FINAL TECHNICAL REPORT:
DOE – Isles - 0000256

Isles, Inc.
Johnston Avenue Solar Project

Project Title:	Johnston Avenue Solar Project
Approved Project Period:	Nov. 1, 2009 to June 30, 2016
Recipient:	Isles, Inc. 10 Wood Street Trenton, NJ 08618
Website (if available)	www.isles.org
Award Number:	DE-EE0000256.001

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Submitted by: (if other than PI)	David Schrayer Director of Properties Phone: 609-933-5813 Fax: 609-393-9513 Email: dschrayer@isles.org

By: David Schrayer

David Schrayer 8/22/17

Signature Date

Executive Summary

DOE awarded funds to support a demonstration project to illustrate how access to solar power and green roof systems could improve building performance and long-term outcomes for the building owner and multiple nonprofit tenants housed in the building.

Since being placed in service the solar PV system has saved approximately $1,000 per month in energy costs. The green roof has added to this benefit by naturally cooling the building and has helped reduce local road flooding by retaining storm water.

These elements have improved the quality of life in the low-income community in which the building is located by allowing social service organizations to focus more of their resources on programs and job creation.

Background

The grant recipient, Isles, Inc., is a 35 year-old non-profit organization that has explored many aspects of community development work and wealth creation in the low–income communities in which it works. In 2005, Isles acquired an under-used early twentieth century factory building on the edge of a low-income residential neighborhood. The plan for the building had multiple objectives including saving the historic brick building, creating construction and permanent jobs through its redevelopment, creating affordable and attractive space for multiple non-profits, creating a new headquarters for Isles.

Before any work could begin Isles and its partner in the project, Modern Recycled Spaces, commissioned a redevelopment plan that was approved by the municipality. This plan allowed for the reuse of the building for training, arts and residential components of the building that would not have been allowed within the underlying Industrial zone. During this time, and as a result of Isles' efforts, the municipality also created an Arts and Culture overlay zone that would encourage other similar type of projects in the area.

Because the building had been mostly neglected sine the 1980s the first order of business in stabilizing the building was to provide a new roof. Because the roof had deteriorated so badly many underlying components had to be replaced or reinforced (see photo addendum pgs. 8, 9, 11).

A. PROJECT OBJECTIVES

Isles' Mill One project focuses on the adaptive reuse of a historic former textile mill at One N. Johnston Avenue in Hamilton Township, Mercer County, NJ as an environmental center and a showcase for green building, with renovations incorporating an advanced high-performance solar photovoltaic (PV) system on the roof, expansive

interior day lighting, energy efficient heating and cooling systems, and a combination of green roof and high-albedo roof systems.

Isles will relocate most of its offices and training facilities to the redeveloped facility. To support this consolidation, Isles will design office, training, and education space to meet a variety of needs, including a school/training center to house its YouthBuild Institute (education and training for young adults). To accommodate YouthBuild Institute's job training, Isles will incorporate space to allow for construction, landscaping, and surveying classes. It will also house a commercial training kitchen, expanding YouthBuild's job training offerings to the culinary fields.

The redeveloped mill will benefit the surrounding community by providing space for community meetings, housing, educational purposes, creative arts, nonprofit organizations, and commercial uses. New economic activity will revitalize this deteriorating neighborhood, creating jobs and access to a range of community-friendly products and services, increasing property tax revenue, and generating new energy. Serving as a central hub of information and public interest, this historically significant, but decaying symbol of the region's industrial heritage will be enlivened and restored into an environmentally responsible, economically viable, and sustainable center for public education and information. Through this project Isles will help revitalize a deteriorating neighborhood, expand its development projects into inner-ring suburbs, broaden its networks and impact, and develop a model, green, multi-purpose facility.

Funding from DOE was used specifically for the architectural, engineering, and construction services and materials necessary to design and implement a new roof, a solar PV system and a green roof at Mill One.

B. PROJECT SCOPE

Overview Description: The scope of this project includes two main phases – design and implementation. In the design phase, Isles engaged a team of professionals to: define the size, location, and technical specifications of the PV system; design and define plant material for the green roof; study the structural capacity of the building and design any structural upgrades necessary to support the PV system and green roof; develop construction plans for the PV system and green roof; obtain all required approvals and permits; develop bid packages for the construction of the PV system and green roof; and identify and engage contractors to build and install the PV system and green roof.

In the implementation phase, the PV system and green roof was built and installed according to the plans and specifications determined in the design phase. Isles worked with our design team to oversee the installation.

Project Objective: Funding from DOE will be used specifically for the architectural, engineering, and construction services and materials necessary to design and implement a PV system and a green roof at Mill One.

This primary objective was met as funds were used for the anticipated purpose.

C. TASKS TO BE PERFORMED

PHASE I: PRELIMINARY DESIGN

Task 1.0 Preliminary Design of PV System and Green Roof
A donor to Isles' capital campaign for the rebuilding of the building recommended that we use Croxton Collaborative Architects for our design work. The principal there, Randolph Croxton ,had been an early proponent of green building and Isles wanted to incorporate green features into the project. Isles worked closely with the architects and the design team to conceptualize and oversee the design of both the PV system and green roof.

Subtask 1.1 Preliminary Design
The design team established the general schematic parameters for the development of both the PV system and green roof.

- This task was accomplished as anticipated.

Subtask 1.2 Design Development
With the basis of the design created, the design team fully developed plans and specifications for the PV system and green roof. This included a full assessment of the structural capacity of the building and plans for any upgrades to the roof or other building systems necessary to support the PV system and green roof.

- This task took far longer than anticipated due to delays on the part of Croxton Collaborative. From the latter part of 2013 through 2014 we were continually led to believe that the design work was a few weeks from completion. Because of this, a decision was made not to cancel our contract with Croxton and start over with a new architect. In retrospect, the project would have been better off using a less known and more local (Croxton is based in New York City) architect. The design work, especially structural components, was exceedingly conservative and produced additional costs to the project uneccessarily.

  Because of DOE requirements regarding no adverse effects of installations in historic buildings and the owner's possible future application for Historic Tax Credits an allowance was made in the design budget for the services of a brick conservator. Replacement brick and mortar selections were made with the assistance of Lorraine Schnabel. (see photo addendum pg. 16) The State Historic Preservation Office confirmed that the work funded through the DOE grant did not adversely impact the historic character of the building.

Subtask 1.3 Apply for Permits
The applicant submitted and final plans to the appropriate Township in order to receive all approvals and permits necessary for the installation of the PV system and green roof.

-This task was accomplished as anticipated upon completion of the final construction documents.

Task 2.0 Installation Contractor Selection
The applicant and design team wrote and distributed a Request for Proposals (RFP) to suppliers and contractors who will submit bids to provide materials and perform the installation of the PV system and green roof. The proposals received were reviewed by the applicant and design team and verified that all candidates are properly licensed and insured, and selected the most suitable suppliers and/or contractor(s).

- This task was accomplished as anticipated. Isles contacted several local contractors known to have capacity and expertise sufficient to carry out the work. A successful pre-bid conference was held. Three bidders submitted complete bids. One bid was significantly higher than the others and so was discarded. Of the remaining bids one was chosen based on personal interview and lower overhead and profit percentages. The successful bidder was Mercer General Works.

PHASE I: MILESTONES and DELIVERABLES

Results from Tasks 1 and 2 are presented via the attached construction drawings. These indicate the final materials selected as well as the structural upgrades necessary to allow the installation of DOE funded equipment.

PHASE II: FINAL DESIGN AND INSTALLATION PROCESS

Task 3.0 Final Design and Installation Process
Isles and the design team will oversee the installation process.

Subtask 3.1 Structural Upgrades
The Contractor will complete structural upgrades of the defined facilities to support the PV system and green roof.

- This task was accomplished with modifications to the original design. These modifications were due to high costs associated with the original design. Croxton Collaborative employed Robert Silman Engineers for the structural design work. Silman is very highly regarded in the field but is also extremely conservative in their approach. This is understandable from the perspective of their liability but disregards the client's need to control costs. An example was

the existing truss system. The trusses had been in place for nearly 100 years without and sign of deflection. Silman's engineers believed that once insulation was present on the roof that snow would accumulate causing additional stress of the structure. This seemed to Isles to be an exaggeration since the building had been without heat for 35 years and so had already experienced years of extreme snow loads. Isles solicited the opinion of a local engineer to support what seemed to be this common sense observation. Croxton disputed this alternate opinion and threatened to walk off the job if other structural opinions were relied on. Isles weighed the costs of starting over on the design versus continuing with Croxton and decided that the additional delay, especially as it related to DOE funds, was not worth it. The result was thousands of pounds of steel reinforcement covering old-growth southern yellow pine trusses. (see photo addendum pgs. 8, 11)

Another structural alteration that was adopted by the design team based on Isles wishes and common sense was to completely rebuild the masonry parapets completely with cement block and face brick. This approach allowed for a better finished product and lower cost than the originally contemplated partial rebuilding using brick alone. (see photo addendum pgs. 4, 7, 10)

Subtask 3.2 PV System

The Contractor will install the PV system including all equipment for the generation of electric power in accordance with the final design requirements. The PV system will be validated to ensure it is active and producing at expected levels.

- This task was completed as anticipated with some modification to the original design to reduce the number of roof penetrations. The original design called for extensive wood reinforcements that would have been visible in the ceiling and nearly 100 points of attachment that would have increased the likelihood of roof leaks that would have been difficult to identify and access for repair. The new design, delegated by Croxton's team to Isles' engineer, reduced the number of penetrations to 20 and allowed easier access to the PV system for maintenance and repair. This was accomplished by creating a steel framework for the solar panels to sit on rather than using the residential type system specified by the design team.
-

Subtask 3.3 Green Roof

The Contractor will complete the green roof construction in accordance with the final design requirements.

- The type of green roof system was selected based on the intent of the installation and structural capacity of the building. An intensive type system was selected because the intent was to retain storm water and provide cooling for the building. This type of system can be propagated in as little as

three inches of growing medium thereby keeping the system weight well below that of an extensive system. The chosen systems also has lower maintenance costs which suited the non-profit owner. This task was accomplished as anticipated. (see photo addendum pgs. 12, 13, 14)

Obstacles Encountered:
The project was somewhat delayed due to unforeseen damage to the approximately 100 year old building. This damage had to be repaired prior to the grant supported work being completed. In addition to the above mentioned structural changes and attempted structural changes, the architect and engineer's investigations into existing conditions somehow did not reveal the need to rebuild the entire front parapet of one of the buildings (see photo addendum pgs. 17, 18) The uncovering of this damage by the contractor caused the stoppage of work in that area. The engineer was called to the site to identify the extent of the problem and devise a suitable repair. There was extensive discussion about the proposed repair as the initial cost estimate was quite high because of the conservative nature of the design. A compromise was reached between the owner and the design team and the work was completed. These construction issues were unrelated to the DOE supported technology but, rather, had to do with failed masonry and wood structures. This work had to be engineered and approved and bid prior to DOE work beginning as DOE work was installed only after a new roof is installed..

Patents: NA

Training and Professional Development: NA

Publications/Presentations/Travel: NA

Attachments:

1. Drawings detailing the structural improvements to the building, new roof system, new solar PV system and green roof system.
2. Photographs detailing existing conditions, conditions as work progressed and conditions after installation.

United States Government or any agency thereof. The views and opinions of authors expressed herein do not necessarily state or reflect those of the United States Government or any agency thereof."

Acknowledgement:
"This material is based upon work supported by the Department of Energy under AwardNumber DE-EE0000256.001*."*

Mill One – 1 N Johnston Ave
Hamilton, NJ 08609
DOE Award No. – EE0000256 Isles, Inc.

Final Technical Report

Photo Addendum

Mill One under rehabilitation June 2017

Existing roof, view west

New roof and solar PV panels

Existing 3 built up layers of roof

New 80 mil TPO roof

Coping at raised parapet

Rebuilt parapet and coping stones

Demolishing deteriorated parapet

Rebuilt parapet and solar PV panels

Existing elevator bulkhead, failing mat'l

Rebuild bukhead w/ code compliant stair

All parapets and elevator bulkhead rebuilt from roof up

Masonry rehabilitation nearing completion

Existing truss and roof, leaking

Truss reinforced, decking replaced

Existing ceiling, decking failure

New decking and structural reinforcement

Existing raised parapet

Rebuilt raised parapet

Existing ceiling, rot at low points

Trusses cleaned and reinforced, future event space

Existing roof

Green roof – retains 8,000 gallons of water in heavy rain

Green roof installation

Green roof installation

Established green roof system

View looking east

Both solar PV arrays

Solar meter and inverter, first floor hallway

Replacement brick approval process w/ brick conservator

Parapet deterioration

Engineer reviewing masonry deterioration

West façade – parapet rebuild

West Façade – parapet rebuild on left

North Facade

South façade – parapet rebuild, medallion replacement

The green roof in winter

BID SET / DIVISION 1 TO BE CONFIRMED

JULY 18,2014

H1 ABBREVIATIONS

NTS

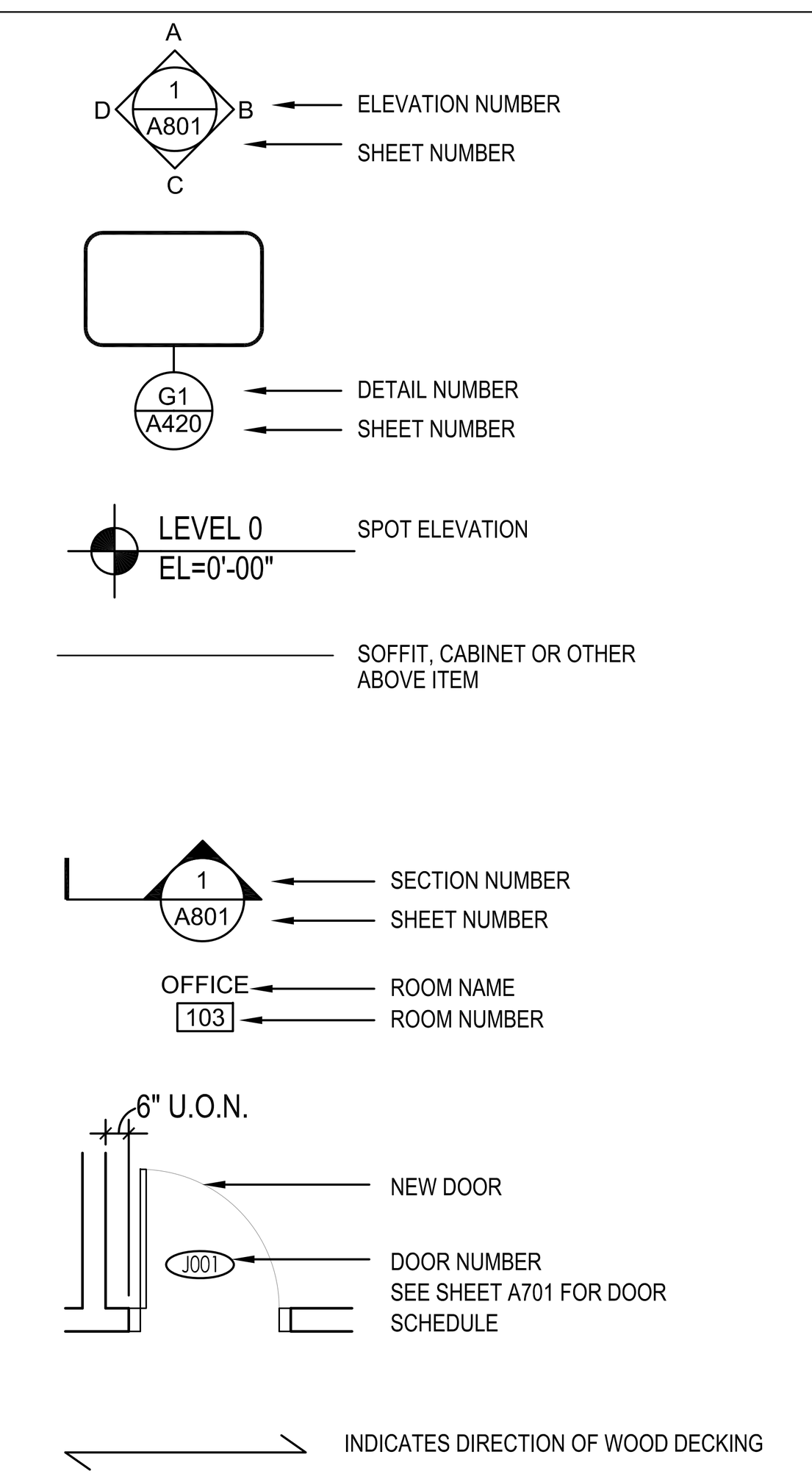
&	AND
∠	ANGLE
@	AT
℄	CENTERLINE
Ø	DIAMETER OR ROUND
#	NUMBER OR POUND
⇌	DIRECTION OF WOOD GRAIN
w/	WITH
A/C	AIR CONDITIONING
ABV.	ABOVE
ACOUS.	ACOUSTICAL
A.F.F.	ABOVE FINISHED FLOOR
ADJ.	ADJUSTABLE
AL.	ALUMINUM
A.P.	ACCESS PANEL
APPROX.	APPROXIMATE
ANCH.	ANCHOR
ARCH.	ARCHITECTURAL
BD.	BOARD
BLDG.	BUILDING
BLK.	BLOCK
BOT.	BOTTOM
CAT.	CATEGORY
CAB.	CABINET
CB.	CORNER BEAD
CEM.	CEMENT
CER.	CERAMIC
C.F.	CUBIC FOOT
C.G.	CORNER GUARD
C.J.	CONTROL JOINT
C.T.	CERAMIC TILE
CL.	CENTER LINE
CLG.	CEILING
CLOS.	CLOSET
COL.	COLUMN
CONC.	CONCRETE
CONSTR.	CONSTRUCTION
CONTR.	CONTRACTOR
CONT.	CONTINUOUS
CORR.	CORRUGATED
CNTR.	COUNTER
CTR	CENTER
CTSK.	COUNTERSUNK
D.	DRAIN
DBL.	DOUBLE
DET.	DETAIL
DIA.	DIAMETER
DIM.	DIMENSION
DISP.	DISPENSER
DN.	DOWN
D.O.	DOOR OPENING
DR.	DOOR
DTL.	DETAIL
DWG.	DRAWING
DWGS.	DRAWINGS
E.	EAST
EA.	EACH
E.J.	EXPANSION JOINT
EL.	ELEVATION
ELEC.	ELECTRICAL
ELEV.	ELEVATOR
EMER.	EMERGENCY
EQ.	EQUAL
EQPT.	EQUIPMENT
EST.	ESTIMATE
EXP.	EXPANSION
EXP.	EXPOSED
EXG.	EXISTING
EXT.	EXTERIOR
F.A.	FIRE ALARM
F.D.	FLOOR DRAIN
FR.	FRAME
FT.	FOOT OR FEET
F.T.F.	FINISH TO FINISH DIMENSION
FUR.	FURRING
G.	GAS PIPE
G.C.	GENERAL CONTRACTOR
GA.	GAUGE
GALV.	GALVANIZED
G.F.	GROUND FACE
GL.	GLASS, GLAZING
GND.	GROUND
GWB	GYPSUM WALLBOARD
GYP.	GYPSUM
H.C.	HOLLOW CORE
HDW.	HARDWARE
HGT.	HEIGHT
H.M.	HOLLOW METAL
HORIZ.	HORIZONTAL
HR.	HOUR
HTG.	HEATING
H.V.A.C.	HEATING, VENTILATING, AIR CONDITIONING
I.D.	INSIDE DIAMETER/DIMENSION
IN.	INCH
INCL.	INCLUDE (S)
INSUL.	INSULATION
INT.	INTERIOR
INV.	INVERT
JT.	JOINT
L.	LENGTH
LAM.	LAMINATE
LH.	LEFT HAND
L.P.	LIGHT PANEL
LT.	LIGHT
MATL.	MATERIAL
MAX.	MAXIMUM
MECH.	MECHANICAL
MED.	MEDIUM
MET.	METAL
MAN.	MANUFACTURER
MIN.	MINIMUM
MIR.	MIRROR
MISC.	MISCELLANEOUS
M.	METER
MM.	MILLIMETER
MOD.	MODULAR
MT.	MOUNT (ED), (ING)
MTL.	MATERIAL
MULL.	MULLION
N	NORTH
NAT.	NATURAL
N.I.C.	NOT IN CONTRACT
NO.	NUMBER
NOM.	NOMINAL
N.T.S.	NOT TO SCALE
OA.	OVERALL
O.C.	ON CENTER
O.D.	OUTSIDE DIAMETER/DIMENSION
PERF.	PERFORATED
PL.	PLATE
PLAM.	PLASTIC LAMINATE
PLAS.	PLASTER
PLYWD.	PLYWOOD
PM.	PRESSED METAL
PR.	PAIR
POL.	POLISHED
PT.	POINT
PTD.	PAINTED
PTN.	PARTITION
R.	RISER
RAD.	RADIUS
REF.	REFERENCE
REINF.	REINFORCED
REQ'D	REQUIRED
RET.	RETURN
REV.	REVISION
RFG.	ROOFING
RFL.	REFLECTED
RM.	ROOM
R.O.	ROUGH OPENING
S.	SOUTH
S.C.	SOLID CORE
SCHED.	SCHEDULE
SECT.	SECTION
SQ.FT.	SQUARE FEET
SFGL.	SAFETY GLASS
S.H.	SPRINKLER HEAD
SHT.	SHEET
SHTH.	SHEATHING
SIM.	SIMILAR
S.L.	SLEEVE
SLNT.	SEALANT
SPEC.	SPECIFICATION
SPKR.	SPEAKER
SPL.	SPECIAL
SQ.	SQUARE
STD.	STANDARD
STL.	STEEL
S.S.	STAINLESS STEEL
STG.	SEATING
STOR.	STORAGE
STRL.	STRUCTURAL
SUSP.	SUSPENDED
SYM.	SYMMETRY (ICAL)
SYS.	SYSTEM
T.	TREAD
TEL.	TELEPHONE
TEMP.	TEMPERED
T & G	TONGUE AND GROOVE
THK.	THICK
THR.	THRESHOLD
T.O.C.	TOP OF CONCRETE
TR.	TRANSOM
T.S.	TOP OF SLAB
T.W.	TOP OF WALL
TYP.	TYPICAL
UC.	UNDERCUT
U.O.N.	UNLESS OTHERWISE NOTED
VERT.	VERTICAL
VNR.	VENEER
W.	WEST
W.B.	WOOD BASE
W/	WITH

SUSTAINABLE DESIGN

1. CONTRACTOR SHALL ENSURE THE IMPLEMENTATION OF THE REQUIREMENTS RELATED TO SUSTAINABLE DESIGN AND LEED IN THESE CONSTRUCTION DOCUMENTS.
2. SUBSTITUTIONS BY THE CONTRACTOR SHALL NOT BE ALLOWED IF THEY ARE DETERMINED TO COMPROMISE THE STATED SUSTAINABLE DESIGN AND LEED REQUIREMENTS. SUBSTITUTIONS MUST BE APPROVED BY THE ARCHITECT; PERFORMANCE DATA AND ENVIRONMENTAL DATA MUST BE SUBMITTED BY THE CONTRACTOR TO THE ARCHITECT FOR EVALUATION.
3. CONTRACTOR SHALL COMPLETE AN ENVIRONMENTAL MATERIALS REPORTING FORM (EMRF) FOR EACH BUILDING MATERIAL USED IN THE PROJECT. CONTRACTOR MUST SUPPLY BACK-UP DOCUMENTATION SUPPORTING THE CLAIMS IN THE EMRF. THE EMRF WILL BE SUPPLIED TO THE CONTRACTOR AS A HARD COPY AND IN ELECTRONIC FORMAT.
4. CONTRACTOR SHALL COMPLY WITH BUILDING COMMISSIONING REQUIREMENTS DESCRIBED IN LEED-NC VERSION 2009
5. SUBSTITUTIONS OR MODIFICATIONS OF LIGHTING FIXTURE, FIXTURE LOCATION, AND LIGHTING CONTROLS IS NOT PERMITTED UNLESS APPROVED IN WRITING BY THE ENGINEER.
6. EQUIPMENT SPECIFIED AS ENERGY STAR RATED MAY NOT BE SUBSTITUTED FOR EQUIPMENT WITHOUT AN ENERGY STAR RATING.
7. CONTRACTOR SHALL DEVELOP AND IMPLEMENT A CONSTRUCTION WASTE MANAGEMENT PLAN. THE PLAN MUST BE SUBMITTED TO THE ARCHITECT FOR REVIEW AND APPROVAL. AT LEAST 95% OF DEMOLITION DEBRIS, CONSTRUCTION DEBRIS, AND PACKAGING MATERIAL MUST BE RECYCLED. THE CONTRACTOR IS RESPONSIBLE FOR THE VERIFICATION AND DOCUMENTATION OF CONSTRUCTION WASTE MANAGEMENT.
8. CONTRACTOR SHALL NOT SUBSTITUTE A MATERIAL WITH LOWER RECYCLED CONTENT WITHOUT REVIEW AND APPROVAL BY THE ARCHITECT. CONTRACTOR SHALL SUBMIT RECYCLED CONTENT DATA FOR THE PROPOSED MATERIAL SUBSTITUTION.
9. CONTRACTOR SHALL NOT SUBSTITUTE A MATERIAL THAT T IS MANUFACTURED OR WHOSE RAW MATERIAL IS EXTRACTED MORE THAN 500 MILES FROM THE PROJECT SITE WITHOUT REVIEW AND APPROVAL BY THE ARCHITECT. CONTRACTOR SHALL SUBMIT MATERIAL MANUFACTURER AND RAW MATERIAL EXTRACTION LOCATIONS.
10. CONTRACTOR SHALL NOT SUBSTITUTE FSC-CERTIFIED WOOD PRODUCTS WITH NON FSC-CERTIFIED WOOD PRODUCTS.
11. CONTRACTOR SHALL OBTAIN THE FSC CHAIN-OF-CUSTODY IDENTIFICATION NUMBERS FOR EACH OF THE FSC-CERTIFIED WOOD PRODUCTS USED IN THE PROJECT, PER EMRF.
12. CONTRACTOR SHALL NOT PERMIT SMOKING IN THE BUILDING DURING CONSTRUCTION. SMOKING MUST TAKE PLACE OUTSIDE THE BUILDING AT LEAST 25' AWAY FROM BUILDING ENTRIES, OUTDOOR AIR INTAKES, OR OPERABLE WINDOWS.
13. CONTRACTOR SHALL INCLUDE IN THE O&M MANUAL ALL INFORMATION REQUIRED TO UNDERSTAND, MAINTAIN / CALIBRATE, AND RESPOND TO THE SYSTEMS.
14. CONTRACTOR SHALL DEVELOP AND IMPLEMENT A CONSTRUCTION INDOOR AIR QUALITY [IAQ] MANAGEMENT PLAN. THE CONSTRUCTION IAQ PLAN MUST BE SUBMITTED FOR REVIEW AND APPROVAL BY THE ARCHITECT. EXAMPLES OF SOME MEASURES INCLUDE, BUT ARE NOT LIMITED TO, POLLUTION SOURCE CONTROL, IMPROVED HOUSEKEEPING, AND THE SCHEDULING OF DELIVERIES AND INSTALLATION.
15. CONTRACTOR SHALL ENSURE THAT ABSORPTIVE MATERIALS [E.G. GYPSUM BOARD] ARE PROTECTED FROM MOISTURE WHEN STORED ON-SITE.

