

WESTCHESTER COUNTY, NEW YORK
DEPARTMENT OF PUBLIC WORKS AND TRANSPORTATION
DIVISION OF ENGINEERING

CONTRACT No. 21-516

TARRYTOWN LIGHTHOUSE RESTORATION
KINGSLAND POINT PARK
VILLAGE of SLEEPY HOLLOW, NEW YORK 10591



WESTCHESTER COUNTY
BUILDING CODE REVIEW

**TARRYTOWN LIGHTHOUSE RESTORATION
CODE REVIEW**
March 19, 2021

APPLICABLE CODES:

2020 Existing Building Code of New York State (EBC)
2020 Building Code of New York State (BC), as referenced by EBC

EBC Classification of work:

Repairs (EBC Definition):

The reconstruction, replacement or renewal of any part of an existing building for the purpose of its maintenance or to correct damage.

Historic Building (EBC Definition):

Any building or structure that is one or more of the following:

1. Listed, or certified as eligible for listing, by the State Historic Preservation Officer or the Keeper of the National Register of Historic Places, in the National Register of Historic Places.
2. Designated as historic under an applicable state or local law.
3. Certified as a contributing resource within a National Register, state designated or locally designated historic district.

Compliance: Building is listed on the National Register of Historic Places, and the NYS Historic Building Inventory.

Chapter 3 Provisions for All Compliance Methods

301.2 Administration, Repairs

Repairs shall comply with the requirements of Chapter 4.

305.1 Accessibility for Existing Buildings, Scope

Required: Accessibility provisions apply to maintenance, change of occupancy, additions and alterations to existing buildings, including those identified as historic buildings.

Provided: Provisions are not applicable to Repairs.

Chapter 4 Repairs

401.1 Scope

Repairs to historic buildings need only comply with Chapter 12.

Chapter 12 Historic Buildings

1201.2 Report:

Required:

Identify each required safety feature that is in compliance with this chapter and where compliance with other chapters of these provisions would be damaging to the contributing historic features.

Describe each feature that is not in compliance with these provisions and shall demonstrate how the intent of these provisions is complied with in providing an equivalent level of safety.

Provided: This code review constitutes the required report.

1201.3 Special Occupancy Exception - Museums:

Group B, Museums if less than 3,000 sq.ft.

Area of building: 1,846 sq.ft. < 3,000 sq.ft.

Means of egress:

Required: Means of maintaining doors in an open position to permit egress.

Provided: Entrance door has no latch and is not locked when the building is occupied. Lock may always be opened with thumb turn from interior side.

Occupant load:

Required: Limit on building occupancy to an occupant load permitted by the means of egress capacity.

Provided:

Number of exits: Non-sprinklered, group B occ., one exit, the building is limited to 49 occupants (BC 1006.2.1).
Stairs: Width 2'-9"; egress capacity 110 occupants (BC 1005.3.1)
Exit door: Width 2'-8"; egress capacity 160 occupants (BC 1005.3.2)

1201.4 Flood Hazard Areas

Permitted: Compliance with BC 1612 is not required for historic buildings.

Provided: Building is classified as historic because it is listed on the National Register of Historic Places, and the NYS Historic Building Inventory.

1201.5 Unsafe Conditions

Required: Conditions determined by the building official to be unsafe shall be remedied.

Provided: Guard rails with openings larger than 4 inches will be infilled with stainless steel netting. Access to the lantern level will not be permitted.

1202.1 Repairs, General

Required: Hazardous materials, such as asbestos and lead-based paint, shall not be used.

Provided: Hazardous materials are prohibited by the specifications.

1202.2 Repairs, Replacement

Permitted/required: Replacement of existing or missing features using original materis

Replacement glazing in hazardous locations shall comply with the safety glazing requirements of Chapter 24 of BC.

Provided: Original materials are specified for repairs and replacement. Laminated saf glass is specified for all glass replacement.

1203.1 Fire Safety, Scope

Required: Historic buildings undergoing alterations, changes of occupancy, or that are moved shall comply with Section 1203.

Provided: The building will not undergo alteration, change of occupancy, or be moved Therefore compliance with Section 1203 is not required.

1204 Change of Occupancy

Not applicable; not a change of occupancy

1205 Structural

Required: Historic buildings shall comply with the applicable structural provisions for the work as classified in Chapter 4 or 5.

Exception 1: The building official shall be authorized to accept existing floors and existing live loads.

Exception 2: Repair of substantial structural damage is not required to comply with Sections 405.2.3 and 405.2.4. Substantial structural damage shall be repaired in accordance with Section 405.2.1.

Provided: There is no substantial structural damage. Repairs are for the purpose of preventing future damage. Structural repair provisions of Chapter 4 are not applicable.

1206 Relocated Buildings

Not applicable.

2020 Energy Conservation Construction Code

Chapter 5 [CE] Existing Buildings

Per paragraph C501.6, provisions of the Energy Code are not mandatory for Historic Buildings.

SHEET

NO. SHEET TITLE

DPW FILE NO.

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GENERAL PRESERVATION NOTES

1. THE TARRYTOWN LIGHTHOUSE IS A HISTORIC STRUCTURE, LISTED ON THE NATIONAL REGISTER OF HISTORIC PLACES. THE INTENT OF THE WORK DESCRIBED IN THESE DRAWINGS IS TO RESTORE AND PRESERVE THE STRUCTURE IN A MANNER CONSISTENT WITH "THE SECRETARY OF THE INTERIOR'S STANDARDS FOR THE TREATMENT OF HISTORIC PROPERTIES". ALL BIDDERS SHALL BE FAMILIAR WITH THE INTENT OF THIS DOCUMENT, WHICH IS AVAILABLE ONLINE AT <http://www.nps.gov/tps/standguide/>.
2. ALL EXISTING MATERIALS AND COMPONENTS OF THE LIGHTHOUSE ARE TO BE CONSIDERED HISTORIC UNLESS SPECIFICALLY INDICATED AS "NON-HISTORIC". HISTORIC ITEMS SHALL NOT BE DAMAGED, REMOVED OR ALTERED EXCEPT AS INDICATED OR AS OTHERWISE REQUIRED FOR PRESERVATION OR RESTORATION. IF TEMPORARY REMOVAL IS REQUIRED, WORK SHALL BE DONE UNDER THE ARCHITECT'S SUPERVISION, THE EXISTING CONDITION SHALL BE DOCUMENTED PHOTOGRAPHICALLY PRIOR TO REMOVAL, AND ALL FASTENERS AND COMPONENTS SHALL BE PROTECTED AND RESTORED FOR RE-INSTALLATION IN THE ORIGINAL CONFIGURATION.

IT IS A VIOLATION OF NYS LAW FOR ANY PERSON TO ALTER THIS DOCUMENT IN ANY WAY, UNLESS ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER. IF A DOCUMENT BEARING THE SEAL OF AN ENGINEER IS ALTERED, THE ALTERING ENGINEER SHALL AFFIX TO THE DOCUMENT THEIR SEAL AND THE NOTATION "ALTERED BY" FOLLOWED BY THEIR SIGNATURE AND THE DATE OF SUCH ALTERATION, AND A SPECIFIC DESCRIPTION OF THE ALTERATION.

