

FIRE ALARM SYSTEMS
PRELIMINARY APPROVAL
INITIAL NS DATE 1/23/13

FINAL APPROVAL SUBJECT TO SUBMITTAL OF FIRE ALARM WORKING DRAWINGS SUBMITTED BY A CERTIFIED FIRE ALARM CONTRACTOR. NO FIRE ALARM WORK SHALL COMMENCE WITHOUT THE ISSUANCE OF A FIRE ALARM PERMIT. FIRE ALARMS SHALL COMPLY WITH CHAPTER 9 OF THE HOUSTON BUILDING CODE.

All Insulation in Walls to be 25 Flame Spread - 450 Smoke Development
Ceilings Used as Return Air Plenum
25 Flame Spread - 50 Smoke Development.

SPECIAL INSPECTIONS AS PER SECTION 1704 OF IBC REQUIRED FOR

- STEEL CONSTRUCTION PER TABLE 1704-3
- CONCRETE CONSTRUCTION PER TABLE 1704-4
- MASONRY CONSTRUCTION PER TABLE 1704-5.1 & 1704-5.3
- SOILS
- PILE FOUNDATION
- SPRAYED FIRE RESISTANT MATERIALS
- EXTENSION INSULATION AND FINISH SYSTEMS (EIFS)
- SMOKE CONTROL
- SPECIAL CASES

CODE INFORMATION:

PROJECT NAME: NORTH MAIN ADMINISTRATION BUILDING
PROJECT LOCATION: 9003 NORTH MAIN HOUSTON, TX 77018

APPLICABLE CODES:

- 2006 INTERNATIONAL BUILDING CODE
- 2006 INTERNATIONAL FIRE CODE
- 2006 UNIFORM MECHANICAL CODE
- 2006 UNIFORM PLUMBING CODE
- 2008 NATIONAL ELECTRICAL CODE
- 2008 HOUSTON COMMERCIAL ENERGY CONSERVATION CODE
- SIGN CODE
- TDLR ELIMINATION OF ARCHITECTURAL BARRIERS
- COH AMENDMENTS AS APPLICABLE TO EACH CODE

OCCUPANCY TYPE

PRIMARY OCCUPANCY TYPE GROUP B - BUSINESS

TYPE OF CONSTRUCTION

ALLOWABLE BUILDING AREA 23,000 SF
ALLOWABLE AREA PER FLOOR (TABLE 503) 6,830 SF

ALLOWABLE BUILDING HEIGHT 4 STORIES
ACTUAL 1 STORIES

FIRE PROTECTION REQUIRED (TABLE 601)

EXTERIOR BEARING WALLS	0
INTERIOR BEARING WALLS	0
NON BEARING WALLS EXTERIOR	0
NON BEARING WALLS INTERIOR	0
STRUCTURAL FRAME	0
FLOORS	0
ROOFS	0
EXTERIOR DOORS AND WINDOWS	UNLIMITED UNPROTECTED WINDOWS

NON SPRINKLED

BUILDING ENVELOPE INSULATION VALUES

ROOF INSULATION R-26
EXTERIOR WALL INSULATION R-16
GLAZING U-FACTOR = 0.28 SHGC = 0.27

NOTICE

THIS PLAN MUST BE KEPT ON JOB FOR ALL CITY INSPECTIONS.

A SEPARATE PERMIT IS REQUIRED FOR SIDEWALK - CURB AND GUTTER, DRIVEWAY, PLUMBING, AIR CONDITIONING, ELECTRICAL, SWIMMING POOLS, ELEVATORS AND SIGNS.

BUILDING PERMIT FOR THIS STRUCTURE IS ISSUED ON THE CONDITION THAT THE FINISHED FLOOR OF THE BUILDING IS NOT LESS THAN TWELVE INCHES (12") ABOVE THE NEAREST MANHOLE OR WHERE NO SEWER IS AVAILABLE THE FINISHED FLOOR SHALL NOT BE LESS THAN FOUR INCHES (4") ABOVE THE CROWN OF THE STREET AND IN ALL INSTANCES AT OR ABOVE THE PROJECTED 100 YEAR BASE FLOOD ELEVATION, IF APPLICABLE.

APPROVED FOR BUILDING PERMIT ONLY
CITY OF HOUSTON
CODE ENFORCEMENT DIVISION

The owner is responsible for compliance with the Building Code. Such approved plans and specifications shall not be changed, modified or altered without authorizations from the building official, and all work shall be done in accordance with the approved plans.

2 3 JAN 2013 NO. 351

C5 CODE INFORMATION
N.T.S.

Glazing in Hazardous Locations Shall Comply with Section-R308 of I.R.C. for One and Two Family Dwellings OR Section-2406 of I.B.C. for Commercial Construction.

LEGEND

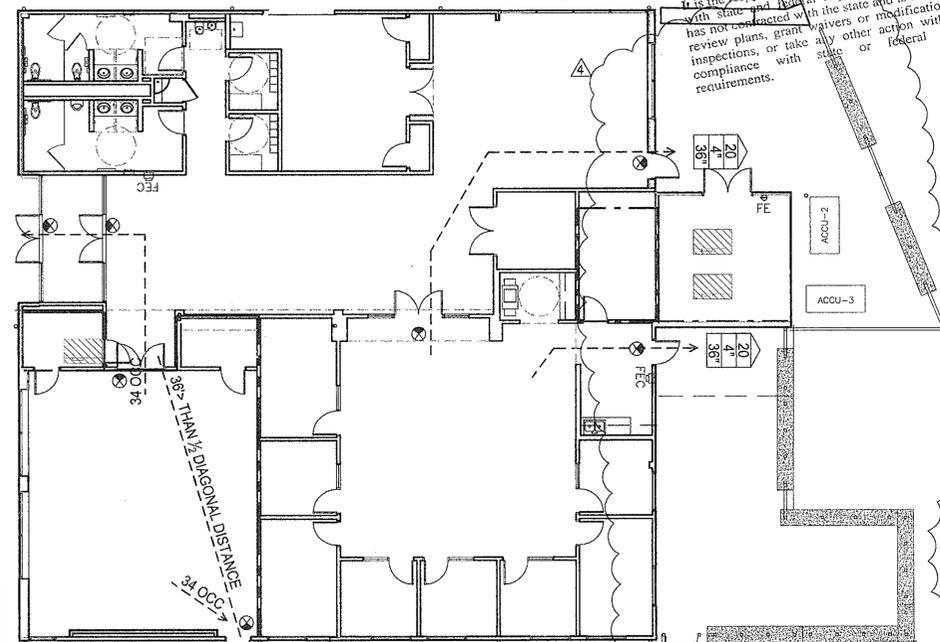
- > EGRESS PATH
- 1-HR FIRE RATED PARTITION
- 2-HR FIRE RATED PARTITION
- ⊗ EXIT SIGN
- FEC FIRE EXTINGUISHER CABINET
- FE FIRE EXTINGUISHER
- XX DESIGN OCCUPANT LOAD
- X" REQUIRED EXIT WIDTH
- X" PROVIDED EXIT WIDTH

EGRESS CALCULATION

AREA	BUSINESS
OCCUPANTS	124
EGRESS WIDTH PER OCCUPANT	.2"
EGRESS WIDTH REQUIRED	24.8"
EGRESS WIDTH PROVIDED	180"

OCCUPANT LOAD TABLE

	AREA	OCCUPANCY LOAD FACTOR	OCC COUNT
BUSINESS (OFFICES)	5602 SF	100	56
ASSEMBLY (MEETING ROOM)	1028 SF	15	68



ACCESSIBILITY
It is the responsibility of the owner to ensure compliance with state and federal requirements. This jurisdiction has not been granted with the state and is not authorized to review plans, grant waivers or modifications, perform inspections, or take any other action with respect to compliance with state or federal accessibility requirements.

Notice
All paving installed over a utility easement shall have construction joints or saw cuts along the entire easement line of the encroachment and traverse the easement at intervals ≤ 10 feet.

SIGN ADMINISTRATION APPROVAL REQUIRED FOR ALL COMMERCIAL SIGNS. SEPARATE PERMIT REQUIRED.

A5 EXITING DIAGRAM
N.T.S.

WED 1/23/13
FOR ALL CITY PERMITTED FOR NO. 376

ISSUE LOG

NO.	DATE	DESCRIPTION
1	02/28/12	Issue for Bid & Construction
2	05/21/12	Addendum #2
3	06/08/12	Rider Update
4	01/07/13	Permit Modifications

CONSULTANT(S):

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STRUCTURAL ENGINEER
SIGMA ENGINEERING SERVICES
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SEAL(S):



PROJECT NAME:
CITY OF HOUSTON
9003 N. MAIN ADMINISTRATION BLDG RENOVATION

CITY OF HOUSTON
GENERAL SERVICES DEPARTMENT

REVIEWED:

PROGRAM MANAGER _____ SPONSORING DEPARTMENT _____

PROJECT MANAGER _____

Rdlr ARCHITECTS
ARCHITECTURE | PLANNING | INTERIORS
1245 West 18th Street Houston, Texas 77008
phone 713.868.3121 www.rdlr.com

DATE: 06/17/10
WBS No: L-000054-0001-4
SCALE: [AS NOTED]
DRAWN BY: _____
CHECKED BY: _____

SHEET TITLE:

CODE INFORMATION

SHEET NO.:

G0.01
3 OF 56 SHEETS

CITY DWG. NO.:

13001358 REVISION

4.2 SPACE ALLOWANCES AND REACH RANGES

TAS SECTIONS 4.2.1 - WHEELCHAIR PASSAGE WIDTH
A. THE MINIMUM CLEAR WIDTH FOR SINGLE WHEELCHAIR PASSAGE SHALL BE 32" AT A POINT AND 36" CONTINUOUSLY
TAS SECTIONS 4.2.2 - WIDTH FOR WHEELCHAIR PASSING
A. THE MINIMUM CLEAR WIDTH FOR TWO WHEELCHAIRS TO PASS IS 60"
TAS SECTIONS 4.2.4.1 - SIZE AND APPROACH
A. MINIMUM CLEAR FLOOR SPACE FOR A WHEELCHAIR AND OCCUPANT SHALL BE 30" WIDE X 48" LONG. CLEAR FLOOR SPACE SHALL BE CENTERED ON THE ELEMENT IT SERVES.

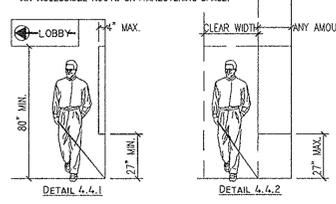
4.3 ACCESSIBLE ROUTE

TAS SECTIONS 4.3.2 - LOCATION
A. AT LEAST ONE ACCESSIBLE ROUTE SHALL BE PROVIDED FROM PUBLIC TRANSPORTATION STOPS, ACCESSIBLE PARKING AND LOADING ZONES, AND PUBLIC STREETS OR SIDEWALKS TO THE ACCESSIBLE BUILDING ENTRANCE.
TAS SECTIONS 4.3.3 - WIDTH
A. THE MINIMUM CLEAR WIDTH OF AN ACCESSIBLE ROUTE SHALL BE 36" EXCEPT AT DOORS.

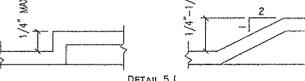
TAS SECTIONS 4.3.4 - PASSING SPACE
A. IF AN ACCESSIBLE ROUTE IS LESS THAN 60" IN WIDTH, THEN PASSING SPACES OF AT LEAST 60"x60" SHALL BE PROVIDED AT 200' MAX. SPACING.
TAS SECTIONS 4.3.5 - HEAD ROOM
A. ACCESSIBLE ROUTES SHALL HAVE 80" MIN. CLEAR HEAD ROOM.

TAS SECTIONS 4.3.7 - SLOPE
A. RUNNING SLOPE SHALL NOT EXCEED 1:20. (IF SLOPE EXCEEDS 1:20, REFER TO SECTION 4.8)
B. CROSS SLOPE SHALL NOT EXCEED 1:50

4.4 PROTRUDING OBJECTS (REFERENCE DETAIL 4.4.1 & 4.4.2)
TAS SECTIONS 4.4.1 - GENERAL
A. OBJECTS PROJECTING FROM WALLS (FOR EXAMPLE, TELEPHONES) WITH THEIR LEADING EDGES BETWEEN 27"-80" ABOVE THE FINISHED FLOOR SHALL PROTRUDE NO MORE THAN 4" INTO WALKS, HALLS, CORRIDORS, PASSAGEWAYS, OR AISLES. OBJECTS MOUNTED WITH THEIR LEADING EDGES AT OR BELOW 27" ABOVE THE FINISHED FLOOR MAY PROTRUDE ANY AMOUNT. FREE-STANDING OBJECTS MOUNTED ON POSTS OR PILDS MAY OVERHANG 12" MAXIMUM FROM 27"-30" ABOVE THE GROUND OR FINISHED FLOOR. PROTRUDING OBJECTS SHALL NOT REDUCE THE CLEAR WIDTH OF AN ACCESSIBLE ROUTE OR MANEUVERING SPACE.



4.5 GROUND AND FLOOR SURFACES
TAS SECTIONS 4.5.2 - CHANGES IN LEVEL (REFERENCE DETAIL 5.1)
A. CHANGES IN LEVEL UP TO 1/4" MAY BE VERTICAL AND WITHOUT EDGE TREATMENT
B. CHANGES IN LEVEL BETWEEN 1/4" AND 1/2" SHALL BE BEVELED WITH A SLOPE NO GREATER THAN 1:2.



TAS SECTIONS 4.5.3 - CARPET
A. CARPET PROVIDED ON A FLOOR SURFACE SHALL BE SECURELY ATTACHED; HAVE A FIRM PAD OR BACKING, OR NO PAD; AND HAVE A LEVEL LOOP, TEXTURED LOOP, LEAD CUT PILE, OR LEVEL CUT/UNCUT PILE TEXTURE. MAXIMUM PILE THICKNESS SHALL BE 1/2". EXPOSED EDGES OF CARPET SHALL BE FASTENED TO FLOOR SURFACES AND HAVE TRIM ALONG THE EXPOSED EDGES.

TAS SECTIONS 4.5.4 - GRATINGS
A. IF GRATINGS ARE LOCATED IN WALKING SURFACES OR ALONG ACCESSIBLE ROUTES, THEN THEY SHALL HAVE SPACES NO GREATER THAN 1/2" WIDE IN ONE DIRECTION.
B. IF GRATINGS HAVE ELONGATED OPENINGS, THEN THEY SHALL BE PLACED SO THAT THE LONG DIMENSION IS PERPENDICULAR TO THE DOMINANT DIRECTION OF TRAVEL.

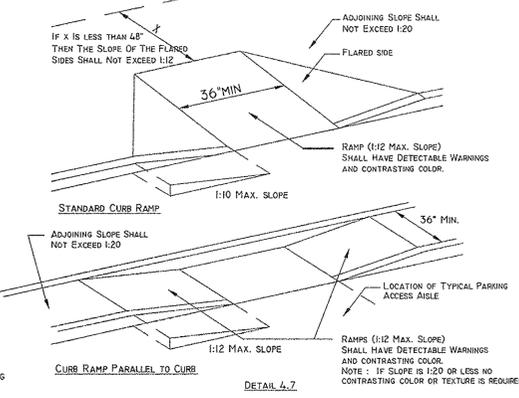
4.6 PARKING AND PASSENGER LOADING ZONES
TAS SECTIONS 4.6.3 - PARKING SPACES
A. ACCESSIBLE PARKING SHALL BE AT LEAST 96" WIDE.
B. PARKING ACCESS AISLES SHALL BE 60" WIDE. VAN ACCESSIBLE ACCESS AISLES SHALL BE 96" WIDE.
C. SURFACE SLOPE SHALL NOT EXCEED 1:50 IN ALL DIRECTIONS (NOTE: NO BUILT UP CURB RAMP MAY BE LOCATED IN AN ACCESSIBLE PARKING ACCESS AISLE).

TAS SECTIONS 4.6.4 - SIGNAGE
A. EACH ACCESSIBLE PARKING SPACE MUST HAVE INDIVIDUALLY MOUNTED OR SUSPENDED SIGN. REQUIRED VAN ACCESSIBLE SPACES MUST BE DESIGNATED.
A. CHARACTERS AND SYMBOLS ON SUCH SIGNS SHALL BE LOCATED 60" MINIMUM ABOVE THE GROUND.
B. SIGNAGE LOCATED WITHIN AN ACCESSIBLE ROUTE SHALL BE LOCATED 80" MIN. ABOVE THE WALKING SURFACE.

TAS SECTIONS 4.6.5 - VERTICAL CLEARANCE
A. PROVIDE MINIMUM VERTICAL CLEARANCE OF 114" AT ACCESSIBLE PASSENGER LOADING ZONES AND ALONG AT LEAST ONE VEHICLE ACCESS ROUTE FROM SITE ENTRANCES AND EXITS.
TAS SECTIONS 4.6.6 - PASSENGER LOADING ZONE
A. PASSENGER LOADING ZONES SHALL PROVIDE AN ACCESS AISLE AT LEAST 60" WIDE AND 20 FT LONG ADJACENT AND PARALLEL TO THE VEHICLE PULL-UP SPACE. IF THERE ARE CURBS BETWEEN THE ACCESS AISLE AND THE VEHICLE PULL-UP SPACE, THEN A CURB RAMP COMPLYING WITH 4.7 SHALL BE PROVIDED. VEHICLE STANDING SPACES AND ACCESS AISLES SHALL BE LEVEL WITH SURFACE SLOPES NOT EXCEEDING 1:50 IN ALL DIRECTIONS.

4.7 CURB RAMPS

TAS SECTIONS 4.7.2 - SLOPE (REFERENCE DETAIL 4.7)
A. SLOPES OF CURB RAMPS SHALL COMPLY WITH 4.8.2.
B. MAXIMUM SLOPES OF ADJOINING GUTTERS, ROAD SURFACE IMMEDIATELY ADJACENT TO THE CURB RAMP, OR ACCESSIBLE ROUTE SHALL NOT EXCEED 1:20.
TAS SECTIONS 4.7.3 - WIDTH (REFERENCE DETAIL 4.7)
A. THE MINIMUM WIDTH OF A CURB RAMP SHALL BE 36", EXCLUSIVE OF FLARED SIDES.
TAS SECTIONS 4.7.5 - SIDES OF CURB RAMPS (REFERENCE DETAIL 4.7)
A. IF A CURB RAMP IS LOCATED WHERE PEDESTRIANS MUST WALK ACROSS THE RAMP OR WHERE IT IS NOT PROTECTED BY HANDRAILS OR GUARDRAILS, IT SHALL HAVE FLARED SIDES. THE MAXIMUM SLOPE OF THE FLARE SHALL BE 1:10



TAS SECTIONS 4.7.10 - DIAGONAL CURB RAMPS
A. IF DIAGONAL CURB RAMPS HAVE RETURNED CURBS OR OTHER WELL-DEFINED EDGES, SUCH EDGES SHALL BE PARALLEL TO THE DIRECTION OF PEDESTRIAN FLOW. THE BOTTOM OF DIAGONAL CURB RAMPS SHALL HAVE 48" MINIMUM CLEAR SPACE. IF DIAGONAL CURB RAMPS ARE PROVIDED AT MARKED CROSSINGS, THE 48" CLEAR SPACE SHALL BE WITHIN THE MARKINGS. IF DIAGONAL CURB RAMPS HAVE FLARED SIDES, THEY SHALL ALSO HAVE AT LEAST A 24" LONG SEGMENT OF STRAIGHT CURB LOCATED ON EACH SIDE OF THE CURB RAMP AND WITHIN THE MARKED CROSSING.

TAS SECTIONS 4.7.11 - ISLANDS
A. ANY RAISED ISLANDS IN CROSSINGS SHALL BE CUT THROUGH LEVEL WITH THE STREET OR CURB RAMPS AT BOTH SIDES AND A LEVEL AREA AT LEAST 48" LONG BETWEEN THE CURB RAMPS IN THE PART OF THE ISLAND INTERSECTED BY THE CROSSINGS.

4.8 RAMPS
TAS SECTIONS 4.8.1 - GENERAL
A. ANY PART OF AN ACCESSIBLE ROUTE WITH A SLOPE GREATER THAN 1:20 SHALL BE CONSIDERED A RAMP AND SHALL COMPLY WITH 4.8
TAS SECTIONS 4.8.2 - SLOPE AND RISE
A. THE LEAST POSSIBLE SLOPE SHALL BE USED FOR ANY RAMP. THE MAXIMUM SLOPE OF A RAMP IN NEW CONSTRUCTION SHALL BE 1:12. THE MAXIMUM RISE FOR ANY RUN SHALL BE 30".
TAS SECTIONS 4.8.3 - CLEAR WIDTH
A. THE MINIMUM CLEAR WIDTH OF A RAMP 30 FT OR LESS IN LENGTH SHALL BE 36". RAMPS MORE THAN 30 FT. IN LENGTH SHALL HAVE A MINIMUM CLEAR WIDTH OF 44".
TAS SECTION 4.8.4 - LANDINGS
A. LEVEL LANDINGS REQUIRED AT TOP AND BOTTOM OF EACH RUN, WITH THE FOLLOWING FEATURES:
1. MINIMUM WIDTH: EQUAL TO WIDTH OF RAMP
2. LENGTH: MINIMUM 60" CLEAR
3. AT CHANGE OF DIRECTION LANDING SHALL BE 60" X 60" MIN.

TAS SECTION 4.8.5 - HANDRAILS
A. HANDRAILS ARE REQUIRED AT ALL RAMPS WITH > 6" RISE.
B. HEIGHT: 34"-38" ABOVE RAMP SURFACE
C. THE CLEAR SPACE BETWEEN THE HANDRAIL AND THE WALL SHALL BE 1-1/2".
TAS SECTIONS 4.8.7 - EDGE PROTECTION
A. RAMPS AND LANDINGS WITH DROP OFF'S SHALL HAVE CURBS, WALLS, RAILINGS, OR PROTECTING SURFACES THAT PREVENT SLIPPING OFF THE RAMP. CURBS SHALL BE A MINIMUM OF 2" HIGH.

4.9 STAIRS
TAS SECTIONS 4.9.2 - TREADS AND RISERS
A. ALL STEPS ON A FLIGHT OF STAIRS SHALL HAVE UNIFORM RISER HEIGHTS AND TREAD WIDTHS
1. MINIMUM TREAD DEPTH SHALL BE 11", MEASURED FROM RISER TO RISER (NOT INCLUDING NOSING)
2. OPEN RISERS ARE NOT PERMITTED
TAS SECTION 4.9.4 - HANDRAILS
A. NON-CONTINUOUS HANDRAILS SHALL EXTEND 12" BEYOND THE TOP RISER AND 12" PLUS THE WIDTH OF ONE TREAD BEYOND THE BOTTOM RISER. AT THE TOP, THE EXTENSION SHALL BE PARALLEL TO THE FLOOR. AT THE BOTTOM, THE HANDRAIL SHALL CONTINUE TO SLOPE FOR A DISTANCE OF ONE TREAD WIDTH (11"), THE REMAINING EXTENSION SHALL BE HORIZONTAL.
B. HEIGHT: 34" - 38", MEASURED FROM THE STAIR NOSING.

4.10 ELEVATORS
TAS SECTIONS 4.10.3 - HALL CALL BUTTONS
A. SHALL BE CENTERED 42" ABOVE FLOOR
TAS SECTIONS 4.10.4 - HALL LANTERNS
A. VISIBLE SIGNALS SHALL HAVE THE FOLLOWING FEATURES:
1. FIXTURES SHALL BE MOUNTED WITH CENTERLINE AT LEAST 72" ABOVE THE LOBBY FLOOR
2. VISUAL ELEMENTS SHALL BE AT LEAST 2-1/2" IN THE SMALLEST DIMENSION

TAS SECTIONS 4.10.5 - RAISED AND BRAILLE CHARACTERS ON HOISTWAY ENTRANCES

A. ALL ELEVATOR HOISTWAY ENTRANCES SHALL HAVE RAISED AND BRAILLE FLOOR NO. DESIGNATIONS PROVIDED ON BOTH JAMBS. CENTERLINE OF THE CHARACTERS SHALL BE 60" ABOVE THE FLOOR. CHARACTERS SHALL BE 2" HIGH.
TAS SECTIONS 4.10.6 - DOOR PROTECTIVE AND REOPENING DEVICE
A. ELEVATOR DOORS SHALL OPEN AND CLOSE AUTOMATICALLY. THEY SHALL BE PROVIDED WITH A REOPENING DEVICE THAT WILL STOP AND REOPEN A CAR DOOR AND HOISTWAY DOOR AUTOMATICALLY IF THE DOOR BECOMES OBSTRUCTED BY AN OBJECT OR PERSON.

TAS SECTIONS 4.10.12 - CAR CONTROLS
A. ALL FLOOR BUTTONS SHALL BE:
1. ALL CONTROL BUTTONS SHALL BE AT LEAST 3/4" IN THEIR SMALLEST DIM. THEY SHALL BE FLUSH OR RAISED.
2. STANDARD CONTROL BUTTONS SHALL BE DESIGNATED BY BRAILLE AND BY RAISED STANDARD ALPHABET CHARACTERS FOR LETTERS, ARABIC CHARACTERS FOR NUMERALS. THE CALL BUTTON FOR THE MAIN ENTRY FLOOR SHALL BE DESIGNATED BY A RAISED STAR AT THE LEFT OF THE FLOOR DESIGNATION.
3. MAXIMUM 5/4" ABOVE FLOOR WHERE SIDE APPROACH IS PROVIDED
4. MAXIMUM 48" WHERE FORWARD APPROACH IS PROVIDED

B. EMERGENCY CONTROLS:
1. SHALL HAVE CENTERLINES 35" MINIMUM ABOVE FLOOR
2. SHALL BE GROUPED AT BOTTOM OF PANEL
C. THE EMERGENCY COMMUNICATION SYSTEM SHALL NOT REQUIRE VOICE COMMUNICATION.

4.11 PLATFORM LIFTS
NOTE: REQUIRES A VARIANCE FROM THE T.D.L.R. TO USE IN LIEU OF AN ELEVATOR
TAS SECTIONS 4.11.2, 4.27.3 - OTHER REQUIREMENTS CONTROLS AND OPERATING SYSTEMS
A. HEIGHTS PERMITTED:
CONTROLS AND OPERATING MECHANISMS SHALL BE LOCATED FOR EITHER A FORWARD OR SIDE APPROACH FROM ANY DIRECTION OF TRAVEL. THEY SHALL BE LOCATED 28" MIN. AND 48" MAXIMUM ABOVE THE FLOOR. THEY SHALL BE OPERABLE WITH ONE HAND. THERE SHALL BE AT LEAST ONE HANDRAIL COMPLYING WITH 4.26. WHEELSTOPS AND GUARDRAILS SHALL BE PROVIDED WHERE NECESSARY.

4.13 DOORS
TAS SECTION 4.13.4 - DOUBLE - LEAF DOORWAYS
A. DOORWAYS WITH TWO INDEPENDENTLY OPERATED LEAVES SHALL HAVE AT LEAST ONE ACTIVE LEAF THAT MEETS THE REQUIREMENTS IN 4.13.5 AND 4.13.6.
TAS SECTION 4.13.5 - CLEAR WIDTH
A. DOORWAYS SHALL PROVIDE A CLEAR OPENING OF 32" MINIMUM, WITH THE DOOR OPEN 90°.
1. CLEAR OPENING SHALL BE MEASURED BETWEEN THE FACE OF THE DOOR AND OPPOSITE STOP.
2. OPENINGS MORE THAN 24" IN DEPTH SHALL PROVIDE A CLEAR OPENING OF 36" MINIMUM.
EXCEPTION: DOORS NOT REQUIRING FULL USER PASSAGE, SUCH AS SHALLOW CLOSETS, SHALL HAVE A CLEAR OPENING OF 20" MINIMUM.

TAS SECTION 4.13.6 - MANEUVERING CLEARANCES AT DOORS
PROVIDE LEVEL (1:50 MAX. SLOPE) AND CLEAR MANEUVERING AREA AT DOORS AS FOLLOWS:
A. FRONT APPROACH PULL SIDE - 60" MIN. WIDTH & 18" MIN. BESIDE STRIKE EDGE
FRONT APPROACH PUSH SIDE - 48" MIN. WIDTH & 0" BESIDE STRIKE EDGE (12" @ STRIKE IF DOOR HAS BOTH A CLOSER AND A LATCH)
B. HINGE SIDE APPROACH PULL SIDE - 60" MIN. WIDTH; 36" MIN. BESIDE STRIKE EDGE OR - 54" MIN. WIDTH; 42" MIN. BESIDE STRIKE EDGE
HINGE SIDE APPROACH PUSH SIDE - 42" MIN. WIDTH & 18" MIN. BESIDE HINGE EDGE (48" MIN. WIDTH IF DOOR HAS BOTH A CLOSER AND A LATCH)
C. LATCH SIDE APPROACH PULL SIDE - 48" MIN. WIDTH AND 24" MIN. BESIDE STRIKE EDGE (54" MIN. WIDTH IF DOOR HAS A CLOSER)
LATCH SIDE APPROACH PUSH SIDE - 42" MIN. WIDTH AND 24" MIN. BESIDE STRIKE EDGE (48" MIN. WIDTH IF DOOR HAS A CLOSER)

TAS SECTION 4.13.8 - THRESHOLDS AT DOORWAYS
A. MAXIMUM THRESHOLD HEIGHT: 1/2" (3/4" AT EXTERIOR SLIDING DOORS). RAISED THRESHOLDS AND FLOOR LEVEL CHANGES SHALL BE BEVELED WITH A SLOPE NO GREATER THAN 1:2.
TAS SECTION 4.13.9 - DOOR HARDWARE
A. HANDLES, PULLS, LATCHES, LOCKS, AND OTHER OPERATING DEVICES SHALL HAVE A SHAPE THAT IS EASY TO GRASP WITH ONE HAND AND DOES NOT REQUIRE TIGHT GRASPING, TIGHT PINCHING, OR TWISTING OF THE WRIST TO OPERATE.
1. LEVER-OPERATED MECHANISMS, PUSH-TYPE MECHANISMS, AND U-SHAPED HANDLES ARE ACCEPTABLE DESIGNS.
2. WHEN SLIDING DOORS ARE FULLY OPEN, OPERATING HARDWARE SHALL BE EXPOSED AND USABLE FROM BOTH SIDES.
3. HARDWARE REQUIRED FOR ACCESSIBLE DOOR PASSAGE SHALL BE MOUNTED NO HIGHER THAN 48" ABOVE FINISHED FLOOR.

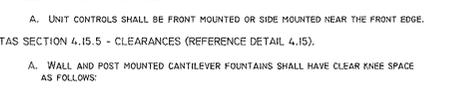
TAS SECTION 4.13.10 - DOOR CLOSERS
A. IF A DOOR HAS A CLOSER, THEN THE SWEEP PERIOD OF THE CLOSER SHALL BE ADJUSTED SO THAT FROM AN OPEN POSITION OF 70°, THE DOOR WILL TAKE AT LEAST 3 SECONDS TO MOVE TO A POINT 3" FROM THE LATCH, MEASURED TO THE LEADING EDGE OF THE DOOR.
TAS SECTION 4.13.11 - DOOR OPENING FORCE
A. THE MAXIMUM FORCE FOR PUSHING OR PULLING OPEN A DOOR SHALL BE AS FOLLOWS:
1. FIRE DOORS SHALL HAVE THE MINIMUM OPENING FORCE ALLOWABLE BY THE APPROPRIATE ADMINISTRATIVE AUTHORITY.
2. OTHER DOORS
A. EXTERIOR HINGED DOORS: NO REQUIREMENT.
B. INTERIOR HINGED DOORS: 5.0 LBF.
C. SLIDING OR FOLDING DOORS: 5.0 LBF.
THESE FORCES DO NOT APPLY TO THE FORCE REQUIRED TO RETRACT LATCH BOLTS OR DISENGAGE OTHER DEVICES THAT MAY HOLD THE DOOR IN A CLOSED POSITION.

4.15 DRINKING FOUNTAINS
TAS SECTION 4.15.2 - SPOUT HEIGHT (REFERENCE DETAIL 4.15 FOR ACCESSIBLE UNIT)
A. ACCESSIBLE SPOUTS SHALL BE NO HIGHER THAN 36", MEASURED FROM THE FLOOR OR GROUND SURFACE TO THE SPOUT OUTLET.
B. IN ADDITION TO ACCESSIBLE UNIT, AT LEAST ONE DRINKING FOUNTAIN SHALL BE AT STANDARD HEIGHT (MAY BE "HIGH/LOW" TYPE IF LOCATED IN ONE LOCATION).

TAS SECTION 4.15.3 - SPOUT LOCATION

A. SPOUTS SHALL BE LOCATED AT THE FRONT OF THE UNIT AND SHALL DIRECT THE WATER FLOW IN A TRAJECTORY THAT IS PARALLEL OR NEARLY PARALLEL TO THE FRONT OF THE UNIT.
1. THE SPOUT SHALL PROVIDE A FLOW OF WATER AT LEAST 4" HIGH.
2. IF THE FOUNTAIN HAS A ROUND OR OVAL BOWL, THE SPOUT MUST BE POSITIONED SO THE FLOW OF WATER IS WITHIN 3" OF THE FRONT EDGE OF THE FOUNTAIN.

TAS SECTION 4.15.4 - CONTROLS
A. UNIT CONTROLS SHALL BE FRONT MOUNTED OR SIDE MOUNTED NEAR THE FRONT EDGE.
TAS SECTION 4.15.5 - CLEARANCES (REFERENCE DETAIL 4.15)
A. WALL AND POST MOUNTED CANTILEVER FOUNTAINS SHALL HAVE CLEAR KNEE SPACE AS FOLLOWS:
1. MINIMUM 27" HIGH (FROM APRON BOTTOM TO FLOOR) MINIMUM 30" WIDE, AND 17" - 19" DEEP.
2. A MINIMUM 30" BY 48" CLEAR FLOOR SPACE ALLOWING A FORWARD APPROACH TO THE UNIT SHALL BE PROVIDED.



4.16 WATER CLOSETS
TAS SECTION 4.16.2 - CLEAR FLOOR SPACE
A. CLEAR FLOOR SPACE FOR WATER CLOSETS NOT IN STALLS SHALL BE PROVIDED AS FOLLOWS:
FRONT APPROACH - 48" MIN. WIDE X 66" MIN. LONG
SIDE APPROACH - 54" MIN. TO FRONT OF TOILET X 48" MIN. WIDE
BOTH APPROACH - 60" MIN. WIDE X 56" MIN. LONG (REFERENCE DETAIL 4.16)
B. NO DOORSWINGS ARE ALLOWED IN CLEAR FLOOR AREA.



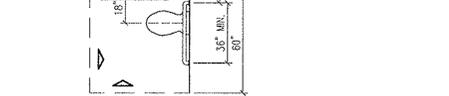
TAS SECTION 4.16.3 - HEIGHT (REFERENCE DETAIL 4.16.2)
A. THE HEIGHT TO THE TOP OF THE TOILET SEAT SHALL BE 17" - 19" ABOVE FLOOR.
1. SEATS SHALL NOT BE SPRUNG TO RETURN TO A LIFTED POSITION.
TAS SECTIONS 4.16.4, 4.26 - GRAB BARS (REFERENCE DETAILS 4.16.1, 4.16.2 & 4.16.3)
A. FOR WATER CLOSETS NOT LOCATED IN TOILET STALLS, THE FOLLOWING GRAB BARS SHALL BE PROVIDED, 33" - 36" ABOVE THE FINISH FLOOR:
1. SIDE WALL: 42" LONG MINIMUM, HOLD 12" MIN. FROM BACK WALL.
2. BACK WALL: 36" LONG MINIMUM, 12" MINIMUM EACH SIDE OF WATER CLOSET CENTERLINE.
REFER TO 4.26 GRAB BARS FOR SIZE AND STRUCTURAL ELEMENTS.

TAS SECTIONS 4.16.5, 4.27.4 - FLUSH CONTROLS (REFERENCE DETAIL 4.16.3)
A. CONTROLS SHALL BE 44" MAXIMUM ABOVE THE FINISH FLOOR.
1. LEVER CONTROLS OR FLUSH VALVES SHALL BE MOUNTED ON THE WIDE SIDE OF TOILET AREAS.
2. CONTROLS SHALL BE HAND OPERATED OR AUTOMATIC.
3. CONTROLS SHALL BE OPERABLE WITH ONE HAND AND SHALL NOT REQUIRE TIGHT GRASPING, PINCHING, OR TWISTING OF THE WRIST.
4. THE FORCE REQUIRED TO ACTIVATE CONTROLS SHALL BE NO GREATER THAN 5 LBF.

TAS SECTION 4.16.6 - DISPENSERS (REFERENCE DETAIL 4.16.2)
A. TOILET PAPER DISPENSERS SHALL BE INSTALLED ON THE SIDE WALL, A MINIMUM 19" ABOVE THE FLOOR, AND A MAXIMUM 36" FROM THE REAR WALL.
1. DISPENSERS THAT CONTROL DELIVERY OR DO NOT PERMIT CONTINUOUS PAPER FLOW SHALL NOT BE USED.

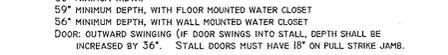


4.17 TOILET STALLS
TAS SECTION 4.22.4 - WHERE APPLICABLE
A. IF TOILET STALLS ARE PROVIDED IN A TOILET ROOM OR BATHROOM, THEN AT LEAST ONE SHALL BE A "STANDARD" ACCESSIBLE TOILET STALL (FOR WHEELCHAIR USERS) COMPLYING WITH THIS SECTION. (REFERENCE DETAIL 4.17.1)
B. IF 6 OR MORE TOILET STALLS ARE PROVIDED IN A TOILET ROOM OR BATHROOM IN ADDITION TO THE "STANDARD" ACCESSIBLE TOILET REQUIRED, AN ADDITIONAL "ALTERNATE A" ACCESSIBLE STALL 36" WIDE (FOR AMBULATORY PERSONS WITH DISABILITIES) COMPLYING WITH THIS SECTION SHALL BE PROVIDED. (REFERENCE DETAIL 4.17.2)
C. ALTERATIONS/EXISTING CONDITIONS: IN ALTERATION WORK, WHERE PROVISION OF A "STANDARD" ACCESSIBLE STALL IS TECHNICALLY INFEASIBLE, OR WHERE PLUMBING CODE REQUIREMENTS PREVENT COMBINING EXISTING STALLS TO PROVIDE SPACE, EITHER "ALTERNATE" STALL (A OR B) COMPLYING WITH THIS SECTION MAY BE PROVIDED IN LIEU OF THE STANDARD STALL. (NOTE: REQUIRES A VARIANCE FROM T.D.L.R.)



TAS SECTION 4.17.3 - SIZE AND ARRANGEMENT (REFERENCE DETAIL 4.17)

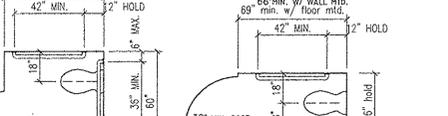
A. TOILET STALLS MAY BE ARRANGED TO PROVIDE EITHER A LEFT OR A RIGHT HANDED APPROACH. ACCESSIBLE TOILET STALLS SHALL HAVE THE FOLLOWING DIMENSIONS:
1. "STANDARD" ACCESSIBLE STALL
60" MINIMUM WIDTH,
59" MINIMUM DEPTH, WITH FLOOR MOUNTED WATER CLOSET
56" MINIMUM DEPTH, WITH WALL MOUNTED WATER CLOSET
DOOR: OUTWARD SWINGING (IF DOOR SWINGS INTO STALL, DEPTH SHALL BE INCREASED BY 36"). STALL DOORS MUST HAVE 18" ON FULL STRIKE JAMB.
2. "ALTERNATE A" ACCESSIBLE STALL (REQUIRED WHEN MORE THAN 6 STALLS PROVIDED, PERMITTED IN LIEU OF STANDARD STALL ONLY WITH A VARIANCE FROM T.D.L.R.)
36" WIDTH - HOLD THIS DIM.
69" MINIMUM DEPTH, WITH FLOOR MOUNTED WATER CLOSET.
66" MINIMUM DEPTH WITH WALL MOUNTED WATER CLOSET
DOOR: OUTWARD SWINGING.
3. "ALTERNATE B" ACCESSIBLE STALL (PERMITTED IN LIEU OF STANDARD STALL ONLY WITH VARIANCE FROM T.D.L.R.)
48" MINIMUM WIDTH,
54" MINIMUM DEPTH,
DOOR: OUTWARD SWINGING.



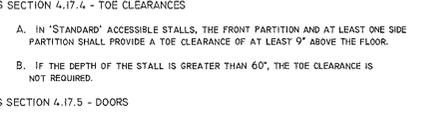
TAS SECTION 4.17.4 - TOE CLEARANCES
A. IN "STANDARD" ACCESSIBLE STALLS, THE FRONT PARTITION AND AT LEAST ONE SIDE PARTITION SHALL PROVIDE A TOE CLEARANCE OF AT LEAST 9" ABOVE THE FLOOR.
B. IF THE DEPTH OF THE STALL IS GREATER THAN 60", THE TOE CLEARANCE IS NOT REQUIRED.
TAS SECTION 4.17.5 - DOORS
A. TOILET STALL DOORS, INCLUDING HARDWARE, SHALL COMPLY WITH 4.13 DOORS
B. IF TOILET STALL APPROACH IS FROM THE LATCH SIDE OF THE STALL DOOR, CLEARANCE BETWEEN THE DOOR SIDE OF THE STALL AND ANY OBSTRUCTION SHALL BE 42" MINIMUM. (THIS IS AN EXCEPTION FROM TYPICAL DOOR MANEUVERING CLEARANCES)

TAS SECTION 4.17.6 - GRAB BARS (REFERENCE DETAILS 4.16.2, 4.16.3, 4.17.1 & 4.17.2)
A. GRAB BARS SHALL BE MOUNTED 33" - 36" ABOVE THE FLOOR.
REFER TO 4.26 GRAB BARS FOR SIZE AND STRUCTURAL REQUIREMENTS.

4.18 URINALS
TAS SECTION 4.18.2 - HEIGHT (REFERENCE DETAIL 12.3.1)
A. URINALS SHALL BE STALL-TYPE OR WALLHUNG WITH A TAPERED, ELONGATED RIM AT 17" MAXIMUM ABOVE THE FINISHED FLOOR.
THE RIM SHALL EXTEND A MINIMUM OF 14" FROM THE WALL.
TAS SECTION 4.18.3 - CLEAR FLOOR SPACE (REFERENCE DETAIL 4.18.1)
A. A CLEAR FLOOR SPACE 30" WIDE BY 48" DEEP MINIMUM SHALL BE PROVIDED IN FRONT OF URINAL TO ALLOW FORWARD APPROACH.
1. THIS SPACE SHALL ADJOIN OR OVERLAP AN ACCESSIBLE ROUTE.
2. URINAL SHIELD THAT DO NOT EXTEND BEYOND THE FRONT EDGE OF THE URINAL RIM MAY BE PROVIDED WITH 29" CLEARANCE BETWEEN THEM.
3. URINALS INSTALLED IN ALCOVES DEEPER THAN 24" REQUIRE A MANEUVERING AREA OF AT LEAST 36" MINIMUM WIDE, CENTERED ON FIXTURE.
TAS SECTION 4.18.4 - FLUSH CONTROLS (REFERENCE DETAIL 4.18.2)
A. CONTROLS SHALL BE 44" MAXIMUM ABOVE THE FINISHED FLOOR.
1. CONTROLS SHALL BE HAND OPERATED OR AUTOMATIC.
2. CONTROLS SHALL BE OPERABLE WITH ONE HAND AND SHALL NOT REQUIRE TIGHT GRASPING, PINCHING, OR TWISTING OF THE WRIST.
3. THE FORCE REQUIRED TO ACTIVATE CONTROLS SHALL BE NO GREATER THAN 5 LBF.



4.19 LAVATORIES & MIRRORS
TAS SECTION 4.19.2 - HEIGHT & CLEARANCES (REFERENCE DETAIL 4.19.1 & 4.19.2)
A. LAVATORIES SHALL BE MOUNTED WITH THE RIM OR COUNTER SURFACE NO HIGHER THAN 34" ABOVE THE FINISHED FLOOR.
1. LAVATORIES SHALL EXTEND 17" MINIMUM FROM THE WALL.
2. CLEARANCE OF 29" MINIMUM SHALL BE PROVIDED FROM THE FINISHED FLOOR TO BOTTOM OF APRON.
3. KNEE CLEARANCE OF 27" MINIMUM SHALL EXTEND 8" MINIMUM UNDER THE EDGE OF THE LAVATORY.
4. THE CLEARANCE OF 9" MINIMUM SHALL BE PROVIDED FOR THE FULL DEPTH OF THE LAVATORY.



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CITY OF HOUSTON GENERAL SERVICES DEPARTMENT logo and name

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TAS SECTION 4.19.4 - EXPOSED PIPES AND SURFACES

A. HOT WATER AND DRAIN PIPES UNDER LAVATORIES SHALL BE INSULATED OR OTHERWISE CONFIGURED TO PROTECT AGAINST CONTACT.

B. THERE SHALL BE NO SHARP OR ABRASIVE SURFACES UNDER LAVATORIES.

TAS SECTIONS 4.19.5, 4.27.4 - FAUCETS

A. CONTROLS SHALL BE OPERABLE WITH ONE HAND AND SHALL NOT REQUIRE TIGHT GRASPING, PINCHING, OR TWISTING OF THE WRIST.

B. THE FORCE REQUIRED TO ACTIVATE CONTROLS SHALL BE NO GREATER THAN 5 LBF.

C. LEVER-OPERATED, PUSH-TYPE, AND ELECTRONICALLY CONTROLLED MECHANISMS ARE EXAMPLES OF ACCEPTABLE DESIGNS.

D. IF SELF-CLOSING VALVES ARE USED THE FAUCET SHALL REMAIN OPEN FOR AT LEAST 10 SECONDS.

TAS SECTION 4.19.6 - MIRRORS (REFERENCE DETAIL 4.19.1)

A. MIRRORS SHALL BE MOUNTED WITH THE BOTTOM EDGE OF THE REFLECTING SURFACE 40" MAXIMUM ABOVE THE FINISHED FLOOR.

B. THE TOP EDGE OF THE REFLECTING SURFACE MUST BE AT LEAST 74" AFF.

4.20 BATHTUBS

TAS SECTION 4.20.2 - FLOOR SPACE

A. CLEAR FLOOR SPACE SHALL BE PROVIDED IN FRONT OF BATHTUBS AS FOLLOWS: 30" WIDE X 60" LONG BESIDE THE BATHTUB FOR SIDE APPROACH 48" WIDE X 60" LONG BESIDE THE BATHTUB FOR FRONT APPROACH WITH SEAT AT HEAD OF TUB - 30" WIDE X 75" LONG BESIDE TUB

TAS SECTION 4.20.3 - SEAT

A. AN IN-TUB SEAT OR A SEAT AT THE HEAD END OF THE TUB SHALL BE PROVIDED. SEATS SHALL BE MOUNTED SECURELY AND SHALL NOT SLIP DURING USE.

TAS SECTIONS 4.20.4 - GRAB BARS

A. HEIGHTS PERMITTED:

- WITH IN TUB SEAT: FOOT CONTROL WALL: 24" LONG MINIMUM, FROM OUTSIDE WALL, 33-36" ABOVE FLOOR. BACK WALL: 2 BARS, 24" LONG MINIMUM, 12" MAXIMUM FROM FOOT WALL, 24" MAXIMUM FROM HEAD WALL, ONE 33-36" ABOVE FLOOR, ONE 9" ABOVE THE TUB. HEAD WALL: 12" MINIMUM, FROM OUTSIDE WALL, 33-36" ABOVE FLOOR.
- WITH SEAT AT HEAD OF TUB: CONTROL WALL: 24" LONG MINIMUM, FROM OUTSIDE WALL, 33-36" ABOVE FLOOR. BACK WALL: 2 BARS, 48" LONG MINIMUM, 12" MAXIMUM FROM FOOT END, 15" MAXIMUM FROM HEAD END, ONE 33-36" ABOVE FLOOR, ONE 9" ABOVE THE TUB. HEAD WALL: NONE.

TAS SECTION 4.20.5

A. CONTROLS MUST BE LOCATED UP FRONT TO THE OPEN SIDE OF TUB

TAS SECTION 4.20.6 - SHOWER UNIT

A. A SHOWER SPRAY UNIT WITH A HOSE AT LEAST 60" LONG SHALL BE PROVIDED THAT THEY CAN BE USED BOTH AS FIXED AND HAND HELD.

4.21 SHOWER STALLS

TAS SECTION 4.21.2 - SIZE AND CLEARANCES

A. SHOWER STALLS SHALL BE EITHER 36"x36" CLEAR INSIDE DIMENSION (HOLD) AT TRANSFER TYPE OR 30" MIN. X 60" MIN. CLEAR INSIDE DIMENSION AT ROLL IN TYPE.

TAS SECTIONS 4.21.3 - SEAT

A. SEAT IS REQUIRED IN 36"x36" STALLS, AND SHALL HAVE THE FOLLOWING FEATURES:

- SHALL BE 17"-19" ABOVE BATHROOM FLOOR
- SHALL EXTEND THE FULL DEPTH OF THE STALL
- SHALL BE LOCATED ON THE WALL OPPOSITE CONTROL WALL
- MAXIMUM SPACE BETWEEN WALL AND SEAT EDGE SHALL BE 1-1/2"
- SHALL PROJECT 16" MAXIMUM INTO STALL WIDTH, EXCEPT AT THE REAR 15" MAXIMUM OF THE STALL, WHERE THE SEAT MAY PROJECT 23"
- WHERE A SEAT IS PROVIDED IN A ROLL IN TYPE SHOWER IT MUST BE THE FOLD-UP TYPE.

TAS SECTIONS 4.21.4 - GRAB BARS

A. GRAB BARS SHALL BE MOUNTED 33-36" ABOVE FLOOR

TAS SECTIONS 4.21.5 - CONTROLS

A. ALL SHOWER CONTROLS SHALL BE LOCATED 38" MINIMUM AND 48" MAXIMUM ABOVE THE FLOOR, UP FRONT ON THE OPEN SIDE.

TAS SECTION 4.21.6 - SHOWER UNIT

A. A SHOWER SPRAY UNIT WITH A HOSE AT LEAST 60" LONG THAT CAN BE USED BOTH AS A FIXED SHOWER HEAD AND AS A HAND HELD SHOWER SHALL BE PROVIDED. THE MOUNTING DEVICE SHALL COMPLY WITH THE REQUIREMENTS FOR FORWARD REACH.

TAS SECTIONS 4.21.7 - CURBS

A. IF PROVIDED, CURBS ON TRANSFER SHOWERS SHALL BE NO HIGHER THAN 1/2" ROLL-IN SHOWERS SHALL NOT HAVE CURBS

4.22 TOILET ROOMS

TAS SECTIONS 4.22.2 - DOORS

A. ALL DOORS TO ACCESSIBLE TOILET ROOMS SHALL COMPLY WITH 4.13. DOORS SHALL NOT SWING INTO CLEAR FLOOR SPACE REQUIRED FOR ANY FIXTURE. CLEAR FLOOR TURNING SPACE MAY OVERLAP DOOR SWINGS.

TAS SECTIONS 4.22.3 - CLEAR FLOOR SPACE

A. THE ACCESSIBLE FIXTURES AND CONTROLS REQUIRED IN 4.22.4, 4.22.5, 4.22.6 4.22.7 SHALL BE ON AN ACCESSIBLE ROUTE. AN UNOBSTRUCTED TURNING SPACE COMPLYING WITH 4.2.3 SHALL BE PROVIDED WITHIN AN ACCESSIBLE TOILET ROOM. THE CLEAR FLOOR SPACE AT FIXTURES AND CONTROLS, THE ACCESSIBLE ROUTE, AND THE TURNING SPACE MAY OVERLAP, HOWEVER, THE ONLY TURNING SPACE PROVIDED SHALL NOT BE LOCATED WITHIN A STALL.

TAS SECTIONS 4.22.4 - WATER CLOSETS

A. IF TOILET STALLS ARE PROVIDED, THEN AT LEAST ONE SHALL BE A STANDARD TOILET STALL COMPLYING WITH 4.17, WHERE 6 OR MORE STALLS ARE PROVIDED IN ADDITION TO THE STALL COMPLYING WITH 4.17.5, AT LEAST ONE STALL 36" WIDE WITH AN OUTWARD SWINGING, SELF-CLOSING DOOR AND PARALLEL GRAB BARS SHALL BE PROVIDED. WATER CLOSETS IN SUCH STALLS SHALL COMPLY WITH 4.16.

TAS SECTIONS 4.22.5 - URINALS

A. IF URINALS ARE PROVIDED, THEN AT LEAST ONE SHALL COMPLY WITH 4.18.

TAS SECTIONS 4.22.6 - LAVATORIES AND MIRRORS

A. IF LAVATORIES AND MIRRORS ARE PROVIDED, THEN AT LEAST ONE OF EACH SHALL COMPLY WITH 4.19. ACCESSIBLE LAVATORIES AND MIRRORS SHALL NOT BE LOCATED WITHIN TOILET STALLS UNLESS OTHER ACCESSIBLE LAVATORIES AND MIRRORS ARE PROVIDED IN THE TOILET ROOM.

