

A

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C

D

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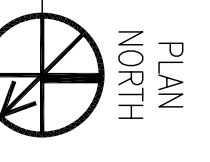
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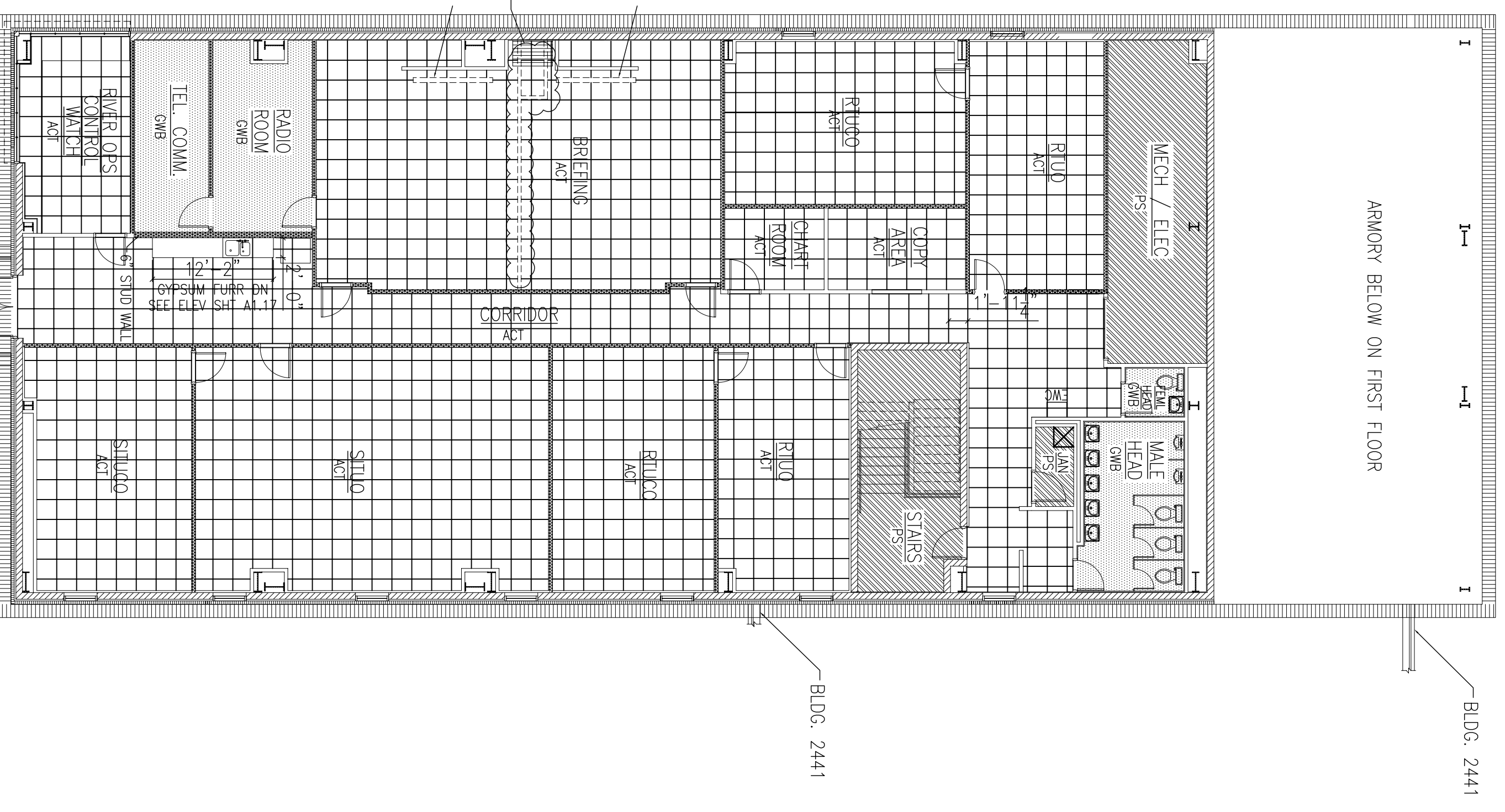
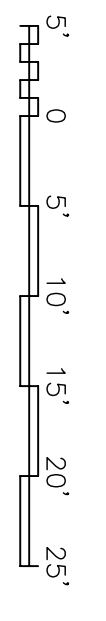
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OPERATIONS BUILDING 2440 SECOND FLOOR REFLECTED CEILING PLAN



