ACADEMY OF WARREN

BUILDING “B”

MULTI-PURPOSE ROOM ADDITION

ACADEMY OF WARREN

13943 E. EIGHT MILE RD.
WARREN, MICHIGAN 48089

PROJECT MANAGER

MICHAEL W. BEAL
CONSTRUCTION DESIGN SERVICES
1109 FAIRWAY DRIVE
LINDEN, MI. 48451
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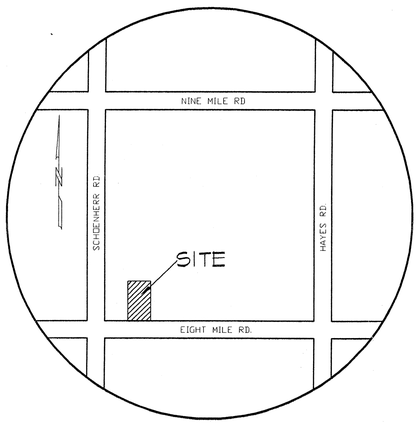


LOCATION MAP

SHEET INDEX

SHEET No.	TITLE
ARCHITECTURAL	
TS	TITLE SHEET
A-1	COMPOSITE FLOOR PLAN
A-2	FOUNDATION PLAN; MISC. DETAILS
A-3	FLOOR PLAN; INTERIOR ELEVATIONS
A-4	REFLECTED CEILING PLAN
A-5	EXTERIOR ELEVATIONS/ ROOM FINISH AND DOOR SCHED.
A-6	WALL SECTIONS AND DETAILS
SP-1	ARCHITECTURAL SPECIFICATIONS
MECHANICAL	
MI	X
MDI	X
ELECTRICAL	
E1	X
E2	X

LEGAL DESCRIPTION

LAND SITUATED IN THE CITY OF WARREN, COUNTY OF MACOMB, STATE OF MICHIGAN, DESCRIBED AS:

THE EAST 12.50 ACRES OF THAT PART OF THE SOUTHWEST ¼ OF THE SOUTHWEST ¼ OF SECTION 36, TOWN 1 NORTH, RANGE 12 EAST, WHICH LIES NORTH OF THE NORTH LINE OF EAST EIGHT MILE ROAD (204 FEET WIDE) CITY OF WARREN, WARREN TOWNSHIP, MACOMB COUNTY, MICHIGAN, MORE PARTICULARLY DESCRIBED AS FOLLOWS: COMMENCING AT THE SOUTHWEST CORNER OF SECTION 36, TOWN 1 NORTH, RANGE 12 EAST, WARREN TOWNSHIP, MACOMB COUNTY, MICHIGAN; THENCE SOUTH 84 DEGREES 32 MINUTES 55 SECONDS EAST ALONG THE SOUTH LINE OF SECTION 36, A DISTANCE OF 1319.74 FEET TO A POINT IN THE WEST LINE OF SUPERVISOR'S PLAT OF HEATH'S FAIRVIEW SUBDIVISION (LIBER 19, PAGE 36 OF PLATS, MACOMB COUNTY RECORDS), EXTENDED SOUTHERLY TO INTERSECT THE SOUTH LINE OF SECTION 36; THENCE NORTH 01 DEGREE 03 MINUTES 45 SECONDS EAST ALONE SAID SUBDEVISION LINE EXTENDED, 120.00 FEET TO THE POINT OF BEGINNING OF THE PARCEL OF LAND HEREIN INTENDED TO BE DESCRIBED, RUNNING THENCE FROM SAID POINT OF BEGINNING NORTH 84 DEGREES 32 MINUTES 55 SECONDS WEST ALONG THE NORTH LINE OF EAST EIGHT MILE ROAD, PARALLEL TO AND DISTANT 120 FEET NORTH OF THE SOUTH LINE OF SECTION 36, A DISTANCE OF 448.28 FEET TO A POINT; THENCE NORTH 01 DEGREE 03 MINUTES 45 SECONDS EAST ALONG A LINE WHICH IS PARALLEL TO THE WEST LINE OF THE AFORESAID SUBDIVISION, A DISTANCE OF 1213.48 FEET TO A POINT IN THE SOUTH LINE OF EASTVIEW SUBDIVISION (LIBER 38, PAGE 4 OF PLATS, MACOMB COUNTY RECORDS); THENCE SOUTH 84 DEGREES 55 MINUTES 15 SECONDS EAST ALONG THE SOUTH LINE OF SAID EASTVIEW SUBDIVISION, SAID LINE BEING ALSO THE NORTH LINE OF THE SOUTHWEST ¼ OF THE SOUTHWEST ¼ OF SECTION 36, A DISTANCE OF 448.28 FEET TO THE INTERSECTION OF SAID LINE WITH THE WEST LINE OF SUPERVISOR'S PLAT OF HEATH'S FAIRVIEW SUBDIVISION; THENCE SOUTH 01 DEGREE 03 MINUTES 45 SECONDS WEST ALONG THE WEST LINE OF SAID SUBDIVISION, SAID LINE BEING ALSO THE EAST LINE OF TH ESOUTHWEST ¼ OF THE SOUTHWEST ¼ OF SECTION 36, A DISTANCE OF 1216.13 FEET TO THE POINT OF BEGINNING.

SITE CONTAINING: 544,506 S.F. OR 12.50 ACRES.

CODE REVIEW INFORMATION

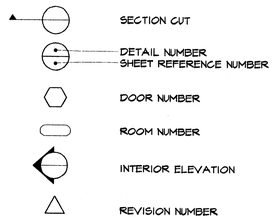
APPLICABLE CODES: ALL WORK UNDER THIS CONTRACT SHALL COMPLY WITH THE PROVISIONS OF THE SPECIFICATIONS & DRAWINGS, AND SHALL SATISFY ALL APPLICABLE CODES, ORDINANCES, AND REGULATIONS OF ALL GOVERNING BODIES INVOLVED. ALL PERMITS AND LICENSES NECESSARY FOR THE PROPER EXECUTION OF THE WORK SHALL BE SECURED AND PAID FOR BY THE CONTRACTOR INVOLVED. APPLICABLE CODES INCLUDE, BUT ARE NOT LIMITED TO THE FOLLOWING:

1. BUILDING & STRUCTURAL	MICHIGAN BUILDING CODE	2003
2. PLUMBING	MICHIGAN PLUMBING CODE	2003
3. MECHANICAL	MICHIGAN MECHANICAL CODE	2003
4. ELECTRICAL	N.E.C.	2002
5. BARRIER FREE ACCESS	MICHIGAN BUILDING CODE	2003
6. NFPA 101	1997 EDITION	

SITE AND BUILDING DATA

1.	ZONING	C-2, COMMERCIAL
2.	BUILDING AREA	3,165 SQ. FT. GROSS
3.	BUILDING HT.	18'-0"
4.	BUILDING USE GROUP	E - EDUCATIONAL (K-6)
5.	TYPE OF CONSTRUCTION:	IIB
6.	BUILDING IS FULLY FIRE SUPPRESSED	

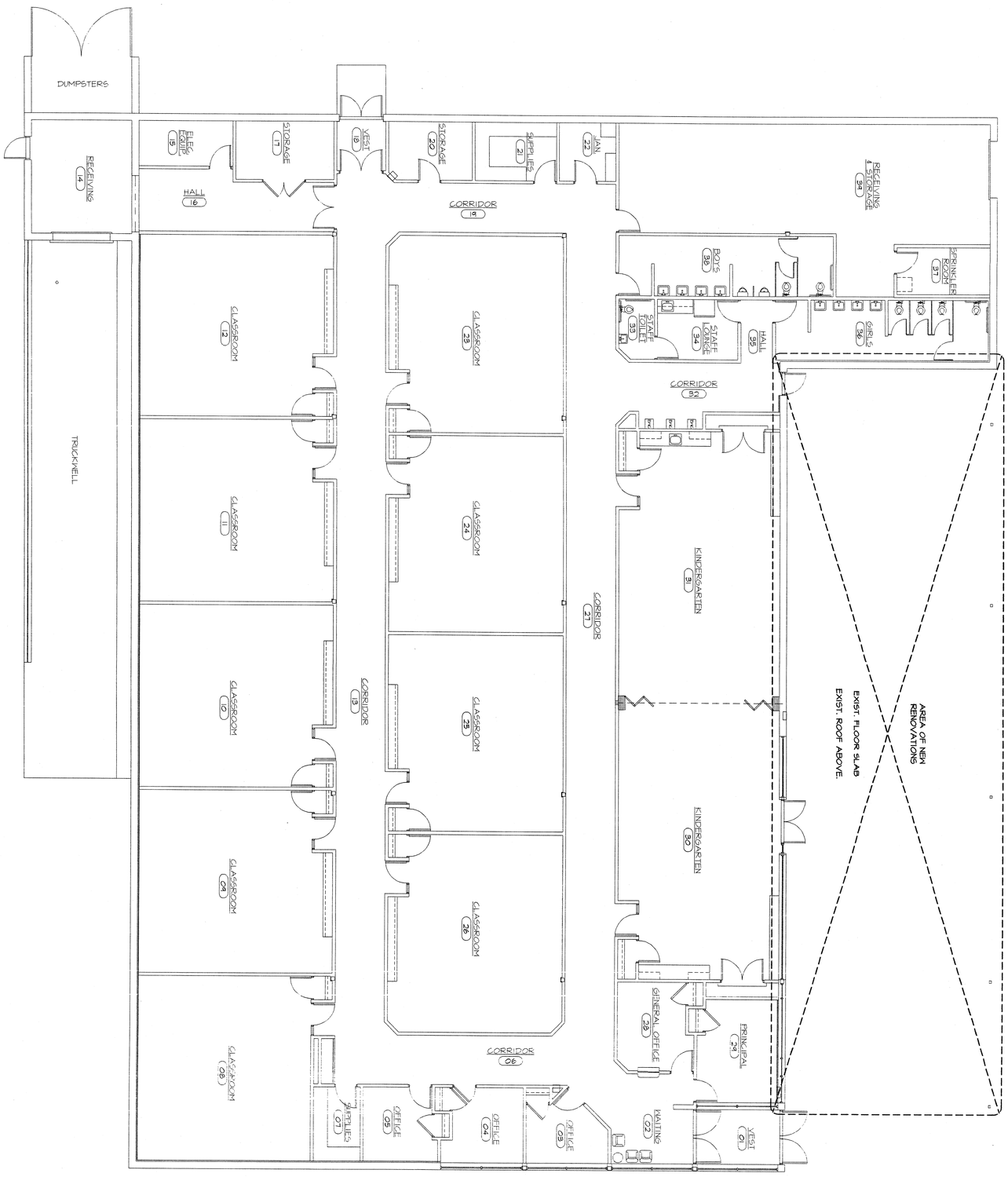
DRAWING SYMBOLS



ABBREVIATIONS

@	AT	INT.	INTERIOR
∠	ANGLE	JAN.	JANITOR
A.B.	ANCHOR BOLT	J.B./J. BOX	JUNCTION BOX
A.C.	AIR CONDITIONING	LAM.	LAMINATE
ACOUST.	ACOUSTICAL	LAV.	LAVATORY
ADJ.	ADJUSTABLE	L.L.	LANDLORD
A.F.F.	ABOVE FINISH FLOOR	MAS.	MASONRY
ALT.	ALTERNATE	MATL.	MATERIAL
ALUM.	ALUMINUM	MAX.	MAXIMUM
ARCH.	ARCHITECTURAL	MECH.	MECHANICAL
BLKG.	BLOCKING	MET.	METAL
B.M.	BENCH MARK	MISC.	MISCELLANEOUS
BOT.	BOTTOM	MIN.	MINIMUM
BRG.	BEARING	M.O.	MASONRY OPENING
B.U.R.	BUILT UP ROOF	N.I.C.	NOT IN CONTRACT
CHNL.	CHANNEL	N.T.S.	NOT TO SCALE
C.T.	CERAMIC TILE	O.C.	ON CENTER
C.J.	CONTROL JOINT	O.D.	OUTSIDE DIAMETER
C.L./ ℄	CENTER LINE	OPNG.	OPENING
CLG.	CEILING	OPP. HD.	OPPOSITE HAND
C.O.	CLEAN OUT	PL.LAM.	PLASTIC LAMINATE
COL.	COLUMN	PL./ ℗	PLATE
CONC.	CONCRETE	PLYWD.	PLYWOOD
CONST. JT.	CONSTRUCTION JOINT	PR.	PAIR
CONT.	CONTINUOUS	R.A.	RETURN AIR
DBL.	DOUBLE	R.	RADIUS
DET.	DETAIL	R.D.	ROOF DRAIN
DIA./ø	DIAMETER	REF.	REFRIGERATOR
DIV.	DIVISION	REINF.	REINFORCING
DN.	DOWN	REQ.	REQUIRED
DW.	DISHWASHER	S.A.	SUPPLY AIR
D.S.	DOWN SPOUT	SFS	SURFACE FOUR SIDES
DWG.	DRAWING	S.C.	SOLID CORE
EA.	EACH	SHT.	SHEET
E.J.	EXPANSION JOINT	SPEC.	SPECIFICATION
ELEC.	ELECTRICAL	S.S.	SERVICE SINK
ELEV.	ELEVATION	ST.STL.	STAINLESS STEEL
EQ.	EQUAL	STL.	STEEL
EST.	ESTIMATE	STOR.	STORAGE
E.W.	EACH WAY	STR.	STRUCTURAL
E.W.C.	ELEC. WATER COOLER	S.R.F.E.	SEMI-RECESSED FIRE EXTING.
EXP.	EXPANSION	T.	THERMOSTAT
EXT.	EXTERIOR	T.C.	TOP OF CURB
F.E.	SURFACE FIRE EXTINGUISHER	TEN.	TENANT
FIN. FLR./F.F.	FINISH FLOOR	T.G.C.	TENANT'S GEN. CONTR.
FIN.	FINISH	T.P.	TOP OF PAVING
FLR.	FLOOR	TYP.	TYPICAL
F.S.	FLOOR SINK	U.N.O.	UNLESS NOTED OTHERWISE
F.B.O.	FURNISHED BY OWNER	V.I.F.	VERIFY IN FIELD
F.D.	FLOOR DRAIN	V.T.R.	VENT THROUGH ROOF
FDN.	FOUNDATION	W.H.	WATER HEATER
GA.	GAUGE	W.I.	WROUGHT IRON
GALV.	GALVANIZED	W.P.	WATER PROOF
G.C.	GENERAL CONTRACTOR	W.R.	WATER RESISTANT
G.I.	GALVANIZED IRON	WT.	WEIGHT
H.B.	HOSE BIBB	W/	WITH
H.C.	HOLLOW CORE	W/O	WITHOUT
HDWE.	HARDWARE		
H.M.	HOLLOW METAL		
I.D.	INSIDE DIAMETER		
INSUL.	INSULATION		

(2436TB - 05-06-05)



COMPOSITE FLOOR PLAN

SCALE 1/8" = 1'-0"

A1

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MULTI-PURPOSE ROOM ADDITION
ACADEMY OF WARREN

13943 E. EIGHT MILE RD.
WARREN, MICHIGAN 48089

COMPOSITE FLOOR PLAN

OWNER:

CHARTER SCHOOL ADMINISTRATION SERVICES

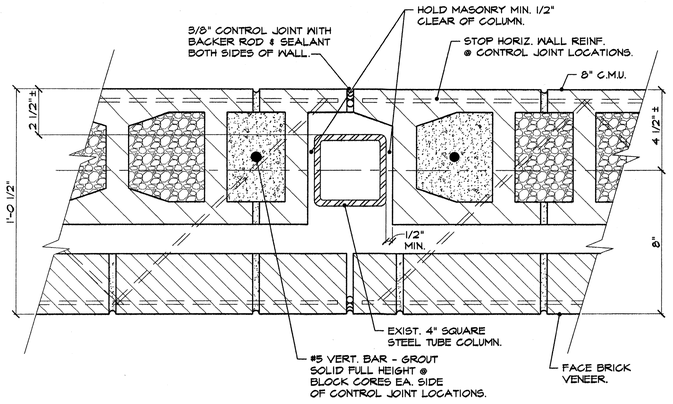
20755 GREENFIELD RD., SUITE 300
SOUTHFIELD, MICHIGAN 48075
(248) 789-4401

FILE: A1	
PROJECT MGR: M.W.B.	
DESIGNED BY: M.W.B.	
DRAWN BY: M.J.K.	
CHECKED BY: J.D.W.	
SCALE: 1/8" = 1'-0"	
SHEET: A1 OF 6	

