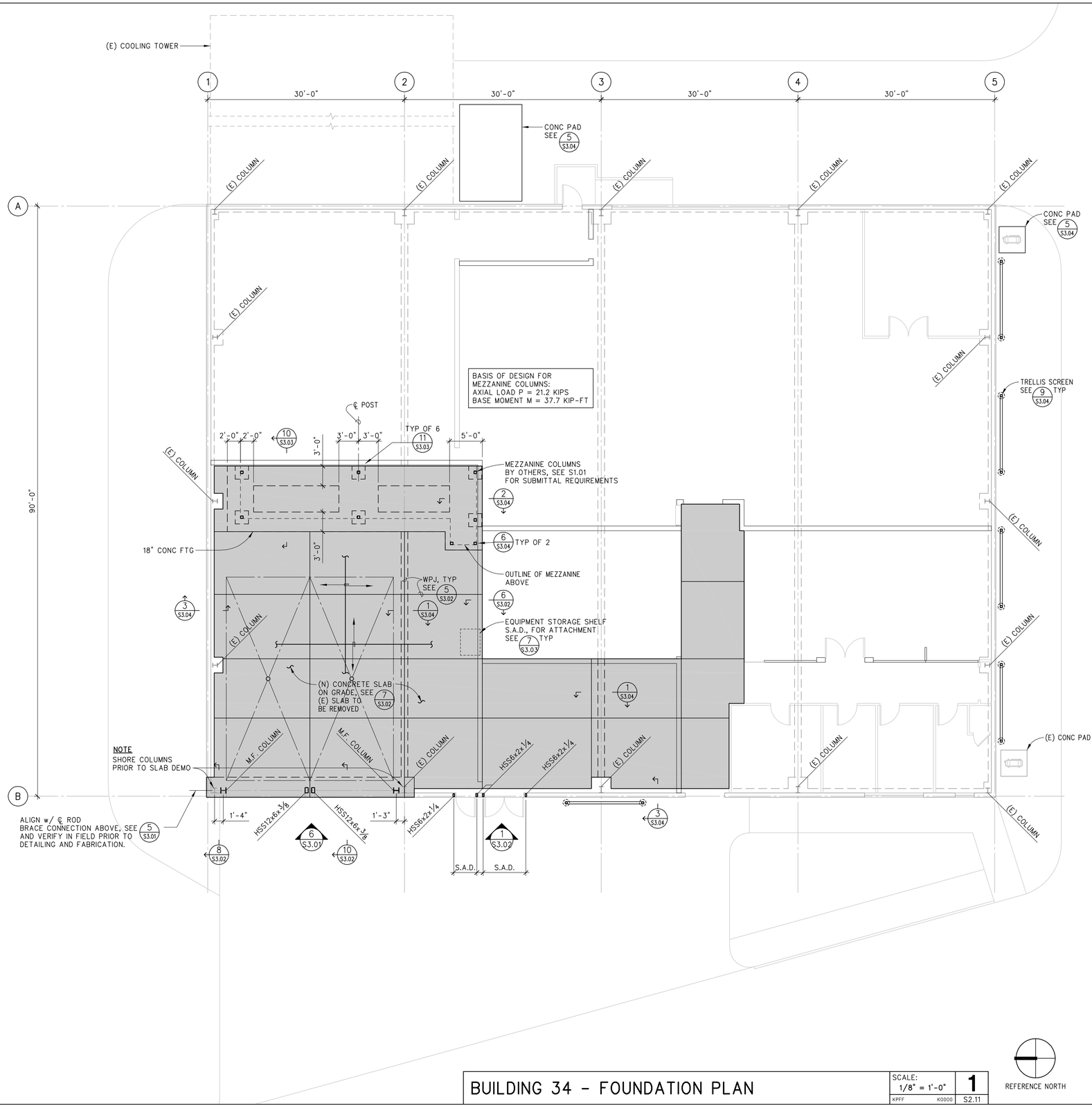
GENERAL NOTES

REVISIONS		
NO.	DATE	DESCRIPTION

DATE	FEBRUARY 04, 2011
DRAWN	BV
CHECKED	DR/JMW
SCALE	
KPFF JOB NO.:	K109013.00

SHEET NUMBER

S1.01



NOTES:

1. FOR GENERAL NOTES REFER TO SHEET S1.00 & S1.01
2. VERIFY ALL DIMENSIONS, ELEVATIONS, FINISH SURFACES, SLOPES, DRAINS, SLAB DEPRESSIONS, ETC., WITH ARCHITECTURAL DRAWINGS, PRIOR TO START OF CONSTRUCTION.
3. SPECIFICATIONS AND DETAILING OF ALL WATERPROOFING AND DRAINAGE ITEMS, ALTHOUGH INDICATED ON THE STRUCTURAL DRAWINGS FOR GENERAL INFORMATION PURPOSES ONLY, ARE THE DESIGN RESPONSIBILITY OF OTHERS.
4. FOR LOCATION, SIZE, AND EXTENT OF CURBS, S.A.D.
5. FOR AREA DRAIN AND SUMP LOCATIONS, S.A.D.
6. SHORING AND UNDERPINNING OF ADJACENT PROPERTY, WHEN REQUIRED, SHALL BE DESIGNED BY OTHERS.
7. TOP OF CONCRETE S.O.G. EL. = 0'-0", U.N.O.,
8. ' S.J. ' INDICATES SHRINKAGE JOINT IN S.O.G., SEE 5/S3.02
   ' W.P.J. ' INDICATES WEAKENED PLANE JOINT IN S.O.G., SEE 5/S3.02
9. ALL ITEMS ARE NEW UNLESS NOTED (E) OR OTHERWISE.

REFERENCE NORTH

BUILDING 34 - FOUNDATION PLAN

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

KPFF K0000 | S2.11

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SHEET TITLE

BUILDING 34 FOUNDATION PLAN

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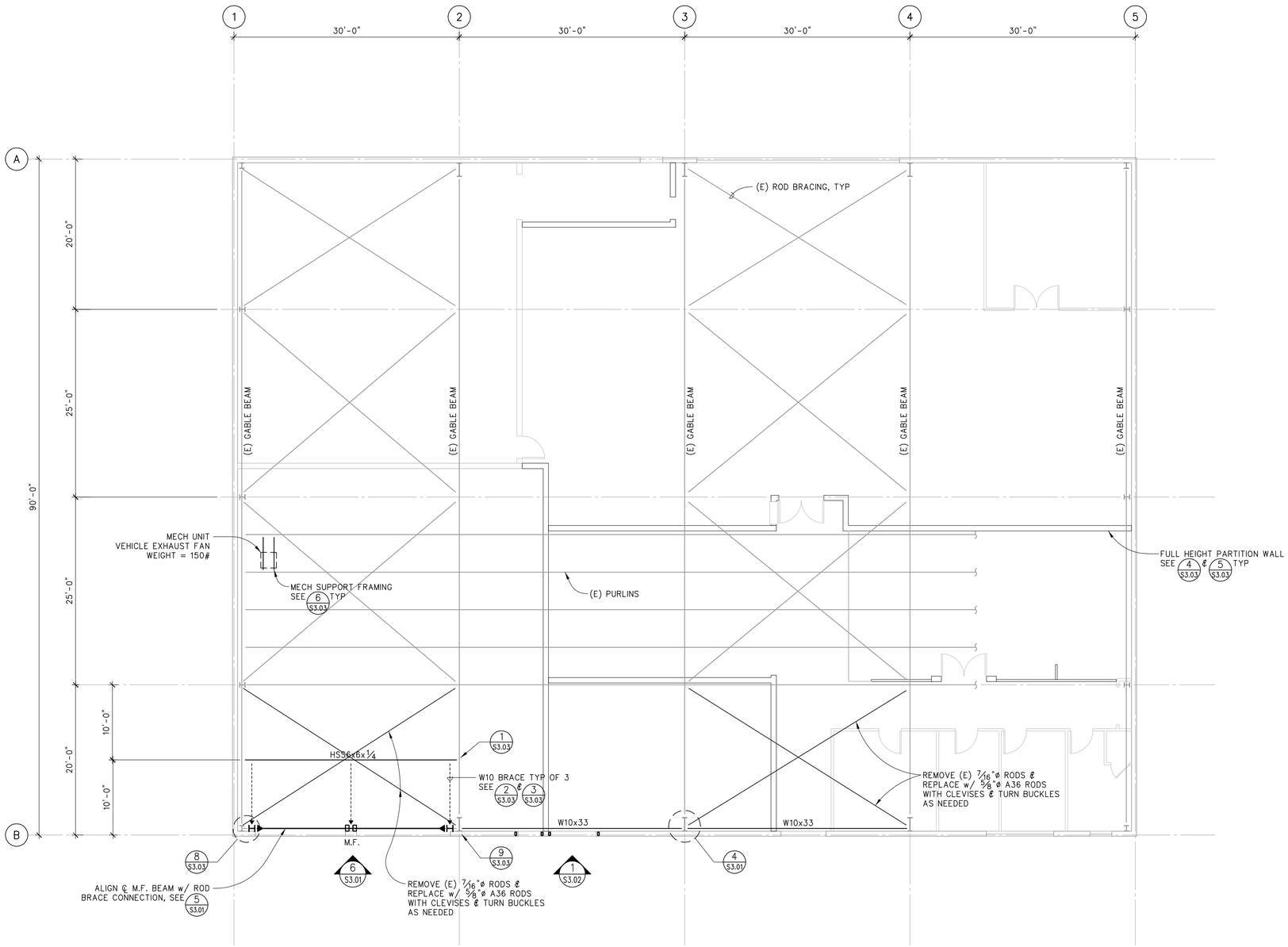
NO.	DATE	DESCRIPTION

DATE	FEBRUARY 04, 2011
DRAWN	BV
CHECKED	DR/JMW
SCALE	
KPFF JOB NO.: K109013.00	

SHEET NUMBER

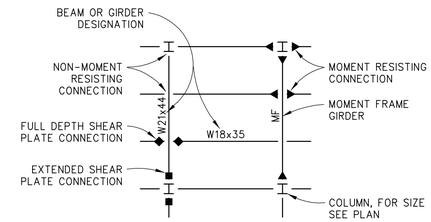
S2.11

Location: I:\109013-00\BLDG-34\109013-3452-11.dwg



NOTES:

1. FOR GENERAL NOTES REFER TO SHEET S1.00 & S1.01
2. VERIFY ALL DIMENSIONS, ELEVATIONS, FINISH SURFACES, SLOPES, DRAINS, SLAB DEPRESSIONS, ETC., WITH ARCHITECTURAL DRAWINGS, PRIOR TO START OF CONSTRUCTION.
3. FOR LOCATION AND EXTENT OF EXTERIOR WALL ASSEMBLIES AND OPENINGS, SEE ARCHITECTURAL DRAWINGS.
4. FOR LOCATION, SIZE, AND EXTENT OF CURBS, S.A.D.
5. FOR AREA DRAIN LOCATIONS, S.A.D.
6. STEEL FRAMING AND CONNECTIONS ARE SHOWN ON PLAN AS THUS:



7. FOR COLUMN SIZES, SEE ELEVATION
8. ALL ITEMS ARE NEW UNLESS NOTED (E) OR OTHERWISE.

BUILDING 34 - ROOF FRAMING PLAN

SCALE: 1/8" = 1'-0" | KPFF | K0000 | 1 | S2.12

REFERENCE NORTH

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BUILDING 34 ROOF PLAN

REVISIONS

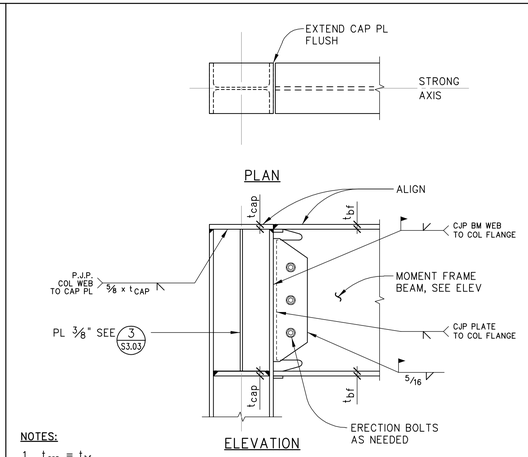
NO.	DATE	DESCRIPTION

DATE	FEBRUARY 04, 2011
DRAWN	BV
CHECKED	DR/JMW
SCALE	
KPFF JOB NO.:	K109013.00

SHEET NUMBER

S2.12

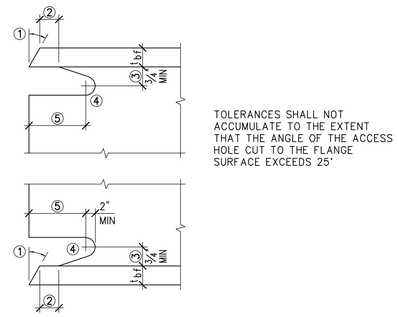
Location: I:\109013-001\BLDG-34\109013-34S2-12.dwg



NOTES:

1. $t_{cap} = t_{bf}$
2. FOR INFORMATION NOT NOTED, SEE 2 & 3/S3.01

DETAIL — SCALE: NONE — 1 — S3.01

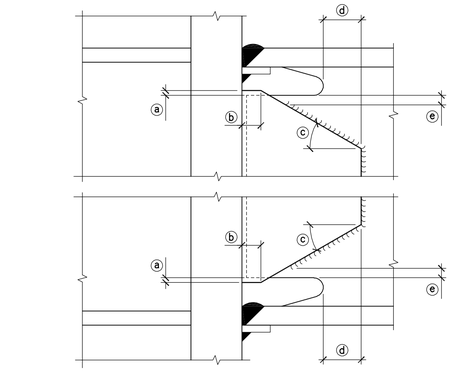


NOTES:

1. BEVEL AS REQUIRED BY AWS D1.1 FOR SELECTED GROOVE WELD PROCEDURE.
2. LARGER OF t_{bf} OR ½ INCH (PLUS ½ t_{bf} , OR MINUS ¼ t_{bf})
3. ¾ t_{bf} TO t_{bf} , ¾" MINIMUM (±¼ INCH)
4. ⅜" MINIMUM RADIUS (PLUS NOT LIMITED, OR MINUS 0)
5. 3 t_{bf} (±½ INCH)

WELD ACCESS HOLE

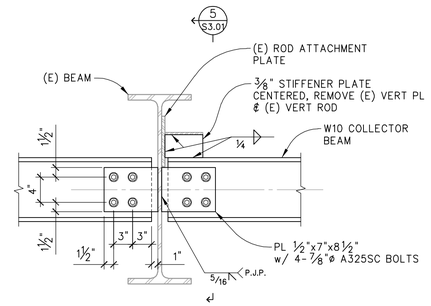
DETAIL — SCALE: NONE — 2 — S3.01



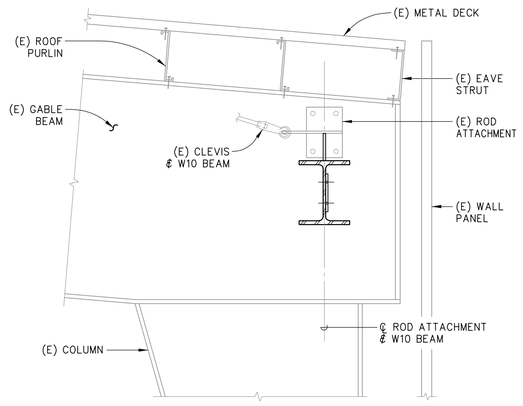
NOTES:

a. ¼" MINIMUM, ½" MAXIMUM
b. 1" MINIMUM
c. 30° (±10°)
d. 2" MINIMUM
e. ½" MINIMUM DISTANCE, 1" MAXIMUM DISTANCE FROM END OF FILLET WELD TO EDGE OF WELD ACCESS HOLE.

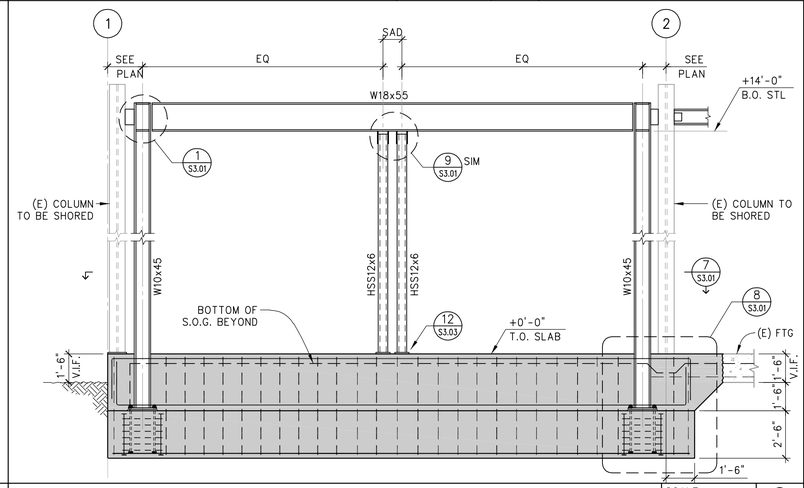
DETAIL — SCALE: NONE — 3 — S3.01



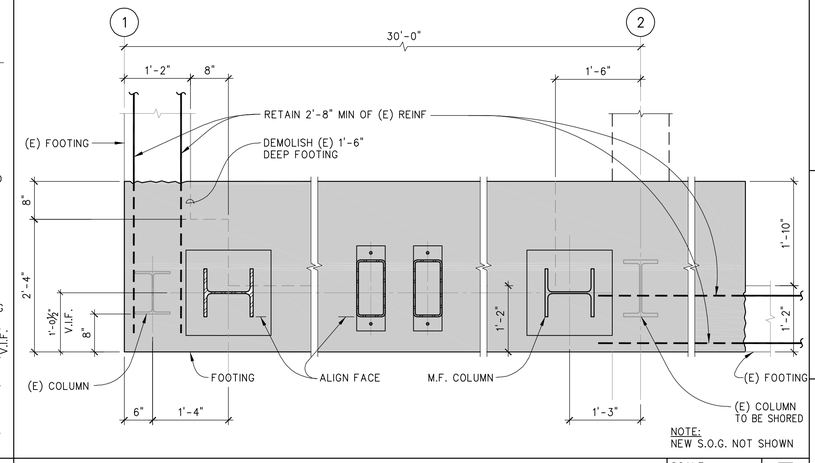
SECTION — SCALE: 1" = 1'-0" — 4 — S3.01



SECTION — SCALE: 1" = 1'-0" — 5 — S3.01

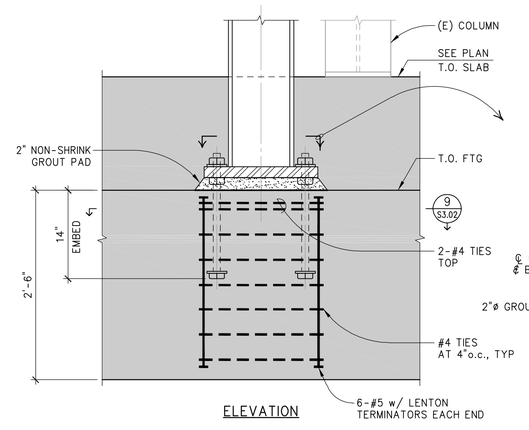


ELEVATION — SCALE: 1/4" = 1'-0" — 6 — S3.01

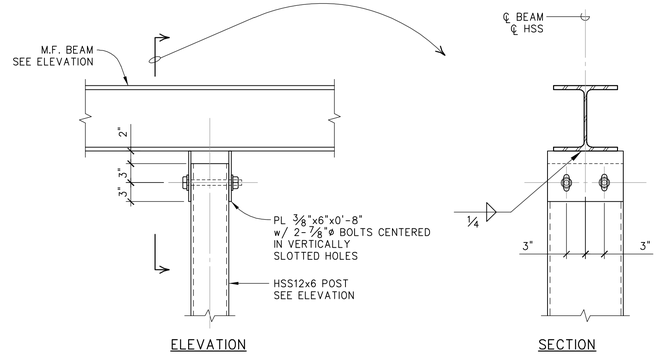


NOTE: NEW S.O.G. NOT SHOWN

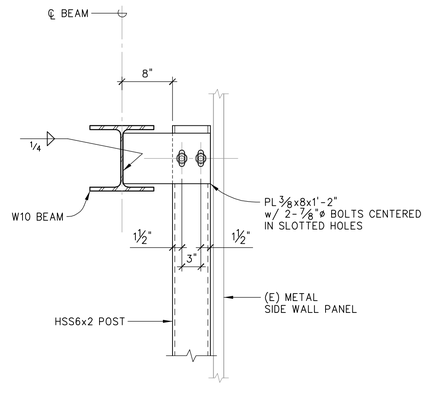
PLAN DETAIL — SCALE: 3/4" = 1'-0" — 7 — S3.01



DETAIL — SCALE: 1" = 1'-0" — 8 — S3.01



DETAIL — SCALE: 1" = 1'-0" — 9 — S3.01



DETAIL — SCALE: 1" = 1'-0" — 10 — S3.01

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SHEET TITLE

ELEVATIONS, SECTIONS & DETAILS

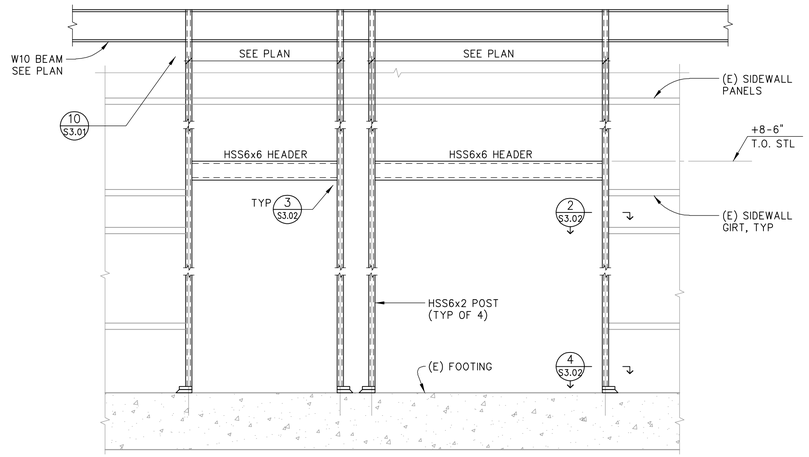
REVISIONS

NO.	DATE	DESCRIPTION

DATE	FEBRUARY 04, 2011
DRAWN	x
CHECKED	DR/JMW
SCALE	
KPFF JOB NO.: K109013.00	

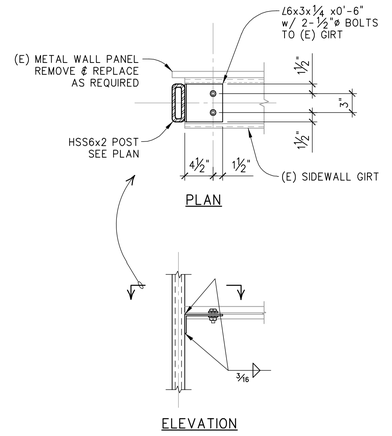
SHEET NUMBER

S3.01



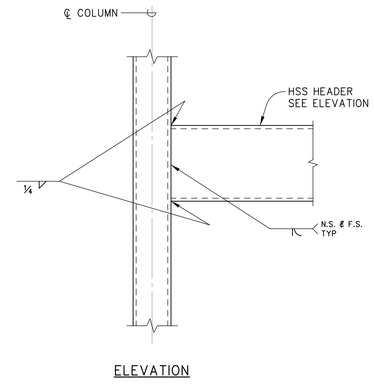
ELEVATION

SCALE: 1/2" = 1'-0" | KPFF K0000 | 1 S3.02



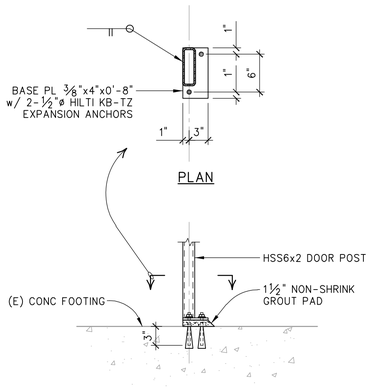
DETAIL

SCALE: 1" = 1'-0" | KPFF K0000 | 2 S3.02



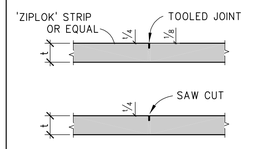
DETAIL

SCALE: 1" = 1'-0" | KPFF K0000 | 3 S3.02



DETAIL

SCALE: 1" = 1'-0" | KPFF K0000 | 4 S3.02

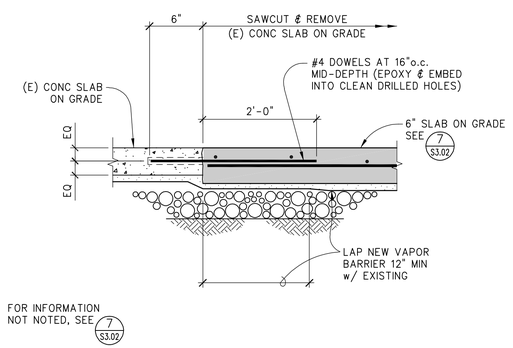


NOTES:

1. FOR SLAB THICKNESS, REINFORCEMENT, AND CONTROL JOINT LOCATIONS, SEE PLAN.
2. LOCATE W.P.J. TO ENCLOSE APPROXIMATE SQUARE AREAS OF 600 SQ FT MAXIMUM.
3. LOCATE S.J. TO ENCLOSE APPROXIMATE AREAS OF 2,400 SQ FT MAXIMUM.
4. SHRINKAGE JOINTS (S.J.) MAY BE USED AS CONSTRUCTION JOINTS (C.J.) FOR SLABS ON GRADE, WHERE NEEDED.
5. WOOD EDGE FORM WITH BEVELED 1x KEYS x 12" LONG AT 24"o.c. MAY BE USED IN LIEU OF KEYED KOLD JOINTS.

