



AT&T

GENERATOR REPLACEMENT NEW HAVEN CDO 59041 MAIN ST NEW HAVEN, MI 48048

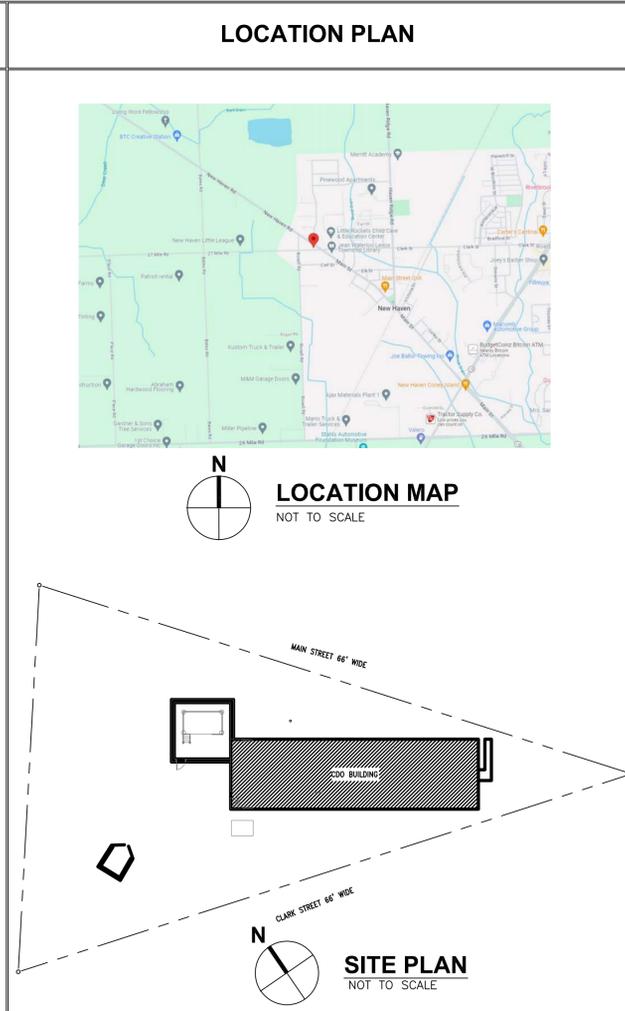
PROJECT NAME: NEW HAVEN CDO - GENERATOR DESIGN	
DET-24002045-A4	CONSULTANT STAMP

GENERAL NOTES

- CONTRACTOR SHALL CLEAN AND DAMP MOP ALL WORK AREAS AND WORK TRAFFIC AREAS AT THE END OF EACH DAY.
- CONTRACTOR SHALL FIELD VERIFY EXISTING CONDITIONS PRIOR TO SUBMITTING BID.
- ALL PATCHING OF EXISTING CONSTRUCTION TO REMAIN SHALL BE DONE TO MATCH EXISTING MATERIALS AND FINISHES AND SO AS TO NOT VOID ANY EXISTING PRODUCT WARRANTIES.
- THE OWNER'S CONSTRUCTION REPRESENTATIVE SHALL COORDINATE AND SUPERVISE THE WORK OF ALL TRADES AND FIELD VERIFY ALL DIMENSIONS PRIOR TO INSTALLATION OF SUBCONTRACTORS' WORK. CONTRACTOR SHALL PAY FOR ALL COSTS ASSOCIATED WITH CHANGES DUE TO LACK OF COORDINATION.
- THE CONTRACTOR SHALL CONFINE CONSTRUCTION TRAFFIC AND DEBRIS REMOVAL TO THE CONSTRUCTION AREA TO PREVENT DUST -RELATED DAMAGE TO THE TELECOMMUNICATIONS EQUIPMENT.
- THE CONTRACTOR SHALL FURNISH SAMPLES AND SHOP DRAWINGS OF ALL EQUIPMENT AND FINISHES FOR REVIEW AND APPROVAL IN ACCORDANCE WITH THE REQUIREMENTS OF THE CONTRACT AND SPECIFICATIONS.
- ALL WORK SHALL CONFORM WITH THE MORE STRINGENT GUIDELINES FOR INSTALLATION AS ESTABLISHED BY THE PRODUCT MANUFACTURER OR THE RELEVANT STANDARDS ORGANIZATION.
- PATCH, PAINT AND REPAIR ALL FLOORS, WALLS AND CEILINGS TO MATCH THE EXISTING CONSTRUCTION AND FINISHING OF THE BUILDING IN ALL LOCATIONS WHERE MECHANICAL AND ELECTRICAL DEMOLITION AND NEW WORK IS PERFORMED.
- WHERE UTILITY SERVICES ARE REQUIRED TO BE REMOVED, RELOCATED, OR MODIFIED, PROVIDE BYPASS CONNECTIONS TO MAINTAIN CONTINUITY OF SERVICE TO OTHER PARTS OF THE BUILDING BEFORE PROCEEDING WITH THE WORK.
- SEALANT REQUIRED FOR ALL EXTERIOR APPLICATIONS SHALL BE A TWO-PART POLYURETHANE MODIFIED SEALANT. SEALANT USED AT ALL DUCT, PIPE AND CONDUIT PENETRATIONS THROUGH WALLS AND FLOOR SLABS SHALL BE MANUFACTURED BY HILTI AND SHALL MEET UL REQUIREMENTS FOR THE FIRE RATED ASSEMBLIES BEING PENETRATED. PROVIDE CONTINUOUS HILTI FIRESAFING AT ALL DUCT, PIPE AND CONDUIT PENETRATIONS THROUGH WALLS AND FLOOR SLABS.
- TEMPORARY DUST CONTAINMENT PARTITIONS ARE REQUIRED BEFORE ANY DEMOLITION OR ALTERATION WORK IS STARTED. FABRICATE WITH 2X4 FIRE RETARDANT STUDS AT 24" ON CENTER WITH TOP AND BOTTOM PLATES. PROVIDE AIR AND DUST TIGHT TEMPORARY WOOD DOOR. COVER FRAMING WITH FLEXIBLE GRIFFOLYN (1-800-231-6074) OR REBCO ANTI-STATIC FIRE SHEETS ON BOTH SIDES. PROVIDE LOCK AND WEATHER-STRIPPING AT DOOR. SEAL ALL EDGES OF ASSEMBLY DUST TIGHT.
- THE CONTRACTOR SHALL PROTECT ALL EXISTING SITE AND BUILDING CONDITIONS FROM DAMAGE DUE TO CONSTRUCTION. THE CONTRACTOR SHALL REPAIR OR REPLACE EXISTING EQUIPMENT, WALLS ETC FROM DAMAGED DURING CONSTRUCTION AT NO ADDITIONAL COST TO THE OWNER.
- SURVEY, INVENTORY AND RECORD THE CONDITION OF ITEMS TO BE REMOVED AND REINSTALLED WITH THE OWNER, SURVEY EXISTING CONDITIONS PRIOR TO THE START OF WORK.
- WHEN EXISTING MECHANICAL, ELECTRICAL, OR STRUCTURAL ELEMENTS CONFLICTING WITH THE INTENDED FUNCTION OR DESIGN ARE ENCOUNTERED, INVESTIGATE THE NATURE AND EXTENT OF THE CONFLICT. PROMPTLY SUBMIT A WRITTEN REPORT TO THE ARCHITECT.
- MAINTAIN UTILITIES EQUIPMENT IN SERVICE AND PROTECT AGAINST DAMAGE DURING CONSTRUCTION. DO NOT INTERRUPT EXISTING UTILITIES SERVING OCCUPIED OR OPERATING FACILITIES, EXCEPT WHEN AUTHORIZED IN WRITING BY THE BUILDING MANAGER AND AUTHORITIES HAVING JURISDICTION. IF REQUIRED BY THE OWNER, AT THE CONTRACTORS EXPENSE, PROVIDE TEMPORARY SERVICE DURING INTERRUPTIONS TO EXISTING UTILITIES. PROVIDE NOT LESS THAN 72 HOURS PRIOR NOTICE TO THE OWNER AND BUILDING MANAGER IF SHUTDOWN OF SERVICE IS REQUIRED.
- THE CONTRACTOR SHALL PROTECT THE TELECOMMUNICATIONS EQUIPMENT PER THE LATEST AT&T STANDARDS, AND TO THE SATISFACTION OF THE AT&T BUILDING MANAGER. EQUIPMENT PROTECTION WHICH IS TO REMAIN IN PLACE FOR MORE THAN 24 HOURS SHALL BE CONSTRUCTED IN SUCH A WAY TO ALLOW ACCESS TO THE EQUIPMENT, AS WELL AS TO ACCOMMODATE EQUIPMENT VENTILATION REQUIREMENTS.
- ASBESTOS CONTAINING MATERIALS (ACM) IS STRICTLY PROHIBITED FROM BEING INSTALLED ON ALL AT&T PROJECTS. SHOULD ACM BE INADVERTENTLY INSTALLED ON PROJECTS, PROPER REMOVAL, DISPOSAL AND REPLACEMENT WITH APPROVED PRODUCT SHALL BE THE SOLE RESPONSIBILITY OF THE INSTALLING CONTRACTOR AT NO COST TO THE OWNER.
- CONTACT JON NIXON, AT&T DAMAGE PREVENTION MANAGER AT OFFICE NUMBER: (616) 881-2268 OR EMAIL: JN3249@ATT.COM PRIOR TO ANY EXCAVATING, DRILLING OR DIGGING AT ANY AT&T LOCATION.

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BUILDING CODE ANALYSIS

GENERAL PROJECT INFORMATION:
OWNER: AT&T CORPORATE REAL ESTATE
AUTHORITY HAVING JURISDICTION: NEW HAVEN, MI

CODE TYPE/YEAR:
BUILDING: 2021 MBC
STRUCTURAL: 2021 MBC
PLUMBING: 2021 MPC
FIRE/LIFE-SAFETY: MICHIGAN FIRE PREVENTION CODE
ACCESSIBILITY: 2021 MBC
MECHANICAL: 2021 MMC
ELECTRICAL: THE ELECTRICAL CODE RULES PART 8, INCORPORATING THE 2023 EDITION OF THE NATIONAL ELECTRICAL CODE (NEC), AND ALL OTHER LOCAL CODES

OTHER PROJECT INFORMATION:
OCCUPANCY CLASSIFICATION: GROUP B (TELECOMMUNICATIONS)
CONSTRUCTION TYPE: IIB
NON-SPRINKLERED
S₀ = 0.056
S₁ = 0.044
RISK CATEGORY IV (PER MBC TABLE 1604.5)
SITE CLASS D (ASSUMED)
S_{0s} = 0.092
S_{0t} = 0.071
SDC = SEISMIC DESIGN CATEGORY = C (IBC)
SHL = SEISMIC HAZARD LEVEL = D (SMACNA)

PROJECT DIRECTORY

OWNER REPRESENTATIVE: AIMEE BUTLER AT&T CORPORATE REAL ESTATE 248-761-8139 EMAIL: AP2953@ATT.COM	CONSTRUCTION MANAGER: ADAM MINGER GILBANE BUILDING COMPANY 517-420-7858 EMAIL: AMINGER@GILBANE.CO	ARCHITECT/ENGINEER: EXP U.S. SERVICES ARCHITECTURAL: ASHLEY ARMBRUSTMACHER: 248-351-8214 EMAIL: ASHLEY.ARMBRUSTMACHER@EXP.COM ELECTRICAL: PERRY NORRITO: 248-351-8225 EMAIL: PERRY.NORRITO@EXP.COM MECHANICAL: RAYMOND BUHAY: 248-351-8216 EMAIL: RAYMOND.BUHAY@EXP.COM CIVIL: NICHOLAS KARPATY EMAIL: NICHOLAS.KARPATY@EXP.COM
SITE SUPERINTENDENT: MIKE ZASADNY GILBANE BUILDING COMPANY 1365 CASS AVENUE RM. 1218 DETROIT, MI 48226 313-806-3914 EMAIL: MZASADNY@GILBANE.CO		

PROJECT SUMMARY

REPLACEMENT OF GENERATOR AND BELLY TANK AND INSTALLATION OF GENERATOR MODULE AND AST. MODULE AND AST TO BE SCREENED WITH VEGETATION.

exp U.S. Services Inc.
1-1 248 351 8200 | 1-1 248 351 8250
27777 Franklin Road
Suite 1510
Southfield, MI 48034
U.S.A.
www.exp.com

REVISIONS / AUTHORIZATIONS

NO.	REVISIONS / AUTHORIZATIONS	DATE	BY
	PERMIT AND CONSTRUCTION	05/15/25	
	FINAL REVIEW #2	04/18/25	
	FINAL REVIEW	03/18/25	
	50% REVIEW	12/17/24	

PROPRIETARY AT&T INFORMATION
NOT FOR GENERAL USE OR DISCLOSURE OUTSIDE OF AT&T
THIS INFORMATION MAY ONLY BE USED BY AUTHORIZED PERSONNEL OF THE LOCAL GOVERNMENT AGENCY IN CONNECTION WITH APPLICATION FOR PERMITS AND AUTHORIZATIONS FOR BUILDINGS, CONSTRUCTION, AND/OR ZONING CHANGES.

AT&T CORPORATE REAL ESTATE

PROJECT_DRAWING

59041 MAIN ST
NEW HAVEN
MI US
NWHNMIMM 111436.01 M18255

SHEET TITLE: **COVER SHEET GENERAL**

AT&T PROJECT NUMBER: 2001272	DATE:	SCALE: N/A
AT&T AUTHORIZATION: AIMEE BUTLER	DRAWN BY: SM	CHECKED BY: RB
	SHEET: -- OF: -- SHEETS	SHEET NO.
	AT&T DRAWING NO.: 2001272G00001	G00001

C:\Users\jatejia\AppData\Local\Temp\AcPublish_8476\2001272G000001.dwg 05-15-2025 17:24:34 (XREF) E:\DET\DET-24002045-A4\60 Execution\65 Drawings\Ar

PROJECT SCHEDULE OF WORK ITEMS RESPONSIBILITY MATRIX				
THE WORK FOR THE GENSET PROJECT SHALL BE PROVIDED UNDER TWO (2) SEPARATE CONTRACTS NAMELY, GENSET CONTRACT AND CONSTRUCTION CONTRACT. THE SCHEDULE OF WORK ITEMS SUMMARIZES UNDER WHICH CONTRACT VARIOUS ITEMS OF WORK ARE TO BE PERFORMED. THE OWNER'S CONSTRUCTION REPRESENTATIVE SHALL PRODUCE THE OVERALL SCHEDULE AND ALSO COORDINATE THE ON SITE WORK ACTIVITIES FOR GENSET CONTRACT AND CONSTRUCTION CONTRACT.				
ITEM #	ITEM	SUPPLY	INSTALLATION	TERMINATIONS AND CONNECTIONS
1.	BATTERY CHARGER	GENSET CONTRACT	GENSET CONTRACT	GENSET CONTRACT
2.	DEMOLITION AND SITE PREPARATION FOR NEW GENERATOR	CONSTRUCTION CONTRACT	CONSTRUCTION CONTRACT	CONSTRUCTION CONTRACT
3.	DISPOSAL OF EXISTING BATTERIES	OWNER	_____	_____
4.	ENGINE MOUNTED PRIMING HAND PUMP	GENSET CONTRACT	GENSET CONTRACT	GENSET CONTRACT
5.	STEEL BRAIDED FLEXIBLE FUEL LINES AT ENGINE	GENSET CONTRACT	GENSET CONTRACT	GENSET CONTRACT
6.	STEEL BRAIDED FUEL PIPES/HOSES ON ENGINE (REQUESTED BY LARA)	GENSET CONTRACT	GENSET CONTRACT	GENSET CONTRACT
7.	FUEL OIL COOLER (GENSET MOUNTED)	GENSET CONTRACT	GENSET CONTRACT	GENSET CONTRACT
8.	DAY-TANK SET (INCLUSIVE OF FUEL SUPPLY PUMPS)	N/A	N/A	N/A
9.	FUEL SYSTEM CONTROL PANEL (VEEDER ROOT CP), FUEL MONITORING PNL CONDUIT & WIRING, PROBES & SENSORS	CONSTRUCTION CONTRACT	CONSTRUCTION CONTRACT	CONSTRUCTION & GENSET CONTRACT
10.	GENSET ALARM BSI TERMINAL CABINET AND WIRING	CONSTRUCTION CONTRACT	CONSTRUCTION CONTRACT	CONSTRUCTION & GENSET CONTRACT
11.	MAIN GENERATOR CONTROL PANEL (GCP) (ON-SET)	GENSET CONTRACT	GENSET CONTRACT	CONSTRUCTION & GENSET CONTRACT
12.	GENERATOR COOLANT MIX	GENSET CONTRACT	GENSET CONTRACT	_____
13.	GENERATOR DELIVERY TO PROJECT SITE	GENSET CONTRACT	_____	_____
14.	GENERATOR OUTPUT BREAKER (WITH LOCKOUT PROVISIONS & SET MOUNTED)	GENSET CONTRACT	GENSET CONTRACT	CONSTRUCTION & GENSET CONTRACT
15.	GENERATOR EXTERNAL GROUNDING WELDED TABS	GENSET CONTRACT	CONSTRUCTION CONTRACT	CONSTRUCTION CONTRACT
16.	GENERATOR LUBE OIL	GENSET CONTRACT	GENSET CONTRACT	_____
17.	"GEN-CTP" PANEL (GCTP)	GENSET CONTRACT	GENSET CONTRACT	CONSTRUCTION & GENSET CONTRACT
18.	"GEN-CTP" (GCTP) PANEL FEEDER CIRCUIT	CONSTRUCTION CONTRACT	CONSTRUCTION CONTRACT	CONSTRUCTION CONTRACT
19.	MAIN FUEL (AST) TANK AND EXTERIOR DOUBLE-WALL PIPING	CONSTRUCTION CONTRACT	CONSTRUCTION CONTRACT	CONSTRUCTION CONTRACT
20.	FUEL PIPING AND COMPONENTS INSIDE MODULE TILL ENGINE	GENSET CONTRACT	GENSET CONTRACT	GENSET CONTRACT
21.	OUTPUT BREAKER LOAD SIDE FEEDER & LUGS	CONSTRUCTION CONTRACT	CONSTRUCTION CONTRACT	CONSTRUCTION CONTRACT
22.	OUTPUT BREAKER LINE SIDE FEEDER & LUGS	GENSET CONTRACT	GENSET CONTRACT	GENSET CONTRACT
23.	OUTPUT BREAKER LOAD SIDE HEADER BOX, PER NEC	CONSTRUCTION CONTRACT	CONSTRUCTION CONTRACT	CONSTRUCTION CONTRACT
24.	PORTABLE GENSET CONNECTION CABINET (PGCC)	CONSTRUCTION CONTRACT	CONSTRUCTION CONTRACT	CONSTRUCTION CONTRACT
25.	REMOTE EMERGENCY STOP PUSHBUTTON(S) WITH PROTECTIVE COVERS INSIDE MODULE	GENSET CONTRACT	CONST. & GENSET CONTRACT	CONSTRUCTION & GENSET CONTRACT
26.	KIRK KEYS - GENSET OUTPUT BREAKER AND PORTABLE GENSET CONNECTION CABINET	N/A	N/A	N/A
27.	REMOTE ANNUNCIATOR PANEL AND WIRING	GENSET CONTRACT	CONSTRUCTION CONTRACT	CONSTRUCTION & GENSET CONTRACT
28.	REMOVAL OF EXISTING GENSET AND MODULE	OWNER/CONSTRUCTION CONTRACT	OWNER/CONSTRUCTION CONTRACT	OWNER/CONSTRUCTION CONTRACT
29.	REMOVAL OF EXISTING LUBE OIL	OWNER	OWNER/CONSTRUCTION CONTRACT	OWNER
30.	REMOVAL OF EXISTING COOLANT	OWNER	OWNER/CONSTRUCTION CONTRACT	OWNER
31.	REMOVAL OF EXISTING FUEL	OWNER	OWNER/CONSTRUCTION CONTRACT	OWNER
32.	RIGGING AND SETTING OF NEW GENSET MODULE	GENSET CONTRACT	GENSET CONTRACT	GENSET CONTRACT
33.	BASLER "HSP" CONTROL (N/A)	N/A	N/A	N/A
34.	EXHAUST FAN, DAMPERS MOTOR & DAMPER CNTRL PANEL	GENSET CONTRACT	GENSET CONTRACT	GENSET CONTRACT
35.	MODULE AND GENERATOR	GENSET CONTRACT	GENSET CONTRACT	CONSTRUCTION & GENSET CONTRACT
36.				
37.				
38.				

NOTES:

1. THE OWNER'S CONSTRUCTION REPRESENTATIVE SHALL USE THIS SCHEDULE TO COORDINATE AND/OR PERFORM THE TERMINATION AND CONNECTIONS AS LISTED. THIS WORK MAY NOT BE DUPLICATED OR INDICATED ON THE SPECIFIC DISCIPLINE DESIGN DRAWING SHEETS. THIS SCHEDULE SHALL BE THE GOVERNING DOCUMENT FOR INSTALLATION OF THE NEW GENSET.
2. THE WORK FOR THE GENSET PROJECT SHALL BE PROVIDED UNDER TWO (2) SEPARATE CONTRACTS NAMELY, GENSET CONTRACT AND CONSTRUCTION CONTRACT. THE SCHEDULE OF WORK ITEMS SUMMARIZES UNDER WHICH CONTRACT VARIOUS ITEMS OF WORK ARE TO BE PERFORMED. THE OWNER'S CONSTRUCTION REPRESENTATIVE SHALL PRODUCE THE OVERALL SCHEDULE AND ALSO COORDINATE THE ON SITE WORK ACTIVITIES UNDER GENSET CONTRACT AND CONSTRUCTION CONTRACT.
3. ALL FINAL CONNECTIONS TO THE GENERATOR CONTROL PANEL SHALL BE BY THE GENSET CONTRACTOR. CONSTRUCTION CONTRACTOR SHALL COORDINATE ALL REQUIREMENTS WITH GENSET CONTRACTOR.

PROJECT NAME:		
NEW HAVEN CDO - GENERATOR DESIGN		
DET-24002045-A4		CONSULTANT STAMP
exp U.S. Services Inc. (+1 248 351 8200) (+1 248 351 8250) 27777 Franklin Road Suite 1510 Southfield, MI 48034 U.S.A. www.exp.com		
• BUILDINGS • EARTH & ENVIRONMENT • ENERGY • • INDUSTRIAL • INFRASTRUCTURE • SUSTAINABILITY •		
REVISIONS / AUTHORIZATIONS		
NO.	REVISIONS / AUTHORIZATIONS	DATE BY
	PERMIT AND CONSTRUCTION	05/15/25
	FINAL REVIEW #2	04/18/25
	FINAL REVIEW	03/18/25
	50% REVIEW	12/17/24
PROPRIETARY AT&T INFORMATION NOT FOR GENERAL USE OR DISCLOSURE OUTSIDE OF AT&T THIS INFORMATION MAY ONLY BE USED BY AUTHORIZED PERSONNEL OF THE LOCAL GOVERNMENT AGENCY IN CONNECTION WITH APPLICATION FOR PERMITS AND AUTHORIZATIONS FOR BUILDINGS, CONSTRUCTION, AND/ OR ZONING CHANGES.		
DRAWINGS PREPARED FOR		
		CORPORATE REAL ESTATE
PROJECT_DRAWING		
59041 MAIN ST NEW HAVEN MI US NWHNMIMN 111436.01 M18255		
SHEET TITLE: RESPONSIBILITY MATRIX GENERAL		
AT&T PROJECT NUMBER: 2001272	DATE:	SCALE: N/A
AT&T AUTHORIZATION: AIMEE BUTLER	DRAWN BY: SM	CHECKED BY: RB
	SHEET: - OF: - SHEETS	SHEET NO.
	AT&T DRAWING NO.: 2001272G00002	G00002

GENERAL NOTES:

- EXISTING SITE TOPOGRAPHY, PROPERTY, RIGHT-OF-WAY, AND HORIZONTAL CONTROL DATA SHOWN ON THE DRAWINGS WERE OBTAINED FROM A TOPOGRAPHIC SURVEY PREPARED BY MUXLOW SURVEYING, PROJECT NUMBER 11033, DATED 06/20/2024, AND REVISED 07/03/2024.
- SITE CONDITIONS MAY HAVE CHANGED SINCE THE SURVEY WAS PREPARED. CONTRACTOR TO VISIT SITE TO FAMILIARIZE THEMSELVES WITH THE CURRENT CONDITIONS AND REPORT ANY DISCREPANCIES TO THE ENGINEER PRIOR TO COMMENCEMENT.
- ALL ELEVATIONS ON THE PLANS AND REFERENCED IN THE CONTRACT DOCUMENT ARE BASED ON THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88 DATUM).
- EXISTING UNDERGROUND UTILITIES AND ASSOCIATED FACILITIES SHOWN ON THESE DRAWINGS HAVE BEEN PLOTTED FROM AVAILABLE SURVEYS AND RECORDS. THEREFORE, THEIR LOCATIONS AND ELEVATIONS MUST BE CONSIDERED APPROXIMATE ONLY. THERE MAY BE OTHER FACILITIES, THE EXISTENCE OF WHICH ARE NOT PRESENTLY KNOWN.
- IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY THE EXISTING CONDITIONS, INCLUDING, BUT NOT LIMITED TO: THE PROPERTY BOUNDARY, BUILDINGS, STRUCTURES, PAVEMENT, AND UTILITY HORIZONTAL AND VERTICAL LOCATIONS BEFORE THE START OF CONSTRUCTION. NOTIFY THE ENGINEER OF ANY DISCREPANCIES PRIOR TO ORDERING MATERIAL AND STARTING WORK.
- THE CONTRACTOR SHALL SUBSCRIBE TO ALL GOVERNING REGULATIONS AND SHALL OBTAIN ALL NECESSARY PUBLIC AGENCY PERMITS PRIOR TO STARTING WORK. THE CONTRACTOR, BY USING THESE PLANS FOR THEIR WORK, AGREE TO HOLD HARMLESS EXP US SERVICES, INC., ITS SUBSIDIARIES AND ASSIGNS, THE AUTHORITY HAVING JURISDICTION (AHJ), THEIR EMPLOYEES AND AGENTS, AND THE OWNER WHILE ACTING WITHIN THE SCOPE OF THEIR DUTIES FROM AND AGAINST ALL LIABILITY, CLAIMS, DAMAGES, AND THE COST OF DEFENSE ARISING OUT OF CONTRACTOR(S) PERFORMANCE OF THE WORK DESCRIBED HEREIN.
- THE CONTRACTOR IS RESPONSIBLE FOR HAVING A SET OF "APPROVED" ENGINEERING PLANS WITH THE LATEST REVISION DATE ON THE JOB SITE PRIOR TO THE START OF CONSTRUCTION. ALL DEVIATIONS FROM THE PLANS ARE TO BE APPROVED IN WRITING BY THE ENGINEER PRIOR TO CONSTRUCTION.
- CONTRACTOR SHALL MAINTAIN ACCURATE RECORDS OF ALL CONSTRUCTION IN CONFORMANCE WITH ALL MUNICIPAL AND OWNER REQUIREMENTS FOR USE IN PREPARING AS-BUILT DRAWINGS.
- THE ENGINEER AND OWNER ARE NOT RESPONSIBLE FOR CONSTRUCTION MEANS, METHODS OR TECHNIQUES, SEQUENCES OR PROCEDURES, TIME OF PERFORMANCE, PROGRAMS, OR FOR ANY SAFETY PRECAUTIONS USED BY THE CONTRACTOR. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR THE EXECUTION OF THEIR WORK IN ACCORDANCE WITH THE CONTRACT DOCUMENTS.
- ALL WORK PROPOSED HEREIN SHALL BE IN ACCORDANCE WITH APPLICABLE LOCAL AND NATIONAL CODES AND THE FOLLOWING STANDARDS AND SPECIFICATIONS:
 - ORDINANCES OF THE VILLAGE OF NEW HAVEN, MICHIGAN AS PREPARED BY THE VILLAGE OF NEW HAVEN.
 - "MDO STANDARD SPECIFICATIONS FOR CONSTRUCTION" AS PREPARED BY MICHIGAN DEPARTMENT OF TRANSPORTATION, LATEST EDITION
 - "MDO DRAINAGE MANUAL" AS PREPARED BY MDO, LATEST EDITION
 - SPECIFICATIONS AND ENVIRONMENTAL PROTECTION AGENCY.
 - THE NATIONAL ELECTRICAL CODE.
 - THE MICHIGAN ACCESSIBILITY CODE.
 - OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA) - LAWS AND REGULATIONS.
 - MICHIGAN DEPARTMENT OF NATURAL RESOURCES
 - NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) REGULATIONS.
 - TESTING OF SOILS BEING EXPORTED FROM THE SITE AND APPROPRIATE DISPOSAL SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
 - ANY MATERIAL IMPORTED ONTO SITE SHALL BE CLEAN AND UNCONTAMINATED. PROOF OF MATERIAL QUALITY COMPLIANCE SHALL BE PRESENTED TO OWNER PRIOR TO IMPORT. OWNER SHALL HAVE THE RIGHT TO VERIFY RESULTS WITH THIRD PARTY TESTING PRIOR TO IMPORT.
- THE WORDS "NEW" "PROPOSED" "INSTALL" "PROVIDE" OR OTHER WORDS WITH A SIMILAR MEANING ON ANY PART OF THESE CONSTRUCTION DOCUMENTS SHALL BE INTERPRETED TO MEAN "FURNISHING AND INSTALL COMPLETE IN PLACE AND READY FOR SERVICE" UNLESS OTHERWISE NOTED IN WRITING BY THE ENGINEER.
- IT IS THE INTENT OF THESE PLANS TO BE IN ACCORDANCE WITH APPLICABLE CODES AND AGENCIES HAVING JURISDICTION OVER THE PROJECT AREA. ANY DISCREPANCIES BETWEEN THESE PLANS AND APPLICABLE CODES SHALL BE IMMEDIATELY BROUGHT TO THE ATTENTION OF THE ENGINEER.
- CONTRACTOR SHALL COORDINATE ALL WORK WITH ENGINEER AND OWNER TO MINIMIZE IMPACTS TO THE OPERATION OF THE SITE. CONTRACTOR SHALL ACCOMMODATE SITE OPERATION REQUIREMENTS VIA WORK SCHEDULES AND TEMPORARY MOT MEASURES INCLUDING BUT NOT LIMITED TO SIGNAGE, FLAGGERS, AND ROAD PLATING TO COVER

- EXPOSED EXCAVATIONS. SUBSURFACE EXPLORATION INFORMATION PROVIDED IS FOR THE CONTRACTOR'S INFORMATION. THE ENGINEER DOES NOT MAKE ANY REPRESENTATION REGARDING EXISTING SUBSOIL CONDITIONS ACROSS THE PROJECT AREA.
- SHOP DRAWINGS:
 - PRIOR TO CONSTRUCTION COMMENCEMENT, THE CONTRACTOR SHALL PROVIDE THE ENGINEER A SHOP DRAWING LOG AND SUBMITTAL SCHEDULE FOR REVIEW. SHOP DRAWINGS SHALL BE PROVIDED IN APPLICABLE PACKAGES FOR THE COMPLETE INSTALLATION/CONSTRUCTION OF PROJECT COMPONENTS (POTABLE WATER, SEWER, PAVING, ETC.) OR PHASES (IF APPLICABLE).
 - PRIOR TO INSTALLATION, SHOP DRAWINGS SHALL BE SUBMITTED TO, REVIEWED BY, AND APPROVED BY THE ENGINEER AND REGULATORY AGENCIES (FOR PUBLIC DONATION PROJECT COMPONENTS).
 - PRIOR TO SUBMITTING SHOP DRAWINGS TO THE ENGINEER, THE CONTRACTOR SHALL REVIEW AND APPROVE THE DRAWINGS, AND SHALL NOTE IN RED ANY DEVIATIONS FROM THE CONTRACT DOCUMENTS. ENGINEER WILL CONDUCT UP TO TWO (2) SHOP DRAWING REVIEWS PER PACKAGE; ADDITIONAL ENGINEER REVIEWS RESULTING FROM DISAPPROVED DRAWINGS SHALL BE AT AN ADDITIONAL COST TO THE CONTRACTOR.

