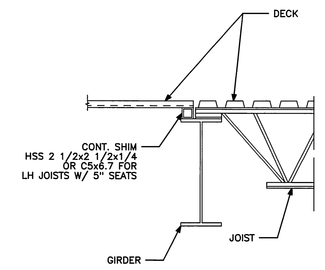
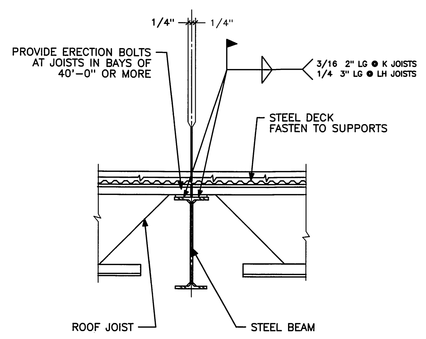


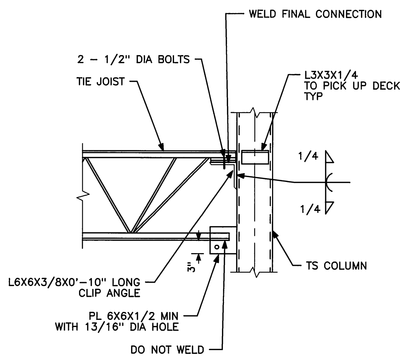
DETAIL AT 90 DEGREE CHANGE IN DECK DIRECTION — D6

NO SCALE | REF: NA



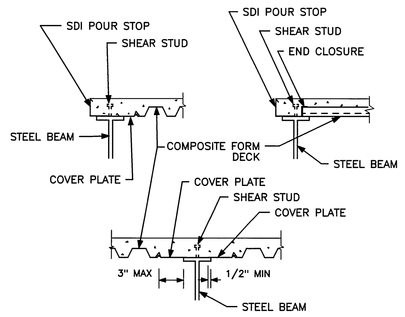
TYPICAL ROOF JOISTS BEARING ON STEEL BEAM — D5

NO SCALE | REF: NA



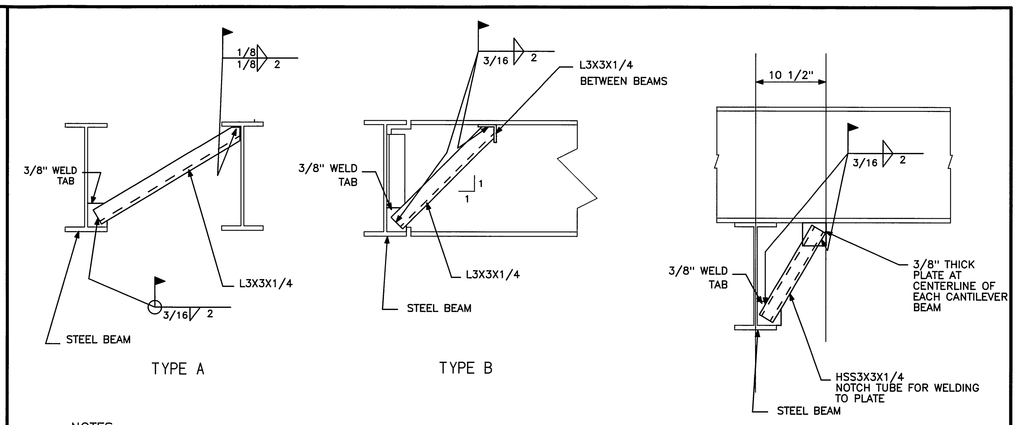
TYPICAL TIE JOIST BEARING — D4

NO SCALE | REF: NA



COMPOSITE DECK DETAILS — D3

NO SCALE | 0 1/2" 1" 2" | REF: S20.1



TYPE A TYPE B TYPE C

NOTES:

1. TYPICAL AT ALL PERIMETER BEAMS USE TYPE C AT CANTILEVED BEAM AREAS (IE. LOBBY)
2. SPACE AT 8'-0" OC MAX, EXCEPT AT CANTILEVERED AREAS, PLACE 1 BRACE AT CENTERLINE OF EACH CANTILEVER BEAM. (MINIMUM ONE BRACE AT MID-SPAN OF BEAM) OR AS SHOWN ON PLAN.