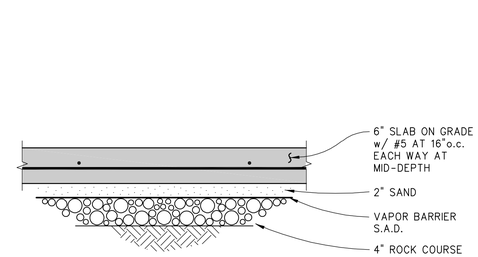
S.O.G. CONTROL JOINTS

SCALE: NONE | KPFF K1035 | 5 S3.02



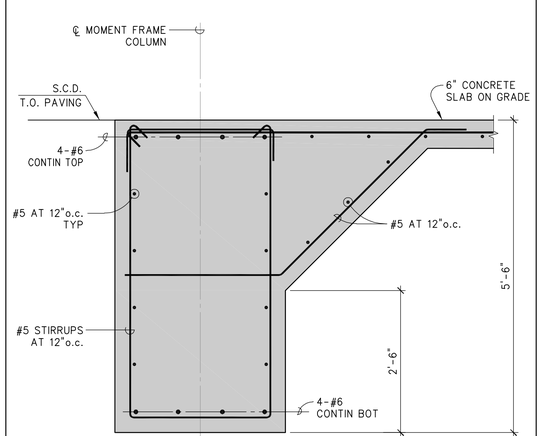
SLAB ON GRADE

SCALE: 3/4" = 1'-0" | KPFF K1030 | 6 S3.02



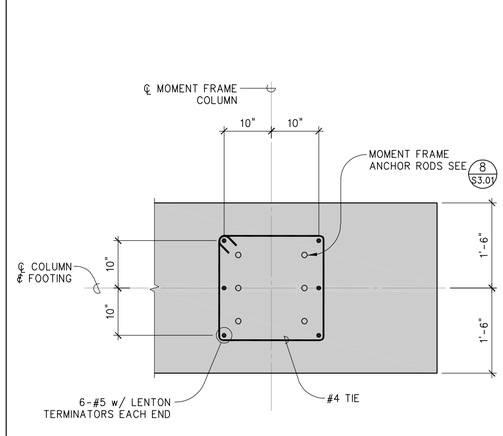
SLAB ON GRADE

SCALE: NONE | KPFF K0000 | 7 S3.02



SECTION

SCALE: 3/4" = 1'-0" | KPFF K0000 | 8 S3.02



SECTION

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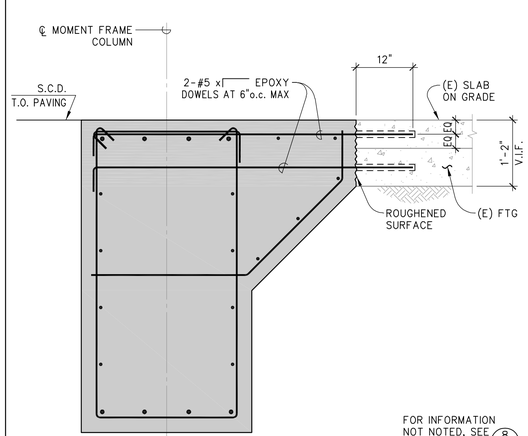
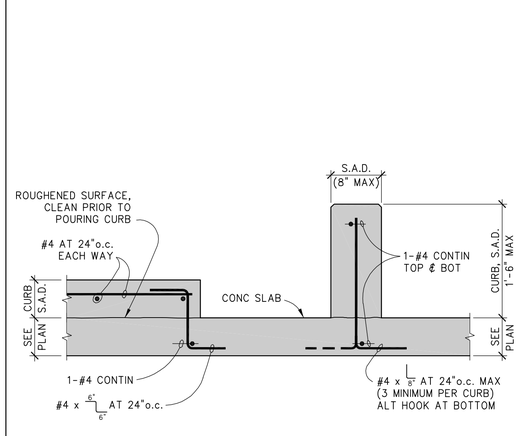


SECTION

SCALE: 3/4" = 1'-0" | KPFF K0000 | 10 S3.02



CURBS ON SLAB

SCALE: NONE | KPFF K1060 | 11 S3.02

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CONSTRUCTION DOCUMENTS

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SHEET TITLE

ELEVATIONS SECTIONS & DETAILS

REVISIONS

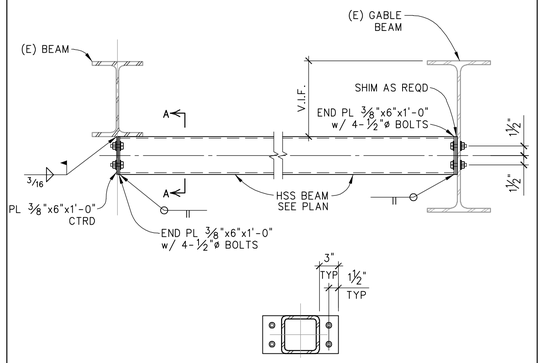
NO.	DATE	DESCRIPTION

DATE	FEBRUARY 04, 2011
DRAWN	RQM
CHECKED	DR/JMW
SCALE	
KPFF JOB NO.:	K109013.00

SHEET NUMBER

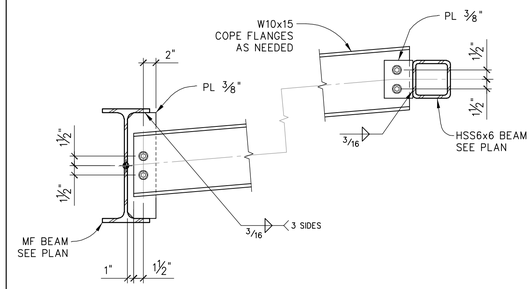
S3.02

Location: \\109013-001\BLDG-34\109013-3453-02.dwg

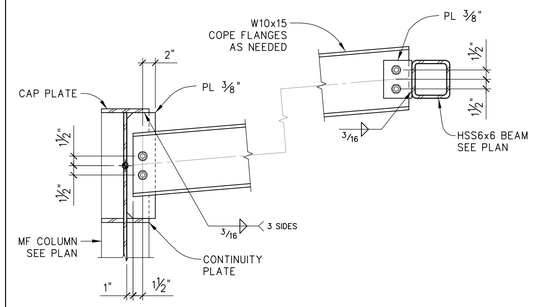


SECTION A-A

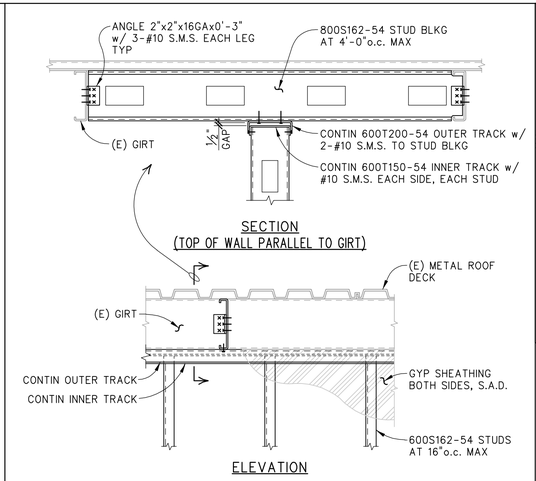
DETAIL | SCALE: 1" = 1'-0" | KPFF K0000 | 1 S3.03



DETAIL | SCALE: 1" = 1'-0" | KPFF K0000 | 2 S3.03

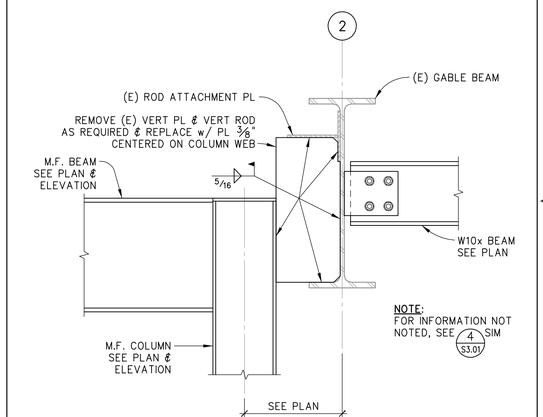


DETAIL | SCALE: 1" = 1'-0" | KPFF K0000 | 3 S3.03



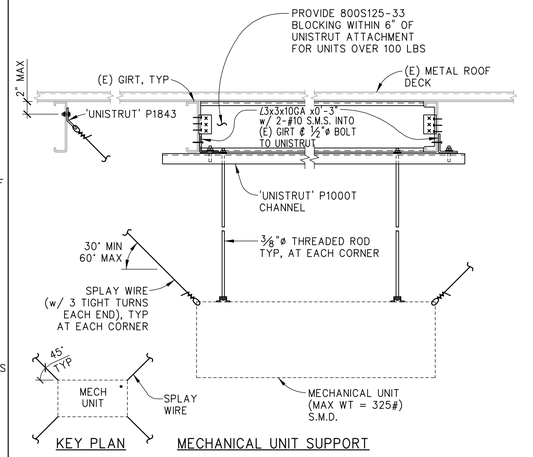
ELEVATION

DETAIL | SCALE: 1" = 1'-0" | KPFF K0000 | 4 S3.03



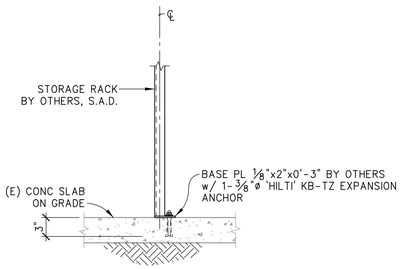
TOP OF WALL PERPENDICULAR TO GIRTS

DETAIL | SCALE: 1" = 1'-0" | KPFF K0000 | 5 S3.03



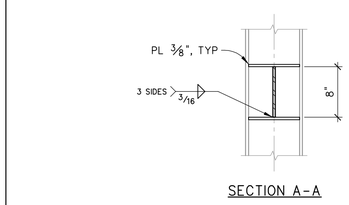
KEY PLAN MECHANICAL UNIT SUPPORT

DETAIL | SCALE: 1" = 1'-0" | KPFF K0000 | 6 S3.03

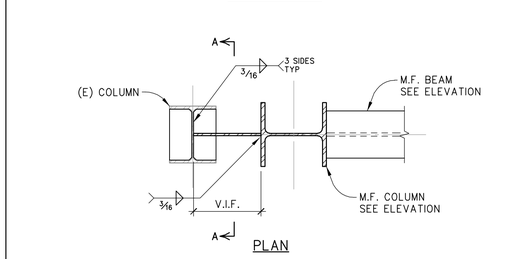


STORAGE RACK BASE CONN

DETAIL | SCALE: 1" = 1'-0" | KPFF K0000 | 7 S3.03



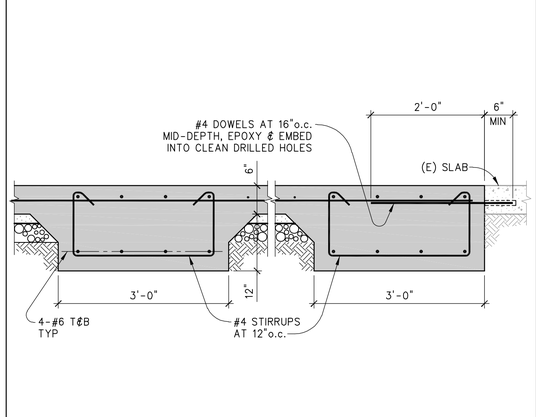
SECTION A-A



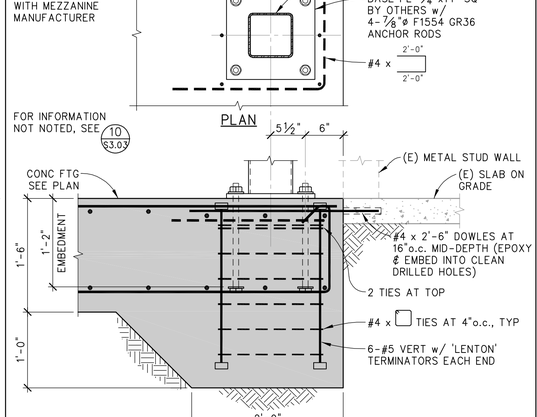
PLAN

DETAIL | SCALE: 1" = 1'-0" | KPFF K0000 | 8 S3.03

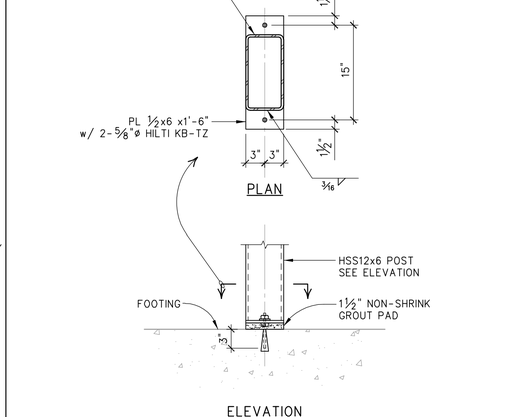
DETAIL | SCALE: 1" = 1'-0" | KPFF K0000 | 9 S3.03



SECTION | SCALE: 3/4" = 1'-0" | KPFF K0000 | 10 S3.03



MEZZANINE BASE CONN DETAIL | SCALE: 1" = 1'-0" | KPFF K0000 | 11 S3.03



ELEVATION

DETAIL | SCALE: 1" = 1'-0" | KPFF K0000 | 12 S3.03

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SHEET TITLE

SECTIONS & DETAILS

REVISIONS		
NO.	DATE	DESCRIPTION

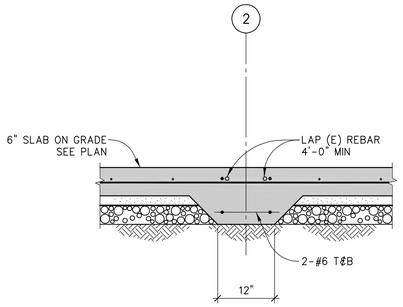
DATE	FEBRUARY 04, 2011
DRAWN	RQM
CHECKED	DR/JMW
SCALE	
KPFF JOB NO.:	K109013.00

SHEET NUMBER

S3.03

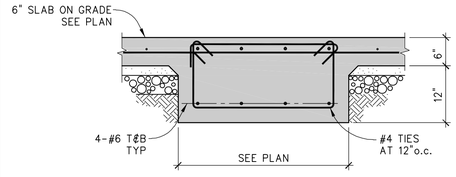
Location: I:\109013-00\BLDG-34\109013-3453-03.dwg

FOR INFORMATION
NOT NOTED, SEE 7 S3.02



SECTION

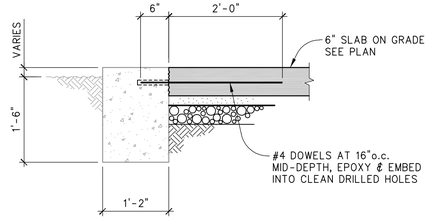
SCALE: 3/4" = 1'-0" | 1 | KPFF K0000 S3.04



SECTION

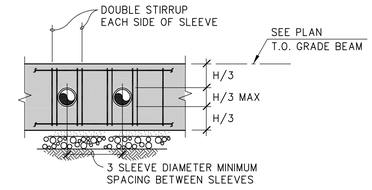
SCALE: 3/4" = 1'-0" | 2 | KPFF K0000 S3.04

FOR INFORMATION
NOT NOTED, SEE 6 S3.02



SECTION

SCALE: 3/4" = 1'-0" | 3 | KPFF K0000 S3.04



PIPE PENETRATION ALLOWED WITHIN MIDDLE THIRD OF G.B.

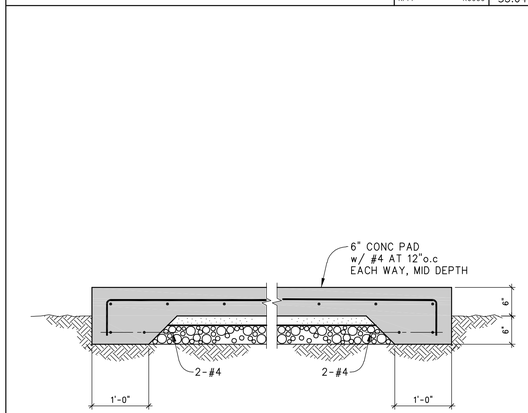
1.) DO NOT CUT OR INTERRUPT G.B. REINF.
2.) MAX OUTER DIAMETER FOR SLEEVES IS H/3.
3.) FOR SIZE AND LOCATION & ANCHORAGE OF PIPES S.P.D., S.E.D., S.A.D., S.M.D.
4.) LENGTH OF SLEEVE = WIDTH OF G.B.

= PIPE WITH SCHED 40 SLEEVE 1" CLEAR ALL AROUND

TYPICAL PIPES AND SLEEVES THRU FOOTINGS

DETAIL

SCALE: NONE | 4 | KPFF K0000 S3.04

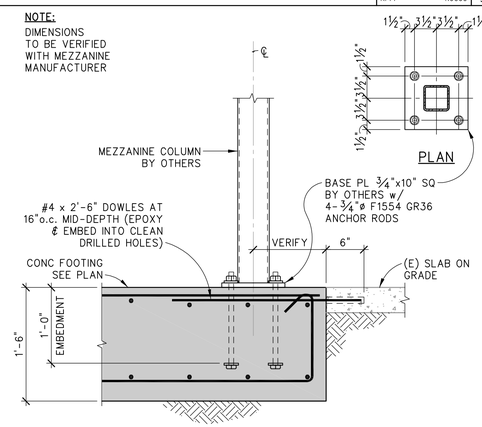


TYP CONC PAD

SECTION

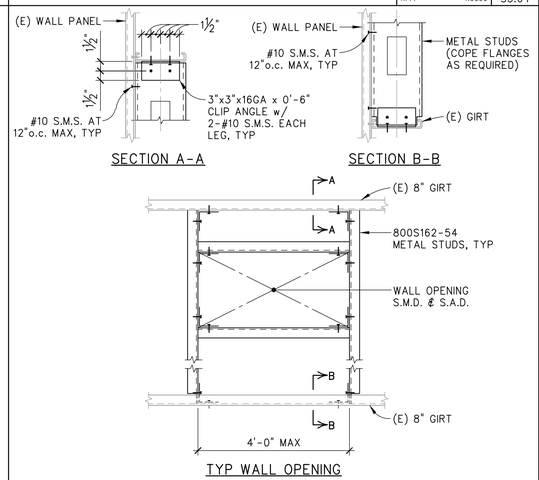
SCALE: 3/4" = 1'-0" | 5 | KPFF K0000 S3.04

NOTE:
DIMENSIONS
TO BE VERIFIED
WITH MEZZANINE
MANUFACTURER



DETAIL

SCALE: 1" = 1'-0" | 6 | KPFF K0000 S3.04



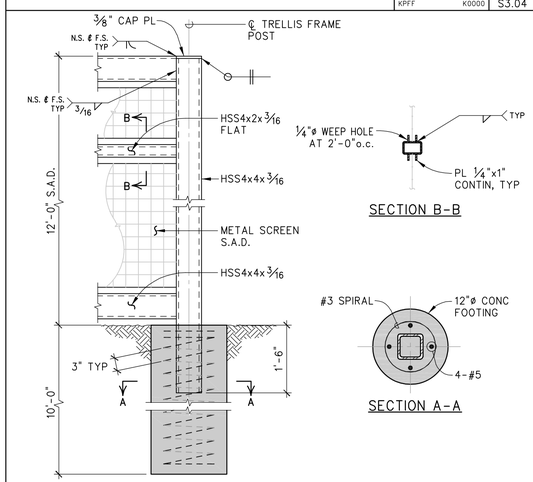
TYP WALL OPENING

DETAIL

SCALE: 1" = 1'-0" | 7 | KPFF K0000 S3.04

NOT USED

SCALE: NONE | 8 | S3.04



DETAIL

SCALE: 1" = 1'-0" | 9 | KPFF K0000 S3.04

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SHEET TITLE

SECTIONS & DETAILS

REVISIONS

NO.	DATE	DESCRIPTION

DATE	FEBRUARY 04, 2011
DRAWN	RQM
CHECKED	DR/JMW
SCALE	
KPFF JOB NO.:	K109013.00

SHEET NUMBER

S3.04

Location: I:\109013-001\BLDG-34\109013-3453-04.dwg

College of San Mateo

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acco engineered systems

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Office (510)346-4300 Fax (510)347-1313

HVAC LEGEND

DUCT SYMBOL LEGEND

SYMBOL	DESCRIPTION
(N) (E)	NEW(N) & EXISTING(E) RECTANGULAR SUPPLY AIR DUCT RISER
(N) (E)	NEW(N) & EXISTING(E) RECTANGULAR RETURN AIR DUCT RISER
(N) (E)	NEW(N) & EXISTING(E) RECTANGULAR EXHAUST AIR DUCT RISER
(N) (E)	NEW(N) & EXISTING(E) ROUND AIR DUCT RISER
	NEW SINGLE & DOUBLE LINE RECTANGULAR OR ROUND DUCT
	EXISTING SINGLE & DOUBLE LINE RECTANGULAR OR ROUND DUCT
	EXISTING DUCTWORK TO BE DEMOLISHED
	SINGLE & DOUBLE LINE DUCTWORK WITH TRANSITIONAL FITTING
SQUARE ROUND	SQUARE TO ROUND TRANSITIONAL FITTING
SQUARE OVAL	SQUARE TO OVAL TRANSITIONAL FITTING
① ②	90° RADIUS ELBOW ①, 90° SQUARE ELBOW WITH TURNING VANES ②
① ②	ROUND DUCT TURNING DOWN ①, RECT. DUCT TURNING DOWN ②
AT	AIR TIGHT (DOOR, SHAFT, ETC.) BY OTHERS.
	BACK DRAFT DAMPER
	CEILING OR DUCT ACCESS PANEL OR DOOR
	CENTER LINE
X/XXX	DETAIL NUMBER DETAIL CALL OUT SYMBOL SHEET NUMBER
	EXHAUST AIR GRILLE (NEW & EXISTING – 24x24 PANEL)
	EXHAUST AIR REGISTER (NEW & EXISTING – SURF. MTD.)
E	ELECT. CONN. LOCATION TO EQUIP. (APPROX.) BY ELECT. CONT'R.
EQ #	EQUIPMENT TAG LABEL
	FIRE DAMPER (SINGLE LINE AND DOUBLE LINE)
	FIRE/SMOKE DAMPER (SINGLE LINE AND DOUBLE LINE)
FD -	FIRE DAMPER LABEL
FSD -	FIRE/SMOKE DAMPER LABEL
	FLEXIBLE DUCT
	LINEAR DIFFUSER (SUPPLY OR RETURN)

DUCT SYMBOL LEGEND

SYMBOL	DESCRIPTION
	MANUAL VOLUME DAMPER
M	MECH. CONT'R. TO PROVIDE EQUIPMENT & INSTALLATION (U.N.O.)
	MOTORIZED DAMPER (ELECTRIC)
	MOTORIZED DAMPER (PNEUMATIC)
	POINT OF CONNECTION
	RETURN AIR GRILLE (NEW & EXISTING – 24x24 PANEL)
	RETURN AIR REGISTER (NEW & EXISTING – SURF. MTD.)
	RETURN AIR GRILLE – 24x12 (NEW & EXISTING – T-BAR CEIL'G.)
	REVISION CLOUD
X	REVISION DELTA
	ROUND CEILING DIFFUSER (NEW & EXISTING)
X/XXX	SECTION NUMBER SECTION CALL OUT SYMBOL SHEET NUMBER
	SUPPLY AIR GRILLE (NEW & EXISTING – 24x24 PANEL)
	SUPPLY AIR REGISTER (NEW & EXISTING – SURF. MTD.)
S	SMOKE DETECTOR (AREA TYPE)
	SMOKE DETECTOR (DUCT TYPE)
	SIDE WALL REGISTER, GRILLE
$	WALL SWITCH BY ELECTRICIAN
T #	THERMOSTAT WITH ZONE NUMBER
	TRANSFER AIR GRILLE (NEW & EXISTING – SURF. MTD.)
	COOLING ONLY VAV BOX WITH SQUARE TO ROUND OUTLET
	REHEAT VAV BOX WITH SQUARE TO ROUND OUTLET
	COOLING ONLY VAV BOX WITH RECTANGULAR LINED S.M. PLENUM
	REHEAT VAV BOX WITH RECTANGULAR LINED S.M. PLENUM
12"ø–4W 250 CFM / 12x12–4W 250 CFM	DIFFUSER NECK SIZE – AIR PATTERN – AIR VOLUME
	END CAP

PIPING SYMBOL LEGEND

SYMBOL	DESCRIPTION
	AUTOMATIC AIR VENT
	BALL VALVE
	BUTTERFLY VALVE
	BLIND FLANGE
	CHECK VALVE
	CIRCUIT SETTER
	DRAIN (ROOF, FLOOR)
	END CAP
	FLOW SWITCH
	GATE VALVE
	FLEXIBLE CONNECTION
	FLOW CONTROL
	PETE'S PLUG
	PIPE (NEW)
	PIPE (EXISTING)
	PRESSURE GAUGE WITH COCK
	REDUCER
X/XX	WATER SYSTEM TYPE PIPE RISER CALL OUT SYMBOL RISER NUMBER
	SCHRAEDER VALVE
	STRAINER
	STRAINER W/DRAIN VALVE AND HOSE ADAPTER
	TEMPERATURE SENSOR WELL
	THERMOMETER
	TRIPLE DUTY VALVE
	UNION
	VENT
	VICTAULIC COUPLING (3)
	WATER FLOW DIRECTION

ABBREVIATIONS

ABBRV.	DESCRIPTION
ABV.	ABOVE
A/C	AIR CONDITIONING
A.D.	ACCESS DOOR
A.F.F.	ABOVE FINISHED FLOOR
A.P.	ACCESS PANEL
APPROX.	APPROXIMATE
&	AND
@	AT
BD.	BOARD
B.D.D.	BACKDRAFT DAMPER
B.F.	BOTTOM FLAT
BF.V.	BUTTERFLY VALVE
B.O.D.	BOTTOM OF DUCT
B.O.P.	BOTTOM OF PIPE
B.V.	BALL VALVE
BLDG.	BUILDING
BTM.	BOTTOM
CLG	CEILING
CFM	CUBIC FEET PER MINUTE
CH.V.	CHECK VALVE
CHWR	CHILLED WATER RETURN
CHWS	CHILLED WATER SUPPLY
CMU	CONCRETE MASONRY UNIT
CONC.	CONCRETE
CONN.	CONNECTION
CONT'R.	CONTRACTOR
CWR	CONDENSER WATER RETURN
CWS	CONDENSER WATER SUPPLY
COND.	CONDENSATE
DMP'R.	DAMPER
DET.	DETAIL
D/L	DOOR LOUVER
DN.	DOWN
DWG	DRAWING
(E)	EXISTING
EA.	EACH
E.A.	EXHAUST AIR
EAG	EXHAUST AIR GRILLE
EAR	EXHAUST AIR REGISTER
EL.	ELEVATION
ELB	ELBOW
ELECT.	ELECTRICAL
ELEV.	ELEVATOR
EQUIP.	EQUIPMENT
EXH	EXHAUST
EXP	EXPANSION
EXT.	EXTERIOR
(F)	FUTURE
F.C.	FLEXIBLE CONNECTION
FD	FIRE DAMPER
FIN.	FINISH
FLEX	FLEXIBLE
FLR	FLOOR
FSD	FIRE SMOKE DAMPER
FT.	FOOT (FEET)

ABBRV.	DESCRIPTION
GA.	GAUGE
G.C.	GENERAL CONTRACTOR
G.I.	GALVANIZED IRON
G.V.	GATE VALVE
GEN.	GENERAL
GPH	GALLONS PER HOUR
GPM	GALLONS PER MINUTE
H.O.A.	HAND–OFF–AUTO
HR.	HOUR
HWR	HOT WATER RETURN
HWS	HOT WATER SUPPLY
I.D.	INSIDE DIMENSION
IN. / "	INCH
(L)	LINED
L	LONG
LBS.	POUNDS
L.D.	LINEAR DIFFUSER
M.A.	MIXED AIR
MAX.	MAXIMUM
M.D.	MOTORIZED DAMPER
MECH.	MECHANICAL
MFR.	MANUFACTURER
MIN.	MINIMUM
MISC.	MISCELLANEOUS
M.U.A.	MAKE UP AIR
M.V.D.	MANUAL VOLUME DAMPER
(N)	NEW
N/A	NOT APPLICABLE
NC	NORMALLY CLOSED
N.I.C.	NOT IN CONTRACT
NO	NORMALLY OPEN
NO.	NUMBER
N.R.	NOT RATED
NTS	NOT TO SCALE
O.C.	ON CENTER
O.D.	OUTSIDE DIMENSION
OPN'G.	OPENING
O.S.A.	OUTSIDE AIR
P.O.C.	POINT OF CONNECTION
PLUMB'G.	PLUMBING
P.S.I.	POUNDS PER SQUARE INCH
(R)	RELOCATE
R	RADIUS
R.A.	RETURN AIR
RAG	RETURN AIR GRILLE
RAR	RETURN AIR REGISTER
RND.	ROUND
REQD	REQUIRED
REV.	REVISION
RF.	ROOF
RM.	ROOM

ABBRV.	DESCRIPTION
S.A.	SUPPLY AIR
SAG	SUPPLY AIR GRILLE
SAR	SUPPLY AIR REGISTER
S.D.	SMOKE DETECTOR
SHT.	SHEET
S.I.	SOUND INSULATION
S.M.	SHEET METAL
SQ.	SQUARE
S.S.	STAINLESS STEEL
STD.	STANDARD
STRUCT.	STRUCTURAL
SUSP	SUSPENDED
SW	SWITCH
SWG	SIDE WALL GRILLE
SWR	SIDE WALL REGISTER
TAG	TRANSFER AIR GRILLE
T.F.	TOP FLAT
T.O.D.	TOP OF DUCT
T.O.P.	TOP OF PIPE
TRANS.	TRANSFER
T'STAT	THERMOSTAT
TYP.	TYPICAL
UBC	UNIFORM BUILDING CODE
U.C.	UNDER CUT
U.G.	UNDER GROUND
UMC	UNIFORM MECHANICAL CODE
U.N.O.	UNLESS NOTED OTHERWISE
U.T.R.	UP THROUGH ROOF
V.	VENT
VAV	VARIABLE AIR VOLUME
VLV.	VALVE
VSD	VARIABLE SPEED DRIVE
VOL.	VOLUME
WMS	WIRE MESH SCREEN
WT.	WEIGHT

HVAC DRAWING INDEX

SHEET NO.	DESCRIPTION
AC0.00	COVER SHEET, HVAC LEGEND AND DRAWING INDEX
AC0.01	EQUIPMENT SCHEDULES AND DETAILS
AC1.01	HVAC – FIRST FLOOR PLAN
AC6.01	HVAC – PIPING AND WIRING DIAGRAMS

HVAC DESIGN INTENT

BUILDING 34 IT SWING SPACE:

THE PROPOSED SYSTEM IS DESIGNED TO PROVIDE TEMPERED/CONDITIONED AIR TO ONLY THE I.T. SUPPORT, SHIPPING/RECEIVING, TECH AREA, MEDIA/TELECOM STORAGE, AND I.T. OFFICES. IT IS NOT A REQUIREMENT TO PROVIDE TEMPERED/CONDITIONED AIR TO THE MEDIA SERVICES AND SECURED STORAGE AREAS.

