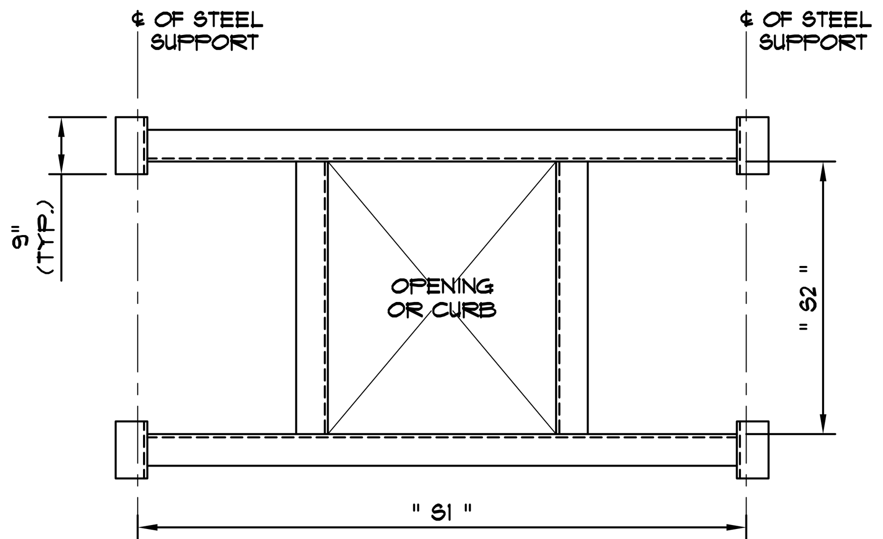
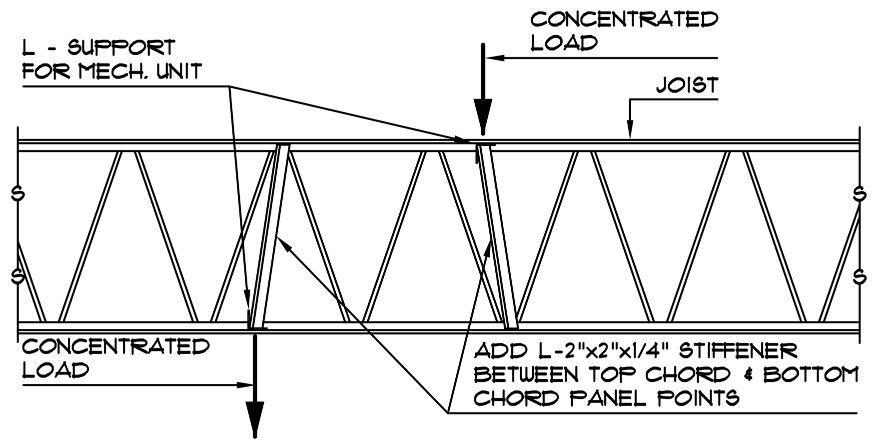


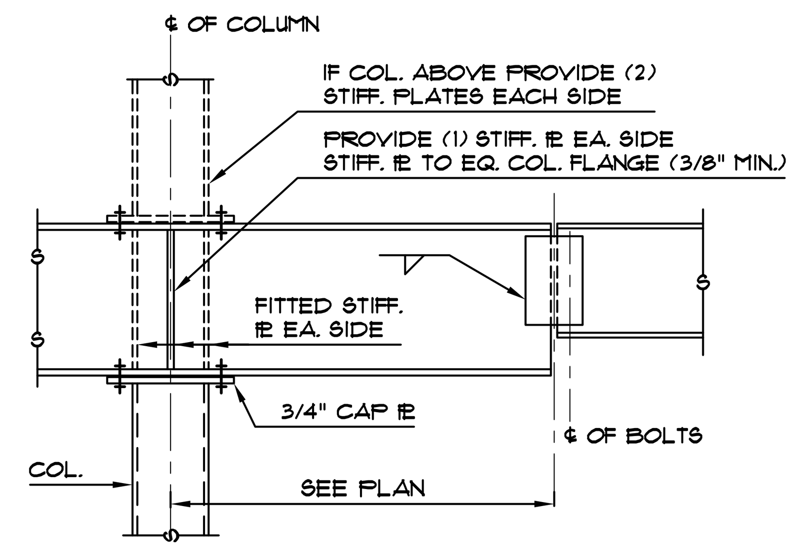
NOTES:
1. FOR SIZE & LOCATION OF OPENINGS SEE ARCHITECTURAL & MECHANICAL DRAWINGS.
2. STEEL CONTRACTOR SHALL VERIFY ALL OPENINGS AND EXACT LOCATIONS WITH THE TRADE CONTRACTOR REQUIRING SAID OPENINGS PRIOR TO FABRICATION & ERECTION OF STEEL FRAMES.
3. PROVIDE STEEL FRAMES AS SHOWN AROUND ALL REQUIRED OPENINGS LARGER THAN 8" AT ROOF.
4. PROVIDE STEEL ANGLES ON ALL SIDES OF OPENINGS UNLESS BEAM IS SHOWN ON PLAN. ANGLE SIZES TO BE:
FOR "S1" OR "S2" ≤ 6'-6" L-4"x4"x5/16"
FOR "S1" OR "S2" > 6'-6" L-6"x6"x3/8"
5. PROVIDE STEEL ANGLES ON ALL SIDES OF MECH'L CURBS UNLESS BEAM IS SHOWN ON PLAN. ANGLE SIZES TO BE L-6"x6"x3/8".
6. FOR SIZE & LOCATION OF MECH'L UNITS, SEE ARCH'L & MECH'L DWGS.