TAS SECTIONS 4.22.7 - CONTROLS AND DISPENSERS

A. IF CONTROLS, DISPENSERS, RECEPTACLES, OR OTHER EQUIPMENT ARE PROVIDED, THEN AT LEAST ONE OF EACH SHALL BE ON AN ACCESSIBLE ROUTE AND SHALL COMPLY WITH 4.27 - (CONTROLS & OPERATING MECHANISMS).

4.23 - BATHROOMS, BATHING FACILITIES, AND SHOWER ROOMS

TAS SECTION 4.23.8 - BATHING AND SHOWER FACILITIES

A. IN ADDITION TO THE REQUIREMENTS OF 4.22, TOILET ROOMS: IF TUBS AND SHOWERS ARE PROVIDED, THEN AT LEAST ONE ACCESSIBLE TUB THAT COMPLIES WITH 4.20 OR AT LEAST ONE ACCESSIBLE SHOWER THAT COMPLIES WITH 4.21 SHALL BE PROVIDED

4.24 - SINKS

TAS SECTION 4.24.2 - HEIGHT

A. SINKS SHALL BE MOUNTED WITH THE RIM OR COUNTER SURFACE NO HIGHER THAN 34" ABOVE THE FINISHED FLOOR.

TAS SECTIONS 4.24.3 - KNEE CLEARANCE

A. KNEE CLEARANCE OF 27" HIGH MINIMUM, 30" WIDE MINIMUM, AND 19" DEEP MINIMUM SHALL BE PROVIDED UNDERNEATH SINKS.

TAS SECTION 4.24.4 - DEPTH

A. EACH SINK SHALL BE A MAXIMUM OF 6-1/2" DEEP.

TAS SECTION 4.24.6 - EXPOSED PIPES AND SURFACES

A. HOT WATER AND DRAIN PIPES UNDER SINKS SHALL BE INSULATED OR OTHERWISE CONFIGURED TO PROTECT AGAINST CONTACT.

B. THERE SHALL BE NO SHARP OR ABRASIVE SURFACES UNDER SINKS.

TAS SECTION 4.24.7, 4.27.4 - FAUCETS

A. CONTROLS SHALL BE OPERABLE WITH ONE HAND AND SHALL NOT REQUIRE TIGHT GRASPING, PINCHING, OR TWISTING OF THE WRIST.

B. THE FORCE REQUIRED TO ACTIVATE CONTROLS SHALL BE NO GREATER THAN 5 LBF.

C. LEVER-OPERATED, PUSH-TYPE, AND ELECTRONICALLY CONTROLLED MECHANISMS ARE EXAMPLES OF ACCEPTABLE DESIGNS.

D. IF SELF-CLOSING VALVES ARE USED THE FAUCET SHALL REMAIN OPEN FOR AT LEAST 10 SECONDS.

4.25 - STORAGE

TAS SECTION 4.25.1 - DEPTH (REFERENCE DETAIL 4.25.1)

A. STORAGE AREAS MAY BE 36" IN DEPTH OR LESS. IF MORE THAN 36" IN DEPTH THEN AREA MUST ALLOW 60" DIAMETER OR CLEAR FLOOR SPACE FOR TURNING.

TAS SECTION 4.25.2 - CLEAR FLOOR SPACE (REFERENCE DETAIL 4.25.2)

TAS SECTION 4.25.3 - HEIGHT (REFERENCE DETAIL 1A.3 AND 4.25.3 & 4.25.4)

A. WHERE A FORWARD REACH IS REQUIRED, ACCESSIBLE STORAGE SPACES SHALL BE 48" MAXIMUM AND 15" MINIMUM ABOVE THE FLOOR. IF THE FORWARD REACH IS OVER AN OBSTRUCTION (WITH KNEE SPACE EQUAL TO OR GREATER THAN REACH DISTANCE) 20"-25" DEEP, THE MAXIMUM HEIGHT SHALL BE 44". IF THE OBSTRUCTION IS LESS THAN 20", MAXIMUM HEIGHT SHALL BE 48".

B. WHERE A SIDE REACH IS PROVIDED, ACCESSIBLE STORAGE SPACES SHALL BE 54" MAXIMUM AND 9" MINIMUM ABOVE THE FLOOR. MAXIMUM HEIGHT SHALL BE 46" FOR SIDE REACH OVER AN OBSTRUCTION 34" MAXIMUM HIGH AND 24" MAXIMUM DEEP.

C. CLOTHES RODS OR SHELVES SHALL BE A MAXIMUM 54" ABOVE FLOOR WHERE A SIDE REACH IS REQUIRED.

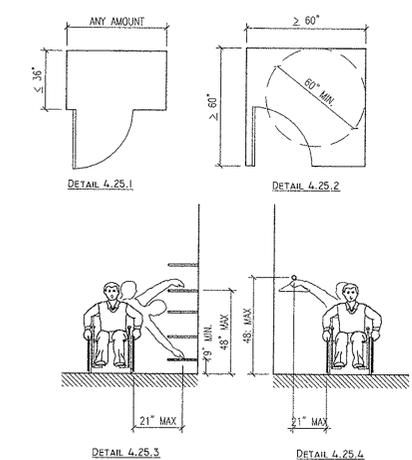
D. WHERE THE DISTANCE FROM THE WHEELCHAIR TO THE CLOTHES ROD OR SHELF EXCEEDS 10" (AS AT CLOSETS WITH INACCESSIBLE DOORS) THE FOLLOWING CRITERIA SHALL BE MET:

- SHELVES: REACH: 21" MAXIMUM; HEIGHT: 48" MAXIMUM, 9" MINIMUM.
- CLOTHES RODS: REACH 21" MAXIMUM; HEIGHT: 48" MAXIMUM.

TAS SECTIONS 4.25.4, 4.27.4 - HARDWARE

A. HARDWARE FOR ACCESSIBLE STORAGE FACILITIES SHALL BE OPERABLE WITH ONE HAND AND SHALL NOT REQUIRE TIGHT GRASPING, PINCHING, OR TWISTING OF THE WRIST.

B. THE FORCE REQUIRED TO ACTIVATE THE HARDWARE SHALL BE NO GREATER THAN 5 LBF



4.26 - GRAB BARS

TAS SECTION 4.26.2 - SIZE AND SPACING

A. DIAMETER OR WIDTH OF GRIPPING SURFACE SHALL BE 1-1/4" TO 1-1/2", OR THE SHAPE SHALL PROVIDE AN EQUIVALENT GRIPPING SURFACE.

1. THE SPACE BETWEEN GRAB BARS AND ADJACENT WALLS SHALL BE 1-1/2"

TAS SECTION 4.26.3 - STRUCTURAL STRENGTH

A. GRAB BARS AND MOUNTING DEVICES SHALL MEET THE FOLLOWING REQUIREMENTS:

- BENDING STRESS INDUCED BY MAXIMUM BENDING MOMENT FROM APPLICATION OF 250 LBF SHALL BE LESS THAN ALLOWABLE STRESS FOR MATERIAL USED.
- SHEAR STRESS INDUCED BY APPLICATION OF 250 LBF SHALL BE LESS THAN ALLOWABLE SHEAR STRESS FOR MATERIAL USED. IF CONNECTION BETWEEN GRAB BAR AND MOUNTING BRACKET IS CONSIDERED TO BE FULLY RESTRAINED, THEN DIRECT AND TORSIONAL SHEAR STRESSES SHALL BE TOTALED FOR THE COMBINED SHEAR STRESS, WHICH SHALL NOT EXCEED THE ALLOWABLE SHEAR STRESS.
- SHEAR FORCE INDUCED IN A FASTENER OR MOUNTING DEVICE FROM APPLICATION OF 250 LBF SHALL BE LESS THAN ALLOWABLE LATERAL LOAD OF EITHER THE FASTENER OR MOUNTING DEVICE OR THE SUPPORTING STRUCTURE, WHICHEVER IS THE SMALLER ALLOWABLE LOAD.
- TENSILE FORCE INDUCED IN A FASTENER BY A DIRECT TENSION FORCE OF 250 LBF PLUS THE MAXIMUM MOMENT FROM THE APPLICATION OF 250 LBF SHALL BE LESS THAN THE ALLOWABLE WITHDRAWAL LOAD BETWEEN THE FASTENER AND THE SUPPORTING STRUCTURE.
- GRAB BARS SHALL NOT ROTATE WITH THEIR FITTINGS.

TAS SECTION 4.26.4 - ELIMINATING HAZARDS

A. GRAB BARS AND ADJACENT WALL SURFACES SHALL BE FREE OF SHARP OR ABRASIVE SURFACES.

B. EDGES SHALL HAVE A RADIUS OF 1/8" MINIMUM.

4.27 - CONTROLS AND OPERATING MECHANISMS

TAS SECTION 4.27.3 - HEIGHT (REFERENCE DETAIL 4.30.3)

A. FRONT APPROACH - 48" MAX. TO 15" MIN. CONTROLS LOCATED IN AN ALCOVE >24" DEEP MUST HAVE 36" CLEAR FLOOR WIDTH.

B. SIDE APPROACH - 54" MAX. TO 9" MIN., EXCEPT PER BELOW.

C. ELECTRICAL & COMMUNICATION SYSTEM RECEPTACLES SHALL BE MOUNTED NO LESS THAN 15" ABOVE THE FLOOR.

4.28 - ALARMS

TAS SECTION 4.28.1 - GENERAL

A. WHEN REQUIRED, VISUAL ALARMS SHALL BE PROVIDED IN EACH OF THE FOLLOWING AREAS, AS A MINIMUM: RESTROOMS AND ANY OTHER GENERAL USAGE AREAS (E.G., MEETING ROOMS), HALLWAYS, LOBBIES, AND ANY OTHER AREA FOR COMMON USE.

TAS SECTION 4.28.2 - AUDIBLE ALARMS

A. IF PROVIDED, AUDIBLE ALARMS SHALL PRODUCE A SOUND THAT EXCEEDS THE PREVAILING EQUIVALENT SOUND LEVEL IN THE ROOM OR SPACE BY AT LEAST 15 DBA OR EXCEEDS ANY MAXIMUM SOUND LEVEL WITH A DURATION OF 60 SECONDS BY 5 DBA, WHICHEVER IS LOUDER.

B. SOUND LEVELS FOR ALARM SIGNALS SHALL NOT EXCEED 120 DBA.

TAS SECTION 4.28.3 - VISUAL ALARMS

A. VISUAL ALARM SIGNAL APPLIANCES SHALL BE INTEGRATED INTO THE BUILDING OR FACILITY ALARM SYSTEM. IF SINGLE STATION AUDIBLE ALARMS ARE PROVIDED THEN SINGLE STATION VISUAL ALARM SIGNALS SHALL BE PROVIDED.

VISUAL ALARM APPLIANCES SHALL HAVE THE FOLLOWING FEATURES:

- THE LAMP SHALL BE A XENON STROBE TYPE OR EQUIVALENT.
- THE COLOR SHALL BE CLEAR OR NOMINAL WHITE (I.E. UNFILTERED OR CLEAR FILTERED WHITE LIGHT).
- THE MAXIMUM PULSE DURATION SHALL BE TWO-TENTHS OF ONE SECOND WITH A MAXIMUM DUTY CYCLE OF 4.0%. (THE PULSE DURATION IS DEFINED AS THE TIME INTERVAL BETWEEN INITIAL AND FINAL POINTS OF 10% OF MAX SIGNAL)
- THE INTENSITY SHALL BE A MINIMUM OF 75 CANDELA.
- THE FLASH RATE SHALL BE A MINIMUM OF 1 HZ AND A MAXIMUM OF 3 HZ
- THE APPLIANCE SHALL BE PLACED 80" ABOVE THE HIGHER FLOOR LEVEL WITHIN THE SPACE OR 6" BELOW THE CEILING, WHICHEVER IS LOWER.
- IN GENERAL, NO PLACE IN ANY ROOM OR SPACE SHALL BE MORE THAN 50" FROM THE SIGNAL (MEASURED IN A HORIZONTAL PLANE).
- IN LARGE ROOMS AND SPACES EXCEEDING 100' ACROSS, WITHOUT OBSTRUCTIONS 6" ABOVE THE FINISHED FLOOR, SUCH AS AUDITORIUMS, DEVICES MAY BE PLACED AROUND THE PERIMETER, SPACED A MAXIMUM 100' APART, IN LIEU OF SUSPENDING APPLIANCES FROM THE CEILING.
- NO PLACE IN COMMON CORRIDORS OR HALLWAYS SHALL BE MORE THAN 50" FROM THE SIGNAL.

4.30 - SIGNAGE

TAS SECTIONS 4.1.2(7), 4.1.3(16)(A) - WHERE APPLICABLE

A. SIGNS WHICH DESIGNATE PERMANENT ROOMS AND SPACES SHALL COMPLY WITH THE REQUIREMENTS LISTED BELOW FOR:

- RAISED AND BRAILLE CHARACTERS, AND PICTOGRAMS
- FINISH AND CONTRAST

EXCEPTION: EMPLOYEE NAME SIGNS ARE NOT REQUIRED TO COMPLY.

TAS SECTIONS 4.1.2(7), 4.1.3(16)(B) - WHERE APPLICABLE

A. SIGNS WHICH PROVIDE DIRECTION TO, OR INFORMATION ABOUT, FUNCTIONAL SPACES OF THE BUILDING SHALL COMPLY WITH THE REQUIREMENTS LISTED BELOW FOR:

- CHARACTER PROPORTION
- CHARACTER HEIGHT
- FINISH AND CONTRAST

EXCEPTION: BUILDING DIRECTORIES, MENUS, AND ALL OTHER SIGNS WHICH ARE TEMPORARY ARE NOT REQUIRED TO COMPLY.

TAS SECTION 4.1.2(7) - WHERE APPLICABLE (REFERENCE DETAIL 4.30.1)

A. ELEMENT AND SPACES OF ACCESSIBLE FACILITIES WHICH SHALL BE IDENTIFIED BY THE INTERNATIONAL SYMBOL OF ACCESSIBILITY ARE:

- PARKING SPACES DESIGNATED AS RESERVED FOR PERSONS WITH DISABILITIES.
- ACCESSIBLE PASSENGER LOADING ZONES.
- ACCESSIBLE ENTRANCES WHEN NOT ALL ARE ACCESSIBLE (INACCESSIBLE ENTRANCES SHALL HAVE DIRECTIONAL SIGNAGE TO INDICATE ROUTE TO NEAREST ACCESSIBLE ENTRANCE).
- ACCESSIBLE TOILET AND BATHING FACILITIES WHEN NOT ALL ARE ACCESSIBLE.

TAS SECTION 4.30.2 - CHARACTER PROPORTION (REFERENCE DETAIL 4.30.2)

A. LETTERS AND NUMBERS ON SIGNS SHALL HAVE A WIDTH-TO-HEIGHT RATIO BETWEEN 3:5 AND 1:1, AND A STROKE-WIDTH-TO-HEIGHT RATIO BETWEEN 1:5 AND 1:10.

TAS SECTION 4.30.3 - OVERHEAD SIGNS

A. CHARACTERS AND NUMBERS ON OVERHEAD SIGNS SHALL BE SIZED ACCORDING TO THE VIEWING DISTANCE FROM WHICH THEY ARE TO BE READ.

- FOR SIGNS HIGHER THAN 80" ABOVE THE FINISHED FLOOR, CHARACTER SIZE SHALL BE 3" MINIMUM.
- THE MINIMUM HEIGHT IS MEASURED USING AN UPPER CASE X.
- LOWER CASE LETTERS ARE PERMITTED.

TAS SECTION 4.30.4 - RAISED AND BRAILLE CHARACTERS AND PICTOGRAMS

A. LETTER AND NUMERALS SHALL BE RAISED 1/32", UPPER CASE, SANS SERIF AND SHALL BE ACCOMPANIED BY GRADE 2 BRAILLE.

- RAISED CHARACTER HEIGHT: 5/8" MINIMUM, 2" HIGH MAXIMUM
- PICTOGRAMS SHALL BE ACCOMPANIED BY THE EQUIVALENT VERBAL DESCRIPTION PLACED DIRECTLY BELOW THE PICTOGRAM.
- THE BORDER DIMENSION OF THE PICTOGRAM SHALL BE 6" MINIMUM

TAS SECTION 4.30.5 - FINISH AND CONTRAST

A. THE CHARACTER AND BACKGROUND OF THE SIGNS SHALL BE EGGSHELL, MATTE, OR OTHER NON-GLARE FINISH. CHARACTERS AND SYMBOLS SHALL CONTRAST WITH THEIR BACKGROUND (EITHER LIGHT CHARACTERS ON A DARK BACKGROUND OR DARK CHARACTERS ON A LIGHT BACKGROUND).

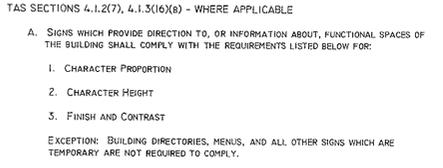
TAS SECTION 4.30.6 - MOUNTING LOCATION AND HEIGHT (REFERENCE DETAIL 4.30.3)

A. WHERE PERMANENT IDENTIFICATION IS PROVIDED FOR ROOMS AND SPACES, SIGNS SHALL BE INSTALLED ON THE WALL ADJACENT TO THE LATCH SIDE OF THE DOOR.

B. WHERE THERE IS NO WALL SPACE TO THE LATCH SIDE OF THE DOOR, INCLUDING AT DOUBLE-LEAF DOORS, SIGNS SHALL BE PLACED ON THE NEAREST ADJACENT WALL.

C. MOUNTING HEIGHT SHALL BE 60" ABOVE THE FINISHED FLOOR TO THE CENTERLINE OF THE SIGN.

D. MOUNTING LOCATION FOR SUCH SIGNAGE SHALL BE SO THAT A PERSON MAY APPROACH WITHIN 3" OF SIGNAGE WITHOUT ENCOUNTERING PROTRUDING OBJECTS OR STANDING WITHIN THE SWING OF A DOOR.



4.31 - PUBLIC TELEPHONES

TAS SECTION 4.1.3(17)(A) - WHERE APPLICABLE

A. IF PUBLIC PAY TELEPHONES, PUBLIC CLOSED CIRCUIT TELEPHONES, OR OTHER PUBLIC TELEPHONES IS PROVIDED, THEN THEY SHALL COMPLY WITH THIS SECTION IN THE QUANTITIES BELOW:

- IF ONE OR MORE SINGLE UNIT OF A TYPE OF PUBLIC TELEPHONE IS PROVIDED ON A FLOOR, THEN AT LEAST ONE OF THOSE PHONES SHALL COMPLY WITH THIS SECTION.
- IF ONE BANK (DEFINED AS TWO OR MORE ADJACENT PUBLIC TELEPHONES, OFTEN INSTALLED AS A UNIT) OF A TYPE OF TELEPHONE IS PROVIDED ON A FLOOR, THEN AT LEAST ONE OF THE TELEPHONES AT THE BANK SHALL COMPLY WITH THIS SECTION.
- IF TWO OR MORE BANKS OF A TYPE OF PUBLIC TELEPHONE ARE PROVIDED ON A FLOOR, THEN THE ACCESSIBLE UNIT MAY BE INSTALLED AS A SINGLE UNIT IN PROXIMITY (EITHER VISIBLY OR WITH SIGNAGE) TO THE BANK. AT LEAST ONE PUBLIC TELEPHONE PER FLOOR SHALL MEET THE REQUIREMENTS FOR A FORWARD REACH TELEPHONE.

ADDITIONAL PUBLIC TELEPHONES MAY BE INSTALLED AT ANY HEIGHT.

UNLESS OTHERWISE SPECIFIED, ACCESSIBLE TELEPHONES MAY BE EITHER FORWARD OR SIDE REACH TELEPHONES.

TAS SECTION 4.1.3(17)(B) - WHERE APPLICABLE

A. ALL TELEPHONES REQUIRED TO BE ACCESSIBLE SHALL BE EQUIPPED WITH A VOLUME CONTROL.

B. IN ADDITION, 25%, BUT NEVER LESS THAN ONE, OF ALL OTHER PUBLIC TELEPHONES PROVIDED SHALL BE EQUIPPED WITH A VOLUME CONTROL AND SHALL BE DISPERSED ALL TYPE OF TELEPHONES, INCLUDING CLOSED CIRCUIT TELEPHONES, THROUGHOUT THE BUILDING OR FACILITY.

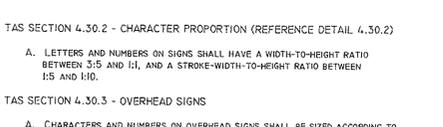
C. SIGNAGE DISPLAYING THE INTERNATIONAL SYMBOL OF ACCESS FOR HEARING LOSS SHALL BE PROVIDED AT EACH TELEPHONE EQUIPPED WITH A VOLUME CONTROL.

TAS SECTION 51.3 - MOUNTING HEIGHT (REFERENCE DETAIL 4.31)

A. THE HIGHEST OPERABLE PART OF THE TELEPHONE SHALL BE 48" MAXIMUM ABOVE THE FLOOR WHERE A FORWARD REACH IS REQUIRED, AND 54" MAXIMUM WHERE A SIDE REACH IS REQUIRED.

B. IF THE FORWARD REACH IS OVER AN OBSTRUCTION (WITH KNEE SPACE EQUAL TO OR GREATER THAN REACH DISTANCE) 20"-25" DEEP THE MAXIMUM HEIGHT SHALL BE 44". IF THE OBSTRUCTION IS LESS THAN 20", MAXIMUM HEIGHT SHALL BE 48".

C. MAXIMUM HEIGHT SHALL BE 46" FOR SIDE REACH OVER AN OBSTRUCTION 34" MAXIMUM HIGH AND 24" MAXIMUM DEEP.



4.32 - SEATING AND TABLES

TAS SECTION 4.32.2 - SEATING

A. IF SEATING SPACES FOR PEOPLE IN WHEELCHAIRS ARE PROVIDED AT FIXED TABLES OR COUNTERS, CLEAR FLOOR SPACE OF 30" X 48" SHALL BE PROVIDED. FLOOR SPACE SHALL NOT OVERLAP REQUIRED KNEE SPACE BY MORE THAN 19"

TAS SECTION 4.32.3 - KNEE SPACE

B. IF SEATING FOR PEOPLE IN WHEELCHAIRS IS PROVIDED AT FIXED TABLES OR COUNTERS, KNEE SPACE AT LEAST 27" HIGH, 30" WIDE AND 19" DEEP SHALL BE PROVIDED.

TAS SECTION 4.32.4 - HEIGHT OF TABLES OR COUNTER

C. THE TOPS OF ACCESSIBLE TABLES AND COUNTERS SHALL BE 28" MINIMUM, AND 34" MAXIMUM, ABOVE THE FINISHED FLOOR.

4.34 - AUTOMATIC TELLER MACHINES

TAS SECTIONS 4.34.2 - CLEAR FLOOR SPACE

A. FLOOR SPACE SHALL COMPLY WITH 4.2.4 TO ALLOW A FORWARD, PARALLEL APPROACH OR BOTH.

TAS SECTIONS 4.34.3 - REACH RANGES

A. FORWARD APPROACH ONLY: CONTROLS WITHIN FORWARD APPROACH SPECIFIED IN 4.2.5.

B. PARALLEL APPROACH: CONTROLS WITHIN UNOBSTRUCTED REACH RANGE FROM CLEAR FLOOR SPACE AT PROTRUSION OF TELLER MACHINE SURROUND PER TABLE AS FOLLOWS:

REACH DEPTH	MAXIMUM HEIGHT	REACH DEPTH	MAXIMUM HEIGHT	REACH DEPTH	MAXIMUM HEIGHT
IN INCHES	IN INCHES	IN INCHES	IN INCHES	IN INCHES	IN INCHES
10 OR LESS	54	15	51	20	48 1/2
11	53 1/2	16	50 1/2	21	47 1/2
12	53	17	50	22	47
13	52 1/2	18	49 1/2	23	46 1/2
14	51 1/2	19	49	24	46

NOTE: ABOVE DOES NOT APPLY TO DRIVE UP MACHINES.

4.35 DRESSING AND FITTING ROOMS

TAS SECTIONS 4.35.2

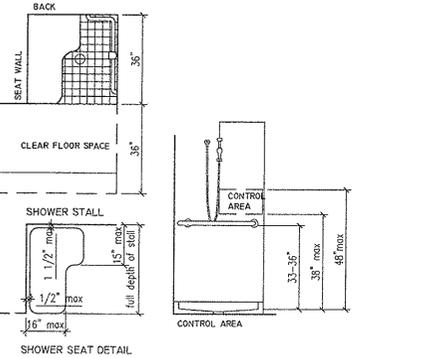
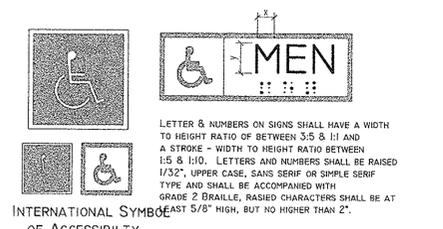
A. CLEAR FLOOR AREA WITH A 60" DIA. WHEELCHAIR TURNAROUND IS REQUIRED. THE TURNAROUND AREA MUST BE CLEAR OF DOOR SWINGS.

TAS SECTIONS 4.35.4 - BENCH

A. EVERY ACCESSIBLE DRESSING ROOM SHALL HAVE A 24" X 48" BENCH FIXED TO THE WALL ALONG THE LARGER DIMENSION. THE BENCH SHALL BE MOUNTED 17" TO 19" ABOVE THE FINISH FLOOR.

TAS SECTIONS 4.35.5 - MIRROR

A. A FULL-LENGTH MIRROR, MEASURING AT LEAST 18" WIDE BY 54" HIGH, SHALL BE MOUNTED IN A POSITION AFFORDING A VIEW TO A PERSON ON THE BENCH AS WELL AS TO A PERSON IN A STANDING POSITION.



ISSUE LOG

NO.	DATE	DESCRIPTION
1	02/28/12	Issue for Bid & Construction

CONSULTANT(S):

MEP ENGINEER
HUNT & HUNT ENGINEERING CORP.
P.O. BOX 771294 HOUSTON, TX 77215-1294
TEL: 713-780-9554 FAX: 713-780-9424

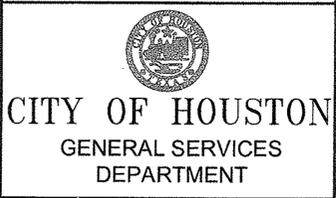
CIVIL ENGINEER
WGA & ASSOCIATES
2500 TANGLEWILE, SUITE 301 HOUSTON, TX 77063
TEL: 713-789-1900

STRUCTURAL ENGINEER
SIGMA ENGINEERING SERVICES
8554 KATY FRWY, SUITE 340 HOUSTON, TX 77024
TEL: 713-461-8584 FAX: 713-465-7479



PROJECT NAME:

CITY OF HOUSTON
9003 N. MAIN ADMINISTRATION
BLDG RENOVATION



REVIEWED:

PROGRAM MANAGER _____ SPONSORING DEPARTMENT _____

PROJECT MANAGER _____

RdIR ARCHITECTS
ARCHITECTURE | PLANNING | INTERIORS

1245 West 18th Street Houston, Texas 77008
phone 713.868.3121 www.rdir.com

DATE: 06/17/10

WBS No: L-000054-0001-4

SCALE: [AS NOTED]

DRAWN BY: _____

CHECKED BY: _____

SHEET TITLE:

TEXAS ACCESSIBILITY
GUIDELINES - PART 2 OF 2

SHEET NO.:

G0.11
5 OF 56 SHEETS

CITY DWG. NO.:

Date of this sheet: 06/17/10
 Drawn by: J. J. ...
 Checked by: J. J. ...
 Design file: XXXXXXXX.DWG

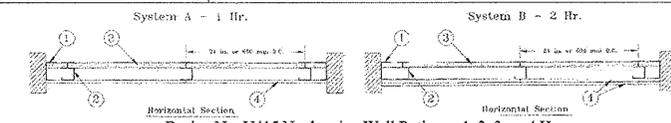
1

2

3

4

5



Design No. U415 Nonbearing Wall Ratings - 1, 2, 3, or 4 Hr

1. Floor, Side and Ceiling Runners - "J" - shaped runner, min 2-1/2 in. deep (min 4 in. deep when System C is used), with unequal legs of 1 in. and 2 in., fabricated from min 24 MSG (min 20 MSG when Item 4A or 7 are used) galv steel. Runners positioned with short leg toward finished side of wall. Runners attached to structural supports with steel fasteners located not greater than 2 in. from ends and not greater than 24 in. OC. "E" - shaped studs (Item 2A) may be used as side runners in place of "J" - shaped runners.

2. Steel Studs - "C" - shaped studs, min 2-1/2 in. deep (min 4 in. deep when System C is used), fabricated from min 23 MSG (min 20 MSG when Item 2D, 3C, or 7 is used) galv steel. Cut to lengths 3/8 to 1/2 in. less than floor-to-ceiling height and spaced 24 in. or 600 mm OC.

2A. Steel Studs - (Not Shown) - "E" - shaped studs installed back to back in place of "C" - shaped studs (Item 2) "E" - shaped studs secured together with steel screws spaced a maximum 12 in. OC. Fabricated from min 23 MSG (min 20 MSG when Item 2D or Item 7 is used) galv steel, min 2-1/2 in. deep (min 4 in. deep when System C is used), with one leg 1 in. long and two legs 3/4 in. long. Shorter legs 1 in. apart to engage gypsum liner panels. Cut to lengths 3/8 to 1/2 in. less than floor to ceiling height.

2B. Furring Channels - (Optional, not shown) - For use with single or double layer systems. Resilient furring channels fabricated from min 23MSG corrosion protected steel, installed horizontally, and spaced vertically a max 24 in. OC. Flange portion of channel attached to each intersecting "C" or "E" stud on side of stud opposite the 1 in. liner panels with 1/2 in. long Type S or S-12 pan-head steel screws. When furring channels are used, wallboard to be installed vertically only. Not to be used with Type FRX or FRX-G gypsum wallboard (Item 4A) or cementitious backer units (Item 7).

2C. Furring Channels - For use with System 1 - "Hat" - shaped, 25 MSG galv steel furring channels attached directly over the liner layers of wallboard to each stud with 2 in. long Type S pan head steel screws. Screws alternate from top flange to bottom flange at each stud intersection. Furring channels spaced vertically max 24 in. OC.

2D. Steel Framing Members - (Optional, not shown) - For use with single or double layer systems. Furring channels and Steel Framing Members as described below. Not to be used with Type FRX or FRX-G gypsum wallboard (Item 4A) or cementitious backer units (Item 7).

a. Furring Channels - Formed of No. 25 MSG galv steel, 2-3/8 in. wide by 7/8 in. deep, spaced max. 24 in. OC perpendicular to studs. Channels secured to studs as described in Item 3. Gypsum board installed vertically only and attached to furring channels as described in Item 3.

b. Steel Framing Members - Used to attach furring channels (Item 2Da) to studs (Item 2 or 2A). Clips spaced max. 24 in. OC, and secured to studs with No. 8 x 1-1/2 in. minimum self-drilling, S-12 steel screw through the center grommet. Furring channels are friction fitted into clips.

PAC INTERNATIONAL INC - Type RSIC-1.

3. Gypsum Board - Gypsum liner panels, nom 1/2 in. thick, 24 in. or 600 mm (for metric spacing) wide. Panels cut 1 in. less in length than floor to ceiling height. Vertical edges inserted in "U" portion of "C" or "E" studs or the gap between the two 3/4 in. legs of the "E" studs. Free edge of end panels attached to long leg of vertical "J" - runners with 1-5/8 in. long Type S steel screws spaced not greater than 12 in. OC. When wall height exceeds liner panel length, liner panel may be banded to extend to the full height of the wall. Horizontal joints need not be backed by steel framing. In System 1, butt joints in liner panels are staggered min 36 in. Butt joints backed with 6 in. by 22 in. strips of 3/4 in. thick gypsum wallboard (Item 4). Wallboard strips centered over butt joints and secured to liner panels with six 1-1/2 in. long Type G steel screws, three screws along the 22 in. dimension at the top and bottom of the strips.

CANADIAN GYPSUM COMPANY - Type SLX
UNITED STATES GYPSUM CO - Type SLX

4. Gypsum Board - Gypsum panels, with beveled, square or tapered edges, nom 5/8 in. thick, 48 in. or 1200 mm wide, applied vertically or horizontally, attached to studs with 1 in. long Type S steel screws spaced 12 in. when installed vertically or 8 in. OC when installed horizontally. Horizontal joints need not be backed by steel framing.

CANADIAN GYPSUM COMPANY - Types AR, C, IP-AR, IP-XI, IP-X2, IPC-AR, SCX, SHX, WRC, WRX
UNITED STATES GYPSUM CO - Types AR, C, FRX-G, IP-AR, IP-XI, IP-X2, IPC-AR, SCX, SHX, WRC, WRX
USG MEXICO S A DE C V - Types AR, C, IP-AR, IP-XI, IP-X2, IPC-AR, SCX, SHX, WRC, WRX

5. Joint Tape and Compound - (Not Shown) Systems A, B, C, E, F, G, H, I
Joints on outer layers of gypsum boards (Item 4 and 4A) covered with paper tape and joint compound. Paper tape and joint compound may be omitted when gypsum boards are supplied with square edges. Exposed screw heads covered with joint compound.

6. Batts and Blankets - Systems A, B, E, F, G, H, I
(Optional) - Mineral wool or glass fiber batts partially or completely filling stud cavity. Any mineral wool or glass fiber batt mineral bearing the UL Classification Marking as to Fire Resistance.
Systems C & D
Min 3 in. (System C) and min 1-1/2 in. (System D) thick mineral wool batts, friction fitted between the studs and floor and ceiling runners.
THERMAFIBER INC - Type SAFB
*Bearing the UL Classification Mark

ISSUE LOG

NO.	DATE	DESCRIPTION
1	02/28/12	Issue for Bid & Construction

CONSULTANT(S):
MEP ENGINEER
 HUNT & HUNT ENGINEERING CORP.
 P.O. BOX 771294 HOUSTON, TX 77215-1294
 TEL: 713-780-9554 FAX: 713-780-9424

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 WGA & ASSOCIATES
 2500 TANGLEWILDE, SUITE 301 HOUSTON, TX 77063
 TEL: 713-789-1900

STRUCTURAL ENGINEER
 SIGMA ENGINEERING SERVICES
 8554 KATY FRWY, SUITE 340 HOUSTON, TX 77024
 TEL: 713-461-8584 FAX: 713-465-7479



PROJECT NAME:
CITY OF HOUSTON
9003 N. MAIN ADMINISTRATION
BLDG RENOVATION



REVIEWED:
 PROGRAM MANAGER _____ SPONSORING DEPARTMENT _____
 PROJECT MANAGER _____

RdIR ARCHITECTS
 ARCHITECTURE | PLANNING | INTERIORS
 1245 West 18th Street Houston, Texas 77008
 phone 713.868.3121 www.rdir.com

DATE: 06/17/10
 WBS No: L-000054-0001-4
 SCALE: [AS NOTED]
 DRAWN BY: _____
 CHECKED BY: _____

SHEET TITLE:
PARTITION TYPES

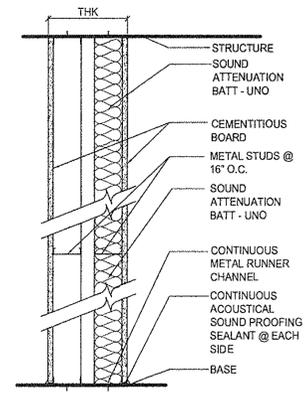
SHEET NO.:
G0.20
 6 OF 56 SHEETS

CITY DWG. NO.:

C5 UL TEST NUMBER 415 NTS

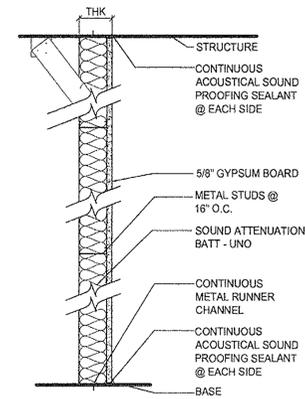
GENERAL NOTES:

- A. USE CEMENTITIOUS BOARD AT ALL PLUMBING WALLS (BEHIND SINK, LAVATORY, TOILET AND URINAL.)
- B. REMAINING WALLS WITHIN RESTROOMS AND SHOWER ROOMS SHALL USE TYPE "WR." MOISTURE RESISTANT BOARD.
- C. USE DEEP LEG DEFLECTION TRACK AT THE TOP OF ALL PARTITIONS SECURED TO UNDERSIDE OF STRUCTURE.
- D. ALL GYPSUM BOARD SHALL BE TYPE "X" UNO.



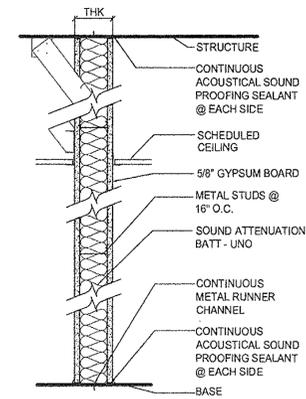
PARTITION TYPE C

CHASE WALL	CHASE WALL	CHASE WALL
BASIC PARTITION THICKNESS (THK)	2'-0" UNO	2'-0" UNO
FIRE RATING (HRS)	1/2"	1/2"
FIRE TEST NUMBER		
ACOUSTICAL RATING (STC)		
ACOUSTICAL TEXT NUMBER		
SOUND ATTENUATION BATT THK	3 1/2"	3 1/2"
GW B THICKNESS	5/8"	5/8"
ACOUSTICAL CAULKING		
FIRE CAULKING		
STUD SIZE	4"	4"
METAL THICKNESS		
STUD SPACING (OC)	1' - 4"	1' - 4"
STUDS TO STRUCT. ABOVE	W/ GWB TO STRUCT. ABOVE	Yes
STUDS TO STRUCT. ABOVE	W/ GWB TO 6" ABV CLG	-
REMARKS:		



PARTITION TYPE B

INTERIOR WALL	INTERIOR WALL	INTERIOR WALL
BASIC PARTITION THICKNESS (THK)	6 5/8"	2 1/4"
FIRE RATING (HRS)		
FIRE TEST NUMBER		
ACOUSTICAL RATING (STC)		
ACOUSTICAL TEXT NUMBER		
SOUND ATTENUATION BATT THK	5 1/2"	NONE
GW B THICKNESS	5/8"	5/8"
ACOUSTICAL CAULKING	Yes	Yes
FIRE CAULKING	-	-
STUD SIZE	6"	1 5/8"
METAL THICKNESS		
STUD SPACING (OC)	1' - 4"	1' - 4"
STUDS TO STRUCT. ABOVE	W/ GWB TO STRUCT. ABOVE	Yes
STUDS TO STRUCT. ABOVE	W/ GWB TO 6" ABV CLG	-
REMARKS:		



PARTITION TYPE A

INTERIOR WALL	INTERIOR WALL	INTERIOR WALL	INTERIOR WALL
BASIC PARTITION THICKNESS (THK)	5 1/4"	5 1/4"	7 1/4"
FIRE RATING (HRS)	1 HR	1 HR	2 HR
FIRE TEST NUMBER		U415	U415
ACOUSTICAL RATING (STC)			
ACOUSTICAL TEXT NUMBER			
SOUND ATTENUATION BATT THK	3 1/2"	3 1/2"	5 1/2"
GW B THICKNESS	5/8"	5/8"	5/8"
ACOUSTICAL CAULKING	Yes	Yes	Yes
FIRE CAULKING	-	Yes	-
STUD SIZE	4"	4"	6"
METAL THICKNESS			
STUD SPACING (OC)	1' - 4"	1' - 4"	1' - 4"
STUDS TO STRUCT. ABOVE	W/ GWB TO STRUCT. ABOVE	Yes	Yes
STUDS TO STRUCT. ABOVE	W/ GWB TO 6" ABV CLG	-	-
REMARKS:			

A5 PARTITION TYPES NTS

1

2

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4

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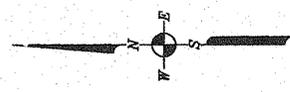
For use in: Houston, TX
 Date: 2/27/2012 2:40 AM
 Drawn by: WGA, SHX, WRC, WRX
 Design File: XXXXXXXX.DWG

NOTICE

A SEPARATE PERMIT IS REQUIRED FOR STEELWORK, CURBS AND GUTTERS, DOWNSPOUTS, FLASHING, AIR OR CONTROLLING, ELECTRICAL, SHIELDING POLES, ESTIMATING AND SIGNS.

CONCRETE PAVEMENT FOR THIS STRUCTURE IS ISSUED ON THE ASSUMPTION THAT THE FINISHED FLOOR OF THE BUILDING IS NOT LESS THAN TWELVE INCHES ABOVE THE FINISHED GRADE. SHALL BE AT LEAST SEVEN INCHES ABOVE THE FINISHED GRADE. THE DRAINAGE SHALL BE LESS THAN FOUR INCHES (4") ABOVE THE STREET AND IN ALL INSTANCES AT LEAST ONE INCH ABOVE THE PROPOSED 100 YEAR BASE FLOOD ELEVATION.

THIS PLAN MUST BE KEPT ON JOB FOR ALL CITY INSPECTIONS.



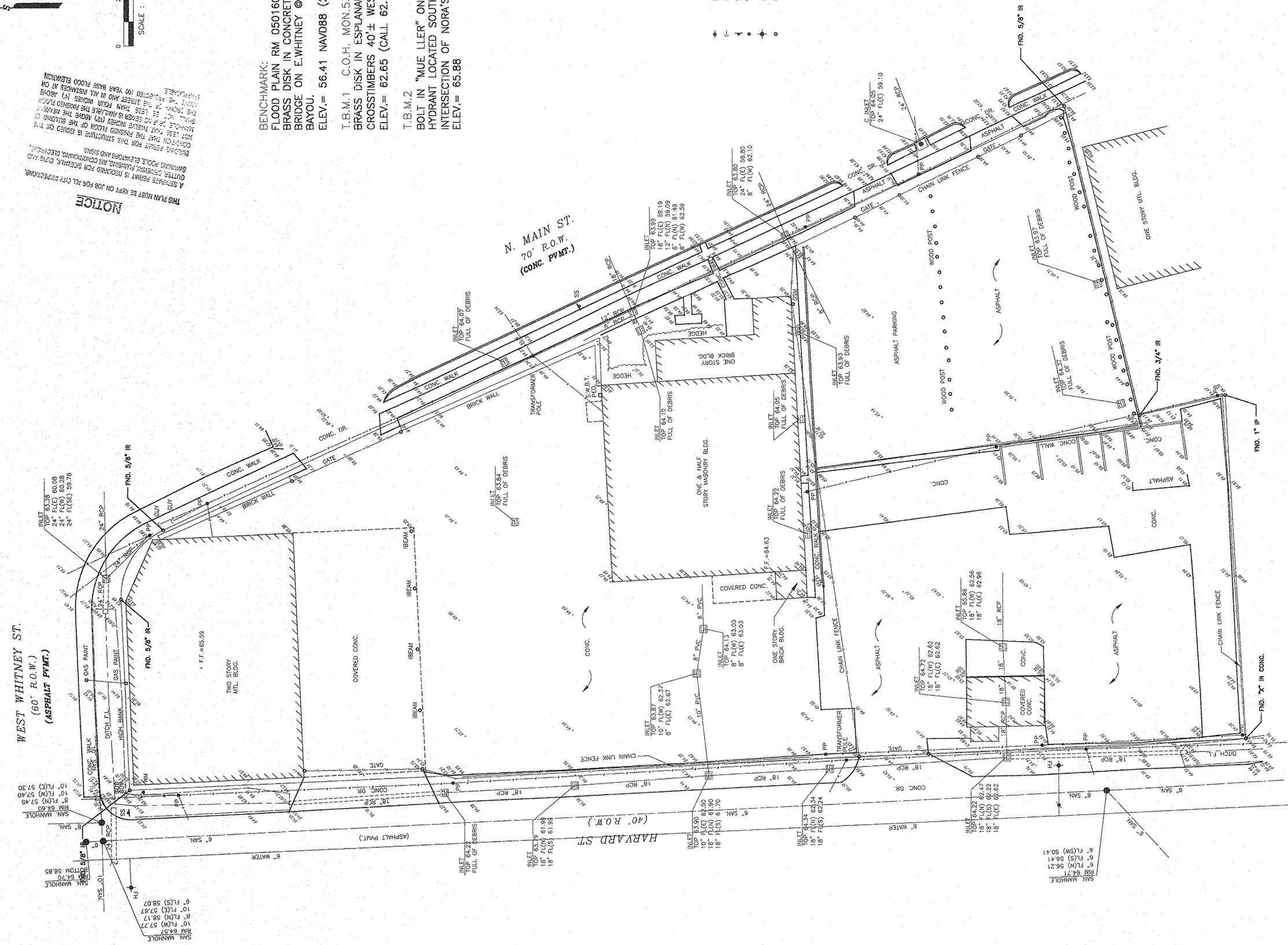
BENCHMARK:
 FLOOD PLAIN RM 050160
 BRASS DISK IN CONCRETE SOUTH SIDE OF
 BRIDGE ON E.WHITNEY @ LITTLE WHITE OAK
 BAYOU.
 ELEV.= 56.41 NAVD88 (2001 ADJ.)

T.B.M.1 C.O.H. MON.5360-0608
 BRASS DISK IN ESPLANADE CENTERLINE
 CROSSINGERS 40'± WEST OF HAYWOOD ST.
 ELEV.= 62.65 (CALL 62.51)

T.B.M.2
 BOLT IN "MUELLER" ON TOP FLANGE OF FIRE
 HYDRANT LOCATED SOUTHEAST CORNER OF
 INTERSECTION OF NORA'S LN. & N.MAIN ST.
 ELEV.= 65.88

LEGEND

PP POWER POLE
 GUY DOWN GUY
 SS STOP SIGN
 WM WATER METER
 FH FIRE HYDRANT
 GSM GAS METER



TOPOGRAPHIC SURVEY OF
 NORTHWEST RECYCLE CENTER
 HOUSTON, TEXAS

TOPOGRAPHIC SURVEY

694-D-2571

7 OF 54 SHEETS

LANDTECH CONSULTANTS, INC.
 Civil Engineering • Land Surveying
 2525 North Loop West
 Suite 300
 Houston, Texas 77008
 Tel. (713) 861-7068 Fax (713) 861-4181

DATE: January 18, 2008
 SCALE: 1" = 20'
 DRAWING No.: 694-D-2571
 JOB No.: 0710349.00
 SHEET No.: 1 OF 1

ST-2007 0710349 CADDY NORTHWEST RECYCLE CENTER

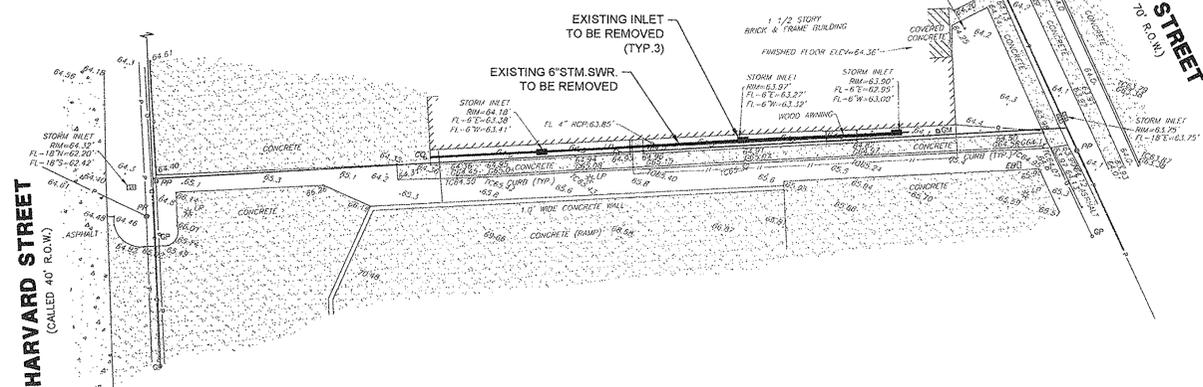
WEST WHITNEY DRIVE
(CALLED 60' R.O.W.)

CALLED 44,855 SQ. FT.
CITY OF HOUSTON
H.C.C.F. NO. G385847

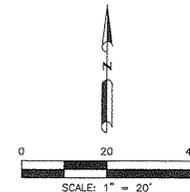
CITY OF HOUSTON
NORTHWEST RECYCLING CENTER

N. MAIN STREET
(CALLED 70' R.O.W.)

HARVARD STREET
(CALLED 40' R.O.W.)



TBM: CUT BOX
ON INLET
ELEV=63.90'



BENCHMARKS:
PRIMARY BENCHMARK IS FLOODPLAIN REFERENCE MARK NUMBER 050160, AN H.C.F.C.D. BRASS DISK STAMPED "E101 8M14" ON BRIDGE AT E. WHITNEY AND LITTLE WHITE OAK BAYOU LOCATED ON CONCRETE WALK ON DOWNSTREAM SIDE OF BRIDGE AT CENTERLINE OF BAYOU IN KEYMAP 453K IN THE WHITE OAK WATERSHED NEAR STREAM E101-00-00. ELEVATION=56.41 FEET, NAVD 1988, 2001 ADJUSTED.
TEMPORARY BENCHMARK IS A BOX CUT IN CONCRETE ON A TYPE "BB" INLET, LOCATED ON THE WEST SIDE OF N. MAIN STREET, ON THE SOUTH SIDE OF THE DRIVEWAY IMMEDIATELY TO THE SOUTH OF PROJECT SITE. ELEVATION=63.90 FEET, NAVD 1988, 2001 ADJUSTED.

FLOOD PLAIN NOTE:
THIS SUBJECT TRACT LIES PARTIALLY IN UNSHADED ZONE "X" (AREAS DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOODPLAIN) AND IN SHADED ZONE "X" (AREAS OF 0.2% ANNUAL CHANCE FLOOD, AREAS OF 1% ANNUAL CHANCE FLOOD WITH AVERAGE DEPTHS OF LESS THAN 1 FOOT OR WITH DRAINAGE AREAS LESS THAN 1 SQUARE MILE; AND AREAS PROTECTED BY LEVEES FROM 1% ANNUAL CHANCE FLOOD) AS DELINEATED ON THE FLOOD INSURANCE RATE MAP FOR HARRIS COUNTY, TEXAS AND INCORPORATED AREAS, MAP NO. 48201C0560 L, REVISED JUNE 18, 2007.
THE NEAREST AND HIGHEST RELEVANT 1% ANNUAL CHANCE FLOOD ELEVATION APPEARS TO BE 63 (NAVD 1988, 2001 ADJUSTMENT) IN LITTLE WHITE OAK BAYOU E101-00-00, AS PER FIRM PANEL 48201C0560 L.