NOTE: REFER TO ARCHITECTURAL DRAWING "COVER SHEET" FOR LIST OF GOVERNING CODES AND STANDARDS.

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SHEET TITLE

COVER SHT, HVAC LEGEND & DWG. INDEX

REVISIONS

NO.	DATE	DESCRIPTION
–	02/04/11	CD SUBMITTAL

DATE	FEBRUARY 04, 2011
DRAWN	RS
CHECKED	CR
SCALE	NONE
ACCO Job #	628985

SHEET NUMBER

AC0.00

PACKAGE AIR CONDITIONING UNIT (AIR COOLED)

SYMBOL	LOCATION	MANUF'R & MODEL NO.	SERVING	CFM	E.S.P.	RPM	REF.	COOLING				HEATING			COMP'R		COND.		EVAP. FAN			EXH. FAN FLA	VOLTAGE	MCA	MFS / MOP	EER	WEIGHT (lbs)	REMARKS
								TOTAL MBH	SENSIBLE MBH	EDB / EWB	AMB	INPUT MBH	OUTPUT MBH	EDB	QTY	RLA	QTY	FLA	BHP	HP	FLA							
(N) AC 34-1	OUTSIDE BLDG. 34	TRANE YSC090E	BUILDING 34	3000	1.00	1122	R410-A	86.7	67.2	78.4 / 63.1	92	120	96	70	1	12.8	1	1.8	1.81	–	1.7	–	460/3ϕ/60	19.5	– / 30.0	11.1	830	7.5 TON PKGD UNITARY GAS/ELECTRIC, 2H/2C DIGITAL DISPLAY–PROGRAMMABLE TOUCH SCREEN, DRY BULB ECONOMIZER 0–100%, BAROMETRIC RELIEF

SPLIT SYTEM FAN COIL (EXISTING)

SYMBOL	LOCATION	MANUFACTURER & MODEL No.	CFM	S.P.	RPM	REF.	TOTAL MBH	SENS. MBH	SUC	EDB / EWB	BHP	WATT	VOLTAGE	WEIGHT (lbs)	REMARKS
(E) FC 34-1	BLDG 34	MITSUBISHI PKA-A12GA	390	–	–	R-410A	12.0	10.3	–	80 / 67	–	30	208-230/1ϕ/60	35	EXISTING, RELOCATE FROM RM 173 BLDG 25, DISCONNECT AND CONNECTION BY ELECTRICAN

SPLIT SYSTEM CONDENSING UNIT (EXISTING)

SYMBOL	LOCATION	MANUFACTURER & MODEL No.	CAP TONS	SUC TEMP	AMB	REF	VOLTAGE	COMP'R		COND.		MCA	MFA / MOCP	EER	WEIGHT (lbs)	REMARKS
								QTY	RLA	QTY	FLA					
(E) CU 34-1	OUTSIDE BLDG 34	MITSUBISHI PUY-A12NHA	1.0	–	95°F	R-410A	208-230/1ϕ/60	1	12	1	0.35	13.0	– / 15.0	13.8	90	EXISTING, RELOCATE FROM RM 173 BLDG 25, DISCONNECT AND CONNECTION BY ELECTRICAN

SUPPLY FAN

SYMBOL	LOCATION	MANUF'R & MODEL NO.	SERVING	CFM	S.P.	RPM	ROT	DIS	WATTS	AMPS	VOLTAGE	WEIGHT (lbs)	REMARKS
(N) SF 34-1	BUILDING 34 CEILING HUNG	THERMOLEC FER-6-3-240(D*)	BUILDING 34	90 MAX 60 MIN	–	–	–	–	–	–	120v/60Hz/1ϕ	–	BUILT IN SUPPLY FAN, FACTORY SUPPLIED THERMOSTAT, FAN SPEED CONTROL, DAMPER INCLUDED. 6"ø DUCT SIZE W/3KW ELECTRIC HEATER

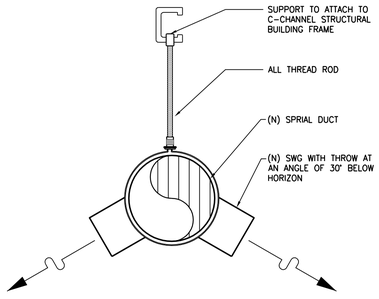
PLYMOVENT EMERGENCY EXHAUST

SYMBOL	LOCATION	MANUF'R & MODEL NO.	SERVING	CFM	S.P.	RPM	ROT	DIS	–	HP	VOLTAGE	WEIGHT (lbs)	REMARKS
(N) EF 34-1	BUILDING 34 CEILING HUNG	PLYMOVENT TEV-3110-60	BUILDING 34	–	–	3450	–	–	–	3.0	208v/60Hz/1ϕ	85	EXHAUST FAN TO BE INSTALLED BY AIR EXCHANGE INC. ELECTRIC STARTER & WALL SWITCH TO BE PROVIDED BY ELECTRICIAN.

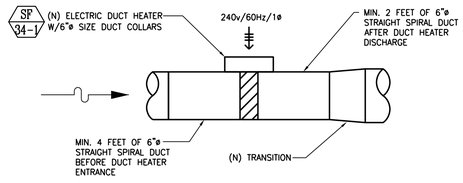
UNIT HEATER (EXISTING)

SYMBOL	LOCATION	MANUF'R & MODEL NO.	SERVING	TOTAL MBH	VOLTAGE	WEIGHT (lbs)	REMARKS
(E) UH 1	BUILDING 34 CEILING HUNG	(E)	BUILDING 34	50	(E)	(E)	EXISTING
(E) UH 2	BUILDING 34 CEILING HUNG	(E)	BUILDING 34	50	(E)	(E)	EXISTING
(E) UH 4	BUILDING 34 CEILING HUNG	(E)	BUILDING 34	50	(E)	(E)	EXISTING, TO BE REMOVED AND RETURNED TO CSM FACILITIES

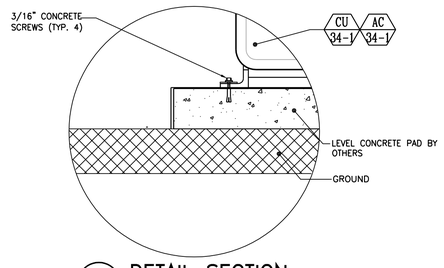
EQUIPMENT SCHEDULES



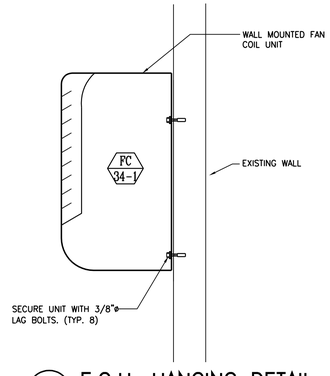
4 DUCT HANGER
SCALE: NONE



3 DUCT HEATER
SCALE: NONE



2 DETAIL SECTION
SCALE: NONE
NOTE: NEOPRENE WASHERS TO BE USED



1 F.C.U. HANGING DETAIL
SCALE: NONE
NOTE: NEOPRENE WASHERS TO BE USED

DETAILS

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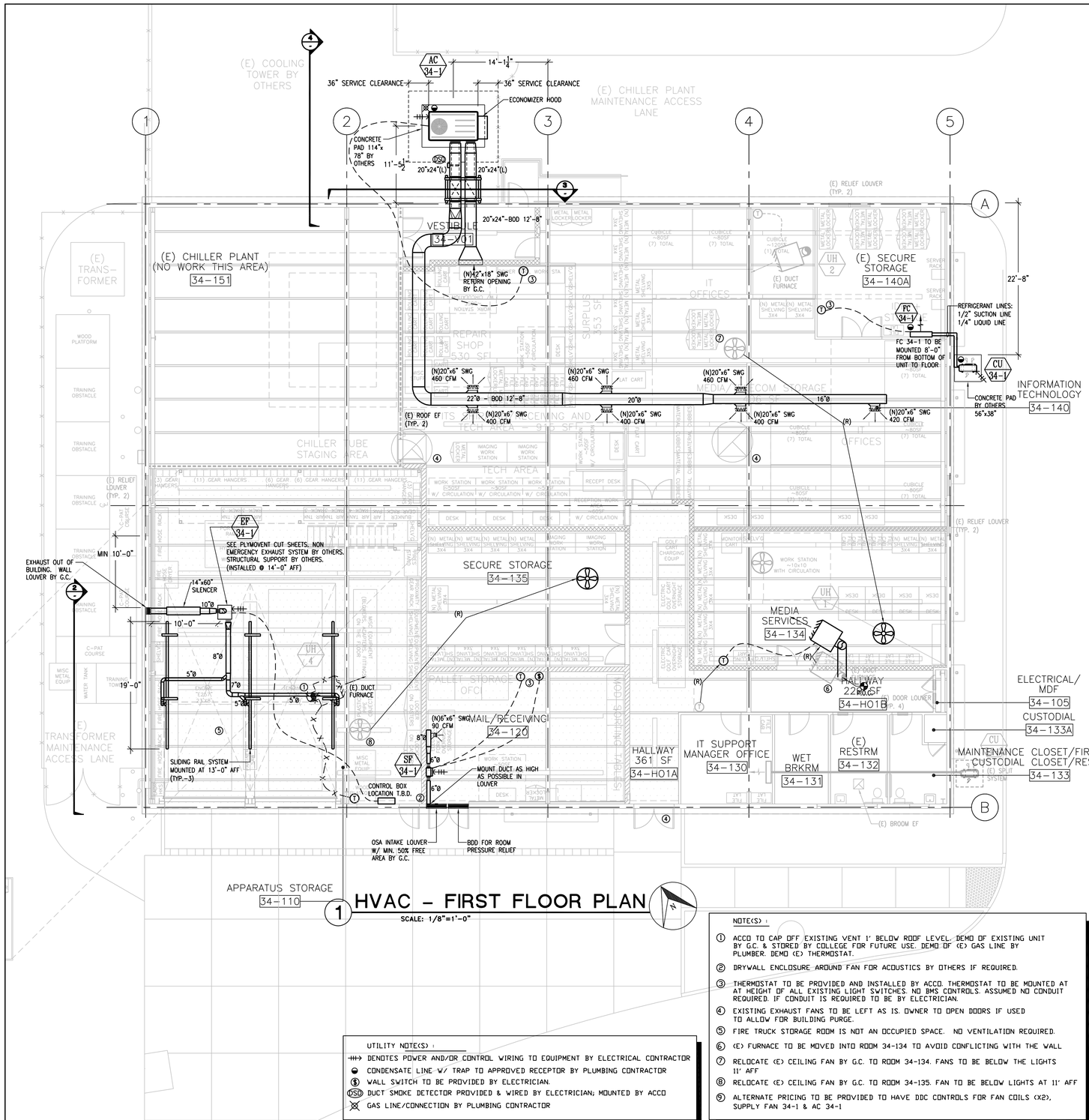
SHEET TITLE
EQUIPMENT SCHEDULES & DETAILS

REVISIONS

NO.	DATE	DESCRIPTION
–	02/04/11	CD SUBMITTAL

DATE	FEBRUARY 04, 2011
DRAWN	RS
CHECKED	CR
SCALE	AS NOTED
ACCO Job #	628985

SHEET NUMBER
AC0.01



1 HVAC – FIRST FLOOR PLAN

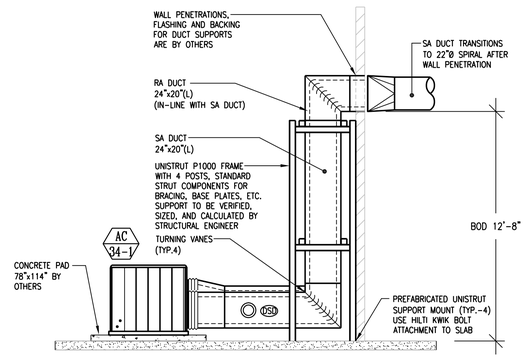
SCALE: 1/8"=1'-0"

UTILITY NOTE(S) :

- ⊣H⊢ DENOTES POWER AND/OR CONTROL WIRING TO EQUIPMENT BY ELECTRICAL CONTRACTOR
- CONDENSATE LINE W/ TRAP TO APPROVED RECEPTOR BY PLUMBING CONTRACTOR
- (S) WALL SWITCH TO BE PROVIDED BY ELECTRICIAN.
- (DSD) DUCT SMOKE DETECTOR PROVIDED & WIRED BY ELECTRICIAN; MOUNTED BY ACCO
- GAS LINE/CONNECTION BY PLUMBING CONTRACTOR

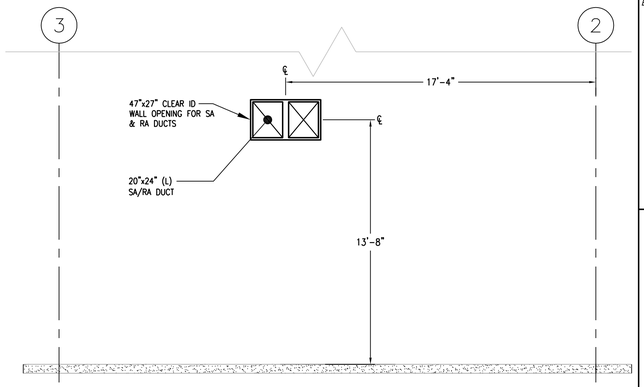
NOTE(S) :

1. ACCO TO CAP OFF EXISTING VENT 1' BELOW ROOF LEVEL. DEMO OF EXISTING UNIT BY G.C. & STORED BY COLLEGE FOR FUTURE USE. DEMO OF <E> GAS LINE BY PLUMBER. DEMO <E> THERMOSTAT.
2. DRYWALL ENCLOSURE AROUND FAN FOR ACOUSTICS BY OTHERS IF REQUIRED.
3. THERMOSTAT TO BE PROVIDED AND INSTALLED BY ACCO. THERMOSTAT TO BE MOUNTED AT AT HEIGHT OF ALL EXISTING LIGHT SWITCHES. NO BMS CONTROLS. ASSUMED NO CONDUIT REQUIRED. IF CONDUIT IS REQUIRED TO BE BY ELECTRICIAN.
4. EXISTING EXHAUST FANS TO BE LEFT AS IS. OWNER TO OPEN DOORS IF USED TO ALLOW FOR BUILDING PURGE.
5. FIRE TRUCK STORAGE ROOM IS NOT AN OCCUPIED SPACE. NO VENTILATION REQUIRED.
6. <E> FURNACE TO BE MOVED INTO ROOM 34-134 TO AVOID CONFLICTING WITH THE WALL
7. RELOCATE <E> CEILING FAN BY G.C. TO ROOM 34-134. FANS TO BE BELOW THE LIGHTS 11' AFF
8. RELOCATE <E> CEILING FAN BY G.C. TO ROOM 34-135. FAN TO BE BELOW LIGHTS AT 11' AFF
9. ALTERNATE PRICING TO BE PROVIDED TO HAVE DDC CONTROLS FOR FAN COILS <X2>, SUPPLY FAN 34-1 & AC 34-1



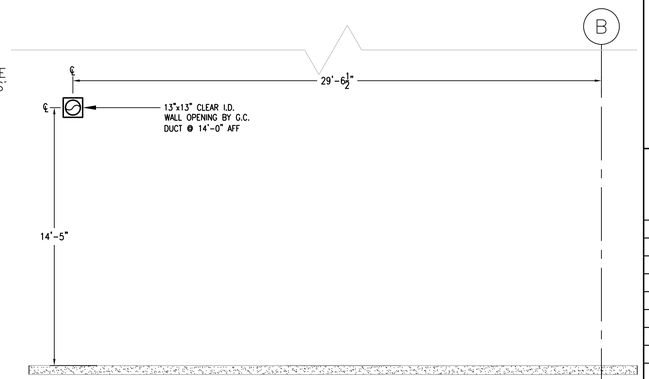
4 SECTION 4 ELEVATION DETAIL

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



3 SECTION 3 ELEVATION DETAIL

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



2 SECTION 2 ELEVATION DETAIL

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

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SHEET TITLE

HVAC–FIRST FLOOR PLAN

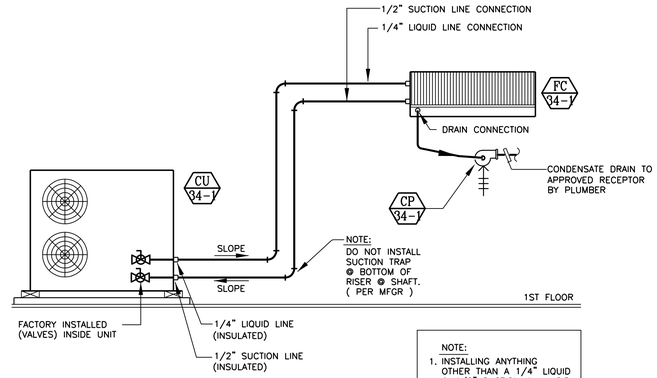
REVISIONS

NO.	DATE	DESCRIPTION
–	02/04/11	CD SUBMITTAL

DATE	FEBRUARY 04, 2011
DRAWN	RS
CHECKED	CR
SCALE	1/8"=1'-0"
ACCO Job #	628985

SHEET NUMBER

AC1.01



NOTE:
1. INSTALLING ANYTHING OTHER THAN A 1/4" LIQUID & 1/2" SUCTION WILL VOID WARRANTY.
2. SUCTION AND LIQUID LINES MUST BE INSULATED
3. CAPILLARY IS LOCATED IN OUTDOOR UNIT

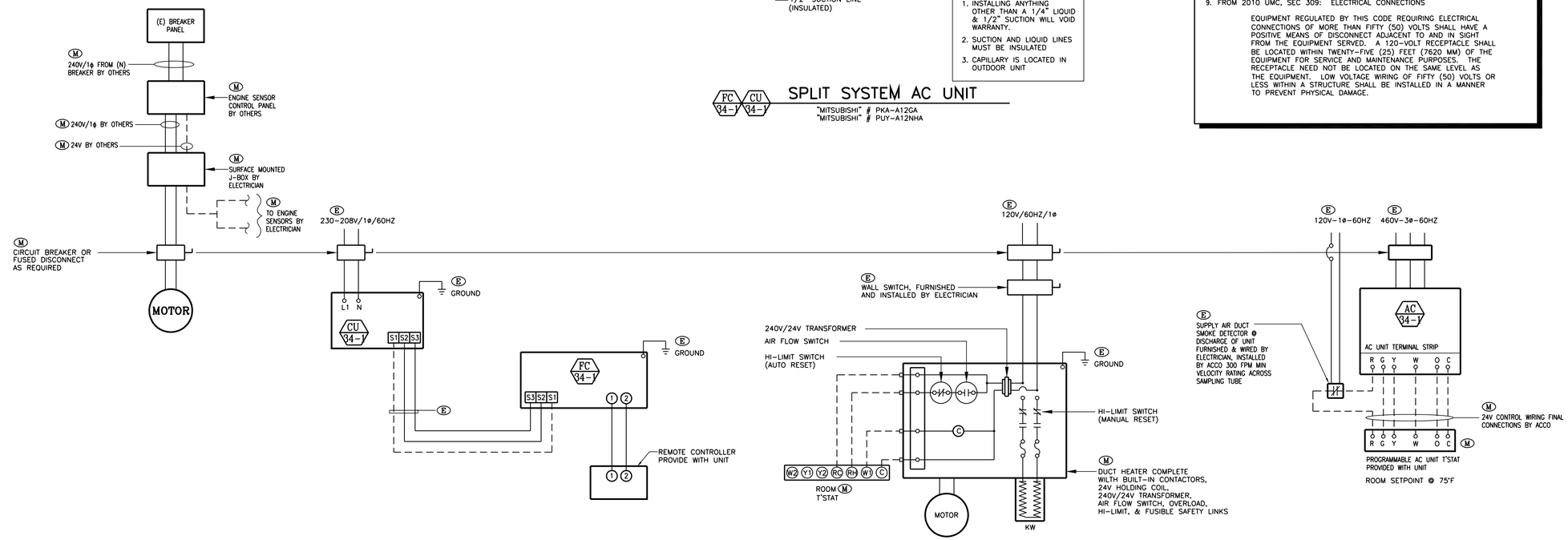
FC 34-Y CU 34-Y SPLIT SYSTEM AC UNIT

"MITSUBISHI" # PKA-A12GA
"MITSUBISHI" # PUY-A12NHA

ELECTRICAL NOTES

1. WIRING AND INSTALLATION SHALL CONFORM TO ALL GOVERNING CODES.
2. (E) INDICATES ITEMS FURNISHED BY ELECTRICAL CONTRACTOR.
3. (M) INDICATES ITEMS FURNISHED BY MECHANICAL CONTRACTOR.
4. (ME) INDICATES ITEMS FURNISHED BY MECHANICAL CONTRACTOR, INSTALLED BY ELECTRICAL CONTRACTOR.
5. (BAS) INDICATES ITEMS FURNISHED BY BUILDING AUTOMATION SYSTEM CONTRACTOR.
6. ——— INDICATES LINE VOLTAGE WIRING BY ELECTRICAL CONTRACTOR.
7. – – – INDICATES LOW VOLTAGE WIRING BY MECHANICAL CONTRACTOR.
8. ALL COPPER AND/OR ALUMINUM CONDUCTOR CONNECTIONS SHALL BE MADE AS PRESCRIBED BY ESTABLISHED ELECTRICAL INDUSTRY AND ENGINEERING STANDARDS. EXTREME CARE MUST BE TAKEN WHEN CONNECTIONS INVOLVE DISSIMILAR MATERIALS.
9. FROM 2010 UMC, SEC 309: ELECTRICAL CONNECTIONS

EQUIPMENT REGULATED BY THIS CODE REQUIRING ELECTRICAL CONNECTIONS OF MORE THAN FIFTY (50) VOLTS SHALL HAVE A POSITIVE MEANS OF DISCONNECT ADJACENT TO AND IN SIGHT FROM THE EQUIPMENT SERVED. A 120-VOLT RECEPTACLE SHALL BE LOCATED WITHIN TWENTY-FIVE (25) FEET (7620 MM) OF THE EQUIPMENT FOR SERVICE AND MAINTENANCE PURPOSES. THE RECEPTACLE NEED NOT BE LOCATED ON THE SAME LEVEL AS THE EQUIPMENT. LOW VOLTAGE WIRING OF FIFTY (50) VOLTS OR LESS WITHIN A STRUCTURE SHALL BE INSTALLED IN A MANNER TO PREVENT PHYSICAL DAMAGE.



EF 34-Y EMERGENCY EXHAUST FAN

CU 34-Y CONDENSING UNIT

FC 34-Y FAN COIL UNIT

SF 34-Y SUPPLY FAN

AC 34-Y PACKAGE AC UNIT

PIPING AND WIRING DIAGRAM

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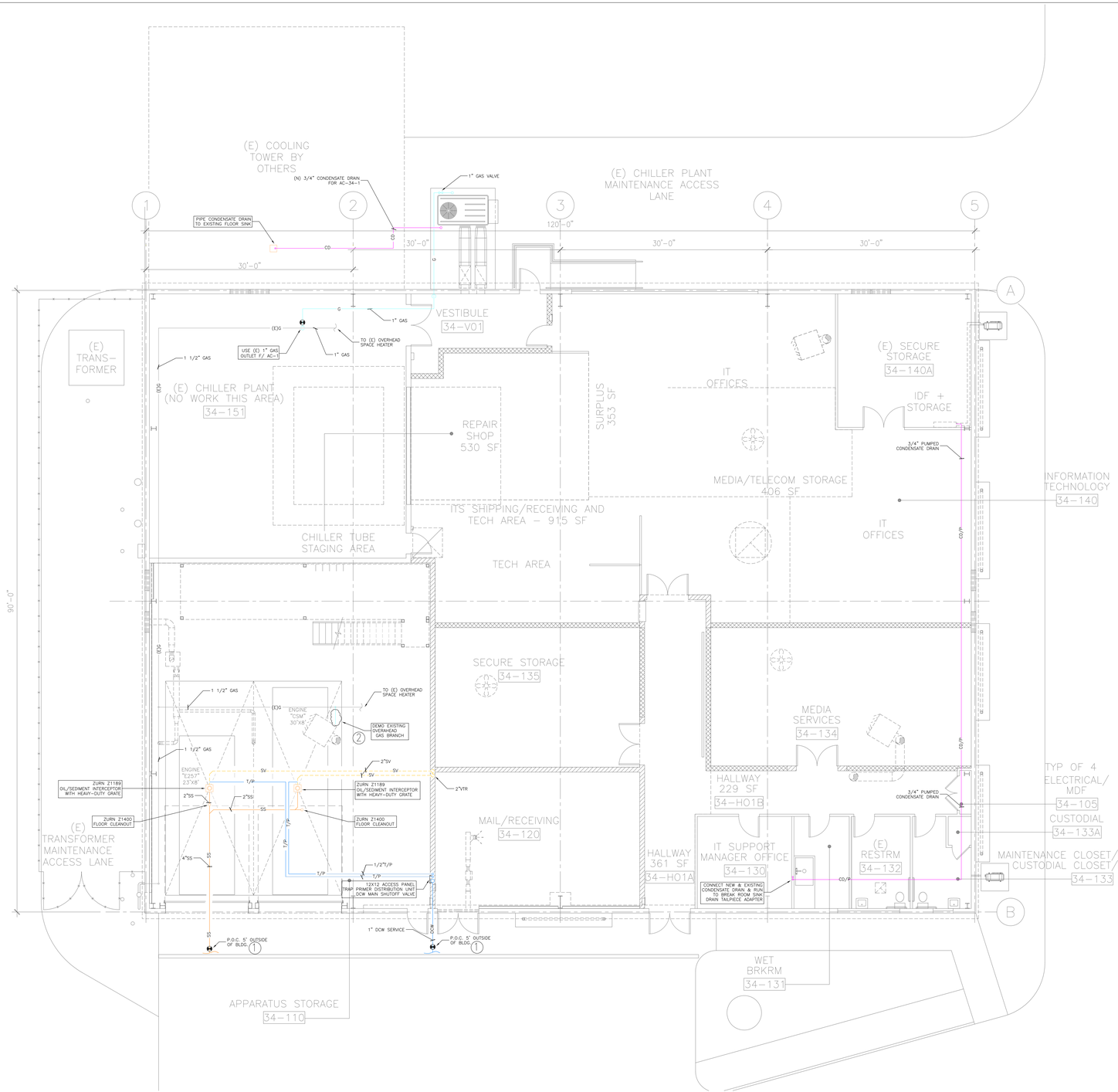
SHEET TITLE
PIPING AND WIRING DIAGRAMS

REVISIONS

NO.	DATE	DESCRIPTION
–	02/04/11	CD SUBMITTAL

DATE	FEBRUARY 04, 2011
DRAWN	RS
CHECKED	CR
SCALE	NONE
ACCO Job #	628985

SHEET NUMBER
AC6.01



1ST FLOOR PLUMBING PLAN - BUILDING 34

1/8"=1'-0"

LEGEND

SS	WASTE PIPING
SV	VENT PIPING
CD	CONDENSATE DRAIN/GRAVITY
CD/P	CONDENSATE DRAIN/PUMPED
DCW	COLD WATER
T/P	TRAP PRIMER
G	NATURAL GAS

PIPING MATERIALS:

1) DOMESTIC COLD WATER, TRAP PRIMER CONDENSATE DRAIN AND CONDENSATE PUMPED DRAIN - TYPE L COPPER

2) SANITARY WASTE & VENT - NO HUB CAST IRON OR DWV COPPER.

