cityofnovi.org

CITY of NOVI CITY COUNCIL

Agenda Item I May 23, 2016

SUBJECT: Approval to award the Novi Video Room Electrical and Mechanical to Great Lakes Power and Lighting INC, the City contracted Electrical contractor, in the amount of \$15,445.89 and R.W. Mead & Sons Inc., the City contracted Mechanical contractor, in the amount of \$23,860 and amend the budget.

SUBMITTING DEPARTMENT: Information Technology Department- Facilities Management Division

CITY MANAGER APPROVAL:



EXPENDITURE REQUIRED	\$ 39,305.89
AMOUNT BUDGETED	\$0
APPROPRIATION REQUIRED	\$ 40,000
LINE ITEM NUMBER	263-295.00-980.100

BACKGROUND INFORMATION:

The project scope will include the electrical and mechanical work per attached print to complete the Novi Video Studio that will be located on the second floor of the Civic Center. The proposed work is scheduled to begin in late May with completion in early June.

The mechanical work will be completed by R.W. Mead; the City's contacted HVAC contractor at a cost of \$23,860. The electrical will be completed by Great Lakes Power and lighting; the City's contracted electrical contractor at a cost of \$15,445.89.

RECOMMENDED ACTION: Approval to award the Novi Video Room Electrical and Mechanical to Great Lakes Power and Lighting INC, the City contracted Electrical contractor, in the amount of \$15,445.89 and R.W. Mead & Sons Inc., the City contracted Mechanical contractor, in the amount of \$23,860 and amend the budget.

	1	2	Y	N
Mayor Gatt				
Mayor Pro Tem Staudt	- 1			
Council Member Burke				
Council Member Casey				

	1	2	Y	N
Council Member Markham				
Council Member Mutch				
Council Member Wrobel				

RESOLUTION

NOW, THEREFORE BE IT RESOLVED that the following Budget Amendment for the renovation project in the PEG Cable Fund is authorized:

INCREASE (DECREASE)

PEG Cable Fund						
APPROPRIATIONS						
Capital Outlay		40,000				
TOTAL APPROPRIATIONS	\$	40,000				
Net Increase (Decrease) to Fund Balance	\$	(40,000)				

I hereby certify that the foregoing is a true and complete copy of a resolution adopted by the City Council of the City of Novi at a regular meeting held on May 23, 2016

Maryanne Cornelius City Clerk



Quotation

Date: May 10, 2016

To: City of Novi

Attn: Brandon

Project: Civic center new panel lower level

In accordance with your request we are pleased to quote the electrical installation required for the above referenced project as follows:

Supply and install new panel and wiring Demo old panel on wall Provide new fuses Breakers to feed video studio

Total Price: \$2967.33

Thank you for the opportunity. If you require additional information please do not hesitate to contact me.

Sincerely,
Alan Thueme
Purchasing agent
Great Lakes Power & Lighting, Inc.
E-mail: athueme@greatlakespwr.com
Cell Ph: 586-855-0960



Quotation

Date: May 10, 2016

To: City of Novi

Attn: Brandon

Project: Video Studio

In accordance with your request we are pleased to quote the electrical installation required for the above referenced project as follows:

Supply and install new lighting
New plugs and raceway.
Mechanical equipment power
4000 wiremold on wall for cart
No floor boxe work included. This will be in wall

Total Price: \$12478.56

Thank you for the opportunity. If you require additional information please do not hesitate to contact me.

Sincerely,
Alan Thueme
Purchasing agent
Great Lakes Power & Lighting, Inc.
E-mail: athueme@greatlakespwr.com
Cell Ph: 586-855-0960



Contractors - Engineers Troubleshooters - Maintenance of Mechanical Systems

CORPORATE OFFICE 33795 RIVIERA FRASER, MI 48026 (586) 296-3650 (586) 294-0410 FAX ANN ARBOR OFFICE 1900 WEST STADIUM SUITE C3 ANN ARBOR, MI 48103 (734) 662-6675 May 17, 2016 Quote #6164

A Michigan Corporation

City of Novi 45175 W. Ten Mile Rd. Novi, MI 48375 Attn: Brandon McCullough

Re: Civic Center - Video Studio

Dear Mr. McCullough,

We are pleased to submit our proposal to provide all the necessary labor, material, permits, and equipment as noted in prints provided by John Tagle Associates, Inc. dated 4-29-16.

PROJECT:

- Demo existing ductwork, VAV box and diffusers in room designated for new video studio.
- Furnish and install one (1) new ceiling plenum mounted Mitsubishi fan coil unit with cooling evaporator.
- Furnish and install all necessary and required supply and return ductwork, diffusers, balancing dampers and branch run-outs.
- Furnish and install one (1) electric duct heater in supply ductwork
- Furnish and install one (1) condensate pump to condensate pan.
- Pipe condensate pump to drain identified on print.
- Furnish and install one (1) new Mitsubishi air cooled condenser on roof pad over video room.
- Refrigerant pipe new fan coil unit to new roof-top air cooled condenser.
- Furnish and install two (2) air return transfer ductwork in rooms noted on print.
- Charge system with R410A refrigerant.
- Furnish and install one (1) new wall mounted thermostat in video room and control wire back to new fan coil unit.
- Start, test and inspect new units after customer supplied power wiring.
- Air balance video room air distribution system.
- Furnish and install one (1) new Mitsubishi below ceiling wall mounting AC unit in room next to video room.
- Furnish and install condensate pump and pipe to drain identified on print.
- Furnish and install one (1) new Mitsubishi air cooled condenser on pad over room.
- Refrigerant pipe new wall mounted evaporator to roof-top air cooled condenser.





- Charge system with R410A refrigerant.
- Start, test and inspect new units after customer supplied power wiring.

PROJECT COST: \$23,860.00

(Twenty Three Thousand Eight Hundred Sixty Dollars)

All work will be performed between the hours of 8:00am - 4:30pm Monday through Friday, except holidays.

EXCLUSIONS:

- Premium time.
- Power wiring of all new AC units.
- Roof cutting and roof pipe curb assembly flashing.

WARRANTY:

- One (1) year R.W. Mead & Sons warranty on equipment and installation.

Thank you for allowing R.W. Mead & Sons the opportunity to quote this project. If you have any questions, please call me at 586-296-3650.

Respectfully submitted,
R.W. Mead & Sons, Inc.

John Mora

Contract/Project Manager

CITY OF NOVI VIDEO STUDIO

JTAI

JOHN TAGLE ASSOCIATES,INC. ARCHITECTS & PLANNERS

INTERIOR MODIFICATIONS

45175 W. 10 MILE ROAD NOVI, MI 48375

DRAWING INDEX:

ARCHITECTURAL

COVER SHEET

A-010 GENERAL INFORMATION A-200 PLANS, DETAILS, & SCHEDULES **MECHANICAL**

M-100 **COVER SHEET & SPECIFICATIONS** M-200 DEMOLITION PLAN & NEW HVAC PLAN

M-300 DETAILS & SCHEDULES ELECTRICAL

ELECTRICAL GENERAL INFORMATION E-100 E-200

POWER & LIGHTING PLANS

DIN ENGINEERING MECHANICAL ELECTRICAL

23880 MIDDLEBELT RD. SUITE 2202 FARMINGTON HILLS, MI 48336 Tei: 248 657-2466 Fax: 248 893-7072





JTAI JOB NO.

16.06

ARCHITECTURAL NOTES & SPECIFICATIONS

GENERAL SPECIFICATIONS

BIDDING AND CONTRACT REQUIREMENTS NOT APPLICABLE

DIVISION 1

GENERAL REQUIREMENTS

- THE CONTRACTOR SHALL VERIFY ALL LINES, LEVELS, DIMENSIONS AND MEASUREMENTS FOR THE PROPER CONSTRUCTION OF THE WORK.
- 2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROPER CUITING FITTING OR PATCHING OF THE WORK THAT MAY BE REQUIRED TO MAKE ITS SEVERAL PARTS FIT TOGETHER OR MAKE NEW WORK JOIN WITH THE EXISTING WORK
 - IOIN WITH THE EAST ING WORM.

 A ALL ADJACENT FINISHED SURFACES, MATERIALS, OR PROPERTY THAT ARE DAMAGED BY THE WORK SHALL BE REPAIRED WITH MATERIALS MATCHING EXISTING SURFACES OR REPLACED BY THE CONTRACTOR AT NO ADDITIONAL COSTS TO THE OWNER.
 - B. JOINTS BETWEEN PATCHED AND EXISTING MATERIALS SHALL BE STRAIGHT, SMOOTH AND FLUSH. ALL PATCHING WORK SHALL BE PERFORMED BY WORKMEN SKILLED IN
- 3. CONTRACTOR TO COMPLY WITH THE REQUIREMENTS OF LAWS, CODES, ORDINANCES AND REQULATIONS OF THE GOVERNMENTAL AUTHORITIES HAVING JURISDICTION WHERE SUCH REQUIREMENTS EXCEED THE REQUIREMENTS OF THE SPECIFICATIONS.
- 4. THE CONTRACTOR SHALL CONTINUOUSLY OBSERVE THE WORK TO ASSURE THAT SHOULD PREVIOUSLY UNSEEN ASBESTOS OR OTHER HAZARDOUS SUBSTANCES BE ENCOUNTERED, THAT SAFETY PROCEDURES WILL IMMEDIATELY GO INTO EFFECT.
 - A. IMMEDIATELY CEASE WORK AND NOTIFY THE OWNER AND ARCHITECT
 - B. ISOLATE THE WORK AREA AND POST "HAZARDOUS MATERIAL DO NOT ENTER" SIGNS. C. PUT INTO EFFECT ALL EPA, MIOSHA AND MICHIGAN DEPARTMENT OF HEALTH PRECAUTIONS.
 - D. THE REMOVAL OF HAZARDOUS MATERIALS SHALL BE AT THE EXPENSE OF THE OWNER.
- CONTRACTOR SHALL SCHEDULE AND CONDUCT MEETINGS AND CONFERENCES AT THE PROJECT SITE, UNLESS OTHERWISE INDICATED.
- 6, CONTRACTOR TO PROVIDE THE FOLLOWING TYPES OF SUBMITTALS FOR REVIEW AND RECORDS:
 - A. SHOP DRAWINGS B. PRODUCT DATA
 - FADDOOT ATTAINST AND TEXTURE TO BE EXPECTED.
 - D. INSPECTION AND TEST REPORTS.
- - A. THE SCHEDULE SHALL EXTEND FROM THE DATE ESTABLISHED FOR THE COMMENCEMENT OF WORK TO THE DATE OF FINAL COMPLETION.
- 8 THE OWNER MAY PERFORM WORK WITH HIS OWN FORCES OR LINDER SEPARATE CONTRACT TO OTHERS. THIS WORK SHALL BE COORDINATED BETWEEN THE OWNER, CONTRACTOR AND ARCHITECT AND SHALL BE SHOWN ON THE PROGRESS SCHEDULE.
- THE FOLLOWING MATERIALS, BUILDING SYSTEMS AND EQUIPMENT REQUIRE SUBMISSION OF SHOP DRAWINGS, MATERIAL LISTS, PRODUCT DATA CATALOGS, ETC.
 A. ACOUSTIC INSULATION
 B. JOINT SEALERS AND FIRE STOPPING

 - C. DOORS & FRAMES D DOOR HARDWARE
 - E. GYPSUM DRYWALL SYSTEMS F. ACOUSTICAL CEILINGS

 - G. PAINTS H. LOUVERS & VENTS
 - I. TEMPERATURE CONTROLS
 J. MECHANICAL EQUIPMENT
 K. ELECTRICAL EQUIPMENT

 - L. LIGHT FIXTURES
 - M. FIRE PROTECTION SYSTEMS AND CALCULATIONS
- 10, EACH PHASE OF THE PROJECT WILL BE DEEMED COMPLETE UPON COMPLETION OF THE PUNCH LIST AND ACCEPTANCE BY THE ARCHITECT AND THE OWNER.
- 11. ALL SCRAP OR REMOVED MATERIAL, DEBRIS OR RUBBISH SHALL BE REGULARLY REMOVED FROM ALL SUPPART A REPORT OF EACH WORKING DAY. CLEAN THE ENTIRE PROJECT ARE AT THE COMPLETION OF CONSTRUCTION INCLUDING FINISH SURFACES, MECHANICAL AND ELECTRICAL EQUIPMENT, FIXTURES, LAMPS, ETC.
- 12. CONTRACTOR TO PROVIDE TEMPORARY BARRICADES AND OTHER PROTECTION REQUIRED TO PREVENT INJURY TO PEOPLE AND DAMAGE TO ADJACENT BUILDING AREAS IN A MANNER THAT DOES NOT RESTRICT THE OWNER'S ACCESS TO ALL PARTS OF THEIR FACILITY.
- 13. CONTRACTOR TO PROVIDE CONSTRUCTION AIDS AND EQUIPMENT AS REQUIRED BY PERS FOR EACH TRADE AS NECESSARY TO FACILITATE THE EXECUTION OF THE WORK, REMOV SUCH ITEMS WHEN THEY ARE NOT NEEDED.
- 14, CONTRACTOR SHALL NOTIFY ARCHITECT OF ANY CONDITIONS FOUND WHERE A MODIFICATION OF THE INTENT OF THE PLANS WOULD PRODUCE BETTER RESULTS.