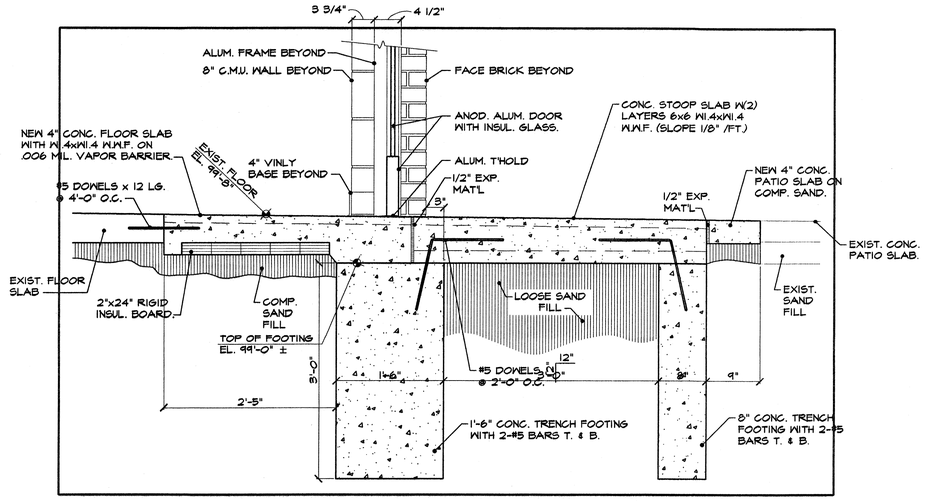
PROJECT LOG

ISSUED FOR PLAN REVIEW	9-19-05

PREPARED UNDER THE SUPERVISION OF:



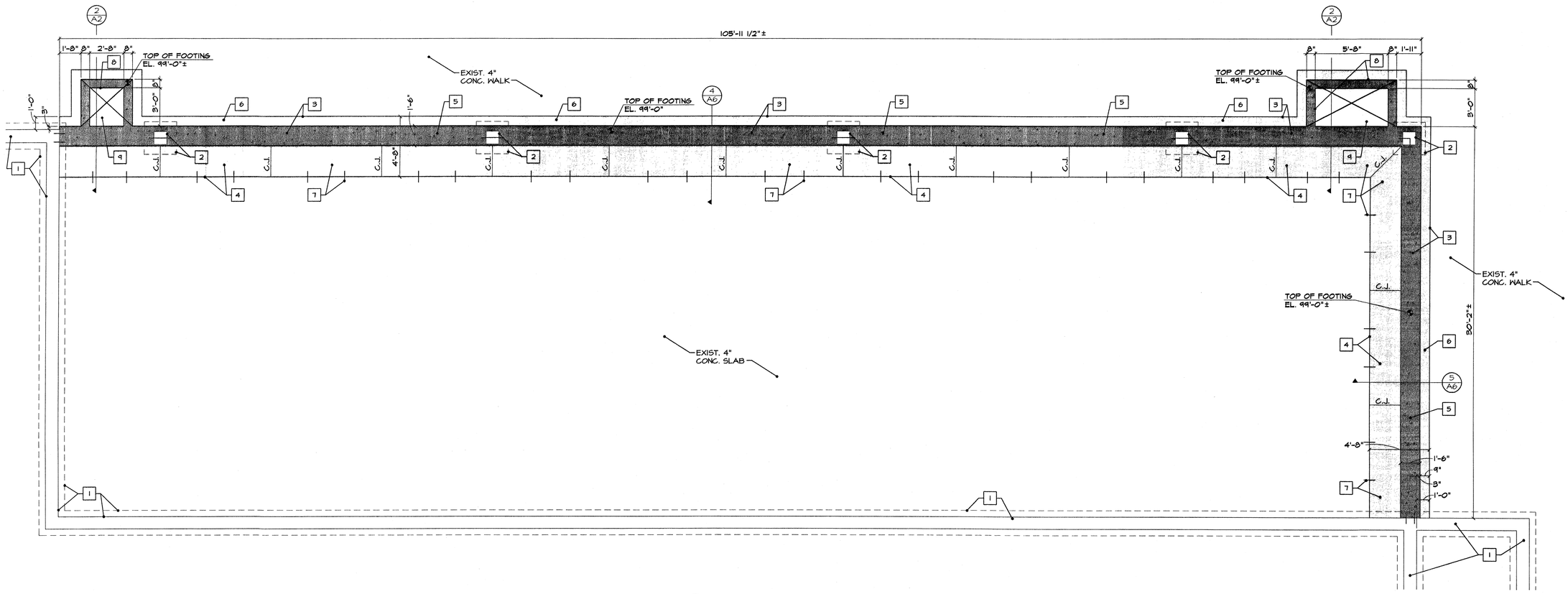
1 TYP. WALL / COLUMN CONTROL JOINT
SCALE: 3" = 1'-0"



2 DOOR ENTRANCE STOOP DETAIL
SCALE: 3" = 1'-0"

CONSTRUCTION NOTES

1. EXISTING 12" FOUNDATION WALL & CONCRETE SPREAD FOOTING BELOW.
2. EXISTING CONCRETE COLUMN PIER & CONCRETE SPREAD FOOTING BELOW.
3. SAW-CUT & REMOVE EXISTING CONCRETE WALK SLAB.
4. SAW-CUT & REMOVE EXISTING CONCRETE FLOOR SLAB.
5. INSTALL NEW 1'-6" WIDE x 3'-6" DEEP (MIN.) CONCRETE TRENCH FOOTING WITH 2 - #5 CONT. BARS TOP & BOTTOM - DOWEL INTO EXISTING CONCRETE COLUMN PIERS AND EXISTING FOUNDATION WALL.
6. INSTALL NEW 4" CONCRETE WALK SLAB ON COMPACTED SAND FILL - PROVIDE CONTROL JOINTS IN NEW SLAB TO MATCH EXISTING LOCATIONS.
7. INSTALL NEW 4" CONCRETE FLOOR SLAB WITH 6x6 W1.4xW1.4 W.M.F. ON .006 MIL VAPOR BARRIER ON 4" MIN. COMPACTED SAND FILL - PROVIDE #5 DOWELS x 12" LONG AT 4'-0" O.C. - EPOXY-SET DOWELS IN DRILLED HOLES 6" DEEP AT CENTERLINE OF EXISTING FLOOR SLAB.
8. INSTALL NEW 8" WIDE x 3'-6" DEEP (MIN.) CONCRETE TRENCH FOOTING WITH #5 BAR CONT. TOP & BOTTOM.
9. CONCRETE STOOP SLAB ABOVE WITH 6x6 W1.4xW1.4 W.M.F. ON LOOSE SAND FILL - PROVIDE 1/2" EXPANSION MATERIAL AT PERIMETER.



FOUNDATION PLAN
SCALE 1/4" = 1'-0"

PREPARED UNDER THE SUPERVISION OF:

PROJECT LOG

ISSUED FOR PLAN REVIEW	5-19-05

FILE: A2
PROJECT MGR: M.W.B.
DESIGNED BY: M.W.B.
DRAWN BY: M.J.K.
CHECKED BY: J.D.W.
SCALE: 1/4" = 1'-0"
SHEET: A2 OF 6

OWNER:
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MULTI-PURPOSE ROOM ADDITION
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FOUNDATION PLAN, MISC. DETAILS

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A2

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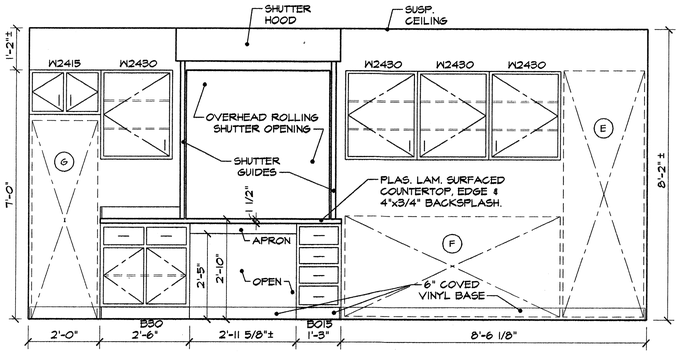
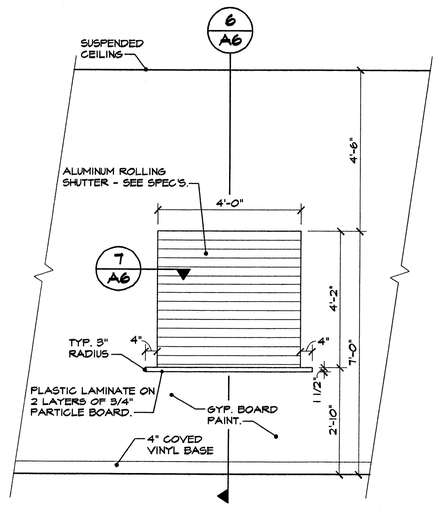


ELEVATION 'A'
SCALE: 3" = 1'-0"



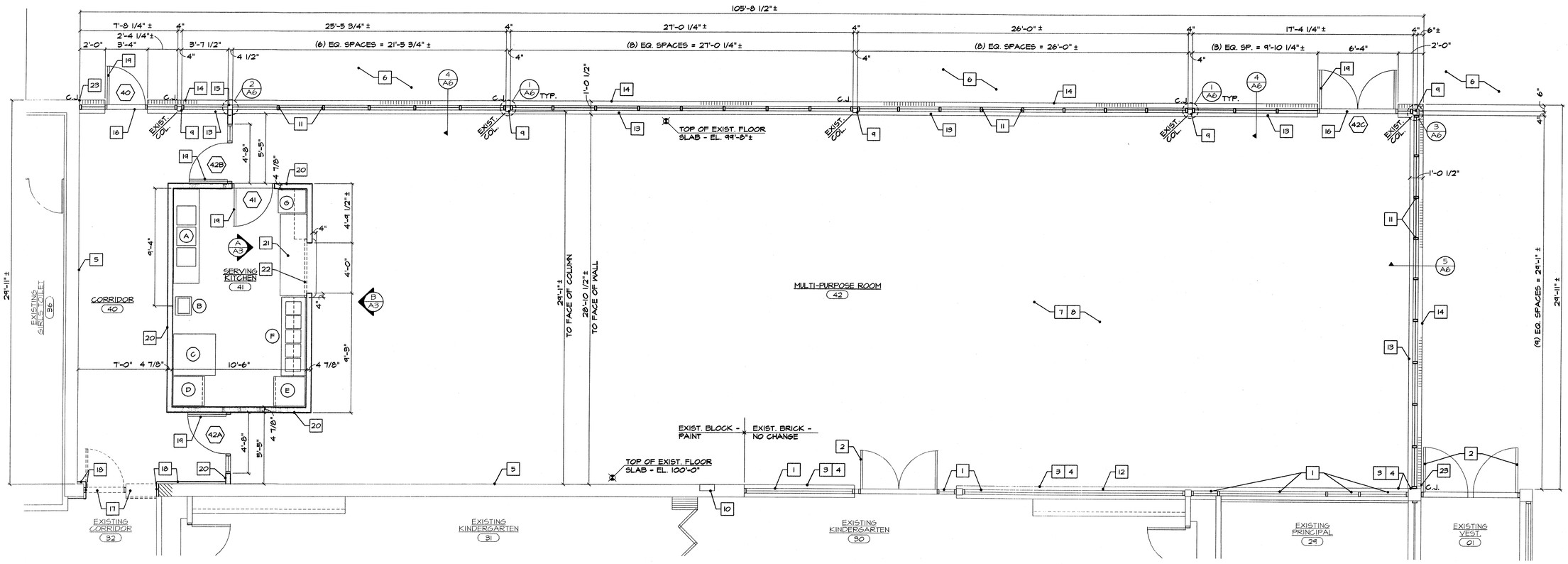
ELEVATION 'B'
SCALE: 1/2" = 1'-0"

KITCHEN EQUIPMENT LIST

- (A) 3-COMPARTMENT SINK - 7'-6 1/2"W. x 2'-0"D. x 3'-8 1/2"H; TURBO-AIR MODEL No. TSS-3-2D; STAINLESS STEEL WITH GALV. LEGS.
- (B) HAND SINK - 1'-5"W. x 1'-3"D. x 1'-2"H.; TURBO-AIR MODEL No. TSS-1-H; STAINLESS STEEL WITH GOOSENECK FAUCET.
- (C) CONVECTION OVEN - 3'-2"W. x 3'-3 1/2"D. x 5'-0"H.; DUKE MODEL No. E101-G; NATURAL GAS
- (D) FREEZER - 2'-3"W. x 2'-5 1/2"D. x 6'11 1/4"H.; TURBO-AIR MODEL No. T-23F; STAINLESS STEEL; 1/2 H.P. COMPRESSOR; 120/208V, 1 PHASE.
- (E) COOLER - 2'-3"W. x 2'-5"D. x 6'-11 1/4"H.; TURBO-AIR MODEL No. T-23; STAINLESS STEEL; 1/3 H.P. COMPRESSOR; 120/208V, 1 PHASE.
- (F) HOT FOOD UNIT - 6'-0 3/8"W. x 1'-10 1/2"D. x 2'-10"H., AEROHOT MODEL No E305/EP305; STAINLESS STEEL; 120/208V, 1 PHASE.
- (G) TURBO-AIR STAINLESS STEEL FOOD CART - 1'-10"W. x 2'-2"D. x 5'-7"H.

CONSTRUCTION NOTES

1. EXISTING ALUMINUM FRAMES & GLASS - NO CHANGE.
2. EXISTING DOOR & FRAME - NO CHANGE.
3. EXISTING ROWLOCK BRICK SILL -NO CHANGE.
4. EXISTING FACE BRICK WALL - NO CHANGE.
5. EXISTING BLOCK WALL - PAINT.
6. EXISTING EXTERIOR CONCRETE "PATIO" SLAB - NO CHANGE.
7. EXISTING CONCRETE FLOOR SLAB - NO CHANGE.
8. EXISTING ROOF ABOVE - NO CHANGE.
9. EXISTING 4"x4" STEEL TUBE COLUMN - PAINT INTERIOR TO MATCH ALUMINUM FRAME COLOR.
10. EXISTING ELECTRICAL PANEL - SEE ELECTRICAL DRAWINGS.
11. NEW ALUMINUM FRAMES (MATCH EXISTING) WITH 1" INSULATED GLASS.
12. EXISTING STEEL CHANNEL LINTEL & BLOCK WALL ABOVE - PAINT.
13. NEW 3/4" CULTURED MARBLE SILL ON NEW 8" BLOCK MASONRY WALL BELOW - PAINT.
14. NEW SLOPED ROWLOCK BRICK SILL ON NEW FACE BRICK MASONRY WALL BELOW (MATCH EXISTING).
15. NEW 4 1/2"x4 1/2" ALUMINUM TUBE SECTION TO MATCH EXISTING.
16. NEW ALUMINUM THRESHOLD.
17. REMOVE EXISTING DOOR, FRAME, THRESHOLD & PORTION OF MASONRY WALL; INSTALL NEW LINTEL - (3) 5"x3 1/2"x5/16" (L.L.V.) STEEL ANGLES OR W8x10 BEAM WITH 11"x3/8" BOTTOM PLATE - BOTTOM OF NEW LINTEL EL. 109'-0"±.
18. INSTALL NEW 5/8" GYPSUM BOARD ON 7/8" METAL FURRING CHANNELS.
19. NEW DOOR & FRAME - SEE DOOR SCHEDULE.
20. NEW 3 5/8"x20 GA. STEEL STUDS AT 16" O.C. WITH 5/8" GYPSUM BOARD EACH SIDE (WALL HEIGHT 12'-0").
21. PLASTIC LAMINATE SURFACED COUNTERTOP & BACKSPLASH WITH BASE CABINETS BELOW - SEE ELEVATION 'A'.
22. OVERHEAD ROLLING SHUTTER - SEE ELEVATION 'B'.
23. ALIGN OUTSIDE FACE OF NEW BRICK WITH FACE OF EXISTING WALL.



