

IP

I MECHANICAL PLAN

MECHANICAL SCHEDULES

MECHANICAL SPECIFICATIONS

LIGHTING

POWER

SCHEDULES

LIGHTING

LUGHTING

LUGHBING PLAN

PLUHBING PLAN

P.2 RISER

P-3 SPECIFICATIONS

INDEX OF DRAWINGS

LEGEND
SITE PLAN
AIO CODE ANALYSIS
D. DEMOLITION PLAN
A20 CONSTRUCTION FLOOR PLAN
DOOR SCHEDULE
A30 REFLECTED CELLING PLAN
A40, FINISH PLAN
FINISH LEGEND
A50 MILLWORK DETAILS
A6,0 WALL SECTIONS

Architectural Ao<sub>i</sub>o COVER PAGE

THIS BUILDING IS PROTECTED BY AN APPROVED

A LICENSED FIRE ALARM CONTRACTOR SHALL MODIFY THE EXISTING FIRE ALARM EQUIPMENT AS REQUIRED TO FULLY PROTECT THE NEW LEASE SPACE IN ACCORDANCE WITH LOCAL AND STATE FIRE CODES. FIRE ALARM SUBMITTALS SHALL BE SUBMITTED TO THE CITY OF SUGAR LAND FOR REVIEW AND PERMIT.

### FIRE SPRINKLER SYSTEM NOTE

A LICENSED FIRE SPRINKLER CONTRACTOR SHALL MODIFY THE EXISTING FIRE SPRINKLER SYSTEM AS REQUIRED TO FULLY PROTECT THE NEW LEASE

### MEDICAL CLINIC INTERIOR BUILD-OUT FORT BEND HEART CENTER

13020 Dairy Ashford Dr. Suite 101, Sugar Land TX 77478

Architect:

Kashou Architecture, Inc. Shawn Kashou, NCARB

20710 Shadow Mill Ct Katy, Texas 77450 Tel: 713 . 965 4470

MEP Engineer:

### William K Hall & Co

Consulting Engineers 1901 Long Prairie Rd Suite 130 Flower Mound, TX 75022 Tel: 214 681 2179 Texas Firm Registration: #F-12258

Ν



**Project Description:** Interior build-out of medical clinic in vacant shell building space.

### Codes:

- 2009 International Building Code
- 2009 International Energy Code City of Sugar Land adopted Codes
- and Amendments.
- 2008 National Electric Code.
- 2012 Texas Accessibility Standards (TAS): TAS standards closely follow the Americans with Disabilities Act Accessibility Guidelines (ADAAG), and have been approved by the Departmet of Justice (DOJ).

ABBREVIATIONS: FAB FD FIN FPLC FR FRMG FXD FXTR FLR FURN GA GC CON GYP C CAB
CPT
CER
CLG
&
CONC
CONT
CONTR
COV
CMU D DBL DEPT DET DIA DIFF DIM DISP DIV DN DR DSCO DW DWR E EIFS

Site Plan /32" = 1'-0"

FABRICATION
FLOOR DRAIN
FINISH
FIREPLACE
FIRE RAT(ED)(ING
FRAMING
DIXED
FIXTURE

HEAD HORIZONTAL HEATING, VENTILATING & AIR CONDITIONING

KITCHEN KNEE SPACE

NIC NO. NTS

**DDODOSED** 3345 sf

EXISTING

EXISTING MEDICAL SUITE

4966 sf

VACANT SHELL

VACANT

SHELL

PARTITION
PARTICLE BOARD
PANEL
PREFINISHED
PREFABRICATED
PLASTIC LAMINATE
PLASTER
PLYWOOD

HVAC RETURN AIR
REFLECTED CEILING PLAN
RECESSED
RECEPTACLE
REFER
REFLECTED

SQUARE FOOT (FEET

SQUARE FOUT (FEE
SOLAR HEAT GAIN
COEFFICIENT
MHILAR
STAINLESS STEEL
STANDARD
STEEL
STOREFRONT
STRUCTURAL
SURFACE
SUSPENDED
SYSTEM(S)

WINDOW REFERENCE NUMBER

TO BE DETRMINED THICK TOILET TRANSPARENT TREATED TONGUE & GROOVE TYPICAL

VERIFY IN FIELD

WITH WATER CLOSET WOOD WASHER & DRYER WINDOW

**GRAPHIC SYMBOLS:** 

### **GENERAL NOTES:**

S. Dairy Ashford Rd

Existing Shell Building & Parking

Building: 20,000 sf gross

Parking: 102 spaces

1. ACOMPLY WITH ALL CODES, LAWS, ORDINANCES, RULES AND BEGUALTIONS OF PUBLIC AUTHORITIES GOVERNING THIS WORK.

OBSTAN AND PAY FOR PERMITS AND HISPSCTIONS AS BEQUINED RITE AUTHORITIES GOVERNING THIS WORK.

REVIEW THISE DOCUMENTS, VERRY DIVENSIONS AND EXISTING CONDITIONS AND CORFIEM THAT THE WORK IS BUILDABLE AS SHOWN. REPORT ANY CONFLICTS OR OPHINSIONS TO THE ARCHITECT FOR CLARIFICATION PRIOR TO ORDERING ANY MATERIALS OR PERFORMING ANY WORK IN QUESTION.

4. SUBMIT REQUESTS FOR SUBSTITUTIONS, REVISIONS, OR CHANGES TO HES ACCHITECT FOR REVIEW AND APPRIVAL PRIOR TO THE MEASURE ACCHITECT FOR REVIEW AND APPRIVAL PRIOR TO THE MEASURE ACCHITECT FOR REVIEW AND APPRIVAL PRIOR TO THE MEASURE ACCHITECT FOR REVIEW AND APPRIVAL PRIOR TO

TO THE ARCHITECT FOR BEVIEW AND APPROVAL PRIOR TO DURCHASE, RABINICATION OR INSTALLATION, COORDINATE WORK WITH THE OWNER, INCLUDING SCHEDULING TIME AND LOCATIONS FOR DELIVERIES, ROPEDETY AND/OR BUILDING ACCESS, USE OF SERVICES AND FACILITIES, AND USE OF ELEVATORS. ANIMINIZE DISTURBENCE OF BUILDING FUNCTIONS AND OCCUPANTS. WORK NOTED "BY OTHERS" OR "NIC" WILL BE PROVIDED BY THE OWNER UNDER A SEPARATE CONTRACT. INCLUDE SCHEDULE AND CONTRACT IN THE CONTRACT INCLUDE SCHEDULE AND CONTRACT IN THE CONTRACT. AND "BY OTHERS" OR SHALL FOR WITH OWNER TO BUSINE ORDSHLY SCOURNEC OF NISTALLITION OF ALL WORK, INCLUDING "NAC" AND "BY OTHERS" WORK.

INSTALLATION OF ALL WOME, INCLUDING TRICE AND BY OTHERS-WOOR.
COORDINATE THE BESTALLATION OF TELECOMPUBLICATIONS, OATA AND SECURITY SYSTEMS WITH THE PRODEED PAPTIES.
HAINTAIN EXITS, EXIT, LIGHTING, FIRE PROTECTIVE DEVICES, AND ALARMS IN CONFORMANCE WITH APPLICABLE CODES AND ORDINANCES.
HAINTAIN WORK AND SURROUNDING AREAS FROM DAMAGE.
HAINTAIN WORK AREAS SECURE AND LOCKABLE DURING.
CONSTRUCTION. CORONNATE WITH TERNAT AND LANDLORD TO ENSURE SECURITY.
DO NOT SCALE DRAWNIGS. WRITTEN DIMENSIONS GOVERN.
CONSTRUCTION. CASE OF CORNEL TO SEE OF CONTROL.

DO NOT SCALE DRAWINGS, WRITTEN DIMENSIONS GOVERN CONSULT THE ARCHITECT IN CASE OF CONFLICT. PARTITIONS, FLOORS AND CEILINGS ARE DIMENSIONED FROM FINISH FACE TO FINISH FACE, UNLESS OTHERWISE NOTED. MAINTAIN DIMENSIONS MARKED "CLEAR". ALLOW FOR THICKNESS

ATTACHED OR MOUNTED TO WALLS OR CEILINGS.

UNDERGUT DOORS TO CLEAR TOP OF FLOOR FINISHES BY X'.
UNLESS OTHERWISE NOTED.

ENSUITE SURFACES TO RECEIVE FINISHES ARE CLEAN, TRUE, AND PREC OF REMOULARITIES. DO NOT PROCEED WITH WORK UNTIL UNDERSTANDANTS ACTIONY CONDITIONS HAVE BEEN CORRECTED.

PROVIDE TRANSPORTED AND RESULTED ASSESSMENT OF THE ORDER AND COVED, TOP SET RESULTENT BASE AT RESILTENT FLOORING, UNLESS OTHERWISE NOTED.

### FIRE ALARM NOTE

THIS BUILDING IS PROTECTED BY AN APPROVED

REQUIRED TO POLLY PROTECT THE NEW LEASE SPACE IN ACCORDANCE WITH LOCAL AND STATE FIRE CODES. SPRINKLER SUBMITTALS SHALL BE SUBMITTED TO THE CITY OF SUGAR LAND FOR REVIEW AND PERMIT.

Project No.

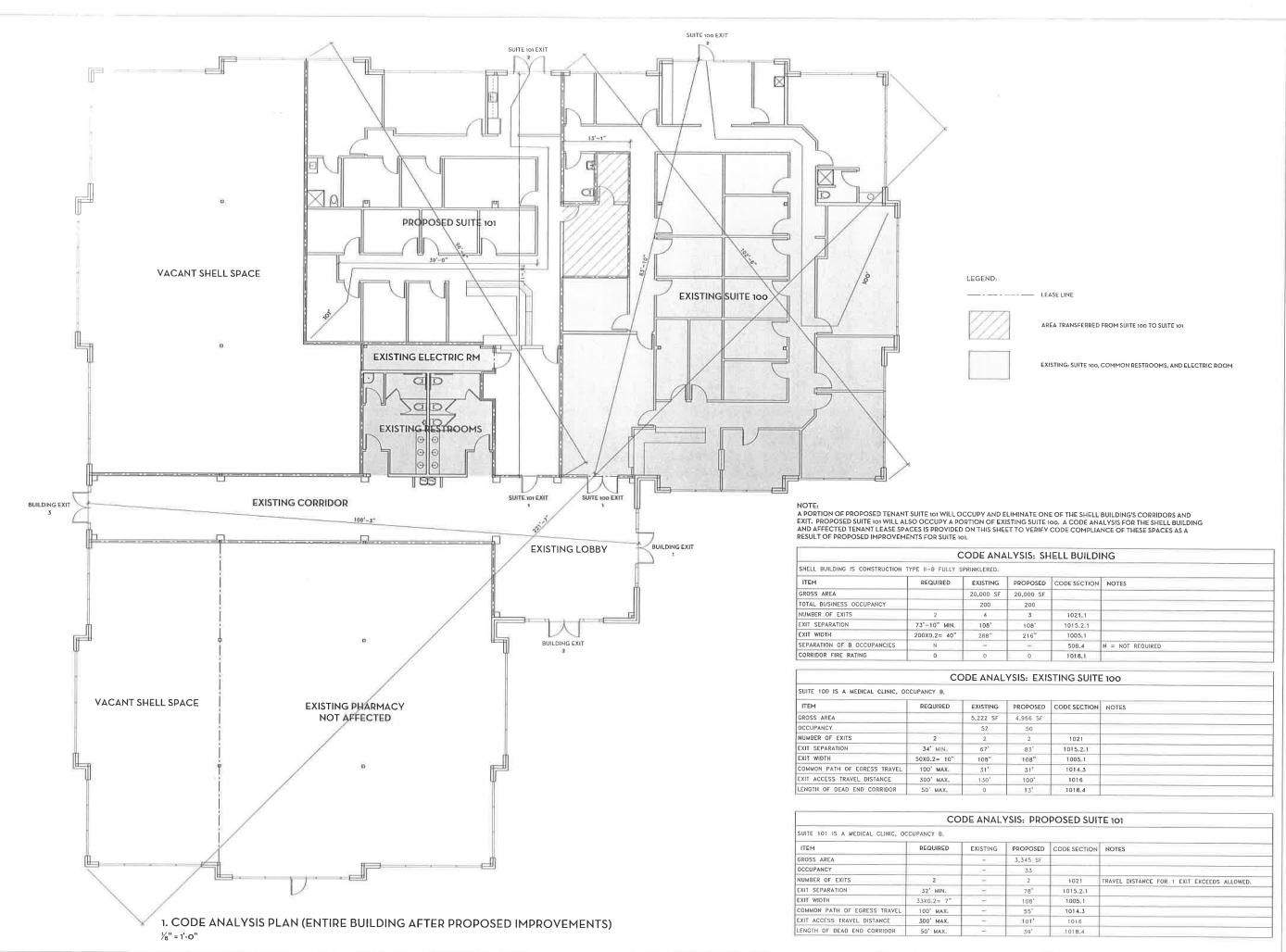
Dwg Name

Cover Page

Site Plan

Issued for: Permit & Construction

Ao.o



Medical Clinic Interior Build-out FORT BEND HEART CENTER Dairy Ashford Dr. Suite 101, Sugar Land, T

KASHOU

Shawn Kashou, NCARB 20710 Shadow Mill Ct Kaly, Texas 77450 Tel: 713 2 965 4470



Issued for:

Permil & Construction

Project No.

Dwg, Name

CODE **ANALYSIS** 

Dwg. No.

A1.0

### DEMOLITION KEYED NOTES:

- 1. LINE OF PROPOSED LEASE SPACE,
  2. DEMOLISH FLOOR TILE WITHIN THE AREA
  INDICATED BY THE "X". SAW CUT EDGES AT
  TILE TO REMAIN TO HAVE CLEAN STRAIGHT
  EDGE.
  3. DEMOLISH WALL, STRUCTURAL COLUMNS TO
  REMAIN, PROTECT DURING DEMOLITION AND
  CONSTRUCTION, REFER TO MECH AND ELECT
  DWGS FOR HVAC EQUIPMENT AND LIGHTING
  DEMOLITION EXTENTS.
  4. STONE CLAD PILASTERS TO BE DEMOLISHED,
  DOOR TO ADJACENT SUITE (100) TO BE
  DEMOLISHED.
  DEMOLISHED.
  OF WINDOW SYSTEM AND SAWCUT
  BRICK BELOW WINDOWS TO CREATE DOOR
  OPENING.

- PORTION OF RINDOWS TO CREATE DOOR OPENING.

  7. DRINKING FOUNTAIN TO BE RELOCATED.

  8. CREATE OPENING FOR PROPOSED DOOR, REFER TO CONSTRUCTION FLOOR PLAN FOR LOCATION.

  9. DEMOLISH DOOR AND FRAME.

  10. EXISTING MEDICAL EQUIPMENT TO REMAIN, GC TO COVER AND PROTECT EQUIPMENT FROM DUST AND PHYSICAL CONTACT THROUGHOUT ENTIRE DEMOLITION AND CONSTRUCTION PERIOD.

  11. EXISTING CEILING GRID IN THESE ROOMS TO BE TERMINATED ON BOTH SIDES OF THE EXISTING PARTITIONS WHICH SHALL BE EXTENDED UP TO DECK TO BECOME DEMISING WALLS,

  12. LOCATION FOR RELOCATED DRINKING FOUNTAINS,

  13. RELOCATE EXISTING VENDING MACHINE TO ADJACENT TO NEW LOCATION OF DRINKING FOUNTAINS.



Medical Clinic Interior Build-out FORT BEND HEART CENTER 13020 Dairy Ashford Dr. Suite 101, Sugar Land, TX 77478

Shawn Kashou, NCARB 20710 Shadow Mill Ct Kaly, Texas 77450 Tel: 713 965 4470



Issued for:

Project No.

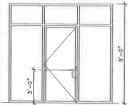
Dwg. Name

Demolition Plan

Dwg. No.

D1.0

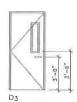
13. INSTALL 1" WHITE LETTERS ON GLASS FROM INTERIOR TO READ: "THIS DOOR TO REMAIN UNLOCKED WHEN BUILDING IS OCCUPIED"

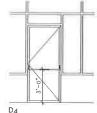






Do





4 SAFETY GLASS WITH BRONZE ANOD, ALUM FRAME STOREFRONT SYSTEM TO MATCH EXISTING

DOOR FINISH:

### DOOR HARDWARE:

- KEY LOCK.
- PUSH / PULL BARS.
  HEAVY DUTY HINGES.
  HEAVY DUTY CLOSER.
  HEAVY DUTY KICK DOWN HOLD OPEN.

### PRIVACY LOCK

- LEVER HANDLES WITH PUSH BUTTON LOCK ON PRIVATE SIDE, INSIDE LEVER RELEASES LOCK. SCHLAGE AL40S NEPTUNE 626. HINGES, CLOSER, DOOR STOP (WALL MOUNT WHERE POSSIBLE, OTHERWISE FLOOR MOUNT).
- H2-A SAME AS H2 BUT WITHOUT A DOOR CLOSER.

- H3 PUSH BUTTON & KEY LOCK

  LEVER HANDLES WITH PUSH BUTTON LOCK ON PRIVATE SIDE, INSIDE LEVER RELEASES LOCK, KEY LOCK/UNLOCK ON OUTSIDE, SCHLAGE AL50PD NEPTUNE 625.
- HINGES, DOOR STOP (WALL MOUNT WHERE POSSIBLE, OTHERWISE FLOOR MOUNT).

- HOSPITAL PRIVACY LOCK RUSPITAL PRIVACT LUCK
  LEVER HANDLES WITH PUSH BUTTON LOCK ON PRIVATE SIDE,
  INSIDE LEVER RELEASES LOCK, EMERGENCY TURN BUTTON ON
  OUTSIDE UNLOCKS. SCHLAGE AL44S NEPTUNE 626,
  HINCES, DOOR STOP (WALL MOUNT WHERE POSSIBLE,
  OTHERWISE FLOOR MOUNT).

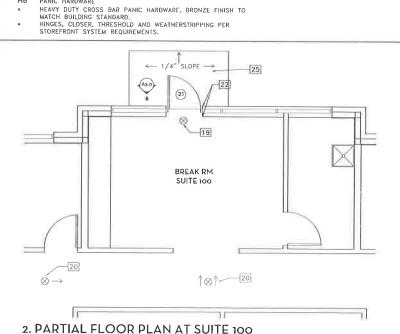
### PANIC HARDWARE

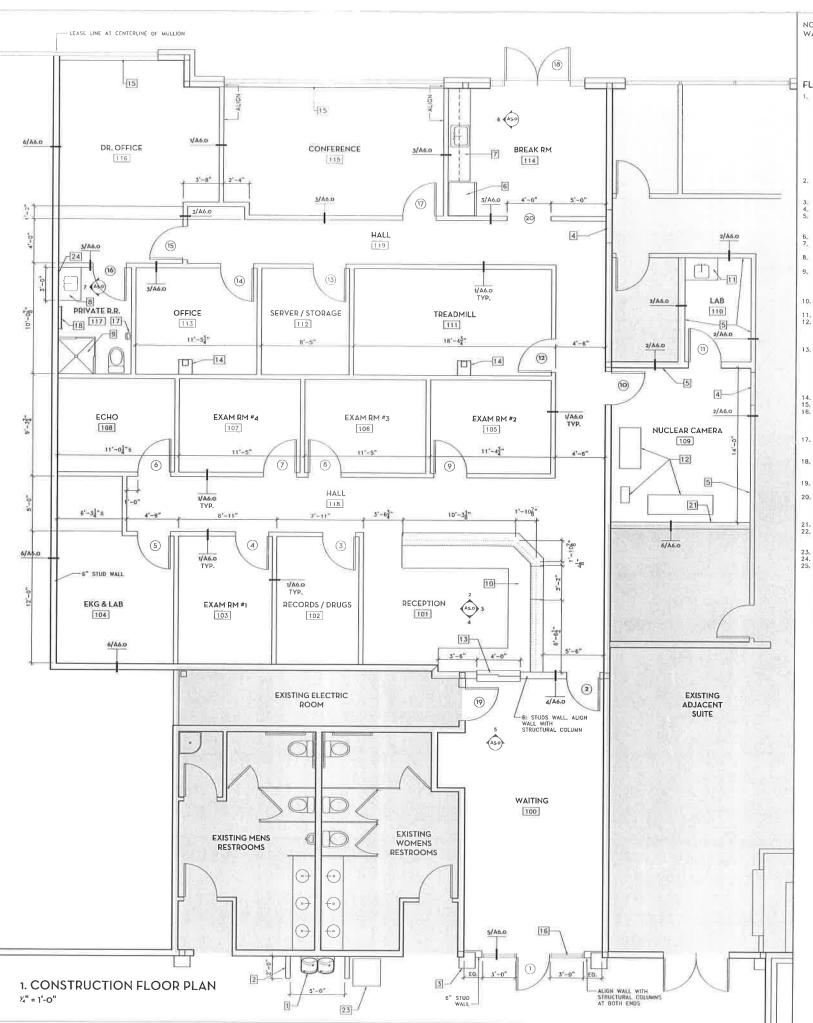
ALL EXISTING HARDWARE TO REMAIN, CONTRACTOR TO VERIFY OPERATION OF ALL HARDWARE AND TO SERVICE AS REQUIRED SO IT IS FULLY OPERATIONAL.

### PANIC HARDWARE

¼" = 1'-0"

# ANODIZED BRONZE ALUMINUM FRAME AND HARDWARE. CLEAR STRUCTURAL GLASS PLASTIC LAMINATE FINISH: WILSON ART WINDSOR MAHOGANY 7039-60 ANODIZED BRONZE ALUMINUM FRAMI WOOD TRIM AT OPENING TO BE PAINTED SEMI GLOSS WHITE. ANODIZED BRONZE ALUMINUM FRAME AND HARDWARE TO MATCH EXISTING TINTED STRUCTURAL GLASS TO MATCH ADJACENT EXISTING





NOTE: DIMENSIONS ARE TO THE FINISH WALL, U.N.O.

### FLOOR PLAN KEYED NOTES:

- RELOCATED DRINKING FOUNTAINS GC TO LOCATE SANITARY SEWER LINE IN THIS AREA PRIOR TO CUTTING FLOORING (SEWER LINE APPEARS IN THIS AREA IN SHELL BUILDING APPEARS IN THIS AREA IN SHELL BUILDING ORAWINGS). INSTALL ORINKING FOUNTAINS SO SEWER CONNECTION CAN BE DONE WITH MINIMAL FLOORING DISRUPTION. IF SANITARY SEWER LINE IS NOT FOUND IN THIS AREA GC SHALL INFORM ARCHITECT PRIOR TO PROCEEDING WITH WORK, PATCH. AND REPAIR FLOORING AND WALL WHEN INSTALLATION IS
- COMPLETE.
  NEW WING WALLS ON BOTH SIDES OF DRINKING FOUNTAINS WALLS TO BE 8"-0" TALL PAINT FINISH TO MATCH ADJACENT WALLS. EXISTING STONE CLAD PILASTERS TO REMAIN. NEW WALL FILL AT DEMOLISHED DOOR,
- NEW WALL FILL AT DEWOLISHED DOOR.
  EXTEND WALL ABOVE CELING UP 10 DECK AT
  EXISTING PARTITIONS TO BECOME DEMISING
  WALLS AROUND ROONS 109 AND 110,
  REFRICERATOR BY OWNER.
  UPPER AND LOWER CABINETS, REFER TO
  MILLWORK DETAILS SHEET A5,0,
  LAVATORY LOWER CABINET, REFER TO MILLWORK
  DETAILS SHEET A5,0,
  40"X40" CORNER SHOWER: STERLING CORNER
  SHOWER BASE AND WALL SURROUND WHITE
  (MODEL 72050100) WITH INTRIGUE SHOWER
  DOOR SILVER (MODEL 51906A).

- DOOR SILVER (MODEL SP1906A).

- SHOWER BASE AND WALL SURROUND WHITE (MODEL 72050100) WITH INTRIDUCE SHOWER DOOR SILVER (MODEL SP1906A).

  ORCEPTIONIST DESK AND CHECK—OUT COUNTER. REFER TO MILLWORK DETAILS SHEET AS.O.

  11, EXISTING SINK AND COUNTER.

  12, EXISTING SINK AND COUNTER.

  12, EXISTING SINK AND COUNTER.

  13, EXISTING SINK AND COUNTER.

  14, EXISTING SINK AND COUNTER TO REMAIN. GC TO COVER AND PROTECT EQUIPMENT FROM DUST AND PHYSICAL CONTACT THROUGHOUT ENTIRE DEMOLITION AND CONSTRUCTION PERIOD.

  13, HORIZONTAL SUDING GLASS WINDOW. CLEAR ANODIZED ALUMINIM TOP AND BOTTOM GLIDE RAILS FOR EACH GLASS PANEL WITH ALUMINIM OPENING FRAME. TEMPERD ONE MAY WISION GLASS WITH VISIBILITY FROM RECEPTION TO WAITING AREA ONLY. SCHEDULED GRANITE SILL. REFER TO MILLWORK DETAILS SHEET AS.O.

  14, FUR OUT WALL AROUND STRUCTURAL POST.

  15, INSTALL SCHEDULED GRANITE WINDOW SILLS.

  16, 19 TALL ALUMINIM STORETRONT AND STRUCTURAL CLASS SYSTEM TO MATCH BUILDING STANDARD. BRONZE ANDOIZED ALUMINUM WITH CLEAR SAFETY GLASS.

  17. TOILET PAPER DISPENSER BOBRICK B6857, INSTALL AT 18" A.F.F., PROVIDE IN WALL TREATED BLOCKING AS REQUIRED.

  19, RELOCATE CEILING MOUNT EXIT SIGN FROM REMOVED EXIT DOOR TO NEW EXIT DOOR.

  20, RELOCATE CEILING MOUNT EXIT SIGN FROM REMOVED EXIT DOOR TO NEW EXIT DOOR.

  21, NEW WALL FLOOR TO DECK.

  22, SAW CUT STONE VENEER BELOW WINDOWS AND WINDOWS SILL AND PATCH, REPAIR AND SEAL AFTER INSTALL AND PATCH, REPAIR AND SEAL AFTER INSTALL AND PATCH, REPAIR AND SEAL AFTER INSTALLING NEW DOOR.

  21, NEW WALL FLOOR TO DECK.

  22, SAW CUT STONE VENEER BELOW WINDOWS AND WINDOWS SILL AND PATCH, REPAIR AND SEAL AFTER INSTALLING NEW DOOR.