IN CHARGE OF STEPHEN TILLY, R.A.
CHECKED BY STEPHEN TILLY, R.A.
MADE BY STEPHEN TILLY, R.A.

RECOMMENDED FOR DESIGN DATE
ADAM KAPLINSKI, R.A.
ASSOCIATE ARCHITECT
DEPARTMENT OF PUBLIC WORKS
& TRANSPORTATION

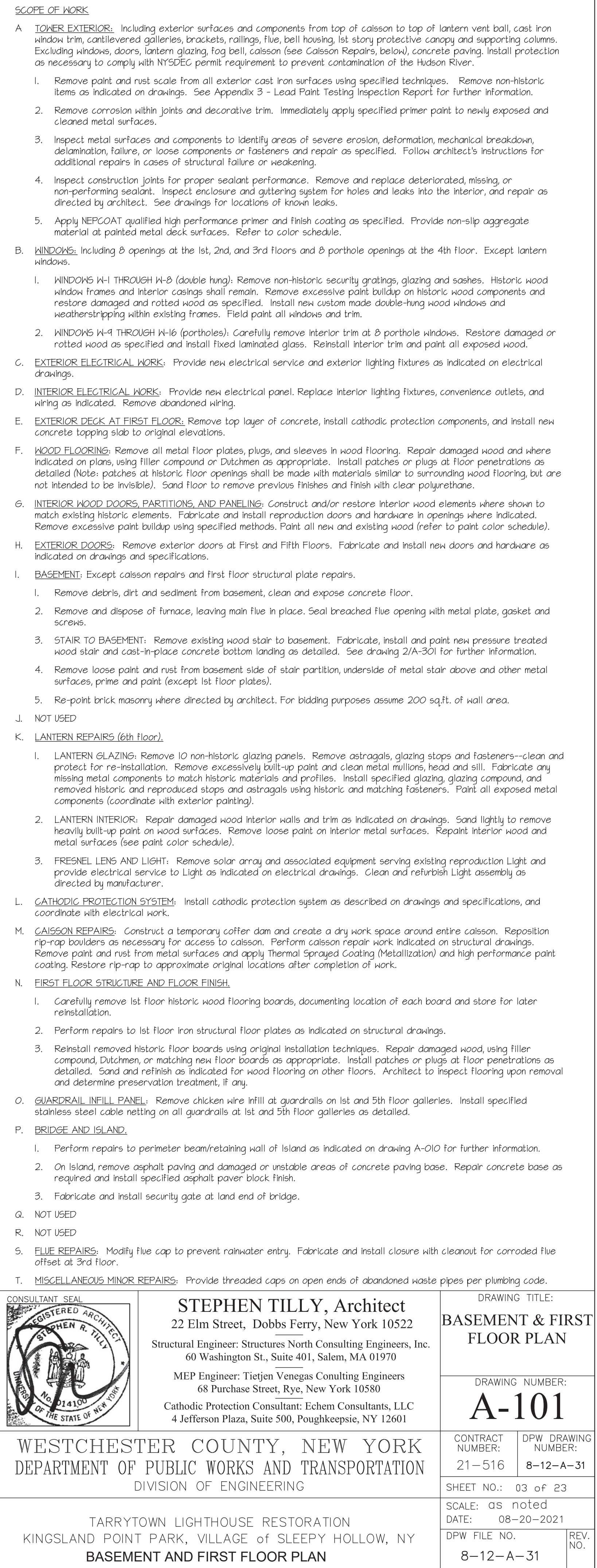
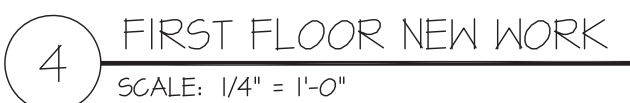
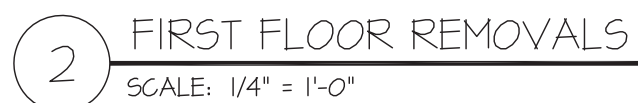
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GAYLE KATZMAN, P.E.
FIRST DEPUTY COMMISSIONER
DEPARTMENT OF PUBLIC WORKS
& TRANSPORTATION

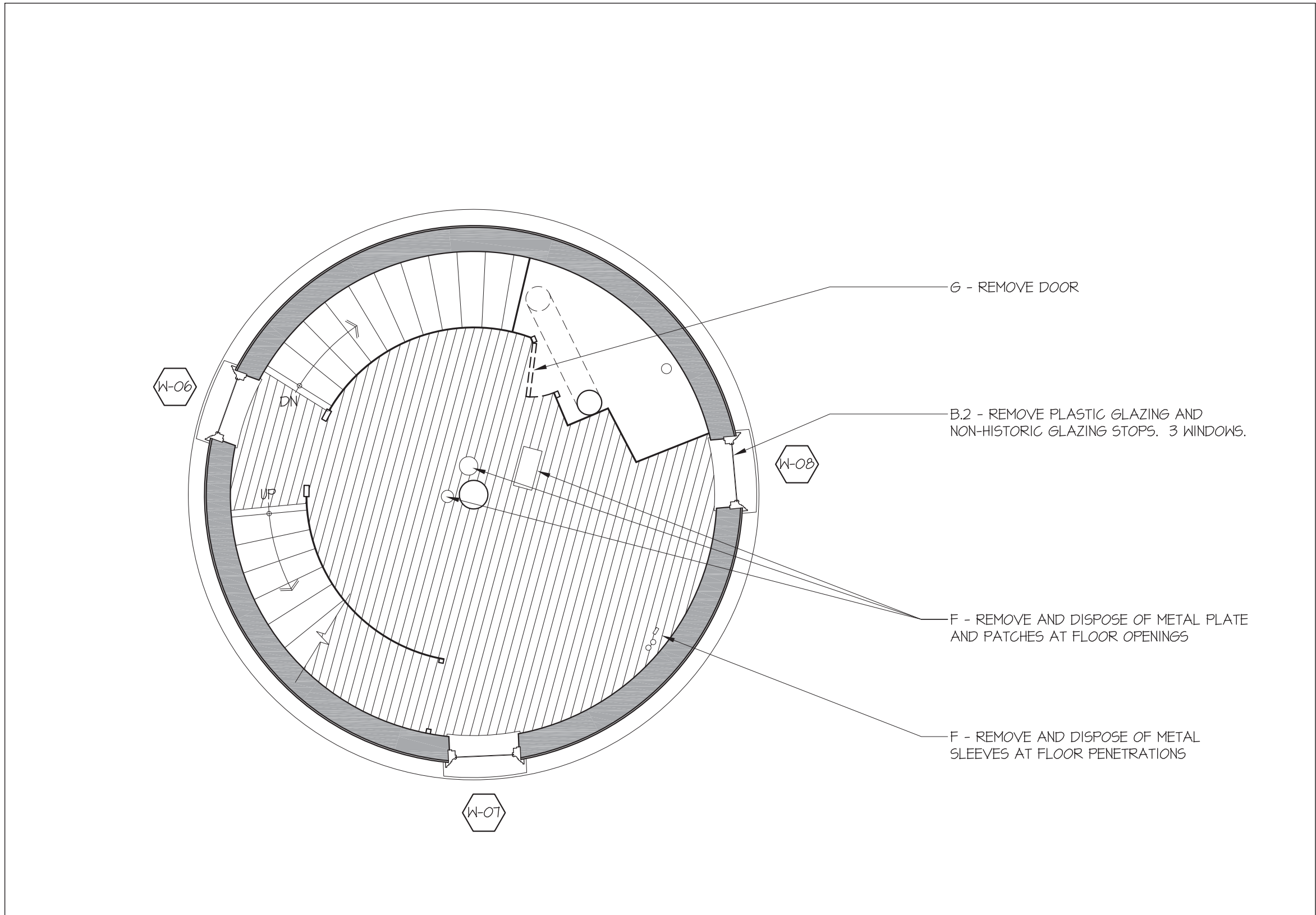
APPROVED FOR CONSTRUCTION DATE
KATHLEEN O'CONNOR
COMMISSIONER
DEPARTMENT OF PARKS, RECREATION
& CONSERVATION