DIVISION 2

DIVISION 3

CONCRETE NOT APPLICABLE

DIVISION 4

NOT APPLICABLE

DIVISION 5

DIVISION 6 WOOD AND PLASTIC

- 1. PERFORM ALL ROUGH CARPENTRY AS SHOWN IN DRAWINGS
- 2. PROVIDE AND INSTALL TREATED WOOD NAILERS. ALL WOOD NAILERS ANCHORED TO STEEL OR MASONRY TO BE NON-COMBUSTIBLE 2" X 4" MINIMUM OR AS INDICATED IN DRAWINGS.

DIVISION 7

THERMAL AND MOISTURE PROTECTION

- PROVIDE INSULATING MATERIALS THAT COMPLY WITH REQUIREMENTS AND WITH REFERENCED STANDARDS AND IN SIZES FO FIT APPLICATIONS INDICATED, SELECTED FROM MANUFACTURER'S STANDARD THICKNESSES, WIDTHS AND LENGTHS.
 A. SOUND ATTENUATION BATT INSULATION.
 1. TYPE: UN-FACED FIBERGLASS ACOUSTICAL INSULATION COMPLYING WITH ASTEL C-33 TYPE III.

 - 2. SIZE: 72" W X 70'-0" L X 1" T
 - SURFACE BURNING CHARACTERISTICS; MAX. FLAME SPREAD 25; MAX. SMOKE DEVELOPED 50.

 - DEVELOPED: 50.

 4. ACOUSTIC PERFORMANCE: NRC 0.70

 5. ACCEPTABLE MANUFACTURER, OR APPROVED EQUAL: OWENS CORNING 6. PRODUCT: SELECTSOUND BLACK ACOUSTIC BLANKET.

 B. LOW FREQUENCY SOUND BATT INSULATION.
 - 1. TYPE: UNFACED RECYCLED BONDED ACOUSTICAL COTTON FIBER PADS COMPLYING WITH ASTM E84.
 - 2. SIZE: 2' W X 4' I X 4" T

 - 2. SILE: 2 W A L A 4 |
 3. SURFACE BURNING CHARACTERISTICS: MAX. FLAME SPREAD 23
 4. ACOUSTIC PERFORMANCE: NRC 1.15
 5. ACCEPTABLE MANUFACTURER, OR APPROVED EQUAL: ASISTOREFRONT, COM
 6. PRODUCT: BASS BUSTER LOW FREQUENCY SOUND ABSORBER.
- 2. PROVIDE JOINT SEALANTS, BACKINGS AND OTHER RELATED MATERIALS THAT ARE COMPATIBLE WITH ONE ANOTHER AND WITH JOINT SUBSTRATES UNDER CONDITIONS OF SERVICE AND APPLICATION, AS DEMONSTRATED BY SEALANT MANUFACTURER BASED ON TESTING AND FIELD
- ELASTOMERIC JOINT SEALANTS
 A. LOW-MODULUS NONACID-CURING SILICONE SEALANT
 1, AVAILABLE PRODUCTS, OR APPROVED EQUALS:
 - a, TREMCO: SPECTREM 1
 - b. DOW CORNING: 790
 - 2. TYPE AND GRADE: S (SINGLE COMPONENT) AND NS (NONSAG).

 - ADDITIONAL MOVEMENT CAPABILITY: CAPABLE OF 50% MOVEMENT IN EXTENSION COHESION UNDER MAXIMUM CYCLIC MOVEMENT PER ASTM C 719. 5, EXPOSURE: USE NT (NONTRAFFIC)
 - 6. SUBSTRATES: USES M, G, A, AND AS APPLICABLE TO JOINT SUBSTRATES
 - NON-STAINING TO POROUS STUBSTRATES WHEN TESTING PER ASTM C 1248 FOR SUBSTRATES.
- - A, ACOUSTICAL SEALANT FOR EXPOSED AND CONCEALED JOINTS; NONSAG, PAINTABLE, ANOUS INAL SEALINIT FOR DEVISED AND UNDERLED JUINS. NORSAN, PAIN AR NONSTAINING LATEX SEACLANT COMPLYING WITH ASTM C 834 THAT EFFECTIVELY REDUCES AIRBORNE SOUND TRANSMISSION THROUGH PERIMETER JOINTS AND OPENINGS IN BUILDING CONSTRUCTION AS DEMONSTRATED BY TESTING REPRESENTATIVE ASSEMBLIES ACCORDING TO ASTM E 90. 1. AVAILABLE PRODUCT, OR APPROVED EQUALS:
 - - a. PECORA CORPORATION: AC-20 FTR ACOUSTICAL AND INSULATION
- 5. PROVIDE SEALANT BACKINGS OF MATERIAL AND TYPE THAT ARE NON-STAINING, COMPATIBLE WITH JOINT SUBSTRATES, SEALANTS, PRIMERS AND OTHER, CONTIFILLERS AND ARE APPROVED FOR APPLICATIONS INDICATED BY SEALANT MANUFACTURER BASED ON FIELD EXPERIENCE AND LABORATORY TESTING.
 - IONY 1ESTING.

 A CYLINDRICAL SEALANT BACKINGS: ASTM C 1330 OF SIZE AND DENSITY TO CONTROL SEALANT DEPTH AND OTHERWISE CONTRIBUTE TO PRODUCING OPTIMUM SEALANT PERFORMANCE.
 - 1. TYPE: C (CLOSED-CELL MATERIAL WITH A SURFACE SKIN).
- INSTALL SEALANTS AND BACKER RODS IN ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS. CLEAN EXCESS SEALANTS OR SEALANT SMEARS ADJACENT TO JOINTS AS INSTALLATION PROGRESSES.

DIVISION 8

- 1. PROVIDE DOORS AND FRAMES OF THE TYPES SHOWN ON THE DOOR SCHEDULE AND WHOSE COMPONENTS ARE MANUFACTURED BY COMPANIES NOTED HERE, OR THEIR APPROVED EQUALS. A, WOOD DOORS
 - 1. ALGOMA HARDWOODS
 - 2. V.T. INDUSTRIES, INC. B. HOLLOW METAL FRAMES

 - 1. CURRIES COMPANY
 - 2. STEEL CRAFT_ALLEGION C, HOLLOW METAL DOORS

 1, CURRIES COMPANY
 - 2. CECO DOOR PRODUCTS
 - 3. SOUNDPROOF WINDOWS, INC. (ACOUSTIC DOOR)

- 2, INTERIOR WOOD DOORS
 A, SOLID CORE TYPE: 1 ≹" THICK, FLUSH DESIGN, PLAIN SLICED RED OAK VENEER, 5-PLY

 - PARTICLE BOARD CORE.

 8. FACE VENEER: PREMIUM GRADE WOOD, PLAIN SLICED RED OAK, BOTH FACES.

 C. VERTICAL EDGES" HARDWOOD PER AWI STANDARD 1300-S.

 D. FINISH: FACTORY FINISH PER NWWDA 5 COAT PROCESS, WRAP DOORS INDIVIDUALLY
 - E. MACHINING: FACTORY PREFIT AND MACHINE FOR SPECIFIED HARDWAR
 - F. ACCEPTABLE PRODUCTS, OR APPROVED EQUALS: SOLID CORE, FLUSH PANELS; ALGOMA HARDWOODS "PC-5 PB CORE".
- 3 ACCUISTIC HOLLOW METAL DOORS
 - A HOLLOW CORE TYPE: 1 THICK, FLUSH PANEL, FABRICATED WITH SMOOTH SURFACES, WITHOUT VISIBLE JOINTS OR SEAMS ON EXPOSED FACES.
 - B. CORE CONSTRUCTION: ACOUSTIC FOAM AND STEEL STIFFENED LAMINATED CORE WITH NO STIFFINER FACE WELDS.
 - C AGGREGATE ACOUSTIC RATING OF DOOR: MIN. STC 56
 - D. LEVEL/MODEL: LEVEL 2 AND PHYSICAL PERFORMANCE LEVEL A (HEAVY DUTY), MIN. 16 GAUGE THICK STEEL.
 - E, HINGE REINFORCEMENT; MINIMUM 7 GAUGE (品") PLATE 1 2" X 9".
 - F. HARDWARE REINFORCEMENTS: FABRICATE ACCORDING TO ANSISDI A250.6 WITH REINFORCING PLATES FROM SAME MATERIAL AS DOOR FACE SHEETS.

 - ACCEPTABLE PRODUCTS, OR APPROVED EQUAL: SOUNDPROOF WINDOWS, INC., STEEL DOOR MODEL 175C1 WITH FULL VIEW GLASS OPTION.
- 4. HOLLOW METAL WELDED FRAMES

 - Y MEI AL WELDED FRAMICS
 A. PROVIDE STANDARD TYPE, FACE WELDED FRAMES DESIGNED TO BE SECURELY
 INSTALLED IN THE ROUGH OPENING AFTER FINISH WALL MATERIAL IS APPLIED.
 B. GENERAL: COMPLY WITH ANSI/SDI A250.8 AND WITH DETAILS INDICATED FOR TYPE
 - C. FABRICATE FRAMES WITH MITERED OR COPED CORNERS

 - C. FABRICATE FRAMES WITH MITERED OR COPED CORNERS.

 D. FRAMES: MINIMUM 16 GAUGE THICK STEEL SHEET, PRIMED AND DRILLED FOR RUBBER SILENCERS.

 E. SPECIAL ACOUSTIC FRAMES: ACOUSTIC FOAM FILLED IN MANUFACTURERS STANDARD PROFILES AND GAUGES.

 F. ACCEPTABLE PRODUCTS, OR APPROVED EQUAL: CURRIES COMPANY CM SERIES, DRYWALL CONSTRUCTION; SOUNDFROOF WINDOWS, INC MODEL 175C1 DOOR TYPE.
- 5. PREPARE AND INSTALL DOORS FOLLOWING MANUFACTURER'S INSTRUCTIONS AND RECOMMENDATIONS FOR TYPE OF DOOR SPECIFIED.
 - MENDALIDNS FURLY EVEC FLOOR SPECIFIED.

 A. FRAMES TO BE INSTALLED PLUMB, LEVEL, RIGID, AND IN TRUE ALIGNMENT AS RECOMMENDED IN ANSISTO A255, 11, RECOMMENDED ERECTION INSTRUCTIONS FOR STEEL FRAMES. ALL FRAMES TO BE FASTENED TO ADJACENT STRUCTURE SO AS TO
 - RETAIN THEIR POSITION AND STABILITY.
 - B. DOORS TO BE INSTALLED AND FAISTENED TO MAINTAIN ALIGNMENT WITH FRAMES TO ACHIEVE MAXIMUM OPERATIONAL EFFECTIVENESS AND APPEARANCE.