- CONTRACTOR PRECONSTRUCTION RESPONSIBILITIES:
- UPON RECEIPT OF NOTICE OF AWARD AND AFTER OBTAINING A CONSTRUCTION PERMIT FROM THE VILLAGE OF NEW HAVEN, THE CONTRACTOR SHALL ARRANGE A PRECONSTRUCTION CONFERENCE TO INCLUDE THE OWNER AND ENGINEER.
 - CONTRACTOR SHALL SUBMIT A DETAILED PHASING AND MAINTENANCE TRAFFIC (MOT) PLAN FOR REVIEW AND APPROVAL BY ENGINEER AND OWNER PRIOR TO CONSTRUCTION COMMENCEMENT AND OBTAINING MOT PERMITS/APPROVALS FROM AGENCIES AS REQUIRED.
 - CONTRACTOR SHALL NOTIFY OWNER OF ALL PRIVATE ROADWAY INTERRUPTIONS/DISTURBANCES A MINIMUM OF 48 HOURS PRIOR TO WORK.
 - THE CONTRACTOR SHALL OBTAIN A MI MISS DIG 811 CERTIFICATION NUMBER FOR UTILITY LOCATE AND NOTIFY THE UTILITIES IDENTIFIED AT LEAST 48 HOURS PRIOR TO COMMENCEMENT OF WORK.
 - PRIOR TO BEGINNING CONSTRUCTION, THE CONTRACTOR SHALL FIELD VERIFY THE SIZE, LOCATION, ELEVATION, AND MATERIAL OF ALL EXISTING UTILITIES PROPOSED TO BE GROSSED OR MODIFIED BY THE WORK PROPOSED IN THE CONTRACT DOCUMENTS.

- UTILITIES:
- EXISTING UTILITY LOCATIONS ON THESE PLANS ARE APPROXIMATE BASED ON THE MOST RELIABLE DATA AVAILABLE TO THE ENGINEER. THE ENGINEER ASSUMES NO RESPONSIBILITY FOR THE ACCURACY OF EXISTING UTILITIES SHOWN OR FOR ANY EXISTING UTILITIES NOT SHOWN OR REFERENCED TO IN THE CONTRACT DOCUMENTS.
 - THE CONTRACTOR SHALL TAKE ALL PRECAUTIONARY MEASURES TO PROTECT EXISTING UTILITIES (ABOVE AND BELOW GRADE) WHETHER SHOWN OR NOT.
 - THE CONTRACTOR SHALL BE RESPONSIBLE FOR DAMAGE TO ANY EXISTING UTILITIES FOR WHICH FALLS TO REQUEST LOCATIONS FROM. THE CONTRACTOR IS ADDITIONALLY RESPONSIBLE FOR DAMAGE TO ANY UTILITIES WHICH ARE PROPERLY LOCATED.
 - IF UPON EXCAVATION AN EXISTING UTILITY IS FOUND TO BE IN CONFLICT WITH THE PROPOSED WORK OR TO BE OF A SIZE OR MATERIAL DIFFERENT THAN WHAT IS SHOWN IN THE CONTRACT DOCUMENTS, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE ENGINEER IN WRITING.
 - THE CONTRACTOR SHALL NOTIFY THE UTILITY OWNER IN ADVANCE OF MARKING ANY CONNECTION TO AN ACTIVE PIPELINE OR UTILITY SYSTEM.
 - ALL EXISTING UTILITIES SHALL BE MAINTAINED IN SERVICE DURING THE CONSTRUCTION WORK UNLESS APPROVED OTHERWISE IN WRITING BY THE ENGINEER AND UTILITY OWNER.
 - PERFORM CONNECTIONS TO EXISTING UTILITIES IN SUCH A MANNER THAT NO DAMAGE AND MINIMAL INTERRUPTION IS CAUSED TO EXISTING INSTALLATION. ANY DAMAGE CAUSED TO EXISTING INSTALLATIONS SHALL BE REPAIRED OR REPLACED BY THE CONTRACTOR.
 - COORDINATE CONNECTION OPERATIONS WITH THE OWNER, WHO SHALL BE NOTIFIED AT LEAST 7 DAYS IN ADVANCE OF ANY ACTIVITY WHICH MAY INTERFERE WITH THE EXISTING UTILITY SYSTEM.
 - CONTRACTOR SHALL FIELD VERIFY THE LOCATION OF EXISTING SANITARY SEWER LINES AT THE PROPOSED TIE-IN LOCATION. CONTRACTOR SHALL NOTIFY THE OWNER AND THE ENGINEER OF ANY DEVIATIONS WITH THE EXISTING CONDITIONS PRIOR TO INSTALLING ANY SANITARY SEWER STRUCTURES OR PIPING.
 - CONTRACTOR TO PLACE A MINIMUM 3 FEET OF COVER OVER ALL PIPES DURING CONSTRUCTION TO PREVENT DAMAGE FROM CONSTRUCTION VEHICLES UNLESS OTHERWISE SPECIFIED IN THE PLANS.

- TEMPORARY FACILITIES:
- IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO ARRANGE FOR OR SUPPLY TEMPORARY UTILITIES INCLUDING BUT NOT LIMITED TO TEMPORARY POTABLE WATER, SANITARY FACILITIES, AND ELECTRICITY TO ITS EMPLOYEES AND SUBCONTRACTORS FOR THEIR

- USE DURING CONSTRUCTION.
- MAINTENANCE OF TRAFFIC (MOT):
 - CONTRACTOR SHALL COORDINATE WITH OWNER, ENGINEER, AND APPLICABLE AGENCIES PRIOR TO ANY WORK REQUIRING MOT AND PREPARE ANY REQUIRED MOT PLANS AND OBTAIN PERMITTING APPROVAL AS REQUIRED BY THE AGENCIES HAVING JURISDICTION.
 - THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE INSTALLATION AND MAINTENANCE OF ADEQUATE SIGNS, TRAFFIC CONTROL DEVICES, AND WARNING DEVICES TO INFORM AND PROTECT THE PUBLIC DURING ALL PHASES OF CONSTRUCTION.
 - MOT IN THE PUBLIC RIGHT-OF-WAY AND SITE ACCESS ROADS/PARKING LOT SHALL BE IN ACCORDANCE WITH THE MUTCD AND THE AGENCIES HAVING JURISDICTION OVER THE PROJECT.
 - CONTRACTOR SHALL NOT CLOSE OR OBSTRUCT STREETS, WALKS, OR OTHER ADJACENT OCCUPIED OR IN-USE FACILITIES WITHOUT PERMISSION FROM OWNER AGENCIES HAVING JURISDICTION. PROVIDE ALTERNATE ROUTES AROUND CLOSED OR OBSTRUCTED TRAFFIC WAYS AS REQUIRED BY GOVERNING REGULATIONS.
 - THE CONTRACTOR IS SOLELY RESPONSIBLE FOR MOT AND SAFETY OF THE PROJECT SITE DURING CONSTRUCTION UNTIL FINAL COMPLETION AND ACCEPTANCE OF THE PROJECT BY THE OWNER.
 - CONTRACTOR SHALL NOTIFY LAW ENFORCEMENT AND FIRE PROTECTION SERVICES TWENTY-FOUR (24) HOURS IN ADVANCE OF DETOURS, AS APPLICABLE TO ACTUAL CONSTRUCTION ZONES. CONTRACTOR SHALL ENSURE FIRE PROTECTION SERVICES ACCESS TO CONSTRUCTION FACILITIES AND ADJACENT BUILDINGS AS NECESSARY AT ALL TIMES.

- SOIL EROSION CONTROL AND STORMWATER POLLUTION PROTECTION:
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR EROSION AND SEDIMENTATION CONTROL AS DETAILED IN THE SOIL EROSION AND SEDIMENTATION CONTROL (SECC) AND/OR STORMWATER POLLUTION PREVENTION (SWPP) PLAN TO PREVENT TRANSMISSION OF SEDIMENT TO THE DRAINAGE FACILITIES.
 - EROSION AND SEDIMENT CONTROL MEASURES ARE TO BE PLACED PRIOR TO, OR AS THE FIRST PART OF CONSTRUCTION. SEDIMENT CONTROL MEASURES MUST PROTECT ALL DRAINAGE FACILITIES FROM SEDIMENTATION.
 - EROSION AND SEDIMENT CONTROL MEASURES TO BE INSPECTED DAILY. REPAIRS TO BE MADE AS NECESSARY AND WITHIN 24 HOURS OF INSPECTION.
 - NO SEDIMENT FROM SITE CONSTRUCTION SHALL BE ALLOWED TO TRANSFER OUTSIDE PROPERTY.
 - EROSION CONTROL MEASURES SHALL BE INSTALLED AROUND ANY DIRT OR TOPSOIL STOCKPILES AND OTHER TEMPORARILY DISTURBED AREAS.
 - ALL EROSION AND SEDIMENTATION CONTROL MEASURES SHALL BE REMOVED AND DISPOSED OF IN ACCORDANCE WITH ALL JURISDICTIONAL GOVERNMENTAL AGENCY REQUIREMENTS WITHIN THIRTY (30) DAYS OF FINAL STABILIZATION.
 - FILTER TRAPS AND SILT FENCES SHALL REMAIN IN PLACE UNTIL A GOOD STAND OF GRASS HAS BEEN OBTAINED. AFTER COMPLETE VEGETATION ESTABLISHMENT, ALL SILT WITHIN PIPES AND DRAINAGE SWALES SHALL BE REMOVED WITHIN 10 DAYS SO THAT FINISHED GRADES ARE MET.

- EARTHWORK:
- IT IS THE CONTRACTOR'S RESPONSIBILITY TO VERIFY THE UNSUITABLE MATERIAL PRESENT ON-SITE AND INCLUDE THE REMOVAL AND REPLACEMENT OF SAME IN THE BID PRICE.
 - THE CONTRACTOR'S BID FOR EARTHWORK SHALL INCLUDE THE EXCAVATION, REMOVAL AND DISPOSAL OF ALL MATERIALS, OF WHATEVER CHARACTER, WITHIN THE LIMITS OF CONSTRUCTION.
 - THE CONTRACTOR SHALL MAKE HIS OWN ESTIMATE ON THE VOLUME OF MATERIAL ACTUALLY REQUIRED TO OBTAIN THE CROSS SECTIONS OR GRADES AS SHOWN ON THE PLANS.
 - THE CONTRACTOR SHALL REMOVE ALL MUCK, YIELDING MATERIAL ROOTS, VEGETATION AND OTHER DEGRADABLE MATERIAL IN ITS ENTIRETY, WITHIN THE PAVEMENT UNITS AND BELOW ALL STRUCTURES AND UTILITIES TO FULL EXCAVATED TRENCH WIDTH. SAID MATERIAL SHALL BE REPLACED WITH CLEAN ORGANIC FREE MATERIAL WITH ROCKS SMALLER THAN ONE INCH IN DIAMETER COMPACTED TO NOT LESS THAN 98% MAXIMUM DENSITY AT OPTIMUM MOISTURE. AASHTO T-180 METHOD "D" WITH MAXIMUM LIFTS OF TWELVE INCHES COMPACTED THICKNESS.
 - ROCK EXCAVATION SHALL INCLUDE ANY ROCK ENCOUNTERED WHICH CANNOT BE REMOVED WITH A 3/4 YARD BACKHOE UNDER NORMAL OPERATING CONDITIONS. ROCK EXCAVATION SHALL BE INCIDENTAL TO CONSTRUCTION OF ALL PIPING SYSTEMS AND NO SEPARATE PAYMENT WILL BE MADE.
 - ALL OPEN TRENCHES AND HOLES ADJACENT TO ROADWAYS OR WALKWAYS SHALL BE PROPERLY MARKED AND BARRICADED TO ASSURE THE SAFETY OF BOTH VEHICULAR AND PEDESTRIAN TRAFFIC.
 - TRENCHES OR HOLES NEAR WALKWAYS OR IN ROADWAYS OR THEIR SHOULDERS ARE NOT TO BE LEFT OPEN OUTSIDE OF ACTIVE CONSTRUCTION ACTIVITIES IN THE SPECIFIC AREA. STEEL ROAD PLATING OF OPEN EXCAVATIONS MAY BE REQUIRED AS REQUESTED BY OWNER TO ENSURE OPERATION OF THE FACILITY DURING CONSTRUCTION.

- WHENEVER IT IS NECESSARY, IN THE INTEREST OF SAFETY, CONTRACTOR TO BRACE OR SHORE THE SIDES OF THE TRENCH, SUCH BRACING OR SHORING SHALL BE CONSIDERED TO BE PART OF THE BID PRICE OF UTILITY PIPE FOR WHICH EXCAVATION AND BACKFILL IS REQUIRED.
- THE CONTRACTOR SHALL FURNISH, PUT IN PLACE AND MAINTAIN SUCH SHEETING, BRACING, AS MAY BE REQUIRED TO SUPPORT THE SIDE OF THE EXCAVATION, AND TO PREVENT ANY MOVEMENT WHICH CAN IN ANY WAY DAMAGE THE WORK OR ENDANGER ADJACENT STRUCTURES.
- IF FIELD CONDITIONS, TYPE OF SHEETING OR CONSTRUCTION METHODS MAKE REMOVAL OF SHEETING IMPRACTICABLE, AT NO ADDITIONAL COST TO THE OWNER, THE CONTRACTOR MAY LEAVE ALL SHEETING IN PLACE. THE ENGINEER MAY REQUIRE SHEETING TO BE CUT OFF AT ANY SPECIFIED ELEVATION BUT IN NO CASE WILL ANY SHEETING BE LEFT CLOSER THAN TWO (2) FEET BELOW THE NATURAL SURFACE, NOR CUT OFF BELOW THE ELEVATION OF THE TOP OF THE PIPE.
- AFTER PIPES, STRUCTURES, AND OTHER APPURTENANCES HAVE BEEN INSTALLED, THE TRENCH OR OPENING SHALL BE BACKFILLED WITH MATERIAL IN CONFORMANCE WITH THE CONTRACT DOCUMENTS.
- IF THE BOTTOM OF THE TRENCH IS ROCK, THE EXCAVATION SHALL BE CARRIED EIGHT INCHES BELOW THE INVERT OF THE PIPE AND BACKFILLED WITH THOROUGHLY COMPACTED SAND, GRAVEL, OR OTHER SUITABLE MATERIAL APPROVED BY THE ENGINEER.
- IN AREAS WHERE NO PAVEMENT IS TO BE CONSTRUCTED, THE BACKFILL ABOVE THE TWELVE INCH LINE ABOVE THE PIPE SHALL BE COMPACTED TO A FIRMNESS APPROXIMATELY EQUAL TO THAT OF THE SOIL ADJACENT TO THE PIPE TRENCH.
- CONSTRUCTION SAFETY - ALL CONSTRUCTION SHALL PERFORMED IN A SAFE MANNER. SPECIFICALLY, THE RULES AND REGULATIONS OF THE OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA) AND THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) SHALL BE STRICTLY OBSERVED.
- CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR COMPLIANCE WITH THE STATE OF MICHIGAN TRENCH SAFETY ACT.
- WATER SHALL NOT BE PERMITTED TO ACCUMULATE IN THE EXCAVATED AREA. IT SHALL BE REMOVED BY PUMPING OR OTHER MEANS AS APPROVED BY THE ENGINEER. THE REMOVAL OF WATER SHALL BE CONSIDERED TO BE A PART OF THE BID PRICE OF THE ITEM FOR WHICH EXCAVATION AND BACKFILL IS REQUIRED. CONTRACTOR TO OBTAIN DOWATERING 1 PERMITS FROM APPLICABLE JURISDICTIONAL AGENCIES IF REQUIRED.
- INSITU SOILS SHALL NOT BE REUSED ONSITE FOR BACKFILL.

- DEMOLITION:
- REMOVAL, DEMOLITION, HAULING, AND DISPOSAL SHALL COMPLY WITH REGULATIONS BY THE STATE D.E.P., E.P.A., AND ANY OTHER AUTHORITY HAVING JURISDICTION.
 - CONTRACTOR SHALL DRAIN, PURGE, OR OTHERWISE REMOVE, COLLECT, AND DISPOSE OF CHEMICALS, GASES, EXPLOSIVES, ACIDS, FLAMMABLES, OR OTHER DANGEROUS MATERIALS BEFORE PROCEEDING WITH DEMOLITION OPERATIONS.
 - CONTRACTOR SHALL CONDUCT DEMOLITION OPERATIONS AND REMOVE DEBRIS TO ENSURE MINIMUM INTERFERENCE WITH ROADS, STREETS, WALKS, AND OTHER ADJACENT OCCUPIED AND USED FACILITIES.
 - ALL EXCAVATED MATERIAL REMOVED FROM THIS PROJECT SHALL BE DISPOSED OF PROPERLY BY THE CONTRACTOR AT THE CONTRACTOR'S EXPENSE.
 - FOR SELECTIVE DEMOLITION, CONTRACTOR SHALL USE CUTTING METHODS LEAST LIKELY TO DAMAGE CONSTRUCTION TO REMAIN OR ADJOINING CONSTRUCTION, TO MINIMIZE DISTURBANCE OF ADJACENT SURFACES, USE HAND OR SMALL POWER TOOLS DESIGNED FOR SAWING OR GRINDING, NOT HAMMERING OR CHOPPING. TEMPORARILY COVER OPENINGS TO REMAIN.
 - CONTRACTOR SHALL DEMOLISH CONCRETE IN SMALL SECTIONS; CUT CONCRETE AT JUNCTURES WITH CONSTRUCTION TO REMAIN, USING POWER-DRIVEN MASONRY SAW OR HAND TOOLS; DO NOT USE POWER-DRIVEN IMPACT TOOLS.
 - TEMPORARY PATCH MATERIAL MUST BE ON THE PROJECT SITE WHENEVER PAVEMENT IS CUT, OR THE ENGINEER MAY SHUT THE JOB DOWN.
 - CONTRACTOR SHALL CONDUCT DEMOLITION OPERATIONS TO PREVENT INJURY TO PEOPLE AND DAMAGE TO ADJACENT BUILDINGS AND FACILITIES TO REMAIN. ENSURE SAFE PASSAGE OF PEOPLE AROUND DEMOLITION AREA.
 - ALL TREES TO REMAIN SHALL BE IDENTIFIED PRIOR TO CONSTRUCTION AND SHALL BE PROTECTED (INCLUSIVE OF TRUNKS, BRANCHES, AND ROOTS) PER LOCAL AHJ STANDARDS.
 - CONTRACTOR SHALL ERECT TEMPORARY PROTECTION, SUCH AS WALKS, FENCES, BARRIERS, RAILINGS, ETC. WHERE REQUIRED BY AUTHORITIES HAVING JURISDICTION.
 - CONTRACTOR SHALL PROTECT EXISTING SITE IMPROVEMENTS, APPURTENANCES, AND LANDSCAPING TO REMAIN.
 - ADJACENT IMPROVEMENTS SHALL BE CLEANED OF DUST, DIRT, AND DEBRIS CAUSED BY DEMOLITION OPERATIONS. ADJACENT AREAS SHALL BE REQUIRED TO BE RETURNED TO CONDITION EXISTING BEFORE START OF DEMOLITION AT NO ADDITIONAL COSTS.
 - ALL EXISTING STREET LIGHTING WILL REMAIN IN PLACE AND REMAIN IN SERVICE DURING CONSTRUCTION OPERATIONS. CONTRACTOR SHALL USE CARE TO ENSURE EXISTING

- CONDUIT, PULLBOXES, AND CONTROL ARE NOT DAMAGED DURING DEMOLITION OPERATIONS.
- GRADING:
- PROVIDE SMOOTH VERTICAL CURVES THROUGH HIGH AND LOW POINTS INDICATED BY SPOT ELEVATIONS. PROVIDE UNIFORM SLOPES BETWEEN NEW AND EXISTING GRADES. AVOID RIDGES AND DEPRESSIONS IN PAVED AREAS.
 - ALL EXISTING UTILITY MH COVERS, ELECTRICAL BOXES, METER BOXES, METERS, DRAINAGE STRUCTURES, ETC. WITHIN PROPOSED AREAS OF IMPROVEMENTS SHALL BE ADJUSTED TO MATCH FINISHED PAVED GRADE ELEVATION, UNLESS OTHERWISE NOTED.
 - PROPOSED ELEVATIONS INDICATE FINISHED CONDITIONS. FOR ROUGH GRADING ELEVATIONS ALLOW FOR THICKNESS OF PROPOSED PAVING (ROADS, WALKS, DRIVES, ETC.) OR TOPSOIL AS INDICATED ON DRAWINGS.
 - ALL PROPOSED SPOT GRADES MARKED AS "ME" SHALL MATCH EXISTING ELEVATIONS.
 - CONTRACTOR SHALL PROVIDE POSITIVE DRAINAGE IN ROADWAYS, ALONG CURB FLOW LINES, AWAY FROM BUILDINGS AND STRUCTURES, AND TOWARD STORM WATER MANAGEMENT SYSTEM. CONTRACTOR SHALL VERIFY FEASIBILITY OF POSITIVE DRAINAGE PRIOR TO FORMING OR INSTALLATION WORK AND IMMEDIATELY NOTIFY OWNER'S CONSTRUCTION REPRESENTATIVE OF ANY DISCREPANCIES.
 - MATCH EXISTING ELEVATIONS WHERE NEW CONSTRUCTION MEETS EXISTING. ENSURE POSITIVE DRAINAGE AWAY FROM BUILDINGS AND STRUCTURES TOWARDS STORM WATER MANAGEMENT SYSTEMS. IMMEDIATELY NOTIFY ENGINEER OF ANY DISCREPANCIES PRIOR TO PAVEMENT, GRAVEL, OR TOPSOIL INSTALLATION.
 - WHEN AN EXISTING DRAINAGE ROUTE, EITHER A STORM SEWER OR WATERWAY, IS INTERRUPTED DUE TO CONSTRUCTION, THE DRAINAGE ROUTE SHALL BE RE-ESTABLISHED TO ORIGINAL CONDITIONS BY THE END OF THE SAME WORK DAY. POSITIVE DRAINAGE MUST BE MAINTAINED AT ALL TIMES DURING CONSTRUCTION.
 - THE CONTRACTOR SHALL EXERCISE CAUTION WHEN GRADING NEAR TREE ROOTS TO AVOID DAMAGE FROM UNPLANNED ROOT PRUNING OR PLACEMENT OF EXCESSIVE FILL OVER ROOTS.
 - ALL GRASS AREAS AFFECTED BY CONSTRUCTION SHALL BE RE-SEEDDED AND MATCH EXISTING ADJACENT GRADE UNLESS OTHERWISE SPECIFIED.