SHEET NOTES:

ISSUE LOG

NO.	DATE	DESCRIPTION
1	07/16/10	Issue for Bid & Construction

CONSULTANT(S):
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SEAL(S):



2/27/12

PROJECT NAME:
CITY OF HOUSTON
9003 N. MAIN ADMINISTRATION
BLDG RENOVATION



CITY OF HOUSTON
GENERAL SERVICES
DEPARTMENT

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PROJECT MANAGER _____

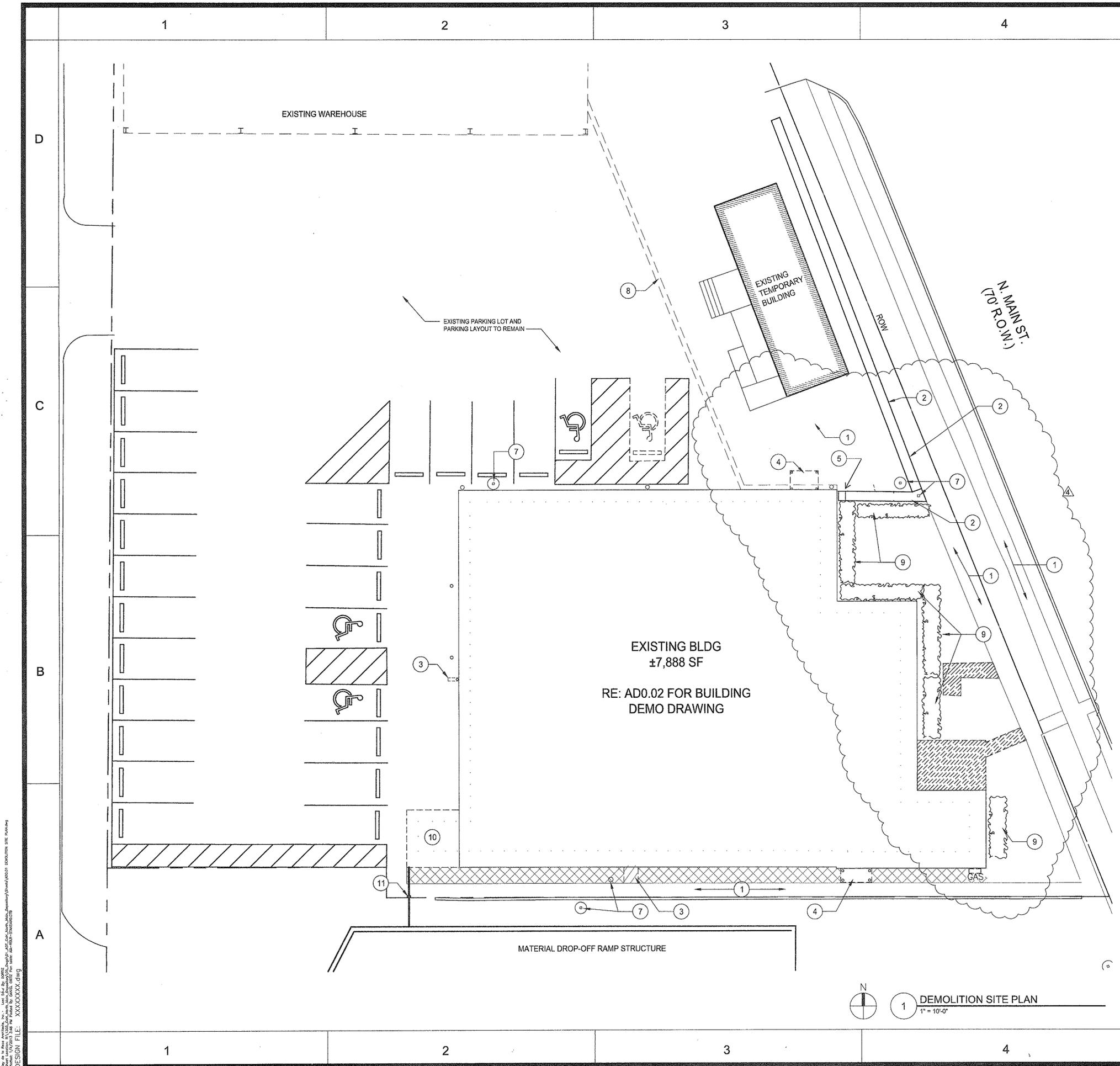
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ARCHITECTURE | PLANNING | INTERIORS
1245 West 18th Street Houston, Texas 77008
phone 713.868.3121 www.rdir.com

WGA
WARD, GETZ & ASSOCIATES, LLP
CONSULTING ENGINEERS
TEXAS REGISTERED ENGINEERING FIRM P-9756
2500 Tanglewilde, Suite 301
Houston, Texas 77068
713.789.1900

DATE: 06/17/11
WBS No.: L-000054-0001-4
SCALE: 1"=20'
DRAWN BY: DCS
CHECKED BY: DCS

SHEET TITLE:
EXISTING
TOPOGRAPHIC MAP
& DEMOLITION PLAN

SHEET NO.:
C1.00
8 OF 56 SHEETS
CITY DWG. NO.:



- LEGEND:**
- EXISTING PAVING TO BE REMOVED
 - AREA TO BE CLEARED AND GRUBBED

DEMOLITION GENERAL NOTES:

A. THE CONTRACTOR IS RESPONSIBLE FOR VISITING THE SITE PRIOR TO SUBMITTING A BID IN ORDER TO FAMILIARIZE HIMSELF WITH THE EXISTING CONDITIONS AT THE SITE.

B. THE CONTRACTOR IS RESPONSIBLE FOR REMOVING ANY AND ALL ABANDONED BURIED UTILITIES IN THE AFFECTED WORK AREAS WHETHER INDICATED SPECIFICALLY BY KEY NOTE ON THESE DRAWINGS OR NOT.

C. PROTECT EXISTING SHRUBS TO REMAIN. TRIM SHRUBS ALONG BUILDING EDGE FOR ACCESS TO WORK ON BUILDING.

- NOTES TO SHEET:**
- 1 EXISTING PAVING TO REMAIN
 - 2 EXISTING BRICK WALL TO REMAIN
 - 3 REMOVE CONCRETE PAVING. SAW CUT CONCRETE AT EDGE OF ANY PAVING TO REMAIN.
 - 4 REMOVE EXISTING LEAN-TO STRUCTURE AND ASSOCIATED FOOTINGS AND/OR EQUIPMENT. PATCH GRASS AS REQ'D.
 - 5 REMOVE PORTION OF BRICK WALL WITH CHAIN LINK FENCING AS REQ'D FOR BUILDING DEMO AND INSTALLATION. SALVAGE BRICK FOR REUSE ON EXISTING BLDG. RETURN REMAINING BRICK TO OWNER.
 - 6 NOT USED
 - 7 EXISTING LIGHT FIXTURE POLE TO REMAIN.
 - 8 DEMO PAVING AS REQ'D TO INSTALL NEW UNDERGROUND COMM/DATA LINES. SEE MEP DRAWINGS FOR ADDITIONAL INFO.
 - 9 REMOVE SHRUBS, PATCH GRASS TO MATCH EXISTING
 - 10 DEMO EXISTING CMU STRUCTURE, INCLUDING STEEL COLUMN AND ROOF FRAMING. PATCH FOUNDATION AS REQUIRED TO PROVIDE SMOOTH, UNIFORM FINISH.
 - 11 DEMO EXISTING CHAIN LINK FENCE AND GATE

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23 JAN 2013 NO. 351

ISSUE LOG		
NO.	DATE	DESCRIPTION
1	02/28/12	Issue for Bid & Construction
2	05/21/12	Addendum #2
3	06/08/12	Rider Update
4	01/07/13	Permit Modifications

CONSULTANT(S):

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PROJECT NAME:
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BLDG RENOVATION



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Rdlr ARCHITECTS
ARCHITECTURE | PLANNING | INTERIORS

1245 West 18th Street Houston, Texas 77008
phone 713.868.3121 www.rdlr.com

DATE: 06/17/10

WBS No: L-000054-0001-4

SCALE: [AS NOTED]

DRAWN BY: _____

CHECKED BY: _____

SHEET TITLE:

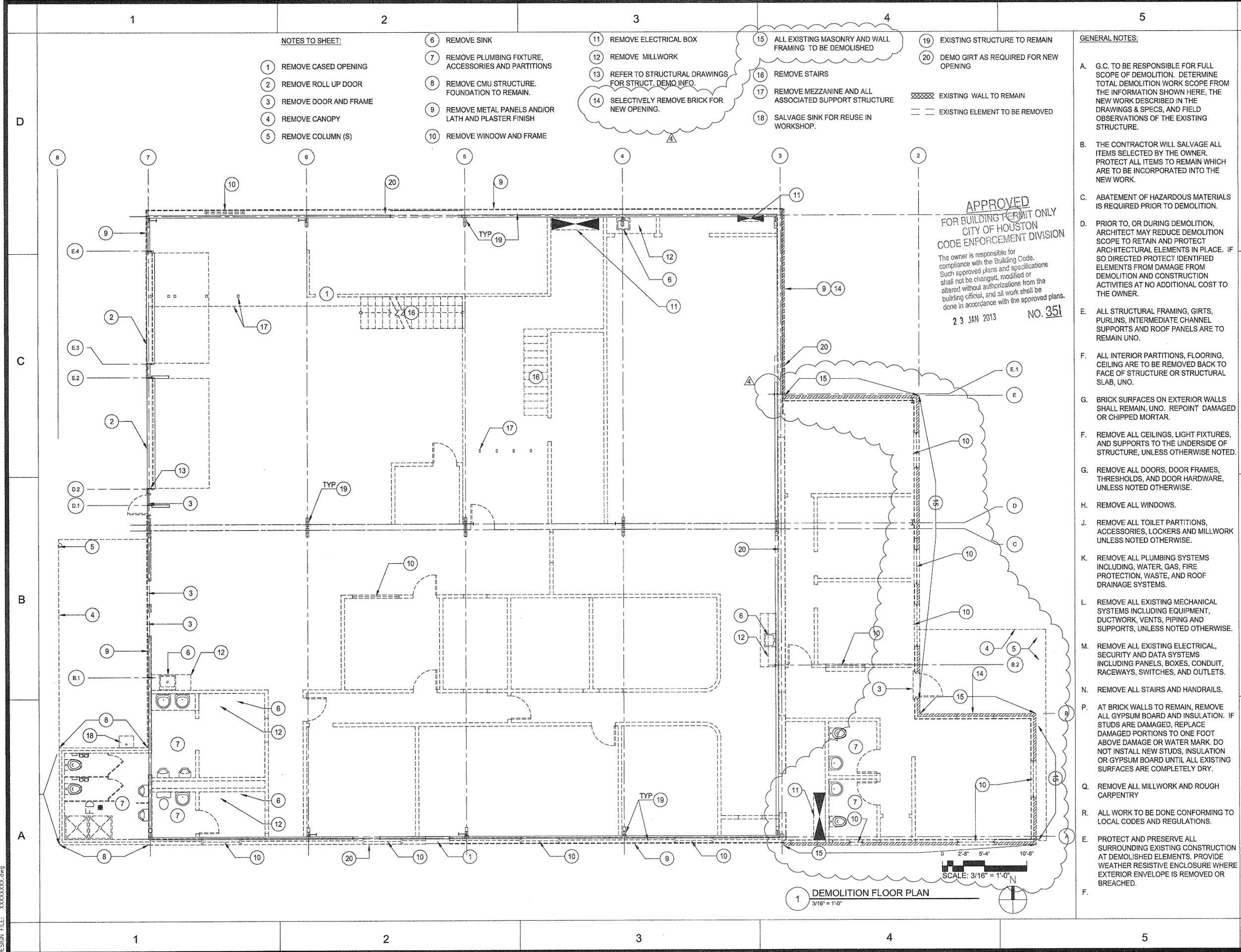
DEMOLITION SITE PLAN

SHEET NO.:

AD1.00
10 OF 56 SHEETS

CITY DWG. NO.:

Rdlr Architects, Inc. 1245 West 18th Street, Houston, Texas 77008
 Phone: 713.868.3121 Fax: 713.868.3122
 www.rdlr.com
 DESIGN FILE: XXXXXXXX.dwg



NOTES TO SHEET:

- 1 REMOVE CASING
- 2 REMOVE ROLL UP DOOR
- 3 REMOVE DOOR AND FRAME
- 4 REMOVE CANOPY
- 5 REMOVE COLUMN (S)
- 6 REMOVE SINK
- 7 REMOVE PLUMBING FIXTURE, ACCESSORIES AND PARTITIONS
- 8 REMOVE CMU STRUCTURE. FOUNDATION TO REMAIN.
- 9 REMOVE METAL PANELS AND/OR LATH AND PLASTER FINISH
- 10 REMOVE WINDOW AND FRAME

- 11 REMOVE ELECTRICAL BOX
- 12 REMOVE MILLWORK
- 13 REFER TO STRUCTURAL DRAWINGS FOR STRUCT. DEMO INFO.
- 14 SELECTIVELY REMOVE BRICK FOR NEW OPENING.

- 15 ALL EXISTING MASONRY AND WALL FRAMING TO BE DEMOLISHED
- 16 REMOVE STAIRS
- 17 REMOVE MEZZANINE AND ALL ASSOCIATED SUPPORT STRUCTURE
- 18 SALVAGE SINK FOR REUSE IN WORKSHOP.

- 19 EXISTING STRUCTURE TO REMAIN
- 20 DEMO GIRT AS REQUIRED FOR NEW OPENING

EXISTING WALL TO REMAIN
 EXISTING ELEMENT TO BE REMOVED

GENERAL NOTES:

- A. G.C. TO BE RESPONSIBLE FOR FULL SCOPE OF DEMOLITION. DETERMINE TOTAL DEMOLITION WORK SCOPE FROM THE INFORMATION SHOWN HERE, THE NEW WORK DESCRIBED IN THE DRAWINGS & SPECS, AND FIELD OBSERVATIONS OF THE EXISTING STRUCTURE.
- B. THE CONTRACTOR WILL SALVAGE ALL ITEMS SELECTED BY THE OWNER. PROTECT ALL ITEMS TO REMAIN WHICH ARE TO BE INCORPORATED INTO THE NEW WORK.
- C. ABATEMENT OF HAZARDOUS MATERIALS IS REQUIRED PRIOR TO DEMOLITION.
- D. PRIOR TO, OR DURING DEMOLITION, ARCHITECT MAY REDUCE DEMOLITION SCOPE TO RETAIN AND PROTECT ARCHITECTURAL ELEMENTS IN PLACE. IF SO DIRECTED PROTECT IDENTIFIED ELEMENTS FROM DAMAGE FROM DEMOLITION AND CONSTRUCTION ACTIVITIES AT NO ADDITIONAL COST TO THE OWNER.
- E. ALL STRUCTURAL FRAMING, GIRTS, PURLINS, INTERMEDIATE CHANNEL SUPPORTS AND ROOF PANELS ARE TO REMAIN UNO.
- F. ALL INTERIOR PARTITIONS, FLOORING, CEILING ARE TO BE REMOVED BACK TO FACE OF STRUCTURE OR STRUCTURAL SLAB, UNO.
- G. BRICK SURFACES ON EXTERIOR WALLS SHALL REMAIN, UNO. REPOINT DAMAGED OR CHIPPED MORTAR.
- F. REMOVE ALL CEILINGS, LIGHT FIXTURES, AND SUPPORTS TO THE UNDERSIDE OF STRUCTURE, UNLESS OTHERWISE NOTED.
- G. REMOVE ALL DOORS, DOOR FRAMES, THRESHOLDS, AND DOOR HARDWARE, UNLESS NOTED OTHERWISE.
- H. REMOVE ALL WINDOWS.
- J. REMOVE ALL TOILET PARTITIONS, ACCESSORIES, LOCKERS AND MILLWORK UNLESS NOTED OTHERWISE.
- K. REMOVE ALL PLUMBING SYSTEMS INCLUDING WATER, GAS, FIRE PROTECTION, WASTE, AND ROOF DRAINAGE SYSTEMS.
- L. REMOVE ALL EXISTING MECHANICAL SYSTEMS INCLUDING EQUIPMENT, DUCTWORK, VENTS, PIPING AND SUPPORTS, UNLESS NOTED OTHERWISE.
- M. REMOVE ALL EXISTING ELECTRICAL, SECURITY AND DATA SYSTEMS INCLUDING PANELS, BOXES, CONDUIT, RACEWAYS, SWITCHES, AND OUTLETS.
- N. REMOVE ALL STAIRS AND HANDRAILS.
- P. AT BRICK WALLS TO REMAIN, REMOVE ALL GYPSUM BOARD AND INSULATION. IF STUDS ARE DAMAGED, REPLACE DAMAGED PORTIONS TO ONE FOOT ABOVE DAMAGE OR WATER MARK. DO NOT INSTALL NEW STUDS, INSULATION OR GYPSUM BOARD UNTIL ALL EXISTING SURFACES ARE COMPLETELY DRY.
- Q. REMOVE ALL MILLWORK AND ROUGH CARPENTRY
- R. ALL WORK TO BE DONE CONFORMING TO LOCAL CODES AND REGULATIONS.
- E. PROTECT AND PRESERVE ALL SURROUNDING EXISTING CONSTRUCTION AT DEMOLISHED ELEMENTS. PROVIDE WEATHER RESISTIVE ENCLOSURE WHERE EXTERIOR ENVELOPE IS REMOVED OR BREACHED.
- F.

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 23 JAN 2013 NO. 351

SCALE: 3/16" = 1'-0"
 0 2'-8" 5'-4" 10'-8"

1 DEMOLITION FLOOR PLAN
3/16" = 1'-0"

ISSUE LOG		
NO.	DATE	DESCRIPTION
1	02/28/12	Issue for Bid & Construction
2	05/21/12	Addendum #2
3	06/08/12	Rider Update
4	01/07/13	Permit Modifications

CONSULTANT(S):
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PROJECT NAME:
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 9003 N. MAIN ADMINISTRATION
 BLDG RENOVATION



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 PROJECT MANAGER _____

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 phone 713.868.3121 www.rdir.com

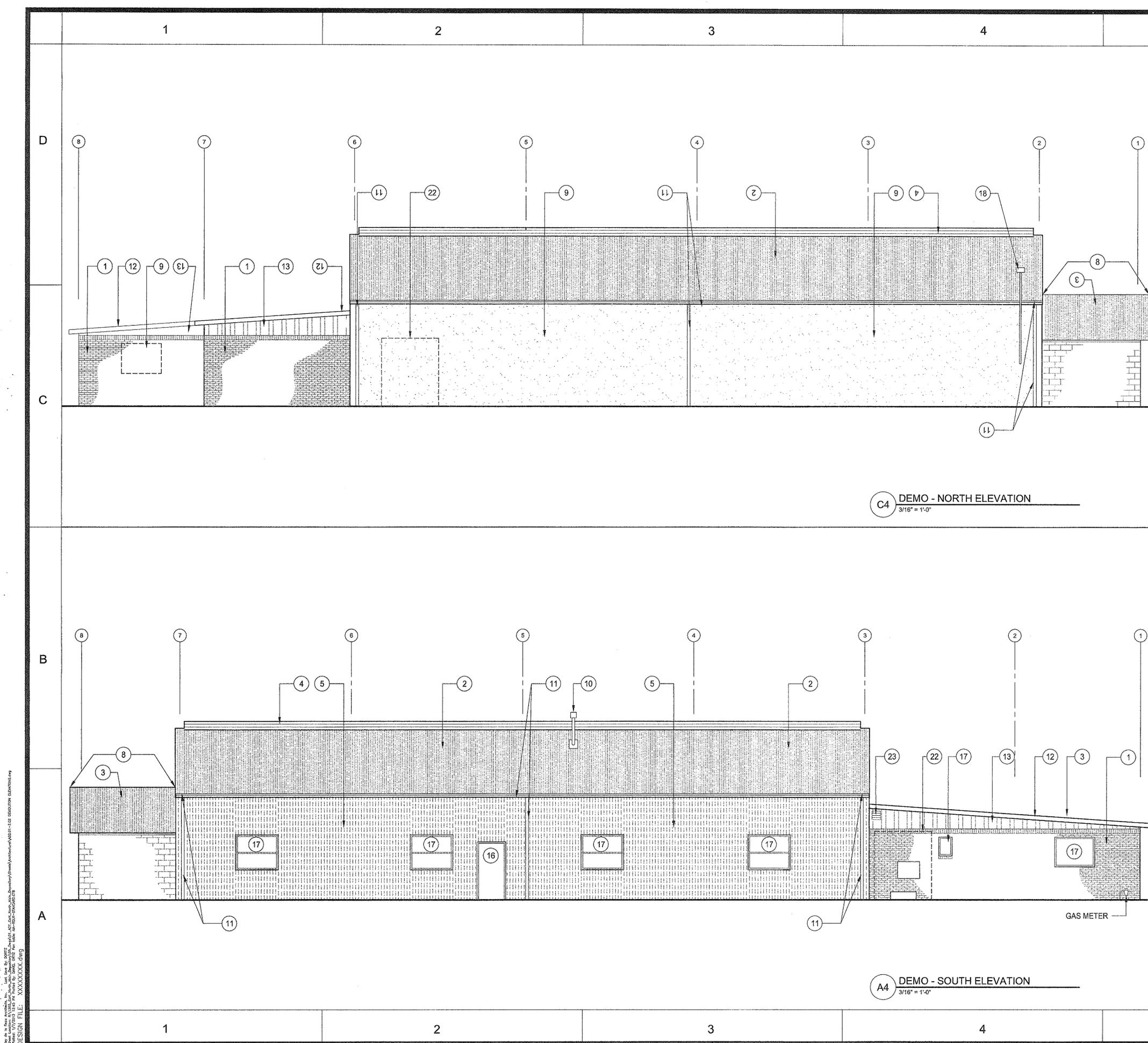
DATE: 06/17/10
 WBS No: L-000054-0001-4
 SCALE: [AS NOTED]
 DRAWN BY:
 CHECKED BY:

SHEET TITLE:
 DEMOLITION FLOOR PLAN

SHEET NO.:
AD1.01
 11 OF 56 SHEETS

CITY DWG. NO.:

Design File: XXXXXXXX.dwg
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 User: rdirm
 Plot Date: 06/17/10
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 Plot Title: DEMOLITION FLOOR PLAN



GENERAL NOTES:
 A. REFER TO SHEET AD1.01 FOR GENERAL NOTES.

NOTES TO SHEET:

- 1 BRICK VENEER AND WALL FRAMING TO BE DEMOLISHED.
- 2 REMOVE MTL ROOF PANELS, SALVAGE FOR REUSE
- 3 REMOVE MTL ROOF PANELS
- 4 REMOVE RIDGE VENT
- 5 REMOVE EXTERIOR METAL WALL PANELS
- 6 REMOVE EXTERIOR PLASTER FINISH AND METAL PANEL SUBSTRATE
- 7 REMOVE CANOPY AND COLUMN STRUCTURE
- 8 REMOVE CMU STRUCTURE INCLUDING WALLS AND ROOF FRAMING. FOUNDATION TO REMAIN.
- 9 BRICK VENEER AND WALL FRAMING TO BE DEMOLISHED.
- 10 REMOVE ROOF VENT STACK. PATCH ROOF PENETRATION
- 11 REMOVE GUTTER AND DOWNSPOUTS
- 12 REMOVE FASCIA AND SOFFIT TRIM
- 13 REMOVE WOOD SIDING
- 14 REMOVE CASSED OPENING
- 15 REMOVE ROLL UP DOOR
- 16 REMOVE DOOR AND FRAME
- 17 REMOVE WINDOW AND FRAME
- 18 REMOVE LIGHT FIXTURE AND POLE
- 19 SALVAGE SINK AND RETURN TO OWNER
- 20 REMOVE ANTENNA POLE
- 21 REMOVE BRICK AND SAVE FOR REUSE
- 22 REMOVE LEAN-TO STRUCTURE AND EQUIPMENT
- 23 REMOVE LOUVERED VENT

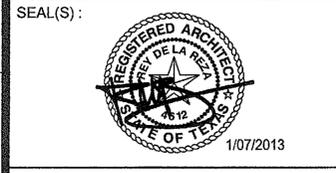
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23 JAN 2013 NO. 351

ISSUE LOG		
NO.	DATE	DESCRIPTION
1	02/28/12	Issue for Bid & Construction
2	05/21/12	Addendum #2
3	06/08/12	Rider Update
4	01/07/13	Permit Modifications

CONSULTANT(S):
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PROJECT NAME:
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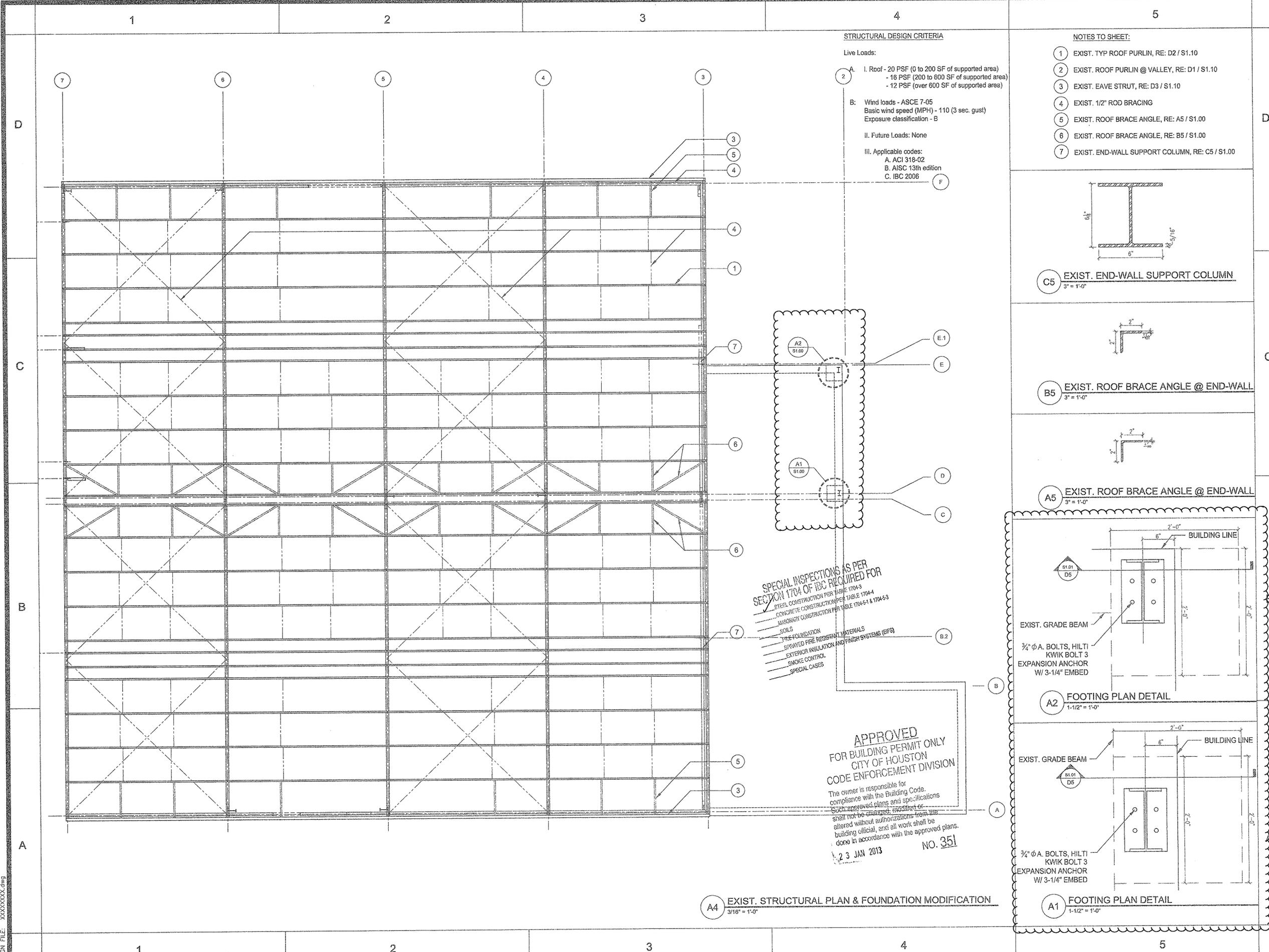
DATE: 06/17/10
 WBS No: L-000054-0001-4
 SCALE: [AS NOTED]
 DRAWN BY: _____
 CHECKED BY: _____

SHEET TITLE:
 DEMOLITION ELEVATIONS
 1 OF 2

SHEET NO.:
AD2.01
 12 OF 56 SHEETS

CITY DWG. NO.:

Drawn by: R. R. R. ARCHITECTS, INC. 1245 WEST 18TH STREET HOUSTON, TEXAS 77008
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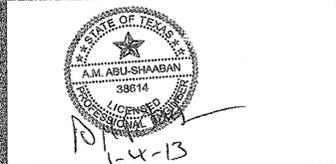


ISSUE LOG		
NO.	DATE	DESCRIPTION
1	02/28/12	Issue for Bid & Construction
2	05/21/12	Addendum #2
3	06/08/12	Rider Update
4	01/07/13	Permit Modifications

CONSULTANT(S):
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PROJECT NAME:
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DATE: 06/17/10
 WBS No: L-000054-0001-4
 SCALE: [AS NOTED]
 DRAWN BY:
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SHEET TITLE:
**STRUCTURAL ROOF
 FRAMING PLAN**

SHEET NO.:
S1.00
 14 OF 56 SHEETS

CITY DWG. NO.:

Drawn by: A.M. ABU-SHAABAN, License No. 38814, State of Texas
 Checked by: A.M. ABU-SHAABAN, License No. 38814, State of Texas
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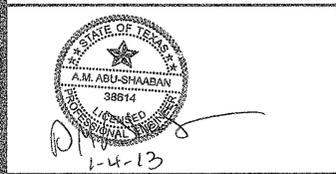
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A

ISSUE LOG		
NO.	DATE	DESCRIPTION
1	02/28/12	Issue for Bid & Construction
2	05/21/12	Addendum #2
3	06/08/12	Rider Update
4	01/07/13	Permit Modifications

CONSULTANT(S):
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PROJECT NAME:
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 PROJECT MANAGER _____

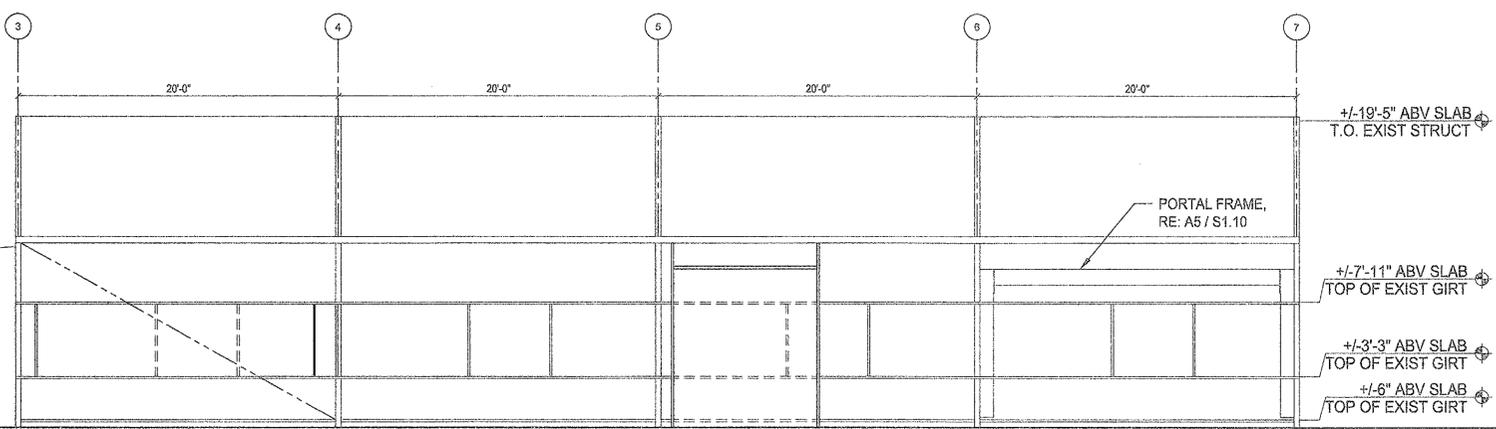
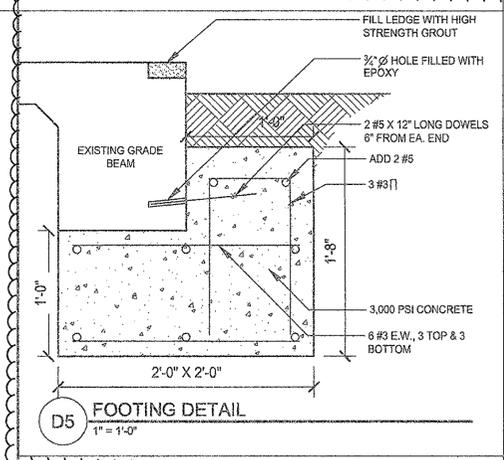
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DATE: 06/17/10
 WBS No: L-000054-0001-4
 SCALE: [AS NOTED]
 DRAWN BY: _____
 CHECKED BY: _____

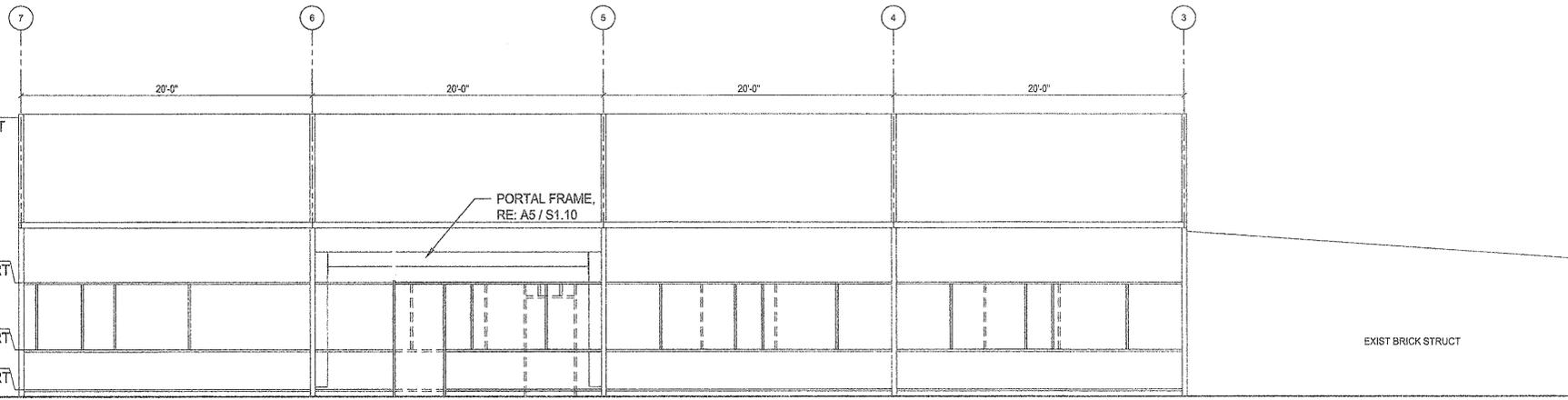
SHEET TITLE:
 STRUCTURAL ELEVATIONS

SHEET NO.:
S1.01
 15 OF 56 SHEETS

CITY DWG. NO.:



C4 NORTH - FRAMING ELEVATION
 3/16" = 1'-0"



A4 SOUTH - FRAMING ELEVATION
 3/16" = 1'-0"

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 23 JAN 2013 NO. 351

LEGEND
 - - - - - DEMO EXIST. WALL GIRT
 _____ EXIST. WALL GIRT
 _____ NEW
 - - - - - 1/2" ROD, DEMO

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 Phone: 713.668.3121 Fax: 713.668.3121
 DESIGN FILE: XXXXXXXX.dwg

1

2

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D

C

B

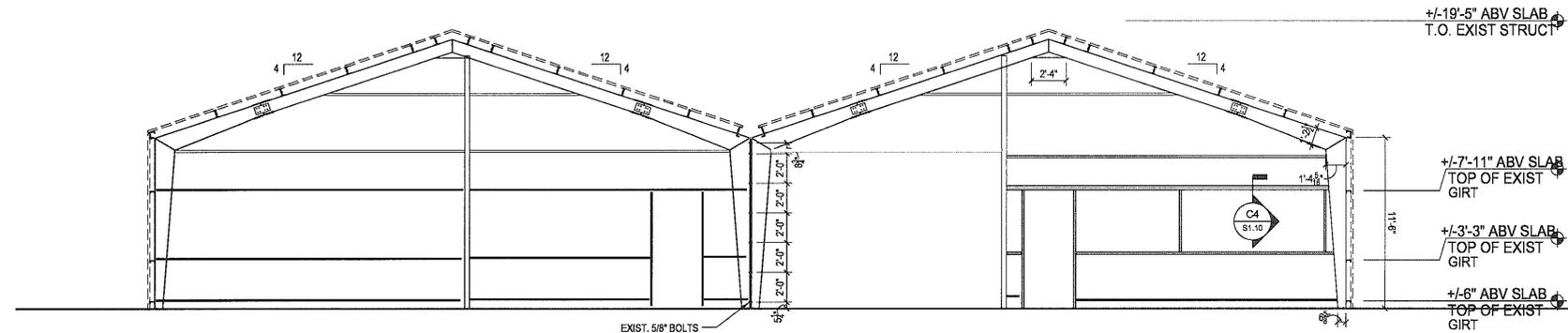
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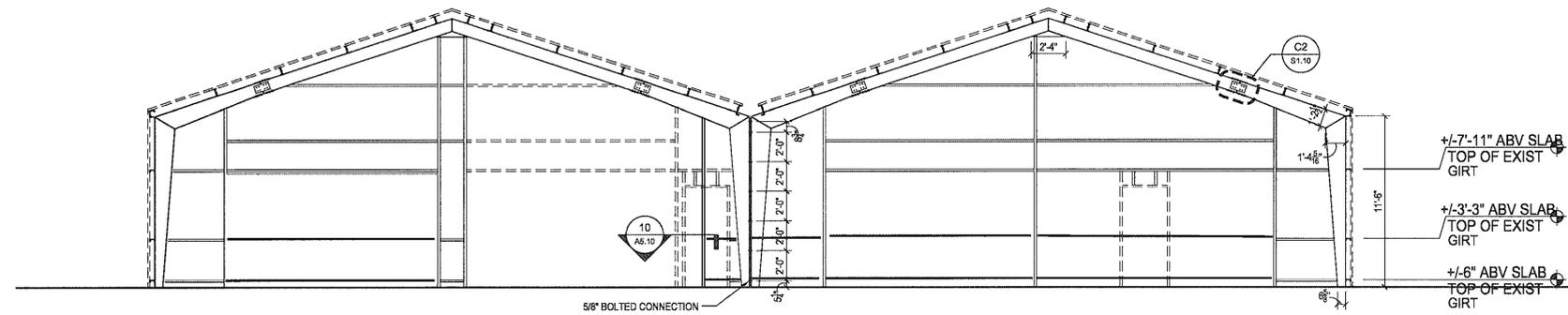
C

B

A



C4 EAST - STRUCTURE ELEVATION
3/16" = 1'-0"



A4 WEST - STRUCTURE ELEVATION
3/16" = 1'-0"

ISSUE LOG

NO.	DATE	DESCRIPTION
1	07/16/10	60% CD SUBMITTAL
2	03/14/11	90% CD SUBMITTAL
3	06/17/11	FOR PERMIT

CONSULTANT(S):

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SEAL(S):

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phone 713.868.3121 www.rdir.com

DATE: 06/17/10
WBS No: L-000054-0001-4
SCALE: [AS NOTED]
DRAWN BY: _____
CHECKED BY: _____

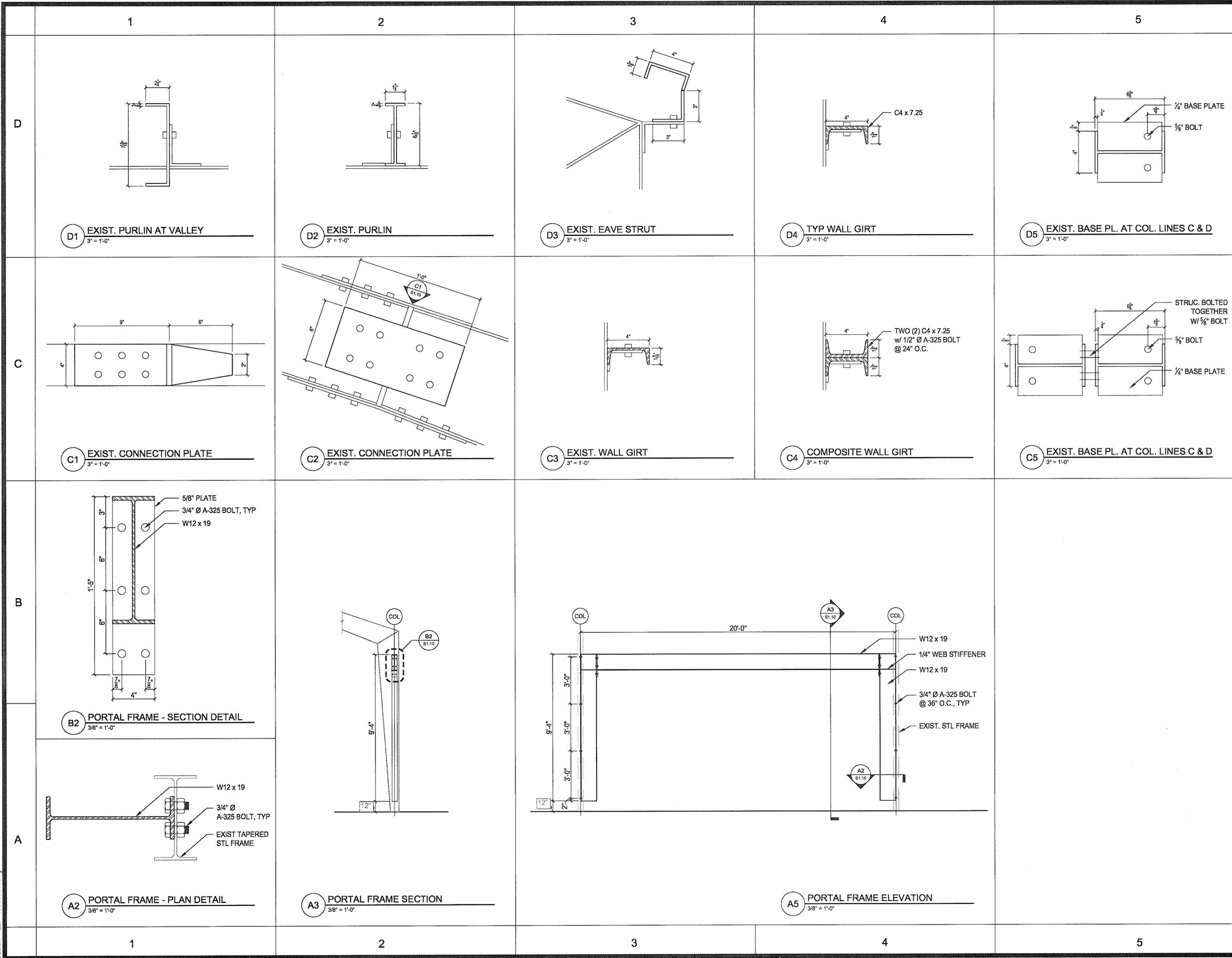
SHEET TITLE:
STRUCTURAL ELEVATIONS

SHEET NO.:
S1.02
16 OF 54 SHEETS

CITY DWG. NO.:

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 Plot File: XXXXXXXX.dwg

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NO.	DATE	DESCRIPTION
1	07/16/10	60% CD SUBMITTAL
2	03/14/11	90% CD SUBMITTAL
3	06/17/11	FOR PERMIT

CONSULTANT(S):
 MEP ENGINEER
 HUNT & HUNT ENGINEERING CORP.
 P.O. BOX 771294 HOUSTON, TX 77215-1294
 TEL: 713-780-6554 FAX: 713-780-9424
 CIVIL ENGINEER
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 2500 TANGLEWILDE, SUITE 301 HOUSTON, TX 77063
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 TEL: 713-461-8584 FAX: 713-465-7479

SEAL(S):

PROJECT NAME:
 CITY OF HOUSTON
 9003 N. MAIN ADMINISTRATION
 BLDG RENOVATION



REVIEWED:
 PROGRAM MANAGER _____ SPONSORING DEPARTMENT _____
 PROJECT MANAGER _____

Rdlr ARCHITECTS
 ARCHITECTURE | PLANNING | INTERIORS
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 phone 713.868.3121 www.rdlr.com

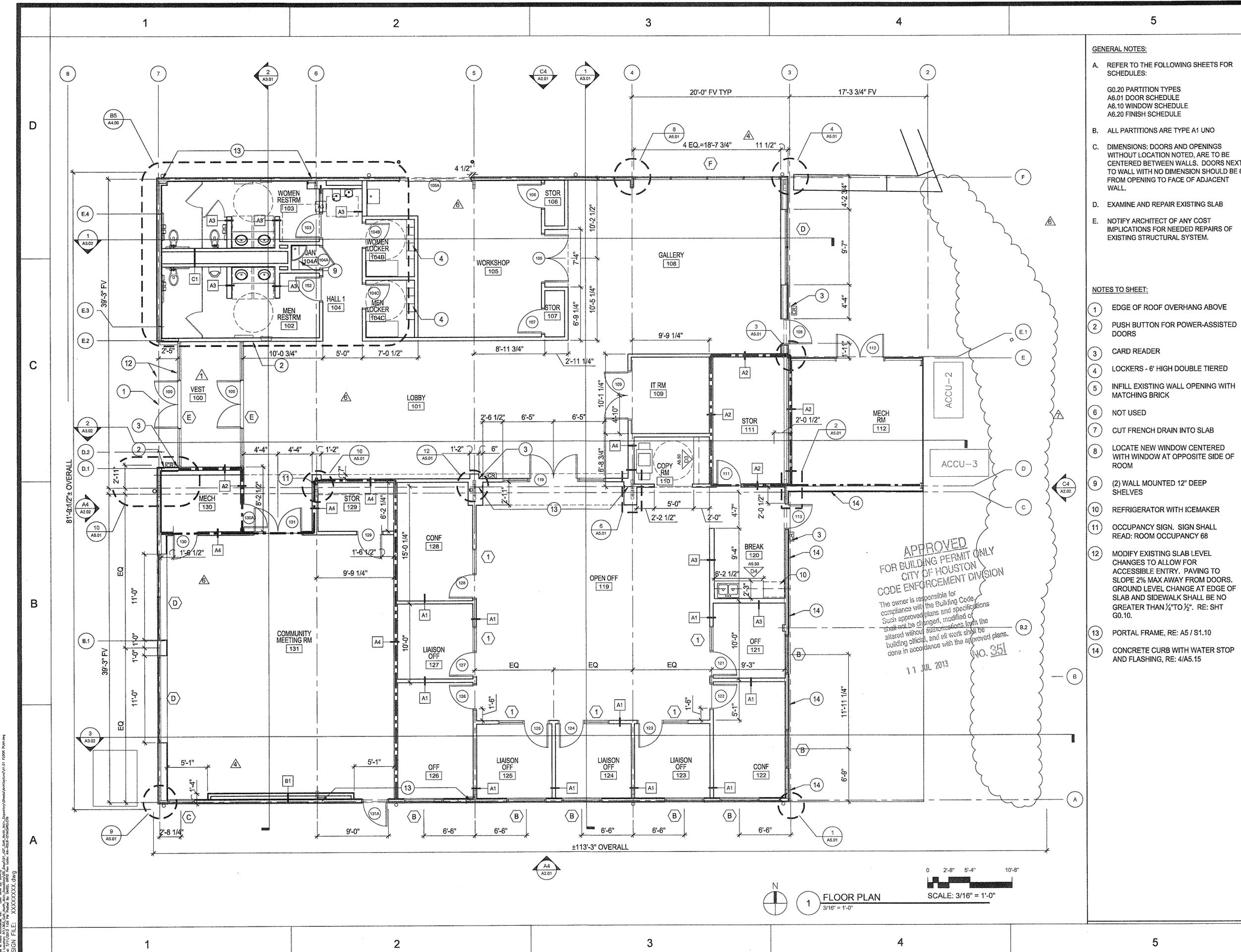
DATE: 06/17/10
 WBS No: L-000054-0001-4
 SCALE: [AS NOTED]
 DRAWN BY: _____
 CHECKED BY: _____

SHEET TITLE:
 STRUCTURAL DETAILS

SHEET NO.:
S1.10
 17 OF 54 SHEETS

CITY DWG. NO.: _____

CAD FILE: _____



GENERAL NOTES:

A. REFER TO THE FOLLOWING SHEETS FOR SCHEDULES:
 G0.20 PARTITION TYPES
 A6.01 DOOR SCHEDULE
 A6.10 WINDOW SCHEDULE
 A6.20 FINISH SCHEDULE

B. ALL PARTITIONS ARE TYPE A1 UNO

C. DIMENSIONS: DOORS AND OPENINGS WITHOUT LOCATION NOTED, ARE TO BE CENTERED BETWEEN WALLS. DOORS NEXT TO WALL WITH NO DIMENSION SHOULD BE 6" FROM OPENING TO FACE OF ADJACENT WALL.