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

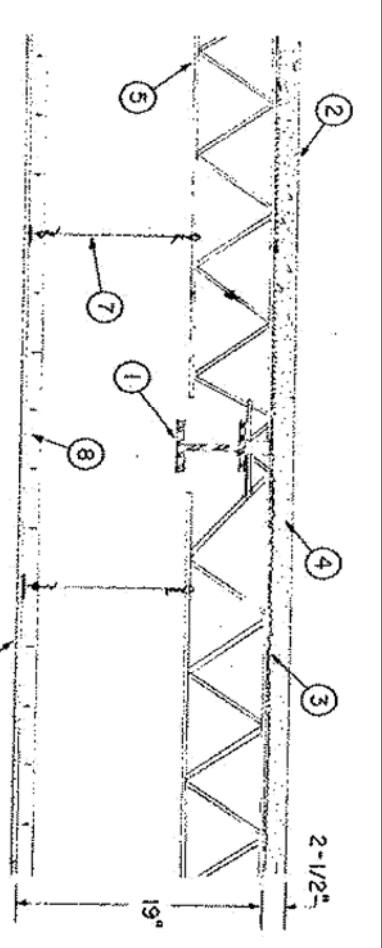


PROJECTION SCREEN SEE SHEET CID-2 FOR DETAILS
SEE HURFOR OPERABLE PARTITION SHOP DWG'S FOR FINISH CIG. CONFIGURATION IN THIS AREA
PROJECTION SCREEN SEE SHEET CID-2 FOR DETAILS

ARMORY BELOW ON FIRST FLOOR

BLDG. 2441

- Design No. 0527
- Revision 13, 2009
- Restrainted Assembly Rating : 2 Hr.
- Unrestrained Beam Ratings : 2, 3 and 4 Hr. (See Items 8A, 8B, 8D, 8E and 10)
- Load Restrainted for Condition Applications : See Guide ENVI7
- 1. Beam : W10x21 minimum size.
- 2. Normal-Weight Concrete : 2-1/2 in. thick carbonate or siliceous aggregate, 152 +/- 0.3 pcf unit weight, 3500 psi compressive strength.
- 3. Metal Lath : 3/8 in. rb, 3.4 lb per sq yd expanded steel. Tied to each joist at every other rib and midway between joists of side top with No. 18 SMC galv steel wire.
- 4. Welded Wire Fabric : 6 x 6 : 10/10 SMC.
- 5. Steel Joists : Type 8x2 min size, spaced 24 in. OC, welded to end supports.
- 6. Bridging : (Not shown), 1/2 in. diam steel bars welded to top and bottom chord of each joist.
- 7. Hanger Wire : No. 12 SMC galv steel wire, twist-tied to lower chord of joists. Located 48 in. OC.
- 8. Steel Framing Members* : Main runners nom 12 ft long, spaced 48 in. OC. Ends of main runners at walls to rest on wall angle, without attachment, with 1/2 to 3/4 in. end clearance. Primary cross tees (1-1/2 in. wide across flange) or cross channels, nom 4 ft long, installed perpendicular to main runners and spaced 24 in. OC. Additional primary cross tees or cross channels required at each gypsum board end joint and 8 in. from end on each side of gypsum board end joint.