 C. INSTALLATION OF HARDWARE ITEMS SHALL BE IN ACCORDANCE WITH THE HARDWARE MANUFACTUR
- 6. DOOR HARDWARE TO MATCH STYLE, TYPE AND MANUFACTURER OF EXISTING DOORS UNLESS OTHERWISE NOTED. NEW LOCKS TO BE KEYED INTO BUILDING MASTER KEY SYSTEM. A. HINGES GASKETING AND SEALS FOR ACOUSTIC DOOR, PROVIDED BY MANUFACTURER

DIVISION 9

- PROVIDE AND INSTALL DRYWALL SYSTEMS AS INDICATED ON THE PLANS TO ACHIEVE THE BUILDING CODE COMPLIANT AND ACOUSTIC ASSEMBLIES REQUIRED TO PRODUCE A COMPLETE FINISHED SYSTEM.
 - A, ASSEMBLY COMPONENTS CONSIST OF, BUT ARE NOT LIMITED TO THE FOLLOWING:
 - STEEL STUDS & RUNNERS: 3 \$\frac{1}{6}\$" WIDE, 20 GAUGE, TYPES 358CWS (STUDS) & 358CWR (RUNNERS) BY U.S. GYPSUM OR EQUAL.
 - 2. \$ STANDARD AND TYPE 'X' GYPSUM SOARD AS MANUFACTURED BY U.S. GYPSUM COMPANY OR APPROVED EQUAL.
 3. FASTENINGS: TYPE S HI-LO SCREWS OR MANUFACTURERS RECOMMENDED.
 - 4. EDGE BEADS: EQUAL TO U.S. GYPSUM #200B.
 - 5. JOINT COMPOUND AND TAPE: PRE-MIXED, FAST SETTING COMPOUND WITH DRYING TIME NOT TO EXCEED 90 MINUTES. PAPER OR SELF-ADHERING FIBER
 - 6. CORNER BEADS: FOUAL TO U.S. GYPSUM DUR-A-BEAD.
 - 5. CURREN BEAUS. EVALLE OF SOME OFFICIAL OFFICIAL OF SOME OFFICIAL OFFICIAL
- 2. PROVIDE AND INSTALL, IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS, THE ACOUSTIC LAY-IN CEILING SYSTEM AS NOTED ON THE PLANS.

 - A. SYSTEM CONSIST OF THE FOLLOWING 1. LAY-IN TILE: WET CUT MINERAL FIBER
 - 2, SIZE: 24" X 24" X 24" X 3"
 - 3. EDGE: SQUARE 4, NRC: 0.80
 - 5, GRID; PRELUDE 接 SUSPENSION SYSTEM BY ARMSTRONG OR APPROVED EQUAL 6, TYPE: ULTIMA HIGH NRC (FINE TEXTURE), MODEL 1940 BY ARMSTRONG OR
 - 7, COLOR: WHITE
- 3. PROVIDE AND INSTALL, IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS, RESILIENT FLOORING AS NOTED ON THE PLANS.
 - A. STATIC DISSIPATING VCT: 12" X 12" X 12" X 12" THICK VINYL COMPOSITION TILE WITH ANTI-STATIC ADDITIVES,
 - AN INSTALLO AUDITIVES.

 B. TYPE: S1985 SOT AS WANUFACTURED BY ARMSTRONG OR APPROVED EQUAL.

 C. COLOR: AS SELECTED BY OWNER FROM MANUFACTURERS AVAILABLE CHOICES.

 D. INSTALLATION ACCESSORIES: S-202 SOT ADHESIVE, COPPER GROUNDING STRIPS AND S-392 SOT POLISH BY ARMSTRONG OR APPROVED EQUAL.
- E. BASE: 4" HIGH X & THICK RUBBER, VINYL COVE, COLOR AS SELECTED BY OWNER FROM MANUFACTURERS AVAILABLE CHOICES,
- 4. APPLY PAINT FINISHES TO NEW AND EXISTING CONSTRUCTION AS NOTED IN THE ROOM FINISH SCHEDULE. INSPECT ALL SURFACES PRIOR TO THE START OF PAINTING, NOTIFY THE ARCHITECT OF ANY CONDITIONS THAT MAY ADVERSELY AFFECT THE QUALITY OF THE FINISHED WORK.

 A. DRYWALL: (2)-COATS PRATT & LAMBERT FLAT "RED SEAL SELF-PRIMING INTERIOR WATERBORNE" Z2003 SERIES PRIMER. (2)-COATS SHERWIN WILLIAMS "HARMONY" INTERIOR ACKYLIC LATE. EGGSHELL FINISH.

 B. METAL: (1)-COAT PRATT & LAMBERT Z1001 INTERIOR EXTERIOR WATERBORNE PRIMER. (1)-COAT PRATT & LAMBERT Z1001 INTERIOR EXT EPOXY EGGSHELL.

 C. COLORS: AS SELECTED BY OWNER FROM MANUFACTURER'S AVAILABLE CHOICES.



PROJECT:

CITY OF **NOVI VIDEO STUDIO**

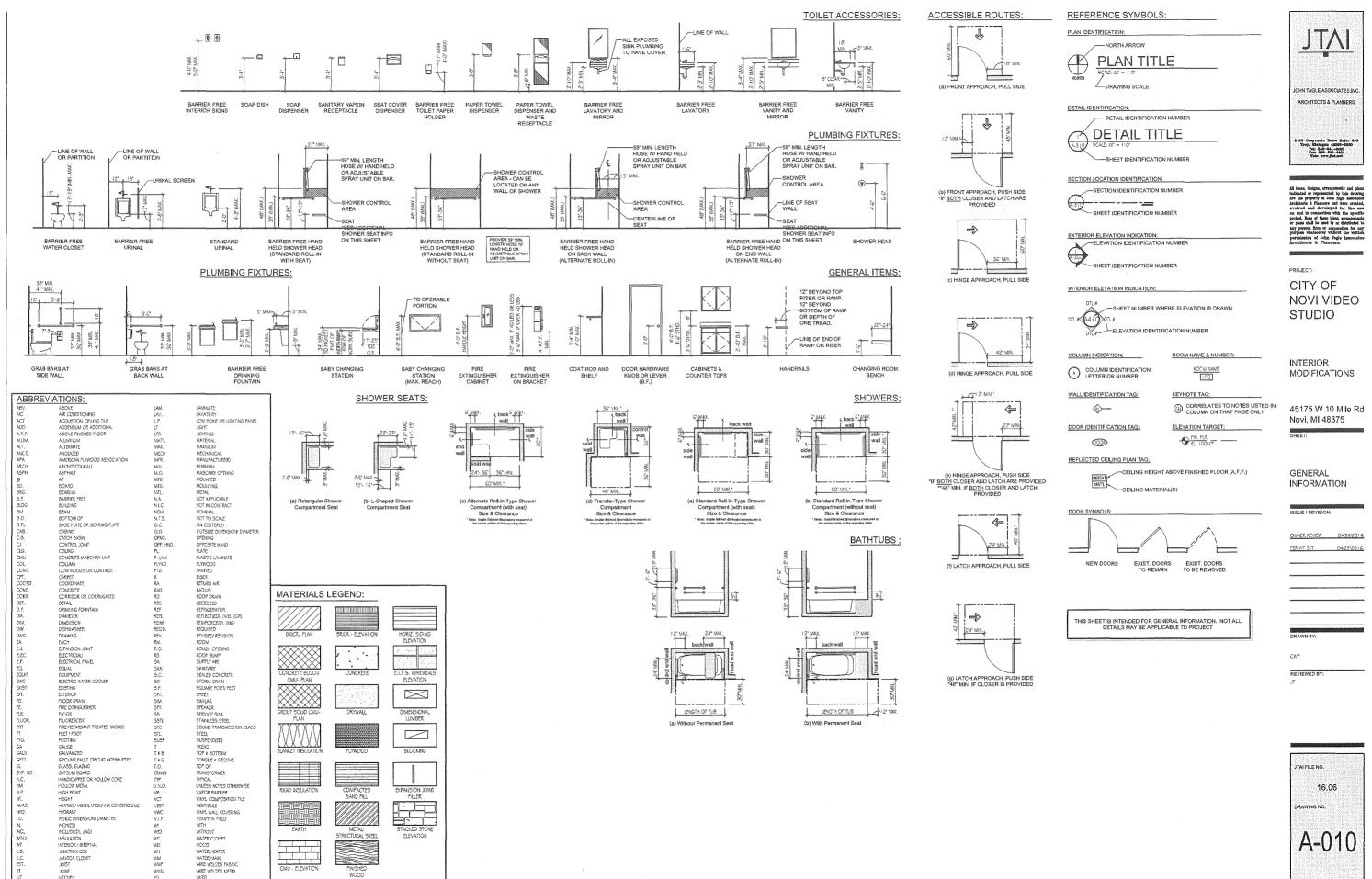
INTERIOR MODIFICATIONS

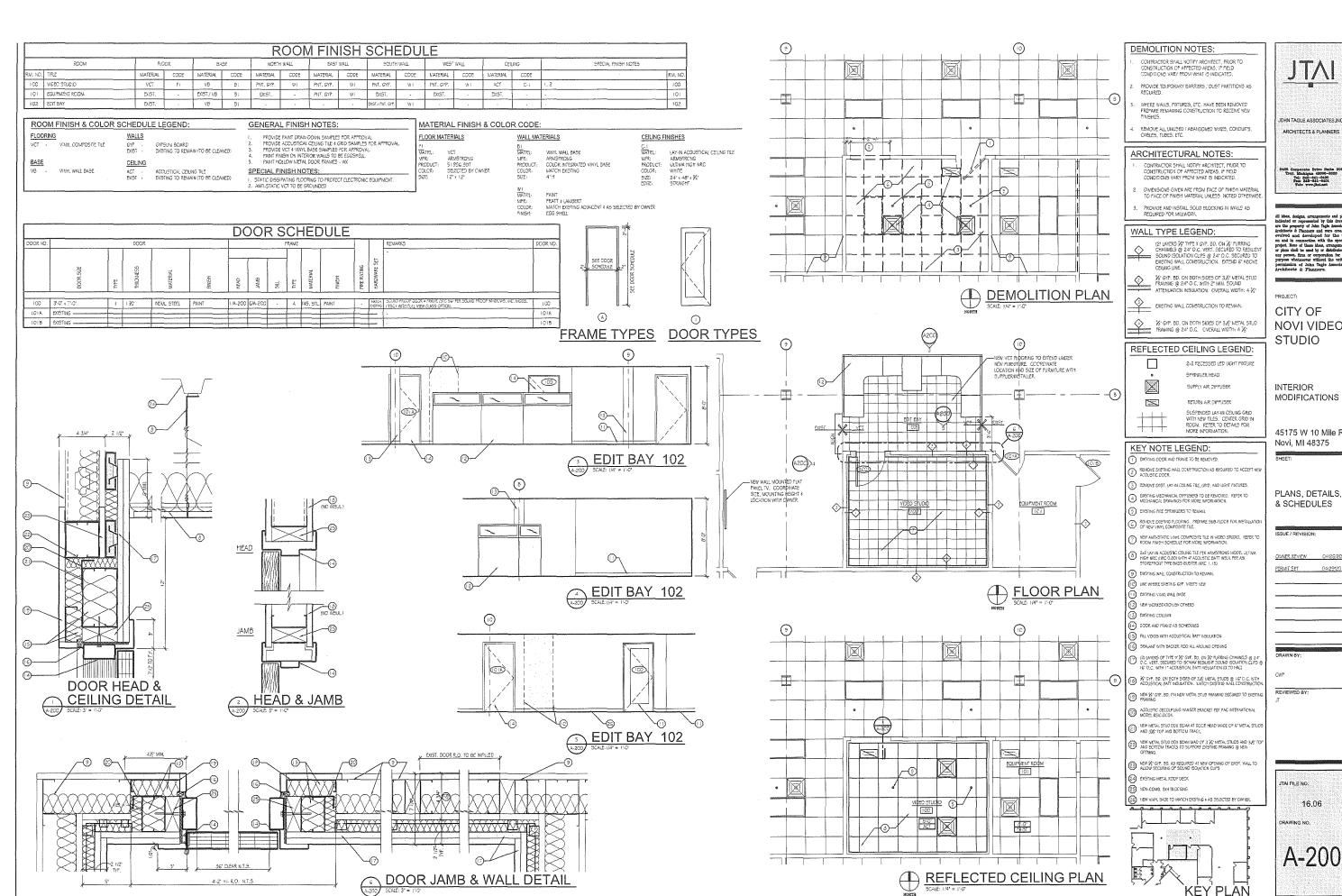
45175 W 10 Mile Rd Novi, MI 48375

GENERAL NOTES

SPECIFICATIONS

TAI FILE NO. 16.06



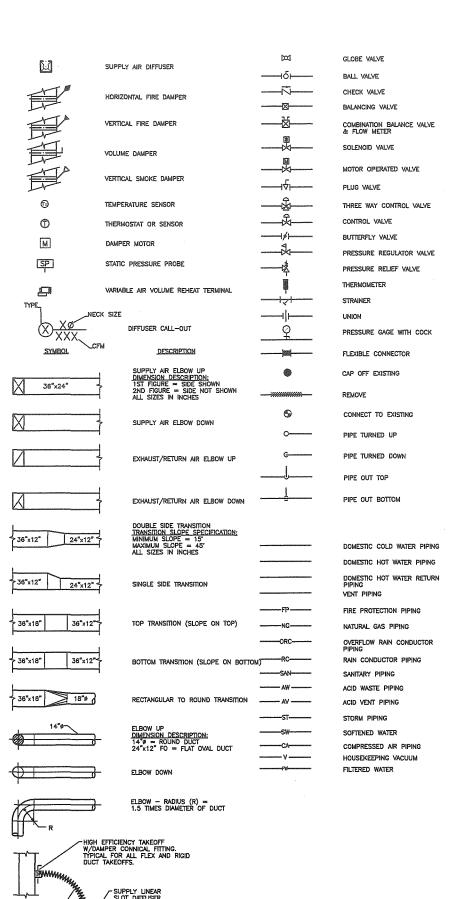




NOVI VIDEO

45175 W 10 Mile Rd

A-200



23 00 00 BASIC MECHANICAL REQUIREMENTS

- 1. ALL WORK TO BE DONE AND MATERIALS FURNISHED COMPLYING WITH APPLICABLE LAWS AND REGULATIONS, INCLUDING THE 2012 MICHIGAN MECHANICAL CODE (M.M.C.). ASHRAE 90.1-2007 "ENERGY STANDARDS FOR BUILDINGS EXCEPT LOW-RISE RESIDENTIAL BUILDINGS", ASHRAE 62.1-2007 VENTILATION FOR ACCEPTABLE INDOOR AIR QUALITY", 2012 INTÉRNATIONAL PLUMBING CODE (M.P.C.). CURRENTLY ENFORCED MICHIGAN BUILDING CODE (M.B.C.), AND LOCAL, STATE, AND FEDERAL FIRE SAFETY CODES (NFPA).
- ALL MATERIALS USED SHALL BE NEW AND UNDAMAGED.
- 3. ALL WORK PERFORMED SHALL BE IN ACCORDANCE WITH CURRENT CONSTRUCTION INDUSTRY STANDARDS AND WORKMANSHIP
- 4. CONTRACTOR TO PROVIDE ACCESS DOORS (RATED OR NON-RATED AS REQUIRED WHERE VALVES OR EQUIPMENT ARE CONCEALED BEHIND A NON-ACCESSIBLE CEILING OR WALL
- 5. FURNISH STEEL SLEEVES WHERE PIPES PENETRATE RATED WALLS. PROVIDE FIRESTOPPING MATERIALS AND SYSTEM TO MAINTAIN THE REQUIRED RATING OF THE WALL PENETRATED. PROVIDE SHOP DRAWINGS SHOWING LISTING AND RATING OF FIRESTOPPING MATERIALS
- 6. ALL MANUFACTURED EQUIPMENT, ACCESSORIES AND MATERIALS SHALL BE USED AS INTENDED BY THE MANUFACTURER, IN STRICT ACCORDANCE WITH THE MANUFACTURER'S WRITTEN INSTALLATION, OPERATION AND MAINTENANCE INSTRUCTIONS.
- 7. THE CONTRACTOR SHALL PROVIDE. IN ADDITION TO ANY OTHER WARRANTIES SPECIFIED, A ONE (1) YEAR FULL LABOR AND MATERIAL WARRANTY ON ALL WORKMANSHIP, MATERIAL AND EQUIPMENT FURNISHED FOR THIS PROJECT.
- 8. THE MECHANICAL CONTRACTOR IS RESPONSIBLE FOR LOCATING ALL OPENINGS AND REQUIRED LINTELS NEEDED FOR THE INSTALLATION OF MECHANICAL
- 9. THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING DETAILS AND TEMPLATES OF ALL OPENINGS NECESSARY FOR MECHANICAL EQUIPMENT INSTALLATION INCLUDING: HOUSING, ACCESS DOORS, INSPECTION DOORS, AND PASSAGEWAYS FOR MECHANICAL EQUIPMENT
- 10. THE CONTRACTOR IS RESPONSIBLE FOR SEALING CRACKS AND FINISHING ROUGH EDGES LEFT FOLLOWING MECHANICAL INSTALLATION.
- 11. THE USE OF THE MECHANICAL EQUIPMENT FOR HEATING, COOLING, OR DRYING DURING CONSTRUCTION IS PROHIBITED, UNLESS APPROVED BY WRITTEN DOCUMENTATION BY THE OWNER.
- 12. THE CONTRACTOR SHALL ARRANGE TO MEET AND INSTRUCT THE OWNER IN THE USE AND MAINTENANCE OF SYSTEMS AND EQUIPMENT, THIS INSTRUCTION SHALL BE FOR A MINIMUM OF (4) HOURS. AN ADDITIONAL (2) HOURS OF INSTRUCTION FOR THE OWNER WILL BE GIVEN IN THE OPERATION OF THE TEMPERATURE CONTROLS BY THE INSTALLER OF THE TEMPERATURE CONTROLS.
- 13. APPROVED EQUALS: MECHANICAL EQUIPMENT MANUFACTURED BY A COMPANY OTHER THAN THAT WHICH WAS SPECIFIED IN THE SCHEDULE MAY BE SUBSTITUTED BY APPROVED SHOP DRAWINGS CONTINENT UPON MEETING THE DESIGN. APPEARANCE, AND FUNCTIONAL STANDARDS ESTABLISHED BY THE ORIGINALLY SPECIFIED ITEM(S). THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING DIMENSIONS, CLEARANCES, ASSEMBLY, FIT, ETC. OF THE APPROVED EQUAL(S) AND THEIR AFFECT ON OTHER EQUIPMENT FIT AND OPERATION. THE CONTRACTOR IS LIABLE FOR ANY ADDED COSTS TO HIMSELF OR OTHERS CAUSED BY THE APPROVED EQUALS.

14. SUBMITTALS

- 14.1. FURNISH SHOP DRAWINGS TO ARCH/ENGINEER FOR APPROVAL PRIOR TO PLACING DELIVERY ORDERS. PROVIDE SHOP DRAWINGS OF ALL MANUFACTURED EQUIPMENT AND MATERIALS EXCEPT PIPE, PIPE FITTINGS, AND GALVANIZED DUCTWORK
- 14.2. AT SUBSTANTIAL COMPLETION OF CONSTRUCTION, FURNISH AS-BUILT PLANS TO ARCH/ENGINEER FOR APPROVAL, WITHIN 90 DAYS AFTER THE DATE OF SYSTEM ACCEPTANCE, APPROVED AS-BUILT PLANS SHALL BE PROVIDED TO 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.
- 14.3. AN OPERATING MANUAL AND MAINTENANCE MANUAL SHALL BE PROVIDED TO THE BUILDING OWNER WITHIN 90 DAYS OF SYSTEM ACCEPTANCE. THESE MANUALS SHALL BE IN ACCORDANCE WITH INDUSTRY-ACCEPTED STANDARDS AND SHALL INCLUDE, AT THE MINIMUM:
- 14.4. SUBMITTAL DATA STATING EQUIPMENT SIZE AND SELECTED OPTIONS FOR EACH PIECE OF EQUIPMENT REQUIRING MAINTENANCE.
- 14.4.1. OPERATION AND MAINTENANCE MANUALS FOR EACH PIECE OF EQUIPMENT REQUIRING MAINTENANCE, REQUIRED ROUTINE MAINTENANCE ACTIONS SHALL BE CLEARLY IDENTIFIED.
- NAMES AND ADDRESSES OF AT LEAST ONE SERVICE AGENCY.
- 14.4.3. HVAC CONTROLS SYSTEM MAINTENANCE AND CALIBRATION INFORMATION. INCLUDING WIRING DIAGRAMS, SCHEMATICS, AND CONTROL SEQUENCE DESCRIPTIONS, DESIRED OR FIELD-DETERMINED SET POINTS SHALL BE PERMANENTLY RECORDED ON CONTROL DRAWINGS AT CONTROL DEVICES OR IN PROGRAMMING COMMENTS.