D. EXAMINE AND REPAIR EXISTING SLAB

E. NOTIFY ARCHITECT OF ANY COST IMPLICATIONS FOR NEEDED REPAIRS OF EXISTING STRUCTURAL SYSTEM.

- NOTES TO SHEET:**
- 1 EDGE OF ROOF OVERHANG ABOVE
 - 2 PUSH BUTTON FOR POWER-ASSISTED DOORS
 - 3 CARD READER
 - 4 LOCKERS - 6' HIGH DOUBLE TIERED
 - 5 INFILL EXISTING WALL OPENING WITH MATCHING BRICK
 - 6 NOT USED
 - 7 CUT FRENCH DRAIN INTO SLAB
 - 8 LOCATE NEW WINDOW CENTERED WITH WINDOW AT OPPOSITE SIDE OF ROOM
 - 9 (2) WALL MOUNTED 12" DEEP SHELVES
 - 10 REFRIGERATOR WITH ICEMAKER
 - 11 OCCUPANCY SIGN. SIGN SHALL READ: ROOM OCCUPANCY 68
 - 12 MODIFY EXISTING SLAB LEVEL CHANGES TO ALLOW FOR ACCESSIBLE ENTRY. PAVING TO SLOPE 2% MAX AWAY FROM DOORS. GROUND LEVEL CHANGE AT EDGE OF SLAB AND SIDEWALK SHALL BE NO GREATER THAN 1/4" TO 1/2". RE: SHT G0.10.
 - 13 PORTAL FRAME, RE: A5 / S1.10
 - 14 CONCRETE CURB WITH WATER STOP AND FLASHING, RE: 4/A5.15

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11 JUL 2013 NO. 351

ISSUE LOG		
NO.	DATE	DESCRIPTION
1	02/28/12	Issue for Bid & Construction
2	05/21/12	Addendum #2
3	06/08/12	Rider Update
7	07/11/13	Plan Revision

CONSULTANT(S):

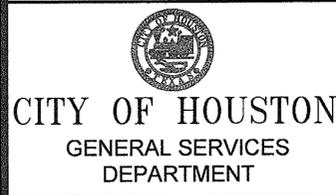
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PROJECT NAME:
 CITY OF HOUSTON
 9003 N. MAIN ADMINISTRATION
 BLDG RENOVATION



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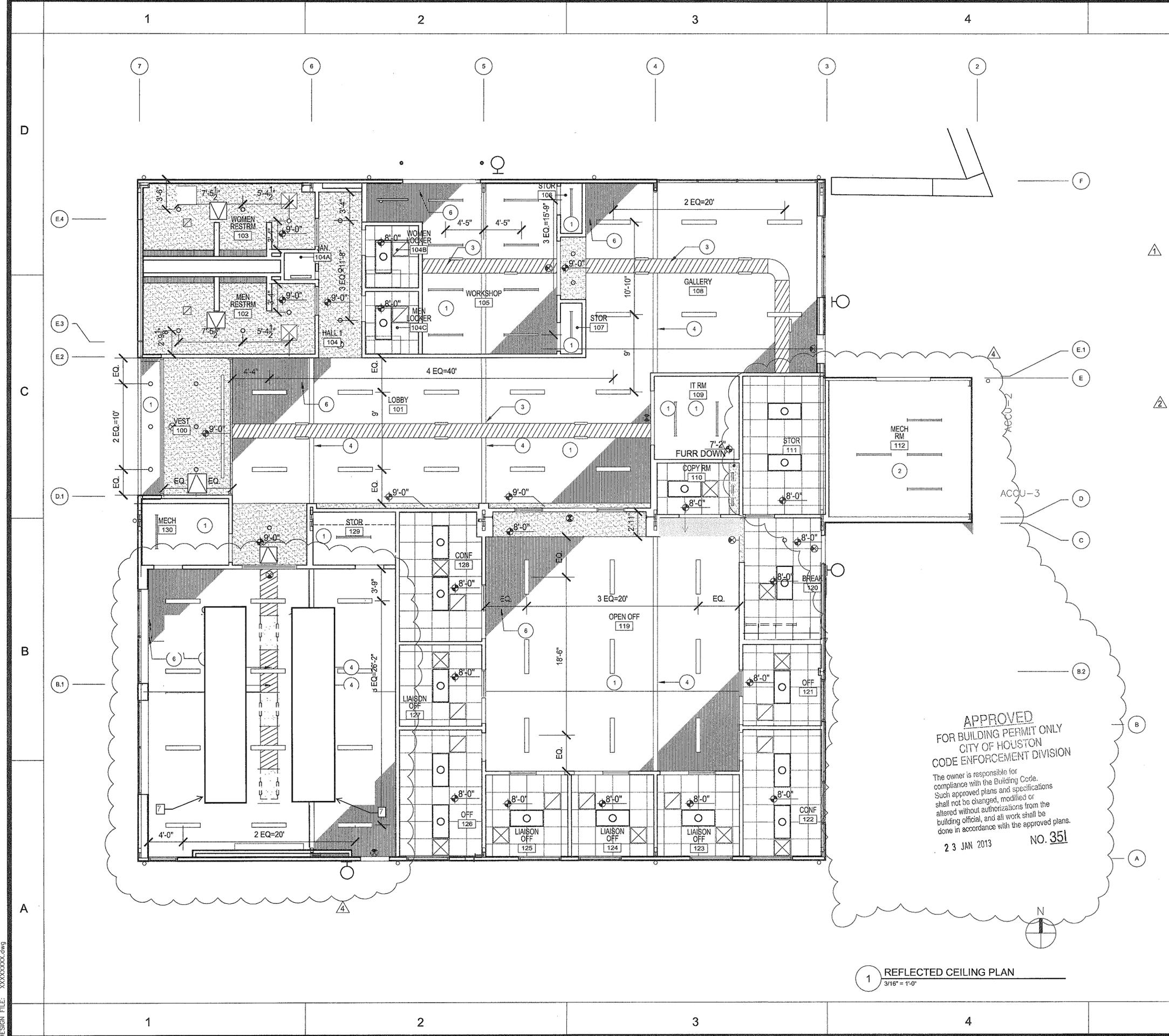
DATE: 06/17/10
 WBS No: L-000054-0001-4
 SCALE: [AS NOTED]
 DRAWN BY: _____
 CHECKED BY: _____

SHEET TITLE:
 FLOOR PLAN

SHEET NO.:
A1.01
 19 OF 56 SHEETS

CITY DWG. NO.:

No. 10 in. Ruler
 Design File: XXXXXXXX.dwg
 Date: 06/17/10
 Project: 9003 N. Main Administration Bldg Renovation
 Designer: [Name]
 Checker: [Name]
 Date: 06/17/10



GENERAL NOTES:

A. REFER TO ELECTRICAL DRAWINGS FOR LIGHT FIXTURE SCHEDULE

B. REFER TO MECH DRAWINGS FOR DESIGN OF THESE SYSTEMS (DUCT SIZES, CIRCUTING, ETC.) RCP TO GOVERN

C. INSTALL LIGHT FIXTURES & MEP DEVICES IN CENTER OF CEILING PANELS UNO.

D. ALL EXPOSED STRUCTURAL STEEL TO BE PAINTED.

E. ALL PENDANT LIGHT FIXTURES TO BE INSTALLED @ 9'-0" AFF.

- NOTES TO SHEET:
- 1 SALVAGED ROOF PANEL CEILING, MOUNT PANELS DIRECTLY TO UNDERSIDE OF ROOF PURLINS. PAINT METAL PANELS.
 - 2 NO CEILINGS IN THIS AREA
 - 3 EXPOSED DUCTWORK
 - 4 EXISTING STRUCTURAL MEMBERS
 - 5 SPEAKERS, COORDINATE W/ OWNER
 - 6 SALVAGED METAL DECK UNDER R-30 ROOF INSULATION
 - 7 Acoustical cloud - Armstrong 2x2 Cortega regular tile in Prelude XL grid and UJA25 outside trim

- RCP LEGEND:
- GYPSUM BOARD
 - 2 x 2 SUSPENDED ACOUSTICAL PANEL SYSTEM
 - PROJECTOR, CEILING MOUNTED
 - PERFORATED SUPPLY GRILLE
 - PERFORATED RETURN GRILLE
 - ACCESS HATCH, 24 x 24
 - SMOKE DETECTOR
 - EXIT SIGN
 - SPEAKER
 - 2 x 4 RECESSED DIRECT/INDIRECT FLUORESCENT
 - DIRECT/INDIRECT PENDANTS
 - DOWNLIGHT
 - INDUSTRIAL FLUORESCENT
 - UNDER COUNTER FLUORESCENT
 - TROUGH LIGHTS
 - EXPOSED AIR DUCT W/ SUPPLY GRILLES

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23 JAN 2013 NO. 351

1 REFLECTED CEILING PLAN
3/16" = 1'-0"

ISSUE LOG		
NO.	DATE	DESCRIPTION
1	02/28/12	Issue for Bid & Construction
2	05/21/12	Addendum #2
3	06/08/12	Rider Update
4	01/07/13	Permit Modifications

CONSULTANT(S):

D
MEP ENGINEER
HUNT & HUNT ENGINEERING CORP.
P.O. BOX 771294 HOUSTON, TX 77215-1294
TEL: 713-780-9554 FAX: 713-780-9424

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STRUCTURAL ENGINEER
SIGMA ENGINEERING SERVICES
8594 KATY FRWY, SUITE 340 HOUSTON, TX 77024
TEL: 713-461-8584 FAX: 713-465-7479



PROJECT NAME:
CITY OF HOUSTON
9003 N. MAIN ADMINISTRATION
BLDG RENOVATION



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PROJECT MANAGER _____

RdlR ARCHITECTS
ARCHITECTURE | PLANNING | INTERIORS
1245 West 18th Street Houston, Texas 77008
phone 713.868.3121 www.rdlr.com

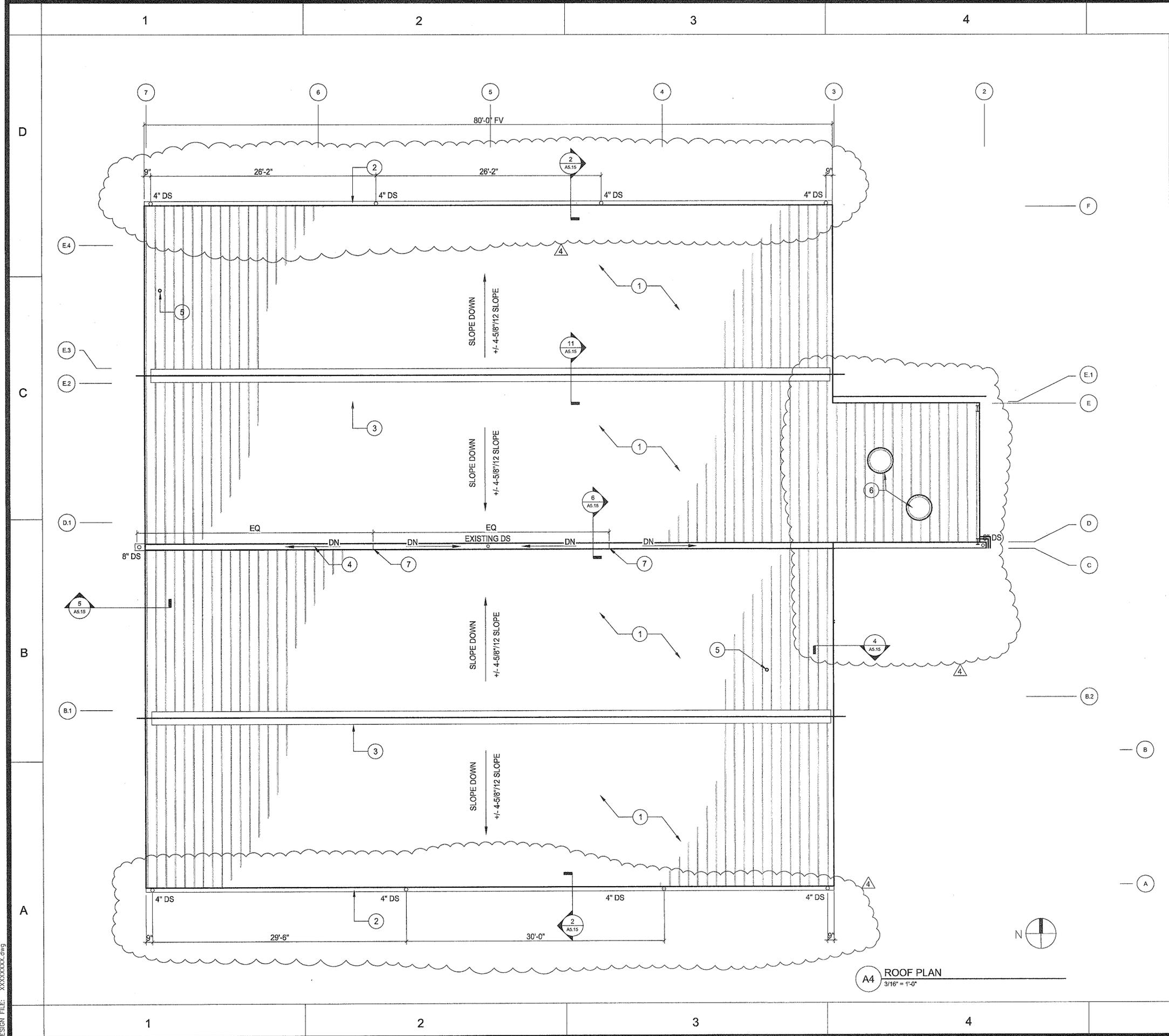
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WBS No: L-000054-0001-4
SCALE: [AS NOTED]
DRAWN BY: _____
CHECKED BY: _____

SHEET TITLE:
REFLECTED CEILING PLAN

SHEET NO.:
A1.02
20 OF 56 SHEETS

CITY DWG. NO.:

RdlR Architects, Inc. 1245 West 18th Street, Houston, Texas 77008
 Tel: 713.868.3121 Fax: 713.868.3122
 www.rdlr.com
 DESIGN FILE: XXXXXXXX.dwg



GENERAL NOTES:

- NOTES TO SHEET:
- ① STANDING SEAM ROOF PANEL W/ GALVALUME FINISH
 - ② 6" WIDE GUTTER
 - ③ PREFINISHED & PREFORMED RIDGE TRIM
 - ④ VALLEY GUTTER
 - ⑤ VENT - RE: MEP
 - ⑥ AIR INTAKE
 - ⑦ INDICATES HIGH POINT IN GUTTER

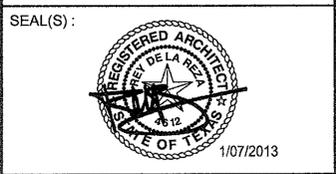
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23 JAN 2013 NO. 351

A4 ROOF PLAN
3/16" = 1'-0"

ISSUE LOG		
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1	02/28/12	Issue for Bid & Construction
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3	06/08/12	Rider Update
4	01/07/13	Permit Modifications

CONSULTANT(S):
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 TEL: 713-461-8584 FAX: 713-465-7479



PROJECT NAME:
CITY OF HOUSTON
9003 N. MAIN ADMINISTRATION
BLDG RENOVATION



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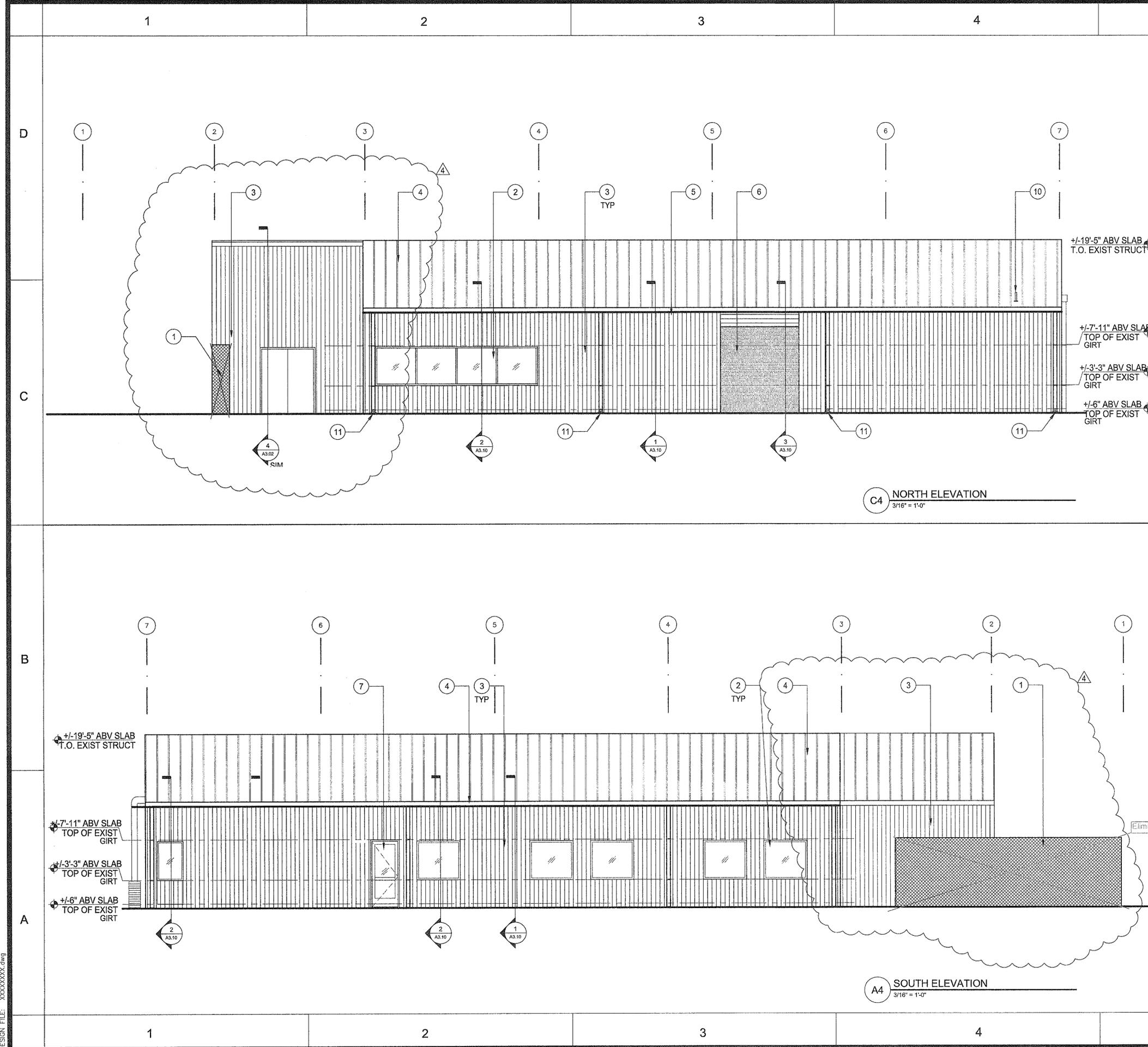
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 WBS No: L-000054-0001-4
 SCALE: [AS NOTED]
 DRAWN BY: _____
 CHECKED BY: _____

SHEET TITLE:
ROOF PLAN

SHEET NO.:
A1.03
 21 OF 56 SHEETS

CITY DWG. NO.:

L:\Projects\9003 N. Main Administration Bldg Renovation\Drawings\Roof Plan.dwg
 Design File: XXXXXXX.dwg



- NOTES TO SHEET:**
- ① 8'-0" TALL GABION WALL FENCING - Eliminated
 - ② WINDOW SYSTEM - RE: WINDOW SCHEDULE SHEET A6.10
 - ③ NEW CORRUGATED METAL PANEL, PATTERN COMPOSED OF 3 COLORS.
 - ④ NEW STANDING SEAM METAL ROOFING
 - ⑤ NEW GUTTER AND DOWNSPOUT
 - ⑥ OVERHEAD DOOR - RE: DOOR SCHEDULE SHEET A6.01
 - ⑦ DOOR(S) - RE: DOOR SCHEDULE SHEET A6.01
 - ⑧ VALLEY GUTTER
 - ⑨ EXISTING STRUCTURAL MEMBER IN FOREGROUND
 - ⑩ VENT, RE: MEP
 - ⑪ SPLASH BLOCK

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3	06/08/12	Rider Update
4	01/07/13	Permit Modifications

CONSULTANT(S):
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PROJECT NAME:
 CITY OF HOUSTON
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 BLDG RENOVATION



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1245 West 18th Street Houston, Texas 77008
 phone 713.868.3121 www.rdr.com

DATE: 06/17/10
 WBS No: L-000054-0001-4
 SCALE: [AS NOTED]
 DRAWN BY: _____
 CHECKED BY: _____

SHEET TITLE:
 EXTERIOR ELEVATIONS

SHEET NO.:
A2.01
 22 OF 56 SHEETS

CITY DWG. NO.:

RDR ARCHITECTS, 1245 WEST 18TH STREET, HOUSTON, TEXAS 77008
 TEL: 713.868.3121 FAX: 713.868.3122 WWW.RDR.COM
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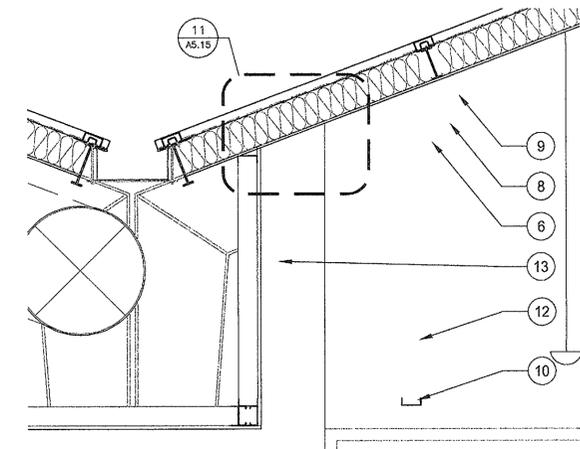
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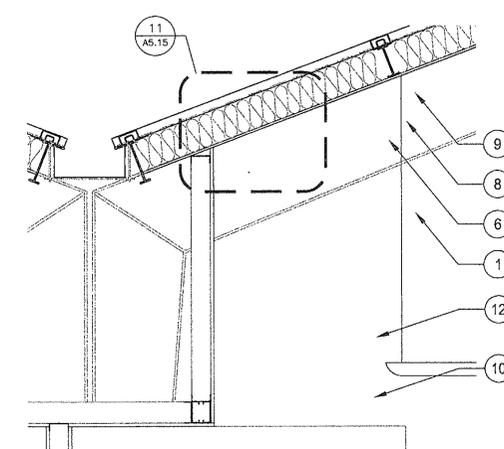
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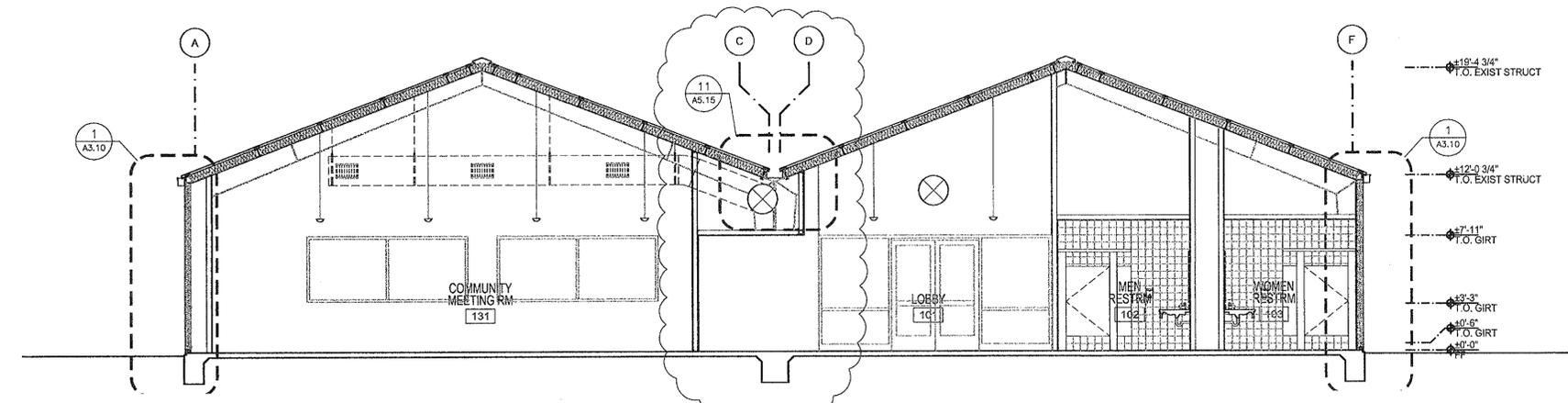
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3/16" = 1'-0"



3 SECTION DETAIL
3/4" = 1'-0"

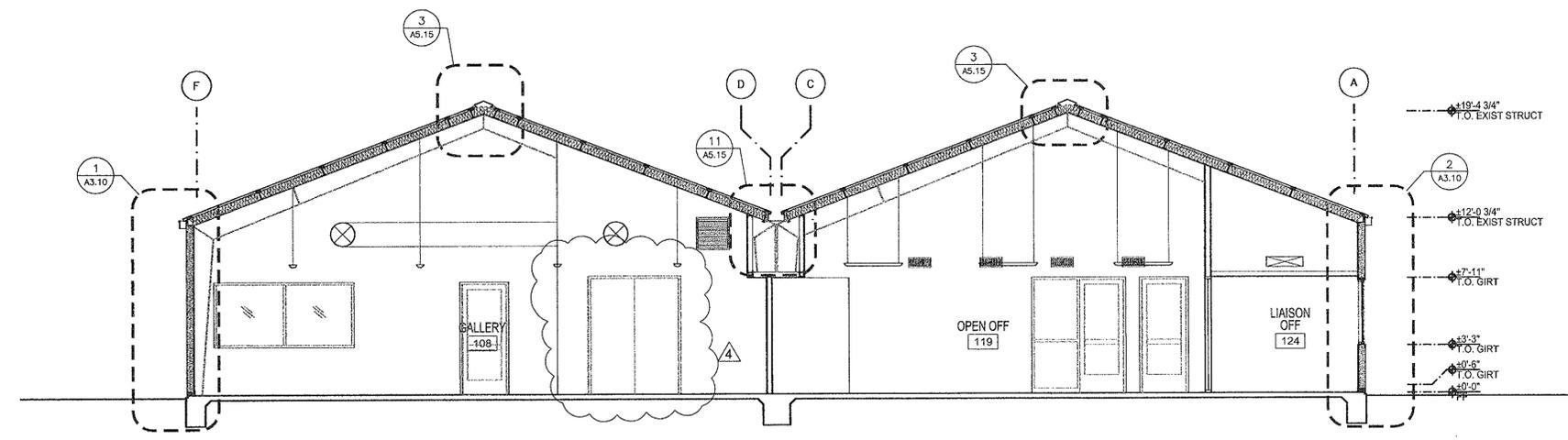
- NOTES TO SHEET:
- 1 EXIST STRUCT, PAINT STRUCTURE IF EXPOSED TO VIEW
 - 2 EXISTING STEEL CHANNEL GIRT
 - 3 EXISTING STEEL ROOF PURLIN
 - 4 EXIST BRICK WALL & FRAMING
 - 5 MANUFACTURER'S STANDARD CORNER TRIM
 - 6 SALVAGED ROOF PANELS, ATTACH TO BOTTOM OF EXISTING ROOF PURLINS
 - 7 4" BATT INSUL, MIN. R-19
 - 8 6" BATT INSUL, MIN R-30
 - 9 STANDING SEAM MTL ROOF PANEL, GALVALUME FINISH
 - 10 4" MTL STUDS
 - 11 3/4" MTL FURRING
 - 12 5/8" GYP. BOARD, PTD.
 - 13 HVAC DUCTWORK; RE: MEP
 - 14 PREFINISHED, EXPOSED FASTENER METAL PANEL
 - 15 SEALANT & BACKER ROD
 - 16 PRE-FIN SHEET METAL FLASHING
 - 17 SCHED WINDOW
 - 18 SCHED DOOR
 - 19 SCHED BASE
 - 20 SCHED HM FRAME
 - 21 SCHED LIGHT FIXTURE
 - 22 PRE FORMED AND PREFINISHED RIDGE CAP
 - 23 PRE FORMED AND PREFINISHED FASCIA
 - 24 PRE FORMED AND PREFINISHED GUTTER
 - 25 PRE FORMED AND PREFINISHED DOWNSPOUT
 - 26 EXISTING EAVE STRUT
 - 27 SCHED. OVERHEAD DOOR
 - 28 PORTAL FRAME, RE: A5 / S1.10

C



2 BUILDING SECTION
3/16" = 1'-0"

B



1 BUILDING SECTION
3/16" = 1'-0"

A

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23 JAN 2013 NO. 351

ISSUE LOG		
NO.	DATE	DESCRIPTION
1	02/28/12	Issue for Bid & Construction
2	05/21/12	Addendum #2
3	06/08/12	Rider Update
4	01/07/13	Permit Modifications

CONSULTANT(S):
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PROJECT NAME:
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BLDG RENOVATION**



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DATE: 06/17/10
WBS No: L-000054-0001-4
SCALE: [AS NOTED]
DRAWN BY: _____
CHECKED BY: _____

SHEET TITLE:
BUILDING SECTIONS

SHEET NO.:
A3.01
24 OF 56 SHEETS

CITY DWG. NO.:

1

2

3

4

5

Date: 06/17/10
 Design: R. J. ...
 Check: ...
 Design File: XXXXXX.GPJ

ISSUE LOG

NO.	DATE	DESCRIPTION
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 SCALE: [AS NOTED]
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 CHECKED BY: _____

SHEET TITLE:
 BUILDING SECTIONS

SHEET NO.:
A3.02
 25 OF 56 SHEETS

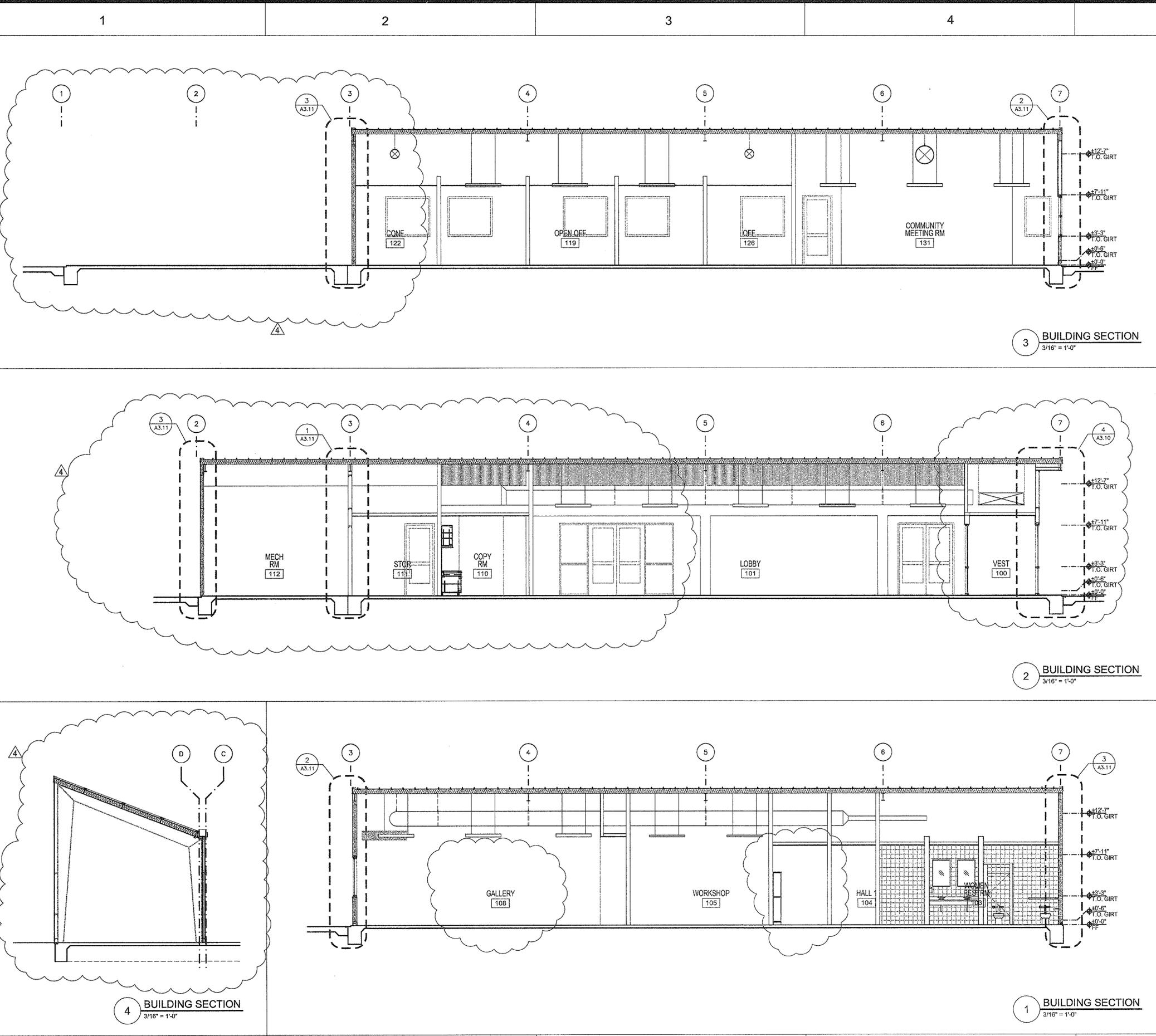
CITY DWG. NO.:

- NOTES TO SHEET:
- EXIST STRUCT, PAINT STRUCTURE IF EXPOSED TO VIEW
 - EXISTING STEEL CHANNEL GIRT
 - EXISTING STEEL ROOF PURLIN
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 - PRE FORMED AND PREFINISHED DOWNSPOUT
 - EXISTING EAVE STRUT
 - SCHED. OVERHEAD DOOR
 - PORTAL FRAME, RE: A5 / S1.10

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23 JAN 2013 NO. 351



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 Plot Time: 10:00 AM
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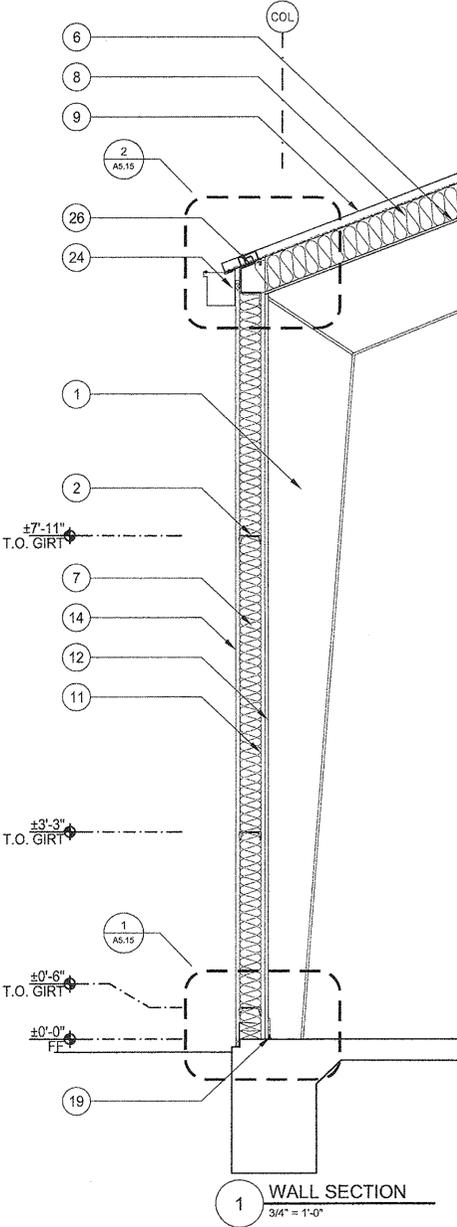
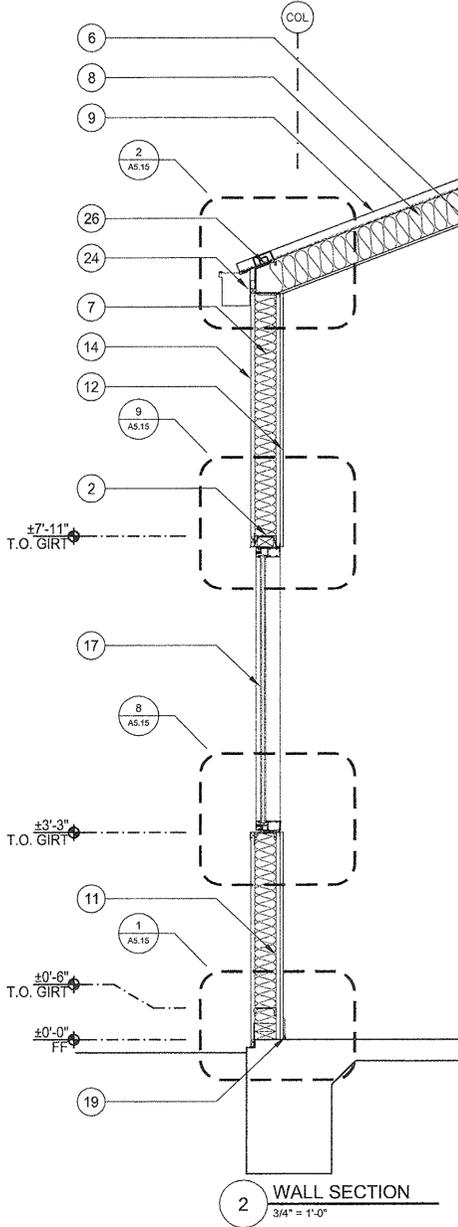
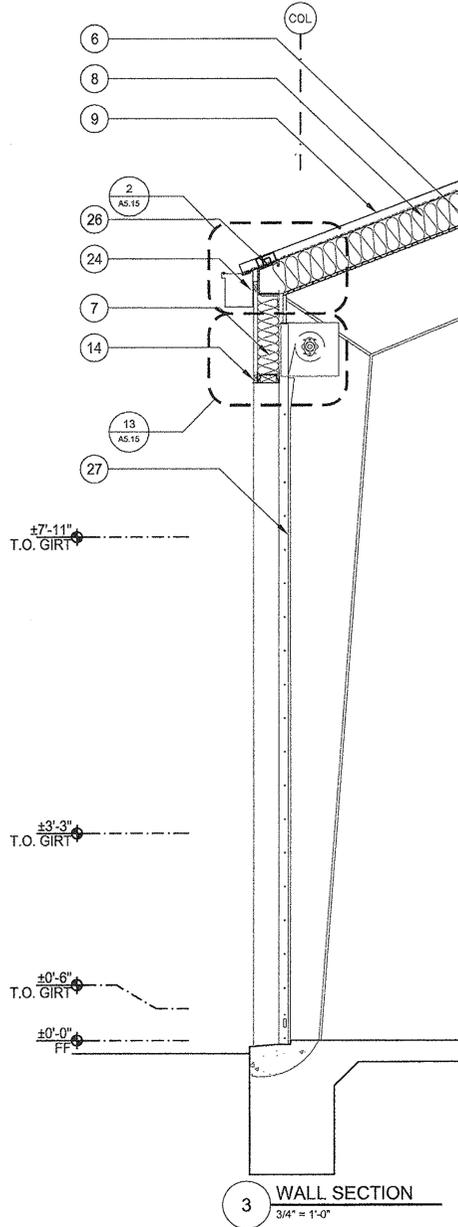
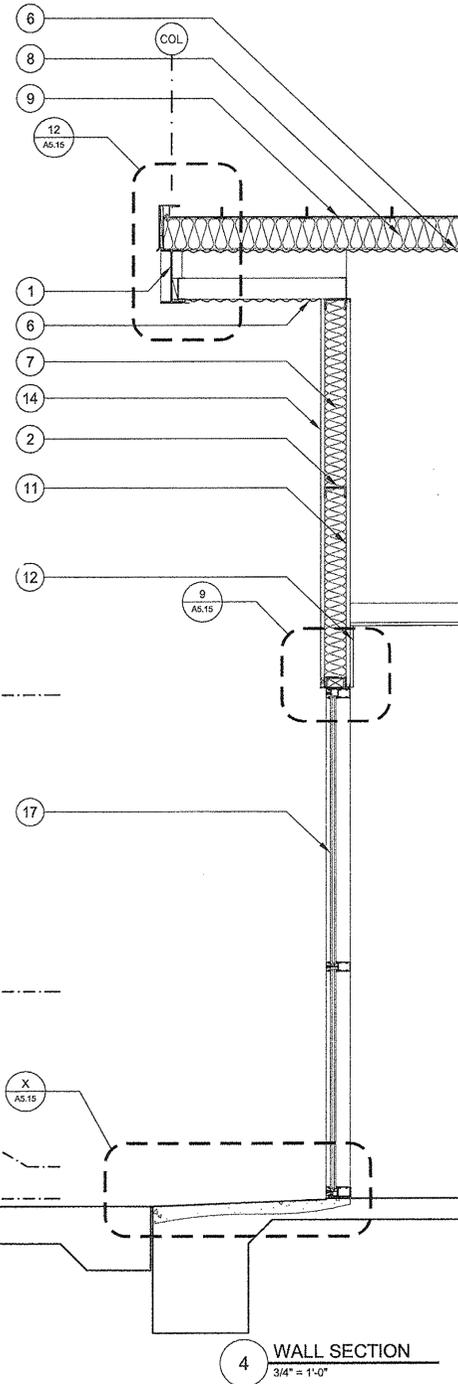
5

D

C

B

A



- NOTES TO SHEET:
- 1 EXIST STRUCT, PAINT STRUCTURE IF EXPOSED TO VIEW
 - 2 EXISTING STEEL CHANNEL GIRTS
 - 3 EXISTING STEEL ROOF PURLIN
 - 4 EXIST BRICK WALL & FRAMING
 - 5 NOT USED
 - 6 SALVAGED ROOF PANELS, ATTACH TO BOTTOM OF EXISTING ROOF PURLINS
 - 7 4" BATT INSUL, MIN. R-19
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 - 21 SCHED LIGHT FIXTURE
 - 22 PRE FORMED AND PREFINISHED RIDGE CAP
 - 23 PRE FORMED AND PREFINISHED FASCIA
 - 24 PRE FORMED AND PREFINISHED GUTTER
 - 25 PRE FORMED AND PREFINISHED DOWNSPOUT
 - 26 EXISTING EAVE STRUT
 - 27 SCHED. OVERHEAD DOOR
 - 28 PORTAL FRAME, RE: A5 / S1.10

ISSUE LOG		
NO.	DATE	DESCRIPTION
1	02/28/12	Issue for Bid & Construction
CONSULTANT(S):		
MEP ENGINEER HUNT & HUNT ENGINEERING CORP. P.O. BOX 771294 HOUSTON, TX 77215-1294 TEL: 713-780-8554 FAX: 713-780-9424		
CIVIL ENGINEER WGA & ASSOCIATES 2500 TANGLEWILDE, SUITE 301 HOUSTON, TX 77063 TEL: 713-789-1900		
STRUCTURAL ENGINEER SIGMA ENGINEERING SERVICES 8554 KATY FRWY, SUITE 340 HOUSTON, TX 77024 TEL: 713-461-8584 FAX: 713-465-7479		
SEAL(S):		
		
PROJECT NAME:		
CITY OF HOUSTON 9003 N. MAIN ADMINISTRATION BLDG RENOVATION		
 CITY OF HOUSTON GENERAL SERVICES DEPARTMENT		
REVIEWED:		
PROGRAM MANAGER	SPONSORING DEPARTMENT	
PROJECT MANAGER		
Rdlr ARCHITECTS ARCHITECTURE PLANNING INTERIORS 1245 West 18th Street Houston, Texas 77008 phone 713.868.3121 www.rdlr.com		
DATE:	06/17/10	
WBS No:	L-000054-0001-4	
SCALE:	[AS NOTED]	
DRAWN BY:		
CHECKED BY:		
SHEET TITLE:		
WALL SECTIONS		
SHEET NO.:		
A3.10 26 OF 56 SHEETS		
CITY DWG. NO.:		

1

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A

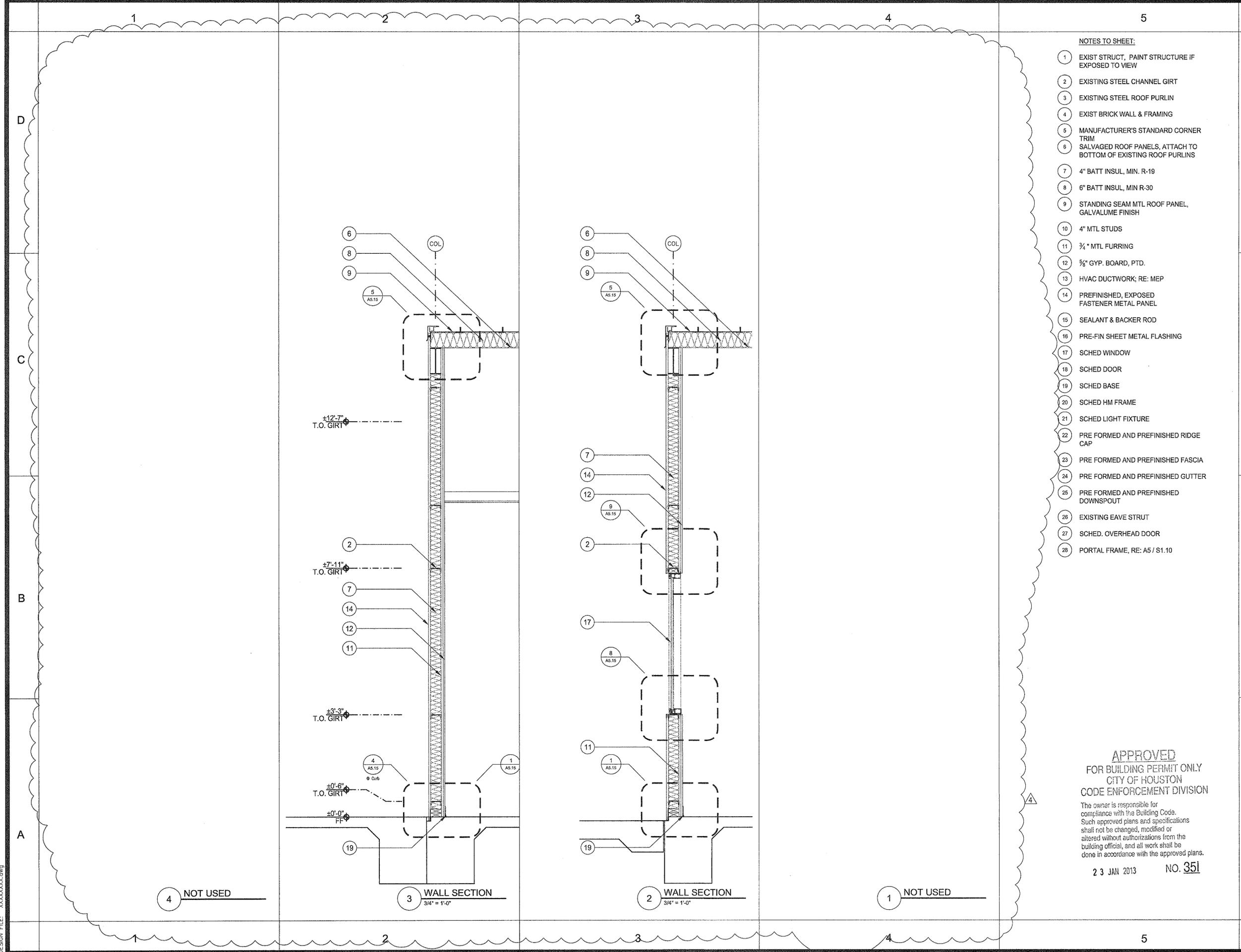
B

C

D

Rdlr Architects, Inc.
 1245 West 18th Street, Houston, Texas 77008
 Phone: 713.868.3121 Fax: 713.868.3122
 www.rdlr.com
 DESIGN FILE: XXXXXXX.dwg

For use by: Rdlr Architects, Inc. - 1245 West 18th Street, Houston, Texas 77008
 Phone: 713.868.3121
 Design File: XXXXXXXX.dwg



- NOTES TO SHEET:**
- 1 EXIST STRUCT. PAINT STRUCTURE IF EXPOSED TO VIEW
 - 2 EXISTING STEEL CHANNEL GIRTS
 - 3 EXISTING STEEL ROOF PURLIN
 - 4 EXIST BRICK WALL & FRAMING
 - 5 MANUFACTURER'S STANDARD CORNER TRIM
 - 6 SALVAGED ROOF PANELS, ATTACH TO BOTTOM OF EXISTING ROOF PURLINS
 - 7 4" BATT INSUL, MIN. R-19
 - 8 6" BATT INSUL, MIN R-30
 - 9 STANDING SEAM MTL ROOF PANEL, GALVALUME FINISH
 - 10 4" MTL STUDS
 - 11 3/4" MTL FURRING
 - 12 5/8" GYP. BOARD, PTD.
 - 13 HVAC DUCTWORK; RE: MEP
 - 14 PREFINISHED, EXPOSED FASTENER METAL PANEL
 - 15 SEALANT & BACKER ROD
 - 16 PRE-FIN SHEET METAL FLASHING
 - 17 SCHED WINDOW
 - 18 SCHED DOOR
 - 19 SCHED BASE
 - 20 SCHED HM FRAME
 - 21 SCHED LIGHT FIXTURE
 - 22 PRE FORMED AND PREFINISHED RIDGE CAP
 - 23 PRE FORMED AND PREFINISHED FASCIA
 - 24 PRE FORMED AND PREFINISHED GUTTER
 - 25 PRE FORMED AND PREFINISHED DOWNSPOUT
 - 26 EXISTING EAVE STRUT
 - 27 SCHED. OVERHEAD DOOR
 - 28 PORTAL FRAME, RE: A5 / S1.10

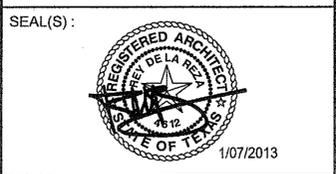
APPROVED
 FOR BUILDING PERMIT ONLY
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 CODE ENFORCEMENT DIVISION

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23 JAN 2013 NO. 351

ISSUE LOG		
NO.	DATE	DESCRIPTION
1	02/28/12	Issue for Bid & Construction
2	05/21/12	Addendum #2
3	06/08/12	Rider Update
4	01/07/13	Permit Modifications

CONSULTANT(S):
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 HUNT & HUNT ENGINEERING CORP.
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 TEL: 713-780-9554 FAX: 713-780-9424
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 WGA & ASSOCIATES
 2500 TANGLEWILDE, SUITE 301 HOUSTON, TX 77063
 TEL: 713-789-1900
 STRUCTURAL ENGINEER
 SIGMA ENGINEERING SERVICES
 8554 KATY FRWY, SUITE 340 HOUSTON, TX 77024
 TEL: 713-481-8584 FAX: 713-465-7479



PROJECT NAME:
 CITY OF HOUSTON
 9003 N. MAIN ADMINISTRATION
 BLDG RENOVATION



REVIEWED:
 PROGRAM MANAGER _____ SPONSORING DEPARTMENT _____
 PROJECT MANAGER _____

Rdlr ARCHITECTS
 ARCHITECTURE | PLANNING | INTERIORS
 1245 West 18th Street Houston, Texas 77008
 phone 713.868.3121 www.rdlr.com

DATE: 06/17/10
 WBS No: L-000054-0001-4
 SCALE: [AS NOTED]
 DRAWN BY: _____
 CHECKED BY: _____

SHEET TITLE:
 WALL SECTIONS

SHEET NO.:
A3.11
 27 OF 56 SHEETS

CITY DWG. NO.:

CAD FILE:

ISSUE LOG		
NO.	DATE	DESCRIPTION
1	02/28/12	Issue for Bid & Construction
2	05/21/12	Addendum #2
3	06/08/12	Rider Update
4	01/07/13	Permit Modifications

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PROJECT NAME:
 CITY OF HOUSTON
 9003 N. MAIN ADMINISTRATION
 BLDG RENOVATION



REVIEWED:

PROGRAM MANAGER _____ SPONSORING DEPARTMENT _____

PROJECT MANAGER _____

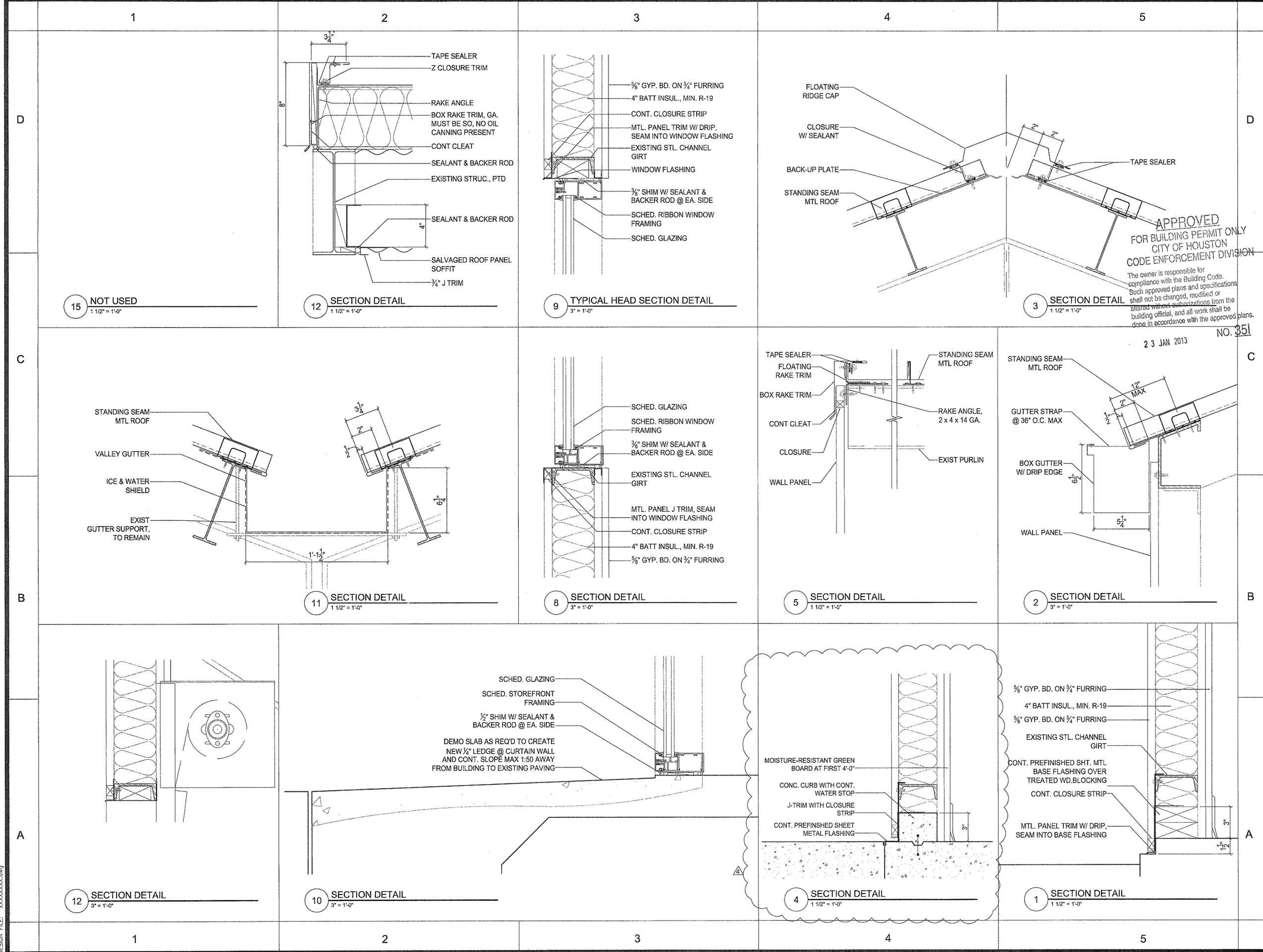
RdIR ARCHITECTS
 ARCHITECTURE | PLANNING | INTERIORS
 1245 West 18th Street Houston, Texas 77008
 phone 713.868.3121 www.rdir.com

DATE: 06/17/10
 WBS No: L-000054-0001-4
 SCALE: [AS NOTED]
 DRAWN BY: _____
 CHECKED BY: _____

SHEET TITLE:
 SECTION DETAILS

SHEET NO.:
A5.15
 30 OF 56 SHEETS

CITY DWG. NO.:



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23 JAN 2013
 No. 351

For All Other Architectural, Mechanical, Electrical, Plumbing, Fire Protection, and Structural Services, Contact: RdIR ARCHITECTS, INC., 1245 West 18th Street, Houston, Texas 77008, Phone: 713.868.3121, www.rdir.com
 DESIGN FILE: XXXXXXXX.GWG

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B

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ISSUE LOG

NO.	DATE	DESCRIPTION
1	02/28/12	Issue for Bid & Construction

CONSULTANT(S):

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P.O. BOX 771294 HOUSTON, TX 77215-1294
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SIGMA ENGINEERING SERVICES
8554 KATY FRWY, SUITE 340 HOUSTON, TX 77024
TEL: 713-461-8894 FAX: 713-465-7479

SEAL(S):



PROJECT NAME:

CITY OF HOUSTON
9003 N. MAIN ADMINISTRATION
BLDG RENOVATION



CITY OF HOUSTON
GENERAL SERVICES
DEPARTMENT

REVIEWED:

PROGRAM MANAGER _____ SPONSORING DEPARTMENT _____
PROJECT MANAGER _____

RdlR ARCHITECTS
ARCHITECTURE | PLANNING | INTERIORS

1245 West 18th Street Houston, Texas 77008
phone 713.868.3121 www.rdlr.com

DATE: 06/17/10

WBS No: L-000054-0001-4

SCALE: [AS NOTED]

DRAWN BY: _____

CHECKED BY: _____

SHEET TITLE:

MILLWORK DETAILS

SHEET NO.:

A5.50

31 OF 56 SHEETS

CITY DWG. NO.:

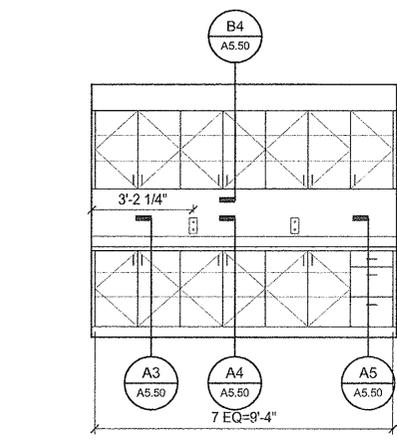
MILLWORK NOTES:

A. BREAK ROOM MILLWORK SHALL BE SALVAGED MATERIAL, OFCI.

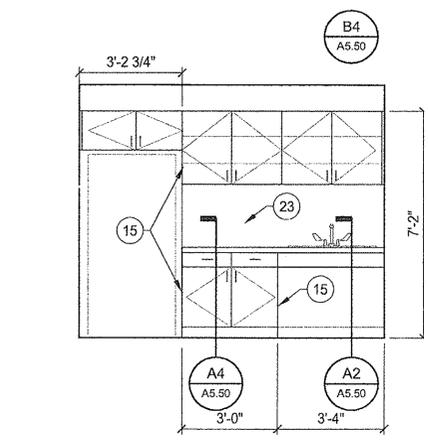
B. PROVIDE ACCESSIBLE PULL-IN SPACE AT SINK, RE: A2 / A5.50 FOR DESIGN CRITERIA

NOTES TO SHEET:

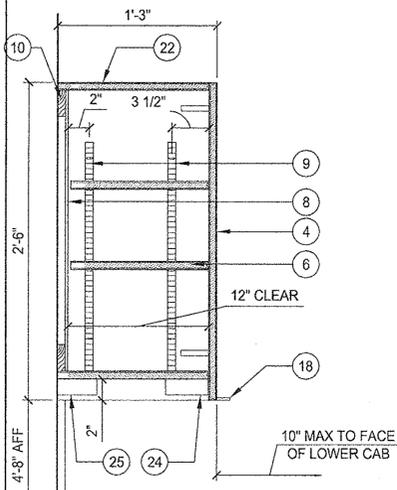
- 1 COUNTERTOP - P.LAM OVER 3/4" MELAMINE
- 2 DRAWER - P.LAM W/PULL AND ROLLER GUIDE
- 3 BACKSPLASH - P.LAM OVER 3/4" MELAMINE
- 4 CABINET DOOR - P.LAM ON 3/4" MELAMINE W/ CONCEALED OVERLAY HINGES, TYP
- 5 HARDWOOD EDGE W/ P.LAM
- 6 ADJUSTABLE SHELF - P.LAM OVER 3/4" MELAMINE
- 7 SILICONE CAULK
- 8 1/2" MELAMINE
- 9 SUPPORTS
- 10 1X FRAMING
- 11 2X BLOCKING
- 12 1X CLEATS
- 13 4" BASE
- 14 P.LAM COUNTERTOP AND APRON OVER 3/4" PLYWOOD
- 15 FINISHED END PANEL
- 16 INSULATED DRAIN PIPE
- 17 SCHEDULED SINK
- 18 WIRE PULL
- 19 BACK SPLASH - BACK PAINTED GLASS WITH SS FRAME
- 20 1/2" SS REVEAL
- 21 MIRROR
- 22 P.LAM OVER 3/4" MELAMINE



D3 COPY ROOM ELEVATION
3/8" = 1'-0"

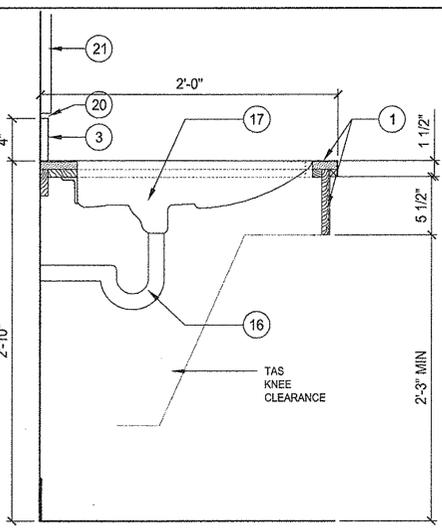


D4 BREAK ROOM ELEVATION
3/8" = 1'-0"

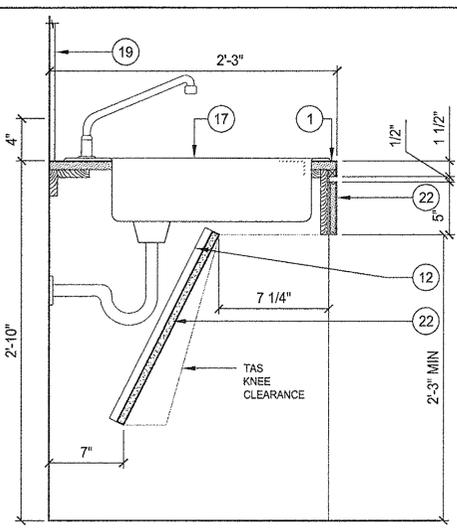


B4 UPPER CABINET
1 1/2" = 1'-0"

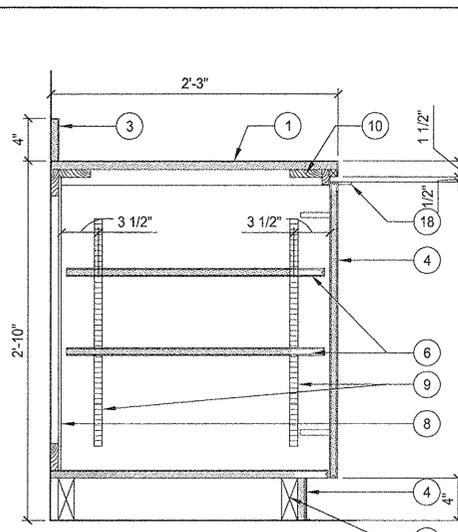
B5 NOTES TO SHEET



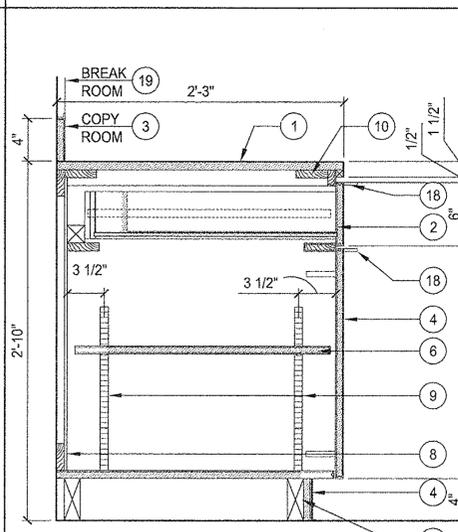
A1 SECTION AT LAV
1-1/2" = 1'-0"



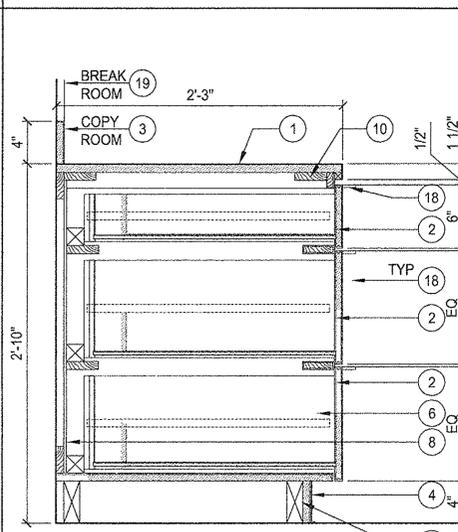
A2 BASE CABINET AT SINK
1-1/2" = 1'-0"



A3 BASE CABINET
1-1/2" = 1'-0"



A4 BASE CABINET
1-1/2" = 1'-0"



A5 BASE CABINET
1-1/2" = 1'-0"

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Rev. 4: 12/15/10 RdlR ARCHITECTS, Inc. Last Date: 06/17/10
 Project: 9003 N. MAIN ADMINISTRATION BLDG RENOVATION
 Design File: XXXXXXXX.dwg
 Designer: [Name]

ISSUE LOG		
NO.	DATE	DESCRIPTION
1	02/28/12	Issue for Bid & Construction
2	05/21/12	Addendum #2
3	06/08/12	Rider Update
4	01/07/13	Permit Modifications
5	01/15/13	Permit Comments

CONSULTANT(S):
MEP ENGINEER
 HUNT & HUNT ENGINEERING CORP.
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PROJECT NAME:
CITY OF HOUSTON
9003 N. MAIN ADMINISTRATION
BLDG RENOVATION



REVIEWED:
 PROGRAM MANAGER _____ SPONSORING DEPARTMENT _____
 PROJECT MANAGER _____

RdIR ARCHITECTS
 ARCHITECTURE | PLANNING | INTERIORS
 1245 West 18th Street Houston, Texas 77008
 phone 713.868.3121 www.rdir.com

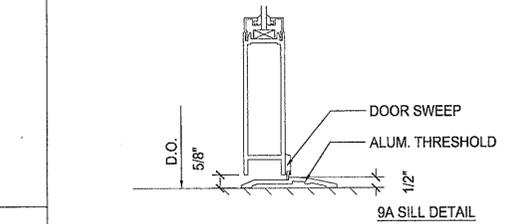
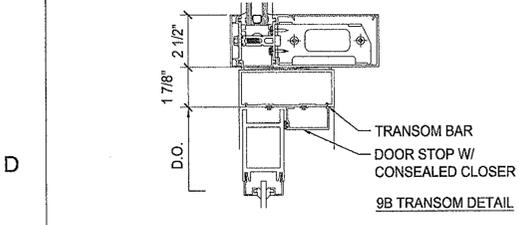
DATE: 06/17/10
 WBS No: L-000054-0001-4
 SCALE: [AS NOTED]
 DRAWN BY: _____
 CHECKED BY: _____

SHEET TITLE:
DOOR SCHEDULE

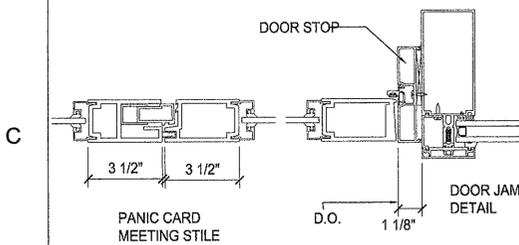
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A6.01
 32 OF 56 SHEETS

CITY DWG. NO.:

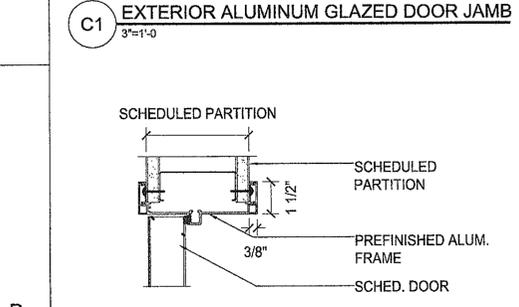
DOOR SCHEDULE											
MARK	ROOM NAME	RATING	FRAME		DOOR		HDW SET	HEAD	JAMB	REMARKS	
			MTL	SIZE	TYPE	MTL					SIZE
100	VESTIBULE		ALUM	6'-4" x 8'-2"	B2	ALUM	6'-0" x 8'-0"	01	RE: C5 / A.602	RE: B5 / A.602	STOREFRONT; PUSH BUTTON; CARD READER; PANIC HARDWARE
102	MEN RESTROOM		ALUM	3'-4" x 8'-2"	A1	WD	3'-0" x 8'-0"	05	RE: B1 / A6.01	RE: A2 / A6.01	
103	WOMEN RESTROOM		ALUM	3'-4" x 8'-2"	A1	WD	3'-0" x 8'-0"	05	RE: B1 / A6.01	RE: A2 / A6.01	
104A	JANITOR		ALUM	3'-4" x 8'-2"	A1	WD	3'-0" x 8'-0"	12	RE: B1 / A6.01	RE: A2 / A6.01	
104B	WOMEN LOCKER		ALUM	3'-4" x 8'-2"	A1	WD	3'-0" x 8'-0"	20	RE: B1 / A6.01	RE: A2 / A6.01	
104C	MEN LOCKER		ALUM	3'-4" x 8'-2"	A1	WD	3'-0" x 8'-0"	20	RE: B1 / A6.01	RE: A2 / A6.01	
105	WORKSHOP		HM	6'-4" x 8'-2"	A2	HM	6'-0" x 8'-0"	08	RE: B1 / A6.01	RE: A2 / A6.01	
105 A	WORKSHOP		STL	9'-0" x 10'-0"	D	STL	9'-0" x 10'-0"	06	RE: B1 / A6.01	RE: A2 / A6.01	OVERHEAD ROLLING STL DOOR
106	STORAGE		ALUM	3'-4" x 8'-2"	A1	WD	3'-0" x 8'-0"	07	RE: B1 / A6.01	RE: A2 / A6.01	
107	STORAGE		ALUM	3'-4" x 8'-2"	A1	WD	3'-0" x 8'-0"	07	RE: B1 / A6.01	RE: A2 / A6.01	
108	GALLERY		ALUM	3'-4" x 8'-2"	B1	ALUM	3'-0" x 8'-0"	03	RE: B1 / A6.01	RE: A2 / A6.01	EXIT ONLY
109	IT ROOM		HM	6'-4" x 8'-2"	A2	HM	6'-0" x 8'-0"	21	RE: B1 / A6.01	RE: A2 / A6.01	
111	STORAGE	1 HR	ALUM	3'-4" x 8'-2"	A1	WD	3'-0" x 8'-0"	09	RE: B1 / A6.01	RE: A2 / A6.01	
112	MECH ROOM		HM	6'-4" x 8'-2"	A2	ALUM	6'-0" x 8'-0"	23	RE: B1 / A6.01	RE: A2 / A6.01	
113	HALLWAY		ALUM	3'-4" x 8'-2"	B1	ALUM	3'-0" x 8'-0"	02	RE: B1 / A6.01	RE: A2 / A6.01	CARD READER; PANIC HARDWARE
119	OPEN OFFICE		ALUM	3'-4" x 8'-2"	A1	WD	3'-0" x 8'-0"	10	RE: B1 / A6.01	RE: A2 / A6.01	GLASS DOOR; CARD READER
121	OFFICE		ALUM	3'-4" x 8'-2"	B1	ALUM	3'-0" x 8'-0"	14	RE: B1 / A6.01	RE: A2 / A6.01	INTERIOR ALUMINUM GLAZING SYSTEM;
122	CONFERENCE ROOM		ALUM	3'-4" x 8'-2"	B1	ALUM	3'-0" x 8'-0"	14	RE: B1 / A6.01	RE: A2 / A6.01	INTERIOR ALUMINUM GLAZING SYSTEM;
123	LIAISON OFFICE		ALUM	3'-4" x 8'-2"	B1	ALUM	3'-0" x 8'-0"	14	RE: B1 / A6.01	RE: A2 / A6.01	INTERIOR ALUMINUM GLAZING SYSTEM;
124	LIAISON OFFICE		ALUM	3'-4" x 8'-2"	B1	ALUM	3'-0" x 8'-0"	14	RE: B1 / A6.01	RE: A2 / A6.01	INTERIOR ALUMINUM GLAZING SYSTEM;
125	LIAISON OFFICE		ALUM	3'-4" x 8'-2"	B1	ALUM	3'-0" x 8'-0"	14	RE: B1 / A6.01	RE: A2 / A6.01	INTERIOR ALUMINUM GLAZING SYSTEM;
126	OFFICE		ALUM	3'-4" x 8'-2"	B1	ALUM	3'-0" x 8'-0"	14	RE: B1 / A6.01	RE: A2 / A6.01	INTERIOR ALUMINUM GLAZING SYSTEM;
127	LIAISON OFFICE		ALUM	3'-4" x 8'-2"	B1	ALUM	3'-0" x 8'-0"	14	RE: B1 / A6.01	RE: A2 / A6.01	INTERIOR ALUMINUM GLAZING SYSTEM;
128	CONFERENCE ROOM		ALUM	3'-4" x 8'-2"	B1	ALUM	3'-0" x 8'-0"	14	RE: B1 / A6.01	RE: A2 / A6.01	INTERIOR ALUMINUM GLAZING SYSTEM;
129	STORAGE		ALUM	6'-4" x 8'-2"	A3	WD	6'-0" x 8'-0"	19	RE: B1 / A6.01	RE: A2 / A6.01	
130	STORAGE	90 MIN	ALUM	6'-4" x 8'-2"	A3	WD	6'-0" x 8'-0"	19	RE: B1 / A6.01	RE: A2 / A6.01	
130 A	STORAGE	60 MIN	ALUM	3'-0" x 8'-2"	A1	WD	3'-0" x 8'-0"	09	RE: B1 / A6.01	RE: A2 / A6.01	ACCESS PANEL
131	COMMUNITY MEETING	90 MIN	HM	6'-4" x 8'-2"	A2	HM	6'-0" x 8'-0"	17	RE: B1 / A6.01	RE: A2 / A6.01	
131 A	COMMUNITY MEETING		ALUM	3'-4" x 8'-2"	B1	ALUM	3'-0" x 8'-0"	18	RE: B1 / A6.01	RE: A2 / A6.01	PANIC HARDWARE



D1 EXTERIOR ALUMINUM GLAZED DOOR HEAD
3" = 1'-0"



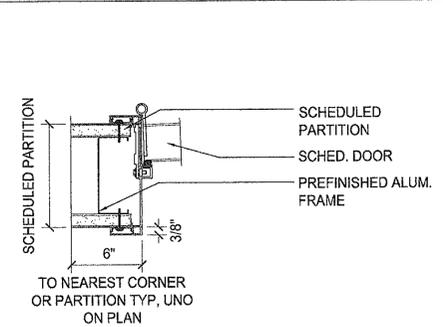
C1 EXTERIOR ALUMINUM GLAZED DOOR JAMB
3" = 1'-0"



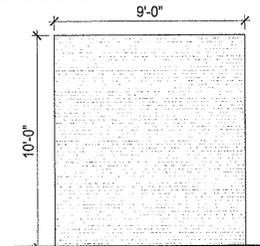
B1 TYPICAL INTERIOR ALUMINUM DOOR HEAD
3" = 1'-0"



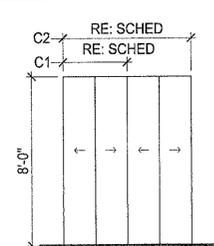
A1 TRESHOLD
3" = 1'-0"



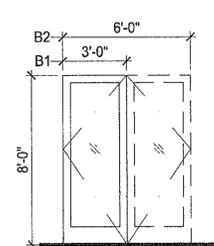
A2 TYPICAL INTERIOR ALUMINUM DOOR JAMB
3" = 1'-0"



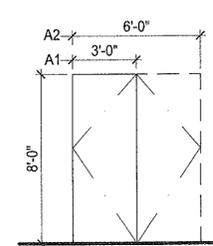
TYPE D
OVERHEAD ROLLING STL DOOR



TYPE C
BI-FOLD CLOSET DOORS



TYPE B
MEDIUM STILE ALUM. DOOR CLR. ANNODIZED FINISH



TYPE A
FLUSH WOOD DOOR TYPE A2 - HM DOOR

DOOR NOTES:
 A. NOT USED
 B. NOT USED
 C. DOOR WAY WIDTHS SHALL BE 32" WIDE CLEAR OR GREATER.
 D. ALL DOORS, INCLUDING OVERHEAD DOOR SHALL HAVE A MAXIMUM AIR LEAKAGE OF 1.0 CFM/SF AS TESTED BY NFRC 400.

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 23 JAN 2013 NO. 351

B5 DOOR SCHEDULE

1/17/2013 1:23 PM Project: 9003 N. MAIN ADMINISTRATION BLDG RENOVATION
 DESIGN FILE: XXXXXXXX.dwg
 User: J. GARCIA
 Plot: 1/17/2013 1:23 PM
 Plot File: 9003 N. MAIN ADMINISTRATION BLDG RENOVATION.dwg

1

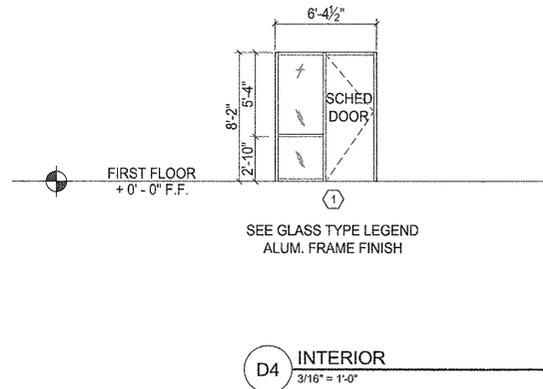
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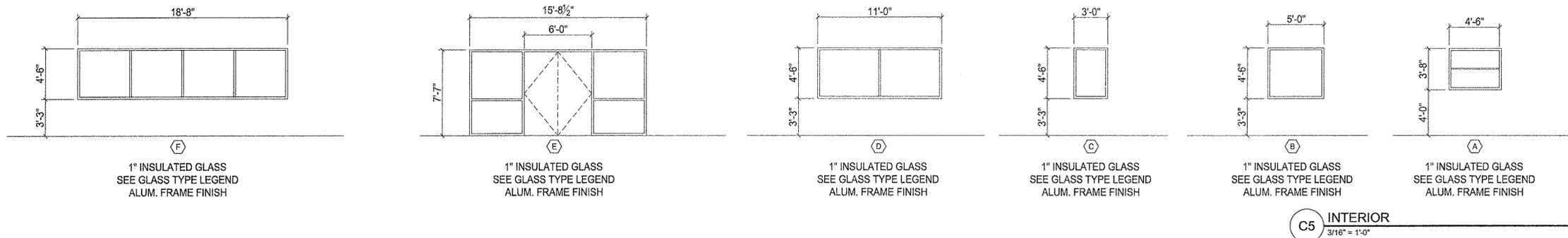
GENERAL NOTES:

- (A) ALL INTERIOR GLAZING FRAMING SHALL BE OFCI SALVAGED MATERIAL
- (B) FIELD VERIFY ALL DIMENSIONS PRIOR TO FABRICATION

GLASS TYPE LEGEND:

- GL - 1 - 1" INSULATED GLAZING
- GL - 2 - 1/2" CLEAR GLAZING
- GL - 3 - 3/4" CLEAR GLAZING, TEMPERED

C



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ISSUE LOG

NO.	DATE	DESCRIPTION
1	02/28/12	Issue for Bid & Construction

CONSULTANT(S):

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HUNT & HUNT ENGINEERING CORP.
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PROJECT NAME:
CITY OF HOUSTON
9003 N. MAIN ADMINISTRATION
BLDG RENOVATION



REVIEWED:

PROGRAM MANAGER _____ SPONSORING DEPARTMENT _____

PROJECT MANAGER _____

RdIR ARCHITECTS
ARCHITECTURE | PLANNING | INTERIORS
1245 West 18th Street Houston, Texas 77008
phone 713.868.3121 www.rdir.com

DATE: 06/17/10
WBS No: L-000054-0001-4
SCALE: [AS NOTED]
DRAWN BY: _____
CHECKED BY: _____

SHEET TITLE:
WINDOW SCHEDULE

SHEET NO.:
A6.10
33 OF 56 SHEETS

CITY DWG. NO.:

1

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4

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A5 NOT USED
3/16" = 1'-0"

Plot File: XXXXXXXX.dwg
 Plot Date: 06/17/10 11:54 AM
 Plot Path: C:\Users\jstark\Documents\Projects\9003 N Main Administration Bldg Renovation\9003 N Main Administration Bldg Renovation.dwg
 Plot Scale: 1/8" = 1'-0"
 Plot Size: 11x17
 Plot Color: Black
 Plot Lineweight: 0.20
 Plot Linetype: Solid
 Plot Font: Arial, 10
 Plot Orientation: Landscape
 Plot Plotter: HP DesignJet 5000 Series
 Plot Driver: HP DesignJet 5000 Series PCL6
 Plot File: XXXXXXXX.dwg

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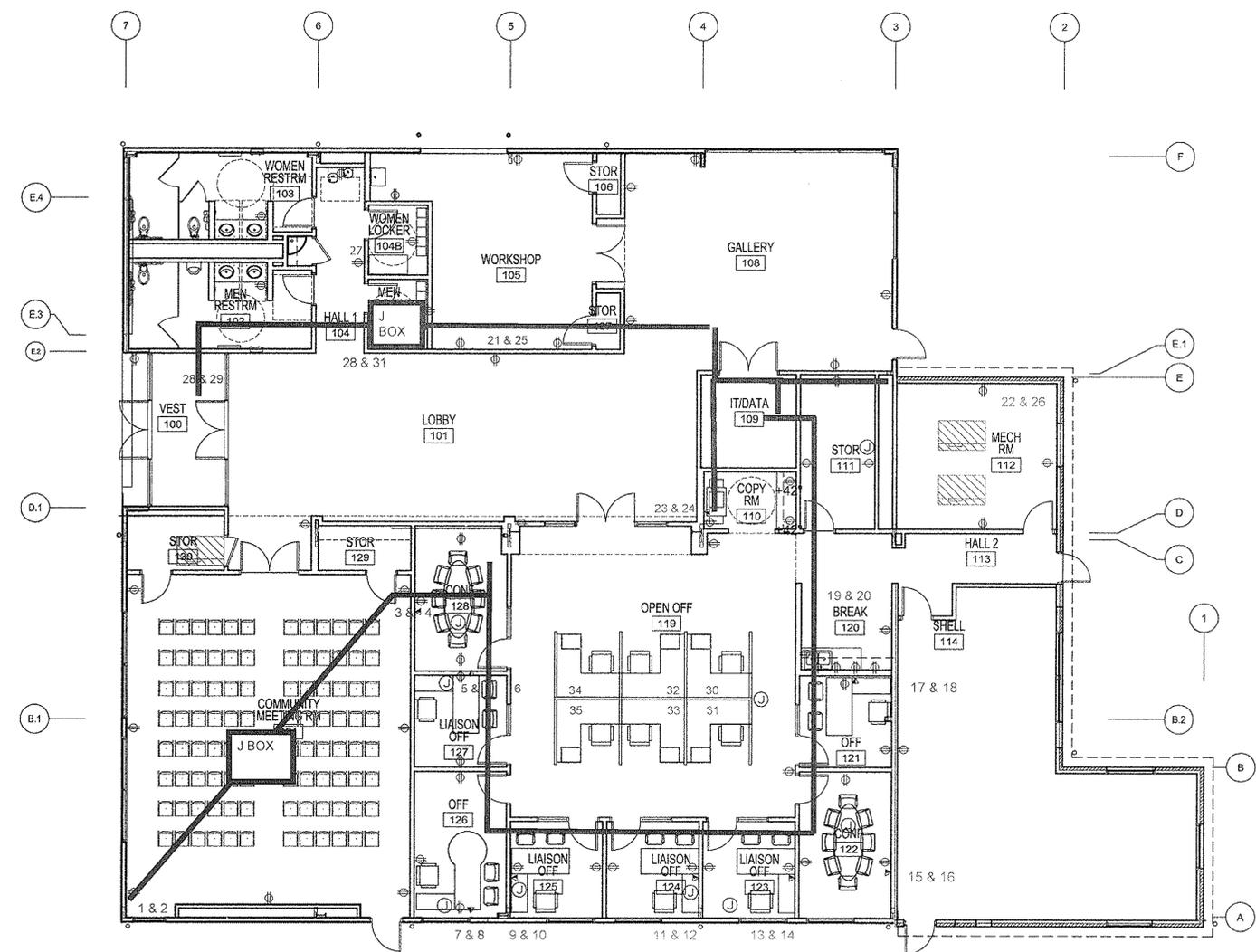
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POWER AND DATA LEGEND:

⊙ JUNCTION BOX

⊕ DUPLEX OUTLET

▲ WALL MOUNTED VOICE / DATA

MEDIA COUNT PER ROOM						
ROOM NAME	ROOM #	# COMPUTERS	# MONITORS	# PRINTERS	# PHONES	# MULTIFUNCTION
CONFERENCE ROOM	1A	1	1		1	
LIAISON OFFICE	1B	1	1		1	
OFFICE	1C	1	1	1	1	
LIAISON OFFICE	1D	1	1		1	
LIAISON OFFICE	1E	1	1		1	
LIAISON OFFICE	1F	1	1		1	
CONFERENCE ROOM	1G	1	1		1	
OFFICE	1H	1	1		1	
STORAGE	1I				1	
COPY ROOM	1J			1	1	2
WORKSTATION	2A	1	1		1	
WORKSTATION	2B	1	1		1	
WORKSTATION	2C	1	1		1	
WORKSTATION	2D	1	1		1	
WORKSTATION	2E	1	1		1	
WORKSTATION	2F	1	1		1	
COMMUNITY ROOM	13I	1	1		1	
BREAK ROOM	112				1	
WORKSHOP	105	1	1		1	
LOBBY/GALLERY	101	1	1		1	
VESTIBULE	100				1	

ISSUE LOG		
NO.	DATE	DESCRIPTION
1	02/28/12	Issue for Bid & Construction

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PROJECT NAME:
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DATE: 06/17/10
WBS No: L-000054-0001-4
SCALE: [AS NOTED]
DRAWN BY: _____
CHECKED BY: _____

SHEET TITLE:
POWER AND DATA PLAN

SHEET NO.:
A8.11
36 OF 56 SHEETS

CITY DWG. NO.:

A4 POWER AND DATA PLAN
1/8" = 1'-0"



Rev. A: In State Accounts, Inc. Unit: Sewer by 02/28/12
 Project: 2/27/2012 11:53 AM Project By: JAMES W. WATSON, PE
 DESIGN FILE: XXXXXXXX.dwg

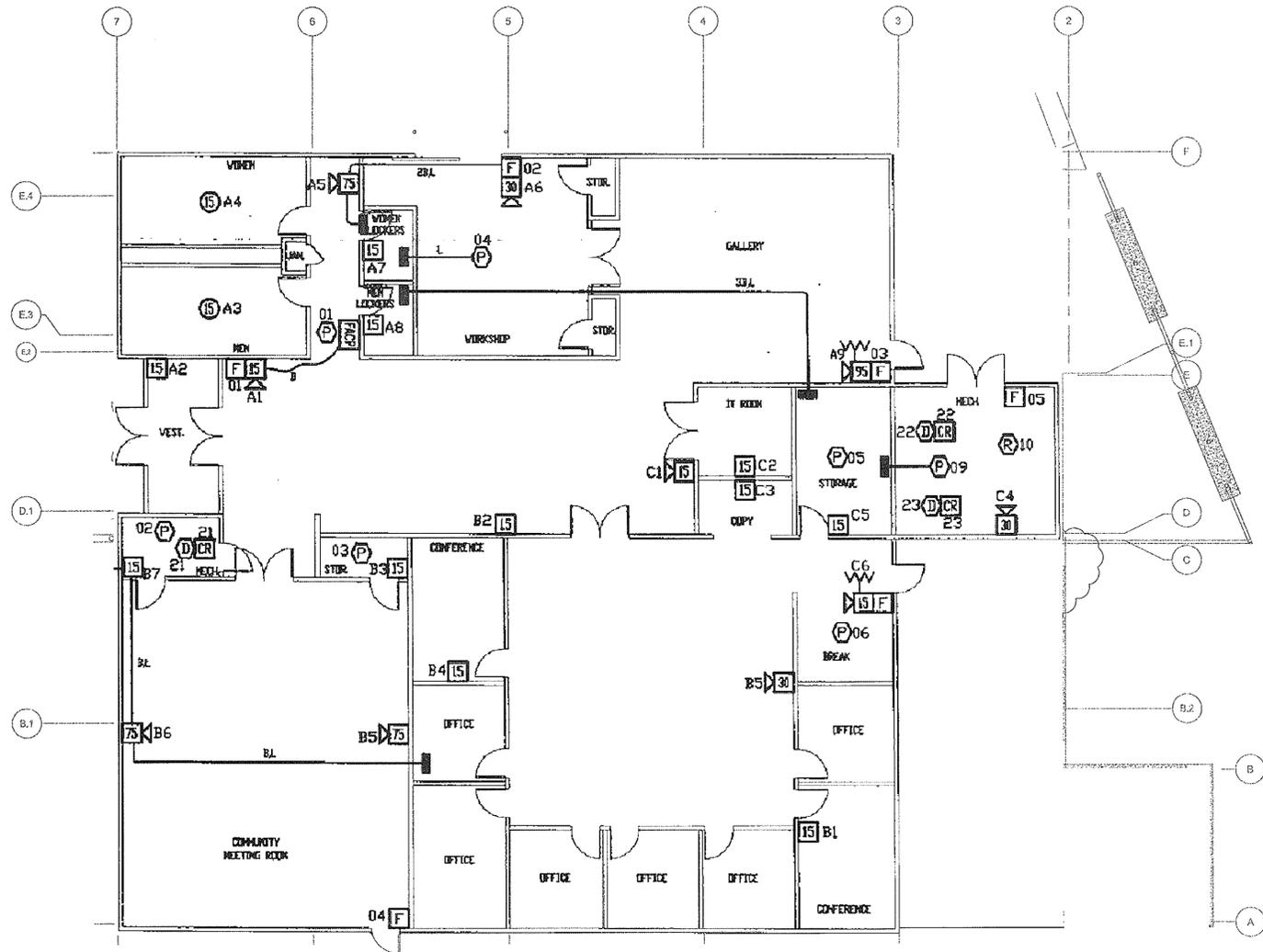
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1 FIRE ALARM PLAN
1/8"=1'-0"

SYMBOL LEGEND AND BACKBOX REQUIREMENTS

SYMBOL	DESCRIPTION AND BACKBOX REQUIREMENTS
[FAC]	NF2-100 INTELLIGENT FIRE ALARM CONTROL PANEL WITH DUCT AND (16.65"Wx19.0"Hx5.2"D) BACK BOX. ELECTRICAL CONTRACTOR TO MOUNT AT 66" AFF TO TOP AND PROVIDE A DEDICATED 120 VAC CIRCUIT.
[D]	NP-100R INTELLIGENT PLUG-IN PHOTOELECTRIC SMOKE DETECTOR WITH B210LP BASE. PROVIDE A 1900 (2-1/8" DEEP) BOX WITH 3/0 PLASTER RING.
[R]	NH-100R FIXED TEMP AND RATE OF RISE HEAT DETECTOR WITH B210LP BASE. PROVIDE A 1900 BOX(2-1/8" DEEP) WITH 3/0 PLASTER RING.
[F]	NOT-BG12LX MANUAL PULL STATION WITH STI-1100 COVER: PROVIDE 4" SQUARE BOX (2-1/8" DEEP) WITH SINGLE GANG PLASTER RING MOUNTED AT 45" AFF TO CENTER.
[D]	ND-200 INTELLIGENT DUCT SMOKE DETECTOR HOUSING. FIRETRON TO PROVIDE AND INSTALL DUCT HOUSING. ELECTRICAL CONTRACTOR TO PROVIDE 1900 BOX WITH COVER AND FLEXIBLE CONDUIT TO DUCT HOUSING.
[CR]	NC-100R ADDRESSABLE RELAY MODULE: PROVIDE A 4" SQUARE (2-1/8" DEEP) BOX.
[F]	SPECTRALERT ADVANCE SERIES HORN WITH SELECTABLE OUTPUT STROBE. PROVIDE A 4" SQUARE (2-1/8" DEEP) BOX WITH 2-GANG PLASTER RING. WALL MOUNT BETWEEN 82" A.F.F. AND 94" A.F.F. TO CENTER. # INDICATES CANDELA RATING.
[F]	SPECTRALERT ADVANCE SERIES SELECTABLE OUTPUT STROBE. PROVIDE A 4" SQUARE (2-1/8" DEEP) BOX WITH 2-GANG PLASTER RING. WALL MOUNT BETWEEN 82" A.F.F. AND 94" A.F.F. TO CENTER. # INDICATES CANDELA RATING.
[S]	SYSTEM SENSOR SC CEILING SERIES STROBE. PROVIDE A 4" SQUARE (2-1/8" DEEP) BOX WITH ADEQUATE STRUCTURAL SUPPORT TO AVOID CEILING TILE DAMAGE. # INDICATES CANDELA.

WIRE LEGEND

TAG	WIRE USAGE DESCRIPTION
B	#14 AWG, 2 CONDUCTOR, SOLID, FPLP FOR AUDIBLE/VISUAL CIRCUITS.
L	#16 AWG, 1 PAIR, SOLID, FPLP FOR SIGNALING LINE CIRCUITS.
ROUTE THIS CABLE TO ALL ADDRESSABLE DEVICES EVEN IF NOT SHOWN.	

SEQUENCE OF OPERATIONS

- UPON ACTIVATION OF ANY INITIATING DEVICE THE FOLLOWING SHALL OCCUR:
 - AUDIBLE AND VISUAL SIGNALS SHALL BE ACTIVATED THROUGHOUT THE FACILITY.
 - SHUTDOWN AIR HANDLING UNITS OVER 2000 CFM.
 - SEND A SIGNAL TO A CENTRAL STATION FOR MONITORING

SCOPE OF WORK

INSTALL NEW FIRE ALARM SYSTEM IN EXISTING BUILDING.

THE SYSTEM SPECIFIED IS A SUPERVISED, ZONED FIRE ALARM SYSTEM. UPON ACTIVATION OF AN ALARM INITIATING DEVICE, THE FOLLOWING SHALL OCCUR:

LIGHT THE APPROPRIATE ZONE LED AT THE FIRE ALARM CONTROL PANEL.

SOUND THE ALARM TONE IN THE BUILDING AND OPERATE THE ALARM LIGHT.

THE SIGNALS MAY BE SILENCED BUT SHALL BE SOUND ON A SUBSEQUENT ALARM. THE PANEL SHALL NOT BE CAPABLE OF RESET UNTIL THE INITIATING DEVICES HAVE BEEN CLEARED. ATTEMPTS TO RESET THE SYSTEM AFTER AN ALARM OR TEST SHALL NOT RESOUND THE SIGNALS.

FIRE ALARM WILL BE MONITORED AT CENTRAL MONITORING STATION OF CITY OF HOUSTON VIA DEDICATED TELEPHONE LINES.

THE SYSTEM SHALL BE PROVIDED WITH TWENTY-FOUR HOUR BATTERY STANDBY AND AUTOMATIC CHARGER.

****THESE PLANS DO NOT SHOW OR NOT INTENDED TO SHOW ALL DETAILS OF THE FIRE ALARM AND AUXILIARY SYSTEMS. IT IS THE CONTRACTORS RESPONSIBILITY TO BE COMPLETELY KNOWLEDGEABLE OF THE SCOPE OF WORK AS NOTED IN THE PLANS AND SPECIFICATIONS AND PROVIDE A SYSTEM OF FIRE ALARMS, SMOKE DETECTORS AND ALL COMPONENTS OF THE SYSTEM TO COMPLY WITH ALL CODES AS EXPOUNDED IN THE NFPA, T.A.S., LIFE SAFETY AND CITY OF HOUSTON CODES.**

FIRE ALARM SYSTEMS

PRELIMINARY APPROVAL

INITIAL 351 DATE 1/9/13

FINAL APPROVAL SUBJECT TO SUBMITTAL OF FIRE ALARM WORKING DRAWINGS SUBMITTED BY A CERTIFIED FIRE ALARM CONTRACTOR. NO FIRE ALARM WORK SHALL COMMENCE WITHOUT THE ISSUANCE OF A FIRE ALARM PERMIT. FIRE ALARMS SHALL COMPLY WITH CHAPTER 9 OF THE HOUSTON BUILDING CODE.

ISSUE LOG

NO.	DATE	DESCRIPTION
1	02/28/12	Issue for Bid & Construction
2	01/07/13	Permit Modifications

CONSULTANT(S):
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SEAL(S):
[Professional Engineer Seal]
TBPE FIRM NO. F-3446

PROJECT NAME:
**CITY OF HOUSTON
9003 N. MAIN ADMINISTRATION
BLDG RENOVATION**

CITY OF HOUSTON
GENERAL SERVICES
DEPARTMENT

REVIEWED:
PROGRAM MANAGER _____ SPONSORING DEPARTMENT _____
PROJECT MANAGER _____

RdIR ARCHITECTS
ARCHITECTURE | PLANNING | INTERIORS
1245 West 18th Street Houston, Texas 77008
phone 713.868.3121 www.rdir.com

DATE: 07/16/10
WBS No: L-000054-0001-4
SCALE: 1/8"=1'-0"
DRAWN BY: M.G.
CHECKED BY: R.T.

SHEET TITLE:
FIRE ALARM PLAN

SHEET NO.:
F1.01
37 OF 56 SHEETS

CITY DWG. NO.:

1

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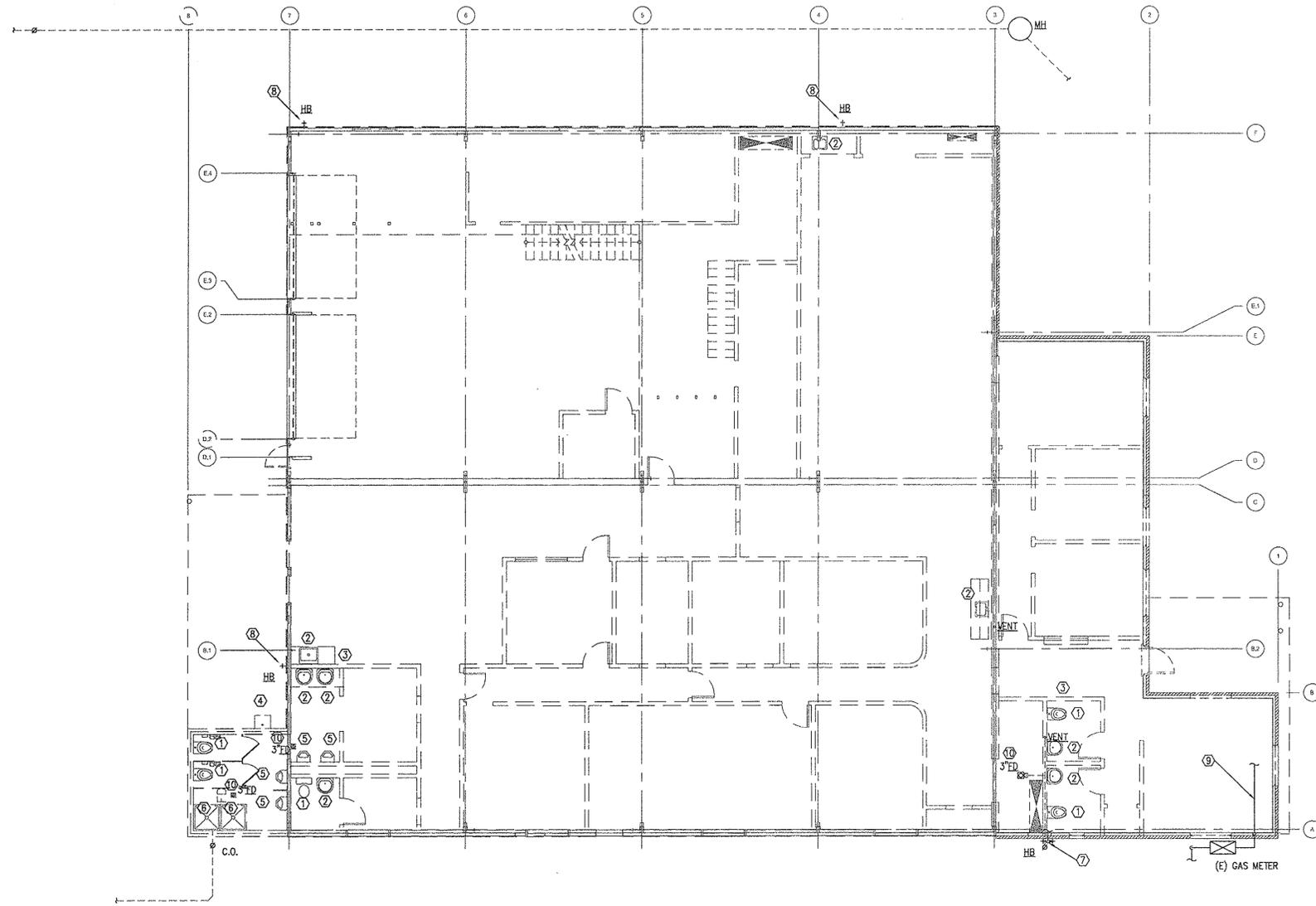
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1 PLUMBING DEMOLITION PLAN
1/8"=1'-0"

GENERAL NOTES:

1. REMOVE ALL EXISTING WATER PIPING IN CEILING ALL THE WAY BACK TO THE MAIN.
2. REMOVE ALL EXISTING GAS PIPING IN CEILING ALL THE WAY BACK TO THE METER.
3. REMOVE ALL EXISTING VENT PIPING.

KEYED NOTES:

- ① REMOVE EXISTING WATER CLOSET, CAP & SEAL WASTE LINE IN FLOOR AIRTIGHT. REMOVE ALL WATER & VENT PIPING.
- ② REMOVE EXISTING SINK OR LAVATORY, CAP & SEAL WASTE LINE IN FLOOR AIRTIGHT. REMOVE ALL WATER & VENT PIPING.
- ③ EXISTING DRINKING FOUNTAIN HAS BEEN REMOVED. CAP & SEAL WASTE LINE IN FLOOR AIRTIGHT. REMOVE ALL WATER & VENT PIPING.
- ④ REMOVE AND RELOCATE EXISTING SERVICE SINK, CAP & SEAL WASTE LINE BELOW FLOOR AIRTIGHT. REMOVE ALL WATER & VENT PIPING.
- ⑤ REMOVE EXISTING URINAL, CAP & SEAL WASTE LINE IN FLOOR AIRTIGHT. REMOVE ALL WATER & VENT PIPING.
- ⑥ REMOVE SHOWER DRAIN, CAP & SEAL BELOW FLOOR AIRTIGHT. REMOVE ALL WATER & VENT PIPING.
- ⑦ REMOVE EXISTING 1-1/2" WATER ENTRY LINE BACK TO CITY WATER MAIN AND CAP FOR NEW CONNECTION.
- ⑧ REMOVE EXISTING HOSE BIBB AND WATER LINE BACK TO WATER MAIN. (REMOVE ALL WATER PIPING IN CEILING & WALLS.)
- ⑨ REMOVE EXISTING GAS LINE BACK TO METER. (REMOVE ALL GAS PIPING IN CEILING & WALLS.)
- ⑩ REMOVE EXISTING FLOOR DRAIN & SEAL ALL PIPING AIRTIGHT.

ISSUE LOG		
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SEAL(S):

 TBPE FIRM NO. F-3446

PROJECT NAME:
 CITY OF HOUSTON
 9003 N. MAIN ADMINISTRATION
 BLDG RENOVATION



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DATE: 07/16/10
 WBS No: L-000054-0001-4
 SCALE: 1/8"=1'-0"
 DRAWN BY: R.G.
 CHECKED BY: L.H.

SHEET TITLE:
 PLUMBING
 DEMOLITION PLAN

SHEET NO.:
PD1.01
 38 OF 56 SHEETS

CITY DWG. NO.:

DESIGN FILE: XXXXXXXX.dwg

CAD FILE:

1

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GENERAL NOTES:

- THESE DRAWINGS ARE SCHEMATIC IN NATURE AND ARE NOT INTENDED TO SHOW ALL OFFSETS. INSTALL PIPING AS CLOSE AS POSSIBLE TO LOCATIONS SHOWN. WHERE INTERFERENCES WITH COMPONENTS OF OTHER TRADES WORK (STRUCTURAL FOUNDATIONS OR OTHER BUILDING ELEMENTS) REQUIRE ROUTINGS AND LOCATIONS THAT VARY FROM THOSE SHOWN, THE CONTRACTOR SHALL OBTAIN PROJECT ENGINEER'S APPROVAL PRIOR TO INSTALLATION. NO ADDITIONAL COST SHALL BE GRANTED FOR THESE CHANGES.
 - BEFORE BEGINNING EXCAVATIONS OR DEMOLITION OF ANY NATURE WHATSOEVER, CONTRACTOR SHALL LOCATE ALL SERVICES AND UTILITIES OCCURRING WITHIN THE BOUNDS OF THE PROJECT. THE CONTRACTOR SHALL THEN PROCEED WITH CAUTION IN THIS WORK SO THAT NO UTILITY OR LINE SERVING AREAS THAT ARE TO REMAIN BE DAMAGED WITH A RESULTANT LOSS OF SERVICE. VERIFY THE SOURCE AND SERVICE OF EACH AND EVERY LINE ENCOUNTERED AND RECORD SERVICE, SIZE AND LOCATION ON RECORD DRAWINGS.
 - COORDINATE EACH AND EVERY INTERRUPTION OF UTILITIES WITH FIRE DEPARTMENT, CITY PUBLIC WORKS DEPARTMENT AND UTILITY COMPANIES TO INSURE MINIMUM SHUT-DOWN TIMES THAT ARE ACCEPTABLE TO THE AUTHORITIES.
 - ROUGH-IN PLUMBING PIPING USING DIMENSIONS SHOWN ON ARCHITECTURAL DRAWINGS. LOCATION OF ALL PIPING SHALL ALLOW INSTALLATION OF FIXTURES WITHOUT THE NEED TO FURR-OUT WALLS.
 - PROVIDE CLEANOUTS IN EXCESS OF THOSE SHOWN WHICH ARE REQUIRED BY THE PLUMBING CODE.
 - INDIVIDUAL FIXTURE SUPPLY AND DRAIN SERVICES ARE NOT SHOWN DUE TO DRAWING SPACE LIMITATIONS. THIS CONTRACTOR SHALL PROVIDE ALL SERVICES FOR A COMPLETE FIRST CLASS INSTALLATION.
 - FURNISH AND INSTALL ALL NECESSARY VALVES, TRAPS, GAUGES, STRAINERS, UNIONS, ETC. FOR EACH PIECE OF EQUIPMENT HAVING PLUMBING CONNECTIONS TO FACILITATE PROPER FUNCTIONING AND SERVICING.
 - DO NOT INSTALL PIPING AT LOCATIONS THAT INTERFERE WITH SERVICE ACCESSIBILITY TO EQUIPMENT.
 - SEAL ALL PENETRATIONS THROUGH RATED WALLS, FLOORS AND CEILINGS WITH A UL LISTED ASSEMBLY TO PROVIDE A RATING EQUAL TO OR GREATER THAN THE RATING OF THE WALL, FLOOR OR CEILING.
 - ALL WALLS, FLOORS, ETC., THAT ARE DISTURBED DUE TO WORK DONE BY THIS CONTRACTOR AND ARE TO REMAIN AFTER FINAL COMPLETION OF PROJECT, SHALL BE REPAIRED TO CONDITION THAT IS ACCEPTABLE TO THE ARCH./ENGR. AND OWNER.
 - EACH CONTRACTOR SHALL VISIT THE SITE AND ASCERTAIN FOR HIM/HERSELF THE CONDITIONS TO BE MET THERE IN IMPLEMENTING THIS WORK AND MAKE DUE PROVISIONS FOR THE SAME. IT IS ASSUMED THAT THE CONTRACTOR HAS VISITED THE PREMISES AND THAT THE COST ESTIMATE COVERS ALL NECESSARY LABOR AND MATERIALS TO PROPERLY ACCOMPLISH THIS WORK. FAILURE ON THE PART OF THE CONTRACTOR TO COMPLY WITH THIS REQUIREMENT SHALL NOT BE CONSIDERED JUSTIFICATION FOR OMISSIONS OR FAULTY WORK OR FOR THE PAYMENT OF ADDITIONAL COMPENSATION.
 - FIELD VERIFY EXISTING AND FUTURE GRADES WITHIN AREAS WHERE WORK IS BEING DONE.
 - VERIFY EXACT LOCATION OF EQUIPMENT PRIOR TO INSTALLATION OF FLOOR DRAINS. RELOCATION DUE TO MISPLACEMENT SHALL BE AT CONTRACTOR'S EXPENSE.
 - SEAL ALL PIPE PENETRATIONS THROUGH BUILDING GRADE BEAMS AND EXTERIOR WALLS WATERTIGHT.
- CLEAN ALL PIPING AS FOLLOWS:
DISINFECTION OF DOMESTIC WATER DISTRIBUTION SYSTEM:
EACH UNIT OF COMPLETED SUPPLY LINE AND DISTRIBUTION SYSTEM SHALL BE DISINFECTED PER THE LOCAL PLUMBING CODE AND PLUMBING OFFICIALS' REQUIREMENTS BEFORE ACCEPTANCE FOR DOMESTIC OPERATION. PROVIDE AT LEAST TWO SAMPLES FROM EACH SYSTEM AND TAKE IN STERILE BOTTLES TO BE EXAMINED BY A LABORATORY EMPLOYING STANDARD METHODS AND PROCEDURES. IF THE EXAMINATION SHOWS A SAMPLE TO BE CONTAMINATED, THE PROCESS OF DISINFECTION AND BACTERIOLOGICAL EXAMINATION SHALL BE REPEATED UNTIL FREE OF CONTAMINATION. SUBMIT LAB RESULTS TO OWNER.
 - SUPPORT UNBURIED PIPE AS FOLLOWS:
HORIZONTAL PIPING:
HUBLESS CAST IRON SOIL PIPING SHALL BE SUPPORTED AT LEAST AT EVERY OTHER JOINT EXCEPT THAT WHEN THE DEVELOPED LENGTH BETWEEN SUPPORTS EXCEEDS FOUR FEET, THEY SHALL BE PROVIDED AT EACH JOINT. SUPPORTS SHALL ALSO BE PROVIDED AT EACH HORIZONTAL BRANCH CONNECTION. SUPPORTS SHALL BE PLACED IMMEDIATELY ADJACENT TO THE COUPLING. SUSPENDED LINES SHALL BE BRACED TO PREVENT HORIZONTAL MOVEMENT.
COPPER TUBING SHALL BE SUPPORTED AT NOT MORE THAN SIX FOOT INTERVALS FOR PIPING 1-1/2" AND SMALLER AND NINE FOOT INTERVALS FOR PIPING 2" AND LARGER IN DIAMETER.
HANGERS FOR NON-INSULATED COPPER PIPING SHALL HAVE A COPPER FINISH. IN POTENTIALLY DAMP LOCATIONS, NON-INSULATED COPPER PIPING HANGERS OR SUPPORTS SHALL BE PLASTIC-COATED.
STEEL PIPING SHALL BE SUPPORTED AT INTERVALS OF NO GREATER THAN 6 FEET FOR 1/2" PIPING, 8 FEET FOR 3/4" & 1" PIPING AND 10 FEET FOR 1-1/4" AND LARGER PIPING.
 - MARKING AND IDENTIFICATION:
IDENTIFY EACH PIPE WITH LABELING AT THE FOLLOWING LOCATIONS:
- AT EACH BRANCH TAKE-OFF FROM A MAIN
- ON EACH SIDE OF A WALL PENETRATION
- EVERY 20' OF STRAIGHT RUN OF PIPE
- AT EQUIPMENT CONNECTIONS IF MORE THAN 10' FROM A BRANCH TAKE-OFF
DOMESTIC HOT WATER:
INDICATE DELIVERED WATER TEMPERATURE ON DOMESTIC HOT WATER SUPPLY AND RETURN LINES.
 - SLEEVES:
FLOORS: PROVIDE UL FIRE RATED ASSEMBLIES WHERE PIPES PENETRATE ABOVE GRADE FLOORS.
WALLS: PROVIDE UL FIRE RATED ASSEMBLIES WHERE PIPES PENETRATE FIRE RATED WALLS.
WHERE PIPING PASSES THROUGH NON-RATED CEILING OR WALL, CLOSE OFF SPACE BETWEEN PIPE OR DUCT AND CONSTRUCTION WITH NORMAL GYPSUM WALLBOARD, REPAIR PLASTER SMOOTHED AND FINISHED TO MATCH REMAINDER OF WALL.
INSTALL CHROME-PLATED OR STAINLESS STEEL ESCUTCHEONS WHERE PIPING PASSES THROUGH FINISHED SURFACES.
 - VENT TERMINALS:
LOCATE ALL SANITARY VENT, AND GAS WATER HEATER FLUE TERMINALS THROUGH ROOF A MINIMUM OF TWENTY FIVE FEET AWAY FROM ALL AIR INTAKES.