APPROVED FOR CONSTRUCTION DATE
HUGH J. GREECHAN JR., P.E.
COMMISSIONER
DEPARTMENT OF PUBLIC WORKS
& TRANSPORTATION

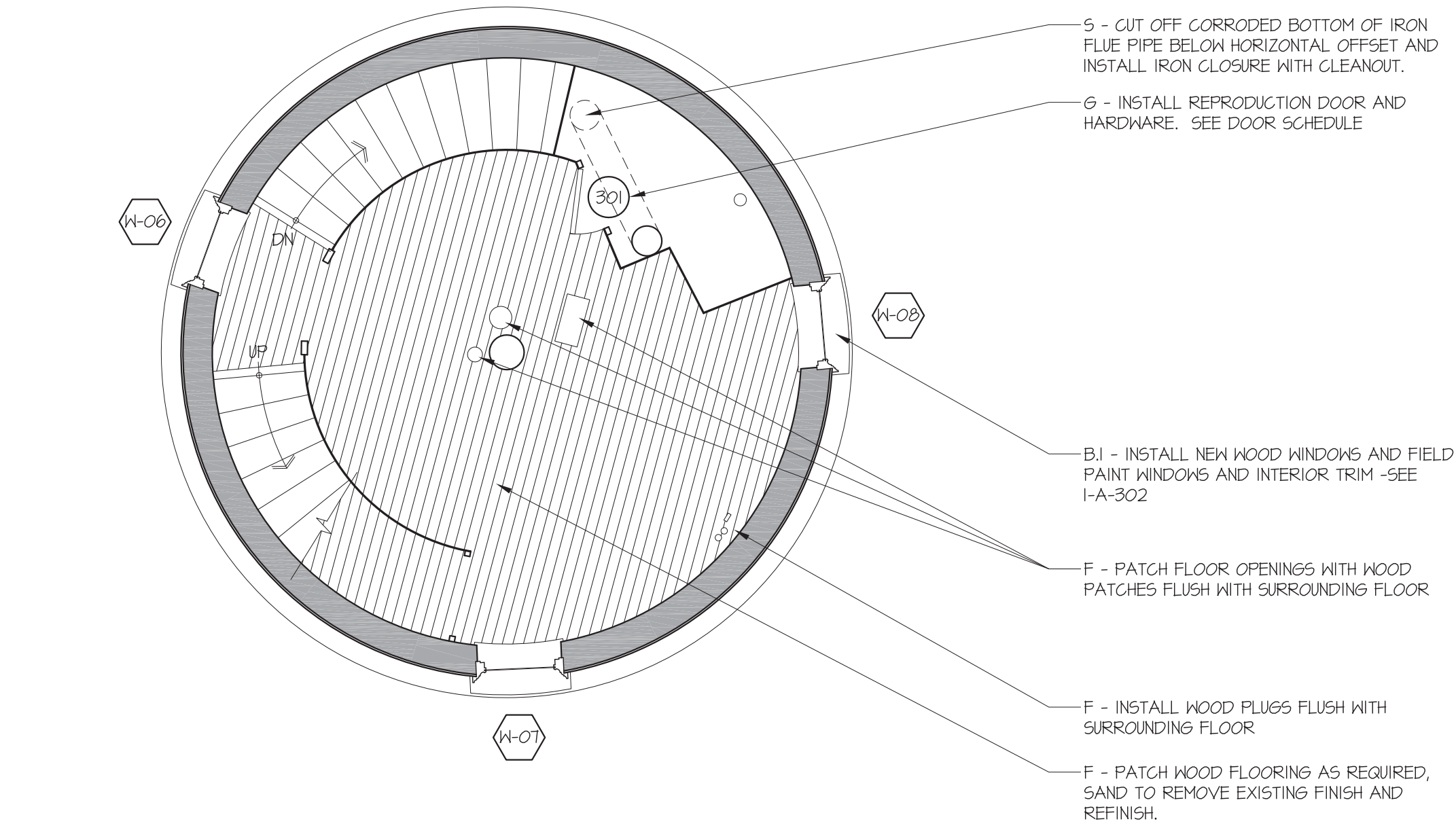
				STEPHEN TILLY, Architect 22 Elm Street, Dobbs Ferry, New York 10522 Structural Engineer: Structures North Consulting Engineers, Inc. 60 Washington St., Suite 401, Salem, MA 01970 MEP Engineer: Tietjen Venegas Consulting Engineers 68 Purchase Street, Rye, New York 10580 Cathodic Protection Consultant: Echem Consultants, LLC 4 Jefferson Plaza, Suite 500, Poughkeepsie, NY 12601			
REVISION NUMBER	DATE	MADE BY	APP'D BY	REVISION			
RECORD DRAWING CERTIFICATION							
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CONTRACTOR				PROJECT COORDINATOR			
NAME		DATE		NAME		DATE	
SIGNATURE				SIGNATURE			
TITLE				TITLE			
WESTCHESTER COUNTY, NEW YORK DEPARTMENT OF PUBLIC WORKS AND TRANSPORTATION DIVISION OF ENGINEERING				CONTRACT NUMBER: 21-516		DPW DRAWING NUMBER: A-000	
TARRYTOWN LIGHTHOUSE RESTORATION KINGSLAND POINT PARK, VILLAGE of SLEEPY HOLLOW, NY TITLE SHEET				SHEET NO. 01 OF 23		SCALE: n/a DATE: 08-20-2021	
				DPW FILE NO. 8-12-T-29		REV. NO.	