H6 SUSTAINABLE DESIGN/ LEED NOTES

NTS



H13 CONSTRUCTION LEGEND

NTS

1. ALL CONTRACT SCOPE OF WORK DELINEATION NOTATIONS IDENTIFIED WITHIN CONTRACT DOCUMENTS HAVE BEEN PREPARED TO SUPPLEMENT ONE ANOTHER. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL WORK INDICATED AND INFERRED.
2. COMPLY WITH ALL REGULATORY AGENCIES, CODES AND BUILDING REQUIREMENTS. SECURE ALL NECESSARY PERMITS, REQUIRED INSPECTIONS AND SIGN-OFFS FOR ALL REQUIRED TRADES.
3. EMPLOY MEANS AND METHODS THAT MINIMIZE VIBRATION, NOISE, DUST, POLLUTANTS, AND OTHER DISTURBANCES.
4. KEEP THE JOB SITE FREE OF ALL MATERIALS AND BROOM CLEAN, AND CONTROL THE CONSTRUCTION AREA AT ALL TIMES TO PREVENT DIRT OR DUST FROM LEAVING THE JOB SITE AND INFILTRATING AREAS OUTSIDE THE PROJECT. PROVIDE CLEANUP AND REMOVAL FOR ALL TRADES UNDER HIS JURISDICTION.
5. THE DRAWINGS INCLUDE A NUMBER OF TYPICAL DETAILS THAT ARE NOT CROSS REFERENCED WITHIN THE SET, DUE TO THEIR GENERIC AND WIDESPREAD NATURE. THE DETAILS SHALL APPLY TO ALL CONSTRUCTION AS PROJECT CONDITIONS PRESENT THEMSELVES.
6. VERIFY ALL EXISTING CONSTRUCTION, CONDITIONS AND DIMENSIONS PRIOR TO THE FABRICATION AND INSTALLATION OF ALL MATERIALS AND PRODUCTS. THE CONTRACTOR SHALL REPORT ANY DISCREPANCIES TO THE ARCHITECT PRIOR TO THE START OF THE WORK. COMMENCEMENT OF THE WORK SHALL IMPLY ACCEPTANCE OF ALL EXISTING CONDITIONS.
7. THE TERM "FIN. FLOOR" WHERE INDICATED ON PLANS, ELEVATIONS AND SECTIONS REFERS TO THE TOP OF FINISHED FLOOR. REFERENCE STRUCTURAL DRAWINGS FOR THICKNESS OF FLOOR CONSTRUCTION.
8. PROTECT AND BE RESPONSIBLE FOR ADJACENT STRUCTURES AND SPACES WITHIN THE AREA OF OPERATION UNDER THIS CONTRACT. ANY DAMAGE OR DISTURBANCE RESULTING FROM WORK DONE UNDER THIS CONTRACT SHALL BE PROMPTLY RESTORED, REPLACED OR REPAIRED AT NO EXTRA COST TO THE OWNER. .
9. DO NOT INTERRUPT EXISTING UTILITIES SERVING EXISTING FACILITIES EXCEPT WHEN AUTHORIZED IN WRITING BY THE OWNER AND ALL AUTHORITIES HAVING JURISDICTION. PROVIDE TEMPORARY SERVICES DURING CONSTRUCTION ACTIVITIES AS ACCEPTABLE TO THE OWNER AND GOVERNING AUTHORITIES.
10. NOTIFY ALL APPLICABLE UTILITY OWNERS AT LEAST 72 HOURS PRIOR TO THE START OF ANY OPERATION OBTAINING ALL NECESSARY PERMITS FROM APPROPRIATE GOVERNING AUTHORITIES, PRIOR TO DEMOLITION AND REMOVAL WORK ON THE SITE. SAID PERMIT AND CERTIFICATIONS SHALL BE DELIVERED TO AND RETAINED BY THE OWNER'S REPRESENTATIVE.
11. ALL DEBRIS AND ADDITIONAL MATERIAL SHALL BE REMOVED FROM THE SITE AND DISPOSED OF PROPERLY.
12. FIRE DIVISIONS SHALL BE CONTINUOUS THROUGH ANY CONCEALED SPACE IN FLOOR OR ROOF CONSTRUCTIONS.
13. CONCEALED SPACES WITHIN PARTITIONS, WALLS, FLOORS, ROOFS, STAIRS, FURRED PIPE SPACES, COLUMN ENCLOSURES, ETC., SHALL BE FIRESTOPPED.
14. ALL EXITS SHALL BE KEPT READILY ACCESSIBLE AND UNOBSTRUCTED AT ALL TIMES.
15. ALL WORK SHALL COMPLY WITH LANDLORD BUILDING STANDARDS AND SPEFICATIONS. COORDINATE WITH PROPERTY MANAGERS OFFICE AS REQ'D.
16. DO NOT SCALE OFF DWGS.

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3. EMPLOY MEANS AND METHODS THAT MINIMIZE VIBRATION, NOISE, DUST, POLLUTANTS, AND OTHER DISTURBANCES.
4. KEEP THE JOB SITE FREE OF ALL MATERIALS AND BROOM CLEAN, AND CONTROL THE CONSTRUCTION AREA AT ALL TIMES TO PREVENT DIRT OR DUST FROM LEAVING THE JOB SITE AND INFILTRATING AREAS OUTSIDE THE PROJECT. PROVIDE CLEANUP AND REMOVAL FOR ALL TRADES UNDER HIS JURISDICTION.
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8. PROTECT AND BE RESPONSIBLE FOR ADJACENT STRUCTURES AND SPACES WITHIN THE AREA OF OPERATION UNDER THIS CONTRACT. ANY DAMAGE OR DISTURBANCE RESULTING FROM WORK DONE UNDER THIS CONTRACT SHALL BE PROMPTLY RESTORED, REPLACED OR REPAIRED AT NO EXTRA COST TO THE OWNER. .
9. DO NOT INTERRUPT EXISTING UTILITIES SERVING EXISTING FACILITIES EXCEPT WHEN AUTHORIZED IN WRITING BY THE OWNER AND ALL AUTHORITIES HAVING JURISDICTION. PROVIDE TEMPORARY SERVICES DURING CONSTRUCTION ACTIVITIES AS ACCEPTABLE TO THE OWNER AND GOVERNING AUTHORITIES.
10. NOTIFY ALL APPLICABLE UTILITY OWNERS AT LEAST 72 HOURS PRIOR TO THE START OF ANY OPERATION OBTAINING ALL NECESSARY PERMITS FROM APPROPRIATE GOVERNING AUTHORITIES, PRIOR TO DEMOLITION AND REMOVAL WORK ON THE SITE. SAID PERMIT AND CERTIFICATIONS SHALL BE DELIVERED TO AND RETAINED BY THE OWNER'S REPRESENTATIVE.
11. ALL DEBRIS AND ADDITIONAL MATERIAL SHALL BE REMOVED FROM THE SITE AND DISPOSED OF PROPERLY.
12. FIRE DIVISIONS SHALL BE CONTINUOUS THROUGH ANY CONCEALED SPACE IN FLOOR OR ROOF CONSTRUCTIONS.
13. CONCEALED SPACES WITHIN PARTITIONS, WALLS, FLOORS, ROOFS, STAIRS, FURRED PIPE SPACES, COLUMN ENCLOSURES, ETC., SHALL BE FIRESTOPPED.
14. ALL EXITS SHALL BE KEPT READILY ACCESSIBLE AND UNOBSTRUCTED AT ALL TIMES.
15. ALL WORK SHALL COMPLY WITH LANDLORD BUILDING STANDARDS AND SPEFICATIONS. COORDINATE WITH PROPERTY MANAGERS OFFICE AS REQ'D.
16. DO NOT SCALE OFF DWGS.

H13 PROJECT DESCRIPTION AND SCOPE OVERVIEW

NTS

1. WORK SHALL BE DONE IN ACCORDANCE WITH LOCAL LAWS AND ORDINANCES THE BUILDING PERMIT SHALL BE SECURED BY THE G.C. EACH SUBCONTRACTOR SHALL OBTAIN ALL PERMITS AND APPROVALS AS REQUIRED BY LAW FOR THE COMPLETION OF THE WORK.

2. THE SUBMISSION OF A PROPOSAL BY THE GENERAL CONTRACTOR AND HIS SUB-CONSULTANTS WILL BE CONSTRUED AS EVIDENCE THAT A CAREFUL AND THOROUGH EXAMINATION OF THE CONDITION OF THE PREMISES HAS BEEN MADE. CLAIMS FOR LABOR, MATERIALS OR EQUIPMENT REQUIRED OR FOR DIFFICULTIES ENCOUNTERED, WHICH COULD HAVE BEEN FORESEEN HAD SUCH AN EXAMINATION BEEN MADE, WILL NOT BE RECOGNIZED.IT SHALL ALSO CONSTITUTE A REPRESENTATION THAT THE G.C. HAS CHECKED AND VERIFIED ALL QUANTITIES, WORK AND MATERIALS INVOLVED AND THAT HE SHALL TAKE RESPONSIBILITY FOR ANY DEFICIENCIES THEREIN.

3. BEFORE ORDERING ANY MATERIAL OR DOING ANY WORK, EACH TRADE SHALL VERIFY ALL MEASUREMENTS AT THE BUILDING AND SHALL BE RESPONSIBLE FOR THE CORRECTNESS OF SAME. NO EXTRA CHARGE OR COMPENSATION WILL BE ALLOWED ON ACCOUNT OF DIFFERENCE BETWEEN ACTUAL DIMENSIONS AND THE MEASUREMENTS INDICATED ON THE DRAWINGS; ANY DISCREPANCIES BETWEEN THE DRAWINGS AND FIELD CONDITIONS WHICH MAY BE FOUND SHALL BE SUBMITTED TO THE ARCHITECT FOR CONSIDERATION AND CLARIFICATION BEFORE PROCEEDING WITH THE WORK.

4. ALL OF THE ARCHITECTS DRAWINGS AND CONSTRUCTION NOTES ARE COMPLIMENTARY AND WHAT IS CALLED FOR BY EITHER WILL BE BINDING AS IF CALLED FOR BY ALL: ANY WORK SHOWN OR REFERRED TO ON ANY ONE DRAWING SHALL BE PROVIDED AS IF SHOWN ON ALL DRAWINGS. WHEN EVER AN ITEM IS SPECIFIED AND/OR SHOWN ON THE DRAWINGS BY DETAIL OR REFERENCE IT SHALL BE CONSIDERED TYPICAL FOR OTHER ITEMS WHICH ARE OBVIOUSLY INTENDED TO BE THE SAME EVEN THOUGH NOT SO DESIGNATED OR SPECIFICALLY NAMED BUT DO SERVE THE SAME FUNCTION.

5 THE WORK TO BE PERFORMED CONSISTS OF FURNISHING ALL LABOR, EQUIPMENT, TOOLS,TRANSPORTATION, SUPPLIES, FEES, MATERIALS, AND SERVICES IN ACCORDANCE WITH THESE NOTES AND DRAWINGS AND PERFORMING ALL OPERATIONS NECESSARY TO CONSTRUCT AND INSTALL COMPLETE AND IN SATISFACTORY CONDITION THE VARIOUS MATERIALS AND EQUIPMENT AT THE LOCATIONS SHOWN. IT IS INTENDED THAT THE DRAWINGS INCLUDE EVERYTHING REQUISITE AND NECESSARY TO FINISH THE ENTIRE WORK PROPERLY, NOTWITHSTANDING THE FACT THAT EVERY ITEM NECESSARILY INVOLVED MAY NOT BE SPECIFICALLY MENTIONED OR SHOWN. ANY ITEM WHICH MAY BE REASONABLY CONSTRUED AS INCIDENTAL TO THE PROPER AND SATISFACTORY COMPLETION OF THE WORK IN ACCORDANCE WITH THE INTENT OF THESE NOTES AND DRAWINGS IS HEREBY INCLUDED.

6. THE G.C. SHALL ABIDE BY AND COMPLETE WITH THE TRUE INTENT AND MEANING OF THE DRAWINGS AND NOTES TAKEN AS A WHOLE AND SHALL NOT AVAIL HIMSELF OF ANY OBVIOUS ERRORS OR OMISSIONS, SHOULD ANY EXIST. SHOULD ANY ERROR OR DISCREPANCY APPEAR OR ANY DOUBT ARISE AS TO THE TRUE MEANING OF THE DRAWINGS OR NOTES, THE G.C. SHALL BRING SUCH ITEMS TO THE ATTENTION OF THE ARCHITECT BEFORE SUBMISSION OF PROPOSAL FOR EXPLANATION OR CORRECTION OF SAME. AFTER THE SUBMISSION OF PROPOSAL, THE G.C. WILL BE HELD RESPONSIBLE FOR ALL SUCH ITEMS.

7. THE CHARACTER AND SCOPE OF THE WORK ARE ILLUSTRATED BY THE DRAWINGS AND NOTES. TO INTERPRET AND EXPLAIN THE DRAWINGS OTHER INFORMATION DEEMED NECESSARY BY THE ARCHITECT WILL BE FURNISHED TO THE G.C. WHEN AND AS REQUIRED BY THE WORK, AND IT IS TO BE UNDERSTOOD THAT SAID ADDITIONAL INFORMATION OR DRAWINGS ARE TO BE OF EQUAL FORCE WITH THESE DRAWINGS.

8. FULL SIZE OR LARGE SCALE DETAILS OR DRAWINGS SHALL GOVERN SMALL SCALE DRAWINGS WHICH THEY ARE INTENDED TO AMPLIFY. DETAILS OR CONDITIONS INDICATED FOR A PORTION OF THE WORK BUT NOT CARRIED OUT FULLY FOR OTHER PORTIONS SHALL APPLY THROUGHOUT TO ALL SIMILAR PORTIONS EXCEPT AS OTHERWISE SPECIFICALLY NOTED. IN EVERY CASE A MORE EXPENSIVE ITEM OR METHOD SHALL BE ASSUMED OVER A LESS EXPENSIVE ONE. AND DIMENSIONS SHALL BE FIGURED RATHER THAN DETERMINED BY RULE OR SCALE.

9. THE PROJECT HAS BEEN DESIGNED AND DETAILED FOR THE SPECIFIC MATERIALS AND EQUIPMENT SPECIFIED. NO SUBSTITUTIONS SHALL BE MADE WITHOUT THE EXPRESS WRITTEN CONSENT OF THE ARCHITECT AND OWNER IF THE SPECIFIED MATERIAL IS NOT AVAILABLE, THE G.C. SHALL PROPOSE AN ALTERNATE MATERIAL AND SHALL PROVIDE DRAWINGS, SAMPLES, SPECIFICATIONS, MANUFACTURER'S LITERATURE, PERFORMANCE DATA, ETC. IN ORDER THAT THE ARCHITECT CAN EVALUATE THE PROPOSED SUBSTITUTION. IF THE SUBSTITUTION AFFECTS A CORRELATED FUNCTION, ADJACENT CONSTRUCTION, OR THE WORK OF ANY OTHER SUBCONTRACTOR OR TRADE, THE NECESSARY CHANGES AND MODIFICATIONS TO THE AFFECTED WORK SHALL BE ACCOMPLISHED BY THE G.C. AT NO ADDITIONAL EXPENSE TO THE OWNER. NO REQUESTS FOR SUBSTITUTES WILL BE ENTERTAINED BY THE ARCHITECT DUE TO G.C.'S FAILURE TO ORDER MATERIALS IN A TIMELY MANNER.

10. THE STANDARD SPECIFICATIONS OF THE MANUFACTURERS APPROVED FOR USE IN THE PROJECT ARE HEREBY MADE A PART OF THESE THOUGH HEREIN WRITTEN OUT IN FULL, EXCEPT THAT WHEREVER THE DRAWINGS REQUIRE HEAVIER MEMBERS, BETTER QUALITY MATERIALS OR ARE OTHERWISE MORE STRINGENT. THESE STRINGENT REQUIREMENTS SHALL GOVERN.

11. THE G.C. SHALL NOTIFY THE ARCHITECT IMMEDIATELY IF IT CANNOT FOR ANY REASON COMPLY WITH ALL THE REQUIREMENTS OF THESE NOTES AND DRAWINGS.

12. THE G.C. SHALL COORDINATE AND SUPERVISE THE WORK OF ALL SUB-CONTRACTORS. HE SHALL BE RESPONSIBLE FOR GIVING ALL TRADES SUCH INFORMATION, PLANS OR DETAILS AS MAY BE REQUIRED FOR THE PROPER INSTALLATION AND COMPLETION OF THEIR WORK.

13. THE G.C. SHALL SUBMIT ALL FABRICATION SHOP DRAWINGS, SAMPLES, AND FIXTURE CUTS FOR THE ARCHITECTS REVIEW AS REQUIRED AND/OR INDICATED ON DRAWINGS. THE ARCHITECT'S REVIEW SHALL NOT BE CONSTRUED AS AN INDICATION THAT SUBMITTAL IS CORRECT OR SUITABLE NOR THAT WORK REPRESENTED BY SUBMITTAL COMPLIES WITH THE DRAWINGS, EXCEPT AS TO MATTERS OF FINISH, COLOR, AND OTHER AESTHETIC MATTERS. ACTION NOTED ABOVE DOES NOT RELIEVE THE G.C. FROM RESPONSIBILITY TO COORDINATE ALL TRADES AND TO CHECK QUANTITIES AND DIMENSIONS AGAINST CONDITIONS IN THE FIELD. G.C. AND SUBCONTRACTORS SHALL ASSUME RESPONSIBILITY FOR ALL ERRORS ON THEIR DRAWINGS.

14. ALL MATERIALS REQUIRED FOR THE PERFORMANCE OF THIS CONTRACT SHALL BE NEW AND OF THE BEST QUALITY OF KINDS SPECIFIED, ALL SUBJECT TO THE APPROVAL OF THE ARCHITECT. THE USE OF OLD OR SECONDHAND MATERIALS IS STRICTLY FORBIDDEN UNLESS SPECIFIED BY THE ARCHITECT. THE G.C. SHALL, IF REQUIRED, FURNISH SATISFACTORY EVIDENCE AS TO THE KIND AND QUALITY OF MATERIALS AND WORKMANSHIP. MATERIALS SHALL BE USED IN ACCORDANCE WITH MANUFACTURER'S PRINTED INSTRUCTIONS, UPON REQUEST, THE MANUFACTURER'S REPRESENTATIVE SHALL GO TO THE SITE AND INSTRUCT THE MECHANICS IN THE USE OF THE MATERIALS OR SHALL SUPERVISE THEIR USE.

15. FOR THE EXECUTION OF THE WORK TO BE PERFORMED UNDER THIS CONTRACT AND FOR THE MANUFACTURE OR TRANSPORTATION OF ANY OF THE MATERIALS OR EQUIPMENT TO BE USED OR INSTALLED, THE G.C. SHALL EMPLOY ONLY SUCH LABOR THROUGHOUT AS WILL NOT INTERFERE WITH THE SPEEDY AND UNINTERRUPTED COMPLETION OF THE PROJECT. ALL WORK SHALL BE DONE BY MECHANICS SKILLED IN THEIR TRADE AND SHALL BE INSTALLED IN A NEAT AND WORKMANLIKE MANNER IN ACCORDANCE WITH THE BEST TRADE PRACTICES.

16. ANY MATERIALS DELIVERED OR WORK PERFORMED, CONTRARY TO THE DRAWINGS AND SPECIFICATIONS AND APPROVED SHOP DRAWINGS, SHALL BE REMOVED BY THE GC AT IT'S OWN EXPENSE, AND THE SAME SHALL BE REPLACED WITH OTHER MATERIALS OR WORK SATISFACTORY TO THE ARCHITECT THE G.C. SHALL ALSO ASSUME THE COST OF REPLACING THE WORK WHICH MAY BE DISTURBED.

17. THE G.C. SHALL BE RESPONSIBLE FOR PROPERLY AND ACCURATELY LAYING OUT THE WORK AND FOR THE LINES AND MEASUREMENTS HEREIN. IT SHALL ESTABLISH NECESSARY REFERENCE LINES AND PERMANENT BENCH MARKS FROM WHICH BUILDING LINES AND ELEVATIONS SHALL BE TAKEN. ELEVATION HEIGHTS OF ALL WORK SHALL BE TRUE AND LEVEL WITHIN A MAXIMUM TOLERANCE OF 1/8" OVERALL THE ENTIRE PROJECT.

18. A) THE PREMISES AND THE JOB SITE SHALL BE MAINTAINED IN A REASONABLY NEAT AND ORDERLY CONDITION AND KEPT FREE FROM ACCUMULATIONS OF WASTE MATERIALS AND RUBBISH DURING THE ENTIRE CONSTRUCTION PERIOD. REMOVE CRATES, CARTONS AND OTHER FLAMMABLE WASTE MATERIALS OR TRASH FROM THE WORK AREAS AT THE END OF EACH WORKING DAY.

B) ELECTRICAL CLOSETS, PIPE AND DUCT SHAFTS, CHASES, FURRED SPACES AND SIMILAR SPACES WHICH ARE GENERALLY UNFINISHED SHALL BE CLEANED AND LEFT FREE FROM RUBBISH, LOOSE PLASTER, MORTAR DRIPPINGS, EXTRANEOUS CONSTRUCTION MATERIALS, DIRT AND DUST.

C) CARE SHALL BE TAKEN BY WORKMEN NOT TO MARK, SOIL, OR OTHERWISE DEFACE FINISHED SURFACES. IN THE EVENT THAT FINISHED SURFACES BECOME DEFACED CLEAN AND RESTORE SUCH SURFACES TO THEIR ORIGINAL CONDITION. IF THIS IS NOT POSSIBLE, DAMAGED SURFACES SHALL BE REPLACED.

D) CLEAN UP IMMEDIATELY UPON COMPLETION OF EACH TRADE'S WORK.

E) CLEAN AREAS OF THE BUILDING IN WHICH PAINTING AND FINISHING WORK IS TO BE PERFORMED JUST PRIOR TO THE START OF THIS WORK,AND MAINTAIN THESE AREAS IN SATISFACTORY CONDITION FOR PAINTING AND FINISHING.

F) THIS CLEANING INCLUDES THE REMOVAL OF TRASH AND RUBBISH FROM THESE AREAS, BROOM CLEANING OF FLOORS AND ROOF, THE REMOVAL OF ANY PLASTER, MORTAR, DUST AND OTHER EXTRANEOUS MATERIALS FROM FINISH SURFACES, INCLUDING BUT NOT LIMITED TO, PV UNITS, WOODWORK, PLASTER, GYPSUM DRYWALL, MASONRY, CONCRETE ETC.

G) IN ADDITION TO THE CLEANING SPECIFIED ABOVE AND THE MORE SPECIFIC CLEANING WHICH MAY BE REQUIRED IN VARIOUS SECTIONS OF THE SPECIFICATIONS, THE PREMISES SHALL BE PREPARED FOR OCCUPANCY BY:

(I) ATHOROUGH CLEANING THROUGHOUT INCLUDING WASHING OR CLEANING BY OTHER APPROVED METHODS OF ALL SURFACES ON WHICH DIRT OR DUST HAS COLLECTED AND BY WASHING GLASS, REMOVING ALL PAINT, STICKERS, PUTTY AND STAINS THEREFROM..

(II) LEAVING ALL FIXTURES AND EQUIPMENT IN AN UNDAMAGED, BRIGHT, CLEAN, POLISHED CONDITION,

(III) CLEAN AND POLISH ALL HARDWARE, AND OTHER METAL WORK.

(IV) DO ALL OTHER CLEANING AS REQUIRED TO TURN THE BUILDING AND PREMISES OVER TO THE OWNER IN A SPOTLESS AND ORDERLY CONDITION.

19. THE G.C. SHALL KEEP THE ARCHITECT INFORMED OF THE PROGRESS OF HIS WORK. NO WORK SHALL BE CLOSED OR COVERED UNTIL IT HAS BEEN DULY INSPECTED AND APPROVED. SHOULD UN-INSPECTED WORK BE COVERED, THE G.C. SHALL. AT HIS OWN EXPENSE. UNCOVER ALL SUCH WORK SO THAT IT CAN BE PROPERLY INSPECTED AND AFTER SUCH INSPECTION, HE SHALL PROPERLY REPAIR AND REPLACE ALL WORK INTERFERED WITH.

20. ALL WORK SHALL BE SUBJECT TO FINAL INSPECTION BY THE ARCHITECT AND ACCEPTANCE BY THE OWNER.

21. PROTECT OWNER'S PROPERTY, EQUIPMENT, RESIDENTS AND EMPLOYEES FROM INJURY AND DAMAGE.

22. ALL PLUMBING, SPRINKLER AND ELECTRICAL LINES ARE TO BE COORDINATED SO THAT NO CONFLICTS OCCUR.

23. GC SHALL CONSULT WITH. ELECTRICAL AND PLUMBING SUBCONTRACTORS FOR LOCATIONS OF CONDUIT AND PIPES IN FOUNDATION, SLABS ON GRADE, AND EXTERIOR WALLS AND SHALL INSTALL WATERTIGHT PIPE SLEEVES AT THEIR RESPECTIVE LOCATIONS.

24. A SET OF THE INSTRUCTION MANUALS AND INSTALLATION INSTRUCTIONS OF ALL EQUIPMENT AND ACCESSORIES INSTALLED IN THIS JOB SHALL BE KEPT BY THE G.C. AND TURNED OVER TO THE OWNER AT THE COMPLETION OF THE JOB.

25. ALL PARTITIONS ARE DIMENSIONED TO FINISHED SIDE OF WALLS ALL PARTITION THICKNESS' SHOWN ARE ACTUAL DIMENSIONS.

26. PROVIDE ADEQUATE BACKUP AND BLOCKING FOR ALL WALL OR TRUSS MOUNTED EQUIPMENT, ROOF WOODWORK, HANDRAILS LIGHTING OR OTHER MISCELLANEOUS ITEMS AS SHOWN ON DRAWINGS TO ASSURE A SECURE INSTALLATION.

27. ALL MISCELLANEOUS WOOD BLOCKING,GROUNDS, FURRING AS REQUIRED TO BE FIRE RETARDANT TREATED PER LEED STDS..

28. AT ALL AREAS WITH ROOF DRAINS: PITCH FINISHED ROOF TO DRAINS.

29. MAINTAIN ACCESS TO ALL POINTS OF EGRESS DURING ENTIRE CONSTRUCTION PERIOD.

30. THE CONTRACTOR SHALL CHALK LINE ALL WORK FOR REVIEW AND APPROVAL BY ARCHITECT. PRIOR TO COMMENCEMENT OF WORK .

31. THE TERM "FIN. ROOF" WHERE INDICATED ON PLANS, ELEVATIONS AND SECTIONS REFERS TO THE TOP OF FINISHED ROOF. REFERENCE STRUCTURAL DRAWINGS FOR THICKNESS OF ROOF CONSTRUCTION.

A1 GENERAL NOTES

NTS

DRAWING LIST

ARCHITECTURAL

A-000 COVER GENERAL NOTES AND LEGENDS
D-104 ROOF DEMOLITION PLAN
A-104 PROPOSED ROOF PLAN
A-201 PARTIAL BUILDING ELEVATIONS
A-301 ROOF SECTIONS
A-401 DETAILS
A-402 DETAILS

STRUCTURAL

S-103 THIRD FLOOR FRAMING PLAN
S-104 ROOF FRAMING PLAN
S-105 UPPER ROOF AND DUNNAGE FRAMING PLAN
S-106 PARAPET REPAIRS
S-200 GENERAL NOTES
S-201 TYPICAL DETAILS
S-300 SECTIONS
S-301 SECTIONS

ELECTRICAL

E-000 ELECTRICAL COVER SHEET
E-001 SOLAR POWER SYSTEM DIAGRAM
E-002 SINGLE LINE DIAGRAM ELECTRICAL
E-103 THIRD FLOOR PLAN ELECTRICAL
E-104 PROPOSED ROOF PLAN ELECTRICAL

PLUMBING

P-103 THIRD FLOOR PLAN PLUMBING
P-104 PROPOSED ROOF PLAN PLUMBING

A13 DRAWING LIST

NTS

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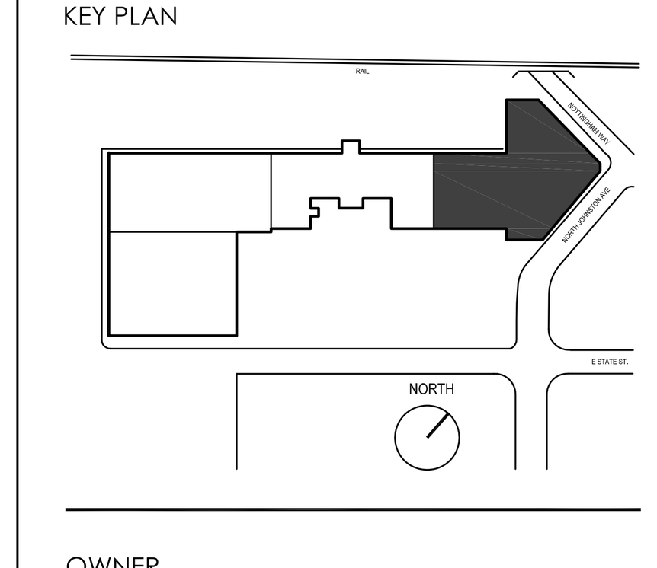
NOT FOR CONSTRUCTION OR BIDDING

NO.	ISSUANCE	DATE
1	100% DD/ PART CD	OCT 1 2012
2	TO OWNER/CONSULTANTS FOR PROJECT RESTART	DEC 19 2012
4	FINAL OWNER'S REVIEW-BID SET	APR 18 2014
5	BID SET- DIVISION 1 TO BE CONFIRMED	JUL 18 2014

KEY PLAN



OWNER
ISLES, INC
10 WOOD STREET
TRENTON, NEW JERSEY

BUILDING A & A1 ROOF ALTERATION
1 JOHNSTON AVE
HAMILTON, NEW JERSEY

SEAL

COVER SHEET
GEN. NOTES & LEGENDS

DRAWING TITLE

A-000

DRAWING

SYMBOLS LEGEND

- DEMOLISH EQUIPMENT AND CURBS. PATCH AND REPAIR DECK AS REQUIRED.
- EXISTING DECKING TO BE REMOVED AND REPLACED DUE TO DETRIORATION.
- DEMOLISH EXISTING ROOFIN MEMBRANE ONLY
- EXISTING TO REMAIN

GENERAL NOTE: ALL INTERIOR BUILDING SPACES TO BE PROTECTED DURING REMOVAL/REPLACEMENT PROCESS.