PLUMBING LEGEND		
SYMBOL	ABBR.	DESCRIPTION
	AFF	ABOVE FINISHED FLOOR
	BFF	BELOW FINISHED FLOOR
—	CO	CLEANOUT
⊗	COTG	CLEANOUT TO GRADE
—	CONT	CONTINUATION
—	CW	DOMESTIC COLD WATER SUPPLY
—	HW	DOMESTIC HOT WATER SUPPLY
→	DN.	DOWN (PIPE TURN)
—	DWG	DRAWING
⊗	EDF	ELECTRIC DRINKING FOUNTAIN
⊗	FCO	FLOOR CLEANOUT
⊗	FD	FLOOR DRAIN
→		FLOW DIRECTION
+	HB	HOSE BIBB
+	IE	INVERT ELEVATION
○	L	LAVATORY
○		KEYED NOTE
—	V	SANITARY VENT
—	SAN	SANITARY WASTE
⊗	SA	SHOCK ABSORB'R. (WATER HAM. ARR.)
—	S	SINK
—	SS	SERVICE SINK
—	TP	TRAP PRIMER
○		UP (PIPE TURN)
—	UR	URINAL
⊗		VALVE IN VERTICAL
⊗		VALVE
⊗	VTR	VENT THRU ROOF
—	WH	WALL HYDRANT
⊥	WCO	WALL CLEANOUT
⊥	WC	WATER CLOSET
○	MH	MANHOLE

⊗ — SANITARY RISER REFERENCE TAG

PLUMBING MATERIALS	
Sanitary Waste and Vent Drainage Piping:	Schedule 40 PVC DWV soil pipe and fittings.
Domestic Water Piping: (Including Cold & Hot Water)	Unburied piping sizes 2" and smaller shall be type "L" hard drawn copper pipe and wrought copper or cast copper alloy solder joint fittings using lead-free solder and non-corrosive flux. Unburied piping sizes 2-1/2" and larger shall be type "L" hard drawn copper pipe and wrought copper roll groove fittings using no-sweat coupling and flange adapter assemblies. Buried piping outside building sizes 2" and 3" shall be 160 psi, SDR 26, PVC pressure pipe and fittings using compression rubber ring joints. Buried piping below building sizes 3" and larger shall be Class 150 lined ductile iron pipe and fittings using mechanical joints. Buried piping sizes 2" and smaller shall be Type "L" soft copper below slab (no joints) and Schedule 40 PVC with solvent weld joints outside building.

APPLICABLE CODES	
UNIFORM PLUMBING CODE — 2006 EDITION WITH CITY OF HOUSTON AMENDMENTS	
AMERICAN DISABILITIES ACT — HANDICAP ACCESS — LATEST EDITION	
ANSI A117.1 — HANDICAP ACCESS — LATEST EDITION	

ISSUE LOG

NO.	DATE	DESCRIPTION
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CONSULTANT(S):
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SEAL(S):

 TBPE FIRM NO. F-3446

PROJECT NAME:
CITY OF HOUSTON
9003 N. MAIN ADMINISTRATION
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CITY OF HOUSTON
GENERAL SERVICES
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DATE: 07/16/10
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 SCALE: NONE
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SHEET TITLE:
PLUMBING
NOTES & LEGEND

SHEET NO.:
P0.01
 39 OF 56 SHEETS

CITY DWG. NO.:

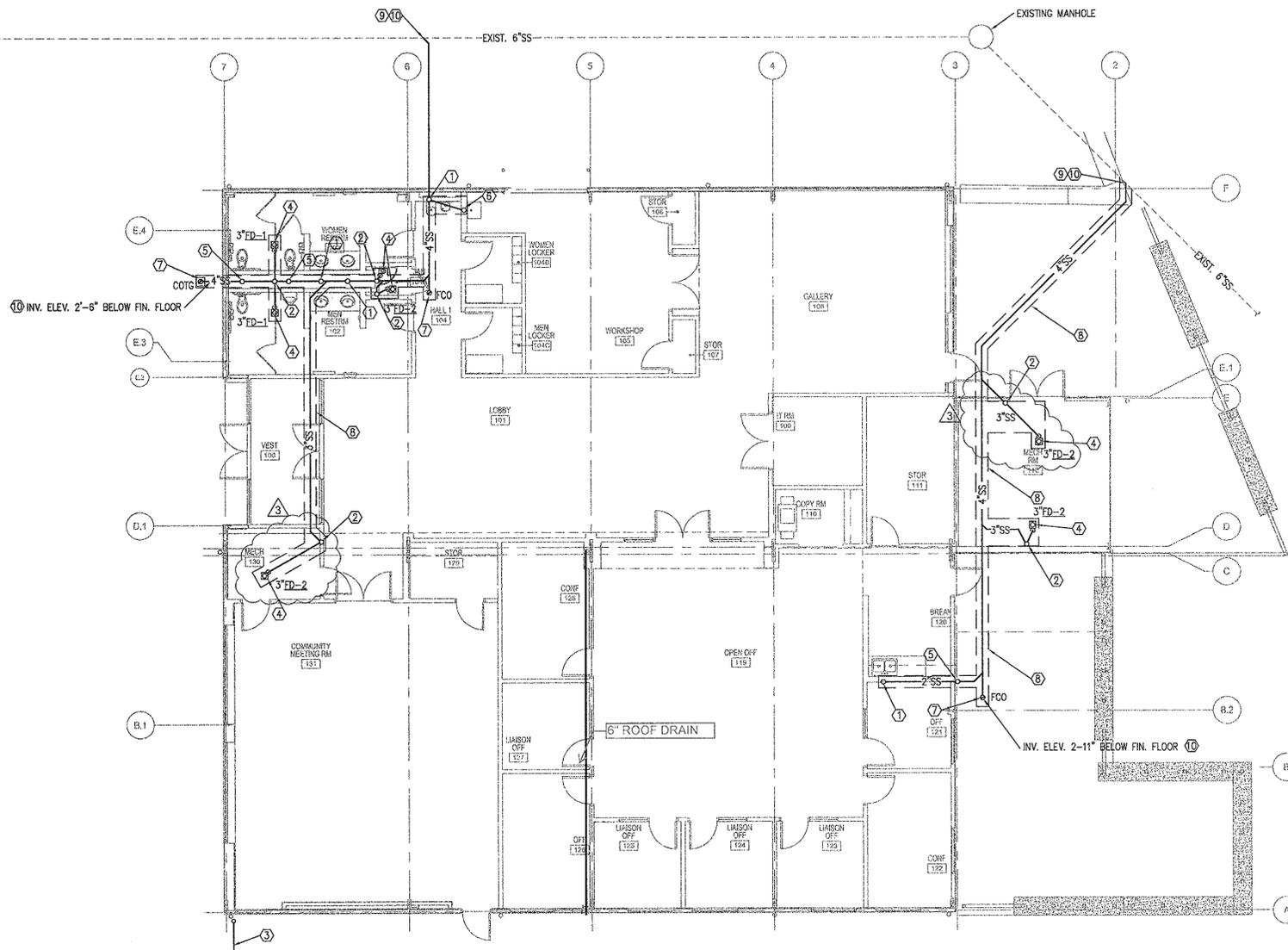
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- KEYED NOTES:**
- ① 2" SANITARY SEWER UP.
 - ② 2" SANITARY VENT UP.
 - ③ ROUTE NEW 2" WATER LINE TO EXISTING WATER METER. REFER TO SHEET E1.00 FOR ADDITIONAL SITE DETAILS. CONTRACTOR TO FIELD VERIFY METER LOCATION & SIZE.
 - ④ 3" TRAPPED SANITARY SEWER, COORDINATE EXACT LOCATION OF FLOOR DRAIN WITH MECHANICAL CONTRACTOR.
 - ⑤ 4" SANITARY SEWER UP.
 - ⑥ 3" SANITARY SEWER UP TO W.C.O.
 - ⑦ 4" SANITARY SEWER UP TO C.O.
 - ⑧ SAW CUT EXISTING CONCRETE, AS REQUIRED FOR NEW SANITARY SEWER INSTALLATION. PATCH CONCRETE SLAB TO MATCH EXISTING.
 - ⑨ CONNECT TO EXISTING SANITARY SEWER.
 - ⑩ PLUMBING CONTRACTOR SHALL FIELD VERIFY ELEVATION AND SLOPES PRIOR TO LAYING SANITARY SEWER LINES.

1 PLUMBING UNDERFLOOR PLAN
1/8"=1'-0"

APPROVED PLUMBING PLAN
SUBJECT PROVISION OF SEC. 102.26 OF THE UNIFORM PLUMBING CODE.
THIS PLAN MUST BE KEPT ON JOB FOR INSPECTORS. SEPARATE PERMIT FOR PLUMBING REQUIRED.
JAN 10 2013 NO. 391
RJ 13001358

ISSUE LOG		
NO.	DATE	DESCRIPTION
1	02/28/12	Issue for Bld & Construction
2	10/29/12	RFI No. 002
3	01/07/13	Permit Modifications

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STRUCTURAL ENGINEER
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SEAL(S):

 TBPE FIRM NO. F-3446

PROJECT NAME:
 CITY OF HOUSTON
 9003 N. MAIN ADMINISTRATION
 BLDG RENOVATION

CITY OF HOUSTON
 GENERAL SERVICES
 DEPARTMENT

REVIEWED:
 PROGRAM MANAGER _____ SPONSORING DEPARTMENT _____
 PROJECT MANAGER _____

RdIR ARCHITECTS
 ARCHITECTURE | PLANNING | INTERIORS
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 phone 713.868.3121 www.rdir.com

DATE: 07/16/10
 WBS No: L-000054-0001-4
 SCALE: 1/8"=1'-0"
 DRAWN BY: R.G.
 CHECKED BY: L.H.

SHEET TITLE:
 PLUMBING
 UNDERFLOOR PLAN

SHEET NO.:
P1.01
 40 OF 56 SHEETS

CITY DWG. NO.:

DESIGN FILE: XXXXXXXX.dwg

CAD FILE:

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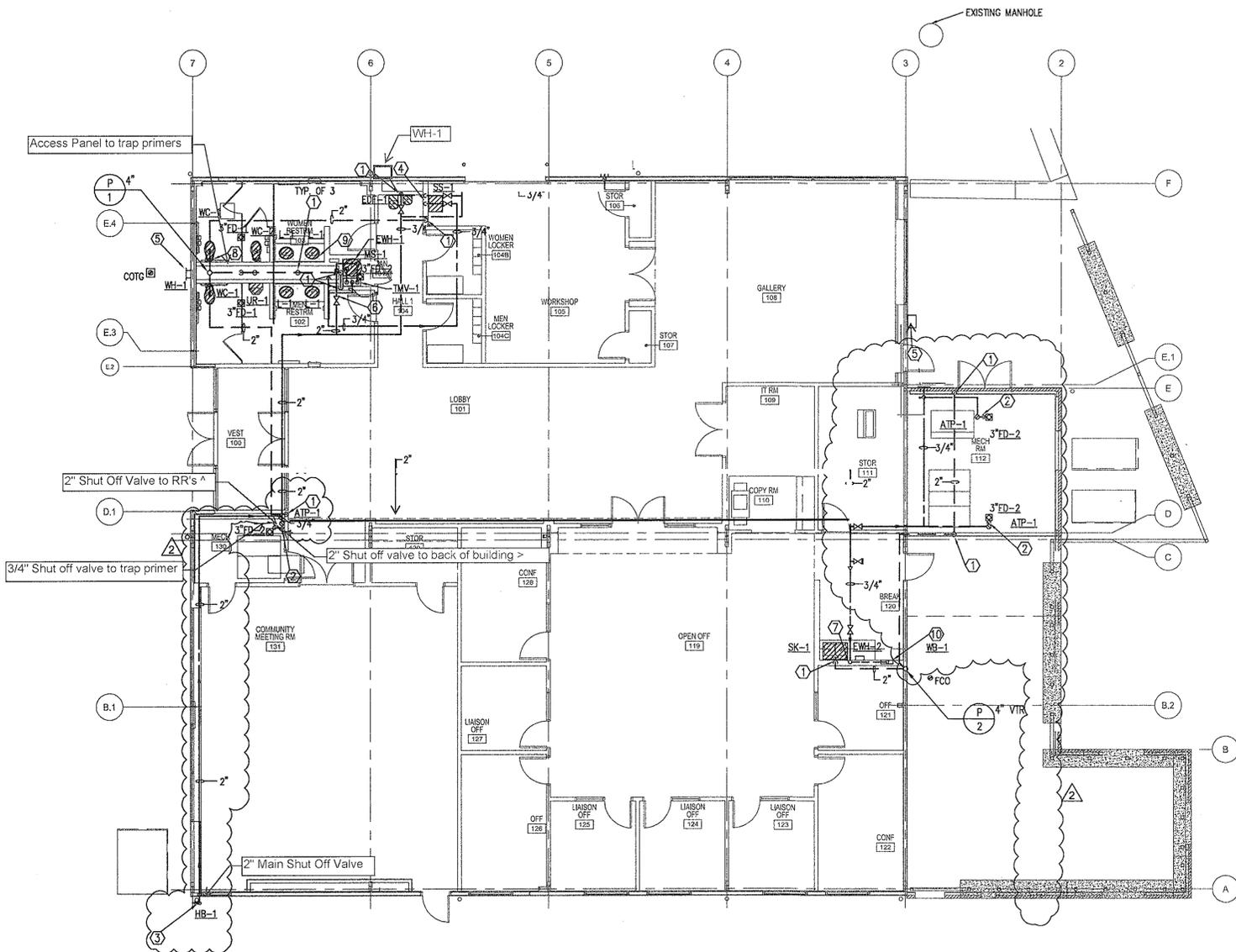
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D

C

B

A



1 PLUMBING FLOOR PLAN
1/8"=1'-0"

KEYED NOTES:

- ① 2" SANITARY VENT RISE.
- ② 1/2" COLD WATER TRAP PRIMER DOWN TO FLOOR DRAIN.
- ③ 2" COLD WATER ENTRY LINE WITH SHUT-OFF VALVE, REFER TO DETAIL 9/PS.02 FOR WATER ENTRANCE DETAIL.
- ④ 3/4" COLD AND HOT WATER DOWN.
- ⑤ 3/4" COLD WATER TO WH-1.
- ⑥ 3/4" HOT WATER AND 2" COLD WATER DOWN IN CHASE.
- ⑦ 3/4" COLD WATER LINE DOWN TO SK-1 & EWH-2. REFER TO WATER HEATER SCHEDULE FOR SPECIFICATIONS.
- ⑧ USE ONE (1) TRANSFORMER FOR ALL WATER CLOSET/URINAL FLUSH VALVES AND PROVIDE WALL BOX (ACCESS PANEL) FOR TRANSFORMER ACCESS. COORDINATE WITH ELECTRICAL CONTRACTOR.
- ⑨ USE ONE (1) TRANSFORMER FOR ALL ELECTRONIC HAND WASHING FAUCETS AND PROVIDE WALL BOX (ACCESS PANEL) FOR TRANSFORMER ACCESS. COORDINATE WITH ELECTRICAL CONTRACTOR.
- ⑩ PROVIDE 1/2" COLD WATER WITH SHUT-OFF VALVE AND FILTER DOWN TO ICE MAKER IN REFRIGERATOR.

ISSUE LOG

NO.	DATE	DESCRIPTION
1	02/28/12	Issue for Bid & Construction
2	11/29/12	Permit Revision

CONSULTANT(S):
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 SCALE: 1/8"=1'-0"
 DRAWN BY: R.G.
 CHECKED BY: L.H.

SHEET TITLE:
 PLUMBING
 FLOOR PLAN

SHEET NO.:
P1.02
 41 OF 56 SHEETS

CITY DWG. NO.:

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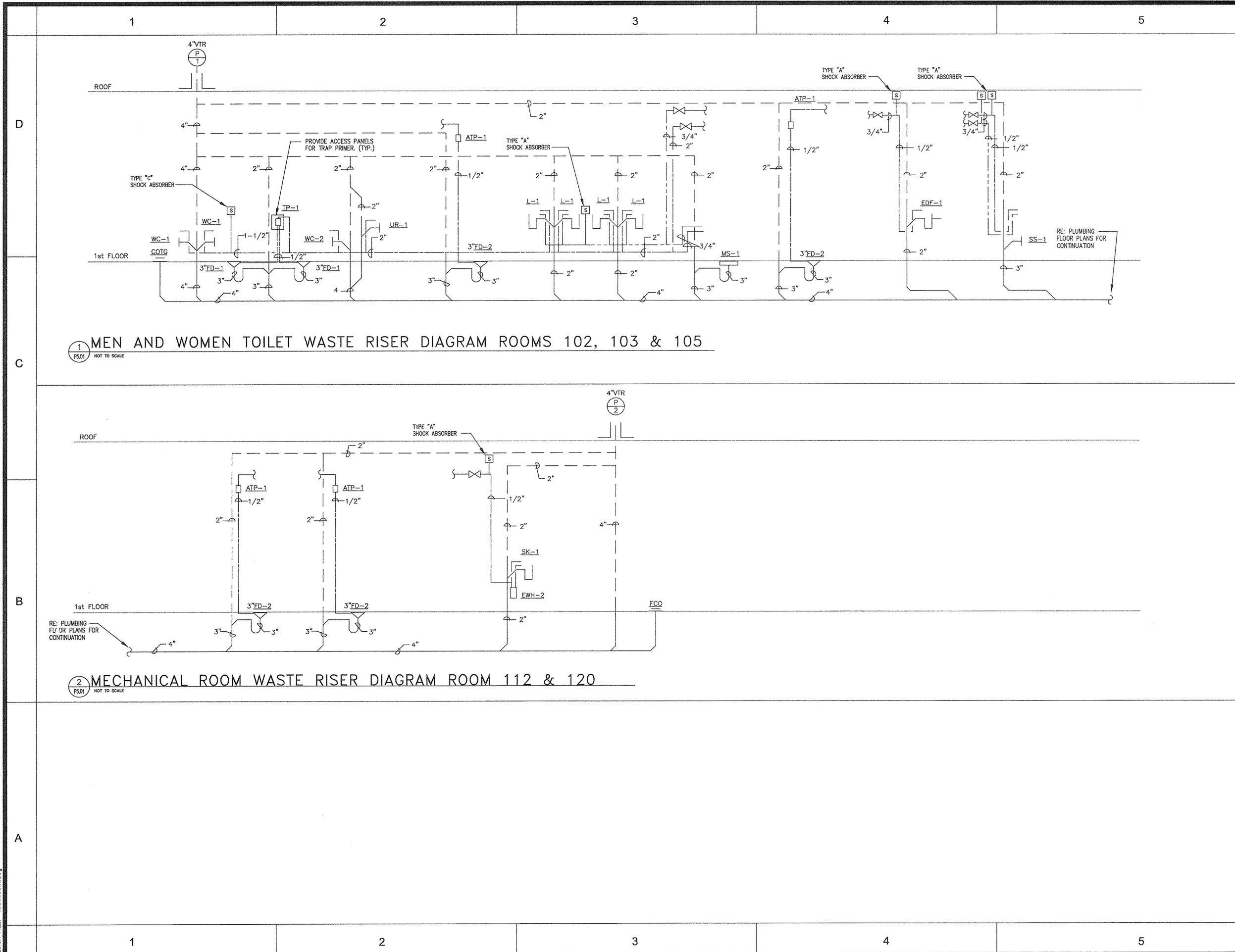
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1 MEN AND WOMEN TOILET WASTE RISER DIAGRAM ROOMS 102, 103 & 105
 P5.01 NOT TO SCALE

2 MECHANICAL ROOM WASTE RISER DIAGRAM ROOM 112 & 120
 P5.01 NOT TO SCALE

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 SCALE: AS NOTED
 DRAWN BY: R.G.
 CHECKED BY: L.H.

SHEET TITLE:
 PLUMBING
 RISER DIAGRAMS

SHEET NO.:
P5.01
 42 OF 56 SHEETS

CITY DWG. NO.:

DESIGN FILE: XXXXXXXX.dwg

CAD FILE:

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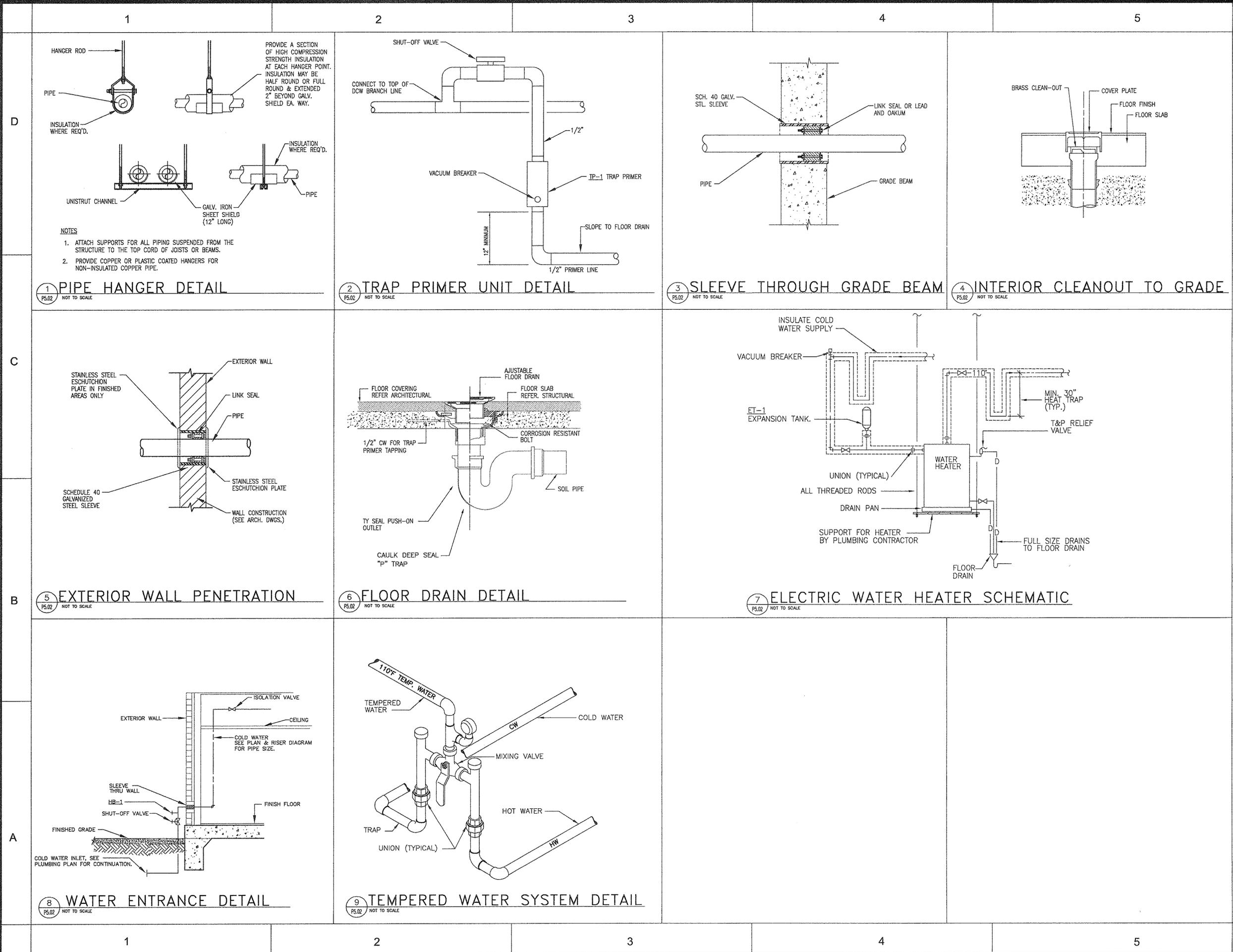
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SHEET TITLE:
 PLUMBING
 DETAILS

SHEET NO.:
P5.02
 43 OF 56 SHEETS

CITY DWG. NO.:



DESIGN FILE: XXXXXXXX.dwg

CAD FILE:

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PLUMBING FIXTURE SCHEDULE			
[REFER TO SPECIFICATION SECTIONS 15400 & 15450]		[REFER TO SPECIFICATION SECTIONS 15400 & 15450]	
MARK	DESCRIPTION	MARK	DESCRIPTION
WC-1	WATER CLOSET - WALL MOUNTED WITH FLUSH VALVE AND CARRIER, ADA AND TAS COMPLIANT. BOWL - VITREOUS CHINA, ELONGATED, SIPHON JET, 1-1/2" TOP SPUD, 1.28 GALLON FLUSH : AMERICAN STANDARD MODEL 2257.C01. FLUSH VALVE - QUIET EXPOSED WITH VACUUM BREAKER, SCREW DRIVER STOP WITH CAP, 1.28-GALLON FLUSH, 120V/24V TRANSFORMER: SLOAN "ROYAL OPTIMA" 111-1.28 ES-S TMO HIGH EFFICIENCY. SEAT - ELONGATED, WITH OPEN FRONT, CONCEALED CHECK & SELF-SUSTAINING HINGE, EXTRA HEAVY PLASTIC: AMERICAN STANDARD MODEL 5905.100. (MOUNT TOILET BOWL TO PROVIDE A FINISHED FLOOR TO TOP OF SEAT HEIGHT OF 17" FOR HANDICAP USE.)	FD-1	FLOOR DRAIN - CAST IRON BODY WITH 6" SATIN NICKEL BRONZE STRAINER, SEDIMENT BUCKET : WADE MODEL 1100-STD6-27.
WC-2	WATER CLOSET - WALL MOUNTED WITH FLUSH VALVE AND CARRIER, ADA COMPLIANT. BOWL - VITREOUS CHINA, ELONGATED, SIPHON JET, 1-1/2" TOP SPUD, 1.28 GALLON FLUSH : AMERICAN STANDARD MODEL 2257.D01. FLUSH VALVE - QUIET EXPOSED WITH VACUUM BREAKER, SCREW DRIVER STOP WITH CAP, 1.28-GALLON FLUSH: SLOAN "ROYAL OPTIMA" 111-1.28 ES-S TMO HIGH EFFICIENCY. SEAT - ELONGATED, WITH OPEN FRONT, CONCEALED CHECK & SELF-SUSTAINING HINGE, EXTRA HEAVY PLASTIC: AMERICAN STANDARD MODEL 5905.100. (MOUNT TOILET BOWL TO PROVIDE A FINISHED FLOOR TO TOP OF SEAT HEIGHT OF 15" FOR NON-HANDICAP USE.)	FD-2	FLOOR DRAIN - CAST IRON BODY & GRATE, SEDIMENT BUCKET AND FUNNEL : WADE MODEL W-1240-TD-EGS.
L-1	LAVATORY - PUBLIC COUNTERTOP, ADA COMPLIANT BOWL - VITREOUS CHINA, 20-3/8" X 17", FRONT OVERFLOW, SELF-RIMMING, CENTER FAUCET HOLE : AMERICAN STANDARD MODEL 0356.041. FAUCET - CHROME PLATED BRASS HAND WASHING FAUCET OPERATED BY INFRARED SENSOR - SLOAN OPTIMA ETF-80 GRID STRAINER DRAIN : AMERICAN STANDARD MODEL 4802.342V. STOPS & SUPPLIES - CHROME PLATED BRASS ANGLE VALVE WITH WHEEL HANDLE, 1/2" INLET, 3/8" OUTLET, 12" X 3/8" O.D. FLEXIBLE TUBING & WALL FLANGE : MCGUIRE MODEL H216S. TRAP - 1-1/4" 17 GAUGE CHROME PLATED BRASS, CLEANOUT, WASTE TO WALL & ESCUTCHEON : MCGUIRE MODEL 8872. (REFER TO ARCHITECTURAL CASEWORK ELEVATIONS FOR COUNTER HEIGHT)	WCQ-1	WALL CLEANOUT - BRASS PLUG WITH ROUND STAINLESS STEEL ACCESS COVER : WADE SERIES 8480R.
UR-1	URINAL - WALL MOUNTED WITH ELECTRIC FLUSH VALVE BOWL - VITREOUS CHINA, WASHOUT ACTION, 0.5 GALLON FLUSH, 3/4" TOP SPUD : AMERICAN STANDARD MODEL 6581.015. FLUSH VALVE - QUIET EXPOSED WITH VACUUM BREAKER, SCREW DRIVER STOP WITH CAP, 0.5 GALLON FLUSH, SENSOR ACTIVATED, 120V/24V TRANSFORMER : SLOAN ROYAL OPTIMA 186-0.5XL ES-S.	ECQ-1	FLOOR CLEANOUT - CAST IRON BODY, FLANGED FERRULE WITH GAS TIGHT PLUG, NICKEL BRONZE SCORATED TOP: WADE SERIES 7000NH. (PROVIDE CARPET MARKER WHERE INSTALLED BENEATH CARPET.)
SK-1	DROP-IN SINK - PUBLIC COUNTERTOP, ADA COMPLIANT BOWL - TYPE 304 STAINLESS STEEL, 33" X 22", SELF-RIMMING, 5-1/2" BOWL DEPTH, DRAIN OPENING OFF-CENTER FRONT TO BACK, SINGLE FAUCET HOLE: ELKAY LRADQ33221. FAUCET - CHROME PLATED BRASS SINGLE LEVER TOP MOUNT KITCHEN FAUCET: ELKAY LKE4160 REMOVABLE BASKET STRAINER DRAIN : ELKAY LK99. STOPS & SUPPLIES - CHROME PLATED BRASS ANGLE VALVE WITH WHEEL HANDLE, 1/2" INLET, 3/8" OUTLET, 12" X 3/8" O.D. FLEXIBLE TUBING & WALL FLANGE : MCGUIRE MODEL H216S. TRAP - 1-1/2" 17 GAUGE CHROME PLATED BRASS, CLEANOUT, WASTE TO WALL & ESCUTCHEON : MCGUIRE MODEL 8872. (REFER TO ARCHITECTURAL CASEWORK ELEVATIONS FOR COUNTER HEIGHT)	ATP-1	TRAP PRIMER - UPC APPROVED, BRASS CONSTRUCTION, WITH ADJUSTMENT SCREW: PRECISION PLUMBING PRODUCTS MODEL P-2. (INSTALL AND ADJUST PER MANUFACTURER'S RECOMMENDATIONS.)
		TP-1	TRAP PRIMER - UPC APPROVED, BRASS CONSTRUCTION, WITH ADJUSTMENT SCREW: PRECISION PLUMBING PRODUCTS MODEL P-2. (INSTALL AND ADJUST PER MANUFACTURER'S RECOMMENDATIONS.)
		SA-1	SHOCK ABSORBER - SEAMLESS COPPER WITH O-RING PISTON, APPROVED FOR CONCEALED WALL CONSTRUCTION, PDI CERTIFIED: SIOUX CHIEF HYDRA-RESTER.
		COTG-1	CLEANOUT TO GRADE - CAST IRON HOUSING WITH ANCHOR FLANGE, LABELED SECURED CAST IRON COVER : WADE MODEL W-8300-MF-83.
		HR-1	HOSE BIBB - POLISHED CHROME PLATED WITH WALL FLANGE, 1/2" INLET, WHEEL HANDLE AND VACUUM BREAKER : WOODFORD MODEL 24P.
		MS-1	MOP SINK - FLOOR MOUNTED 28 x 28 x 12 WITH T-10-VB SINK FITTING, VACUUM BREAKER AND BP SPLASH CATCHER PANELS. STERN WILLIAMS CRESCENT CRS-2200
		SS-1	SERVICE SINK - WALL HUNG SINK - ENAMELED CAST IRON INSIDE ONLY, SUPPLIED WITH WALL HANGER, RIM GUARD AND DRILLED BACK 2 HOLES : AMERICAN STANDARD MODEL 7692.00B. FAUCET - EXPOSED YOKE WALL MOUNTED UTILITY FAUCET WITH VACUUM BREAKER AND SHANK STOPS : AMERICAN STANDARD MODEL 8341.076. TRAP - 3" CAST IRON P TRAP : AMERICAN STANDARD MODEL 7798.030.
		WH-1	WALL HYDRANT - ANTI-FREEZE, ANTI-SIPHON, SATIN NICKEL BRONZE BOX : WADE MODEL W-8625.
		WB-1	WALL BOX - RECESSED ICE MAKER OUTLET BOX 20 GAUGE STEEL WITH WHITE ENAMEL FINISH, 1/2" CHROME 1/4 TURN VALVE AND HAMMER ARRESTER: IPS CORP. WATER-TITE MODEL NO. W9700HA.
		EDF-1	ELECTRIC DRINKING FOUNTAIN - WALL MOUNTED, DUAL-HEIGHT HANDICAP ACCESSIBLE UNIT - STAINLESS STEEL CABINET, TWO LEVEL FOUNTAINS WITH FRONT PUSH BUTTON OPERATION, CHROME PLATED BUBBLERS, LEAD-FREE WATER SYSTEM PARTS, 8.0 GPH CAPACITY, 120 VOLTS, 4.0 FLA: ELKAY MODEL EZSTL6C TRAP - 1-1/2" 17 GAUGE CHROME PLATED BRASS, CLEANOUT, WASTE TO WALL & ESCUTCHEON : MCGUIRE MODEL 8872. STOP & SUPPLY - SCREWDRIWER STOP WITH 3/8" INLET SUPPLIED WITH FOUNTAIN UNIT.
		TWV-1	THERMOSTATIC WATER MIXING VALVE - FOR EXPOSED PIPING UNIT WITH BIMETAL THERMOSTAT LINKED DIRECTLY TO VALVE PORTING, ADJUSTABLE LIMIT STOP, COLOR CODED DIAL: C-H, UNION ANGLE, STRAINER CHECKSTOPS ON INLETS, ROUGH BRONZE FINISH, LEONARD # TM-30.

PLUMBING ROUGH-IN SCHEDULE						
ITEM	DESCRIPTION	ROUGH-IN MINIMUMS				REMARKS
		WASTE	VENT	HW	CW	
WC-1	WATER CLOSET	4"	2"	-	1"	WALL MOUNTED ADA
WC-2	WATER CLOSET	4"	2"	-	1"	WALL MOUNTED
L-1	LAVATORY	1 1/2"	2"	1/2"	1/2"	WALL HUNG ADA
SK-1	SINK	1 1/2"	2"	1/2"	3/4"	COUNTERTOP ADA
SS-1	SERVICE SINK	3"	2"	3/4"	3/4"	WALL HUNG
MS-1	MOP SINK	3"	2"	3/4"	3/4"	JAN. CLOSET
EDF-1	DRINKING FOUNTAIN	1 1/2"	2"	-	1/2"	WALL HUNG ADA
FD-1	FLOOR DRAIN	3"	2"			
FD-2	FLOOR DRAIN	4"	2"			
TP-1	TRAP PRIMER	-	-	-	1/2"	

SHOCK ABSORBER SCHEDULE		
PDI SYMBOL	FIXTURE UNIT CAPACITY	
A	1 - 11	
B	12 - 32	
C	33 - 60	
D	61 - 113	
E	114 - 154	

ELECTRIC WATER HEATER SCHEDULE									
MARK	STORAGE CAPACITY (GALLONS)	POWER	KW	TEMP. RISE (DEG. F)	RECOVERY (G.P.H.)	DELIVERED WATER TEMP. (DEG. F)	LOCATION	MAKE / MODEL	REMARKS
EWH-1	20	277V/1PH	4.5	72°	25	110°	ROOM 104A	A.O.SMITH / DEL-20	COMPLETE WITH T&P RELIEF VALVE
ET-1									WESSELS TTA-5 ASME EXPANSION TANK.
EWH-2	4	120V/1PH	1.5	70°	15	120°	ROOM 120	BOSCH (ARISTON) / GL4	1500 WATT/110 VOLT

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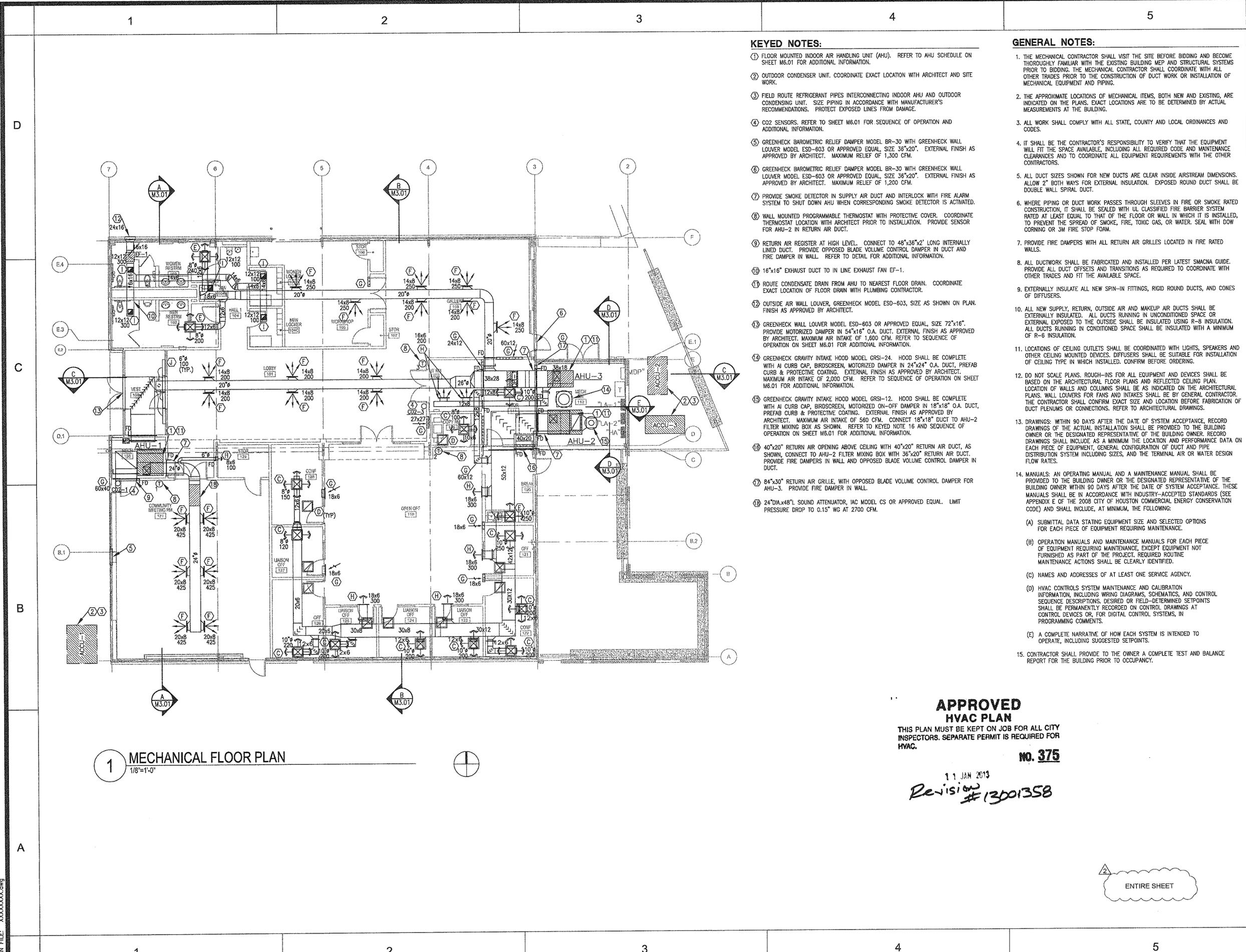
SHEET TITLE:
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SCHEDULES

SHEET NO. :
P6.01
44 OF 56 SHEETS

CITY DWG. NO. :

DESIGN FILE: XXXXXXXX.dwg

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KEYED NOTES:

- ① FLOOR MOUNTED INDOOR AIR HANDLING UNIT (AHU). REFER TO AHU SCHEDULE ON SHEET M6.01 FOR ADDITIONAL INFORMATION.
- ② OUTDOOR CONDENSER UNIT. COORDINATE EXACT LOCATION WITH ARCHITECT AND SITE WORK.
- ③ FIELD ROUTE REFRIGERANT PIPES INTERCONNECTING INDOOR AHU AND OUTDOOR CONDENSING UNIT. SIZE PIPING IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS. PROTECT EXPOSED LINES FROM DAMAGE.
- ④ CO2 SENSORS. REFER TO SHEET M6.01 FOR SEQUENCE OF OPERATION AND ADDITIONAL INFORMATION.
- ⑤ GREENHECK BAROMETRIC RELIEF DAMPER MODEL BR-30 WITH GREENHECK WALL LOUVER MODEL ESD-603 OR APPROVED EQUAL, SIZE 36"x20". EXTERNAL FINISH AS APPROVED BY ARCHITECT. MAXIMUM RELIEF OF 1,300 CFM.
- ⑥ GREENHECK BAROMETRIC RELIEF DAMPER MODEL BR-30 WITH GREENHECK WALL LOUVER MODEL ESD-603 OR APPROVED EQUAL, SIZE 36"x20". EXTERNAL FINISH AS APPROVED BY ARCHITECT. MAXIMUM RELIEF OF 1,200 CFM.
- ⑦ PROVIDE SMOKE DETECTOR IN SUPPLY AIR DUCT AND INTERLOCK WITH FIRE ALARM SYSTEM TO SHUT DOWN AHU WHEN CORRESPONDING SMOKE DETECTOR IS ACTIVATED.
- ⑧ WALL MOUNTED PROGRAMMABLE THERMOSTAT WITH PROTECTIVE COVER. COORDINATE THERMOSTAT LOCATION WITH ARCHITECT PRIOR TO INSTALLATION. PROVIDE SENSOR FOR AHU-2 IN RETURN AIR DUCT.
- ⑨ RETURN AIR REGISTER AT HIGH LEVEL. CONNECT TO 48"x36"x2' LONG INTERNALLY LINED DUCT. PROVIDE OPPOSED BLADE VOLUME CONTROL DAMPER IN DUCT AND FIRE DAMPER IN WALL. REFER TO DETAIL FOR ADDITIONAL INFORMATION.
- ⑩ 16"x16" EXHAUST DUCT TO IN LINE EXHAUST FAN EF-1.
- ⑪ ROUTE CONDENSATE DRAIN FROM AHU TO NEAREST FLOOR DRAIN. COORDINATE EXACT LOCATION OF FLOOR DRAIN WITH PLUMBING CONTRACTOR.
- ⑫ OUTSIDE AIR WALL LOUVER, GREENHECK MODEL ESD-603, SIZE AS SHOWN ON PLAN. FINISH AS APPROVED BY ARCHITECT.
- ⑬ GREENHECK WALL LOUVER MODEL ESD-603 OR APPROVED EQUAL, SIZE 72"x16". PROVIDE MOTORIZED DAMPER IN 54"x16" O.A. DUCT. EXTERNAL FINISH AS APPROVED BY ARCHITECT. MAXIMUM AIR INTAKE OF 1,600 CFM. REFER TO SEQUENCE OF OPERATION ON SHEET M6.01 FOR ADDITIONAL INFORMATION.
- ⑭ GREENHECK GRAVITY INTAKE HOOD MODEL GRSI-24. HOOD SHALL BE COMPLETE WITH A CURB CAP, BIRDSCREEN, MOTORIZED ON-OFF DAMPER IN 18"x18" O.A. DUCT, PREFAB CURB & PROTECTIVE COATING. EXTERNAL FINISH AS APPROVED BY ARCHITECT. MAXIMUM AIR INTAKE OF 2,000 CFM. REFER TO SEQUENCE OF OPERATION ON SHEET M6.01 FOR ADDITIONAL INFORMATION.
- ⑮ GREENHECK GRAVITY INTAKE HOOD MODEL GRSI-12. HOOD SHALL BE COMPLETE WITH A CURB CAP, BIRDSCREEN, MOTORIZED ON-OFF DAMPER IN 18"x18" O.A. DUCT, PREFAB CURB & PROTECTIVE COATING. EXTERNAL FINISH AS APPROVED BY ARCHITECT. MAXIMUM AIR INTAKE OF 560 CFM. CONNECT 18"x18" DUCT TO AHU-2 FILTER MIXING BOX AS SHOWN. REFER TO KEYED NOTE 16 AND SEQUENCE OF OPERATION ON SHEET M6.01 FOR ADDITIONAL INFORMATION.
- ⑯ 40"x20" RETURN AIR OPENING ABOVE CEILING WITH 40"x20" RETURN AIR DUCT, AS SHOWN, CONNECT TO AHU-2 FILTER MIXING BOX WITH 36"x20" RETURN AIR DUCT. PROVIDE FIRE DAMPERS IN WALL AND OPPOSED BLADE VOLUME CONTROL DAMPER IN DUCT.
- ⑰ 84"x30" RETURN AIR GRILLE, WITH OPPOSED BLADE VOLUME CONTROL DAMPER FOR AHU-3. PROVIDE FIRE DAMPER IN WALL.
- ⑱ 24"DIA. x 48"L. SOUND ATTENUATOR, IAC MODEL CS OR APPROVED EQUAL. LIMIT PRESSURE DROP TO 0.15" WG AT 2700 CFM.

GENERAL NOTES:

1. THE MECHANICAL CONTRACTOR SHALL VISIT THE SITE BEFORE BIDDING AND BECOME THOROUGHLY FAMILIAR WITH THE EXISTING BUILDING MEP AND STRUCTURAL SYSTEMS PRIOR TO BIDDING. THE MECHANICAL CONTRACTOR SHALL COORDINATE WITH ALL OTHER TRADES PRIOR TO THE CONSTRUCTION OF DUCT WORK OR INSTALLATION OF MECHANICAL EQUIPMENT AND PIPING.
2. THE APPROXIMATE LOCATIONS OF MECHANICAL ITEMS, BOTH NEW AND EXISTING, ARE INDICATED ON THE PLANS. EXACT LOCATIONS ARE TO BE DETERMINED BY ACTUAL MEASUREMENTS AT THE BUILDING.
3. ALL WORK SHALL COMPLY WITH ALL STATE, COUNTY AND LOCAL ORDINANCES AND CODES.
4. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO VERIFY THAT THE EQUIPMENT WILL FIT THE SPACE AVAILABLE, INCLUDING ALL REQUIRED CODE AND MAINTENANCE CLEARANCES AND TO COORDINATE ALL EQUIPMENT REQUIREMENTS WITH THE OTHER CONTRACTORS.
5. ALL DUCT SIZES SHOWN FOR NEW DUCTS ARE CLEAR INSIDE AIRSTREAM DIMENSIONS. ALLOW 2" BOTH WAYS FOR EXTERNAL INSULATION. EXPOSED ROUND DUCT SHALL BE DOUBLE WALL SPIRAL DUCT.
6. WHERE PIPING OR DUCT WORK PASSES THROUGH SLEEVES IN FIRE OR SMOKE RATED CONSTRUCTION, IT SHALL BE SEALED WITH UL CLASSIFIED FIRE BARRIER SYSTEM RATED AT LEAST EQUAL TO THAT OF THE FLOOR OR WALL IN WHICH IT IS INSTALLED, TO PREVENT THE SPREAD OF SMOKE, FIRE, TOXIC GAS, OR WATER. SEAL WITH DOW CORNING OR 3M FIRE STOP FOAM.
7. PROVIDE FIRE DAMPERS WITH ALL RETURN AIR GRILLES LOCATED IN FIRE RATED WALLS.
8. ALL DUCTWORK SHALL BE FABRICATED AND INSTALLED PER LATEST SMACNA GUIDE. PROVIDE ALL DUCT OFFSETS AND TRANSITIONS AS REQUIRED TO COORDINATE WITH OTHER TRADES AND FIT THE AVAILABLE SPACE.
9. EXTERNALLY INSULATE ALL NEW SPIN-IN FITTINGS, RIGID ROUND DUCTS, AND CONES OF DIFFUSERS.
10. ALL NEW SUPPLY, RETURN, OUTSIDE AIR AND MAKEUP AIR DUCTS SHALL BE EXTERNALLY INSULATED. ALL DUCTS RUNNING IN UNCONDITIONED SPACE OR EXTERNAL EXPOSURE TO THE OUTSIDE SHALL BE INSULATED USING R-8 INSULATION. ALL DUCTS RUNNING IN CONDITIONED SPACE SHALL BE INSULATED WITH A MINIMUM OF R-6 INSULATION.
11. LOCATIONS OF CEILING OUTLETS SHALL BE COORDINATED WITH LIGHTS, SPEAKERS AND OTHER CEILING MOUNTED DEVICES. DIFFUSERS SHALL BE SUITABLE FOR INSTALLATION OF CEILING TYPE IN WHICH INSTALLED. CONFIRM BEFORE ORDERING.
12. DO NOT SCALE PLANS. ROUGH-INS FOR ALL EQUIPMENT AND DEVICES SHALL BE BASED ON THE ARCHITECTURAL FLOOR PLANS AND REFLECTED CEILING PLAN. LOCATION OF WALLS AND COLUMNS SHALL BE AS INDICATED ON THE ARCHITECTURAL PLANS. WALL LOUVERS FOR FANS AND INTAKES SHALL BE BY GENERAL CONTRACTOR. THE CONTRACTOR SHALL CONFIRM EXACT SIZE AND LOCATION BEFORE FABRICATION OF DUCT PLENUMS OR CONNECTIONS. REFER TO ARCHITECTURAL DRAWINGS.
13. DRAWINGS: WITHIN 90 DAYS AFTER THE DATE OF SYSTEM ACCEPTANCE, RECORD DRAWINGS OF THE ACTUAL INSTALLATION SHALL BE PROVIDED TO THE BUILDING OWNER OR THE DESIGNATED REPRESENTATIVE OF THE BUILDING OWNER. RECORD DRAWINGS SHALL INCLUDE AS A MINIMUM THE LOCATION AND PERFORMANCE DATA ON EACH PIECE OF EQUIPMENT, GENERAL CONFIGURATION OF DUCT AND PIPE DISTRIBUTION SYSTEM INCLUDING SIZES, AND THE TERMINAL AIR OR WATER DESIGN FLOW RATES.
14. MANUALS: AN OPERATING MANUAL AND A MAINTENANCE MANUAL SHALL BE PROVIDED TO THE BUILDING OWNER OR THE DESIGNATED REPRESENTATIVE OF THE BUILDING OWNER WITHIN 90 DAYS AFTER THE DATE OF SYSTEM ACCEPTANCE. THESE MANUALS SHALL BE IN ACCORDANCE WITH INDUSTRY-ACCEPTED STANDARDS (SEE APPENDIX E OF THE 2008 CITY OF HOUSTON COMMERCIAL ENERGY CONSERVATION CODE) AND SHALL INCLUDE, AT MINIMUM, THE FOLLOWING:
 - (A) SUBMITTAL DATA STATING EQUIPMENT SIZE AND SELECTED OPTIONS FOR EACH PIECE OF EQUIPMENT REQUIRING MAINTENANCE.
 - (B) OPERATION MANUALS AND MAINTENANCE MANUALS FOR EACH PIECE OF EQUIPMENT REQUIRING MAINTENANCE, EXCEPT EQUIPMENT NOT FURNISHED AS PART OF THE PROJECT. REQUIRED ROUTINE MAINTENANCE ACTIONS SHALL BE CLEARLY IDENTIFIED.
 - (C) NAMES AND ADDRESSES OF AT LEAST ONE SERVICE AGENCY.
 - (D) HVAC CONTROLS SYSTEM MAINTENANCE AND CALIBRATION INFORMATION, INCLUDING WIRING DIAGRAMS, SCHEMATICS, AND CONTROL SEQUENCE DESCRIPTIONS, DESIRED OR FIELD-DETERMINED SETPOINTS SHALL BE PERMANENTLY RECORDED ON CONTROL DRAWINGS AT CONTROL DEVICES OR, FOR DIGITAL CONTROL SYSTEMS, IN PROGRAMMING COMMENTS.
 - (E) A COMPLETE NARRATIVE OF HOW EACH SYSTEM IS INTENDED TO OPERATE, INCLUDING SUGGESTED SETPOINTS.
15. CONTRACTOR SHALL PROVIDE TO THE OWNER A COMPLETE TEST AND BALANCE REPORT FOR THE BUILDING PRIOR TO OCCUPANCY.

APPROVED HVAC PLAN

THIS PLAN MUST BE KEPT ON JOB FOR ALL CITY INSPECTORS. SEPARATE PERMIT IS REQUIRED FOR HVAC.