TYPICAL BEAM BRACE DETAIL — D1

NO SCALE | REF: S20.1, S30.1

MASONRY

1. ALL MASONRY WALLS AND PARTITIONS SHALL BE REINFORCED.
2. COMPRESSIVE STRENGTH OF MASONRY, F'm, SHALL BE MIN. 1500 PSI.
3. COMPRESSIVE STRENGTH OF LOAD BEARING CONCRETE MASONRY UNITS SHALL BE IN ACCORDANCE WITH ASTM C90.
4. MORTAR SHALL BE TYPE S WITH A MINIMUM COMPRESSIVE STRENGTH OF 1800 PSI AT 28 DAYS.
5. GROUT SHALL HAVE A COMPRESSIVE STRENGTH OF 3000 PSI AT 28 DAYS.
6. COMPRESSIVE STRENGTH OF LOAD BEARING BRICK SHALL BE IN ACCORDANCE WITH ASTM C55.
7. EXPANSION BOLTS IN HOLLOW MASONRY WALL SHALL BE LOCATED AT SOLID BLOCK OR BOND BEAM.
8. SMU INDICATES SOLID MASONRY UNITS, OR HOLLOW CONCRETE UNITS WITH ALL VOIDS COMPLETELY FILLED WITH 3000 PSI CONCRETE OR GROUT.
9. WOOD NAILERS ON MASONRY SHALL BE ANCHORED WITH 1/2" DIA. ANCHOR BOLTS @ 2'-8" O.C. AND EXTENDED 6" INTO SOLID MASONRY UNLESS NOTED OTHERWISE.
10. WHERE BEAMS, JOISTS, OR COLUMNS BEAR ONTO MASONRY, THE MASONRY SHALL BE SOLID OR FILLED SOLID, A MINIMUM OF 2'-0" TO EACH SIDE OF THE CENTERLINE OF BEARING, FOUR COURSES HIGH, OR A CONTINUOUS CONCRETE FILLED BOND BEAM SHALL BE LOCATED UNDER THE BEARING.
11. MASONRY LOCATED BELOW TOP OF SLAB ON FILL SHALL BE SOLID OR FILLED SOLID.
12. ALL CMU SHALL BE REINFORCED.

STRUCTURAL STEEL

1. STUCTURAL STEEL SHALL BE ASTM A992, Fy = 50 KSI. SQUARE AND RECTANGULAR HSS SECTIONS SHALL BE ASTM A500, GRADE B, Fy = 46 KSI. ROUND HSS SECTIONS SHALL BE ASTM A500, GRADE B, Fy = 42 KSI, UNLESS NOTED OTHERWISE.
2. FABRICATION SHALL NOT BEGIN UNTIL SHOP DRAWINGS HAVE BEEN APPROVED,
3. CONNECTIONS NOT DETAILED ON DRAWINGS SHALL BE DESIGNED BY THE STEEL FABRICATOR.
4. BASE PLATES AND BEARING PLATES SHALL BE GROUTED WITH NON-SHRINK GROUT AND AT PROPER GRADE, BEFORE PLACING STEEL.
5. CONTRACTOR SHALL APPLY 2 BRUSH COATS OF ASPHALT TO COLUMNS AND BASE PLATES EXPOSED TO FILL AFTER COLUMN IS IN PLACE.
6. STEEL BEAMS ENCASED IN CONCRETE SHALL RECEIVE CLIPS OR BE WRAPPED WITH WIRE MESH, UNLESS NOTED OTHERWISE.
7. STEEL COLUMNS ENCASED IN CONCRETE SHALL BE WRAPPED WITH WIRE MESH, UNLESS NOTED OTHERWISE.
8. STRUCTURAL STEEL NOT ENCASED OR EMBEDDED IN CONCRETE SHALL RECEIVE ONE SHOP COAT OF PAINT.
9. STEEL BEAMS TO RECEIVE WOOD NAILERS SHALL HAVE BOLT HOLES DRILLED FOR 1/2" DIA. BOLTS @ 2'-- 6"+/-- O.C. STAGGERED.
10. VERIFY WITH MECHANICAL DRAWINGS FOR LOCATION OF DUCTS, PIPING, OR THROUGH FLOOR AND ROOF CONSTRUCTION BEFORE SPACING FRAMING.