REMOVE MASONRY TILE ELEVATOR BULKHEAD DOWN TO SOUND BRICK SHAFT WALL. ALL EQUIPMENT AND EQUIPMENT SUPPORTS TO REMAIN AND BE PROTECTED DURING CONSTRUCTION. REMOVE WOODEN STAIR.

ALL EXISTING ROOF DRAINS TO BE REPLACED. TYP.

SEE STRUCTURAL DWG S-106 FOR PARAPET INVESTIGATIVE PROBE INFORMATION.

PARAPET EL. 3'-7" A.F.R.

PARAPET EL. 2'-0" A.F.R.

PARAPET EL. 1'-9" A.F.R.

PARAPET EL. 1'-5" A.F.R.

REMOVE EXISTING ROOFING MEMBRANE, PRESERVE FRAMING, PATCH AND REPAIR EXISTING DAMAGED WOOD DECKING

ALL EXISTING ROOF VENTS TO BE REMOVED, TYP.

REMOVE EXISTING ROOF VENTS AND CURB, PATCH CEILING AND PREPARE TO RECEIVE NEW ROOFING MEMBRANE.

EXPOSE & REPAIR WALL SCUPPERS AS SECONDARY OVERFLOW DRAIN TYP

EXPOSE & REPAIR WALL SCUPPERS AS SECONDARY OVERFLOW DRAIN TYP

REMOVE EXISTING ROOFING MEMBRANE AND DECKING WHERE SHOWN. PRESERVE ALL FRAMING.

PREPARE PARAPETS TO RECEIVE NEW ROOFING MEMBRANE TYP.

REMOVE EXISTING ROOFING MEMBRANE AND DECKING WHERE SHOWN. PRESERVE ALL FRAMING.

REMOVE EXISTING ROOF VENTS AND CURB, PATCH CEILING AND PREPARE TO RECEIVE NEW ROOFING MEMBRANE.

REMOVE EXISTING ROOF VENTS AND CURB, PATCH CEILING AND PREPARE TO RECEIVE NEW ROOFING MEMBRANE.

REMOVE EXISTING ROOFING MEMBRANE, PRESERVE FRAMING, PATCH AND REPAIR EXISTING WOOD DECKING

REMOVE EXISTING ROOF VENTS AND CURB, PATCH CEILING AND PREPARE TO RECEIVE NEW ROOFING MEMBRANE.

REMOVE ROOF HATCH AND PREPARE FRAMING TO RECEIVE NEW ROOF HATCH

EXPOSE & REPAIR WALL SCUPPERS AS SECONDARY OVERFLOW DRAIN TYP

EXPOSE & REPAIR WALL SCUPPERS AS SECONDARY OVERFLOW DRAIN TYP

SEE STRUCTURAL DWG S-106 FOR PARAPET INVESTIGATIVE PROBE INFORMATION.

NORTH

F' E' D' C' B' A'

20'-1" 19'-5" 19'-2" 19'-7" 20'-2"

M L K J I H G F E D C B A

9'-0" 16'-0" 16'-0" 16'-0" 16'-0" 16'-0" 16'-0" 16'-0" 16'-0" 16'-0" 16'-7"

1 1.5 2 2.5 3 3.5 4 4.5 5 5.5 6 6.5 7 8 9 10 11 12 13

7'-11" 8'-4" 8'-4" 8'-0" 8'-0" 8'-0" 8'-0" 8'-0" 8'-0" 8'-0" 8'-0" 8'-5" 20'-10" 20'-0" 20'-0" 20'-0" 20'-0" 23'-5"

A1 GREEN ROOF ALT PLAN

1/8"=1'-0"

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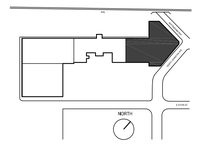
5	BID SET DIVISION 1 TO BE CONFIRMED	JUL 18 2014

KEY PLAN



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TRENTON, NEW JERSEY

BUILDING A & A1 ROOF ALTERATION

1 JOHNSTON AVE
HAMILTON, NEW JERSEY

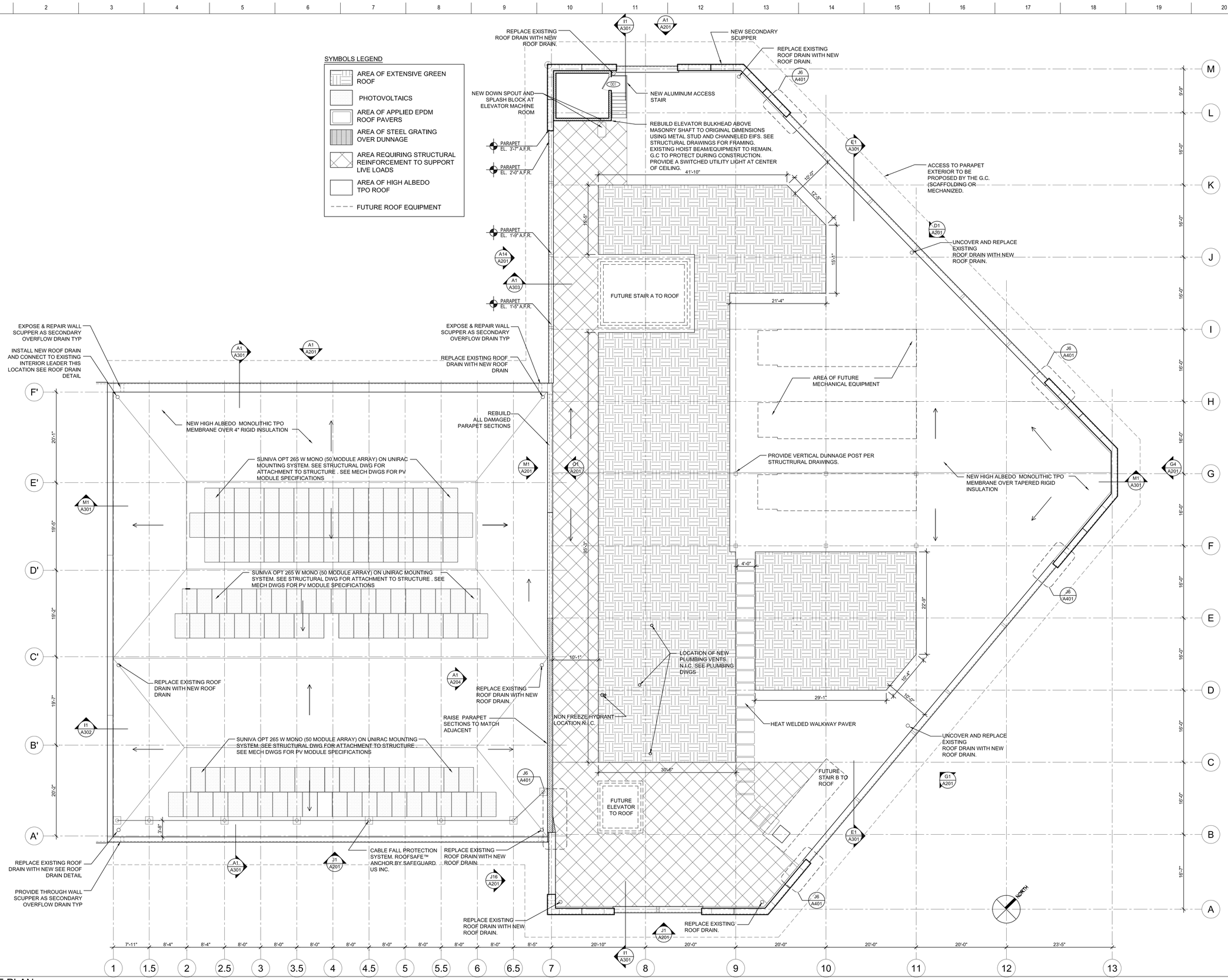
SEAL

DRAWING TITLE

DEMOLITION ROOF PLAN

DRAWING

D-104



A1 ROOF PLAN

1/8"=1'-0"

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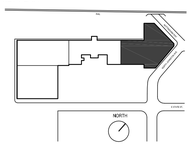

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HAMILTON, NEW JERSEY

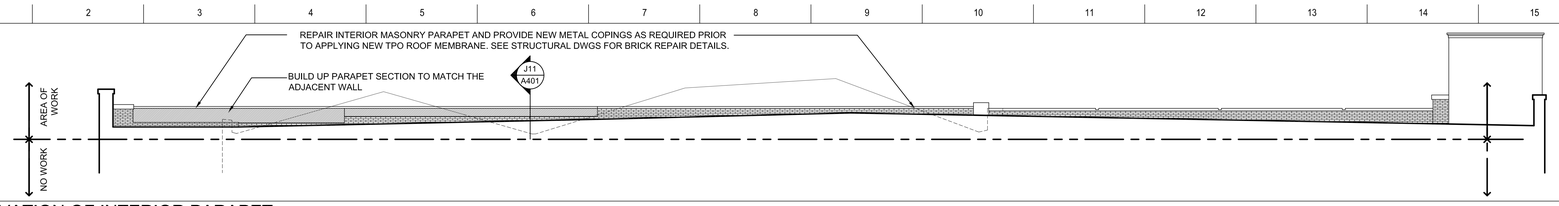
SEAL

DRAWING TITLE

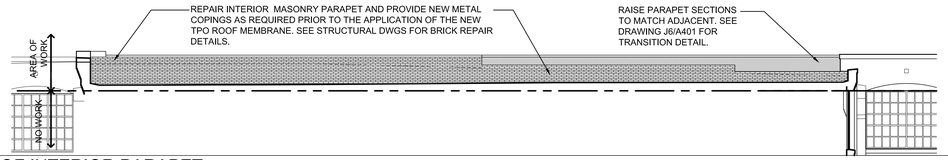
PROPOSED ROOF PLAN

DRAWING

A-104



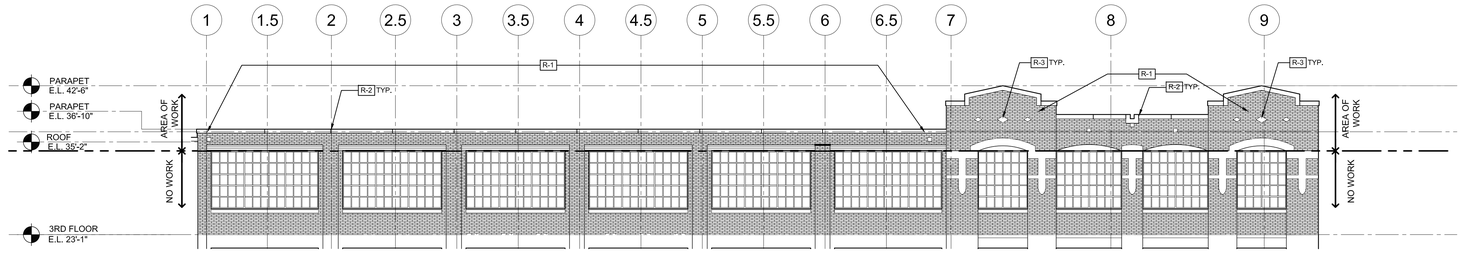
O1 ELEVATION OF INTERIOR PARAPET
1/8"=1'-0"



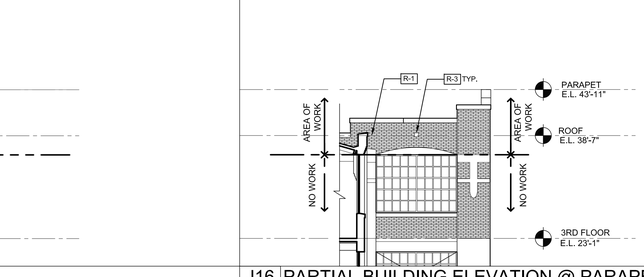
M1 ELEVATION OF INTERIOR PARAPET
1/8"=1'-0"

EXTERIOR REPAIR SYMBOL KEY	
R-1	REPAIR OR REBUILD MASONRY PARAPET WALL. COPING AT PARAPET ARE TO BE REPLACED AS DETERMINED BY INVESTIGATIVE PROCESS DESCRIBED IN STRUCTURAL DWG S-106 AND SPECIFICATIONS. SEE STRUCTURAL DWGS FOR MASONRY REPAIR DETAILS. SEE ARCHITECTURAL DRAWINGS FOR FLASHING INFORMATION. PROVIDE NEW THROUGH WALL SECONDARY DRAINGE SCUPPERS WHERE SHOWN ON THE PLANS AT THE NEW ROOF ELEVATION .
R-2	ALL VERTICAL JOINT LINES SHOWN IN THE COPING STONES REPRESENT NEW EXPANSION JOINTS THAT ARE EITHER CUT INTO EXISTING COPING OR WILL BE THE LOCATION OF EXPANSION JOINTS OF NEW COPING STONES
R-3	ALL DECORATIVE CONCRETE MEDALLIONS IN THE EXISTING MASONRY PARAPET WALL ARE TO BE SALVAGED, RESTORED AND REUSED IN THEIR EXACT CURRENT LOCATIONS
C-1	LOCATION OF MASONRY CRACK. SEE STRUCTURAL DRAWINGS FOR REPAIR DETAILS.
NOTE:	CONCRETE LINTEL REPAIR IS NOT PART OF THE BASE SCOPE UNLESS THE CONCRETE LOSS OF THE LINTEL IS STRUCTURAL AND IMPEDES THE REBUILDING OF A PARAPET WALL.

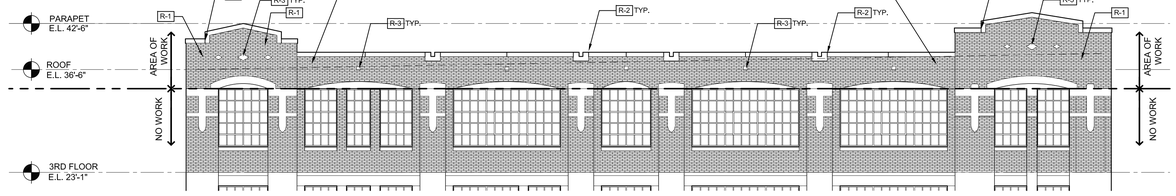
M16 LEGEND
NA



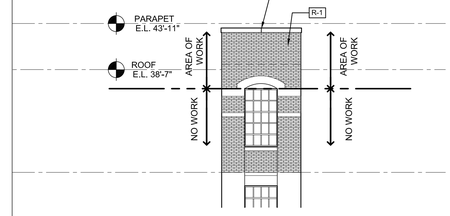
J1 PARTIAL BUILDING ELEVATION @ PARAPET
1/8"=1'-0"



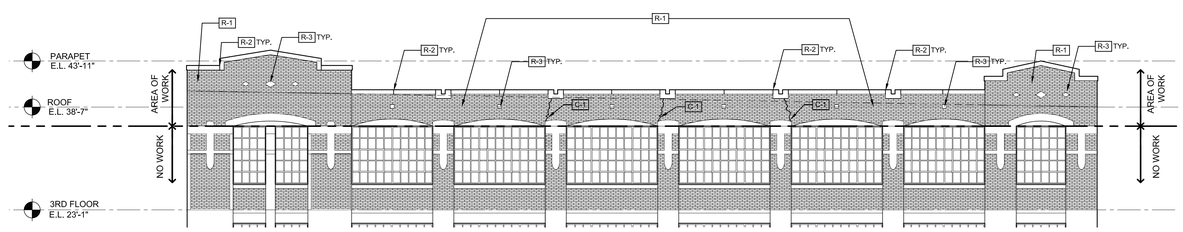
J16 PARTIAL BUILDING ELEVATION @ PARAPET
1/8"=1'-0"



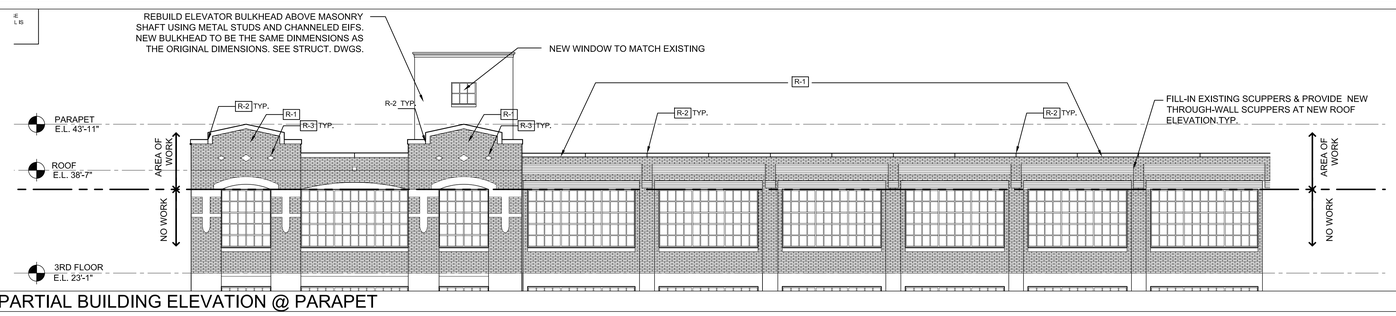
G1 PARTIAL BUILDING ELEVATION @ PARAPET
1/8"=1'-0"



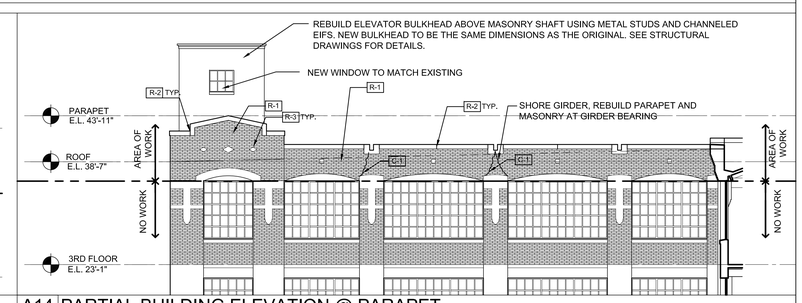
G14 PARTIAL BUILDING ELEVATION @ PARAPET
1/8"=1'-0"



D1 PARTIAL BUILDING ELEVATION @ PARAPET
1/8"=1'-0"



A1 PARTIAL BUILDING ELEVATION @ PARAPET
1/8"=1'-0"



A14 PARTIAL BUILDING ELEVATION @ PARAPET
1/8"=1'-0"

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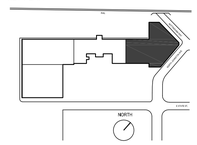
NO.	ISSUANCE	DATE
1	100% DD/ PART CD	OCT 1 2012
2	TO OWNER/CONSULTANTS FOR PROJECT RESTART	DEC 19 2012
3	PROGRESS SET TO OWNER	NOV 05 2013
4	FINAL OWNER'S REVIEW-BID SET	APR 18 2013
5	BID SET- DIVISION 1 TO BE CONFIRMED	JUL 18 2014

KEY PLAN



OWNER
ISLES, INC
10 WOOD STREET
TRENTON, NEW JERSEY

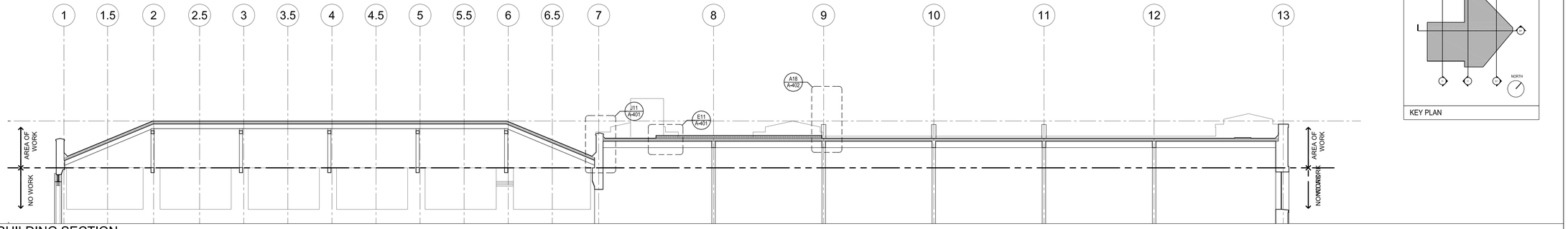
BUILDING A & A1 ROOF ALTERATION

1 JOHNSTON AVE
HAMILTON, NEW JERSEY

SEAL

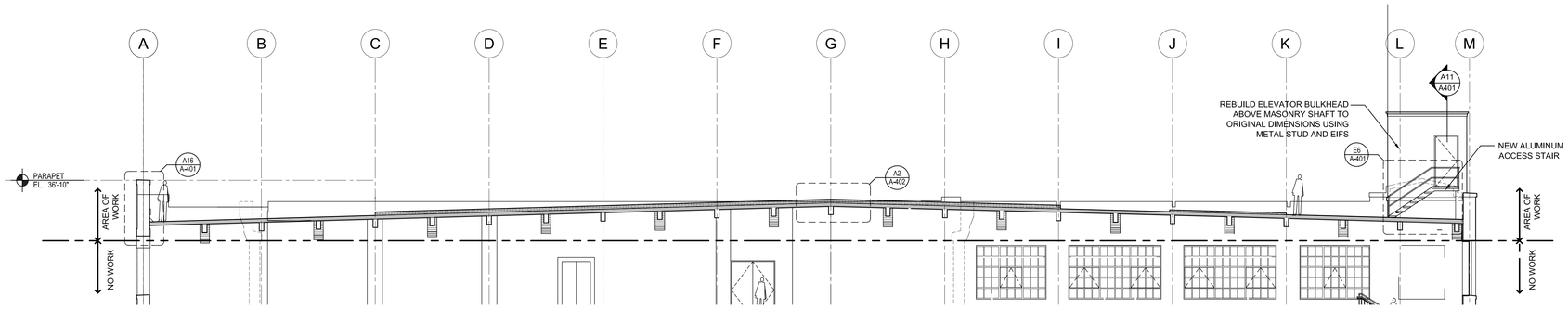
DRAWING TITLE
PARTAL BUILDING ELEVATIONS

DRAWING
A-201



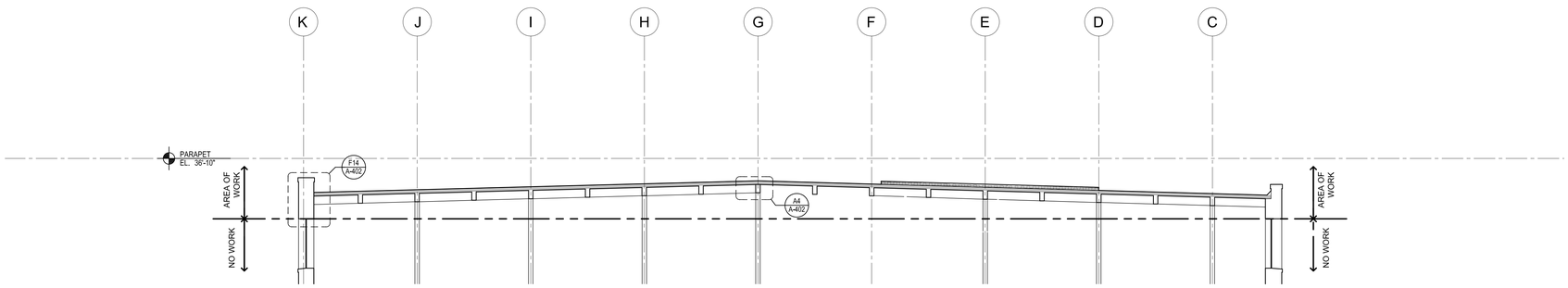
M1 BUILDING SECTION

1/8"=1'-0"



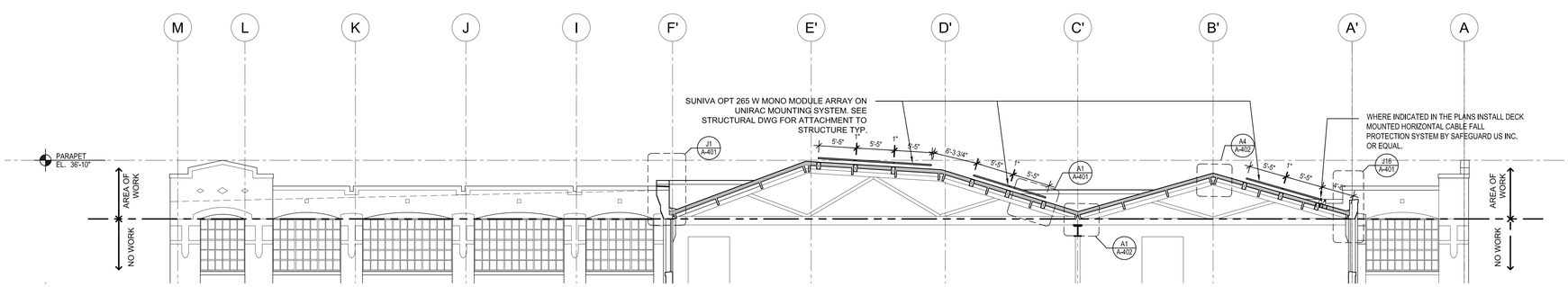
I1 BUILDING SECTION

1/8"=1'-0"



E1 BUILDING SECTION

1/8"=1'-0"



A1 BUILDING SECTION

1/8"=1'-0"

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KEY PLAN

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OR BIDDING

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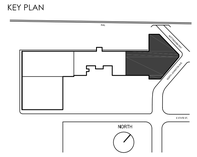
5	BID SET DIVISION 1 TO BE CONFIRMED	JUL 18 2014

KEY PLAN



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1 JOHNSTON AVE
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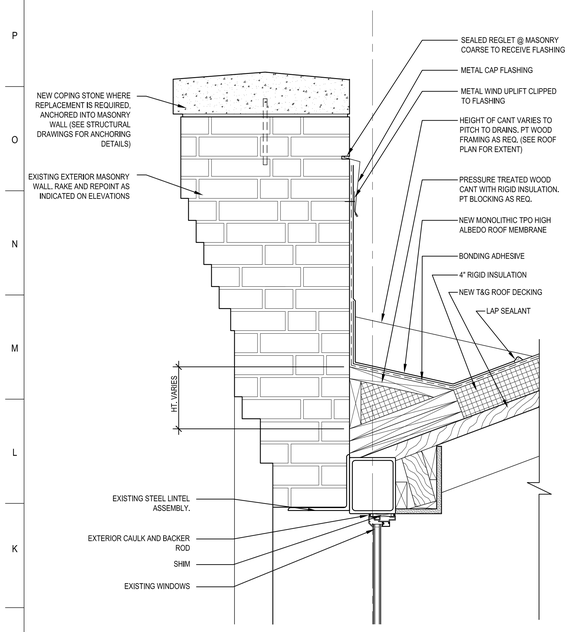
SEAL

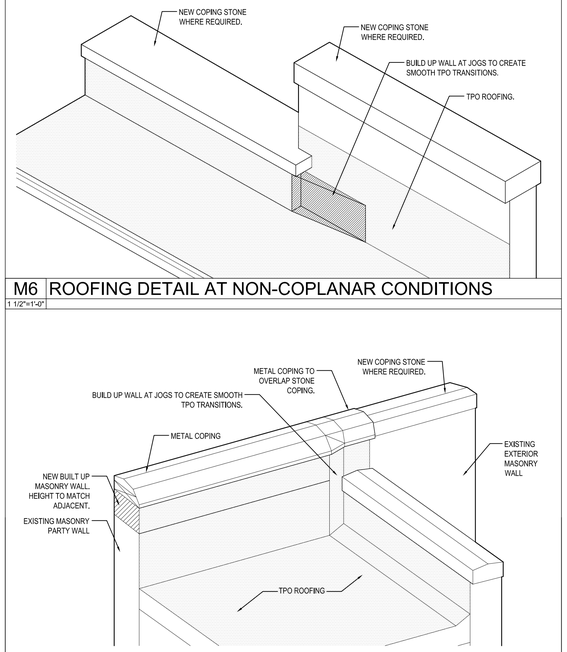
DRAWING TITLE
ROOF SECTIONS

DRAWING
A-301



J1 DETAIL AT BLDG. A-1 PARAPET

1 1/2"=1'-0"