23 05 00 COMMON WORKS FOR HVAC

- 1. QUALITY ASSURANCE: WHERE EQUIPMENT OR ACCESSORIES ARE USED WHICH DIFFER IN ARRANGEMENT, CONFIGURATION, DIMENSIONS, RATINGS, OR ENGINEERING PARAMETERS FROM THOSE INDICATED ON THE CONTRACT DOCUMENTS, THE CONTRACTOR IS RESPONSIBLE FOR ALL COSTS INVOLVED IN INTEGRATING THE EQUIPMENT OR ACCESSORIES INTO THE SYSTEM AND FOR OBTAINING THE PERFORMANCE FROM THE SYSTEM INTO WHICH THESE ITEMS ARE PLACED. THIS MAY INCLUDE CHANGES FOUND NECESSARY DURING THE TESTING. ADJUSTING, AND BALANCING PHASE OF THE PROJECT.
- CONTINUITY OF EXISTING SERVICES: DO NOT INTERRUPT OR CHANGE EXISTING SERVICES WITHOUT PRIOR WRITTEN APPROVAL FROM THE OWNER'S PROJECT REPRESENTATIVE. WHEN INTERRUPTION IS REQUIRED, COORDINATE THE DOWN TIME WITH THE USER AGENCY TO MINIMIZE DISRUPTION TO THEIR ACTIVITIES. UNLESS SPECIFICALLY STATED, ALL WORK INVOLVED IN INTERRUPTING OR CHANGING EXISTING SERVICES IS TO BE DONE DURING NORMAL WORKING HOURS UNLESS DIRECTED BY THE OWNER
- PROTECTION OF FINISHED SURFACES: FURNISH ONE CAN OF TOUCH_UP PAINT FOR EACH DIFFERENT COLOR FACTORY FINISH WHICH IS TO BE THE FINAL FINISHED SURFACE OF THE PRODUCT. DELIVER TOUCH UP PAINT WITH OTHER "LOOSE AND DETACHABLE PARTS" AS COVERED IN THE GENERAL REQUIREMENTS.
- SEALING AND FIRE STOPPING: SEALING AND FIRE STOPPING OF SLEEVES/OPENINGS BETWEEN DUCTWORK, PIPING, ETC. AND THE SLEEVE, STRUCTURAL OR PARTITION OPENING SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR WHOSE WORK PENETRATES THE OPENING. PROVIDE ALL FIRE STOPPING OF FIRE RATED PENETRATIONS AND SEALING OF SMOKE RATED PENETRATIONS IN COMPLIANCE WITH SECTION 07 84 00 FIRE STOPPING.
- SUBMITTALS: SUBMIT FOR ALL EQUIPMENT AND SYSTEMS AS REQUIRED BY THE OWNER, MARKING EACH SUBMITTAL WITH THAT SPECIFICATION SECTION NUMBER MARK GENERAL CATALOG SHEETS AND DRAWINGS TO INDICATE SPECIFIC ITEMS BEING SUBMITTED AND PROPER IDENTIFICATION OF EQUIPMENT BY NAME AND/OR NUMBER, AS INDICATED IN THE CONTRACT DOCUMENTS
- CERTIFICATES AND INSPECTIONS: OBTAIN AND PAY FOR ALL REQUIRED STATE INSTALLATION INSPECTIONS EXCEPT THOSE PROVIDED BY THE ARCHITECT/ENGINEER IN ACCORDANCE WITH CODE. DELIVER ORIGINALS OF THESE CERTIFICATES TO THE DIVISION PROJECT REPRESENTATIVE. INCLUDE COPIES OF THE CERTIFICATES IN THE OPERATING AND MAINTENANCE INSTRUCTIONS.
- OPERATION AND MAINTENANCE DATA: SUBMIT OPERATIONAL AND MAINTENANCE DATA FOR ALL INSTALLED EQUIPMENT AND CONTROLS, SUBMIT NO OF COPIES AS INSTRUCTED BY THE OWNER
- DEMOLITION PERFORM ALL DEMOLITION AS INDICATED ON THE DRAWINGS TO ACCOMPLISH NEW WORK. WHERE DEMOLITION WORK IS TO BE PERFORMED ADJACENT TO EXISTING WORK THAT REMAINS IN AN OCCUPIED AREA, CONSTRUCT TEMPORARY DUST PARTITION TO MINIMIZE THE AMOUNT OF CONTAMINATION OF THE OCCUPIED SPACE. WHERE PIPE OR DUCT IS REMOVED AND NOT RECONNECTED WITH NEW WORK, CAP ENDS OF EXISTING SERVICES AS IF THEY WERE NEW WORK. COORDINATE WORK WITH THE USER AGENCY TO MINIMIZE DISRUPTION TO THE EXISTING BUILDING OCCUPANTS, ALL PIPE, WIRING AND ASSOCIATED CONDUIT, INSULATION, DUCTWORK, AND SIMILAR ITEMS DEMOLISHED, ABANDONED, OR DEACTIVATED ARE TO BE REMOVED FROM THE SITE BY THE CONTRACTOR. ALL PIPING AND DUCTWORK SPECIALTIES ARE TO BE REMOVED FROM THE SITE BY THE CONTRACTOR UNLESS THEY ARE DISMANTLED AND REMOVED OR STORED BY THE USER AGENCY. ALL DESIGNATED EQUIPMENT IS TO BE TURNED OVER TO THE USER AGENCY FOR THEIR USE AT A PLACE AND TIME SO DESIGNATED. MAINTAIN THE CONDITION OF MATERIAL AND/OR EQUIPMENT THAT IS INDICATED TO BE REUSED EQUAL TO THAT EXISTING BEFORE WORK BEGAN.
- COORDINATION VERIFY THAT ALL DEVICES ARE COMPATIBLE FOR THE SURFACES ON WHICH THEY WILL BE USED. THIS INCLUDES, BUT IS NOT LIMITED TO, DIFFUSERS, REGISTER, GRILLES, AND RECESSED OR SEMI RECESSED HEATING AND/OR COOLING TERMINAL UNITS INSTALLED IN/ON ARCHITECTURAL SURFACES. COORDINATE ALL WORK WITH OTHER CONTRACTORS PRIOR TO INSTALLATION. ANY INSTALLED WORK THAT IS NOT COORDINATED AND THAT INTERFERES WITH OTHER CONTRACTOR'S WORK SHALL BE REMOVED OR RELOCATED AT THE INSTALLING CONTRACTOR'S EXPENSE.

23 05 93 TESTING, ADJUSTING, AND BALANCING

- 1. THE MECHANICAL CONTRACTOR SHALL SUBCONTRACT A TEST AND BALANCE CONTRACTOR TO BALANCE THE SYSTEMS DESCRIBED BELOW.
- 2. THE BALANCING SHALL BE COMPLETED BY AN INDEPENDENT TEST AND BALANCE CONTRACTOR WHO IS NOT AN EMPLOYEE OF THE MECHANICAL CONTRACTOR.
- 3. PER COMPLIANCE WITH ASHRAE 90.1-2007, THE BALANCER SHALL SUBMIT AN AIR BALANCE REPORT TO THE ENGINEER AND STATE OR COUNTY INSPECTOR
- 4. THE BALANCE REPORT SHALL SHOW PROOF THAT THE SYSTEM HAS BEEN BALANCED TO +/- 10% OF THE DESIGNED FLOW RATE, IT IS THE MECHANICAL CONTRACTOR AND TEST AND BALANCER'S DUTY TO PROVIDE ACCURATE DATA, SO AREAS OF INCORRECT FLOW MAY BE DISCLOSED TO THE ENGINEER, INSPECTOR
- ALL AIRSIDE SYSTEMS, COMPONENTS, ETC. INCLUDING SUPPLY, RETURN, OUTDOOR, AND EXHAUST AIR SYSTEMS SHALL BE BALANCED. THE BALANCER SHALL PROVIDE SHEAVES AND BELTS AS NEEDED TO PROPERLY BALANCE EQUIPMENT TO +/- 10% OF THE DESIGNED AIRFLOWS
- 5.1. ALL DIFFUSERS, REGISTERS, GRILLES, AND LOUVERS SHALL BE INDIVIDUALLY BALANCED AND LISTED IN THE BALANCE REPORT.
- 5.2. ALL AIRSIDE EQUIPMENT, SUPPLY, RETURN, AND OUTDOOR AIR FLOWRATES SHALL BE LISTED IN THE BALANCE REPORT.
- 6. ALL HVAC MOTOR DATA INCLUDING FREQUENCY (RPM), AMP DRAW, HORSEPOWER, EXTERNAL STATIC PRESSURE, HEAD PRESSURE, ETC., SHALL BE INCLUDED IN THE BALANCE REPORT

23 07 13 DUCT INSULATION

- 1. ALL DUCTWORK SHALL BE INSULATED PER ASHRAE 90.1-2007 TABLE 6.8.2.B.
- 1.1. MINIMUM SUPPLY AIR DUCT INSULATION: NONE REQUIRED.
- 1.2. MINIMUM RETURN AIR DUCT INSULATION: NONE REQUIRED. 1.3. MINIMUM EXHAUST AIR DUCT INSULATION: NONE REQUIRED.
- 2. WHERE DESIGNATED, SUPPLY AND RETURN AIR DUCTWORK SHALL BE LINED WITH 1" ACOUSTICAL DUCT LINER. OVERSIZE DUCTWORK AS REQUIRED AS DIMENSIONS SHOWN ON PLAN ARE INTERIOR DUCT DIMENSIONS!!!
- ALL INSULATION MATERIALS TO

23 09 00 INSTRUMENTATION AND CONTROL FOR HVAC

- 1. THE CONTRACTOR SHALL FURNISH AND INSTALL ALL NECESSARY THERMOSTATS. CONTROL RELAYS, SENSORS, CONTROL WIRING, DAMPERS, ACTUATORS, ETC., REQUIRED TO PROVIDE A FULLY OPERATIONAL HVAC SYSTEM.
- 2. THE THERMOSTAT SHALL BE DIGITAL-ELECTRONIC, WITH BACKLIT LCD DISPLAY, 7-DAY PROGRAMMABLE, WITH PROGRAMMABLE OCCUPIED AND UNOCCUPIED "CONTINUOUS FAN" AND "AUTO FAN" FUNCTIONALITY, 2-STAGE HEAT, 2-STAGE
- 3. THE FURNACE(S) AND CONDENSING UNIT(S) SHALL ALL UTILIZE THERMOSTAT CONTROL SYSTEM FURNISHED AS PART OF THE UNIT(S), OR SPECIFIED TO BE PROVIDED AS OPTIONS OR ACCESSORIES BY THE MANUFACTURER OF THE UNIT(S). ALL WIRING WILL BE DONE IN ACCORDANCE WITH APPROVED SHOP DRAWINGS FURNISHED BY THE MANUFACTURER.

23 31 00 HVAC DUCTS AND CASINGS

- 1. ALL DUCTWORK SHALL BE FABRICATED AND INSTALLED IN COMPLIANCE WITH 2012 M.M.C. CHAPTER 6, AND SMACNA HVAC DUCT CONSTRUCTION STANDARDS. ALL DUCTWORK SHALL BE SEALED AND INSULATED IN ACCORDANCE WITH ASHRAE 90.1-2007
- 2. DUCTWORK SHALL BE GALVANIZED STEEL FOR DUCTS: HOT-DIPPED GALVANIZED STEEL SHEET, ASTM A653/A653M FS TYPE B, WITH G60/Z180 COATING.
- 3. JOINTS SEALERS AND SEALANTS: NON-HARDENING, WATER RESISTANT, MILDEW AND MOLD
- 3.1. TYPE: HEAVY MASTIC OR LIQUID USED ALONE OR WITH TAPE, SUITABLE FOR JOINT CONFIGURATION AND COMPATIBLE WITH SUBSTRATES, AND RECOMMENDED BY MANUFACTURER FOR PRESSURE CLASS OF DUCTS.
- SURFACE BURNING CHARACTERISTICS: FLAME SPREAD OF ZERO, SMOKE DEVELOPED OF ZERO, WHEN TESTED IN ACCORDANCE WITH ASTM E84.
- 4. HANGER ROD: ASTM A36/A36M; STEEL, GALVANIZED; THREADED BOTH ENDS, THREADED ONE END, OR CONTINUOUSLY THREADED
- 5. ROUND FLEX DUCT SHALL BE USED FOR DIFFUSER-GRILLE CONNECTIONS ABOVE LAY-IN CEILINGS, FLEX DUCT MAY BE USED IN OTHER AREAS WHERE THE DUCT AND GRILLE ARE PERMANENTLY AND REASONABLY ACCESSIBLE. MAXIMUM FLEX DUCT LENGTH IS 6'-0". PERFORMANCE OF FLEXIBLE DUCT SHALL MEET OR EXCEED THE RIGID DUCTWORK
- 6. UNLESS OTHERWISE NOTED ON PLANS, ALL SUPPLY AND RETURN DUCTWORK LOCATED WITHIN TEN (10) FEET OF THE EQUIPMENT FAN SHALL BE LINED WITH 1" ACOUSTICAL DUCT LINER, DUCT DIMENSIONS SHOWN ON MECHANICAL PLANS ARE INTERIOR DIMENSIONS.
- 7. ALL DUCT LINER SHALL HAVE A FLAME SPREAD AND SMOKE DEVELOPMENT 25 OR LESS AND 50 OR LESS WHEN TESTED BY ASTM E-84 (NFPA 255) METHOD



PROJECT

CITY OF **NOVI VIDEO** STUDIO

INTERIOR MODIFICATIONS

45175 W 10 Mile Rd Novi. MI 48375

COVER SHEET **SPECIFICATIONS**

04,18.16	RE\
04.22.16	OWNER'S REV
04.29.16	PERMIT

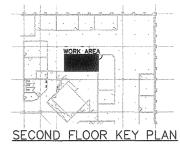
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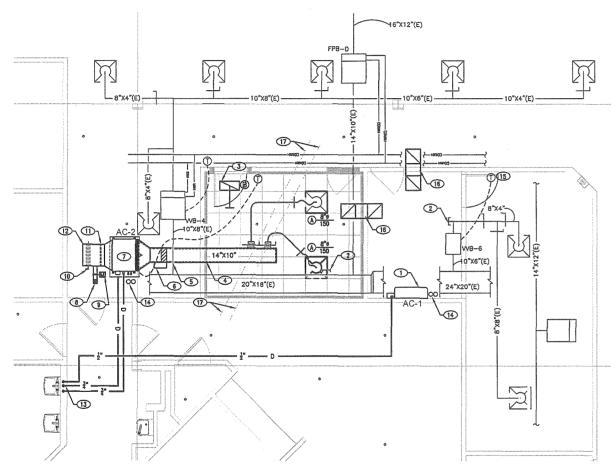
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NOVI STUDIO NEW HVAC PLAN SCALE: 1/4" = 1'

FIRE-PROTECTION NOTES:

FIRE-PROTECTION CONTRACTOR SHALL VISIT THE SITE TO DETERMINE EXACT SCOPE OF WORK CURRENTLY THERE ARE TWO SPRINKLER HEADS IN PROPOSED STUDIO, FIRE-PROTECTION CONTRACTOR SHALL ADJUST SPRINKLER HEAD SPACING AND FLOW FOR ORDINARY—HAZARD OCCUPANCY.