- PAVING:
- ALL UNDERGROUND UTILITIES SHALL BE COMPLETED PRIOR TO THE CONSTRUCTION OF THE PAVEMENT BASE IN THE AREA OF WORK.
 - CONTRACTOR SHALL PREPARE PAVEMENT AREAS IN ACCORDANCE WITH THE PROJECT GEOTECHNICAL REPORT PRIOR TO INSTALLATION OF STABILIZED SUB-GRADE FILL.
 - STABILIZED SUB-GRADE FILL SHALL BE INSTALLED TO THE THICKNESS AND COMPACTION SHOWN IN THE CONTRACT DOCUMENTS. SUB-GRADE FILL MATERIAL SHALL BE PLACED IN MAXIMUM 6" LIFTS. SUB-GRADE FILL MATERIAL GREATER THAN 6" SHALL BE PLACED IN TWO OR MORE EQUAL LIFTS.
 - ROADWAY BASE MATERIAL SHALL BE INSTALLED TO THE THICKNESS AND COMPACTION SHOWN IN THE CONTRACT DOCUMENTS. ROADWAY BASE MATERIAL SHALL BE PLACED IN MAXIMUM 6" LIFTS. BASES GREATER THAN 6" SHALL BE PLACED IN TWO OR MORE EQUAL LIFTS.
 - TESTING OF ALL SUB-GRADE, BASE, AND ASPHALTIC CONCRETE OR PORTLAND CEMENT CONCRETE PAVEMENT SHALL BE TAKEN PER THE RECOMMENDATIONS OF THE GEOTECHNICAL ENGINEER/TESTING AGENCY (TO BE ENGAGED BY CONTRACTOR). IN THE ABSENCE OF ANYTHING STATING OTHERWISE, COMPACTION TESTS ARE TO BE PERFORMED ON EVERY 6" LIFT OF AGGREGATE BACKFILL AND ON EVERY LIFT OF NEW ASPHALT PAVEMENT. CONTRACTOR TO SUBMIT TESTING SCHEDULE TO OWNER/ENGINEER A MINIMUM OF 1 WEEK IN ADVANCE OF SUB-GRADE PROOF ROLL TEST.
 - ASPHALTIC CONCRETE PAVEMENT:
 - ASPHALTIC CONCRETE PAVEMENT THICKNESS AND COMPACTION SHALL BE IN ACCORDANCE WITH THE CONTRACT DOCUMENTS.
 - PRIME AND TACK COATS SHALL BE PLACED IN ACCORDANCE WITH MICHIGAN DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS.
 - ALL ASPHALTIC CONCRETE SHALL HAVE A MAXIMUM OF 20% (BY WEIGHT) OF RECYCLED ASPHALT PRODUCTS (RAP).
 - PORTLAND CEMENT CONCRETE PAVEMENT:
 - CONTRACTOR SHALL PREPARE PAVEMENT AREAS IN ACCORDANCE WITH THE PROJECT GEOTECHNICAL REPORT AND ACI-330 PRIOR TO INSTALLATION OF STABILIZED SUBGRADE FILL.
 - ALL CONCRETE USED SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH AND THICKNESS IN ACCORDANCE WITH THE CONTRACT DOCUMENTS.
 - LAY OUT CONTROL JOINTS BY STARTING WITH ANY DRAINAGE INLETS OR STRUCTURES WITHIN THE PAVEMENT SECTION AND WORK TOWARD EDGE OF PAVEMENT.
 - KEEP ALL JOINTS CONTINUOUS UNLESS TERMINATED BY AN ISOLATION JOINT.
 - CONTROL JOINTS SHALL BE FORMED OR SAWED WITHIN 4 TO 12 HOURS FROM TIME OF PLACEMENT; MAXIMUM SPACING (IN FEET) SHALL BE TWO TIMES THICKNESS (IN INCHES).
 - KEEP JOINTS SQUARE. AVOID RECTANGULAR AND IRREGULARLY SHAPED PANELS. DO NOT EXCEED 1.25 LENGTH

- TO WIDTH RATIO. AVOID ACUTE JOINT ANGLES.
- ALL CONTRACTION AND ISOLATION JOINTS THAT ARE EXPECTED TO INCUR VEHICULAR TRAFFIC LOADING SHALL HAVE THICKENED EDGES.
 - CURE CONCRETE IMMEDIATELY AFTER FINISHING OPERATION IS COMPLETED BY USING ONE OF THE FOLLOWING METHODS: PONDED WATER, PIGMENTED WATER-BASED CURING COMPOUND, SATURATED BURLAP.
 - ALL ISOLATION TYPE JOINTS SHALL USE A SONNEBORN/SONNOLASTIC EXPANSION JOINT FILLER AND SEALANT OR EQUIVALENT. PREFORMED NEOPRENE RUBBER COMPRESSION SEALS MAY ALSO BE USED.
 - CONTRACTOR SHALL SUBMIT CONCRETE JOINTING PLAN TO ENGINEER FOR APPROVAL PRIOR TO CONSTRUCTION.
 - VEHICULAR TRAFFIC SHALL NOT BE ALLOWED ON CONCRETE PAVEMENTS UNTIL A MINIMUM TESTED COMPRESSIVE STRENGTH OF 3000 PSI HAS BEEN ACHIEVED UNLESS OWNER REQUIREMENTS DIFFER.
- PROJECT CLOSEOUT:
- CLEANING UP:
 - DURING CONSTRUCTION, THE PROJECT SITE AND ALL ADJACENT AREAS SHALL BE MAINTAINED IN A NEAT AND CLEAN MANNER. UPON FINAL CLEAN UP, THE PROJECT SITE SHALL BE LEFT CLEAR OF ALL SURPLUS MATERIAL OR TRASH. THE PAVED AREAS SHALL BE SWEEP BROOM CLEAN.
 - THE CONTRACTOR SHALL RESTORE OR REPLACE, WHEN AND AS DIRECTED BY ENGINEER, ANY PUBLIC OR PRIVATE PROPERTY DAMAGED BY ITS WORK, EQUIPMENT, EMPLOYEES, OR THOSE OF ITS SUBCONTRACTORS TO A CONDITION AT LEAST EQUAL TO OR BETTER THAN THE EXISTING CONDITION IMMEDIATELY PRIOR TO CONSTRUCTION. TO THIS END, THE CONTRACTOR SHALL DO ALL NECESSARY SITE WORK IN A NEAT AND CAREFUL MANNER WHEN TING INTO EXISTING/ADJACENT AREAS. SUITABLE MATERIALS AND METHODS SHALL BE USED FOR ALL RESTORATION ACTIVITIES.
 - WHERE MATERIAL OR DEBRIS HAS WASHED OR FLOWED INTO OR BEEN PLACED IN WATER COURSES, DITCHES, DRAINS, CATCH BASINS, OR ELSEWHERE AS A RESULT OF THE CONTRACTOR OPERATIONS, SUCH MATERIAL OR DEBRIS SHALL BE REMOVED AND SATISFACTORILY DISPOSED OF DURING PROGRESS OF THE WORK, AND THE AREA KEPT IN A CLEAN AND NEAT CONDITION.
 - PROJECT RECORD DOCUMENTS:
 - THE CONTRACTOR SHALL MAINTAIN ACCURATE AND COMPLETE RECORDS OF THE WORK PERFORMED.
 - ALL REQUIRED DENSITY AND MATERIAL TEST RESULTS FOR SUB-GRADE AND BASE MATERIAL SHALL BE PROVIDED TO THE ENGINEER BEFORE PLACEMENT OF THE NEXT LAYER OF STABILIZATION/PAVEMENT.
 - ALL "AS-BUILT" INFORMATION SUBMITTED TO THE ENGINEER SHALL BE SUFFICIENTLY ACCURATE, CLEAR, AND LEGIBLE TO SATISFY THE ENGINEER THAT THE INFORMATION PROVIDES A TRUE REPRESENTATION OF THE IMPROVEMENTS ACTUALLY CONSTRUCTED.
 - UPON COMPLETION OF CONSTRUCTION, THE CONTRACTOR SHALL SUBMIT TO THE ENGINEER COMPLETE SETS OF "AS-BUILT" CONSTRUCTION DRAWINGS AS REQUIRED FOR SUBMITTAL AND APPROVAL. THESE DRAWINGS SHALL BE MARKED TO SHOW "AS-BUILT" CONSTRUCTION CHANGES AND DIMENSIONED LOCATIONS AND ELEVATIONS OF ALL IMPROVEMENTS. FINAL AS-BUILTS SHALL BE SIGNED AND SEALED BY A PROFESSIONAL SURVEYOR AND MAPPER IN THE STATE OF THE PROJECT AREA.
 - ALL AS-BUILT INFORMATION ON ELEVATIONS OF WATER, SEWER, DRAINAGE, AND PAVING SHALL BE CERTIFIED BY A PROFESSIONAL SURVEYOR AND MAPPER IN THE STATE OF THE PROJECT AREA.
 - AS-BUILT INFORMATION SHALL DUPLICATE OR IMPROVE UPON THE LEVEL OF DETAIL SHOWN IN THE PLANS.

- STORMWATER DRAINAGE:
- CONTRACTOR SHALL INSPECT AND CLEAN ALL EXISTING STRUCTURES AND PIPES WITHIN THE PROJECT LIMITS. IF EXISTING STRUCTURES AND PIPES ARE DAMAGED, CONTRACTOR SHALL NOTIFY THE ENGINEER PRIOR TO CONNECTION WITH THE NEW PIPE OR STRUCTURE. CONTRACTOR TO ENSURE ALL STORM WATER PIPING AND STRUCTURES ARE CLEANED PRIOR TO PROJECT CLOSEOUT.
 - PROTECT COMPLETED DRAINAGE STRUCTURES FROM CONTAMINATION BY SILT AND CONSTRUCTION DEBRIS. PLACE FILTER FABRIC BETWEEN THE FRAME AND INLET GRATE UNTIL SITE CONSTRUCTION OPERATIONS ARE FINISHED.

EXISTING LEGEND

- -- -- -- -- PROPERTY BOUNDARY
- EASEMENT
- ROAD CENTERLINE
- -- -- -- -- EX. CM --- EXISTING UNDERGROUND COMMUNICATIONS
- -- -- -- -- EX. GAS --- EXISTING GAS LINE
- -- -- -- -- EX. WM --- EXISTING WATER MAIN
- -- -- -- -- EX. W --- EXISTING WATER SERVICE
- -- -- -- -- EX. SS --- EXISTING SANITARY SYSTEM
- -- -- -- -- EX. DR --- EXISTING DRAINAGE
- -- -- -- -- EX. OE --- EXISTING OVERHEAD UTILITY LINE
- -- -- -- -- EX. BE --- EXISTING BURIED ELECTRIC LINE
- -- -- -- -- EXISTING UNKNOWN UNDERGROUND UTILITY
- -- -- -- -- EXISTING FENCE
- -- -- -- -- EXISTING GRAVEL
- -- -- -- -- EXISTING CONCRETE
- -- -- -- -- EXISTING ASPHALT
- -- -- -- -- WATER MANHOLE
- -- -- -- -- SANITARY SEWER MANHOLE
- -- -- -- -- CLEANOUT
- -- -- -- -- DOWNSPOUT
- -- -- -- -- INLET
- -- -- -- -- GAS METER
- -- -- -- -- AIR CONDITIONING UNIT
- -- -- -- -- UTILITY POLE
- -- -- -- -- GUY ANCHOR
- -- -- -- -- POST
- -- -- -- -- DETECTABLE WARNING PLATE
- -- -- -- -- MISCELLANEOUS STRUCTURE
- -- -- -- -- CONTOUR ELEVATION
- -- -- -- -- CONIFEROUS TREE
- -- -- -- -- BUSH
- -- -- -- -- DECIDUOUS TREE

PROJECT NAME:	
NEW HAVEN CDO - GENERATOR DESIGN	
DET-24002045-A4	
CONSULTANT STAMP	

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REVISIONS / AUTHORIZATIONS			
NO.	REVISIONS / AUTHORIZATIONS	DATE	BY
	PERMIT AND CONSTRUCTION	05/15/25	
	FINAL REVIEW #2	04/18/25	
	FINAL REVIEW	03/18/25	
	50% REVIEW	12/17/24	

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 WITH APPLICATION FOR PERMITS AND AUTHORIZATIONS FOR
 BUILDINGS, CONSTRUCTION, AND/ OR ZONING CHANGES.

DRAWINGS PREPARED FOR	
	CORPORATE REAL ESTATE
PROJECT DRAWING	
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59041 MAIN ST NEW HAVEN MICHIGAN US	
NWHNMIMN	2001272 M18255
SHEET TITLE:	
GENERAL NOTES CIVIL	
AT&T PROJECT NUMBER: 2001269	DATE: 5/15/25
AT&T AUTHORIZATION:	DRAWN BY: REE
AT&T PM: AIMEE BUTLER	CHECKED BY: NSK
	SHEET: 1 OF: 4 SHEETS
	AT&T DRAWING NO.: 2001269C10000
	SHEET NO.: C10000

KEY NOTES - DEMOLITION

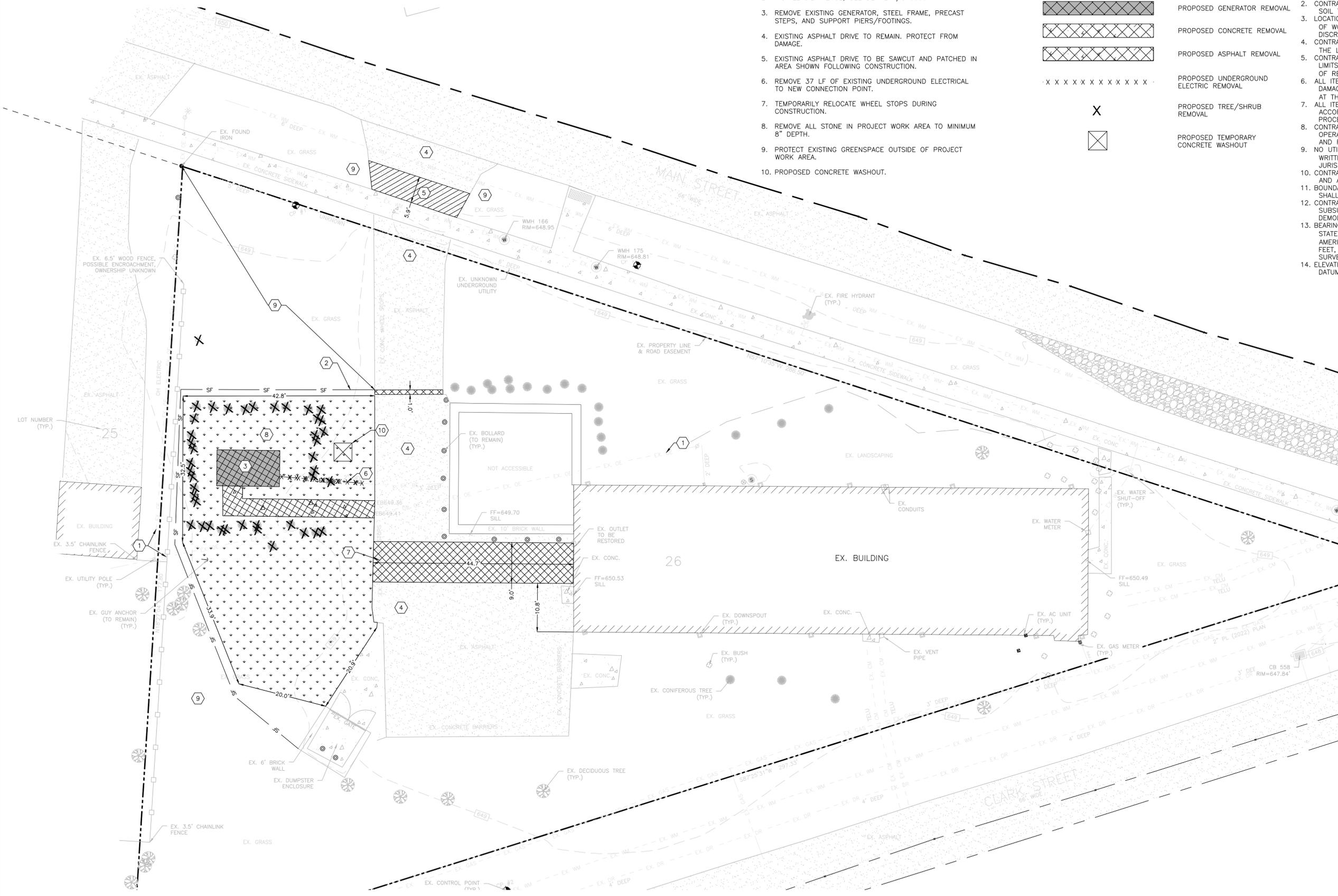
- EXISTING OVERHEAD ELECTRICAL LINES TO BE PROTECTED.
- INSTALL SILT FENCE, SEE DETAIL 1/C40000.
- REMOVE EXISTING GENERATOR, STEEL FRAME, PRECAST STEPS, AND SUPPORT PIERS/FOOTINGS.
- EXISTING ASPHALT DRIVE TO REMAIN. PROTECT FROM DAMAGE.
- EXISTING ASPHALT DRIVE TO BE SAWCUT AND PATCHED IN AREA SHOWN FOLLOWING CONSTRUCTION.
- REMOVE 37 LF OF EXISTING UNDERGROUND ELECTRICAL TO NEW CONNECTION POINT.
- TEMPORARILY RELOCATE WHEEL STOPS DURING CONSTRUCTION.
- REMOVE ALL STONE IN PROJECT WORK AREA TO MINIMUM 8" DEPTH.
- PROTECT EXISTING GREENSPACE OUTSIDE OF PROJECT WORK AREA.
- PROPOSED CONCRETE WASHOUT.

EXISTING LEGEND

-  PROPOSED CLEARING/GRUBBING
-  PROPOSED GENERATOR REMOVAL
-  PROPOSED CONCRETE REMOVAL
-  PROPOSED ASPHALT REMOVAL
-  PROPOSED UNDERGROUND ELECTRIC REMOVAL
-  PROPOSED TREE/SHRUB REMOVAL
-  PROPOSED TEMPORARY CONCRETE WASHOUT

GENERAL NOTES

- CONTRACTOR SHALL MAKE ARRANGEMENTS FOR THE PROPER BRACING, SHORING AND OTHER REQUIRED PROTECTION OF ALL ROADWAYS AND EXCAVATIONS BEFORE CONSTRUCTION BEGINS.
- CONTRACTOR SHALL REPAIR AND REPLANT ANY EXISTING GRASS OR SOIL THAT IS DISTURBED BY CONSTRUCTION ACTIVITY.
- LOCATIONS OF ALL UTILITY LINES TO BE FIELD VERIFIED WITHIN AREA OF WORK. CONTRACTOR TO NOTIFY OWNER/ENGINEER OF ANY DISCREPANCIES.
- CONTRACTOR SHALL CONDUCT DEMOLITION AND SITE CLEARING WITHIN THE LIMITS DESIGNATED ON THE PLANS/DRAWINGS.
- CONTRACTOR SHALL NOT DEMOLISH ANY ITEM OUTSIDE OF THE LIMITS DESIGNATED UNLESS OTHERWISE AUTHORIZED BY ENGINEER OF RECORD (EOR). APPLICABLE JURISDICTIONS OR OWNER.
- ALL ITEMS DESIGNATED TO REMAIN SHALL BE PROTECTED FROM ANY DAMAGE OR LOSS. ANY DAMAGES INCURRED SHALL BE RESTORED AT THE CONTRACTOR'S EXPENSE.
- ALL ITEMS DESIGNATED TO BE REMOVED SHALL BE REMOVED IN ACCORDANCE WITH PREVAILING JURISDICTIONAL REQUIREMENTS AND PROCEDURES.
- CONTRACTOR SHALL SCHEDULE AND MAINTAIN DEMOLITION OPERATIONS TO MINIMIZE INCONVENIENCE TO ADJACENT PROPERTIES AND ROADWAY USE.
- NO UTILITIES SHALL BE DEMOLISHED, REMOVED OR ALTERED WITHOUT WRITTEN APPROVAL OF UTILITY OWNER, AGENCY/AGENCIES OR JURISDICTIONS.
- CONTRACTOR SHALL OBTAIN ALL NECESSARY JURISDICTIONAL PERMITS AND APPROVALS PRIOR TO CONSTRUCTION BEGINNING.
- BOUNDARIES OF ASPHALT, CONCRETE AND CURBING DEMOLITION SHALL BE SAW CUT IN A STRAIGHT LINE.
- CONTRACTOR SHALL COORDINATE & SEQUENCE THE DEMOLITION OF SUBSURFACE UTILITIES AND INFRASTRUCTURE WITH ABOVE GROUND DEMOLITION TO ENSURE NO ADVERSE IMPACTS TO CONSTRUCTION.
- BEARINGS DESCRIBED HEREON ARE REFERENCED TO THE MICHIGAN STATE PLANE COORDINATE SYSTEM (SOUTH ZONE) AND THE NORTH AMERICAN DATUM OF 1983 (2011 ADJUSTMENT), INTERNATIONAL FEET, GEOID18, AS ESTABLISHED BY THE SURVEY FROM MUXLOW SURVEYING.
- ELEVATIONS ARE REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM OF 1988.



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NEW HAVEN CDO - GENERATOR DESIGN

DET-24002045-A4

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REVISIONS / AUTHORIZATIONS

NO.	REVISIONS / AUTHORIZATIONS	DATE	BY
	PERMIT AND CONSTRUCTION	05/15/25	
	FINAL REVIEW #2	04/18/25	
	FINAL REVIEW	03/18/25	
	50% REVIEW	12/17/24	

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BUILDINGS, CONSTRUCTION, AND/OR ZONING CHANGES.

DRAWINGS PREPARED FOR
AT&T CORPORATE REAL ESTATE

PROJECT_DRAWING
01
59041 MAIN ST
NEW HAVEN
MICHIGAN US
NWHNMIMM 2001272 M18255

SHEET TITLE:
EX. CONDITIONS AND DEMO PLAN CIVIL

AT&T PROJECT NUMBER: 2001269	DATE: 5/15/25	SCALE: AS SHOWN
AT&T AUTHORIZATION:	DRAWN BY: REE	CHECKED BY: NSK
AT&T PM: AIMEE BUTLER	SHEET: 2 OF: 4 SHEETS	SHEET NO. C10101D

1 EXISTING CONDITIONS AND DEMOLITION PLAN
SCALE: 1" = 10'

PROPOSED WORK LEGEND

-  PROPOSED ASPHALT
-  PROPOSED CONCRETE GENERATOR/UTILITY PAD
-  PROPOSED ASPHALT RESTORATION
-  PROPOSED CONCRETE SIDEWALK
-  PROPOSED GREENSPACE RESTORATION (MATCH EXISTING)
-  PROPOSED NEW UNDERGROUND ELECTRICAL CONNECTION
-  PROPOSED TEMPORARY CONTRACTOR STAGING AREA
-  PROPOSED FLOW ARROW

ABBREVIATIONS:

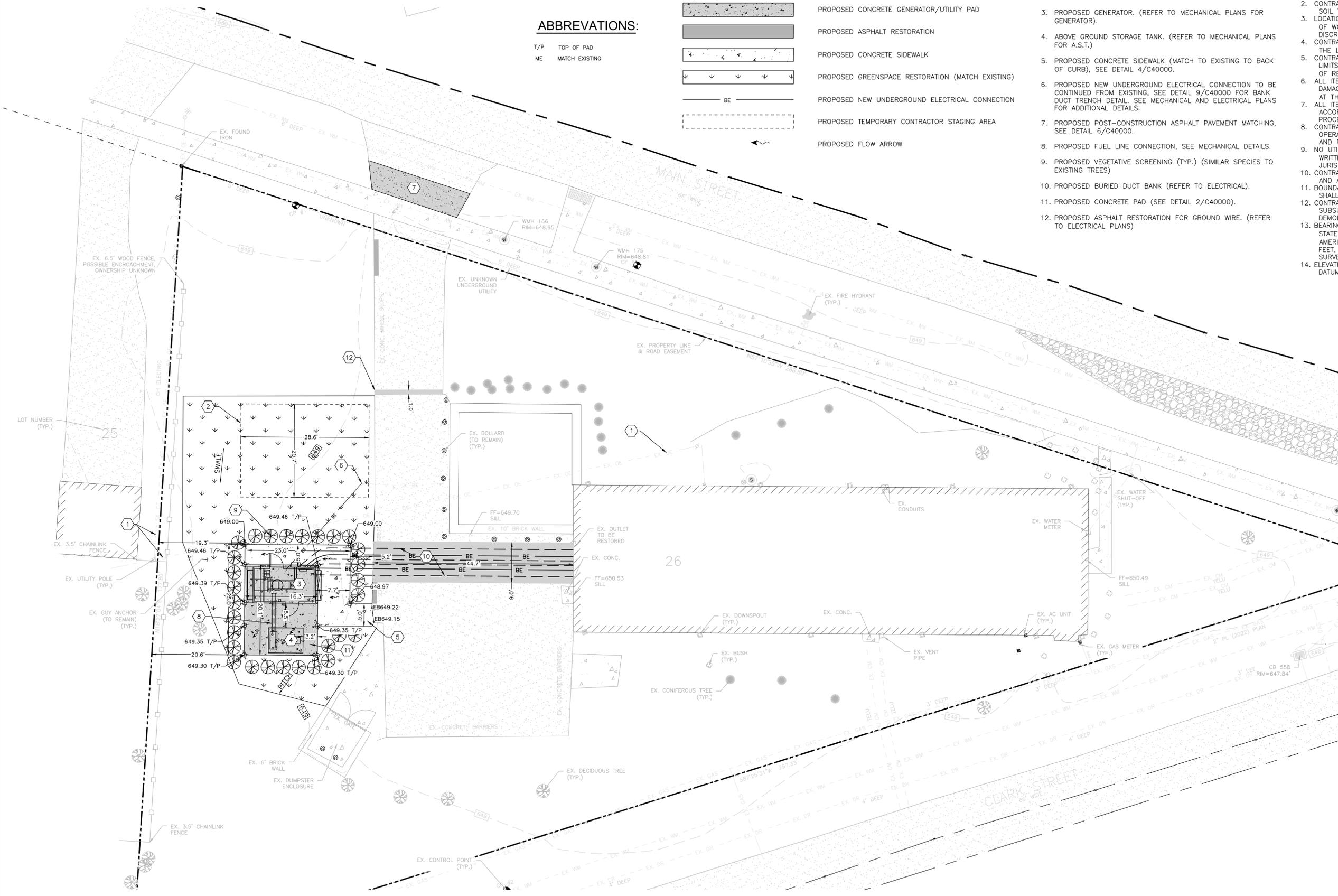
- T/P TOP OF PAD
- ME MATCH EXISTING

KEY NOTES - NEW WORK

1. EXISTING OVERHEAD ELECTRICAL LINES TO BE PROTECTED.
2. CONTRACTOR STAGING AREA.
3. PROPOSED GENERATOR. (REFER TO MECHANICAL PLANS FOR GENERATOR).
4. ABOVE GROUND STORAGE TANK. (REFER TO MECHANICAL PLANS FOR A.S.T.)
5. PROPOSED CONCRETE SIDEWALK (MATCH TO EXISTING TO BACK OF CURB), SEE DETAIL 4/C40000.
6. PROPOSED NEW UNDERGROUND ELECTRICAL CONNECTION TO BE CONTINUED FROM EXISTING. SEE DETAIL 9/C40000 FOR BANK DUCT TRENCH DETAIL. SEE MECHANICAL AND ELECTRICAL PLANS FOR ADDITIONAL DETAILS.
7. PROPOSED POST-CONSTRUCTION ASPHALT PAVEMENT MATCHING. SEE DETAIL 6/C40000.
8. PROPOSED FUEL LINE CONNECTION, SEE MECHANICAL DETAILS.
9. PROPOSED VEGETATIVE SCREENING (TYP.) (SIMILAR SPECIES TO EXISTING TREES)
10. PROPOSED BURIED DUCT BANK (REFER TO ELECTRICAL).
11. PROPOSED CONCRETE PAD (SEE DETAIL 2/C40000).
12. PROPOSED ASPHALT RESTORATION FOR GROUND WIRE. (REFER TO ELECTRICAL PLANS)

GENERAL NOTES

1. CONTRACTOR SHALL MAKE ARRANGEMENTS FOR THE PROPER BRACING, SHORING AND OTHER REQUIRED PROTECTION OF ALL ROADWAYS AND EXCAVATIONS BEFORE CONSTRUCTION BEGINS.
2. CONTRACTOR SHALL REPAIR AND REPLANT ANY EXISTING GRASS OR SOIL THAT IS DISTURBED BY CONSTRUCTION ACTIVITY.
3. LOCATIONS OF ALL UTILITY LINES TO BE FIELD VERIFIED WITHIN AREA OF WORK. CONTRACTOR TO NOTIFY OWNER/ENGINEER OF ANY DISCREPANCIES.
4. CONTRACTOR SHALL CONDUCT DEMOLITION AND SITE CLEARING WITHIN THE LIMITS DESIGNATED ON THE PLANS/DRAWINGS.
5. CONTRACTOR SHALL NOT DEMOLISH ANY ITEM OUTSIDE OF THE LIMITS DESIGNATED UNLESS OTHERWISE AUTHORIZED BY ENGINEER OF RECORD (EOR). APPLICABLE JURISDICTIONS OR OWNER.
6. ALL ITEMS DESIGNATED TO REMAIN SHALL BE PROTECTED FROM ANY DAMAGE OR LOSS. ANY DAMAGES INCURRED SHALL BE RESTORED AT THE CONTRACTOR'S EXPENSE.
7. ALL ITEMS DESIGNATED TO BE REMOVED SHALL BE REMOVED IN ACCORDANCE WITH PREVAILING JURISDICTIONAL REQUIREMENTS AND PROCEDURES.
8. CONTRACTOR SHALL SCHEDULE AND MAINTAIN DEMOLITION OPERATIONS TO MINIMIZE INCONVENIENCE TO ADJACENT PROPERTIES AND ROADWAY USE.
9. NO UTILITIES SHALL BE DEMOLISHED, REMOVED OR ALTERED WITHOUT WRITTEN APPROVAL OF UTILITY OWNER, AGENCY/AGENCIES OR JURISDICTIONS.
10. CONTRACTOR SHALL OBTAIN ALL NECESSARY JURISDICTIONAL PERMITS AND APPROVALS PRIOR TO CONSTRUCTION BEGINNING.
11. BOUNDARIES OF ASPHALT, CONCRETE AND CURBING DEMOLITION SHALL BE SAW CUT IN A STRAIGHT LINE.
12. CONTRACTOR SHALL COORDINATE & SEQUENCE THE DEMOLITION OF SUBSURFACE UTILITIES AND INFRASTRUCTURE WITH ABOVE GROUND DEMOLITION TO ENSURE NO ADVERSE IMPACTS TO CONSTRUCTION.
13. BEARINGS DESCRIBED HEREON ARE REFERENCED TO THE MICHIGAN STATE PLANE COORDINATE SYSTEM (SOUTH ZONE) AND THE NORTH AMERICAN DATUM OF 1983 (2011 ADJUSTMENT), INTERNATIONAL FEET, GEOID18, AS ESTABLISHED BY THE SURVEY FROM MUXLOW SURVEYING.
14. ELEVATIONS ARE REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM OF 1988.