SCHEDULE:

FLOOR DRAIN	ZURN Z1189
TRAP PRIMER	PPP PRECISION PLMG PRODUCT
ACCESS PANEL	ELMDOOR PRODUCT 12X12
CLEAN OUT	ZURN Z1400

NOTES:

1. WASTE AND WATER RUN TO 5'-0" OUTSIDE OF BLDG.
2. NATURAL GAS DEMO VERIFY IN FIELD

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SHEET TITLE

PLUMBING 1ST FL PLAN

REVISIONS

NO.	DATE	DESCRIPTION
	1/24/11	100% SUBMITTAL
	2/4/11	RE-SUBMIT
	2/16/11	RE-SUBMIT

DATE	JANUARY 26, 2011
DRAWN	KC
CHECKED	
SCALE	1/8" = 1'-0"
LJK JOB NO.:	31-007

SHEET NUMBER

P1.01

SYMBOLS: (ALL SYMBOLS MAY OR MAY NOT BE USED)

LIGHTING

- 2' x 4' FLUORESCENT LIGHT FIXTURE – REFER TO FIXTURE SCHEDULE FOR ADDITIONAL INFORMATION.
- 1' x 4' FLUORESCENT LIGHT FIXTURE – REFER TO FIXTURE SCHEDULE FOR ADDITIONAL INFORMATION.
- 2' x 2' FLUORESCENT LIGHT FIXTURE – REFER TO FIXTURE SCHEDULE FOR ADDITIONAL INFORMATION.
- PENDANT FLUORESCENT LIGHT FIXTURE – REFER TO FIXTURE SCHEDULE FOR ADDITIONAL INFORMATION.
- LIGHTING FIXTURE ON EMERGENCY POWER, UNSWITCHED, UON, SEE TAG FOR TYPE.
- 4'–0" FLUORESCENT STRIP FIXTURE – REFER TO FIXTURE SCHEDULE FOR ADDITIONAL INFORMATION.
- DOWN LIGHT – "D" INDICATES FIXTURE TYPE, "3" INDICATES CIRCUIT, AND "a" INDICATES SWITCH CONTROL
- WALL MOUNTED LIGHTING FIXTURE – REFER TO FIXTURE SCHEDULE FOR ADDITIONAL INFORMATION.
- RECESSED WALL WASHING FIXTURE – REFER TO FIXTURE SCHEDULE FOR ADDITIONAL INFORMATION.
- LIGHT TRACK AND FIXTURES – REFER TO FIXTURE SCHEDULE FOR ADDITIONAL INFORMATION.
- EXIT LIGHT – CEILING OR WALL MOUNTED SHADED AREA INDICATES ILLUMINATED FACE WITH ARROWS AS INDICATED
- EMERGENCY BATTERY UNIT
- SPST TOGGLE SWITCH – 20A, 120/277V, "a" INDICATES CONTROL
- 3–WAY TOGGLE SWITCH – 20A, 120/277V "a" INDICATES CONTROL
- SPST KEYED SWITCH – 20A, 120/277V, "a" INDICATES CONTROL
- LOW VOLTAGE SWITCH, "a" INDICATES CONTROL.
- OCCUPANCY SENSOR, CEILING MOUNT, "a" INDICATES CONTROL
- OCCUPANCY SENSOR, WALL MOUNT, "a" INDICATES CONTROL
- OCCUPANCY SENSOR, DUAL RELAY, WALL MOUNT, "a" INDICATES CONTROL
- POWER PACK, 20A, UNIVERSAL VOLTAGE
- PHOTO CELL – 120/277V RATED FOR LOAD SERVED
- ——LV—— LOW VOLTAGE MULTI–CONDUCTOR CABLE – PLENUM RATED WHERE REQUIRED, NOT INSTALLED IN CONDUIT

GENERAL NOTE:

1. INSTALL ALL WALL MOUNTED POWER, TELEPHONE AND DATA OUTLETS @ +18" AFF UNLESS OTHERWISE NOTED. INSTALL ALL LIGHTING CONTROL SWITCHES, FIRE ALARM PULL PULL STATIONS AND WALL TELEPHONE JACKS @ +48" AFF UNLESS OTHERWISE NOTED. ALL HEIGHT MEASUREMENTS SHALL BE THE CENTERLINE OF THE DEVICE.

POWER

- MOTOR
- JUNCTION BOX – CEILING OR WALL MOUNTED, SIZE TO CODE, TAPE AND TAG WIRES; PROVIDE FLEX AND/OR RECEPTACLE AS REQUIRED TO CONNECT EQUIPMENT
- RECEPTACLE, DUPLEX – 20A, 120V GND – NEMA 5–20R U.O.N.
- RECEPTACLE, DOUBLE DUPLEX – (2) 20A, 120V GND – NEMA (2)5–20R U.O.N.
- RECEPTACLE, DUPLEX WITH ONE HALF SWITCHED
- RECEPTACLE, DUPLEX WITH GFCI PROTECTION
- CORD DROP, DUPLEX RECEPTACLE IN JUNCTION BOX AT +72" A.F.F. SUSPENDED BY TYPE S.O. CORD WITH GRIPS AT EACH END, TOP AND BOTTOM.
- SPECIAL RECEPTACLE 250V – SINGLE PHASE 3 WIRE, GND (L6–20R U.O.N.)
- SPECIAL RECEPTACLE – THREE PHASE 5 WIRE, GND (L21–20R U.O.N.)
- ELECTRIFIED FURNITURE VOICE/DATA CONNECTION
- WIREMOLD G–4000 DIVIDED. VERIFY MOUNTING HEIGHT AND BRANCH CIRCUIT CONDUIT ROUTING.
- TELE/POWER POLE – WIREMOLD #30TP–4 OR EQUAL WITH DEVICES AS SHOWN
- FLOOR OUTLET WITH DUPLEX RECEPTACLE
- FLOOR TELEPHONE OUTLET
- MULTI–DEVICE FLOOR BOX WITH DEVICES AS SHOWN ON PLANS – WITH CARPET PLATE
- TELEPHONE WALL OUTLET – SINGLE GANG RING AND STRING INTO CEILING SPACE. INSTALL J–BOX AND 3/4" CONDUIT WITH STRING INTO CEILING SPACE
- COMBINATION DATA/TELEPHONE OUTLET–SAME AS TELEPHONE OUTLET ABOVE NO. INDICATES QUANTITY OF DATA OUTLET.
- DATA OUTLET – SAME AS TELEPHONE OUTLET ABOVE
- CARD READER ROUGH–IN (3/4" CO TO CEILING SPACE)
- TRANSFORMER – WALL HUNG OR FLOOR MOUNTED ON ISOLATION PADS
- SWITCHBOARD, DISTRIBUTION BOARD OR MOTOR CONTROL CENTER
- POWER PANELBOARD–SURFACE OR FLUSH MOUNTED; VERIFY WALL DEPTH IF FLUSH MOUNTED
- FSD FIRE SMOKE DAMPER
- NOTE REFERENCE SYMBOL – SEE ASSOCIATED NOTE
- CONDUIT STUB–UP OR DOWN AS NOTED
- RELOCATE EXISTING DEVICE AS SHOWN
- HASH MARK IDENTIFICATION
  - EQUIPMENT GROUND CONDUCTOR
  - ISOLATED GROUND CONDUCTOR (WHERE USED)
  - NEUTRAL CONDUCTOR
  - PHASE CONDUCTOR AND/OR SWITCH LEGS
- FLEX CONDUIT WITH CONNECTION
- #10 CONDUIT – HOME RUN TO PANEL, TERMINAL CABINET, ETC., HASH MARKS INDICATE NUMBER OF WIRES, "#10" INDICATES WIRE SIZE, SIZE CONDUIT PER CODE U.O.N.
- CONDUIT – CONCEALED IN WALLS OR CEILING, 1/2" WITH (2) #12 THHN/THWN Cu & (1) #12 THHN/THWN Cu GROUND U.O.N.
- CONDUIT – IN OR BELOW FLOOR, 3/4" WITH (2) #12 THHN/THWN Cu & (1) #12 THHN/THWN Cu GROUND U.O.N.
- #10 —MC— MC CABLE – HASH MARKS INDICATE QUANTITY OF CONDUCTORS, OR AS REQUIRED PER PANEL SCHEDULE, #10 INDICATES CONDUCTOR SIZE
- 100/3 PANELBOARD, SIZE AS NOTED, MAIN LUGS ONLY UNLESS MAIN BREAKER SHOWN, "100/3" INDICATES MAIN BREAKER SIZE
- DISCONNECT SWITCH – MOTOR RATED, "M" INDICATES SWITCH TO BE FURNISHED WITH MOTOR CIRCUIT PROTECTOR, "C" INDICATES SWITCH TO BE FURNISHED WITH CIRCUIT BREAKER, "F" INDICATES SWITCH TO BE FURNISHED WITH FUSES, SIZED ACCORDING TO EQUIPMENT NAMEPLATE DATA. DISCONNECT SWITCH IS NON–FUSED WHERE NO "M", "C" OR "F" IS NOTED.
- 2 MAGNETIC MOTOR STARTER WITH CPT, HOA AND 3 OL's, '2' INDICATES NEMA SIZE
- MANUAL MOTOR STARTER SWITCH WITH INTEGRAL OVERLOAD HEATERS
- MAGNETIC FVNR STARTER. "N" INDICATES MAGNETIC NEMA SIZE
- COMBINATION MOTOR STARTER/DISCONNECT D: DISCONNECT AMPERE RATING/POLE N: MAGNETIC NEMA SIZE
- 100AS NON–FUSED SAFETY SWITCH. "100AS" INDICATES SWITCH AMPERE RATING
- 70AF 100AS FUSED SAFETY SWITCH. "100AS" INDICATES SWITCH AMPERE RATING. "70AF" INDICATES FUSED AMPERE RATING.
- 70AF 100AS FUSIBLE PLUG–IN UNITS. "H" OR "R" INDICATE TYPE OF FUSE. "70AF" INDICATES FUSED AMPERE RATING. "100AS" INDICATES SWITCH AMPERE RATING.
- VFD VARIABLE FREQUENCY DRIVE – FURNISHED BY OTHERS
- DS/VFD INTEGRAL DISCONNECT / VARIABLE FREQUENCY DRIVE, FURNISHED BY DIVISION 15

DRAWING INDEX:

DRAWING LIST

Sheet#	Sheet Title	ISSUANCES: CONSTRUCTION SET 2/4/2011
E2.00	BUILDING 34 SYMBOL LIST AND ABBREVIATIONS	X
E2.01	TITLE 24 LIGHTING COMPLIANCE & FIXTURE SCHEDULE	X
E2.02	BUILDING 34 POWER/SIGNAL FLOOR PLAN	X
E2.03	BUILDING 34 LIGHTING FLOOR PLAN	X
E2.04	BUILDING 34 RACK DETAIL	X

ABBREVIATIONS:

AFF	ABOVE FINISH FLOOR	KVA	KILOVOLT AMPERES
AL	ALUMINUM CONDUCTOR OR BUS	KW	KILOWATTS
AM	AMMETER	LS	LIFE SAFETY
AS	AMMETER SWITCH	LR	LEGALLY REQUIRED
ATS	AUTOMATIC TRANSFER SWITCH	LTG	LIGHTING
BKR	BREAKER	MCP	MOTOR CIRCUIT PROTECTOR
BLDG	BUILDING	MTD	MOUNTED
BPS	BOOSTER POWER SUPPLY	MTG	MOUNTING
CM	CUSTOMER METER	N	NEW
CKT	CIRCUIT	NL	NIGHT LIGHT
CO	CONDUIT ONLY	NIC	NOT IN CONTRACT
CU	COPPER CONDUCTOR OR BUS	NTS	NOT TO SCALE
DS/VFD	INTEGRAL DISCONNECT/ VARIABLE FREQUENCY DRIVE FURNISHED BY DIV15	OS	OPTIONAL STANDBY
		R	REMOVE
E	EXISTING	RE	RELOCATE EXISTING
EC	ELEVATOR CONTROLLER	RECPT	RECEPTACLE
EDF	ELECTRIC DRINKING FOUNTAIN	SL	SECURITY LIGHT – ON/OFF BY PHOTO CELL
EGC	EQUIPMENT GROUNDING CONDUCTOR	SLD	SINGLE LINE DIAGRAM
EL	EXTERIOR LIGHT – ON BY PHOTO CELL, OFF BY TIME CLOCK	TBD	TO BE DETERMINED
		TC	TIME CLOCK
EM	EMERGENCY	TTB	TV/TELEPHONE BACKBOARD FURNISHED BY OTHERS
EPO	EMERGENCY POWER OFF	TVSS	TRANSIENT VOLTAGE SURGE SUPPRESSION
EQ	EQUAL		
ER	EXISTING TO BE REMOVED	TYP	TYPICAL
FAAP	FIRE ALARM ANNUNCIATOR PANEL	UON	UNLESS OTHERWISE NOTED
FACP	FIRE ALARM CONTROL PANEL	VC	VOLUME CONTROL
FBO	FURNISHED BY OTHERS	VFD	VARIABLE FREQUENCY DRIVE FURNISHED BY DIV 15
GEC	GROUNDING ELECTRODE CONDUCTOR		
GFR	GROUND FAULT RELAY	VM	VOLTMETER
GND	GROUND	VS	VOLTMETER SWITCH
IBO	INSTALLED BY OTHERS	W	WALL MOUNTED
IG	ISOLATED GROUND CONDUCTOR OR BUS	WP	EQUIPMENT OF WEATHERPROOF CONSTRUCTION OR DESIGN
		XFMR	TRANSFORMER

NON–INFRINGEMENT STATEMENT

THE ELECTRICAL WORK SHOWN ON THESE DRAWINGS, IN THE PROFESSIONAL JUDGEMENT OF THE UNDERSIGNED, DOES NOT INTERFERE WITH THE INTEGRITY OF THE LIFE SAFETY SYSTEM REQUIREMENTS FOR THE BUILDING.

DESIGNER:_____ DATE:_____

ARCHITECT OF RECORD

noll & tam architects and planners

729 Heinz Avenue
Berkeley, CA 94710
510.649.8295
fax 510.649.3008

CONSULTANTS

CUPERTINO ELECTRIC
1740 CESAR CHAVEZ ST.
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C–10 LIC.NO. 174637

REGISTERED PROFESSIONAL ENGINEER
DAN BORESCH
E13955
12/31/11
RENEWAL DATE
ELECTRICAL
STATE OF CALIFORNIA
2/4/11

CONSTRUCTION DOCUMENTS

COLLEGE OF SAN MATEO
BUILDING 34 MODERNIZATION
SMCCCD
3401 CSM Drive
San Mateo, CA 94402
College of San Mateo
1700 W. Hillsdale Blvd.
San Mateo, CA 94402

SHEET TITLE
BUILDING 34 SYMBOL LIST AND ABBREVIATIONS

REVISIONS

NO.	DATE	DESCRIPTION
	12/03/10	90% CD
	01/18/11	PROGRESS SET
	01/26/11	CONSTRUCTION SET
	02/04/11	CONSTRUCTION SET

DATE	FEBRUARY 04, 2011
DRAWN	RF
CHECKED	GG
SCALE	NA
N&T JOB NO.:	2901.4

SHEET NUMBER
E2.00

INDOOR LIGHTING POWER ALLOWANCE — LTG-3C

Project Name: College of San Mateo Building 34	Date: November 22, 2010

ALLOWED LIGHTING POWER (Choose One Method)

A separate Lighting Schedule Must Be Filled Out for Conditioned and Unconditioned Spaces. Installed Lighting Power listed on this page are only for: ■ CONDITIONED spaces ☐ UNCONDITIONED spaces

COMPLETE BUILDING METHOD

BUILDING CATEGORY (From §146 Table 146-E)	WATTS PER (ft²)	X	COMPLETE BLDG. AREA	=	ALLOWED WATTS
	TOTALS				
			AREA		WATTS

AREA CATEGORY METHOD - Part A

A	B		C		D
AREA CATEGORY (From §146 Table 146-F)	WATTS PER (ft²)	X	AREA (ft²)	=	ALLOWED WATTS
OFFICE AREAS	1.2		6,487		7,784
ENGINE AREA	1.2		1,960		2,352
Sum of Additional Allowed Watts from Area Category Method - Part B (from table below)					
	TOTALS		8,447		10,136
			AREA		WATTS

AREA CATEGORY METHOD - Part B Additional Wattage Allowance (from Table 146-F Footnotes)

A	B	C¹	D	E	F	G
Primary Function	Sq Ft	Additional Watts Per ft² Allowed	Wattage Allowance (B x C)	Description(s) and Quantity of Special Luminaire ² Types in each Primary Function Area	Total Design Watts	ALLOWED WATTS Smaller of D or F
				TOTALS - Enter into Area Category Method - Part A (table above)		

1. Additional watts available only when allowed according to the footnotes on bottom of Table 146-f for chandelier or sconce; art, craft, assembly or manufacturing specialized task work; precision commercial/ industrial work; or lab specialized task work.
2. Special luminaires are light fixtures described in the Table 146-F Footnotes that are subject to an additional wattage allowance.

TAILORED METHOD

Total Allowed Watts using the Tailored Method taken from LTG-4C (Page 1 of 4) Row 3 | |

The indoor lighting power allowance using the Tailored Method of compliance shall be determined using the LTG-4C set of forms. A separate set of LTG-4C forms shall be filled out for CONDITIONED and UNCONDITIONED spaces.

CERTIFICATE OF COMPLIANCE (Page 3 of 4) LTG-1C

Project Name: College of San Mateo Building 34	Date: November 22, 2010

INDOOR LIGHTING SCHEDULE and FIELD INSPECTION ENERGY CHECKLIST

Fill in controls for all spaces: a) area controls, b) multi-level controls, c) manual daylighting controls for daylit areas > 250ft², automatic daylighting controls for daylit areas > 2,500ft², d) shut-off controls, e) display lighting controls, f) tailored lighting controls - general lighting controlled separately from display, ornamental and display case lighting and g) demand responsive automatic controls for retail stores > 500ft², in accordance with Section 131.

MANDATORY LIGHTING CONTROLS - FIELD INSPECTION ENERGY CHECKLIST

Type / Description	Number of Units	Location in Building	Special Features	Field Inspector: Pass	Field Inspector: Fail
CEILING OCCUPANT SENSOR	10	WORK AREAS	☐	☐	☐
WALL SWITCH	7	WORK AREAS	☐	☐	☐
			☐	☐	☐
			☐	☐	☐
			☐	☐	☐
			☐	☐	☐
			☐	☐	☐
			☐	☐	☐
			☐	☐	☐
			☐	☐	☐
			☐	☐	☐
			☐	☐	☐
			☐	☐	☐

SPECIAL FEATURES INSPECTION CHECKLIST (See Page 2 of 4 of LTG-1C)

The local enforcement agency should pay special attention to the items specified in this checklist. These items require special written justification and documentation, and special verification. The local enforcement agency determines the adequacy of the justification, and may reject a building or design that otherwise complies based on the adequacy of the special justification and documentation submitted.

Field Inspector's Notes or Discrepancies:

CERTIFICATE OF COMPLIANCE (Page 1 of 4) LTG-1C

Project Name: College of San Mateo Building 34 — Date: November 22, 2010

Project Address: 1700 W. Hillsdale Blvd. San Mateo, CA. 94402 — Climate Zone: 3 — Building CFA: — Unconditioned Floor Area:

General Information

Building Type: ■ Nonresidential ☐ High-Rise Residential ☐ Hotel/Motel
☐ Schools ☐ Relocatable Public Schools ☐ Conditioned Spaces ☐ Unconditioned Spaces

Phase of Construction: ☐ New Construction ☐ Addition ■ Alteration

Method of Compliance: ☐ Complete Building ■ Area Category ☐ Tailored

Documentation Author's Declaration Statement

- I certify that this Certificate of Compliance documentation is accurate and complete.

Name: Thomas Byers — Signature:

Company: Cupertino Electric Inc. — Date: November 22, 2010

Address: 1740 Cesar Chavez Street — If applicable: CEA# CEPE#

City/State/Zip: San Francisco, CA 94124 — Phone: 415-970-3400

Principal Lighting Designer's Declaration Statement

- I am eligible under Division 3 of the California Business and Professions Code to accept responsibility for the lighting design.
- This Certificate of Compliance identifies the lighting features and performance specifications required for compliance with Title 24, Pages 1 and 6 of the California Code of Regulations.
- The Design features represented on this Certificate of Compliance are consistent with the information provided to document this design on the other applicable compliance forms, worksheets, calculations, plans and specifications submitted to the enforcement agency for approval with this building permit application.

Name: Thomas Byers — Signature:

Company: Cupertino Electric Inc. — Phone: 415-970-3400

Address: 1740 Cesar Chavez Street — License # E12690

City/State/Zip: San Francisco, CA 94124 — Date: November 22, 2010

Lighting Mandatory Measures

Indicate location on building plans of Mandatory Measures Note Block: ______

LIGHTING COMPLIANCE FORMS & WORKSHEETS (check box if worksheet is included)

For detailed instructions on the use of this and all Energy Efficiency Standards compliance forms, please refer to the Nonresidential Manual published by the California Energy Commission.

	Form	Description
■	LTG-1C Pages 1 through 4	Certificate of Compliance. All Pages required on plans for all submittals.
☐	LTG-2C	Lighting Controls Credit Worksheet
■	LTG-3C	Indoor Lighting Power Allowance
☐	LTG-4C Pages 1 through 4	Tailored Method Worksheet
☐	LTG-5C Pages 1 and 2	Line Voltage Track Lighting Worksheet

MANDATORY MEASURES

- ☐ Building Lighting Shut-off
  The building lighting shut off system consists of an automatic time switch, with a zone for each floor.
- ☐ Override for Building Lighting Shut-off
  The automatic building shut-off system is provided with a manual accessible override switch in sight of the lights. The area of override is not to exceed 5,000 square feet.
- ☐ Automatic Control Devices Certified
  All automatic control devices specified are certified; all alternate equipment shall be certified and installed as directed by the manufacturer.
- ☐ Fluorescent Ballast and Luminaries Certified
  All fluorescent fixtures subject to certification and specified for the projects are certified.
- ☐ Individual Room/Area Controls
  Each room and area in this building is equipped with a separate switch or occupancy sensor device for each area with floor-to-ceiling walls.
- ☐ Uniform Reduction for Individual Rooms
  All rooms and areas greater than 100 square feet and more than 0.8 watts per square foot of lighting load shall be controlled with Multi-level switching for uniform reduction of lighting within the room.
- ☐ Daylit Area Control
  All rooms that are greater than 250 square feet and contain windows and skylights, that allow for the effective use of daylight in the area shall have 50% of the lighting power in each daylit area controlled by a separate switch; or

  the effective use of daylight through cannot be accomplished because the windows are continuously shaded by a building on the adjacent lot. Diagram of shading during different times of year is included on plans.

LIGHTING FIXTURE SCHEDULE

TYPE	SYMBOL	CATALOG #	DESCRIPTION	LAMP QTY	LAMP DESCRIPTION	FIXTURE WATTS	FIXTURE VOLTAGE
		NAUTILUX NT110-F226-120-WHT	WALL MOUNTED EXTERIOR WEATHER PROOF FIXTURE	3		75	120
		QUANTUM EMERGENCY LIGHT ELM2-120	WALL MOUNTED THERMOPLASTIC EMERGENCY LIGHT	4		1.5	120
		OW-WRAPAROUND OW-N-2-32-UNV-1/2EB	SURFACE MOUNTED FLOURESCENT FIXTURE	8	T8	32	277
		SLIMLYTE PLUS SLP-126-OL	UNDERCOUNTER FLOURESCENT FIXTURE	4	T5	26	120

CERTIFICATE OF COMPLIANCE (Page 4 of 4) LTG-1C

Project Name: College of San Mateo Building 34	Date: November 22, 2010

Conditioned and Unconditioned Space. Lighting must not be combined for compliance.

Indoor Lighting Power for Conditioned Spaces		Watts	Indoor Lighting Power for Unconditioned Spaces		Watts
Installed Lighting (from Conditioned LTG-1C Page 2)		3,584	**Installed** Lighting (from Unconditioned LTG-1C Page 2)		
Lighting Control Credit Conditioned Spaces (from LTG-2C)	-	0	Lighting Control Credit Unconditioned Spaces (from LTG-2C)	-	
Adjusted **Installed** Lighting Power	=	3,584	Adjusted **Installed** Lighting Power	=	
Complies if Installed ≤ **Allowed** ↕			Complies if **Installed** ≤ **Allowed** ↕		
Allowed Lighting Power Conditioned Spaces (from LTG-3C)		10,136	**Allowed** Lighting Power Unconditioned Spaces (from LTG-3C)		

Required Acceptance Tests

Designer:

This form is to be used by the designer and attached to the plans. Listed below is the acceptance test for the Lighting System, LTG-2A. The designer is required to check the acceptance tests and list all control devices serving the building or space shall be certified as meeting the Acceptance Requirements for Code Compliance. If all the lighting system or control of a certain type requires a test, list the different lighting and the number of systems. The NA7 Section in the Appendix of the Nonresidential Reference Appendices Manual describes the test. Since this form will be part of the plans, completion of this section will allow the responsible party to budget for the scope of work appropriately. ***Forms can be grouped by type of Luminaire controlled.***

Enforcement Agency:

Systems Acceptance. *Before Occupancy Permit is granted for a newly constructed building or space or whenever a new lighting system with controls is installed in the building or space shall be certified as meeting the Acceptance Requirements.*
The LTG-2A form is not considered a complete form and is not to be accepted by the enforcement agency unless the boxes are checked and/or filled and signed. In addition, a Certificate of Acceptance forms shall be submitted to the enforcement agency that certifies plans, specifications, installation certificates, and operating and maintenance information meet the requirements of §10-103(b) of Title 24 Part 6. The field inspector must receive the properly filled out and signed forms before the building can receive final occupancy. A copy of the LTG-2A for each different lighting luminaire control(s) must be provided to the owner of the building for their records.