NON-COMPOSITE FLOOR DECK

1. WHERE NOTED ON PLAN, STEEL FLOOR FORM SHALL BE 1 1/2" – 22 GA STEEL DECK
2. FASTENING PATTERN:
   AT EACH SUPPORT WELD DECK TO SUPPORT AT 12" OC MAX, 36/4 PATTERN, WITH 5/8" DIAMETER PUDDLE WELDS
   SIDE LAPS TO BE SCREWED WITH #10 TEKS AT 2'-0" OC MAX.

APPROVED DECK MANUFACTURERS ARE VULCRAFT, CANAM, AND UNITED STEEL DECK. USE OF A DECK BY A MANUFACTURER OTHER THAN THOSE LISTED WILL REQUIRE VERIFICATION BY AN ENGINEER HIRED BY THE DECK FABRICATOR THAT THE ALTERNATE DECK CAN SUPPORT ALL IMPOSED LOADS. THIS VERIFICATION MUST BE STAMPED BY A PROFESSIONAL ENGINEER AND SUBMITTED PRIOR TO RECIEPT OF THE DECK SHOP DRAWINGS.

STEEL ROOF DECK

1. WHERE NOTED ON PLAN, ROOF DECK SHALL BE TYPE B (WIDE RIB), 1 1/2" – 22 GA

   DECK ATTACHMENT – 5/8" PUDDLE WELD
   PATTERN – 36/5
   SIDELAPS: 7 – #10 TEK SCREWS PER SPAN

APPROVED DECK MANUFACTURERS ARE VULCRAFT, CANAM, AND UNITED STEEL DECK. USE OF A DECK BY A MANUFACTURER OTHER THAN THOSE LISTED WILL REQUIRE VERIFICATION BY AN ENGINEER HIRED BY THE DECK FABRICATOR THAT THE ALTERNATE DECK CAN SUPPORT ALL IMPOSED LOADS. THIS VERIFICATION MUST BE STAMPED BY A PROFESSIONAL ENGINEER AND SUBMITTED PRIOR TO RECEIPT OF THE DECK SHOP DRAWINGS.

COMPOSITE STEEL FLOOR DECK

1. WHERE NOTED ON PLANS, COMPOSITE FLOOR DECK SHALL BE 1 1/2" – 22 GAUGE WHERE NOTED ON PLANS, COMPOSITE FLOOR DECK SHALL BE 2" – 20 GAUGE
2. FASTENING PATTERN:
   AT EACH SUPPORT WELD DECK TO SUPPORT AT 12" OC MAX. 36/4 PATTERN, WITH 5/8" DIAMETER PUDDLE WELD.
   SIDE LAPS TO BE SCREWED WITH #10 TEKS AT 2'-0" OC MAX.

APPROVED DECK MANUFACTURERS ARE VULCRAFT, CANAM, AND UNITED STEEL DECK. USE OF A DECK BY A MANUFACTURER OTHER THAN THOSE LISTED WILL REQUIRE VERIFICATION BY AN ENGINEER HIRED BY THE DECK FABRICATOR THAT THE ALTERNATE DECK CAN SUPPORT ALL IMPOSED LOADS. THIS VERIFICATION MUST BE STAMPED BY A PROFESSIONAL ENGINEER AND SUBMITTED PRIOR TO RECEIPT OF THE DECK SHOP DRAWINGS.

MISCELLANEOUS

1. CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND EXISTING CONDITIONS BEFORE PROCEEDING WITH THE WORK.
2. CONTRACTOR SHALL REPORT ANY VARIATIONS FOUND AT SITE BEFORE PROCEEDING WITH THAT PART OF THE WORK.

DESIGN LOADS (BOCA 1999)

LIVE LOAD –
GYMNASIUM = 100 PSF
FUTURE KITCHEN / DINING = 100 PSF
LOBBIES AND STAIRS = 100 PSF
MECHANICAL ROOMS = 125 PSF
STORAGE = 125 PSF

SNOW LOAD –
Pg = 60 PSF
Ce = 1.0
I = 1.0
Pf = 46 PSF + DRIFTING TO 168 PSF

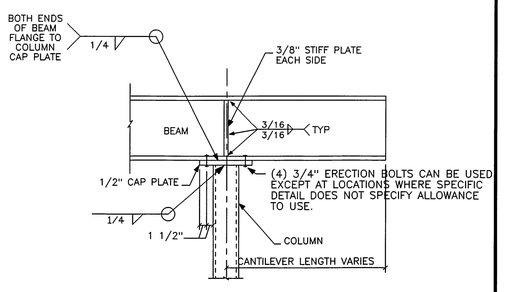
WIND LOAD –
BASIC WIND SPEED = 90 MPH
I = 1.23 (INTERPOLATED)
EXPOSURE C
P = 43.3 PSF
NET UPLIFT PRESSURE = 20 PSF