  21, NEW WALL FLOOR TO DECK.

  22, SAW CUT STONE VENEER BELOW WINDOWS AND WINDOWS SILL AND PATCH, REPAIR AND SEAL AFTER INSTALLING HISS FLOOR ELEVEL, INSTALL A CONCRETE LANDING OUTSIDE THE NEW DOOR.

  21, HER EXTERIOR SIDEWALK FINISH LEVEL IS LOWER THAN INTERIOR FINISH FLOOR ELEVEL, INSTALL A CONCRETE LANDING OUTSIDE THE NEW DOOR.

  23, FILECATE OF THE PROTECT OF A TO THE SIDES AT A MAXIMUM SLOPE OF A!"

  24 SAY CUT STONE VENEER BE AS INTERIOR FINISH FLOOR ELEVATION, AND SHALL SLOPE AWAY FROM THE BUILDING AND TO THE SIDES AT A MAXIMUM SLOPE OF ¼" VERTICAL PER 1 FOOT HORIZONTAL UNTIL IT IS LEVEL WITH THE EXISTING SIDEWALK.



Sugar

Suite

Ashford Dr.

FORT

Medical

KASHOU

Shawn Kashou NCARR 20710 Shadow Mill Ct Kaly, Texas 77450 Tel: 713 965 4470



31/14/2013

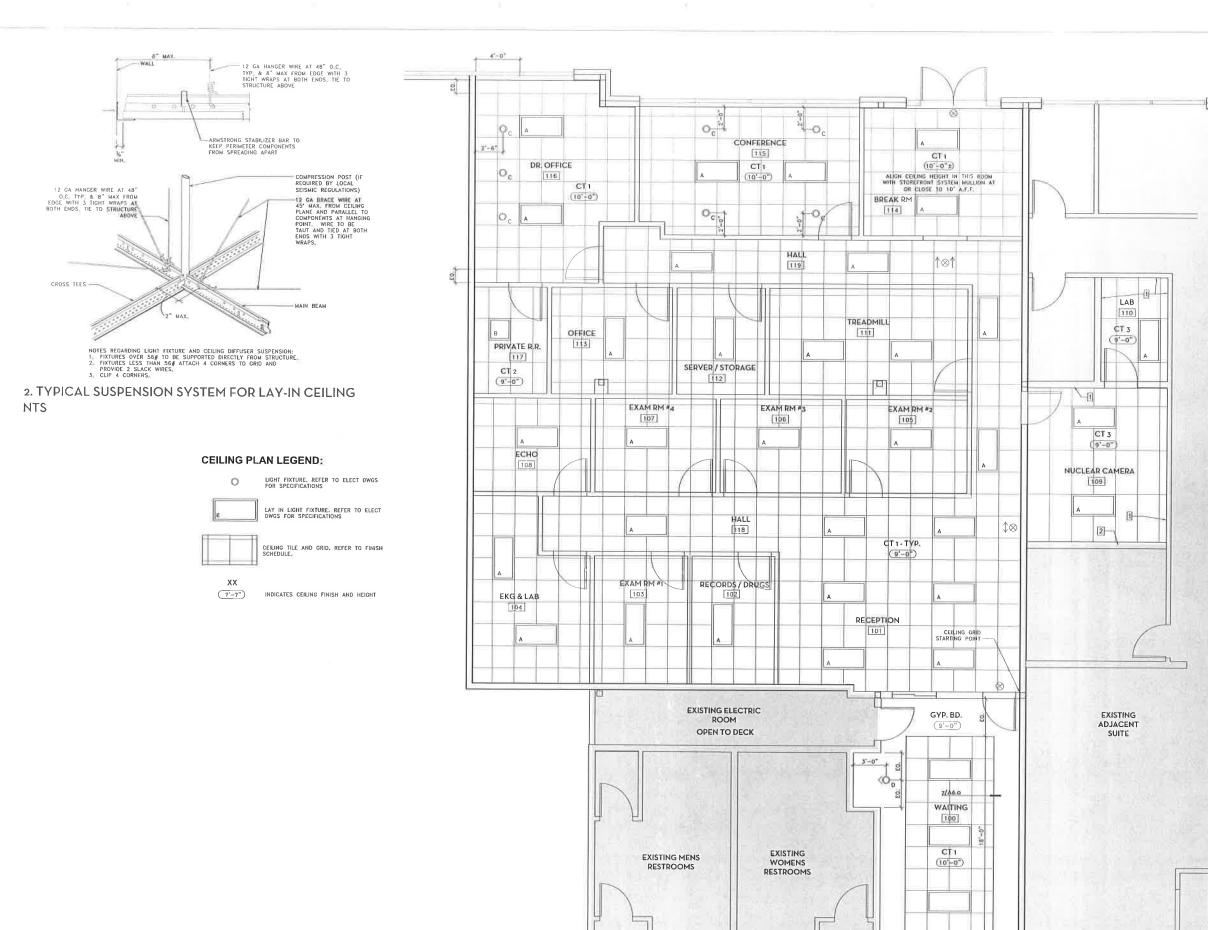
Issued for: Permit & Construction

Project No. Dwg. Name

Floor Plan Door Schedule

Dwg No

A2.0



1. REFLECTED CEILING PLAN

 $\otimes$ 

### REFLECTED CEILING PLAN KEYED NOTES:

- EXISTING CEILING GRID IN THESE ROOMS TO BE TERMINATED ON BOTH SIDES OF THE EXISTING WALLS, EXTEND WALLS AROVE CEILING UP TO DECK SO EXISTING PARTITIONS BECOME DEMISING WALLS AROUND ROOMS 109 AND 110, PROPERTY OF THE PROPER

FORT BEND HEART CENTER
Dairy Ashford Dr. Suite 101, Sugar Land, TX 77478 Medical Clinic Interior Build-out



Shawn Kashou, NCARB 20710 Shadow Mill Cl Katy, Texas 77450 Tel: 713 ... 965 4470



95 3 100 11/14/2013

Issued for:

Permil & Construction

Project No.

Dwg. Name

Reflected Ceiling Plan

Dwg. No.

A3.0

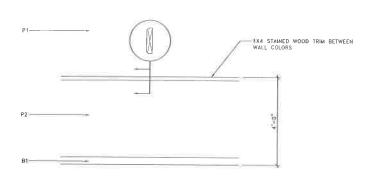
			FINISH LEGEND	
FINISH LABEL	DESCRIPTION	COLOR	NOTES	MINIMUM
FLOOR				1 111110
T1	PORCELAIN TILE	TAN / BROWN	EXISTING TO REMAIN	CLASS II
T2	PORCELAIN TILE	TAN	18"X18" NON-SLIP PORCELAIN TILE GROUT & SEAL.	CLASS II
T3	PORCELAIN TILE	WHITE	12"X12" NON-SLIP PORCELAIN TILE, GROUT & SEAL.	CLASS II
VTI	EXISTING VINYL TILE	WHITE	EXISTING TO REMAIN	CLASS II
WD1	HARDWOOD PLANKS	TBD	ENGINEERED HARDWOOD PLANKS 5" WIDE	CLASS II
WALL BA	ASE		The state of the s	
Bt	VINYL COVE BASE	TBD	ROOPE 4" VINYL COVE BASE	CLASS C
B2	WOOD BASE	RUSSET	STAINED WOOD WALL BASE MOLDING	CLASS C
0.2	PROCELAIN COVE BASE		PORCELAIN COVE BASE TILE TO MATCH ADJACENT WALL THE FINISH	CLASS C
WALLS			F-1-AD-MANAGE STATE STAT	
P1	PAINTED GYP. BD.	TBD	LATEX PRIMER & EGGSHELL PAINT	CLASS C
P2	PAINTED GYP. BD.	TBD	LATEX PRIMER & SEMIGLOSS PAINT	CLASS C
T4	PORCELAIN TILE	WHITE	12"X12" PORCELAIN TILE, GROUT & SEAL	CLASS C
CEILING:	S		In the second se	1000000
CT1	2X2 CEILING TILE	WHITE	ARMSTRONG DUNE ANGLED TEGULAR #1774, FINE TEXTURE, PRELUDE EXPOSED T 15/16" GRID, WHITE,	CLASS C
CT2	2X4 WET AREA CEILING TILE	WHITE	WASHABLE WATER RESISTANT VINYL FACED CEILING TILE, WHITE PRELUDE EXPOSED T 15/16" GRID, WHITE	CLASS C
CT3	EXISTING CEILING TILE	WHITE	TERMINATE EXISTING GRID AT DEMISING WALLS AND PATCH AND REPAIR GRID AND TILES ON BOTH SIDES OF THE WALLS.	CLASS C
P3	PAINTED GYP. BD.	TBD	LATEX PRIMER & EGGSHELL PAINT	CLASS C
COUNTE	RTOPS & SILLS			LEADS C
GRI	QUARTZ STONE	TBD	ZODIAO GRANITE STANDARD SELECTION	191
PLASTIC	LAMINATES	2.5181	Para Michigan Commence (Control Control Contro	-
PLI	PLASTIC LAMINATE	TBD	WILSON ART STANDARD COLORS	
PL2	PLASTIC LAMINATE	TBD	WILSON ART STANDARD COLORS	
PL3	PLASTIC LAMINATE	TBD	WILSON ART STANDARD COLORS	
PL4	PLASTIC LAMINATE	TBD	WILSON ART STANDARD COLORS	

REFER TO THE ALLOWANCES SECTION IN THE PROJECT MANUAL "INSTRUCTIONS TO BIDDERS" FOR PROVIDING ALLOWANCES FOR FINISH ITEMS NOT SPECIFIED THAT AFFECT PRICING.

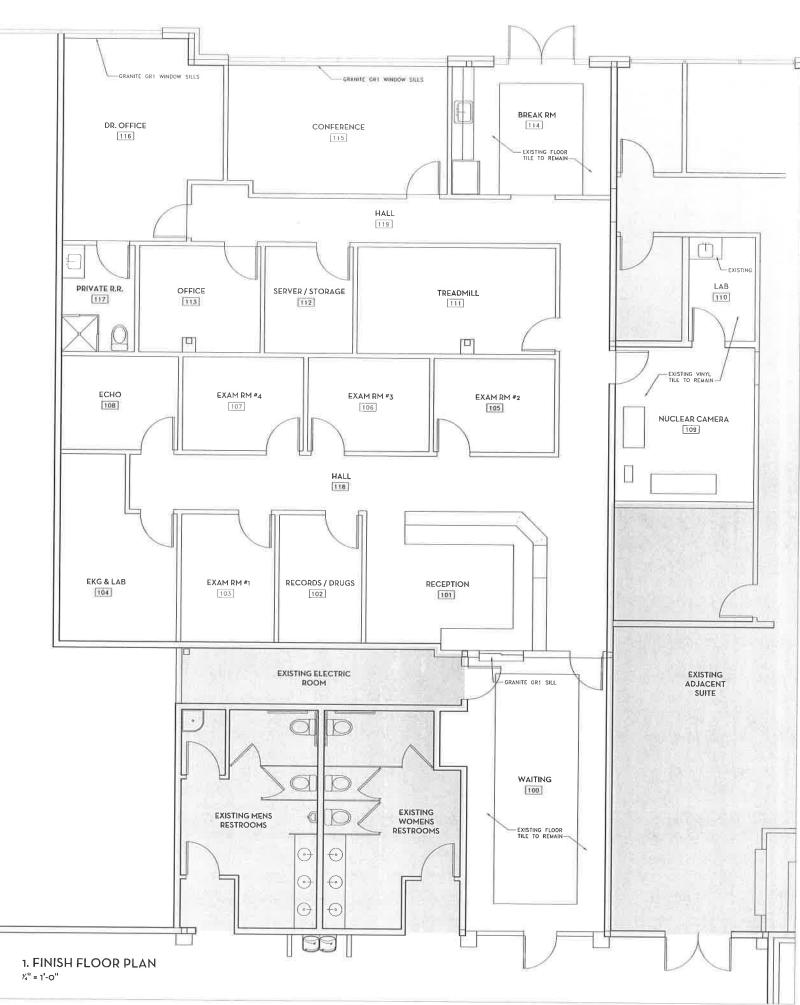
			FIN	IISH SCH	IEDULE		
ROOM NUMBE R	ROOM USAGE	FLOOR	WALL BASE	WALLS	CEILING	CEILING HEIGHT	NOTES
100	PATIENT WAITING	T1	B1	P1 / P2	P3 / CT1	10'-0" / 9'-0"	REFER TO 2/A4.0
101	RECEPTION / CHECKOUT	T1	81	P1 / P2	CT1	9"-0"	REFER TO 2/A4.0
102	RECORDS/ DRUG STORAGE	Т3	BI	P1	CT1	9"-0"	
103	EXAM ROOM #1	T3	B1	PI	CT1	9'-0"	
104	EKG & LAB	13	B1	P1	CTI	9*-0**	
105	EXAM ROOM #2	T3	B1	P1	CT1	9*0**	
106	EXAM ROOM #3	T3	81	P1	CT1	9*-0*	
107	EXAM ROOM #4	T3	B1	P1	CT1	9!-0"	
108	ECHO	73	B1	P1	CT1	9"⊷0"	
109	NUCLEAR CAMERA	VTI	B1	P1	CT3	9*-0**	
110	LAB	VT1	81	193	CT3	9"-0"	
111	TREADMILL	T3	B1	P1	CII	9'-0"	
112	SERVER / STORAGE	T3	B1	P1	CT1	9'-0"	
113	OFFICE	WD1	B2	P1	CT1	9'-0"	
114	BREAK ROOM	T1	81	P1	CT1	10"-0"	
115	CONFERENCE ROOM	WD1	B2	P1	CT1	9,-0-	
116	OFFICE	WD1	B2	PI	CT1	9'-0"	
117	PRIVATE RESTROOM	13	B3	T4 / P1	CT2	9*-0*	REFER TO 7/A5.0
118	HALL	T2	81	P1 / P2	CTI	9*-0*	REFER TO 2/A4.0
119	HALL	T2	B1	P1 / P2	CT1	9"-0"	REFER TO 2/A4.0

FINISH MATERIALS NOTE:
INTERIOR WALL AND CEILING FINISHES SHALL BE CLASSIFIED IN ACCORDANCE WITH ASTME 84. INTERIOR FINISH MATERIALS
SHALL MEET THE MINIMUM CLASS FLAME SPREAD AND SMOKE-DEVELOPED INDEXES INDICATED IN THE FINISH LEGEND.
CLASS A: FLAME SPREAD 26-75; SMOKE-DEVELOPED 0-450,
CLASS B: FLAME SPREAD 26-75; SMOKE-DEVELOPED 0-450,
CLASS C: FLAME SPREAD 76-200; SMOKE-DEVELOPED 0-450.

INTERIOR FLOOR FINISH AND FLOOR COVERING MATERIALS SHALL BE CLASS II AS CLASSIFIED IN ACCORDANCE WITH NFPA 253, CLASS I, 0.45 WATTS/CM2 OR GREATER; CLASS II, 0.22 WATTS/CM2 OR GREATER.



2. TYPICAL COLOR SCHEME AT MULTICOLORED WALLS NTS



Medical Clinic Interior Build-out FORT BEND HEART CENTER 13020 Dairy Ashford Dr. Suite 101, Sugar Land, TX 77478

Kashou

Shawn Kashou, NCARB 20710 Shadow Mill Cl Kaly, Texas 77450 Tel: 713\_965 4470



Issued for:

Project No.

Dwg. Name Finish Plan

Finish Schedule

Dwg. No.

A4.0

1" = 1'-0"

1" = 1'-0"

FORT BEND HEART CENTER 13020 Dairy Ashford Dr. Suite 101, Sugar Land, TX 77478 Medical Clinic Interior Build-out

KASHOU

Shawn Kashou, NCARB 20710 Shadow Mill Cl Katy, Texas 77450 Tel: 713 \_ 965 4470



Issued for: Permil & Construction

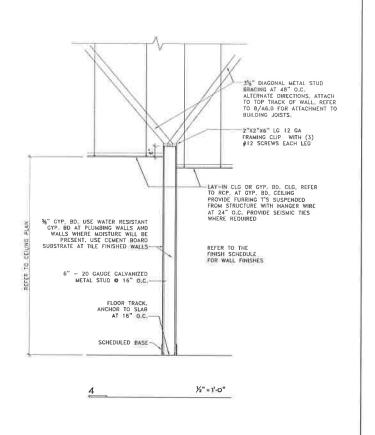
Project No.

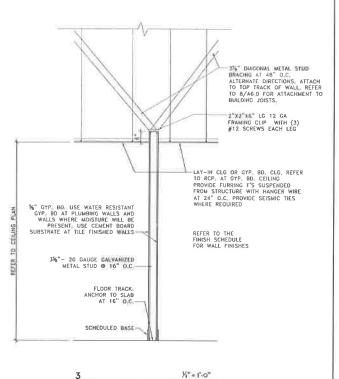
Dwg. Name

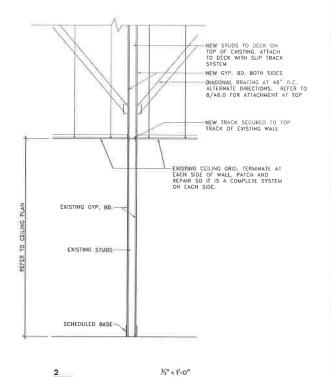
Millwork Details

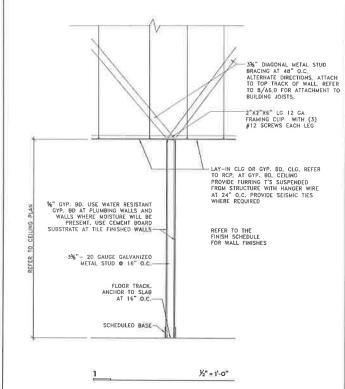
10. COUNTER SECTION AT KNEE SPACE

A5.0











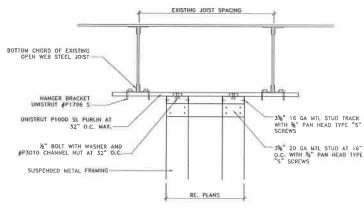
20710 Shadow Mill Cl Katy, Texas 77450 Tel: 713 965 4470

BOTTOM CHORD OF EXISTING
OPEN WEB STEEL JOIST

HANGER BRACKET
UNISTRUT #P1796 S

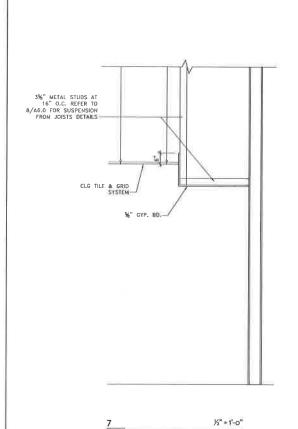
UNISTRUT

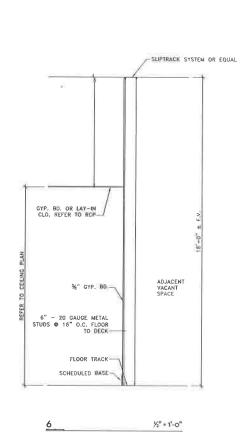
### FRAMING LENGTH IS PERPENDICULAR TO JOISTS

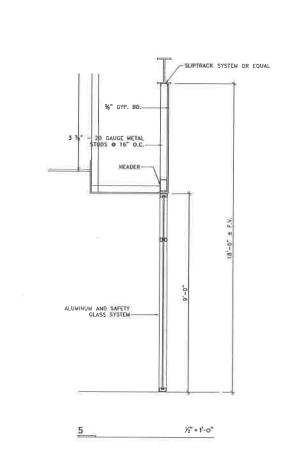


FRAMING LENGTH IS PARALLEL TO JOISTS

8 SUSPENDED FRAMING DETAILS NTS







Dealings and Regulitations proposed by Kostno- Architecture, that are their consultants, shalling in declarate of the consultants, shalling in declarate of the consultants of the subsequent of the subsequent of the physical odoress provided in large documents. Use of the Instruments of the consultants of the consultant of the programme at consultants and metal-tanders the modern consultants are consultant of the University of the Consultants of t



Finton 11/11/2013

Issued for:
Permit & Construction 11/14/2013

Permit a Construction 11/1

Project No.

Dwg, Name

Wall Sections

Dwg. No.

A6.0



Shawn Kashou, Architect 20710 Shadow Mill Ct Katy, Texas 77450 Tel: 713 965 4470

MEP Engineer: William K Hall & Co

Consulting Engineers 1901 Long Prairie Rd Sulle 130 Flower Mound, TX 75022 Tel: 214 681 2179 Toxas Firm Registration: # F-12258

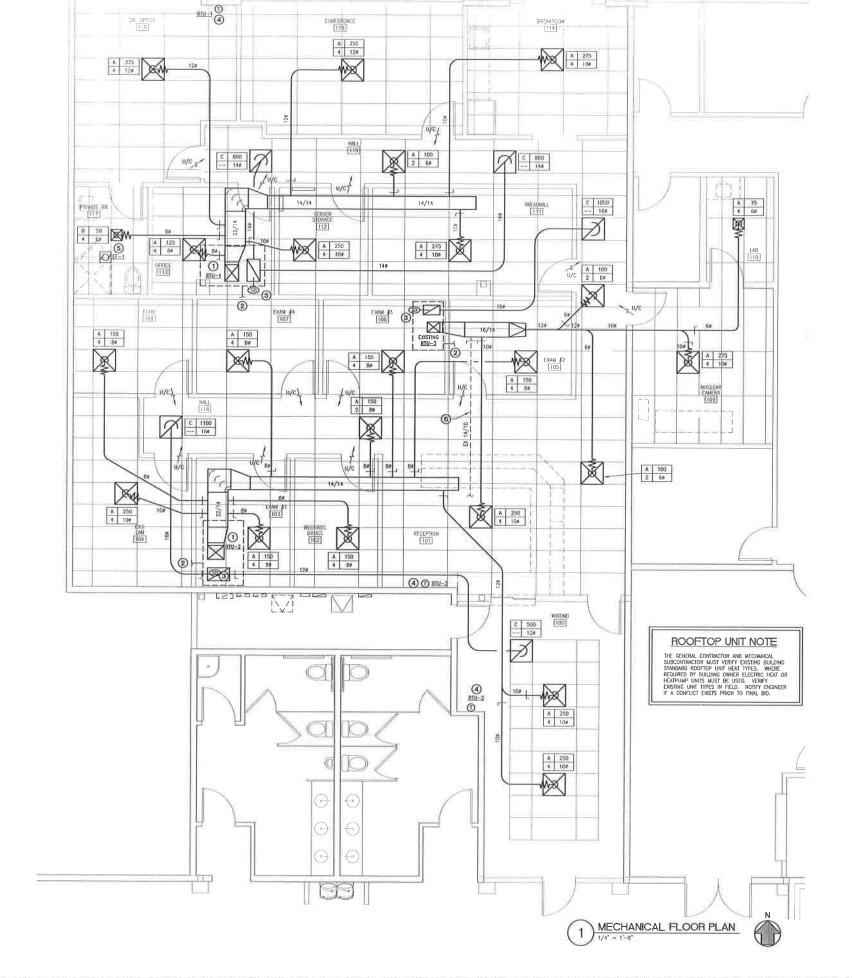


ssued for:	
Permit & Construction	1/14/201

Project No.

Dwg Name

MECHANICAL PLAN AND NOTES



THE ROOFTOP UNIT. UNIT MUST BE INSTALLED TO BEAR ON JOISTS WITH ADDED BRADING AS REQUIRED BY STRUCTURAL ENGINEER. REFER TO STRUCTURAL D-24MINGS FOR ADDITIONAL BRADING REQUIRED. UNIT SHALL BE LOCACIED WITH ADDITIONAL CONTROL OF CLEARANCES FOR MAINTENANCE PER MANUFACTURER. OUTSIDE AR INTAKE SHALL BE A MINIMUM OF 10"-O" FORM AMY FILLY EVENT OR PLUMPRING VEHT. ALL ROOF WORK SHALL BE PERFORMED BY LANDLORDS ROOFER TO RETAIN ROOF WARRANTY WHEN REQUIRED.

MECHANICAL PLAN KEYED NOTES:

- 3/4" MINIMUM CONDENSATE LIMI SHALL BE PIPED TO THE CLOSEST CODE APPROVED DISPOSAL SITE. INSTALL SECONDARY GRAIN PAN AND ROUTE SECONDARY CONDENSATE TO DRAIN AT A CONSPICUOUS LOCATION.
- 3 SMOKE DETECTOR LOCATED IN SETURN AIR STREAM. INTEGRATE INTO THE THEHMOSTAT CONTROL CIRCUIT 50 THAT WHEN ACTIVATED THE BLOWER MEDITER IS DE-EMERIZED. SMOKE DETECTORS SHALL BE COMPARIBLE WITH THE LANDLORD'S FIRE ALARM SYSTEM. ALL WRING, INCLUDING FINAL CONNECTIONS FROM THE SMOKE DETECTORS TO THE LANDLORD'S FIRE ALARM SYSTEM ARE BY THE LANDLORD'S DESIGNATED FIRE ALARM CONTRACTOR AT THE TENANT'S EXPENSE.
- 4 HERMOSTAT MOUNTO AT 48" A.F.F. MECHANICAL COMPRACTOR SHALL FURNISH AND MISTML ALL COMTRACTOR SHALL ENTRING REQUIRED FOR OPERATING THE HACK SYSTEM. CONTRACTOR SHALL ENTRY THERMOSTAT LOCATION WITH OWNER PRIOR TO ROUGH-IN. CONTRACTOR SHALL INSTALL THERMOSTATS IN NON ACCESSIBLE LOCATION WITH REMOTE SERSOR'S NARA RETURNE GRILLES IF PREFERRED BY THE OWNER. PROVIDE OPAQUE LOCKING COVER IF REQUIRED.
- EXHAUST FAN TO BE CONTROLLED BY SWITCH AND BRANCH CIRCUIT SHOWN. ROUTE CHAUST DUCTS UP TO GREENHECK ROOF VERTILIATING GREENMECK CARSE" WITH BUILT IN FLASHING FLANGE, PROVIDE WITH BIRDSCREEN AND BACKDRAFT DUMPER, INSTALLATION SHALL RETAIN ROOF BOOM AND ROOF WARRANTY. INSTALLATION AND COMPARIBLE WITH ROOFING SYSTEM, COORDINATE LOCATION IN FIELD WITH LANDLORD PROR TO INSTALLATION, EXHAUST TERMINATION SHALL BE A MINIMUM 10"-0" FROM ANY OUTSIDE AIR INTAKE.
- (B) RTU-3 IS EXISTING TO REMAIN. RTU-3 PROVIDES COOLING FOR THE EXISTING SHELL BUILDING TOILET BROWS. CONTRACTOR MUST RECONNECT EXISTING 14/10 SUPPLY DUCT TO TOILET BROWS, 400 CPM TOTAL, 200 CPM TO EXIST PROVIDENTS IN TRUE. CONTRACTOR MUST VERFY ZONING OF EXISTING RTU-3 WITH BUILDING OWNER PRIOR TO CONSTRUCTION.

