

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94	1999-161-1	COOK	75	21
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		

D-91-411-99

MASONRY WALL TIES:

- MATERIAL: SEE SPECIFICATIONS.
- EXTERIOR WALL:
 - CONNECT WALL TO ALL STRUCTURAL STEEL COLUMNS WITH TIES AT 16 INCHES ON CENTER, VERTICALLY.
- INTERIOR WALL:
 - CONNECT WALL TO STEEL STRUCTURE AS INDICATED ON DETAILS.
 - CONNECT WALL TO ALL STRUCTURAL STEEL COLUMNS WITH TIES AT 16 INCHES ON CENTER, VERTICALLY.

STEEL NOTES:

- DIMENSIONS: TO CENTERLINES OF COLUMNS, BEAMS AND PIPES; BACKS OF CHANNELS AND ANGLES; TOP SURFACES OF BEAMS AND TUBES, AND INSIDE OF BREECHING PLATES UNLESS SHOWN OTHERWISE.
- ELEVATIONS: REFER TO TOP SURFACE OF FLANGE OF MEMBER (AND CENTERLINE OF PIPES) UNLESS SHOWN OTHERWISE.
- FRAMING MEMBERS NOTED BY DEPTH AND WEIGHT SHALL CONFORM TO THE AISC SPECIFICATION. FRAMING MEMBERS NOTED BY DEPTH ONLY ARE FULLY SIZED ON ANOTHER PLAN OR ELEVATION.
- THE EXTENT OF GUARDRAIL AND KICK PLATE AROUND FLOORS, PLATFORMS, AND STAIRS IS INDICATED BY A GUARDRAIL CENTERLINE TOGETHER WITH KICK PLATE DETAILS. PROVIDE GUARDRAIL AND KICK PLATE AROUND ALL NEW AND MODIFIED PLATFORMS.
- WHERE OPENINGS IN GRATING ARE SHOWN OR REQUIRED FOR PASSAGE OF PIPING, COLUMNS, OR OTHER STRUCTURAL STEEL, EDGE BIND OPENING WITH 1/4" KICK PLATE WELDED TO THE GRATING.
- COORDINATE NEW GUARDRAIL, PLATFORMS AND DOOR FRAMES WITH EXISTING AND THOSE FURNISHED BY SPECIAL PR PRIOR TO FABRICATION. MAKE FIELD MEASUREMENTS AND MINOR MODIFICATIONS WHERE CONFLICTS OCCUR.
- ALL KICK PLATES SHALL EXTEND A MINIMUM OF 4 INCHES ABOVE WALKING SURFACE.
- WELD SYMBOLS SHOWN MAY NOT DISTINGUISH BETWEEN FIELD AND SHOP WELDING. CONTRACTOR SHALL PROVIDE AS MUCH WELDING AS PRACTICAL IN THE SHOP. CONTRACTOR'S SHOP DRAWINGS SHALL SHOW ALL WELDING AND DISTINGUISH BETWEEN FIELD AND SHOP WELDING.
- WHERE FILLET WELD SIZES ARE NOT NOTED ON DRAWINGS, PROVIDE MINIMUM SIZE IN ACCORDANCE WITH AWS D1.1, 5.14. ALL OTHER TYPE WELDS NOT SIZED ON DRAWINGS SHALL DEVELOP FULL STRENGTH OF MEMBERS ATTACHED.
- PROVIDE 2" DIAMETER DRAINAGE HOLES @ 4'-0" OC WHERE FRAMING MEMBER ORIENTATION MAY TRAP WATER.
- ANCHOR BOLTS FOR ALL MACHINERY OVER 30 HORSEPOWER SHALL HAVE TWO HEAVY HEX NUTS.
- SET ELEVATION OF BASEPLATES TO TOP OF BASEPLATE AND ANCHOR BOLTS TO TOP OF BOLT. DO NOT WORK FROM TOP OF CONCRETE.
- PROVIDE STAINLESS STEEL FASTENERS FOR ALL BOLTED CONNECTIONS WHERE ONE OR MORE MEMBERS OR ELEMENTS ARE STAINLESS STEEL MATERIAL.
- PROVIDE GALVANIZED FASTENERS FOR ALL BOLTED CONNECTIONS WHERE ONE OR MORE MEMBERS OR ELEMENTS ARE GALVANIZED MATERIAL.
- MISCELLANEOUS ANCHOR BOLTS, EXPANSION ANCHORS, ANCHOR RODS, AND FASTENERS NOT INDICATED, BUT REQUIRED FOR ANCHORAGE OF EQUIPMENT AND MATERIALS, SHALL BE PROVIDED (AS RECOMMENDED BY MANUFACTURER OF ITEMS). ANCHORAGE WILL BE SUBJECT TO REVIEW BY ENGINEER.
- CONTRACTOR SHALL FURNISH AND INSTALL MISCELLANEOUS STEEL ITEMS NOT SHOWN BUT NECESSARY FOR COMPLETE CONSTRUCTION OF PROJECT.
- ANCHOR BOLTS FOR MECHANICAL EQUIPMENT WHICH ARE NOT DETAILED ON DRAWINGS, BUT ARE FURNISHED UNDER THIS CONTRACT, SHALL HAVE SUFFICIENT EXTENSION FOR TWO HEAVY HEX NUTS.
- BOLT HOLES IN BASEPLATES SHALL BE SIZED AS FOLLOWS UNLESS INDICATED OTHERWISE ON DRAWINGS:

STEEL NOTES (continued):

DIAMETER OF BOLT	HOLE DIAMETER
5/8"	7/8"
3/4"	1 1/16"
7/8"	1 3/16"
1" TO 2"	BOLT DIA + 1/2"
OVER 2"	BOLT DIA + 1"

- WHERE HANGERS OR POSTS CONNECT TO TOP OR BOTTOM FLANGE OF HORIZONTAL WIDE-FLANGE BEAMS, FURNISH 3/8" WEB VERTICAL STIFFENER PLATE ON EACH SIDE OF BEAM WEB, CONTINUOUSLY FILLET WELDED TO WEB AND FLANGE, UNLESS NOTED OTHERWISE.
- WHERE PIPE OR EQUIPMENT HANGERS ATTACH TO BOTTOM OR TOP BEAM FLANGE, FURNISH MINIMUM 3/8" STIFFENER PLATE ON EACH SIDE OF BEAM WEB, CONTINUOUSLY WELDED TO WEB AND FLANGE. STIFFENER PLATE MAY BE OMITTED IF HANGER ATTACHES TO BEAM BOTTOM FLANGE AND CONSISTS OF LUG PLATE IN PLANE OF AND LOCATED DIRECTLY BENEATH BEAM WEB.
- PROVIDE MISCELLANEOUS STEEL AS REQUIRED FOR SUPPORT OF GRATING, CHECKERED PLATE, CONCRETE FORM DECK AND ROOF DECK AT COLUMN PENETRATIONS AND OTHER OBSTRUCTIONS TO NORMAL SUPPORT STEEL.

STRUCTURAL STEEL CONNECTION DESIGN NOTES:

- CONNECTIONS SHALL BE DESIGNED AT 100% OF ALLOWABLE STRESS PER AISC STEEL CONSTRUCTION MANUAL, FOR COMBINATION OF SPECIFIED FORCES AND MOMENT, AS APPLICABLE.
- UNLESS NOTED OTHERWISE, ALL BEAM-TO-COLUMN AND BEAM-TO-BEAM CONNECTIONS SHALL BE DOUBLE CLIP ANGLE CONNECTIONS, WITH MINIMUM OF 2 ROWS OF BOLTS. ALTERNATE CONNECTION CONCEPTS AT LOCATIONS OF HIGH AXIAL FORCE IN BEAMS SHALL BE SUBMITTED TO ENGINEER FOR REVIEW PRIOR TO USE.
- UNLESS NUMBER OF BOLTS IS SPECIFICALLY CALLED OUT ON DRAWINGS, DETAILS OF BOLTED CONNECTIONS ARE NOT INTENDED TO SHOW EXACT NUMBER OF BOLTS, BUT ARE SYMBOLIC ONLY.
- VERTICAL DIAGONALS WORK POINT: COLUMN CENTROID AND BEAM CENTROID CENTERLINE INTERSECTION. VERTICAL DIAGONALS MAY BE OFFSET FROM INTERSECTION WORK POINTS UP TO 8 INCHES TO SIMPLIFY CONNECTIONS, SUBJECT TO ENGINEER'S REVIEW.
- HORIZONTAL DIAGONALS WORK POINT: COLUMN CENTROID OR BEAM CENTERLINE INTERSECTION, AS APPLICABLE, UNLESS NOTED OTHERWISE.
- PROVIDE SLOTTED OR OVERSIZE HOLES WHERE REQUIRED TO FACILITATE INSTALLATIONS TO EXISTING MEMBERS. USE SLIP CRITICAL BOLTS FOR THESE CONNECTIONS.
- FIELD DRILL HOLES FOR CONNECTION TO EXISTING STEEL; WELDING TO EXISTING STEEL WILL BE PERMITTED ONLY WHERE INDICATED OR SPECIFICALLY APPROVED BY ENGINEER.

PIPE SUPPORT STEEL NOTES:

- FOR PIPE SUPPORT LOCATIONS, SEE MECHANICAL DRAWINGS.