TYPICAL DETAIL @ ROOF OPENING & UNDER MECH'L CURB

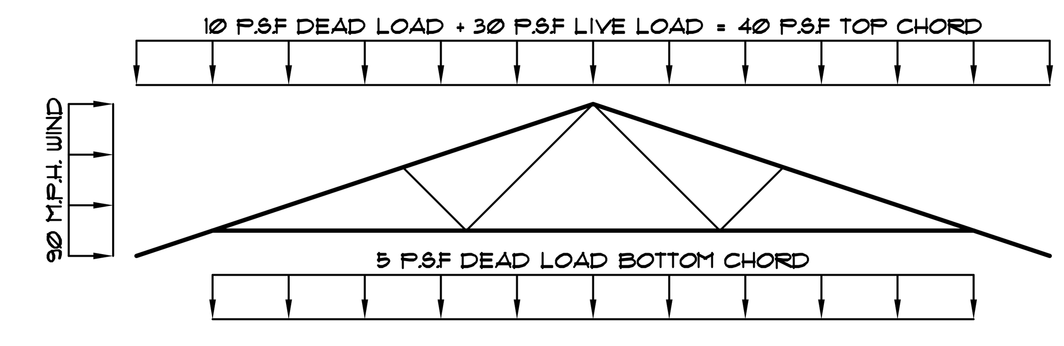


NOTE:
SUPPORTING LOAD AT CONDENSERS, MECHANICAL UNITS AND ALL CONCENTRATED LOADS GREATER THAN 300 lbs. OMIT IF LOAD IS WITHIN 3" OF A PANEL POINT.