PROJECT NAME:		
NEW HAVEN CDO - GENERATOR DESIGN		
DET-24002045-A4		

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exp U.S. Services Inc. P +1.248.351.8200 F +1.248.351.8250 27777 Franklin Road Suite 1510 Southfield, MI 48034 U.S.A. www.exp.com	
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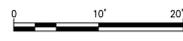
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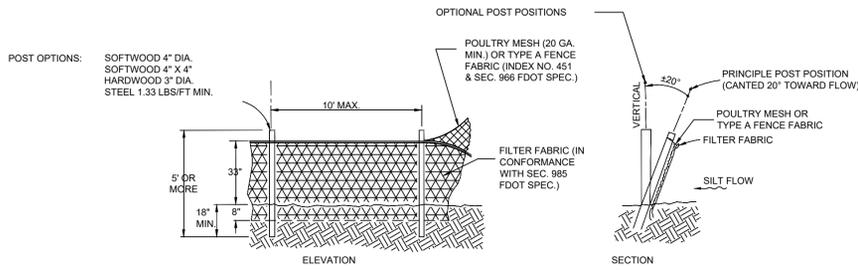
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PROJECT_DRAWING
 01
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 NEW HAVEN
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 NWHNMIMN 2001272 M18255

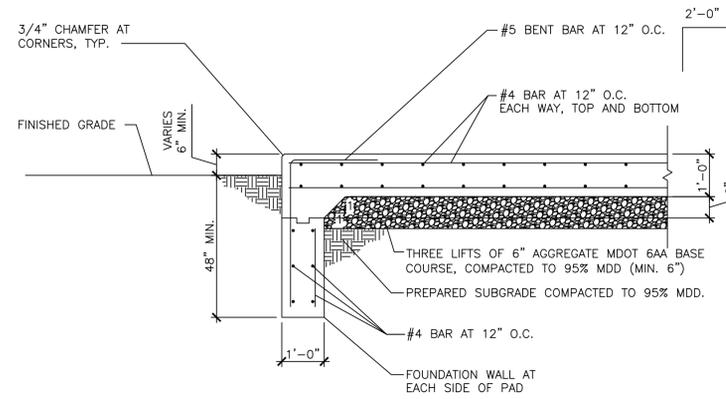
SHEET TITLE: NEW WORK PLAN CIVIL	
AT&T PROJECT NUMBER: 2001269	DATE: 5/15/2025
AT&T AUTHORIZATION:	SCALE: AS SHOWN
AT&T PM: AIMEE BUTLER	DRAWN BY: REE
	CHECKED BY: NSK
	SHEET: 3 OF 4 SHEETS
	SHEET NO. C20000

1 NEW WORK PLAN
 SCALE: 1" = 10'

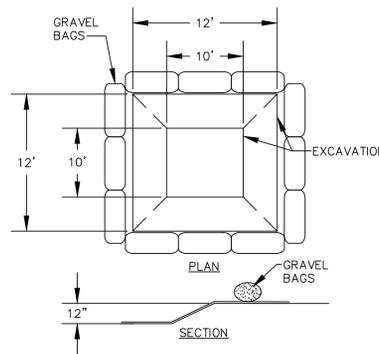


1 SILT FENCE
N.T.S.

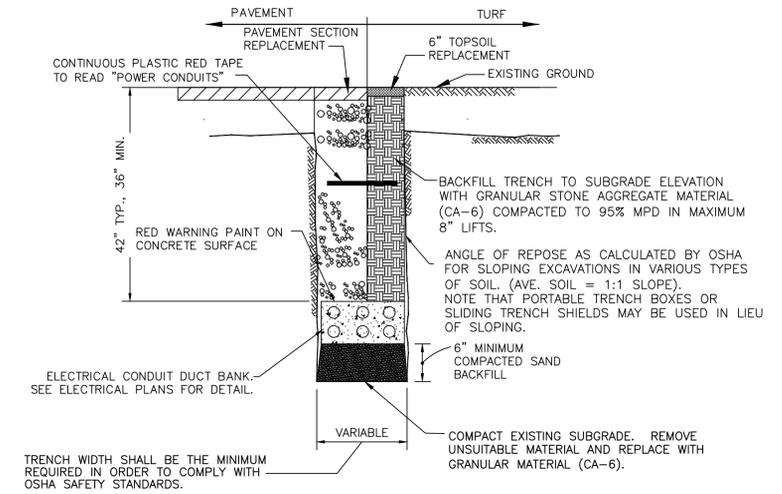


2 GENERATOR PAD DETAIL
1/2" = 1'-0"

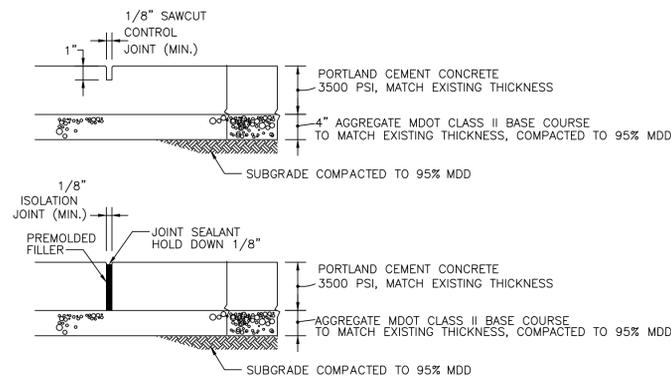
- NOTES:
- COORDINATE OVERALL PAD DIMENSIONS WITH FINAL APPROVED GENERATOR SUBMITTAL PRIOR TO CONSTRUCTION. PROVIDE MINIMUM 6" FROM EACH EDGE OF PAD TO NEAREST FACE OF FUEL TANK OR ACCESS PLATFORM BEARING ON THE PAD.
 - REFER TO CIVIL SITE PLANS FOR PAD LOCATION, ORIENTATION, AND ELEVATION.
 - ANCHOR GENERATOR TO CONCRETE PAD IN ACCORDANCE WITH EQUIPMENT MANUFACTURER'S INSTALLATION INSTRUCTIONS.
 - CONCRETE SHALL HAVE A MINIMUM 28-DAY COMPRESSIVE STRENGTH OF 5,000 PSI.
 - REINFORCING STEEL SHALL BE ASTM A615, GRADE 60.



3 DUCT BANK TRENCH
N.T.S.



6 ASPHALT PAVEMENT MATCHING
N.T.S.



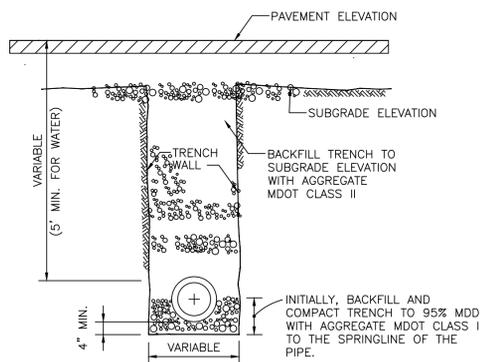
SIDEWALK NOTES:

- WIDTH PER PLAN.
- MAXIMUM TRAVEL SLOPE SHALL NOT EXCEED 5% (20:1).
- MAXIMUM CROSS SLOPE & AT LANDINGS SHALL BE 2% (50:1).
- AGGREGATE BASE COURSE SHALL BE MECHANICALLY COMPACTED.
- SIDEWALK SHALL BE PROMPTLY BACKFILLED AND PROTECTED FROM DAMAGE.
- SIDEWALK SHALL HAVE A BROOM FINISH.
- UNLESS OTHERWISE NOTED, CONTROL JOINTS TO BE 5' O.C.
- UNLESS OTHERWISE NOTED, ISOLATION JOINTS TO BE 50' O.C., ABUTTING CURB, OTHER WALKS OR STRUCTURES, AND CHANGES OF DIRECTION.

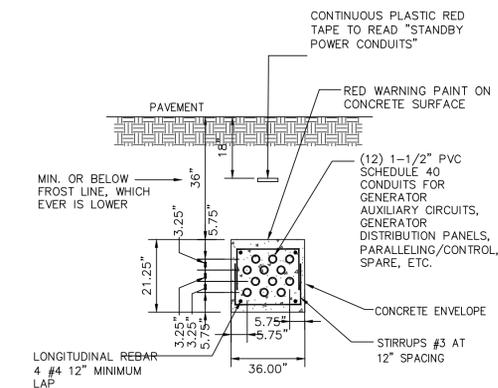
4 CONCRETE SIDEWALK
N.T.S.

- GENERAL NOTES:**
- SECURE POLYETHYLENE LINING WITH UV-STABILIZED GEOTEXTILE FABRIC SANDBAGS.
 - POLYETHYLENE LINING SHALL BE 10MM MIN. AND FREE OF HOLES, TEARS, OR OTHER DEFECTS. THE SHEET SHALL BE APPROPRIATELY SIZED TO FIT THE ENTIRE WASHOUT SYSTEM WITHOUT SEAMS OR OVERLAPS. REPLACE LINER AS NECESSARY.
 - EXCAVATION SHALL BE A 8'x8' MIN. AND SIZED TO CONTAIN ALL LIQUID AND WASTE EXPECTED TO BE GENERATED.

5 CONCRETE WASHOUT
N.T.S.



7 ASPHALT PAVEMENT SECTION
N.T.S.



9 PIPE TRENCH DETAIL
N.T.S.

10 GENERATOR CONTROLS DUCT BANK
NOT TO SCALE

PROJECT NAME:
NEW HAVEN CDO - GENERATOR DESIGN

DET-24002045-A4

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3/15/15

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PROJECT DRAWING
01
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NEW HAVEN
MICHIGAN US
NWHNMIMN 2001272 M18255

SHEET TITLE:
DETAILS CIVIL

AT&T PROJECT NUMBER:
2001269

DATE: 5/15/25 SCALE: AS SHOWN

DRAWN BY: REE CHECKED BY: NSK

AT&T AUTHORIZATION:
AT&T PM: AIMEE BUTLER

SHEET: 4 OF 4 SHEETS SHEET NO. 2001269C40000 C40000

MECHANICAL ABBREVIATIONS			
ACC	AIR-COOLED CONDENSER	IN	INCHES
ACCU	AIR-COOLED CONDENSING UNIT	KW	KILOWATTS
ACWC	AIR-COOLED WATER CHILLER	LAT	LEAVING AIR TEMPERATURE
AFF	ABOVE FINISHED FLOOR	LBS	POUNDS
AHU	AIR HANDLING UNIT	LF	LINEAR FEET
APD	AIR PRESSURE DROP	LVR	LOUVER
AS	AIR SEPARATOR	LWT	LEAVING WATER TEMPERATURE
AUTO	AUTOMATIC	MA	MIXED AIR TEMPERATURE
BDD	BACK DRAFT DAMPER	MAX	MAXIMUM
BOD	BOTTOM OF DUCT	MBH	BRITISH THERMAL UNITS (THOUSANDS)
BOP	BOTTOM OF PIPE	MBMS	MECHANIZED BUILDING MANAGEMENT SYSTEM
BTU	BRITISH THERMAL UNITS	M.C.	MECHANICAL CONTRACTOR
BTUH	BRITISH THERMAL UNITS PER HOUR	MCA	MINIMUM CIRCUIT AMPACITY
CAP	CAPACITY	MCC	MOTOR CONTROL CENTER
CFM	CUBIC FEET PER MINUTE	MD	MOTORIZED DAMPER
CH	CHILLER	N/A	NOT APPLICABLE
CHWP	CHILLED WATER PUMP	NC	NORMALLY CLOSED, NOISE CRITERIA
CHWS	CHILLED WATER SUPPLY	NIC	NOT IN CONTRACT
CHWR	CHILLED WATER RETURN	OA	OUTSIDE AIR
CO	CLEAN OUT	ODB	OPPOSED BLADE DAMPER
COL	COLUMN	PBD	PARALLEL BLADE DAMPER
CRAC	COMPUTER ROOM AIR CONDITIONER	PC	PUMPED CONDENSATE
CS	CIRCUIT SETTER	PD	PRESSURE DROP
CT	COOLING TOWER	PH	PHASE
CTG	CEILING TRANSFER GRILLE	PRESS	PRESSURE
CUH	CABINET UNIT HEATER	PRV	PRESSURE REDUCING VALVE
CV	CONSTANT VOLUME	PSI	POUND PER SQUARE INCH
CW	COLD WATER	PSIG	POUND PER SQUARE INCH GAUGE
CWP	CONDENSER WATER PUMP	RA	RETURN AIR
CWR	CONDENSER WATER RETURN	RM	REFRIGERATION MACHINE
CWS	CONDENSER WATER SUPPLY	REG	REGISTER
DB	DRY BULB	RET	RETURN
DC	DRY COOLER	RH	RELATIVE HUMIDITY
DD	DUCT DETECTOR	RPM	REVOLUTIONS PER MINUTE
DIA	DIAMETER	RTU	ROOF TOP UNIT
DISC	DISCONNECT	SA	SUPPLY AIR
DX	DIRECT EXPANSION	SD	SMOKE DETECTOR, STORM DRAIN
EA	EACH	SF	SQUARE FEET
EAT	ENTER AIR TEMPERATURE	SP	STATIC PRESSURE, SUMP PUMP
EF	EXHAUST FAN	STD	STANDARD
ESP	EXTERNAL STATIC PRESSURE	SYS	SYSTEM
ET	EXPANSION TANK	T	THERMOSTAT
EBH	ELECTRIC BASEBOARD HEATER	TCC	TEMPERATURE CONTROL CONTRACTOR
ECUH	ELECTRIC CABINET UNIT HEATER	TOV	TRIPLE DUTY VALVE
EUH	ELECTRIC UNIT HEATER	THK	THICK
EWT	ENTERING WATER TEMPERATURE	TR	TRANSFER
EXH	EXHAUST	TSP	TOTAL STATIC PRESSURE
EXIST	EXISTING	TYP	TYPICAL
EXP	EXPANSION	UH	UNIT HEATER
FA	FIRE ALARM	V	VENT, VOLTS
FCO	FLOOR CLEAN OUT	VAV	VARIABLE AIR VOLUME
FCU	FAN COIL UNIT	VD	MANUAL VOLUME DAMPER
FD	FIRE DAMPER	VEL	VELOCITY
FE	FIRE EXTINGUISHER	VLV	VALVE
FLA	FULL LOAD AMPS	VIF/V.I.F	VERIFY IN FIELD
F.O.R.	FUEL OIL RETURN	W/	WITH
F.O.S.	FUEL OIL SUPPLY	W/O	WITHOUT
FPM	FEET PER MINUTE	WB	WET BULB
FPS	FEET PER SECOND	WC	WATER COLUMN
FS	FLOW SWITCH	(E)	EXISTING
FST	FREEZE STAT	(N)	NEW
FT	FEET	NW	NEW WORK
GA	GAUGE	(T)	TEMPORARY
GC	GENERAL CONTRACTOR		
GPH	GALLON PER HOUR		
GPM	GALLON PER MINUTE		
G.V.	GENERATOR VENDOR		
HD	HEAD		
HWR	DOMESTIC HOT WATER RETURN		
HWS	DOMESTIC HOT WATER SUPPLY		
HHWR	HEATING HOT WATER RETURN		
HHWS	HEATING HOT WATER SUPPLY		
HT	HEIGHT		
HVAC	HEATING VENTILATION & AIR CONDITION		
HZ	HERTZ		
IAW	IN ACCORDANCE WITH		
ID	INSIDE DIAMETER		

MECHANICAL SYMBOLS	
GENERAL MECHANICAL SYMBOLS	
	KEYNOTE TAG 1. KEYNOTE NUMBER 1, 2, 3... 2. DEMOLITION KEYNOTE NUMBER D1, D2, D3...
	MECHANICAL EQUIPMENT TAG 1. MECHANICAL EQUIPMENT TYPE 2. EQUIPMENT NUMBER
	DETAIL TAG 1. DETAIL NUMBER 2. SHEET NUMBER
	SECTION TAG 1. SECTION NUMBER 2. SHEET NUMBER
	LINETYPE INDICATES NEW DUCTWORK AND PIPING
	LINETYPE INDICATES EXISTING DUCTWORK AND PIPING TO BE REMOVED
	LINETYPE INDICATES EXISTING DUCTWORK AND PIPING TO REMAIN
	NEW WORK CONNECTION
	EXTENT OF DEMOLITION POINT
	MAINTENANCE CLEARANCE
HVAC PIPING SYMBOLS	
	GATE VALVE (OR OTHER TYPE VALVE WHERE SPECIFIED)
	GLOBE VALVE
	CHECK VALVE
	3-WAY CONTROL VALVE
	RELIEF VALVE
	PRESSURE REDUCING VALVE
	CONTROL VALVE-ELECTRONIC
	CONTROL VALVE-SOLENOID
	STRAINER
	THERMOMETER & SEPARABLE SOCKET
	PRESSURE GAUGE W/ GAUGE COCK
	UNION
	BALANCING VALVE
	CIRCUIT SETTER
	PLUG VALVE
	NEEDLE VALVE
	BUTTERFLY VALVE
	BALL VALVE
	PIPE RUN UP
	PIPE RUN DOWN
	PIPE DROP
	VALVE IN PIPE RUN UP
	VALVE IN PIPE RUN DOWN
	VALVE IN PIPE DROP
	FLOW DIRECTION
	PITCH DIRECTION
	FLEXIBLE CONNECTION
	REDUCER, CONCENTRIC
	REDUCER, ECCENTRIC
	AIR VENT, MANUAL
	AIR VENT, AUTOMATIC
	PRESSURE & TEMPERATURE TAP
	FLOW SWITCH
	FLOW METER
	REDUCED PRESSURE BACKFLOW PREVENTER

MECHANICAL SYMBOLS	
VENTILATION SYMBOLS	
	SUPPLY DUCT UP
	SUPPLY DUCT DOWN
	SLOT DIFFUSER
	RETURN OR EXHAUST DUCT UP
	RETURN OR EXHAUST DUCT DOWN
	SUPPLY AIR TERMINAL
	RETURN AIR TERMINAL
	ROUND SUPPLY AIR TERMINAL
	SQUARE ELBOW WITH TURNING VANES
	SQUARE TO ROUND TRANSITION
	FLEXIBLE DUCT
	FLEXIBLE DUCT TURN
	VARIABLE AIR VOLUME BOX
	VARIABLE AIR VOLUME BOX W/ REHEAT
	BOOSTER COIL, DUCT MOUNTED
	DUCT SHOE WITH DAMPER
	THERMOSTAT / TEMPERATURE SENSOR
	HUMIDITY SENSOR
	VOLUME DAMPER
	MOTORIZED DAMPER
	MOTORIZED FIRE/SMOKE DAMPER
	BACKDRAFT DAMPER
	FIRE DAMPER
	ACCESS DOOR
	TRANSFER DUCT W/REGISTERS
	DOOR TRANSFER GRILLE
	STATIC PRESSURE SENSOR
	WATER-ON-FLOOR DETECTOR
PUMP SYMBOLS	
	INLINE PUMP

MECHANICAL GENERAL NOTES

- THE SCOPE OF THIS WORK CONSISTS OF FURNISHING AND INSTALLING COMPLETE MECHANICAL SYSTEMS. THE CONTRACTOR SHALL PROVIDE ALL SUPERVISION, LABOR, MATERIALS, EQUIPMENT, MACHINERY, AND ALL OTHER ITEMS NECESSARY TO COMPLETE THE SYSTEM. IT IS THE INTENT OF THESE PLANS AND DOCUMENTS TO PROVIDE COMPLETELY FINISHED, TESTED, AND OPERATIONAL SYSTEMS. ALL APPARATUS, APPLIANCES, MATERIALS, AND INCIDENTAL ACCESSORIES NECESSARY TO MAKE THE WORK COMPLETE AND READY FOR OPERATION, SHALL BE PROVIDED BY THE CONTRACTOR WITHOUT ADDITIONAL EXPENSE TO THE OWNER. THE TERM "PROVIDE," WHERE USED IN THESE SPECIFICATIONS AND ON THE DRAWINGS, SHALL BE DEFINED AS PURCHASE, FABRICATE, INSTALL AND CONNECT TO THE SYSTEMS AS STATED ABOVE.
- ALL WORK SHALL BE INSTALLED IN ACCORDANCE WITH STATE AND LOCAL REGULATIONS. THE MANUFACTURER'S RECOMMENDATIONS SHALL BE FOLLOWED AS REQUIRED. ALL EQUIPMENT SHALL BE NEW AND U.L. LISTED.
- THE CONTRACTOR SHALL SECURE AND PAY FOR ALL PERMITS AND PAY ALL FEES NECESSARY FOR THE EXECUTION AND COMPLETION OF THIS WORK.
- THE CONTRACTOR SHALL PROVIDE ACCESS DOORS FOR ALL MECHANICAL EQUIPMENT WHICH IS INSTALLED IN INACCESSIBLE LOCATIONS. BUILDING COMPONENTS REQUIRING ACCESS DOORS SHALL INCLUDE, BUT NOT BE LIMITED TO, ALL NON LAY-IN TYPE CEILINGS, CONCEALED SPLINE CEILINGS, CHASES, CRAWL SPACES, ATTICS, FLOORS, AND WALLS. ACCESS DOORS SHALL BE MINIMUM 24" X 24" FOR HAND ACCESS AND LARGER IF HUMAN ACCESS IS REQUIRED. COORDINATE THE INSTALLATION OF THE MECHANICAL, PLUMBING, AND FIRE PROTECTION SYSTEM WITH THE ARCHITECTURAL PLANS. PROVIDE THE GENERAL CONTRACTOR A SCHEDULE OF THE QUANTITY AND SIZE FOR ALL ACCESS DOORS REQUIRED FOR THIS PROJECT.
- THE CONTRACTOR SHALL COOPERATE WITH OTHERS DOING WORK ON THE BUILDING AS MAY BE NECESSARY FOR THE PROPER EXECUTION OF THE WORK OF THE VARIOUS TRADES EMPLOYED IN THE CONSTRUCTION OF THE BUILDING. THE CONTRACTOR SHALL OBTAIN A COMPLETE AND CURRENT SET OF PLANS AND SPECIFICATIONS FOR THIS PROJECT. THE CONTRACTOR SHALL REFER TO THE ARCHITECTURAL, STRUCTURAL, CIVIL AND ELECTRICAL DRAWINGS TO THE END THAT UNNECESSARY DELAYS MAY BE AVOIDED. NO EXTRAS WILL BE ALLOWED BECAUSE OF CONFLICTS CAUSED BY THE USE OF INCOMPLETE OR OUTDATED PLANS AND SPECIFICATIONS.
- THE DATA GIVEN HEREIN AND ON THE DRAWINGS IS AS EXACT AS CAN BE SECURED; BUT THE ABSOLUTE ACCURACY IS NOT GUARANTEED. THE SPECIFICATIONS AND DRAWINGS ARE FOR THE ASSISTANCE AND GUIDANCE OF THE CONTRACTOR. EXACT LOCATION, DISTANCES, AND LEVELS WILL BE GOVERNED BY THE BUILDINGS. THE CONTRACTOR SHALL USE THE DATA CONTAINED WITH THIS UNDERSTANDING. THE DRAWINGS SHALL BE FOLLOWED AS CLOSELY AS ACTUAL CONSTRUCTION AND WORK OF OTHER CONTRACTOR WILL PERMIT. ALL DEVIATIONS FROM DRAWINGS REQUIRED TO MAKE THE MECHANICAL, PLUMBING, AND FIRE PROTECTION WORK CONFORM TO THE BUILDING AS CONSTRUCTED AND TO THE WORK OF OTHERS SHALL BE MADE BY THE CONTRACTOR.
- THE CONTRACTOR SHALL VERIFY ALL MEASUREMENTS AT THE BUILDINGS AND SHALL BE RESPONSIBLE FOR THE CORRECTNESS OF SAME. NO EXTRA COMPENSATION WILL BE ALLOWED BECAUSE OF DIFFERENCES BETWEEN WORK SHOWN ON THE DRAWINGS AND MEASUREMENTS AT THE BUILDING.
- ALL WORK AND MATERIALS COVERED BY THE SPECIFICATIONS SHALL BE SUBJECT TO INSPECTION AND, AT ALL TIMES, BY REPRESENTATIVES OF THE ARCHITECT, ENGINEER, OR THE OWNER. IF THE ARCHITECT'S, ENGINEER'S, OR OWNER'S INSPECTOR FIND THAT ANY MATERIAL DOES NOT CONFORM TO THESE SPECIFICATIONS, THE CONTRACTOR SHALL, WITHIN 3 DAYS AFTER BEING NOTIFIED BY THE ARCHITECT, ENGINEER, OR OWNER, REMOVE THE MATERIAL FROM THE PREMISES. IF SAID MATERIAL HAS BEEN INSTALLED, THE ENTIRE EXPENSE OF REMOVING AND REPLACING SAME, INCLUDING ALL CUTTING AND PATCHING THAT MAY BE NECESSARY, SHALL BE BORNE BY THE CONTRACTOR.
- THE CONTRACTOR SHALL REMOVE ALL MATERIALS NOT INSTALLED IN HIS WORK WHICH WOULD INTERFERE WITH THE WORK OF OTHER CONTRACTOR, IF SO DIRECTED BY THE ARCHITECT, ENGINEER, OR THE OWNER. AT THE COMPLETION OF THE WORK, THE CONTRACTOR SHALL CLEAN UP AND REMOVE FROM THE PREMISES ALL DEBRIS AND MATERIALS NOT INSTALLED SO THAT THE PREMISES WILL BE LEFT CLEAN.
- UPON COMPLETION OF THE WORK AND ADJUSTMENT OF ALL EQUIPMENT, ALL SYSTEMS SHALL BE TESTED IN THE PRESENCE OF THE ARCHITECT AND ENGINEER TO DEMONSTRATE THAT ALL EQUIPMENT FURNISHED AND INSTALLED UNDER THE PROVISIONS OF THESE SPECIFICATIONS FUNCTIONS IN THE MANNER REQUIRED.

- THE CONTRACTOR SHALL PROVIDE ENGRAVED PLASTIC NAMEPLATES FOR ALL MECHANICAL EQUIPMENT FOR THIS PROJECT. PROVIDE FLOW DIRECTION ARROWS AND SYSTEM IDENTIFIERS EVERY 25 FEET FOR ALL MECHANICAL, PLUMBING, AND FIRE PROTECTION PIPING SYSTEMS.
- THE CONTRACTOR SHALL PROVIDE A MINIMUM OF 8 MANHOURS OF OWNER TRAINING BY THE MANUFACTURER'S REPRESENTATIVES FOR THE MECHANICAL SYSTEM(S) FOR THIS PROJECT. THIS WORK SHALL BE INCLUDED IN THE BASE BID AND SCHEDULED WITH THE OWNER'S REPRESENTATIVE AFTER SUBMISSION OF THE O/M MANUALS. THE CONTRACTOR SHALL REQUIRE THE MANUFACTURER'S REPRESENTATIVES TO CONDUCT THE OWNER TRAINING SESSION(S).
- THE WORD "PROVIDE" MEANS TO FURNISH AND INSTALL.
- THE CONTRACTOR SHALL DEMOLISH, DISASSEMBLE, AND REMOVE FROM THE PREMISES ALL EXISTING EQUIPMENT AND MATERIAL AS INDICATED THAT IS NOT BEING REUSED AND BECOMING PROPERTY OF THE OWNER. THE CONTRACTOR SHALL LEGALLY DISPOSE OF SUCH EQUIPMENT AND MATERIAL IN ACCORDANCE WITH LOCAL REGULATIONS.
- THE CONTRACTOR SHALL VISIT THE SITE PRIOR TO BIDDING AND BECOME INFORMED AS TO THE EXISTING CONDITIONS OF THE PREMISES. THE CONTRACTOR SHALL FAMILIARIZE HIMSELF WITH ALL EXISTING SYSTEMS AND WITH THE NEW WORK THAT IS REQUIRED. NO CONSIDERATION WILL BE GRANTED FOR ALLEGED MISUNDERSTANDING OF THE WORK THAT IS TO BE DONE. ANY DIFFICULTIES IN COMPLYING WITH THE DRAWINGS OR SPECIFICATIONS, OR QUESTIONS OF CLARIFICATION, SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT/ENGINEER BEFORE BIDDING.
- THE CONTRACTOR SHALL NOTIFY THE ENGINEER, WITH THE SUBMISSION OF THEIR BID, OF ALL MATERIALS AND APPARATUS BELIEVED TO BE INADEQUATE, UNSUITABLE, IN VIOLATION OF LAWS, ORDINANCES, AND RULES, AND OF ANY NECESSARY ITEMS OF WORK OMITTED. IN THE ABSENCE OF SUCH WRITTEN NOTICE, IT IS MUTUALLY AGREED THAT THE CONTRACTOR HAVE INCLUDED THE COST OF ALL REQUIRED ITEMS IN HIS PROPOSAL, AND THAT HE SHALL BE RESPONSIBLE FOR THE APPROVED SATISFACTORY FUNCTIONING OF THE ENTIRE SYSTEM WITHOUT EXTRA COMPENSATION.
- PROVIDE ALL PENETRATIONS TO THE BUILDINGS AS REQUIRED FOR THE INSTALLATION OF ALL MECHANICAL EQUIPMENT AND MATERIALS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR SEALING ALL PENETRATIONS TO THE EXTERIOR OF THE BUILDING AS A RESULT OF THE WORK. PROVIDE TEMPORARY AND/OR PERMANENT CLOSURE OF BUILDING OPENINGS AS A RESULT OF DEMOLITION WORK. PROVIDE SLEEVES AND INSERTS AS REQUIRED. ADHERE TO ALL APPLICABLE PORTIONS OF THE ARCHITECTURAL SPECIFICATIONS FOR ROOF, WALL AND FLOOR PENETRATIONS. THE CONTRACTOR SHALL COORDINATE WITH THE ROOFING CONTRACTOR AND OTHER TRADES AS REQUIRED.
- WHERE THE DRAWINGS INDICATE CONNECTIONS AND COORDINATION WITH EXISTING UTILITIES, ABOVE AND BELOW THE FLOOR OR GRADE, IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY THE EXACT LOCATION, TYPE, SIZE, INVERTS, CAPACITY, AND COMPATIBILITY OF EXISTING UTILITIES THROUGH ACTUAL FIELD MEASUREMENTS AND INVESTIGATIONS AT THE JOB SITE PRIOR TO FABRICATION OR INSTALLATION OF ANY PIPING AND EQUIPMENT. THE CONTRACTOR SHALL NOTIFY THE ARCHITECT/ENGINEER IMMEDIATELY IF SIGNIFICANT DEVIATION FROM THE PLANS ARE DISCOVERED. THE CONTRACTOR SHALL ADHERE TO ALL APPLICABLE NOTIFICATION LAWS PRIOR TO ALL DIGGING OPERATIONS.
- PROVIDE ALL OPERATING AND SAFETY CONTROLS FOR ALL MECHANICAL EQUIPMENT. PROVIDE AND INSTALL ALL CONTROL WIRING, CONDUIT, RELAYS, THERMOSTATS, SENSORS, CONTROL VALVES, CONTROLLERS, AND OTHER ITEMS REQUIRED TO DEVELOP THE WRITTEN "SEQUENCE OF CONTROL" AND CONTROL DIAGRAMS (WHERE SHOWN). ADHERE TO THE MANUFACTURER'S INSTRUCTION WHERE APPLICABLE. PROVIDE SHOP DRAWINGS, WIRING DIAGRAMS, PNEUMATIC AND ELECTRIC SCHEMATIC CONTROL DIAGRAMS, AND EQUIPMENT CUT SHEETS TO DESCRIBE THE METHOD OF IMPLEMENTATION.
- THE CONTRACTOR SHALL OBTAIN AND ADHERE TO THE OWNER'S "RULES AND REGULATIONS FOR CONSTRUCTION". THE CONTRACTOR SHALL BE RESPONSIBLE FOR ADHERING TO ALL OWNER REQUIREMENTS INCLUDING, BUT NOT LIMITED TO, ALLOWABLE WORKING HOURS, PARKING, CORE DRILLING, NOISE, SECURITY, DUST CONTROL, TRASH REMOVAL, STAGING AREAS, STORAGE OF MATERIALS, CLEANUP, TOILET AVAILABILITY, ALL TEMPORARY UTILITIES, AND ALL UTILITY SERVICE INTERRUPTION. THE CONTRACTOR SHALL COORDINATE ALL ACTIVITIES WITH THE OWNER'S DESIGNATED REPRESENTATIVE.
- REFER TO THE ELECTRICAL DRAWINGS FOR THE VOLTAGE AND PHASE REQUIREMENTS FOR ALL ELECTRICALLY POWERED MECHANICAL/PLUMBING EQUIPMENT.
- DURING PROGRESS OF THE WORK, MAINTAIN AN ACCURATE RECORD OF THE INSTALLATION OF THE SYSTEM, LOCATING ALL DUCTWORK, PIPING AND EQUIPMENT PRECISELY BY DIMENSION. UPON COMPLETION OF THE INSTALLATION, TRANSFER ALL RECORD DATA TO BLUE-LINE PRINTS OF THE ORIGINAL DRAWINGS.
- ASBESTOS CONTAINING MATERIALS (ACM) IS STRICTLY PROHIBITED FROM BEING INSTALLED ON ALL AT&T PROJECTS. SHOULD ACM BE INADVERTENTLY INSTALLED ON PROJECTS, PROPER REMOVAL, DISPOSAL AND REPLACEMENT WITH APPROVED PRODUCT SHALL BE THE SOLE RESPONSIBILITY OF THE INSTALLING CONTRACTOR AT NO COST TO THE OWNER.