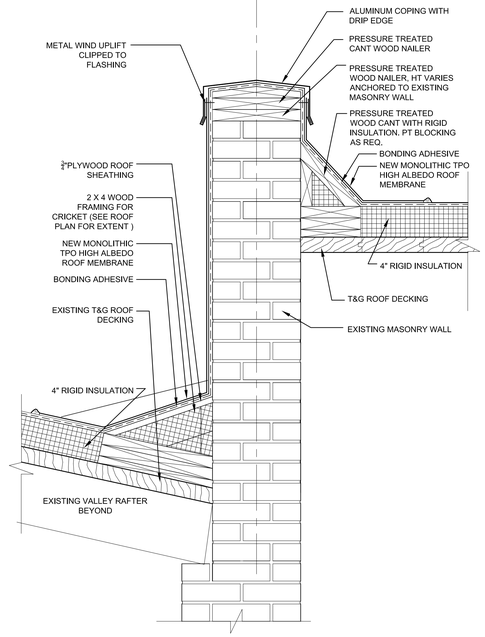


M6 ROOFING DETAIL AT NON-COPLANAR CONDITIONS

1 1/2"=1'-0"

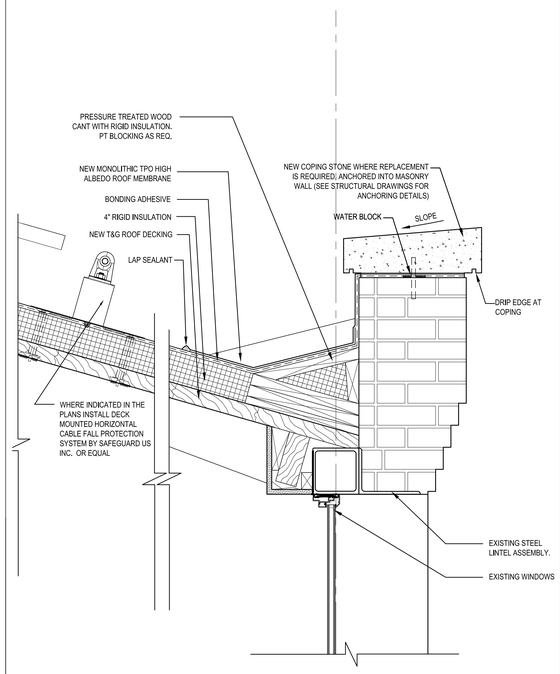
J6 ROOFING DETAIL AT PARTY WALL CORNER

1/2"=1'-0"



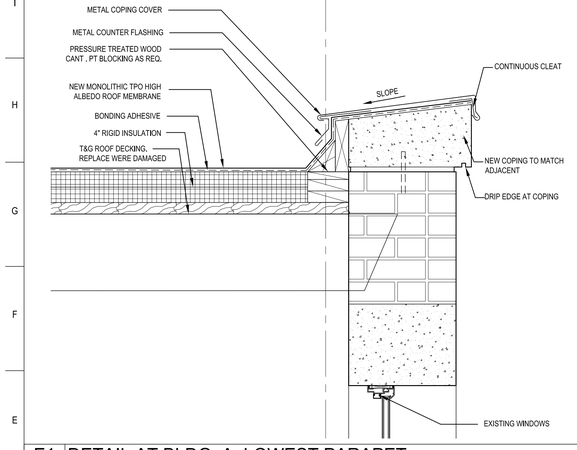
J11 DETAIL AT PARTY WALL PARAPET

1 1/2"=1'-0"



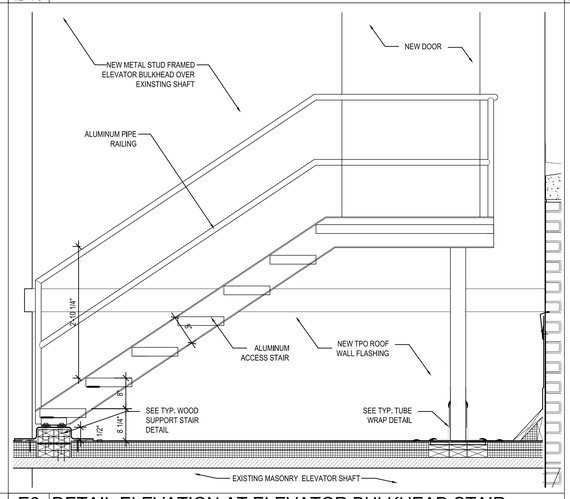
J16 DETAIL AT BLDG. A-1 PARAPET

1 1/2"=1'-0"



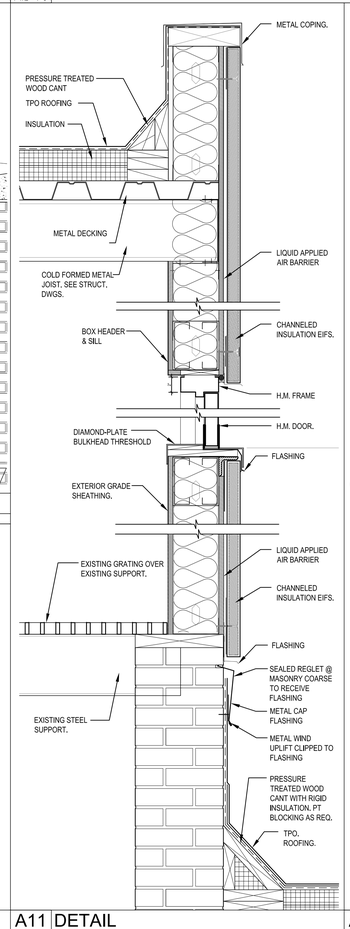
E1 DETAIL AT BLDG. A LOWEST PARAPET

1 1/2"=1'-0"



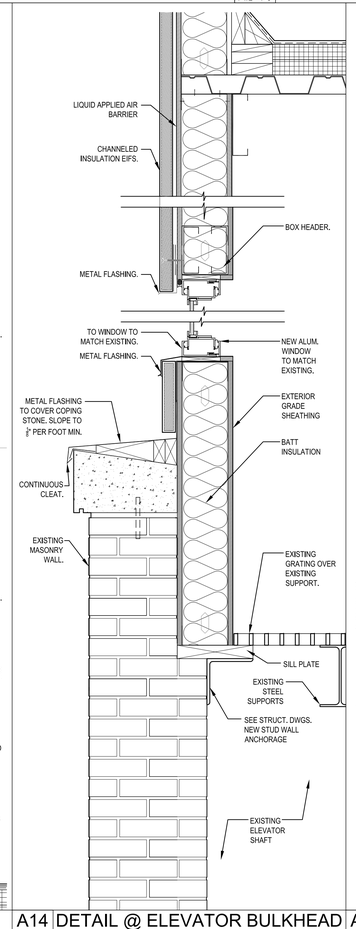
E6 DETAIL ELEVATION AT ELEVATOR BULKHEAD STAIR

3/4"=1'-0"



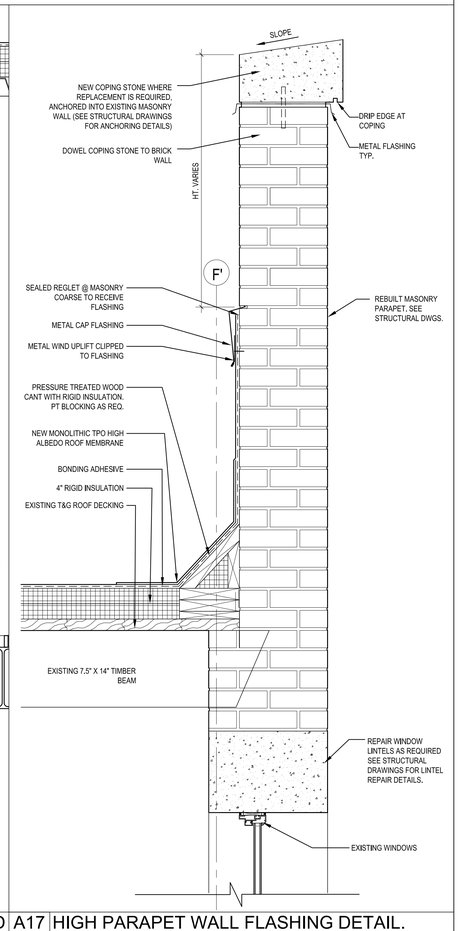
A11 DETAIL

1 1/2"=1'-0"



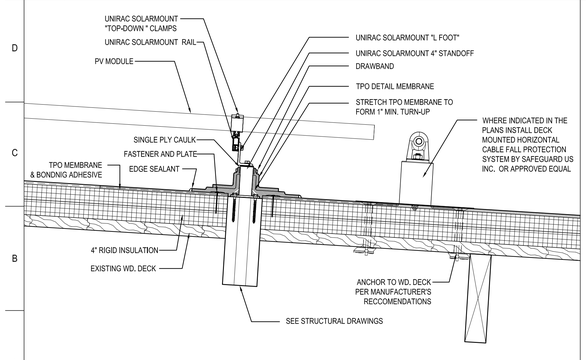
A14 DETAIL @ ELEVATOR BULKHEAD

1 1/2"=1'-0"



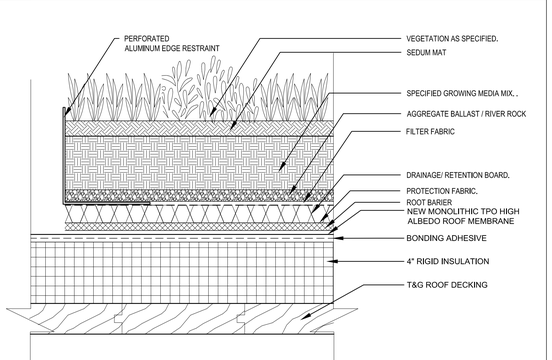
A17 HIGH PARAPET WALL FLASHING DETAIL.

1 1/2"=1'-0"



A1 DETAIL AT SOLAR PV MOUNTING

1 1/2"=1'-0"



A7 GREEN ROOF DETAIL

3"=1'-0"

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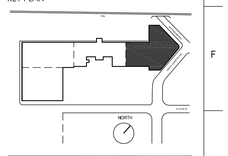
5	BID SET DIVISION 1 TO BE CONFIRMED	JUL 18 2014

KEY PLAN



OWNER
ISLES, INC
10 WOOD STREET
TRENTON, NEW JERSEY

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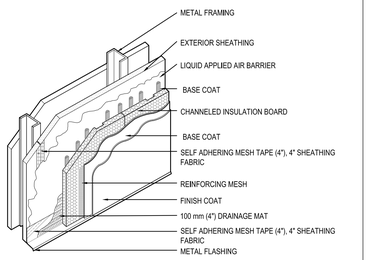
1 JOHNSTON AVE
HAMILTON, NEW JERSEY

SEAL

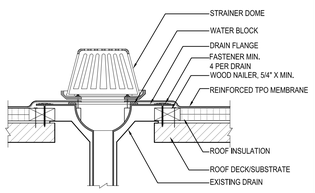
DRAWING TITLE
DETAILS

DRAWING
A-401



K1 CHANNELED INSULATION EIFS

1 1/2"=1'-0"

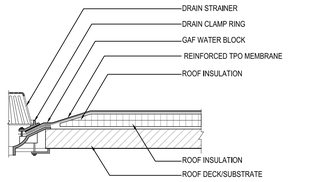


NOTE:

1. INSTALL RETROFIT DRAIN INTO EXISTING DRAIN PER MANUFACTURERS RECOMENDATION.
2. APPLY EDGE SEALANT TO ALL CUT REINFORCED TPO EDGES.

K4 DRAIN RETRO FIT/INSERT DTL.

1 1/2"=1'-0"

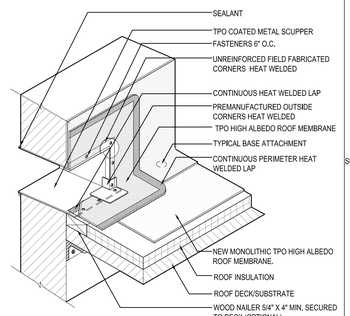


NOTE:

1. A FIELD WELD CANNOT PASS WITHIN 9" OF THE CLAMPING, OR WITHIN THE DRAIN SUMP ITSELF.
2. MEMBRANE MUST EXTEND MINIMUM 1" BEYOND THE BOLT HOLES, THE CLAMPING RING BOLTS MUST PENETRATE THE MEMBRANE.
3. TAPERED INSULATION TO CREATE A ROOF SUMP MINIMUM 36" X 36" IN SIZE. (IF APPLICABLE)
4. USE ONE FULL TUBE OF GAF WATER BLOCK PER DRAIN.

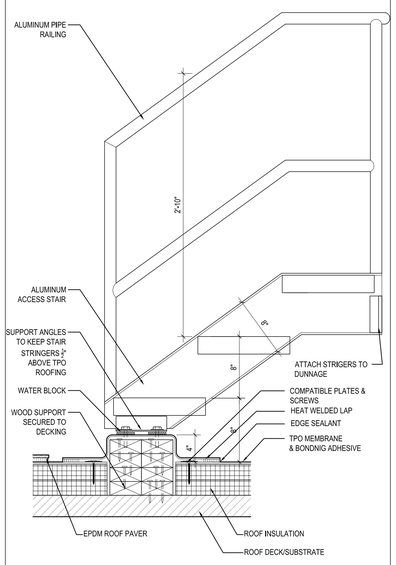
K7 STANDARD ROOF DRAIN DETAIL

1 1/2"=1'-0"



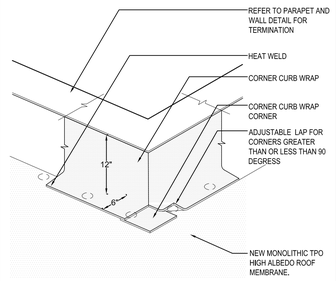
K11 COATED METAL SCUPPER DETAIL

1 1/2"=1'-0"



K14 COVERED WOOD SUPPORT AT STAIR

1 1/2"=1'-0"



K18 TPO CORNER CURB WRAP DTL.

1 1/2"=1'-0"

NOTE:

1. ALL SEGMENTS OF THE EAR MUST BE WELDED TOGETHER AND WELDED TO THE WALL
2. APPLY EDGE SEALANT TO ALL CUT REINFORCED TPO EDGES.

F1 TPO INSIDE CORNER 2 STEP DETAIL

1 1/2"=1'-0"

F4 TPO DETAIL @ ROOF HATCH

1 1/2"=1'-0"

F7 HEAT WELDED WALKWAY PAVER

1 1/2"=1'-0"

F11 HIGH WALL FLASHING

1 1/2"=1'-0"

F14 TPO FLASHING W/ TERMINATION BAR

1 1/2"=1'-0"

F18 TPO COUNTER FLASHING DETAIL

1 1/2"=1'-0"

A1 TPO VALLEY DETAIL

1 1/2"=1'-0"

A4 TPO RIDGE DETAIL

1 1/2"=1'-0"

A7 TPO CUT EDGE SEALANT DETAIL

1 1/2"=1'-0"

A11 TPO CHANGE OF PLANE DETAIL

1 1/2"=1'-0"

A14 TPO SQUARE TUBE DETAIL

1 1/2"=1'-0"

A18 DUNNAGE FLASHING DETAIL

1 1/2"=1'-0"

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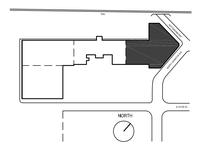

OWNER
ISLES, INC
10 WOOD STREET
TRENTON, NEW JERSEY

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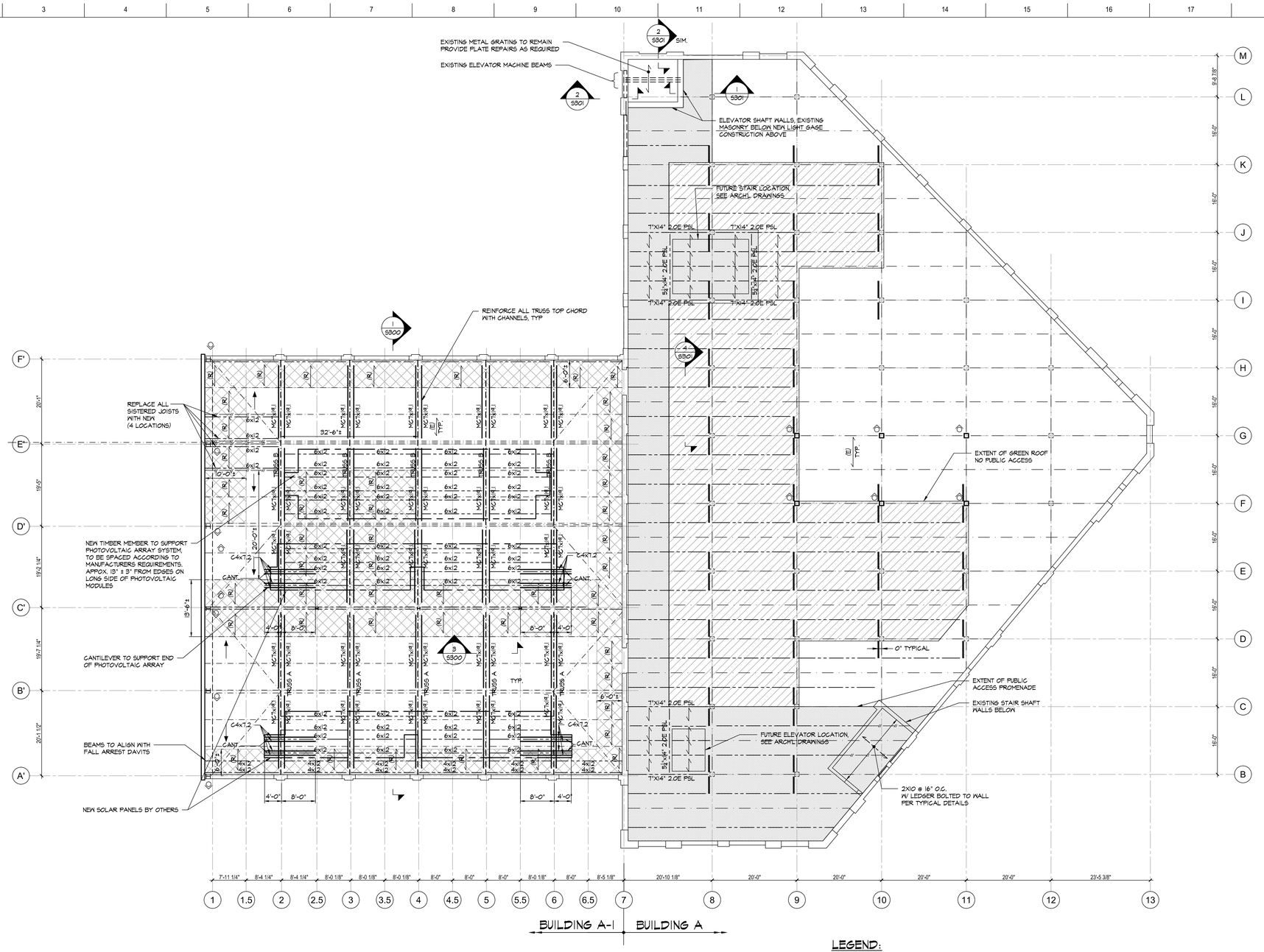
1 JOHNSTON AVE
HAMILTON, NEW JERSEY

SEAL

DRAWING TITLE
DETAILS

DRAWING
A-402



NOTES:

1. ROOF DECKING AND/OR FRAMING MAY REQUIRE ADDITIONAL REINFORCING IN ISOLATED AREAS OF SIGNIFICANT WATER DAMAGE. FOR BUILDING A-1 SEE PLAN FOR EXTENT OF ROOF DECKING REPLACEMENT. FOR BUILDING A, ASSUME 15% OF DECKING WILL REQUIRE REPLACEMENT. REMOVE EXISTING ROOFING, ALLOW ARCHITECT AND ENGINEER TO INSPECT DECKING, ALL DETERIORATED DECKING WILL BE IDENTIFIED AND SHALL BE REMOVED AND REPLACED IN KIND. IF DECKING IS SOUND, DO NOT REPLACE. DECKING SHALL BE REPLACED FULL LENGTH BETWEEN SUPPORTS.

LEGEND:

- INDICATES EXISTING MASONRY BEARING WALLS BELOW
- INDICATES EXISTING WB STEEL COLUMN
- INDICATES EXISTING 7½"X7½" TIMBER POST BELOW
- INDICATES EXISTING TIMBER BEAM OR PURLIN
- INDICATES EXISTING TIMBER BEAM TO BE REMOVED
- INDICATES NEW 8X8 WOOD BRACES, U.O.N.
- INDICATES NEW 7X14 WOOD BEAM, U.O.N.
- INDICATES NEW STEEL FRAMING
- INDICATES TRUSS SLOPE DIRECTION
- (R) INDICATES DIRECTION OF EXISTING NOMINAL 2x8 TONGUE & GROOVE DECK REQUIRING REPLACEMENT. DECKING SHALL BE REPLACED FROM SUPPORT TO SUPPORT
- (E) INDICATES DIRECTION OF EXISTING NOMINAL 2x8 TONGUE & GROOVE DECK TO REMAIN (TYPICAL ALL BAYS A AND A-1, U.O.N.)
- INDICATES COLUMN UP/DOWN
- INDICATES SPAN DIRECTION OF NEW NOMINAL 2x8 TONGUE & GROOVE DECK
- INDICATES GIRDER REINFORCING SEE SECTION 2/S400
- INDICATES EXTENT OF PUBLIC ACCESS, SEE ARCHITECTURAL
- INDICATES EXTENT OF GREEN ROOF, SEE ARCHITECTURAL
- INDICATES EXISTING WOOD DECKING TO BE REPLACED DUE TO DETERIORATION

ROOF FRAMING PLAN

SCALE: 3/32"=1'-0"

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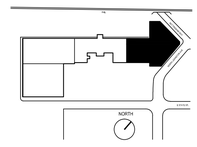
NOT FOR CONSTRUCTION OR BIDDING

NO.	ISSUANCE	DATE
1	FINAL OWNER'S REVIEW-BID SET	APR 18 2014
2	BIDSET/DIVISION 1 TO BE CONFIRMED	JULY 18, 2014

KEY PLAN



OWNER
ISLES, INC
10 WOOD STREET
TRENTON, NEW JERSEY

BUILDING A & A1 ROOF ALTERATION

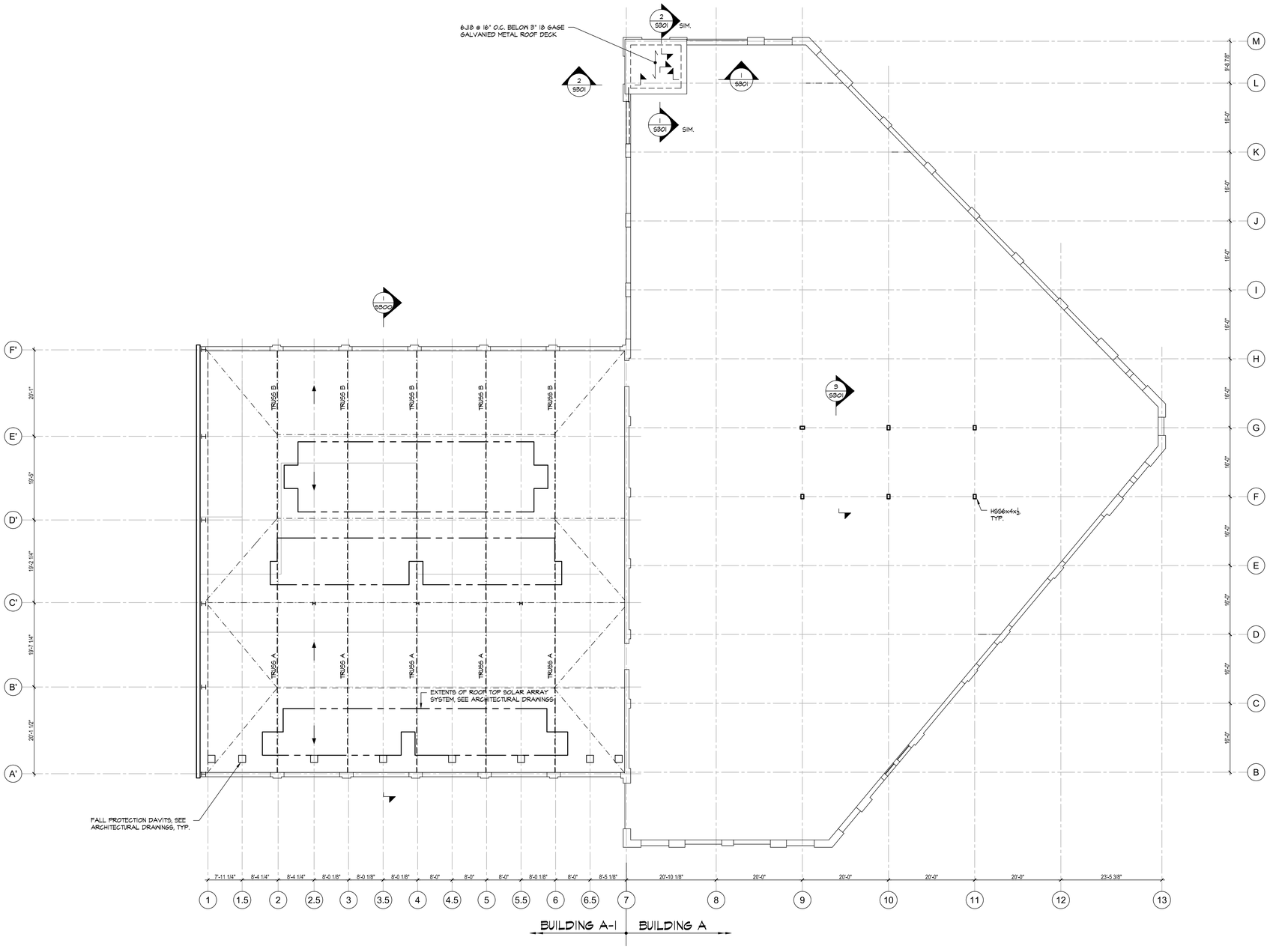
1 JOHNSTON AVE
HAMILTON, NEW JERSEY

SEAL

DRAWING TITLE
AS NOTED SB
4-18-14 GD

ROOF FRAMING PLAN

DRAWING
S-104



ROOF FRAMING PLAN

SCALE: 3/32"=1'-0"

LEGEND:

- INDICATES TRUSS SLOPE DIRECTION
- INDICATES COLUMN UP/DOWN
- INDICATES NEW STEEL FRAMING
- INDICATES DIRECTION OF NEW STEEL GRATING
- INDICATES MOMENT CONNECTION, DESIGN FOR 15 K.FT, U.O.N

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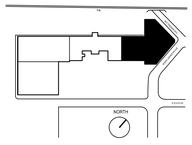

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SEAL

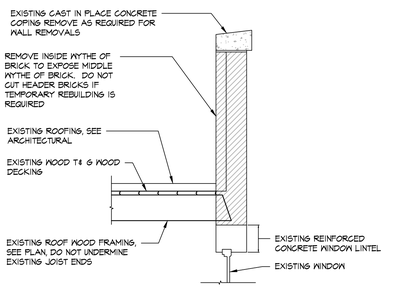
DRAWING TITLE

MAM
AS NOTED KM
9-5-13

UPPER ROOF AND DUNNAGE FRAMING PLAN

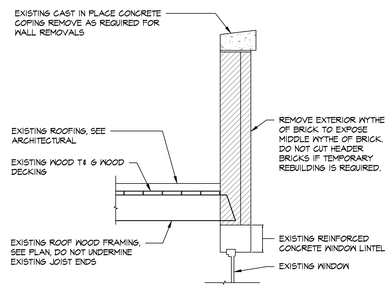
DRAWING

S-105



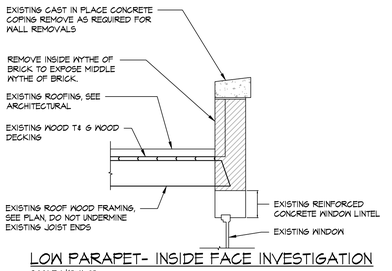
HIGH PARAPET- INSIDE FACE INVESTIGATION

SCALE 1 ½"=1'-0"



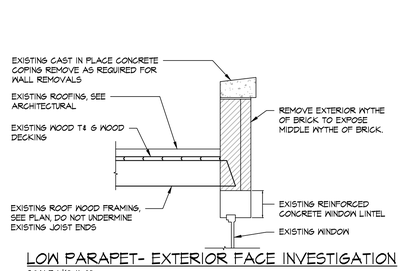
HIGH PARAPET- EXTERIOR FACE INVESTIGATION

SCALE ½"=1'-0"



LOW PARAPET- INSIDE FACE INVESTIGATION

SCALE 1 ½"=1'-0"



LOW PARAPET- EXTERIOR FACE INVESTIGATION

SCALE 1 ½"=1'-0"

EXISTING ROOF FRAMING PLAN

SCALE: 3/32"=1'-0"

LEGEND:

- INDICATES EXISTING MASONRY BEARING WALLS BELOW
- INDICATES EXISTING W8 STEEL COLUMN
- INDICATES EXISTING 7½"x7½" TIMBER POST BELOW
- INDICATES EXISTING TIMBER BEAM OR PURLIN
- (E) INDICATES DIRECTION OF EXISTING NOMINAL 2x8 TONGUE & GROOVE DECK TO REMAIN (TYPICAL ALL BAYS A AND A-1, U.O.N.)