Luminaires Controlled: Equipment Requiring Testing	Description	Number of like Controls	Location	LTG-2A Controls and Sensors and Automatic Daylighting Controls Acceptance
				☐
				☐
				☐
				☐
				☐
				☐
				☐
				☐
				☐
				☐
				☐
				☐
				☐

CERTIFICATE OF COMPLIANCE (Page 2 of 4) LTG-1C

INDOOR LIGHTING SCHEDULE and FIELD INSPECTION ENERGY CHECKLIST

Project Name: College of San Mateo Building 34	Date: November 22, 2010
Installation Certificate, LTG-1-INST (Retain a copy and verify form is completed and signed.)	Field Inspector ☐
Certificate of Acceptance, LTG-2A (Retain a copy and verify form is completed and signed.)	Field Inspector ☐

A separate Lighting Schedule Must Be Filled Out for Conditioned and Unconditioned Spaces. Installed Lighting Power listed on the Lighting Schedule is only for: ■ **CONDITIONED SPACE** ☐ **UNCONDITIONED SPACE**

☐ *The actual indoor lighting power listed below includes all installed permanent and portable lighting systems in accordance with §146a.*

☐ *Only for offices: Up to the first 0.2 watts per square foot of portable lighting shall not be required to be included in the calculation of actual indoor lighting power density in accordance with the Exception to §146a. All portable lighting in excess of 0.2 watts per square foot is totaled below.*

A: Name or Item Tag	B: Complete Luminaire Description (i.e., 3 lamp fluorescent troffer, F32T8, one dimmable electronic ballast)	C: Special Features	D: Watts per Luminaire ¹	E: CEC Default from NA8	E: According to §130 (d or e)	F: Number of Luminaires	G: Installed Watts(D x F)	H: Field Inspector² Pass	H: Fail
		☐		☐	☐			☐	☐
F1	Fluorescent (2) T8 lamps	☐	32	■	☐	103	3,296	☐	☐
F2	Fluorescent (1) T8 lamp	☐	32	■	☐	8	256	☐	☐
F3	Flurescent Strip (1)T8 lamp	☐	32	■	☐	4	32	☐	☐
		☐		☐	☐			☐	☐
		☐		☐	☐			☐	☐
		☐		☐	☐			☐	☐
		☐		☐	☐			☐	☐
		☐		☐	☐			☐	☐
		☐		☐	☐			☐	☐
		☐		☐	☐			☐	☐
		☐		☐	☐			☐	☐
		☐		☐	☐			☐	☐
		☐		☐	☐			☐	☐
		☐		☐	☐			☐	☐
		☐		☐	☐			☐	☐
		☐		☐	☐			☐	☐
					INSTALLED WATTS PAGE TOTAL:		3,584		

Building total number of pages: 1 — Installed Watts Building Total (Sum of all pages): 3,584 — Enter into LTG-1C Page 4 of 4

1. *Wattage shall be determined according to Section 130(d and e). Wattage shall be rating of light fixture, not rating of bulb.*
2. *If Fail then describe on Page 2 of the Inspection Checklist Form and take appropriate action to correct. Verify building plans if necessary.*

ARCHITECT OF RECORD

noll & tam architects and planners

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Berkeley, CA 94710
510.649.8295
fax 510.649.3008

CONSULTANTS

CUPERTINO ELECTRIC
1740 CESAR CHAVEZ ST.
SAN FRANCISCO, CA.
(415)970-3400
C-10 LIC.NO. 174637

REGISTERED PROFESSIONAL ENGINEER — DAN BORESCH E18955 — 12/31/11 RENEWAL DATE — ELECTRICAL — STATE OF CALIFORNIA — 2/4/11

CONSTRUCTION DOCUMENTS

COLLEGE OF SAN MATEO

BUILDING 34 MODERNIZATION

SMCCCD
3401 CSM Drive
San Mateo, CA 94402

College of San Mateo
1700 W. Hillsdale Blvd.
San Mateo, CA 94402

SHEET TITLE

BUILDING 34 TITLE 24 COMPLIANCE

REVISIONS

NO.	DATE	DESCRIPTION
	12/03/10	90% CD
	01/18/11	PROGRESS SET
	01/26/11	CONSTRUCTION SET
	02/04/11	CONSTRUCTION SET

DATE	FEBRUARY 04, 2011
DRAWN	RF
CHECKED	GG
SCALE	NA
N&T JOB NO.:	2901.4

SHEET NUMBER

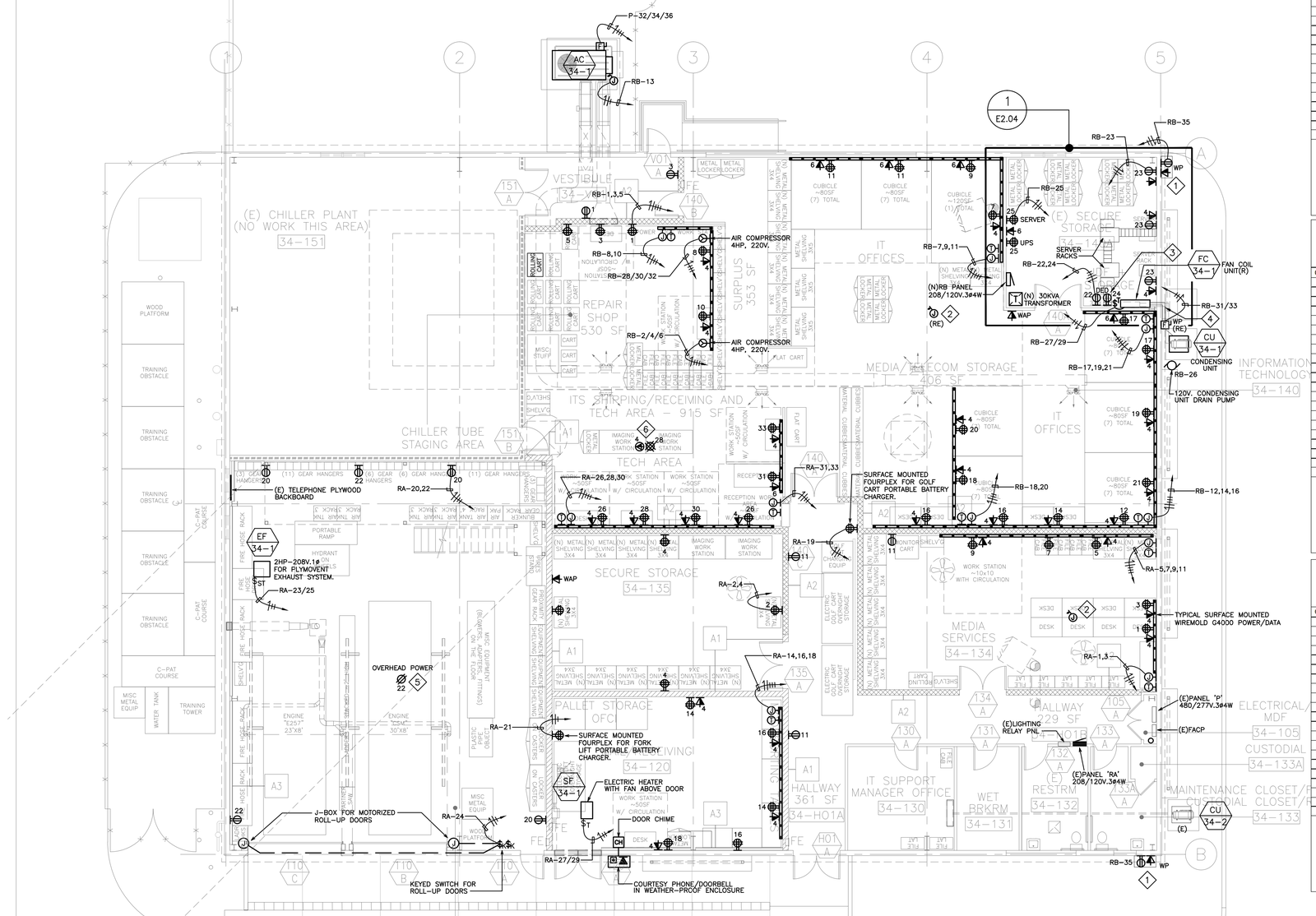
E2.01

GENERAL NOTES:

1. REMOVE ALL BRANCH WIRING FROM EXISTING FLOOR MOUNTED JUNCTION BOXES AND PROVIDE BLANK COVER.

KEYED NOTES:

1. (2) EXTERIOR POWER/DATA JACKS MOUNTED AT 9 FT. HIGH BELOW ROOF–LINE IN WEATHER–PROOF ENCLOSURE FOR CCTV CAMERA SYSTEM.
2. RELOCATE EXISTING CEILING FANS. SEE HVAC DRAWING AC1.01 FOR EXACT LOCATION.
3. POWER STRIP MOUNTED ON SERVER RACK FRAME. VERIFY AND COORDINATE EXACT LOCATION OF SERVER RACKS.
4. CONTROL WIRING BY ELECTRICAL IN 3/4"CONDUIT.
5. MOUNT TO STRUCTURAL STEEL, COORDINATE MOUNTING AND EXACT LOCATION IN FIELD.
6. FED FROM CONDUIT ABOVE, COORDINATE MOUNTING AND EXACT LOCATION IN FIELD.



1 E2.02 **FLOOR PLAN – BUILDING 34**

1/8"=1'–0"

NORTH

Panel (E) P	Voltage 277/480V, 3PH, 4W	Ground bus X
Bus 225A	KAIC	Isolated Ground Bus
Main	Location RM.34-105	Neutral 100 %
Lugs	Mounting SURFACE	
NEMA 1		

Ckt.	Description	CB	Type	Load	Ph.	Load	Type	CB	Description	Ckt.
1	Overhead light	20/1	L	1152	A	1792	L	20/1	Overhead light	2
3	Overhead light	20/1	L	1152	B	1152	L	20/1	Overhead light	4
5	Overhead light	20/1	L	1795	C	4400	L	20/1	Exterior Lighting	6
7	Overhead light Engine Room	20/1	L	1000	A	1000	L	20/1	Exit & Emergency Lighting	8
9	Overhead light Engine Room	20/1	L	1000	B				Space	10
11			H	5540	C	5540	H			12
13	EF-1	40/3	H	5540	A	5540	H	40/3	EF-2	14
15			H	5540	B	5540	H			16
17	Space				C	16620	M			18
19	Storage Room lights	20/1	L	1000	A	16620	M	100/3	Sub-feed to child care center	20
21	Space				B	16620	M			22
23	Space				C				Space	24
25			M	8164	A	13950	M			26
27	(N) Transformer feeding Panel 'RB'	50/3	M	7814	B	9750	M	70/3	Transformer feeding Panel 'RA'	28
29			M	6214	C	9550	M			30
31					A	4515	H			32
33					B	4515	H	30/3	AC-34-1	34
35					C	4515	H			36
37					A					38
39					B					40
41					C					42

Type:		Connected	Demand	Ph.	
C	Computer	-	-	A	60273
H	HVAC	46,785	48,170	B	53083
K	Kitchen	-	-	C	54174
L	Lighting	15,443	19,304		
M	Misc.	105,302	105,302		
R	Recept.	-	-		
	Total	167,530	172,776 = 208		Amps

Panel (E) RA	Voltage 208/120V, 3PH, 4W	Ground bus X
Bus 225A	KAIC 12	Isolated Ground Bus
Main 125/3P	Location RM.34-105	Neutral 100 %
Lugs	Mounting SURFACE	
NEMA 1		

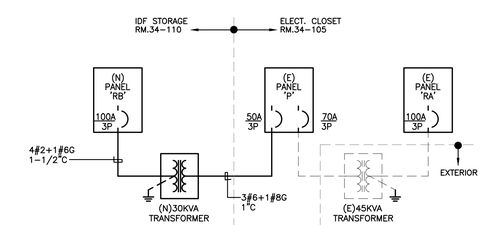
Ckt.	Description	CB	Type	Load	Ph.	Load	Type	CB	Description	Ckt.
1	Media Services Stations - Wiremold	20/1	C	350	A	700	R	20/1	Secured storage	2
3	Media Services Stations - Wiremold	20/1	C	350	B	700	R	20/1	Secured storage	4
5	Media Services Stations - Wiremold	20/1	C	350	C			20/1	Spare	6
7	Media Services Stations - Wiremold	20/1	C	350	A			20/1	Spare	8
9	Media Services Stations - Wiremold	20/1	C	350	B			20/1	Spare	10
11	Media Services Receptacle	20/1	C	1050	C			20/1	Spare	12
13	Spare	20/1			A	700	R	20/1	Mail Room Sorting Wiremold	14
15	Spare	20/1			B	700	R	20/1	Mail Room Sorting Wiremold	16
17	Spare	20/1			C	350	R	20/1	Mail Room Work Station	18
19	Golf Cart Portable Charging Station	20/1	R	1000	A	1000	R	20/1	Engine Room Receptacles	20
21	Fork Lift Portable Charging Station	20/1	R	1000	B	1000	R	20/1	Engine Room Receptacles	22
23	EF-34-1	20/2	H	1000	C	1000	R	20/1	Engine Room Roll-up Doors	24
25			H	1000	A	350	C	20/1	ITS Tech Area Wiremold	26
27	SF-34-1	30/2	H	1500	B	700	C	20/1	ITS Tech Area Wiremold	28
29			H	1500	C	350	C	20/1	ITS Tech Area Wiremold	30
31	ITS Tech Area Wiremold	20/1	C	350	A			20/1	Spare	32
33	ITS Tech Area Wiremold	20/1	C	350	B			20/1	Spare	34
35	Spare	20/1			C			20/1	Spare	36
37	Spare	20/1			A			20/1	Spare	38
39	Spare	20/1			B			20/1	Spare	40
41	Spare	20/1			C			20/1	Spare	42

Type:		Connected	Demand	Ph.	
C	Computer	4,900	2,450	A	5800
H	HVAC	5,000	5,375	B	6650
K	Kitchen	-	-	C	5600
L	Lighting	-	-		
M	Misc.	-	-		
R	Recept.	8,150	8,150		
	Total	18,050	15,975 = 44		Amps

Panel RB	Voltage 208/120V, 3PH, 4W	Ground bus X
Bus 100A	KAIC 10	Isolated Ground Bus
Main 100A/3P	Location RM.34-110	Neutral 100 %
Lugs	Mounting SURFACE	
NEMA 1		

Ckt.	Description	CB	Type	Load	Ph.	Load	Type	CB	Description	Ckt.
1	Repair Shop Work Stations	20/1	R	1000	A	982	M			2
3	Repair Shop Work Stations	20/1	R	1000	B	982	M	40/3	Repair Shop Air Compressor #1	4
5	Repair Shop Work Stations	20/1	R	350	C	982	M			6
7	IT Offices Work Station Wiremold	20/1	C	350	A	350	R	20/1	Repair Shop Work Station	8
9	IT Offices Work Station Wiremold	20/1	C	350	B	350	R	20/1	Repair Shop Work Station	10
11	IT Offices Work Station Wiremold	20/1	C	700	C	350	C	20/1	IT Offices Work Station Wiremold	12
13	Duct Detector	20/1	H	350	A	350	C	20/1	IT Offices Work Station Wiremold	14
15	Spare	20/1			B	700	C	20/1	IT Offices Work Station Wiremold	16
17	IT Offices Work Station Wiremold	20/1	C	350	C	350	C	20/1	IT Offices Work Station Wiremold	18
19	IT Offices Work Station Wiremold	20/1	C	350	A	350	C	20/1	IT Offices Work Station Wiremold	20
21	IT Offices Work Station Wiremold	20/1	C	350	B	350	C	20/1	IDF Room Server Rack	22
23	IDF Room	20/1	C	350	C	350	C	20/1	IDF Room Server Rack	24
25	IDF Room	20/1	C	350	A	1000	H	20/1	Condenser Unit Drain Pump	26
27	FC-34-1	30/2	H	1000	B	982	M			28
29			H	1000	C	982	M	40/3	Repair Shop Air Compressor#2	30
31	CU-34-1	30/2	H	1750	A	982	M			32
33			H	1750	B			20/1	Spare	34
35	Exterior CCTV	20/1	M	450	C			20/1	Spare	36
37	Spare	20/1			A			20/1	Spare	38
39	Spare	20/1			B			20/1	Spare	40
41	Spare	20/1			C			20/1	Spare	42

Type:		Connected	Demand	Ph.	
C	Computer	5,950	2,975	A	8164
H	HVAC	6,850	7,288	B	7814
K	Kitchen	-	-	C	6214
L	Lighting	-	-		
M	Misc.	6,342	6,342		
R	Recept.	3,050	3,050		
	Total	22,192	19,655 = 55		Amps



2 E2.02 **PARTIAL ELECTRICAL SINGLE-LINE**

ARCHITECT OF RECORD

noll & tam architects and planners

729 Heinz Avenue
Berkeley, CA 94710
510.649.8295
fax 510.649.3008

CONSULTANTS

CUPERTINO ELECTRIC

1740 CESAR CHAVEZ ST.
SAN FRANCISCO, CA.
(415)970–3400
C–10 LIC.NO. 174637

REGISTERED PROFESSIONAL ENGINEER
DAN BORESCH
E18955
12/31/11
RENEWAL DATE
ELECTRICAL
STATE OF CALIFORNIA

2/4/11

CONSTRUCTION DOCUMENTS

COLLEGE OF SAN MATEO

BUILDING 34 MODERNIZATION

SMCCCD
3401 CSM Drive
San Mateo, CA 94402

College of San Mateo
1700 W. Hillsdale Blvd.
San Mateo, CA 94402

SHEET TITLE

BUILDING 34 POWER/SIGNAL FLOOR PLAN

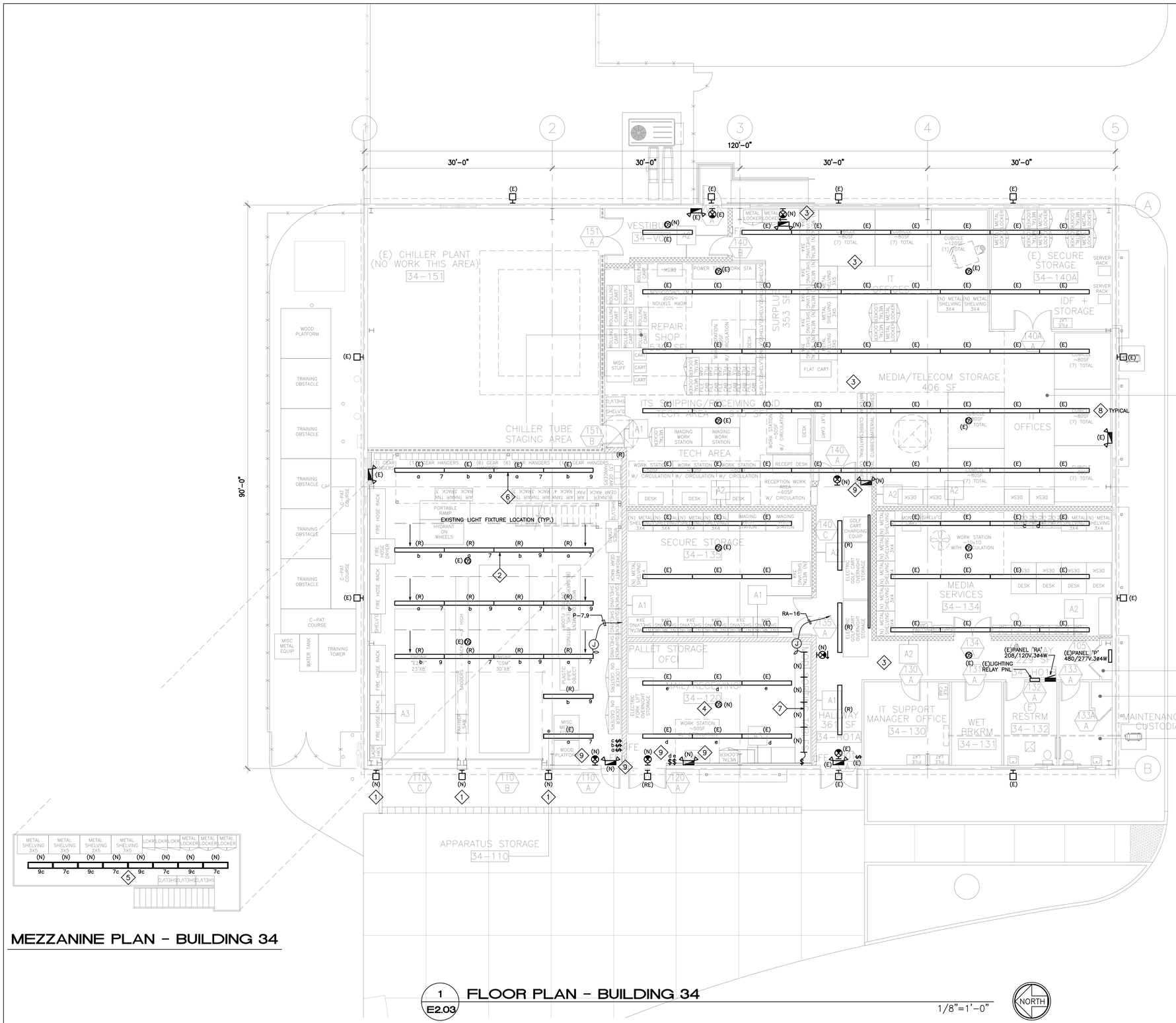
REVISIONS

NO.	DATE	DESCRIPTION
	10/28/10	50% CD
	12/03/10	90% CD
	01/18/11	PROGRESS SET
	01/26/11	CONSTRUCTION SET
	02/04/11	CONSTRUCTION SET

DATE	FEBRUARY 04, 2011
DRAWN	RF
CHECKED	GG
SCALE	1/8" = 1'–0"
N&T JOB NO.:	2901.4

SHEET NUMBER

E2.02



MEZZANINE PLAN - BUILDING 34

1 E2.03 FLOOR PLAN - BUILDING 34

1/8"=1'-0"

NORTH

KEYED NOTES:

1. NEW EXTERIOR WALL MOUNTED LIGHT FIXTURE WITH RED LENS REFLECTOR COVER. TO BE FED FROM EXISTING EXTERIOR LIGHTING CIRCUIT ON PANEL 'P'.
2. RELOCATE & SHIFT DOWN EXISTING LIGHT FIXTURES IN THIS AREA TO ACCOMODATE CLEARANCE FOR MEZZANINE STAIR AREA.
3. ALL EXISTING LIGHTING CONTROL IN THIS AREA TO REMAIN.
4. VERIFY AND COORDINATE CEILING HEIGHT IN THIS AREA.
5. NEW 1'x4' LIGHT FIXTURES MOUNTED BELOW MEZZANINE LEVEL.
6. ALLOW OVERHEAD CLEARANCE FOR MEZZANINE LIGHTING IN THIS AREA.
7. NEW 4' STRIP LIGHTS IN SORTING TABLE AREA.
8. ALL EXISTING LIGHT FIXTURES @ 12' AFF.
9. ALL NEW EXIT SIGNS AND EM LIGHTS TO BE FED FROM EXISTING CIRCUITS.

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DAN BORESCH
E18955
12/31/11
RENEWAL DATE
ELECTRICAL
STATE OF CALIFORNIA
2/4/11

CONSTRUCTION DOCUMENTS

COLLEGE OF SAN MATEO

BUILDING 34 MODERNIZATION

SMCCCD
3401 CSM Drive
San Mateo, CA 94402

College of San Mateo
1700 W. Hillsdale Blvd.
San Mateo, CA 94402

SHEET TITLE

BUILDING 34 LIGHTING FLOOR PLAN

REVISIONS

NO.	DATE	DESCRIPTION
	10/28/10	50% CD
	12/03/10	90% CD
	01/18/11	PROGRESS SET
	01/26/11	CONSTRUCTION SET
	02/04/11	CONSTRUCTION SET

DATE	FEBRUARY 04, 2011
DRAWN	RF
CHECKED	GG
SCALE	1/8" = 1'-0"
N&T JOB NO.:	2901.4

SHEET NUMBER

E2.03

Fire Alarm System For

COLLEGE OF SAN MATEO BUILDING 34

1700 W. Hillsdale Boulevard
San Mateo, California 94403

DRAWING INDEX

SHEET NUMBER	SHEET TITLE	CAD FILE NAME
FA-01	COVER SHEET/ FIRE ALARM EQUIPMENT LIST/ SCOPE OF WORK	44OP-083436.DWG
FA-02	MISCELLANEOUS NOTES/ EXISTING SEQUENCE OF OPERATIONS	44OP-083436.DWG
FA-03	EXISTING MXL PANEL AND UPDATED CALCULATIONS	44OP-083436.DWG
FA-04	WIRING OF DEVICES	44OP-083436.DWG
FA-05	BUILDING 34 FIRE ALARM RISER DIAGRAM	44OP-083436.DWG
FA-06	FIRE ALARM PLAN BUILDING 34	44OP-083436.DWG

FIRE ALARM EQUIPMENT LIST

CATE-GORY	ITEM NO.	SYMBOL	QTY	MODEL NUMBER	DESCRIPTION	MANUFACTURER	DATA SHEET NUMBER	CALIFORNIA STATE FIRE MARSHAL LISTING NUMBER
	1	F	2	MSI-10B	INTELLIGENT MANUAL PULL STATION	SIEMENS	6187	7150-0067:0036
	2	SD	1	FP-11	INTELLIGENT SMOKE DETECTOR	SIEMENS	6175	7272-0067:0203
	3		1	DB-11	DETECTOR BASE FOR FP-11	SIEMENS	6175	7300-0067:0134
	4		1	ILP-1	INTELLIGENT PHOTOELECTRIC DETECTOR	SIEMENS	6164	7272-0067:0162
	5		1	AD-3ILP	AIR DUCT HOUSING FOR ILP-1	SIEMENS	6124	3240-0067:0116
	6	DD WP	1	STA-2	SAMPLING TUBE FOR DUCTS 9" TO 1'9"	SIEMENS	6124	----
	7		1	DA-X3SR	REALAY BOARD FOR AD-3ILP	SIEMENS	6124	----
	8		1	EAD-3	WEATHER PROOF ENCLOSURE FOR DUCT HOUSING	SIEMENS	6124	----
	9	SL 15cd	4	STR	MULTI CANDELA WALL-MOUNTED STROBE, 15cd	WHEELOCK	---	7125-0785:0168
	10	SL 30cd			MULTI CANDELA WALL-MOUNTED STROBE, 30cd	WHEELOCK	---	7125-0785:0168
	11	SL 75cd			MULTI CANDELA WALL-MOUNTED STROBE, 75cd	WHEELOCK	---	7125-0785:0168
	12	SL 110cd			MULTI CANDELA WALL-MOUNTED STROBE, 110cd	WHEELOCK	---	7125-0785:0168
	13	15cd	2	HSR	MULTI CANDELA WALL-MOUNTED HRON/STROBE, 15cd	WHEELOCK	---	7125-0785:0168
	14	30cd			MULTI CANDELA WALL-MOUNTED HORN/STROBE, 30cd	WHEELOCK	---	7125-0785:0168
	15	75cd			MULTI CANDELA WALL-MOUNTED HORN/STROBE, 75cd	WHEELOCK	---	7125-0785:0168
	16	110cd			MULTI CANDELA WALL-MOUNTED HORN/STROBE, 110cd	WHEELOCK	---	7125-0785:0168

GENERAL ELECTRICAL NOTES

1. ALL WIRING AND INSTALLATION MUST CONFORM WITH PROJECT SPECIFICATIONS, APPLICABLE CODE SUMARIES. DRAWINGS AND REQUIREMENTS ADOPTED BY NFPA.

2. SMOKE DETECTORS SHALL NOT BE LOCATED IN A DIRECT AIRFLOW NOR CLOSER THAN 3 FEET FROM AIR SUPPLY DIFFUSER OR RETURN AIR OPENING PER NFPA 72 2010 EDTION.

3. ALL SMOKE DETECTORS AND INITIATING DEVICES WIRING SHALL BE INSTALLED MINIMUM 3 FEET FROM ELECTRONIC BALLAST (LIGHTING FIXTURES).

4. WHEN INSTALLING INITIATING AND NOTIFICATION DEVICES, POLARITY MUST BE OBSERVED.

5. ALL NOTIFICATION CIRCUIT WIRES MUST BE SUPERVISED. HENCE, NO PARALLEL BRANCHING OF WIRES IS PERMISSIBLE (T-TAPPING). ALL AUDIBLE SIGNALING DEVICES SHALL PRODUCE A DISTINCTIVE THREE-PULSE TEMPORAL TONE, AUDIBLE SIGNALS SHALL HAVE A SOUND LEVEL OF NOT LESS THAN 75dbA AT 10' OR AT LEAST 15dbA ABOVE THE AVERAGE AMBIENT SOUND LEVEL, WHICHEVER IS GRATER , BUT NOT MORE THAN 110dbA AT THE MINIMUM HEARING DISTANCE FROM THE AUDIBLE APPLIANCE (PER NFPA 72 2010 ED.) WHEN MORE THAN TWO (2) VISUAL DEVICES ARE IN THE SAME VIEWING PLANE THE VISUAL DEVICES SHALL BE SYNCHRONIZED AS REQUIRED BY NFPA 2010 EDITION.

6. DO NOT INSTALL ADDRESSABLE DEVICES PRIOR TO PROGRAMMING. (SEE NOTE 15)

7. ALL 24 VDC WIRE TO BE INSTALLED IN DEDICATED CONDUIT SEPARATE FROM 120 VAC WIRING, IN ACCORDANCE WITH CURRENT NATIONAL AND STATE ELECTRICAL CODES.