- 8A. Steel Framing Members* : (Not shown) : As an alternate to item 8. For use with 1/2 in. thick gypsum board only. Main runners nom 12 ft long, spaced 48 in. OC. Cross channels, 4 ft long, installed perpendicular to main runners and spaced 24 in. OC. Additional cross channels required 8 in. from each side of gypsum board end joints, and 8 in. from each side of light fixtures. Cross tees, 4 ft long, installed perpendicular to main runners to support the 4 ft sides of light fixtures. -Shaped metal trim molding, installed at perimeter of light fixtures to cover and support the exposed gypsum board edges.
- CHICAGO METALLIC CORP* : Types 650, 650C, 670 or 670C. When Type 650, 650C, 670 or 670C steel framing members are used, the maximum Unrestrained Beam Rating is 3 hr. When Types 654C or 674C cross tees are used, assembly and beam ratings are limited to 2 hr.
- 8B. Steel Framing Members* : (Not shown) : As an alternate to items 8 and 8A. Main runners nom 12 ft long, spaced 48 in. OC. Cross tees, nom 48 in. long installed perpendicular to main runners and spaced 24 in. OC. Additional cross tees located 8 in. from end on each side of light fixtures.
- CHICAGO METALLIC CORP* : Types 650, 650C, 670 or 670C. When Type 650, 650C, 670 or 670C steel framing members are used, the maximum Unrestrained Beam Rating is 3 hr. When Types 654C or 674C cross tees are used, assembly and beam ratings are limited to 2 hr.
- 8C. Steel Framing Members* : As an alternate to 8, 8A and 8B. Main runners, cross tees, cross channels and wall angle as listed below:
 - a. Main Runners : Nom 10 or 12 ft long, 15/16 in. or 1-1/2 in. wide face, spaced 4 ft. OC.
 - b. Cross Tees : Nom 4 ft. long, 1-1/2 in. wide face or 15/16 in. wide face, installed at sides of light fixtures, installed perpendicular to the main runners, spaced 24 in. OC. When Bolts and Blankets* (Item 12) are used, cross tees spaced 16 in. OC. Additional cross tees or cross channels used at 8 in. from each side of butted gypsum board end joints. The cross tees or cross channels may be riveted or screw attached to the wall angle or channel to facilitate the ceiling installation.
 - c. Cross Channels : Nom 4 ft. long, installed perpendicular to main runners, spaced 24 in. OC. When Bolts and Blankets* (Item 12) are used, cross channels spaced 16 in. OC.
 - d. Wall Angle or Channel : Painted or galv steel angle with 1 in. legs, 1-9/16 in. deep attached to walls at perimeter of ceiling with fasteners 16 in. OC. To support steel framing member ends and for screw-attachment of the gypsum board.
- 8D. Alternate Steel Framing Members* : (Not shown) : As an alternate to items 8, 8A, 8B and 8C. For use in corridors or rooms having a maximum width dimension of 14 ft. Steel framing members consist of grid runners, locking angle wall molding and hanger bars. Locking angle wall molding secured to walls with steel nails or screws spaced max 24 in. OC. Slots of locking angle wall molding provide with hanger bars to be drilled with tabbed cutouts in bottom edge of hanger bars. Hanger bars spaced max 50 in. OC and suspended with No. 12 AWG steel hanger wires spaced max 48 in. OC. Adjoining lengths of hanger bar to overlap 12 in. and to be secured together and suspended by a shored hanger wire. A min clearance of 1/4 in. shall be maintained between the ends of the hanger bars and the walls. Grid runners cut-to-length and installed perpendicular to hanger bars and spaced max 24 in. OC with additional grid runners installed 8 in. OC at gypsum board end joints. Grid runners parallel with walls to be spaced max 16 in. from wall. Ends of grid runners to rest on and engage slots of locking angle wall molding with a clearance of 3/8 in. to 1/2 in. mentioned between each end of the grid runner and the wall. Balls of grid runner to be captured by tabbed cutouts in bottom edge of hanger bars.