NO. 375

11 JAN 2013
Revision # 13001358

ENTIRE SHEET

1 MECHANICAL FLOOR PLAN
1/8"=1'-0"

ISSUE LOG		
NO.	DATE	DESCRIPTION
1	02/28/12	Issue for Bid & Construction
2	01/07/13	Permit Modifications

CONSULTANT(S):
MEP ENGINEER
HUNT & HUNT ENGINEERING CORP.
P.O. BOX 771294 HOUSTON, TX 77215-1294
TEL: 713-780-9654 FAX: 713-780-9424
CIVIL ENGINEER
WGA & ASSOCIATES
2500 TANGLEWILDE, SUITE 301 HOUSTON, TX 77063
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STRUCTURAL ENGINEER
SIGMA ENGINEERING SERVICES
8554 KATY FRWY, SUITE 340 HOUSTON, TX 77024
TEL: 713-461-8584 FAX: 713-465-7479

SEAL(S):

TBPE FIRM NO. F-3446

PROJECT NAME:
**CITY OF HOUSTON
9003 N. MAIN ADMINISTRATION
BLDG RENOVATION**

**CITY OF HOUSTON
GENERAL SERVICES
DEPARTMENT**

REVIEWED:
PROGRAM MANAGER _____ SPONSORING DEPARTMENT _____
PROJECT MANAGER _____

RdIR ARCHITECTS
ARCHITECTURE | PLANNING | INTERIORS
1245 West 18th Street Houston, Texas 77008
phone 713.868.3121 www.rdir.com

DATE: 07/16/10
WBS No: L-000054-0001-4
SCALE: 1/8"=1'-0"
DRAWN BY: M.G.
CHECKED BY: V.S.

SHEET TITLE:
**MECHANICAL
FLOOR PLAN**

SHEET NO.:
M1.01
45 OF 56 SHEETS

CITY DWG. NO.:

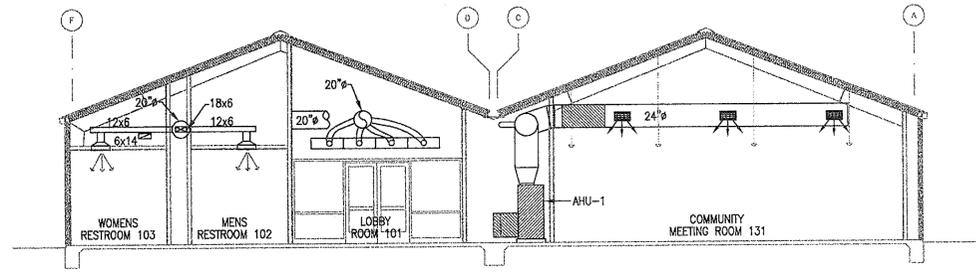
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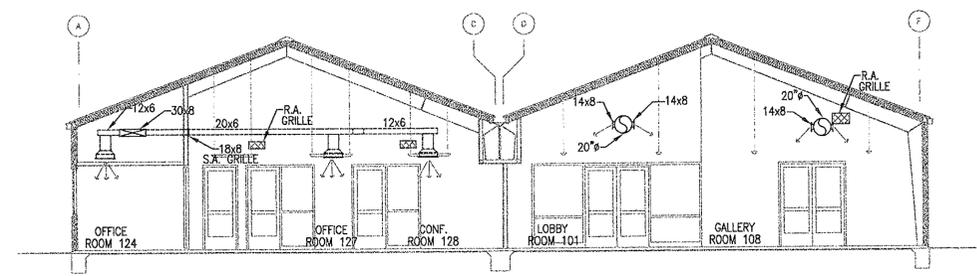
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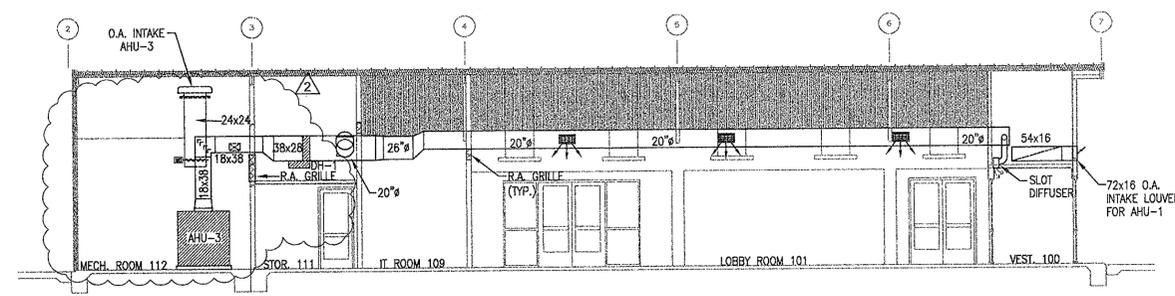
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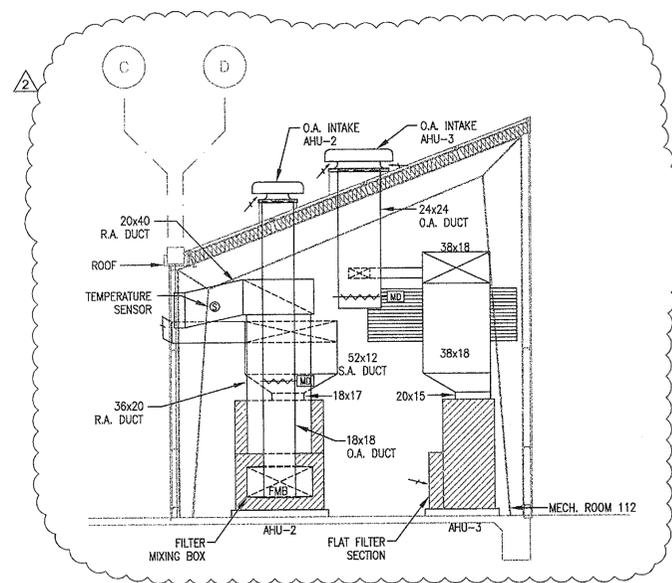
1 SECTION A-A
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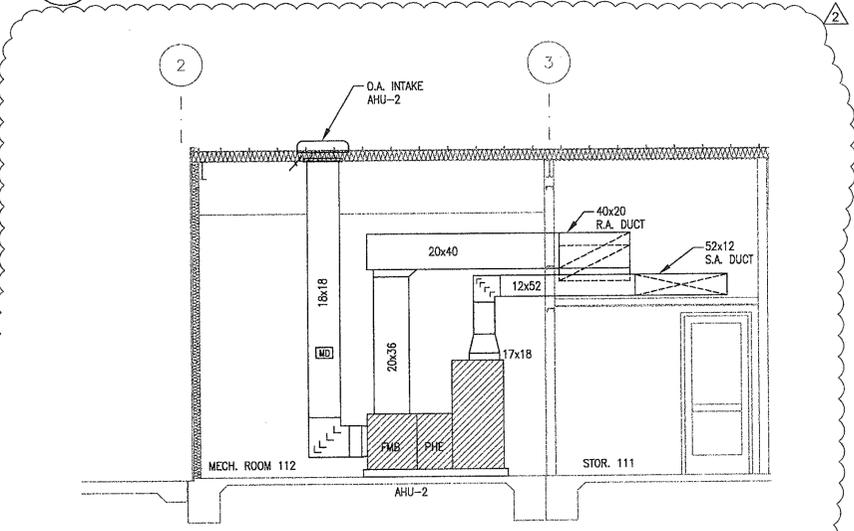
2 SECTION B-B
1/8"=1'-0"



3 SECTION C-C (AHU-2 NOT SHOWN FOR CLARITY)
1/8"=1'-0"



4 SECTION D-D
1/4"=1'-0"



5 SECTION E-E
1/4"=1'-0"

APPROVED HVAC PLAN
THIS PLAN MUST BE KEPT ON JOB FOR ALL CITY INSPECTORS. SEPARATE PERMIT IS REQUIRED FOR HVAC.
NO. 375
9.1 JAN 2013
Revision #13021358

ISSUE LOG

NO.	DATE	DESCRIPTION
1	02/28/12	Issue for Bld & Construction
2	01/07/13	Permit Modifications

CONSULTANT(S):
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SEAL(S):
STATE OF TEXAS
LARRY HUNT
REGISTERED PROFESSIONAL ENGINEER
MECHANICAL
TBPE FIRM NO. F-3446

PROJECT NAME:
CITY OF HOUSTON
9003 N. MAIN ADMINISTRATION
BLDG RENOVATION

CITY OF HOUSTON
GENERAL SERVICES
DEPARTMENT

REVIEWED:
PROGRAM MANAGER _____ SPONSORING DEPARTMENT _____
PROJECT MANAGER _____

RdIR ARCHITECTS
ARCHITECTURE | PLANNING | INTERIORS
1245 West 18th Street Houston, Texas 77008
phone 713.868.3121 www.rdir.com

DATE: 07/16/10
WBS No: L-000054-0001-4
SCALE: AS NOTED
DRAWN BY: M.G.
CHECKED BY: V.S.

SHEET TITLE:
MECHANICAL
BUILDING SECTIONS

SHEET NO.:
M3.01
46 OF 56 SHEETS

CITY DWG. NO.:

ISSUE LOG

NO.	DATE	DESCRIPTION
1	02/28/12	Issue for Bld & Construction

CONSULTANT(S):
 MEP ENGINEER
 HUNT & HUNT ENGINEERING CORP.
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 SIGMA ENGINEERING SERVICES
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 TEL: 713-461-8584 FAX: 713-465-7479



SEAL(S):
 TBPE FIRM NO. F-3446
 PROJECT NAME:

CITY OF HOUSTON
 9003 N. MAIN ADMINISTRATION
 BLDG RENOVATION



CITY OF HOUSTON
 GENERAL SERVICES
 DEPARTMENT

REVIEWED:
 PROGRAM MANAGER _____ SPONSORING DEPARTMENT _____
 PROJECT MANAGER _____

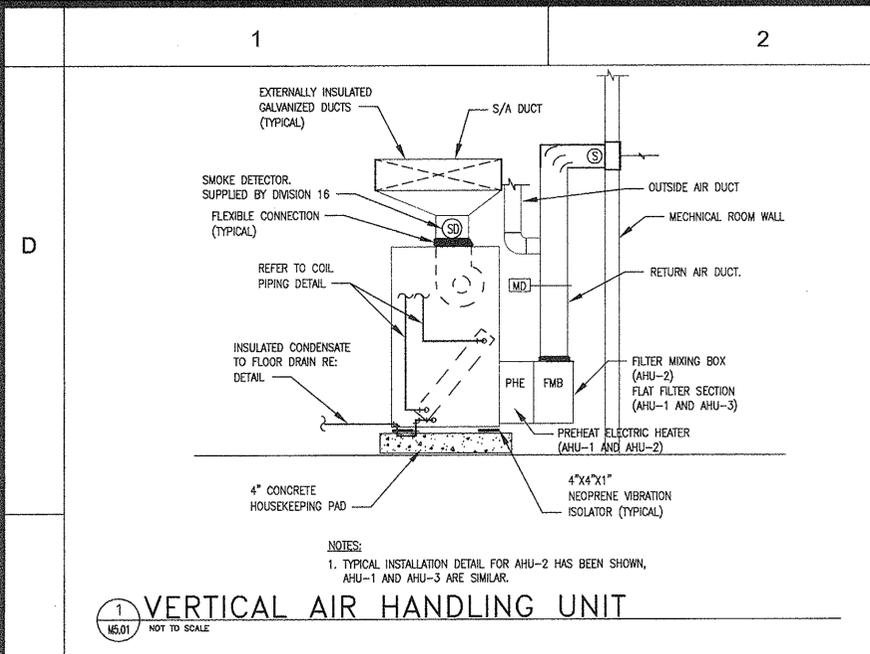
RdIR ARCHITECTS
 ARCHITECTURE | PLANNING | INTERIORS
 1245 West 18th Street Houston, Texas 77008
 phone 713.868.3121 www.rdir.com

DATE: 08/22/11
 WBS No: L-000054-0001-4
 SCALE: AS NOTED
 DRAWN BY: M.G.
 CHECKED BY: L.H.

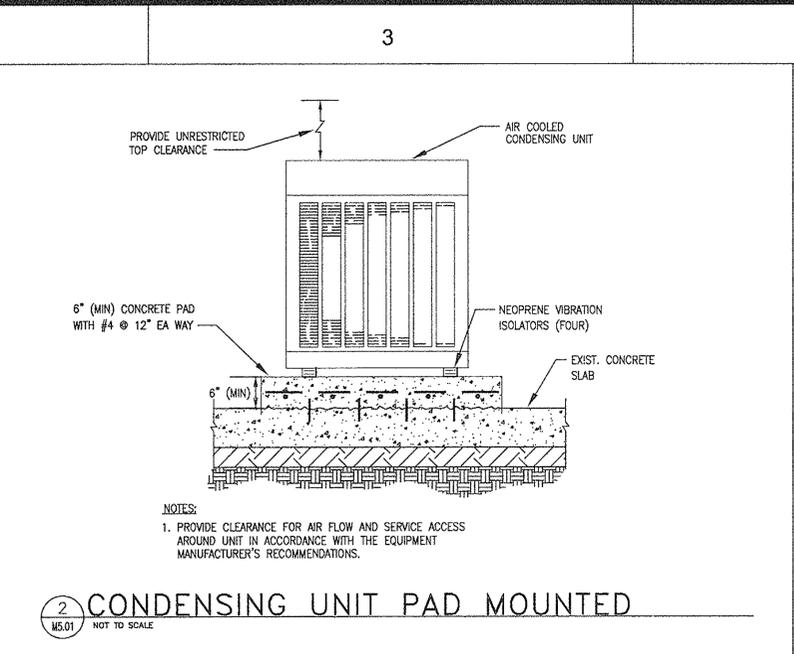
SHEET TITLE:
 MECHANICAL
 DETAILS

SHEET NO.:
M5.01
 47 OF 56 SHEETS

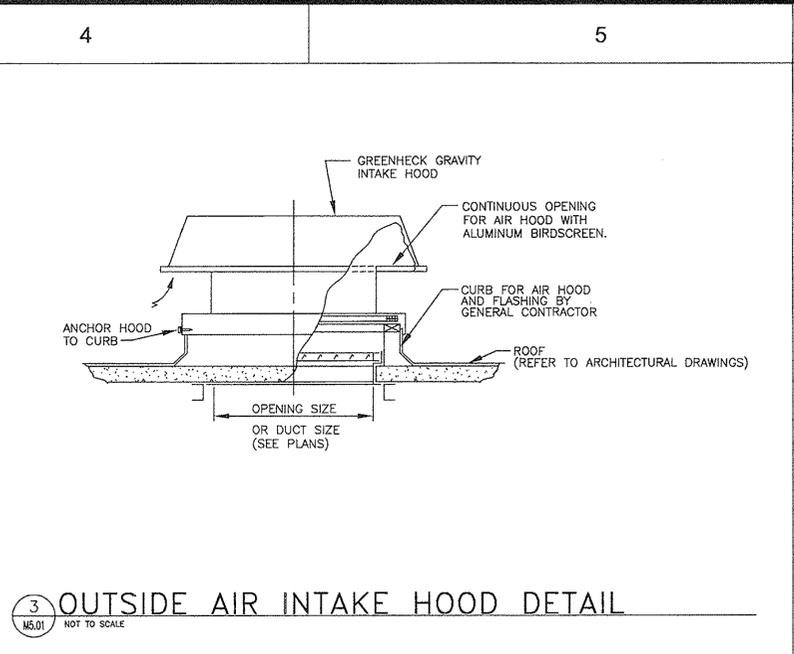
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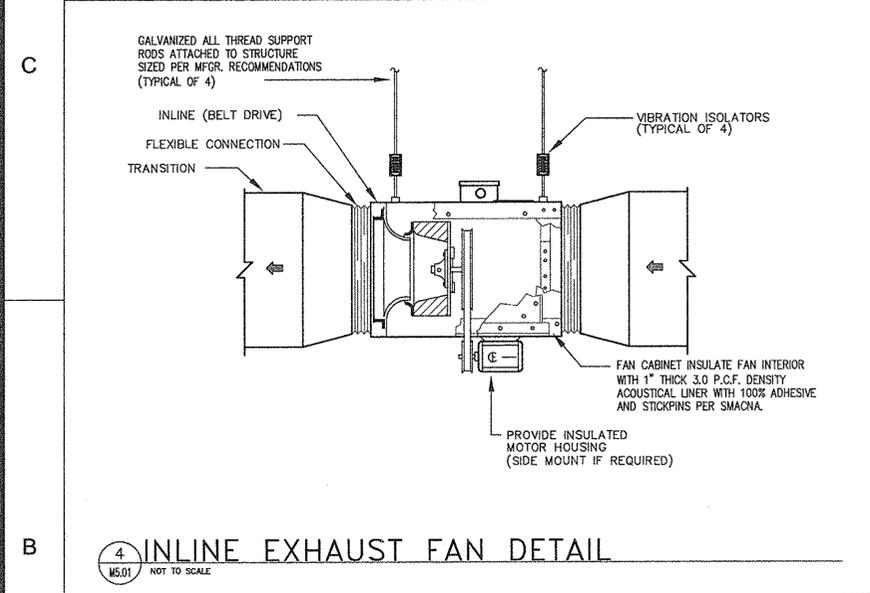
1 VERTICAL AIR HANDLING UNIT
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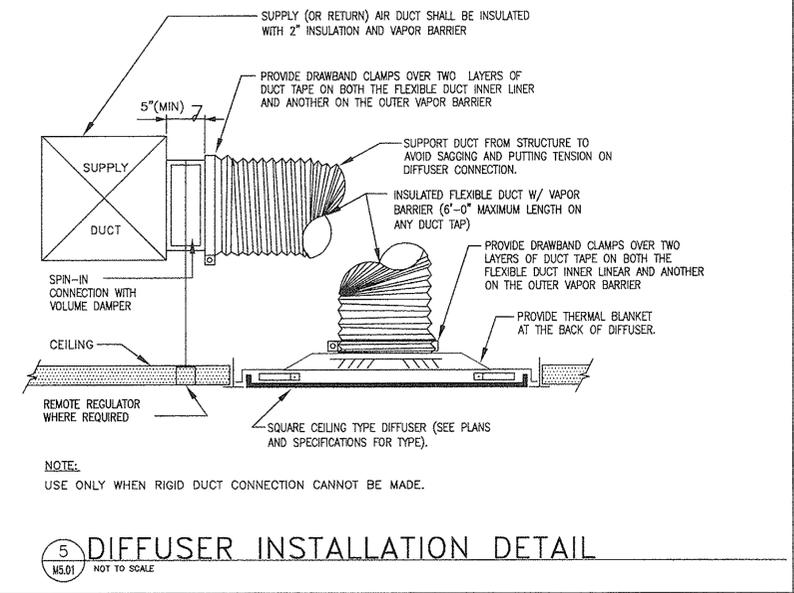
2 CONDENSING UNIT PAD MOUNTED
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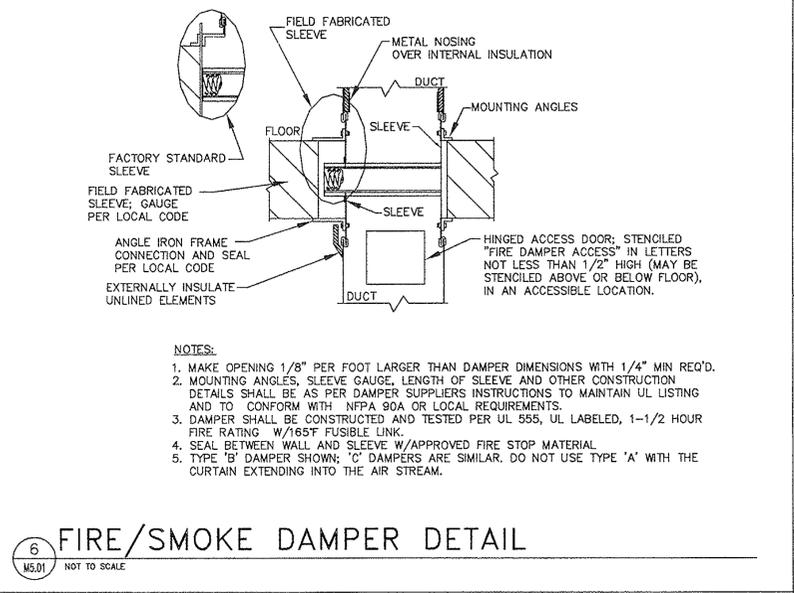
3 OUTSIDE AIR INTAKE HOOD DETAIL
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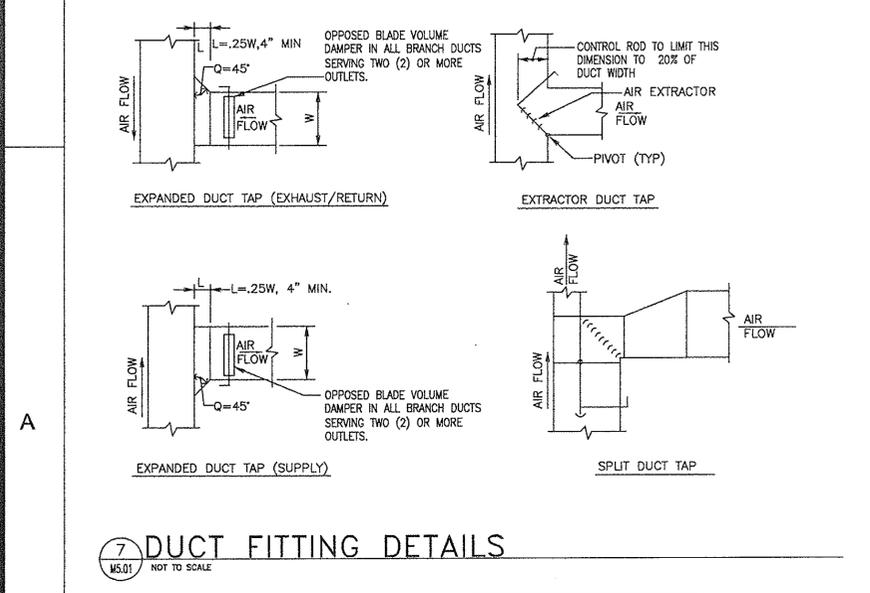
4 INLINE EXHAUST FAN DETAIL
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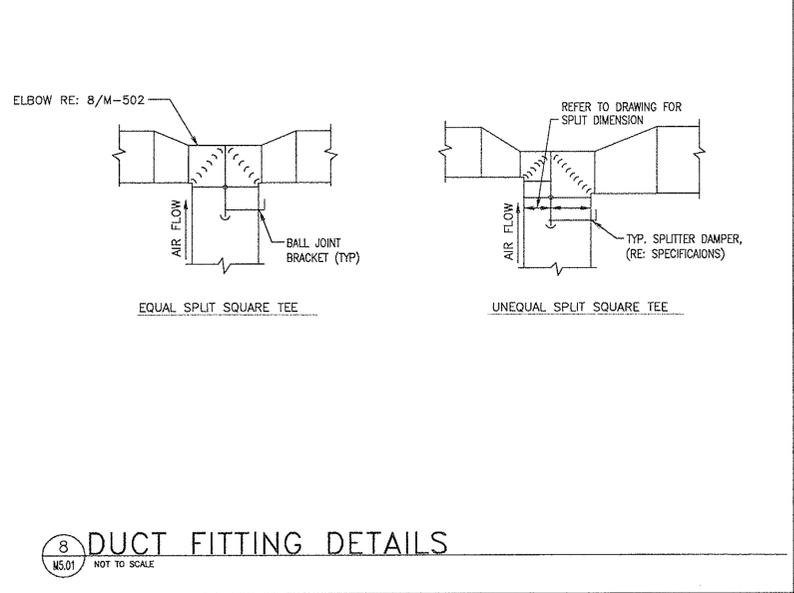
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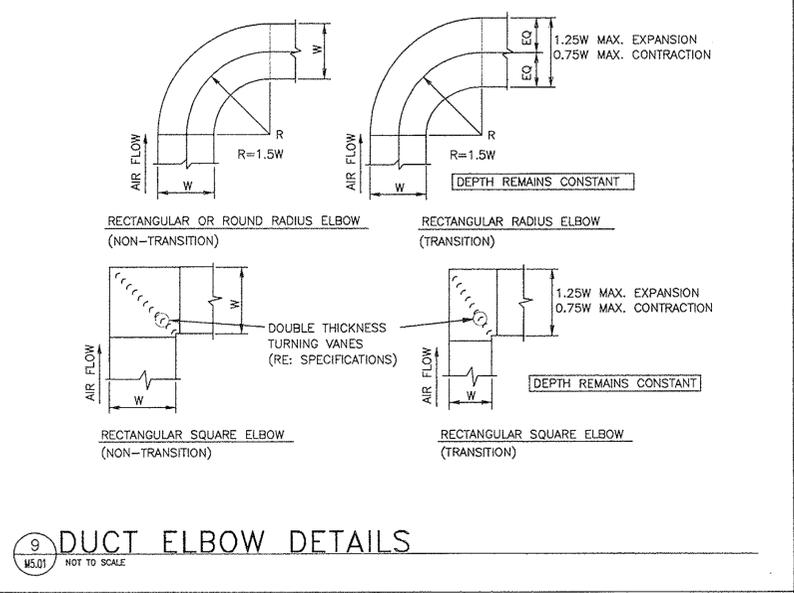
6 FIRE/SMOKE DAMPER DETAIL
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7 DUCT FITTING DETAILS
 M5.01 NOT TO SCALE

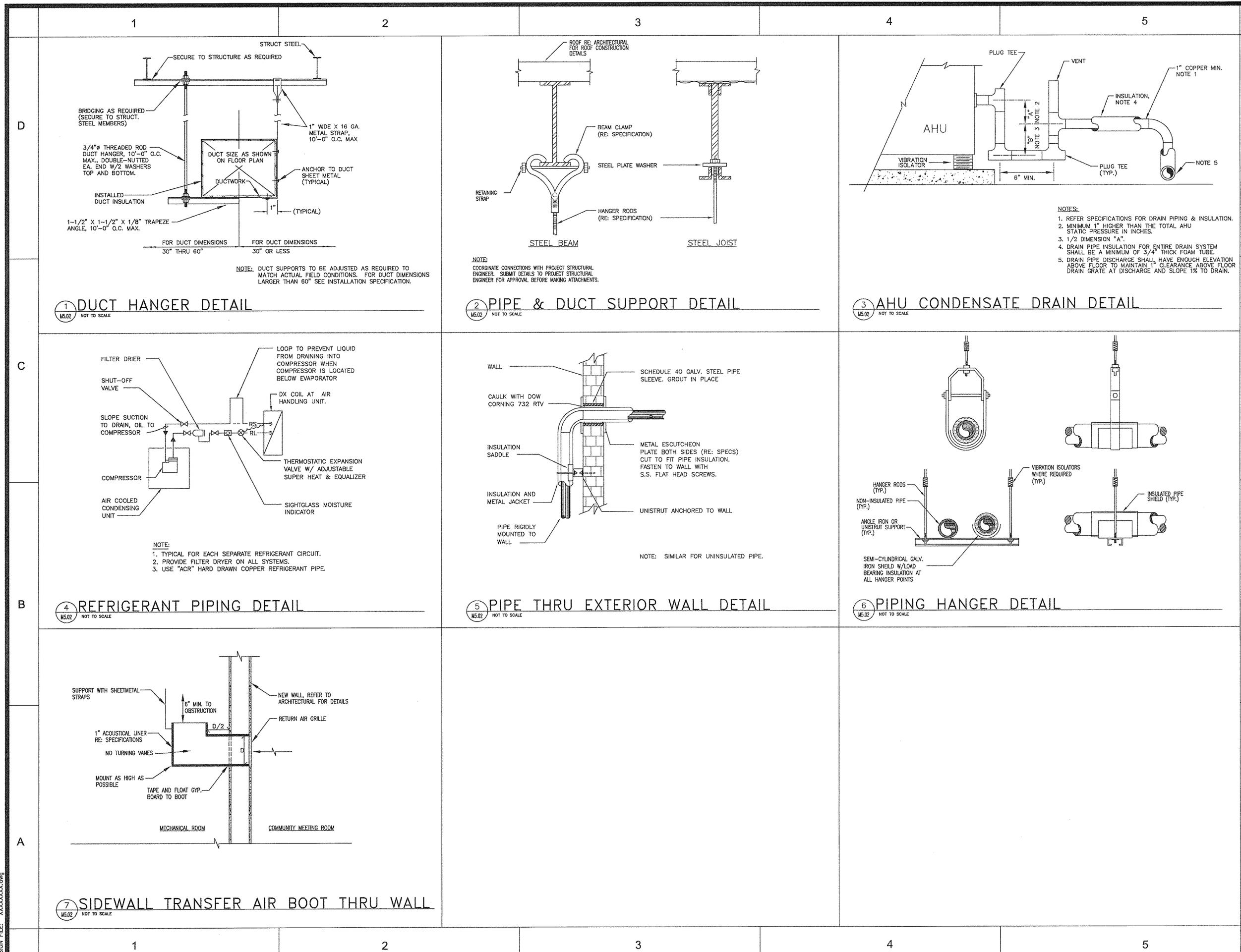


8 DUCT FITTING DETAILS
 M5.01 NOT TO SCALE



9 DUCT ELBOW DETAILS
 M5.01 NOT TO SCALE

DESIGN FILE: XXXXXXXX.dwg



ISSUE LOG		
NO.	DATE	DESCRIPTION
1	02/28/12	Issue for Bid & Construction
CONSULTANT(S):		
MEP ENGINEER HUNT & HUNT ENGINEERING CORP. P.O. BOX 771294 HOUSTON, TX 77215-1294 TEL: 713-780-9554 FAX: 713-780-9424 CIVIL ENGINEER WGA & ASSOCIATES 2500 TANGLEWILDE, SUITE 301 HOUSTON, TX 77063 TEL: 713-789-1900 STRUCTURAL ENGINEER SIGMA ENGINEERING SERVICES 8554 KATY FRWY, SUITE 340 HOUSTON, TX 77024 TEL: 713-461-8584 FAX: 713-465-7479		
SEAL(S):		
TBPE FIRM NO. F-3446 PROJECT NAME: CITY OF HOUSTON 9003 N. MAIN ADMINISTRATION BLDG RENOVATION		
CITY OF HOUSTON GENERAL SERVICES DEPARTMENT		
REVIEWED:		
PROGRAM MANAGER	SPONSORING DEPARTMENT	
PROJECT MANAGER		
RdIR ARCHITECTS ARCHITECTURE PLANNING INTERIORS 1245 West 18th Street Houston, Texas 77008 phone 713.868.3121 www.rdir.com		
DATE: _____		
WBS No.:	L-000054-0001-4	
SCALE:	AS NOTED	
DRAWN BY:	M.G.	
CHECKED BY:	L.H.	
SHEET TITLE:		
MECHANICAL DETAILS		
SHEET NO.:		
M5.02 48 OF 56 SHEETS		
CITY DWG. NO.:		

DESIGN FILE: XXXXXXXX.dwg

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AIR HANDLING UNIT SCHEDULE

GENERAL	AHU-1	AHU-2	AHU-3
TAG NO.	AHU-1	AHU-2	AHU-3
LOCATION SERVED	COMMUNITY ROOM	OFFICE AREA	PUBLIC/WORKSHOP
TYPE	VERTICAL DRAW THRU	VERTICAL DRAW THRU	VERTICAL DRAW THRU
VOLTAGE/PHASE/HZ	460/3/60	460/3/60	460/3/60
TOTAL AIR (CFM)	2,700	3,600	4,100
OUTSIDE AIR (CFM)	1,600	560	2,020
EXT. STATIC ("WG)	1.0	1.75	1.75
DRIVE TYPE	BELT	BELT	BELT
HORSEPOWER	2	5	5
TYPE	HIGH EFF / ODP	HIGH EFF / ODP	HIGH EFF / ODP
VOLTAGE/PHASE/HZ	460 / 3 / 60	460 / 3 / 60	460 / 3 / 60
MIN. ROWS/MAX. FINS/IN	6 / 8	6 / 14	6 / 8
FACE VELOCITY	341.8	455.7	429.8
EDB/EWB (°F) AIR	87.5 / 73.0	80 / 67	86.5 / 71.0
LDB/LWB (°F) AIR	51.48 / 50.89	51.92 / 51.53	53.79 / 52.69
MAX. AIR D.P. (IN. H2O)	0.43	0.82	0.61
SENSIBLE HEAT (BTUH)	106,340	110,530	146,640
TOTAL HEAT (BTUH)	191,390	167,230	238,710
HEATER RATING (KW)	35	39	-
MODEL NO.	PHE	PHE	-
NO. OF STAGES	6	6	-
MAX. AIR D.P. (IN. H2O)	0.05	0.12	-
VOLTAGE/PHASE/HZ	460 / 3 / 60	460 / 3 / 60	-
MANUFACTURER, MODEL NUMBER & APPROX. WEIGHT (LBS.)	CARRIER 39LD08 1000	CARRIER 39LD08 1200	CARRIER 39LD10 1,000
REMARKS:	1,4,5	2,4	3,4,5
NOTES:	1. AHU-1 SHALL INCLUDE A FLAT FILTER SECTION WITH FILTERS AND ELECTRIC PREHEAT SECTION WITH HEATER. 2. AHU-2 SHALL INCLUDE A FILTER MIXING BOX SECTION WITH FILTERS AND ELECTRIC PREHEAT SECTION WITH HEATER. 3. AHU-3 SHALL INCLUDE A FLAT FILTER SECTION WITH FILTERS. 4. CLEAN FILTER PRESSURE DROP SHALL NOT EXCEED 0.21" WG. 5. PROVIDE DOUBLE WALL PANEL CONSTRUCTION.		

OUTDOOR VENTILATION AIR CALCULATIONS

SPACE	AREA (SQ.FT.)	OUTDOOR VENTILATION AIR REQUIRED PER TABLE 4.1, 2006 UNIFORM MECHANICAL CODE (CFM/SQ.FT.)	OUTDOOR AIR (CFM)
OFFICE	1,500	0.08	120
COMMUNITY MEETING ROOM	1,100	0.20	220
LOBBY/GALLERY/CONF. ROOM	2,000	0.20	400
IT ROOM	100	0.25	25
WORKSHOP	450	0.25	113
COPY ROOM	60	0.20	12
CORRIDORS & UTILITIES	1,600	0.05	80
PUBLIC RESTROOMS	350	EXHAUST	700
LOCKER ROOMS	90	EXHAUST	200
TOTAL =			1,870

TOTAL CALCULATED: OUTDOOR VENTILATION AIR PER TABLE 4.1 OF 2006 UNIFORM MECHANICAL CODE = 1,870 CFM

ACTUAL: OUTDOOR VENTILATION AIR ALLOWED = 4,180 CFM

MECHANICAL LEGEND

SYMBOL	DESCRIPTION
Ⓣ	THERMOSTAT
Ⓜ	HUMIDISTAT
Ⓢ	SMOKE DETECTOR
Ⓢ	DUCT TEMPERATURE SENSOR
VD	VOLUME DAMPER
FSD	FIRE/SMOKE DAMPER
SA	SUPPLY AIR
RA	RETURN AIR
EA	EXHAUST AIR
MD	MOTORIZED DAMPER IN DUCT
ⓧ	ELBOW WITH TURNING VANES
ⓧ	SUPPLY
ⓧ	RETURN
ⓧ	EXHAUST REGISTER
ⓧ	FLEXIBLE DUCT CONNECTION TO RECTANGULAR DUCT WITH SPIN-IN CONNECTOR
EF	EXHAUST FAN
Ⓢ	ROOF EXHAUST FAN
OAI	OUTSIDE AIR INTAKE
CD	CONDENSATE DRAIN
RE: 1/MO.00	REFER TO DETAIL #1 ON DRAWING MO.00

AIR COOLED CONDENSING UNIT SCHEDULE

GENERAL	ACCU-1	ACCU-2	ACCU-3
LOCATION	OUTSIDE	OUTSIDE	OUTSIDE
UNIT SERVED	AHU-1	AHU-2	AHU-3
VOLTAGE/PHASE/HZ	480/3/60	480/3/60	480/3/60
AMBIENT TEMPERATURE	105 °F	105 °F	105 °F
CAPACITY (TONS)	20	15	25
EER/SEER	11	11.2	11
REFRIGERANT	R-410A	R-410A	R-410A
RLA / LRA	33.4 / 114	24.4 / 100	37.2 / 125
MANUFACTURER & MODEL NUMBER	CARRIER 38AUD025(D)	CARRIER 38AUD016(D)	CARRIER 38AP025(D)
NOTES:	1. FIELD ROUTE REFRIGERANT PIPING TO ALL ACCU UNITS. 2. SIZE PIPING ACCORDING TO MANUFACTURER'S RECOMMENDATIONS. 3. PROVIDE POWERED RECEPTACLE.		

AIR DEVICE SCHEDULE

MARK	DESCRIPTION	MATERIAL	MAX. NC LEVEL	MANUFACTURER/ MODEL NO.	REMARKS
A	ROUND SUPPLY DUCT	ALUMINUM	30	TITUS/TMRA- AA	FOR INSTALLATION ON GYP BOARD, VOLUME CONTROL DAMPER. NOMINAL NECK SIZE AND AIR FLOW AS SHOWN ON PLANS.
B	24"x24" R.A. REGISTER	ALUMINUM	30	TITUS/PAR AA	SAME AS "D" EXCEPT FOR GYP BOARD CEILING.
C	24"x24" S.A. DIFFUSER	ALUMINUM	30	TITUS/PSS AA	FRAME FOR LAY-IN CEILING, VOLUME CONTROL DAMPER. AIR FLOW AS SHOWN ON PLANS.
D	24"x24" R.A., E.A. DIFFUSER	ALUMINUM	30	TITUS/PAR AA	FRAME FOR LAY-IN CEILING, VOLUME CONTROL DAMPER. AIR FLOW AS SHOWN ON PLANS.
E	24"x24" S.A. DIFFUSER	ALUMINUM	30	TITUS/PSS AA	SAME AS "C" EXCEPT FOR GYP BOARD CEILING.
F	DOUBLE DEFLECTION GRILLE WITH RADIUS ENDCAPS	ALUMINUM	30	KRUGER/DMG SERIES	DUCT MOUNTED GRILLE WITH VOLUME DAMPER, HORIZONTAL & VERTICAL EXTRACTORS. AIR FLOW AS SHOWN ON THE PLANS.
G	RETURN GRILLE	ALUMINUM	30	TITUS/350FL	3/4" BLADE SPACING, FIXED DEFLECTION AND VOLUME DAMPER, AIR FLOW AND SIZE AS SHOWN ON PLANS. PROVIDE FIRE DAMPER IF LOCATED IN FIRE RATED WALL.
H	SUPPLY REGISTER	ALUMINUM	30	TITUS/300FS	3/4" BLADE SPACING, DOUBLE DEFLECTION AND VOLUME DAMPER, AIR FLOW AND AS SHOWN ON PLANS.
I	12"x12" RETURN AIR/ EXHAUST REGISTER	ALUMINUM	30	TITUS/PAR AA	SAME AS "B" EXCEPT, SIZE IS 12"x12".
J	2 SLOT, 36" LINEAR DIFFUSER	ALUMINUM	30	TITUS/ML-39 WITH MPI-39	SURFACE MOUNTED, 1" SLOT, ADJUSTABLE LINEAR DIFFUSER, 1 1/8" BORDER WITH INSULATED BOOT PLENUM.

FAN SCHEDULE

MARK	SERVICE	TYPE	CFM	SP WG	HP OR (WATTS)/ V/PH/HZ	MANUFACTURER/ MODEL	REMARKS
EF-1	RESTROOMS, JANITOR CLOSET AND LOCKERS	CENTRIFUGAL INLINE	900	0.5"	1/3 HP 115V/1/60	GREENHECK/BSQ-120-4	1. PROVIDE BACKDRAFT DAMPER, MOTOR COVER/BELT GAURD, NEOPRENE HANGING ISOLATORS, AND DISCONNECT SWITCH. 2. INTERLOCK EF-1 WITH AHU-3 SO THAT WHEN AHU-3 IS ON EF-1 IS ON.

SEQUENCE OF OPERATION-O.A. INTAKE DAMPERS (AHU-1, 2 & 3):

- OUTSIDE AIR INTAKE DAMPERS ARE 2-POSITION (ON-OFF) FOR AHU-2, AND MOTORIZED MODULATING DAMPERS FOR AHU-1 AND AHU-3.
- WHEN EACH AIR HANDLING UNIT IS OFF, THE CORRESPONDING OUTSIDE AIR INTAKE DAMPER SHOULD BE IN THE CLOSED POSITION.
- WHEN AHU-2 IS ON, THE CORRESPONDING OUTSIDE AIR INTAKE DAMPER SHOULD BE IN THE FULLY OPEN POSITION. MINIMUM OUTSIDE AIR SETTING SHALL BE 200 CFM.
- FOR AHU-1 AND AHU-3: DURING OPERATION, IF THE CO₂ CONCENTRATION, AS SENSED BY THE CORRESPONDING CO₂ SENSOR, LOCATED IN THE SPACE, RISES ABOVE THE SET POINT, THE CORRESPONDING OUTSIDE AIR INTAKE DAMPER OPENS TO MAINTAIN THE CO₂ CONCENTRATION. CONVERSELY IF THE ROOM CO₂ LEVEL FALLS BELOW THE SET POINT, THE CORRESPONDING OUTSIDE AIR INTAKE DAMPER CLOSES TO MAINTAIN CO₂ CONCENTRATIONS. MINIMUM OUTSIDE AIR SETTINGS FOR AHU-1 AND AHU-3 SHALL BE 300 CFM AND 1,000 CFM RESPECTIVELY.

TEMPERATURE CONTROL:

- COOLING MODE (THERMOSTAT SET TO COOL): WHEN TEMPERATURE IN THE SPACE, AS SENSED BY THE ROOM THERMOSTAT, IS ABOVE THE ADJUSTABLE SET POINT THE CORRESPONDING AIR HANDLING UNIT SHOULD START. THE UNIT SHOULD CONTINUE TO OPERATE TO COOL THE SPACE AND MAINTAIN SET POINT.
- HEATING MODE (THERMOSTAT SET TO HEAT): WHEN TEMPERATURE IN THE SPACE, AS SENSED BY THE ROOM THERMOSTAT, IS BELOW THE ADJUSTABLE SET POINT, THE CORRESPONDING ELECTRIC HEATER SHOULD START. THE HEATER SHOULD CONTINUE TO OPERATE, IN STAGES, TO HEAT THE SPACE AND MAINTAIN SET POINT.

DUCT HEATER SCHEDULE

GENERAL	DH-1
UNIT SERVED	AHU-3
LOCATION SERVED	ROOMS 100 THRU 108
TYPE	ELECTRIC
DUCT SIZE (INCHES)	38"W X 28"H
AIRFLOW (CFM)	3700
TEMP. RISE	45°F
HEATER RATING (KW)	54
VOLTAGE/PHASE/HZ	460/3/60
NO. OF STAGES	1
MANUFACTURER & MODEL NUMBER	INDEECO MODEL TFXU, FINNED TUBULAR
REMARKS:	FURNISH HEATER WITH INSULATED BOTTOM MOUNT TERMINAL BOX, FUSES, STAINLESS STEEL ELEMENTS, DISCONNECT SWITCH AND SCR CONTROLS. CONTROLS SHALL INCLUDE THERMAL CUTOUTS, AIRFLOW SWITCH, CONTROL TRANSFORMER, CONTACTORS, AND SCR CONTROLLER.

ISSUE LOG

NO.	DATE	DESCRIPTION
1	02/28/12	Issue for Bid & Construction

CONSULTANT(S):

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TBPE FIRM NO. F-3446

PROJECT NAME:
CITY OF HOUSTON
9003 N. MAIN ADMINISTRATION
BLDG RENOVATION



CITY OF HOUSTON
GENERAL SERVICES
DEPARTMENT

REVIEWED:

PROGRAM MANAGER _____ SPONSORING DEPARTMENT _____

PROJECT MANAGER _____

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DATE: 07/16/10
WBS No: L-000054-0001-4
SCALE: NONE
DRAWN BY: M.G.
CHECKED BY: V.S.

SHEET TITLE:
MECHANICAL
SCHEDULES & LEGEND

SHEET NO.:
M6.01
49 OF 56 SHEETS

CITY DWG. NO.:

DESIGN FILE: XXXXXX.dwg

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ELECTRICAL LEGEND			
SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
	FLUORESCENT LIGHT FIXTURE. SUBSCRIPT DENOTES FIXTURE TYPE.		CONDUIT ROUTED CONCEALED.
	FLUORESCENT LIGHT FIXTURE. SUBSCRIPT DENOTES FIXTURE TYPE.		CONDUIT ROUTED EXPOSED.
	INCANDESCENT LIGHT FIXTURE. ALPHA SUBSCRIPT DENOTES FIXTURE TYPE. NUMERIC SUBSCRIPT DENOTES CIRCUIT NUMBER.		CONDUIT ROUTED UNDERGROUND.
	EXIT LIGHT FIXTURE. ALPHA SUBSCRIPT DENOTES FIXTURE TYPE. PROVIDE DIRECTION ARROWS AS SHOWN ON THE DRAWINGS.		CONDUIT ROUTED IN CONCEALED IN CONCRETE.
	SINGLE POLE SWITCH WITH STAINLESS STEEL COVER PLATE.		HOMERUN TO PANEL. SUBSCRIPT DENOTES PANEL AND CIRCUIT NUMBER. SHORT HASH MARK INDICATES HOT WIRE OR SWITCHLEG, LONG HASH MARK INDICATES NEUTRAL, CURVED HASH MARK INDICATES GROUND WIRE.
	THREE-WAY SWITCH WITH STAINLESS STEEL COVER PLATE.		PARTIAL HOMERUN.
	DIMMER SWITCH RATED 1000 WATTS MINIMUM WHEN MOUNTED IN GANG CONFIGURATION SHOWN ON DRAWINGS WITH STAINLESS STEEL COVER PLATE.		DISTRIBUTION PANEL.
	SINGLE POLE SWITCH WITH WEATHERPROOF ENCLOSURE AND STAINLESS STEEL COVER PLATE.		LIGHTING & RECEPTACLE PANELBOARD.
	THREE-WAY SWITCH WITH WEATHERPROOF ENCLOSURE.		TRANSFORMER.
	WALL MOUNTED LEVITON NO. ODS15-IDW OCCUPANCY SENSOR WITH S.S. COVER, UNLESS NOTED OTHERWISE. MOUNTED 48" AFF TO CENTER OF OUTLET BOX.		GROUND.
	FRACTIONAL HORSEPOWER MANUAL MOTOR STARTER, PROVIDED WITH PROPERLY RATED THERMAL ELEMENT.		EXISTING.
	SAME AS ABOVE WITH WEATHERPROOF ENCLOSURE.		NEW.
	WALL MOUNTED MOTION DETECTOR SWITCH.		RELOCATED.
	CEILING MOUNTED LEVITON NO. ODC20-MOW OCCUPANCY SENSOR, UNLESS NOTED OTHERWISE.		FUTURE.
	POWER PACK MOUNTED ABOVE CEILING ON J-BOX FOR POWER TO CEILING SENSORS. LEVITON NO. ODP20-070 UNLESS NOTED OTHERWISE.		GROUND FAULT CIRCUIT INTERRUPTING.
	DUPLEX RECEPTACLE MOUNTED 18" ABOVE FINISH FLOOR UNLESS NOTED OTHERWISE. SUBSCRIPT DENOTES CIRCUIT NUMBER.		WEATHERPROOF.
	DUPLEX RECEPTACLE, SAME AS ABOVE, MOUNTED HORIZONTALLY 6" ABOVE COUNTER BACKSPASH.		VARIABLE FREQUENCY DRIVE.
	DUAL GANG RECEPTACLE (QUADPLEX), SAME AS ABOVE. PROVIDE SINGLE FACEPLATE.		TRANSFORMER.
	DUPLEX RECEPTACLE, SAME AS ABOVE, WITH WEATHERPROOF ENCLOSURE, EQUAL TO TAYMAC #10150.		ABOVE FINISH FLOOR (REFERS TO CENTER OF DEVICE).
	DUPLEX RECEPTACLE, SAME AS ABOVE, GROUND FAULT CIRCUIT INTERRUPTING.		INDICATES MOUNTING HEIGHT WHEN OTHER THAN STANDARD.
	DUPLEX RECEPTACLE MOUNTED 18" ABOVE FINISH FLOOR, UNLESS NOTED OTHERWISE, ON DEDICATED CIRCUIT, NEMA-5-20R.		GROUND.
	SINGLE RECEPTACLE MOUNTED 18" ABOVE FINISH FLOOR, UNLESS NOTED OTHERWISE, ON DEDICATED CIRCUIT.		CONDUIT.
	SPECIAL RECEPTACLE AS NOTED ON FLOOR PLANS.		NOT FUSED.
	COMMUNICATIONS WALL OUTLET, MOUNTED 54" A.F.F. CONDUIT WITH PULL WIRE TO ABOVE CEILING.		FULL LOAD AMPS.
	COMMUNICATIONS OUTLET, CONDUIT WITH PULL WIRE TO ABOVE CEILING.		FLOW SWITCH (PLUMBING).
	DATA OUTLET, SAME AS ABOVE.		TAMPER SWITCH (PLUMBING).
	COMBINATION DATA/COMMUNICATIONS OUTLET, SAME AS ABOVE.		CEILING.
	FLOOR MOUNTED COMMUNICATIONS, DATA OR COMBINATION OUTLET.		FLOOR MOUNTED JUNCTION BOX.
	JUNCTION BOX.		FLOOR MOUNTED QUADRUPLE RECEPTACLE.
	DISCONNECT SWITCH.		EMERGENCY LIGHT ON GENERATOR.
	MOLDED CASE CIRCUIT BREAKER.		EMERGENCY LIGHT WITH BATTERY BACK-UP.
	DISCONNECT SWITCH.		LIGHTING CONTACTOR.
	MAGNETIC MOTOR STARTER.		IRRIGATION CONTROLLER.
	COMBINATION MAGNETIC MOTOR STARTER AND DISCONNECT SWITCH.		DOOR LOCK POWER SUPPLY.
	MOTOR.		LIGHTING CONTROL PANEL.
	CURRENT TRANSFORMER-NUMBER AND RATIO AS INDICATED.		DIMMING CONTROL MODULE.

NOTE: ALL SYMBOLS MAY NOT BE USED.