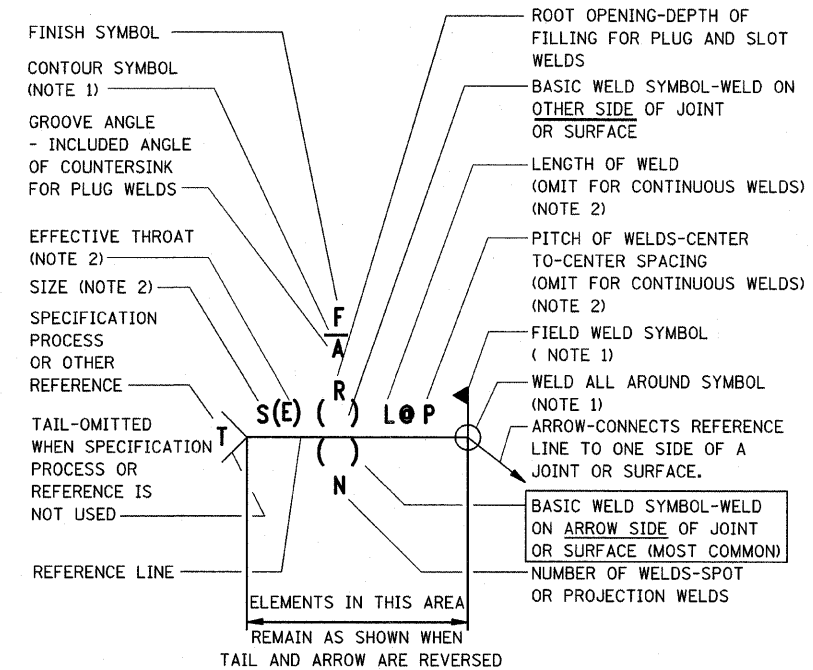
ABBREVIATIONS:

BM	BEAM	PL.	PLATE
CL	CENTER LINE	PROJ	PROJECTION
CLR	CLEAR	RET	RETURN
CMU	CONCRETE MASONRY UNIT	SCH.	SCHEDULE
CONC	CONCRETE	S.S.	STAINLESS STEEL
DIA	DIAMETER	STL	STEEL
EA	EACH	S. STL	STAINLESS STEEL
(E)	EXISTING	T/	TOP
EMB	EMBEDMENT	T.P.	TOE PLATE
EQ	EQUAL		
FRP	FIBER REINFORCED PLASTIC		
F.S.	FAR SIDE		
GALV	GALVANIZED		
GRG	GRATING		
G.R.	GUARD RAIL		
H.R.	HAND RAIL		
HLS	HOLES		
LG	LONG		
L.L.V.	LONG LEG VERTICAL		
LSL	LONG SLOTTED HOLE		
N.S.	NEAR SIDE		

WELD SYMBOLS

FILLET WELD DOUBLE SIDE		GROOVE WELD (BEVEL CONVEX)	
FILLET WELD SINGLE SIDE		GROOVE WELD (BEVEL FLUSH)	
FILLET WELD DOUBLE STAGGERED		GROOVE WELD (U)	
GROOVE WELD (FLARE V)		GROOVE WELD (J)	
GROOVE WELD (FLARE BEVEL)		PLUG WELD	
GROOVE WELD (SQUARE)		BACK OR BACKING WELD	
GROOVE WELD (SQUARE CONVEX)		SURFACING WELD	
GROOVE WELD (SQUARE FLUSH)			
GROOVE WELD (V)			
GROOVE WELD (BEVEL)			

LOCATION OF ELEMENTS OF A WELDING SYMBOL



NOTES:

- SUPPLEMENTARY SYMBOL.
- SHOWN ON SAME SIDE OF REFERENCE LINE AS THE WELD SYMBOL. IF "WELD BOTH SIDES" DIMENSIONS ARE REQUIRED ON BOTH SYMBOLS, EVEN IF SAME DIMENSIONS.

PUMP STATION TRUCK LOT AND TRANSFORMER PAD WORK (MECHANICALLY STABILIZED EARTH RETAINING WALL CONSTRUCTION) WILL BE PERFORMED AS A SEPARATE CONTRACT.

THE CONTRACTOR SHALL COORDINATE HIS/HER WORK WITH THE PUMP STATION TRUCK LOT AND TRANSFORMER PAD CONTRACTOR IN ACCORDANCE WITH ARTICLE 105.08 OF THE STANDARD SPECIFICATIONS AND AS DIRECTED BY THE ENGINEER.

PLOT DATE = 3/22/2010
FILE NAME = D:\98028\98028-161-1-S-02.dgn
PLOT SCALE = 1:1
USER NAME = AUSER



REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
STRUCTURAL GENERAL NOTES - SHEET 2

SCALE: VERT. NO SCALE
HORIZ. DATE: 3/23/2010
DRAWN BY: A.T.
CHECKED BY: A.N.