SEISMIC LOAD –
Av = .11, Aa=.11
SEIS. HAZARD EXP. GROUP = 1
SEIS. PERFORMANCE CAT. = C
SITE COEF. – S = 1.0
STRUCTURAL SYSTEM = BUILDING FRAME SYSTEM WITH REINFORCED MASONRY SHEAR WALLS (GOVERNS)
R = 4.5
Cd = 4.0
ANALYSIS PROCEDURE = EQUIV. LATERAL FORCE
BASE SHEAR – V = .0811 x W

GENERAL NOTES — A6

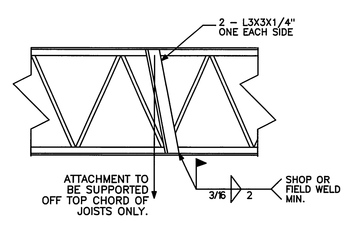
NO SCALE | REF: S20.1, S30.1

NOTE: PROVIDE WEB STIFFENERS PER THE INSTRUCTIONS OF THIS DETAIL FOR ALL BEAM OVER BEAM, BEAM OVER COLUMN, AND COLUMN SUPPOTRED BY BEAM CONDITIONS.



TYPICAL BEAM OVER COLUMN DETAIL — C5

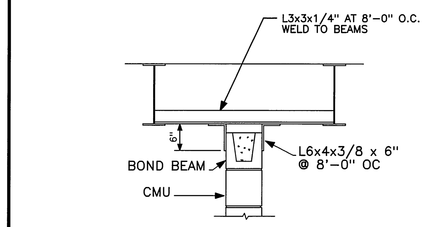
NO SCALE | REF: S20.1, S30.1



THIS JOIST REINFORCING DETAIL SHALL BE USED AT ALL LOCATIONS WHERE MECHANICAL EQUIPMENT, DUCTWORK, PIPING, AND ELECTRICAL CONDUITS ARE HUNG FROM THE TOP CHORD OF THE JOISTS WHEN NOT AT A JOIST PANEL POINT. G.C. TO COORDINATE LOCATIONS OF ABOVE ITEMS TO MINIMIZE REINFORCEMENTS NECESSARY.

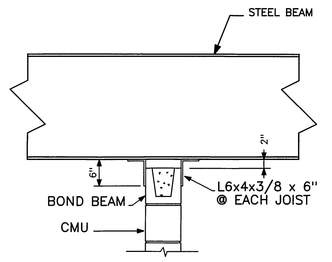
EXISTING ROOF JOIST REINFORCING DETAIL — C4

NO SCALE | REF: S20.1, S30.1



TOP OF PARTITION SUPPORT PARALLEL TO JOISTS — C3

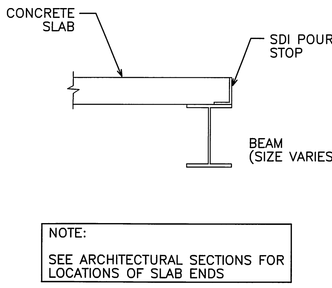
NO SCALE | REF: S20.1, S30.1



NOTE:
SEE ARCHITECTURAL SECTIONS FOR LOCATIONS OF SLAB ENDS

TOP OF PARTITION SUPPORT PERPENDICULAR TO JOISTS OR BEAMS — C2

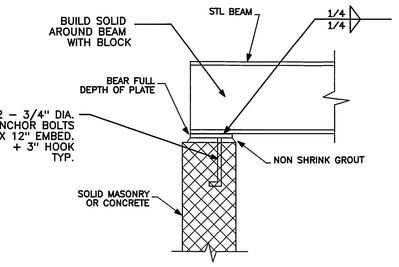
NO SCALE | REF: S20.1, S30.1



NOTE:
SEE ARCHITECTURAL SECTIONS FOR LOCATIONS OF SLAB ENDS

TYPICAL POUR STOP DETAIL — C1

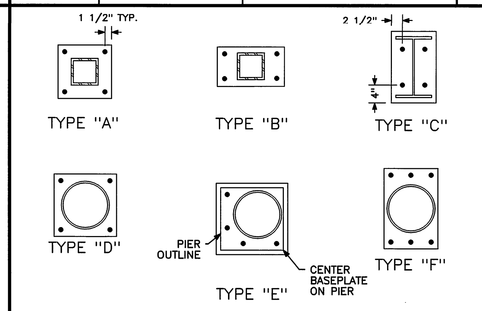
NO SCALE | REF: S20.1, S30.1



NOTE: AT POCKETS IN CONT MASONRY WALLS OR PIERS FILL SPACES SOLID AROUND BEAM W/ GROUT OR CONC FILL.