PROJECT NAME:	
NEW HAVEN CDO - GENERATOR DESIGN	
DET-24002045-A4	

CONSULTANT STAMP

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REVISIONS / AUTHORIZATIONS			
NO.	REVISIONS / AUTHORIZATIONS	DATE	BY
	PERMIT AND CONSTRUCTION	05/15/25	
	FINAL REVIEW #2	04/18/25	
	FINAL REVIEW	03/18/25	
	50% REVIEW	12/17/24	

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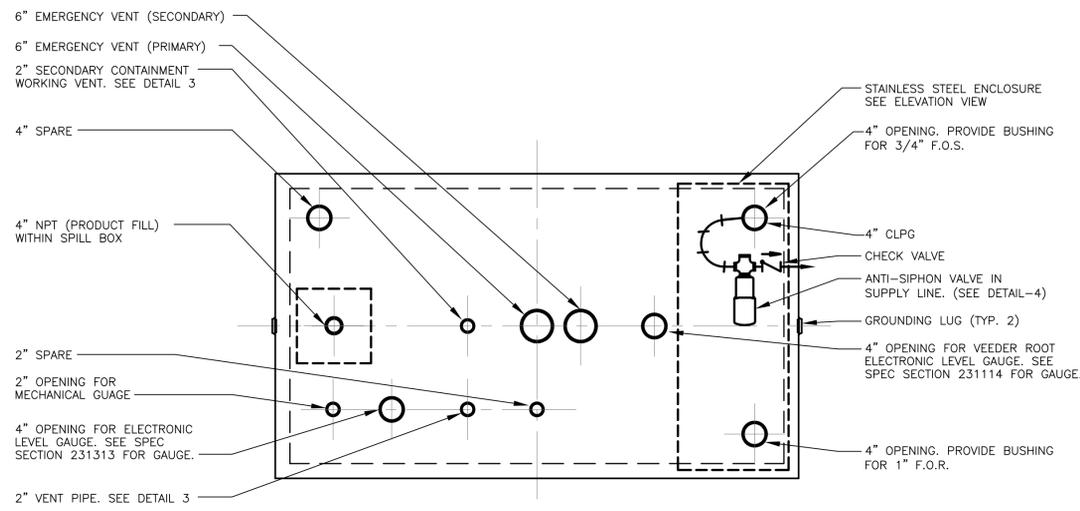
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59041 MAIN ST
 NEW HAVEN
 MI US
 NWHNMIMM 111436.01 M18255

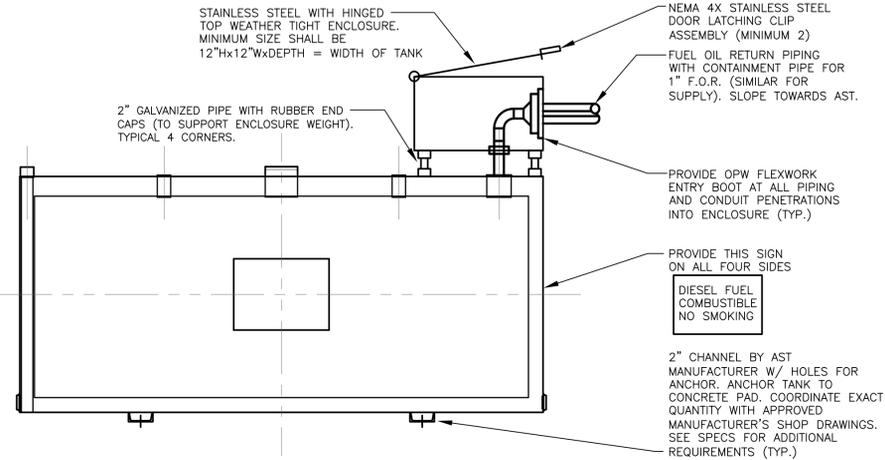
SHEET TITLE:
**ABBR., SYMBOLS & NOTES
 MECHANICAL**

AT&T PROJECT NUMBER: 2001272	DATE:	SCALE: N/A
AT&T AUTHORIZATION: AIMEE BUTLER	DRAWN BY: SM CHECKED BY: RB	SHEET: - OF: - SHEETS SHEET NO. M00001

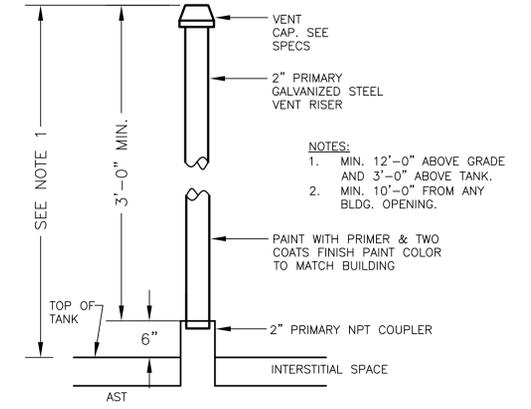
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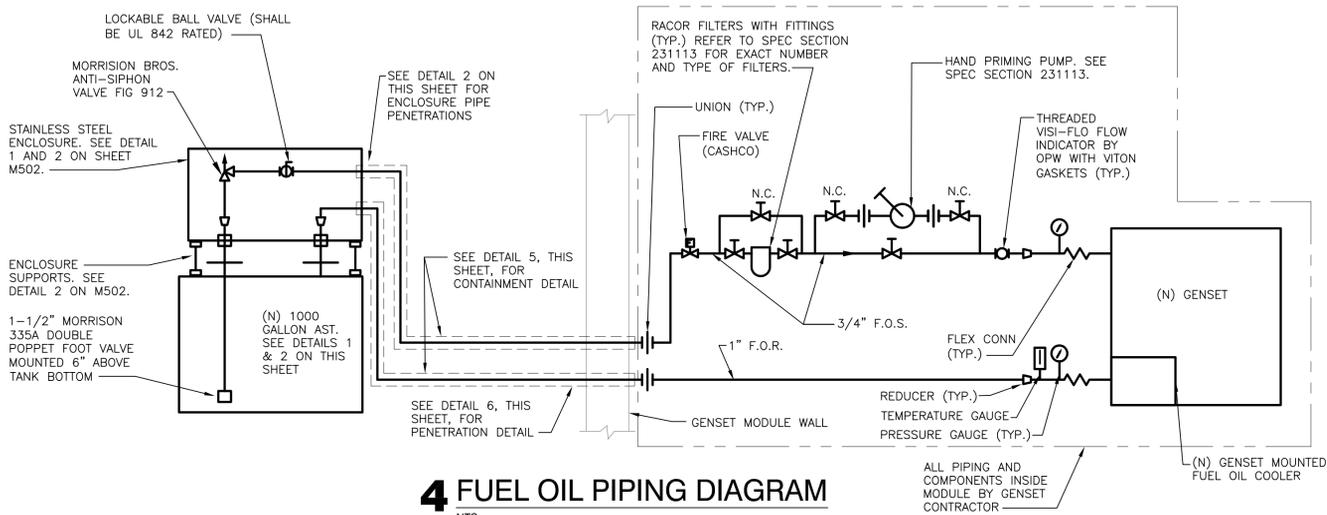
1 ABOVEGROUND STORAGE TANK - PLAN
NTS



2 ABOVEGROUND STORAGE TANK - ELEVATION
NTS

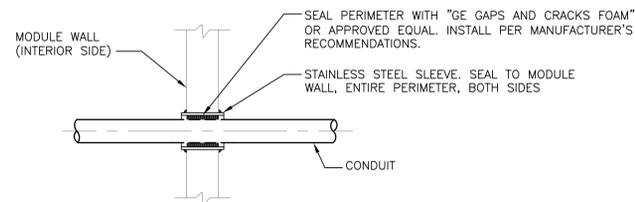


3 AST VENT PIPE RISER DETAIL
NTS



4 FUEL OIL PIPING DIAGRAM
NTS

- DETAIL-4 NOTES:
- REFER TO SPEC SECTION 231113 FOR ADDITIONAL REQUIREMENTS.
 - ALL ITEMS ARE PROVIDED AND INSTALLED UNDER CONSTRUCTION CONTRACT, UNLESS NOTED OTHERWISE.

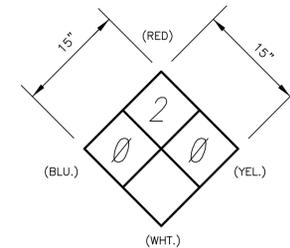


7 CONDUIT DETAIL AT MODULE WALL
NTS

AST SCHEDULE (OWNER FURNISHED)

NO.	MAKE	MODEL	CAPACITY (GALLONS)	ACCESSORIES	REMARKS
AST	CONTAINMENT SOLUTIONS	SAC002	1000	15-GAL SPILL BOX	DOUBLE WALL UL-2085 LISTED TANK.

COORDINATE EXACT PAD MOUNTING REQUIREMENTS WITH TANK MANUFACTURER.



PER NFPA 704 CHAPTER 6. (INSTALL ON ALL VISIBLE SIDES)

XX,XXX #
WEIGHT (empty)

FILL

MAIN TANK VENT

MAIN TANK EMERGENCY VENT

INTERSTITIAL EMERGENCY VENT

LEAK DETECTION TUBE

INTERSTITIAL SENSOR

X,XXX GALLON
CAPACITY

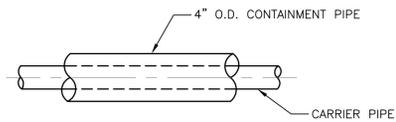
CAUTION: THIS TANK TO CONTAIN
PETROLEUM PRODUCTS ONLY

NO SMOKING

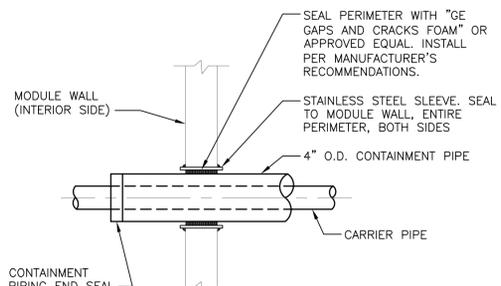
COMBUSTIBLE

DIESEL FUEL

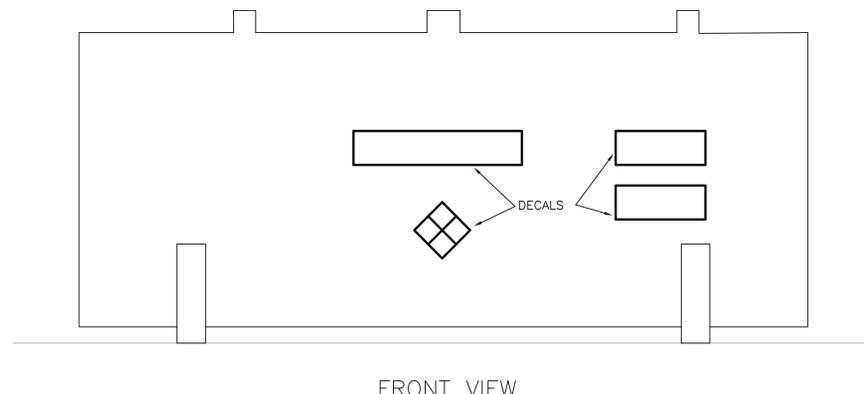
- 1" BLACK LETTERS ON WHITE BACKGROUND
- 1 1/2" BLACK LETTERS ON WHITE BACKGROUND (INSTALL ON VISIBLE SIDE)
- 1" & 3/4" BLACK LETTERS ON WHITE BACKGROUND (one on each visible side)
- 3" RED LETTERS ON WHITE BACKGROUND (one on each visible side)
- 3" RED LETTERS ON WHITE BACKGROUND (one on each visible side)
- 3" RED LETTERS ON WHITE BACKGROUND (one on each visible side)



5 DOUBLE WALL CONTAINMENT DETAIL
NTS



6 FUEL OIL PIPING DETAIL AT MODULE WALL
NTS



7 ABOVEGROUND STORAGE TANK LABELING REQUIREMENTS
NTS

REQUIRED TANK DECALS

PROJECT NAME:
NEW HAVEN CDO - GENERATOR DESIGN
DET-24002045-A4

CONSULTANT STAMP
STATE OF MICHIGAN
5/13/23
RAYMOND S. BUHAY
ENGINEER
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DRAWINGS PREPARED FOR
AT&T CORPORATE REAL ESTATE

PROJECT_DRAWING
59041 MAIN ST
NEW HAVEN
MI US
NWHNMIM 111436.01 M18255
SHEET TITLE:

DETAILS MECHANICAL

AT&T PROJECT NUMBER: 2001272	DATE: SM	SCALE: AS NOTED
AT&T AUTHORIZATION: AIMEE BUTLER	SHEET: - OF: - SHEETS	CHECKED BY: RB
AT&T DRAWING NO.: 2001272M50001	SHEET NO. M50001	

ABBREVIATION LIST

A	AMPERE	MCC	MOTOR CONTROL CENTER
AC	ALTERNATING CURRENT	MPDP	MAIN POWER DISTRIBUTION PANEL
A/C	AIR CONDITIONING UNIT	MECH	MECHANICAL
ACCU	AIR COOLED CONDENSING UNIT	MFR	MANUFACTURER
AF	AMP FRAME/FUSED SIZE	MISC	MISCELLANEOUS
AF	ABOVE FINISHED FLOOR	MSP	MOTOR STARTER PANEL
AFG	ABOVE FINISHED GRADE	MTG	MOUNTING
AS	AMP SENSOR SIZE	(N)	NEW EQUIPMENT OR INSTALLATION
AST	ABOVE GROUND STORAGE TANK	NEC	NATIONAL ELECTRICAL CODE
AT	AMP TRIP SETTING	NEUT	NEUTRAL
BD	BUS DUCT	NTS	NOT TO SCALE
C	CONDUIT	PB	PUSH BUTTON
CB	CIRCUIT BREAKER	PC	PHOTO CELL
CIRC.	CIRCUIT	PDP	POWER DISTRIBUTION PANEL
C.O.	CENTRAL OFFICE	PDSC	POWER DISTRIBUTION SERVICE CABINET
CT	CURRENT TRANSFORMER	PH	PHASE
CTP	CRITICAL TELE. POWER PANEL	PRI	PRIMARY
DC	DIRECT CURRENT	PWR	POWER
DIAG.	DIAGRAM	(R)	RELOCATED DEVICE OR EQUIPMENT
DISC	DISCONNECT	(R&R)	REMOVE AND RELOCATE
DWG	DRAWING	REC	RECESSED
EF	EXHAUST FAN	RGS	RIGID GALVANIZED STEEL CONDUIT
EMER	EMERGENCY	SEC	SECONDARY
EQUIP	EQUIPMENT	SECT	SECTION
E.C.	ELECTRICAL CONTRACTOR	SF	SUPPLY FAN
FWC	ELECTRIC WATER COOLER	SPD	SURGE PROTECTOR DEVICE
(E)	EXISTING INSTALLATION OR EQUIP.	SW	SWITCH
FDR	FEEDER	TB	TAP BOX
FLEX	FLEXIBLE	TBB	TELEPHONE BACKBOARD
FUT	FUTURE	TEL	TELEPHONE
GFCI	EQUIPMENT GROUND WIRE	Typ	TYPICAL
GRD	GROUND FAULT	UNO	UNLESS NOTED OTHERWISE
H	HEIGHT	U/G	UNDERGROUND
HOA	HAND OFF AUTO SWITCH	UH	UNIT HEATER
HP	HORSE POWER	VFC	VARIABLE FREQUENCY CONTROLLER
HPS	HIGH PRESSURE SODIUM	VFD	VARIABLE FREQUENCY DRIVE
HTR	HEATER	W	WIRE
INCAND	INCANDESCENT	WP	WEATHER PROOF
HV	HIGH VOLTAGE	WIR	WIREFRAY
J	JUNCTION BOX	XFMR	TRANSFORMER
KV	KILOVOLT		
KVA	KILO VOLT AMPERE		
KW	KILOWATT		
LC	LIGHTING CONTRACTOR		
LV	LOW VOLTAGE		
LTG	LIGHTING		

ELECTRICAL SYMBOL LIST

SYMBOL	DESCRIPTION
	SINGLE POLE LIGHT SWITCH - SUBSCRIPTS: 3-THREE WAY SWITCH, 4-FOUR WAY SWITCH.
	SINGLE POLE LIGHT SWITCH WITH RED PILOT LIGHT, "ON" WHEN SWITCH IS IN THE "OFF" POSITION.
	SINGLE POLE, TIMER SWITCH.
	FRACTIONAL HORSEPOWER MANUAL SINGLE POLE, LOCKABLE MOTOR STARTER WITH THERMAL OVERLOAD RELAY AND RED PILOT LIGHT IN NEMA 1 ENCLOSURE.
	SINGLE POLE, 120/277 VOLT DIMMING SWITCH.
	SINGLE POLE, 120 VOLT PASSIVE INFRARED OCCUPANCY SENSOR WITH MANUAL "OFF-AUTO-ON" OVERRIDE AND ADJUSTABLE TIMER FOR "ON" CONTROL.
	PACKAGED CONTROL PANEL WITH LOCAL DISCONNECT BY EQUIPMENT MANUFACTURER.
	SPECIFICATION GRADE DUPLEX RECEPTACLE - 20A, 120 VOLT, 3W, GROUNDING TYPE.
	SPECIFICATION GRADE QUADRUPLEX RECEPTACLE - 20A, 120 VOLT, 3W, GROUNDING TYPE.
	SPECIFICATION GRADE QUADRUPLEX RECEPTACLE MOUNTED 6" ABOVE COUNTERTOP UNO - 20A, 120 VOLT, 1P, 3W.
	SPECIFICATION GRADE DUPLEX RECEPTACLE MOUNTED 6" ABOVE COUNTERTOP UNO - 20A, 120 VOLT, 1P, 3W, NEMA.
	SPECIAL RECEPTACLE (TYPE AND NEMA CONFIGURATION AS INDICATED ON DRAWINGS).
	FEEDER BUS DUCT.
	BUS DUCT RISER FLOOR PENETRATION LOCATION.
	THERMAL MAGNETIC CIRCUIT BREAKER.
	DRAW-OUT AIR CIRCUIT BREAKER.
	PULL BOX.
	SPLICE BOX.
	CEILING MOUNTED JUNCTION BOX.
	GROUND AS PER NEC
	SURFACE MOUNTED PANELBOARD, UNLESS NOTED OTHERWISE.
	SURFACE MOUNTED POWER DISTRIBUTION PANELBOARD.
	MISCELLANEOUS PANELS AND CABINETS. TYPE AS INDICATED ON PLANS.
	MOTOR STARTER PANEL.
	COMBINATION MOTOR STARTER, FUSED DISCONNECT TYPE IN NEMA 1 ENCLOSURE, WITH FUSES PER MOTOR NAME PLATE DATA. 3-POLE, UNO.
	NON-FUSED DISCONNECT SWITCH.
	FUSED DISCONNECT SWITCH.
	MANUAL TRANSFER SWITCH
	VARIABLE FREQUENCY CONTROLLER WITH HARMONIC FILTER
	CONTROL RELAY.
	MOTOR PROTECTOR.
	TELEPHONE/DATA OUTLET BOX WITH 3/4" DIA. EMPTY CONDUIT STUB UP 6" ABOVE ACCESSIBLE CEILING, UNO.
	1X4, 2-LAMP WRAPAROUND PENDANT MOUNTED LUMINAIRE, UNLESS NOTED OTHERWISE.
	1X4, EMERGENCY LUMINAIRE
	1X4, LUMINAIRE CONNECTED TO A NIGHT LIGHT CIRCUIT
	2X4, 2 LAMP, RECESSED MOUNTED LUMINAIRE.
	WALL MOUNTED LUMINAIRE.
	RECESSED DOWNLIGHT LUMINAIRE.
	EMERGENCY BATTERY PACK UNIT.
	EMERGENCY EXIT SIGN - SHADING INDICATES LIGHTED FACE. ARROW INDICATES STENCIL INDICATED EXIT DIRECTION.
	CONDUIT STUBBED DOWN.
	CONDUIT STUBBED UP.
	HOMERUN CIRCUIT TO A PANELBOARD.
	MOTOR - SINGLE OR THREE PHASE.
	POWER POLE.
	COMBINATION POWER/TELEPHONE POWER POLE.
	CEILING MOUNTED OCCUPANCY SENSOR.
	WALL MOUNTED OCCUPANCY SENSOR.
	120V PLUG STRIP WITH 20A. SPECIFICATION GRADE, GROUNDING TYPE. RECEPTACLE @ 0'-9" CENTER, UNO.
	WALL MOUNTED E-STOP PUSH BUTTON WITH PROTECTIVE COVER.
	GENERATOR ENGINE BLOCK HEATER
	LIGHTING CONTACTOR.
	TIME CLOCK.

NOTE: ALL SYMBOLS SHOWN ARE NOT NECESSARILY USED ON THE DRAWINGS

LINETYPE LEGEND

HALF TONE	DENOTES BACKGROUND OR EXISTING CONDITIONS
THIN SOLID LINES:	DENOTES DEVICES, EQUIPMENT, ETC. EXISTING TO REMAIN
DASHED LINES:	DENOTES EXISTING DEVICES, EQUIPMENT, ETC. TO BE REMOVED
HEAVY SOLID LINES:	DENOTES NEW OR RELOCATED DEVICES, EQUIPMENT, ETC.
HEAVY DASHED LINES:	DENOTES U/G CONDUIT/WIRING INSTALLATION