BUILDING A PARAPET REPAIRS

THE BASE SCOPE OF WORK IS REBUILDING ALL EXTERIOR PARAPET WALLS IN BUILDING INCLUDING COPING REPLACEMENT. SEE ARCHITECTURAL ELEVATIONS AND SPECIFICATIONS.

THE FOLLOWING PRE-CONSTRUCTION PARAPET INVESTIGATION SHALL BE COMPLETED TO DETERMINE IF THE SCOPE CAN BE REDUCED TO LOCAL BRICK REPLACEMENT AND REPOINTING.

PRE-CONSTRUCTION PARAPET INVESTIGATION

THE PURPOSE OF THIS PRE-CONSTRUCTION INVESTIGATION IS TO CONFIRM THE CONDITION OF THE INSIDE WYTHE OF BRICK AND THE MIDDLE WYTHE OF BRICK.

EXISTING CONDITION

1. THE EXISTING PARAPET WALLS ARE 3 WYTHE COMPOSITE UNREINFORCED BRICK MASONRY.
2. WHERE OBSERVED, BOTH THE INSIDE FACE AND THE EXTERIOR FACE BRICKS HAVE EXTENSIVE DAMAGE.
3. THE COPING STONES ARE DETERIORATED ALLOWING LONG TERM WATER INFILTRATION.
4. LOCAL PROBES WERE COMPLETED DURING THE DESIGN PHASE OF THE PROJECTS TO EXPOSE THE INSIDE FACE OF THE BRICK.

GENERAL CONDITIONS

1. CONTRACTOR SHALL PROVIDE MEANS AND METHODS OF PROTECTION (INCLUDING DRAINAGE, WATER PROTECTION, AND RELATED INTERNAL/EXTERNAL ACCESS/PROTECTION FOR THE FULL INTERIOR AND EXTERIOR PERIMETER OF THE BUILDING FOR ALL PARAPET WORK.
2. ALL WORK SHALL BE DONE IN CONFORMANCE WITH THE FULL PROJECT SPECIFICATIONS.
3. TEMPORARY SHORING, BRACING AND PROTECTION SHALL BE PROVIDED AS REQUIRED TO KEEP PARAPETS STABLE. PROTECTION SHALL BE PROVIDED ON BOTH SIDES OF THE PARAPET AS REQUIRED.
4. IF MASONRY IS SOUND, REMOVALS SHALL BE 2'-0" IN WIDTH MAXIMUM WITHOUT TEMPORARY BRACING.
5. IF MASONRY IS SOUND, REMOVALS ON THE EXTERIOR AND INSIDE FACES SHALL BE SPACED AT LEAST 5'-0" APART OR TEMPORARY BRACING SHALL BE PROVIDED.
6. ADDITIONAL REMOVALS OF UNSOUND MATERIAL MAY BE REQUIRED TO MAINTAIN A STABLE PARAPET WALL.
7. THE WORK SHALL PROCEED IN SUCH A MANNER THAT THE CONDITION AND CHARACTERISTICS OF THE VARIOUS MATERIALS, IN THEIR NATURAL STATE, CAN BE ACCURATELY ASCERTAINED. BRICK AND CONCRETE MATERIALS SHALL NOT BE REMOVED FROM THE SITE UNTIL OBSERVED BY THE ENGINEER AND ARCHITECT.
8. THE CONTRACTOR SHALL ALLOW FOR THE ENGINEER AND ARCHITECT TO OBSERVE AREAS OF MASONRY REMOVAL DURING AND AFTER THE WORK.
9. FINAL LOCATIONS OF REMOVALS SHALL BE CONFIRMED BY THE ENGINEER AND THE ARCHITECT IN THE FIELD TO OBTAIN THE RANGE OF CONDITIONS.
10. CONDITIONS SHALL BE DOCUMENTED AND PHOTOGRAPHED PRIOR TO REMOVALS.
11. THIS PROCESS WILL BE UTILIZED TO EITHER CONFIRM THE 100% PARAPET REBUILD BASE SCOPE ON BUILDING A OR TO GENERATE A REDUCED SCOPE IF THE INVESTIGATION REVEALS SOUND MASONRY SECTIONS. IN THE CASE OF A REDUCED SCOPE, THE DESIGN TEAM WILL DOCUMENT AND ISSUE THE REDUCED SCOPE OF WORK AND THE CONTRACTOR THEN WILL SUBMIT A PROPORTIONAL CREDIT TO THE OWNER.

SCOPE OF WORK:

1. COPING STONE REMOVALS: REMOVE CAST-IN-PLACE CONCRETE COPING STONE FOR 5 FOOT LENGTH. ALLOW FOR OBSERVATION OF THE TOP OF THE MASONRY DIRECTLY BELOW THE COPING STONE.
2. INTERIOR WYTHE REMOVAL: REMOVE ALL ROOFING ON PARAPET TO EXPOSE FACE OF BRICK. REMOVE INTERIOR FACE BRICK TO EXPOSE THE MIDDLE WYTHE OF MASONRY. AT TALL PARAPETS, DO NOT CUT HEADER BRICKS IF TEMPORARY REBUILDING IS REQUIRED.
3. EXTERIOR WYTHE REMOVAL: REMOVE EXTERIOR FACE BRICK TO EXPOSE MIDDLE WYTHE OF MASONRY. AT TALL PARAPETS, DO NOT CUT HEADER BRICKS IF TEMPORARY REBUILDING IS REQUIRED.

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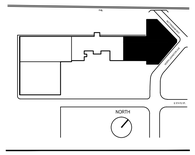

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DRAWING TITLE

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4-18-14 — GO

PARAPET REPAIRS

DRAWING

S-106

GENERAL NOTES

1. ALL STRUCTURAL WORK SHALL BE COORDINATED WITH ARCHITECTURAL AND MECHANICAL DRAWINGS AND SHALL CONFORM TO THE PROJECT SPECIFICATIONS, INCLUDING THE NEW JERSEY STATE BUILDING CODE, LATEST EDITION.
2. CONTRACTOR SHALL PROVIDE TEMPORARY SHORING, BRACING, SHEETING AND MAKE SAFE ALL FLOORS, ROOFS, WALLS AND ADJACENT PROPERTY AS PROJECT CONDITIONS REQUIRE. SHORING AND SHEETING SHALL BE DESIGNED BY A STATE OF NEW JERSEY LICENSED PROFESSIONAL ENGINEER HIRED BY THE CONTRACTOR, WHO SHALL SUBMIT SHOP DRAWINGS AND CALCULATIONS FOR THE OWNER'S REVIEW.
3. DIMENSIONS AND ELEVATIONS OF EXISTING CONSTRUCTION GIVEN IN STRUCTURAL DRAWINGS ARE BASED ON INFORMATION CONTAINED IN VARIOUS ORIGINAL DESIGN AND CONSTRUCTION DOCUMENTS PROVIDED BY THE OWNER, AND LIMITED FIELD OBSERVATIONS AND MEASUREMENTS. THE CONTRACTOR SHALL VERIFY ALL INFORMATION PERTAINING TO EXISTING CONDITIONS BY ACTUAL MEASUREMENT AND OBSERVATION AT THE SITE. ALL DISCREPANCIES BETWEEN ACTUAL CONDITIONS AND THOSE SHOWN IN THE CONTRACT DOCUMENTS SHALL BE REPORTED TO THE ENGINEER OF RECORD FOR HIS EVALUATION BEFORE THE AFFECTED CONSTRUCTION IS PUT IN PLACE.

STRUCTURAL STEEL

1. ALL STRUCTURAL STEEL WORK SHALL CONFORM TO THE FOLLOWING GOVERNING STANDARDS:
   A. AISC "SPECIFICATION FOR THE DESIGN, FABRICATION AND ERECTION OF STRUCTURAL STEEL FOR BUILDINGS, "LATEST EDITION.
   B. THE AMERICAN WELDING SOCIETY (AWS D1.1) "CODE FOR WELDING IN BUILDING CONSTRUCTION," LATEST EDITION.
2. ALL STRUCTURAL STEEL SHALL CONFORM TO THE FOLLOWING ASTM SPECIFICATIONS:
   A. WIDE FLANGE BEAMS, COLUMNS AND STRUCTURAL TEES: ASTM A992
   B. HOLLOW STRUCTURAL SECTIONS: ASTM A500, GRADE B
   C. STRUCTURAL PIPE SECTIONS: ASTM A501 OR ASTM A53, GRADE B.
   D. CHANNELS, ANGLES AND PLATES: ASTM A36 UNLESS OTHERWISE NOTED
   E. BOLTED CONNECTIONS OF BEAMS OR GIRDERS ARE TO BE MADE WITH ASTM A325-SC BOLTS (3/4" DIA.)
   F. ANCHOR BOLTS: ASTM F1554, GRADE 36.
3. STEEL CONNECTIONS SHALL BE STANDARD AISC FRAMED BEAM CONNECTIONS.
   A. PROVIDE CONNECTIONS BASED ON REACTION AS DETERMINED FROM AISC UNIFORM LOAD TABLE. (UNLESS OTHERWISE NOTED ON PLANS.)
   B. REINFORCING IS TO BE PROVIDED AT CONNECTIONS WHERE CUTS REDUCE THE SHEAR OR MOMENT CAPACITY BELOW THAT REQUIRED TO SUSTAIN THE REACTION. FLANGES AND WEB ARE TO BE REINFORCED WHERE THE LOCAL CAPACITY TO SUSTAIN CONNECTION LOAD IS INADEQUATE.
   C. CONNECTIONS SHALL BE DESIGNED FOR SHEAR AND ECCENTRICITY, CONSIDERING THAT THE CONNECTION IS AN EXTENSION OF THE BEAM AND GIRDERS. ADD SPECS/NOTES FOR STAINLESS STEEL (ANCHORS, WALL TIES, ETC.
   4. MINIMUM WELD SIZE IS 1/4" FILLET UNLESS NOTED OTHERWISE.
4. ALL BEAMS EXCEPT CANTILEVER BEAMS SHALL BE FABRICATED WITH NATURAL CAMBER UP. CANTILEVER BEAMS SHALL BE FABRICATED SO THAT NATURAL CAMBER RAISES CANTILEVER END.
5. FIELD CUTTING OR BURNING OF STEEL IS PROHIBITED EXCEPT WITH THE EXPRESSED WRITTEN APPROVAL OF THE STRUCTURAL ENGINEER OF RECORD.
6. PROVIDE MECHANICALLY GALVANIZED BOLTS FOR EXTERIOR APPLICATIONS.
7. WELDING SHALL BE PERFORMED BY CERTIFIED LICENSED WELDERS AND ARE AWS QUALIFIED. WELDING ELECTRODES SHALL BE AWS 5.1, CLASS E70XX (USE LOW HYDROGEN ELECTRODES FOR A572, GRADE 50 STEEL).
8. SHOP PAINT EXPOSED STEEL MEMBERS, STEEL MEMBERS NOT ENCASED IN CONCRETE OR SPRAY FIREPROOFED, AND ALL STEEL MEMBERS AT THE EXTERIOR WALL WITH TNEMEC #10-99. FIELD PAINT ALL EXPOSED MEMBERS WITH TNEMEC 550 OMNITHANE OR APPROVED EQUAL.
9. MASONRY ANCHORS SHALL BE HILTI "HIT" ADHESIVE ANCHORS AS MANUFACTURED BY HILTI FASTENING SYSTEMS, INC., OR APPROVED EQUAL, THE SIZE AS INDICATED ON THE DRAWINGS. THEY SHALL BE INSTALLED AS PER MANUFACTURER'S INSTRUCTIONS.
10. SHOP AND ERECTION DRAWINGS SHALL BE SUBMITTED TO THE STRUCTURAL ENGINEER FOR REVIEW AND APPROVAL. NO FABRICATION OF STEEL SHALL COMMENCE WITHOUT APPROVED SHOP DRAWINGS.

FRAMING LUMBER

1. ALL FRAMING LUMBER WORK SHALL CONFORM TO THE FOLLOWING GOVERNING STANDARDS:
   A. AMERICAN INSTITUTE OF TIMBER CONSTRUCTION, "TIMBER CONSTRUCTION MANUAL" LATEST EDITION.
   B. NATIONAL FOREST PRODUCTS ASSOCIATION "NATIONAL DESIGN SPECIFICATIONS FOR WOOD CONSTRUCTION," LATEST EDITION.
2. FRAMING LUMBER SHALL HAVE EACH PIECE GRADE STAMPED, SHALL BE SURFACED DRY (EXCEPT STUDS, WHICH SHALL BE KILN DRIED) AND SHALL CONFORM TO THE FOLLOWING SPECIE AND GRADE:
   RAFTERS AND JOISTS: DOUGLAS FIR-LARCH #2
   BEAMS, GIRDERS AND HEADERS: DOUGLAS FIR-LARCH #1
   STUDS AND PLATES: DOUGLAS FIR-LARCH, STUD GRADE
3. TIMBER LUMBER SHALL CONFORM TO THE FOLLOWING SPECIE AND GRADE:
   POST AND TIMBER: DOUGLAS FIR-LARCH #1
   BEAMS AND STRINGERS: DOUGLAS FIR-LARCH #1
4. PRESERVATIVE TREATED WOOD: PROVIDE TREATED LUMBER COMPLYING WITH AWPS-2 AT SILL PLATE AND ALL LUMBER IN CONTACT WITH CONCRETE OR MASONRY.
5. ALL WOOD FRAMING INCLUDING DETAILS FOR BRIDGING, BLOCKING, FIRE STOPPING, ETC., SHALL CONFORM TO THE LATEST EDITION OF THE "NATIONAL DESIGN SPECIFICATION FOR WOOD CONSTRUCTION" AND ITS SUPPLEMENTS AND SHALL BE INSTALLED IN ACCORDANCE WITH THE NFPA "MANUAL FOR HOUSE FRAMING".
6. FASTENING SHALL BE IN ACCORDANCE WITH THE MOST RESTRICTIVE OF: THE INTERNATIONAL BUILDING CODE, (LATEST EDITION), THE 1992 CABO FOR 1 AND 2 FAMILY DWELLINGS, OR THE MANUFACTURER'S RECOMMENDED FASTENING SCHEDULES.
7. ALL FLUSH FRAMED CONNECTIONS SHALL BE MADE WITH APPROVED GALVANIZED STEEL JOIST OR BEAM HANGERS, MINIMUM 18 GAUGE, INSTALLED ACCORDING TO MANUFACTURER'S RECOMMENDATIONS.
8. WHERE FRAMING LUMBER IS FLUSH FRAMED TO MICROLLAM, STEEL OR FLITCH-PLATE GIRDER, SET THESE GIRDERS 1/2" CLEAR (MIN.) BELOW TOP OF FRAMING LUMBER, TO ALLOW FOR SHRINKAGE.
9. STUD BEARING WALLS ARE TO BE 2 x 4 @ 16"o/c. AT THE INTERIOR AND 2 x 6 @ 16"o/c. AT THE EXTERIOR, UNLESS NOTED OTHERWISE ON PLAN.
10. ALL RAFTERS AND JOISTS SHALL ALIGN DIRECTLY WITH STUDS BELOW, WHERE REQUIRED INSTALL ADDITIONAL STUDS.
11. LAP ALL PLATES AT CORNERS AND AT INTERSECTION OF PARTITIONS.
12. STAGGER ALL TOP AND BOTTOM PLATE SPLICES A MINIMUM OF 32 INCHES.
13. USE DOUBLE STUDS @ ENDS OF WALL AND ENDS OF WALL OPENINGS.
14. AT THE ENDS OF ALL BEAMS, HEADERS AND GIRDERS PROVIDE A BUILT UP OR SOLID POST WHOSE WIDTH IS AT LEAST EQUAL TO THE WIDTH OF THE MEMBER IT IS SUPPORTING AND WHOSE DEPTH IS 4" (NOM.) AT INTERIOR WALLS AND 6" (NOM.) AT EXTERIOR WALLS.
15. USE DOUBLE TRIMMERS AND HEADERS AT ALL FLOOR OPENINGS WHERE BEAMS ARE NOT DESIGNATED.
16. PROVIDE CROSS BRIDGING AT A MAXIMUM OF 8' o/c.
17. BUILT UP BEAMS LESS THAN 8" DEEP SHALL BE SPIKED TOGETHER WITH 2 - 16D NAILS @16"o/c. BUILT UP BEAMS GREATER THAN 8" DEEP SHALL BE SPIKED TOGETHER WITH 3 - 16D NAILS @16"o/c.
18. WHERE THERE IS NO PLYWOOD WALL SHEATHING, PROVIDE DIAGONALS AT ALL EXTERIOR CORNERS OF STUD WALLS AT EACH FLOOR. (1" x 4" BRACES LET INTO STUDS AND NAILED AT EACH STUD CROSSING WITH 2 - 10D NAILS.)
19. NO NEW OR EXISTING JOISTS SHALL BE CUT OR NOTCHED WITHOUT APPROVAL.

WOOD HEADER SCHEDULE

ROUGH OPENING WIDTH	HEADER 2 x 4 WALL	HEADER 2 x 6 WALL
LESS THAN 3'-0"	(2) 2 x 6	(3) 2 x 8
3'-1 TO 4'-0"	(2) 2 x 8	(3) 2 x 8
4'-1" TO 6'-0"	(2) 2 x 10	(3) 2 x 10
6'-1" TO 8'-0"	(2) 2 x 12	(3) 2 x 12
OVER 8'-0"	SEE PLANS	SEE PLANS

NOTE: PROVIDE (1) JACK STUD FOR SPANS LESS THAN 4'-0" WIDE,
(2) JACK STUDS FOR SPANS LESS THAN 8'-0" WIDE,
(3) JACK STUDS FOR SPANS OVER 8'-0" WIDE.

PLYWOOD SHEATHING

1. PROVIDE PLYWOOD SHEATHING COMPLYING WITH APA-GRADE STAMPED AND SHALL NOT EXCEED THE SPANS INTENDED FOR USE ON THE STAMP. ALL PLYWOOD SHALL BE MADE WITH EXTERIOR GLUE AND SHALL BE OF THE FOLLOWING THICKNESS:
   FLOOR: 3/4"
   WALL: 1/2"
   ROOF: 5/8"
2. ALL PLYWOOD SHALL BE GLUED AND SCREWED TO FLOOR JOISTS USING AN APA APPROVED ADHESIVE (B. F. GOODRICH PLA00 OR EQUAL).
3. USE PLY CLIPS OR OTHER EDGE SUPPORT AS REQUIRED FOR PLYWOOD SHEATHING.
4. LEAVE 1/16" SPACE AT ALL PLYWOOD PANEL END JOINTS AND 1/8" SPACE AT ALL PANEL EDGE JOINTS.

SPECIAL INSPECTIONS

1. INSPECTIONS REQUIRED BY THE N.J. STATE BUILDING CODE SHALL BE PERFORMED BY A TESTING AGENCY PROVIDED BY THE OWNER FOR THE FOLLOWING ITEMS:
   A. STRUCTURAL STEEL - ERECTION AND BOLTING (BC 1704.3.2, 1704.3.3)
   B. STRUCTURAL COLD-FORMED STEEL (BC 1704.3.4)
   C. MASONRY (BC 1704.5)
   D. STRUCTURAL SAFETY - STRUCTURAL STABILITY (BC 1704.19)

THE TESTING AGENCY FOR THE INSPECTIONS SHALL FILE ALL APPROPRIATE FORMS WITH THE BUILDING DEPARTMENT.

METAL DECKING

1. METAL DECKING WORK SHALL CONFORM TO THE AISI "NORTH AMERICAN SPECIFICATION FOR THE DESIGN OF COLD-FORMED STEEL STRUCTURAL MEMBERS," LATEST EDITION PER GOVERNING BUILDING CODE.
2. METAL DECKING UNITS AND ACCESSORY ITEMS SHALL BE FORMED FROM STEEL SHEETS CONFORMING TO ASTM A1008 OR A653 WITH A MINIMUM YIELD STRENGTH OF 33,000 PSI. BEFORE FORMING, THE STEEL SHEET SHALL RECEIVE A HOT DIP GALVANIZED COATING CONFORMING TO ASTM A653, GRADE 90.
3. METAL DECKING SHALL BE SHORED AS REQUIRED BY PLANS OR BY SPAN AND LOAD CONDITIONS TO SUPPORT ALL CONSTRUCTION LOADS.
4. EXCEPT AS OTHERWISE NOTED, DECK SHALL BE ATTACHED TO STRUCTURAL STEEL BY 3/4"Ø FUSION WELDS @12"o/c. AT END AND INTERIOR SUPPORTS PERPENDICULAR TO THE DECK SPAN AND AT EDGE AND INTERIOR SUPPORTS PARALLEL TO THE DECK SPAN. WELDS MAY BE OMITTED IN RIBS IN WHICH SHEAR CONNECTORS ARE TO BE APPLIED, EXCEPT THAT EACH DECK SECTION SHALL HAVE SUFFICIENT WELDS TO ADEQUATELY SECURE THE DECK, BRING THE DECK INTO DIRECT CONTACT WITH THE SUPPORTING STEEL AND TO PROVIDE SUFFICIENT DIAPHRAGM STRENGTH TO MAINTAIN BUILDING ALIGNMENT.
5. PRIOR TO FABRICATION, THE CONTRACTOR SHALL SUBMIT SHOP DRAWINGS FOR THE METAL DECKING, SHOWING DECK GAUGE, SIZE AND LAYOUT AS WELL AS CLOSURE CONDITIONS, WELDS TO SUPPORTS AND SIDE LAP DETAILS.
6. ALL REINFORCED OPENINGS IN METAL DECK SHALL BE INSTALLED BY METAL DECK SUBCONTRACTOR. METAL DECK SUBCONTRACTOR TO PROVIDE REINFORCING AS PER TYPICAL DETAILS.
7. AT METAL DECK WITHOUT CONCRETE FILL THE FOLLOWING MAY BE ATTACHED WITHOUT SPECIFIC APPROVAL OF THE STRUCTURAL ENGINEER. ACOUSTICAL TILE AND GYPSUM BOARD CEILING ONLY; NO PIPING, DUCTING OR CONDUIT. MAXIMUM CEILING WEIGHT - 3.5 PSF. MAXIMUM WIRE HANGER LOAD = 60#.
8. WHERE SUSPENSION OF HANGER WIRES ARE REQUIRED BY OTHERS, VERIFY AND COORDINATE LOCATIONS, PATTERNS, SPACING, ETC. WITH THE APPROPRIATE TRADE. DRILL OR PUNCH HOLES AT BOTTOM OF DECK FLUTES OF SUFFICIENT SIZE TO PASS SUPPORT WIRES. WIRE SUPPORTS HALL BE LOOPED AND SECURED WITH A MINIMUM OF THREE (3) TIGHT TURNS AROUND A MINIMUM 1½"X12" LONG FURRING CHANNEL OR NO. 3x12" LONG REINFORCING BAR CENTERED ABOVE THE HOLE AND LAID IN THE DECK FLUTES.

COLD FORMED METAL FRAMING

1. ALL COLD FORMED METAL FRAMING WORK SHALL COMPLY WITH THE AISI "NORTH AMERICAN SPECIFICATION FOR THE DESIGN OF COLD FORMED STEEL STRUCTURAL MEMBERS," LATEST EDITION PER GOVERNING CODE AS WELL AS ANSI A42.4 "SPECIFICATIONS FOR INTERIOR LATHING AND FURRING".
2. ALL PLYWOOD APPLIED TO METAL JOISTS SHALL BE SCREWED AND GLUED TO THE JOISTS. THE ADHESIVE SHALL BE AN APA APPROVED ELASTOMERIC ADHESIVE.
3. INSTALL METAL FRAMING IN ACCORDANCE WITH MANUFACTURER'S WRITTEN INSTRUCTIONS AND RECOMMENDATIONS, UNLESS OTHERWISE INDICATED. ALL MATERIALS SHALL BE GALVANIZED.
4. ALL LOAD BEARING STUDS , JOISTS, AND ACCESSORIES SHALL BE MADE OF THE MINIMUM TYPE, SIZE, GAUGE, AND SPACING SHOWN ON DRAWINGS AND PROVEN IN THE CALCULATIONS.
5. SUBMIT PE SIGNED AND SEALED SHOP DRAWINGS AND CALCULATIONS FOR ALL LOAD BEARING COLD FORMED METAL FRAMING (JOISTS, STUDS, ETC.) PRIOR TO FABRICATION SHOP DRAWINGS SHALL INDICATE PLACING OF ALL FRAMING MEMBERS SHOWING TYPE, SIZE, GAGE, NUMBER, LOCATION AND SPACING. SHOP DRAWINGS SHALL ALSO INDICATE SUPPLEMENTAL STRAPPING, BRACING, SPLICES, BRIDGING, ACCESSORIES AND DETAILS REQUIRED FOR PROPER INSTALLATION. SEE SPECIFICATIONS, LOADING DIAGRAMS AND SCHEDULE FOR STRUCTURAL PERFORMANCE CRITERIA.
6. SHOP DRAWINGS SHALL SHOW SIZE AND LENGTH OF WELDS FOR ALL WELDED CONNECTIONS AND TYPE, SIZE AND NUMBER OF SCREWS FOR ALL SCREWED CONNECTIONS. SUBMIT MANUFACTURER DATA GIVING STRENGTH VALUES FOR ALL FASTENERS USED. WELDED CONNECTIONS SHALL BE WIRE BRUSHED AND COATED WITH A ZINC RICH PAINT.
7. ALL GALVANIZED STUDS AND/ OR JOISTS, 10, 12, 14 AND 16 GAGE, SHALL BE FORMED FROM STEEL THAT CORRESPONDS TO THE REQUIREMENTS OF ASTM A446, GRADE D, WITH A MINIMUM YIELD OF 50,00 PSI.
8. ALL GALVANIZED 18 AND 20 GAGE STUDS AND/ OR JOISTS, AND ALL GALVANIZED TRACK, BRIDGING AND ACCESSORIES SHALL BE FORMED FROM STEEL THAT CORRESPONDS TO THE REQUIREMENTS OF ASTM A446, GRADE A, WITH A MINIMUM YIELD OF 33,000 PSI.
9. ALL STUDS, JOIST AND ACCESSORIES SHALL BE PRIMED WITH RUST - INHIBITIVE PAINT MEETING THE PERFORMANCE REQUIREMENTS OF TT-P-636C, OR SHALL BE FORMED FROM STEEL HAVING A G-60 GALVANIZED COALING.
10. FRAMING COMPONENTS MAY BE PRE-ASSEMBLED INTO PANELS PRIOR TO ERECTING. PREFABRICATED PANELS SHALL BE SQUARE WITH COMPONENTS ATTACHED IN A MANNER AS TO PREVENT RACKING.
11. AXIALLY LOADED STUDS SHALL BE INSTALLED IN A MANNER WHICH WILL ASSURE THE ENDS OF THE STUDS ARE POSITIONED AGAINST THE INSIDE TRACK WEB, PRIOR TO STUD AND TRACK ATTACHMENT.
12. STUDS SHALL BE PLUMBED, ALIGNED AND SECURELY ATTACHED TO THE FLANGES OR WEBS OF BOTH UPPER AND LOWER TRACKS.
13. WALL STUD BRIDGING SHALL BE ATTACHED IN A MANNER TO PREVENT STUD ROTATION. BRIDGING ROWS SHALL BE SPACED ACCORDING TO THE FOLLOWING SCHEDULE. WALLS UP TO 10'-0" HEIGHT, ONE ROW AT MID-HEIGHT. WALLS EXCEEDING 10'-0" HEIGHT; BRIDGING ROWS SPACED NOT TO EXCEED 5'-0" ON-CENTER.
14. CONTRACTOR IS RESPONSIBLE FOR PROVIDING ALL TEMPORARY BRACING AND SHORING AS REQUIRED UNTIL ERECTION IS COMPLETED AND ALL ATTACHED ADJACENT FRAMING IS COMPLETE.
15. SPLICES IN AXIALLY LOADED STUDS ARE NOT PERMITTED.
16. JOISTS SHALL BE LOCATED DIRECTLY OVER BEARING STUDS OR LOAD DISTRIBUTION MEMBER TO BE PROVIDED AT THE TOP TRACK.