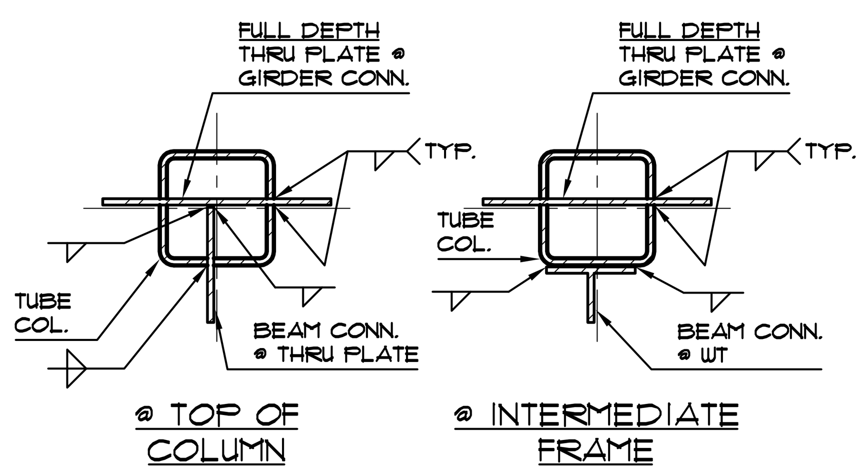
TYPICAL DETAIL OF REINF'D. JOIST



CANTILEVER BEAM CONNECTION



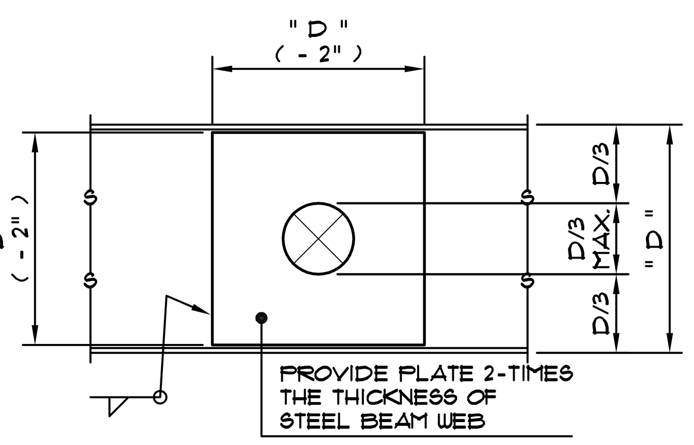
PREFAB. TRUSS LOADING DIAGRAM



NOTE:
WHERE A SINGLE ROW OF ¾"φ BOLTS DOES NOT MEET THE CONNECTION REQUIREMENTS STATED IN THE GENERAL NOTES PROVIDE A FULL DEPTH SINGLE ROW OF 1"φ BOLTS BEFORE USING A DOUBLE ROW OF BOLTS

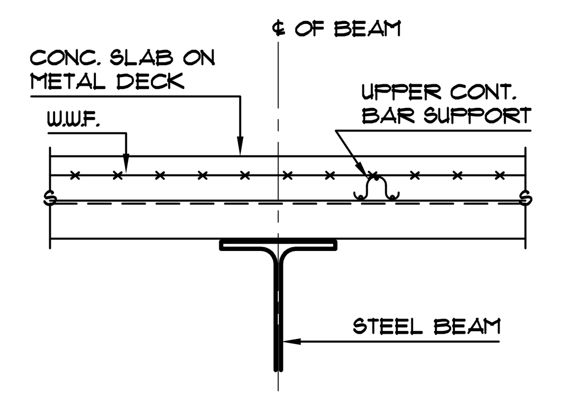
TYPICAL THRU PLATE DETAIL

(@ TUBE COLUMN)

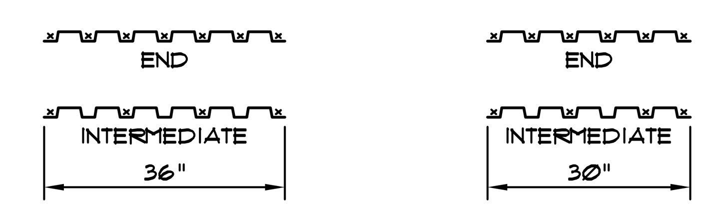


NOTE:
LOCATE OPENINGS IN MIDDLE 1/3 OF BEAM SPAN

TYPICAL REINF. DETAIL FOR OPENINGS IN STEEL BEAMS



TYPICAL W.W.F. SUPPORT



ROOF DECK WELDING PATTERN

NOTES:
UNLESS OTHERWISE SPECIFIED ON DRAWINGS PROVIDE & INSTALL LINTELS FOR ALL SQUARE HEAD MASONRY OPENINGS IN ALL MASONRY WALLS IN ACCORDANCE WITH THE FOLLOWING SCHEDULES & COMMENTS.

LOOSE LINTEL SCHEDULE

(FOR 4", 8", 12", & 16" WALLS)