FLOOR PLAN
SCALE 1/4" = 1'-0"

PREPARED UNDER THE SUPERVISION OF:

PROJECT LOG

ISSUED FOR PLAN REVIEW	05-18-05

FILE: A3
PROJECT MGR: M.W.B.
DESIGNED BY: M.W.B.
DRAWN BY: M.J.K.
CHECKED BY: J.D.W.
SCALE: AS NOTED
SHEET: A3 of 6

OWNER:
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(248) 799-4401

MULTI-PURPOSE ROOM ADDITION
ACADEMY OF WARREN
13943 E. EIGHT MILE RD.
WARREN, MICHIGAN 48089

FLOOR PLAN, INTERIOR ELEVATIONS

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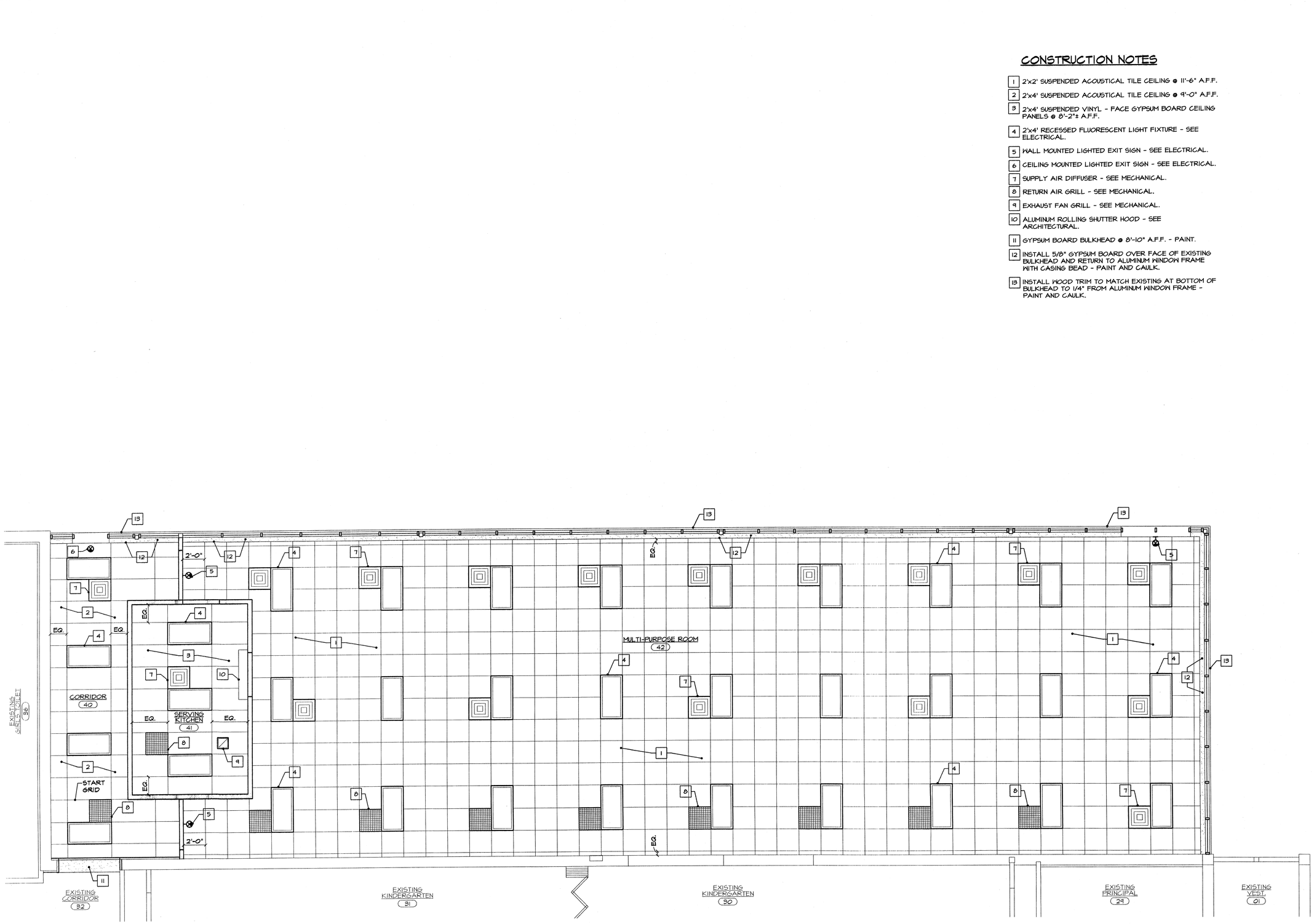
A3

(24378 - 05-06-05)

CONSTRUCTION NOTES

1. 2'x2' SUSPENDED ACOUSTICAL TILE CEILING @ 11'-6" A.F.F.
2. 2'x4' SUSPENDED ACOUSTICAL TILE CEILING @ 9'-0" A.F.F.
3. 2'x4' SUSPENDED VINYL - FACE GYPSUM BOARD CEILING PANELS @ 8'-2"± A.F.F.
4. 2'x4' RECESSED FLUORESCENT LIGHT FIXTURE - SEE ELECTRICAL.
5. WALL MOUNTED LIGHTED EXIT SIGN - SEE ELECTRICAL.
6. CEILING MOUNTED LIGHTED EXIT SIGN - SEE ELECTRICAL.
7. SUPPLY AIR DIFFUSER - SEE MECHANICAL.
8. RETURN AIR GRILL - SEE MECHANICAL.
9. EXHAUST FAN GRILL - SEE MECHANICAL.
10. ALUMINUM ROLLING SHUTTER HOOD - SEE ARCHITECTURAL.
11. GYPSUM BOARD BULKHEAD @ 8'-10" A.F.F. - PAINT.
12. INSTALL 5/8" GYPSUM BOARD OVER FACE OF EXISTING BULKHEAD AND RETURN TO ALUMINUM WINDOW FRAME WITH CASING BEAD - PAINT AND CAULK.
13. INSTALL WOOD TRIM TO MATCH EXISTING AT BOTTOM OF BULKHEAD TO 1/4" FROM ALUMINUM WINDOW FRAME - PAINT AND CAULK.



N

REFLECTED CEILING PLAN

SCALE 1/4" = 1'-0"

PREPARED UNDER THE SUPERVISION OF:

PROJECT LOG

ISSUED FOR PLAN REVIEW	12-19-05

FILE: A4
PROJECT MGR: M.W.B.
DESIGNED BY: M.W.B.
DRAWN BY: M.J.K.
CHECKED BY: J.D.W.
SCALE: 1/4" = 1'-0"
SHEET: A4 OF 6

OWNER:
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MULTI-PURPOSE ROOM ADDITION
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REFLECTED CEILING PLAN

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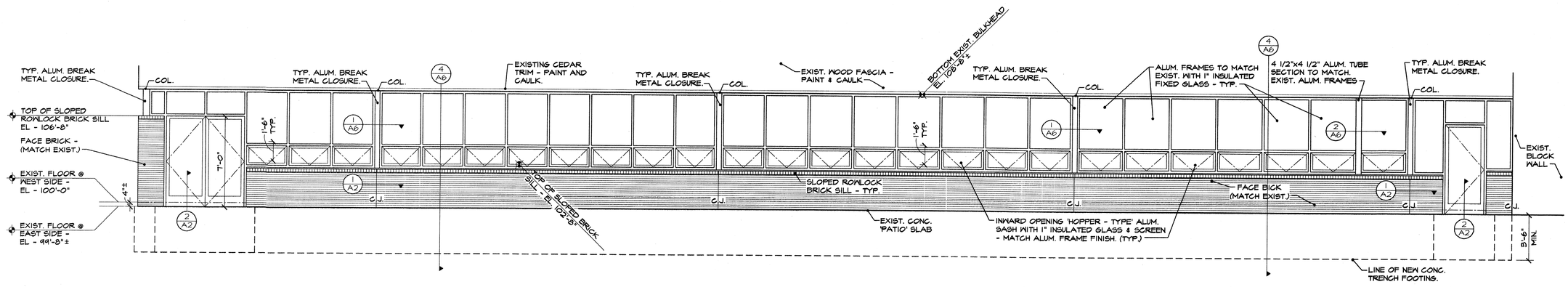
A4



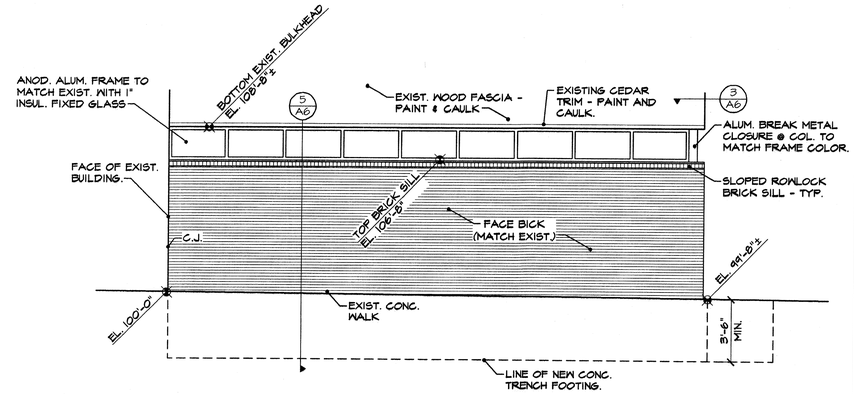
EAST ELEVATION

SCALE 1/4" = 1'-0"

TOTAL AREA OF OPERABLE SASH - %

PERCENT OF GROSS FLOOR AREA -

NEW CONCRETE BLOCK MASONRY UNIT AND NEW BASE BRICK COURSING SHALL ALIGN WITH EXISTING MASONRY COURSING.



SOUTH ELEVATION

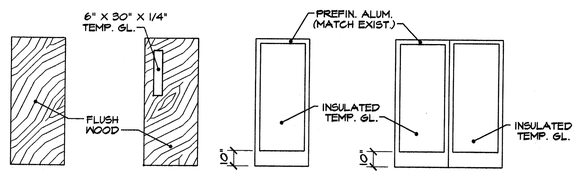
SCALE 1/4" = 1'-0"

DOOR & FRAME SCHEDULE

No.	SIZE	DOOR MATERIAL	DOOR FINISH	DOOR TYPE	FRAME MATERIAL	FRAME FINISH	FRAME TYPE	NOTES
	3'-0" x 6'-8" x 1 3/4" / (2) 3'-0" x 7'-0" x 1 3/4" / 3'-0" x 7'-0" x 1 3/4"	ALUMINUM & GLASS / BIRCH - SOLID CORE	PREFINISHED		ALUMINUM / HOLLOW METAL	PREFINISHED / PAINT		MATCH EXISTING DOOR HARDWARE.
40	3'-0" x 7'-0" x 1 3/4"	ALUMINUM & GLASS	PREFINISHED	C	ALUMINUM	PREFINISHED	3	ALUM. THRESHOLD
41	3'-0" x 6'-8" x 1 3/4"	BIRCH - SOLID CORE	PREFINISHED	B	HOLLOW METAL	PAINT	1	
42A	3'-0" x 6'-8" x 1 3/4"	BIRCH - SOLID CORE	PREFINISHED	A	HOLLOW METAL	PAINT	2	
42B	3'-0" x 6'-8" x 1 3/4"	BIRCH - SOLID CORE	PREFINISHED	A	HOLLOW METAL	PAINT	2	
42C	(2) 3'-0" x 7'-0" x 1 3/4"	ALUMINUM & GLASS	PREFINISHED	D	ALUMINUM	PREFINISHED	4	ALUM. THRESHOLD

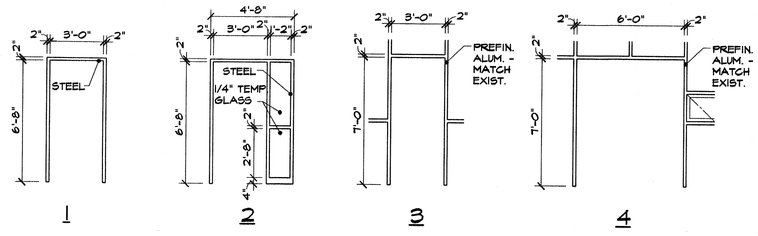
ROOM FINISH SCHEDULE

No.	NAME	FLOOR	BASE	WALLS	CEILING	HT.	NOTES
		12" x 12" RESILIENT TILE / RESILIENT SHEET FLRG.	4" COVED VINYL / 6" COVED VINYL	GYPSUM BOARD - PAINT / PREFIN. F.R.P. PANELS / EXISTING BLOCK - PAINT / EXISTING BRICK - NO CHANGE / NEW BLOCK - PAINT	SUSP. 2'x4' ACOUSTICAL TILE / GYP. BOARD BULKHEAD - PAINT / SUSP. 2'x4' GYP. BD. (SEE NOTE) / SUSP. 2'x2' ACOUSTICAL TILE		
40	CORRIDOR	●	●	●	●	9'-0"	
41	SERVING KITCHEN	●	●	●	●	8'-2"±	PREFIN. VINYL. FACED CEILING PANELS
42	MULTI-PURPOSE ROOM	●	●	●	●	11'-6"	



DOOR TYPES

NO SCALE



FRAME TYPES

NO SCALE

PREPARED UNDER THE SUPERVISION OF:

PROJECT LOG

	ISSUED FOR PLAN REVIEW 05-26-05

FILE: A1
PROJECT MGR: M.W.B.
DESIGNED BY: M.W.B.
DRAWN BY: M.J.K.
CHECKED BY: J.D.W.
SCALE: AS NOTED
SHEET: A5 of 6

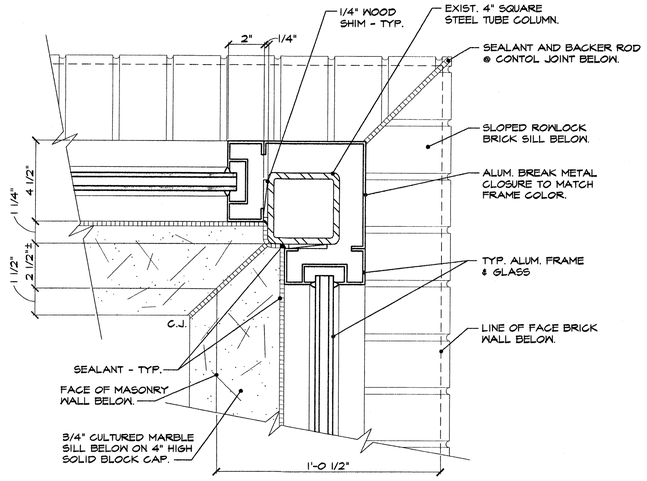
OWNER:
CHARTER SCHOOL ADMINISTRATION SERVICES
20755 GREENFIELD RD., SUITE 300
SOUTHFIELD, MICHIGAN 48075
(248) 789-4401

MULTI-PURPOSE ROOM ADDITION
ACADEMY OF WARREN
13943 E. EIGHT MILE RD.
WARREN, MICHIGAN 48089

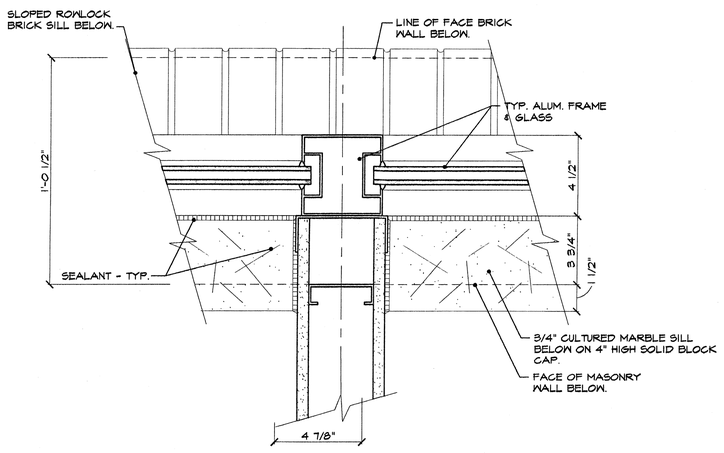
EXTERIOR ELEVATIONS/
ROOM FINISH AND DOOR SCHEDULES

Wilcox Professional Services
AN ISO 9001 CERTIFIED COMPANY
WWW.WILCOXASSOCIATES.COM
5859 SHERMAN ROAD • SAGINAW, MICHIGAN 48604
PHONE (989) 752-8500 • FAX (989) 752-8600
TOLL FREE (888) 752-8500