8. CONDUIT SIZING TO BE DETERMINED BY THE ELECTRICAL CONTRACTOR AND SHALL CONFORM TO CONDUIT FILL CAPACITIES AS PER REQUIREMENTS OF CURRENT EDITIONS OF NATIONAL AND STATE ELECTRICAL CODES.

9. DO NOT APPLY 120 VAC POWER TO CONTROL PANEL UNTIL A SIEMENS FIRE SAFETY SERVICE TECHNICIAN HAS INSPECTED ALL SYSTEM WIRING CONNECTIONS AND HAS APPROVED THE SYSTEM TO BE TURNED ON.

10. ALL PLUG-IN TYPE DETECTORS REQUIRE A 4" OCTAGONAL, 1-1/2"" OR DEEPER MOUNTING BOX. REFER TO DETAIL DRAWINGS FOR DEVICE WIRING AND MOUNTING CONDITIONS.

11. 120 VAC INPUT CONNECTIONS TO THE FIRE ALARM CONTROL PANEL LIGHT AND POWER SERVICE SHALL BE ON DEDICATED BRANCH CIRCUIT(S). THE CIRCUIT(S) AND CONNECTIONS SHALL BE MECHANICALLY PROTECTED. CIRCUIT DISCONNECTION MEANS SHALL HAVE A RED MARKING, SHALL BE ACCESSIBLE ONLY TO AUTHORIZED PERSONNEL, AND SHALL BE IDENTIFIED AS FIRE ALARM CIRCUIT CONTROL. THE LOCATION OF THE CIRCUIT DISCONNECTING MEANS SHALL BE PERMANENTLY IDENTIFIED AT THE FIRE ALARM CONTROL UNIT.

12. INSTALLATION MATERIALS SUCH AS CONDUITS, FITTINGS, JUNCTION BOXES, TERMINAL CABINETS, PULL BOXES, HANGERS, ETC. ARE SUPPLIED AND INSTALLED BY THE ELECTRICAL CONTRACTOR. ALL WIRING IS TO BE FROM DEVICE TERMINAL TO DEVICE TERMINAL SPLICES AND WIRE NUTS ARE NOT ACCEPTABLE.

13. ANY DEVIATION FROM THE DESIGN AND LOCATION OF EQUIPMENT SHOWN MUST FIRST HAVE A WRITTEN APPROVAL FROM SIEMENS FIRE SAFETY. ANY DEVIATION FROM DESIGN MUST ALSO BE INDICATED ON SIEMENS FIRE SAFETY SHOP DRAWINGS (BLUEPRINTS) AND RETURNED TO SIEMENS FIRE SAFETY AT TIME OF JOB COMPLETION.

14. SHOWN IN THIS DRAWING SET IS SIEMENS FIRE SAFETY ENGINEERED FIRE ALARM SYSTEM PER CONTRACTUAL DESIGN DRAWINGS AND SPECIFICATIONS.

a) CONTRACTOR SHALL NOT DEVIATE BY NOT MORE THAN 5% FROM THE FINAL APPROVED SHOP DRAWINGS.

b) WIRE RUNS HAVE BEEN ENGINEERED TO COMPLY WITH SPECIFIC VOLTAGE DROP REQUIREMENTS. ANY DEVIATION FROM SHOWN WIRE RUNS WHICH RESULTS IN NONCOMPLIANCE WITH VOLTAGE DROP REQUIREMENTS SHALL BE THE SOLE RESPONSIBILITY OF THE ELECTRICAL CONTRACTOR.

c) THESE SUBMITTED SHOP DRAWINGS ARE COMPLETE. SIEMENS FIRE SAFETY SHALL NOT BEAR ANY ADDITIONAL COSTS OF RE-ENGINEERING RECORD DRAWINGS (AS-BUILTS).

15. ALL SMOKE DETECTORS (NEW OR EXISTING) SHALL BE PROTECTED FROM DUST AND DEBRIS DURING CONSTRUCTION. SMOKE-SENSING DETECTORS SHALL NOT BE INSTALLED UNTIL AFTER THE CONSTRUCTION CLEANUP OF ALL TRADES IS COMPLETE AND FINAL. PER NFPA 72 2010 EDITION.

Exception: WHERE REQUIRED BY THE AUTHORITY HAVING JURISDICTION FOR PROTECTION DURING CONSTRUCTION. DETECTORS THAT HAVE BEEN INSTALLED DURING CONSTRUCTION AND FOUND TO HAVE A SENSITIVITY OUTSIDE THE LISTED AND MARKED SENSITIVITY RANGE SHALL BE CLEANED OR REPLACED AT AN ADDITIONAL COST TO THE CONTRACTOR.

16. POWER SERVICES SHALL BE ON A DEDICATED BRANCH CIRCUIT WIT A RED MARKING AND IDENTIFIED AS "FIRE ALARM CIRCUIT CONTROL"

17. PROVIDE TEMPORAL-THREE DISTINCTIVE FIRE ALARM SOUND.

18. THE STROBE FLASH RATE SHALL NOT EXCEED TWO (2) FLASHES PER SECOND NOR BE LESS THAN ONE FLASH PER SECOND.

19. FINAL FIRE ALARM TEST SHALL BE MADE WITH THE DSA INSPECTOR OF RECORD (IOR). LOCAL FIRE AUTHORITY SHALL BE NOTIFIED OF DATE AND TIME OF FINAL FIRE ALARM TESTING AND SHALL ASSIST/WITNESS SUCH TESTING WHEN ABLE.

20. FIRE ALARM CONTRACTOR SHALL PROVIDE A "RECORD OF COMPLETION" TO THE INSPECTOR OF RECORD (IOR)/DSA AFTER COMPLETION OF OPERATIONAL ACCEPTANCE TEST.

SCOPE OF WORK

Presented herein is the fire alarm system modifications for the building remodel which include a slight reconfiguring of notification devices and the addition of two pull stations. System status changes report to the campus fire alarm system and will then be sent to the existing campus monitoring company.

MXL - FIRE ALARM SYSTEM WIRING GUIDELINES

1. ALL WIRING MUST COMPLY WITH LOCAL AND CALIFORNIA ELECTRICAL CODES. ALL WIRING MUST BE DONE AS DESCRIBED IN NOTES 2 & 6 BELOW, TO OBTAIN SAFE AND PROPER SYSTEM OPERATION.

2. EARTH GROUND THE MXL ENCLOSURE PROPERLY; SEE LATEST EDITION OF NATIONAL ELECTRICAL CODES FOR APPROVED METHODS. CONDUIT GROUND IS NOT ADEQUATE.

3. SEPARATE ALL WIRING FOR INITIATING DEVICES (i.e., DETECTORS, MANUAL STATIONS, TRI MODULES, ETC) FROM ALL OTHER WIRING IN THE MXL-IQ ENCLOSURE.

4. INSULATE ALL CABLE DRAIN WIRES FROM ANY CONDUIT OR OTHER EARTH GROUNDED ELECTRICAL BOX, INCLUDING THOSE IN THE MXL ENCLOSURE.

5. CONNECT SHIELD CABLE DRAIN WIRE ONLY AT SPECIFIED LOCATION INSIDE THE MXL ENCLOSURE.

6. EARTH GROUND ALL CONDUIT RUNS THROUGHOUT THE INSTALLATON.

7. LINE RESISTANCE IS MEASURED AT THE ALD-2I MODULE SCREW TERMINALS. THE END OF THE LOOP MUST BE SHORTED, THE ALD-2I MODULE MUST BE REMOVED FROM THE SCREW TERMINALS, AND NO ADDRESSABLE DEVICES MAY BE INSTALLED.

8. LINE CAPACITANCE IS MEASURED AT THE ALD-2I MODULE SCREW TERMINALS THE END OF THE LOOP(S) MUST BE OPEN. THE ALD-2I MODULE MUST BE REMOVED FROM THE SCREW TERMINALS AND NO ADDRESSABLE DEVICES MAY BE INSTALLED.

9. ALL 110/120 VAC CIRCUITS SHALL BE INSTALLED IN DEDICATED CONDUIT.

10. ALD-2I LOOP WIRING MUST NOT BE IN THE SAME CONDUIT AS CODED AUDIBLE WIRING.

11. ALL INITIATING CIRCUITS ARE RATED POWER LIMITED AND SHALL BE WIRED IN ACCORDANCE WITH APPLICABLE CODES.

12. UNDERGROUND WIRING IS PERMISSIBLE IF ALL NEC WIRING REQUIREMENTS ARE MET.

13. OVERHEAD OR EXTERIOR WIRING IS NOT RECOMMENDED.

CODE SUMMARY

2010	CALIFORNIA BUILDING STANDARDS ADMINISTRATIVE CODE PART 1, TITLE 24, CALIFORNIA CODE OF REGULATIONS (CCR)
2010	CALIFORNIA BUILDING CODE PART 2, TITLE 24, CCR (2009 IBC AND 2010 CALIFORNIA AMENDMENTS)
2010	CALIFORNIA ELECTRICAL CODE PART 3, TITLE 24, CCR (2008 NEC AND 2010 CALIFORNIA AMENDMENTS)
2010	CALIFORNIA MECHANICAL CODE PART 4, TITLE 24, CCR (2009 UMC AND 2010 CALIFORNIA AMENDMENTS)
2010	CALIFORNIA PUMBING CODE PART 5, TITLE 24, CCR (2009 UPC AND 2010 CALIFORNIA AMENDMENTS)
2010	CALIFORNIA FIRE CODE PART 9, TITLE 24, CCR (2009 IFC AND 2010 CALIFORNIA AMENDMENTS)
2010	NFPA 72 NATIONAL FIRE ALARM CODE AND ALL AMENDMENTS IN ADDITIONS TO THE ABOVE

BUILDING CONDITIONS

PROJECT LOCATION:
COLLEGE OF SAN MATEO
1700 WEST HILLDALE BOULEVARD
SAN MATEO, CA 94402

BUILDING OWNER:
SAN MATEO COUNTY COMMUNITY COLLEGE DISTRICT
3401 CSM DRIVE SAN MATEO, CA 94402
TEL. 650-574-6512

ARCHITECT OF RECORD
noll & tam
architects and planners
729 Heinz Avenue
Berkeley, CA 94710
510.649.8295
fax 510.649.3008

STAMP

CONTRACTOR'S NAME & ADDRESS:
CUPERTINO ELECTRIC INC.
1740 Cesar Chavez Street
San Francisco, CA 94124
Tel 415.970.3400 Fax 415.970.3434

PRODUCT MANUFACTURER:
SIEMENS Industry Inc.
SAN FRANCISCO BRANCH
25821 Industrial Boulevard, Suite 300
Hayward, California 94545-2991
Tel (510) 783-6000 Fax (510) 293-2100
California State C10 License No. 758796
U.L. Certificate ID No. 324787-001

COLLEGE OF SAN MATEO
BUILDING 34 MODERNIZATION
SMCCCD
3401 CSM Drive
San Mateo, CA 94402
College of San Mateo
1700 W. Hillsdale Blvd.
San Mateo, CA 94402

SHEET TITLE
COVER/ DRAWING INDEX/ EQUIPMENT LIST

REVISIONS

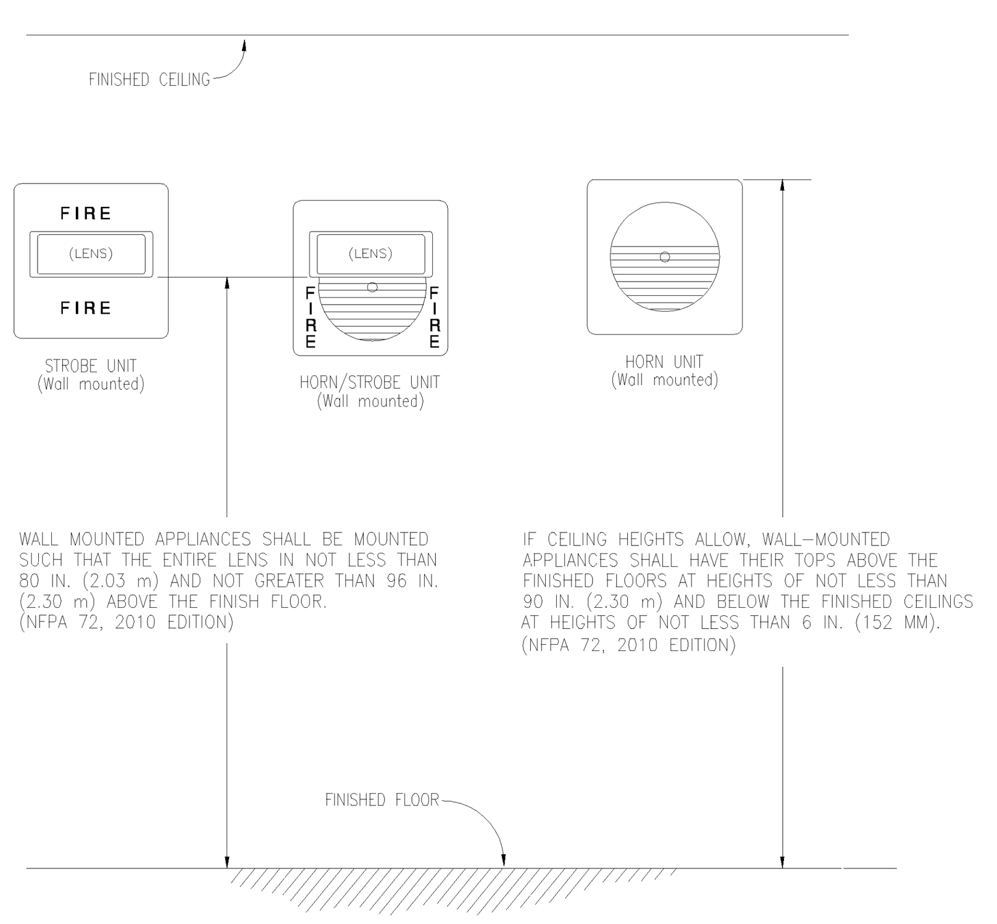
NO.	DATE	DESCRIPTION
	02/04/11	CONSTRUCTION SET

DATE	FEBRUARY 04, 2011
DRAWN	RB
CHECKED	MM
SCALE	NA
N&T JOB NO.:	2901.4

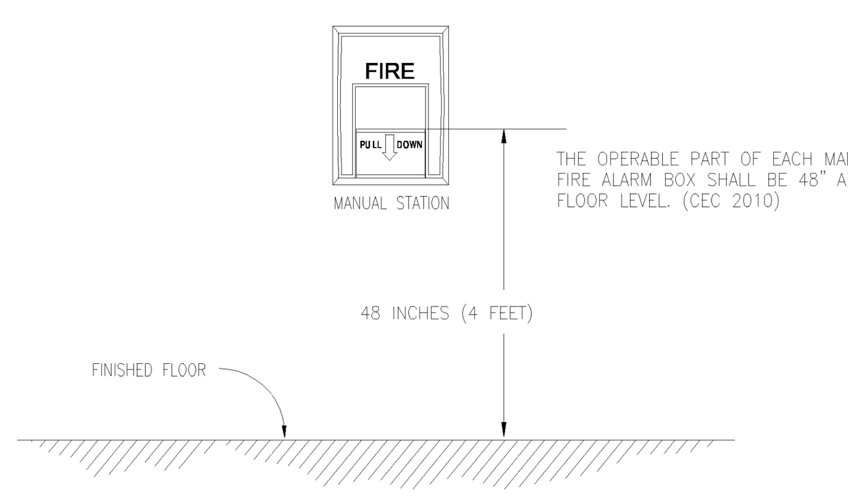
SHEET NUMBER
FA-01

JOB NUMBER: 44OP-083436
NET NUMBER: 5284222

MOUNTING DETAILS



TYPICAL ELEVATION DETAIL OF AUDIBLE & VISUAL ALARM DEVICE

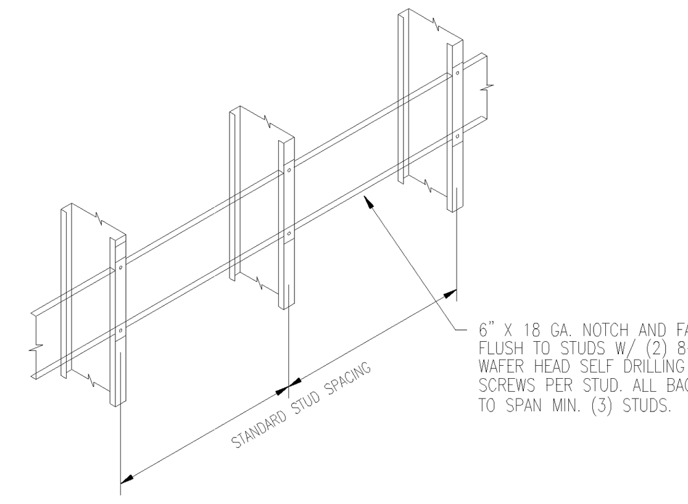


TYPICAL ELEVATION DETAIL OF MANUAL PULL STATION

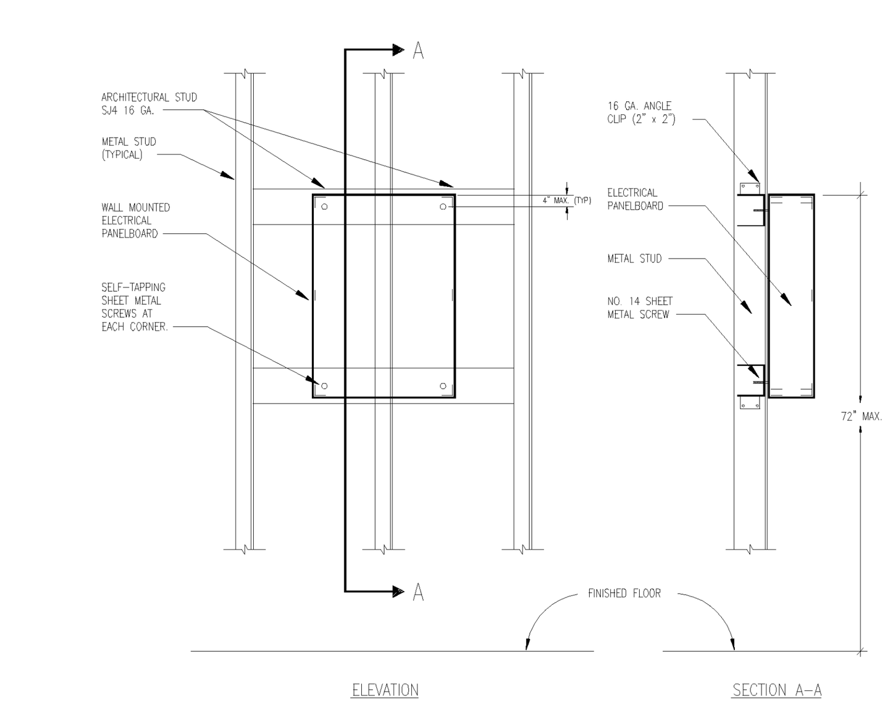
PANEL ANCHORAGE NOTE

ATTACHMENT OF EQUIPMENT WEIGHING LESS THAN 400 LBS. AND SUPPORTED DIRECTLY ON FLOOR OR ROOF STRUCTURE, FURNITURE OR TEMPORARY OR MOVABLE EQUIPMENT AND EQUIPMENT WEIGHING LESS THAN 20 LBS. THAT IS SUPPORTED BY VIBRATION ISOLATION DEVICES SUSPENDED FROM ROOF, WALL OR FLOOR NEED NOT BE DETAILED ON PLANS (CBC TITLE 24, PART 2, SECTION 1630A.1). HOWEVER, SUCH EQUIPMENT MUST BE SUPPORTED AND ANCHORED TO RESIST FORCES PRESCRIBED BY SECTION 1630A.2 AND THE ANCHORAGE SHALL BE APPROVED BY THE STRUCTURAL ENGINEER OF RECORD AND OSHPD AS PART OF FIELD REVIEWS/INSPECTIONS. THE INSPECTOR OF RECORDS SHALL ASSURE THAT THE ABOVE REQUIREMENTS ARE ENFORCED.

THE PS-12/24-8 POWER BOOSTER PANELS EACH WEIGHS LESS THAN 20 LBS. INCLUDING BATTERIES.



Metal Backing Gypsum Board Wall For Panel Mounting



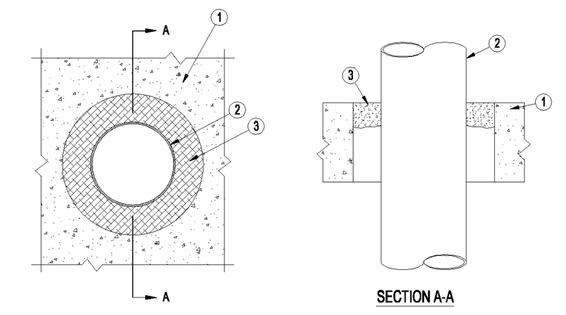
Panelboard Mounting Detail

TYPICAL MOUNTING OF EQUIPMENT WEIGHING OVER 20 LBS. (120 LBS MAXIMUM)

THROUGH-PENETRATION FIRESTOP SYSTEM DETAILS

SYSTEM NO. CAJ1027 (FORMERLY SYSTEM NO. 202)

F RATING - 3 HOUR
T RATING - 0 HOUR



1. FLOOR OR WALL ASSEMBLY - MIN 4-1/2 IN. THICK LIGHTWEIGHT OR NORMAL WEIGHT CONCRETE. WALL MAY ALSO BE CONSTRUCTED OF ANY UL CLASSIFIED CONCRETE BLOCKS. MAX THROUGH OPENING SIZE IS 12.4 SQ. IN.

SEE CONCRETE BLOCKS (CAZT) CATEGORY IN FIRE RESISTANCE DIRECTORY FOR NAMES OF MANUFACTURERS.

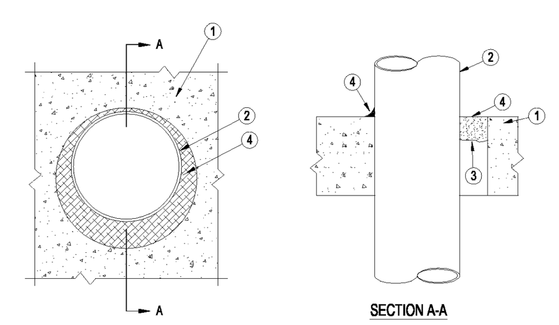
2. PIPE OR CONDUIT - NOM. 10 IN. DIA. (OR SMALLER) SCHEDULE 10 (OR HEAVIER) STEEL PIPE, NOM 6 IN. DIA. (OR SMALLER) RIGID STEEL CONDUIT, NOM 4 IN. DIA. (OR SMALLER) STEEL EMT OR NOM 3 IN. DIA. (OR SMALLER). TYPE L (OR HEAVIER) COPPER PIPE. MAX ONE PIPE OR CONDUIT PER THROUGH OPENING. MAX ANNULAR SPACE BETWEEEN PIPE OR CONDUIT AND EDGE OF OPENING IS 3/4 IN. MIN ANULAR SPACE BETWEEN PIPE OR CONDUIT AND EDGE OF OPENING IS 0 IN. (POINT CONTACT). PIIPE OR CONDUIT TO BE RIGIDLY SUPPORTED ON BOTH SIDES OF FLOOR OR WALL ASSEMBLY.

3. FILL VOID OR CAVITY MATERIALS - PUTTY-MOLDABLE PUTTY MATERIAL KNEEDED BY HAND AND APPLIED TO FILL ANNULAR SPACE TO A MIN DEPTH OF 1 IN FLUSH WITH TOP SURFACE OF FLOOR. IN WALL ASSEMBLIES, REQUIRED PUTTTY THICKNESS TO BE INSTALLED SYMMETRICALLY ON BOTH SIDES OF WALL.

MINNESOTA MINING & MFG. CO.- MPS-2+.
*BEARING THEUL CLASSIFICATION MARKING.

SYSTEM NO. CAJ1044 (FORMERLY SYSTEM NO 319)

T RATING - 0 HR
L RATING AT AMBIENT - 2 CFM/SQ FT (SEE ITEM 4)
L RATING AT 400 F - LESS THAN 1 CFM/SQ FT (SEE ITEM 4)



1. FLOOR WALL ASSEMBLY-LIGHTWEIGHT OR NORMAL WEIGHT (100-150 PCF) CONCRETE. EXCEPT AS NOTED IN TABLE UNDER ITEM 4, MIN THICKNESS OF SOLID CONCRETE FLOOR OR WALL ASSEMBLY IS 4-1/2 IN. FLOOR MAY ALSO BE CONSTRUCTED OF ANY MIN 6 IN. THICK UL CLASSIFIED HOLLOW-CORE. PRECOAT CONCRETE UNITS. WHEN FLOOR IS CONSTRUCTED OF HOLLOW-CORE PRECOAT CONCETE UNITS, PACKING MATERIALS (ITEM 3) AND CAULK FILL MATERIAL (ITEM 4) TO BE INSTALLED SYMETRYCALLY ON BOTH SIDES OF THE FLOOR, FLUSH WITH FLOOR SURFACE. WALL ASSEMBLY MAY ALSO BE CONSTRUCTED OF CLASSIFIED CONCRETE BLOCKS. MAX DIA. OF OPENING IS 32 IN. SEE CONCTRETE BLOCKS (CAZT) AND PRECAST CONCRETE UNITS (CFTV) CATEGORY IN THE FIRE RESISTANCE DIRECTORY FOR NAMES OF MANUFACTURER

1A. STEEL SLEVE - (OPTIONAL NOT SHOWN) NOM 16 IN. (OR SMALLER) SCHEDULE 10 (ORHEAVIER) STEEL SLEEVE CAST OR GROUTED INTO FLOOR OR WALL ASSEMBLY. SLEEVE MAY EXTEND A MAX OF 2 IN. ABOVE TOP FLOOR OR BEYOND EITHER SURFACE OF WALL.

2. PIPE OR CONDUIT - NOM 30 IN.DIA. (OR SMALLER) CAST IRON OR SCHEDULE 10 (OR HEAVIER) STEEL PIPE, NOM 6 IN. DIA. (OR SMALLER) STEEL CONDUIT, NOM 3 IN. DIA. (OR SMALLER) TYPE L (OR HEAVIER) COPPER TUBE OR NOM 4 IN. DIA. (OR SMALLER) STEEL ELECTRICAL METALIC TUBING. MAX ANNU;AR SPACE BETWEEN PIPE OR CONDUIT AND EDGE OF THROUGH OPENING NOT TO EXCEED 2 IM. MIN ANNULAR SPACE BETWEEN PIPE OR CONDUIT AND EDGE OF THROUGH OPENING IS 0 IN. (POINT CONTACT). PIPE OR CONDUIT TO BE RIGIDLY SUPPORTED ON BOTH SIDE OF FLOOR OR WALL ASSEMBLY.

3. PACKING MATERIAL - POLYETHYLENE BACKER ROD OR NOM 1 IN. THICKNESS OF THIGHTLY-PACKRD MINERAL WOOL BATT OR GLASS FIBER INSULATION FIRMLY PACKED INTO OPENING AS A PERMANENT FORM. PACKING MATERIAL TO BE RECESSED FROM TOP SURFACE OF FLOOR OF FROM BOTH SURFACES OF WALL AS REQUIRED TO ACCOMODATE THE REQUIRED THICKNESS OF CAULK FILL MATERIAL (ITEM 4).

4. FILL, VOID OR CAVITY MATERIAL - CAULK - APPLIED TO FILL THE ANNULAR SPACE FLUSH WITH TOP SURFACE OF FLOOR. IN WALL ASSEMBLIES, REQUIRED CAULK THICKNESS TO BE INSTALLED SYMMETRICALLY ON BOTH SIDES OF WALL, FLUSH WITH WALL SURFACE. THE HOURLY F RATING AND THE MIN REQUIRED CAULK THICKNESS ARE DEPENDENT UPON A NUMBER OF PARAMETERS, AS SHOWN ON THE FOLLOWING TABLE.