### MECHANICAL GENERAL NOTES:

- CONTRACTOR IS RESPONSIBLE FOR FIELD VERIFICATION OF ALL CONDITIONS AND IS
   RESPONSIBLE FOR REPORTING ANY CONFLICTS TO THE ARCHITECT PRIOR TO THE START
   OF WORK.
- "EXISTING" OR "VERIFY IN FIELD" MEANS THE CONTRACTOR IS TO CONFIRM THE ITEM SHOWN ON THE DRAWING EXISTS AND IS IN GOOD WORKING CONDITION. SHOULD THE CONTRACTOR FIND THE COMPLENT IS NOT AS SHOWN ON THESE DRAWINGS, IT IS TO BE INSTALLED AS REQUIRED TO PROVIDE THE TEMANT WITH A FULLY FUNCTIONING SYSTEM AND AS REQUIRED OF ALL LOCAL CODES AND THE LOCAL AUTHORITY HAVING JURISDICTION.
- 3. CONFIRM THE EXACT LOCATION OF ALL MECHANICAL EQUIPMENT PRIOR TO INSTALLATION OF MECHANICAL ROUGH-IN.
- 4. ANY PENETRATIONS THRU FIRE RATED PARTITIONS SHALL BE SEALED AS REQUIRED AND PROVIDED WITH FIRE DAMPERS WHERE REQUIRED TO UPHOLD THE RATING OF THE PARTITION.
- 5. THE MECHANICAL CONTRACTOR SHALL NOT INSTALL DUCTWORK ABOVE OR WITHIN THE CODE REQUIRED WORKING CLEARANCES OF ANY ELECTRICAL PANEL BOARD OR SWITCHGEAR. COORDINATE WITH ELECTRICAL CONTRACTOR.
- 6. CONTRACTOR IS REQUIRED TO CONTACT THE BUILDING OWNER FOR ANY ROOF WORK. IF BUILDING OWNER REQUIRES A SPECIFIC ROOFING CONTRACTOR, IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO CONTACT, COORDINATE AND PAY FOR ANY AND ALL ROOFING WORK WITH THE BUILDING OWNERS ROOFING CONTRACTOR.
- 7. POWER WIRING, CONDUIT, SWITCHES AND TIME CLOCKS SHALL BE FURNISHED AND INSTALLED BY ELECTRICAL CONTRACTOR.
- B. LOW VOLTAGE WIRE AND CONDUIT SHALL BE FURNISHED & INSTALLED BY ELECTRICAL CONTRACTOR. FINAL CONNECTIONS BY AIR CONDITIONING CONTRACTOR.
- ROUTE CONDENSATE DRAIN PIPING TO AN APPROVED RECEPTOR BY PLUMBING CONTRACTOR, CONDENSATE DRAIN TO BE TRAPPED.
- CENERAL CONTRACTOR SHALL FURNISH AND /OR INSTALL CUTTING, PATCHING, FRAMING, ROOFING, PAINTING, EQUIPMENT SCREENING, CURBS, OR PLATFORMS WITH THE REQUIREMENTS OF THE JAIR CONDITIONING SYSTEM.
- 11 MAINTAIN 10'-0" HORIZONTAL DISTANCE BETWEEN EXHAUST & PLUMBING VENTS AND A/C UNITS FRIESH AIR INTAKE.

### FIRE ALARM NOTE

THE GENERAL CONTRACTOR AND MECHANICAL SUBCONTRACTOR SHALL VERIEY AND INCLUDE IN THEIR FINAL BID ALL LIFE SAFETY, SMOKE/FIRE ALARL SYSTEMS RECORD TO (BRING) TENANTS SPACE COMPARISE WITH THE LANGUISTS SYSTEM, AND CURRENT WITH LOCAL AND STATE CODES. FAILURE TO DO SO SHALL RESULT IN NO EXPENSE TO THE TENANT.

### **ROOFING NOTE**

ALL ROOF WORK AND PENETRATIONS SHALL BE PERFORMED BY LANDLORDS ROOFING CONTRACTOR TO RETAIN ROOF WARRANTY AND BOND. CONTACT LANDLORD FOR REQUIREMENTS

Dwg. No.

	MECHANICAL	ABBH	EVIATIONS
ıc	AIR CONDITIONING	LBS	POUNDS
FF.	ABOVE FINISHED FLOOR	MD	MANUAL DAMPER
NHJ	AUTHORITY HAVING JURISDICTION	N/A	NOT APPLICABLE
HP	BRAKE HORSE POWER	0/A	OUTSIDE AIR
BTU	BRITISH THERMAL UNIT	OBD	OPPOSED BLADE DAMPER
D	CONDENSATE DRAIN	PH	PHASE
CFM	CUBIC FEET PER MINUTE	R/A	RETURN AIR
0	CLEANOUT	RPM	REVOLUTIONS PER MINUTE
E)	EXISTING	RTU	ROOF TOP UNIT
IR.	ENERGY EFFICIENCY RATIO	S/A	SUPPLY AIR
F	EXHAUST FAN	SD	SMOKE DAMPER
SP	EXTERNAL STATIC PRESSURE	SP	STATIC PRESSSURE (IN, W.G.)
UH	ELECTRIC UNIT HEATER	T	THERMOSTAT
D	FIRE DAMPER	TYP.	TYPICAL
Т	FEET	UC	UNDER CUT DOOR
PM	FEET PER MINUTE	UMC	UNIFORM MECHANICAL CODE
IVAC	HEATING, VENTILATING & AC	V	VOLT
ų.	NONES	VD	VOLUME DAMPER
w	KILOWATT	w	WATT
AT	LEAVING AIR TEMPERATURE	WB	WET BULB TEMPERATURE

						HO	)F1	OP I	PAC	(AG	⊢ UI	VII S	CHE	<u>-</u> DU		
SYMBOL	MAKE	MODEL #	UNIT		SUPPLY F	AN DATA		COOLING	CAPACITY	SEER/	HEAT	EL	ECTRICAL		WEIGHT	NOTES:
SIMBOL	MARE	MODEL P	(TONS)	CFM	MIN O/A	E.S.P.	H;P.	TOTAL MBH	SENSIBLE MBH	EER	жw	VOLT/PH	MOCP	M.C.A.	(LB)	NOTES:
RTU-1	CARRIER	50HC006	5,0	1800	200	0.6	1,0	58.0	43,5	15.2 SEER	11,5	460/3	25	25.0	800	1, 2, 3, 4, 5, 6, 7, 8 & 9
RTU-2	CARRIER	50HC006	5,0	1800	200	0.6	1.0	58.0	43,5	15.2 SEER	11,5	460/3	25	25,0	800	1, 2, 3, 4, 5, 6, 7, 8 & 9
EXISTING RTU-3	CARRIER	50TM036	3,0	1200	150	0.5	0.5	36.0	27,0	13.0 SEER	8,8	460/3	15	14.9	VERIFY	4, 6

	MECHANICAL LEGEND	
AIR DEVICE SPECIFICATION  MARK A 200 CFM  THROW 4 8 W NECK SIZE	SUPPLY AIR RETURN AIR OUTSIDE AIR	RECTANGULAR DUCT: 32x20=32"Wx20"H ROUND DUCT: 20#=20"ROUND FLAT OVAL DUCT: 32x20#=32"Wx20"H
SINGLE LINE DOUBLE LINE FITTING	SINGLE LINE DOUBLE LINE FITTING	SINGLE LINE DOUBLE LINE FITTING
VOLUME DAMPER	PXECUTRIX (RECTANCIA) AR OR ROUND)	ROUND WIFE
FD FIRE DAMPER	30' TRANSITION NON SYMMETRICAL WYE	EXTRACTOR EXTRACTOR
MD MD MOTORIZED DAMPER  90 RECTANGULAR	DOUBLE FORMED  EMPINO VANES  SYMMETRICAL WYE	BELLINOUTH BELLINOUTH
ELGOW WITH TURNING VANES	DOUBLE COMED TO TURNING VANCES TO TURNING VANCES TO TURNING VANCES TO TURN THE TURN	ROUND MAIN DUCT WITH ROUND MAIN ROUND BRANCH ROUND BRANCH
SOUME TO RECTANGULAR RECTANGULAR RECTANGULAR MAIN WITH	ROUND DUCT RISER  RETAY NOUL AR RECTAY OF PAPER	CONCAL TEE BRANCH  15' MAX.  CONCENTRIC ROUND  ROUND  TRANSITION
ROUND BRANCH BRANCH RECTANGUIAR	PUCT DROP  ROUND DUCT DROP	UNIVERSITIOALLY UNIVERSITY UNIVER
MARI WITH RECTANGULAR BRANCH	RECTANGULAR OFFSET LESS THAN 15'	PLEXIBLE CONNECTION
CONCENTRIC SQUARE TO ROUNE	RECTANGULAR OFFSET MORE THAN 15	SD SD SD SMOKE DETECTOR

			E	EXH.	AUST	FAI	NS			
MARK	MAKE	QUANTITY	MODEL	CFM	STATIC PRESSURE	RPM	VOLT/PH	WATTS	SONES	NOTES:
EF-1	GREENHECK	1	SP-890-Q0	75	0,25"	700	120/1	50	1,9	1,2,3
NOTES:										

NOTES:

PROVIDE BACKDRAFT DAMPER.

ROUTE EXHAUST DUCT TO ROOF CAP.

INTERLOCK FOR OPERATION WITH LOCAL ROOM LIGHTING WHERE REQUIRED.

SUPPLY DEPONATED										
B NAILOR 4320AA 12"x12" T-BAR YES NO 0FT-WHITE SUPPLY 1, 2, 3, 4, 5, 7, 1  C NAILOR 51CP 24"-24" T-BAR NO	MARK	MAKE	MODEL					FINISH	DESCRIPTION	NOTES:
D NAILOR 51ED 24"-24" TEAD NO NO OFF-MILE SUPPLY 1, 2, 3, 4, 5, 7, 5	Α	NAILOR	4320AA	24"x24"	T-BAR	YES	NO	OFF-WHITE		1, 2, 3, 4, 5, 7, 9
C NAILOR 51FP 24"x24" T-BAR NO NO OFF-WHITE PERFORATED 1, 2, 4, 5, 8, 9	В	NAILOR	4320AA	12"x12"	T-BAR	YES	NO	OFF-WHITE		1, 2, 3, 4, 5, 7, 9
	С	NAILOR	51FP	24"x24"	T-BAR	NO	NO	OFF-WHITE	PERFORATED FILTER RETURN	1, 2, 4, 5, 8, 9

NOTES:

1. SEE ARCHITECTURAL REFLECTED CELING PLAN FOR EXACT LOCATION OF CELING MOUNTED AIR DISTRIBUTION DEVICES.

2. ALL AIR DISTRIBUTION DEVICES SHALL BE ALUMINUM CONSTRUCTION WITH BAKED ENAMEL FINISH.

3. ALL CELING DIFFUSERS SHALL BE 4-WAY THROW UNLESS NOTED OTHERWISE. SEE MECHANICAL PLAN.

4. PAINT TO MATCH CELING COLOR OR AS DIRECTED BY ARCHITECT WHERE REQUIRED.

5. CONTRACTOR SHALL RECIEVE APPROVAL VA SUBMITTAL WITH OWNER PROOR TO ORDERING AIR DEVICES.

5. PROVIDE WITH FACTORY POTIONAL DAMPER IN NON-ACCESSIBLE CELING.

7. PROVIDE WITH FACTORY INSTALLED FOR—BACKED INSULATION.

8. PROVIDE WITH FACTORY INSTALLED FOR—BACKED INSULATION.

9. KRUEGER, PRICE, AND TITUS ARE CONSIDERED EQUIVALENT MANUFACTURERS.

Fort Bend Heart Center 13020 Dairy Ashford, Suite 101 Sugar Land, TX 77478

Shawn Kashou, Architect 20710 Shadow Mill CI Katy, Texas 77450 Tel: 713 965 4470

MEP Engineer: William K Hall & Co

Consulting Engineers 1901 Long Pratrie Rd Suite 130 Flower Mound, TX 75022 Tel: 214 681 2179 Texas Firm Registration: #F-12258



Issued for:	
Permit & Construction	11/14/2013

Project No. Dwg. Name

> MECHANICAL SCHEDULES AND LEGEND

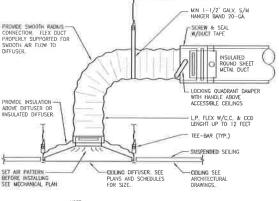
Dwg. No.

M-2

Land,

Ñ





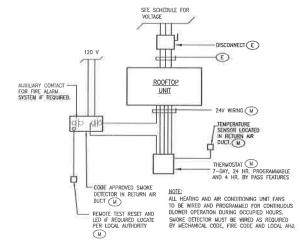
\_\_12 GA WIRE

NOTE:

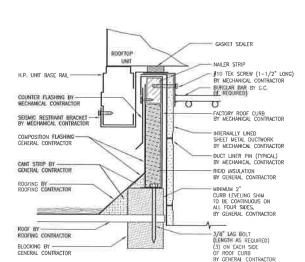
1. USE RIGID DUCT FOR EXHAUST AND RETURN DUCT.

2. FURNISH OPPOSED BLADE DAMPER AT HARD CEILINGS.

### DIFFUSER INSTALLATION DETAIL



4) ROOFTOP UNIT CONTROL DIAGRAM



- BACK DRAFT DAMPER

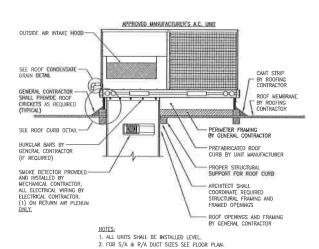
3 EXHAUST FAN SYSTEM DETAIL

CEILING -

- EXHAUST FAN

- CEILING GRILLE

5 ROOFTOP UNIT CURB DETAIL



6 ROOFTOP UNIT INSTALLATION DETAIL

### MECHANICAL SPECIFICATIONS

SECTION 15000 BASIC MECHANICAL REQUIREMENTS

BASIC MECHANICAL RECURREMENTS

MI—SCOPE:

A. THE CONTRACTOR SHALL PROVIDE ALL MATERIALS, LABOR, TOOLS, PLANT, INCIDENTALS AND CONTRACTUAL EXPENSES NECESSARY TO INSTALL AND MAKE READY FOR OWNER'S USE A COMPLETE HEATING, VENTILATION, AND AIR CONDITIONING (HWAC) SYSTEM AS CALLED FOR IN THE CONTRACT DOCUMENTS AND AS NOTEON OF SPECIFICATION THE CONTRACT OF THE OWNER, ARCHITECT AND MECHANICAL REWINERS.

DIT THE OWNER, ARCHITECT AND MECHANICAL REWINERS.

MAKE A COMPLETE SYSTEM WEETER OF DOTO SUCH DETAILS AND MERITORIES OF THE OWNERS AND STATEMENT OF THE ASSOCIATION OF THE OWNERS AND STATEMENT OF THE ASSOCIATION OF THE OWNERS AND STATEMENT OF THE ASSOCIATION OF THE OWNERS AND SPECIFICATIONS.

ANOTHER SECTION OF THE SPECIFICATIONS.

BEFORE STARTING ANY WORK. THE CONTRACTOR FOR THIS SECTION OF THE WORK SHALL EXAMINE A COMPLETE SET OF DRAWNINGS AND SPECIFICATIONS OF THE SPECIFICATIONS.

SHEED STANDING AND STATEMENT OF THE SECTION OF THE WORK SHALL EXAMINE A COMPLETE SET OF DRAWNINGS AND SPECIFICATIONS FIRE PROPERTIES AND SPECIFICATIONS.

SHEED PROPECTION, AND WORK. THE CONTRACTOR FOR THIS SECTION OF THE WORK SHALL EXAMINE A COMPLETE SET OF DRAWNINGS AND SPECIFICATIONS OF THE OWNER SHALL EXAMINE A COMPLETE SET OF DRAWNINGS AND SPECIFICATIONS PROPERTIES TO THE PROPERTIES FOR THE OWNER FOR SHALL EXCITED THE PROPERTIES FOR THE SET OF DRAWNINGS AND SPECIFICATIONS OF THE OWNER OWNER SHALL EXCENTING THE PROPERTIES AND ANY MINOR ADJUSTMENTS NECESSARY TO AVOID CONFILED THAT THE BUILDING STRUCTURE AND THE WORK OF THE OTHER TRADES SHALL BE MADE. CONTRACTOR SHALL NOTIFY ARCHITECT IMMEDIATELY IF ANY MAJOR CONFLICTS OCCUR.

M2 - WORKMANSHIP.

ALL WORK SHALL BE PERFORMED BY COMPETENT MECHANICS USING PROPER TOOLS AND EQUIPMENT TO PRODUCE FIRST-DUALITY WORK. ALL WORK SHALL BE NEATLY INSTALLED, ACCESSIBLE FOR MAINTENANCE, COMPLETE WITH ALL ACCESSORIES REQUIRED, AND MEETING THE APPROVAL OF THE OWNER AND THE ARCHITECT.

M.S. MATERIALS:
ALL PRODUCTS, COLUMENT, MATERIALS, AND ACCESSORIES SHALL BE OF FIRST-LINE
QUALITY, GRADE AND TYPE SHOWN ON THE DRAWINGS AND SPECIFIED, OR EQUIVALENTS
ACCEPTED BY THE ARCHITECT OR ENGINEER IN WRITING

M4\_ SITE INSPICTIONS
CONTRACTOR SHALL VISIT THE JOB SITE PRIOR TO SUBMITTING HIS BID AND THOROUGHLY
PAMILLARIZE HIMSELF WITH ALL EXISTING CONDITIONS AND EXACT NATURE OF THE WORK,
THE DRAWINGS ARE ESSENTIALLY DIAGRAMMATIC. SUBMISSION OF BID ACKNOWLEDGES
PULL RESPONSIBILITY FOR TURNISHING A COMPLETE AND FUNCTIONAL SYSTEM, MO
CONTRACT LIVES TO ACCOUNT OF THE PRIOR STATE TURNS
ANY OMISSION WHICH RESULTS FROM A FACILITIE TO THOROUGHLY MAKE THE EXAMINATION

ME PERMITS:
THE CONTRACTOR SHALL OBTAIN AND PAY FOR ALL PERMITS, INSPECTIONS AND FEES,
COPIES OF ALL PERMITS AND INSPECTION REPORTS SHALL BE SUBMITTED TO THE
ARCHITECT.

M.7. AS BULLTS.

CONTRACTOR SHALL PROVIDE A COMPLETE SET OF AS—BULLTS TRANSPARENCIES WITH ALL

CHANGES NOTED THEREON AT THE COMPLETION OF THE PROJECT AND PRIOR TO FINAL

ACCEPTANCE AND PAYMENT. THESE DRAWINGS SHALL HAVE ALL INSTALLATIONS

REFERENCE DO JUNEAUSIONS TO A SET REFERENCE DOINT OR POINTS.

M8— GUARANTEE:
CONTRACTOR SHALL UNCONDITIONALLY GUARANTEE ALL LABOR AND MATERIALS ON ALL
WORK AGAINST DEFECTS IN WORKMANSHIP AND MATERIALS FOR A PERIOD OF ONE YEAR
AFTER COMPLETION... CONTRACTOR SHALL BE RESPONSIBLE FOR ALL DAMAGE TO ANY
PART OF THE PREMISES CAUSED BY EQUIPMENT TURNISHED AND INSTALLED UNDER THIS SECTION OF THE SPECIFICATIONS FOR A PERIOD OF ONE (1) YEAR AFTER DATE OF ACCEPTANCE OF HIS WORK

MSH— OPERATING MANUALS;

CONTRACTOR SHALL FURNISH THE OWNER WITH ALL OPERATING MANUALS AND MAINTENANCE INSTRUCTIONS FOR THE EQUIPMENT INSTALLED. MANUALS SHALL BE BOUNDED IN THREE RING LOOSE-LEAF BINDERS AND INDEXED BY PRODUCT TYPE. A SECTION WITHIN THE MANUAL SHALL INCLIDE THE NAME, TELEPHONE NUMBER AND ADDRESS OF ALL LOCAL SUPPLIERS OF ALL MATERIAL AND EQUIPMENT INSTALLED TOCCHIER WITH MAME, TELEPHONE NUMBER, AND ADDRESS OF ALL CONTACTORS OF THE PROJECT. PROVIDE 3 SETS OF MANUALS TO THE OWNER. CONTRACTORS OF THE PROJECT. PROVIDE 3 SETS OF MANUALS TO THE OWNER. CONTRACTOR SHALL AFFIX A MAINTENANCE JUBELS TO ALL EQUIPMENT REQUIRING POLITINE MANUFACHORS.

MAINTENANCE LABELS TO ALL EQUIPMENT REQUIRING ROUTINE MAINTENANCE.

MID—COORDINATION AND VERFICATION:
THE DRAWINGS ARE DIAGRAMMATIC AND INTENDED TO SHOW SCOPE. THE CONTRACTOR SHALL COORDINATE HIS WORK WITH OTHER TRADES TO PROVIDE THE BEST ARRANGEMENT OF ALL DUCTS, PIPES, CONDUIT, ETC... THE LOCATION OF EXISTING PIPING AND DUCTWORK SHOWN IS APPROXIMATE. CONTRACTOR SHALL VERIFY THEIR LOCATION PRIOR TO EBGINING WORK OF THIS SECTION. AND SHALL MAKE MOOFFICATIONS AND ADJUSTMENTS REQUIRED TO INSTALL THE WORK OF THIS SECTION.

A THE EXACT LOCATION OF ALL ROOF MOUNTED OPENINGS AND THE EXACT LOCATION OF ALL ROOF MOUNTED DEPRINGS TO COMMENCEMENT OF ALL ROOF MOUNTED EQUIPMENT WITH THE STRUCTURAL AND ARCHITECTURAL PLANS PRIOR TO ANY INSTALLATION. PROVIDE THE EQUIPMENT WITH THE STRUCTURAL AND ARCHITECTURAL PLANS PRIOR TO ANY INSTALLATION. PROVIDE THE EQUIPMENT WITH THE STRUCTURAL AND THE PROPERTY OF THE PROPER

M11 - EXTERIOR OPENINGS:
COORDINATE LOCATIONS OF ALL EXTERIOR WALL AND ROOF OPENINGS WITH ALL RELEVANT
TRADES AND PROVIDE WATERTIGHT FLASHINGS WHEREVER PENETRATIONS OCCUR. EXACT
LOCATIONS AND SIZES MAY BE DEPENIORY UPON EQUIPMENT SELECTIONS. COORDINATE
SIZES AND LOCATIONS OF ALL OPENINGS WITH APPROPRIATE EQUIPMENT REQUIREMENTS.

M12 CUTTING AND PATCHING.
ALL CUTTING AND PATCHING REQUIRED OF THE STRUCTURE SHALL BE PROVIDED UNDER
OTHER SECTIONS OF THE WORK. PROVIDE NECESSARY TO THE PROJECT SUPERINTENDEN

M13— CLEANUP; UPON COMPLETION OF THE WORK UNDER THIS SECTION. THE CONTRACTOR SHALL REMOVE ALL SURFLUS MATERIALS, EQUIPMENT AND DEBRIS INCIDENTAL TO THIS WORK AND LEAVE THE PREMISES CLEAN AND ORDERLY.

M14- EQUIPMENT ACCESS:

PERMANENT ACCESS TO EQUIPMENT SHALL BE PROVIDED AND A MINIMUM OF 30° CLEAR WORKING SPACE IN FRONT OF ACCESS PANELS TO THE COMPRESSOR, BLOWER ASSEMBLY AND AIR FILTER SECTION OF THE FOURPMENT SHALL BE PROVIDED. ADDITIONAL SPACE SHALL BE PROVIDED WHEN RECOMMENDED BY THE EQUIPMENT MANUFACTURER FOR MANIFEMANCE.

M15-- FILTERS;
FILTERS SHALL BE U.L. RATED AND APPROVED. CONTRACTOR SHALL PROVIDE NEW
FILTERS FOR ALL HAVG EQUIPMENT BEFORE INITIAL START-UP." THESE FILTERS SHALL BE
REPLACED WITH NEW FILTERS AT TIME OF FINAL ACCEPTANCE BY OWNER.

M.16— DUCTWORK:

A. DUCTWORK SHALL BE FABRICATED WITH GALVANIZED STEEL CONSTRUCTION AND INSTALLED IN ACCORDANCE WITH THE MOST RESTRICTIVE OF STATE CODES, LOCAL CODES, ASHRAE AND SMACNA STANDARDS. SIZES NOTED ARE CLEAR INTERNAL DIMENSIONS.

B. FOR EXPOSED DUCTWORK PROVIDE INTERNAL DUCT LINING FOR A MINIMUM OF THE FIRST 10 FEET OF SUPPLY AND RETURN AIR DUCT FROM EACH AIR CONDITIONING UNIT FOR SUDDRATTENATION. DUCTWORK TO BE INCRESSED WITH PROVIDED THEORESS OF LINING. LINING TO BE INCRESSED WITH PROVIDED THEORESS OF LINING. LINING TO BE INCRESSED TO THE PROVIDED AIR VOLUME EXTRACTORS, SPUTTER DAMPERS OR ADJUSTABLE TURNING VANES AT ALL BRANCH TAKE—OFFS AS REQUIRED FOR PROPER AIR BALANCING.

D. VOLUME DAMPERS SHALL BE PROVIDED IN EACH BRANCH DUCT TO EACH DIFFUSERS STALL BE EXCENSED TO BE STALLED AS DEATH OF THE STANDARD CEILING. DIFFUSERS SHALL BE PROVIDED IN STALLED AS SHALL BE PROVIDED THE STALLED AS OF SUM BOARD CEILING. DIFFUSERS SHALL BE PROVIDED BY DOUBLE THICKNESS TURNING VANES SHALL BE USED ON ALL DUCT TURNS OF 90°C.

P. DOUBLE THICKNESS TURNING VANES SHALL BE USED ON ALL DUCT TURNS OF 90°C.

P. DUCT RUNGOUTS TO DIFFUSERS AND DUCT/PIPING CONNECTIONS TO EQUIPMENT

E. DUCT RUNOUTS TO DIFFUSERS AND DUCT/PIPING CONNECTIONS TO FOLIPMENT

9U.