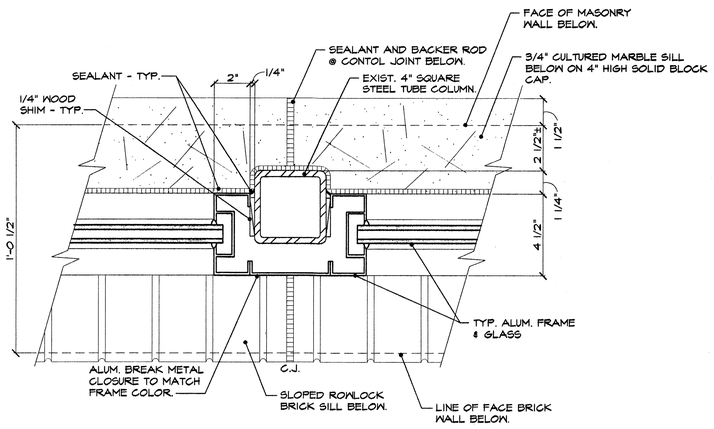
A5



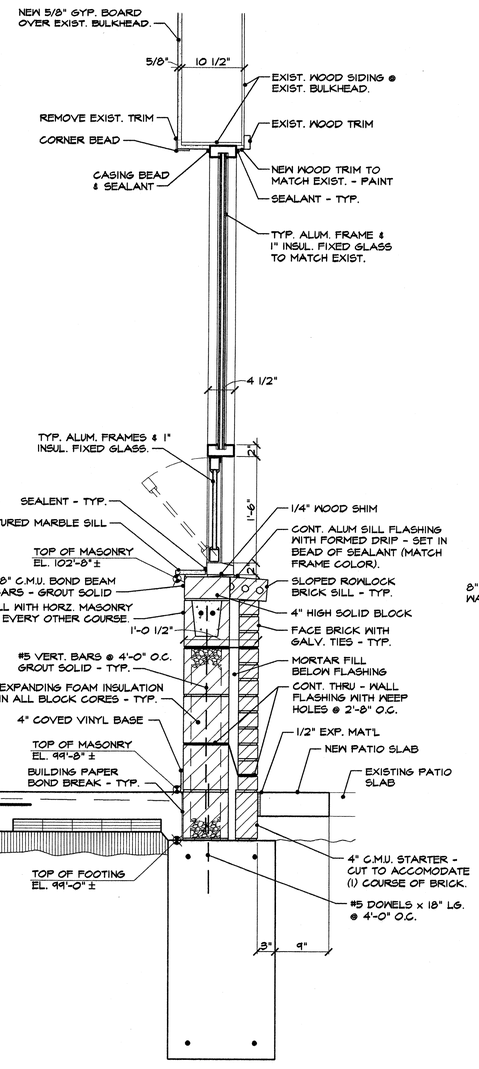
3 DETAIL #3
SCALE: 3" = 1'-0"



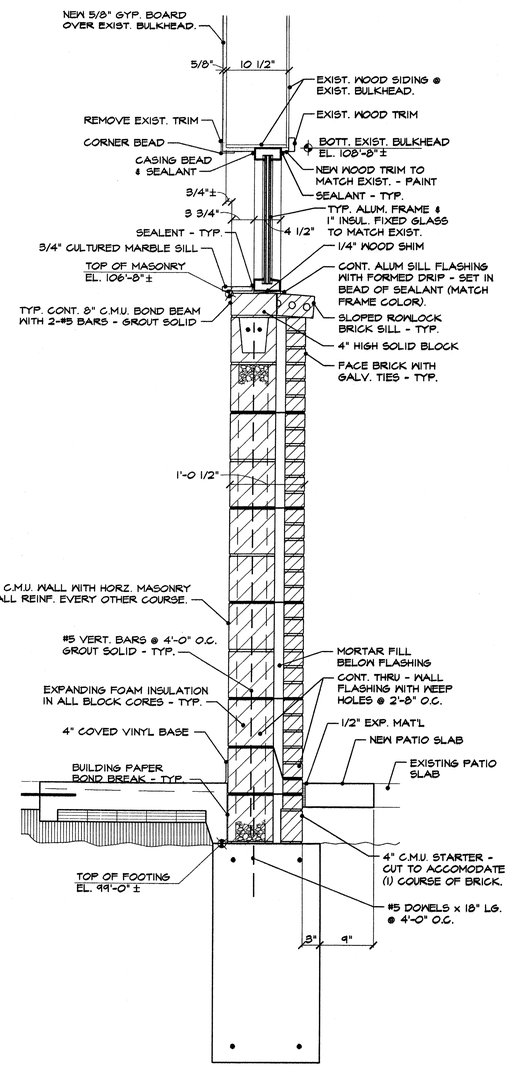
2 DETAIL #2
SCALE: 3" = 1'-0"



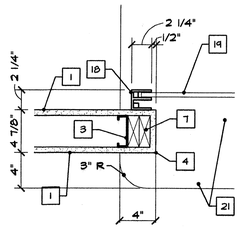
1 TYP. EXIST. COLUMN SECTION
SCALE: 3" = 1'-0"



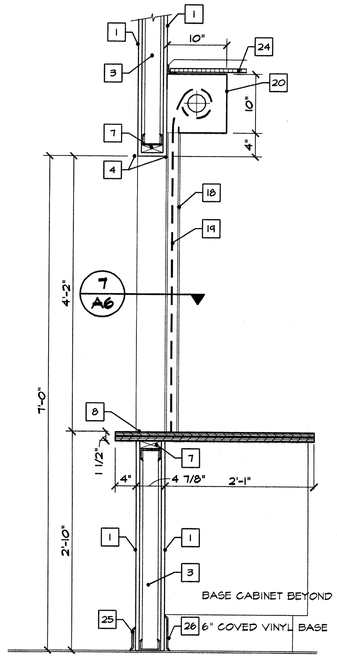
4 WALL SECTION #4
SCALE: 3" = 1'-0"



5 WALL SECTION #5
SCALE: 1" = 1'-0"



7 DETAIL #7
SCALE: 1 1/2" = 1'-0"



6 ROLLING SHUTTER SECTION
SCALE: 1" = 1'-0"

(24387B - 05-06-05)

OWNER:
CHARTER SCHOOL ADMINISTRATION SERVICES
20755 GREENFIELD RD. SUITE 300
SOUTHFIELD, MICHIGAN 48075
(248) 789-4401

PREPARED UNDER THE SUPERVISION OF:

PROJECT LOG
ISSUED FOR PLAN REVIEW 8-19-05

FILE: A6
PROJECT MGR: M.W.B.
DESIGNED BY: M.W.B.
DRAWN BY: M.J.K.
CHECKED BY: J.D.W.
SCALE: AS NOTED
SHEET: A6 OF 6

MULTI-PURPOSE ROOM ADDITION
ACADEMY OF WARREN
13943 E. EIGHT MILE RD.
WARREN, MICHIGAN 48089

WALL SECTIONS AND DETAILS

Wilcox Professional Services
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PHONE (989) 752-6500 • FAX (989) 752-6600
TOLL FREE (888) 752-6500

A6

(243878 - 05-06-05)

ARCHITECTURAL SPECIFICATIONS

GENERAL CONDITIONS

The American Institute of Architects "General Conditions of the Contract for the Construction of Buildings", form A-201 document, latest edition, shall be made a part of these specifications, and shall govern the execution of this Contract in the same manner as if repeated herein in full. Copies of this document may be obtained from the Project Manager.

SCOPE

The Contract shall include all labor, materials, tools, equipment, scaffolding, freightage, cartage, the handling of materials and such services, for and properly incidental to performing and properly completing the work required by the plans and specifications. Work implied by the specifications, but not directly shown or specified, necessary to the proper completion of the work, shall nevertheless be furnished by the Appropriate Contractor. The owner shall coordinate the work of all Subcontractors, shall establish all necessary schedules, shall maintain the execution of the work to schedule, and shall indicate to Subcontractors the jurisdiction of their trades as applying to the work. The owner shall assure that all work is done to the proper lines and grades, is true and plumb and done in a workmanlike manner, and that all materials and workmanship be of the highest qualitative standards applicable to each trade. The site shall be left clean at the completion of the Contract and the building and other work shall be left broom clean. All glass shall be cleaned.

SUBSTITUTION

Wherever the term "or equal", or the brand name or manufacturer's or installer's name or a product is specified herein, it shall be used to indicate standards of quality and utility. If the Contractor wishes to substitute another brand or manufacturer or technique of equal quality and utility to that specified, he shall make application to the Owner in writing during the bidding period, submitting proof as indicated below.

A. General:
   1. Furnish all work and services for furnishing, submitting, processing and handling of requests for substitutions prior to bidding. Any substitution must be in accord with provisions of Contract Documents.
   2. Completely coordinate with work of other trades.
   3. See appropriate sections for specific items.

B. Receipt of request for substitutions:
   1. Request must be received at least 3 calendar days prior to bid due date.
   2. Request received later will not be considered.
   3. Only written requests, submitted in triplicate with complete data as indicated will be considered.

C. In making request for substitution of a specific product or construction method, the Contractor represents:
   1. He has investigated the proposed product or method, and has determined that it is equal or superior in all respects to that specified, and that it will perform it's intended function.
   2. He will provide same guarantee for substitute item as for product or method specified.
   3. He will coordinate installation of accepted substitution into work, to include building modifications if necessary, making such changes as may be required for work to be complete in all respects, at no additional cost.
   4. He waives all claims for additional costs or time related to substitution which subsequently become apparent.
   5. That proposed substitute complies color and pattern- wise with base specified item or method.
   6. That he will pay for Architectural and Engineering costs if required to revise the Construction documents caused by this substitution.
   7. The proposed substitution will have no adverse affect on other trades or the construction schedule.
   8. That maintenance and service parts, if applicable, will be locally available for the proposed substitution.
   9. Acknowledges acceptance of these provisions when submitting his request.

D. Submit complete data substantiating compliance of proposed substitution with Contract Documents.
   1. For products provide:
      a. product identification, including manufacturer's name.
      b. Manufacturer's literature, marked to indicate specific model, type, size, and options to be considered.
      c. Product description.
      d. Performance and test data.
      e. Reference standards.
      f. Difference in power demand, air quantities, etc.
      g. Dimensional differences from specified unit.
      h. Full size samples if requested. Owner reserves right to impound sample until physical units are installed on project for comparison purposes. Requester shall pay all costs for furnishing and return of samples. Owner is not responsible for loss of, or damage to, samples.
      i. Name and address of similar projects and name of Owner's representative we can contact, to discuss products, installation, and field performance data.
   2. For construction methods provide:
      a. Detailed description of purposed method.
      b. Illustration or drawing of same.
   3. Itemized comparison of proposed substitute to specified item.
   4. Data relating to changes in construction schedule.
   5. Relation to separate contracts.
   6. Total cost savings, if any, to be realized by Owner if proposed substitution is accepted.

E. Substitutions will not be considered if:
   1. They are not submitted in accord with this section.
   2. Acceptance will require substantial revision of Contract Documents or building spaces.
   3. Request for substitution does not indicate specific item for which request is submitted. Acceptance of manufacturer only will not be made.
   4. Conditional bids and voluntary alternates will not be considered.

GUARANTEES

All Contractors shall guarantee that all materials and all workmanship furnished and rendered under this Contract shall be free from any defects or faults whatsoever, and shall replace, without cost to the Owner, any defective or faulty work or material for a period of one (1) year from and after the date of acceptance of the work, as directed by the Owner or Project Manager. All guarantees shall be submitted in writing prior to acceptance of the work.

PERMITS, CODES AND APPROVALS

All Contractors shall obtain and pay for all necessary and lawful permits, licenses, approvals and fees as may be required by any governmental or other agencies regulating the work, and shall conform to all applicable codes, ordinances, regulations and rules affecting the work.

All such rules and regulations shall be a part of these specifications. Each Contractor shall give all requisite notice to all proper authorities and make deposit or pay for all utilities, connections and other fees or bonds as necessary in the performance of the work required by these documents. Project Manager shall require that all subcontractors comply with the requirements of this section as may be necessary.

DISCREPANCIES AND OMISSIONS

Contractors shall bring to the attention of the Architect any discrepancies or ambiguities in, or omissions from the Drawings and Specifications, at once. Should any bidder be in doubt of the meaning, intent or interpretation of any phase of the work, he shall notify the Project Manager. The Project Manager will than issue appropriate clarification in written Addenda. No instructions other than written will be binding. No deviation from the Drawings and Specifications shall be made without the written instruction of the Project Manager.

SAMPLES AND SHOP DRAWINGS

Contractors shall submit samples of work and materials as required for written approval. Furnish one (1) set of reproducible seplas of Shop Drawings as required herein. All Shop Drawings shall be submitted to:

CONSTRUCTION DESIGN SERVICES
1104 FAIRWAY DRIVE
LINDEN, MICHIGAN 48451
ATTN. MICHAEL BEAL, PROJECT MANAGER

CHANGES IN WORK

Changes in the work must be approved by the Project Manager in writing. Extra charges will be allowed only when ordered in writing. No bills based on verbal orders will be considered by the Owner.

LAYOUT

The Contractor shall layout lines, levels and grades of all work as shown on the plans and shall be responsible for their accuracy. Layout shall be approved by the Owner.

ITEMS NOT IN CONTRACT

Items Not in the Contract are designated as (N.I.C.) on the Drawings. These items shall be furnished and/or installed by the Owner.

INSURANCE

Contractors required minimum coverages and limits of liability shall be as follows with endorsements in all policies to include the Project Manager, the Engineer & the Owner and the employees and agents thereof, and any other parties in interest designated by Owner as additional insurers, except Workmen's Compensation Insurance, which shall contain an endorsement waiving all rights or subrogation against Owner, and the partners and agents of Owner and the partners of partners and any other parties in interest designated by the Owner, and further provided that the Owner be given thirty (30) days prior written notice of any alteration or termination of coverage.

A. Liability Insurance shall name the Owner as an additional insured and shall include all major divisions of coverage and on a comprehensive basis, including:
   1. Premises Operations
   2. Independent Contractors'
   3. Products & Completed Operations
   4. Personal Injury Liability with Fellow Employee Exclusion deleted.
   5. Contractual including specified provisions for Contractor's obligation under paragraph 4.18 of General Conditions.
   6. Owned, non-owned and hired motor vehicles.
   7. Broad Form Property Damage including Completed Operations.
   8. Umbrella Excess Liability

B. The insurance required herein shall be written for not less than the following, or greater if required by law:
   1. Worker's Compensation
      a. State: Statutory
      b. Applicable Federal: Statutory
      c. Benefits required by Union labor contracts: As applicable
   2. Comprehensive General Liability (including Premises-Operations; Independent Contractor's Protective; Products and Completed Operations; Broad Form Property Damage):
      a. Bodily Injury
         $1,000,000.00 Each Occurrence
         $1,000,000.00 Aggregate, Products and Completed Operations
      b. Property Damage:
         $1,000,000.00 Each Occurrence
         $1,000,000.00 Aggregate
      c. Products and Completed Operations Insurance shall be maintained for a minimum period of (1) year after final payment and Contractor shall continue to provide evidence of such coverage to Owner on an annual basis during the aforementioned period.
      d. Property Damage Liability insurance shall include coverage for the following hazards:
         1. X (Explosion)
         2. C (Collapse)
         3. U (Underground)
      e. Contractual Liability:
         1. Bodily Injury:
            $1,000,000.00 Each Occurrence
         2. Property Damage:
            $1,000,000.00 Each Occurrenc
            $1,000,000.00 Annual Aggregate
      f. Personal Injury, with Employment Exclusion deleted:
         $1,000,000.00 Annual Aggregate
   3. Comprehensive Automobile Liability:
      a. Bodily Injury:
         $1,000,000.00 Each Occurrence
         $1,000,000.00 Each Accident
      b. Property Damage:
         $1,000,000.00 Each Occurrence

Since the State has a no-fault automobile insurance requirement, Contractor shall be certain coverage is provided which conforms to any specific stipulation in the State law.

C. Furnish Certificates of Insurance which specifically set forth evidence of all coverage required on form AIA G705. Furnish to the Owner copies of all endorsements that are subsequently issued amending coverage or limits.

COMMENCEMENT OF CONSTRUCTION

Contractors shall commence Owner's work immediately upon receipt of the Owner issuance of a letter authorizing the start of construction, and after completion of the following items by the Contractors:

A. Provide to the Owner. The names, addresses, representatives' names, and telephone numbers of all Subcontractors which are to be engaged in the construction of Owner's Work.
B. Certificates of Insurance as described herein.
C. Evidence that all required permits and approvals have been obtained.

SITE ACCEPTANCE

Contractors shall not start work until they are satisfied that actual site conditions are substantially as set forth on the Drawings. Once, having started the work, the Contractors shall be deemed to have accepted the site as ready for work, and it shall be his responsibility to make whatever adjustments, corrections, or repairs to the site as are required to make the project complete, without extra compensation. All Contractors shall schedule a coordination meeting with the Owner to determine a suitable access route to the site and the premises, designated parking for Contractor(s), designated loading, unloading and storage areas for materials, etc.

DAMAGES TO THE WORK

Each Contractor shall immediately repair all damages to the work at his own expense as directed by the Owner. All Contractors shall maintain the alignment, connection and integrity of all work throughout the Contract.

WORKMANSHIP AND QUALITY

Each Contractor shall replace or repair all material and workmanship condemned as not in accordance with the Plans and Specifications by the Owner promptly and at the Contractor's own expense.