TYPICAL BEAM BEARING DETAIL — B5

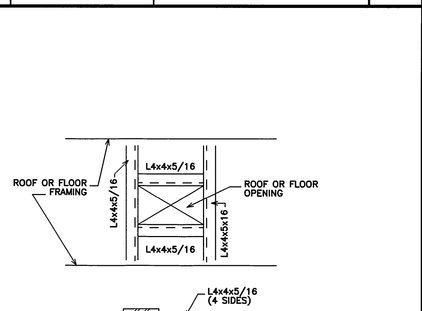
NO SCALE | REF: S20.1, S30.1



NOTES:
1. THE FOLLOWING ANCHOR RODS ARE REQUIRED AT ALL COLUMNS UNLESS NOTED OTHERWISE ON THE FOUNDATION PLANS.
   4–3/4" DIA. X 9" EMBEDMENT
   HEADED ANCHOR RODS (ASTM F1554)
2. AT COLUMN LOCATIONS 6.2/E1, 8/E1, 10.6/H1, 12/E1, 14/B1, 14/E1, 16/B1, 16/E1, 18/B1, 18/E1, .4/B.2, .4/A.2, .6/A.2:
   USE 4–3/4" DIA. X 12" EMBEDMENT
   HEADED ANCHOR BOLTS (ASTM F1554)

BASE PLATE TYPES — B4

NO SCALE | REF: S20.1, S30.1

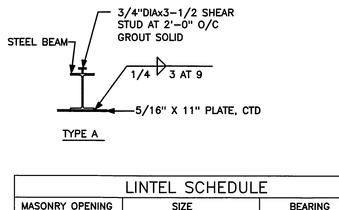


NOTES:

1. PROVIDE AT ALL OPENINGS 6" OR LARGER IN NEW FLOORS AND ROOF AND EXG FLOOR AND ROOF.
2. ALL CONNECTIONS TO BE WELDED.
3. SIM. AT FLOOR
4. COORDINATE OPENING SIZE WITH MECHANICAL, ELECTRICAL AND PLUMBING TRADES.

TYPICAL FLOOR AND ROOF FRAME OPENING — B3

NO SCALE | REF: S20.1, S30.1



LINTEL SCHEDULE		
MASONRY OPENING	SIZE	BEARING
4'–10" OR LESS	L4x3 1/2x5/16 LLV	8" MIN. ON SMU
4'–10" TO 7'–0"	L 5x3 1/2x5/16 LLV	8" MIN. ON SMU
7'–0" TO 9'–0"	L6x3 1/2x3/8 LLV	8" MIN. ON SMU
16'–0" MAX.	W16x26 + PL (TYPE A)	8" MIN. ON SMU

NOTES:
1. ONE ANGLE IS REQUIRED FOR EVERY 4" OF MASONRY.
2. LINTELS FOR EXTERIOR MASONRY SHALL BE GALVANIZED
3. MULTIPLE ANGLES SHALL BE WELDED BACK TO BACK.

LINTEL SCHEDULE — B2

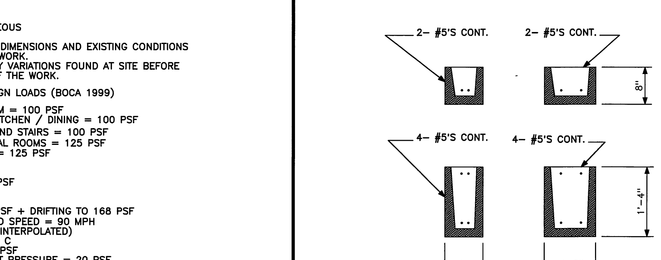
NO SCALE | REF: S20.1, S30.1

EXTERIOR MASONRY LINTEL SCHEDULE		
SPAN NOT TO EXCEED	SIZE	BEARING
12'–0"	BENT PL 8X5X3/8 (LLV)	8" MIN. ON SMU
10'–0"	BENT PL 7X5X3/8 (LLV)	8" MIN. ON SMU
8'–0"	BENT PL 6X5X3/8 (LLV)	8" MIN. ON SMU
6'–0"	L5X5X3/8	8" MIN. ON SMU