9U.

9U.

P. DUCT RUNOUTS TO DIFFUSERS AND DUCT/PIPING CONNECTIONS TO EQUIPMENT SHALL BE SIZED TO MATCH NECK OR EQUIPMENT INTAKE/DISCHARGE SIZES, UNILESS OTHERWISE NOTED.

G. PROYIDE FIRE DAMPERS AND/OR COMBINATION FIRE SMOKE DAMPERS WHERE DUCTS PEMETRIACT HIPROUGH RATED WALLS OR CEILINGS WHERE REQUIRED BY CODE.

ODE.

ODE.

ODE.

H. P. STAND DUCT TAPE.

FEXIBLE DUCT USED FOR CONDITIONED AIR SHALL BE LUL, APPROVED, VINYL. COATED, WIRE REINFORCED FIBERGASS, 1" EXTERNAL INSULATION, THERMAPLEX TYPE MKE, CLASS 1 OR EQUAL, UNIVERSITY OF LEAVING TO PERSON FOR THE MESSAGE OF THE MESSAGE OF THE MESSAGE OF THE WIND FIRE THE MESSAGE OF THE MESSAGE OF THE WORK STAND FOR COATED THE MESSAGE OF THE WIND FIRE THE MESSAGE OF THE MESSAGE OF THE MESSAGE OF THE MESSAGE OF THE ARCHITECTURAL REPLECTED CEILING FIALD OF FIRE THE ARCHITECTURAL REPLECTED CEILING FIALD OF THE PROPERTY OF THE ARCHITECTURAL REPLECTED CEILING FIALD OF THE PROPERTY OF THE ARCHITECTURAL REPLECTED CEILING FIALD OF THE ARCHITECTURAL REPLECTED CEILING FIALD OF THE ARCHITECTURAL REPLECTED CEILING FIALD OF THE PROPERTY OF THE ARCHITECTURAL REPLECTED CEILING FIALD OF THE PROPERTY OF THE ARCHITECTURAL REPLECTED CEILING FIALD OF THE ARCHITECTURAL REPLECTED OF THE ARCHITECTURAL REPLECTED CEILING FIALD OF THE ARCHITECTURAL REPLECTED OF THE ARCHITECTURAL REPLECTE

M17- INSULATION:

A. INSULATION SHALL BE ULL LISTED IN COMPRIANCE WITH FLARE-SPREAD RATING OF NOT MORE THAN 25 AND SHOKE DENSITY NOT EXCEEDING 50, PER THE MECHANICAL CODE. INSTALLATION SHALL BE IN ACCORDANCE WITH ALL MECHANICAL CODE REQUIREMENTS.

B. INSULATE ALL INTERIOR CONDITIONED SUPPLY AND RETURN AIR DUCTWORK

WITH 1-1/2" THICK, O75 LB, PER CU, FT. DENSITY FIBERGLASS INSULATION
WITH WAPOR BARRIER AND A MINIMUM R-VALUE = 8.0 FOR SUPPLY DUCTS
AND A MINIMUM R-VALUE = 4.0 FOR RETURN DUCTS.
CONDITIONED SUPPLY AND RETURN AIR DUCTWORK EXPOSED TO THE WATHER
SHALL BE INTERNALLY LINED WITH FIBERGLASS DUCT LINER MINIMUM R-VALUE
= 8.0 FOR SUPPLY AND A MINIMUM R-VALUE = 4.0 FOR RETURN DUCTS.

M18 - EXTERIOR INSTALLATION:
ALL EQUIPMENT, DUCTS, PIPING, DEVICES AND MATERIALS INSTALLED OUTSIDE THE BUILDING
OR OTHERWISE EXPOSED TO THE WEATHER SHALL BE COMPLETELY WEATHER-PROOFED,

M12- MECHANICAL VENTRATION SYSTEM (SUPPLY AND/OR EXHAUST) SHALL BE EQUIPPED WITH A BEAST OF SHIT-OFF WHEN VENTRATION IS NOT REQUIRED, AND BACKGRAFT DAMPERS WHICH CAN BE CLOSED ON FAN SHUTDOWN SHALL BE PROVIDED FOR AIR INTAKES AND/OR DISCHARGES.

M20- GRAVITY VENTILATION:
EACH GRAVITY VENTILATION SYSTEM, EXCEPT FOR COMBUSTION AIR OPENINGS, SHALL BE PROVIDED WITH AUTOMATIC DAMPERS IN ALL OPENINGS TO THE OUTSIDE.

M21- SMOKE DETECTORS:
EACH AR HANDLING SYSTEM ABOVE 2000 CFM SHALL BE PROVIDED WITH SUITABLE SMOKE
DETECTORS IN THE SUPPLY AND/OR RETURN DUCT AS REQUIRED BY CODE, INTERLOCKED
WITH FAN STARTER(S) FOR AUTOMATIC SHUT-OFF.

WITH PAN STANDARY, FOR AUTOMAND SHOT-UP.

ACC. HANCE SYSTEM SHALL BE PROVIDED WITH AN AUTOMATIC SPACE
ACC. HANCE SYSTEM SHALL BE PROVIDED WITH AN AUTOMATIC SPACE
TEMPERATURE CONTROL DEVICE CAPABLE OF BEING SET TO MANYAM SPACE
TEMPERATURE SET POINTS FROM 55°F TO 85°F AND HAVE THE ABILITY TO
OPERATING THE SYSTEM HEATING AND COULDIN IN SEQUENCE. CONTROLS
SHALL BE ADJUSTED TO PROVIDE A TEMPERATURE RANGE OF AT LEAST 5°F
AND UP TO 10°F BETWEEN FULL HEATING AND COLONIC, AND HAVE THE
CAPABILITY OF TERMINATING ALL HEATING AT A TEMPERATURE OF NO MORE
THAN JOY FAND COOLING AT HOT LESS THAM 78°F.
B. THERMICSTANS SHALL HAVE KUMERIC SETPOINTS IN T. ADJUSTABLE SETPOINT
MOUNTED AT 46° ABOVE FINISHED FOR PERSONNEL, AND SHALL BE
MOUNTED AT 46° ABOVE FINISHED FOR PERSONNEL AND SHALL BE
COUNTROLS SHALL BE PROVIDED THAT TEMPORARILY OPERATE THE SYSTEM AS
REQUIRED DURING OF HOURS TO MAINTAIN A SETBACK HEATING AND
COOLING THERMOSTAT SETPOINT,

ALL LIDE AND LOW VOLTAGE WIRING SHALL BE INSTALLED IN CONDUIT, ALL
CONDUITS SHALL BE FURNISHED AND INSTALLED BY THE ELECTRICAL
CONTRACTOR.

M23\_ VIBRATION ISOLATION:
ALL EQUIPMENT SHALL BE SECURELY FASTENED TO THE BUILDING STRUCTURE WITH CODE
APPROVED VIBRATION ISOLATORS AND EARTHQUAKE RESTRAINTS.

M24 CONDENSATE DRAIN:
A 3/4\* MINIMUM CONDENSATE DRAIN FROM EACH AIR CONDITIONING UNIT TO A CODE APPROVED RECEPTOR SHALL BE PROVIDED. CONDENSATE PIPING SHALL BE TYPE "M" COPPER.

M25— OUTSIDE AIR:
MINIMUM VENTILATION RATES SHALL COMPLY WITH THE LATEST EDITION OF ASHRAE
REQUIREMENTS. CONTROLS SHALL BE PROVIDED TO ALLOW OUTSIDE AIR DAMPERS OR
DEVICES TO BE OPERATE AT THE REQUIRED VENTILATION RATES. OUTSIDE AIR INTAKES
SHALL BE A MINIMUM OF 10"-0" FROM ROOF JACKS AND EXHAUSTS, VENTS AND INTAKES
SHALL BE COVERED WITH 1/2" MESH GALVANIZED SCREEN.

M26- ACCESS DOORS:

MACE—ACCESS DOORS:
WHERE RECESSARY IN DUCTWORK OR CASINGS, SUITABLE ACCESS DOORS AND FRAMES TO PERMIT INSPECTION, OPERATION AND MAINTENANCE OF ALL CONTROLS, MOTOR BEARINGS, OR OTHER APPARATUS CONCEALED BEHIND THE SHEET METAL WORK SHALL BE PROVIDED. ACCESS DOORS IN DUCTS MAY BE OF SINCLE PANEL CONSTRUCTION OF NOT LESS THAN NO. 18 CAUGE CALVANIZED STEEL AND SHALL HAVE SPONGE RUBBER CASKETS WITH HINGES AND LATCHES.

M27- BALANCING AND ADJUSTING:

MAZE—BALANCHIC AND ADJUSTING:

A ALL AR SYSTEMS SHALL BE ADJUSTED BY AN INDEPENDENT BALANCING CONTRACTOR THAT IS A MEMBER OF THE ASSOCIATED AR BALANCING COUNCIL (AGBC) OR THE MATIONAL ENVIRONMENTAL BALANCING BUREAU (NEBB). SUBMIT BALANCE REPORT TO OWNER PRIOR TO RECEIVING FINAL PAYMENT. ADDITIONAL BALANCING MAMPERS AND/OR PULLEY CHANGES SHALL BE PROVIDED AS REQUIRED TO BALANCE SYSTEMS AT NO INCREASE IN CONTRACT PRICE.

B. EACH PIECE OF EQUIPMENT AND ALL SYSTEMS SHALL BE ADJUSTED AND RE-ADJUSTED TO INSURE PROPER FUNCTION OF ALL CONTROLS. MINITEDIANCE OF TEMPERATURES, ADDOUACY OF FLOWS AND CAPACITIES, EMPLOYED TO THE ADDITION OF ALL CONTROLS. OPERATION OF ALL CONTROLS. PROPER OPERATIONS OF ALL CONTROLS. OPERATION OF ALL CONTROLS. OPERATION OF ALL CONTROLS. OPERATION OF COURS AND CAPACITIES, DOWN OF THE ADDITION OF ALL CONTROLS. OPERATION OF SWERT REQUIREMENTS FOR PROPER OPERATIONS CONTROLS OF THE PROPER PROPERS.

eart Ĭ end

L

Shawn Kashou, Architect 20710 Shadow Mill Ct

MEP Engineer: William K Hall & Co

Consulting Engineers 1901 Long Prairie Rd Suile 130 Flower Mound, TX 75022 Tel: 214 681 2179 Firm Registration: # F-12258



Permit & Construction 11/14/2013

Issued for:

	 _
	_
	_
Project No.	
,	

MECHANICAL **SPECIFICATIONS** AND DETAILS

Dwg. No.

M-3

Sugar Land, TX

MEP Engineer: William K Hall & Co

Ĭ,

Consulting Engineers 1901 Long Prairie Rd Suite 130 Flower Mound, TX 75022 Tel: 214 681 2179
Texas Firm Registration: # F-12258



Issued for: Permit & Construction 11/14/2013

Project No.

Dwg. Name

ELECTRICAL LIGHTING PLAN AND NOTES

Dwg. No.

E-1



(6) (P)

### LIGHTING PLAN KEYED NOTES:

- 1 EXHAUST FANS TO BE CONTROLLED VIA SWITCH AS SHOWN.
- (2) VERIFY FIXTURES AND QUANTITY OF FIXTURES TO BE USED FOR NICHT LIGHTING WITH LIGHTING AND OWNER PROOR TO CONSTRUCTION. CONTRACTOR MUST PROVIDE NICHT LIGHTING ON A 24 HOUR CIRCUIT OR TIME CLOCK CONTROL. COORDINATE ON/OFF TIMES AND REQUIREMENTS IN FIELD.
- (3) NIGHT LIGHTS, EXIT SIGNS AND EMERGENCY LIGHTIMS SHALL BE COMMICTED TO LOCAL CIRCUIT AFFAD OF SMITCH IF REQUIRED BY THE LOCAL AUTHORITY MANNO, JURISDICTION CONTRACTOR MUST COORDINATE LIGHTICATOR AND REQUIREMENTS FOR FIXTURES WITH TENANT, LANCLORD AND AUTHORITY HAVING JURISDICTION.
- (4) EGRESS EMERGENCY FIXTURE SPECIFICATION SHOWN FOR REFERENCE. FIXTURE INSTALLED MIST HE BUILDING STANDARD AS REQUIRED BY LANDLORD. VERIFY REQUIREMENTS IN FIELD FOR EGRESS LIGHTING AND SECURITY LIGHTING, PROVIDE IN LOCATIONS AS REQUIRE BY LANDLORD AND LOCAL ANJ.
- (5) LIGHT FIXTURES TYPE 'D' AND 'E' ARE SPECIFIED WITH (2) TWO BALLASTS. A/B SWITCHING IN ROOMS WITH THESE FIXTURES MUST BE ACHIEVED BY SWITCHING THE BALLASTS AS DIRECTED BY THE TENANT. THE CONTRACTOR MUST VERIFY WITH THE TENANT ALL ROOMS REQUIRING THIS METHOD OF LIGHTING REDUCTION CONTROL. THE CONTRACTOR MUST VERIFY CONTRACTOR MUST VERIFY THE CONTRACTOR MUST VERIFY THE CONTRACTOR MUST VERIFY THE CONTRACTOR MUST VERIFY THE SWITH METHOD TO CONSTRUCTION.
- (6) CAMERA ROOM AND LAB ROOM ARE EMSTING; CONTRACTOR MUST VERIFY EXISTING LIGHT FIXTURES ARE 277%. EMSTINES QUENT FIXTURES CRECUTING AND SWITCHING IN THESE ROOM MUST BE INTERCRETED AND INTEGRATED MINO NEW TRANNIF SAFEL QUENTING POWER AND CONTROL. COORDINATE ALL REQUIREMENTS WITH TRAINING ARCHITECT PRIOR TO CONSTRUCTION. PROVIDE NEW SWITCHES WHERE REQUIRED.

### **BUILDING LIGHTING CONTROL**

EXISTING SHELL BUILDING LIGHTING CIRCUITS MUST BE CONTROLLED BY EXISTING CONTACTORS WHERE REQUIRED BY LANGLORO AND AUTHORITY HAVING JURISDICTION. ROUTE LIGHTING ORDER THE LISTING CONTACTOR AND PROVIDE "ACID THE LIGHTING OVER RIDE" SMITCHES WHERE REQUIRED. COORDINATE ALL REQUIREMENTS IN FIELD WITH EXISTING BUILDING STSTEMS PRIOR TO CONSTRUCTION. NOTIFY EMERGER "A CONFLICT EXISTING BUILDING STSTEMS PRIOR TO CONSTRUCTION. NOTIFY EMERGER "A CONFLICT EXISTING

### **ELECTRICAL GENERAL NOTES:**

- CONTRACTOR IS RESPONSIBLE FOR FIELD VERIFICATION OF ALL CONDITIONS AND IS RESPONSIBLE FOR REPORTING ANY CONFLICTS TO THE ARCHITECT PRIOR TO THE START OF WORK.
- 2- "EXISTING" OR "VERFY IN FIELD" MEANS THE CONTINUOUS IS TO CONTINU THE ITEM SHOWN ON THE DRAWNO EXISTS AND IS IN GOOD WORKING CONDITION. SHOULD THE CONTROLLOR FIND THE EQUIPMENT IS NOT AS SHOWN ON THESE DRAWNINGS, IT IS TO BE INSTALLED AS RECOURED TO PROVIDE THE IESNAM WITH A FULLY FUNCTIONING SYSTEM AND AS RECUIRED BY ALL LOCAL CODES AND THE LOCAL AUTHORITY HAVING JURISDICTION.
- THE CONTRACTOR SHALL PROVIDE A COMPLETE, USEABLE, AND OPERABLE FACILITY IN ACCORDANCE WITH ALL PERSIMENT COSES AND REGULATIONS.
- ELECTRICAL CONTRACTOR SHALL MAKE FINAL CONNECTIONS TO ALL ELECTRICALLY

  EMERGIZED EQUIPMENT WHITHER FURNISHED BY CONTRACTOR OR OWNER AND SHALL
  MEET THE LATEST APPROVED MATIONAL ELECTRICAL CODE (N.E.C.) FOR THE AREA.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE TO THE BUILDINGS
  5. STRUCTURE OR UTILITIES CAUSED BY SLAB PENETRATIONS. IT IS RECOMMENDED THAT
  THE CONTRACTOR X-PAY THE FLOOR PRIOR TO ANY SLAB PENETRATIONS.
- CONTRACTOR SHALL COMPLY WITH THE LATEST APPROVED NATIONAL ELECTRICAL CODE AND 6- OSHA'S FAULT PROTECTION STANDARD ON THE CONSTRUCTION STIE.
- CONTRACTOR SHALL PROVIDE EMPTY CONDUIT WITH PULL STRING FOR SECURITY SYSTEM WIRNS BY OWNERS SECURITY SYSTEM VENDOR 1/2" MINIMUM, ALL SECURITY SYSTEM CONDUIT SHALL BE CONCRETED DEPOSED SECURITY SYSTEM CONDUIT SHALL NOT BE ALLOWED. VENEY REQUIREMENTS WITH OWNER PRIOR TO FINAL BID.
- CONTRACTOR SHALL REFER TO ELECTRICAL SPECIFICATIONS WITHIN THIS SUBMITTAL FOR 8- ADDITIONAL REQUIREMENTS.
- VOLTAGE DROP THRU ALL CONDUCTORS SHALL NOT EXCEED THAT ALLOWED BY THE NEC. 9. COMPACTION SHALL UPSIZE FEEDERS AND BRANCH CIRCUITS AS REQUIRED WHERE REQUIRED.

				LIGHTIN	NG FIXTURE SCHEDULE			
TYPE	SYMBOL	QUANTITY	MOUNTING	MANUFACTURER	DESCRIPTION	LAMPS	WATTS	VOLTS
A		18	RECESSED	METALUX	#2GR8332A12277EB81 - 2'X4' FLUORESCENT LENSED TROFFER, 3-LAMP, T-B, ACRYLIC PATTERN, 277V.	3-F32/T8/735	88W	277V
В		5	RECESSED	METALUX	#2GR8332A12277EB81-EL4 - 2'X4' FLUORESCENT LENSED TROFFER, 3-LAMP, 1-B, ACRYLIC PATTERN, 277V. EMERGENCY FIXTURE WITH BATTERY, 90 MINUTES OF EMERGENCY POWER.	3-F32/T8/735	88W	277V
C		1360	RECESSED	METALUX	#2GR8232A12277EB81 - 2'X4' FLUORESCENT LENSED TROFFER, 2-LAMP, T-8, ACRYLIC PATTERN, 277V	2-F32/T8/735	Saw	277V
D 2-BALLAST	0	11	RECESSED	METALUX	#2GR8332A12277EB82 - 2'X4' FLUORESCENT LENSED TROFFER, 3-LAMP, T-8, ACRYLIC PATTERN, 277V, 2-BALLAST	3-F32/T8/735	W58	277V
E 2-BALLAST	0	1	RECESSED	METALUX	2GR8232A12277E882 − 2'X4' FLUORESCENT LENSED TROFFER, 2-LAMP, T-8, ACRYLIC PATTERN, 277V, 2-BALLAST,	2-F32/T8/735	Saw	277V
F	0	7	RECESSED	PORTFOLIO	#C7126E-7250-LI - 7° RECESSED DOWN LIGHT, 1-26W DTI LAMP, LENS AND TRIM AS SPECIFIED BY TENANT.	1-26W/PL/35K	25W	277V
G	Ø	্য	RECESSED.	PORTFOLIO	₹C7118E-7210-U - 7" RECESSED DOWN LIGHT, 1-26W DTT LAMPS, ELECTRONIC BALLAST, SINGLE WALL WASH, LENS AND TRIM AS SPECIFIED BY TENANT	1-18W/PL/35K	18W	277V
EMI		9	SURFACE	SURELIGHT	#AEL2 - ARCHITECTURAL EMERGENCY LIGHT SERIES. COLOR AS DIRECTED BY BUILDING OWNER.	WITH FIXTURE		277V
EM/X	1203	0	SURFACE	SURELIGHT	AUX—7 — LPX SERES COMBO, LED EOT AND EMERGENCY LEHT WITH MED LETTERS, ARROWS AS INDICATED. EMERGENCY BATTERY WITH MINIMUM 90 MINUTES OF EMERGENCY POWER. UNIVERSAL MOUNTING BRACKET.	WITH FIXTURE	77.	277V
XI.:	\$	5	SURFACE	SURELIGHT	LPX-7 - LED EXIT LIGHT WITH RED LETTERS ARROWS AS INDICATED: EMERGENCY BATTERY WITH MINIMUM 90 MINUTES OF EMERGENCY POWER: UNIVERSAL MOUNTING BRACKET.	WITH FIXTURE		277V

- LIGHT FIXTURES SHOWN ARE FOR REFERENCE ONLY. CONTRACTOR SHALL SUBMIT CUT SHEETS FOR ALL LIGHTING FIXTURES TO ARCHITECT AND TENANT FOR APPROVAL PRIOR TO ORDERING OF FIXTURES, FIXTURES INSTALLED SHALL MEET ALL REQUIREMENTS OF COMCHECK FORMS AT A MINUSUR.
- 2. EXIT LIGHTS TO BE PROVIDED WITH UNIVERSAL MOUNTING HARDWARE FOR CEILING OR WALL MOUNTING
- 3. ALL FLUORESCENT FIXTURES CONTROLLED BY OCCUPANCY SENSORS WHICH DO NOT HAVE DIMMABLE BALLASTS SHALL HAVE PROGRAM START BALLASTS OR AS REQUIRED BY FIXTURE MANUFACTURER FOR FULL WARRANTY.
- 4. FIXTURE MANUFACTURERS MAY INCLUDE BUT ARE NOT LIMITED TO ACUITY, COOPER AND PHILIPS

### OR OFFICE (D)0/b (B) 0 EM/NL HB-1 (B) 2 (A) HALL 119 ₩ X1 HB-THVATE R SERVER TREADMILL [11] (5) (3) >0< 113 (5) -O-ECHO [108] EXAM ∦4 107 EXAM #3 -2 -0. 9 0 (A) (6) (A)--0 -Q (6) CAMERA 3 -Ø⊾ 2 EM/NL 18-18 HALL 118 (A) (A) -EXAM #1 (D)/1 RECEPTION (5) REFER TO ARCHITECT'S REFLECTED CEILING FOR EXACT LOCATION OF ALL LIGHT FIXTURES 9< (D)/1 ⊗ 3,444 LATER LANGE TO PANEL TO MAR.

(5) [115]

(1) INI

2

-(3)

LIGHTING FLOOR PLAN



Issued for: Permit & Construction 11/14/2013

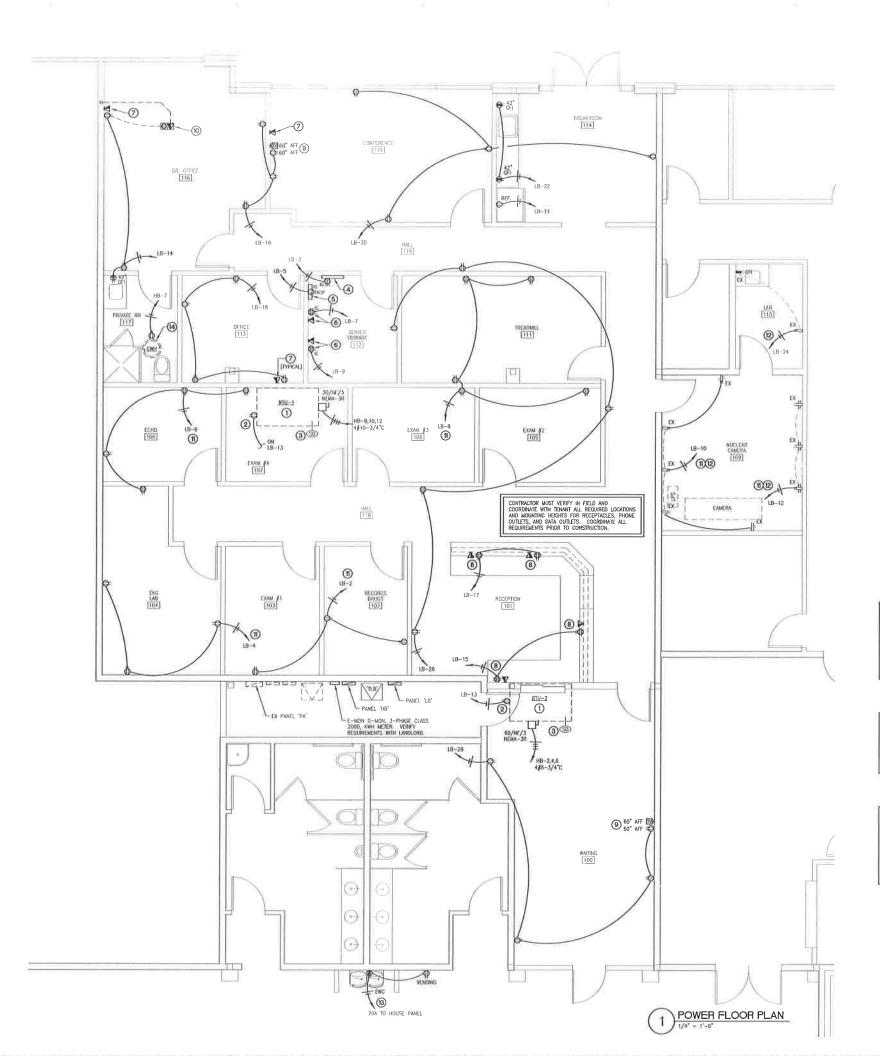
Project No.

Dwg. Name

ELECTRICAL POWER PLAN AND NOTES

Dwg. No.