POST INSTALLED ADHESIVE AND MECHANICAL ANCHORS

1. POST INSTALLED ANCHORAGE SHALL BE INSTALLED PER MANUFACTURER TECHNICAL DATA TO INTACT BASE MATERIAL. NOTIFY ENGINEER OF RECORD PRIOR TO INSTALLATION IF BASE MATERIAL CONDITION DEVIATES FROM STRUCTURAL DRAWINGS OR MANUFACTURER TECHNICAL DATA.
2. MANUFACTURER DATA FOR ALTERNATE ANCHORAGE PROPOSED BY CONTRACTOR SHALL BE SUBMITTED TO ENGINEER OF RECORD FOR REVIEW AND APPROVAL. SUBMITTAL SHALL INCLUDE THE ICC EVALUATION SERVICE REPORT WITH ICC TESTED CAPACITY MEETING OR EXCEEDING CAPACITY OF ANCHORAGE SPECIFIED IN CONTRACT DOCUMENTS.
3. UNLESS OTHERWISE INDICATED, POST INSTALLED ANCHORAGE SHALL BE ADHESIVE TYPE HILTI HIT-HY200 INTO CONCRETE OR GROUT FILLED CMU OR STONE BASE MATERIAL OR HILTI-HIT HY70 INTO BRICK MASONRY OR UNGROUTED CMU BASE MATERIAL.
4. EXISTING REINFORCING BARS IN THE STRUCTURE MAY CONFLICT WITH SPECIFIC ANCHOR LOCATIONS. UNLESS NOTED ON THE DRAWINGS THAT THE EXISTING REBARS CAN BE CUT, THE CONTRACTOR SHALL REVIEW THE EXISTING STRUCTURAL DRAWINGS AND SHALL UNDERTAKE TO LOCATE THE POSITION OF THE REINFORCING BARS BY A MEANS APPROVED BY THE ENGINEER OF RECORD.
5. ANY ANCHORAGE DESIGN SUBMITTED AS AN ALTERNATIVE TO THAT SHOWN ON THESE DRAWINGS SHALL BE SUBMITTED ON P.E. SIGNED AND SEALED DRAWINGS & CALCULATIONS. THIS P.E. SHALL BE HIRED BY THE CONTRACTOR.

ENGINEERED WOOD PRODUCTS

1. RIM BOARDS: PROVIDE CONTINUOUS 1 ¼" THICK RIM BOARDS, TIMBERSTRAND LSL AS MANUFACTURED BY WEYERHAEUSER OR APPROVED EQUAL. INSTALL IN COMPLIANCE WITH THE MANUFACTURER'S RECOMMENDATIONS AT THE PERIMETER OF ALL FLOOR PLATFORMS.

LOADING SCHEDULE: EXISTING BUILDING (PSF)

BUILDING A

FLOOR	CONCRETE SLAB	STEEL	WOOD STRUCTURE	HUNG CEILING/MECH./ ROOFING/ INSULLATION	PARTITIONS	FLOOR FINISH	TOTAL DEAD LOAD	SNOW LOAD/ LIVE LOAD	TOTAL LOAD
ROOF	--	--	10	10	--	--	20	30	50
3RD FLOOR	--	--	15	5	12	8	40	60	100
2ND FLOOR	--	--	15	5	12	8	40	60	100
1ST FLOOR	60	--	15	--	12	8	60	100	160
LOWER FLOOR	60	--	--	--	--	--	60	125	185
LOADING DOCK	97	--	--	--	--	--	97	100	197

BUILDING A-1

FLOOR	CONCRETE SLAB	STEEL	WOOD STRUCTURE	HUNG CEILING/MECH.	PARTITIONS	FLOOR FINISH	TOTAL DEAD LOAD	LIVE LOAD	TOTAL LOAD
ROOF	--	--	25	5	--	--	30	30	50
3RD FLOOR	--	7	6	5	12	7	37	60	100
2ND FLOOR	--	7	6	5	12	7	37	60	100
1ST FLOOR	59	7	--	--	12	7	85	100	160
LOWER FLOOR	--	--	--	--	--	--	--	--	--
LOADING DOCK	--	--	--	--	--	--	--	--	--

LOADING SCHEDULE: NEW ROOF (PSF)

BUILDING A

FLOOR	WOOD STRUCTURE	ROOFING/ INSULLATION MEP	GREEN ROOF	PAVERS	TOTAL DEAD LOAD	SNOW & ICE LOAD/ LIVE LOAD	TOTAL LOAD
TYPICAL ROOF - UNOCCUPIED	10	10	--	--	20	30	50
GREEN ROOF - UNOCCUPIED	10	10	70	--	90	30	110
PROMENADE - OCCUPIED	10	10	--	10	30	60	90

BUILDING A-1

FLOOR	WOOD STRUCTURE	ROOFING/ INSULLATION MEP	SOLAR PANELS	PAVERS	TOTAL DEAD LOAD	SNOW & ICE LOAD/ LIVE LOAD	TOTAL LOAD
TYPICAL ROOF - UNOCCUPIED	10	10	--	--	20	30	50
SOLAR PANEL ROOF AREAS - UNOCCUPIED	10	10	5	--	25	30	55

DESIGN LOAD PARAMETERS

GOVERNING CODE:
NEW JERSEY STATE BUILDING CODE, LATEST EDITION
BUILDING CATEGORY:
I - BUILDINGS AND OTHER STRUCTURES EXCEPT THOSE LISTED IN CATEGORIES II, III, AND IV
ROOF SNOW LOAD:

25	PSF	P_g	GROUND SNOW LOAD
20	PSF	P_f	FLAT ROOF SNOW LOAD
1.0	PSF	C_e	SNOW EXPOSURE FACTOR
1.0		I_s	SNOW LOAD IMPORTANCE FACTOR
1.0		C_t	THERMAL FACTOR

WIND LOAD (ASCE 7-98 METHOD 2):

100	MPH	V	BASIC WIND SPEED (3-SEC. GUST)
1.0		I_w	WIND IMPORTANCE FACTOR
C			WIND EXPOSURE(S)

SEISMIC DESIGN DATA:

1.0		I_E	SEISMIC IMPORTANCE FACTOR
II			SEISMIC USE GROUP
.3	%g	S_{DS}	SHORT PERIOD SPECTRAL RESPONSE COEFF.
.1	%g	S_{D1}	1 SECOND SPECTRAL RESPONSE COEFF.
D			SITE CLASS
B			SEISMIC DESIGN CATEGORY

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KEY PLAN

OWNER
ISLES, INC
10 WOOD STREET
TRENTON, NEW JERSEY

BUILDING A & A1 ROOF ALTERATION

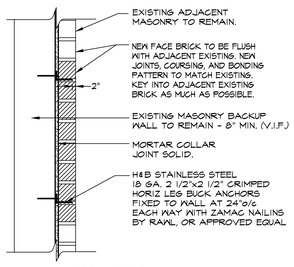
1 JOHNSTON AVE
HAMILTON, NEW JERSEY

SEAL

DRAWING TITLE
GENERAL NOTES

AS NOTED
10-14-08

DRAWING
S-200



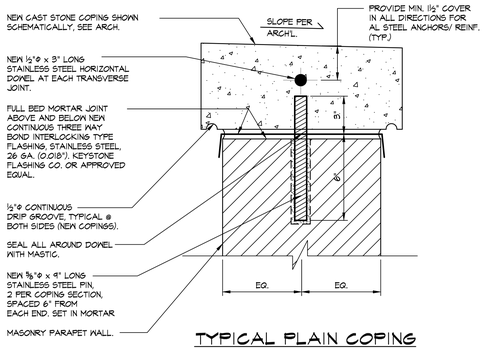
TYPICAL SECTION

NOTES:

1. INDICATES BRICK TO BE REPLACED. NEW BRICK IS TO MATCH EXISTING BRICK IN EXACT DIMENSIONS, COLOR, TEXTURE, ETC. - CAREFULLY CUT EXISTING HEADERS, INCLUDING DIAGONAL HEADERS, TO CREATE UNIFORM BACKUP SURFACE FOR NEW FACE BRICK. REPLACE EXISTING HEADER BRICK WITH NEW HALF BRICK HEADER BRICKS. SEE ARCH'L DWGS. FOR EXTENT OF FACE BRICK REPLACEMENT.
2. NEW MASONRY IS TO MATCH EXISTING FACADE BONDING PATTERN. BONDING PATTERN VARIES THROUGHOUT BUILDING. VERIFY IN FIELD.
3. SEE SPECIFICATIONS FOR FURTHER DETAILS ABOUT MORTAR, ANCHORS, MASONRY, ETC. (TYPICAL).
4. REUSE SALVAGED BRICK PER RECOMMENDATIONS OF DESIGN TEAM.
5. PRE SOAK ALL NEW BRICK UNITS FOR 24 HOURS (MIN.) PRIOR TO INSTALLATION - SEE SPEC'S FOR DETAILS. WET CURE INSTALLED BRICK AND MORTAR (ESPECIALLY IN HOT WEATHER) TO PREVENT PREMATURE DRYING AND CRACKING OF THE MORTAR.
6. THIS DETAIL DOES NOT APPLY TO PARAPETS.

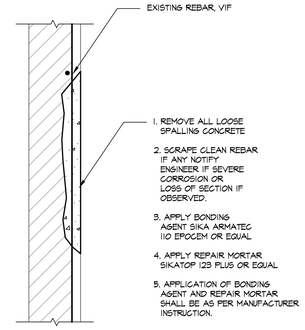
TYPICAL DETAIL-FACE BRICK REPLACEMENT

SCALE: N.T.S.

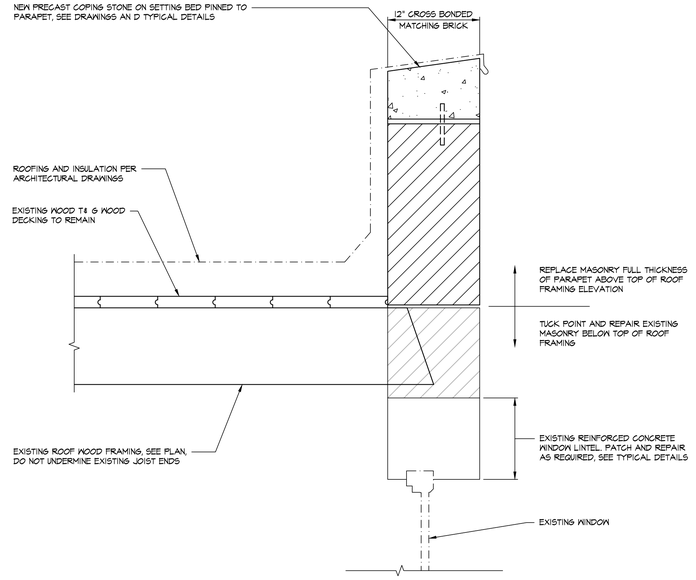


TYPICAL PLAIN COPING STONE DETAIL

SCALE:N.T.S.

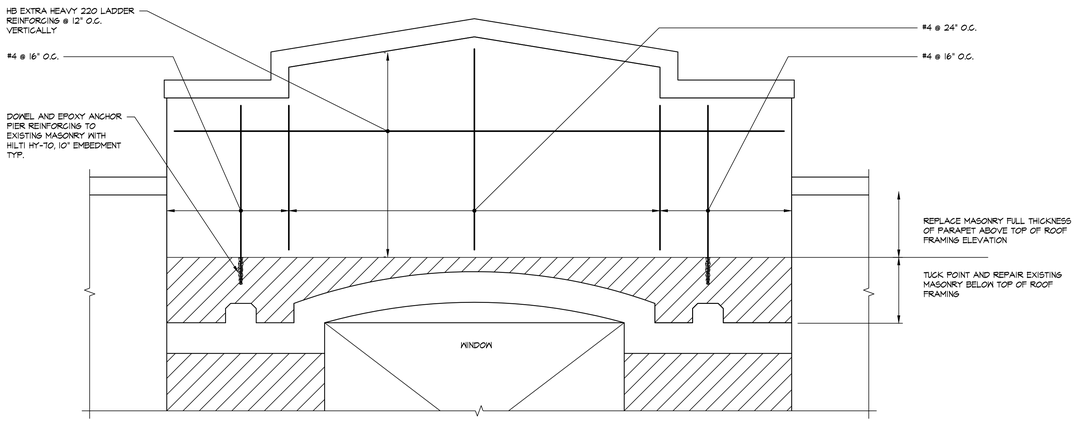


TYPICAL DETAIL CONCRETE SPALL REPAIR



TYPICAL DETAIL - REPAIR OF LOW ROOF PARAPET, H ≤ 3'-0"

SCALE 1 ½"=1'-0"

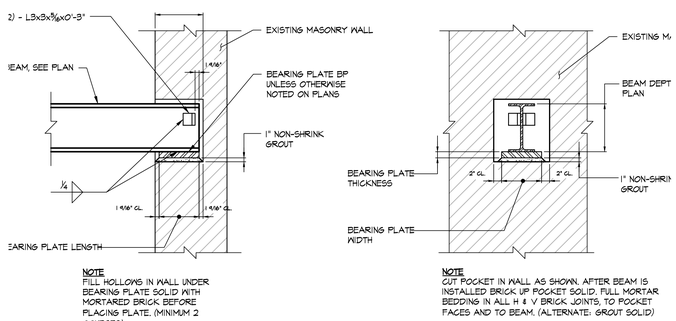


TYPICAL DETAIL - DECORATIVE PARAPET REINFORCING

SCALE: ½"=1'-0"

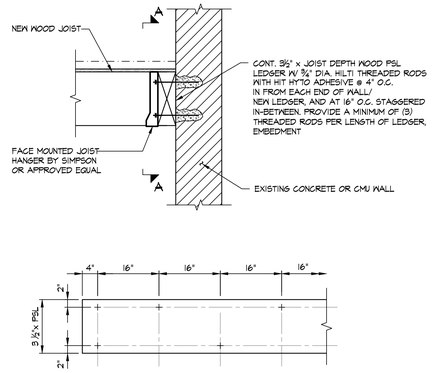
NOTES:

1. SEE TYPICAL DETAIL - REPAIR OF LOW PARAPET FOR INFORMATION NOT SHOWN.
2. SEE ARCHITECTURAL DRAWINGS FOR ADDITIONAL MASONRY REPAIR REQUIREMENTS.



BEARING PL SCHEDULE			
MARK	LENGTH (∥ TO BM.)	WIDTH (⊥ TO BM.)	THICKNESS
BP-1	8	8	⅜"
BP-2			
BP-3			

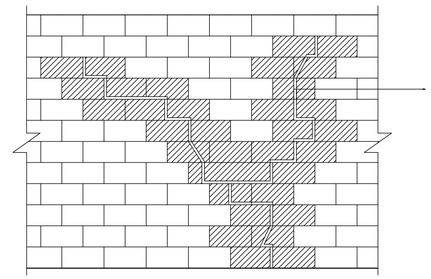
TYPICAL DETAIL BEAM BEARING ON EXISTING WALL



SECTION A-A

TYPICAL DETAIL WOOD LEDGER SUPPORT OF JOISTS @ CMU OR CONCRETE WALL

NOTE:
PARAPET HEIGHT IS TO MATCH EXISTING.

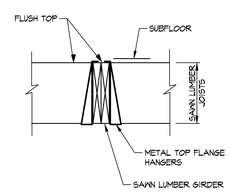


NOTES:

1. DENOTES BRICK TO BE REPLACED. WHERE CRACK IS THRU WALL, REPLACE ALL WYTHES OF BRICK ON EACH SIDE OF CRACK TO 1st MORTAR JOINT. REPLACE EXISTING HEADERS WITH NEW HEADERS. REPLACE LOOSE AND CRACKED BRICKS. WHERE CRACK IS ONLY IN OUTER WYTHE, REPLACE ONLY OUTER WYTHE.
2. WHERE CRACK IS OPEN AND ¼" OR LESS AND IS PRESENT ONLY IN THE OUTER WYTHE AND ONLY IN JOINTS, RAKE AND REPOINT JOINTS ONLY.

TYPICAL DETAIL REPAIR IN BRICK MASONRY

SCALE: N.T.S.



TYPICAL SAWN LUMBER JOISTS TO SAWN LUMBER GIRDERS

SCALE: 1"= 1'-0"

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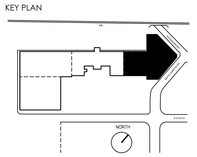
KEY PLAN



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1 JOHNSTON AVE
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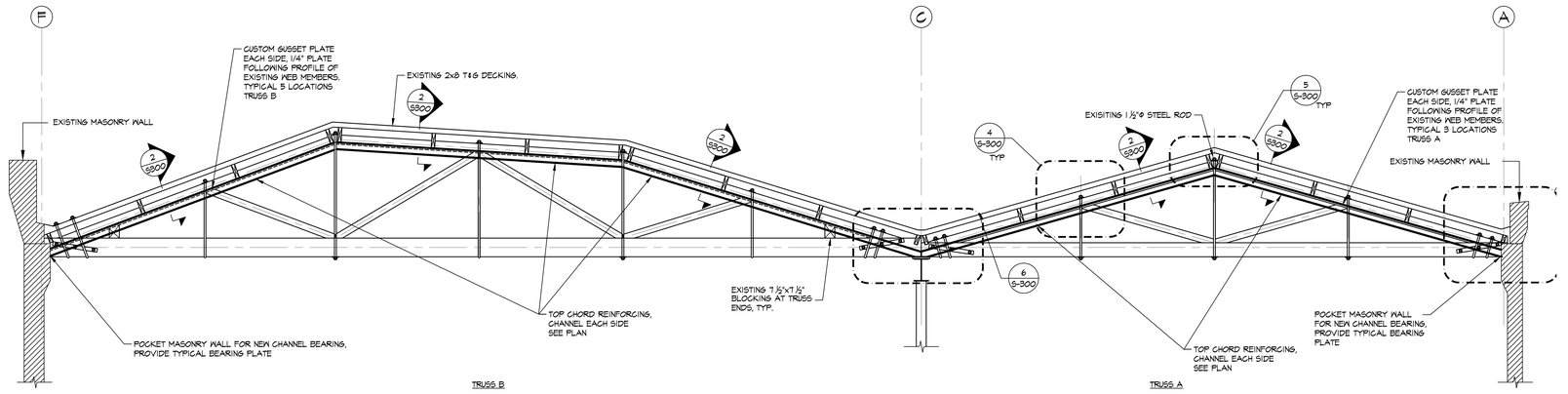
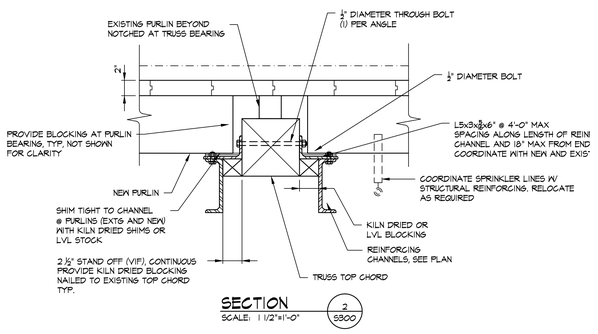
AS NOTED
10-14-08

TYPICAL DETAILS

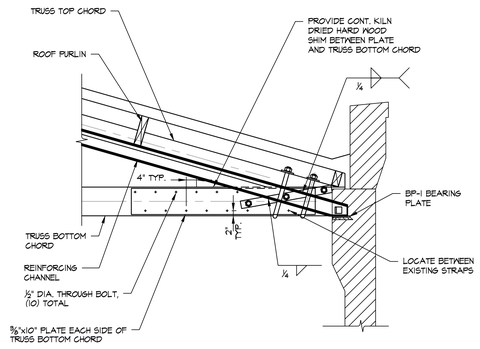
DRAWING
S-201



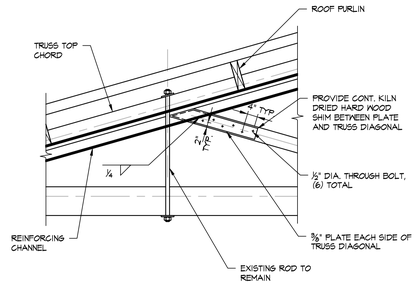
EXISTING TRUSS ELEVATION
1 S300
SCALE: 1/4"=1'-0"



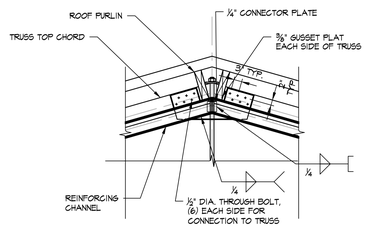
SECTION
SCALE: 1 1/2"=1'-0"
2 S300



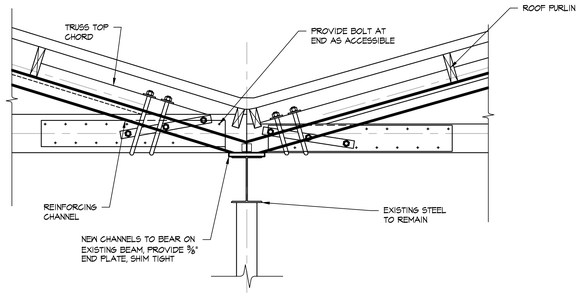
SECTION
SCALE: 1 1/2"=1'-0"
3 S-300



SECTION
SCALE: 1 1/2"=1'-0"
4 S-300



SECTION
SCALE: 1 1/2"=1'-0"
5 S-300



NOTE: SEE SECTION 3/S300 FOR INFORMATION NOT SHOWN

SECTION
SCALE: 1 1/2"=1'-0"
6 S-300

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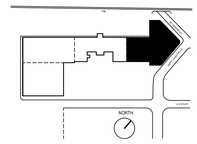

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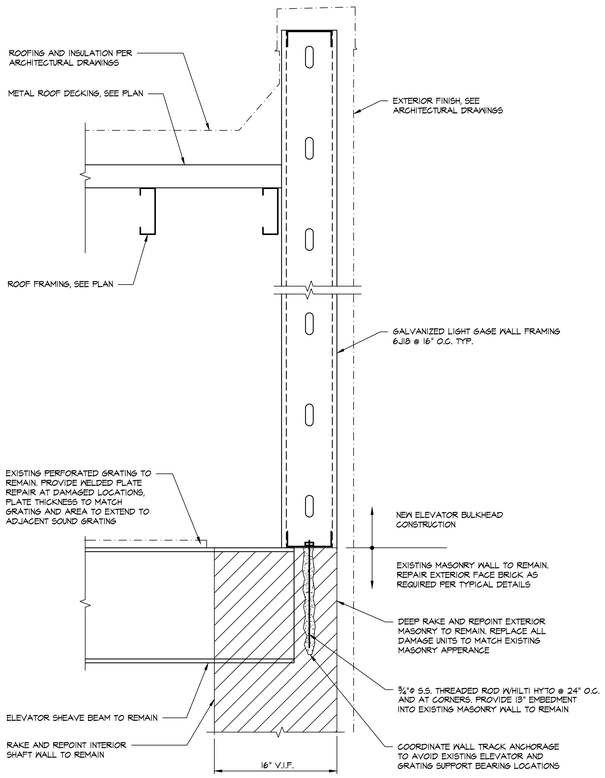
AS NOTED
10-14-08

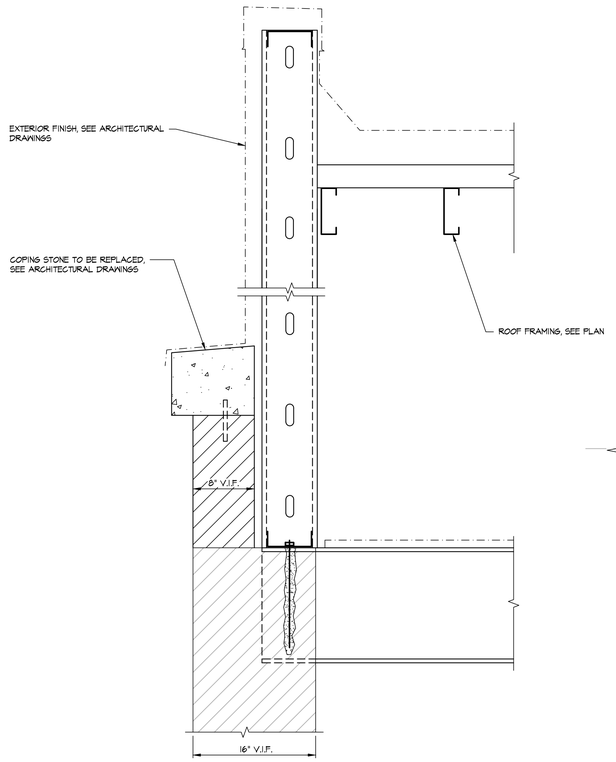
SECTIONS

DRAWING
S-300



ELEVATOR BULKHEAD
SCALE: 1 ½"=1'-0"

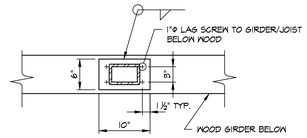
1 / S301



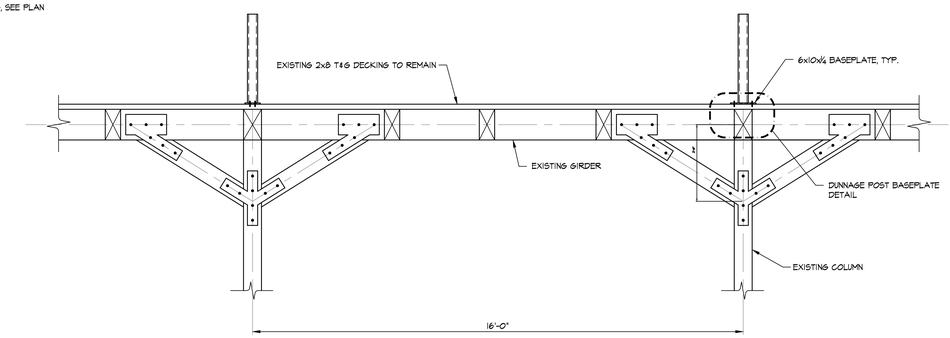
ELEVATOR BULKHEAD
SCALE: 1 ½"=1'-0"

2 / S301

NOTE:
SEE SECTION 1/S401 FOR INFORMATION NOT SHOWN.