KEYED NOTES:

- 1) INSTALL NEW INDOOR AC UNIT BELOW CEILING. PROVIDE CONDENSATE PUMP.
- 2 NEW DUCT CAP
- 3 SEE DETAIL-2 FOR RETURN AIR GRILLE INSTALLATION
- SEE DETAIL-3 FOR DUCT PENETRATION
- MODIFY/REPOUTE EXISTING 10"X8" DUCT TO MAKE SPACE FOR NEW 14"X10" SPACE (IF NEEDED)

 INTERLOCK NEW DUCT HEATER WITH FAN-COIL-UNI FAN OPERATION.

- FAN OPERATION.

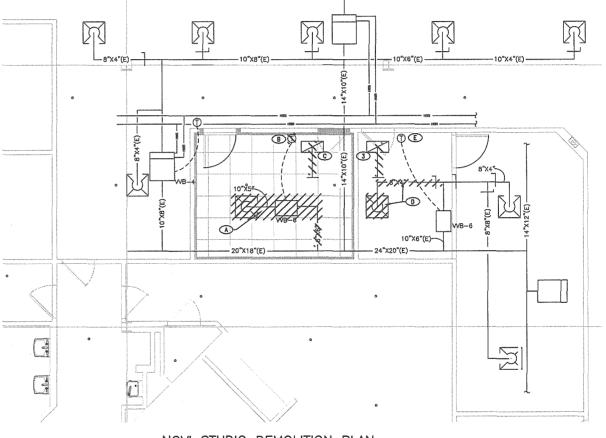
 THANG FAN-COIL UNIT FROM STRUCTURE ABOVE WITH THREADED-ROD AND VIBRATION ISOLATORS

 6"X6" UP THRU ROOF, PROVIDE GOOSENECK ABOVE ROOF LEVEL

 CONTRACTOR SHALL BALANCE OUTSIDE AIR TO 25-CPM. INTERLOCK MOTORIZED DAMPER WITH FAN-COIL UNIT OPERATION. DAMPER SHALL CLOSE WHEN THE UNIT IS NOT IN OPERATION
- (10) PROVIDE FULL SIZE RETURN AIR DAMPER IN RETURN AIR PLENUM. BALANCE DAMPER TO 275-CFM
- 11) MERV-8 FILTER. PROVIDE ACCESS TO REPLACE FILTER
- 12 24"WX18"HX30"L PLENUM

- TERMINATE CONDENSATE LINES IN AN APPROVED FIXTURE
 REFRIGERANT LINES FROM CONDENSING UNIT ON ROOF
 RELOCATED THERMOSTAT. REWIRE WITH VAV BOX
- (16) 16X12 RETURN AIR 1° LINED BOX WITH TWO 16X16 OPENINGS ON TOP. INSTALL AS HIGH AS POSSIBLE SEE DETAIL-1

17 EXISTING BEAM.



16"X12"

NOVI STUDIO DEMOLITION PLAN SCALE: 1/4" = 1'

DEMOLITION KEYED NOTES:

- (A) REMOVE EXISTING VAV BOX, CONTROLS, SUPPLY AIR DUCT AND DIFFUSER
 (B) REMOVE EXISTING THERMOSTAT
- © REMOVE EXISTING RETURN AIR GRILLE
- D REMOVE EXISTING DIFFUSER AND DUCT
- E EXISTING THERMOSTAT TO BE RELOCATED



PROJECT: CITY OF **NOVI VIDEO** STUDIO

INTERIOR MODIFICATIONS

45175 W 10 Mile Rd Novi, MI 48375

DEMOLITION PLAN NEW HVAC PLAN

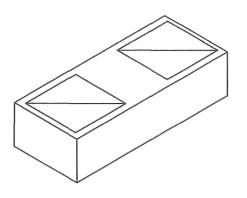
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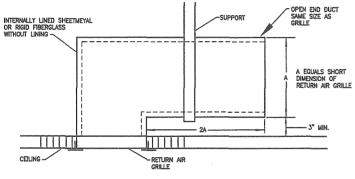
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M-200





DETAIL — 1
RETURN AIR BOX DETAIL
NO SCALE



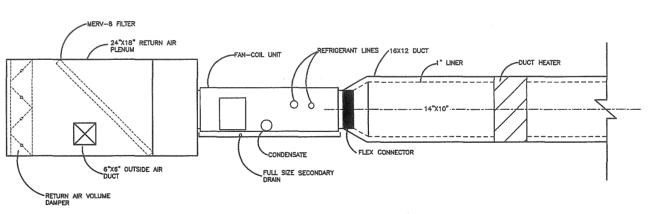
DETAIL - 2 TYPICAL CEILING RETURN AIR GRILLE SOUND TRAP NO SCALE

OUTSIDE AIR CALCULATION						
SPACE TYPE	SPACE AREA SQ. FT	DENSITY PEOPLE/1000 SF	NO. OF PEOPLE	OUTSIDE AIR PER PERSON	OUTSIDE AIR REQUIRED	
STUDIO	158	-	3	6-CFM	18-CFM	
CONTROL RM.	97	-	0	0-CFM	O-CFM	
TOTAL OUTSIDE AIR REQUIRED 18—CFM						
TOTAL OUTSID	TOTAL OUTSIDE AIR SUPPLIED 25-CFM					

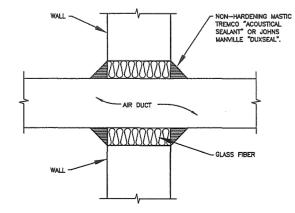
DIFFUSER, GRILLE, AND LOUVER SCHEDULE								
FINISHES: 1) BY ARCH. NOTES: A) SEE DRAWING FOR NECK SIZE AND AIR QUANTITY B) PROVIDE FRAME COMPATIBLE WITH WALL 1) BY ARCH. E) OBD. F) REFER TO ARCHITECTURAL PLANS FOR EXACT LOCATION G) FACTORY UNED PLENUM								
TAG	MANUF.	MODEL		DESCRIPTION FINISH NOTE				NOTES
(A)	TITUS	OMNI	CEILING DIFFUSER	EILING DIFFUSER 24"X24". ALUMINUM CONSTRUCTION 1 A.B.C.E		A,B,C,E,F		
8	mus	50F	RETURN AIR GRILL	JRN AIR GRILLE 24"X12" GRID FOR LAY-IN CEILING 1 A.B.F		A,B,F		

DUCT HEATER S	CHEDULE				
MARK	DH-1				
MANUFACTURER	GREENHECK				
INDOOR /OUTDOOR UNIT MODEL NO.	IDHC				
UNIT ELECTRICAL (V / PH / HZ)	12V. 1PHASE, 60-HZ				
POWER (KW)	3-KW				
SIZE	DUCT SZIE				
CONTROLS	SCR				
AIRFLOW SWITCH, POWER DISCONNECT					

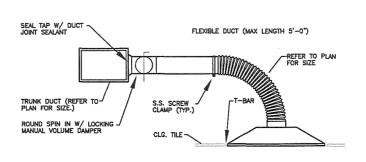
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	AC-1 SCHE	DULE	AC-2 SCHEDULE			
	MARK	AC-1	MARK	AC-2		
	MANUFACTURER	MITSUBISHI	MANUFACTURER	MITSUBISHI		
	INDOOR /OUTDOOR UNIT MODEL NO.	PKA-A12HA6 PUY-A12NHA6	INDOOR /OUTDOOR UNIT MODEL NO.	PEA-A12AA6 PUY-A12NHA6		
٦	UNIT ELECTRICAL (V / PH / HZ)	208 / 203V, 1PHASE	UNIT ELECTRICAL (V / PH / HZ)	208 / 203V, 1PHASE		
	MCA (INDOOR / OUTDOOR)	1 / 13	MCA (INDOOR / OUTDOOR) MOCP	1 / 13 15		
	EER / SEER	10.1 / 15.2	EER / SEER	9.7 / 14.0		
	COOLING	12000 BUT/H	COOLING	12000 BUT/H		
	REFRIGERANT	R410A	REFRIGERANT	R410A		
	LIQUID / GAS 1/4" / 1/2"		LIQUID / GAS	1/4" / 1/2"		
	PROVIDE CONDENSATE PUMP, PROGRAM	MABLE WALL T-STAT	PROVIDE CONDENSATE PUMP, PROGRAM	MABLE WALL T-STAT		



FAN-COIL UNIT INSTALLATION DETAIL NO SCALE



DETAIL — 3
TYPICAL DETAIL OF ACOUSTICAL SEALING
OF AIR DUCT PENETRATION THRU A WALL
NO SCALE NOTE: ALL DUCTS MUST BE SEALED IN THIS MANNER



SPIN-IN AND CLG. DIFFUSER DETAIL NO SCALE





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VOLECT:

CITY OF NOVI VIDEO STUDIO

INTERIOR MODIFICATIONS

45175 W 10 Mile Rd Novi, MI 48375

> DETAILS & SCHEDULES

04.18.16 REVIEW
04.2218 OWNER'S REVIEW
04.29.16 PERMIT SET

DRAWN BY:

F.D

REVIEWED BY

JTAI FILE NO.

16.06

DRAWING NO.

M-300

A. Provide all materials of the types of makes specified, except that only pre-bid substitutions will be considered.

substitutions will be considered.

B. The drawings show the general arrangement, general design and extent of the various electrical systems and are blogrammatic. They are not intended to be scaled for rough—in measurements or to serve as shop drawings.

C. The runs of feeders and branch circuits as shown on the plans are schematic only and are not intended to show the exact routing. The final determination as to routing shall be governed by structural conditions, interferences, circuiting, etc.

EXTENT OF WORK:
 A Work shall include all labor, materials, equipment, programming and incidentals required for the construction, installation, and placing in service of the power system, lighting system, control system etc., as shown on the drawings and as specified.

III. SUBMITTALS:

A. Detailed shop drawings of equipment furnished shall be submitted to Architect for review and approval prior to installation.

and approval prior to installation.

Shop drawings shall be submitted for the following equipment.

Panel boards.

Lighting Fixtures and controls.

Jevices (Receptocles, Switches, Disconnects, Etc.)

Labels (for Equipment and Devices)

4. Lobels (for Equipment and Devices)

IV. Quality Assurance:

A. Character of Work

1. The installation shall be so made that its several components parts will function tagether as a workable system. It shall be complete with all accessories necessary for its operation, and shall be left with all equipment properly adjusted and in working order. Execute the work in conformity with the best practice, to contribute to efficiency of operation, minimum maintenan accessibility and appearance. Execute so that the installation will conform and accommodate itself to the building structure, its equipment and its usage. Drawings and specifications are intended to set forth all work and collectively they shall govern the scope, character, and design of the work. The drawings and specifications are complementary to each other and what is called for by one shall be binding as if called for by both.

S. Cooperation with Other Trades

1. When Interferences exist with the work of other trades, notify the Owner's Project Manager before installation of the work.

Crainness and Codes

1. The entire installation shall b in accordance with the governing rules and regulations of the

Ordinances and Codes

1. The entire installation shall b in accordance with the governing rules and regulations of the
National Electric Code, NFPA-101 and all local governing boards having jurisdiction and shall meet all the standards and requirements of the owner. UL and NEMA Compliance:

OL and NEMA compliance.

1. Provide materials and equipment that are UL listed and labeled and comply with applicable UL and NEMA standards. Provide components that are UL classified.

UL and NEMA standards. Provide components that are u. crossines.

Permits and inspections

1. Procure and pay for all permits required.

2. Give all required notices of inspections required by the laws or other regulations and pay all fees in connection therewith.

3. Secure certificate of final inspection and approval from the authority having jurisdiction.

. Quarantee
A. All work performed and all material and equipment furnished under this contract shall be from defects and shall remain so for a period of at least (1) year from the date of acceptance. The full cost of maintenance, labor and materials required to correct any defect during this one—year period shall be included in the submitted bid.