E-2



### POWER PLAN KEYED NOTES:

- ONLET ALL POWER WITH FACTORY INSTALLED CIRCUIT BREAKER AND CONVENIENCE OFFICE. ALL POWER WIRING AND FINAL CONNECTION MUST BE EFF CECTRICAL CONTRACTOR COORDINATE WITH MECHANICAL CONTRACTOR FOR THRU-THE-BASE ELECTRICAL UTILITY ACCESS. SEE PLAN FOR AMPERICAE AND NEMA RATING, COORDINATE RTI LOCATION WITH LANGLORDS STRUCTURAL EXHIBITER.
- WADMER RESISTANT, WATERPROOF, GFCI, MAINTEMANCE RECEPTACLE FURMISHED WITH REU-COGROMATE WITH MECHANICAL CONTRACTOR. ALL WIRING AND FINAL CONNECTION SHALL BE BY ELECTRICAL CONTRACTOR.
- 3 APPROXIMATE LOCATION OF DUCT SMOKE DETECTOR. COORDINATE EXACT LOCATION IN FIELD WITH MECHANICAL CONTRACTOR AND LOCAL AHJ.
- 4 PLYWOOD TELEPHONE BACKBOARD WITH \$6 GROUND AND RECEPTACLE WITH ISOLATED GROUND. CONTINUETOR MUST MAKE ALL FINAL CONNECTIONS AS REQUIRED FOR LOW VOLTACE SYSTEMS AS REQUIRED BY PHONE COMPANY, CABLE COMPANY, COMMUNICATIONS, ALARM COMPANY, BUILDING OWNER AND TENANT. PROVIDE PULL STRINGS WHERE REQUIRED.
- (5) PROVIDE FIRE ALARM CONTROL PANEL (FACP) AS REQUIRED BY LOCAL FIRE MARSHALL. REFER TO "FIRE ALARM NOTE" THIS SHEET FOR ADDITIONAL INFORMATION.
- (6) COMPUTER SERVER RECEPTACLES AND DATA, LOCATION SHOWN FOR REFERENCE. COMPUTER SERVER LOCATION AND REQUIREMENTS MUST BE COORDINATED WITH THE FACILITY DIRECTOR AND LOCATED AS REQUIRED, SERVER RECEPTACLES MUST BE PROVIDED WITH ISOLATED ORDINO.
- PROUTE CONDUIT FOR PHONE AND DATA LINES UP TO ABOVE CEUING, TERMINATE WITH 90' BEND AND BUSHING, PROVIDE LOW VOLTAGE TELEPHONE AND DATA CARBING AS DIRECTED BY TENANT, VERIFY LOCATION OF JUNCTION BOXES WITH TENANT PRIOR TO INSTALLATION, WHERE RIGID CELINGS INTERFER WITH ACCESS TO CONDUITS, EXTEND CONDUITS TO TERMINATION POINT WITH PULL STRINGS SO DIRECTED BY TENANT.
- (B) POWER OUTLET AND TELEPHONE/DATA QUITLET PARKS IN RECEPTION AREA MUST BE LOCATED AS REQUIRED BY THE FACULINES DIRECTOR. CONTRACTOR MUST INSTALL POWER AND OR BLOW COUNTERS AS DIRECTOD. PROVIDE HOLES WITH GROWNETS IN COUNTERS WHERE REQUIRED. COORDINATE ALL REQUIREMENTS WITH THE FACULITY DIRECTOR PROPER TO CONSTRUCTION. COORDINATE ALL RECUPRIZED AND DATA/TELEPHONE HEIGHTS IN FIELD.
- POWER AND T.V. QUITLET MOUNTED ON WALL AT HEIGHT AND LOCATION AS DIRECTED BY IERAMI. CONTRACTOR MUST VERBY REQUIREMENTS AND LOCATION WITH TEMANT PRIOR TO INSTALLATION.
- 10 1" POWER CONDUIT AND 1" COMMUNICATIONS CONDUIT BELOW SLAB WITH PULL STRINGS FOR FOWER AND COMMUNICATIONS TO FLOOR CUTLETS IN DOCTORS OFFICE. ROUTE COMMUNICATIONS CONDUIT TO SERVER CLOSST, "COORDINATE CUTLET LOCATIONS WITH DOCTOR PRIOR TO CONSTRUCTION. BACKFILL AND PATCH AS REQUIRED.
- (1) REFER TO PATIENT CARE NOTE AND REDUNDANT GROUNDING NOTE. VERIFY ALL AREAS USES WITH FACILITIES CONTINUED BODY DURING CONSTRUCTION. PROMDE GIT BREASER WHERE REQUIRED BY LOCAL AUTHORITY HAVING JURISDICTION.
- (2) CAMERA ROOM AND LAB ROOM ARE EXISTING. CONTRACTION MUST VERIFY EXISTING CAMERA, UPS, AND OTHER CIRCUITS ARE AS REQUIRED BY TEMANT AND TEMANTS. EQUIPMENT REQUIREMENTS. INTERCET TOSTING CIRCUING IN THESE ROOMS AND CONNECT TO NEW TEMANT PANEL FOR SEPARATION OF POWER AND NEW METERING.
- (3) EXISTING EWC AND VENDING MACHINE IS BEING RELOCATED. RELOCATE EXISTING EWC AND VENDING MACHINE POWER CIRCUIT TO THIS NEW LOCATION. CIRCUIT TO BE CONNECTED TO HOUSE PANIEL. WHERE TWO CIRCUITS ARE EXISTING BOTH MUST BE RELOCATED.
- (14) WATER HEATER ON PLATFORM ABOVE CEILING

### PATIENT CARE AREA WIRING NOTE

ELECTRICAL CONTRACTOR MUST COORDINATE AND ESTABLISH WITH THE FACILITIES COVERNING BODY OR ITS DESIGNEE LOCATIONS CONSIDERED PARIENT CARE APEAS AS DEFINED IN CHAPTER 3 ON RAP 99, HEALTH CARE FACILITIES COULD MONATE OR PARIENT CARE BOOMS AND CONTAINING PARIENT CARE AREAS MIST HAVE WINNER INCLUDE REDUINDAM FORWARD FOR APEAS FAIRT WITH WINNER INCLUDE REDUINDAM FOR WINNER FAIRT WITH HE C. STL. 31/4) A. (8) AND NIPA 99 CHAPTER 6. COORDINATE ALL REQUIREMENTS WITH GUILDING COLIFIANT AND LOCAL AUTHORITY HAVING JURESDICTION.

### GROUNDING NOTE

THE ELECTRICAL CONTRACTOR MUST INSTALL THE ELECTRICAL SYSTEM INCLUDING THE GROUNDING SYSTEM AND REDUNDANT GROUNDING AS REQUIRED BY NFPA 70 (NATIONAL ELECTRICAL CODE) SECTION AND NFPA 99 (STANDARD FOR HEALTH CARE FACILITIES) AND THE LOCAL ANTINGRITY HAWING JURISDICTION.

### FIRE ALARM NOTE

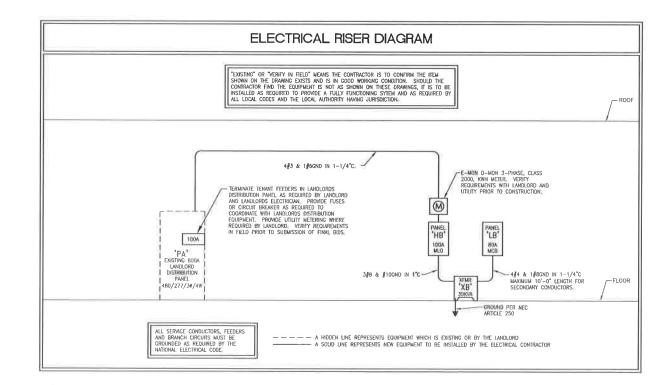
A FIRE ALARM SYSTEM THAT MEETS CURRENT NPPA FIRE CODE MUST BE INSTALLED BY A LICENSED QUALIFIED FIRE SAFETY CONTRACTOR. THIS COMPANY WILL SUBBIT A PLAN TO THE TOWN FIRE MASSHAL'S OFFICE FOR APPROVAL PRIOR TO INSTALLATION. THE CHERAL CONTRACTOR AND ELECTRICAL SUBCONTRACTOR SHALL VERBY AND INCLUDE IN HERE FIREL BID ALL LET SAFETY, SMOKEF, THE ALARM SYSTEMS REQUIRED TO BRING SPACE UP TO CURRENT MPPA STANDARDS, LOCAL AND STATE CODES AS REQUIRED BY PIRE MARRANTS.

### DISCONNECT SWITCH LEGEND

H/#/# LOUWHITY OF POLES FUSE RATING 

### SHORT-CIRCUIT CURRENT NOTE

ELECTRICAL CONTRACTOR MUST COORDINATE AND VERIFY WITH THE ELECTRIC UTILITIES SERVICE PLANNER AWALABLE SHORT-CIRCUIT CURRENTS FROM THE UTILITIES INSTALLED TRANSFORMER, CONTRACTOR MUST INSTALL BREAKERS WITH PROPER INTERRUPT RATING AND PROTECTION OF ELECTRICAL COMPONENTS FOR THE AWALABLE SHORT-CIRCUIT CURRENTS, BREAKERS MUST BE PROVIDED WITH INTERRUPT RATING REQUIRED AS CALCULATED USING THE POINT-O-POINT WIETHOO, CONTRACTOR MUST RECEIVE APPROVAL FROM THE AUTHORITY HAVING JURISOCITION IN INSTALL AS EXPIRES MUST SSTELL, If A SCENIES ANTED STSTELL IS USED TROVIDE LABELING TO INSTALL AS EXPIRES MUST DISTALL OF THE AUTHORITY HAVING JURISOCITION IN INSTALL AS EXPIRES MUST DISTALL IN JURISOCITION EL AGENCY.



Ali	М	AINS	: 100A : 100A MLO : 22,000										'HB'							K : KITCHEN EQ	NUOUS (	100	
2	J.,		LOAD DESIGNATIO	N.					. (	ON	N E	СТ	E.D. V	Α			_		OAD DESI	GNATION	-T	Τ.	19
S	崖	300	DESCRIPTION (NO	IE)	¢	H.	К	ØA	ØB	øc.	T	\ B (	DA	ØB	ØC	ĸ	N.	c	(NOTE)	DESCRIPTION	- 6	13	
1	20	1	LTG - EWERG, NIGHT, 24HR	13	X			300	11/7/	3000	+	H	6630	2000	0000		X		1-un (t		25		1
3	20	1	LIGHTING	Т	X			1000	1950			-	-	6630		Г	$\otimes$		3			+	1
5	20	1.	LICHTING		X			2000		1350	-		- 5000		6630	П	X		3			12	đ
7	20	1	WATER HEATER			X		3000		3000	Н		66,30	2000	0000		X		3) RTU-2		25	1	1
	20		SPARE							2000	-	-	-	6530	0000		$\times$		3)			т	T
	20		SPARE	П					111111	-	$\mathbf{H}$	-	-		5630		X		3			13	5
15.	35		XEMS, JEB, 30KAY					4040	U.S		1	-	4120						33 RTU-3		15	П	Т
15									4760		$\mathbb{H}$	+	- 3000	4120	2000				3)			Т	1
17		3							4//	4500	Н		1		4120				3			3	
19			SPACE						20,000		$\mathbf{H}$	-		30000					SPACE			Т	T
21		_	SPACE	L	_			33.030							222				SPACE				
23			SINCE	L				<i>(////////////////////////////////////</i>		+++	Н	1	- 322	1000000					SPACE			L	I
				PHA	SE T	OTA	s	9A =	25,320		B =	24.0	90	#C = 2	3,230				TOTAL CO	NNECTED VA	72,0	540	
	-		IES:				.*									-	$\neg$	ĊC	NNECTED V	VA (CODE C)	3.0	600	_
	_		DE SWITCH TYPE CIRCUIT BRE														ŀ	_		VA (CODE N)	69.0	240	-
(	2) C	RCL	IT CONTROLLED VIA TIME CLOS	CK (	OR P	HOT	OCEL	L PRO	MDE E	ICLOSU	RE I	NEAR	PANEL				- 1-	_			69,0	J40	-
(	3) P	RÓVI	DE " HACR " TYPE CIRCUIT B	REA	KER.													CC	NNECTED	VA (CODE K)		0	
0	0 0	D-CN/A	DE " GFI " TYPE CIRCUIT BRE	AVE	D I												- [		PANEL CON	INECTED KVA	7	2.6	
1	_		DE BREAKER WITH LOCK-ON I																PANEL	DEMAND KVA	7	35	
			DE CIRCUIT WITH ISOLATED GR																PANEL D	EMAND AMPS	8	8 6	Ξ
																						_	_

AJ	М	BUS AINS	E: 208/120 3# 4W 5: 100A B: 80A MCB 5: 10,000							PAI (SUR			-								C : CONTINUOUS N : NON-CONTIN K : KITCHEN EOL	UOUS (1		
9		ш	LOAD DESIGNATIO	N					(	CONI	Y E	СТ	E D	V A						LO	AD DESIGNATION		Ι.,	1
엉	TRP	POLE	DESCRIPTION (N	one)	С	N	К	ØA	ΦB	ØC	A	ВС	Т	ØA	фB	øc	K	N	C	(N	OTE) DESCRIPTION	문	POLE	5
1	20	1.	SPARE.	Т	Г	Т	П		100000	10000	+	+	+	540		1000		X		1	RECEPTACLES (3)	20		t
3	20	1	PHONE BOARD	(8	1	X		3000	300		Н	+1	-8		540	37//	Г	X		T)		20	T	t
5	70	1	FACP	16		X				300	Н	++	-8		9/11/5	720	П	X		Œ.	RECEPTACLES (4)	20	1	1
7	20	1.	SERVER	16		X		500			Н	+	-[	900				X		6	RECEPTACLES (5)	20	1	T
9	20	1	SERVER	6	1	X		111111	500		+	++	-lii	000	900		П	X	- 1	T)	RECEPTACLES (5)	20	3	1
11	20	1	REFRIGERATOR	Т	Т	X		-37/1//	1030000	600	H	++	-8	88000		1080		$\times$			RECEPTACLES (6)	20	1	1
13	20	1	MAINTENANCE RECEPT (2)	Т	Т	X		360			H	-1-1	-Г	720		7000		X		*	RECEPTACLES (4)	20	1	1
15	20	1	RECEPTION RECEPT (4)	60	1	X			720		Н	+	- 13	100	720	777		X		Ξ	RECEPTACLES (4)	20	1	h
17	20	1	RECEPTION RECEPT (4)	(8)	1	X		7077	0000	720	14	++	-8			720		$\times$		П	RECEPTACLES (4)	20	1	1
19	20	.1	SPARE	Г	П				77		Н	-1-1	-	720				X		П	RECEPTACLES (4)	20	T	2
21	20	1	SPARE	Т					++-1	100000	Н	+	- 3		360	10000		X			RECEPTACLES (2)	20	1	2
23	20	1	SPARE	Т	1				0.300	-	14		-8			360		$\propto$	$\neg$	_	RECEPTACLES (2)	20	1	2
25	20	1	SPARE						1000	100	H	-	-	900				X		-	RECEPTACLES (5)	20		
27	20	1	SPARE	т	1-			33000		10000	H	+ 1	- 2		720			$\otimes$		П	RECEPTACLES (A)	20	1	2
29	20	1	SPARE	T				22 7/			H	++	-13	//	Married Co.						SPARE	20	1	3
31	-		SPACE	т	1	-				10000	Н	Н	-		7777	0000					SPACE	17.	-	3
33			SPACE	T	П						Н	44	-12	9000	+++					Н	SPACE			3
35			SPACE			т			W		14	11	-13	788E						u	SPACE		_	3
37			SPACE	T	1					100	14	+	-			0000				Н	SPACE	_	1	3
30			SPACE	T				10000			Н	11	-12								SPACE			41
41			SPACE	T						1000	14	14	-12		1100			П		-	SPACE	$\neg$	-	4
1	-			PHA	SE	TOTAL	s	PA =	4,640	1	B =	4.7	60	T	IC = 4.	500	Т		-	TC	TAL CONNECTED VA	13.9	00	1
E	ANEL	. NO	DTES:				1							-			_	T	r.c	-	IECTED VA (CODE C)		0	-
(	D) P	ROV	IDE REDUNDANT GROUNDING W	HER	ER	EQUII	RED	BY NFP.	A 99									- 1		_		31/	-	=
(	2) C	IRCL	JIT CONTROLLED VIA TIME CLO	CK (	OR I	PHOT	OCFI	L. PRO	OVIDE EN	VCI OSUB	F N	FAR I	PANE	100				- 1	CC	МР	ECTED VA (CODE N)	13,9	30	
- 1	_		IDE " HACR " TYPE CIRCUIT E																CC	NN	IECTED VA (CODE K)		0	
`	_		IDE " GFI " TYPE CIRCUIT BRI	_														- [		PA	NEL CONNECTED KVA	13	9	Т
1	_																	- 1			PANEL DEMAND KVA	13	.9	
1	_		IDE BREAKER WITH LOCK-ON															ŀ		-	PANEL DEMAND AMPS	36	-	=
(	y P	KUV	IDE CIRCUIT WITH ISOLATED GR	KUUN	ID.													-16-			TATEL DEMONSO PONTS		10	

# Fort Bend Heart Center 13020 Dairy Ashford, Suite 101 Sugar Land, TX 77478

Shawn Kashou, Architect 20710 Shadow Mill Ct Katy, Texas 77450 Tel: 713 g65 4470

MEP Engineer:

William K Hall & Co

Consulting Engineers 1901 Long Prairie Rd Suite 130 Flower Mound, TX 75022 Tel: 214 681 2179 Texas Firm Registration: # F-12258



Issued for:	
Permit & Construction	11/14/2013

ELECTRICAL PANEL SCHEDULES AND RISER DIAGRAM

Dwg. No.

Dwg, Name

E-3

### ELECTRICAL SYMBOLS LEGEND

	ELECTRICAL CTIVIDOLO LLCLID
A A NL	LIGHTING FIXTURE SYMBOLS;  STANDARD DESIGNATIONS FOR ALL LIGHTING FIXTURES.  "A" = FIXTURE TYPE, REFER TO FIXTURE SCHEDULE "NL" = UNSWITCHED MORIT LIGHT "2" = CIRCUIT NUMBER "0" = SWITCH CONTROL
A_NL	= CIRCUIT NOMBER = SWITCH CONTROL
	FIXTURE - SURFACE, RECESSED OR PENDANT MOUNTED.
Ot Ot	FIXTURE - WALL MOUNTED.  LIGHTING FIXTURES ON MORBAL/EMERGENCY CIRCUIT, OR WITH EMERGENCY BALLES! BALLES!
⊗₁ ⊗	EXIT LIGHTHING FIXTURE, ARROWS AND EXIT FACE AS INDICATED ON DRAWINGS, MOUNTED INCHES ABOVE DOOR FRAME, OR TWO INCHES BILLOW CELLING TO TOP OF SIGN, OR AS DIRECTED.
999	LIGHT TRACK, LENGTH AS INDICATED ON THE DRAWNOS, WITH NUMBER:  OF LIGHTING FIXTURES AS ROLLATED ON DRAWNOS, AND AS INDICATED IN THE LIGHTING FIXTURE SCHEDULE.
	EMERGENCY BATTERY UNIT WITH LICHTING HEADS
	POWER SYMBOLS:
Ψ	STANDARD 20A, 120V-1¢ GROUNDING TYPE DUPLEX RECEPTACLE
₩	STANDARD 20A, 120V-1# GROUNDING TYPE FOUR-PLEX RECEPTACLE
Ψ	STANDARD 20A, 120V-1# GROUNDING TYPE CFCI DUPLEX RECEPTACLE
•	STANDARD 20A, 120V-1# GROUNDING TYPE CFCI FOUR-PLEX RECEPTACLE
0	STANDARD 20A, 120V-1¢ GROUNDING TYPE DEDICATED DUPLEX RECEPTACLE
φ	STANDARD 20A, 120V-1# GROUNDING TYPE SIMPLEX RECEPTACLE
, é	STANDARD 20A, 120V-10 GROUNDING TYPE ONE HALF SWITCHED DUPLEX RECEPTACLE
, , , , , , , , , , , , , , , , , , ,	20A. 120V-14 ISOLATED GROUND DUPLEX RECEPTACLE
φ	
Ψ	SPECIAL RECEPTACE MOUNTED AT +18" AFFU.O.NAMPS -VOLTS & PINSE AS INDICATED ON PINSE. VERTY NEAL CONFIGURATION WITH INSTALLED EQUIPMENT SUPPLIER PRIOR TO PLACING ORDER.
<b>5</b>	STANDARD 20A, 1204-14 GROUNGING TYPE DUPLEX RECEPTACLE MOUNTED WITHIN FURLY OR SURFACE FLOOR OUTLET BOX. TO DENOTES FLUSH AND 'S' OKNOTES SURFACE
₩	STANDARD 20A, 120V-19 CROUNDING TYPE FOUR-PLEX RECEPTACLE MOUNTED WITHIN FLUSH OR SUFFACE FLOOR OUTLIES BUY. T DENOTES FLUSH AND S DENOTES SUBFACE
<b>①</b>	JUNCTION BOX SIZED BY THIS CONTRACTOR PER ACTUAL MUMBER OF COMPUTES AND/OR CONDUCTORS PASSING THRU ACCORDING TO NEC TABLE 370-16(a)(b).  SWITCHING SYMBOLS:
\$	STANDARD 20A, 120/277-16 SPST TOGGLE SWITCH MOUNTED AT +48" A.F.F., U.O.N., SINGLE POLE SWITCH,
\$3	"3" = THREE WAY SWITCH,
ş.,	"a" = SWITCH CONTROL (lower case lext)
<b>₽</b> p	"P" = SWITCH WITH PILOT LIGHT, ON WHEN SWITCH IS ON
\$ <sub>wP</sub>	"WP" = WEATHERPROOF SINGLE POLE SWITCH. "D" = DIMMER SWITCH, RATED 1500W, UNLESS OTHERWISE INDICATED.
\$ <sub>D</sub>	"M" = WALL SWITCH OCCUPANCY SENSOR,
\$ <sub>T</sub>	T" = WALL SWITCH WITH TIMER, 1000W, 1 MINUTE TO 3 HOURS
4	TELEPHONE/DATA/TY/CCTV: COMBINATION TELEPHONE/DATA OUTLET AT +18" A.F.F., U.O.N. PROVIDE "I COMPOUT STUDE-UP 6" MINIMUM INTO ACCESSIBLE CEILING SPACE.
▼	THE PHONE OUTLET AT +18" A.F.F., U.ON PROWDE 1" CONDUIT STUB-UP 6" MINIMOM INTO ACCESSIBLE CEILING SPACE.
▽	DATA OUTLET AT +18" A.F.F., U.ON. — PROVIDE 1" CONDUIT STUB-UP 6" MINIMUM INTO ACCESSIBLE CELLING SPACE.
12	STUBUP 6 MINIMUM INTO ACCESSIBLE CELLING SPACE. COMBINATION TELEPHONE/DATA OUTLET MOUNTED WITHIN FLUSH OR SURFACE OUTLET BOX, "F" DEMOIES FLUSH AND "S" DENOTES SURFACE.
н™	"F" DENOTES FLUSH AND "S" DENOTES SURFACE TELEVISION AND/OR CCIV OUTLET AS DIRECTED BY OWNER AT +18" A.F.F., U.O.N.
_	PANELIDARD, TERMINAL CABINETS & OTHER: UCHTING OR POWER PANEL, RECESSED.
_	LIGHTING OR POWER PANEL, SURFACE
30A/NF/3 □ <sup>1</sup>	DISCONNECT SWITCH, UNFUSED TYPE, SIZE AS INDICATED ON DRAWINGS. (MDAMP, JPOLE)
30A/20A/3 🗗	DISCONNECT SWITCH, FUSED TYPE, SIZE AS INDICATED ON DRAWINGS. (30AMP, 20AMP FUSE, 3POLE)
•	THERMOSTAT
@	PHOTO-ELECTRIC CELL
TC	TIME CLOCK WITH MANUAL BY PASS, WITH HAND-OFF-AUTO SELECTOR SWITCH
PB	PULLBOX - SIZE AS INDICATED OR REQUIRED.
2°C 4#1 & 1#6GND	INDICATES 2" CONDUIT WITH 4 1 1AWG AND 1 6AWG GROUND
(2)2°C 4∦1 & 1∦6GND	
	CUMBUCTURS IN EACH CONDUIT.

### **ELECTRICAL ABBREVIATIONS**

A	AMPERE	kCMIL.	THOUSAND CIRCULAR MILS
AFF	ABOVE FINISHED FLOOR OR GRADE	hVA	KILO-VOLT AMPERE
C	CONDUIT OR RACEWAY	kW	KILO-WATT
CATV	CAULE TELEVISION	LTG	LICHTING
CKT	CIRCUIT	MCB	MAIN CIRCUIT BREAKER
CB	CIRCUIT DREAKER	MDP	MAIN DISTRIBUTION PANEL
CU	COPPER	MLO	MAIN LUGS ONLY
E	CENTERLINE	MTD	MOUNTED
DWC	DRAWING	MTG	MOUNTING
EC	ELECTRICAL SYSTEM INSTALLER	NIC	NOT IN CONTRACT
EWC	ELECTRIC WATER COOLER	NO /	NUMBER
EMT	ELECTRICAL METALLIC TUBING	NTS	NOT TO SCALE
EX	EXISTING	PB	PULLBOX
FA	FIRE ALARM	PH Ø	PHASE
G,GND	GROUND	PC	PLUMBING SYSTEM INSTALLER
GC	GENERAL CONTRACTOR	PVC	POLY-VINYL CHLORIDE CONDUIT
GFI	GROUND FAULT INTERRUPTER	PWR	POWER
GFIP	GROUND FAULT INTERRUPTER	RGS	RIGID GALVANIZED STEEL
	PROTECTED EQUIPMENT	TD	TELEPHONE/DATA
HVAC	HEATING, VENTILATING AND	TYP	TYPICAL
	AIR CONDITIONING INSTALLER	U.O.I.	UNLESS OTHERWISE INDICATED
HP	HORSEPOWER	WP	WEATHERPROOF
1G	ESOLATED GROUND	XFMR	TRANSFORMER
JB	JUNCTION BOX		

### BASIC ELECTRICAL REQUIREMENTS

ELS SCOPE:

A THE CONTINUED REALL PROVIDE ALL MATERIALS, LABOR, TOOLS, PLANT, INCOMENDALS AND CONTINUED EXPENSES NECESSARY TO INSTALL AND INCOMENDALS AND CONTINUED EXPENSES NECESSARY TO INSTALL AND INCOMENDALS AND AS NOTED OF SECONED NERROL, TO THE SATISFACTION OF THE OWNER, ARCHITECT AND ELECTRICAL ENGINEER BY THE CONTINUED RESIDENCE OF THE CONTINUED AND ARCHITECT AND ELECTRICAL ENGINEER IN MAKE A COMPLETE SYSTEM WHICHIEF OR NOT SUCH OITHALS ARE MIGHTONION IN THE SECONED AS SHOWN ON THE PURAS, BUT WHICH ARE ORNOLOGY NECESSARY TO MAKE A COMPLETE SYSTEM, DECEPTING OUT AND ARCHITECTURAL DECEPTING OUT AND ARCHITECTURAL SYSTEM, DECEPTING OUT AND ARCHITECTURAL SYSTEM, DECEPTING ON THE OWNER AS HOWN ON THE PURAS, BUT WHICH ARE OWNERS AND SPECIFICATIONS.