LIGHTING FIXTURE SCHEDULE							
TYPE	MANUFACTURER AND CATALOG NUMBER	DESCRIPTION	VOLTAGE	LAMPS	MOUNTING	REMARKS	
A	LIGHTOLIER H9S2QLR232277HI	2'x4' HP90 RECESSED DIRECT/INDIRECT FLUORESCENT LIGHT FIXTURE WITH (2) 32-WATT T8 LAMPS, ACRYLIC LINEAR PRISMATIC LENS AND INSTANT START ELECTRONIC BALLAST.	277	2-32W T8	RECESSED	UL LISTED	
B	LIGHTOLIER KW4S232UNVHI-AWC4W CSP- AH5 CSP	4' LONG INDUSTRIAL FLUORESCENT LIGHT FIXTURE WITH (2) 32-WATT T8 LAMPS, WIRE GUARD, CHAIN HANGING KIT AND INSTANT START BALLAST.	277	2-32W T8	CHAIN	UL LISTED	
BE	LIGHTOLIER KW4S232UNVHI-AWC4W CSP- AH5 CSP-EM	4' LONG INDUSTRIAL FLUORESCENT LIGHT FIXTURE WITH (2) 32-WATT T8 LAMPS, WIRE GUARD, CHAIN HANGING KIT, INSTANT START BALLAST AND EMERGENCY BATTERY PACK.	277	2-32W T8	CHAIN	UL LISTED	
C	LITECONTROL P-ID-7734T8-BW-CWM-ELB10-1CWQ-277	4' LONG PENDANT DIRECT/INDIRECT LIGHT FIXTURE WITH (3) 32-WATT T8 LAMPS, STEEL HOUSING, 4' LONG STEEL BAFFLE AND ELECTRONIC BALLAST WITH LESS THAN 10% THD.	277	3-32W T8	PENDANT	UL LISTED	
CE	LITECONTROL P-ID-7734T8-BW-CWM-ELB10-1CWQ-277-EF	4' LONG PENDANT DIRECT/INDIRECT LIGHT FIXTURE WITH (3) 32-WATT T8 LAMPS, STEEL HOUSING, 4' LONG STEEL BAFFLE, ELECTRONIC BALLAST WITH LESS THAN 10% THD AND EMERGENCY BATTERY PACK.	277	3-32W T8	PENDANT	UL LISTED	
C1	LITECONTROL P-ID-7734T8-BW-CWM-LPD/ELB-1CWQ-277	4' LONG PENDANT DIRECT/INDIRECT LIGHT FIXTURE WITH (3) 32-WATT T8 LAMPS, STEEL HOUSING, 4' LONG STEEL BAFFLE AND ELECTRONIC DIMMING BALLAST WITH LESS THAN 10% THD.	277	3-32W T8	PENDANT	UL LISTED	
C1E	LITECONTROL P-ID-7734T8-BW-CWM-LPD/ELB-1CWQ-277	4' LONG PENDANT DIRECT/INDIRECT LIGHT FIXTURE WITH (3) 32-WATT T8 LAMPS, STEEL HOUSING, 4' LONG STEEL BAFFLE, ELECTRONIC DIMMING BALLAST WITH LESS THAN 10% THD AND EMERGENCY BATTERY PACK.	277	3-32W T8	PENDANT	UL LISTED	
C2	LITECONTROL P-ID-7734T8-BW-CWM-ELB10-1CWQ-277	4' LONG PENDANT DIRECT/INDIRECT LIGHT FIXTURE WITH (2) 32-WATT T8 LAMPS, STEEL HOUSING, 4' LONG STEEL BAFFLE AND ELECTRONIC BALLAST WITH LESS THAN 10% THD.	277	2-32W T8	PENDANT	UL LISTED	
D	LITECONTROL 2014T8-CWM-ELB10-120	4' LONG STEEL RECESSED PERIMETER LIGHT FIXTURE WITH (1) 32-WATT T8 LAMP, DIE-FORMED AND WELDED STEEL HOUSING AND ELECTRONIC BALLAST WITH LESS THAN 10% THD.	277	1-32W T8	RECESSED	UL LISTED	
D2	LITECONTROL 2012T8-CWM-ELB10-120	2' LONG STEEL RECESSED PERIMETER LIGHT FIXTURE WITH (1) 32-WATT T8 LAMP, DIE-FORMED AND WELDED STEEL HOUSING AND ELECTRONIC BALLAST WITH LESS THAN 10% THD.	277	1-32W T8	RECESSED	UL LISTED	
E	LIGHTOLIER 8021 CCLW S6132BU	RECESSED COMPACT FLUORESCENT DOWNLIGHT WITH 6" APERTURE, (1) 32-WATT TRIPLE TUBE LAMP, LOW IRIDESCENCE FINISH AND ELECTRONIC BALLAST.	277	1-32W TRT	RECESSED	UL LISTED	
F	LIGHTOLIER TCF132WUMH1 BPR	48" UNDER SHELF FLUORESCENT LUMINAIRE WITH (1) 32-WATT T8 LAMP, ACRYLIC LINEAR PRISMATIC LENS AND INSTANT START ELECTRONIC BALLAST.	120	1-32W T8	SURFACE	UL LISTED	
EE	LIGHTOLIER 8021 CCLW S6132BU EM	RECESSED COMPACT FLUORESCENT DOWNLIGHT WITH 6" APERTURE, (1) 32-WATT TRIPLE TUBE LAMP, LOW IRIDESCENCE FINISH, ELECTRONIC BALLAST AND EMERGENCY BATTERY PACK.	277	1-32W TRT	RECESSED	UL LISTED	
WE	LITHONIA WST 421RT MD 277 SF ELDW DDBT	ARCHITECTURAL BUILDING MOUNTED TRAPEZOIDAL WALL PACK WITH COMPACT FLUORESCENT LAMP, EMERGENCY BATTERY PACK, FUSE, ELECTRONIC BALLAST WITH LESS THAN 10% THD AND DARK BRONZE TEXTURED FINISH.	277	1-42W TRT	WALL MOUNT	UL LISTED	
X	LITHONIA LRP 1RC LRA 120/277 EL N	EDGE-LIT SINGLE FACE EXIT SIGN WITH BRUSHED ALUMINUM HOUSING, CLEAR BACKGROUND WITH RED LETTERS ON MIRROR AND NI-CAD BATTERY. PROVIDE DIRECTIONAL INDICATORS AS SHOWN ON DRAWING.	277	RED LED	WALL MOUNT	UL LISTED	
X1	LITHONIA LRP 2RC LRA 120/277 EL N	EDGE-LIT DOUBLE FACE EXIT SIGN WITH BRUSHED ALUMINUM HOUSING, CLEAR BACKGROUND WITH RED LETTERS ON MIRROR AND NI-CAD BATTERY. PROVIDE DIRECTIONAL INDICATORS AS SHOWN ON DRAWING.	277	RED LED	WALL MOUNT	UL LISTED	

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NO.	DATE	DESCRIPTION
1	02/28/12	Issue for Bld & Construction

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SEAL(S):

 TBPE FIRM NO. F-3446

PROJECT NAME:
 CITY OF HOUSTON
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 BLDG RENOVATION

CITY OF HOUSTON
 GENERAL SERVICES
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DATE: 07/16/10
 WBS No: L-000054-0001-4
 SCALE: NONE
 DRAWN BY: M.G.
 CHECKED BY: R.T.

SHEET TITLE:
 ELECTRICAL
 LEGEND & FIXTURE SCHEDULE

SHEET NO.:
E0.01
 50 OF 56 SHEETS

CITY DWG. NO.:

1

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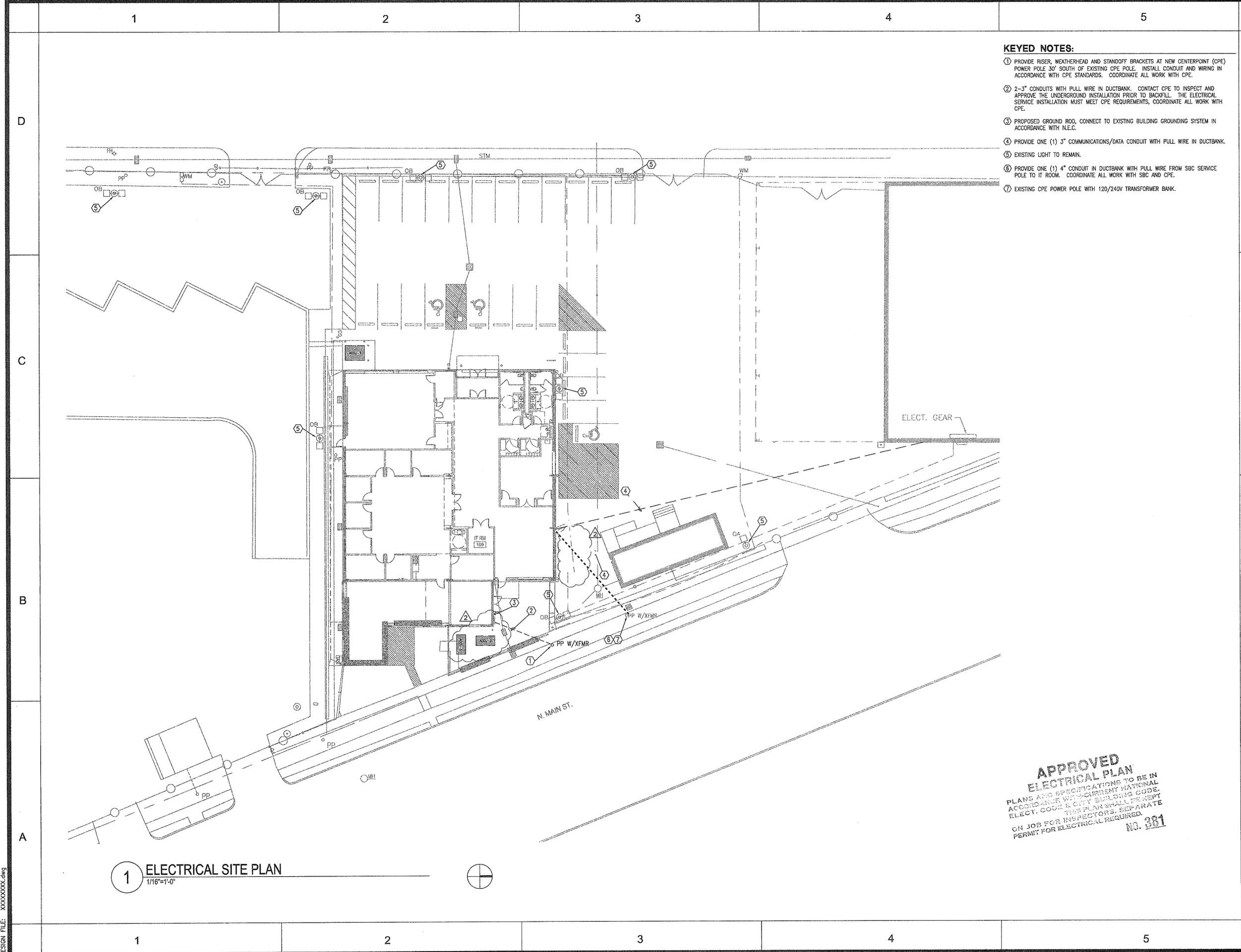
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CAD FILE:



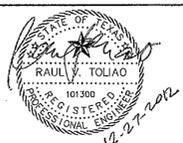
- KEYED NOTES:**
- ① PROVIDE RISER, WEATHERHEAD AND STANDOFF BRACKETS AT NEW CENTERPOINT (CPE) POWER POLE 30' SOUTH OF EXISTING CPE POLE. INSTALL CONDUIT AND WIRING IN ACCORDANCE WITH CPE STANDARDS. COORDINATE ALL WORK WITH CPE.
 - ② 2-3" CONDUITS WITH PULL WIRE IN DUCTBANK. CONTACT CPE TO INSPECT AND APPROVE THE UNDERGROUND INSTALLATION PRIOR TO BACKFILL. THE ELECTRICAL SERVICE INSTALLATION MUST MEET CPE REQUIREMENTS, COORDINATE ALL WORK WITH CPE.
 - ③ PROPOSED GROUND ROD, CONNECT TO EXISTING BUILDING GROUNDING SYSTEM IN ACCORDANCE WITH N.E.C.
 - ④ PROVIDE ONE (1) 3" COMMUNICATIONS/DATA CONDUIT WITH PULL WIRE IN DUCTBANK.
 - ⑤ EXISTING LIGHT TO REMAIN.
 - ⑥ PROVIDE ONE (1) 4" CONDUIT IN DUCTBANK WITH PULL WIRE FROM SBC SERVICE POLE TO IT ROOM. COORDINATE ALL WORK WITH SBC AND CPE.
 - ⑦ EXISTING CPE POWER POLE WITH 120/240V TRANSFORMER BANK.

1 ELECTRICAL SITE PLAN
1/16"=1'-0"

**APPROVED
ELECTRICAL PLAN**
PLANS AND SPECIFICATIONS TO BE IN ACCORDANCE WITH CURRENT NATIONAL ELECT. CODE & CITY BUILDING CODE. THIS PLAN SHALL BE SEPT ON JOB FOR INSPECTORS. SEPARATE PERMIT FOR ELECTRICAL REQUIRED.
NO. 381

ISSUE LOG		
NO.	DATE	DESCRIPTION
1	02/28/12	Issue for Bld & Construction
2	01/07/13	Permit Modifications

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CITY OF HOUSTON
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DATE: 03/14/11
 WBS No: L-000054-0001-4
 SCALE: 1/16"=1'-0"
 DRAWN BY: M.G.
 CHECKED BY: R.T.

SHEET TITLE:
 ELECTRICAL
 SITE PLAN

SHEET NO.:
E1.00
 51 OF 56 SHEETS

CITY DWG. NO.:

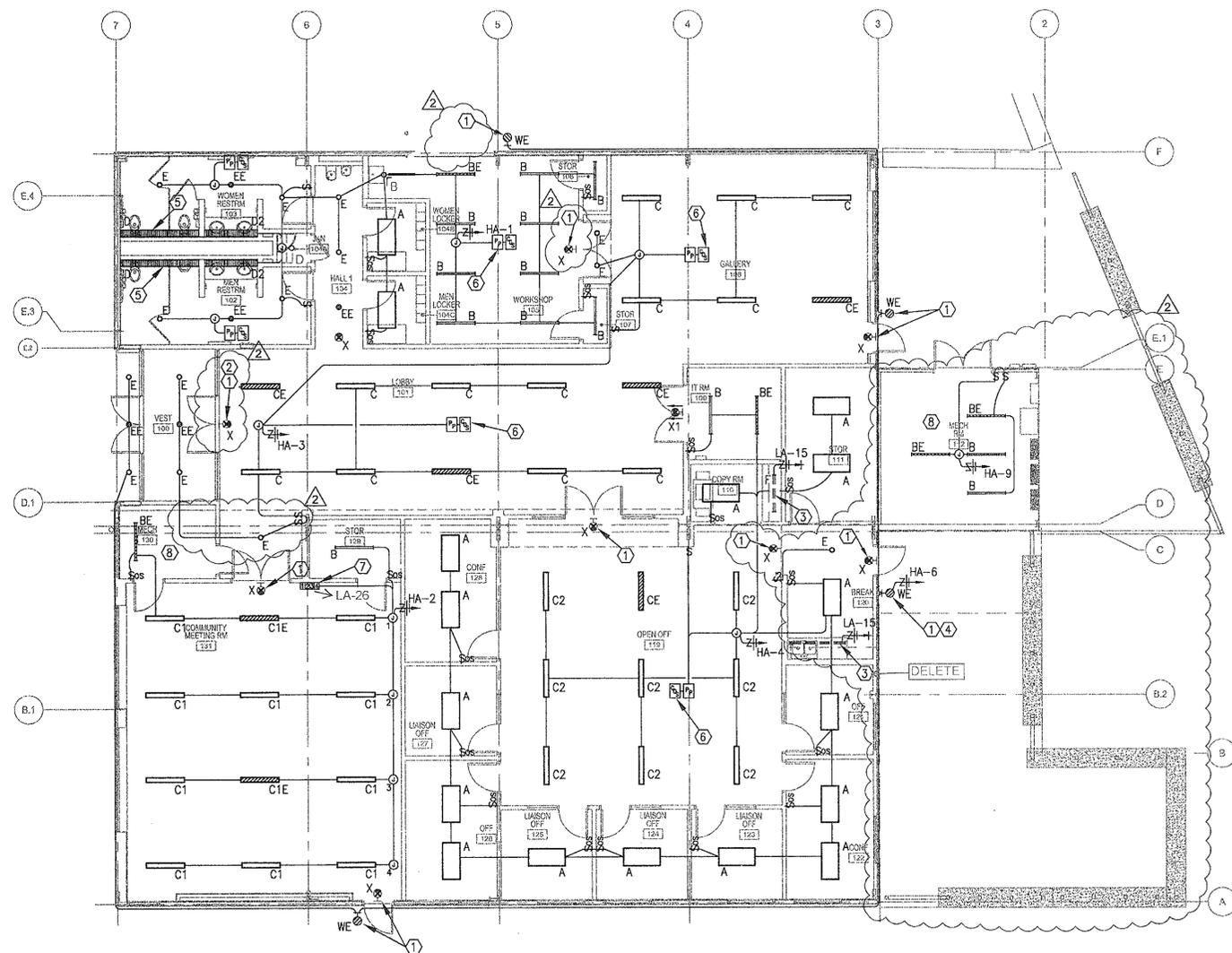
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1 ELECTRICAL LIGHTING PLAN
1/8"=1'-0"

GENERAL NOTES:

1. ALL EXIT SIGNS AND NIGHT LIGHTS SHALL BE CONNECTED TO BRANCH CIRCUIT HA-7 (3-#12, 3/4") IN PANEL HA.
2. ALL EXIT SIGNS SHALL BE TYPE "X" OR "X1" UNLESS OTHERWISE NOTED.
3. ALL LIGHT FIXTURES WITH BATTERY PACK SHALL HAVE "LPCD" SWITCH TO AUTOMATICALLY TRANSFER FIXTURE TO BATTERY PACK UPON LOSS OF CIRCUIT VOLTAGE.

KEYED NOTES:

- 1 WALL MOUNTED FIXTURE 12" ABOVE TOP OF DOOR OR AT ELEVATION DIRECTED BY ARCHITECT.
- 2 ROUTE BRANCH CIRCUIT CONNECTION TO EXIT SIGN THROUGH GLASS MULLION UP TO ADJACENT CEILING PLENUM.
- 3 PROVIDE UNDERCABINET LIGHT, 120 VOLTS. COORDINATE EXACT LOCATION WITH ARCHITECT.
- 4 CONTROL OUTDOOR LIGHTING BRANCH CIRCUIT VIA 24/7 TIME SWITCH, INTERMATIC MODEL ET70115C OR EQUAL, AND PHOTO-SENSOR OUTDOORS ON ROOF ORIENTED NORTH, INTERMATIC MODEL V45471CR OR EQUAL. INSTALL TIME SWITCH IN MECHANICAL ROOM. COORDINATE LOCATION WITH OTHER TRADES.
- 5 PROVIDE QUANTITY OF FIXTURES TYPE "D" AND "D2" TO EQUAL LENGTH AS SHOWN ON REFLECTED CEILING PLAN.
- 6 LOCATE OCCUPANCY-SENSOR TO BOTTOM OF EXPOSED STRUCTURAL STEEL WITH WIRING ROUTED OUT OF SIGHT TO BUILDING USER.
- 7 LEVITON D3204-11LW MULTIZONE CONTROLLER/DIMMER. SELF CONTAINED DIMMER WITH FOUR (4) LOCAL ZONES AND LEARNING IR RECEIVER MOUNTED AT 44" AFF. 1,2,3,4 INDICATE ZONE CONTROL SWITCHING.
- 8 COORDINATE EXACT LOCATION OF LIGHT FIXTURES WITH MECHANICAL EQUIPMENT AND PIPING LAYOUT.

**APPROVED
ELECTRICAL PLAN**
PLANS AND SPECIFICATIONS TO BE IN ACCORDANCE WITH LATEST NATIONAL ELECT. CODE AND ALL BUILDING CODE. THIS PLAN SHALL BE KEPT ON JOB FOR INSPECTOR'S SEPARATE PERMIT FOR ELECTRICAL REQUIRED.
NO. 381

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SHEET TITLE:
 ELECTRICAL
 LIGHTING PLAN

SHEET NO.:
E1.02
 53 OF 56 SHEETS

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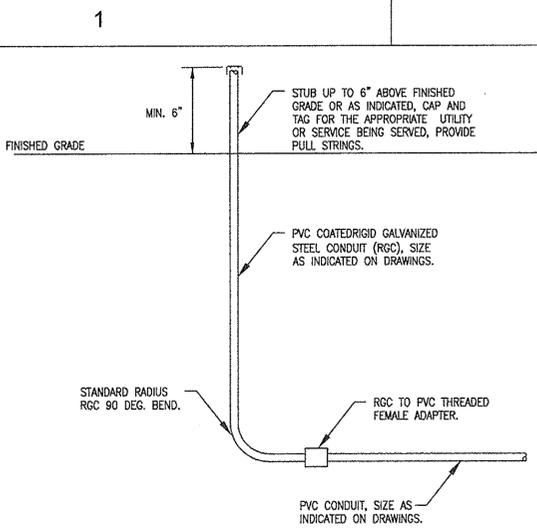
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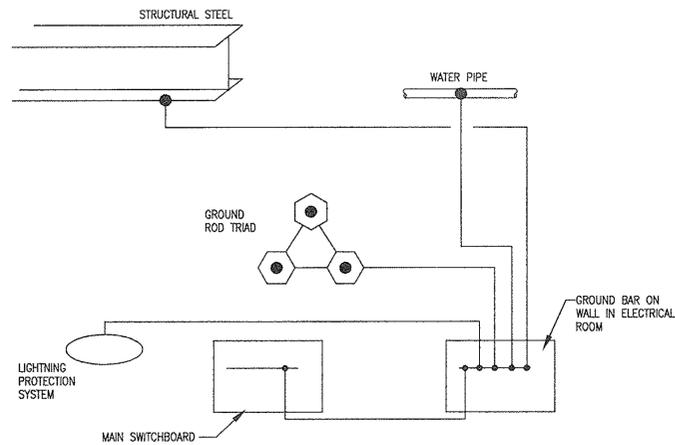
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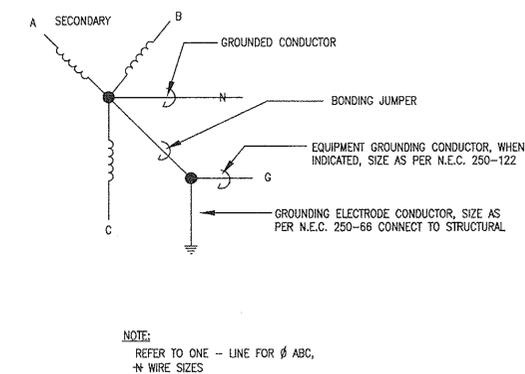
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1 UNDERGROUND CONDUIT STUB-UP
E5.01 NOT TO SCALE

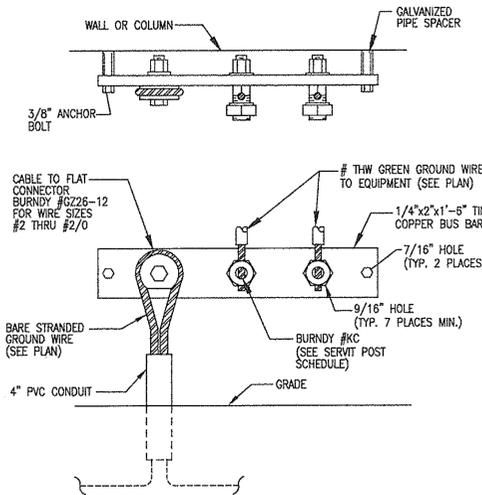


2 TYPICAL GROUND SYSTEM DIAGRAM
E5.01 NOT TO SCALE

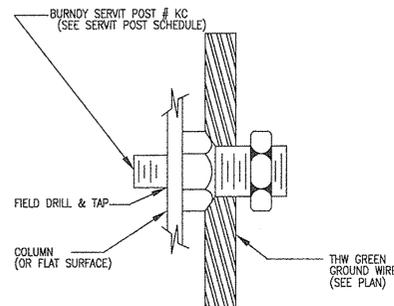


NOTE:
REFER TO ONE - LINE FOR Ø ABC,
↔ WIRE SIZES

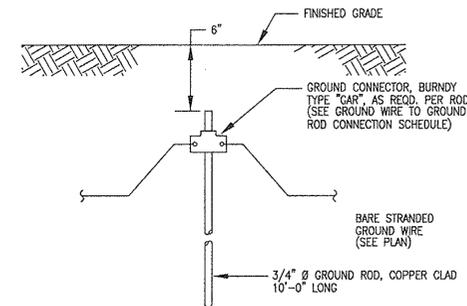
3 3-PHASE TRANSFORMER GROUNDING
E5.01 NOT TO SCALE



4 GROUND BUS PLATE DETAIL
E5.01 NOT TO SCALE

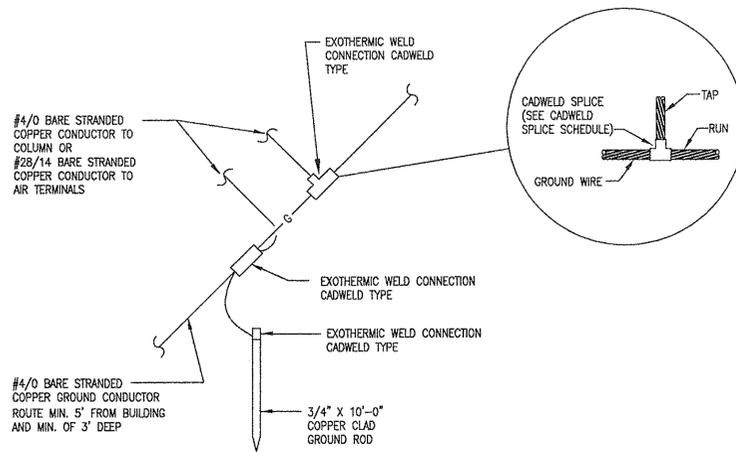


5 GROUNDING AT STEEL COLUMN OR FLAT SURFACE DETAIL
E5.01 NOT TO SCALE

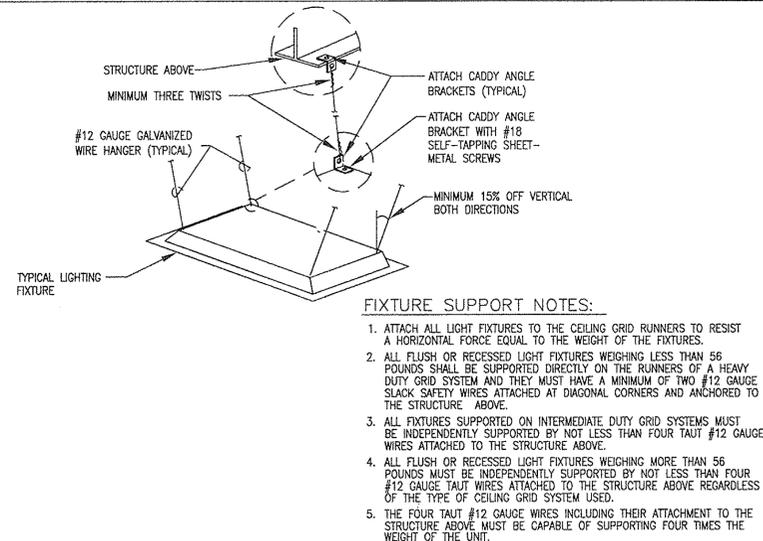


NOTE:
CONSTRUCTION CONTRACTOR TO PROVIDE GROUND ROD DRIVING STUD.

6 DRIVEN GROUND ROD DETAIL
E5.01 NOT TO SCALE

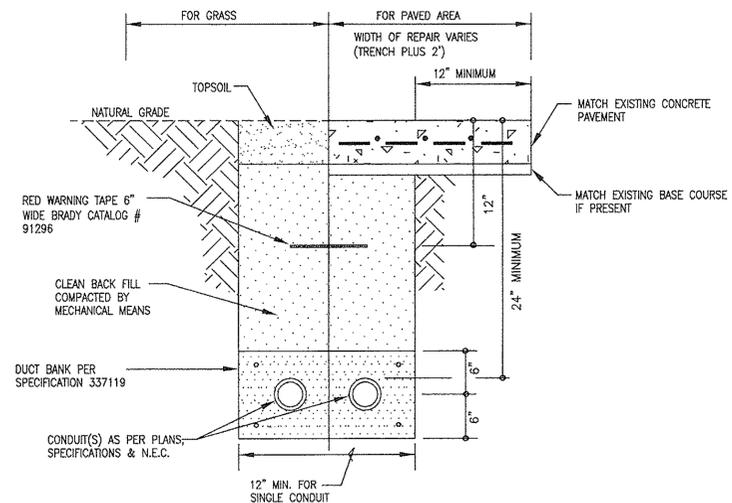


7 GROUND COUNTERPOISE DETAIL
E5.01 NOT TO SCALE



FIXTURE SUPPORT NOTES:
1. ATTACH ALL LIGHT FIXTURES TO THE CEILING GRID RUNNERS TO RESIST A HORIZONTAL FORCE EQUAL TO THE WEIGHT OF THE FIXTURES.
2. ALL FLUSH OR RECESSED LIGHT FIXTURES WEIGHING LESS THAN 56 POUNDS SHALL BE SUPPORTED DIRECTLY ON THE RUNNERS OF A HEAVY DUTY GRID SYSTEM AND THEY MUST HAVE A MINIMUM OF TWO #12 GAUGE SLACK SAFETY WIRES ATTACHED AT DIAGONAL CORNERS AND ANCHORED TO THE STRUCTURE ABOVE.
3. ALL FIXTURES SUPPORTED ON INTERMEDIATE DUTY GRID SYSTEMS MUST BE INDEPENDENTLY SUPPORTED BY NOT LESS THAN FOUR TAUT #12 GAUGE WIRES ATTACHED TO THE STRUCTURE ABOVE.
4. ALL FLUSH OR RECESSED LIGHT FIXTURES WEIGHING MORE THAN 56 POUNDS MUST BE INDEPENDENTLY SUPPORTED BY NOT LESS THAN FOUR #12 GAUGE TAUT WIRES ATTACHED TO THE STRUCTURE ABOVE REGARDLESS OF THE TYPE OF CEILING GRID SYSTEM USED.
5. THE FOUR TAUT #12 GAUGE WIRES INCLUDING THEIR ATTACHMENT TO THE STRUCTURE ABOVE MUST BE CAPABLE OF SUPPORTING FOUR TIMES THE WEIGHT OF THE UNIT.

8 FIXTURE SUPPORT DETAIL
E5.01 NOT TO SCALE



9 TYPICAL TRENCH SECTION DETAIL
E5.01 NOT TO SCALE

ISSUE LOG		
NO.	DATE	DESCRIPTION
1	02/28/12	Issue for Bid & Construction

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SEAL(S):

TBPE FIRM NO. F-3446

PROJECT NAME:
CITY OF HOUSTON
9003 N. MAIN ADMINISTRATION
BLDG RENOVATION

CITY OF HOUSTON
GENERAL SERVICES
DEPARTMENT

REVIEWED:
PROGRAM MANAGER _____ SPONSORING DEPARTMENT _____
PROJECT MANAGER _____

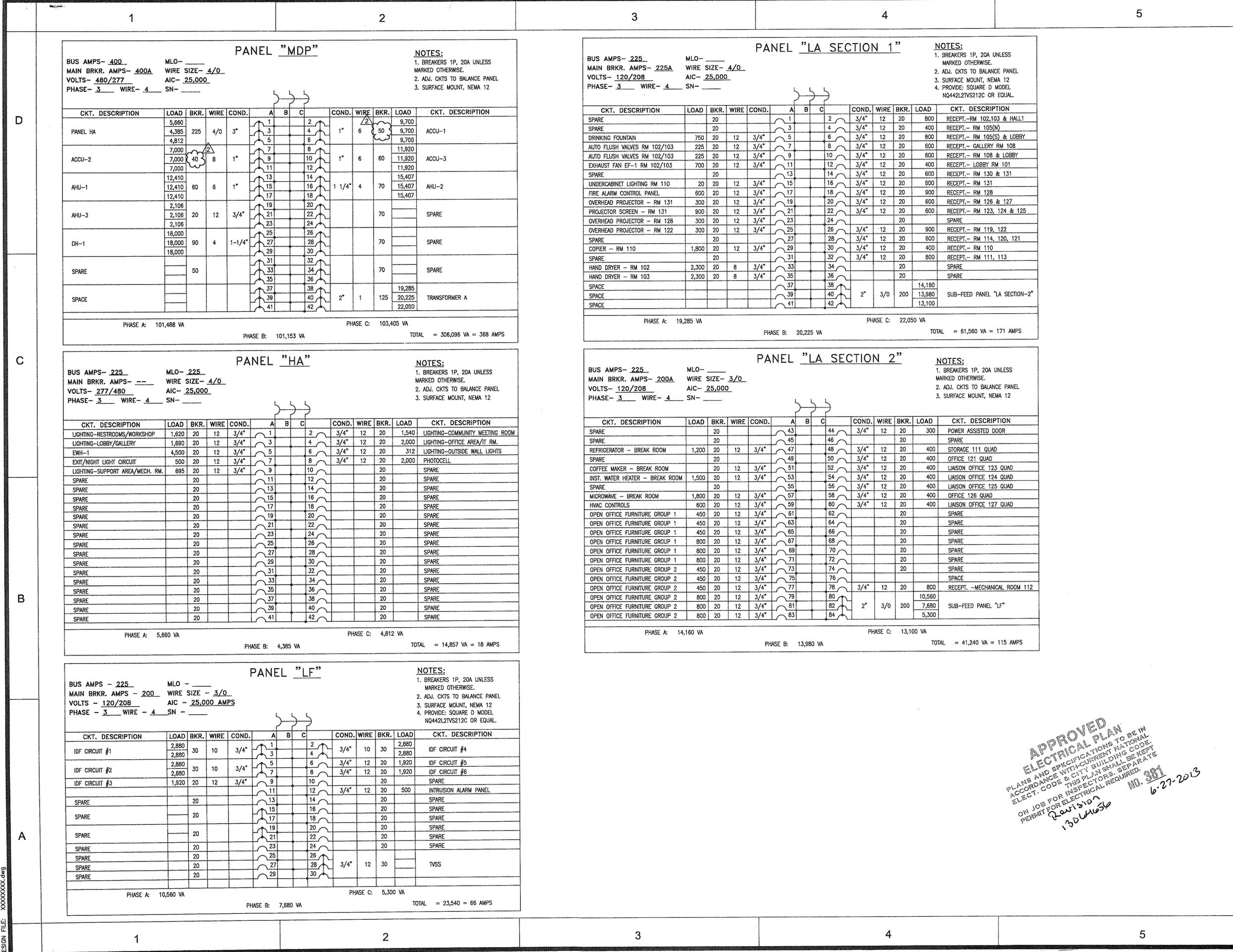
RdIR ARCHITECTS
ARCHITECTURE | PLANNING | INTERIORS
1245 West 18th Street Houston, Texas 77008
phone 713.868.3121 www.rdir.com

DATE: 07/16/10
WBS No: L-000054-0001-4
SCALE: AS NOTED
DRAWN BY: M.G.
CHECKED BY: R.T.

SHEET TITLE:
**ELECTRICAL
DETAILS**

SHEET NO.:
E5.01
54 OF 56 SHEETS

CITY DWG. NO.:



PANEL "MDP"

BUS AMPS- 400 MLO-
 MAIN BRKR. AMPS- 400A WIRE SIZE- 4/0
 VOLTS- 480/277 AIC- 25,000
 PHASE- 3 WIRE- 4 SN-

NOTES:
 1. BREAKERS 1P, 20A UNLESS MARKED OTHERWISE.
 2. ADJ. CKTS TO BALANCE PANEL
 3. SURFACE MOUNT, NEMA 12

CKT. DESCRIPTION	LOAD	BKR.	WIRE	COND.	A	B	C	COND.	WIRE	BKR.	LOAD	CKT. DESCRIPTION
PANEL HA	5,660	225	4/0	3"	1	2		1"	6	50	9,700	ACCU-1
ACCU-2	7,000				3	4					9,700	
AHU-1	12,410	60	6	1"	5	6					11,920	ACCU-3
AHU-3	2,106	20	12	3/4"	7	8					11,920	
DH-1	18,000	90	4	1-1/4"	9	10		1 1/4"	4	70	15,407	AHU-2
SPARE					11	12					15,407	
SPACE					13	14					15,407	
					15	16					15,407	
					17	18					15,407	
					19	20					15,407	
					21	22					15,407	
					23	24					15,407	
					25	26					15,407	
					27	28					15,407	
					29	30					15,407	
					31	32					15,407	
					33	34					15,407	
					35	36					15,407	
					37	38					15,407	
					39	40					15,407	
					41	42					15,407	

PHASE A: 101,488 VA PHASE B: 101,153 VA PHASE C: 103,405 VA TOTAL = 306,096 VA = 368 AMPS

PANEL "LA SECTION 1"

BUS AMPS- 225 MLO-
 MAIN BRKR. AMPS- 225A WIRE SIZE- 4/0
 VOLTS- 120/208 AIC- 25,000
 PHASE- 3 WIRE- 4 SN-

NOTES:
 1. BREAKERS 1P, 20A UNLESS MARKED OTHERWISE.
 2. ADJ. CKTS TO BALANCE PANEL
 3. SURFACE MOUNT, NEMA 12
 4. PROVIDE: SQUARE D MODEL NQ442LTVS212C OR EQUAL

CKT. DESCRIPTION	LOAD	BKR.	WIRE	COND.	A	B	C	COND.	WIRE	BKR.	LOAD	CKT. DESCRIPTION
SPARE	20				1	2		3/4"	12	20	800	RECEPT.-RM 102,103 & HALL1
SPARE	20				3	4		3/4"	12	20	400	RECEPT.- RM 105(N)
DRINKING FOUNTAIN	750	20	12	3/4"	5	6		3/4"	12	20	800	RECEPT.- RM 105(S) & LOBBY
AUTO FLUSH VALVES RM 102/103	225	20	12	3/4"	7	8		3/4"	12	20	600	RECEPT.- GALLERY RM 108
AUTO FLUSH VALVES RM 102/103	225	20	12	3/4"	9	10		3/4"	12	20	600	RECEPT.- RM 108 & LOBBY
EXHAUST FAN EF-1 RM 102/103	700	20	12	3/4"	11	12		3/4"	12	20	400	RECEPT.- LOBBY RM 101
SPARE	20				13	14		3/4"	12	20	600	RECEPT.- RM 130 & 131
UNDERCABINET LIGHTING RM 110	20	20	12	3/4"	15	16		3/4"	12	20	600	RECEPT.- RM 131
FIRE ALARM CONTROL PANEL	600	20	12	3/4"	17	18		3/4"	12	20	900	RECEPT.- RM 128
OVERHEAD PROJECTOR - RM 131	300	20	12	3/4"	19	20		3/4"	12	20	600	RECEPT.- RM 126 & 127
PROJECTOR SCREEN - RM 131	900	20	12	3/4"	21	22		3/4"	12	20	600	RECEPT.- RM 123, 124 & 125
OVERHEAD PROJECTOR - RM 128	300	20	12	3/4"	23	24					20	SPARE
OVERHEAD PROJECTOR - RM 122	300	20	12	3/4"	25	26		3/4"	12	20	900	RECEPT.- RM 119, 122
SPARE	20				27	28		3/4"	12	20	600	RECEPT.- RM 114, 120, 121
COPIER - RM 110	1,800	20	12	3/4"	29	30		3/4"	12	20	400	RECEPT.- RM 110
SPARE	20				31	32		3/4"	12	20	800	RECEPT.- RM 111, 113
HAND DRYER - RM 102	2,300	20	8	3/4"	33	34					20	SPARE
HAND DRYER - RM 103	2,300	20	8	3/4"	35	36					20	SPARE
SPACE					37	38					14,160	
SPACE					39	40		2"	3/0	200	7,880	SUB-FEED PANEL "LA SECTION-2"
SPACE					41	42					13,100	

PHASE A: 19,285 VA PHASE B: 20,225 VA PHASE C: 22,050 VA TOTAL = 61,560 VA = 171 AMPS

PANEL "HA"

BUS AMPS- 225 MLO- 225
 MAIN BRKR. AMPS- --- WIRE SIZE- 4/0
 VOLTS- 277/480 AIC- 25,000
 PHASE- 3 WIRE- 4 SN-

NOTES:
 1. BREAKERS 1P, 20A UNLESS MARKED OTHERWISE.
 2. ADJ. CKTS TO BALANCE PANEL
 3. SURFACE MOUNT, NEMA 12

CKT. DESCRIPTION	LOAD	BKR.	WIRE	COND.	A	B	C	COND.	WIRE	BKR.	LOAD	CKT. DESCRIPTION
LIGHTING-RESTROOMS/WORKSHOP	1,620	20	12	3/4"	1	2		3/4"	12	20	1,540	LIGHTING-COMMUNITY MEETING ROOM
LIGHTING-LOBBY/GALLERY	1,680	20	12	3/4"	3	4		3/4"	12	20	2,000	LIGHTING-OFFICE AREA/IT RM.
EWI-1	4,500	20	12	3/4"	5	6		3/4"	12	20	312	LIGHTING-OUTSIDE WALL LIGHTS
EXIT/NIGHT LIGHT CIRCUIT	500	20	12	3/4"	7	8		3/4"	12	20	2,000	PHOTOCELL
LIGHTING-SUPPORT AREA/MECH. RM.	695	20	12	3/4"	9	10					20	SPARE
SPARE	20				11	12					20	SPARE
SPARE	20				13	14					20	SPARE
SPARE	20				15	16					20	SPARE
SPARE	20				17	18					20	SPARE
SPARE	20				19	20					20	SPARE
SPARE	20				21	22					20	SPARE
SPARE	20				23	24					20	SPARE
SPARE	20				25	26					20	SPARE
SPARE	20				27	28					20	SPARE
SPARE	20				29	30					20	SPARE
SPARE	20				31	32					20	SPARE
SPARE	20				33	34					20	SPARE
SPARE	20				35	36					20	SPARE
SPARE	20				37	38					20	SPARE
SPARE	20				39	40					20	SPARE
SPARE	20				41	42					20	SPARE

PHASE A: 5,660 VA PHASE B: 4,385 VA PHASE C: 4,812 VA TOTAL = 14,857 VA = 18 AMPS

PANEL "LA SECTION 2"

BUS AMPS- 225 MLO-
 MAIN BRKR. AMPS- 200A WIRE SIZE- 3/0
 VOLTS- 120/208 AIC- 25,000
 PHASE- 3 WIRE- 4 SN-

NOTES:
 1. BREAKERS 1P, 20A UNLESS MARKED OTHERWISE.
 2. ADJ. CKTS TO BALANCE PANEL
 3. SURFACE MOUNT, NEMA 12

CKT. DESCRIPTION	LOAD	BKR.	WIRE	COND.	A	B	C	COND.	WIRE	BKR.	LOAD	CKT. DESCRIPTION
SPARE	20				43	44		3/4"	12	20	300	POWER ASSISTED DOOR
SPARE	20				45	46					20	SPARE
REFRIGERATOR - BREAK ROOM	1,200	20	12	3/4"	47	48		3/4"	12	20	400	STORAGE 111 QUAD
SPARE	20				49	50		3/4"	12	20	400	OFFICE 121 QUAD
COFFEE MAKER - BREAK ROOM	20	12	3/4"		51	52		3/4"	12	20	400	LIAISON OFFICE 123 QUAD
INST. WATER HEATER - BREAK ROOM	1,500	20	12	3/4"	53	54		3/4"	12	20	400	LIAISON OFFICE 124 QUAD
SPARE	20				55	56		3/4"	12	20	400	LIAISON OFFICE 125 QUAD
MICROWAVE - BREAK ROOM	1,800	20	12	3/4"	57	58		3/4"	12	20	400	OFFICE 126 QUAD
HVAC CONTROLS	600	20	12	3/4"	59	60		3/4"	12	20	400	LIAISON OFFICE 127 QUAD
OPEN OFFICE FURNITURE GROUP 1	450	20	12	3/4"	61	62					20	SPARE
OPEN OFFICE FURNITURE GROUP 1	450	20	12	3/4"	63	64					20	SPARE
OPEN OFFICE FURNITURE GROUP 1	450	20	12	3/4"	65	66					20	SPARE
OPEN OFFICE FURNITURE GROUP 1	800	20	12	3/4"	67	68					20	SPARE
OPEN OFFICE FURNITURE GROUP 1	800	20	12	3/4"	69	70					20	SPARE
OPEN OFFICE FURNITURE GROUP 1	800	20	12	3/4"	71	72					20	SPARE
OPEN OFFICE FURNITURE GROUP 2	450	20	12	3/4"	73	74					20	SPARE
OPEN OFFICE FURNITURE GROUP 2	450	20	12	3/4"	75	76					20	SPARE
OPEN OFFICE FURNITURE GROUP 2	450	20	12	3/4"	77	78		3/4"	12	20	800	RECEPT.-MECHANICAL ROOM 112
OPEN OFFICE FURNITURE GROUP 2	800	20	12	3/4"	79	80					10,560	
OPEN OFFICE FURNITURE GROUP 2	800	20	12	3/4"	81	82		2"	3/0	200	7,880	SUB-FEED PANEL "LF"
OPEN OFFICE FURNITURE GROUP 2	800	20	12	3/4"	83	84					5,300	

PHASE A: 14,160 VA PHASE B: 13,980 VA PHASE C: 13,100 VA TOTAL = 41,240 VA = 115 AMPS

PANEL "LF"

BUS AMPS - 225 MLO -
 MAIN BRKR. AMPS - 200 WIRE SIZE - 3/0
 VOLTS - 120/208 AIC - 25,000 AMPS
 PHASE - 3 WIRE - 4 SN -

NOTES:
 1. BREAKERS 1P, 20A UNLESS MARKED OTHERWISE.
 2. ADJ. CKTS TO BALANCE PANEL
 3. SURFACE MOUNT, NEMA 12
 4. PROVIDE: SQUARE D MODEL NQ442LTVS212C OR EQUAL

CKT. DESCRIPTION	LOAD	BKR.	WIRE	COND.	A	B	C	COND.	WIRE	BKR.	LOAD	CKT. DESCRIPTION
IDF CIRCUIT #1	2,880	30	10	3/4"	1	2		3/4"	10	30	2,880	IDF CIRCUIT #4
IDF CIRCUIT #2	2,880	30	10	3/4"	3	4		3/4"	12	20	1,920	IDF CIRCUIT #5
IDF CIRCUIT #3	1,920	20	12	3/4"	5	6		3/4"	12	20	1,920	IDF CIRCUIT #6
SPARE					7	8					20	SPARE
SPARE					9	10					20	SPARE
SPARE					11	12		3/4"	12	20	500	INTRUSION ALARM PANEL
SPARE					13	14					20	SPARE
SPARE					15	16					20	SPARE
SPARE					17	18					20	SPARE
SPARE					19	20					20	SPARE
SPARE					21	22					20	SPARE
SPARE					23	24					20	SPARE
SPARE					25	26					20	SPARE
SPARE					27	28		3/4"	12	30		TVSS
SPARE					29	30					20	SPARE

PHASE A: 10,560 VA PHASE B: 7,880 VA PHASE C: 5,300 VA TOTAL = 23,540 VA = 66 AMPS

ISSUE LOG

NO.	DATE	DESCRIPTION
1	02/28/12	Issue for Bld & Construction
2		

ISSUE LOG

NO.	DATE	DESCRIPTION
1	02/28/12	Issue for Bid & Construction
2	06/25/13	Permit Modifications

CONSULTANT(S):
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 STRUCTURAL ENGINEER
 SIGMA ENGINEERING SERVICES
 8554 KATY FRWY, SUITE 340 HOUSTON, TX 77024
 TEL: 713-461-8584 FAX: 713-465-7479

SEAL(S):

 TBPE FIRM NO. F-3446

PROJECT NAME:
 CITY OF HOUSTON
 9003 N. MAIN ADMINISTRATION
 BLDG RENOVATION


 CITY OF HOUSTON
 GENERAL SERVICES
 DEPARTMENT

REVIEWED:
 PROGRAM MANAGER _____ SPONSORING DEPARTMENT _____
 PROJECT MANAGER _____

RdIR ARCHITECTS
 ARCHITECTURE | PLANNING | INTERIORS
 1245 West 18th Street Houston, Texas 77008
 phone 713.868.3121 www.rdir.com

DATE: 07/16/10
 WBS No: L-000054-0001-4
 SCALE: NONE
 DRAWN BY: M.G.
 CHECKED BY: R.T.

SHEET TITLE:
 ELECTRICAL
 ONE-LINE DIAGRAM &
 LOAD ANALYSIS

SHEET NO.:
E6.02
 56 OF 56 SHEETS

CITY DWG. NO.:

GENERAL NOTES:

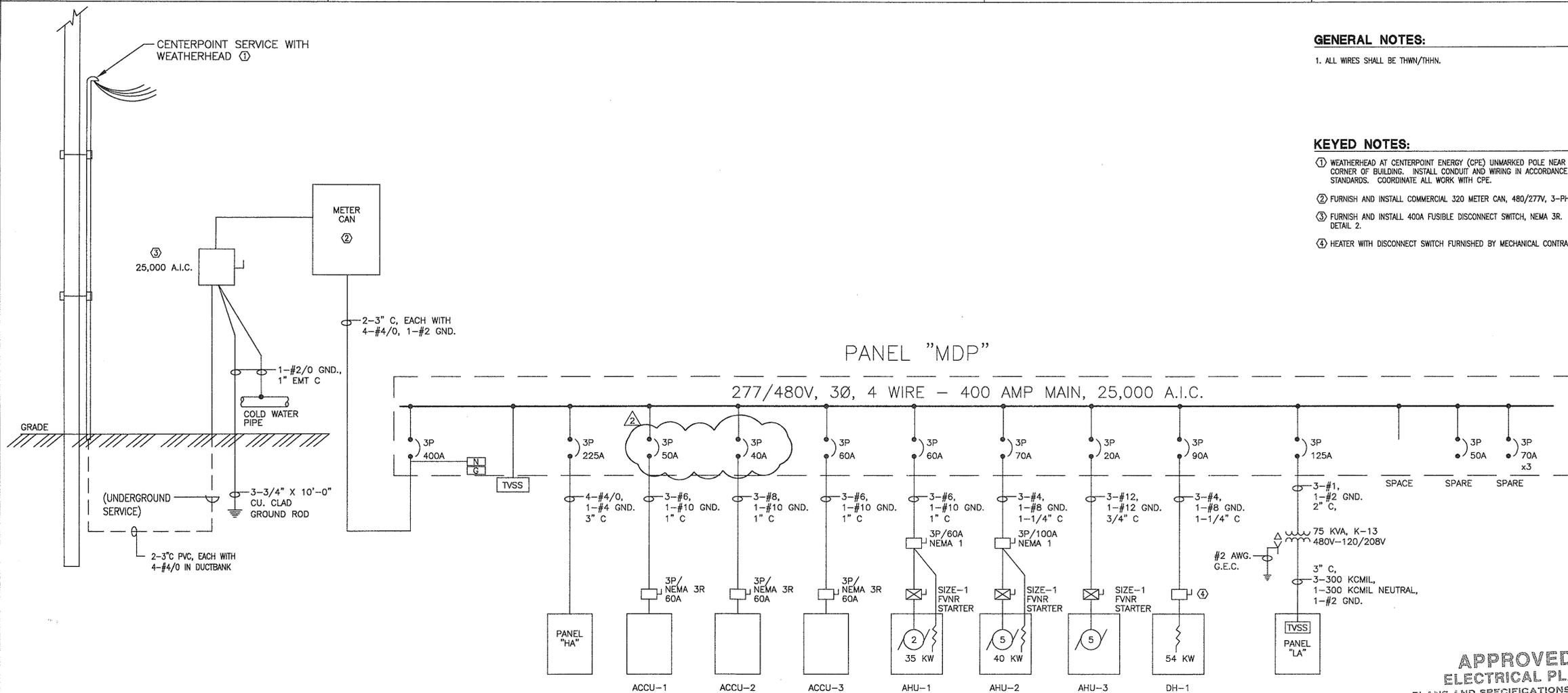
1. ALL WIRES SHALL BE THWN/THHN.

KEYED NOTES:

- ① WEATHERHEAD AT CENTERPOINT ENERGY (CPE) UNMARKED POLE NEAR NORTHEAST CORNER OF BUILDING. INSTALL CONDUIT AND WIRING IN ACCORDANCE WITH CPE STANDARDS. COORDINATE ALL WORK WITH CPE.
- ② FURNISH AND INSTALL COMMERCIAL 320 METER CAN, 480/277V, 3-PHASE, 4 WIRE.
- ③ FURNISH AND INSTALL 400A FUSIBLE DISCONNECT SWITCH, NEMA 3R. REFER TO DETAIL 2.
- ④ HEATER WITH DISCONNECT SWITCH FURNISHED BY MECHANICAL CONTRACTOR.

PANEL "MDP"

277/480V, 3Ø, 4 WIRE - 400 AMP MAIN, 25,000 A.I.C.



APPROVED ELECTRICAL PLAN
 PLANS AND SPECIFICATIONS TO BE IN ACCORDANCE WITH CURRENT NATIONAL ELECT. CODE & CITY BUILDING CODE. THIS PLAN SHALL BE KEPT ON JOB FOR INSPECTORS. SEPARATE PERMIT FOR ELECTRICAL REQUIRED.
 Division 13064056 NO. 381 6-27-2010

1 ELECTRICAL ONE-LINE DIAGRAM
 SCALE: NONE

LIGHTING LOAD BASED ON NEC TABLE 220.12			
OCCUPANCY	AREA (SQ.FT.)	VA/SQ.FT.	TOTAL VA
OFFICE/CONFERENCE/MEETING	2,842	3.5	9,947
MECHANICAL/ELECTRICAL/ACTIVE STORAGE/HALLWAY	938	0.5	469
WORKSHOP	388	2	776
LOBBY/GALLERY/RESTROOM/BREAK ROOM/LOCKER ROOM	2,184	1	2,184
INACTIVE STORAGE	785	0.25	199
TOTAL LIGHTING LOADS PER NEC	7,128		13,556.75
INDOOR CONNECTED LIGHTING			10,045.00
INDOOR LIGHTING PER NEC			13,556.75
OUTDOOR CONNECTED LIGHTING			312.00
TOTAL CONNECTED LIGHTING LOADS			13,868.75

POWER LOAD	
DESCRIPTION	TOTAL VA
PANEL LA LOADS	81,560.00
EWH-1 HEATER	4,500.00
TOTAL POWER LOAD	86,060.00

HVAC LOADS						
HVAC EQUIPMENT-COOLING	MODEL	VOLTS	RLA / HP	Fan RLA	KVA	AMPS
ACCU-1 / AHU-1	38AUD025(D)/39LD08	480/3/60	33.4/2	1.6	33.90	39.8
ACCU-2 / AHU-2	38AUD016(D)/39LD08	480/3/60	24.4/5	1.6	27.94	33.6
ACCU-3 / AHU-3	38AP025(S)/39LD10	480/3/60	37.2/5	5.8	42.23	50.8
TOTAL					104.07	124.2

ELECTRICAL LOAD ANALYSIS						
DESCRIPTION	HP	KVA	AMPS			
			A	B	C	N
LIGHTING LOAD		13.8	16.63	16.63	16.63	16.36
25% OF LIGHTING		3.45	4.16	4.16	4.16	4.09
POWER LOAD		66.06	79.46	79.46	79.46	0.00
HVAC LOAD						
COOLING	104.07		0	0	0	0
HEATING AND AHU UNITS	143.77		143.77	172.93	172.93	0
MOTOR LOAD	5		6.32	7.60	7.60	0.00
25% OF LARGEST MOTOR			1.58	1.90	1.90	0.00
TOTAL		234.98	282.68	282.68	282.68	20.45
INCOMING SERVICE	2X#4/0		460	460	460	460
SPARE CAPACITY			177.32	177.32	177.32	439.55
% SPARE CABLE AMPACITY			38.55	38.55	38.55	95.55

2 400A FUSED DISCONNECT SWITCH
 SCALE: NONE