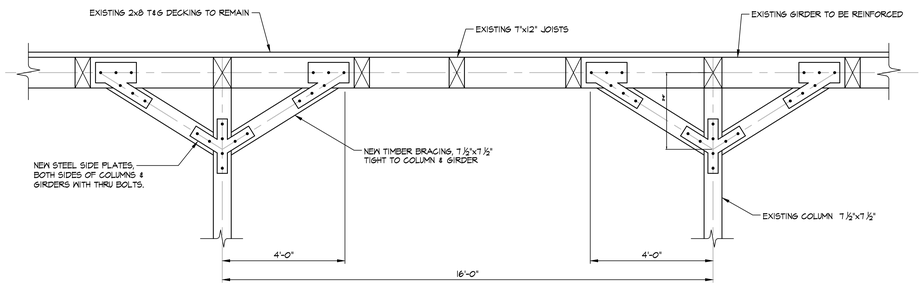


DUNNAGE POST BASEPLATE
SCALE 1"=1'-0"



SECTION
SCALE: ½"=1'-0"

3 / S301



ELEVATION AT GIRDER
SCALE: ½"=1'-0"

4 / S301

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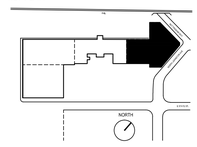

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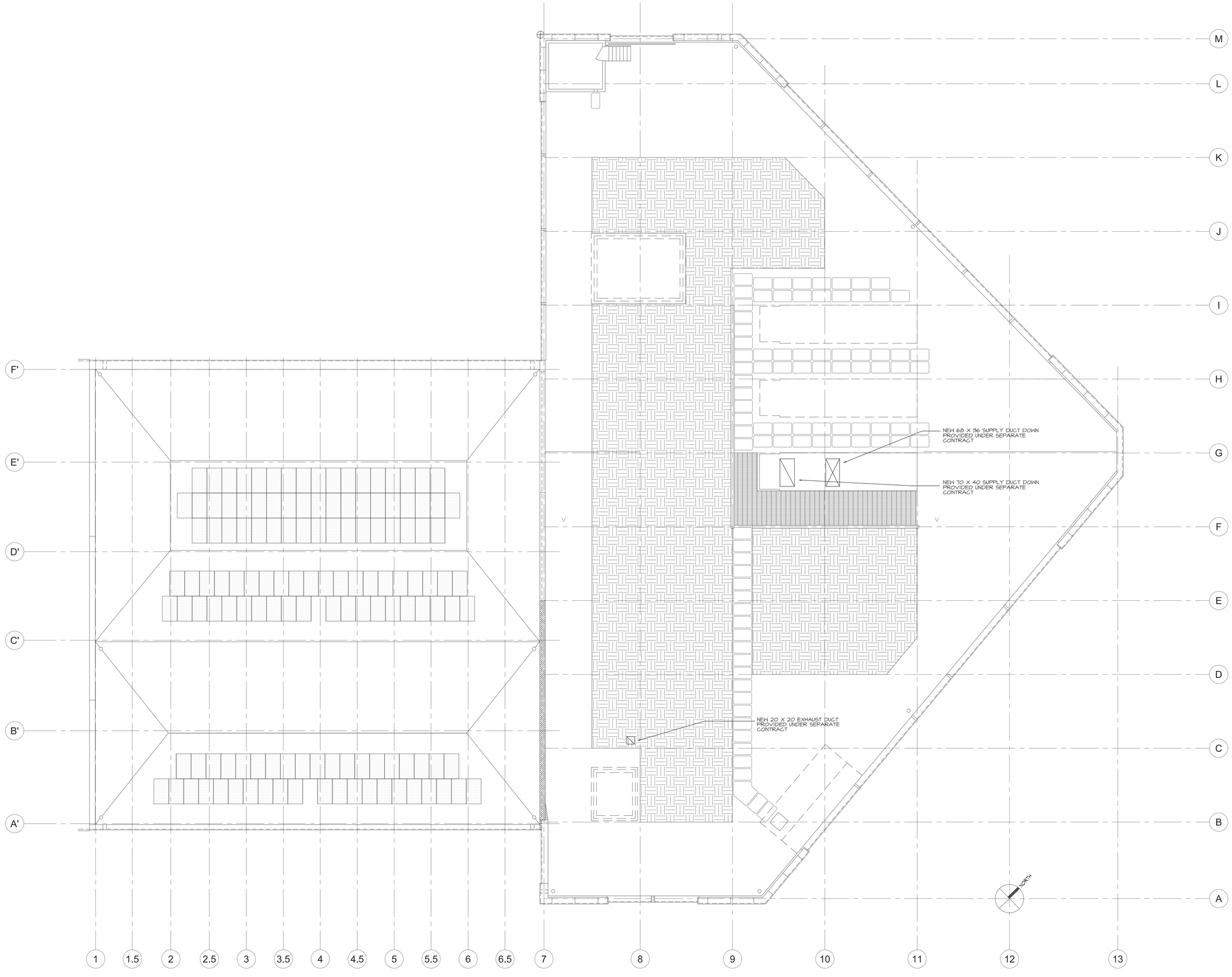
10-14-08

SECTIONS

DRAWING
S-301



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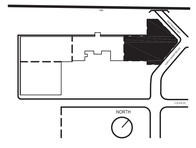
NOT FOR CONSTRUCTION OR BIDDING

NO.	ISSUANCE	DATE
1	FINAL OWNER'S REVIEW-BID SET	APR 18 2014
5	BID SET DIVISION 1 TO BE CONFIRMED	JUL 18 2014

KEY PLAN



OWNER
ISLES, INC
10 WOOD STREET
TRENTON, NEW JERSEY

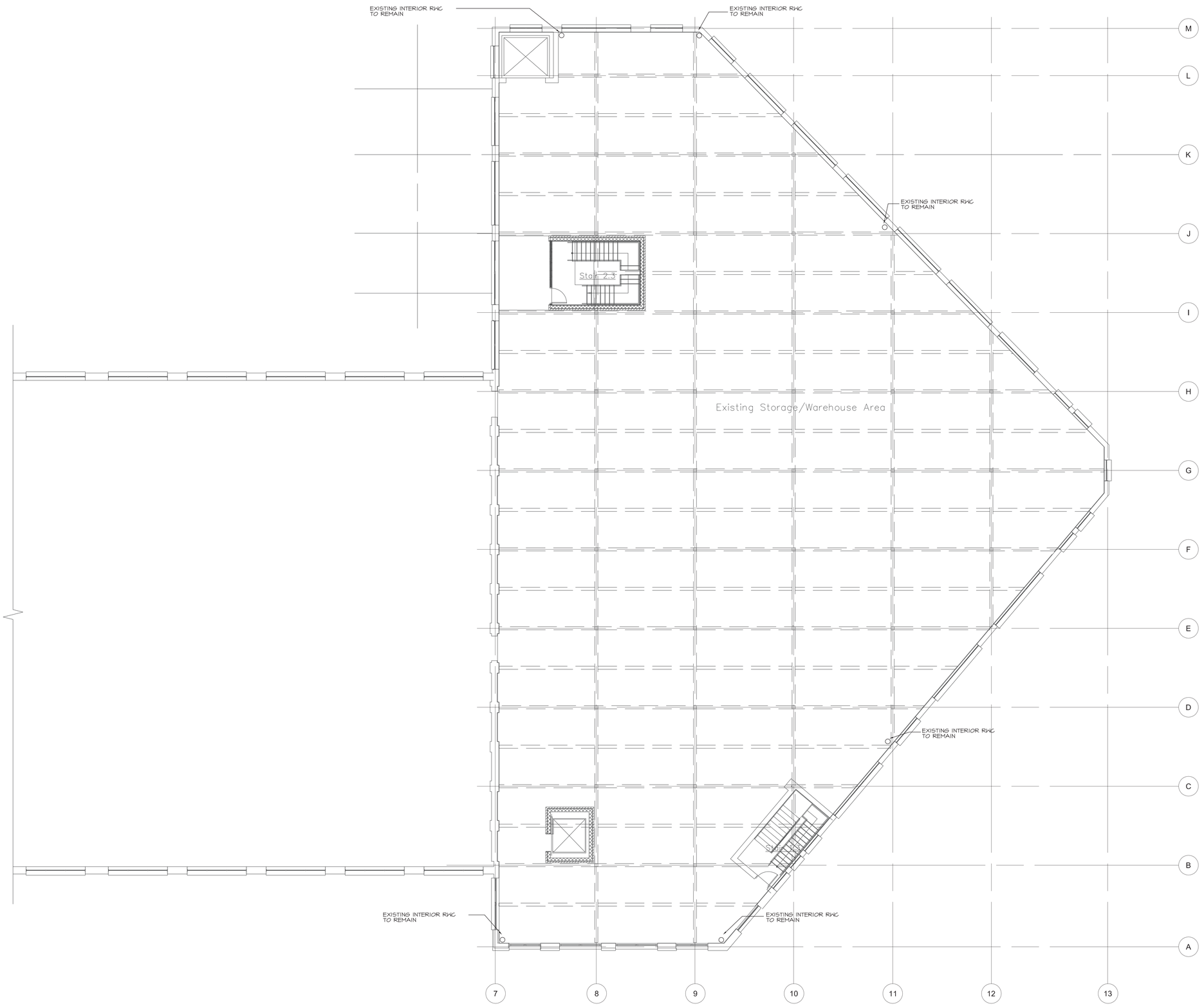
BUILDING A & A1 ROOF ALTERATION

1 JOHNSTON AVE
HAMILTON, NEW JERSEY

SEAL

DRAWING TITLE
PROPOSED ROOF PLAN
HVAC

DRAWING
M-104



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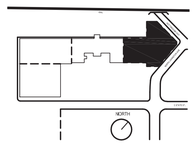

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SEAL

DRAWING TITLE
THIRD FLOOR PLAN
PLUMBING

DRAWING
P-103

FLOOR, ROOF & AREA DRAIN SCHEDULE

DRAIN	MANUFACTURER & MODEL NUMBER	REMARKS
ROOF DRAIN	J. R. SMITH MODEL NO. 1010	

REMOVE EXISTING ROOF & REPLACE WITH NEW ROOF DRAIN, CONNECT NEW ROOF DRAIN TO EXISTING INTERIOR RWC

6" ROOF DRAIN

SCUPPER FOR SECONDARY OVERFLOW DRAIN

REMOVE EXISTING ROOF & REPLACE WITH NEW ROOF DRAIN, CONNECT NEW ROOF DRAIN TO EXISTING INTERIOR RWC

6" ROOF DRAIN

EXISTING SCUPPER FROM BULKHEAD TO REMAIN

REMOVE EXISTING ROOF & REPLACE WITH NEW ROOF DRAIN, CONNECT NEW ROOF DRAIN TO EXISTING INTERIOR RWC

6" ROOF DRAIN

NEW ROOF DRAIN CONNECT TO EXISTING INTERIOR RWC

SCUPPER FOR SECONDARY OVERFLOW DRAIN

4" ROOF DRAIN 1250 SQ. FT.

NEW ROOF DRAIN CONNECT TO EXISTING INTERIOR RWC

SCUPPER FOR SECONDARY OVERFLOW DRAIN

4" ROOF DRAIN 1600 SQ. FT.

6" ROOF DRAIN 4800 SQ. FT.

NEW ROOF DRAIN CONNECT TO EXISTING INTERIOR RWC

4" ROOF DRAIN

NEW ROOF DRAIN CONNECT TO EXISTING INTERIOR RWC

NEW NON-FREEZE HYDRANT PROVIDE UNDER SEPRATE CONTRACT

NEW 3" PLUMBING VENT PROVIDE UNDER SEPRATE CONTRACT

NEW 4" PLUMBING VENT PROVIDE UNDER SEPRATE CONTRACT

NEW 3" PLUMBING VENT PROVIDE UNDER SEPRATE CONTRACT

6" ROOF DRAIN

REMOVE EXISTING ROOF & REPLACE WITH NEW ROOF DRAIN, CONNECT NEW ROOF DRAIN TO EXISTING INTERIOR RWC

4" ROOF DRAIN 1100 SQ. FT.

SCUPPER FOR SECONDARY OVERFLOW DRAIN

NEW ROOF DRAIN CONNECT TO EXISTING INTERIOR RWC

4" ROOF DRAIN 1250 SQ. FT.

SCUPPER FOR SECONDARY OVERFLOW DRAIN

NEW ROOF DRAIN CONNECT TO EXISTING INTERIOR RWC

6" ROOF DRAIN

SCUPPER FOR SECONDARY OVERFLOW DRAIN

REMOVE EXISTING ROOF & REPLACE WITH NEW ROOF DRAIN, CONNECT NEW ROOF DRAIN TO EXISTING INTERIOR RWC

6" ROOF DRAIN 4400 SQ. FT.

REMOVE EXISTING ROOF & REPLACE WITH NEW ROOF DRAIN, CONNECT NEW ROOF DRAIN TO EXISTING INTERIOR RWC

SCUPPER FOR SECONDARY OVERFLOW DRAIN

NORTH

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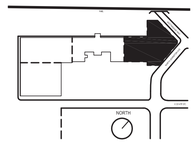

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DRAWING
P-104

ABBREVIATIONS

@	AT
A OR AMP	AMPERE
ABV	ABOVE
AC	ABOVE COUNTER
A.C.	ALTERNATING CURRENT
AF	AMPERE FRAME
A.F.C.	ABOVE FINISH CEILING
A.F.C.I.	ARC FAULT CIRCUIT INTERRUPTER
A.F.F.	ABOVE FINISH FLOOR
A.F.G.	ABOVE FINISH GRADE
A.I.C.	AMPERE INTERRUPTING CAPACITY
AL.	ALUMINUM
ALT.	ALTERNATE
AM	AMMETER
ANNUN.	ANNUNCIATOR
ANT.	ANTENNA
ARCH.	ARCHITECT
AS	AMMETER SWITCH
AT	AMPERE TRIP
ATC	AUTOMATIC TEMPERATURE CONTROL
ATS	AUTOMATIC TRANSFER SWITCH
AUX.	AUXILIARY
BD	BUS DUCT
BIL	BASIC INPULSE LEVEL
BKBD	BACKBOARD
B.F.C.	BELOW FINISH CEILING
C. OR CDT.	CONDUIT
C/B	CIRCUIT BREAKER
CBL.	CABLE
CC	CASEWORK CONTRACTOR
CKT	CIRCUIT
CLG.	CEILING
CONN.	CONNECTION
CONST.	CONSTRUCTION
CONT.	CONTINUOUS
CONTR.	CONTRACTOR
CPT	CONTROL POWER TRANSFORMER
CT	CURRENT TRANSFORMER
CU.	COPPER
DEMO.	DEMOLITION
DC	DIRECT CURRENT
DIA.	DIAMETER
DIC.	DICTATION
DISC.	DISCONNECT
DIST.	DISTRIBUTION
DWG.	DRAWING
DP	DISTRIBUTION PANEL
E	EMERGENCY
EA.	EACH
E.C.	ELECTRICAL CONTRACTOR
E.D.P.	ELECTRICAL DATA PROCESSING
ELEC.	ELECTRICAL
ELEV.	ELEVATOR
EMT	ELECTRICAL METALLIC TUBING
ENCL.	ENCLOSURE
E.O.	ELECTRICALLY OPERATED
E.R.	EXISTING RELOCATED
EQUIP.	EQUIPMENT
E.W.C.	ELECTRIC WATER COOLER
EX.	EXISTING TO REMAIN
F	FUSED
F/A	FIRE ALARM
F.B.O.	FURNISHED BY OWNER
F.D.	FEEDER DUCT
FDR.	FEEDER
F.H.C.	FIRE HOUSE CABINET
F.I.	FILM ILLUMINATOR
FL.	FLOOR.
FLUOR.	FLUORESCENT
F.S.	FLOW SWITCH
FUT.	FUTURE
G	EQUIPMENT GROUND CONDUCTOR
GA.	GAUGE
G.C.	GENERAL CONTRACTOR
G.F.C.I.	GROUND FAULT CIRCUIT INTERRUPTER
G.F.S.C.	GROUND FAULT SENSING RELAY
GND.	GROUND
GSG	SYSTEM CIRCUIT GROUND CONDUCTOR
H.I.D.	HIGH INTENSITY DISCHARGE
H.O.A.	HAND-OFF-AUTOMATIC
HORIZ.	HORIZONTAL
H.P.	HORSEPOWER
HT.	HEIGHT
H.V.	HIGH VOLTAGE
HVAC	HEATING VENTILATING AIR CONDITIONING
I.D.	INSIDE DIMENSION
ILL.	ILLUMINATION
IMT	INTERMEDIATE METAL CONDUIT
INV.	INVERT
J.B.	JUNCTION BOX
JUNC.	JUNCTION
KVA	KILOVOLT AMPERE
KW	KILOWATT
KWH	KILOWATT-HOUR
L.A.	LIGHTNING SURGE ARRESTOR
LCP	LOCAL CONTROL PANEL
LIM	LINE ISOLATION MOTOR
L.O.	LUGS ONLY
LS	LIMIT SWITCH
LT.	LIGHT
LTG.	LIGHTING
LV	LOW VOLTAGE
M	MAIN
MAX	MAXIMUM
M.C.	MECHANICAL CONTRACTOR
MCB	MAIN CIRCUIT BREAKER
MCC	MOTOR CONTROL CENTER
MCP	MOTOR CONTROL PROTECTOR
ME	MODIFY EXISTING
MFR.	MANUFACTURER
MIN.	MINIMUM
M.O.	MECHANICALLY OPERATED
M.L.O.	MAIN LUGS ONLY
MTD.	MOUNTED
MV	MEDIUM VOLTAGE
N	NEUTRAL
N.C.	NORMALLY CLOSED
N.I.C.	NOT IN CONTRACT
N.O.	NORMALLY OPEN
N.T.S.	NOT TO SCALE
O.C.	ON CENTER
O.C.B.	OIL CIRCUIT BREAKER
O.C.P.	OVERCURRENT PROTECTION
O.D.	OUTSIDE DIMENSION
P	POLE
PB	PULL BOX
P.C.	PLUMBING CONTRACTOR
P.F.	POWER FACTOR
PH OR Φ	PHASE
PL	PILOT LIGHT
PNL	PANEL
PRI.	PRIMARY
PS	PULL STATION
PSI	POUNDS PER SQUARE INCH
PT	POTENTIAL TRANSFORMER
PWR.	POWER
RCVR.	RECEIVER
RE	REMOVE EXISTING
REL	RELOCATED ITEM
REQ.	REQUIRED
SEC.	SECONDARY
SLD	SINGLE LINE DIAGRAM
SLV	SLEEVE
SPEC.	SPECIFICATION
SS	SUBSTATION
S.T.	SHUNT TRIP
STD.	STANDARD
STR.	STARTER
SW.	SWITCH
SWGR.	SWITCHGEAR
SYS.	SYSTEM
TEL.	TELEPHONE
TEMP.	TEMPERATURE
TERM	TERMINAL
TV	TELEVISION
TYP.	TYPICAL
UC	UNDERCOUNTER
U/F	UNFUSED
U.L.	UNDERWRITERS LABORATORY
U.O.N.	UNLESS OTHERWISE NOTED
U.V.	UNDER VOLTAGE
V	VOLT
VERT.	VERTICAL
VM	VOLTMETER
VS	VOLTMETER SWITCH
W	WIRE
W	WATT
WP	WATERPROOF
X	EXISTING
XDR	TRANSDUCER
XFMR	TRANSFORMER
XFR	TRANSFER
XMTR	TRANSMITTER
XP	EXPLOSION-PROOF
XPDR	TRANSPONDER

SINGLE LINE DIAGRAM SYMBOLS

- POTHEAD
- A — AMMETER
- AS — AMMETER SWITCH
- V — VOLTMETER
- VS — VOLTMETER SWITCH
- (CT) CURRENT TRANSFORMER
- (PT) POTENTIAL TRANSFORMER
- 51 — RELAY (NUMBER INDICATES RELAY TYPE)
- RELAY CONTACTS
- GFP — GROUND FAULT TRIPPING MECHANISM
- GFS — GROUND FAULT SENSING COIL
- CIRCUIT BREAKER OR MOTOR CIRCUIT PROTECTOR
- CIRCUIT BREAKER OR MOTOR CIRCUIT PROTECTOR 12.47KV BREAKER
- DISCONNECT SWITCH
- FUSED CUTOUT
- FUSED DISCONNECT SWITCH, SAFETY SWITCH
- FUSE
- STARTER NEMA SIZE MOTOR STARTER
- STARTER NEMA SIZE COMBINATION MOTOR STARTER AND CIRCUIT BREAKER
- STARTER NEMA SIZE COMBINATION MOTOR STARTER AND DISCONNECT SWITCH
- CONTROL WIRING
- POWER OR DISTRIBUTION TRANSFORMER
- ISOLATION TRANSFORMER (K-13)
- WYE CONNECTION
- DELTA CONNECTION
- MOTOR (NUMBER DENOTES HORSE POWER)
- PNL — SINGLE SECTION PANEL BOARD
- TRANSFER SWITCH
- EMERGENCY GENERATOR
- TVSS — TRANSIENT VOLTAGE SURGE SUPPRESSION
- RESISTIVE LOAD
- CP — CONTROL PANEL
- LA — LIGHTNING ARRESTOR (OR SURGE ARRESTOR)
- CAPACITOR
- DRAWOUT DEVICE
- K — KEY INTERLOCK
- E — ELECTRICAL INTERLOCK
- M — MECHANICAL INTERLOCK

GENERAL ELECTRICAL NOTES

1. ALL WORK SHALL BE IN ACCORDANCE WITH ALL APPLICABLE LAWS, CODES, AND REGULATIONS ADOPTED BY MUNICIPAL, COUNTY, STATE, AND FEDERAL AUTHORITIES, INCLUDING THE LATEST ADOPTED EDITION OF THE NATIONAL ELECTRICAL CODE (NEC) NFPA 70 AND WITH THE REQUIREMENTS/AMENDMENTS OF THE LOCAL AUTHORITY HAVING JURIDICTIONS (AHJ).
2. CONTRACT DRAWINGS ARE DIAGRAMMATIC IN NATURE AND ARE INTENDED TO CONVEY SCOPE, DESIGN INTENT, AND GENERAL ARRANGEMENT ONLY. CONTRACTOR IS RESPONSIBLE FOR COORDINATING ALL WORK OF ALL TRADES INCLUDING RESOLUTION OF FIELD CONFLICTS THE MAY ARISE.
3. ALL OF THE ELECTRICAL INSTALLATION SHALL BE INSTALLED IN A NEAT WORKMANLIKE MANNER AND IN ACCORDANCE WITH INDUSTRY STANDARDS.
4. EACH FEEDER AND BRANCH CIRCUIT SHALL INCLUDE AN INSULATED EQUIPMENT GROUDING CONDUCTOR. BOND ALL ELECTRICAL EQUIPMENT, OUTLET BOXES, GROUNDING TYPE RECEPTACLES, ETC., IN ACCORDANCE WITH N.E.C. ARTICLE 250.
5. TRUNKING OR GROUPING OF BRANCH CIRCUIT AND FEEDERS SHALL BE PERMITTED, PROVIDED THAT THE NEC RULES PERTAINING TO MAXIMUM ALLOWABLE PERCENT FILL OF CARRYING CONDUCTORS IN A RACEWAY ARE STRICTLY COMPLIED WITH. THE CONTRACTOR SHALL EXERCISE GREAT CAUTION IN PROVIDING AN EQUAL NUMBER OF A, B, AND C PHASE CONDUCTORS WHEN GROUPING CIRCUITS.
6. TROUGHS, JUNCTION AND PULL BOXES ARE NOT NECESSARILY INDICATED, BUT SHALL BE PROVIDED WHERE MANDATED BY THE NEC, AND AS REQUIRED FOR EASE OF INSTALLATION. BOXES SHALL BE SIZED (MINIMUM) IN ACCORDANCE WITH NEC ARTICLE 314. TROUGHS SHALL BE SIZED PER NEC ARTICLE 366.
7. ALL NEW 600V OVER-CURRENT PROTECTIVE DEVICES SHALL HAVE INTERRUPTING CAPABILITIES OR RATINGS (AIC OR AIR) IN RMS AMPERES SYMMETRICAL. ALL DEVICES SHALL BE FULLY RATED FOR AVAILBLE FAULT CURRENT. ALL PANELBOARDS, SWITCHBOARDS, MDPS, DEVICES, ETC. SHALL BE FULLY RATED.
8. ALL BUILDING WIRE SHALL BE COPPER CONDUCTORS, TYPE USE-2 OR THWN-2 (SUNLIGHT RESISTANT) 90 DEGREE CELSIUS RATED INSULATION, #12 AWG MINIMUM. UTILIZE #10 AWG WIRE FOR ANY CIRCUIT THAT EXCEEDS 100 FEET. SEE TABLE FOR RECOMMENDED APPLICATION.
9. CONTRACTOR SHALL PROVIDE AND INSTALL AN APPROVED, UL LISTED, FIRE STOP SEALANT, TOTALLY ENCLOSING ALL PENETRATIONS THROUGH RATED CEILINGS, WALLS, ROOFS, FLOORS, ETC. ALL FLOOR PENETRATIONS SHALL BE CORE-DRILLED, SLEEVED AND SEALED WITH AN APPROVEED FIRE RATED SEALANT. ALL EXISTING PENETRATIONS BETWEEN FLOORS AND WALLS MUST BE CLOSED TO MAINTAIN FIRE RATING.
10. THE DESIGN INTENT OF THESE DRAWINGS IS TO MEET THE MINIMUM REQUIREMENTS OF THE LATEST ADOPTED EDITION OF THE NATIONAL ELECTRICAL CODE (NEC) AND OTHER APPLICABLE CODES. THE DRAWINGS DO NOT NECESSARILY REPESENT THE MOST EFFICIENT AND EFFECTIVE DESIGN.
11. THE CONTRACTOR SHALL PERFORM THE WORK AS INDICATED ON THE DRAWINGS. ANY DEVIATIONS FROM THE DRAWINGS SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW AND APPROVAL IN WRITING. IF CHANGEES ARE MADE WITHOUT THE ENGINEER'S WRITTEN CONSENT, THE CONTRACTOR SHALL BE LIABLE FOR ANY ISSUES THAT MAY ARISE DUE TO THE CHANGES.
12. UNLESS OTHERWISE NOTED, ALL WIRE SIZES SHALL BE BASED ON FOLLOWING:
    a. #14 THROUGH #1 OR 100A OR LESS - NEC TABLE 310.16 60° COLUMN
    b. #1/0 AND GREATER OR 101A OR GREATER -NEC TABLE 310.16 75° COLUMN
    c. OTHER ALLOWANCES OF NEC 110.14(C)
13. ALL ELECTRICAL MATERIALS, DEVICES, APPLIANCES AND EQUIPMENT SHALL BE NEW, LABELS AND LISTED BY A NATIONALLY RECOGNIZED TESTING LABORATORY OR AGENCY (E.G. UL), UNLESS OTHERWISE NOTED.
14. ELECTRICAL CONTRACTOR SHALL FOLLOW ALL MANUFACTURER'S INSTRUCTIONS FOR INSTALLATION OF ALL EQUIPMENT IF NOT INDICATED ON DRAWINGS. IF THERE IS A DISCREPANCY, MANUFACTURER'S INSTRUCTIONS TAKE PRECEDENCE.
15. ALL WIRING METHODS SHALL BE NEC COMPLIANT AND MEET THE REQUIREMENTS OF THE SPACE, OCCUPANCY & CONDITION OF USE.
16. ALL WORK SHALL COMPLY WITH THE LATEST REVISION OF THE LOCAL UTILITY'S ELECTRICAL SERVICE REQUIREMENTS - COORDINATE ALL SERVICE WORK WITH UTILITY PRIOR TO INSTALLATION.
17. CALL BEFORE YOU DIG (PA ONE CALL SYSTEM 1-800-242-1776 OR DIAL 811). EC TO HIRE AN INDEPENDENT UTILITY LOCATING COMPANY TO MARK-OUT CUSTOMER OWNED/PRIVATE PROPERTY FACILITIES BEFORE DIGGING AT EC'S EXPENSE.
18. CONTRACTOR TO PLACE NEW EQUIPMENT, RELOCATE CURRENTLY INSTALLED EQUIPMENT, OR RE-WORK EXISTING ROOM AS REQUIRED TO COMPLY WITH WORKING CLEARANCE ISSUES, DEDICATED SPACE ISSURES, AND WITH APPLICABLE CODES.
19. EC TO RE-FEED AND/OR CONNECT NEW FEEDERS TO EXISTING EQUIPMENT AS REQUIRED. EC IS RESPONSIBLE TO MAKE ANY REQUIRED AND/OR NECESSARY CHANGES TO THE EXISTING INSTALLATION TO ALLOW FOR NEW SERVICE/FEEDER CONFIGURATION.
20. CONTRACTOR SHALL MEET INSTALLATION CRITERIA FOR SEISMIC REQUIREMENTS IN PROJECT LOCATION.
21. THE EC/INSTALLER IS RESPONSIBLE FOR THE CONSTRUCTABILITY OF THE DRAWINGS FROM A PRACTICAL AND EXISTING FIELD CONDITIONS PERSPECTIVE.
22. WITH RESPECT TO CONSTRUCTION BASED ON THESE DRAWINGS, THE EC/INSTALLER IS ULTIMATELY RESPONSIBLE FOR ALL INSTALLED MEANS AND METHODS MEETING ALL APPLICABLE CODES AND STANDARDS.
23. VPES INC. DOES NOT TAKE RESPONSIBILITY FOR ANY STRUCTURAL DESIGN OR ANALYSIS REQUIRED.
24. IT HAS BEEN ASSUMED THAT ALL CONDUITS FOR ROOFTOP EQUIPMENT WILL BE EXPOSED TO DIRECT SUNLIGHT ON OR ABOVE THE ROOF, CONTRACTOR SHALL DERATE THE CONDUCTORS PER NEC TABLE 310.15(B)(2)(C) AND SHALL INCREASE CONDUCTOR/CONDUIT SIZE AS REQUIRED.
25. THE PV SYSTEM HAS BEEN DESIGNED BY OTHERS AND PROVIDED TO VPES INC. BY ONTILITY. THE GIVEN INFORMATION, CALCULATIONS, ETC., AS WELL AS ADDITIONAL INFORMATION GIVEN BY ONTILITY WAS USED AS A BASIS OF DESIGN TO CREATE THIS PERMIT SET. VPES INC. DOES NOT TAKE RESPONSIBILITY FOR OUTPUT, PERFORMANCE, LONGEVITY, UTILITY REBATES, ETC. OF THE SYSTEM.
26. UNLESS OTHERWISE NOTED, ALL CIRCUIT BREAKERS ARE BASED ON INVERSE TIME TYPE AND ALL FUSES ARE BASED ON DUAL ELEMENT TIME-DELAY TYPE.
27. ALL ELECTRICAL EQUIPMENT, DEVICES, OCPDS, ETC. ON DC SIDE OF INVERTER SHALL BE RATED FOR USE WITH DC.