ORNOLOGY NECESSARY TO MAKE A COMPLETE SYSTEM, DECEPTING OUT AND ARCHITECTURAL STRUCTURAL, MAKE, DURING THE SECTION OF THE SECURIORIS.

ON THE ACCOUNTAGE OF THE SPECIFICATIONS.

OF STRUCTURE ASSETTION ANY WORK THE CONTRACTOR FOR THIS SECTION OF THE WORK SHALL EXAMINE A COMPLETE SET OF DRAWINGS AND SPECIFICATIONS FOR ALL TRADES, NICLUDAR ASCITICITURAL, FRANCE, ELECTRICAL, FIRE PROTECTION, AND PULMENCE, DIMENSORS, SPACE RECORRELIESTS, AND MINOR ADJUSTMENT ASSETTION AND STRUCTURE AND THE WORK OF THE OTHER TRADES SHALL BE MADE.

CONTRACTOR SHALL NOTITY ARCHITECT MANERALLY IF ANY MAJOR CONFLICTS OCCUR.

CZ - WORKOMMENP.
ALL WORK STALL BE PERFORMED BY COMPETENT ELECTRICIANS USING PROPER TOOLS
AND EQUIPMENT TO PRODUCE FIRST-CHALLY WORK. ALL WORK SHALL BE NAFLY
NISTALED, ACCESSIBLE FOR MANTENANCE, COMPLETE WITH ALL ACCESSORIES REQUIRED,
AND MEETING THE APPROVAL OF THE OWNER AND THE RACHITECT.

### E3. MATERIAS. ALL PRODUCTS, EQUIPMENT, MATERIALS, AND ACCESSORIES SHALL BE OF FIRST-LINE QUALITY, GROLA AND TYPE SHOWN ON THE DRAWINGS AND SPECIFIED, OR EQUIVALENTS ACCEPTED BY THE ARCHITECT OR ENGINEER IN WRITING.

E4— SITE INSPECTION—
CONTRACTOR SHALL WIST THE JOB SITE PRIOR TO SUBMITTING HIS BID AND THOROUGHLY FAMILMATE HIMSLE WITH ALL DISTING CONDITIONS AND EXACT NATURE OF THE WORK, THE DRAWNS AND EXECUTIVE DRAWNSAME, SUBMISSION OF A BID ACKNOWLEDGES FULL RESPONSIBILITY FOR FURNISHING A COUPLETE AND PUNCTIONAL SYSTEM. NO CHANGES IN CONTRACT MILE SHAME TO THOROUGH STATE FURNIS FOR ANY OWISSION WHICH RESULTS FROM A FAILURE TO THOROUGHLY MAKE THE EXAMINATION

ES— CODES:
THE UNITE INSTALLATION SHALL CONFORM TO THE REQUIREMENTS OF THE LATEST APPLICABLE ENTRON OF THE CODES, ORDINANCES AND RECULATIONS INTERPRETED BY THE LOCAL AUTHORITY HANNIS JURISDICTION, IN ADDITION THE INSTALLATION SHALL CONFORM TO A PROJECT CONTROL OF THE PROPERTY HANNIS AND THE CONFORMATION OF THE METHODAL LECETRICA, CODE, LATEST ADOPTICE DETRONAL RECORDER, SETTLY ORDINANCES.

B. REQUIREMENTS OF THE ARMONISM LISTED CODE, LATEST ADOPTICE DETRONAL RECEIVED, ASSETT ORDINANCES.

C. ALL PRODUCTS IN THIS WORK SHALL STATE AND MUNICIPAL ENGINEERS FOR ELECTRICAL WINNIS APPROXIMATIONAL GROUP OF ARE UNDERWRITERS FOR ELECTRICAL WINNIS APPROXIMATIONAL GROUP OF ARE UNDERWRITERS.

E6— PERMITS:
THE CONTRACTOR SHALL OBTAIN AND PAY FOR ALL PERMITS, INSPECTIONS AND FEES,
COPIES OF ALL PERMITS AND INSPECTION REPORTS SHALL BE SUBMITTED TO THE
ARCHITECT.

E/F \_ AS\_MULLIS;
CONTRACTOR SHALL PROVIDE A COMPLETE SET OF AS\_BUILTS TRANSPARENCIES WITH ALL
CHANGES NOTED THEREON AT THE COMPLETION OF THE PROJECT AND PRIOR TO FINAL
ACCEPTANCE AND PAYMENT. THESE DRAWNOS SHALL HAVE ALL INSTALLATIONS
REFERENCED BY DIMENSIONS TO A SET REFERENCE POINT OR POINTS,

EB \_\_\_\_CMARAHIEE:
CONTRACTOR SHALL UNCONDITIONALLY GUARANTEE ALL LABOR AND MATERIALS ON ALL
WORK AGAINST DEFECTS IN WORKLAMSHIP AND MATERIALS FOR A PERIOD OF ONE YEAR
AFTER COMMETION, CONTRACTOR SHALL BE RESPONSIBLE FOR ALL DAMAGE TO MY
PART OF THE PREMISES CAUSED OF EULIPHEAP HEMSHED AND INSTALLED UNDER THIS
SECTION OF THE SPECIFICATIONS FOR A PERIOD OF ONE (1) YEAR AFTER DATE OF
ACCEPTANCE OF HIS WORK.

E9 OPERATING MANUALS:

CONTRACTOR SHALL FURNISH THE OWNER WITH ALL OPERATING MANUALS AND MAINTENANCE INSTRUCTIONS FOR THE EQUIPMENT INSTALLED, MANUALS SHALL BE BOUNDED IN THREE RISK LOOSE-LEAF BRIDGES AND INDEXED BY PRODUCT TYPE. A SECTION WITHIN THE MANUAL SHALL INCLUDE THE MANUAL TENDER NUMBER AND ADDRESS OF ALL LOCAL SUPPLIES OF ALL MATERIAL AND EQUIPMENT INSTALLED TOCKHEAR WITH NAMEL, TELEPROKE MURBER AND ADDRESS OF ALL CONTRACTIONS OF THE PROJECT. PROVIDE 3 TO THE OWNER CONTRACTOR SHALL AFTIX A MANTENANCE LEDELS TO ALL COMPARTY REQUIPMENT REQUIPMENT REQUIPMENT REQUIPMENT REQUIPMENT FOR CONTRACTOR SHALL AFTIX A MANTENANCE LEDELS TO ALL COMPARTY REQUIPMENT REQ

ELIDE\_CORRINATION\_AND\_VERFICATION.

THE DRAWINGS ARE DISCROUNTED THE OFFICE TO SHOW SCOPE. THE CONTINCTOR

THE DRAWINGS ARE DISCROUNTED AND INTERIORS TO SHOW SCOPE. THE CONTINCTOR

THE DRAWINGS ARE DISCROUNTED. THE LOCATION OF DESTRUCE PROPERTY
OF ALL DUCTS, PPESS, COMOUNT, FTC. THE LOCATION OF DESTRUCE PROPERTY
OF SHOW THE PROPERTY OF THE SECTION AND SHALL MAKE UNOFFICIATIONS AND
DUCTHOMS SHOWN IS APPROXIMATE CONTINCTOR SHALL VERSIT PHER LOCATION PRIOR
TO BEGINNING WORK OF THIS SECTION AND SHALL MAKE UNOFFICIATIONS AND
ADJUSTMENTS ROUGHED TO INSTALL THE WORK OF FIRS SECTION.

A VERIFY AND COORDINATE ALL SZES OF EQUIPMENT TO BE INSTALLED WITHIN ROOMS WITH THE AMAILANCEMER OF EUCLOPHENT, INSURING NODCOUNTED

B. COORDINATE WORK OF MECHANICAL TRADES FOR WORK REQUIRED AS PART OF
THIS SECTION, AND VERSY OUNTIFY, SZES AND LOCATION OF ALL WORK OF
C. COORDINATE THE WORK OF ALL OTHER TRADES, VERTINGS ALL REQUIRED
CLEARANCES, PROPER SLEEVS, SUPPORTS, DOOR SIMICS AND OTHER TIBLIS
AFFECTION, THE WORK OF ALL OTHER TRADES, VERTINGS ALL REQUIRED
CLEARANCES, PROPER SLEEVS, SUPPORTS, DOOR SIMICS AND OTHER TIBLIS
AFFECTION, THE WORK OF ALL OTHER TRADES FOR THE METHODS OF INSTALLING
AND CONNECTION OF ALL OTHER TRADES AND OTHER TIBLIS
AFFECTION, THE WORK OF ALL OTHER TRADES. WE RETHODS OF INSTALLING
AND CONNECTION OF ALL OTHER TRADES. AND OTHER TIBLIS
AFFECTION, THE WORK OF ALL OTHER TRADES. AND OTHER TIBLIS
AFFECTION, THE WORK OF ALL OTHER TRADES. AND OTHER TIBLIS
OTHER DRAWINGS.

ELL— EXTERIOR OPENINGS.

COGRANAE LOCATIONS OF ALL EXTERIOR WALL AND BOOF OPENINGS WITH ALL RELEVANT TRACES AND PRODUC WAREAGHT ITALIBRIES WERELYER PENETRATIONS OCCUR. DOCT. INC. AND SUZE WAY BE DEFENDENT UPON TOURNAM SELECTIONS. COGRAMATE SELECTIONS AND SUZE AND LOCATIONS OF ALL OPENINGS WITH APPROPRIATE EQUIPMENT REQUIREMENT.

EL2— CUTTING AND PATCHING:
ALL CUTTING CHASING AND CHANNELING REQUIRED FOR ANY WORK UNDER THIS DIMISION
SHALL BE BY THE CONTRACTOR, CUTTING SHALL HAVE PRIOR APPROVAL OF THE
LANGLORD, ALL PATCHING SHALL BY G.C. AND SHALL MATCH THE SURROUNDING
SURFACES.

C13— ECUPMENT ACCESS!

ALL WORK IN THIS SECTIONS SHALL BE INSTALLED SO AS TO BE READILY ACCESSIBLE FOR OPERATING, SERVICING, MAINTAINING, AND REPAIRING, THIS CONTRACTOR IS RESPONSIBLE FOR PROVIDING SUFFICIENT SERVICE ACCESS TO ALL EQUIPMENT.

ELS—TEMPORARY LICHT AND FOWER.
THIS CONTRACTOR SHALL FURNISH AND INSTALL ALL TEMPORARY WIRING AND RELATED GROUND FAULT INTERRUPTION PROTECTION FOR LIGHTING AND POWER FOR ALL CONTRACTORS AND IS RESPONSIBLE FOR ITS REMOVAL

ELS—SIEPVES:
PROMIE SLEEVES OF SUFFICIENT SIZE TO PERMIT READY INSTALLATION OF EACH COMOUNT WHICH PASSES THROUGH WALLS OR SUSPENDED SLARS. SLEEVES IN CONCRETE BEAUS, JUSTIS, COLUMNS OR FOOTING WALLS ON THE WESTALLED DATA WHERE PERMITTED BY THE STRINCTUME, BEAUGER. LOCK SLEEVE SHALL ENTED HER ONE TREMPETER FOOR WALL OR PARTITION AND SHALL BE CUT RUSH WITH EACH SURFACE EXCEPT SLEEVES WALL TO PROMISE THE PROPERTY BETTER THE FLOOR, WHICH SHALL EXTEND IT ABOVE THE ADORS. CONTINUOUS MUST COORDINATE THROUGH THE LANGUAGE NAY CORE DISTURBED OR CUTTING OF MUST COORDINATE THROUGH THE LANGUAGE NAY CORE DISTURBED OR CUTTING OF THE PROPERTY OF THE SHARD. HE SHARD WHERE A CORDUIT PASSES THROUGH AN EXTERNOS SHAFFACE, SCAL THE SPACE BETWEEN THE CONDUIT AND ITS SLEEVE WITH AN APPROVED WATER TIGHT COMPOUND.

THE CONDUCT AND THE PROOF.

FINELDANCS SHALL BE FACTORY ASSEMBLED OF THE BOLTED CIPCUIT DREAMER THPE.

FINELDANCS SHALL BE FACTORY ASSEMBLED OF THE BOLTED CIPCUIT DREAMER THPE.

FINELDANCS SHALL BUSING, FULL SIZE COMPER NEUTRAL. FOOK GROUND BUSSING AND OVERALL LOCKAGEE HINGED DOOR. ALL PANELS SHALL BE DEAD FRONT AND FLUSH OR SURFACE WOUNTED AS SHOWN.

A CONTRACTOR SHALL PURINGH AND INSTALL A THPENHITCH DIRECTORY CARD OF THE CIRCUITS AND PLACE IN PANEL DOOR. CIRCUIT NUMBERS SHALL BE ON THE CONTRACTORY CARD. THE CONTRACTORY CARD.

CHARGES FROM THE FROOL.

BALL PANELEDANCE PHESE AMPERINGE SHALL BE BURNACED TO WITHIN TOX MANIMUM.

CHERTY ACTUAL ALC. SHOPT CIRCUIT CURRENT REQUIREMENTS WITH THE LANGUISHOOD OR UTILITY COMPANY AND VERTILY SHIFTCHEAST COMPLIANCE PROOR.

D. LIOS SHALL BE SUITABLE FOR COPPER CONDUCTORS.

### **ELECTRICAL SPECIFICATIONS**

- E17 CIRCUIT BREAKERS.

  ALL CIRCUIT BREAKERS SHALL BE OF THE BOLTED TYPE, QUICK-MAKE AND QUICK BREAK DESCAN, THERMAL MACHITIC TYPE, TRIP FREE AND TRIP-HOLOXITING.

  A VOLICE RATING SHALL BE AS REQUIRED FOR THE APPLICATION.

  A VOLICE RATING SHALL BE ABBITTO OUNEYSAFED, USE "MACE" CORDITIONOUTD SHAPED FOR AIR CONDITIONING LOUSS, USE "SWO" CIRCUIT BREAKERS FOR LIGHTING CREUTES CONTROLLED FROM THE PAINAL.

  C. ALL BRANCH SREAKERS SHALL BE ABLE TO ACCOMMODATE LOCKOUT CLIPS. PROVIDE CUTS TO LOCK BREAKERS STOR LIGHTING, MIDTORS, RETRIEFATIONS AND CONTROLS FOR VECHNICAL STSTEMS.

  ARRIVAGE ALL BRANKERS TO CORRESPOND EXCLIPT WITH PAIRS SCHEDULES.

ETA-STRUCTURES.

TRANSFORMERS SHALL BE DIFY TYPE, INDOOR OR OUTDOOR, SELF-COOLED TYPE WITH 1907 I EINFERNIUS ROSE UNDER TULL LOAD CONDITIONS. TRANSFORMER SHALL BE PAD MONIECO OR 1905 ON THE BULLION STRUCTURE, REPROVED ON THE SHALL OF THE SHALL BE PAD MONITHME TO REDUCE WEARING HORSES. USE FLEGHE WEALLOW, CHORDIT WITH GROUNDING BUSINES FOR PRIMARY AND SECONDAY CONNICTIONS TO TRANSFORMER, TRANSFORMER SHALL BE INSTALLED TO MANTAIN ALL CODE REQUIRED CLEARANCES. TRANSFORMER SHALL BE QUIET TYPE CONSTRUCTION AND HAVE FOUR 2-1/2X FULL CAPACITY TAPS.

ETA-CONDUITS

ET

AS PUSSIBLE AGAINST THE STRUCTURE ABOVE.

PROVIDE NOT CONDUCTORS AND CABLES PLANKLY MARKED AND TADGED WITH UL LAGEL, SIZE, VOLTACE RATING, INSULATION TYPE, TYPE OF STRANDING, MANUFACTURES NAME, TRANSLE MARKED AND DATE AND YEAR WHEN MANUFACTURED. CONDUCTORIS SMALL BE MANUFACTURED AND SMALL BE ASSOCIATED AND AND ADMIT AND YEAR WHEN MANUFACTURED.

A PORTER CONTROLLED AND AND AND ADMIT SHALL BE SOULD, #8 AND LARGER SHALL BE STRANDING.

A PORTER CONTROLLED AND AND SMALLER SHALL BE AND LARGER SHALL BE STRANDING.

SIZE PER DESTANCE SHOWN BELOW. DISTANCE SHALL BE MADELIANDED FROM THE PANGEDARD CIRCUIT BREAKER TO THE FURTHEST OUTLET.

#10 BUTKEN TO PETEL

#10 BUTKEN TOOL FOR THE FURTHEST OUTLET.

#10 BUTKEN TOOL FOR THE TOOL FOR THE PANGEDARD CARDING TOOL FOR THE FURTHEST OUTLET.

#10 BUTKEN TOOL FOR THE TOOL FOR THE FURTHEST OUTLET.

- C. JES BETWEEN 150-250 FEET

  d. 46 VORF 230 FEET

  C. ALL WIRNING SHALL BE COLOR CODED AS FOLLOWS.
  2206/120 VOLT SYSTEM

  HEUTRAL WHITE

  PHASE 8 OR 12 RED.

  PHASE 8 OR 12 RED.

  PHASE 8 OR 12 RED.

  PHASE 8 OR 12 DOWNER

  GROUND GREEN

  GROUND GREEN

  GROUND GREEN

  CONNECTORS OR LUGS. ALJAMHUM

  CONNECTORS OR LUGS. ALJAMHUM

  CONNECTORS OR LUGS. ALJAMHUM

  SHALL WIRNING AND CABLE INCLUDING LUW VOLTAGE AND CONTROL CIRCUITS

  SHALL BE INSTALLED IN COMOUNT UNLESS ONTRANSE NOTED.

  F. THE INSTALLED IN COMOUNT UNLESS ONTRANSE NOTED.

  ALJAMHUM CONDICTIONS ARE NOT ACCEPTABLE.

  ALJAMHUM CONDICTIONS ARE NOT ACCEPTABLE.

G. ALUMINIM CONDUCTORS ARE NOT ACCEPTABLE.

E2.1. DISCONNECT SWITCHES:
SAFETY AND DISCONNECT SWITCHES SHALL BE HEAVY DUTY TYPE, QUICK-MAKE,
QUICK-BREAK FUSED OR NON-FUSIBLE WITH RATINGS AND SIZES AS NOTED ON THE
PUASH AND REQUIRED BY COLORS. PROVINGE SWITCHS WITH HIE NUMBER OF POLES AND
WITH A MAMEPIATE INDICATING EQUIPMENT CONTROLLED.
WITH A MAMEPIATE INDICATING EQUIPMENT CONTROLLED.
A FUSIBLE DISCONNECT SWITCHES SHALL INVE QUICK-MERCA
MECHANISM AND AN INTERLOCKING COVER WHICH CANNOT BE OFEND WHEN
MECHANISM AND AN INTERLOCKING COVER WHICH CANNOT BE OFEND WHEN
MECHANISM AND AN INTERLOCKING COVER WHICH CANNOT BE OFEND WHEN
MECHANISM AND AN INTERLOCKING COVER WHICH CANNOT BE OFEND WHEN
MECHANISM AND AN INTERLOCKING COVER WHICH CANNOT BE OFEND WHEN
MECHANISM AND AN INTERLOCKING COVER WHICH CANNOT BE OFEND WHEN
MECHANISM AND AN INTERLOCKING COVER WHICH CANNOT BE OFEND WHEN
MECHANISM AND AN INTERLOCKING COVER WHICH CANNOT BE OFEND WHEN
MECHANISM AND AN INTERLOCKING COVER WHICH CANNOT BE OFEND WHEN
MECHANISM AND AN INTERLOCKING COVER WHICH CANNOT BE OFEND WHEN
MECHANISM AND AND INTERLOCKING COVER WHICH CANNOT BE OFEND WHEN
MECHANISM AND AND INTERLOCKING COVER WHICH CANNOT BE OFEND WHEN
MECHANISM AND AND INTERLOCKING COVER WHICH CANNOT BE OFFICED
FOR FUSIBLE DISCONNECT SWITCHES, EXCEPT FOR SINGLE PHASE MOTORS 2

E. PROVIDE DISCONNECT SWITCHES FOR ALL MOTORS OR EQUIPMENT UTO TO OF
SIGHT OF THE CONTROLLED ON MOSE THAN 50 FLET FROM THE CONTROLLER,
PROVIDE DISCONNECT SWITCHES FOR ALL MOTORS OR EQUIPMENT LOCATION.

# PROVIDE A DISCONNECT SWITCH AT THE MOTOR ON EUROPMENT COLORIDAR. E22\_OUTLET BOXES. OUTLET BOXES SHALL BE ONE—PIECE CALVANIZED, SOUARE, PRESSED STEEL, KNOCKOUT TYPE, 4'x2-1/8' DEEP MINIMUM IN MALLS, AND 4'x1-1/2' DEEP MINIMUM IN NELLINGS, WITH PLASTER RINGS. CAST BOXES SHALL BE CAST RINGS THERADED HID CAST FERRORS, AND ALVANIZED CAST PROVIDED CAST RESTRING METAL WITH GASKETED DESCRIPTION OF CAST RESTRING METAL WITH GASKETED DEVICES OF OF THE ARMERICED OUTLETS, USE CONCRETE BOXES FOR OUTLETS IN CONCRETE CONSTRUCTION. UNSIAL BOXES RIGHD YEAR DUBLING STRUCTURE AND SUPPORT OF THE STANDERS OF THE ALVANIZED STEEL BOX HANGERS OF TYPES MADE SPECIFICALLY FOR THE PURPOSE. D. ALL BOXES SHALL BE OF PROPER CODE SIZE FOR NUMBER AND SIZES OF COMMODITIES THE PROPERTY OF THE STANDERS OF THE STRUCTURE OF THE STRIKE SIDE OF DOOR.

- DOOR.

  E33. UNITION AND PULL BOXES.
  THE PLANS NOICATE ONLY SCHEMATIC ROUTINGS FOR COMBUILT NAME. THIS CONTRACTOR SHALL FURNISH AND INSTALL ADDITIONAL BOXES WHERE REQUIRED BY FELD CONDITIONS OR BY CODE.

  A BOXES AND COVERS SHALL BE CALVANIZED STEEL OF CODE CAUGE SIZE.

  BIN WET LOCATIONS, OUTCOMES OR WHERE INDICATED TO BE WEATHERPROOF, PROVIDE BOXES THAT HAVE BEEN HOT-DIPPED CALVANIZED AFTER THAT HAVE BEEN HAVE BEEN HOT REPORTED HORSE BOXES FOR HIS STANLESS STEEL SCAPICH, AND IN PROPERTY HAVE BEEN HAVE STEEL BOXES STEEL SCAPICH AND PROPERTY INAPPERIENT OF THE CONDUIT SYSTEM.

  WHERE RINGLATED OR REQUIRED TO SERVE AS PULL BOXES OR JUNCTION BOXES, PROVIDE SHEET STEEL BOXES WITH SCAREV ON COVERS FOR SUPPRECE OF TURN HOUNDING. SHEET OF JUNCTION BOXES HOW DIPPORT OF THE USE OF JUNCTION BOXES HAVE SHEED SEED FOR DIPPUSERS AND RETURN AIR CRILLES OR ACCESS PAWELS USED FOR DIPPUSERS AND RETURN AIR CRILLES OR ACCESS PAWELS AS LOCATED ON PLANS.

  F. JUNCTION AND PULL BOXES MUST BE LABELED WITH CIRCUIT NUMBERS ASSESSED.

- F. JUNCTION AND PULL BOXES MUST BE LABELED WITH CIRCUIT NUMBERS IDENTIFIED AND SYSTEM TYPE ON BOXES COVER.

E24— HANGERS:
HANGERS SHALL, NCLUDE ALL WISCELIANFOUS STEEL SUCH AS ANGLE IRON, BANDS,
C-CLAMPS, CHANNELS, HANGER RODS, ETC., NECESSARY FOR THE INSTALLATION,
HANGERS SHALL SE EASTENED TO BUILDING STEEL, CONCRETE OR MASONRY, BUT NOT
PIPHOG OR DUCKWORK: HANGING FROM WITTA DECK IS NOT PERMITTED, WHERE
INTERTERENCE'S OCCUR, AND IN ORDER TO SUPPORT DUCTWORK OR PIPHO, THE
CONTRACTOR WORLD'S INSTALL ISPECTATIVE HANGERS OR SUPPORTS WHICH SHALL BE
LOCATED HIERER THEY DO NOT MEMETER, WITH ACCESS TO REE DAMPERS, WALVES, AN
OTHER COUNTRY. HANGER THEYS AND INSTALLATION METHODS ARE ASSO SUPPORTS
OTHER COUNTRY. HANGER THEYS AND INSTALLATION METHODS ARE ASSO SUPPORTS
WHICH AS A SHALL BE DELECTIVE OLLY SEPARATED.

E25— SUPPORTS..

PROVIDE ALL NECESSARY FOUNDATIONS, SUPPORTS AND BACKING FOR ALL ENCLOSURES, COMPUTE SOUTHWART, OUTLETS, DENCES AND LIGHTING PIXTURES. ATTACH ALL BOXES, OUTLET BOXES, STRAPS, CABINETS AND EQUIPMENT TO WOOD WITH WOOD OR LIG STREMS, TO MALTA, WITH MACHINES SCREWS AND BLICK, AND TO CONCRETE WITH EXPANSION ANCHORS OR SELV DIFLLING METAL, AND WITH MACHINE, SCREWS OR BOILS, MOST SELV BRILLING METAL, AND WITH MACHINE, SCREWS OR BOILS. MOST SELV BRILLING OF ATTACHMENTS AS FROURISED TO SUPPORT EQUIPMENT WITH A BUSING METER PROVIDE OF A TO 1. SCRUPE FLOOR MOUNTED

EQUIPMENT TO FLOOR WITH MACHINE BOILS AND ANCHORS.

# EXE MAT. FLAMENCIA. THE PROTECTION. ELECTRICAL CONTRACTOR SMALL BE RESPONSIBLE FOR ALL POWER WIRNG, LINE VOLTAGE WIRNG, AND LINE VOLTAGE CONTROL WIRNG WHERE WIDGATED UNDER THE HEATING, WIRNG, AND LINE VOLTAGE CONTRACTOR. SMALL ASD WITERCONNECT LINE VOLTAGE WIRNG BETWEEN RELAYS AND SWITCHES AS REQUIRED.