INSPECTION AND ACCEPTANCE

It is each Contractor's responsibility to schedule inspections by the appropriate governing authorities as necessary and to comply with their requirements, and all applicable codes and regulations.

From time to time, and upon completion of construction, The Project Manager will inspect the construction for compliance with Drawings and Specifications and issue a "punch list" for correction. Corrections must be made before final payment is authorized.

GENERAL CONSTRUCTION GUIDELINES

A. No deviation from the Plans and Specifications shall be permitted without prior written approval by the Project Manager. Owner shall not be responsible for the cost of removal, refabrication or reinstallation of materials, fixtures or finishes which do not conform to the plans and specifications.
B. All Contractors shall be bondable, licensed Contractors, capable of performing quality workmanship and working in harmony with other Contractors on the job.
C. The following documents shall be posted at the job site by the appropriate Contractor:
   1. A complete set of state approved working drawings for the project.
   2. Building or Inspection permits as may be required by governing authorities.
D. All construction shall comply with all applicable Federal, State, County and/or city statutes, ordinances, regulations, laws, building codes, fire codes, and underwriter's codes. All required permits and inspections in connection with the construction of the project shall be obtained and paid for by the appropriate Contractor.
E. Owner and all Contractors shall enter into a Contract or Contracts (hereinafter collectively called the "Contract") wherein Contractor shall agree to complete and finish Owner's work in accordance with Plans and Specifications. Said Contract shall be in the form of the current edition of Document A101 of the American Institute of Architects, and shall provide, among other things, the following:
F. That notwithstanding, anything contained in the Contract to the contrary, all Contractors will perform the work and furnish the required materials on the sole credit of Owner; that no lien for labor or materials will be filed or claimed by any Contractor against the Premises. In the event a lien is filed, Contractors will immediately discharge any such lien filed or claimed by any suppliers, laborers or Subcontractors, and will Indemnify and save the Owner harmless from any and all costs and expenses, including reasonable attorney's fees suffered or incurred as a result of any such lien that may be filed or claimed in connection with or arising out of work undertaken by the Contractors.
G. Each contractor is responsible for receiving and unloading their respective construction materials at the job site. Contractors shall store & protect materials at a location so as not to disrupt the work of other trades. Once received at the job site, all materials become the responsibility of the appropriate contractor.
H. Each Contractor is responsible for providing temporary toilet facilities for their employees.
I. Each Contractor shall be responsible for cleaning up and removing their own construction debris, on a daily basis. Dumpsters required for disposal of construction debris are the responsibility of the appropriate Contractor.
J. All requirements of Life Safety codes must be maintained during construction including the Occupational Safety and Health Act (OSHA) requirements, as well as MIOSHA requirements.
K. The Project Manager may stop any work, and Contractors will correct anything which is in violation, in the opinion of the Project Manager, that may cause injury or harm to the public.

TEMPORARY CONSTRUCTION WATER & ELECTRICITY

Each Contractor shall provide such extensions, devices and hookups as required to carry out the work, as directed by the Owner.

PROJECT MEETINGS

A. The Owner shall schedule Project Meetings as follows:
   1. Pre-Construction Meeting: To be conducted prior to construction at the job site with attendance by Project Manager, Owner, Sub-Contractors and Suppliers as may be necessary.
   2. Progress Meetings: To be conducted at the job site as directed by the Owner.

APPLICATION FOR PAYMENT

1. On or before the fifth (5th) day of each month, Each Contractor shall submit to Owner, itemized Application for Payment for work completed during the previous calendar month, with Sworn Statement and Waivers of Lien, beginning with the second application for payment.
2. Submit Application for Payment on AIA Documents G702, Application and Certification for Payment, and G703, Continuation Sheet; furnish in triplicate.
3. Owner will make monthly partial payments to each Contractor within twenty five (25) days after receipt of application for Payment. Owner will withhold ten percent (10 %) of each payment as retainage.
4. Within thirty (30) days after Certificate of Substantial Completion has been issued, Each Contractor will be paid a sum sufficient to increase total payments to 100 percent (100 %) of Contract amount, less such retainage Owner deems necessary to cover cost of any items remaining to be completed.

COMPLETION

Upon completion of Owner's construction work, the Project Manager shall inspect the Premises, and determine if the Premises are acceptable.

SITE WORK AND EXCAVATION

Excavate as required to install footings as shown on drawings. All footings shall bear on firm undisturbed soil regardless of depth shown on drawings. All exterior footings shall extend a minimum of 3'-6" below finish grade. Excavate and install new connection to existing sanitary sewer system in compliance with local Health Department requirements.

SOIL CAPACITY - A soils report was not prepared for this project. All footings are designed with an assumed soil bearing capacity of 3,000 psf.

BACKFILL - Where fill or backfill is required to raise the subgrade for concrete slabs, clean well-graded granular soils shall be used, conforming to Michigan Department of State Highways Classifications of Porus Grade "A" material, or equivalent. Fill shall be deposited in horizontal lifts not to exceed 12" in thickness, with each lift compacted uniformly to a minimum density of ninety-five percent (95 %) of its maximum value, as determined by the modified Proctor Test (A.A.S.H.T.O. T-180 or ASTM D-1557).

CONCRETE

In accordance with ASTM C-150, Type I, low alkali. Concrete shall have a minimum compressive strength at 28 days of 3,000 psi. Exterior concrete shall be air-entrained. Comply with all requirements of ACI Standards 301, 304, 318 and ACI 306R for cold weather construction as they may apply to this work.

All concrete shall be ready-mixed concrete in accordance with ASTM C-94. Maximum allowable time from plant to pour shall be 1-1/2 hours.

Forms shall conform to the shape, lines and dimensions of the members as called for on the drawings, and shall be substantial and sufficiently tight to prevent leakage of concrete. They shall be properly braced or tied together so as to maintain position and shape.

Provide reinforcing steel bars in all concrete footings, slabs, etc., as indicated, using deformed bars meeting ASTM Designation A- 615 Grade 60. Provide welded wire fabric, meeting ASTM A-185, in all concrete floor slabs and stoops in the upper 1/3 of the slab thickness. Footing reinforcing called for on the drawings shall be continuous and shall have a minimum of 30 bar diameters lap unless otherwise noted. Corner bars shall be provided at all outside corners and shall be of the same size and spacing as the main reinforcing.

Concrete slabs on grade shall be poured on compacted sand fill or creek run #6 gravel in maximum 12" lifts. Provide .006 mil polyethylene film under all interior floor slabs; Lap joints 6" and turn up at walls 4" minimum.

Exterior slabs shall be formed of Grade 35s, air-entrained concrete, floated and given a medium broom finish.

Provide 15 lb. asphalt impregnated building paper bond break at junction between floor slab and perimeter building foundation walls.

STRUCTURAL STEEL

Design Code: AISC "Specifications for the design Fabrication and Erection of Structural Steel for Buildings", 8th edition.
Materials:
   A. Wide flange shapes - ASTM A992 Grade 50
   B. Plates, channels, angle - ASTM A36
   C. Steel Tube - ASTM A500, Grade 46
   D. High Strength Bolts - ASTM - A325N
   E. Standard and Anchor Bolts - ASTM A36
   F. Welding Electrode - E70XX
   G. Anchors - ASTM A-108

All connections shall be standard framed beam connections unless noted otherwise. Welding shall conform to the requirements of the code for Arc and gas welding in Building Construction, American Welding Society. Provide shop drawings for approval prior to fabrication. All structural steel shall receive one coat of shop applied rust inhibitive primer.

JOINT SEALANTS

General Sealer Performance Requirements: Provide colors that match adjacent surfaces as approved by the Owner. Select materials for compatibility with joint surfaces and other indicated exposures, and except as otherwise indicated select modulus of elasticity and hardness or grade recommended by manufacturer for each application indicated.

A. Elastomeric Sealants:
   1. One-Compound Polysulfide Sealant: Polysulfide-based, 1-part elastomeric sealant, comply with FS TT- S-00230, Class A, Type II (non sag) unless Type I recommended by manufacturer for application shown.
   2. One-Compound Polyrethane Sealant: Polyrethane-based, 1-part elastomeric sealant, complying with FS TT-S-00230, Class A, Type I (self-leveling) unless Type II recommended by manufacturer for application shown.
B. Non-Elastomeric Sealants:
   1. One-Component Acrylic Sealant: Acrylic Terpolymer, solvent-based one-part, thermo-plastic sealant compound; solids not less than 95 complying with FS TT-S-00230, Class B, Type II; recommended by manufacturer for general use as an exposed building construction sealant.
   2. Butyl Rubber Sealant: Polymerized butyl rubber and inert fillers (pigments), solvent-based with minimum % solids, non-sag consistency, tack-free of 24 75 hours or less, paintable, non-staining; complying with FS TT-S-001657.
C. Miscellaneous Materials:
   1. Joint Primer/Sealer: Provide type of joint primer/sealer recommended by sealant manufacturer for joint surfaces to be primed or sealed.
   2. Bond Breaker Type: Polyethylene tape or other plastic tape as recommended by sealant manufacturer to be applied to sealant-contact surfaces where bond to substrate or joint filler must be avoided for proper performance of sealant. Provide self-adhesive tape where applicable.
   3. Sealant Backer Rod: Compressible rod stock of polyethylene foam, polyethylene jacketed polyurethane foam, butyl rubber foam, neoprene foam or other flexible, permanent, durable nonabsorptive material as recommended by sealant manufacturer for compatibility with sealant.

INTERIOR WOOD DOORS

1 3/4" thick, Solid core interior wood doors shall have crossbanded structural composite lumber core, matched grain birch veneer faces to be factory finished (PC 5 plycore of engineered lumber).

ALUMINUM WINDOW AND ENTRANCE FRAMING

Window and entrance framing shall be equal to Kawneer 451 Series with style of doors and anodized aluminum finish to match existing. Frame system shall be thermally broken, glazed system. Glass shall be insulated units with two layers 1/4" clear glass (tempered where required by code), 1/2" air space, low E as manufactured by LOF. Install per manufacturer's recommendations and provide reinforcing in frames as required for wind loading and as required for hardware installation. Field measure opening sizes and provide shop drawings for final approval.

GLAZING

A. Exterior Glazing: Refer to window and entrance framing details.
B. Interior Glazing:
   1. Clear, tempered glass - 1/4" thick at doors & sidelights.
C. Related Materials -
   Glazing Gaskets: meeting the following requirements:
   1. Elastomer Content of Gasket Compound: 100 silicone rubber, black and non-staining.
   2. Physical Properties - Glazing Gaskets: Meet performance requirements of ASTM C 542.
   3. Detail: Manufacturer's standard detail as indicated and as required to provids specified performance.
   4. Type: Closed cell or solid, durometer as required by glazing design.

Sealant for Glazing: Dow 990 Sealant

Glazing Tape: Tremco #440; Shore A hardness of 10 at installation and not exceeding 20 upon aging.

Setting Blocks: neoprene or EPDM 70 to 90 Shore A Hardness as recommended by manufacturer; certified non-staining and compatible with sealant. Use EPDM for units set with silicone glazing sealant.
D. Warranty on insulating glass units shall be 10 year standard warranty.

GYPSUM BOARD

All steel stud walls, bulkheads & ceilings (where indicated) shall receive gypsum board of types and thickness as shown. Taping and finishing of joints as detailed on the Drawings. Products shall be as manufactured by Gold Bond, National Gypsum, USG or approved equal. Provide edge beads at all openings, corners and exposed edge conditions, spackle and sand.

FINISHES

A. Vinyl Base:
   Vinyl cove base shall be roll stock as supplied and installed by the Owner. 4" or 6" high in color as selected from manufacturers standards by the Owner.
B. Suspended Acoustical Ceiling System: Suspended acoustical board ceiling shall be Class 'A' rated 2'x2'x5/8" or 2'x4'x5/8" as selected by the Owner and as manufactured by Armstrong Company. The suspension system shall be direct hung exposed prefinished white aluminum grid as manufactured by Donn Corp. or approved equal.
C. Resilient tile and resilient sheet flooring shall be as supplied and installed by the Owner.
D. All plastic laminate surfaced cabinetry, countertops & backsplashes shall be as supplied and installed by the Owner.
E. All cultured marble window sills shall be supplied and installed by the Owner.
F. All F.R.P. (fiberglass reinforced panels) shall be 1/4" thick, 4'x8' panels as manufactured by Masonite Corp. or approved equal. Provide prefinished accessories as required. Panels shall be as supplied and installed by the Owner.
G. Urinal screens and prefinished, floor mounted toilet partitions shall be supplied and installed by the Owner. Provide shop drawings to the Project Manager for approval.

PAINTING

Painting and finishing shall include all exposed surfaces that do not have a factory applied finish, as scheduled on the drawings or room finish schedule. All hollow metal and gypsum board shall be prepared to receive paint finish. Paint application shall be accomplished under conditions which will permit materials to perform as intended. Colors shall be selected by the Owner, and paint, stain & varnish samples shall be submitted for approval prior to application. Approved manufacturer's are Sherwin Williams or Pratt & Lambert products. Comparable quality paints by other approved manufacturers may be used, subject to approval by the Project Manager.

1. Steel and Hollow Metal:
   1 coat metal primer (only when metal not shop primed)
   2 coats alkyd semi-gloss enamel
2. Ferrous Metal:
   Clean galvanized metal with non-petroleum solvent
   1 coat rust inhibitive metal primer (if not primed)
   2 coats semi gloss alkyd enamel
3. Gypsum Board and Existing Masonry:
   1 coat Pro-Mar latex wall primer
   2 coats Pro-Mar alkyd eggshell enamel

Apply paint according to manufacturer's written instructions. Use applicators and techniques best suited for substrate and type of material being applied.

ROLLING SHUTTER

Shutter shall be as manufactured by Cornwell Iron Works, as distributed by Detroit Door & Hardware, (248) 348-1200 or as manufactured by Raynor Door Corp., (313) 937-1480. Unit shall be face mounted (push-up) type. Wall opening size shall be as shown from top of counter (by others). Curtain shall be formed of interlocking flat faced 1 1/2" clear anodized slats of .040" thick aluminum. Bottom bar of clear anodized aluminum tubular section with continuous lift handles. Provide master - keyable cylinder lock operable from the interior of shutter. Guides shall be heavy duty clear anodized aluminum sections with polypropylene pile runners. Hood shall be 0.04" thick clear anodized aluminum.

MASONRY WORK

Walls below grade shall be laid up of modular, 16" long standard weight concrete block units of thickness indicated on the drawings, and as manufactured of Portland cement and gravel, meeting ASTM C-90 standards. Above grade block walls shall be laid up of modular, 16" hollow lightweight concrete units with masonry wall reinforcing every second course. Wall reinforcing shall be 9 gauge trussed welded wire units equal to Dur-O-Wall or AA wire products.

Mortar

Materials:

Portland cement:	ASTM C150, Type I
Hydrated lime:	ASTM C207, Type S
Masonry cement:	ASTM C91, Type II
Sand:	ASTM C144
Water:	Fit for drinking

Proportions of mortar used below grade or in contact with earth shall be one part, type II, masonry cement, six parts sand. Proportions above grade shall be one part, type II masonry cement, three parts sand.

Joints: provide concave tooled joints at all block units.

Bullnose block: provide bullnose blocks at all door jambs.

CONCRETE GROUT FOR MASONRY WORK

Concrete Grout: In accordance with ASTM C-476 for Fine Grout. Grout shall have a minimum compressive strength of 2,000 psi at twenty-eight (28) days. All grout shall be pumped into block cores and bond beams and shall be vibrated as necessary.