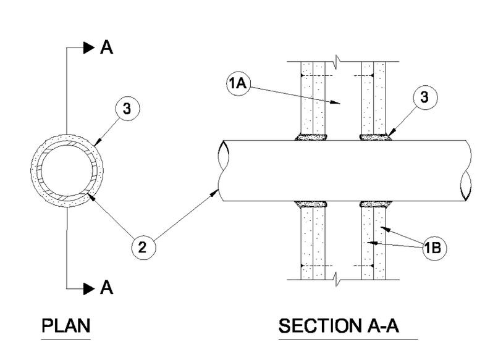
MIN FLOOR OR WALL THKNS, IN	NOM PIPE TUBE OR CONDUIT DIA. IN.	MAX ANNULAR SPACE, IN	MAX CAULK THKNS, IN	F RATING, HR
2-1/2	1/2-12	1-3/8	1/2	2
2-1/2	1/2-12	2-7/8	1	2
4-1/2	1/2-6	1-3/8	1/4(a)	2
4-1/2	1/2-12	1-1/4	1/2	3
4-1/2	1/2-20	2	1	3
4-1/2	22-30	2	2	3
5-1/2	1/2-6	1-3/8	1(b)	4

(a) MIN 2 IN THICKNESS OF MINERAL-WOOL BATT INSULATION REQUIRED IN ANNULAR SPACE.
(b) MIN 1 IN. THICKNESS OF MINERAL-WOOL BATT INSULATION REQUIRED IN ANNULAR SPACE ON BOTH SIDES OF FLOOR OR WALL ASSEMBLY. MIN 1IN. THICKNESS OF CAULK TO BE INSTALLED FLUSH WITH EACH SURFACE FLOOR OR WALL ASSEMBLY.

MINNESOTA MINING & MANUFACTURING CO - TYPES CP-25 WB, CP-25 WB+.
(NOTE: L RATING AND OR USE OF OPTIONAL SLEEVE APPLY ONLY WHEN TYPE CP-25WB + CAULK IS USED).

SYSTEM NO. WL1001 (FORMERLY SYSTEM NO 147)

F RATING - 1 & 2 HOURS
T RATING - 0, 1, 1-1/2 & 2 HOURS



1. WALL ASSEMBLY - THE 1,2,3, OR 4 HR FIRE-RATED GYPSUM WALLBOARD/STUD WALL ASSEMBLY SHALL BE CONSTRUCTED OF THE MATERIALS AND IN THE MANNER DESCRIBED IN THE INDIVIDUAL U300 OR U400 SERIES WALL OR PARTITION DESIGNS IN THE UL FIRE RESISTANCE DIRECTORY AND SHALL INCLUDE THE FOLLOWING CONSTRUCTION FEATURES:
   A. STUDS - WALL FRAMING MAY CONSIST OF EITHER WOOD STUDS (MAX 2 HR FIRE RATED ASSEMBLIES) OR STEEL CHANNEL STUDS. WOOD STUDS TO CONSIST OF NOM 2 BY 4 IN. LUMBER SPACED 16 IN. O.C. WITH NOM 2 BY 4 IN. LUMBER END PLATES AND CROSS BRACES. STEEL STUDS TO BE MIN 3-5/8 IN. WIDE BY 1-3/8 IN. DEEP CHANNELS SPACED MAX 24 O.C.
   B. WALLBOARD GYPSUM * - NOM 1/2 OR 5/8 IN. THICK, 4 FT. WIDE WITH SQUARE OR TAPERED EDGES. THE GYPSUM WALLBOARD TYPE, THICKNESS, NUMBER OF LAYERS, FASTENER TYPE AND SHEET ORIENTATION SHALL BE AS SPECIFIED IN THE INDIVIDUAL U300 OR U400 SERIES DESIGN IN THE UL FIRE RESISTANCE DIRECTORY. MAX DIAM OF OPENING IS 13-1/2 IN.

2. PIPE OR CONDUIT - NOM 12 IN. DIAM (OR SMALLER) SCHEDULE 10 (OR HEAVIER) STEEL PIPE, NOM 12 IN. DIAM (OR SMALLER) SERVICE WEIGHT (OR HEAVIER) CAST IRON SOIL PIPE, NOM 12 IN. DIAM (OR SMALLER) CLASS 50 (OR HEAVIER) DUCTILE IRON PRESSURE PIPE, NOM 6 IN. DIAM (OR SMALLER) STEEL CONDUIT, NOM 4 IN. DIAM (OR SMALLER) STEEL ELECTRICAL METALLIC TUBING OR TYPE L (OR HEAVIER) COPPER TUBING OR NOM 1 IN. DIAM (OR SMALLER) FLEXIBLE STEEL CONDUIT. WHEN COPPER PIPE OR FLEXIBLE STEEL CONDUIT IS USED, MAX F RATING OF FIRESTOP SYSTEM (ITEM 3) IS 2 H. STEEL PIPES OR CONDUITS LARGER THAN NOM 4 IN. DIAM MAY ONLY BE USED IN WALLS CONSTRUCTED USING STEEL CHANNEL STUDS. A MAX OF ONE PIPE OR CONDUIT IS PERMITTED IN THE FIRESTOP SYSTEM. PIPE OR CONDUIT TO BE INSTALLED NEAR CENTER OF STUD CAVITY WIDTH AND TO BE RIGIDLY SUPPORTED ON BOTH SIDES OF WALL ASSEMBLY.

3. FILL, VOID OR CAVITY MATERIAL * - CAULK - CAULK FILL MATERIAL INSTALLED TO COMPLETELY FILL ANNULAR SPACE BETWEEN PIPE OR CONDUIT AND GYPSUM WALLBOARD AND WITH A MIN 1/4 IN DIAM BEAD OF CAULK APPLIED TO PERIMETER OF PIPE OR CONDUIT AT ITS EGRESS FROM THE WALL. CAULK INSTALLED SYMMETRICALLY ON BOTH SIDES OF WALL ASSEMBLY. THE HOURLY F RATING OF THE FIRESTOP SYSTEM IS DEPENDENT UPON THE HOURLY FIRE RATING OF THE WALL ASSEMBLY IN WHICH IT IS INSTALLED, AS SHOWN IN THE FOLLOWING TABLE. THE HOURLY T RATING OF THE FIRESTOP SYSTEM IS DEPENDENT UPON THE TYPE OR SIZE OF THE PIPE OR CONDUIT AND THE HOURLY FIRE RATING OF THE WALL ASSEMBLY IN WHICH IT IS INSTALLED AS TABULATED BELOW:

MAX PIPE OR CONDUIT DIAM, IN	ANNULAR SPACE IN	F RATING HR	T RATING HR
1	0 TO 3/16	1 OR 2	0+, 1 OR 2
1	1/4 TO 1/2	3 OR 4	3 OR 4
4	0 TO 1/4	1 OR 2	0
4	0 TO 1-1/2#	1 OR 2	0
6	1/4 TO 1/2	3 OR 4	0
12	3/16 TO 3/8	1 OR 2	0

+ WHEN COPPER PIPE IS USED, T RATING IS 0 H
#0 TO 1-1/2 IN. ANNULAR SPACE APPLIES ONLY WHEN TYPE CP-25 WB+ CAULK IS USED.
MINNESOTA MINING & MFG. CO. - TYPES CP-25 S/L, CP-25 N/S, CP-25 WB, CP-25 WB+. (NOTE: L RATINGS APPLY ONLY WHEN TYPE CP-25 WB+ CAULK IS USED)

(E) FIRE ALARM SEQUENCE OF OPERATION MATRIX

NOTE:
BLANK = NOT APPLICABLE
R = REQUIRED ACTION

	FACP ALARM, SCIENCE BUILDING & MAIN FACP, BUILDING 7	FACP TROUBLE, SCIENCE BUILDING & MAIN FACP, BUILDING 7	FACP SUPERVISORY, SCIENCE BUILDING & MAIN FACP, BUILDING 7	ANNUNCIATE ALARM @ RCC	ANNUNCIATE TROUBLE @ RCC	ANNUNCIATE SUPERVISORY @ RCC	ACTIVATE AUDIO/VISUAL THROUGHOUT THE BLDG.	ELEVATOR RECALL RECALL ELEVATORS TO DESIGNATED FLOOR AND STOP	ALTERNATE ELEVATOR RECALL RECALL ELEVATORS TO DESIGNATED FLOOR AND STOP	ELEVATOR SHUTDOWN		ALARM RECEIPT CAPABILITY DURING ABNORMAL CONDITIONS	HVAC SHUTDOWN	FIRE SMOKE DAMPER ACTIVATION
MANUAL PULL STAION	X			X			X							
AREA SMOKE DETECTOR	X			X			X							
SMOKE DETECTORS ON EITHER SIDE OF FIRE RATED DOOR ACROSS CORRIDOR	X			X			X							
DUCT SMOKE DETECTOR (HVAC UNITS)	X			X			X						X	
DUCT SMOKE DETECTOR (FIRE SMOKE DAMPER)	X			X			X						X	X
AREA SMOKE DETECTOR (DEDICATED FOR FSD	X			X			X						X	X
ELEVATOR LOBBY - SMOKE DETECTOR " EXCEPT 1ST FLOOR"								X						
ELEVATOR LOBBY - SMOKE DETECTOR "1ST FLOOR ONLY"									X					
HEAT DETECTOR - ELEVATOR MACHINE RM. OR SHAFT										X				
WATERFLOW SWITCH	X			X			X							
VALVE TAMPER			X			X								
INITIATING CKT STYLE C (CLASS B)														
OPEN WIRE		X			X									
GROUNDED WIRE		X			X							R		
SHORTED WIRES		X			X									
LOSS OF CARRIER		X			X									
NOTIFICATION CKT STYLE Y (CLASS B)														
OPEN WIRE		X			X									
GROUNDED WIRE		X			X							R		
SHORTED WIRES		X			X									
SIGNALING LINE CKT STYLE 3 (CLASS B)														
OPEN WIRE		X			X									
GROUNDED WIRE		X			X							R		
WIRE TO WIRE SHORT & OPEN		X			X									
WIRE TO WIRE SHORT & GROUND		X			X									
OPEN & GROUND		X			X									
LOSS OF CARRIER		X			X									

WIRING GUIDELINES

PLENUM CABLE VS. NON-PLENUM

THE NEC RECOGNIZES 3 TYPES OF POWER LIMITED FIRE ALARM CABLING:

FPL - THIS IS A GENERAL USE POWER LIMITED FIRE ALARM CABLE. IT CANNOT BE USED IN A PLENUM SPACE OR FOR RISERS (CABLING BETWEEN FLOORS), CABLE MUST BE IN CONDUIT.

FPLR - THIS IS A POWER LIMITED RISER RATED CABLE THAT CAN BE USED FOR GENERAL PURPOSES OR BETWEEN FLOORS. IT CANNOT BE USED IN A PLENUM SPACE, CABLE MUST BE IN CONDUIT.

FPLP - THIS IS A POWER LIMITED CABLE THAT CAN BE USED IN A PLENUM, RISER, OR FOR GENERAL PURPOSE.

A PLENUM IS ANY AREA USED TO CONDUCT ENVIRONMENTAL AIR. PLENUM SPACES CAN BE DUCTWORK, THE SPACE ABOVE A DROP CEILING, OR BELOW A RAISED FLOOR. BECAUSE THESE SPACES ARE BEING USED FOR THE AIR HANDLING SYSTEM. THERE ARE STRICT RULES THAT MUST BE FOLLOWED TO REDUCE THE RISK OF INTRODUCING TOXIC FUMES IN THE EVENT OF A FIRE. SINCE FIRE ALARM CABLING IS OFTEN INSTALLED EXPOSED, WITHOUT CONDUIT, ABOVE DROP CEILINGS THE CABLING MUST BE RATED FOR USE IN A PLENUM SPACE.

WIRING REQUIREMENTS

- THE DRAIN SHIELD IS A VERY IMPORTANT PART OF THE SYSTEM INSTALLATION. WE WOULD NOT SPECIFY SHIELDED CABLE IF IT WAS NOT NECESSARY. SHIELDS SHOULD BE KEPT CONTINUOUS THROUGHOUT THE CIRCUIT AND KEPT FREE FROM ANY REFERENCE TO EARTH GROUND.
- SHIELDED CABLE CAN BE FPL, FPLR, OR FPLP. SIEMENS INTELLIGENT ADDRESSABLE DEVICES REQUIRE SHIELDED CABLE.
- NOTIFICATION APPLIANCES (I.E. - HORN/STROBES, HORNS, ETC.) REQUIRE NON-SHIELDED CABLE.
- UNDERGROUND CABLE, WHETHER OR NOT INSTALLED IN CONDUIT, SHALL BE LISTED AS UNDERGROUND BURIAL TYPE.
- WIRING IS TO BE INSTALLED POINT TO POINT WITH NO SPLICING.

WIRING REQUIREMENTS

INITIATING DEVICES

EXAMPLES: (SD) 2 - 7
- DEVICE REFERENCE NUMBER
- INITIATING ALD LOOP DESIGNATION
- DEVICE SYMBOL (SMOKE DETECTOR)

AUDIBLE / VISUAL CIRCUITS:

EXAMPLES: 15cd S1-1
- STROBE CANDELA RATING
- DEVICE REFERENCE NUMBER
- HORN/STROBE CIRCUIT DESIGNATION
- DEVICE SYMBOL (HORN/STROBE)

MXL WIRING SCHEDULE

SYMBOL	RECOMMENDED WIRE TYPE	USED ON
A	2-CONDUCTOR, #16 AWG SOLID TWISTED SHIELDED CABLE Cable Part Number: F1TSP16SRD-FPLR (CONDUIT) F1TSP16SRD-FPLP (PLENUM)	ADDRESSABLE ALARM INITIATING DEVICES: - FP-SERIES SMOKE DETECTORS - TRI-SERIES INTERFACE MODULES - AD-SERIES DUCT DETECTORS - MSI-SERIES PULL STATION
B	2-CONDUCTOR, #12 AWG SOLID or STRANDED (PER NEC) Cable Part Number: FA-1202C-1-1N-03 (CONDUIT) FA-1202C-1-2N-03 (PLENUM)	NOTIFICATION APPLIANCE CIRCUIT: - STROBE CIRCUIT - HORN/STROBE CIRCUIT
C	2-CONDUCTOR, #16 AWG SOLID TWISTED CABLE Cable Part Number: F1TP16SRD-FPLR (CONDUIT) F1TP16SRD-FPLP (PLENUM)	NOT USED VOICE AUDIO CIRCUIT: - SPEAKER CIRCUIT
D	2-CONDUCTOR, #12 AWG SOLID or STRANDED (PER NEC) Cable Part Number: FA-1202C-1-1N-03 (CONDUIT) FA-1202C-1-2N-03 (PLENUM)	24 VDC POWER TO: - FIRE ALARM PANELS - DOOR HOLDERS
F	2-CONDUCTOR, #16 AWG SOLID TWISTED SHIELDED CABLE Cable Part Number: F1TSP16SRD-FPLR (CONDUIT) F1TSP16SRD-FPLP (PLENUM)	NOT USED TELEPHONE CIRCUIT: - FIREFIGHTER'S TELEPHONE JACK - FIREFIGTER'S REMOTE TELEPHONE STATION
G	2-CONDUCTOR, #16 AWG SOLID TWISTED CABLE Cable Part Number: F1TP16SRD-FPLR (CONDUIT) F1TP16SRD-FPLP (PLENUM)	MISCELLANEOUS FIELD DEVICES: - TRI to MONITORED DEVICES - WATERFLOW SWITCH / TAMPER SWITCH - DIGITAL DIALER to FACP - TSM-1 TEST SWITCH
H	2-CONDUCTOR, #12 AWG SOLID or STRANDED (PER NEC) Cable Part Number: FA-1202C-1-1N-03 (CONDUIT) FA-1202C-1-2N-03 (PLENUM)	NOT USED NOTIFICATION APPLIANCE CIRCUIT: - HORN CIRCUIT - CHIME CIRCUIT
M	2-CONDUCTOR, #16 AWG SOLID TWISTED SHIELDED CABLE Cable Part Number: F1TSP16SRD-FPLR (CONDUIT) F1TSP16SRD-FPLP (PLENUM)	"M-NET" - MXL NETWORK WIRING: - MMB-2 / NET-7 / NET-4 (MMB-2 / PSR-1 / ANN / FIP / FDP)
V	2-CONDUCTOR, #16 AWG SOLID TWISTED SHIELDED CABLE Cable Part Number: F1TSP16SRD-FPLR (CONDUIT) F1TSP16SRD-FPLP (PLENUM)	NOT USED VOICE AUDIO RISER: LOW LEVEL - DISTRIBUTED AMPLIFICATION (TBM-2, OCC-1 TO OCC-1 CARD)
X	2-CONDUCTOR, #16 AWG SOLID TWISTED SHIELDED CABLE Cable Part Number: F1TSP16SRD-FPLR (CONDUIT) F1TSP16SRD-FPLP (PLENUM)	"X-NET" - GLOBAL NETWORK WIRING: - NIM-1W to NIM-1W (MXL / MXL-V / MXL-IQ)
P	2-CONDUCTOR, #12 AWG SOLID or STRANDED (PER NEC) Cable Part Number: FA-1202C-1-1N-03 (CONDUIT) FA-1202C-1-2N-03 (PLENUM)	EXTENDER PANEL ACTIVATION: - SIEMENS PAD-3 EXTENDER PANEL - WHEELOCK PS-12/24-8 EXTENDER PANEL
120 VAC	2-CONDUCTOR, #12 AWG SOLID, THHN (GROUNDED WIRE)	120 VAC POWER WIRING TO: - F.A. CONTROL PANELS - AMPLIFIER PANELS - POWER SUPPLY PANEL - FIRE ALARM PRINTERS

WIRING NOTE:
1. WIRING FOR NOTIFICATION APPLIANCE CIRCUIT IS CLASS B, STYLE Y.
2. WIRING FOR INITIATING DEVICES IS CLASS B, STYLE C.
3. SEE WIRING GUIDELINES FOR CABLE TYPE USE.
4. CONDUIT FILL < 40%, 3/4" CONDUIT.
5. WHERE CIRCUIT ARE RUN UNDERGROUND, USE UNDERGROUND RATED CABLE.
   2AS-1602POS = 2 CONDUCTOR #16 GUAGE SOLID TWISTED SHIELDED "UNDERGROUND CABLE"
   2A-1202 = 2 CONDUCTOR #12 GUAGE SOLID "UNDERGROUND CABLE"

SCOPE OF WORK

ARCHITECT OF RECORD
noll & tam
architects and planners
729 Heinz Avenue
Berkeley, CA 94710
510.649.8295
fax 510.649.3008

STAMP

REGISTERED C-10 LICENSED CONTRACTOR SIEMENS INDUSTRY LIC. NO. 758796 STATE OF CALIFORNIA

CONTRACTOR'S NAME & ADDRESS:
CUPERTINO ELECTRIC INC.
1740 Cesar Chavez Street
San Francisco, CA 94124
Tel 415.970.3400 Fax 415.970.3434

PRODUCT MANUFACTURER:
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SAN FRANCISCO BRANCH
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California State C10 License No. 758796
U.L. Certificate ID No. 324787-001

COLLEGE OF SAN MATEO
BUILDING 34 MODERNIZATION
SMCCCD
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College of San Mateo
1700 W. Hillsdale Blvd.
San Mateo, CA 94402

SHEET TITLE
MISCELLANEOUS DETAILS

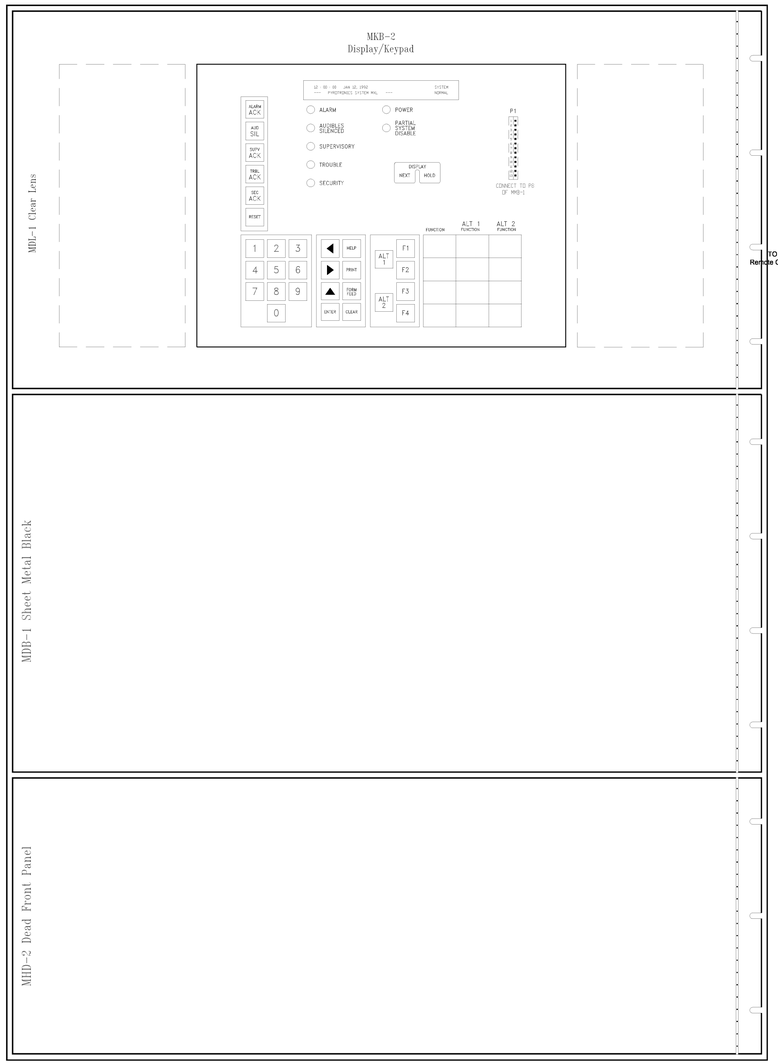
REVISIONS

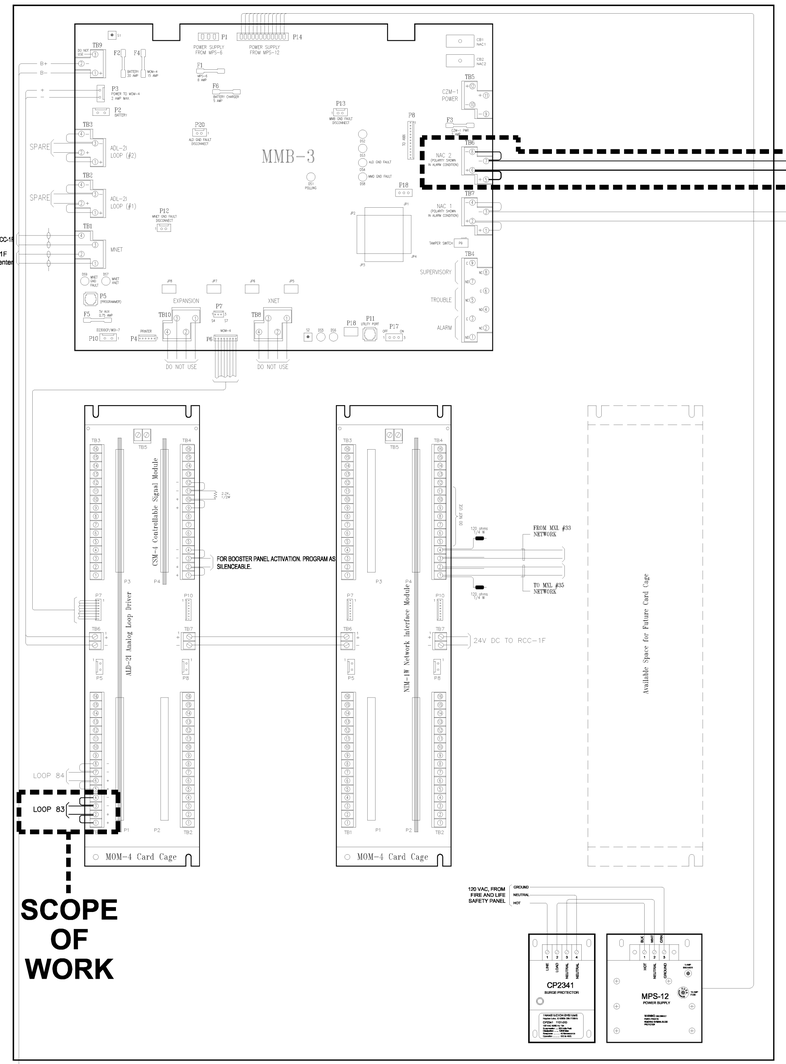
NO.	DATE	DESCRIPTION
	02/04/11	CONSTRUCTION SET

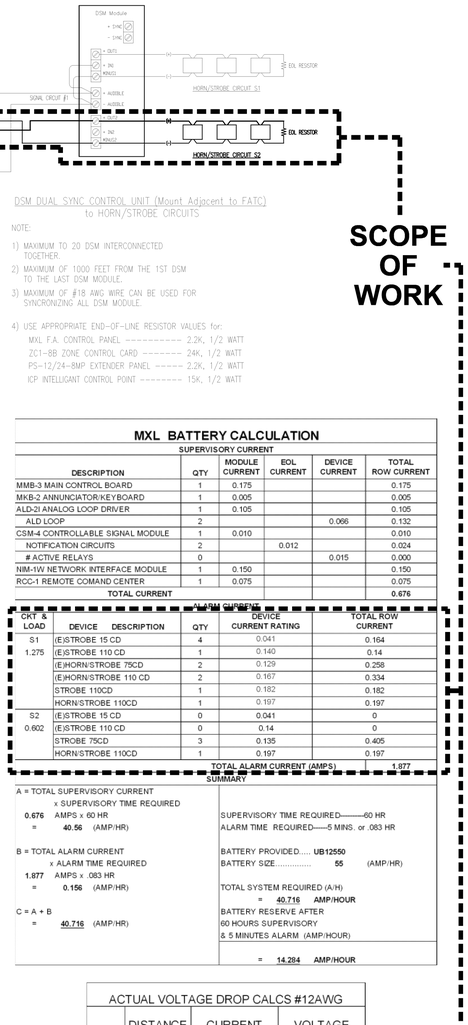
DATE	FEBRUARY 04, 2011
DRAWN	RB
CHECKED	MM
SCALE	NA
N&T JOB NO.:	2901.4

SHEET NUMBER
FA-02

JOB NUMBER: 440P-083436
NET NUMBER: 5284222







SCOPE OF WORK

MXL BATTERY CALCULATION

SUPERVISORY CURRENT

DESCRIPTION	QTY	MODULE CURRENT	EOL CURRENT	DEVICE CURRENT	TOTAL ROW CURRENT
MMB-3 MAIN CONTROL BOARD	1	0.175			0.175
MKB-2 ANNUNCIATOR/KEYBOARD	1	0.005			0.005
ALD-2I ANALOG LOOP DRIVER	1	0.105			0.105
ALD LOOP	2			0.066	0.132
CSM-4 CONTROLLABLE SIGNAL MODULE	1	0.010			0.010
NOTIFICATION CIRCUITS	2		0.012		0.024
# ACTIVE RELAYS	0			0.015	0.000
NIM-1W NETWORK INTERFACE MODULE	1	0.150			0.150
RCC-1 REMOTE COMAND CENTER	1	0.075			0.075
TOTAL CURRENT					0.676

ALARM CURRENT

CKT & LOAD	DEVICE DESCRIPTION	QTY	DEVICE CURRENT RATING	TOTAL ROW CURRENT
S1 1.275	(E)STROBE 15 CD	4	0.041	0.164
	(E)STROBE 110 CD	1	0.140	0.14
	(E)HORN/STROBE 75CD	2	0.129	0.258
	(E)HORN/STROBE 110 CD	2	0.167	0.334
	STROBE 110CD	1	0.182	0.182
	HORN/STROBE 110CD	1	0.197	0.197
S2 0.602	(E)STROBE 15 CD	0	0.041	0
	(E)STROBE 110 CD	0	0.14	0
	STROBE 75CD	3	0.135	0.405
	HORN/STROBE 110CD	1	0.197	0.197
	TOTAL ALARM CURRENT (AMPS)			1.977

SUMMARY

A = TOTAL SUPERVISORY CURRENT
x SUPERVISORY TIME REQUIRED
0.676 AMPS x 60 HR
= 40.56 (AMP/HR)

B = TOTAL ALARM CURRENT
x ALARM TIME REQUIRED
1.877 AMPS x .083 HR
= 0.156 (AMP/HR)

C = A + B
= 40.716 (AMP/HR)

SUPERVISORY TIME REQUIRED——60 HR
ALARM TIME REQUIRED——5 MINS. or .083 HR

BATTERY PROVIDED..... UB12550
BATTERY SIZE..... 55 (AMP/HR)

TOTAL SYSTEM REQUIRED (A/H)
= 40.716 AMP/HOUR
BATTERY RESERVE AFTER
60 HOURS SUPERVISORY
& 5 MINUTES ALARM (AMP/HOUR)
= 14.284 AMP/HOUR

ACTUAL VOLTAGE DROP CALCS #12AWG

CKT	DISTANCE (ft.)	CURRENT LOAD (amps)	VOLTAGE DROP (%)
S1	490	1.275	8.611
S2	230	0.602	1.908

Internal View

BB-55 Battery Cabinet

(E)MXL – FIRE ALARM CONTROL PANEL
Building 34, College of San Mateo

HIGHLIGHTED ITEMS ARE CONSIDERED

NEW SCOPE OF WORK

ARCHITECT OF RECORD
noll & tam
architects and planners
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San Mateo, CA 94402

SHEET TITLE
(E) MXL FACP CALCULATIONS AND DETAILS

REVISIONS

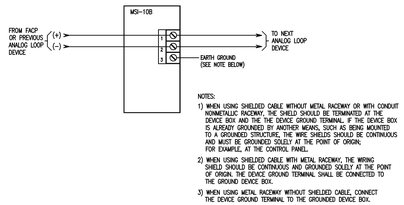
NO.	DATE	DESCRIPTION
	02/04/11	CONSTRUCTION SET

DATE FEBRUARY 04, 2011
DRAWN RB
CHECKED MM
SCALE NA
N&T JOB NO.: 2901.4

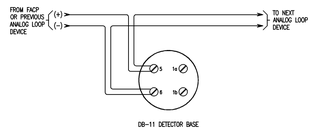
SHEET NUMBER
FA-03

JOB NUMBER: 44OP-083436
NET NUMBER: 5284222

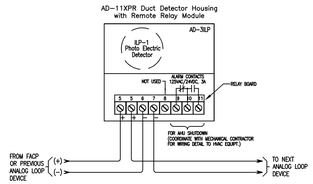
TYPICAL WIRING OF FIELD DEVICES



MSI-10B MANUAL PULL STATION (SINGLE ACTION)

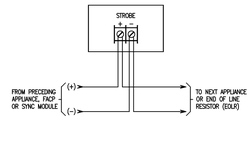


FPT-11 INTELLIGENT THERMAL DETECTOR or
FP-11 INTELLIGENT PHOTOELECTRIC FIRE DETECTOR
with DB-11 DETECTOR BASE

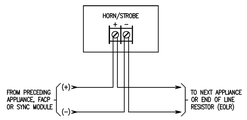


AD-3ILP DUCT DETECTOR HOUSING and DA-X3SR RELAY MODULE
with ILP-1 INTELLIGENT PHOTO SMOKE DETECTOR

NOTE: THE AIR FLOW INSIDE THE DUCT MUST BE MORE THAT 300 FEET PER MINUTE FOR THE DUCT DETECTOR TO OPERATE PROPERLY.