E27— WIRING DEVICES:
THIS CONTRACTOR SHALL FURNISH AND INSTALL SWITCHES AND RECEPTACLES, UNLESS
NOTED OTHERWISE, AS NECESSARY FOR A COMPLETE INSTALLATION. COLOR OF DEVICES
AND PLATES SHALL MATCH WALL COLOR OR AS REQUIRED BY ARCHITECT. THE DEVICES
SHALL BE OF THE TYPES AND RATINGS LISTED, OR APPROVED EDULIS.

	HUBBELL	LEVITON	PASS & SEGMON
SINGLE POLE SWITCH	HB( - 1221	5521-1	5021
TWO POLE SWITCH	HBL-1222	5522-1	5022
THREE WAY SWITCH	HBL-1223	5523-1	5023
DUPLEX RECEPTACLE	5362	5262~↓	. 1404
GEL RECEPTACLE	CE5352	6108-1	#501_E

# THE LOCAL MITCHES ALL SWITCHES SHALL RE SPECIFICATION GRADE RATED 15, 20 OR 30 AMPERES AT 277 VOLU AC, TOTALY PECLOSED OUET ACTION TYPE, 1 OR 2 POLD, 3 OR 4 WAY, MOMENTARY CONTACT OR LOCK TYPE AS REQUIRED. THE 15 AMPERE RATED SWITCH MADE BE USED ONLY FOR ILICHING LOUDS OF LESS THAN 10 AMPERES, SWITCHES ARRIVED MOTORS SHALL BE HORSEPOWER RATED AND SHALL HAVE RUMBER OF POLES AND MOMENTED WEATHERPROOF SWITCHES, PROVIDE CASCETED STANLESS STEEL LIST COVER MOMENTED WEATHERPROOF SWITCHES, PROVIDE CASCETED STANLESS STEEL LIST COVER PLATE, PASS & SEYVOUR WE SERES. WHERE SURFACE MOMENTED, USE CAST BOW WITH CASKETED CAST ALUMINUM LIST COVER PLATE, HOBBELL [7420, WHERE APPLICABLE.

C29— MOTOR STARTIES:

MAGNETIC MOTOR STARTES SHALL BE PROVIDED WITH RESET TYPE OVERLOADS THAT CLOSELY MACK MOTOR MAMERIANE RABINS AND SHALL BE ELECTRICALLY HELD (MINAMAN SHE'L JE IN A NEAR I ENCLOSIVE) AND BE USED FOR ALL SHIRLE PHASE AND THREE PHASE MOTORS AREAD ADMOST LY HE. THAT REQUIRE AUXILIARY CONTROL. PROVIDE CONTROL DEVOCES (AUXILIARY CONTROL TO CONTROL

- SMITHERS AND UNITED THE THE AND LAMPS.

  10S. CONTRACTOR SHALL PROVIDE, INSTALL, AND CONNECT ALL LIGHTING FRYTURES AND LAMPS INDICATED ON THE FRAVINES ACCORDING TO THE FIXTURE SCHEDULE. ALL FIXTURES SHALL BE ULL LUBELED. CONTRACTOR IS TO REPLACE ALL NON-WORKING LAMPS PRIOR TO CERTIFICATE OF OCCUPANCY DATE AND SHALL INCLUDE COST IN HIS BID. A FLUORESCENT BALLASTS SHALL BE LECTRONIC PREMIUM TYPE C.B.M. CERTIFICED, ETL. APPROVIDED, ULL LUSTED, UNITED PROTOR RAPID CONTRACTOR, PROVIDED, ETL. APPROVIDED, ULL LUSTED, UNITED PROVIDED AND AND THE LAMP PROVIDED.

  5. HID BALLASTS SHALL BE LIGHTON THE SOURCE, WATTAGE AND POSITION OF THE LAMP PROVIDED.

  C. DIMAMBLE BALLASTS SHALL BE SUPPLIED FOR DIMABLE FLUORESCENT FIXTURES SHALL BE PROVIDED WITH APPLICABLE THERMAL PROVIDED WITH APPLICABLE THERMAL PROVIDED.
- THERMAL PROTECTION

  E. LICHT FIXTURES INSTALLED OUTDOORS IN LOCATIONS PROTECTED FROM THE
- LIGHT PRIVATES INSTALLED OUTDOORS IN DOCATIONS PROTECTED FROM THE WACHTER CAS WHORE CAMPAILS SHALL BE METHED FOR DOTOCOM WE REST, and the second of the second state o

- RECESSED FIXTURES IN FIRE RATED CEILINGS AS REQUIRED BY LOUR.

  ELI—\_GROUNDING.

  FIRSTSH AND INSTALL A COMPLETE WIRED GROUNDING CONQUETOR SYSTEM, \$12 AWG
  MINIBUR, \$250 AND INSTALLS IN ACCORDANCE WITH THE LAREST ADDRIES EDITION OF
  THE MINIBUR, LECTRICAL COORDANCE WITH THE LAREST ADDRIES EDITION OF
  THE MINIBUR, LECTRICAL COORDANCE, STORE LOOK COPES AND AS NOTED IN THE
  SYSTEM GROUND COINECTION, PROVIDE A GREEN COLOR INSULATED
  COPPER CONDUCTOR IN A RIGGI STEEL CONDUIT TO THE GROUND ELECTRODE.
  CONNECT THE CONDUIT AND CONDUCTOR TO THE ELECTRODE WITH A
  MALLABLE RON CONDUIT HIS AND A 2-POLIT GROUND CAUDE.

  B. GROUNDING CONNECTIONS ANDE TO THE WATER PIPMS SYSTEM STALL BE
  MINIBURATED TO THE MATER PIPMS GYSTEM IS UNSULTABLE FOR USE
  AS A GROUNDING ELECTROCA AND A BORONING, JUPPER
  MINIBURATED THE MATERIAL COMPANY OF A THE MATER PIPMS OF THE IS UNSULTABLE FOR USE
  AS A GROUNDING ELECTROCA AND HIS SYSTEM IS UNSULTABLE FOR USE
  AS A GROUNDING ELECTROCA AND HIS SYSTEM IS UNSULTABLE FOR USE
  AS A GROUNDING ELECTROCA AND HIS SYSTEM WAND A
  RECOURTEDER'S INCLUMEN FOO SEE, SYSTEM ACCESSION TO
  RESISTANCE TO GROUND
  ENCISSION FOR CONDUCTOR WITH AS SYSTEM CROWNED AS SYSTEM WAND A
  MUTURE, COMPUTED THE ASSYSTEM CROWNED CONNECTION SEED AS
  A GROUNDING ELECTROCA SYSTEM WAND A
  MUTURE, COMPUTED THE SYSTEM CROWNED CONNECTION SEED AS
  A GROUNDING ELECTROCA THE SYSTEM CROWNED CONNECTION SEED AS
  A CROUNTED.

# O STUDIO HE RUTHOL OF DATH SOUTHED ELECTRICAL SYSTEM HANNING A SECURING HER RUTHOL OF DATH SOUTHED HANNING A SECURING HONOLOGE WITH A SYSTEM ROOMED CONNECTION SIZED AS FROMING. D. ALL CONDUIT INCLUDING FLEDREL CONDUIT AND NON-HETALIC CONDUITS SHALL BE GROUNDED WITH A GREAT ROOMED CONDUITOR. E. A. SEPARANE FROMED TO SECURING HAVE AND MINIMARY IN EACH COMMUNITY FERRING THE COST WARP AND GIBBRET COMPUTERED ELIPHANT F. ALL DENCES SHALL BE BONDED TO THE CONDUITOR SYSTEM. USE A BONDING JUMPER BETWEEN THE CUITED BOXES AND PULL BOXES SHALL BE BONDED TO THE CONDUIT SYSTEM. G. ALL ENCLOSURES AND NON-CURRENT CARRYING METAL PARTS ARE TO ROOMED. CONDUIT SYSTEM IS TO BE ELECTRICALLY CONTINUOUS WHERE SOUNDED. CONDUIT SYSTEM IS TO BE ELECTRICALLY CONTINUOUS WHERE FOR CONDUIT SYSTEM IS TO BE ELECTRICALLY CONTINUOUS WHERE FOR CONDUIT SYSTEM IS TO BE ELECTRICALLY CONTINUOUS WHERE THE CONDUIT SYSTEM IS TO BE ELECTRICALLY CONTINUOUS WHERE FOR CONDUIT SYSTEM IS TO BE ELECTRICALLY CONTINUOUS WHERE FOR CONDUIT SYSTEM IS TO BE ELECTRICALLY CONTINUOUS WHERE FOR CONDUIT SYSTEM IS TO BE ELECTRICALLY CONTINUOUS WHERE FOR CONDUIT SYSTEM IS TO BE ELECTRICALLY CONTINUOUS WHERE FOR CONDUIT SYSTEM IS TO BE ELECTRICALLY CONTINUOUS WHERE FOR CONDUIT SYSTEM IS TO BE ELECTRICALLY CONTINUOUS OF THE CONDUIT SYSTEM IS TO BE ELECTRICALLY CONTINUOUS OF THE CONDUIT SYSTEM IS TO BE ELECTRICALLY CONTINUOUS OF THE CONDUIT SYSTEM IS TO BE ELECTRICALLY CONTINUOUS OF THE CONDUIT SYSTEM IS TO BE ELECTRICALLY CONTINUOUS OF THE CONDUIT SYSTEM IS TO BE ELECTRICALLY CONTINUOUS OF THE CONDUIT SYSTEM IS TO BE ELECTRICALLY CONTINUOUS OF THE CONDUIT SYSTEM IS TO BE ELECTRICALLY CONTINUOUS OF THE CONDUIT SYSTEM IS TO BE ELECTRICALLY CONTINUOUS OF THE CONDUIT SYSTEM IS TO BE ELECTRICALLY CONTINUOUS OF THE CONDUIT SYSTEM IS TO BE THE CONDUIT SYSTEM IN THE CONDUIT SYSTEM IN THE CONDUIT SYSTEM IS TO BE THE CONDUIT SYSTEM IN THE CONDUIT SYSTE

# THE CONDUIT SYSTEM, USE BONDING JUMPERS WITH APPROVED CLAMPD. E32\_TESTING. ALL MIRING AND CONNECTIONS SHALL BE TESTED FOR CONTINUITY, SHORTS AND IMPROPER OROUNDS IN ACCORDANCE WITH THE REQUIREMENTS OF THE NATIONAL ELECTRICAL CODE. ALL RECEPTAGE GUILLES SHALL SHALL BE TESTED FOR PROPER ROQUIDING, ANY AND ALL REPARKS RESULTING FROM HE TESTS OR PRELIMINARY OPERATION OF THE EQUIPMENT SHALL REPARKS RESULTING FROM HE TESTS OR PRELIMINARY OPERATION OF THE EQUIPMENT SHALL REPARKS RESULTING FROM HE TESTS OF PRELIMINARY OPERATION OF THE EQUIPMENT SHALL REPARKS RESULTING FROM HE TESTS OF THOSE REPRINCIPLY OF THE MACHITECT. 2. SERVICE AND FEEDER CONDUCTIONS INSULATION RESISTANCE. 3. GROUND FALL PROTECTION. 4. SUCH OTHER TESTS AS IN SEE REQUIRED BY THE MACHITECT. 4. SUCH OTHER TESTS AS IN THE PRINCIPLY CLAWNER THE SETS—LOWN TRANSFORMER TO PROVICE A SECONDARY FULL FRANCE OF THE SETS—LOWN TRANSFORMER TO PROVICE A SECONDARY FULL FRANCE OF THE PRINCIPLY ON THE MACHITECT ALL CONNECTIONS INVESTED HE MACHING. CONDUCTOR HE TESTS AS INDUSTRIES HE THE PROPERTY OF THE MACHITECT. CONDUCTOR SHOWED BOUNDED HE VOIL THE MACHITECT OF 120 MINIMAN TO 125 VOILTS MACHINE BOUNDED HE THE ALL CONNECTIONS INVESTED HE MACHING. CONDUCTOR HAVE BEEN AND TO THE LOW VOILTAGE PARKEDURED BY THE AUTHORITY HAVING JURISHING HET STETS THAT ARE REQUIRED BY THE AUTHORITY HAVING JURISHING HET STETS THAT ARE REQUIRED BY THE AUTHORY HAVING JURISHING HET STETS THAT ARE REQUIRED BY THE AUTHORY HAVING JURISH CULTUM REQUIRED BY STIMLE PRINCIPLES.

ELS.—CLEANIP.—

JUPON COMPLIAND OF THE WORK UNIES THIS SECTION. THE CONTRACTOR SMALL BEND CALL LIGHT US MATERIALS, COMPANY AND DEBRIS MEDICATAL, TO THIS WORK AND LEAVE THE REPORTS CLEAN AND GOBERTY. THE CONTRACTOR SMALL CLEAN ALL COUNTRACTOR SHORT CONTRACTOR SHALL CLEAN ALL COUNTRACTOR SHORT CONTRACTOR SHOTT CONTRACTOR SHORT CO

 $\overline{\Phi}$ O T  $\overline{\sigma}$ Ø I 0

## Suite Ashford, Dairy 3020

ઝ

en

 $\mathbf{m}$ 

ort

Shawn Kashou, Architect 20710 Shadow Mill CI Kaly, Texas 77450 Tel: 713 965 4470

### MEP Engineer: William K Hall & Co

Consulling Engineers 1901 Long Prairie Ad Suite 130 Flower Mound, TX 75022 Tel: 214 681 2179 Texas Firm Registration: # F-12258

Province and Specifications presented by Kashoo Architesture, size of the Concomitation, whether in sections or hard concellents, whether in sections or hard stage, are soppyingled leterturinests of Sardess of



Issued for:

Project No.	
TOTECT NO	

### ELECTRICAL SPECIFICATIONS AND LEGEND

F-4



Shawn Kashou, Architect 20710 Shadow Mill CI Kaly, Texas 77450 Tel: 713 , 965 4470

MEP Engineer: William K Hall & Co

Consulting Engineers 1901 Long Prairie Rd Suite 130 Flower Mound, TX 75022 Tel: 214 681 2179 Texas Firm Registration: # F-12258

Ormalius mai Specificolóm pracorad by Kanhas Architecture, his air thair consultants, airthine consultants, airthine is destabled or hard supe, are experigified furtherments of Service supe, are experigified furtherments of Service and Coolmats. Use of the indivinents of Service and Coolmats. Use of the indivinents of Service and Coolmats. One of the indivinents of Service and Coolmats. One of the indivinents of Service and Coolmats. One of the indivinents of the Coolmats of the Service and Coolmats of Service and Service an



Permit & Construction 11/f 4/2013

Project No.

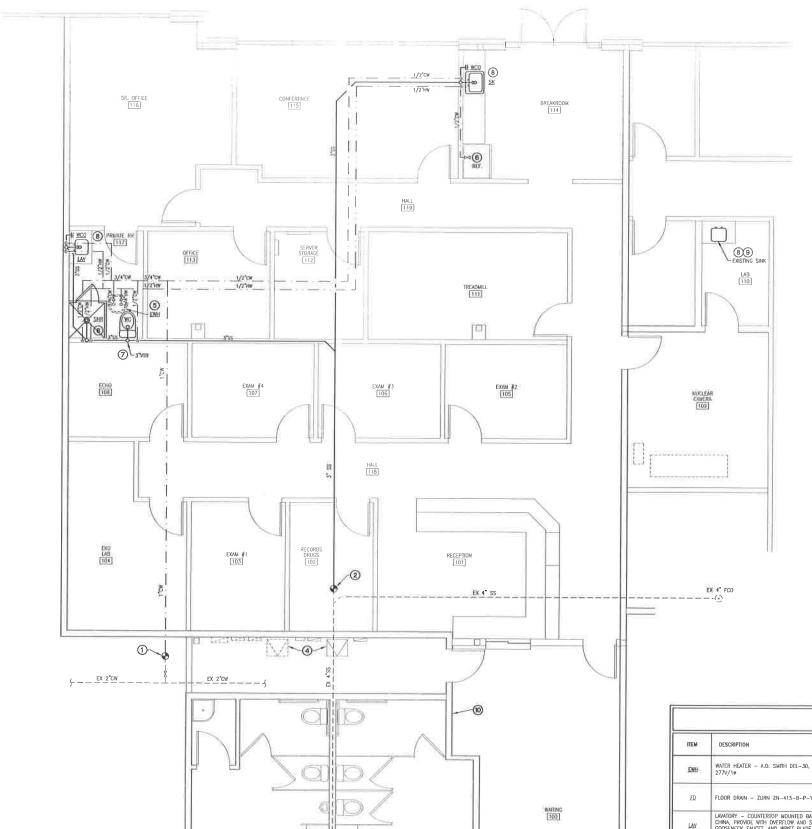
Dwg, Name

Issued for:

PLUMBING DOMESTIC WATER AND SANITARY PLAN

Dwg No

P-1



20

HELDCATED EWC (3)

PLUMBING FLOOR PLAN

### PLUMBING KEYED NOTES:

- OCCUPIED TO SHELL WATER UNE TO EXISTING WATER LINE OF EQUAL OR GREATER SIZE. CONTRACTOR SHALL VERBY EXACT WATER LINE LOCATION AND SIZE IN FIELD PRIDR TO BD. IF A CONFLICT EXISTS CONTRACTOR SHALL NOTIFY ARCHITECT BEFORE SUBMISSION OF BD.
- (2) APPROXIMATE LOCATION OF EXISTING 4" SANITARY SEWER. CONTRACTOR MUST WEBSTY EXACT LOCATION, DIRECTION OF SLOPE AND INVERT ELEVATION PHIOR TO CONSTRUCTION. NOTIFY CHONERER IF A CONFLICT EXISTS, ALL NEW TENANT SANITARY WASTE PIPING TO BE SLOPED AT 1/4" PER FOOT MINIMUM.
- (3) LOCATION FOR RELOCATED EWC. MAKE ALL CONNECTIONS AS REQUIRED. SEE NOTE \$10 FOR ADDITIONAL HARDWANTON. CONNECT NEW 1/2\*CW AND 2\*SS INTO EXISTING TOLET ROOM PLUMBING. VERRIFY EXACT LOCATIONS AND REQUIREMENTS IN FIELD PRIOR TO FINAL BID.
- 4 WATER LINES MUST NOT BE ROUTED ABOVE ELECTRICAL PANELS OR WITHIN THE WORKING SPACE OF ELECTRICAL PANELS AND TRANSFORMER.
- (5) WAITER HEATER ON PLATFORM WITH SECONDARY DRAWN PAN (SMITTY PAN). ROUTE SECONDARY DRAWN PAN LINE ALONG WITH TEMPERATURE AND PRESSURE RELEF LINE TO EXTENDE, HUB DRAW, OR CLOSEST APPROVED DISPOSAL SITE ALLOWED BY LOCAL AUTHORITY HAVING JURISDICTION.
- (6) 1/2" WATER SUPPLY FOR ICE MAKER. CONTRACTOR MUST SUPPLY BACKFLOW PREVENTER AND WATER FILTER AS SPECIFIED BY OWNER AND AS REQUIRED BY THE LOCAL AUTHORITY HAVING JURISDICTION.
- 3" SANITARY VENT THRU ROOF. CONTRACTOR MUST COORDINATE LOCATION WITH OWNER. VENT MUST BE A MINIMUM OF 10"-0" FROM ANY FRESH AIR MITMAGE. COORDINATE ROOF FENETRATION WITH OWNERS ROOFER TO MAINTAIN ROOFING WARRANTY WHERE APPLICABLE.
- (8) ALL SINKS AND SHOWERS MUST BE PROVIDE WITH A THERMOSTATIC MIXING VALVE PROVIDING TEMPERED WATER SET TO A MAXIMUM OF 110'F, DEVICE MUST CONFORM TO ASSE 1070, WHERE ALLOWED AS AN ALTERNATE METHOD OF CONTROL SET WATER HEALER TO A MAXIMUM OF 110'F.
- EXISTING SINK IN LAB TO REMAIN. NO MODIFICATIONS ARE REQUIRED. VERIFY CONDITION AND NOTIFY TENANT OF ANY DIFFICIENCIES.
- (0) EXISTING ELECTRIC WATER COOLER TO BE REMOVE AND REUSED. CONTRACTOR MUST USE CAME DURRING REMOVAL PROCESS FOR FUTURE REUSE. EXISTING WATER AND SANITARY PPING USET DE REMOVED AND CAPPER AS REQUIRED FOR NEW WAITING ROOM WALL FINISHES. SEE NOTE #11 FOR ADDITIONAL INFORMATION.

### PLUMBING GENERAL NOTES:

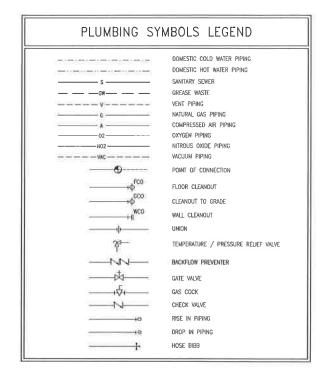
- CONTRACTOR IS RESPONSIBLE FOR FIELD VERIFICATION OF ALL CONDITIONS AND IS RESPONSIBLE FOR REPORTING ANY CONFLICTS TO THE ARCHITECT PRIOR TO THE START OF WORK.
- 2. "EXISTING" OR "VERIFY IN FIELD" MEANS THE CONTRACTOR IS TO CONFIRM THE ITEM SHOWN ON THE DRAWING EXISTS AND IS IN GOOD WORKING CONDITION, SHOULD THE CONTRACTOR TRID THE EQUIPMENT IS NOT AS SHOWN ON THESE DRAWINGS, IT IS TO BE INSTALLED AS REQUIRED TO PROVIDE THE TEMANT WITH A FOLLY FUNCTIONING SYSTEM AND AS REQUIRED IT ALL LOCAL COLDES AND THE LOCAL AUTHORITY HAVEN
- JURISDICTION.

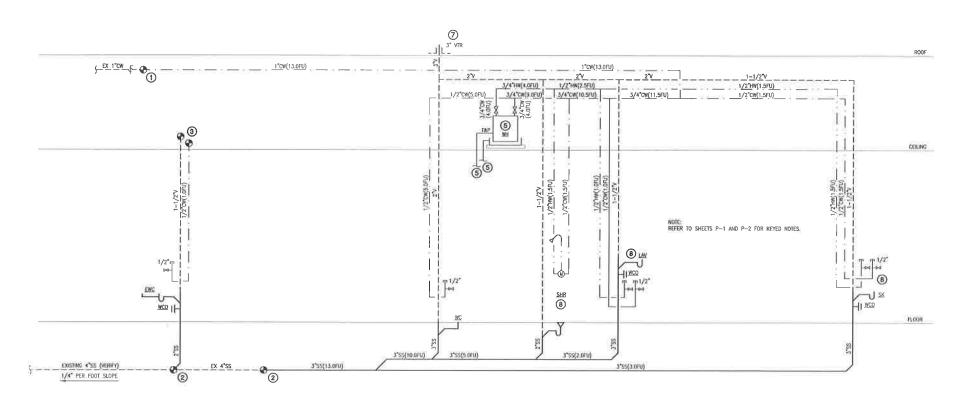
  3. COMPRIM THE EXACT LOCATION OF SEEVER LINE AND CONFIRM ADEQUATE INVERT ELEVATION IS AVAILABLE FOR SLOPE OF PLUMBING LINES SHOWN, SANITARY PIPING TO BE SLOPED AT THE MINIMUM AS REQUIRED BY TABLE 704.1 OF THE IPC UNLESS NOTED OTHERWISE,
- 4. ANY PENETRATION THRU OR TRENCHED IN CONCRETE FLOORS OR PARTITIONS SHALL BE SAW CUT OR CORE DRILLED.
- ANY PENETRATIONS THRU FIRE PATED PARTITIONS SHALL BE SEALED AS REQUIRED TO UPHOLD THE RATING OF THE PARTITION.
- THE PLUMBING CONTRACTOR SHALL NOT INSTALL EXPOSED PIPING ABOVE OR WITHIN THE CODE REQUIRED WORKING CLEARANCES OF ANY ELECTRICAL PANELBOARD OR SWITCHGEAR COORDINATE WITH ELECTRICAL CONTRACTOR.
- 7.º PLUMBING CONTRACTOR SHALL MAKE ALL FINAL CONNECTIONS TO OWNER SUPPLIED EQUIPMENT REQUIRING PLUMBING CONNECTIONS.
- $\theta_{\rm in}$  all tap fees, impact fees and public assessment fees are to be included in this contractors price,
- 9. CONTRACTOR IS REQUIRED TO CONTACT THE BUILDING LANDLORD FOR ANY ROOF WORK. IF LANDLORD REQUIRES A SPECIFIC ROOFING CONTRACTOR, IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO CONTACT, COROBINES AND PAY FOR ANY AND ALL ROOFING WORK WITH THE LANDLORDS ROOFING CONTRACTOR;
- 10 PROMOE CLEAN-OUTS AT THE ENDS OF RUNS
- 11. MAINTAIN MINIMUM OF 10'-0" HORIZONTAL DISTANCE BETWEEN PLUMBING ROOF JACKS (VENTS) AND FRESH AIR INTAKES OR OUTSIDE AIR INTAKES.
- 12. PROVIDE ISOLATION VALVES AT ALL FIXTURES.