PREPARED UNDER THE SUPERVISION OF:

PROJECT LOG

FILE:	SP1
PROJECT MGR:	M.W.B.
DESIGNED BY:	M.W.B.
DRAWN BY:	M.J.K.
CHECKED BY:	J.D.W.
SCALE:	NONE
SHEET:	SP1 OF 1

ISSUED FOR PLAN REVIEW 05-19-05

OWNER:
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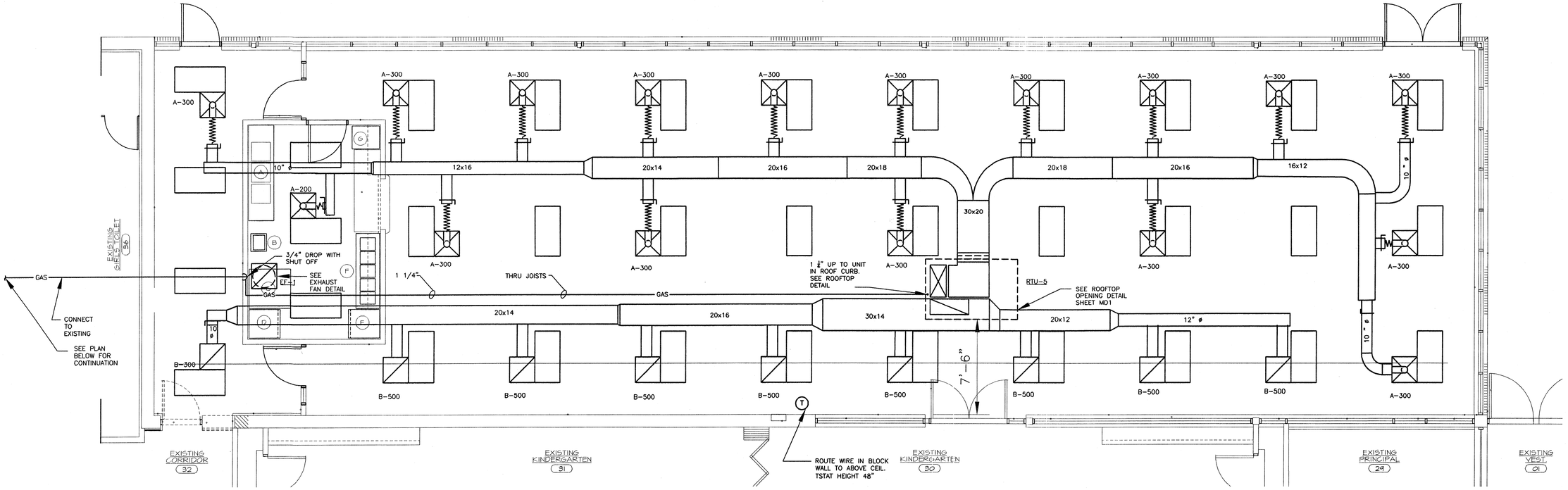
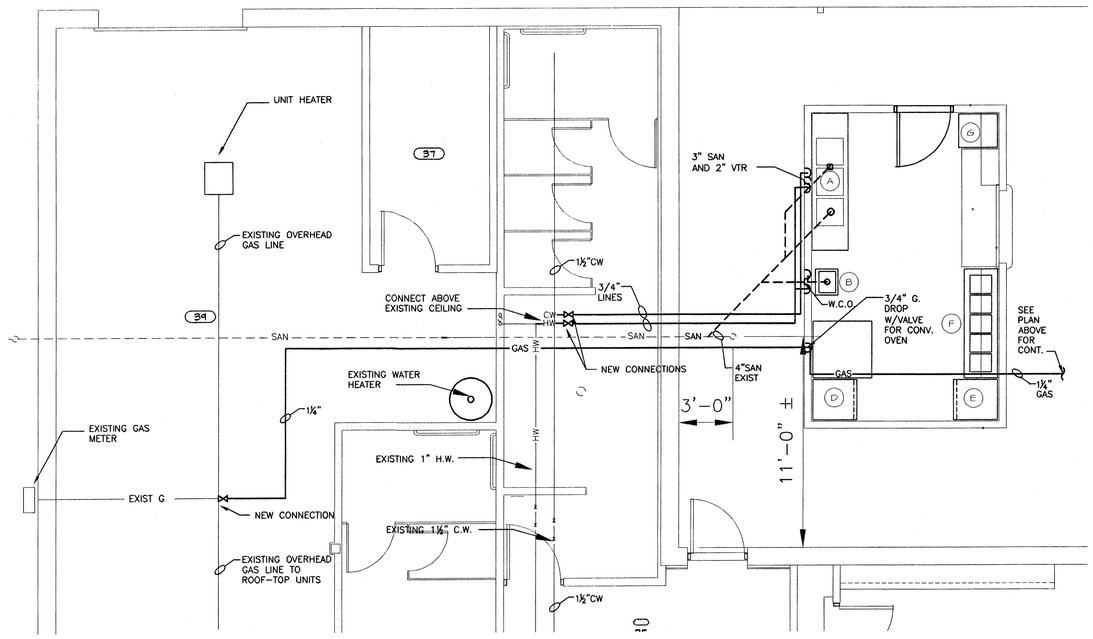
SP1



FLOOR PLAN- HVAC & GAS PIPING
SCALE 1/4" = 1'-0"



PARTIAL FLOOR PLAN- PLUMBING
SCALE 1/4" = 1'-0"

PREPARED UNDER THE SUPERVISION OF:

PROJECT LOG
9/19/05 ISSUED FOR PLAN REVIEW

FILE: 50741\00011\M1
PROJECT MGR: MWB
DESIGNED BY: MWB
DRAWN BY: SAT
CHECKED BY:
SCALE: 1/4" = 1'-0"
SHEET: M1 OF 1

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MECHANICAL / PLUMBING FLOOR PLAN

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M1

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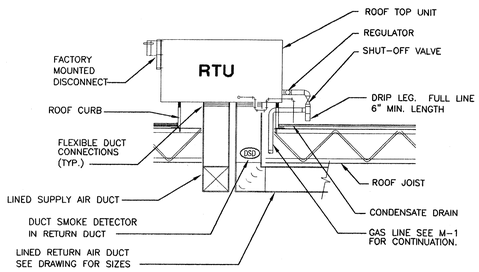
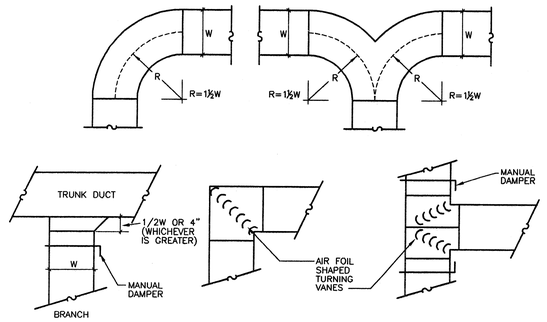


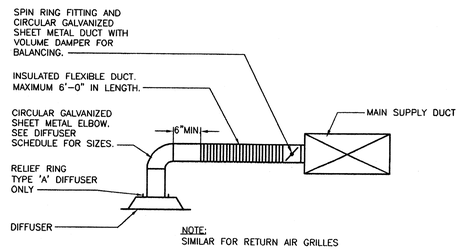
ROOFTOP UNIT DETAIL

NOT TO SCALE



ACCEPTABLE DUCT TURNS

NOT TO SCALE



NOTE:
SIMILAR FOR RETURN AIR GRILLES

DIFFUSER CONNECTION DETAIL

NOT TO SCALE

ROOFTOP UNIT SCHEDULE

RTU-5 BRYANT MODEL# 580FPV150300KB STANDARD EFFICIENCY ROOFTOP UNIT, 12½ TON, 300 MBH GAS HEAT INPUT, 208/230 VOLT, 3Ø, 60 CYCLE, NATURAL GAS/DIRECT SPARK IGNITION, 1 ¼" GAS CONNECTION

PROVIDE CRRFCURB003A00 ROOF CURB TO BE SUPPLIED BY MECHANICAL CONTRACTOR AND INSTALLED AND FLASHED BY ROOFING CONTRACTOR
INSIDE DIMENSIONS OF ROOF CURB: 4'-2⅞" X 6'-5⅜"

NOTES:

1. ROOF TOP UNITS SHALL HAVE DOWN FLOW ENTHALPY CONTROLLED ECONOMIZER.
2. PROVIDE POWERED EXHAUST WITH BAROMETRIC RELIEF DAMPER.
3. PROVIDE 2" PLEATED MEDIA FILTER. FARR 30/30.
4. PROVIDE TIME DELAY CONTROL FOR COMPRESSORS.
5. UNITS SHALL BE COMPLETELY PACKAGED AND WIRED FOR ALL CONTROLS. PROVIDE A CONVENTIONAL THERMOSTAT BOARD TO INTERFACE WITH A JOHNSON UNIT CONTROLLER AND SPACE SENSOR.
6. 5 YEAR COMP. WARRANTY – CRANKCASE HEATERS, LIQUID LINE FILTER-DRYERS, LOW LIMIT DISCHARGE THERMOSTAT, ELECTRONIC COMP. PROTECTION.
7. 10 YEAR HEAT EXCHANGER WARRANTY – AUTOMATIC SPARK IGNITION, MAIN GAS VALVE, FAN DELAY, HIGH LIMIT AND PRE-PURGE CONTROL, POWER FORCED DRAFT VENT.
8. MOTORIZED OUTSIDE AIR DAMPER INTERLOCKED w/ UNIT OPERATION.
9. COOLING PERFORMANCE IS RATED AT 95' AMBIENT TEMPERATURE, 80'F ENTERING DRY BULB, 67'F ENTERING WET BULB. UNITS ARE SUITABLE FOR OPERATION TO +/- 20% OF NOMINAL CFM.

GENERAL MECHANICAL NOTES

1. ALL WORK AND MATERIALS SHALL COMPLY WITH GOVERNING CODES, SAFETY ORDERS AND REGULATIONS.
2. CONTRACTOR SHALL OBTAIN AND PAY FOR ALL NECESSARY PERMITS, FEES, AND INSPECTIONS REQUIRED BY GOVERNING AUTHORITIES.
3. ALL MATERIALS AND EQUIPMENT PROVIDED AND/OR INSTALLED SHALL BE GUARANTEED FOR A PERIOD OF ONE (1) YEAR UNLESS OTHERWISE INDICATED, FROM THE DATE OF FINAL ACCEPTANCE OF THE WORK BY THE OWNER, ANY DEFECTIVE MATERIALS OR INFERIOR WORKMANSHIP SHALL BE CORRECTED TO THE ENTIRE SATISFACTION OF THE OWNER.
4. FLEXIBLE DUCT SHALL HAVE MAX. LENGTH OF 6'-0".
5. ALL SHEET METAL DUCTWORK SHALL BE INSTALLED IN ACCORDANCE WITH SMACNA AND/OR LOCAL AND ASHRAE CODES. TAPE ALL TRANSVERSE AND LONGITUDINAL JOINTS, AND TAKEOFFS ON SUPPLY, RETURN AND EXHAUST DUCTS. DUCT SHALL BE MILD GALVANIZED STEEL IN ACCORDANCE WITH SMACNA.
6. WHERE INTERIOR OF DUCTWORK IS VISIBLE THRU AN AIR OUTLET OR INLET, INSIDE OF DUCT SHALL BE PAINTED WITH A FLAT BLACK PRIMER, OR INSIDE SHALL HAVE BLACK FACING.
7. CONTRACTOR SHALL COORDINATE INSTALLATION OF ALL DUCTWORK WITH CEILING AND ROOF FRAMING, COOPERATE WITH OTHER TRADES, MAINTAIN MANUFACTURERS RECOMMENDED CLEARANCES OF ALL ITEMS OF EQUIPMENT, INSTALL TURNING VANES IN ALL 90 DEG. DUCT ELBOWS, INSTALL SPIN-IN EXTRACTOR/DAMPER AT BRANCH DUCT CONNECTION TO MAIN DUCT AND SEAL AIR TIGHT.
8. ANY EQUIPMENT THAT IS SUBSTITUTED SHALL FIT IN THE SPACE PROVIDED, WITH ADEQUATE ROOM FOR SERVICING, INCLUDING SUBSTITUTE EQUIPMENT NAMED IN THE SPECIFICATIONS, CONTRACTOR SHALL SUBMIT A ¼" SCALE DRAWING OF ALL EQUIPMENT SUBSTITUTED FOR APPROVAL PRIOR TO INSTALLATION.
9. MECHANICAL CONTRACTOR SHALL START UP SYSTEM AND BALANCE AIR SIDE TO PLUS/MINUS 10% OF INDICATED AIR QUANTITIES.
10. ALL SUPPLY, RETURN AND EXHAUST DUCT SIZES ARE INSIDE CLEAR DIMENSIONS. ALL SUPPLY AND RETURN DUCTWORK SHALL HAVE 1" THICK 1½ LB. DENSITY EXTERNAL THERMAL DUCT INSULATION.
11. SMOKE DETECTORS SHALL BE INSTALLED BY THE MECHANICAL CONTRACTOR AND CONNECTED BY THE FIRE ALARM CONTRACTOR. AT EACH AIR HANDLING SYSTEM 2000 CFM OR OVER, PROVIDE SMOKE DETECTOR IN THE RETURN AIR DUCT. ACTIVATION SHALL STOP THE UNIT FAN, CLOSE THE OUTDOOR AIR DAMPER AND ACTIVATE A VISIBLE AND AUDIBLE ALARM. A VISIBLE AND AUDIBLE DETECTOR TROUBLE ALARM SHALL ALSO BE PROVIDED. ALARMS SHALL BE INSTALLED IN A CONSTANTLY ATTENDED LOCATION. CONNECT TO THE FIRE ALARM SYSTEM BY FIRE ALARM CONTRACTOR.
12. REFER TO SCHEDULES FOR MATERIALS AND EQUIPMENT REQUIREMENTS.
13. ALL BRANCH DUCTWORK SHALL BE SAME SIZE AS DIFFUSER NECK UNLESS OTHERWISE NOTED.

EXHAUST FAN SCHEDULE

EF-1 GREENHECK MODEL CUBE-098-4, 300 CFM AT 0.25" S.P. 977 RPM 1/4 H.P., 115/1/60 VOLTS. PROVIDE BACKDRAFT DAMPER AND 12" HIGH ROOF CURB.

DIFFUSER AND GRILLE SCHEDULE

TYPE "A" TITUS MODEL TDC SUPPLY AIR DIFFUSER, 24"x24" SQUARE FACE, ROUND NECK, BORDER TYPE 3, 4 WAY THROW OR AS INDICATED, NECK SIZED FOR NO GREATER THAN 25 NC. SUPPLY WITH AG-75 OPPOSED BLADE DAMPER. COLOR-WHITE #26

TYPE "B" TITUS MODEL 50F ALUMINUM EGGCRATE RETURN GRILLE. 1/2"x1/2"x1/2" ALUMINUM CORE, WHITE #26 COLOR, BORDER TYPE 3, 24"x24" SQUARE FACE, ROUND NECK

DIFFUSER AND GRILLE NECK SIZES

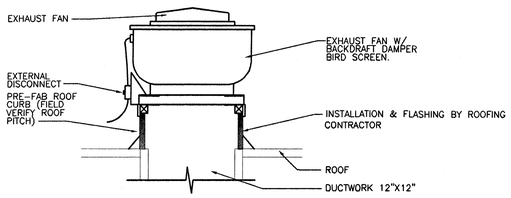
CFM RANGE	NECK SIZE
100-175	6"
176-275	8"
276-450	10"
451-600	12"
601-750	14"

FS1 FLOOR SINK SCHEDULE

JOSAM #49020ASW, SQUARE PVC 6⅝" DEEP, 12⅝" SQUARE. ACID RESISTING INTERIOR, DOUBLE DRAINAGE FLANG WITH WEEPHOLES, BOTTOM OUTLET.
PIPE SIZE ACCORDING TO REQUIREMENTS. 4" AIR GAP MIN.