WHEELOCK STR WALL MOUNTED STROBE
(Multi-Candela Appliance)



WHEELOCK HSR WALL MOUNTED HORN/STROBE
(Multi Candela Two Wire Appliance)

SCOPE OF WORK

HIGHLIGHTED ITEMS ARE CONSIDERED

NEW SCOPE OF WORK

ARCHITECT OF RECORD

noll & tam
architects and planners

729 Heinz Avenue
Berkeley, CA 94710
510.649.8295
fax 510.649.3008

STAMP

CONTRACTOR'S NAME & ADDRESS:

CUPERTINO ELECTRIC INC.
1740 Cesar Chavez Street
San Francisco, CA 94124
Tel 415.970.3400 Fax 415.970.3434

PRODUCT MANUFACTURER:

SIEMENS Industry Inc.
SAN FRANCISCO BRANCH
25821 Industrial Boulevard, Suite 300
Hayward, California 94545-2991
Tel (510) 783-6000 Fax (510) 293-2100
California State C10 License No. 758796
U.L. Certificate ID No. 324787-001

COLLEGE OF SAN MATEO
BUILDING 34
MODERNIZATION

SMCCCD
3401 CSM Drive
San Mateo, CA 94402
College of San Mateo
1700 W. Hillsdale Blvd.
San Mateo, CA 94402

SHEET TITLE
TYPICAL WIRING OF DEVICES

REVISIONS

NO.	DATE	DESCRIPTION
	02/04/11	CONSTRUCTION SET

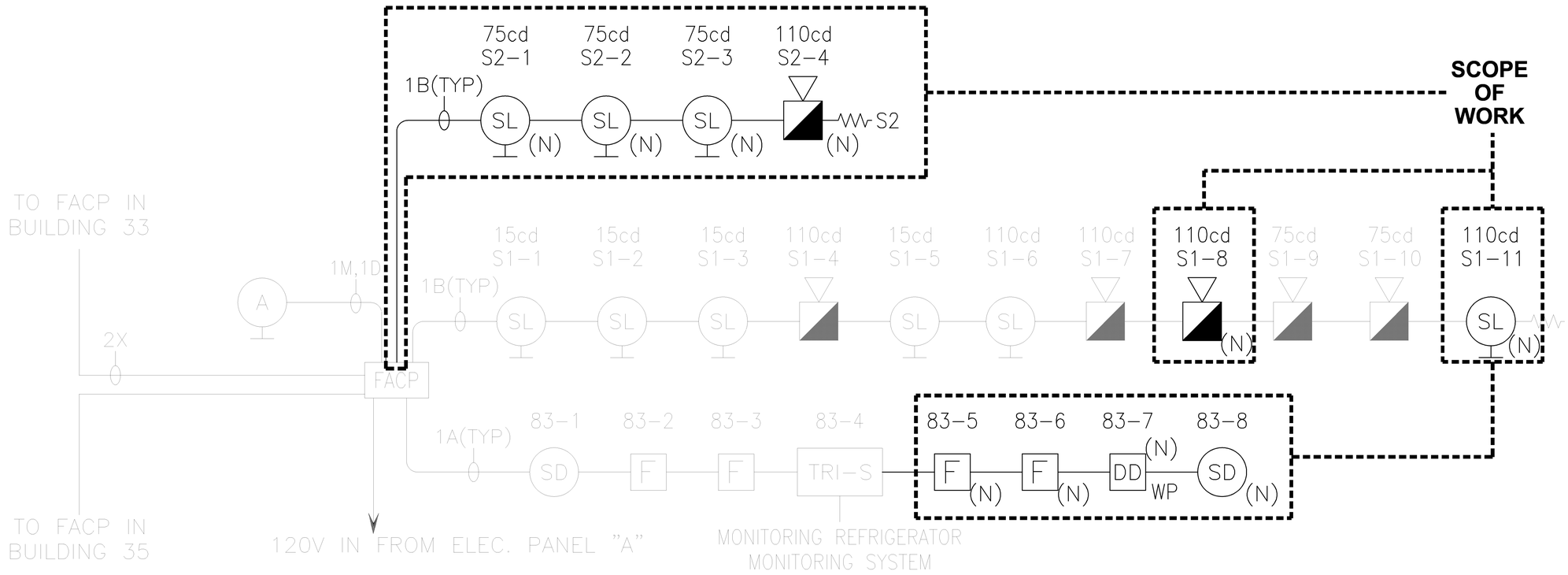
DATE	FEBRUARY 04, 2011
DRAWN	RB
CHECKED	MM
SCALE	NA
N&T JOB NO.:	2901.4

SHEET NUMBER
FA-04

JOB NUMBER: 440P-083436
NET NUMBER: 5284222

LEGEND:

(N) – NEW DEVICE



BUILDING 34 FIRE ALARM RISER DIAGRAM

HIGHLIGHTED ITEMS ARE CONSIDERED

NEW SCOPE OF WORK

ARCHITECT OF RECORD

noll & tam

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COLLEGE OF SAN MATEO

BUILDING 34 MODERNIZATION

SMCCCD
3401 CSM Drive
San Mateo, CA 94402

College of San Mateo
1700 W. Hillsdale Blvd.
San Mateo, CA 94402

SHEET TITLE

BUILDING 34 FIRE ALARM RISER DIAGRAM

REVISIONS

NO.	DATE	DESCRIPTION
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DATE	FEBRUARY 04, 2011
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CHECKED	MM
SCALE	NA
N&T JOB NO.:	2901.4

SHEET NUMBER

FA-05

JOB NUMBER: 440P-083436
NET NUMBER: 5284222

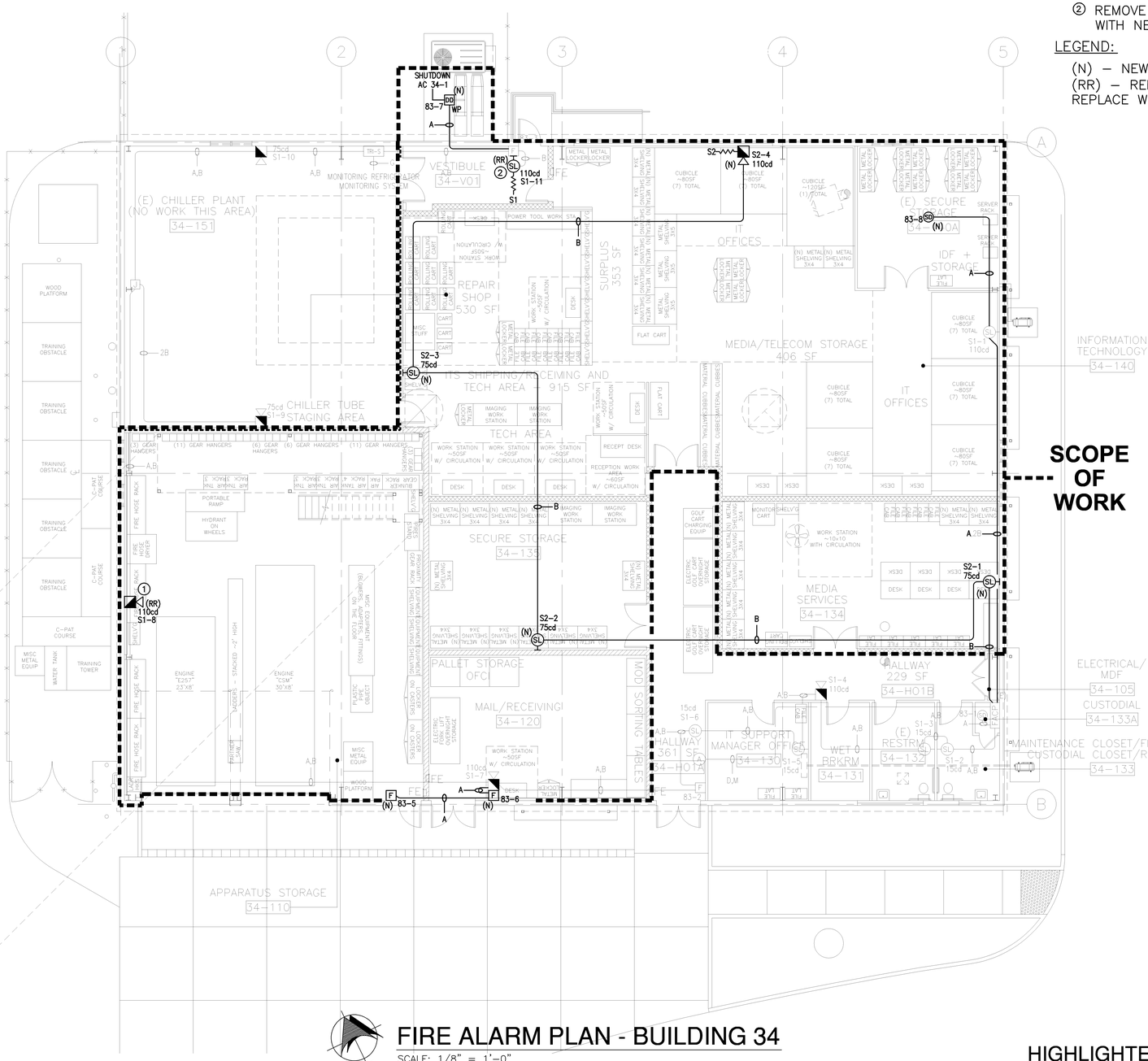
SHEET NOTE:

① REMOVE EXISTING STROBE AND REPLACE WITH NEW HORN STROBE.

② REMOVE EXISTING HORN/STROBE AND REPLACE WITH NEW STROBE.

LEGEND:

(N) – NEW DEVICE
(RR) – REMOVE EXISTING DEVICE AND REPLACE WITH NEW DEVICE



FIRE ALARM PLAN - BUILDING 34

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

HIGHLIGHTED ITEMS ARE CONSIDERED

NEW SCOPE OF WORK

ARCHITECT OF RECORD

noll & tam
architects and planners

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COLLEGE OF SAN MATEO

BUILDING 34 MODERNIZATION

SMCCCD
3401 CSM Drive
San Mateo, CA 94402

College of San Mateo
1700 W. Hillsdale Blvd.
San Mateo, CA 94402

SHEET TITLE

FIRE ALARM PLAN BUILDING 34

REVISIONS

NO.	DATE	DESCRIPTION
	02/04/11	CONSTRUCTION SET

DATE	FEBRUARY 04, 2011
DRAWN	RB
CHECKED	MM
SCALE	AS NOTED
N&T JOB NO.:	2901.4

SHEET NUMBER

FA-06

JOB NUMBER: 440P-083436
NET NUMBER: 5284222

LEGEND

● ● ● ● ACCESSIBLE PATH OF TRAVEL (P.O.T.) AS INDICATED ON PLAN IS A BARRIER FREE ACCESS ROUTE WITHOUT ANY ABRUPT VERTICAL CHANGES EXCEEDING ½" IF BEVELED AT 1:2 MAXIMUM SLOPE, OR VERTICAL LEVEL CHANGES NOT EXCEEDING ¼" MAX, AND AT LEAST 48" IN WIDTH. SURFACE IS STABLE, FIRM AND SLIP RESISTANT. CROSS-SLOPE DOES NOT EXCEED 2% AND SLOPE IN THE DIRECTION OF TRAVEL IS LESS THAN 5% UNLESS OTHERWISE INDICATED. ACCESSIBLE P.O.T. SHALL BE MAINTAINED FREE OF OVERHANGING OBSTRUCTIONS TO 80" MIN. (1103B.8.2) AND PROTRUDING OBJECTS GREATER THAN 4" PROJECTION FROM WALL AND ABOVE 27"AND LESS THAN 80" (1133B.8.6.). CONTRACTOR TO VERIFY THAT ALL BARRIERS IN THE P.O.T. HAVE BEEN REMOVED OR WILL BE REMOVED UNDER THIS PROJECT AND COMPLIES WITH CBC 1133B.

■ ELEVATOR.

● BUILDING RESTROOM. SEE BUILDING PLANS.

▲ DRINKING FOUNTAIN. SEE BUILDING PLANS.

ACCESSIBLE ROUTE SIGN
SEE DETAIL 11 / L4.03

✳ CAMPUS MAP DIRECTORY
(INCLUDES CAMPUS MAP WHICH SHOWS ACCESSIBLE ROUTE)

DSA FILE NUMBERS

5N: 01-109870

10N: 01-110095

FINE ART COURTYARD: 01-109895

NORTH GATEWAY: 01-110307

SITE PACKAGE: 01-110097

SEE SHEET A0.03 FOR A COMPREHENSIVE LIST OF HISTORICAL DSA PROJECTS ON CAMPUS.

ACCESSIBLE SEATING

SPECTATOR SEATING AT POOL

PROVIDED 18" SEATING SPACES	CBC REQUIRED WHEELCHAIR SPACES	PROVIDED WHEELCHAIR SPACES
280	4	4

PARKING ANALYSIS

STRATEGY:
- PROVIDE ACCESSIBLE PARKING FOR THE ENTIRE CAMPUS THAT EXCEEDS THE QUANTITY SPECIFIED BY CODE.
- ACCESSIBLE PARKING QUANTITIES ARE BASED ON THE TOTAL NUMBER OF PARKING SPACES ON CAMPUS, NOT ON INDIVIDUAL PARKING LOT QUANTITIES.
- ACCESSIBLE SPACES WILL BE DISTRIBUTED TO SERVE EACH SECTOR / ELEVATION OF CAMPUS, AND WILL BE LOCATED AS CLOSE TO THE ACTIVITY CENTERS AS POSSIBLE.

NORTH GATEWAY PACKAGE N.I.C.

LOT	ESTIMATED PROPOSED PARKING SPACES	ACCESSIBLE PARKING SPACES STANDARD	VAN
BASE BID			
9	203	5	1
11	218	0	0
ALT BID 2	269		
10		0	1
TOTAL	690	5	2

SITE PACKAGE

LOT	PROPOSED PARKING SPACES	ACCESSIBLE PARKING SPACES STANDARD	VAN
1	527	7	
2	697	5	1
3	167	10	1
5	50	1	2
6	77	3	1
7&8	114	4	1
12	15	1	2
13	17		
14	177	4	
15	556		1
16	670		
17	88	3	
18	64		1
19	26		
20	27	1	
21	35	2	
22	53	2	1
24	2	1	1
27	78	7	2
TOTAL	3,440	51	14

TOTAL CAMPUS PARKING

	PROPOSED PARKING SPACES	ACCESSIBLE PARKING SPACES
NORTH GATEWAY	690	7
SITE PACKAGE	3,440	65
TOTAL PROVIDED	4,130	72
ACCESSIBLE PARKING REQUIRED:*		52

*OVER 1,001 PARKING SPACES PROVIDED REQUIRES 20 ACCESSIBLE SPACES, PLUS 1 FOR EACH 100 SP. OVER 1,000.

NARRATIVE

THE PEDESTRIAN ACCESSIBLE ROUTE OF TRAVEL WITHIN THE LIMITS OF WORK FOR THE SITE PACKAGE PROJECT ARE SHOWN FROM CAMPUS ENTRY POINTS SUCH AS TRANSPORTATION STOPS OR PARKING LOTS TO ALL BUILDING AND ACCESSIBLE PARKING SPACES WITHIN THE SCOPE OF WORK.

DUE TO THE CAMPUS LOCATION ON TOP OF THE HILL, THERE IS NO PEDESTRIAN ACCESSIBLE ROUTE TO THE PROPERTY LINE, SINCE ALL SIDEWALKS ARE ON ADJACENT STREETS WHICH EXCEED 5% SLOPE. ALL ACCESSIBLE PARKING SPACES AT LOT 21 AND LOT 22 ARE INTENDED TO SERVE THE ATHLETIC FACILITIES ADJACENT TO THESE LOTS. IT IS NOT FEASIBLE TO MAKE THEM ACCESSIBLE TO THE CAMPUS CORE AREA DUE TO EXCESSIVE SLOPES BETWEEN THE LOTS AND THE CAMPUS CORE.

THE NORTH GATEWAY PACKAGE IS NOT INCLUDED IN CONTRACT/PROJECT.

McCarthy Building Companies, Inc.
343 Sansome Street, 14th Floor
San Francisco, California 94104
P 415 364-1339
F 415 397-5999

LICENSED ARCHITECT STEVEN C. KENDRICK No. C14099 REN. 09-30-07 STATE OF CALIFORNIA

REGISTERED LANDSCAPE ARCHITECT KEVIN MICHAEL SULLIVAN Signature NO. 2188 RENEWAL 5-31-10 Date STATE OF CALIFORNIA

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
OFFICE OF REGULATION SERVICE
APPL. #: 01-110097
AC ____ FLS ____ SS ____
DATE ____
FILE NUMBER:

College of San Mateo
Site Package
San Mateo, CA

Developed for
San Mateo County Community College District

Revision Description	Date

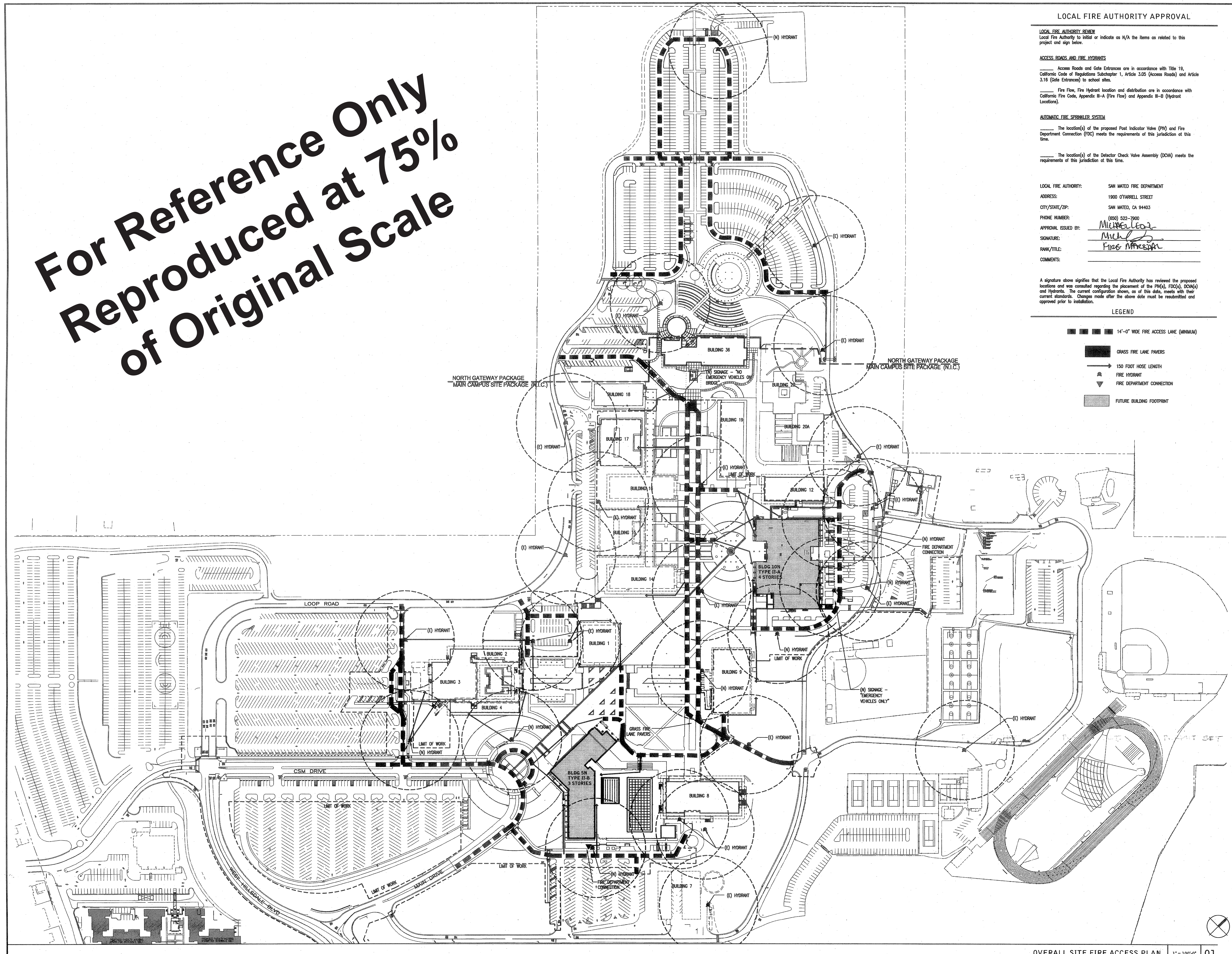
Revision Description	Date
Elevator Revisions	01-22-09

Job. No.	27082.30
Date	12 NOVEMBER 2008
Drawn by	AG, DT
Checked by	LC
Scale	AS SHOWN

0 50 100 200

ACCESSIBLE PATH OF TRAVEL PLAN

R-1



LOCAL FIRE AUTHORITY APPROVAL

LOCAL FIRE AUTHORITY REVIEW
Local Fire Authority to initial or indicate as N/A the items as related to this project and sign below.

ACCESS ROADS AND FIRE HYDRANTS

______ Access Roads and Gate Entrances are in accordance with Title 19, California Code of Regulations Subchapter 1, Article 3.05 (Access Roads) and Article 3.16 (Gate Entrances) to school sites.

______ Fire Flow, Fire Hydrant location and distribution are in accordance with California Fire Code, Appendix III-A (Fire Flow) and Appendix III-B (Hydrant Locations).

AUTOMATIC FIRE SPRINKLER SYSTEM

______ The location(s) of the proposed Post Indicator Valve (PIV) and Fire Department Connection (FDC) meets the requirements of this jurisdiction at this time.

______ The location(s) of the Detector Check Valve Assembly (DCVA) meets the requirements of this jurisdiction at this time.

LOCAL FIRE AUTHORITY: SAN MATEO FIRE DEPARTMENT
ADDRESS: 1900 O'FARRELL STREET
CITY/STATE/ZIP: SAN MATEO, CA 94403
PHONE NUMBER: (650) 522-7900
APPROVAL ISSUED BY: MICHAEL LEON
SIGNATURE: [signature]
RANK/TITLE: FIRE MARSHAL
COMMENTS: ______

A signature above signifies that the Local Fire Authority has reviewed the proposed locations and was consulted regarding the placement of the PIV(s), FDC(s), DCVA(s) and Hydrants. The current configuration shown, as of this date, meets with their current standards. Changes made after the above date must be resubmitted and approved prior to installation.

LEGEND

- 14'-0" WIDE FIRE ACCESS LANE (MINIMUM)
- GRASS FIRE LANE PAVERS
- 150 FOOT HOSE LENGTH
- FIRE HYDRANT
- FIRE DEPARTMENT CONNECTION
- FUTURE BUILDING FOOTPRINT

noll & tam
architects and planners
729 Heinz Avenue
Berkeley, CA 94710
510.649.8295
fax 510.649.3008

LPA
Architecture
Planning
Interior Design
Landscape Architecture
Graphics

1548 Eureka Road
Suite 101
Roseville, California 95661

P 916 | 772-4300
F 916 | 772-4330
E lpa@lpainc.com
W www.lpainc.com

IDENTIFICATION STAMP
DIVISION OF THE STATE ARCHITECT
APPLICATION NUMBER 01
AC______ FLS______ SS
DATE

CALIFORNIA STATE FIRE MARSHAL
APPROVED
APPROVAL OF THIS PLAN DOES NOT AUTHORIZE OR APPROVE ANY OMISSION OR DEVIATION FROM APPLICABLE REGULATIONS. FINAL APPROVAL IS SUBJECT TO FIELD INSPECTION. ONE SET OF APPROVED PLANS SHALL BE AVAILABLE ON THE PROJECT SITE AT ALL TIMES.
REVIEWED BY: ______ DATE:

CSM
NORTH
GATEWAY

West Hillsdale Blvd
San Mateo, CA
94402

REGISTERED LANDSCAPE ARCHITECT
KEVIN MICHAEL SULLIVAN
NO. 2186
RENEWAL 5-31-10
STATE OF CALIFORNIA

PERMIT SET

SHEET TITLE
OVERALL SITE
FIRE ACCESS

REVISIONS

NO.	DATE	DESCRIPTION

DATE	19 DEC 08
DRAWN	RF
CHECKED	KS
SCALE	
JOB NO.	28066.10

SHEET NUMBER
R-2

OVERALL SITE FIRE ACCESS PLAN | 1" = 100'-0" | 01