ELECTRICAL DRAWINGS LIST

E-000	ELECTRICAL COVER SHEET
E-001	SOLAR POWER SYSTEM DIAGRAM
E-002	SINGLE LINE DIAGRAM
E-103	THIRD FLOOR PLAN - ELECTRICAL
E-104	ROOF PLAN - ELECTRICAL

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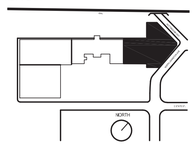

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DRAWING

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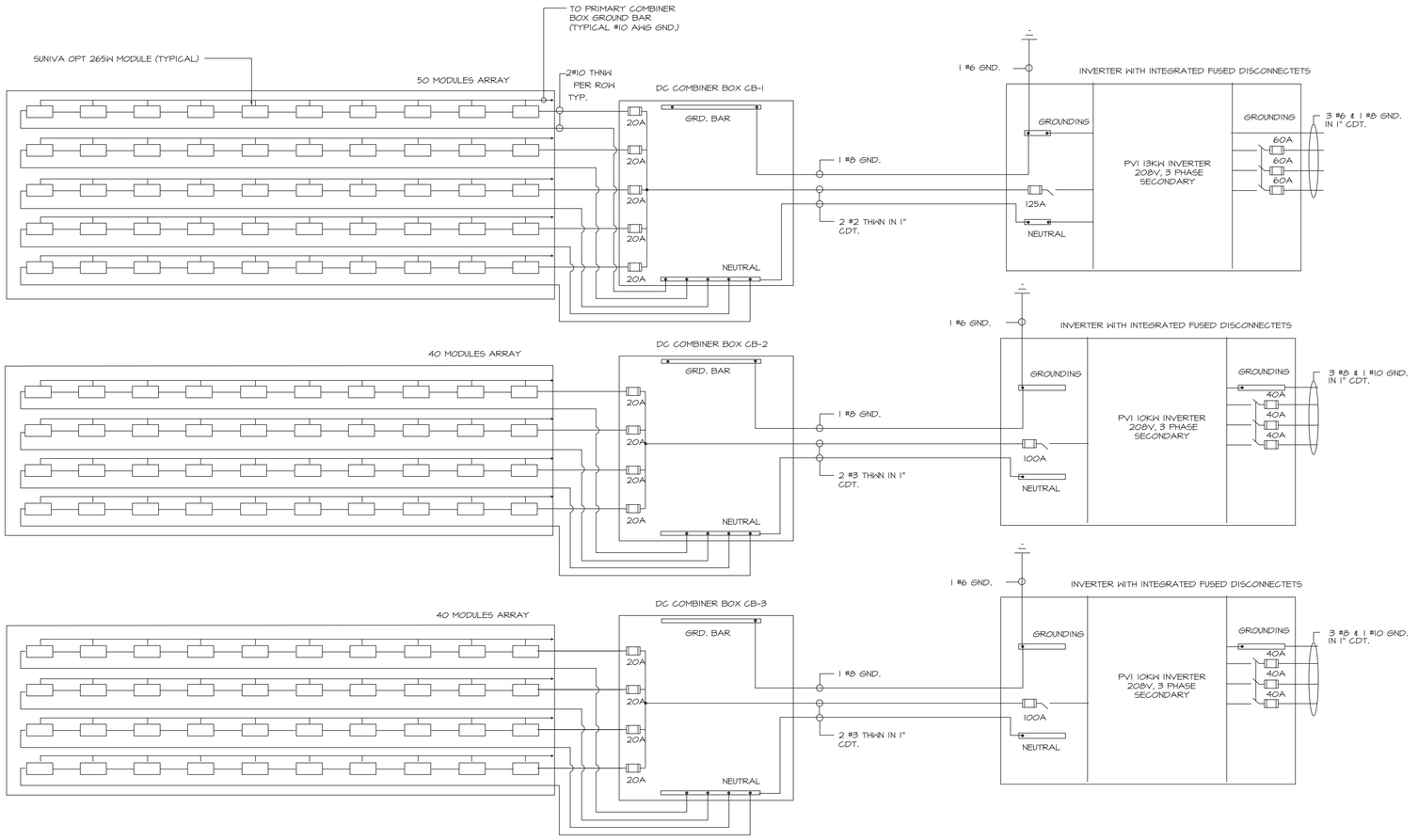

PHOTOVOLTAIC SYSTEM WIRING DIAGRAM

N.T.S.

DRAWING NOTES:

1. ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE LATEST ADOPTED ADDITION OF THE NEC.
2. SERVICE EQUIPMENT TO BE LOCATED AS CLOSE AS POSSIBLE TO SERVICE CONDUCTORS ENTERING THE BUILDING. GROUP EQUIPMENT TOGETHER AS REQUIRED.
3. ALL EQUIPMENT ON THE SUPPLY SIDE OF THE SERVICE DISCONNECT SHALL HAVE A MINIMUM AIC RATING TO MATCH AVAILABLE SHORT CIRCUIT CURRENT. OBTAIN DATA FROM UTILITY AS REQUIRED.
4. ALL CONDUCTORS SHALL BE CU AND USE-2 (SUNLIGHT RESISTANT) UNLESS OTHERWISE NOTED.
5. CONNECT PV AC GROUNDING ELECTRODE CONDUCTOR (GEC) TO EXISTING AC GEC AS REQUIRED. COMPLY WITH NEC SECTION 250.50 & 250.64.
6. ALL SERVICE RELATED WORK TO BE DONE IN STRICT ACCORDANCE WITH UTILITY COMPANY REQUIREMENTS.
7. ALL SERVICE EQUIPMENT SHALL BE LISTED FOR SERVICE ENTRANCE USE.
8. EC TO RE-FEED AND/OR CONNECT NEW FEEDERS TO EXISTING EQUIPMENT AS REQUIRED OR CONNECT EXISTING FEEDERS/BRANCH CIRCUITS TO NEW EQUIPMENT AS REQUIRED. EC IS RESPONSIBLE TO MAKE ANY REQUIRED AND/OR NECESSARY CHANGES TO THE EXISTING INSTALLATION TO ALLOW FOR NEW SERVICE CONFIGURATION.
9. EC TO VERIFY THAT EXISTING EQUIPMENT CONFIGURATION MATCHES SINGLE LINE DIAGRAM AT MINIMUM. MAKE ADJUSTMENTS AS REQUIRED AND REPORT MATERIAL CHANGES TO ENGINEER FOR REVIEW.
10. THE EC/INSTALLER HAS THE FULL RESPONSIBILITY FOR MEETING WITH THE LOCAL ELECTRIC UTILITY AND COORDINATING WITH THE LOCAL ELECTRIC UTILITY COMPANY'S REQUIREMENTS BEFORE INSTALLATION BEGINS. VPES INC. HAS NOT MET WITH THE LOCAL UTILITY. VPES INC. ADVISES THE INSTALLER TO CONTACT THE LOCAL ELECTRIC UTILITY AS SOON AS POSSIBLE TO BEGIN THE PROCESS AS NOT DOING SO MAY CAUSE A DELAY IN OBTAINING THE REQUESTED SERVICE. ALSO, LOCAL ELECTRIC UTILITY FEES MAY APPLY TO OBTAIN REQUESTED SERVICE.
11. THE EC/INSTALLER IS RESPONSIBLE FOR THE PHYSICAL LAYOUT OF THE SERVICE EQUIPMENT AND ALL DISTRIBUTION EQUIPMENT MEETING WORKING CLEARANCES AND ALL OTHER REQUIREMENTS OF THE NEC BASED ON ACTUAL FIELD CONDITIONS. THE LOCATION OF THE SERVICE DISCONNECTING MEANS SHALL MEET THE REQUIREMENTS OF NEC ARTICLE 230, AND SHOULD BE REVIEWED WITH INSTALLER'S UNDERWRITER BEFORE INSTALLATION.
12. ALL NEW DEVICES ON AC SIDE OF SOLAR POWER SYSTEM SHALL BE LISTED FOR BI-DIRECTIONAL USE (IE. BACK-FEEDING). DO NOT INSTALL MORE BREAKERS IN PV DISTRIBUTION PANEL THAN REQUIRED FOR INSTALLATION.
14. PV MODULE, STRING AND ARRAY CIRCUIT RATINGS SHALL BE DISPLAYED ON LABELS PERMANENTLY MARKED AND AFFIXED TO THE INVERTER AND COMBINER BOXES.
15. THE AC CIRCUIT BREAKER IN THE PV INVERTER AND ANY CIRCUIT BREAKERS, MODULES, FUSES AND DISCONNECT SWITCHES INSTALLED BETWEEN THE INVERTER AND MAIN DISTRIBUTION PANEL SHALL HAVE A SHORT CIRCUIT RATING EQUAL TO OR EXCEEDING THAT OF THE MAIN CIRCUIT BREAKER IN THE MAIN DISTRIBUTION PANEL.
16. UNLESS OTHERWISE NOTED, ALL CIRCUIT BREAKERS ARE BASED ON INVERSE TIME TYPE AND ALL FUSES ARE BASED ON DUAL ELEMENT TIME-DELAY TYPE.
17. ALL CONDUIT PENETRATIONS SHALL BE PROPERLY SEALED AS PER MANUFACTURERS RECOMMENDATIONS.
18. THE CONTRACTOR SHALL PROVIDE A RACEWAY SYSTEM BELOW OR ALONG THE SOLAR MODULES FOR ROUTING OF CONDUCTORS. ALL CONDUCTORS THAT ARE EXPOSED BELOW THE SOLAR MODULES SHALL BE PROPERLY SUPPORTED BY MEANS OF FRAMING SYSTEM WITH THE USE OF APPROVED CLIPS OR STAINLESS STEEN TIE-WRAPS. CONDUITS SHALL NOT BE LEFT UNSUPPORTED OR RUN ON THE SURFACE OF MEMBRANE OF THE ROOF. IN LOCATIONS WHERE CONDUCTORS ARE EXPOSED FOR MAKING TERMINATIONS TO PV MODULES THE CIRCUIT SHALL BE MADE 'NOT READILY ASSESSIBLE' BY USE OF PHYSICAL BARRIERS.
19. VPES INC. DOES NOT TAKE RESPONSIBILITY FOR ANY STRUCTURAL DESIGN OR ANALYSIS REQUIRED.
20. THE PV SYSTEM HAS BEEN DESIGNED BY OTHERS AND PROVIDED TO VPES INC. BY ONTILITY. THE GIVEN INFORMATION, CALCULATIONS, ETC., AS WELL AS ADDITIONAL INFORMATION GIVEN BY ONTILITY WAS USED AS A BASIS OF DESIGN TO CREATE THIS PERMIT SET. VPES INC. DOES NOT TAKE RESPONSIBILITY FOR OUTPUT, PERFORMANCE, LONGEVITY, UTILITY REBATES, ETC. OF THE SYSTEM.
21. ALL ELECTRICAL EQUIPMENT, DEVICES, OCPDS, ETC. ON DC SIDE OF INVERTER SHALL BE RATED FOR USE WITH DC.

PV SYSTEM CALCULATION

KEY MODULE SPECIFICATIONS (SUNIVA OPTIMUS 260)

Vmp	30.2	(VOLTS AT MAX. POWER POINT)
Imp	8.6	(CURRENT AT MAX. POWER POINT)
Voc	38.1	(OPEN CIRCUIT VOLTAGE)
Isc	9.08	(SHORT CIRCUIT CURRENT)

WEATHER COEFFICIENT −0.335%
PER WEATHER.COM, LOWEST RECORDED TEMP IS −27°C
PER WEATHER.COM, HIGHEST RECORDED TEMP IS −105°F

OPERATING VOLTAGE

Vpm x	# MODULES IN STRING		
30.2	10	302	VOLTS

OPERATING CURRENT

Imp x	# STRINGS IN PARALLEL			
8.6 X	4 =	34.4	AMPS	(FOR 4 STRINGS)
8.6 X	5 =	43	AMPS	(FOR 5 STRINGS)

MAXIMUM SYSTEM VOLTAGE

Voc x [1+ coldest temp − 25] x temp coeff
30.2 x [1+((−27−25)x(−.335%/C/100))]
30.2 x [1+(−52 x −.00335)]
30.2 X 1.1742 = 35.46 VOLTS

TEMPERATURE CORRECTED Voc X # MODULES IN STRING
10 units 35.46V X 10 UNITS = 354.61 <600 VOLTS, THERFORE OKAY

SHORT CIRCUIT CURRENT

	Isc x	# STRINGS IN PARALLEL x 1.25			
5 STRINGS	9.08 X	5 X	1.25 =	56.75	13KW MAX INPUT CURRENT = 69
4 STRINGS	9.08 X	4 X	1.25 =	45.4	10KW MAX INPUT CURRENT = 52

CONDUCTOR SIZE MODULE TO MODULE AND/OR FROM MODULT TO COMBINER BOX (PV SOURCE CIRCUITS)

Isc x	# STRINGS IN PARALLEL x 1.25 x 1.25			DERATE 80%
9.08 X	1 X	1.25 X	1.25 =	14.19 20 AMP FUSE, #10 MI8.8 17.73 22.17 AMPS

CONDUCTOR SIZE FROM COMBINER TO PV OUTPUT (PV OUTPUT CIRCUIT)

Isc x	# strings in parallel x 1.25 x 1.25			75° DEGREE AMPS	:DERATE 90° DEGREE AMPS
5 STRINGS	9.08 X	5 X	1.25 X	1.25 = 70.94 #4	122.31 #2
4 STRINGS	9.08 X	4 X	1.25 X	1.25 = 56.75 #6	97.84 #3

MINIMUM INVERTER OUTPUT CONDUCTOR AMPACITY

INVERTER MAXIMUM OUTPUT x 1.25

MAX AC WATTAGE/	MIN AC VOLTAGE					PF	75° WIRE
13200	208	3 PHASE	=	36.67	SOLECTRIA PVI−13	45.83	0.88 52.08 #6
10000	208	3 PHASE	=	27.78	SOLECTRIA PVI−10	34.72	0.88 39.46 #8

ROOF TEMPERATURE DERATING CALCUALTION (PER NEC 310.15(B)(2)(C))
ASSUMING CONDUIT IS INSTALLED A MINIMUM OF 1/2" ABOVE ROOF, TEMPERATURE ADDER IS 40°F
105° + 40° = 145°F
PER 310.16, CORRECTION FACTOR FOR 145°F IS 0.58 FOR 90° COLUMN

USING #2 CU THWN−2=>	130 X	0.58 =	75.4 >	70.94	
USING #3 CU THWN−2=>	110 X	0.58 =	63.8 >	56.75	
USING #10CU THWN−2=>	40 X	0.58 =	23.2 >	22.17	

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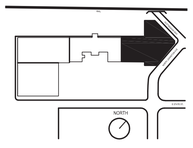
NOT FOR CONSTRUCTION OR BIDDING

NO.	ISSUANCE	DATE
1	FINAL OWNER'S REVIEW-BID SET	APR 18 2014
5	BID SET DIVISION 1 TO BE CONFIRMED	JUL 18 2014

KEY PLAN



OWNER
ISLES, INC
10 WOOD STREET
TRENTON, NEW JERSEY

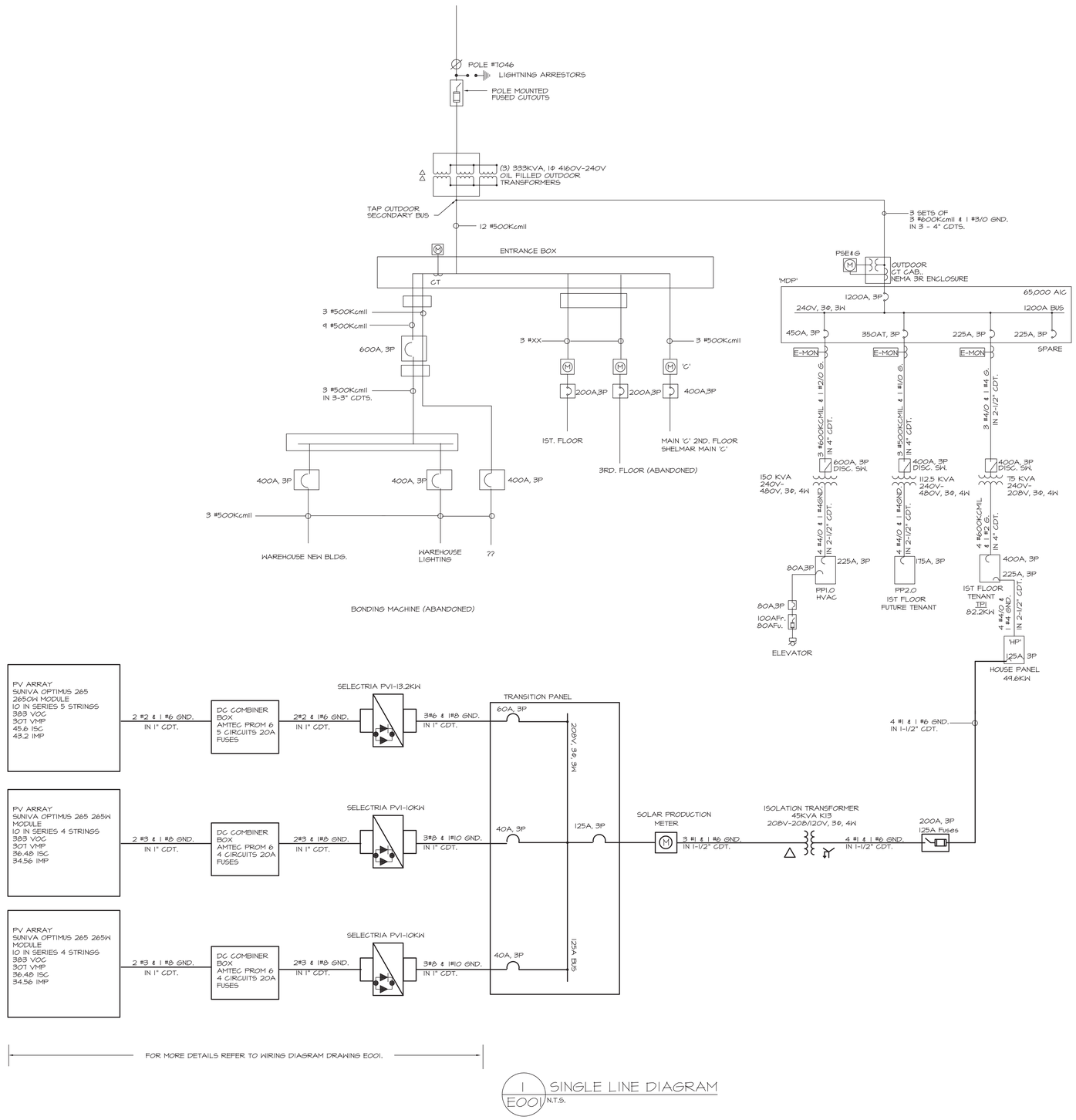
BUILDING A & A1 ROOF ALTERATION

1 JOHNSTON AVE
HAMILTON, NEW JERSEY

SEAL

DRAWING TITLE
SOLAR POWER SYSTEM DIAGRAM

DRAWING
E-001



1 E001 SINGLE LINE DIAGRAM N.T.S.

LEGEND

NEW EQUIPMENT AND WIRING

EXISTING EQUIPMENT AND WIRING TO REMAIN

SINGLE LINE NOTES:

1. ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE LATEST ADOPTED ADDITION OF THE NEC.
2. SERVICE EQUIPMENT TO BE LOCATED AS CLOSE AS POSSIBLE TO SERVICE CONDUCTORS ENTERING THE BUILDING. GROUP EQUIPMENT TOGETHER AS REQUIRED.
3. ALL EQUIPMENT ON THE SUPPLY SIDE OF THE SERVICE DISCONNECT SHALL HAVE A MINIMUM AIC RATING TO MATCH AVAILABLE SHORT CIRCUIT CURRENT. OBTAIN DATA FROM UTILITY AS REQUIRED.
4. ALL CONDUCTORS SHALL BE CU AND USE-2 (SUNLIGHT RESISTANT) UNLESS OTHERWISE NOTED.
5. CONNECT PV AC GROUNDING ELECTRODE CONDUCTOR (GEC) TO EXISTING AC GEC AS REQUIRED. COMPLY WITH NEC SECTION 250.50 & 250.64.
6. ALL SERVICE RELATED WORK TO BE DONE IN STRICT ACCORDANCE WITH UTILITY COMPANY REQUIREMENTS.
7. ALL SERVICE EQUIPMENT SHALL BE LISTED FOR SERVICE ENTRANCE USE.
8. EC TO RE-FEED AND/OR CONNECT NEW FEEDERS TO EXISTING EQUIPMENT AS REQUIRED OR CONNECT EXISTING FEEDERS/BRANCH CIRCUITS TO NEW EQUIPMENT AS REQUIRED. EC IS RESPONSIBLE TO MAKE ANY REQUIRED AND/OR NECESSARY CHANGES TO THE EXISTING INSTALLATION TO ALLOW FOR NEW SERVICE CONFIGURATION.
9. EC TO VERIFY THAT EXISTING EQUIPMENT CONFIGURATION MATCHES SINGLE LINE DIAGRAM AT MINIMUM. MAKE ADJUSTMENTS AS REQUIRED AND REPORT MATERIAL CHANGES TO ENGINEER FOR REVIEW.
10. THE EC/INSTALLER HAS THE FULL RESPONSIBILITY FOR MEETING WITH THE LOCAL ELECTRIC UTILITY AND COORDINATING WITH THE LOCAL ELECTRIC UTILITY COMPANY'S REQUIREMENTS BEFORE INSTALLATION BEGINS. VPES INC. HAS NOT MET WITH THE LOCAL UTILITY. VPES INC. ADVISES THE INSTALLER TO CONTACT THE LOCAL ELECTRIC UTILITY AS SOON AS POSSIBLE TO BEGIN THE PROCESS AS NOT DOING SO MAY CAUSE A DELAY IN OBTAINING THE REQUESTED SERVICE. ALSO, LOCAL ELECTRIC UTILITY FEES MAY APPLY TO OBTAIN REQUESTED SERVICE.
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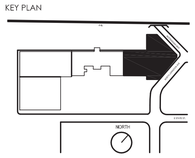


OWNER
ISLES, INC
10 WOOD STREET
TRENTON, NEW JERSEY

BUILDING A & A1 ROOF ALTERATION

1 JOHNSTON AVE
HAMILTON, NEW JERSEY

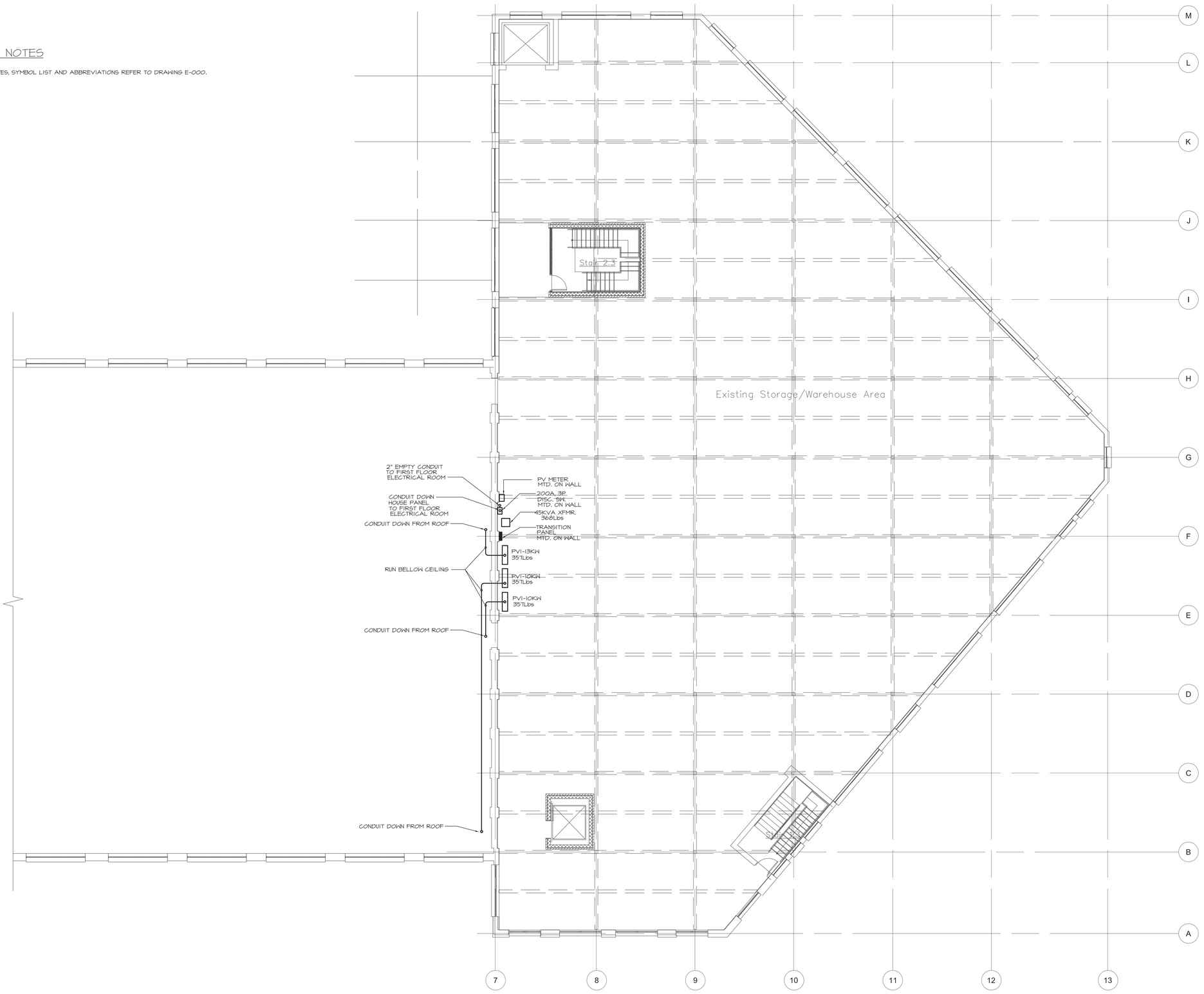
SEAL

DRAWING TITLE
SINGLE LINE DIAGRAM ELECTRICAL

DRAWING
E-002

DRAWING NOTES

1. FOR GENERAL NOTES, SYMBOL LIST AND ABBREVIATIONS REFER TO DRAWING E-000.



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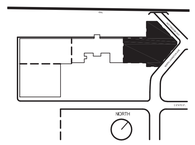

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ISLES, INC
10 WOOD STREET
TRENTON, NEW JERSEY

BUILDING A & A1 ROOF ALTERATION

1 JOHNSTON AVE
HAMILTON, NEW JERSEY

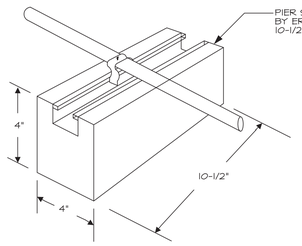
SEAL

DRAWING TITLE
THIRD FLOOR PLAN
ELECTRICAL

DRAWING
E-103

DRAWING NOTES

1. FOR GENERAL NOTES, SYMBOL LIST AND ABBREVIATIONS REFER TO DRAWING E-000.
2. FOR PV ROOF RACK DESIGN AND INSTALLATION, REFER TO ARCHITECTURAL DRAWING A301 AND STRUCTURAL ENGINEER DRAWINGS.



PIPE PIER SUPPORT DETAIL

NO SCALE

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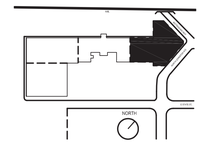

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1 JOHNSTON AVE
HAMILTON, NEW JERSEY

SEAL

DRAWING TITLE
PROPOSED ROOF PLAN ELECTRICAL

DRAWING
E-104