GENERAL ELECTRICAL NOTES

- ALL EXISTING ELECTRICAL DEVICES AND INSTALLATION SHOWN ON THE FLOOR PLANS SHALL BE FIELD VERIFIED BEFORE SUBMITTING BIDS, AS APPLICABLE TO THIS PROJECT.
- UNDER NO CIRCUMSTANCES SHALL THE CONTRACTOR ATTEMPT TO CONNECT NEW ELECTRICAL DEVICES OR CIRCUITS TO AN EXISTING ENERGIZED POWER DISTRIBUTION SWITCHGEAR, PANEL BOARD, MOTOR CONTROL CENTER, BUS DUCT, ETC. MAKE ARRANGEMENTS WITH OWNER'S CONSTRUCTION REPRESENTATIVE FOR A METHOD OF PROCEDURE (M.O.P.) MEETING TO ESTABLISH THE CRITERIA FOR THE NECESSARY POWER SHUT DOWN. THIS MEETING SHALL BE HELD A MINIMUM OF TWO (2) WEEKS IN ADVANCE OF PERFORMING THE ACTUAL WORK.
- ANY INTERRUPTION OF SERVICE SHALL BE PERFORMED AT A TIME APPROVED IN ADVANCE BY OWNER'S CONSTRUCTION REPRESENTATIVE SO AS NOT TO INTERFERE WITH THE PRESENT BUILDING OPERATIONS. MAXIMUM POWER SHUT-DOWN TO ALL EXISTING CRITICAL TELEPHONE EQUIPMENT (POWER PLANTS), AIR DRYERS, CTP PANELS, AND RELATED SUPPORTING AHU EQUIPMENT SHALL BE LIMITED TO 1 1/2 HOURS. PROVIDE TEMPORARY POWER AS REQUIRED.
- INCLUDE COST OF ALL PLANNED POWER SHUTDOWNS REQUIRED FOR COMPLETION OF ALL WORK INCLUDING INSTALLATION OF NEW UTILITY CO. SERVICE.
- ALL ELECTRICAL WORK SHALL CONFORM TO THE MICHIGAN ELECTRICAL CODE RULES PART 8, INCORPORATING THE 2023 EDITION OF THE NATIONAL ELECTRICAL CODE (NEC), AND ALL OTHER LOCAL CODES. ALL ELECTRICAL MATERIALS SHALL BE UL LISTED AND APPROVED FOR THE PURPOSE. OBTAIN AND PAY FOR ALL REQUIRED PERMITS AND CERTIFICATE OF INSPECTION FOR ALL THE WORK INDICATED ON THE DESIGN DRAWINGS AND SPECIFIED HEREIN.
- ALL WIRING SHALL BE COPPER, RATED AT 600V, TYPE THWN, XHHW OR THHN, RATED FOR 90°C AND SIZE SHALL BE NO SMALLER THAN #12 UNLESS OTHERWISE NOTED ON THE DRAWINGS.
- ALL CONDUITS, 1/2" DIAMETER MINIMUM TO 4" DIAMETER SHALL BE EMT UNLESS OTHERWISE INDICATED ON THE DRAWINGS. CONDUIT FITTINGS SHALL BE COMPRESSION TYPE OR STEEL SET SCREW TYPE. CONDUITS INSTALLED OUTDOORS, EXPOSED TO WEATHER SHALL BE RIGID METAL GALVANIZED. ALL PVC SCH. 40 CONDUIT INSTALLED U/G SHALL BE INSTALLED IN A CONCRETE ENCASED DUCT BANK.
- ALL EXPOSED CONDUIT RUNS SHALL BE INSTALLED PARALLEL AND PERPENDICULAR TO WALLS WHERE PRACTICAL. INSTALL APPROPRIATE EXPANSION FITTINGS WHERE A RACEWAY CROSSES BUILDING EXPANSION JOINTS. INSTALL ALL CONDUITS CLOSE TO THE CEILING. DO NOT INSTALL ANY CONDUITS HORIZONTAL ON WALLS UNLESS THEY ARE NEAR TO CEILING. ALL CONDUITS SHALL BE SUPPORTED FROM BUILDING STRUCTURE SYSTEM.
- MAINTAIN A 6" CLEARANCE BETWEEN CONDUIT AND PIPING. MAINTAIN A 12" CLEARANCE BETWEEN CONDUIT AND HEAT SOURCES, SUCH AS STEAM PIPES. FASTEN EXPOSED AND CONCEALED CONDUIT USING GALVANIZED STRAPS, TRAPEZE HANGERS OR BOLTED SPLIT STAMPED GALVANIZED HANGERS. DO NOT FASTEN CONDUIT WITH WIRE OR PIPE STRAPS. DO NOT SUPPORT ANY CONDUIT FROM LAY-IN CEILING GRID SYSTEM. IN GENERAL, MAINTAIN NEW CONDUIT AS TIGHT TO UNDER SIDE OF FLOOR STRUCTURE ABOVE AS POSSIBLE MINIMIZING BENDS AND TURNS. DO NOT SUPPORT ANY CONDUIT FROM MECHANICAL DUCT WORK, PIPING, OR OWNER'S CABLE RACKS.
- ALL CIRCUITS FOR POWER RECEPTACLES AND LIGHTING SHALL BE #12 AND #12 GROUND IN MIN. 1/2" CONDUIT UNLESS OTHERWISE NOTED ON THE DRAWINGS. EACH HOME RUN SHALL BE SEPARATELY CONNECTED TO A SPARE 20A-1P CIRCUIT BREAKER IN THE EXISTING RECEPTACLE OR LIGHTING PANEL. EACH CIRCUIT HOME RUN SHALL HAVE ITS OWN NEUTRAL CONDUCTOR. EACH RACEWAY FOR BRANCH CIRCUITS AND A HOME RUN TO AN ELECTRICAL PANEL SHALL HAVE AN EQUIPMENT GROUND CONDUCTOR IN ACCORDANCE WITH NEC REQUIREMENTS, UNLESS NOTED OTHERWISE ON THE DRAWING. CIRCUIT NUMBERS ARE SHOWN TO INDICATE DESIGN INTENT ONLY.
- BRANCH CIRCUIT CABLE SIZE SHALL BE ADJUSTED BASED ON THE CONDUCTOR LENGTH, AS INDICATED BELOW:
 - A.) 120V CABLING FROM PANEL TO ELECTRICAL LOAD SHALL BE AS FOLLOWS, UNLESS OTHERWISE INDICATED:
 - LESS THAN 75 FEET, USE #12 AWG MINIMUM
 - FROM 75 TO 200 FEET, USE #10 AWG MINIMUM
 - FROM 201 TO 250 FEET, USE #8 AWG MINIMUM
- ALL POWER OUTLETS SHALL BE LABELED WITH 'P-TOUCH' TAPE TO INDICATE RELATED PANEL AND CIRCUIT NUMBER.
- ALL LIGHT SWITCHES SHALL BE LABELED WITH 'P-TOUCH' TAPE TO INDICATE RELATED PANEL AND CIRCUIT NUMBER.
- ALL NEW WIRING SHALL BE CONCEALED IN THE CEILING SPACE, OR WALLS WITHIN THE FINISHED ADMINISTRATIVE AREAS. WHERE CONCEALED WIRING IS NOT FEASIBLE, THE USE OF SURFACE METAL RACEWAYS SHALL BE PERMITTED. PAINT THE RACEWAYS TO MATCH ADJACENT WALL FINISHES.
- FOR NEW ELECTRICAL DEVICES SUCH AS PANELBOARDS, DISCONNECT SWITCHES, CIRCUIT BREAKERS IN MAIN SWITCHBOARD ETC., PROVIDE BLACK LAMINATED PLASTIC NAMEPLATE WITH WHITE LETTERS INDICATING POWER SOURCE AND LOAD SERVED. ATTACH NAMEPLATE TO THE EQUIPMENT WITH SHEET METAL SCREWS.
- DO NOT USE EXISTING TELEPHONE EQUIPMENT FRAME MOUNTED POWER OUTLETS UNDER ANY CIRCUMSTANCES. DO NOT USE EXISTING TELEPHONE EQUIPMENT FRAME SUPER STRUCTURE, EXISTING CABLE TRAYS OR EXISTING RACEWAYS TO SUPPORT NEW RACEWAYS OR NEW GROUND CONDUCTOR RISER.
- DO NOT USE POWDER ACTUATED ANCHORS IN THE EXISTING TELEPHONE EQUIPMENT AREAS OR IN THE OFFICE AREAS UNLESS OTHERWISE APPROVED BY THE OWNER'S CONSTRUCTION REPRESENTATIVE.
- NO SPLICING. IF SPLICES ARE REQUIRED ONLY WHERE INDICATED ON DRAWING THEY SHALL BE MADE WITH HIGH PRESS CRIMP COMPRESSION BARREL TYPE SPLICE CONNECTORS AS HEAT SINK.
- USE METALLIC TYPE GROUNDING BUSHINGS IN ALL ENCLOSURES UNLESS NOTED OTHERWISE.
- REMOVE ALL CONSTRUCTION DUST AND DEBRIS ON A DAILY BASIS.
- ALL CONDUIT PENETRATIONS THROUGH WALLS AND FLOORS SHALL BE INSTALLED IN OPENING OF SUFFICIENT DIAMETER TO ALLOW PROPER SPACE FOR FIRE RETARDANT SEALING. IN ALL CASES, FIRE RETARDANT INSTALLATION SHALL HAVE MINIMUM TWO (2) HOURS FLAME (F) AND TEMPERATURE (T) RATINGS. ALL ABANDONED, NEW WALL AND FLOOR PENETRATIONS SHALL BE FIRE SEALED WITH HILTI FIRESTOP PRODUCTS. SEE ARCHITECTURAL DRAWINGS, AND SPECIFICATIONS FOR ADDITIONAL INFORMATION.
- COORDINATE THE EXACT LOCATION AND NATURE OF ANY REQUIRED ELECTRICAL CONNECTION TO BE PROVIDED FOR MECHANICAL EQUIPMENT PRIOR TO ROUGH-IN. VERIFY THE ELECTRICAL SERVICE REQUIRED FOR EACH ITEM OF MECHANICAL EQUIPMENT WITH THE MECHANICAL CONTRACTOR PRIOR TO FURNISHING SUCH POWER. REFER TO MECHANICAL DRAWING FOR MECHANICAL EQUIPMENT REQUIRING ELECTRICAL CONNECTIONS. MAKE CONNECTION AND PROVIDE APPROPRIATE WIRE, CONDUIT AND OVERCURRENT PROTECTION FOR EQUIPMENT. THE DISCONNECTING MEANS FOR ALL MECHANICAL EQUIPMENT SHALL BE ACCESSIBLE AND HAVE CLEARANCES AS REQUIRED BY THE NEC. MOTORS SHALL BE FURNISHED AND INSTALLED UNDER DIVISION 23 WORK. WITH POWER CONNECTED UNDER DIVISION 26 WORK. FINAL CONNECTION SHALL BE MADE WITH SUITABLE LENGTH OF LIQUID-TIGHT FLEXIBLE METALLIC CONDUIT. ALL MOTOR BRANCH CIRCUITS, ETC., SHALL BE FIELD-VERIFIED FOR PROPER SEQUENCE AND MOTOR ROTATION. PHASE SEQUENCE SHALL BE A-B-C (VIEWED FROM FRONT: LEFT TO RIGHT, TOP TO BOTTOM, FRONT TO REAR). REFER TO MECHANICAL DRAWINGS FOR MOTORS THAT ARE TO BE INTERLOCKED AND APPROPRIATE CONTROL WIRING AND CONDUITS.
- AFTER REMOVAL OF ANY ELECTRICAL DEVICE, EQUIPMENT AND/OR APPURTENANCE, IF THERE ARE OPENINGS IN THE WALLS, FLOORS, AND/OR ROOF NOT TO BE REUSED, CLOSE ALL OPENINGS TO MATCH ADJACENT MATERIALS AND CONSTRUCTIONS. PATCH, IN-FILL REPAIR, AND/OR CLOSE THIS OPENING AND FINISH SIMILAR TO SURROUNDING SURFACES. COORDINATE WITH DRAWINGS AND WITH ALL OTHER TRADES.
- DO NOT COVER OR OBSTRUCT OWNER'S CEILING INSERTS, UNOPENED OR PARTIAL UNUSED CABLE SLOTS OR HOLES BY ANY CONDUIT, RACEWAYS, BUS DUCT, OR EQUIPMENT. CONSULT WITH OWNER'S CONSTRUCTION REPRESENTATIVE AND REVIEW TECHNICAL SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.
- ON COMPLETION OF WORK, SUBMIT THREE (3) SETS OF "RECORD" DRAWINGS TO CONSTRUCTION MANAGER IMMEDIATELY AFTER APPROVAL OF THE CONSTRUCTION WORK. "RECORD" DRAWINGS SHALL CLEARLY INDICATE THE FOLLOWING TO REFLECT ACTUAL CONSTRUCTION WORK AND RELATED FIELD CONDITIONS: ALL THE ELECTRICAL DEVICES SUCH AS DISCONNECT SWITCHES, STARTERS, LUMINAIRES, ETC., AS APPLICABLE. ACTUAL ROUTING OF ALL FEEDERS AND INDIVIDUAL BRANCH CIRCUITS 30 AMPS OR LARGER WITH THE RELATED CONDUIT SIZE AND WIRING. LOCATION OF INCOMING ELECTRICAL SERVICE AND ALL THE CIRCUITS INSTALLED UNDERGROUND OR IN A SLAB. MANUFACTURER'S NAME AND CATALOG NUMBERS EQUIPMENT FOR LUMINAIRES, MOTOR STARTERS, AS APPLICABLE.
- COORDINATE CONSTRUCTION PHASING WITH THE OWNER'S CONSTRUCTION REPRESENTATIVE AND WITH OTHER TRADES PRIOR TO DEMOLITION OF ANY EXISTING INSTALLATION OR COMMENCEMENT OF ANY NEW WORK.
- SUBMIT (2) SETS OF COMPOSITE 1/4" OR 1/8" SCALED LAYOUT DRAWINGS TO ARCHITECT/ENGINEER FOR REVIEW AND RECORDS PRIOR TO COMMENCING ANY NEW INSTALLATION WORK OF THE ELECTRICAL CONDUITS 2" AND ABOVE, PULL BOXES, BUS DUCTS, CABLE TRAYS, LIGHT FIXTURES LAYOUT, ETC. THE COMPOSITE DRAWINGS SHALL INCLUDE ALL EXISTING AND NEW MECHANICAL DUCTWORK, PIPING, ELECTRICAL CONDUITS, BUS DUCT, CABLE TRAYS, LIGHT FIXTURES, PULL BOXES, CEILING MOUNTED EQUIPMENT AND OTHER EXISTING BUILDING STRUCTURAL MEMBERS. ALL MAJOR COMPONENTS OF THE MECHANICAL AND ELECTRICAL SYSTEM SHALL BE IDENTIFIED, COORDINATED AND LABELED ON THE COMPOSITE LAYOUT DRAWINGS. ALL CONFLICTS SHALL BE RESOLVED WITH THE COMPOSITE DRAWING BETWEEN ALL TRADES OFF BY OWNER'S CONSTRUCTION REPRESENTATIVE AND ALL TRADES BEFORE INSTALLATION BEGINS.
- CAREFULLY EXAMINE EXISTING PROJECT CONDITIONS WITH RESPECT TO NEW INSTALLATION WORK REQUIREMENTS. COMMENCEMENT OF ANY DEMOLITION OR NEW WORK INDICATES THAT THE CONTRACTOR ACCEPTS EXISTING CONDITIONS. NO EXTRA CHARGES WILL BE ACCEPTED BY OWNER AFTER BIDDING THAT ARE RELATED TO CONTRACTOR'S INABILITY TO INSTALL NEW EQUIPMENT AND ASSOCIATED RACEWAYS AND WIRING DUE TO EXISTING CONDITIONS.
- FURNISH AND INSTALL NECESSARY PULL AND JUNCTION BOXES, WHETHER SHOWN ON DRAWINGS OR NOT, AS REQUIRED TO COMPLY WITH NEC AND TO MEET DESIGN INTENT SHOWN ON DESIGN DRAWINGS. PROVIDE "P-TOUCH" LABELS IN FRONT COVER OF JUNCTION BOXES AND PULL BOXES INDICATING THE RELATED PANEL AND POWER SOURCE FOR LOAD BEING SERVED.
- WORK AROUND EXPOSED BUS BARS IN BATTERY EQUIPMENT SPACES WITH EXTREME CAUTION. PROTECT BUS BARS AND PERFORM WORK ABOVE EXISTING BATTERY EQUIPMENT IN STRICT ACCORDANCE WITH THE OWNER'S GUIDELINES AND INSTRUCTIONS.
- SHOULD IT APPEAR THAT THERE IS A DUPLICATION ON THE DRAWINGS OR IN THE SPECIFICATIONS, WHEREIN THE SAME WORK OR ITEMS ARE SHOWN OR SPECIFIED AS BEING PROVIDED UNDER SEPARATE SUBCONTRACTS OR SUPPLY ORDERS, AND SUCH DUPLICATION IS NOT CLARIFIED BY ADDENDUM DURING THE BIDDING PERIOD, IT SHALL BE ASSUMED THAT THE RESPONSIBILITY FOR THE CONTRACTOR WILL SELECT AND COORDINATE DIVISION OF WORK AMONG SUBCONTRACTORS.
- THE DESIGN DRAWINGS, AS SUBMITTED, ARE DIAGRAMMATIC AND ARE NOT INTENDED TO SHOW EXACT LOCATION OF EQUIPMENT, AND ASSOCIATED RACEWAY ROUTING UNLESS DIMENSIONS ARE GIVEN. DRAWINGS ARE NOT TO BE SCALED FOR INSTALLATION WORK.
- LOCATION AND EQUIPMENT DESIGNATION SHOWN ON THE FLOOR PLAN ARE BASED ON THE EXISTING RECORD DRAWINGS FURNISHED BY THE OWNER AND MAY NOT REFLECT ACTUAL EXISTING INSTALLATION. NOTIFY OWNER'S CONSTRUCTION REPRESENTATIVE OF ANY DISCREPANCY FOUND PRIOR TO COMMENCING ANY DEMOLITION WORK, ANY ROUGH-IN WORK OR NEW INSTALLATION WORK.
- PROVIDE NEW TYPED PANELBOARD CIRCUIT DIRECTORY FOR ALL NEW AND/OR EXISTING PANELS THAT ARE AFFECTED BY DEMOLITION, MODIFICATIONS OR NEW WORK, FOR AFFECTED BRANCH CIRCUIT PANELBOARDS.
- ON COMPLETION OF ALL WORK UPDATE/REPLACE EXISTING FIRE ALARM SYSTEM ZONE CHARTS AS APPLICABLE.
- REPLACE EXISTING ELECTRICAL ONE LINE DIAGRAMS WITH NEW UPDATED ELECTRICAL ONE LINE DIAGRAMS TO REFLECT REVISIONS MADE TO THE EXISTING POWER DISTRIBUTION SYSTEM. UPDATED ONE LINE DIAGRAMS WILL BE FURNISHED BY EXP FOR INSTALLATION UNDER THIS CONTRACT.
- PERFORM ELECTRICAL TESTING ON ALL NEW ELECTRICAL EQUIPMENT AND INSTALLATION PER NETA GUIDELINES. SUBMIT TEST REPORTS FOR REVIEW AND RECORDS.
- FOR THE EXISTING CRITICAL EQUIPMENT SUCH AS C.O. POWER PLANTS, AIR DRYERS, CRITICAL TELEPHONE POWER (CTP), COORDINATE WITH OWNER'S CONSTRUCTION REPRESENTATIVE ALL PLANNED POWER SHUT-DOWNS.
- AFTER ALL INSTALLATION WORK AND ELECTRICAL SYSTEM TESTING IS COMPLETE, PROVIDE (3) SETS OF TYPED WRITTEN INSTRUCTION SHEETS FOR OWNER'S REVIEW AND APPROVAL REGARDING NORMAL OPERATION, MONTHLY TEST, AND EMERGENCY OPERATION OF NEW ATIS IN CONJUNCTION WITH NEW GENSET OPERATION SWITCHGEARS. AFTER APPROVAL FROM THE OWNER OF THIS EQUIPMENT OPERATIONAL PROCEDURE, PROVIDE HANDS ON TRAINING TO OWNER'S STAFF FOR MINIMUM OF (2) HOURS ON EACH ELECTRICAL EQUIPMENT OPERATION. AFTER ALL TRAINING IS COMPLETE, SUBMIT (5) SETS OF FINAL TYPED WRITTEN INSTRUCTION SHEETS IN LAMINATED PLASTIC TO OWNER.
- ALL EXISTING DISCONNECTS, MOTOR STARTER, AND CONTROL WIRING ASSOCIATED WITH THE EQUIPMENT SCHEDULED TO BE REMOVED ON THIS PROJECT SHALL BE DISCONNECTED AND REMOVED UNLESS NOTED OTHERWISE ON DRAWINGS. ASSOCIATED CONDUITS AND WIRING SHALL BE REMOVED BACK TO POWER SOURCE UNLESS NOTED OR INDICATED OTHERWISE ON DRAWINGS.
- ASBESTOS CONTAINING MATERIALS (ACM) IS STRICTLY PROHIBITED FROM BEING INSTALLED ON ALL AT&T PROJECTS. SHOULD ACM BE IDENTIFIED INADVERTENTLY INSTALLED ON PROJECTS, PROPER REMOVAL, DISPOSAL AND REPLACEMENT WITH APPROVED PRODUCT SHALL BE THE SOLE RESPONSIBILITY OF THE INSTALLING CONTRACTOR AT NO COST TO THE OWNER.
- COORDINATE ALL LOCATION OF FLOOR AND WALL CORING, PATCHING AND FIRE PROOFING REQUIREMENTS WITH OWNER'S CONSTRUCTION REPRESENTATIVE AND ARCHITECTURAL TRADES PRIOR TO BIDDING.
- ALL CONDUIT AND WIRING SHALL BE NEW AND ONLY ONE FEEDER CIRCUIT SHALL BE INSTALLED PER CONDUIT UNLESS OTHERWISE NOTED.
- FOR ALL NEW ONE-LINES AND RISER DIAGRAMS PROVIDE 24x36 FRAMES. TESTRITE VISUAL, MODEL #: E09-B-MANUFACTURER CONTACT NUMBER: 888.873.2735.

- CONTRACTOR SHALL LIST ALL DEVIATIONS FROM DRAWINGS AND/OR SPECIFICATIONS ON A SEPARATE TYPED-OUT SHEET AND SUBMIT WITH THE BID PROPOSAL.
- CONTRACTOR SHALL COORDINATE REMOVAL AND CLEANUP OF ALL DEBRIS CAUSED BY HIS WORK DURING CONSTRUCTION AND THE STORAGE OF BUILDING MATERIALS. CLEAN ALL AREAS AT THE END OF EACH WORK DAY. CONTRACTORS ARE TO CONFINE CONSTRUCTION TRAFFIC AND DEBRIS REMOVAL TO THE CONSTRUCTION AREA AS MUCH AS POSSIBLE TO MINIMIZE DUST.
- CONTRACTOR SHALL COORDINATE ALL DEMOLITION WORK AND NEW CONSTRUCTION WORK WITH OWNER'S CONSTRUCTION REPRESENTATIVE AND BUILDING MANAGER TO MINIMIZE BUSINESS DISRUPTIONS WHILE NEW CONSTRUCTION IS IN PROGRESS.
- REFER TO MECHANICAL, ARCHITECTURAL DRAWINGS, ETC., FOR ADDITIONAL WORK TO BE COORDINATED WITH THIS DRAWING AND THE REQUIREMENTS SPECIFIED HEREIN.
- CONTRACTOR SHALL ERECT PARTITIONS, AS DETAILED, COORDINATE EXACT LOCATIONS WITH THE OWNER'S CONSTRUCTION REPRESENTATIVE.
- GENERAL CONTRACTOR SHALL PATCH ALL WALL, CEILING, AND FLOOR SURFACES, AS WELL AS ANY OTHER MATERIALS TO REMAIN THAT ARE DAMAGED OR AFFECTED BY DEMOLITION OR NEW CONSTRUCTION. ALL PATCHING OF EXISTING CONSTRUCTION SHALL BE DONE TO MATCH EXISTING MATERIALS AND FINISHES, UNLESS NOTED OTHERWISE.
- IF HAZARDOUS MATERIALS ARE IN ANY WAY SUSPECTED INCLUDING, BUT NOT LIMITED TO ASBESTOS OR POLLUTANTS, CONTRACTOR SHALL INFORM THE ARCHITECT IMMEDIATELY AND SUSPEND WORK ON THAT AREA OF CONSTRUCTION. OWNER SHALL BE RESPONSIBLE FOR TESTING SUSPECTED MATERIAL AND REMOVAL OF SAME.
- ALL INDICATED DEVICES AND LIGHT FIXTURES ARE FROM PREVIOUS ENGINEERED DRAWINGS AND FIELD OBSERVATIONS. ACTUAL CONDITIONS MAY VARY AND MUST BE VERIFIED BY THIS CONTRACTOR WHO SHALL MAKE MINOR ADJUSTMENTS AS NECESSARY TO COMPLETE INSTALLATION OF ALL NEW WORK. THE CONTRACTOR SHALL NOTIFY THE OWNER CONSTRUCTION REPRESENTATIVE FOR REDIRECTION AS REQUIRED.

PROJECT NAME:	
NEW HAVEN CDO - GENERATOR DESIGN	
DET-24002045-A4	
CONSULTANT STAMP	

exp U.S. Services Inc.	
1-1 248.351.8200 +1 248.351.8250	
27777 Franklin Road	
Suite 1510	
Southfield, MI 48034	
U.S.A.	
www.exp.com	
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NO.	REVISIONS / AUTHORIZATIONS	DATE	BY
	PERMIT AND CONSTRUCTION	05/15/25	
	FINAL REVIEW #2	04/18/25	
	FINAL REVIEW	03/18/25	
	50% REVIEW	12/17/24	

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PROJECT DRAWING

59041 MAIN ST
 NEW HAVEN
 MI US
 NWHMMIM 111436.01 M18255

ABBREVIATIONS, SYMBOLS & NOTES ELECTRICAL

AT&T PROJECT NUMBER:	2001272	DATE:		SCALE:	N/A
AT&T AUTHORIZATION:	AIMEE BUTLER	DRAWN BY:	SM	CHECKED BY:	PN/ND
		SHEET:		OF:	
		AT&T DRAWING NO.:	2001272E00001	SHEET NO.:	E00001

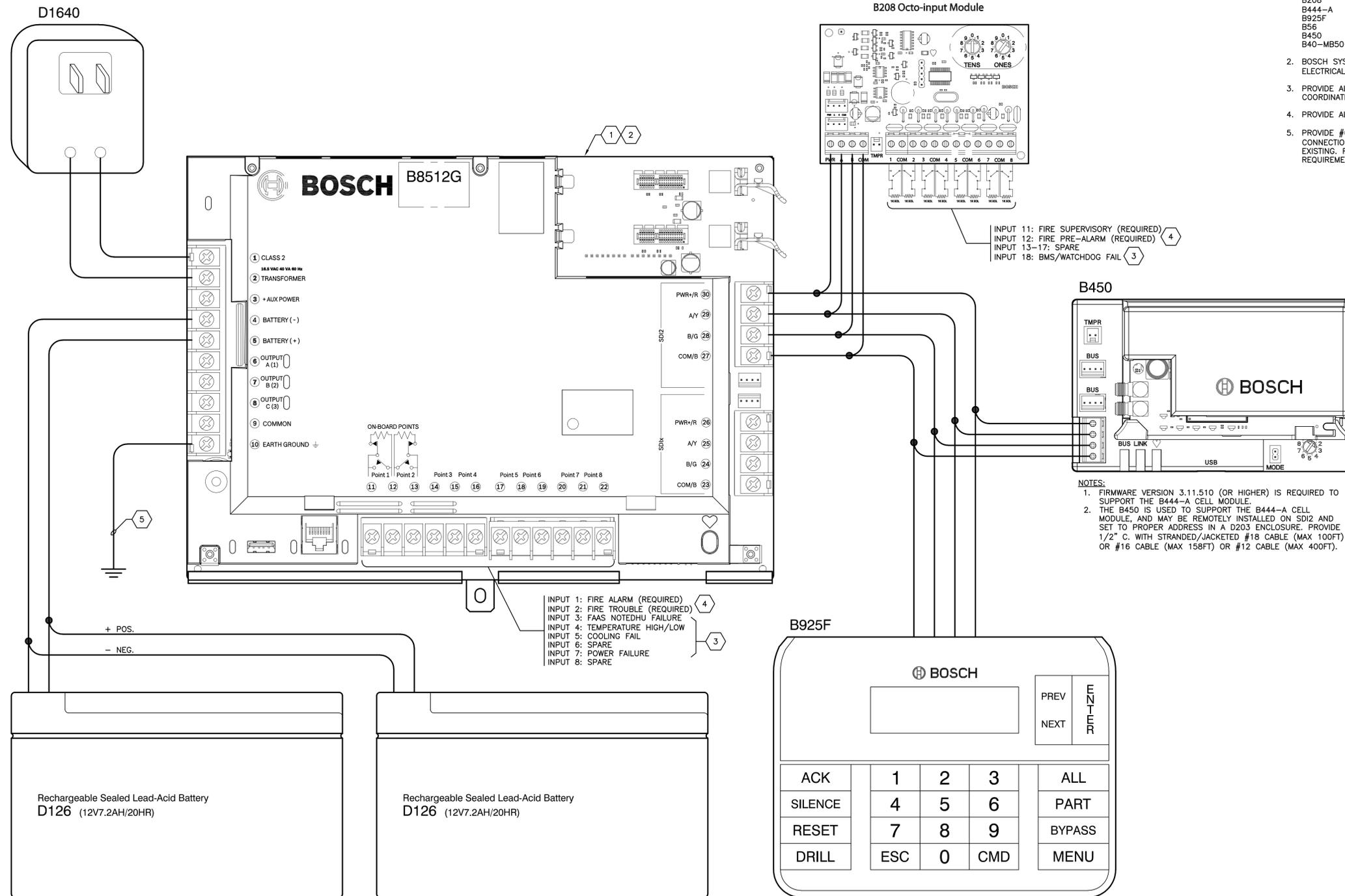
GENERAL NOTES:

- CONTACT TERRY FREDRICKSON FOR BOSCH SYSTEM ORDERING INFORMATION, TERRY.FREDRICKSON@US.BOSCH.COM

DETAIL-1 KEY NOTES:

- BOSCH SYSTEM AND ALL ACCESSORIES PROVIDED BY ELECTRICAL CONTRACTOR. PROVIDE THE FOLLOWING COMPONENTS FOR A COMPLETE BOSCH SYSTEM:

PART NO.	DESCRIPTION
B8512G	MAIN PANEL-B8512G
D8109	FIRE ENCLOSURE, RED (UL APPROVED)
D8004	TRANSFORMER ENCLOSURE KIT (UL APPROVED)
D1640	TRANSFORMER PLUG-IN, 16 VAC 40 VA
D122L	DUAL BATTERY HARNESS, 35", 12V
D126	BATTERY, 12V 7AH
ICP-1K22AWG-10	END OF LINE RESISTOR, 1K OHM 22AWG (10 PK)
D167	EARTH GROUND CLAMP
B208	8-INPUT EXPANSION MODULE
B444-A	PLUG-IN CELL MODULE, AMEC LTE (NO-SIM-CARD)
B925F	FIRE AND INTRUSION KEYPAD, SD12
B56	KEYPAD SURFACE MOUNT BOX
B450	PLUG-IN COMMUNICATOR INTERFACE
B40-MB50	OUTDOOR MULTIBAND ANTENNA, CELL, 50FT.
- BOSCH SYSTEM SHALL BE PROGRAMMED AT SITE BY BOSCH CERTIFIED INSTALLER. ELECTRICAL CONTRACTOR TO COORDINATE WITH EAMC/BASC ALARMING CENTER.
- PROVIDE ALARM AND EXTEND FROM TEMPERATURE CONTROL PANEL TO NEW BOSCH PANEL. COORDINATE WITH TEMPERATURE CONTROLS VENDOR.
- PROVIDE ALARM AND EXTEND FROM FACP PANEL TO NEW BOSCH PANEL.
- PROVIDE #6 AWG GREEN INSULATED, COPPER STRANDED, RHH-L3 GROUND CONDUCTOR CONNECTION FROM BOSCH PANEL TO "OPG". TERMINATION AT GROUND BAR SHALL MATCH EXISTING. REFER TO GENERAL GROUNDING NOTES ON SHEET E60003 FOR ADDITIONAL REQUIREMENTS.