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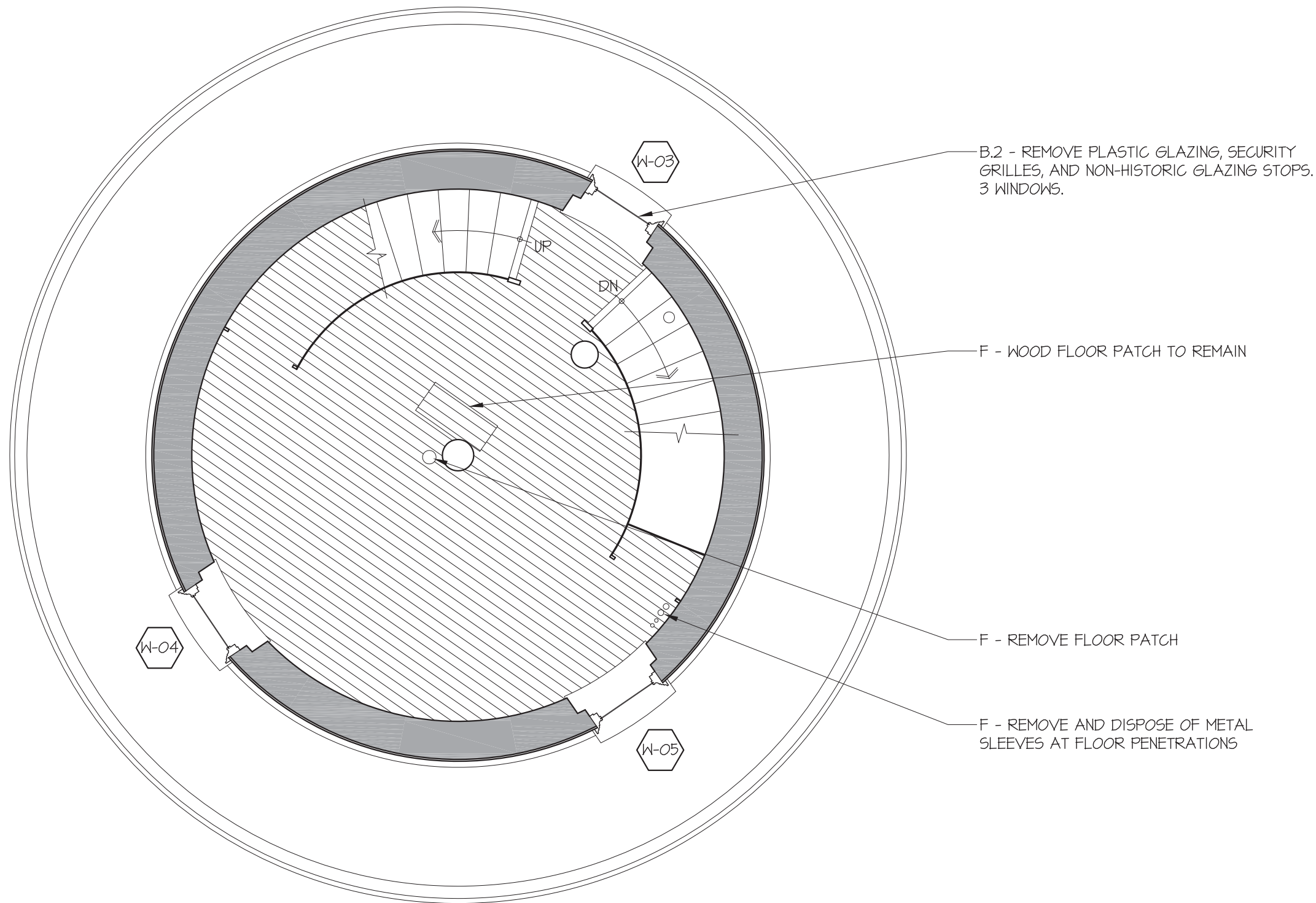




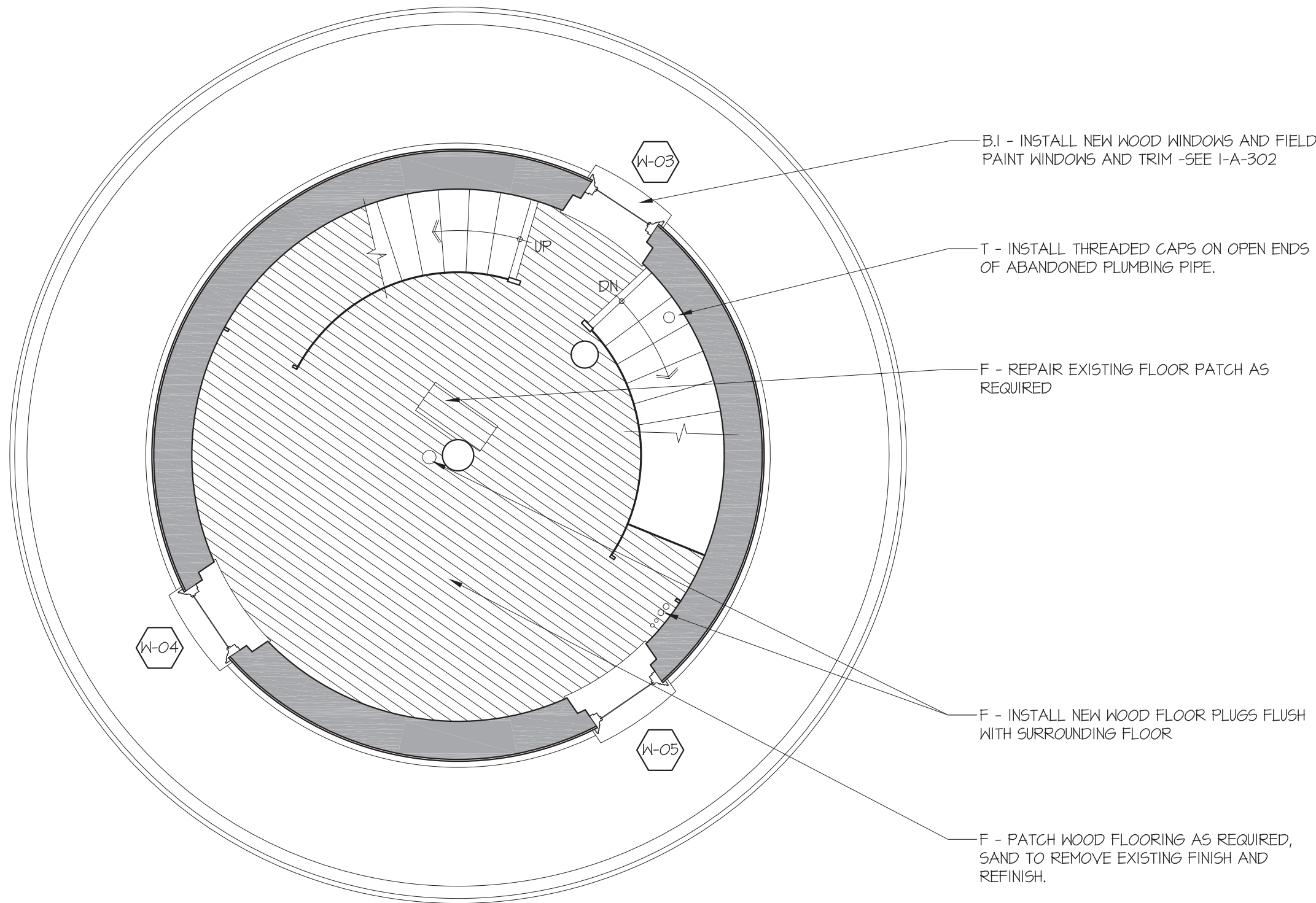
2 3rd FLOOR REMOVALS
SCALE: 1/4" = 1'-0"