Vi. Cutting, Patching, Damage to other Work and Phasing—Out
A. Contractor shall do all cutting, fitting or patching of the work that may be required,
shown upon, or reasonably implied by the drawings and specifications.
Building structural members shall not be drilled, punched, cut or burned without approval of
the Architect. Contractor shall be responsible for the cost of repairing damage he inflicts on
the building structural the Architect. Controctor shall be responsible for the cost or repairing damage he limites the building structure.

C. Controctor shall be held responsible for all damage to other work caused by his work, or through the neglect of his workmen. All patching and repairing of damaged work shall be done by workmen of the proper trade, but the cost of same shall be paid by electrical

contractor.

PRODUCTS

1. WIRE AND CABLE

A. All conductors for systems of 800 voits or less shall be type THWN roted for 600 voits.

B. Conductors shall be stranded soft copper of number and sizes as required by the NEC or as shown an drawings, whichever is larger.

C. Color coding. Phase conductors red, blue and black.

D. AC type cable shall be permitted an individual light fixture whips a believe a suspended ceiling, and where concelled in wall spaces with a maximum expased above suspended ceiling of four (4) feet.

REWAYS
Wheneys shall be painted sheet steel, with hinged spring latched cover for access to wiring, and knockouts for condult entry along sides, conforming to UL 870. Cross section size shall be as indicated on drawings.

Indicated on drowings.

III. SAFETY SWITCHES

A. Switches shall be heavy duty, horsepower rated and shall have cover interlocking provisions to prevent unauthorized opening of switch door in 'on' position.

B. Switches shall have quick-make, quick-break, operating handle mechanism which shall be an integral part of the box, not the cover. Provisions for podiocking shall be included for at least three naddicks. three padiocks.

C. Fusible switches shall be equipped with class R rejection type

C. Fusible switches along the equipped what account of the control of the clips.

N. CIRCUIT BREAKER PANELBOARDS

A Branch Panelboards shall be bolt-on circuit breaker type.

Breakers shall be thermal magnetic type with inverse time characteristics on overloads and instantaneous magnetic trip on short circuit. Breakers shall have quick-break toggle mechanism, and shall be trip free on overload or short circuit. Multipole breakers shall be common trip type, handle tie bars shall not be used.

Breakers shall be rated 10,000 AIC minimum, symmetrical at 240 volts, or 14,000 AIC for 480 volts.

B. Panels shall be constructed so that breaker units can be easily added or removed without disturbing adjacent units.

C. Cabinets shall be NEC gage steel, NEAA type 1, flush cylinder, tumbler type locks and handles. Cabinet heights shall be as required for number of breakers and spaces specified. Cabinets widths shall be 20 Inch minimum, 5 3/4 Inch deep. Key panels clike.

Panelboards shall be equipped with copper phase, ground and

V. LIGHTING See lighting fixture schedule on drawings for lighting fixture description, manufacturer and lamp type.

VI. RECEPTACLES

VII. WALL SWITCHES

A. Standard wall switches shall be specification grade, 20 amp, 120-277 volt, rocker (de

VIII. WALL PLATES

A. Color to match device, stainless steel in finished areas, galvanized steel in janitor's closets, mech. and elec. rooms.

COUPMENT IDENTIFICATION

A. Namepletes shall be laminated phenolic, not less than 1/16" thick, with white surface and black core. Characters shall not be smaller than 1/8" in height. Edges of nameplates shall chamfered 1/32" at 45 deg.

B. Wire markers shall be oil-resistant, adhesive-backed vinyl film with legends atched into

surface, applied at both ends of conductor.

C. Each receptacle cover plate if on a dedicated circuit or a circuit for specific equipment (like computer, coffee, microwave etc.) shall be provided with a machine printed 5 1/2 cf of adhesive tape label indicating circuit number, and indicated use.

A. Rigid metal conduit shall be installed in all EXPOSED exterior applications. EMT for interior locations, Rigid non-metallic for underground

runa.

B. Exposed conduit shall be run parallel or perpendicular to building walls.

C. Liquid light flexible conduit shall be used to facilitate connections to motors or

C. Liquid tight flexible conduit shall be used to facilitate connections to motors or other vibrating equipment.

D. Where conduits penetrate fire walls or partitions, provide UL rated fire stop to mointon integrity of fire barriers.

E. Conduit connections to pull boxes, control panels and other electrical equipment enclosures shall be made by use of double steel locknuts.

F. All conduits shall be substantially supported by pipe straps or suitable clamps or hangers, so attached to the structure as to provide a substantial and rigid insulation. John use of hangers with plumbing lines will not be permitted.

G. Running threads will not be permitted. Where necessary split couplings or Erickson couplings shall be used.

IL WIRE AND CABLE

A. Conductors for power wiring shall be a minimum of \$12 AWG
and control wiring shall be a minimum of \$14 AWG.

B. Splices and tops of conductors \$10 AWG and smaller shall be
made using electrical spring connectors with polywinyl chloride
insulating caps.

C. Splices and tops of conductors larger than \$10 AWG shall be
made using electrical spring connectors. Finish splice or top shall be insulated with
600V, 90 deg. C rated insulating cover or one layer or vinyl backed mastic followed
by two half-lopped layers or electrical tape.

D. Interiors of all conduits shall be swabbed clean and dry before
pulling size.

D. Interiors of all conduits shall be swebbed clean and dry before pulling wire.

E. The best care shall be exercised while installing conductors in conduits so as not to damage conductor insulation. Use only
U. Isated wire pulling lubricants for pulling—in conductors.

F. Free ends and loops of wire at boxes and enclosures shall be pushed bock into box and protected by blank covers or other means, until the finishing work is completed to the point that final connections can be made.

E. Each receptacle circuit shall have a separate neutral conductor. There shall be no sharing of neutral conductors.

H. All control and power wires shall be identified at both ends; i.e. at the power, lighting and control panel and at the device connected.

I. Torque all terminations in compliance with associated device UL listing.

BOXES

A. Junction boxes shall be installed where indicated and where necessary to terminate, top or redirect multiple circuit runs.

B. Support boxes independently of conduits by means of brackets, rod hangers, botts and other suitable means.

C. Pull boxes shall be installed where required for offsets or bends, to facilitate the installation of conductors or where shown.

IV. ELECTRICAL EQUIPMENT SUPPORT DEVICES

Conerol
 Junction boxes, pull boxes, control stations, cobinets, switches, and other electrical equipment shall be rigidly supported by attachment of the building structure prior to the installation of conduits.

2. Conduits shall be supported at intervals not greater than 10 feet and within 3 feet 2. Conduits shall be supported at Intervale not greater than 10 feet and wrann 3 reet of any bend or autiet box.

B. Conduit shall be kept at least 12 inches away from parallel runs of high temperature radiating surfaces and at least 7 inches away from such surfaces at crossings. Where such surfaces are insulated, conduit shall clear the surface by 2 inches. Conduit shall not run directly under cold water lines.

C. Groups of exposed parallel conduits shall be supported by conduit racks.

V. PANELBOARDS, STARTERS, AND DISCONNECT SWITCHES

I panelboards, starters, and disconnect switches shall be mounted so that top is no more than 72 inches above finished floor and in locations which are clearly

no more than 72 inches above traished floor and in locations which are clearly accessible.

B. All electrical equipment shall be clearly labeled to indicate the equipment controlled. Nameplates shall be provided for this purpose.

C. Panelboard branch circuits shall be connected to appropriate branch breakers and circuit number as shown on drawings.

D. Provide nameplate on each panelboard, identifying panelboard designation and power source. Panelboards shall be supplied with "sub-feeds" and main breakers when indicated.

E. provide new typewritten circuit directories in each new and revised panelboard.

VI. MOTOR OVERLOADS

A. Overload heaters/sensors shall be provided by the contractor.

Contractor shall be responsible for field verifying actual motor horsepower, nameplate full load current and service factor of each motor and provide or replace overload heaters as required by the National Electrical Code and in accordance with manufacturer's suggested size.

A. Fuses shall be provided by the electrical contractor.

B. Feeder fuses 600 amp and below shall be UL Class RK1, time

B. Feeder fuses 600 cmp and below shall be us whole with a field of delay.
C. Motor branch circuit fuses shall be Ul. Class RKS, time delay.
D. Provide fuses for all fuse holders, including those in equipment furnished by others to which electrical contractor makes connections. Contractor shall replace fuses blown during construction.

VIII. LIGHT FIXTURES

A. Install complets lighting system as shown and specified on the drawings and as described below.

B. In general, fixtures are intended to be located symmetrically in space to be lighted, with adjustment where required to avoid interference with other work or equipment.

C. Fixtures shall be installed so that water cannot enter or occumulate in housings, connection boxes, lamp holders or other electrical parts.

D. Install fixture stems, hangers, supporting members, wiring channels, framing between building members, and other materials and fittings required for installation of fixtures specified.

positing members, and outer intereas and nitraje required for instalation or insures specified.

E. Fixtures shall be installed in accordance with detals and mounting heights shall be as indicated. If for reasons of interferences with such equipment or structural interferences, fixture locations and mounting heights may be altered slightly.

Fixtures shall be closed of dirt, inside and outside. Fixtures shall not be installed until pointing work of general contract is completed or, if earlier installation is mendatory, fixtures shall be completely enclosed with paper or pleatic during pointing so no paint comes in contact with fixture.

C. Install mounting strupe and accessorier required and support fixtures from points recommended by manufacturer. Supports from building structure shall be adequate to hold at least twice fixture weight.

H. All surface outlet boxes to which fixtures are attached and all pull boxes shall be fastened to the structure independent of the conduit system supports.

I. Were ties shall not be permitted for supporting conduit.

I. Local wall switches are intended to control lighting system unless otherwise noted.

K. Switches shall be installed and wired so that they are on when taggle handle is in upper position.

A. minimum size of electrical equipment ground conductors shall be in accordance with National Electrical Code, Article 250. Provide oversized conductors where

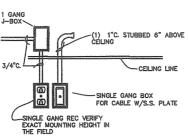
shown.

B. Bond all metallic conduits entering lighting panel and power panel.

C. A separate insulated stranded copper ground conductor shall be run with all circuits. Conductor shall be properly terminated at both ends of conduit run to

maintain a continuous ground path.

Provide driven grounds as required by utility and interconnect with building electrode conductor.