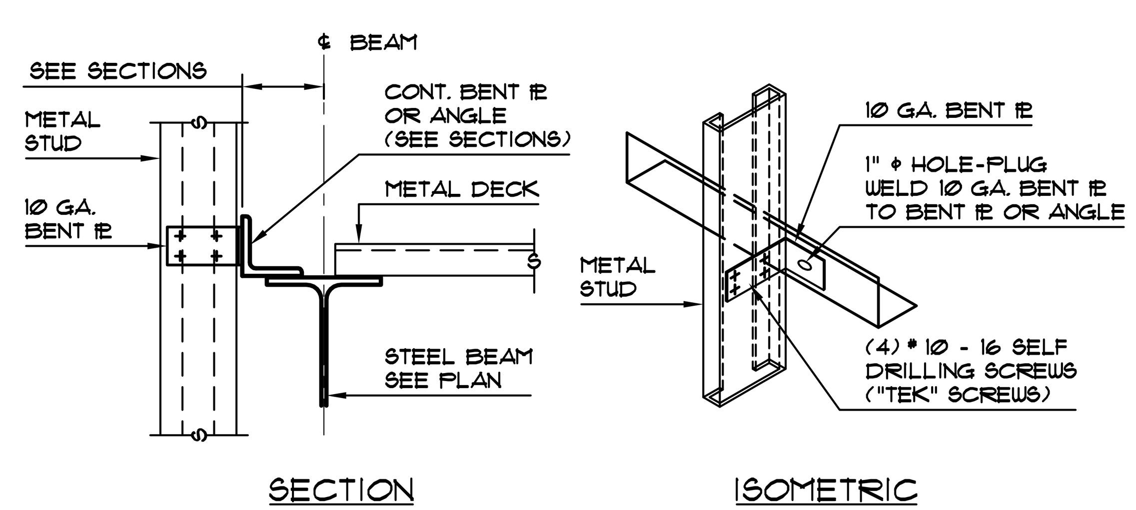
MASONRY OPENING	LINTEL SIZE	REMARKS
UP TO 4'-0"	L - 3 1/2" x 3 1/2" x 1/4"	
4'-1" TO 6'-0"	L - 5" x 3 1/2" x 5/16"	
6'-1" TO 8'-0"	L - 6" x 3 1/2" x 5/16"	
OVER 8'-0"	W 8 x 18 + ℗	

LOOSE LINTEL SCHEDULE

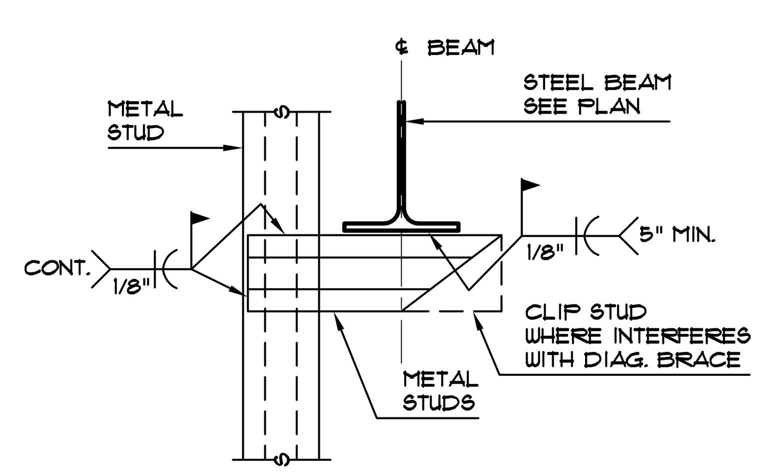
(FOR 6" WALLS)