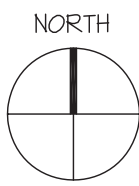
4 3rd FLOOR NEW WORK
SCALE: 1/4" = 1'-0"



1 2nd FLOOR REMOVALS
SCALE: 1/4" = 1'-0"



3 2nd FLOOR NEW WORK
SCALE: 1/4" = 1'-0"



REVISION NUMBER	DATE	MADE BY	APP'D BY	REVISION	

SCOPE OF WORK:

A. **TOWER EXTERIOR:** Including exterior surfaces and components from top of caisson to top of lantern vent ball, cast iron window trim, cantilevered galleries, brackets, railings, flue, bell housing, 1st story protective canopy and supporting columns. Excluding windows, doors, lantern glazing, fog bell, caisson (See Caisson Repairs, below), concrete paving. Install protection as necessary to comply with NYSDEC permit requirement to prevent contamination of the Hudson River.

- Remove paint and rust scale from all exterior cast iron surfaces using specified techniques. Remove non-historic items as indicated on drawings. See Appendix 3 - Lead Paint Testing Inspection Report for further information.
- Remove corrosion within joints and decorative trim. Immediately apply specified primer paint to newly exposed and cleaned metal surfaces.
- Inspect metal surfaces and components to identify areas of severe erosion, deformation, mechanical breakdown, delamination, failure, or loose components or fasteners and repair as specified. Follow architect's instructions for additional repairs in cases of structural failure or weakening.
- Inspect construction joints for proper sealant performance. Remove and replace deteriorated, missing, or non-performing sealant. Inspect enclosure and gutting system for holes and leaks into the interior, and repair as directed by architect. See drawings for locations of known leaks.
- Apply NERCOAT qualified high performance primer and finish coating as specified. Provide non-slip aggregate material at painted metal deck surfaces. Refer to color schedule.

B. **WINDOWS:** Including 8 openings at the 1st, 2nd, and 3rd floors and 8 porthole openings at the 4th floor. Except lantern windows.

- WINDOWS W-1 THROUGH W-8 (double hung):** Remove non-historic security gratings, glazing and sashes. Historic wood window frames and interior casings shall remain. Remove excessive paint buildup on historic wood components and restore damaged and rotted wood as specified. Install new custom made double-hung wood windows and weatherstripping within existing frames. Field paint all windows and trim.
- WINDOWS W-1 THROUGH W-16 (portholes):** Carefully remove interior trim at 8 porthole windows. Restore damaged or rotted wood as specified and install fixed laminated glass. Reinstall interior trim and paint all exposed wood.

C. **EXTERIOR ELECTRICAL WORK:** Provide new electrical service and exterior lighting fixtures as indicated on electrical drawings.

D. **INTERIOR ELECTRICAL WORK:** Provide new electrical panel. Replace interior lighting fixtures, convenience outlets, and wiring as indicated. Remove abandoned wiring.

E. **EXTERIOR DECK AT FIRST FLOOR:** Remove top layer of concrete, install cathodic protection components, and install new concrete topping slab to original elevations.

F. **WOOD FLOORING:** Remove all metal floor plates, plugs, and sleeves in wood flooring. Repair damaged wood and where indicated on plans, using filler compound or Dutchmen as appropriate. Install patches or plugs at floor penetrations as detailed (Note: patches at historic floor openings shall be made with materials similar to surrounding wood flooring but are not intended to be invisible). Sand floor to remove previous finishes and finish with clear polyurethane.

G. **INTERIOR WOOD DOORS, PARTITIONS, AND PANELING:** Construct and/or restore interior wood elements where shown to match existing historic elements. Fabricate and install reproduction doors and hardware in openings where indicated. Remove excessive paint buildup using specified methods. Paint all new and existing wood (refer to paint color schedule).

H. **EXTERIOR DOORS:** Remove exterior doors at First and Fifth Floors. Fabricate and install new doors and hardware as indicated on drawings and specifications.

I. **BASEMENT:** Except caisson repairs and first floor structural plate repairs.

- Remove debris, dirt and sediment from basement, clean and expose concrete floor.
- Remove and dispose of furnace, leaving main flue in place. Seal breached flue opening with metal plate, gasket and screws.
- STAIR TO BASEMENT:** Remove existing wood stair to basement. Fabricate, install and paint new pressure treated wood stair and cast-in-place concrete bottom landing as detailed. See drawing 2/A-301 for further information.
- Remove loose paint and rust from basement side of stair partition, underside of metal stair above and other metal surfaces, prime and paint (except 1st floor plates).
- Re-point brick masonry where directed by architect. For bidding purposes assume 200 sq.ft. of wall area.

J. NOT USED

K. **LANTERN REPAIRS (6th floor).**

- LANTERN GLAZING:** Remove 10 non-historic glazing panels. Remove astragals, glazing stops and fasteners--clean and protect for re-installation. Remove excessively built-up paint and clean metal mullions, head and sill. Fabricate any missing metal components to match historic materials and profiles. Install specified glazing, glazing compound, and removed historic and reproduced stops and astragals using historic and matching fasteners. Paint all exposed metal components (coordinate with exterior painting).
- LANTERN INTERIOR:** Repair damaged wood interior walls and trim as indicated on drawings. Sand lightly to remove heavily built-up paint on wood surfaces. Remove loose paint on interior metal surfaces. Repaint interior wood and metal surfaces (see paint color schedule).
- FRESNEL LENS AND LIGHT:** Remove solar array and associated equipment serving existing reproduction Light and provide electrical service to Light as indicated on electrical drawings. Clean and refurbish Light assembly as directed by manufacturer.

L. **CATHODIC PROTECTION SYSTEM:** Install cathodic protection system as described on drawings and specifications, and coordinate with electrical work.

M. **CAISSON REPAIRS:** Construct a temporary coffer dam and create a dry work space around entire caisson. Reposition rip-rap boulders as necessary for access to caisson. Perform caisson repair work indicated on structural drawings. Remove paint and rust from metal surfaces and apply Thermal Sprayed Coating (Metalization) and high performance paint coating. Restore rip-rap to approximate original locations after completion of work.

N. **FIRST FLOOR STRUCTURE AND FLOOR FINISH.**

- Carefully remove 1st floor historic wood flooring boards, documenting location of each board and store for later reinstallation.
- Perform repairs to 1st floor iron structural floor plates as indicated on structural drawings.
- Reinstall removed historic floor boards using original installation techniques. Repair damaged wood, using filler compound, Dutchmen, or matching new floor boards as appropriate. Install patches or plugs at floor penetrations as detailed. Sand and refinish as indicated for wood flooring on other floors. Architect to inspect flooring upon removal and determine preservation treatment, if any.