- ARMSTRONG WORLD INDUSTRIES INC : Type DFR-8000-SS. When Type DFR-8000-SS Steel Framing Members are used, assembly and beam ratings are limited to 2 hr.
- 8E. Alternate Steel Framing Members* : (Not shown) : As an alternate to items 8, 8A, 8B, 8C and 8D. Main runners nom 12 ft long, spaced 72 in. OC. Cross tees, nom 6 ft long, installed perpendicular to main runners and spaced 24 in. OC. Additional 6 ft long cross tees required at each gypsum board end joint with butted gypsum board end joints centered between cross tees spaced 8 in. OC. The main runners and cross tees may be riveted or screw-attached to the wall angle or channel to include the ceiling insulation.
- ARMSTRONG WORLD INDUSTRIES INC : Type DFR-8000. When Type DFR-8000 Steel Framing Members with 6 ft cross tees are used, assembly and beam ratings are limited to 2 hr.
- 9. Wall Molding : (Not shown) : 25 WSG steel channel, 1-1/2 in. deep with 3/4 in. lower leg and 1/4 in. top leg, nailed to walls along perimeter of ceiling. Gypsum board placed under wall molding lower leg and screw attached 12 in. OC.
- 10. Gypsum Board* : 1/2 or 5/8 in. thick, 4 ft wide, installed with long dimension perpendicular to cross tees with side joints centered along main runners, and end joints centered below cross tees. Gypsum board fastened to framing members with 1-1/4 in. long gypsum board screws spaced a max 12 in. OC in a 6-12-12-6 pattern along cross-tees. Screws along sides and ends of boards spaced 1/2 in. from board edge. End joints of the sheets shall be staggered with spacing between joints on adjacent boards not less than 4 ft. OC. Joints to be covered with paper tape and joint compound.

- When alternate Steel Framing Members* (Item 8B) are used, gypsum board installed with long dimension (side joints) perpendicular to the cross channels and 4 ft cross tees, and with the side joints centered along the main runners. Gypsum board fastened to cross channels with gypsum board screws located 1/2 in. from butted end joints, with one screw located at the midpoint of the cross channel, one screw located 12 in. from end on each side of the channel end span, and one screw located 2-3/4 in. from each side joint. End joints of the sheets shall be staggered as described above. Joints to be covered with paper tape and joint compound.
- When the alternate Steel Framing Members* (Item 8B) are used, gypsum board installed with long dimension perpendicular to cross tees with side joints centered along the main runners and end joints centered along cross tees. Gypsum board fastened to cross tees with gypsum board screws located 1/2 in. from butted end joints, with one screw located 12 in. from end on each side of the channel end span, and one screw located 2-3/4 in. from each side joint. End joints of the sheets shall be staggered as described above. Joints to be covered with paper tape and joint compound.
- When alternate Steel Framing Members* (Item 8D) are used, gypsum board sheets installed with long dimension (side joints) perpendicular to the grid runners with the end joints staggered min. 4 ft and centered between grid runners which are spaced 8 in. OC. Prior to installation of the gypsum board sheets, bocker strips consisting of nom 7-3/4 in. wide by 48 in. long pieces of gypsum board one to be laid atop the grid runner. Flanges and centered over each butted end joint location. The bocker strips are to be secured to the flanges of the grid runners at opposite corners of the bocker strip to prevent the bocker strips from being uplifted during screw-attachment of the gypsum board sheets. Gypsum board fastened to cross tees with drywall screws spaced 1 in. and 4 in. from the side joints and max 8 in. OC in the field of the board. The butted end joints are to be secured to the bocker strip with No. 10 by 1-1/2 in. long Type G remaining screws located 1 in. from each side of the butted end joint and spaced 1 in. and 4 in. from the side joints and max 8 in. OC in the field of the board. Joints to be covered with paper tape and joint compound.

- When alternate Steel Framing Members* (Item 8E) are used, gypsum board sheets installed with long dimension (side joints) perpendicular to the 6 ft long cross tees with the end joints staggered min. 4 ft and centered between cross tees which are spaced 8 in. OC. Prior to installation of the gypsum board sheets, bocker strips consisting of nom 7-3/4 in. wide by 48 in. long pieces of gypsum board one to be laid atop the grid runner. Flanges and centered over each butted end joint location. The bocker strips are to be secured to the flanges of the grid runners at opposite corners of the bocker strip to prevent the bocker strips from being uplifted during screw-attachment of the gypsum board sheets. Gypsum board fastened to cross tees with drywall screws spaced 1 in. and 4 in. from the side joints and max 8 in. OC in the field of the board. The butted end joints are to be secured to the bocker strip with No. 10 by 1-1/2 in. long Type G remaining screws located 1 in. from each side of the butted end joint and spaced 1 in. and 4 in. from the side joints and max 8 in. OC in the field of the board. Joints to be covered with paper tape and joint compound.