PROJECT NAME:
 NEW HAVEN CDO - GENERATOR DESIGN
 DET-24002045-A4

CONSULTANT STAMP
 STATE OF MICHIGAN
 5/13/23
 RAYMOND S. BUHAY
 ENGINEER
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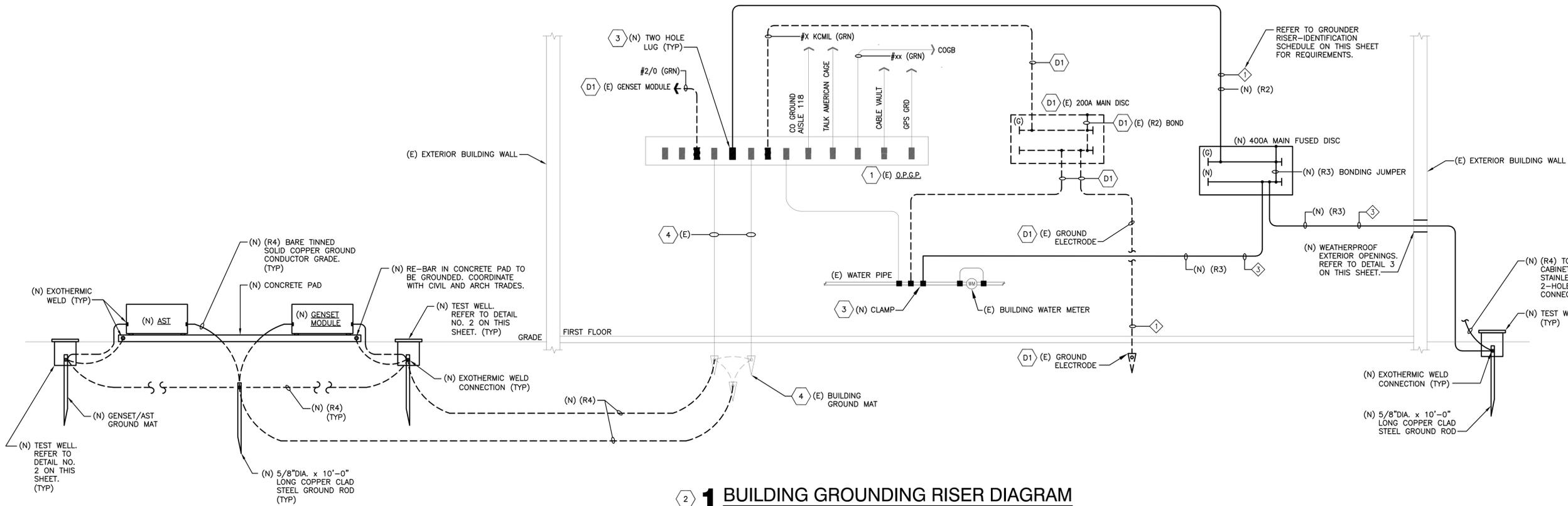
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SHEET TITLE:
BOSCH PANEL DETAILS ELECTRICAL

AT&T PROJECT NUMBER: 2001272	DATE: SM	SCALE: N/A
AT&T AUTHORIZATION: AIMEE BUTLER	CHECKED BY: PN/ND	SHEET NO. E50001

1 BOSCH PANEL DETAIL
 NOT TO SCALE

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2 BUILDING GROUNDING RISER DIAGRAM

NTS
 NOTES:
 1. ALL NEW GROUNDING CONDUCTORS ON THIS DIAGRAM SHALL BE STRANDED, GREEN INSULATED TYPE "RH-H-L3" UNLESS OTHERWISE NOTED.

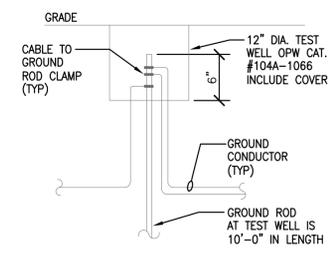
GROUND WIRE LEGEND

R1 - 500 KCMIL, CU. STRANDED, GREEN INSULATED
 R2 - #4/0 AWG, CU. STRANDED, GREEN INSULATED
 R3 - #1/0 AWG, CU. STRANDED, GREEN INSULATED
 R4 - #2 AWG, CU., SOLID, BARE, TIN PLATED
 R5 - #2 AWG, CU., STRANDED, GREEN INSULATED
 R6 - #750KCMIL, CU., STRANDED, GREEN INSULATED
 R7 - #6 AWG, CU, BARE STRANDED

TAG ID NO.	MATERIAL	TAG SIZE	LETTER SIZE	DESCRIPTION AT O.P.G.P.	DESCRIPTION AT TERMINATION
1	BRASS - 18 GAUGE	1 1/2" DIA	MIN 1/8"	MAIN DISC. SW	O.P.G.P.
2	BRASS - 18 GAUGE	1 1/2" DIA	MIN 1/8"	"WATER PIPE"	O.P.G.P.
3	BRASS - 18 GAUGE	1 1/2" DIA	MIN 1/8"	DES @ MAIN DISC. SW "GRD ROD"	MAIN DISC. SW
4	BRASS - 18 GAUGE	1 1/2" DIA	MIN 1/8"		
5	BRASS - 18 GAUGE	1 1/2" DIA	MIN 1/8"		
6	BRASS - 18 GAUGE	1 1/2" DIA	MIN 1/8"		
7					

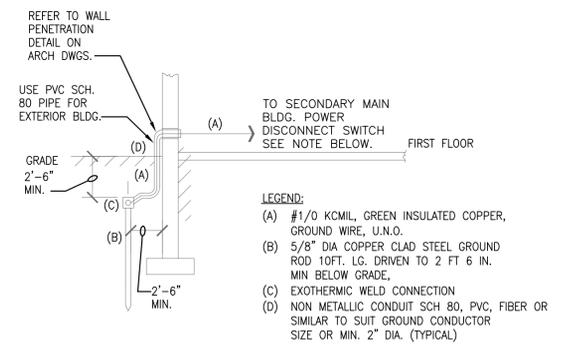
C.O. GROUND RISER-IDENTIFICATION SCHEDULE

NTS



2 NEW TEST WELL

NTS



3 GROUND CONDUCTOR ENTRANCE

NOTE:
 SIMILAR FOR NEW GROUND MAT GROUNDING EXCEPT LEGEND ITEM (A) SHALL BE #2 AWG, CU, SOLID BARE TINNED WHEN SHOWN (TYPICAL)

GENERAL NOTES:

- ALL GROUNDING EQUIPMENT AND CONDUCTORS ON THIS SHEET ARE EXISTING UNLESS NOTED OTHERWISE.
- REFER TO GENERAL GROUNDING NOTES AND DETAILS ON SHEET E60002 FOR ADDITIONAL REQUIREMENTS.
- REFER TO GROUNDING SPECIFICATIONS SECTION 260526 FOR ADDITIONAL REQUIREMENTS. SUBMIT TEST REPORT FOR REVIEW.

KEY NOTES - DEMO WORK:

- DISCONNECT AND REMOVE AFTER NEW EQUIPMENT IS TESTED AND ENERGIZED.

KEY NOTES - NEW WORK:

- FIELD VERIFY EXACT LOCATION PRIOR TO BIDDING.
- REFER TO TYPICAL GROUNDING NOTES AND DETAILS ON THIS SHEET AND SHEET E60002.
- REFER TO DETAILS ON SHEET E60002.
- CONTRACTOR SHALL FIELD TRACE AND LOCATE EXISTING BUILDING GROUND MAT PRIOR TO BIDDING.

PROJECT NAME:
NEW HAVEN CDO - GENERATOR DESIGN

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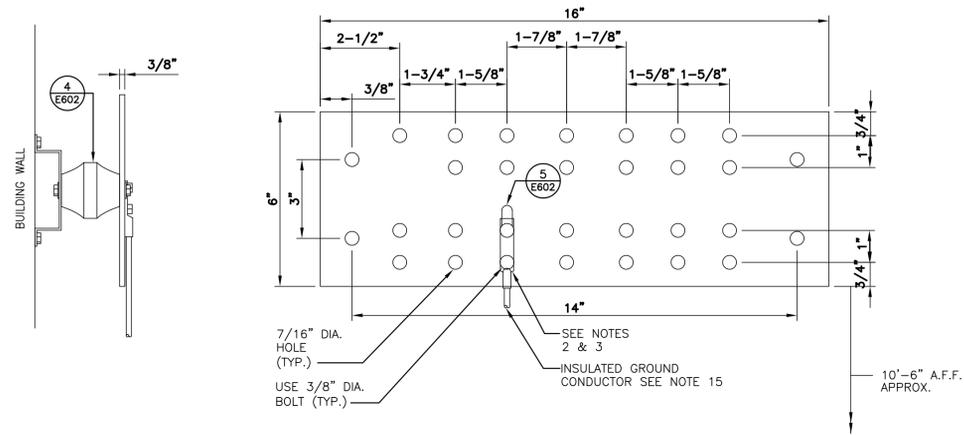
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SHEET TITLE:
GROUNDING RISER & DETAILS ELECTRICAL

AT&T PROJECT NUMBER: 2001272	DATE:	SCALE: N/A
AT&T AUTHORIZATION: AIMEE BUTLER	DRAWN BY: SM	CHECKED BY: PN/ND
	SHEET: - OF: - SHEETS	SHEET NO.
	AT&T DRAWING NO.: 2001272E60001	E60001



1 EXISTING O.P.G.P. GROUND BAR

NTS

REQD	PART NO.	DESCRIPTION
1	XXX	GROUND BAR
2	2103890010	WALL MTG. BRKT.
2	3061-4	INSULATORS*
4	3012-1	5/8-11 X 1 HHCS
4	3015-8	LOCKWASHERS-5/8"

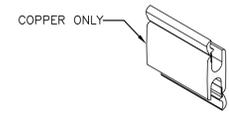
MANUFACTURER: NEWTON INSTRUMENTS COMPANY, INC. TEL: 919-575-6426 (PART NO. XXX)



SEE NOTE 5 FOR ADDITIONAL REQUIREMENTS

2 STRAPS

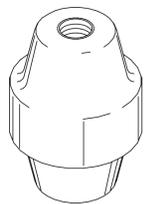
NTS



T & B" CAT. NO. CHT750350-2 FOR 750 MCM OR EQUAL BY "BURNDY" WITH CLEAR COVER.

3 COMPRESSION H-TAP

NTS



NOTE: CALL GLASTIC CORPORATION (216-486-0100) FOR LOCAL DISTRIBUTOR.

4 GROUND INSULATOR

NTS

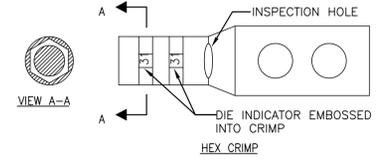
SPECIFICATION - Verification of CO Earth 'Grounds' (TEST FORM)

Location: _____
Address: _____

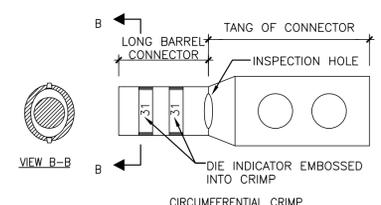
Verification of O.P.G.P. ground bar connection to earth ground - choose one of items 1 through 4 listed below that is applicable for this location.

- WATER PIPE
 - Determine outer diameter _____ and composition _____
 - Water meter is jumpered _____ (y,n,nr), what size composition _____ of jumper.
 - Determine resistance using FALL OF POTENTIAL METHOD _____ OHMS.
 - Approximate horizontal length to water main or well head _____ number of feet.
- DRIVEN GROUND ROD SYSTEM, GROUND RING OR GROUND MAT.
 - Wire size _____, composition _____, solid wire _____
 - Determine resistance using FALL OF POTENTIAL METHOD _____ OHMS.
- PRIVATE WELL CASING (verify physically)
 - Determine water pipe outer diameter _____ and composition _____. NOTE: If water pipe is copper go on to 'b' below.
 - Determine resistance using FALL OF POTENTIAL METHOD _____ OHMS.
 - Approximate horizontal length of water pipe to well head. _____ number of feet.
- OTHER (comment in detail)

5. MAIL COMPLETED TEST FORM IN DUPLICATE FOR APPROVAL TO:
OWNER'S CONSTRUCTION REPRESENTATIVE (SEE SPECIFICATION COVER SHEET FOR NAME AND ADDRESS)



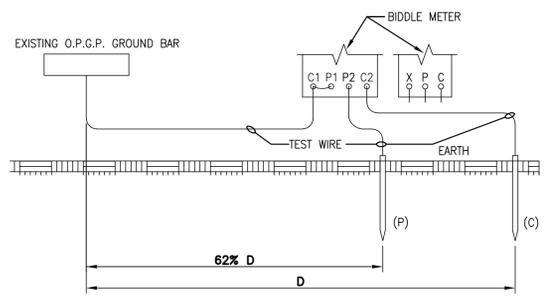
AFTER CRIMPING, ALL FLASHES, BURRS, OR SHARP EDGES RESULTING FROM THE CRIMPING PROCESS MUST BE REMOVED.



5 TWO HOLE CRIMP COPPER CONNECTION

NTS

NOTE: PROVIDE CLEAR SINK WRAP COVERS



LEGEND
(C) - CURRENT REFERENCE GROUND ROD
(P) - POTENTIAL REFERENCE GROUND ROD
(D) - RECOMMENDED DISTANCE OF CURRENT REFERENCE GROUND ROD FROM O.P.G.P.:
FOR SINGLE EARTH ELECTRODE/WATER PIPE
D = 50 TO 60 FEET

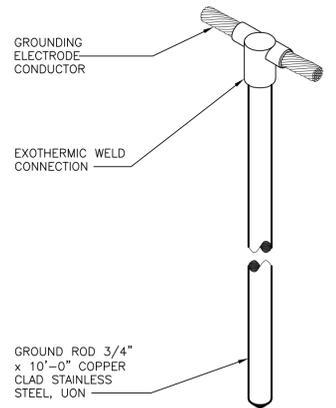
NOTES:
1. COORDINATE TESTING TWO WEEKS IN ADVANCE WITH THE OWNER'S CONSTRUCTION REPRESENTATIVE.

6 FALL-OF-POTENTIAL

NTS

GENERAL GROUNDING NOTES:

- COORDINATE ALL WORK RELATED TO COPPER GROUND RISER WITH THE OWNER'S REPRESENTATIVE.
- NO COLDWELDING IS PERMITTED IN AREAS WITH EXISTING TELEPHONE EQUIPMENT, AND OTHER AREAS INSIDE THE BUILDING.
- TWO HOLE BARREL, BOLTED TYPE HYDRAULIC DOUBLE INDENT COPPER COMPRESSION POSSIBLE. CONNECTOR SHALL BE BURNDY OR EQUAL BY T&B. ALL COMPRESSION CONNECTORS (FOR CABLE SIZES NO. 1/0 AWG AND LARGER) SHALL EMPLOY HEX OR CIRCUMFERENTIAL - TYPE CRIMPS, AND THE CRIMPS SHALL EMBOSS AN INDICATOR OF THE DIE USED TO MAKE THE CRIMP. USE TWO-HOLE CRIMPED CONNECTORS FOR BONDING AND GROUNDING CONNECTIONS ON CONDUCTORS LARGER THAN # 8 AWG. ALL COMPRESSION CONNECTORS (FOR CABLE SIZES NO. 1/0 AWG AND LARGER) WILL HAVE AN INSPECTION HOLE BETWEEN THE TANG AND BARREL OF THE CONNECTOR BEFORE THE CRIMPS ARE MADE.
- ALL GROUNDING CONNECTIONS SHALL BE MADE IN THE PRESENCE OF OWNER'S CONSTRUCTION REPRESENTATIVE. REMOVE AFTER CRIMPING, ALL FLASHES, BURRS, OR SHARP EDGES RESULTING FROM THE CRIMPING PROCESS.
- PLASTIC OR METALLIC STRAPS SHALL BE USED TO SECURE GROUND CONDUCTOR EVERY 18" HORIZONTALLY AND 9" VERTICALLY TO THE BUILDING COLUMNS, CEILINGS OR WALLS. IF METALLIC STRAPS ARE USED THEY MUST BE OF THE TYPE WHICH DOES NOT COMPLETELY ENIRCLE THE CONDUCTOR. DO NOT USE EXISTING CONDUIT, CABLE TRAY OR ANY OTHER EXISTING MECHANICAL DUCT TO SECURE GROUND CONDUCTOR. REFER TO STRAP DETAILS ON THIS SHEET FOR EXACT REQUIREMENTS.
- ALL GROUNDING CONDUCTORS WITHIN THE BUILDING SHALL BE INSULATED GREEN COLOR, COPPER, RHH-L3 SIZE AS NOTED, UNLESS INDICATED OTHERWISE ON THE FLOOR PLAN DRAWING. REFER TO SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS. SUBMIT CUT SHEET FOR REVIEW.
- ALL CRIMP CONNECTIONS SHALL BE COATED WITH A CORROSION PREVENTATIVE COMPOUND "GREASE NON-OXIDE" AS MANUFACTURED BY: YJASA EXIDE, CALL 1-630-920-4440 FOR LOCAL DISTRIBUTOR.
- ALL GROUNDING CONDUCTORS SHALL BE RUN EXPOSED WITHIN THE BUILDING WHENEVER PRACTICAL. CONDUCTORS SHOULD NOT BE RUN CONCEALED IN SLABS, COLUMNS, OR WALLS. USE PVC SLEEVES WHERE GROUND CONDUCTOR PENETRATES WALLS OR FLOOR SLABS.
- PACK OPENINGS AROUND GROUND CONDUCTOR PENETRATIONS OF FLOOR SLABS OR WALLS WITH FIRE RETARDANT MATERIAL. REFER TO PENETRATION DETAILS ON ARCHITECTURAL DRAWINGS AND SPECIFICATION.
- PROVIDE NEW TELEDYNE PENN-UNION TYPE GPL BRONZE GROUND CLAMP OR EQUAL BY BURNDY FOR NEW GROUND CONDUCTOR FOR CONNECTIONS TO SUIT EXISTING WATER PIPE. NEW GROUND CONDUCTOR SHALL BE CONNECTED AHEAD OF WATER METER ON INCOMING MAIN CITY WATER PIPE, WHERE APPLICABLE. REFER TO DETAIL 6.
- ALL GROUND CONDUCTOR CONNECTIONS TO ELECTRICAL EQUIPMENT SHALL BE MADE IN ACCORDANCE WITH THE "NATIONAL ELECTRIC CODE" 2023 EDITION.
- PROVIDE GROUND CONDUCTOR AT MAIN WATER PIPE TERMINATION POINT, "DO NOT DISCONNECT" WITH BRASS TAG.
- FOR CABLE TO CABLE CONNECTION, USE HYDRAULIC COPPER COMPRESSION TYPE H-TAP CONNECTOR. T&B CATALOG #CHT750350-2 OR EQUAL BY BURNDY. REFER TO DETAIL 3.
- ALL BENDS ON GROUND CONDUCTOR SHALL HAVE A MINIMUM RADIUS OF 1 FOOT, UNLESS NOTED OTHERWISE.
- ALL GROUND CONDUCTORS FOR CO GROUND RISER AND RELATED INSTALLATION SHALL BE GREEN INSULATED AND PURCHASED FROM SOUTHWIRE RHH-L3 (800) 444-1700 OR (513) 228-1010, OR AMERICAN INSULATED WIRE COMPANY, UNLESS OTHERWISE NOTED.
- COORDINATE ANY REMOVAL OF GROUNDING CONDUCTORS WITH OWNER'S CONSTRUCTION REPRESENTATIVE PRIOR TO ANY REMOVAL. ALL EXISTING GROUND CONNECTORS SHALL REMAIN UNTIL NEW GROUNDING AND THE RELATED NEW INSTALLATION WORK IS COMPLETED, TESTED, AND OPERATIONAL.
- PROVIDE TAGS ON ALL GROUNDING CONDUCTOR TERMINATION POINTS WITH "DO NOT DISCONNECT" LABELS. ALL TAGS AT GROUND BAR TERMINATIONS SHALL BE SECURED WITH CORD; TIE WRAPS SHALL NOT BE USED. SEE GROUND CONDUCTOR TERMINATION SCHEDULE ON SHEET E60001 FOR DETAILS.
- NEW GROUNDING CONNECTION SHALL BE WITH 2-HOLE CRIMP COMPRESSION TYPE BOLTED TONGUE LONG BARREL CONNECTOR, TIN PLATED COPPER AND SHALL BE LISTED FOR THEIR INTENDED USE BY AN NATIONALLY RECOGNIZED TESTING LABORATORY (NRTL). HARDWARE KIT SHALL BE WEATHER RESISTED SILICON BRONZE, 3/8" HEXAGON HEAD BOLTS AND NUTS WITH EXTERNAL TOOTH LOCKWASHERS PLACED BOTH ENDS, BETWEEN THE CONNECTOR AND BOLT HEAD AND BETWEEN THE LOCKING-NUT AND THE EQUIPMENT SURFACE TO WHICH IT IS SECURED TO ENDS. CRIMPING SHALL BE WITH DIES SPECIFIED BY THE MANUFACTURER OF THE CONNECTOR LUG. IF A CONNECTOR IS TO BE SECURED DIRECTLY TO A PAINTED SURFACE, THE PAINT SHALL BE REMOVED TO REVEAL BARE METAL COMPLETELY AROUND AREA OF THE COMPLETED CONNECTION. A THIN LAYER OF A CORROSION PREVENTIVE COMPOUND SUCH AS NO-OX-ID "A" SHALL BE APPLIED TO THE BARE METAL SURFACE. USE ZINC SPRAY COATING FOR ANY DRILLED HOLES. REFER TO GROUNDING NOTES AND DETAILS ON SHEET E60001.
- GROUND TEMP FUEL TANK PER MANUFACTURER REQUIREMENTS. PREPARE EQUIPMENT SURFACE FOR PROPER GROUNDING CONNECTION. CAUTION: "DO NOT WELD" WITH FUEL IN TANK. COORDINATE EXACT REQUIREMENTS WITH FUEL CONTRACTOR PRIOR TO ANY WORK. "DO NOT" EXOTHERMIC WELD IF EQUIPMENT STEEL IS LESS THAN 0.040 THICK. USE 2-HOLE CRIMP COMPRESSION TYPE BOLT TONGUE LONG BARREL CONNECTORS. REFER TO NOTE-4 ABOVE.



7 GROUND ROD DETAIL

NTS

PROJECT NAME:
NEW HAVEN CDO - GENERATOR DESIGN

DET-24002045-A4

CONSULTANT STAMP

STATE OF MICHIGAN
5/13/23
RAYMOND S. BUHAY
ENGINEER
No. 6201064206
LICENSED PROFESSIONAL ENGINEER

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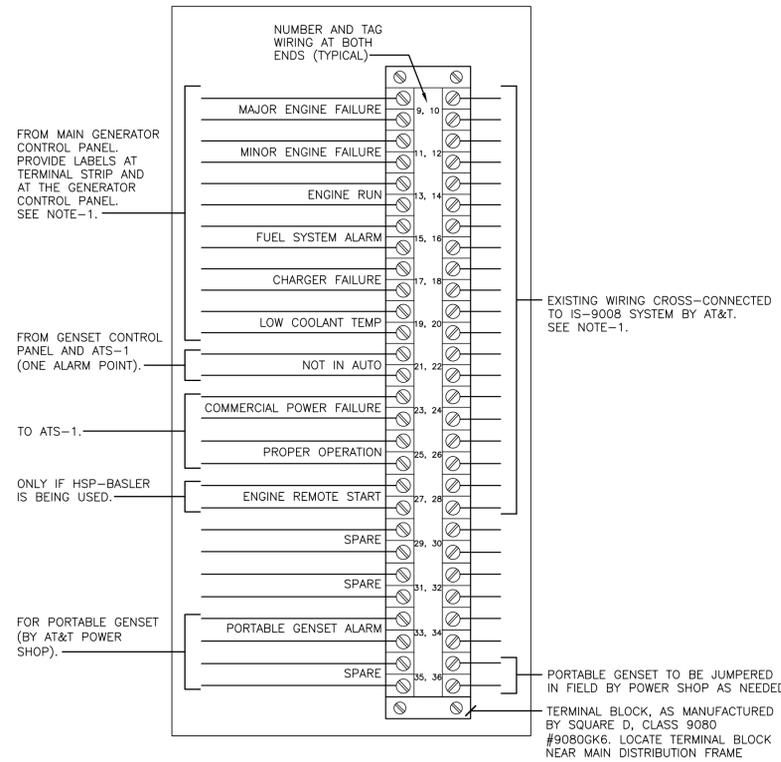
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AT&T CORPORATE REAL ESTATE

PROJECT_DRAWING

59041 MAIN ST
NEW HAVEN
MI US
NWHNMIMM 111436.01 M18255

GROUNDING DETAILS ELECTRICAL

AT&T PROJECT NUMBER: 2001272	DATE: SM	SCALE: N/A
AT&T AUTHORIZATION: AIMEE BUTLER	CHECKED BY: PN/ND	SHEET NO. E60002
AT&T DRAWING NO.: 2001272E60002		

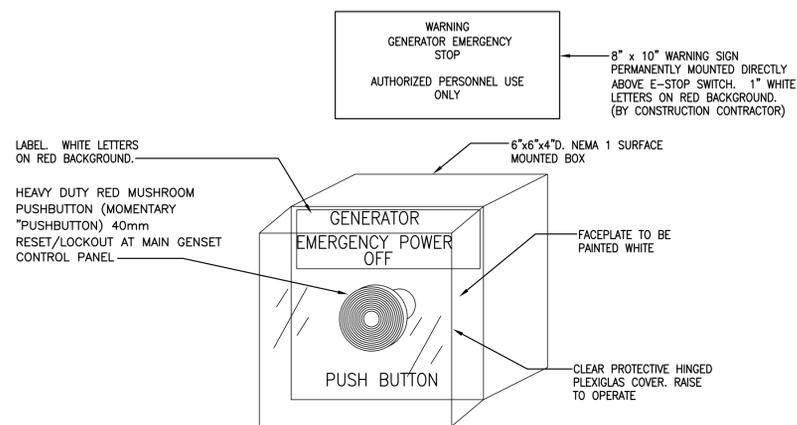


1 GENSET ALARM BSI TERMINAL CABINET DETAIL

NTS

NOTES:

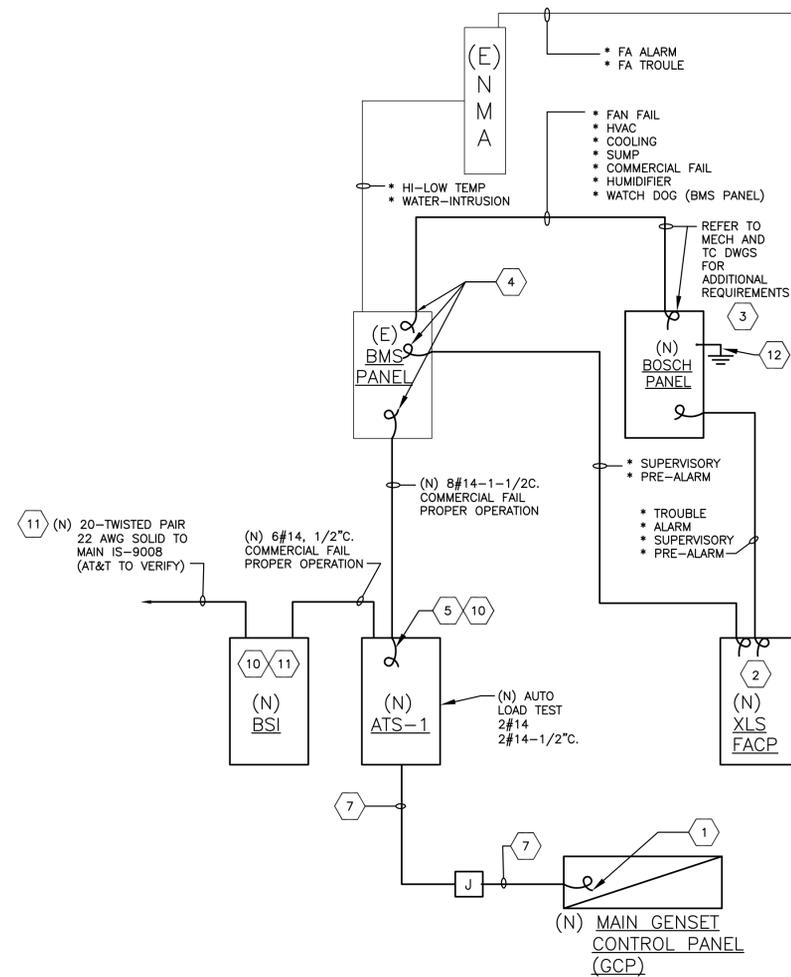
- COORDINATE INSTALLATION OF NEW ALARM WIRING AND TERMINATION WITH THE OWNER'S CONSTRUCTION REPRESENTATIVE, AT&T PROJECT MANAGER AND CO MANAGER. REFER TO SHEET E10104 & E60003 FOR ADDITIONAL REQUIREMENTS.
- WIRING TERMINATION NUMBERS INDICATED ARE TO SHOW DESIGN INTENT ONLY, IF NECESSARY PROVIDE TERMINAL NUMBERS IN A CHRONOLOGICAL ORDER TO ACCOMMODATE NUMBERS ON THE EXISTING TERMINAL STRIP.
- INSTALL ALARM TERMINAL STRIP IN NEMA-1 ENCLOSURE WITH FULLY HINGED DOOR.



NOTE: EPO SWITCH SHALL BE MOMENTARY "PUSH-BUTTON" TYPE AND SURFACE MOUNTED AT 52" ABOVE FINISHED FLOOR. THIS EPO SWITCH SHALL BE WIRED SO THAT IT COMPLETELY SHUTS-DOWN THE RESPECTIVE GENERATOR. PROVIDE ALL REQUIRED WIRING IN 1/2" CONDUIT BETWEEN THIS EPO STATION AND RESPECTIVE GENERATOR SHUT-OFF SIGNAL TERMINAL BLOCK/RELAYS. EPO STATION SHALL BE MANUFACTURED BY PILLA OR APPROVED EQUAL ELECTRICAL PRODUCTS, INC. MODEL #ST120ES0N1-PILCLHCOV1, TEL. (904) 396-7371. SEE DRAWING G002 FOR ADDITIONAL REQUIREMENTS.