O. **GUARDRAIL INFILL PANEL:** Remove chicken wire infill at guardrails on 1st and 5th floor galleries. Install specified stainless steel cable netting on all guardrails at 1st and 5th floor galleries as detailed.

P. **BRIDGE AND ISLAND.**

- Perform repairs to perimeter beam/retaining wall of Island as indicated on drawing A-010 for further information.
- On Island, remove asphalt paving and damaged or unstable areas of concrete paving base. Repair concrete base as required and install specified asphalt paver block finish.
- Fabricate and install security gate at land end of bridge.

Q. NOT USED

R. NOT USED

S. **FLUE REPAIRS:** Modify flue cap to prevent rainwater entry. Fabricate and install closure with cleanout for corroded flue offset at 3rd floor.

T. **MISCELLANEOUS MINOR REPAIRS:** Provide threaded caps on open ends of abandoned waste pipes per plumbing code.

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Structural Engineer: Structures North Consulting Engineers, Inc.
60 Washington St., Suite 401, Salem, MA 01970
MEP Engineer: Tietjen Venegas Consulting Engineers
68 Purchase Street, Rye, New York 10580
Cathodic Protection Consultant: Echem Consultants, LLC
4 Jefferson Plaza, Suite 500, Poughkeepsie, NY 12601

DRAWING TITLE:
SECOND & THIRD FLOOR PLANS

DRAWING NUMBER:
A-102

CONTRACT NUMBER: 21-516	DPW DRAWING NUMBER: 8-12-A-32
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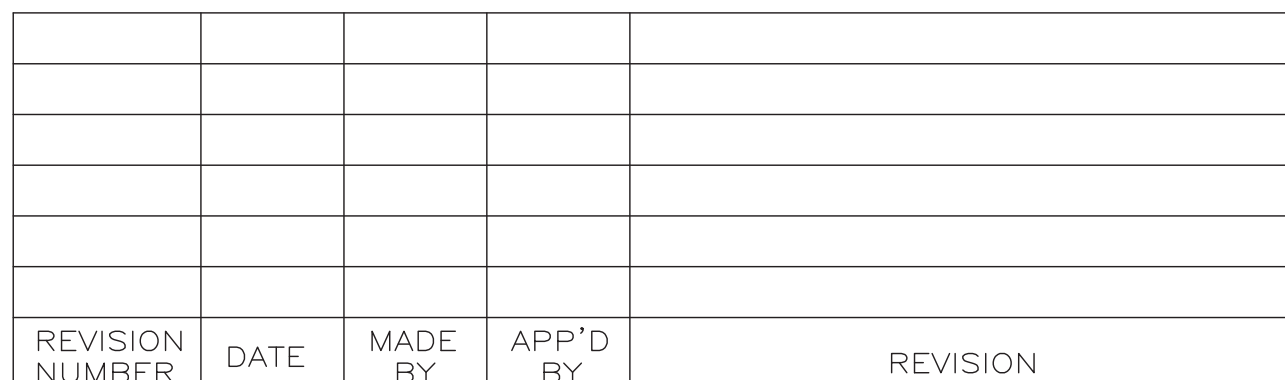
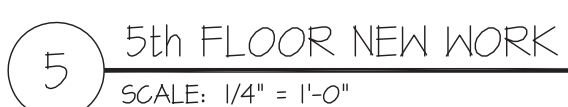
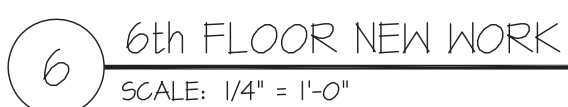
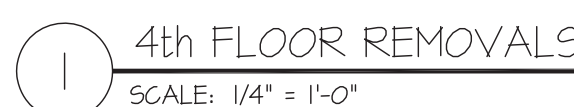
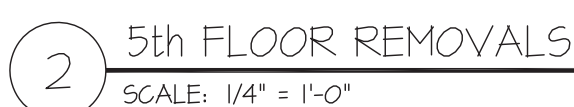
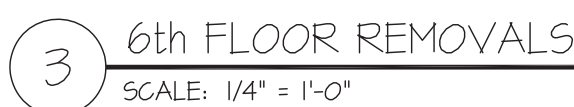
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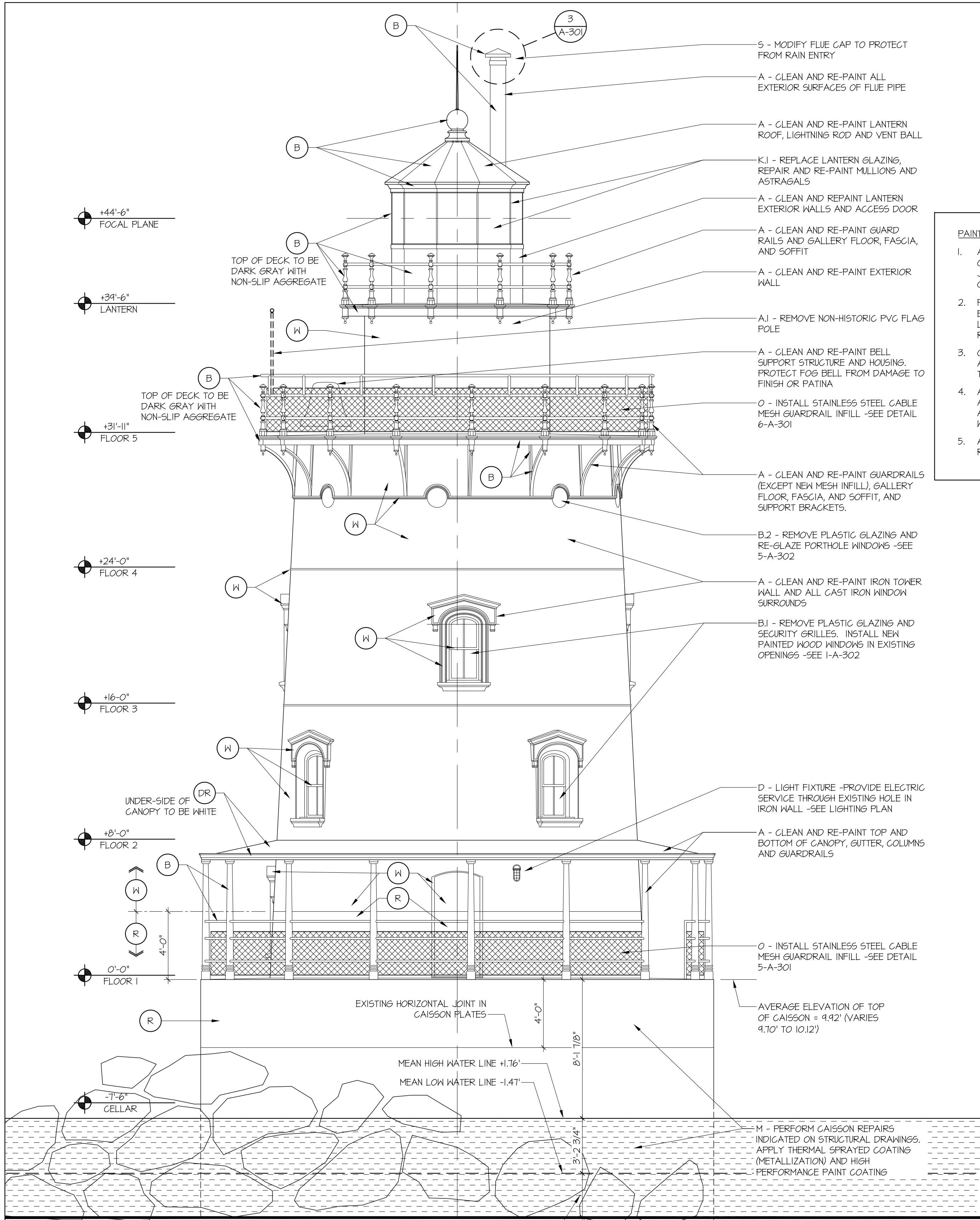
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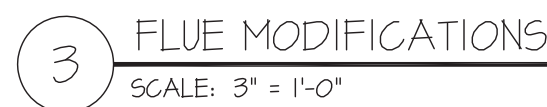
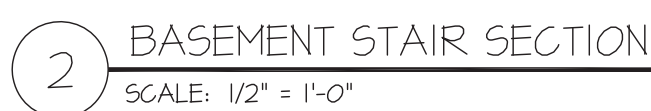
WESTCHESTER COUNTY, NEW YORK
DEPARTMENT OF PUBLIC WORKS AND TRANSPORTATION
DIVISION OF ENGINEERING