Walloboard Thickness, In.	Restrainted Assembly Rating, Hr.	Unrestrained Assembly Rating, Hr.	Unrestrained Beam Rating, Hr.
1/2	2	2	3
5/8	2	2	4

- AMERICAN GYPSUM CO. : Types AG-C.
- CERAMANTEED GYPSUM INC. : Type FRFC, Profile Type C.
- CERAMANTEED GYPSUM CANADA INC. : Profile Type C.
- CANADIAN GYPSUM COMPANY : Types C, IP-XZ, IPC-AR.
- GEORGIA-PACIFIC GYPSUM L.L.C. : Type S.
- LAFARGE NORTH AMERICA INC. : Types LGFC-C, LGFC-C/A.
- NATIONAL GYPSUM CO. : Types FSK-C, FSK-C.
- PARROTT GYPSUM PRODUCTS CO. : Types DBA.
- PARROTT GYPSUM PRODUCTS CO. : Types DBA.
- PARROTT GYPSUM PRODUCTS CO. : Types DBA.
- TEMPLE-INLAND FOREST PRODUCTS CORP. : Type TC-C.
- UNITED STATES GYPSUM CO. : Types C, IP-XZ, IPC-AR.
- USG MEXICO S.A. DE C.V. : Types C, IP-XZ, IPC-AR.

- CANADIAN GYPSUM COMPANY : Types C, IP-XZ, IPC-AR.
- UNITED STATES GYPSUM CO. : Types C, IP-XZ, IPC-AR.
- USG MEXICO S.A. DE C.V. : Types C, IP-XZ, IPC-AR.
- 11. Screw, Gypsum Board : (Not shown) - No. 6 Phillips-Type, Type S self-drilling and self-tapping, 1-1/4 in. long.
- 12. Bolts and Blankets* : (Optional, Not shown) - When used Ratings are limited to 1 Hr. - For use with Steel Framing Members* (Specifically Item 8B) and Gypsum Board* (Specifically Item 10A) - Any thickness mineral wool or glass fiber insulation bearing the UL Classification Marking for Surface Burning Characteristics, having a flame spread value of 25 or less and a smoke spread value of 50 or less. Insulation fitted in the concealed space, draped over steel framing members/gypsum board ceiling members.

LEGEND:

ACT	ACOUSTICAL CEILING TILE
CONC	SEALED CONCRETE
CPT-1	CARPET TILE TYPE 1
CPT-2	CARPET TILE TYPE 2
EP	EPOXY PAINT
GWB	GYPSUM WALL BOARD
IJWT	IMPACT RESISTANT WALL TREATMENT
MPI	MASTER PAINTERS INSTITUTE (MPI) SYSTEM EXT 5, 10-65
MS	METAL SOFFIT
P	PAINT
PT	PAINTED STRUCTURE
QVT	PORCELAIN TILE
RB	QUARTZ VINYL TILE
RT	RUBBER BASE
FP	RUBBER STAIR TREADS FIREPROOFING

SYM	DESCRIPTION	DATE	APPR
	REVISED AS PER URS COMMENTS 9 OCTOBER 2009	11-06-09	RW



DESIGNED BY: R. WILTSE
 DRAWN BY: T. ARNOLD
 CHECKED BY: P. DAMMON

DEPARTMENT OF THE NAVY
 NAVAL FACILITIES ENGINEERING COMMAND SOUTHEAST
 NAVAL AIR STATION JACKSONVILLE
 MISSISSIPPI

JOHN C. STENNIS SPACE CENTER
 SOF RIVERINE AND COMBAT
 CRAFT OPERATIONS FACILITY - PRE-FINAL
 OPERATIONS BLDG. 2440 2ND FLOOR
 REFLECTED CEILING PLAN

SCALE: AS SHOWN
 SHEET NO.: P-2110
 WORK ORDER NO.: 510247
 CONTR. CENTER NO.: N62467-05-0-0096
 DRAWING NUMBER: 15002688
 SHEET: 41 OF 132

DATE: 11-06-09

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C

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