THREE COMPARTMENT FAUCET

DELTA WALLMOUNT FAUCET 28T6543, 8" CENTERS, 14" SWING NOZZLE

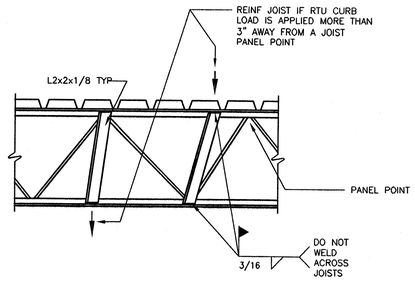


EXHAUST FAN DETAIL

NOT TO SCALE

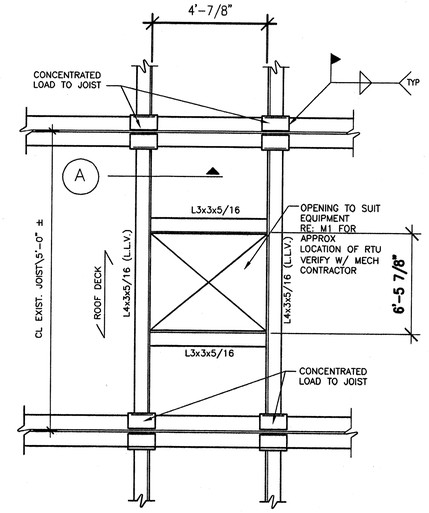
GENERAL PLUMBING NOTES

1. CONTRACTOR SHALL COORDINATE INSTALLATION OF PLUMBING WORK WITH ALL OTHER TRADES PRIOR TO START OF CONSTRUCTION SO AS TO AVOID UNNECESSARY DELAY OR INTERFERENCES.
2. ALL PLUMBING WORK AND MATERIALS SHALL BE INSTALLED IN ACCORDANCE WITH ALL APPLICABLE ORDINANCES, GOVERNING CODES, SAFETY ORDERS AND REGULATIONS HAVING JURISDICTION. THE CONTRACTOR SHALL OBTAIN ALL APPROVALS REQUIRED FROM REGULATING AGENCIES BEFORE STARTING WORK.
3. CONTRACTOR SHALL OBTAIN AND PAY FOR ALL NECESSARY PERMITS, FEES, AND INSPECTIONS REQUIRED BY GOVERNING AUTHORITIES.
4. DOMESTIC WATER PIPING: ABOVE GROUND COPPER TYPE"L".
5. GAS PIPING: INSIDE BUILDING ABOVE GROUND, SCHEDULE 40 BLACK STEEL PIPE.
6. INSULATE DOMESTIC HOT/COLD WATER PIPING WITH 1/2" THICK MICRO-LOK FIBER GLASS PIPE INSULATION BY JOHNS-MANVILLE PIPE INSULATION OR APPROVED EQUALED.
7. ALL PIPING SHALL BE KEPT TIGHT TO UNDERSIDE OF STRUCTURE AND SECURED IN ACCORDANCE WITH ALL APPLICABLE CODES.
8. SOME VENTS AND CLEANOUTS MAY BE OMITTED FOR DRAWING CLARITY, PROVIDE AND INSTALL ALL VENTS AND CLEANOUTS REQUIRED IN ACCORDANCE WITH ALL APPLICABLE CODES.
9. SANITARY PIPING SHALL HAVE A MINIMUM OF 1/8" PER FOOT SLOPE.
10. SANITARY VENTS THROUGH ROOF SHALL TERMINATE A MINIMUM OF 1 FOOT ABOVE THE ROOF.
11. MECHANICAL AND PIPING PLANS ARE DIAGRAMMATIC IN NATURE, INTENDED TO INDICATE DESIGN INTENT ONLY. CONTRACTOR IS RE-SPONSIBLE TO COORDINATE SPECIFIC LOCATIONS OF ITEMS AND ADJUST AS REQUIRED TO ACCOMMODATE CONSTRUCTION CONDITIONS, CODES REQUIREMENTS AND THE WORK OF OTHER TRADES.



Ⓐ TYPICAL JOIST REINF AT CONCENTRATED LOADS

SCALE: 1"= 1'-0"



Ⓑ ROOF OPENING FRAME (RTU #5)

SCALE: 1"= 1'-0"

PREPARED UNDER THE SUPERVISION OF:

PROJECT LOG
ISSUED FOR PLAN REVIEW 9/19/05

FILE: 50741\00011\MD1
PROJECT MGR: MWB
DESIGNED BY: MWB
DRAWN BY: SAT
CHECKED BY:
SCALE: NONE
SHEET: MD1 OF 1

OWNER:
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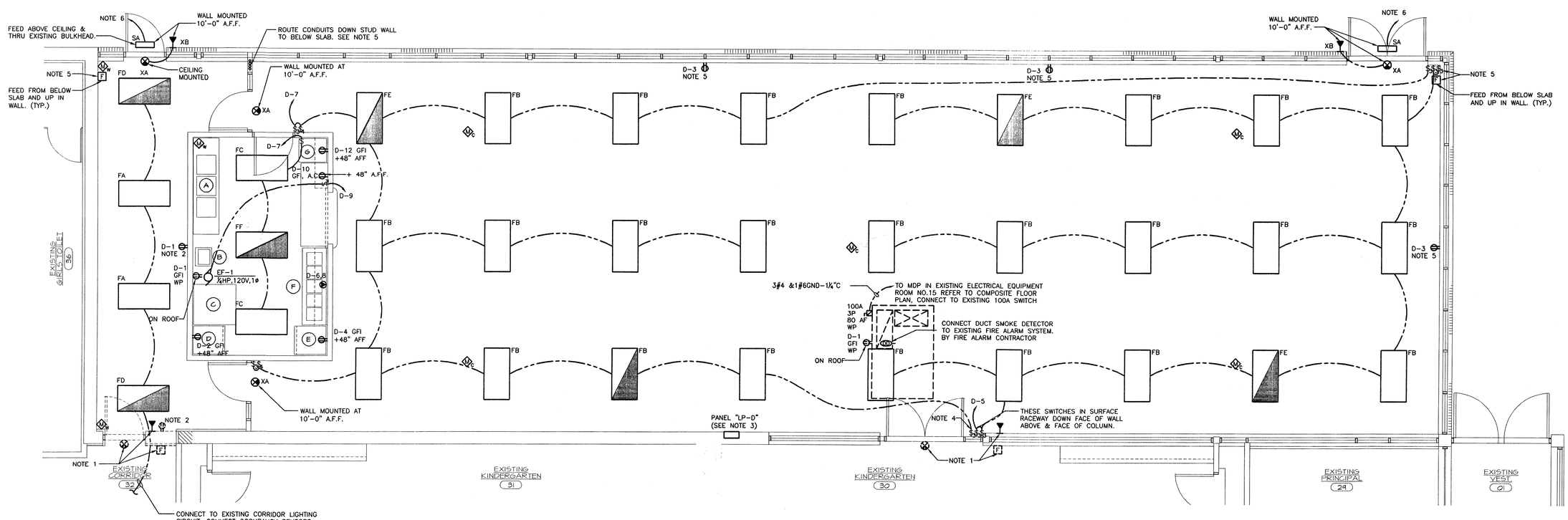
MD1

50741.00011



FLOOR PLAN - ELECTRICAL

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

NOTES:

1. RELOCATE EXISTING EXIT SIGN, EXTERIOR EMERGENCY LIGHT AND FIRE ALARM PULL STATION TO NEW EXIT DOOR. PULL STATION BY FIRE ALARM CONTRACTOR.
2. RELOCATE RECEPTACLE TO CORRIDOR. CONNECT TO NEW CIRCUIT INDICATED.
3. REMOVE EXISTING ELECTRICAL PANEL AND INSTALL NEW PANEL TO FIT 20"W X 29"H X 6"DEEP OPENING, SQUARE D NQOD20L100. FILL IN UNDER PANEL TO MATCH EXISTING BLOCK WALL. ROUTE 4#8 1#10GND- 1"C INSIDE EXISTING BLOCK WALL FROM PANEL LP-C, IN EXISTING ELECTRICAL EQUIPMENT ROOM NO. 15- REFER TO COMPOSITE FLOOR PLAN. INSTALL 50A 3 POLE BREAKER IN FIRST AVAILABLE SPACE IN PANEL 'LP-C'.
4. SURFACE MOUNT SWITCHES ON WALL. ROUTE SURFACE MOUNTED RACEWAY ALONG COLUMN TO ABOVE CEILING AND CONNECT TO CONDUIT.
5. ROUTE 3/4" CONDUIT FOR DEVICE AND CIRCUIT IN STUD WALL WHERE INDICATED AND ROUTE CONDUIT UNDER FLOOR SLAB AND UP IN NEW OR EXISTING BLOCK WALL TO OUTLET BOX.
6. CONNECT TO NEAREST EXISTING EXTERIOR LIGHTING CIRCUIT ON EAST WALL APPROXIMATELY 50FT TO THE NORTH OF THE NORTHEAST EXIT DOOR.

SCHEDULE OF PANEL 'LP-D'

VOLTAGE RATING: 120/208V			PHASE: THREE		WIRE: FOUR		
MIN. BUSS AMPS: 100 A			MAIN DEVICE AMPS: M.L.O.				
BREAKER A.I.C.: 10,000			MOUNTING: RECESSED				
LOCATION DESCRIPTION	LOAD (KVA)	DEVICE AMPS/P	#	PH	#	DEVICE AMPS/P	LOAD (KVA)	LOCATION DESCRIPTION
RECEPTS	0.360	20	1		2	20	1.080	(D) FREEZER
RECEPTS	0.540	20	3		4	20	0.960	(E) REFRIGERATOR
LIGHTS	1.350	20	5		6	25	1.875	(F) FOOD TABLE
LIGHTS	1.350	20	7		8	25	1.875	
EF-1	0.667	20	9		10	20	0.180	COUNTER RECEPT
SPACE			11		12	20	0.180	WALL RECEPT
			13		14			SPACE
			15		16			
			17		18			
			19		20			
NOTES:						TOTAL CONNECTED LOAD:		10.417 KVA
						TOTAL DEMAND LOAD:		7.292 KVA

PANEL	EXISTING CONNECTED LOAD (KVA)	NEW CONNECTED LOAD (KVA)	NEW CONNECTED LOAD (KVA)
MDP	142.808	165.504	148.154
PANEL LP-C	27.818	38.235	24.342

LIGHT FIXTURE SCHEDULE

TYPE	LAMPS	DESCRIPTION
FA	2-F32T8/41K	2'x4' FLUORESCENT LAY-IN FIXTURE WITH TWO (2) T-8 LAMPS, FLUSH STEEL LENS FRAME, .125" #12 PATTERN ACRYLIC PRISMATIC LENS AND 120 VOLT SOLID STATE BALLAST. LITHONIA CAT. #2GT8-2-32-A12125-120-GEB OR ENGINEER ACCEPTED SUBSTITUTE.
FB	3-F32T8/41K	2'x4' FLUORESCENT LAY-IN FIXTURE WITH THREE (3) T-8 LAMPS, FLUSH STEEL LENS FRAME, .125" #12 PATTERN ACRYLIC PRISMATIC LENS AND TWO 120 VOLT SOLID STATE BALLASTS. LITHONIA CAT. #2GT8-3-32-A12125-120-(2)GEB OR ENGINEER ACCEPTED SUBSTITUTE.
FC	3-F32T8/41K	SAME AS TYPE 'FB' EXCEPT WITH ADDITIONAL LENS GASKETING AND ONE 120 VOLT SOLID STATE BALLAST. LITHONIA CAT. #2GT8-3-32-A12125-120-GEB-LG OR ENGINEER ACCEPTED SUBSTITUTE.
FD	2-F32T8/41K	SAME AS TYPE 'FA' EXCEPT WITH 1400 LUMEN OUTPUT BATTERY SYSTEM. LITHONIA CAT. #2GT8-2-32-A12125-120-GEB-EL14 OR ENGINEER ACCEPTED SUBSTITUTE.
FE	3-F32T8/41K	SAME AS TYPE 'FB' EXCEPT WITH 1400 LUMEN OUTPUT BATTERY SYSTEM. LITHONIA CAT. #2GT8-3-32-A12125-120-(2)GEB-EL14 OR ENGINEER ACCEPTED SUBSTITUTE.
FF	3-F32T8/41K	SAME AS TYPE 'FC' EXCEPT WITH 1400 LUMEN OUTPUT BATTERY SYSTEM. LITHONIA CAT. #2GT8-3-32-A12125-120-GEB-LG-EL14 OR ENGINEER ACCEPTED SUBSTITUTE.
SA	1-LU70	70 WATT HIGH PRESSURE SODIUM WALL PACK WITH 120 VOLT HIGH POWER FACTOR BALLAST, RUGGED DIE-CAST ALUMINUM HOUSING AND PRISMATIC BOROSILICATE REFRACTOR. LITHONIA CAT. #TWH-70S-120-LPI OR ENGINEER ACCEPTED SUBSTITUTE.
XA	LED	LED EXIT SIGH WITH WHITE THERMOPLASTIC HOUSING, SINGLE FACE STENCIL RED LETTERING, NO SIDE MOUNT LAMPS, HIGH OUTPUT LEAD CALCIUM BATTERY, CEILING OR BACK MOUNTING. LITHONIA CAT. #LHOM-S-W-1-R-120/277-HO-RO OR ENGINEER ACCEPTED SUBSTITUTE.
XB	1-MR24 KRYPTON	REMOTE EMERGENCY LAMP, SINGLE HEAD, MULTI-FACETED REFLECTOR, 6V, 9W. MOUNTED AT 10'-0" A.F.F. LITHONIA CAT. #ELA-MR24-K0906 OR ENGINEER ACCEPTED SUBSTITUTE.

ELECTRICAL LEGEND

- LIGHT FIXTURES – LETTERS INDICATE TYPE AND CIRCUIT, SHADING INDICATES EMERGENCY FIXTURE
- LIGHT FIXTURES – LETTERS INDICATE TYPE
- LIGHT FIXTURE, LETTER INDICATES TYPE.
- WALL MOUNTED LIGHT FIXTURE, LETTER INDICATES TYPE.
- RECESSED WALL WASH FIXTURE, LETTER INDICATES TYPE.
- RECESSED LIGHT FIXTURE, CEILING OR SOFFIT MOUNTED, LETTER INDICATES TYPE.
- TRACK LIGHTING, LETTER INDICATES TYPE
- SINGLE FACE EXIT SIGN, SHADING INDICATES FACE, ARROW AS INDICATED, LETTER INDICATES TYPE.
- DOUBLE FACE EXIT SIGN, SHADING INDICATES FACE, ARROW AS INDICATED, LETTER INDICATES TYPE.
- $ SINGLE POLE SWITCH, MOUNT @ 48" AFF UNLESS INDICATED OTHERWISE.
- $3 THREE WAY SWITCH, MOUNT @ 48" AFF UNLESS INDICATED OTHERWISE.
- $4 FOUR WAY SWITCH, MOUNT @ 48" AFF UNLESS INDICATED OTHERWISE.
- $O OCCUPANCY SENSOR WALL SWITCH WATT STOPPER CAT.#WA-200
- ULTRASONIC OCCUPANCY SENSOR WITH POWER PACK, CEILING MOUNTED WATT STOPPER CAT.# WT-1105 FOR SENSOR AND CAT.# BZ-100 FOR POWER PACK.
- DUEL TECHNOLOGY OCCUPANCY SENSOR WITH POWER PACK, CEILING MOUNTED WATT STOPPER CAT.# DT-300 FOR SENSOR AND CAT.# BZ-100 FOR POWER PACK
- DUAL TECHNOLOGY SENSOR WITH POWER PACK, WALL MOUNTED WATT STOPPER CAT.# DT-200 FOR SENSOR AND CAT.# BZ-100 FOR POWER PACK.
- $M MANUAL MOTOR STARTER
- CEILING MOUNTED DUPLEX RECEPTACLE
- DUPLEX RECEPTACLE, MOUNT @ 18" AFF UNLESS INDICATED OTHERWISE
- GFI DUPLEX RECEPTACLE WITH GROUND FAULT PROTECTION, MOUNT @ 18" AFF UNLESS INDICATED OTHERWISE.
- RECEPTACLE, PLUGMOLD, TWOPIECE, 12 INCH CENTERS
- S SURGE SUPRESSION DUPLEX RECEPTACLE, MOUNT @ 18" AFF UNLESS INDICATED OTHERWISE.
- FLOOR RECEPTACLE
- QUADRUPLEX RECEPTACLE, MOUNT @ 18" AFF UNLESS INDICATED OTHERWISE
- COMBINATION FLOOR BOX. WALKER CAT. # RFB4 WITH TWO (2) PLATES, ONE FOR DUPLEX RECEPTACLE AND ONE FOR COMBINATION TELE/DATA OUTLETS AND CARPET INSERT COVER.
- FLOOR BOX. WALKER CAT. # RFB4 WITH ONE (1) PLATE FOR DUPLEX RECEPTACLE EACH
- 30 AMP RECEPTACLE, 208 VOLT, SINGLE PHASE
- 30 AMP RECEPTACLE, 120 VOLT, SINGLE PHASE
- TELEPHONE OUTLET, MOUNT @ 18" AFF UNLESS INDICATED OTHERWISE.
- W WALL MOUNTED TELEPHONE OUTLET, MOUNT @ 48" AFF UNLESS INDICATED OTHERWISE
- DATA OUTLET, MOUNT @ 18" AFF UNLESS INDICATED OTHERWISE.
- COMBINATION TELE/DATA OUTLET, MOUNT @ 18" AFF UNLESS INDICATED OTHERWISE.
- TV TV VIDEO OUTLET.
- XB WALL MOUNTED EMERGENCY LIGHT.
- CIRCUIT BREAKER, RATINGS AS INDICATED
- E NOTATION OF ELECTRICAL DEVICE TO REMAIN
- R NOTATION OF ELECTRICAL DEVICE TO BE REMOVED
- ER NOTATION OF EXISTING ELECTRICAL DEVICE TO BE RELOCATED
- AC MOUNTED 6" ABOVE COUNTER TOP
- WP WEATHER PROOF
- DISTRIBUTION PANEL
- PANELBOARD
- TELEPHONE BACKBOARD
- CP CONTROL PANEL
- J JUNCTION BOX
- FACP FIRE ALARM CONTROL PANEL
- F Rcd FIRE ALARM VISUAL ANNUNCIATOR (cd) STROBE, CANDELA RATING AS NOTED
- F Rcd FIRE ALARM AUDIO/VISUAL ANNUNCIATOR (cd) STROBE, CANDELA RATING AS NOTED
- S CEILING MOUNTED SMOKE DETECTOR
- H CEILING MOUNTED HEAT DETECTOR
- F FIRE ALARM PULL STATION
- DUCT SMOKE DETECTOR
- TS FS FIRE PROTECTION FLOW OR TAMPER SWITCHES.
- FUSED DISCONNECT SWITCH

PREPARED UNDER THE SUPERVISION OF:

PROJECT LOG

ISSUED FOR REVIEW	9/15/05

FILE: 50741.00011/E1
PROJECT MGR: MRC
DESIGNED BY: MRC
DRAWN BY: DCH
CHECKED BY:
SCALE: 1/4"=1'-0"
SHEET: E1 OF 2

OWNER:
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MULTI-PURPOSE ROOM ADDITION ACADEMY OF WARREN
13943 E. EIGHT MILE RD.
WARREN, MICHIGAN 48089

ELECTRICAL FLOOR PLAN

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E1

50741.00011

(24367B - 10-29-04)

WORK INCLUDED

The Electrical Contractor shall provide all items, articles materials, operations, or methods mentioned, listed, or scheduled on the drawings and in these specifications, including labor, materials, equipment, and incidentals necessary required for the completion and operation of all systems.