	PLUMB	BING	FIXT	URE	SCH	EDU	LE
ITEM	DESCRIPTION	COLD WATER	HOT WATER	WASTE	TRAP	VENT	SPECIFICATIONS AND REMARKS
EWU	WATER HEATER - A.O. SMITH DEL-30, 3,000W INPUT, 30 GALLON: 277V/1¢	3/4"	3/4"	: 4-47		-	RSTALL WITH ANTROL EXPANSION TANK AND SMITTY PAR. TAP VALVE AND SMITTY PAN TO BRAIN TO FLOOR DRAIN OR HUB DRAIN BELOW. 100% SHUTGEF AT 110°F OUTPUT.
FD	FLOOR DRAIN - ZURN ZN-415-B-P-Y			PER PLAN	PER PLAN	PER PLAN	NICKEL TOP, 1/2" TRAP PRIMER CONNECTION. SIZE AS SHOWN ON DRAWINGS.
LAY	LAYATORY — COUNTERTOP MOUNTED BATHROOM SINK, VITREOUS CHIRA, PROVIDE WITH OVERFLOW AND SOAP DISPENSER HOLES, GOOSSENCE, FAUCET, AND WRIST BLAGE HANDLES. MANUFACTURER, MODEL, AND COLOR TO BE SELECTED BY TENANT.	1/2	1/2"	1-1/2*	1-1/4*	1-1/2*	INSULATE ALL EXPOSED DRAIN AND WATER PIPING UNDER LAWATORY WITH TRUEBRO MODEL \$10.2 (WHITE) OR EQUIVALENT, P TRAP CRID STRAINER & STOPS. ADA APPROVED. FURNISH WITH ALL FITTINGS, VALVES AND SUPPLIES TO COMPLETE INSTALLATION.
<u>sk</u>	ADA COMPLIANT STAINLESS STEEL BREAKROOM SINK AS DIRECTED BY TENANT,	1/2"	1/2"	1-1/2"	1-1/4*	1-1/2*	MODEL PER TENANT. WITH GOOSNECK SPOUT AND WRIST BLADE HANDLES WHERE REQUIRED BY TENANT.
SHR	SHOWER SHOWER HEAD, TRIM KIT AND VALVE BODY, COORDINATE DRAIN LOCATION WITH ARCHITECT WHERE SHOWER ENCLOSURE WILL BE USED, VERIFY ALL REQUIREMENTS WITH TENANT.	1/2"	1/2*	-	-	=	FURNISH WITH ALL FITTINGS, VALVES AND SUPPLIES TO COMPLETE INSTALLATION.
IMY	WATTS SERIES MMV - THERMOSTATIC MIXING VALVE WATTS SERIES MMV IS USTED UNDER ASSE 1017, 1069 AND 1070	1/2*	1/2-	-		==	CONSTRUCTED WITH BRONZE BODY, LOCKING CAP AND AGUISTMENT FEATURE. SET TEMPERATURE TO A MAXIMUM OF 110°F.
WC	WATER CLOSET FLUSH TANK — AMERICAN STANDARD \$2898.012 "CADET" 15" HEIGHT, SIDE TRIP LEVER, WHITE VITREOUS CHINA, ELONGATED, 1.6 GPF.	1/2"	=	4-	INTEGRAL	2"	PROVIDE WITH OLSONITE #95 SOLID PLASTIC OPEN FRONT SEAT, LESS COVER. FURNISH WITH ALL REQUIRED FITTINGS, VALVES AND SUPPLIES. SIDE TRIP LEVER ON SIDE OPPOSITE GRAB BAR.

NOTE: PLUMBING FIXTURES SPECIFIED ARE FOR REFERENCE ONLY. VERIFY FINAL FIXTURE SELECTIONS WITH TENANT AND ARCHITECT PRIOR TO ORDERING FIXTURES.

	PLUMBII	NG ABBRE\	/IATIONS
N/a	ABOVE CEILING	HB	HOSE BIBB/WALL HYDRANT
AFF	ABOVE FINISHED FLOOR	HW	HOT WATER
AHJ	AUTHORITY HAVING JURISDICTION	HWR	HOT WATER RETURN
B/F	BELOW FLOOR	LAV	LAVATORY
BFP	BACKFLOW PREVENTER	MBH	1000 BTU/HR
E	CENTER LINE	PRV	PRESSURE REDUCING VALVE
CO	CONDENSATE DRAW	RPBP	REDUCED PRESSURE ZONE BACKFLOW PREVENTER
ÇO	CLEANOUT	S	SANITARY
CW	COLD WATER	TP:	TRAP PRIMER
D	DRAIN	T & P	TEMPERATURE & PRESSURE
DN	DOWN	TYP	TYPICAL
EL	ELEVATION	UR	URINAL
EWC	ELECTRIC WATER COOLER	v	VENT
FC0	FLOOR CLEANOUT	VTR	VENT THROUGH ROOF
FD	FLOOR DRAIN	/W .	WASTE
FS	FLOOR SINK	WC	WATER CLOSET
G	GAS - LOW PRESSURE	wco	WALL CLEANOUT
GCO	GRADE CLEANOUT	UNO	UNLESS NOTED OTHERWISE







Shawn Kashou, Architect 20710 Shadow Mill Ct Kaly, Texas 77450 Tel: 713 , 965 4470

MEP Engineer: William K Hall & Co

Consulting Engineers 1901 Long Prairie Rd Suite 130 Flower Mound, TX 75022 Tol: 214 681 2179 Texas Firm Registration: # F-12258

Dressings and Specifications proposed by section Architecture, bit, so their sections of the section of the sec



Issued for:	
Permit & Construction	11/14/2013

PLUMBING RISER DIAGRAM

Dwg. No.

Dwg. Name

P-2

- P1 SCOPE:

  A THE CONTRACTOR SHALL PROVIDE ALL LABOR, MATERIALS, EQUIPMENT AND SERVICES REQUIRED TO COMPLETE THE INSTALLATION OF THE WORK OF THIS SECTION AS SHOWN ON THE DEAWNINGS AND DESCRIBED HEREIN, INCLUDING ALL INCIDENTIAL WORK NECESSARY TO MAKE IT COMPLETE, SATISFACTORY AND READY FOR OPERATION AND USE. MAKE READY FOR OWNERS USE COMPLETE PLUMBING SYSTEMS TO THE SATISFACTION OF THE OWNER, ARCHITECT AND MECHANICAL ENGINEER.

  B. THE CONTRACTOR SHALL FURNISH AND INSTALL ALL WORK NECESSARY TO MAKE A COMPLETE SYSTEM WHITHER OR NOT SUCH DETAILS ARE MENTIONED IN THESE SPECIFICATIONS AS SHOWN ON THE PLANS, BUT WHICH ARE OBNOUSLY NECESSARY TO MAKE A COMPLETE SYSTEM MENTIONS THAT ARE SPECIFICALLY MENTIONED HEREIN OR PLANNLY MENTIONED HEREIN OR PLANNLY MENTIONED HEREIN OR PLANNLY AND THE SECTION OF THE SPECIFICATIONS.

  C. BEFORE STARTING ANY WORK. THE CONTRACTOR FOR THIS SECTION OF THE SWITCH STATE OF THE SPECIFICATIONS.

  C. BEFORE STARTING ANY WORK. THE CONTRACTOR FOR THIS SECTION OF THE SPECIFICATIONS. FOR ALL TRADES, INCLUDING ARCHITECTURAL, STRUCTURAL, HAVE, ELECTRICAL, FIRE PROTECTION, AND PLUMBING, DIMENSIONS, SPACE REQUIREMENTS, AND POINTS OF CONNECTION TO ALL EQUIPMENT SHALL BE VERIFIED, AND ANY MINOR ADJUSTMENTS NECESSARY TO AVOID CONTRACTOR ICT WITH FAULDING STRUCTURE AND THE WORK SPALL EXAMINE SHEEDS AND PLUMBING STRUCTURE, AND ANY MINOR ADJUSTMENTS NECESSARY TO AVOID CONFICIC WITH THE BUILDING STRUCTURE AND THE WORK OF THE OTHER TRADES SHALL BE MADE. CONTRACTOR SHALL NOTIFY ARCHITECT IMMEDIATELY IF ANY MAJOR CONFLICTS OCCUR.

P2 — WORKMANSHIP:
ALL WORK SHALL BE PERFORMED BY COMPETENT MECHANICS USING PROPER TOOLS
AND EQUIPMENT TO PRODUCE FIRST—QUALITY WORK. ALL WORK SHALL BE NEATLY
INSTALLED, ACCESSIBLE FOR MAINTENANCE, COMPLETE WITH ALL ACCESSORIES
REQUIRED, AND MEETING THE APPROVAL OF THE OWNER AND THE ARCHITECT.

P3 — MATERIALS: ALL PRODUCTS, EQUIPMENT, MATERIALS, AND ACCESSORIES SHALL BE OF FIRST-LINE QUALITY, GRADE AND TYPE SHOWN ON THE DRAWINGS AND SPECIFIED, OR EQUIVALENTS ACCEPTED BY THE ARCHITECT OR ENGINEER IN WRITING.

P4 - SITE INSPECTION:
CONTRACTOR SHALL VISIT THE JOB SITE PRIOR TO SUBMITTING HIS BID AND FXAC CONTRACTOR SHALL VISIT THE JOB SITE PRIOR TO SUBMITTING HIS BID AND THOROUGHLY FAMILIARIZE HIMSELF WITH ALL EXISTING CONDITIONS AND EXACT NATURE OF THE WORK, THE DRAWINGS ARE ESSENTALLY DIAGRAMMATIC. SUBMISSION OF A BID ACKNOWLEDGES FULL RESPONSIBILITY FOR PRINSHINING A COMPLETE AND FUNCTIONAL SYSTEM. NO CHANCES IN CONTRACT WILL BE MADE TO ACCOMMODATE OR ALLOW EXTRA FUNDS FOR ANY OMISSION WHICH RESULTS FROM A FAILURE TO THOROUGHLY MAKE THE EXAMINATION.

P5 — CODES;
THE ENTIRE INSTALLATION SHALL CONFORM TO THE REQUIREMENTS OF THE LATEST APPLICABLE EDITION OF THE CODES, ORDINANCES AND REGULATIONS INTERPRETED BY THE LOCAL AUTHORITY HAVING JURISDICTION.

P6 — PERMITS:
THE CONTRACTOR SHALL OBTAIN AND PAY FOR ALL PERMITS, INSPECTIONS AND FEES.
COPIES OF ALL PERMITS AND INSPECTION REPORTS SHALL BE SUBMITTED TO THE
ARCHITECT.

PY — AS-EVULLS:
CONTRACTOR SHALL PROVIDE A COMPLETE SET OF AS-BUILTS TRANSPARENCIES WITH
ALL CHANGES NOTED THEREON AT THE COMPLETION OF THE PROJECT AND PRIOR TO
FINAL ACCEPTANCE AND PAYMENT. THESE DRAWINGS SHALL HAVE ALL INSTALLATIONS
REFERENCED BY DIMENSIONS TO A SET REFERENCE POINT OR POINTS,

PB — GUARANTEE:
CONTRACTOR SHALL UNCONDITIONALLY GUARANTEE ALL LABOR AND MATERIALS ON
ALL WORK AGAINST DEFECTS IN WORKMANSHIP AND MATERIALS FOR A PERIOD OF
ONE YEAR AFTER COMPLETION. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL
DAMAGE TO ANY PART OF THE PREMISES CAUSED BY COURPMENT INTRINSED AND DAMAGE TO ANY PART OF THE PREMISES CAUSED BY EQUIPMENT FURNISHED AND INSTALLED UNDER THIS SECTION OF THE SPECIFICATIONS FOR A PERIOD OF ONE (1) THAN ATTER DATE OF ACCEPTANCE OF HIS WORK. THE CONTRACTION SHALL ADJUST ALL VALVES, CONTROLS, VACUUM BREAKERS AND INCIDENTAL ITEMS AND SHALL LEAVE THE SYSTEM IN PERFECT OPPERATING CONDITION, THE CONTRACTOR SHALL FURNISH THE OWNER ALL MANUFACTURES' WRITTEN GUARANTEE OF MATERIALS AND EQUIPMENT, INCLUDING WATER HEATER WARRANTY REQUIREMENTS AND WATER STERILIZATION REPORT.

P9 — OPERATING MANUALS;

CONTRACTOR SHALL FURNISH THE OWNER WITH ALL OPERATING MANUALS AND MAINTENANCE INSTRUCTIONS FOR THE EQUIPMENT INSTALLED. MANUALS SHALL BE BOUNDED IN THREE RING LOOSE—LEAF BINDERS AND INDEXED BY PRODUCT TYPE. A SECTION WITHIN THE MANUAL SHALL INCLUDE THE MAME, TELEPHONE NUMBER AND ADDRESS OF ALL CONTRACTOR SHALL MAINTEN, AND EQUIPMENT INSTALLED TOGETHER WITH NAME, TELEPHONE NUMBER AND ADDRESS OF ALL CONTRACTORS OF THE PROJECT, PROVIDE 3 SETS OF MANUALS TO THE OWNER. CONTRACTOR SHALL AFFIX A MAINTENANCE LABELS TO ALL EQUIPMENT REQUIRING ROUTINE MAINTENANCE.

### PLUMBING SPECIFICATIONS

P10 — COORDINATION AND VERIFICATION:
THE DRAWINGS ARE DIAGRAMMATIC AND INTERDED TO SHOW SCOPE, THE
CONTRACTOR SHALL COORDINATE HIS WORK WITH OTHER TRADES TO PROVIDE THE
BEST ARRANGEMENT OF ALL DUCTS, PIPES, CONDUIT, ETC., THE LOCATION OF
EXISTING PIPING AND DUCTORY SHOWN IS APPROXIMATE, CONTROTOR SHALL
VENIEY THEIR LOCATION PRIOR TO BEGINNING WORK OF THIS SECTION AND
SHALL SHOWN OF THE SHALL S

- SECTION.

  A. THE EXACT LOCATION OF ALL PLUMBING EQUIPMENT SHALL BE VERIFIED WITH THE ARCHITECT AND STRUCTURAL ENGINEER PRIOR TO COMMENCE
- WITH INE ARCHITECT AND STRUCTURE CHARGEST AND CONDUIT
  OF WORK WRING, FUSED DISCONNECT SWITCHES AND CONDUIT
  REQUIREMENTS WITH THE ELECTRICAL CONTRACTOR. THESE ITEMS SHALL
  ALSO BE INSTALLED BY THE ELECTRICAL CONTRACTOR.

P11 — EXTERIOR OPENINGS:
COORDINATE LOCATIONS OF ALL EXTERIOR WALL AND ROOF OPENINGS WITH ALL
RELEVANT TRADES AND PROVIDE WATERTIGHT FLASHINGS WHEREVER PENETRATIONS
OCCUR. EXACT LOCATIONS AND SIZES MAY BE DEPENDENT UPON EQUIPMENT
SELECTIONS, COORDINATE SIZES AND LOCATIONS OF ALL OPENINGS WITH
APPROPRIATE EQUIPMENT REQUIREMENTS.

P12 — UNDER FLOOR PIPING EXCAVATION AND BACKFILLING:
ALL UNDER FLOOR PIPING SHALL BE INSTALLED IN CONJUNCTION WITH THE GENERAL
CONTRACTORS WORK SCHEDULE. NO UNDERGEOUND WORK SHALL BE COVERED OR
ENCLOSED UNTIL IT HAS BEEN INSPECTED AND TESTED. THE PLUMBING CONTRACTOR
SHALL DO THE NECESSARY TRENCHING, SIORING AND BACKFILLING REQUIRED TO
FUFILL HIS CONTRACT, BOTTOMS OF TRENCHES SHALL BE CUT TO GRADE ALL
OPENINGS AND STUB—UP FOR PLUMBING PIPING AND PIXTURES SHALL BE CAREFULLY
LOCATED AND COORDINATED, OTHERWISE, PLUMBING CONTRACTOR SHALL CUT NEW
OPENINGS AT HIS OWN EXPENSE. AND REIMBURSE OTHER SUBCONTRACTORS FOR
ANY DAMAGE DONE TO THEIR WORK.

ANT DAMAGE DONE TO THEIR WORK.

P14 — DOMESTIC COLD WATER AND HOT WATER PIPING:
ABOVE GRADE TYPE "L" COPPER, ASTM B-BB COLOR CODED AND BELOW GRADE
TYPE "K" COPPER, ASTM B-BB, COLD HARD DRAWN SEMILESS COPPER TUBING,
WATER PIPING SHALL BE ABOVE GROUND AS MUCH AS POSSIBLE EXCEPT TO
ISLANDS, ALL PIPE CONNECTIONS SHALL RISE ABOVE FLOOR IN INTERIOR WALLS,
NO CONNECTIONS UNDER FLOOR, WATER SUPPLY PIPE FITTINGS SHALL BE WROUGHT
COPPER, AMSI B16,22 AND CAST FITTINGS WITH NON-LEAD SOLDER JOINTS (100%
LEAD FREE). PIPING 4 IN, AND LARGER SHALL BE BELL AND SPIGOT CLASS 50
DUCTILE IRON PIPE CENTRIFUGALLY CAST, CEMENT-LINED INSIDE.

P14 — SANITARY SOIL WASTE AND VENT PIPING:
ABOVE AND BELOW SLAB WASTE AND VENT SHALL BE SCHEDULE 40 PVC SOIL PIPE
AND FITTINGS ASSEMBLED WITH SOLVENT CEMENT JOINTS, DEBURR PIPE AFTER
CUTTING, CLEAN PIPE AND FITTINGS WITH PURPLE PRIMER, PIPING 3" DIAMETER AND
SMALLER SHALL BE SLOPED AT A MINIMUM OF 1/4" (2X) PER FOOT, PIPING 4" IN
DIAMETER AND LARGER MAY BE SLOPED AT A MINIMUM OF 1/6" PER FOOT.
CONTRACTOR SHALL BID THE USE OF CAST IRON PIPING WHEN PVC 15 NOT ALLOWED
BY THE LOCAL AUTHORITY.

P15 — CLEANOUTS:
PROVIDE CLEANOUTS WHERE INDICATED AND REQUIRED. UNILESS OTHERWISE INDICATED, CLEANOUTS SHALL BE ACCESSIBLE WITH EXTENSIONS TO GRADE, TO OUTSIBE OF BUILDINGS, OR TO FLOORS ABOVE AS INDICATED OR REQUIRED, D NOT LOCATE CLEANOUTS IN PUBLIC LOBBIES AND PUBLIC CORRIDORS UNLESS APPROVED BY ARCHITECT. PURNISH AND INSTALL CLEANOUTS AT CHANGES IN DIRECTION, AND AS REQUIRED BY LOCAL ORDINANCE AND CODES.

P16 — INDIRECT AND CONDENSATE DRAINS:
HARD DRAWN, TYPE "M" OR "L" COPPER TUBE, ASTM B86 AND WROUCHT COPPER
FITTINGS, ANSI B16.22, SOLDER JOINT TYPE, OR PVC. COORDINATE CONDENSATE
TRAP INSTALLATION WITH AR CONDITIONING UNIT MANUFACTURER. ALL INTERIOR
CONDENSATE DRAIN PIPING SHALL BE INSULATED. DRAIN SHALL BE SLOPED AT A
MINIMUM OF 1%. DRAIN SHALL TERMINATE AT THE CLOSEST CODE APPROVED
DISPOSAL SITE.

P17 — VALVES:

EVERY PLUMBING FIXTURE SHALL BE INDEPENDENTLY VALVED, VALVES SHALL BE
MANDFACTURED BY MIBCO, HAMMOND, POWELL, STOCKHAM, WATTS OR EQUIVALENT
APPROVED BY THE ENGINEER. GATE VALVES SHALL CONFORM TO MSS—SP—BO FOR
BRONZE AND MSS—SP—70 FOR IRON, VALVES S'ANLL CONFORM TO MSS—SP—BO FOR
BRONZE AND MSS—SP—70 FOR IRON, VALVES S'ANLLER SHALL BE MIBCO
1—113 OR S—113 OR APPROVED EDUIVALENT. BALL VALVES SHALL HAVE CAST
BRONZE BODY, BLOWOUT PROOF STEMS, FULL SIZE PORT, 316 STAINLESS STEEL
IRIM, TEPLON SEAT AND SEAL AND THRUST WASHERS. VALVES 2" AND SMALLER
SHALL BE NIBCO T—585—70—66 OR APPROVED EQUIVALENT.

P16 - NATURAL CAS PIPING:
PIPE SHALL BE NEW SCHEDULE 40 BLACK STEEL CONFORMING TO ASTM
STANDARDS, WITH 150 LB, MIN, BLACK MALLEABLE IRON SCREWED FITTINGS AND
COUPLINGS. CAS PIPING INSTALLED UNDERGROUND SHALL BE PROTECTED FROM
CORROSION, MACHINE WRAPPED), CATE VALVES ONE INCK AND SMALLER SHALL BE
LEVER HANDLE TYPE WITH CHECK, ALL BRONZE, SCREWED, 1-1/4" AND LARGER
VALVES SHALL BE IRON BODY WITH BRONZE SQUARE TAR PLUG, PROVIDE
OPERATING WRENCH WHERE REQUIRED FOR EACH VALVE.

P19 SHOCK ABSORBERS:
FACTORY FABRICATED WITH STAINLESS STEEL CONSTRUCTION SIMILAR TO JOSAM NO.
75007 (IF REQUIRED BY LOCAL CODES), AIR CHAMBERS WILL NOT BE PERMITTED
AS A SUBSTITUTE FOR SHOCK ABSORBERS.

P20 — PIPE HANGERS AND SUPPORTS:
HOLD HORIZONTAL PIPE RUNS FIRMLY IN PLACE USING APPROVED STEEL AND IRON HANGERS, SUPPORTS, AND/OR PIPE RESTS UNLESS OTHERWISE INDICATED, SUSPEND HANGER RODS FROM CONCRETE INSERTS OF FROM APPROVED BRACKETS, CLAMPS OR CUPS. HANG PIPES INDIVIDUALLY OR IN GROUPS IF SUPPORTING STRUCTURE IS ADEQUATE TO SUPPORT WEIGHT OF PIPING AND FLUID, EXCEPT FOR BURIED PIPING, HANG OR SUPPORT PIPE RUNS SO THAT THEY MAY EXPAND OR CONTRACT FREELY WITHOUT STRAIN TO PIPE OR EQUIPMENT, HANGERS SHALL BE SUPPLIED WITH FACTORY INSTALLED ISOLATION AND DI-CHROMATE FINISH.

P21 — INSULATION:
ALL HOT AND COLD DOMESTIC WATER LINES, LAVATORY DRAINS, SINK AND
CONDENSATE DRAINS TO BE INSULATED WITH 1/2" FIBERGLASS MOLDED PIPE
COVERING ABOVE AND BELOW GRADE, HOT WATER PIPING SHALL BE INSULATED AS
REQUIRED BY THE ENERGY CODE AND THE AUTHORITY HAVING JURISDICTION.

P22 TRAP FRIMERS.
WHERE SHOWN ON THE DRAWINGS OR REQUIRED BY THE LOCAL PLUMBING CODE,
INSTALL AUTOMATIC TRAP PRIMERS ON COLD WATER SUPPLY AT NEAREST FIXTURE
AND RUN DRAIN TO TRAP SEAL BEING PROTECTED. PROVIDE ARCHITECT APPROVED
ACCESS PANELS WHEN PRIMERS ARE INSTALLED IN WALLES.

P23 — ROOF FLASHING: SANITARY VENT FLASHINGS: SEMCO 1100-3 OR 1100-5, WITH ONE-PIECE LEAD FLASHING AND COUNTER FLASHING SLEEVE, OTHER PIPE THROUGH ROOF FLASHING: SEMCO 1100-2 OR 1100-4, ONE-PIECE 4 LB, LEAD FLASHING AND COUNTER FLASHING SLEEVE.

P24 - WATER STERILIZATION:
BEFORE ANY USE OF THE SYSTEM IS MADE FOR DOMESTIC PURPOSES, IT SHALL BE
STERILIZED WITH APPROVED AGENTS. THE LINE IS THEN FLUSHED OUT UNTIL ALL
TRACES OF CHEMICAL HAVE BEEN REMOVED.

P25 - TESTING AND INSPECTION:

THE ENTIRE PLUMBING SYSTEM INCLUDING ALL SEWER, GAS, WATER, WASTE AND VENT PIPING SHALL BE TESTED BEFORE COVERING, ENCLOSING OR INSULATING TO THE SATISFACTION OF THE ARCHITECT AND LOCAL BUILDING INSPECTOR. THE WATER USED FOR THESE TESTS SHALL BE OBTAINED FROM A PORTABLE SOURCE OF SUPPLY IF REQUIRED. WORK SHALL BE INSPECTED FOR COMPLIANCE WITH CODES, ORDINANCES, REGULATIONS AND ADHERENCE TO CONTRACT DOCUMENTS. PLUMBING CONTRACTOR SHALL SUPPLY OWNER WITH SIGNED FORMS OR PROOF OF ACCEPTANCE BY THE LOCAL AUTHORITY BEFORE CONTINUING FROM ONE STAGE TO ANOTHER. FINAL APPROVAL SHALL BE OBTAINED BEFORE FINAL PAYMENT IS MADE ON THE CONTRACT.

P26 — CLEANUP: UPON COMPLETION OF THE WORK UNDER THIS SECTION. THE CONTRACTOR SHALL REMOVE ALL SURPLUS MATERIALS, EQUIPMENT AND DEBRIS INCIDENTAL TO THIS WORK AND LEAVE THE PREMISES CLEAN AND ORDERLY.

WATER HEATER INSTALLATION SHALL MEET THE REQUIREMENTS OF SECTION 504 OF THE IECC. S.O.V. (TYP.) = AUTOMATIC AIR VENT -HEAT TRAP (TYP.) UNION (TYP.) ASME PRESS & TEMP, VALVE DRAIN COCK DRAIN PAN TO DRAIN TO 3/4" PRESSURE & TEMP DRAIN PIPE INTO THE CLOSEST CODE APPROVED DISPOSAL SITE AS PER PLUMBING CODE (SEE PLUMBING PLAN)

4 ELECTRIC WATER HEATER DETAIL

Previous and Spatilizations programs by Kosinos Artificiators, inc. or their consultation, another in effectively for the consultation, and within the effective or hard copy, are copyrighted instruments in Service the physical orders provided in these decrements. Use of the instruments of the said for progress of consultation, who provided this way to be a said for progress of consultation, who can be said to be a said for progress of consultation, which was the said of the said for progress of consultation, and the said of the THE MERCE

Permit & Construction	11/14/201
-	
-	

Center

eart

Ĭ

end

 $\mathbf{\Omega}$ ort

ш

Shawn Kashou, Architect

Texas Firm Registration: # F-12258

20710 Shadow Mill Ct Katy, Texas 77450

Tel: 713 : 965 4470

Consulting Engineers 1901 Long Prairie Rd Suite 130 Flower Mound, TX 75022 Tel: 214 681 2179

MEP Engineer William K Hall & Co

101

Suite

Ashford,  $\succeq$ 

Dairy

13020

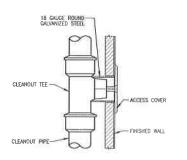
Land,

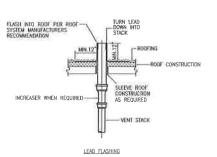
Sugar

Dwg Name PLUMBING SPECIFICATIONS AND **DETAILS** 

Dwg. No.

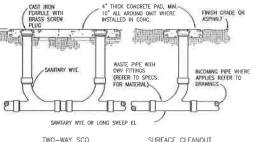
P-3











TWO-WAY SCO SURFACE CLEANOUT NOTE: ALL CLEANOUT LOCATIONS SHALL BE VERIFIED WITH ARCHITECT PRIOR TO

GRADE/SURFACE CLEANOUT DETAIL