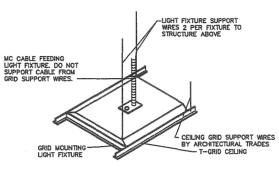


NOTES:

1. THE ABOVE DETAIL APPLIES TO THE FOLLOWING SYMBOL:

Нτ

TV LOCATION DETAIL



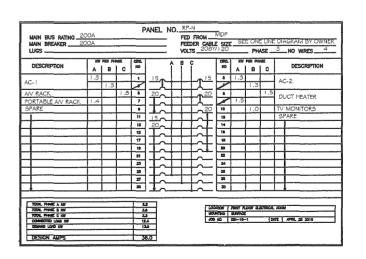
T-GRID FIXTURE MOUNTING DETAIL

POWER ELECTRICAL WORK SHALL COMPLY WITH LATEST NATIONAL ELECTRICAL CODE, LIFE SAPETY CODE AND APPLICABLE STATE AND LOCAL CODES AND HOME RUN TO PANEL INDICATED. 2#12&1#12 GND 3/4°C ELECTRICAL EQUIPMENT AND WRING SHALL BE NEW AND SHALL BE FURNISHED AND INSTALLED BY THIS CONTRACTOR, UNLESS OTHERMSE NOTED. CONDUIT CONCEALED IN WALL OR ABOVE CEILING 9777 CIRCUIT BREAKER POWER PANEL 120/208V 3Ø 4W WRING SHALL BE IN CONDUIT. CONDUIT SHALL BE 314" MIN., CONDUITS IN PINISHED AREAS SHALL BE CONCEALED, CONTRACTOR MAY USE SURFACE RACEWAYS AND PITTINGS FOR WRING IN FINGHED AREAS WHERE CONDUITS CAN INCT BE CONCEALED, ONLY WITH FROOR APPROVAL FROM ZEGIGN 0 DUPLEX RECEPTACLE 20A-1 PHASE-120V 181 AFF. UNO 9 QUADRUPLEX RECEPTACLE 120V 1-PHASE DISCONNECT SWITCH-F INDICATES FUSED NEW WIRES SHALL BE TYPE THEM. MINIMUM SIZE SHALL BE #12 AWG, UNLESS OTHERWISE MOTED. Ó MOTOR SIZE AS INDICATED ON DRAWNICS RECEPTACLE CIRCUITS SHALL HAVE A DEDICATED GROUND AND DEDICATED 0 HINCTION BOY 6. NO METAL CLAD FLEXIBLE WIRING SHALL BE USED EXCEPT FROM JUNCTION BOX TO FIXTURES AND SHALL NOT EXCEED 6 FEET IN LENGTH. LIGHTING SEE FIXTURE SCHEDULE FOR EXTENDED DESCRIPTION FINAL CONNECTIONS TO EQUIPMENT, FURNISHED AND INSTALLED BY OTHERS, SHALL BE PROVIDED BY 1'HIS CONTRACTOR. 2X2' LAY-IN LED LIGHT FIXTURE VERIFY LOCATION OF LIGHTING FIXTURES, MECHANICAL EQUIPMENT IN CEILING, SPEAKERS AND POWER OUTLETS ETC, WITH DESIGN PROFESSIONAL PRIOR TO 2X2' LAY-IN LED LIGHT FIXTURE W/ BATTERY BACK UP FOR EMERGENGY LIGHTING (AD) - PIXTURE TYPE AND MOUNTING HEIGHTS OF POWER AND DATA OUTLETS. **(3)** OCCUPANCY SENSOR SWITCH - SINGLE POLE UNIONAL MODERNA MORE THAT ME MENTANCE UN THE LEGISLATION OF MEANING THE METANCE MORE THAT METANCE AND THE METANCE METANCE AND THE METANCE METANCE AND THE METANCE METANCE AND THE METANCE META SWITCH - THREE-WAY DIMMER SWITCH \$ PROMINE A TYPEWRITTEN DIRECTORY IN THE PANEL DOOR. ACCUPATELY COMM INDICATING ROOMS AND EQUIPMENT BEING SERVED, CONTRACTOR SHOULD MAKE EVERY ATTEMPT TO IDENTIFY ALL CIRCUITS. TELEPHONE OUTLET-SINGLE GANG COMBINATION VOICE AND DATA OUTLET-SINGLE GANG

LEGEND

ELECTRICAL NOTES

LUMINAIRE SCHEDULE						
FIXTURE MARK	DESCRIPTION	MANUFACTURER(5)	VOLTAGE	FIXTURE WATTAGE	LAMP DESCRIPTION	
(A)	2:2 RECESSED GRID MOUNT CENTER BASKET LED FATURE WITH CURVED RIDSED ACRIVLO DIFFUSER. FATURE SHALL BE 0-10V DIMMING CAPABLE DOWN TO 10% WITH WILTI-VOLTAGE CAPABILITIES.	i. LITHONIA 28LT 5ERIES 2BLT2-33L-ADP-EZ i -LP635	MVOLT	30W	3500°K 82CRI	
Æ	SHALL BE SAME AS TYPE "L' EXCEPT PROVIDE WITH INTEGRAL 1 400					





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CITY OF **NOVI VIDEO** STUDIO

INTERIOR MODIFICATIONS

45175 W 10 Mile Rd Novi, MI 48375

ELECTRICAL GENERAL INFORMATION

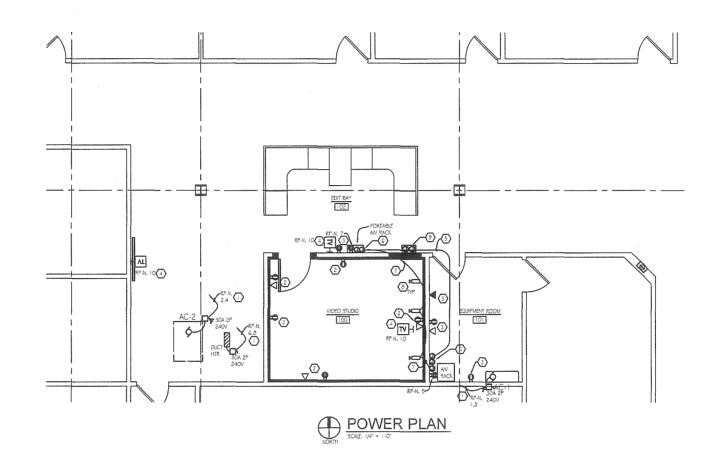
ISSUE / RE	VISION:
04.18.16	REV
04.26.16	OWNER'S REVI
04.29.16	PERMITS

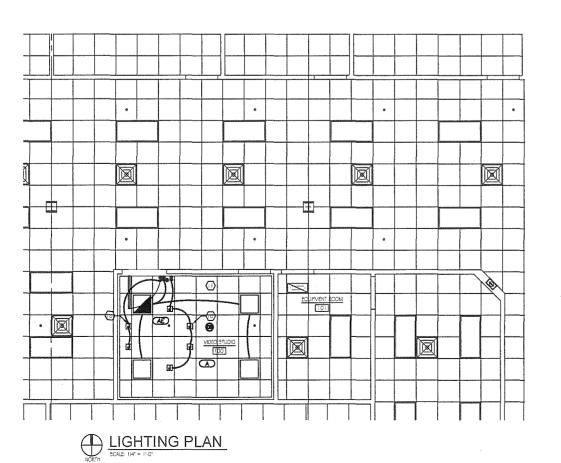
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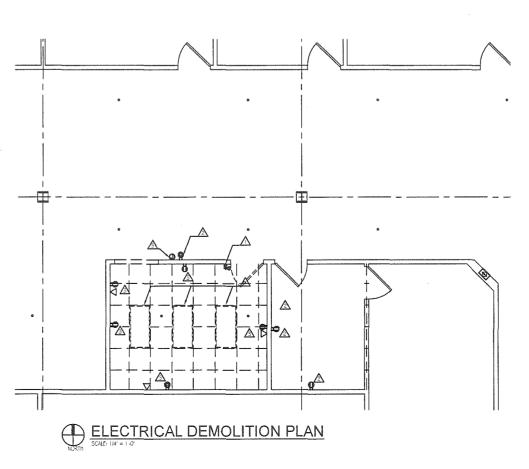
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DIN ENGINEERING







GENERAL DEMOLITION NOTES

- REMOVE OR ISOCATE WIRING, OUTLETS, LIGHTING FIXTURES. ETC. THAT ARE TO BE ABANDONED AND/OR INTERFERING WI THE BUILDING ALTERATIONS OR. ADDITIONS.
- EXISTING ELECTRICAL WIRING, OUTLETS, LIGHTING FIXTURES, ETC. NOT INTERFERING WITH THE BUILDING ALTERATIONS OR ADDITIONS SHALL REMAIN CONNECTED TO EXISTING CIRCUIT.

OHN TAGLE ASSOCIATES, INC ARCHITECTS & PLANNERS

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CITY OF

STUDIO

INTERIOR

MODIFICATIONS

45175 W 10 Mile Rd Novi, MI 48375

POWER AND

LIGHTING PLANS

04.26.16 OWNER'S REVIEW

04.29.16 PERMIT SET

REVIEW

NOVI VIDEO

I. COORDINATE DEMOLITION WITH ARCHITECTURAL AND MECHANICAL TRADES,

GENERAL POWER NOTES

- . ALL ELECTRICAL DEVICES SHOWN ON THIS PLAN SHALL BE NEW UNLESS OTHERWISE NOTED.

 ANY 120 VOLT BRANCH CIRCLIT FEEDER LÖNIGER THAN 1 20-0* TO LAST DEVICES SHALL BE SIZED TO THE NEXT LARGER. STANDARD AWS SIZE. E.C. SHALL FIELD VERIFY ALL LENGTHS CEPSOPPOR.
- ALL RECEPTACLES SHALL BE 20A RATED UNLESS NOTED

- OTHERWISE.

 ALL RECEPTACLES WITHIN 6-0" OF SINK OR OTHER WATER SUPPLY SHALL BE GROLL PRESCRIPTACE.

 5. REFER TO ARCHITECTURAL PLOOR PLAN AND ELEVATIONS FOR EVACT LOCATION OF DEVICES.

 G. ALL JUNCTION BOXES SERVING BRANCH CROUIT WRING SHALL BE LABELED WITH CROQUITS SERVING.

 7. ALL 120 VOLT CROUITS SHALL UTILIZE A SEPARATE NEUTRAL.

 ALL COMOUTS SERVING 120 VOLTS OR GREATER SHALL MOLUDE A GROUND WIRE.

DEMOLITION KEY NOTES:

- EXISTING SWITCH TO BE REMOVED, PROVIDE COVER PLAT
- A EXISTING RECEPTACLE OR DATAPHONE OUTLET TO REMA
- EXISTING RECEPTACLE OR DATA OUTLET TO BE EXTENDED OUT TO NEW PURRING, REFER TO NEW PLAN THIS SHEET
- A EXISTING 2X4 LIGHT FIXTURES TO BE REMOVED. REMOVE CONDUIT AND WIRING BACK TO J-BOX, REUSE EXISTING CIRCUIT FOR NEW LIGHTING.
- A EXISTING WALL MOUNTED 1-30X WITH WHIP TO PRE-IMPREC FURNITURE TO BE RELOCATED, REFER TO NEW PLAN THIS SHEET.

NEW WORK KEY NOTES:

- RUN 2#1241#12 GND 3/4"C TO NEW PANEL RP-N. NEW PANEL WILL BE INSTALLED IN 15T PLOOR ELECTRICAL ROOM REFER TO PANEL SCHEDULE SHEET E100.
- EXISTING RECEPTACLE OR DATA/PHONE OUTLET TO BE FURRED OUT TO NEW WALL, EXTEND CONDUIT AND WIRING AS REQUIRED, COORDINATE WITH ARCH FLANS FOR PROPORE SHAUNG OF RECEPTACE DUE TO SOUND.
- (3) EXISTING RECEPTACLE OR DATA OUTLET TO REMAIN
- FOWER AND DATA RECEPTACLE FOR TV MONIFOR, CIRCUIT
 AS SHOWN, VEREY EXACT MOUNTING HEIGHT IN THE FIELD
 REFER TO DETAIL SHEET E LOO.
- PROVIDE (2) I'C WITH PULL STRING FROM EACH AN J-BOX TO PORTABLE AN J-BOX. RUN ABOVE CRUNG. COORDINATE ALL WORK WITH AN CONTRACTOR PRIOR TO ROUGH-IN.
- 6 PROVIDE (2) 4' SQUARE DEEF BOXES WITH 1'HOLE 5/9 COVER PLATE FOR FEED THROUGH MOUNTED AT 18'AFF
- 7) I'C WITH PULL STRING FOR CAMERA FEED.
- 8 PROVIDE SINGLE GAND J-BOX FOR CAMERA LOCATION, VERIFY EXACT MOUNTING HEIGHT IN THE FIELD.
- MEW LOCATION OF PURNITURE CIRCLIFI. PROVIDE NEW 4*
 ROUND FIRE RATED FEED THIS FLOOR BOX. EXTEND
 EXISTING CIRCLIFT THROUGH PRIST FLOOR CEILING SPACE.
 REPER TO DEMOLITION DOTE 95 THIS SHEET. REVOIPE NEW
 WHIP AND FINAL TERMINATION TO PREMIRED FURNIT URE.
- FROVIDE NEW CEILING MOUNTED SINGLE TWIST LOCK I 120V RECEPTABLE WITH 515 COVER PLATE FOR STUDIO UGSTRIKE LIGHTING IS PROVIDED BY AV CONTRACTOR. CONNECT TO AW RACK I 20V CIRCUIT.
- CONNECT NEW TYPE 'A' AND 'AE' FIXTURE TO EXISTING LIGHTING FIXTURE, PROVIDE NEW DIMMER SWITCH AS







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