LOCAL CONDITIONS

The Electrical Contractor shall visit the site and shall familiarize himself with conditions which will affect the work he is to perform.

PERMITS AND INSPECTIONS

The Electrical Contractor shall take out all permits required and arrange for all necessary inspections and shall pay all fees and expenses in connection therewith as a part of their work
under their Contract.

Upon completion of the work, they shall furnish to the Owner all certifications of inspection and approval which are customary for the classes of work involved.

RULES, CODES AND STANDARDS

All work shall be performed or installed in strict accordance with all applicable rules, regulations and codes of Local, State and Federal Governments, or other authorities having lawful jurisdiction, and each Contractor and Subcontractor shall be responsible for such compliance.

All electrical work and equipment shall conform to the requirements of the current issue of the National Electrical Code, and shall bear label of inspection and approval of the Underwriters' Laboratories.

EXTRA WORK

For any extra electrical work which may be proposed, this Contractor shall furnish to the Engineer an itemized breakdown of the estimated cost of materials and labor required to complete this work. To this cost shall be added a percentage to cover all items of insurance, overhead and profit as listed in Contractor's Proposal. The Electrical Contractor shall proceed only after receiving a written order from the Engineer establishing the agreed price and describing the work to be done.

SCHEDULE OF WORK

The Electrical Contractor shall expedite his work in order to conform to the Owner's schedule and where necessary shall work overtime at his own expense so that all work may be complied within the time outlined.

CUTTING AND PATCHING

No cutting and burning of holes through beams or other structural members shall be done without the specific permission of the Architect.

All openings in walls, ceilings, or floors made by the Electrical Contractor shall be neatly patched by him after other work is done. At the discretion of the Architect, cutting and patching of work in place shall be done by the Trade whose work is done, but the cost of such work shall be paid for by the Electrical Contractor.

All measurements necessary for the proper installation of materials or apparatus shall be taken in the field. The Contractor shall be held responsible for the correct fit of work installed.

GUARANTEE AND WARRANTY

Contractor shall guarantee all work installed by him or his Subcontractors to be free from defect in material and workmanship for a period of one year following the date of final acceptance of the work, and he shall repair or replace at no additional cost to the Owner, any material or equipment developing defects and shall also make good any damage caused by such defects or the correction of defects. Repairs or replacements shall bear additional twelve (12) months guarantee, as originally called for, dated from the final acceptance of the repair or placement. This requirement shall be binding even though it will exceed products guarantees normally furnished by some manufacturers.

Contractor shall submit his own and each equipment manufacturer's written certificates, warranting that each item or equipment furnished complies with all requirements of the Drawings and Specifications.

Note that guarantee shall run from date of final acceptance of the work, not from date of installations of a device or piece of equipment.

REMODELING AND DEMOLITION WORK

Remove all existing wire, conduit, and electrical devices conflicting with construction; where old facilities are indicated to be removed; and where new facilities replace old installations.

Furnish and install new conduit and wiring to replace existing conduit and wiring abandoned or removed as part of the project where required.

Extend the existing conduit system or install new conduit and wire to provide electrical service to new devices or existing devices where required.

All existing, exposed conduit abandoned as part of the project shall be removed. All unused openings in junction or pull boxes and device boxes shall be closed with a suitable cover or plug.

All electrical equipment and materials removed on the project shall remain the property of the Owner and shall be stored in a location on the property designated by the Owner.

All existing electrical equipment, switches, starters, controls, etc., interfering with the new construction, but not being abandoned as part of the project, shall be relocated as may be necessary and/or shown on the drawings.

EXCAVATION, TRENCHING AND BACKFILLING

Contractor shall perform all necessary excavations as required by his underground work, and shall remove whatever substances encountered, to the depths shown on the drawings, or as required by field conditions and directed by the Engineers.

Contractor shall provide all shoring necessary to maintain the banks of their excavations, removing same as the work progresses and the filling in is done.

No excavation for pipe trenching shall be made in filled or disturbed earth until it has finally settled or has been otherwise compacted to properly support general construction.

All trenches shall be dry and clean when conduit is being laid. Any water in trenches shall be pumped dry before installation of conduit.

All conduit lines shall be laid straight and in true alignment with the grade and location established on the drawings, or as directed by the Engineers.

Trenches shall be backfilled and compacted with sand in eight inch layers, compacted to at least 95% of its maximum density as determined by ASTM D1557. Excess excavating material shall be removed from the premises or deposited on the premises where directed.

MOTORS

Unless otherwise noted, all motors shall be provided and installed by other trades for final connections by the Electrical Contractor.

CONDUITS AND FITTINGS

Conduits in mechanical equipment spaces may be run exposed. All other conduit shall be concealed, unless otherwise noted. Exposed conduit shall be installed parallel, or at right angles to adjacent building lines and shall be supported at intervals not exceeding eight feet.

All wiring shall be enclosed in a raceway, unless otherwise noted.

Conduit run exposed and conduit larger than 1" shall be hot-dip galvanized, rigid heavywall type unless otherwise noted.

Conduit 1" and smaller which is concealed in walls or ceiling spaces shall be Electrical Metallic Tubing.

Conduit run in floor, underfloor and underground shall be rigid non-metallic, PVC conduit equal to Carlon Type 40. Provide equipment grounding conductor in each conduit in accordance with N.E.C.

WIRE AND CABLES

All wire and cable shall conform to the latest requirements of the current edition of the NEC and shall meet all ASTM Specifications. Wire and cable shall be new; shall have size, grade of insulation, voltage and manufacturer's name permanently marked on outer covering at regular intervals; shall be delivered in complete coils or reels with identifying size and insulation tags.

All wire and cable shall be #12 AWG stranded, soft-drawn copper, Type THWN or THHN, unless otherwise noted or a higher temperature wire is required to feed lighting fixtures, high temperature cutouts, etc.

WIRING DEVICES

All duplex receptacles shall be 20 ampere, 125 volt, grounding type specification grade and color by owner, as manufactured by Pass and Seymour, Bryant, Hubbell or Arrow-Hart and Hegeman, equal to Catalog No. 5352 Pass and Seymour.

GFI receptacles shall be 20 ampere, 125 volt, 5mA trip grounding type, specification grade, color by owner, as manufactured by Pass & Seymour CAT# 2094 or Bryant, Hubbell or Arrow-Hart. Weatherproof receptacles to have while-in-use covers by Pass & Seymour CAT# WIUC10-DCL or Bryant, Hubbell, or Arrow-Hart.

All wall switches single pole, three and four way, shall be 20 ampere, 120/277 volt, ground terminal, specification grade, color by owner, Catalog No. Series 20AC as manufactured by Pass & Seymour or equal to Bryant, Hubbell, Arrow-Hart and Hegeman.

All switch and receptacles plates in occupied spaces shall be thermoset plastic no line "SP" series as manufactured by Pass and Seymour, Hubbell, Bryant, or Arrow-Hart and Hegemen.

All switch and receptacles plates in unoccupied spaces shall be .040 stainless steel; 97,000 series as manufactured by Pass and Seymour, Hubbell, Bryant, or Arrow-Hart and Hegemen.

Absolutely no despard switches shall be used unless otherwise specified or unless necessary due to building construction; and then only if specifically approved by the Engineer.

SURFACE METAL RACEWAY

Provide two piece surface mounted, grey enamel finished, metal raceway, divide to seperate branch circuits and phone/data cables. Provide necessary connection accessories for a complete raceway system. Wiremold series 4000 or equal.

DISCONNECT SWITCHES

Provide and install all required fusible or non-fusible disconnect switches shown on the drawings. All switches shall be heavy duty type in a NEMA 1 enclosure when mounted indoors, or a NEMA 3R enclosure when mounted outdoors. Switches shall be quick-make, quick-break with a mechanical dual cover interlock. Disconnect switches shall be Square D, G.E. or Cutler Hammer.

MANUAL MOTOR STARTER

Fractional single phase motor starters shall be toggle switch type with red running light. Properly sized overloads and NEMA Type 1 enclosure. Units shall be Square D Class 2510, G.E. or Cutler Hammer.

FUSES

All fuses shall be dual element cartridge type and shall have a minimum short-circuit rating of 100,000 rms amps. Fuses shall be Bussman "Fusetron."

Fuses for all circuit, motors, and other equipment shall be selected in ratings in accordance with the National Electrical Code, to provide a coordinated system of over-current protection. Thus in case of a fault or harmful overload, only the fuses nearest the fault or overload equipment shall open. Fuses selected for branch circuit protection of motors with other thermal overload protection shall not be rated at greater than 150% of full load motor current.

LAMPS

All linear fluorescent lamps to be medium bipin T-8 wattage as indicated on drawings, 78 color rendering index, 4100 K color temperature, 20000 hours rated life, 25 deg. C rated operating temperature and pass the Federal Toxic Characteristic Leaching Procedure.

All metal halide lamps to be mogul base, multi-vapor, 65 color rendering index, 4000 K color temperature, and uncoated.

BALLASTS

Ballast shall be rapid start with voltage rating as indicated on drawing at 60Hz. and high frequency type operating lamps above 20kHz. Lamp Current Crest Factor shall be 1.7 or less and Ballast Factor greater than 0.85 in accordance with lamp manufacturer recommendation and ANSI C82.11-1993. Total Harmonic Distortion shall be less than 10% and have a power factor greater than 0.97.

Ballasts shall operate lamps with no visible flicker, shall operate at 72 degrees Fahrenheit and have a starting temperature of 0 degrees Fahrenheit.

Any ballast that develops a noticeable hum or become inoperative during the Contract Guarantee period, then the ballast and fuse shall be replaced in the fixture and connected for a complete operation at no additional cost to the Owner.

BRANCH CIRCUIT PANELBOARDS

Lighting Panelboards, Circuit Breaker Type, 120/208 Volt, 3 Phase, 4 Wire:

a. Shall be dead front, Square D type NQOB or equal to G.E., or Cutler Hammer with flush or surface mounted steel cabinet as required and an integral assembly of circuit breakers. Trims shall have hinged and locked doors with glass or heavy plastic covered circuit directories. All locks shall be keyed alike. Boxes shall be galvanized, and front assembly shall be painted with a prime and finish coat of manufacturer's standard finish. All flush mounted panels shall be approximately 5-3/4" deep and 20" wide. Panels shall have 3 phase, 4 wire, solid neutral mains of capacities indicated on the drawings with main lugs or main circuit breaker as required.

b. Circuit breakers shall be molded plastic case type, AC-DC rated, 1, 2, or 3 pole as required, quick-make, quick-break, with trip free operating handle, position indication and thermal-magnetic trip device, temperature compensation, bolted type, with toggle switching action to be independent of tripping action. Provide magnetic trip action device for all motor circuit, 2 and 3 pole breakers shall have a common operating handle and common trip mechanism. Trip ratings shall be as indicated on the drawings and minimum interrupting capacity shall be 10000 rms symmetrical amperes at 240 volts.

c. Lugs for mains shall be solderless type.

MANUALS AND BROCHURES

Upon completion of work furnish Owner with four sets of manufacturer's instruction books, maintenance brochures, descriptive brochures, and spare parts brochures for equipment listed in the specification. One complete set shall be bound into book form for the Owner's use.

RECORD DRAWINGS

The Contractor shall keep in its field office, one copy of all drawings, specifications, shop drawings, and changes available for reference by the Owner and Architects reflecting an accurate
and up-to-date record of actual construction whether or not covered by official revisions to drawings and specifications.

Record drawings shall consist of separate plans for lighting systems, receptacle systems, power systems, communication systems, riser diagrams, etc. Each system drawing shall show location, size and conductor fill for all conduits, junction boxes and outlets.

At completion, the Contractor shall furnish to the Owner one (1) complete set of contract sepias, neatly marked and dimensioned where required to show all variations between actual construction as built and work as indicated on the printed drawings, including all changes in locations, sizes, depth, elevations, etc. Particular care shall be taken to fully dimension all concealed and underground work performed under the Contract. These sepias shall be new sets purchased from the Architect, each sheet certified as built by the Contractor, and turned over to the Owner in good condition.

SHOP DRAWINGS

Submit shop drawings in accordance with the requirements of the Contract conditions and Division 1 of these specifications.

Check shop drawings for coordination with the work of other trades and conformity with the contract drawings and specifications before submitting them to the Architect-Engineer; note any and all variations and affix Contractor's approval stamps. Where more than one piece of equipment is shown on the shop drawing, the equipment to be supplied shall be marked.

Drawings or catalog cuts marked "resubmit as noted" or "rejected" must be corrected and returned for final checking. No shop drawings or catalog cuts shall be used on the work unless marked "no exceptions" or "exceptions as noted" by the Engineers. Three copies of all drawings and catalog cuts submitted will be retained by the Engineers. Contractor shall submit as many
more copies as he desires returned. The Contractor shall furnish to the field, prints of shop drawings and catalog cuts marked "no exceptions" or "exceptions as noted" as required by the construction operations.

After shop drawings have been submitted to the engineer and returned to the Contractor marked "no exceptions" or "exceptions as noted", the Contractor will not be allowed to resubmit shop drawings of another manufacturer, for the same item, without the engineers consent.

Shop drawings required shall include but not necessarily be limited to the following:

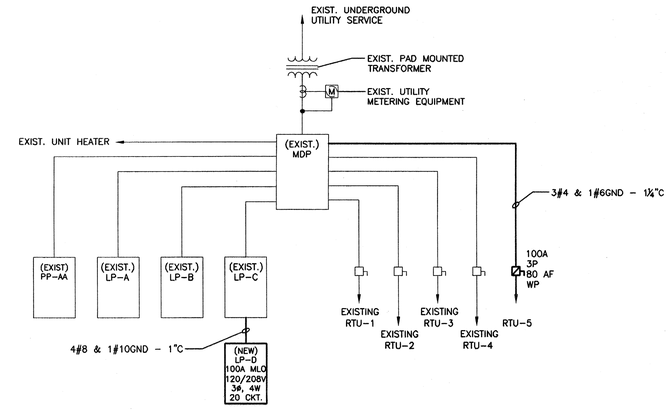
- light fixtures
- disconnect switches
- motor starters
- circuit breakers
- panelboards
- emergency power system
- lighting control system
- fire alarm system

TEMPORARY POWER AND LIGHTING

Provide temporary power and lighting as required for construction.

Cost of current consumed will be paid by the Owner.

The Electrical Contractor shall perform his work in accordance with any applicable safety laws, rules, or regulations of the State of Michigan.



ELECTRICAL RISER DIAGRAM

SCALE: NOT TO SCALE

PREPARED UNDER THE SUPERVISION OF:

	PROJECT LOG		
	ISSUED FOR REVIEW	9/19/05	
FILE: 50741.00011/E1			
PROJECT MGR: MRC			
DESIGNED BY: MRC			
DRAWN BY: DCH			
CHECKED BY:			
SCALE: NOT TO SCALE			
SHEET: E2 OF 2			

OWNER:
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MULTI-PURPOSE ROOM ADDITION
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ELECTRICAL SPECIFICATIONS

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E2

50741.00011