MASONRY OPENING	LINTEL SIZE	REMARKS
2'-0" TO 6'-0"	WT 7 x 11	
6'-1" TO 8'-0"	WT 8 x 13	

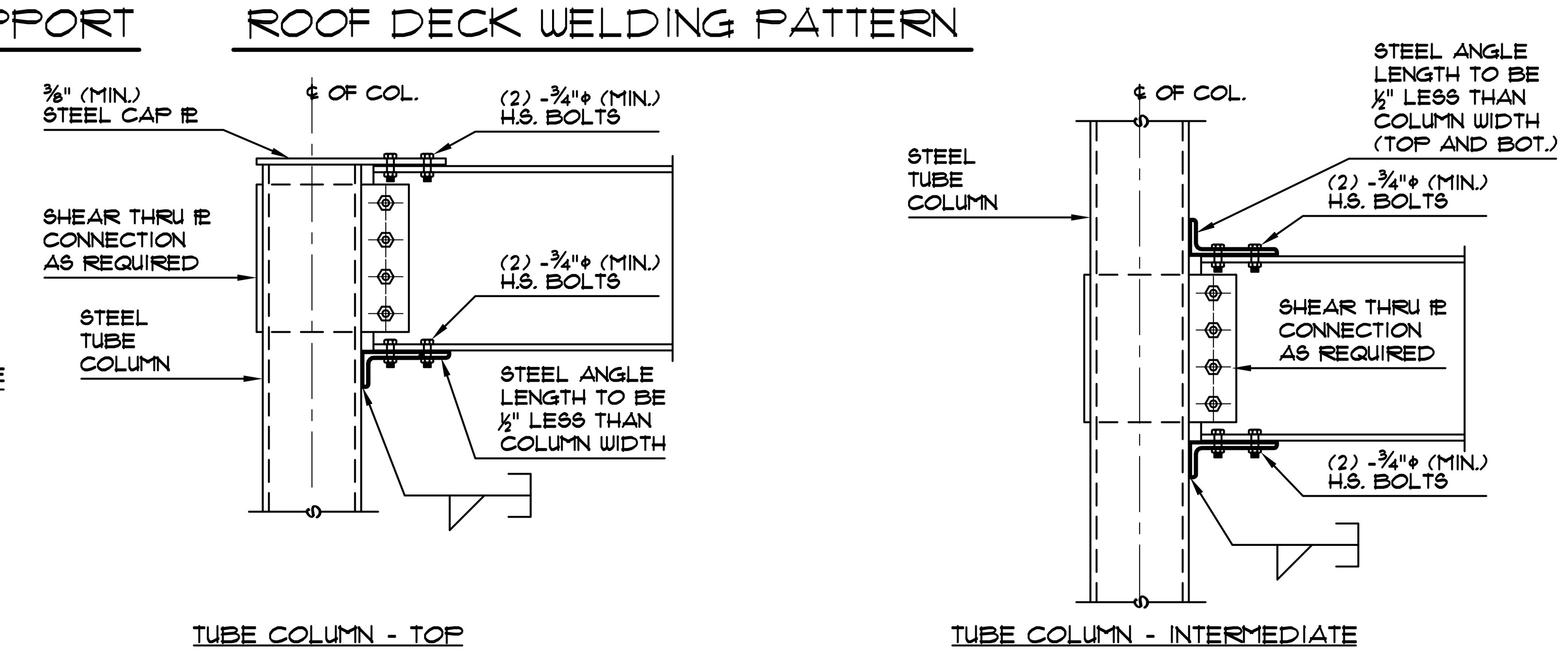
NOTES:
1. PROVIDE ONE (1) ANGLE FOR EACH 4" OF MASONRY WIDTH.
2. BEAR LINTELS 6" MINIMUM EACH SIDE OF OPENING.
3. ALL LINTELS IN EXTERIOR WALLS TO BE GALVANIZED.
4. WHERE OPENINGS LOCATED NEXT TO COLUMNS OR BEAMS, ATTACH TO STRUCTURAL STEEL, CONNECTION NOT TO PROTRUDE INTO OPENING.
5. CONSULT ARCHITECTURAL, MECHANICAL & ELECTRICAL DRAWINGS FOR OPENING SIZE & LOCATION.



DETAIL-"A"



DETAIL-"C"



TYPICAL WIND/SEISMIC FLEXIBLE MOMENT CONNECTION DETAILS

(INDICATED THUS ◁ ▷ ON PLAN)

NOTES:
1. SEE PLAN FOR LOCATION.
2. THE NUMBER AND DIAMETER OF BOLTS, THE SIZE AND LENGTH OF THE WELDS, AND THE THICKNESS OF THE ℗'s AND ANGLES TO BE DETERMINED BASED ON THE FOLLOWING MOMENT CAPACITIES UNLESS INDICATED OTHERWISE (ALLOWABLE STRESS INCREASES MAY NOT BE TAKEN FOR A.S.D.):
W 12 - 20 KIP-FT   W 14 - 20 KIP-FT
W 16 - 25 KIP-FT   W 18 - 30 KIP-FT
3. ALL BOLTS AT MOMENT CONNECTIONS TO BE 3/4"φ (MIN.) A325 PRE-TENSIONED BOLTS
4. PROVIDE STANDARD HOLES. LONG OR SHORT SLOTTED HOLES ARE NOT PERMITTED.