NOTES:
1. LINTELS FOR EXTERIOR MASONRY SHALL BE HOT–DIPPED GALVANIZED.
2. "SMU" INDICATES SOLID MASONRY UNIT.
3. LINTEL IS SIZED FOR 4" WIDTH OF MASONRY.

EXTERIOR MASONRY VENEER LINTEL SCHEDULE — B1

NO SCALE | REF: S20.1, S30.1

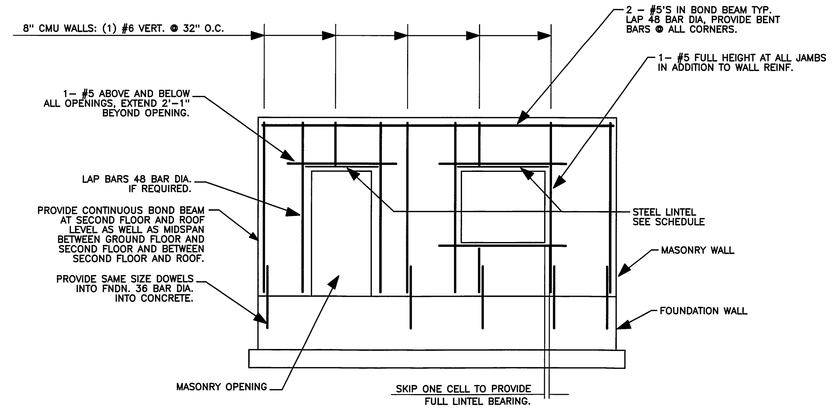


UNLESS SHOWN OTHERWISE PROVIDE THE ABOVE MIN. REINFORCING

NOTE: NO INSULATION IN BOND BEAMS

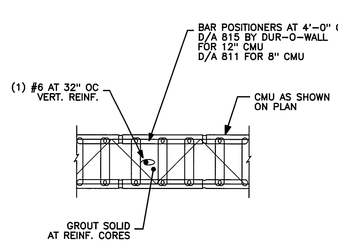
TYPICAL CMU BOND BEAM REINFORCING — A5

NO SCALE | REF: S20.1, S30.1



TYPICAL MASONRY REINFORCING — A3

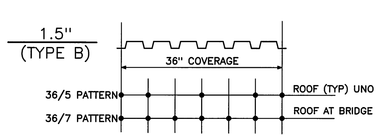
NO SCALE | REF: S20.1, S30.1



NOTES:
1. LOCATE REINFORCING AT ALL WALL ENDS AND CORNERS AND AT EACH SIDE OF CONTROL JOINTS AND STEEL COLUMNS.
2. NO INSULATION IN GROUTED CORES.
3. DETAIL APPLIES AT ALL MASONRY WALLS.
4. SEE ARCH DETAILS AND OTHER SHEETS FOR ADDITIONAL REINFORCING AT PIERS AND MISC. WALLS.

TYPICAL MASONRY REINFORCING PLAN — A2

NO SCALE | REF: S20.1, S30.1



TYPICAL DECK FASTENER LAYOUT — A1

NO SCALE | REF: S20.1, S30.1

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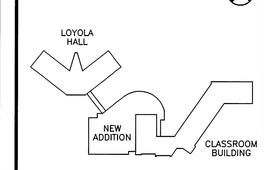
Project Title

CHEVERUS HIGH SCHOOL PHASE 3-ADDITIONS & RENOVATIONS

PORTLAND, MAINE

HA Project No. 02103

Key Plan



Mark	Date	Description
–	05-28-04	ISSUED FOR BID
–	05-17-04	OWNER REVIEW
–	02-27-04	DD REVIEW

Issue Dates

Drawing Status

Drawing Title

FRAMING NOTES AND DETAILS

PA / PE: BKB | Drawn By: GPC

Drawing Number

S60.1

PLOT DATE: Feb 27 2004 14:10:15 for /c/school/02103/s_det001.db/s2.dr by jcfor