2 MOMENTARY EMERGENCY STOP PUSH-BUTTON DETAIL

NTS



3 LOW VOLTAGE ALARM WIRING DIAGRAM

NTS

DETAIL NOTES:

- COIL 10'-0". FINAL CONNECTION BY GENSET CONTRACTOR AT&T REPRESENTATIVE PAUL ANTKOWIAK, AND COORDINATE WITH OWNER'S CONSTRUCTION REPRESENTATIVE.
- COIL 10'-0". FINAL CONNECTION BY SIEMENS REPRESENTATIVE. COORDINATE WITH OWNER'S CONSTRUCTION REPRESENTATIVE. REFER TO 'D' SERIES DRAWINGS.
- COIL 10'-0". FINAL CONNECTION BY BOSCH CERTIFIED REPRESENTATIVE. COORDINATE WITH OWNER'S CONSTRUCTION REPRESENTATIVE.
- COIL 10'-0". FINAL CONNECTION BY BMS CONTRACTOR. COORDINATE WITH OWNER'S CONSTRUCTION REPRESENTATIVE.
- COIL 10'-0". FINAL CONNECTION BY RUSSELECTRIC REPRESENTATIVE. COORDINATE WITH OWNER'S CONSTRUCTION REPRESENTATIVE.
- TAG ALL WIRING AT BOTH ENDS. SUBMIT AS-BUILT WIRING DIAGRAM WITH WIRE TAG INFORMATION.
- REFER TO CONTROL WIRING DIAGRAM ON SHEET E60003 FOR ADDITIONAL REQUIREMENTS.
- ALL CONDUIT SHALL BE MINIMUM 3/4" UNLESS NOTED OTHERWISE.
- REFER TO 'D' SERIES DRAWINGS FOR WIRING AND ADDITIONAL REQUIREMENTS.
- COIL 10'-0" FINAL CONNECTION BY AT&T REPRESENTATIVE PAUL ANTKOWIAK & AT&T 'GNFO'. COORDINATE WITH OWNER'S CONSTRUCTION REPRESENTATIVE.
- COORDINATE EXACT REQUIREMENTS WITH OWNER'S CONSTRUCTION REPRESENTATIVE AND AT&T BUILDING NETWORK REPRESENTATIVES.
- GROUNDING SHALL BE PER MANUFACTURER'S REQUIREMENTS. CONTRACTOR SHALL TRACE, VERIFY CONNECTION AND MODIFY PER MANUFACTURER'S REQUIREMENTS.

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 59041 MAIN ST
 NEW HAVEN
 MI US
 NWHNMIMM 111436.01 M18255

SHEET TITLE:		DETAILS ELECTRICAL	
AT&T PROJECT NUMBER:	DATE:	SCALE:	N/A
2001272			
AT&T AUTHORIZATION:	DRAWN BY:	CHECKED BY:	PN/ND
AIMEE BUTLER	SM		
	SHEET:	OF:	SHEETS
	AT&T DRAWING NO.:	SHEET NO.	
	2001272E60005	E60005	

NEW CTP-1 PANEL SCHEDULE

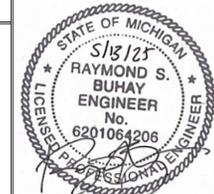
VOLTAGE: 120/208V		MOUNTING: SURFACE			LOCATION: EQUIPMENT AREA 101			
AMPS: 100A MLO		PHASE: 3		WIRE: 4		AIC: 22K FULLY RATED		
#	LOAD DESCRIPTION	BKR/P	LOAD		LOAD	BKR/P	LOAD DESCRIPTION	#
1	PORT. BATTERY HEATER	20/1P	1500	A	1200	20/1P	VEEDER ROOT PANEL	2
3	PORT. BATTERY CHARGER	20/1P	1000	B	800	20/1P	FIRE ALARM PANEL (FACP)	4
5	BOSCH PANEL	20/1P	1000	C	-	20/1P	SPARE	6
7	SPARE	20/1P	-	A	-	20/1P	SPARE	8
9	SPARE	20/1P	-	B	-	20/1P	SPARE	10
11	SPARE	20/1P	-	C	-	20/1P	SPARE	12
A PHASE LOAD (KVA):		2.7		CONNECTED KVA:		5.5		
B PHASE LOAD (KVA):		1.8		DEMAND KVA:				
C PHASE LOAD (KVA):		1.0		CONNECTED AMPS:		15.3		

NAMEPLATE SCHEDULE (REFER TO SHEET N60001)

POS NO	FIRST LINE	SECOND LINE	THIRD LINE	REMARKS
1	UTILITY METER & CT CAB	SERVING	MAIN SWITCH	
2	MAIN SWITCH (350AF)	FED FROM C/T CAB	SERVING ATS-1	
3	BUILDING	SURGE ARRESTER (60AF)		
4	GENSET OUTPUT (350AT)	CKT BRKR	SERVING MTS-1/ATS-1	
5	PGCC	SERVING	MTS-1/ATS-1	
6	MTS-1	SERVING	ATS-1	
7	SOURCE#1	GENSET OUTPUT	CKT BRKR	
8	SOURCE#2	PGCC	-	
9	ATS-1	SERVING	MDP	
10	SOURCE#1	COMMERCIAL PWR	MAIN SWITCH	
11	SOURCE#2	MTS-1	GENSET/PGCC	
12	MDP	FED FROM	ATS-1	
13	MTS-2	(150AT)	-	
14	DP-A	(200AT)	-	
15	CTP-1	(60AT)	-	
16	GCTP	(100AT)	-	
17	SPARE	(100AT)	-	
18	-	-	-	
19	-	-	-	
20	-	-	-	
21	MTS-2	FED FROM	MDP	
22	DP-A	FED FROM	MDP	
23	CTP-1	FED FROM	MDP	
24	GCTP	FED FROM	MDP	
25	-	-	-	
26	-	-	-	
27	-	-	-	
28	-	-	-	
29	-	-	-	
30	PACU-1.1.1 COMP/COND	FED FROM	MTS-2/MDP	NOTE-7
31	PACU-1.1.1 SUPPLY FAN	FED FROM	DP-A	NOTE-7
32	PDSC-101	FED FROM	DP-A	NOTE-7
33	PDSC-102	FED FROM	DP-A	NOTE-7
34	AC UNIT	FED FROM	DP-A	NOTE-7
35	LP-A	FED FROM	DP-A	NOTE-7
36	PDSC-103	FED FROM	DP-A	NOTE-7
37	-	-	-	
38	-	-	-	
39	-	-	-	
40	-	-	-	
41	-	-	-	

NOTES:

1. NAMEPLATE SIZE UNLESS OTHERWISE SHOWN OR CALLED OUT IN SPECIFICATION, 3 1/2" WIDTH, 1 3/4" HEIGHT.
2. CHARACTER SIZE: TOP LINE LETTERS 3/8", BOTTOM TWO LINES LETTERS 3/16" IN HEIGHT.
3. USE ENGRAVED BAKELITE NAMEPLATES, WHITE LETTERS ON BLACK BACKGROUND. ATTACH NAMEPLATE TO ELEC. EQUIP. WITH SHEET METAL SCREWS.
4. SUBMIT A TYPED NAME PLATE SCHEDULE FOR REVIEW AND ACCEPTANCE BY AN ARCHITECT/ENGINEER.
5. COMPLY WITH SPECIFICATIONS FOR NAMEPLATES FOR SWGR., SUBSTATIONS, SWITCHBOARDS, AND MOTOR CONTROL CENTERS.
6. USE STAINLESS STEEL SCREWS FOR ALL NAMEPLATES.
7. REMOVE ANY EXISTING NAMEPLATES AND REPLACE WITH NEW WHERE NEW NAMEPLATE IS REQUIRED.
8. SIMILAR TO NOTE 3 EXCEPT, WHITE LETTERS ON RED BACKGROUND.
9. PROVIDE LABEL; CW OR CW. FIELD VERIFY PRIOR TO LABELING.
10. SIMILAR TO NOTE 3 EXCEPT, BLACK LETTERS ON YELLOW BACKGROUND.

PROJECT NAME:	
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	FINAL REVIEW	03/18/25	
	50% REVIEW	12/17/24	

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PROJECT_DRAWING	
59041 MAIN ST NEW HAVEN MI US NWHNMIMN 111436.01 M18255	
SHEET TITLE: GCTP & NAMEPLATE SCHEDULES ELECTRICAL	
AT&T PROJECT NUMBER: 2001272	DATE: _____ SCALE: N/A
AT&T AUTHORIZATION: AIMEE BUTLER	DRAWN BY: SM CHECKED BY: PN/ND SHEET: - OF: - SHEETS SHEET NO. E60006

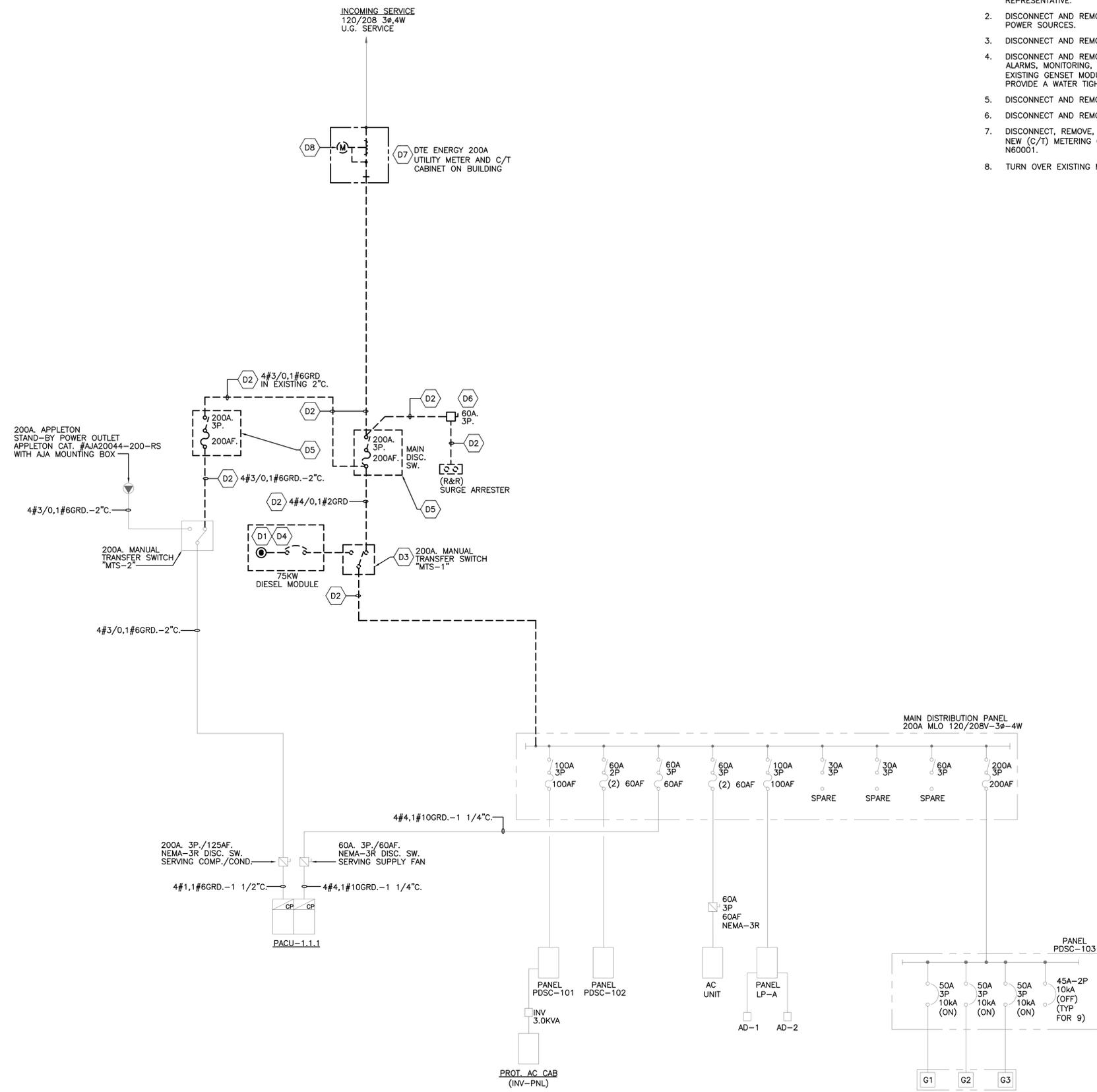
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 05-15-2025 16:56:14 (WREF) E:\DET\DET-24002045-AA\60 Execution\65 Drawings\65 Drawings\Common Content\W182551TB.dwg

KEY NOTES - DEMOLITION WORK:

1. REMOVAL OF THIS GENSET BY AT&T. THIS CONTRACTOR SHALL DISCONNECT (DE-ENERGIZE) AND COORDINATE POWER SHUTDOWNS WITH AT&T POWER MAINTENANCE SHOP, PROPERTY MANAGEMENT, AND OWNER'S CONSTRUCTION REPRESENTATIVE.
2. DISCONNECT AND REMOVE ALL EXISTING CONDUIT AND WIRING BACK TO POWER SOURCES.
3. DISCONNECT AND REMOVE EXISTING MTS.
4. DISCONNECT AND REMOVE ALL ASSOCIATED POWER, GROUNDING, CONTROLS, ALARMS, MONITORING, CONDUIT & WIRING BACK TO SOURCES FROM THE EXISTING GENSET MODULE. CUT ALL CONDUITS 0'-12" BELOW GRADE AND PROVIDE A WATER TIGHT CAP.
5. DISCONNECT AND REMOVE EXISTING FUSIBLE DISCONNECT SWITCH.
6. DISCONNECT AND REMOVE DISCONNECT SWITCH.
7. DISCONNECT, REMOVE, REPLACE AND RECONNECT EXISTING CONDUCTORS TO NEW (C/T) METERING CABINET. REFER TO NEW WORK ONE LINE DIAGRAM ON N60001.
8. TURN OVER EXISTING METER AND C/T'S TO DTE ENERGY REPRESENTATIVE.

GENERAL NOTES:

- A. ALL EQUIPMENT SHOWN ON THE ONE-LINE DIAGRAM IS EXISTING UNLESS NOTED OTHERWISE.
- B. EXISTING EQUIPMENT SHOWN MAY NOT REFLECT EXISTING CONDITIONS. CONTRACTOR SHALL FIELD VERIFY EXISTING ELECTRICAL DISTRIBUTION SYSTEM AS APPLICABLE, PRIOR TO DOING ANY WORK OR MAKING ANY MODIFICATION TO THE SYSTEM.
- C. EXP ASSUMED THAT ALL EXISTING TO REMAIN EQUIPMENT AND ITS INSTALLATION ARE CODE COMPLIANT. CONTRACTOR SHALL NOTIFY IMMEDIATELY OWNER'S CONSTRUCTION REPRESENTATIVE OF ANY DISCREPANCIES FOUND DURING CONSTRUCTION.
- D. COORDINATE ALL DEMOLITION AND NEW WORK WITH THE OWNER'S CONSTRUCTION REPRESENTATIVE. SUBMIT A PROJECT PHASING SCHEDULE TO OWNERS CONSTRUCTION REPRESENTATIVE FOR REVIEW AND APPROVAL.
- E. COORDINATE ALL PLANNED POWER SHUTDOWNS TO THE EXISTING POWER DISTRIBUTION SYSTEM WITH THE OWNER'S CONSTRUCTION REPRESENTATIVE. SUBMIT SHUT-DOWN SCHEDULE TO OWNERS CONSTRUCTION REPRESENTATIVE FOR REVIEW AND APPROVAL WITH MINIMUM (2) WEEKS IN ADVANCE.
- F. INCLUDE COST OF ALL REQUIRED PLANNED POWER SHUTDOWNS AND COORDINATION WITH PROPERTY MANAGEMENT, AT&T POWER MAINTENANCE SHOP AND UTILITY COMPANY, AS REQUIRED.
- G. FIELD VERIFY ALL EXISTING CONDITIONS PRIOR TO BIDDING.



1 ONE-LINE DIAGRAM - DEMOLITION WORK

NTS

THE EXISTING EQUIPMENT SHOWN ON ONE-LINE DIAGRAM MAY NOT REFLECT EXISTING CONDITIONS. ELECTRICAL CONTRACTOR SHALL FIELD VERIFY EXISTING ELECTRICAL DISTRIBUTION SYSTEM AS APPLICABLE PRIOR TO ANY POWER SHUT-DOWNS. ADDING NEW LOADS OR MAKING ANY MODIFICATIONS TO THE EXISTING POWER DISTRIBUTION SYSTEM.

PROJECT NAME:
NEW HAVEN CDO - GENERATOR DESIGN
DET-24002045-A4

CONSULTANT STAMP
STATE OF MICHIGAN
5/13/23
RAYMOND S. BUHAY
ENGINEER
No. 6201064206
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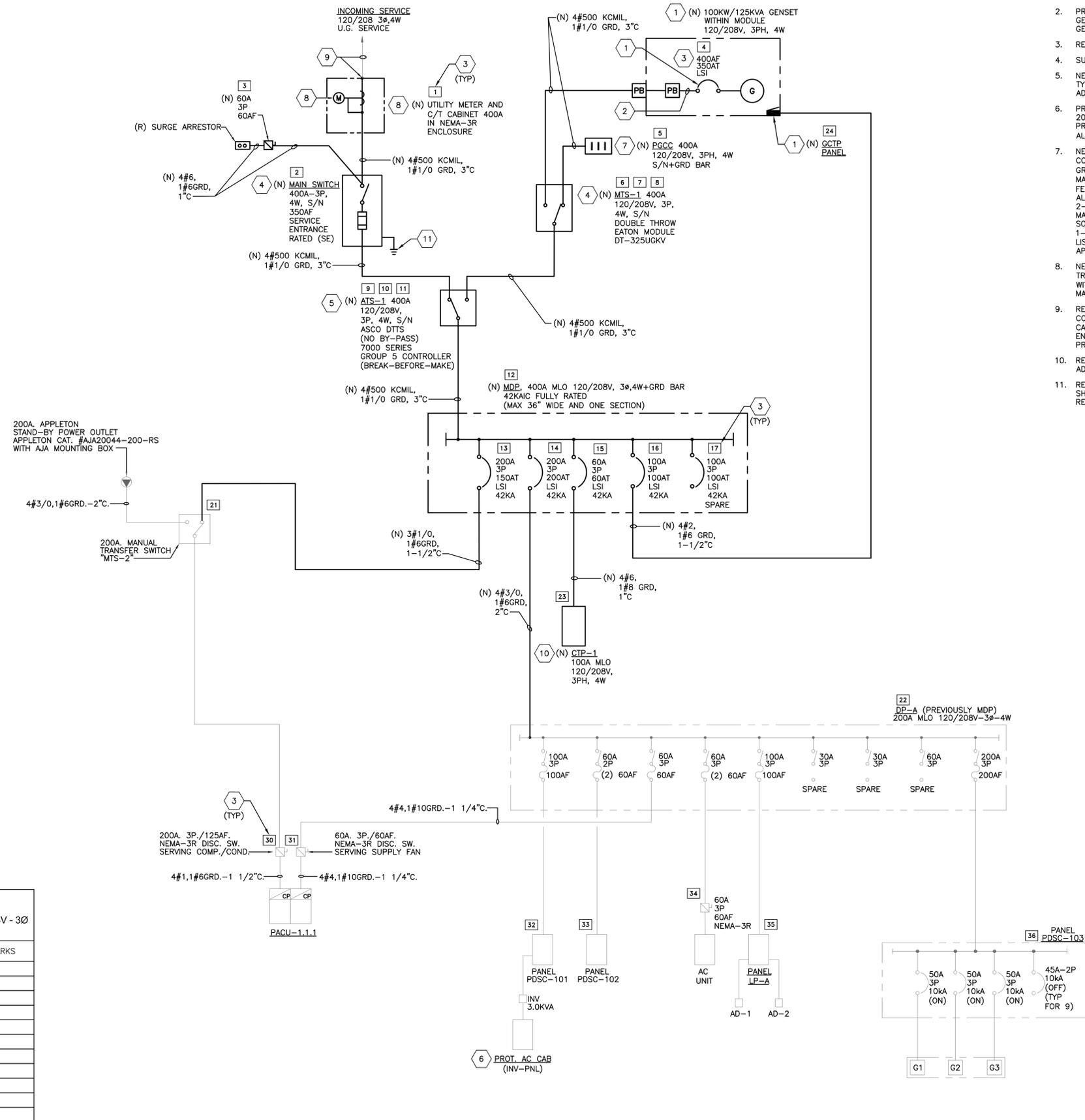
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NEW HAVEN
MI US
NWHNMIMM 111436.01 M18255

**ONE LINE DIAGRAM - DEMO
ONE LINE DIAGRAM**

AT&T PROJECT NUMBER: 2001272	DATE:	SCALE: N/A
AT&T AUTHORIZATION: AIMEE BUTLER	DRAWN BY: SM CHECKED BY: PN/ND	SHEET: -- OF: -- SHEETS SHEET NO. N600000

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BUILDING CONNECTED LOAD SUMMARY		
BLDG SQ FT: 4309 120/208V - 3Ø		
- 4W		
TYPE OF LOAD	EXISTING LOADS AMPS CONNECTED	REMARKS
LIGHTING (ESTIMATED)	5.1	
POWER RECEPTACLES (ESTIMATED)	2.6	
PACU-1.1.1	98.4	
FURNACE	2.6	
ACCU FOR FURNACE	35.0	
ELECTRIC WATER HEATER	16.7	
(3) TELE RECTIFIERS (200A-DC)	105.0	
CTP POWER (ESTIMATED)	20.0	
MISCELLANEOUS (ESTIMATED)	7.0	
FUTURE	xxx	
TOTAL AMPS:	292.3	
TOTAL KW:	105.3	

1 ONE-LINE DIAGRAM - NEW WORK

KEY NOTES - NEW WORK:

- NEW EQUIPMENT PRE-PURCHASED BY AT&T. THIS CONTRACTOR SHALL CONNECT, TEST, ENERGIZE, ETC. COORDINATE WITH OWNER'S CONSTRUCTION REPRESENTATIVE AND GENSET CONTRACTOR.
- PROVIDE LIQUID TIGHT FLEXIBLE CONDUIT CONNECTION TO GENERATOR OUTPUT CIRCUIT BREAKER. COORDINATE WITH GENERATOR CONTRACTOR.
- REFER TO NAMEPLATE SCHEDULE ON SHEET E60008.
- SUBMIT SHOP DRAWINGS FOR REVIEW AND APPROVAL.
- NEW ATS SHALL BE EQUIPPED WITH 2-HOLE COMPRESSION TYPE LUGS. REFER TO SPECIFICATION SECTION 263600 FOR ADDITIONAL REQUIREMENTS.
- PROVIDE NEW 20A-1P CIRCUIT BREAKERS FOR ALL NEW 20A CIRCUITS. MATCH EXISTING 20A-1P CIRCUIT BREAKERS. PROVIDE NEW TYPED OUT CIRCUIT BREAKER DIRECTORY WITH ALL EXISTING AND NEW ITEMS/DEVICES BEING SERVED.
- NEW EXTERIOR WALL MOUNTED PORTABLE GENSET CONNECTION CABINET (PGCC) 400A, 120/208V, 3Ø, 4W, + GROUND BAR CAM-LOK STYLE CONNECTION. NEW #4/0 MALE CAM-LOC CONNECTORS COLOR CODED. MATCH NEW FEMALE #4/0 DLO COLOR CODED CABLE CONNECTORS. ALUMINUM FULLY GASKETTED WATER-TIGHT, SEALED, AUTO-2-WIRE GENSET START, NEMA-3R ENCLOSURE. MANUFACTURED BY INTERSECT, INC. CONTACT: SOLUTIONS@INTERSECTINC.COM, PHONE NUMBER 1-800-910-3735, PART #ICGC-1P-400-SERIES, UL LISTED. SUBMIT SHOP DRAWINGS FOR REVIEW AND APPROVAL.
- NEW DTE ENERGY COMPANY METERING AND CONTROL TRANSFORMERS (C/T'S). COORDINATE EXACT REQUIREMENTS WITH DTE SERVICE REPRESENTATIVE. INCLUDE ALL COST MATERIAL, WORK, TESTING SHUT-DOWNS, ETC. WITH BIDS.
- RECONNECT EXISTING UNDERGROUND INCOMING SERVICE CONDUCTORS FROM EXISTING UTILITY POLE TO NEW C/T CABINET. COORDINATE EXACT REQUIREMENTS WITH DTE ENERGY COMPANY. FIELD VERIFY EXISTING CONDITIONS PRIOR TO BIDDING. INCLUDE ALL COST IN BIDS.
- REFER TO PANEL SCHEDULE ON SHEET E60006 FOR ADDITIONAL REQUIREMENTS.
- REFER TO PARTIAL GROUNDING RISER AND DETAILS ON SHEET E60001 AND SHEET E60002 FOR ADDITIONAL REQUIREMENTS.

GENERAL NOTES:

- ALL EQUIPMENT SHOWN ON THE ONE-LINE DIAGRAM IS EXISTING UNLESS NOTED OTHERWISE.
- EXISTING EQUIPMENT SHOWN MAY NOT REFLECT EXISTING CONDITIONS. CONTRACTOR SHALL FIELD VERIFY EXISTING ELECTRICAL DISTRIBUTION SYSTEM AS APPLICABLE. PRIOR TO DOING ANY WORK OR MAKING ANY MODIFICATION TO THE SYSTEM.
- EXP ASSUMES THAT ALL EXISTING TO REMAIN EQUIPMENT AND ITS INSTALLATION ARE CODE COMPLIANT. CONTRACTOR SHALL NOTIFY IMMEDIATELY OWNER'S CONSTRUCTION REPRESENTATIVE OF ANY DISCREPANCIES FOUND DURING CONSTRUCTION.
- COORDINATE ALL DEMOLITION AND NEW WORK WITH THE OWNER'S CONSTRUCTION REPRESENTATIVE. SUBMIT A PROJECT PHASING SCHEDULE TO OWNERS CONSTRUCTION REPRESENTATIVE FOR REVIEW AND APPROVAL.
- COORDINATE ALL PLANNED POWER SHUTDOWNS TO THE EXISTING POWER DISTRIBUTION SYSTEM WITH DTE ENERGY COMPANY AND OWNER'S CONSTRUCTION REPRESENTATIVE. SUBMIT SHUTDOWN SCHEDULE TO OWNER REPRESENTATIVE FOR REVIEW AND APPROVAL WITH MINIMUM (2) WEEKS IN ADVANCE.
- INCLUDE COST OF ALL REQUIRED PLANNED POWER SHUTDOWNS AND COORDINATION WITH PROPERTY MANAGEMENT, GENSET CONTRACTOR, ETC., AT&T POWER MAINTENANCE AS REQUIRED.
- FIELD VERIFY ALL EXISTING CONDITIONS PRIOR TO BIDDING.
- REFER TO PROJECT SPECIFICATIONS FOR ADDITIONAL EQUIPMENT AND EQUIPMENT INSTALLATION SHOP DRAWING REQUIREMENTS.
- REFER TO GENERAL ELECTRICAL NOTES ON SHEET E00001 FOR ADDITIONAL REQUIREMENTS.
- ALL EXTERIOR CONDUITS BELOW AND ABOVE GRADE SHALL BE RIGID GALVANIZED STEEL CONDUIT. INSTALL ALL EXTERIOR CONDUITS MINIMUM 24" ABOVE FINISH GRADE/SURFACE UNLESS OTHERWISE NOTED.
- ALL EQUIPMENT TESTING SHALL BE PERFORMED BY INDEPENDENT THREE-PARTY NETA CERTIFIED LEVEL 3 TESTING CONTRACTOR. SUBMIT ALL TEST REPORTS FOR RECORDS.
- CONTRACTOR SHALL VERIFY AND COORDINATE EQUIPMENT PHASE ROTATION WITH AT&T POWER MAINTENANCE SHOP PRIOR TO ENERGIZING NEW EQUIPMENT.

PROJECT NAME:
NEW HAVEN CDO - GENERATOR DESIGN

DET-24002045-A4

CONSULTANT STAMP

STATE OF MICHIGAN
5/13/23
RAYMOND S. BUHAY
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REVISIONS / AUTHORIZATIONS			
NO.	REVISIONS / AUTHORIZATIONS	DATE	BY
	PERMIT AND CONSTRUCTION	05/15/25	
	FINAL REVIEW #2	04/18/25	
	FINAL REVIEW	03/18/25	
	50% REVIEW	12/17/24	

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BUILDINGS, CONSTRUCTION, AND/OR ZONING CHANGES.

DRAWINGS PREPARED FOR

AT&T CORPORATE REAL ESTATE

PROJECT_DRAWING

59041 MAIN ST
NEW HAVEN
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NWHNMIMM 111436.01 M18255

SHEET TITLE:
ONE LINE DIAGRAM - NW
ONE LINE DIAGRAM

AT&T PROJECT NUMBER: 2001272
DATE: SCALE: N/A
DRAWN BY: SM CHECKED BY: PN/ND
SHEET: -- OF: -- SHEETS SHEET NO.
AT&T DRAWING NO.: 2001272N60001
AIMEE BUTLER N60001

THE EXISTING EQUIPMENT SHOWN ON ONE-LINE DIAGRAM MAY NOT REFLECT EXISTING CONDITIONS. ELECTRICAL CONTRACTOR SHALL FIELD VERIFY EXISTING ELECTRICAL DISTRIBUTION SYSTEM AS APPLICABLE PRIOR TO ANY POWER SHUT-DOWNS. ADDING NEW LOADS OR MAKING ANY MODIFICATIONS TO THE EXISTING POWER DISTRIBUTION SYSTEM.