GENERAL NOTES

STRUCTURAL STEEL

1. All structural steel details shall be designed in accordance with the latest issue of the American Institute of Steel Construction (AISC), "Specification for Structural Steel Buildings."
2. Connections shall be designed to develop the full strength of the member over the required span, 1 1/2 times for composite members.
3. Provide double angle connections at all beam to wide flange columns and beam to beam connections whenever possible. The steel fabricator must notify the Structural Engineer if there are to be any changes. See Typical Thru-Pl Detail for beam to tube column connections.
4. Field connections shall be made by high strength bolts 3/4" minimum in diameter or welded as shown on drawings.
5. All pipe shapes shall be ASTM A53, Grade B, Fy= 35 KSI.
6. All tube shapes shall be ASTM A500, Grade B, FY=46 KSI.
7. All structural wide flange shapes to be ASTM A-992/A572, Grade 50.
8. All steel plates, angles, channels are to be ASTM A-36 unless indicated otherwise.

STEEL JOISTS

1. All standard bar joists, materials, and workmanship shall conform to the latest edition of the S.J.I. "Standard Specifications for Openweb Joists, K Series."
2. Do not load joists until bridging is installed.

STEEL ROOF DECK

1. Deck shall be 20 gage galvanized 1.5" wide rib variety (Type B) continuous over at least 3 spans.
2. Deck to be installed as per manufacturer's recommendations.

STEEL FLOOR DECK

1. Deck shall be 26 gage galvanized equal to 9/16" Type 'UFS' form deck by United Steel Deck, Inc.
2. Deck installation to be in strict accordance with manufacturer's recommendations.
3. Installation to be 3 span continuous.
4. All beams to have puddle welds at 12" O.C. (max).
5. Floor construction is unshored composite design. The steel will deflect under the weight of the concrete placed. The general contractor is to pour sufficient concrete, over and above the specified depth, to provide a level floor.

COLD FORM METAL FRAMING

1. All Cold Form Metal framework for the exterior walls, load-bearing walls and roof framing shall be designed by the cold form metal framing contractor in accordance with the manufacturer's guidelines. See required design loads on drawings.
2. Submit signed and sealed shop drawings and calculations for review prior to fabrication and erection.
3. Installation to be in strict accordance with shop drawings and manufacturer's recommendations. Brace all walls during erection as per manufacturer's recommendations.
4. All welds are to be by a certified welder.
5. Metal studs to have rows of horizontal bridging at a maximum 4'-6" on center. Bridges to be installed as per manufacturer's recommendations.
6. All load bearing metal framing members to be a minimum of 6" - 12 gage members at a maximum spacing of 24 inches on center unless otherwise noted on plan.
7. All metal tracks to match size and gauge of wall studs.

PREFABRICATED METAL TRUSSES

1. Prefabricated metal trusses shall be designed and manufactured by the truss manufacturer. The truss manufacturer shall design the connections of the trusses to the supporting structure or verify the adequacy of any connections indicated on the drawings. See required design loads on drawings.
2. Submit signed and sealed shop drawings and calculations for review prior to fabrication or erection.
3. Installation to be in strict accordance with manufacturer's recommendations. Brace trusses during erection as per manufacturer's recommendations.

PLYWOOD SHEATHING

1. All plywood sheathing shall comply with APA. Plywood shall meet C-D Interior APA, Structural I and II C-D Interior APA, or Structural I and II C-D Exterior APA.
2. Roof sheathing: 5/8" thick 40/20.
3. Floor sheathing: 3/4" thick 48/24.
4. Wall sheathing: 5/8" thick 32/16.
5. Attachment to be in accordance with IBC2006 requirements.
6. All plywood to have exterior glue.
7. See specifications for additional requirements.

MISCELLANEOUS

1. Contractor shall verify all dimensions, sections and elevations on the job.
2. Consult the Architectural, Mechanical and Electrical drawings for verification of location and dimensions of chases, inserts, openings, sleeves, washes, drips, reveals, depressions, equipment pads and other product requirements.
3. All walls shall be braced during construction until permanently restrained.
4. Reproductions of contract documents are not acceptable as shop drawings and will be rejected.

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No.	Date	Issue Notes
2	4-9-2010	Issued for Permit Review
1	2-1-2010	Issued for Bid

Date	
CAD File Name	0920-A0 Series
Project Manager	DJD
Drawn By	JDH
Checked By	BB
Project ID	0920
Drawing Title	TYPICAL DETAILS AND GENERAL NOTES
Drawing No.	S4.2

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