TARRYTOWN LIGHTHOUSE RESTORATION
KINGSLAND POINT PARK, VILLAGE OF SLEEPY HOLLOW, NY
SECOND AND THIRD FLOOR PLANS



TARRYTOWN LIGHTHOUSE RESTORATION
KINGSLAND POINT PARK, VILLAGE of SLEEPY HOLLOW, NY
FOURTH, FIFTH, & SIXTH FLOOR PLANS





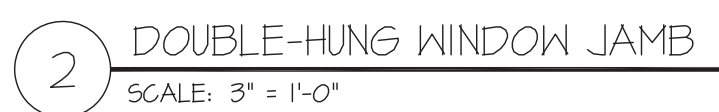
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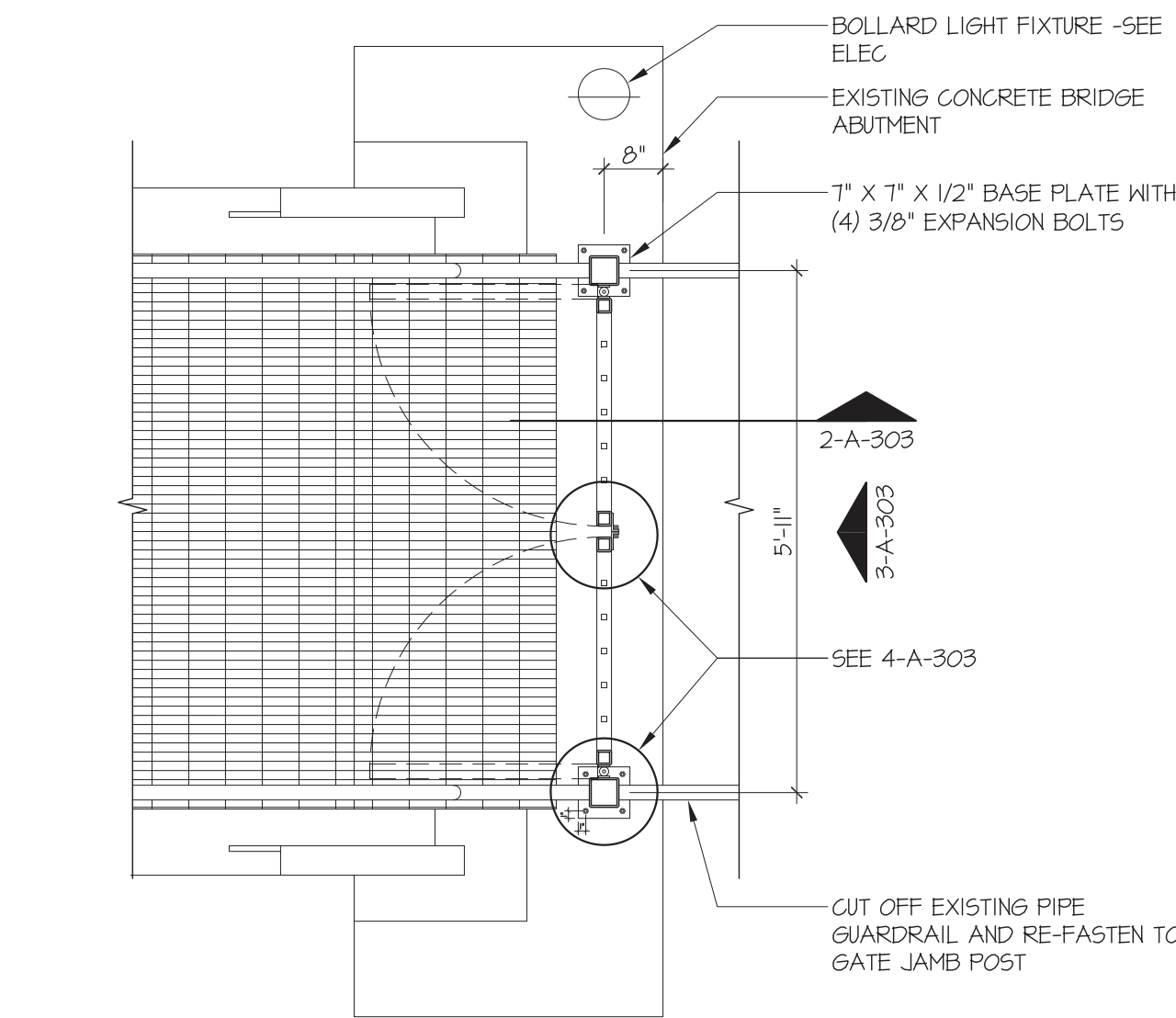
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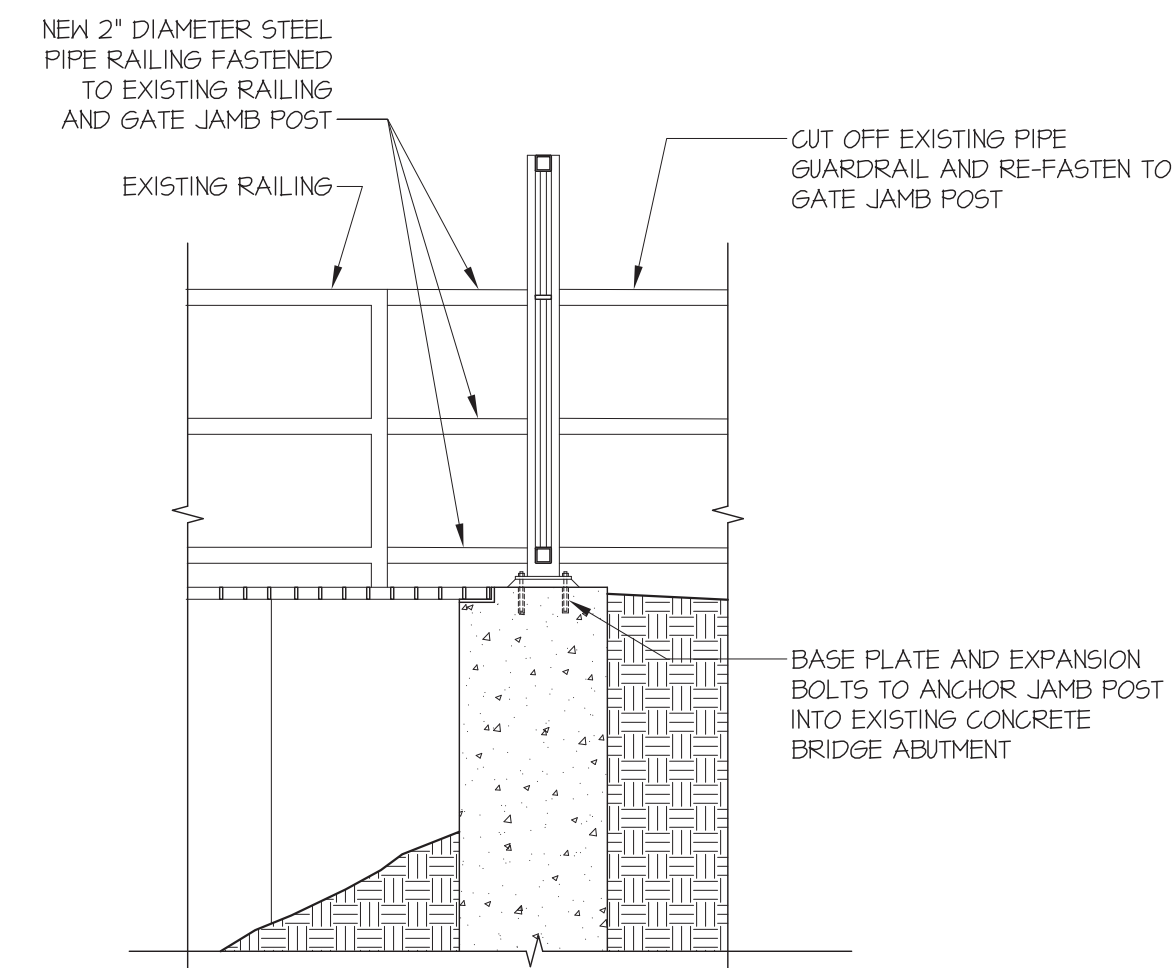
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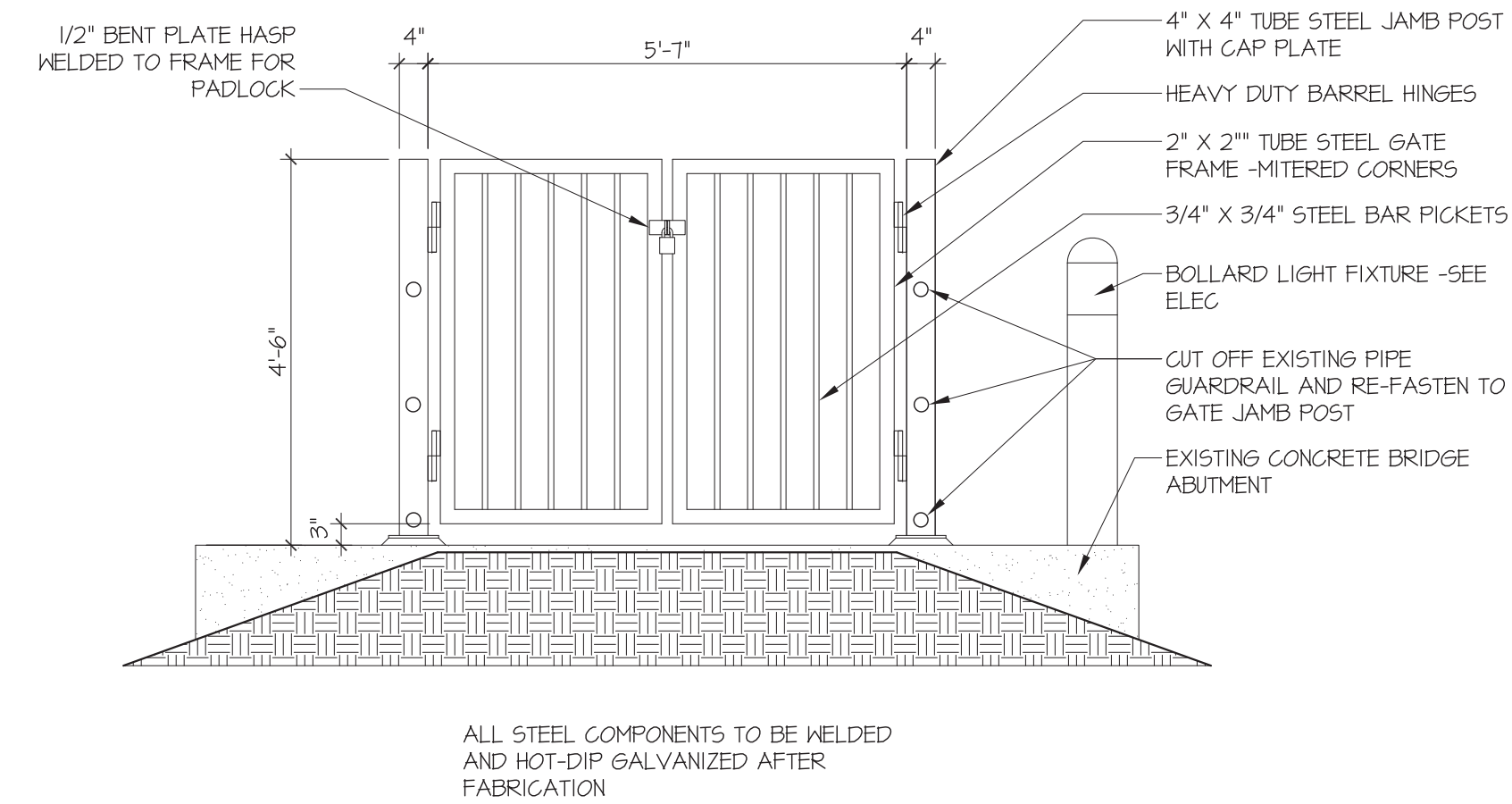
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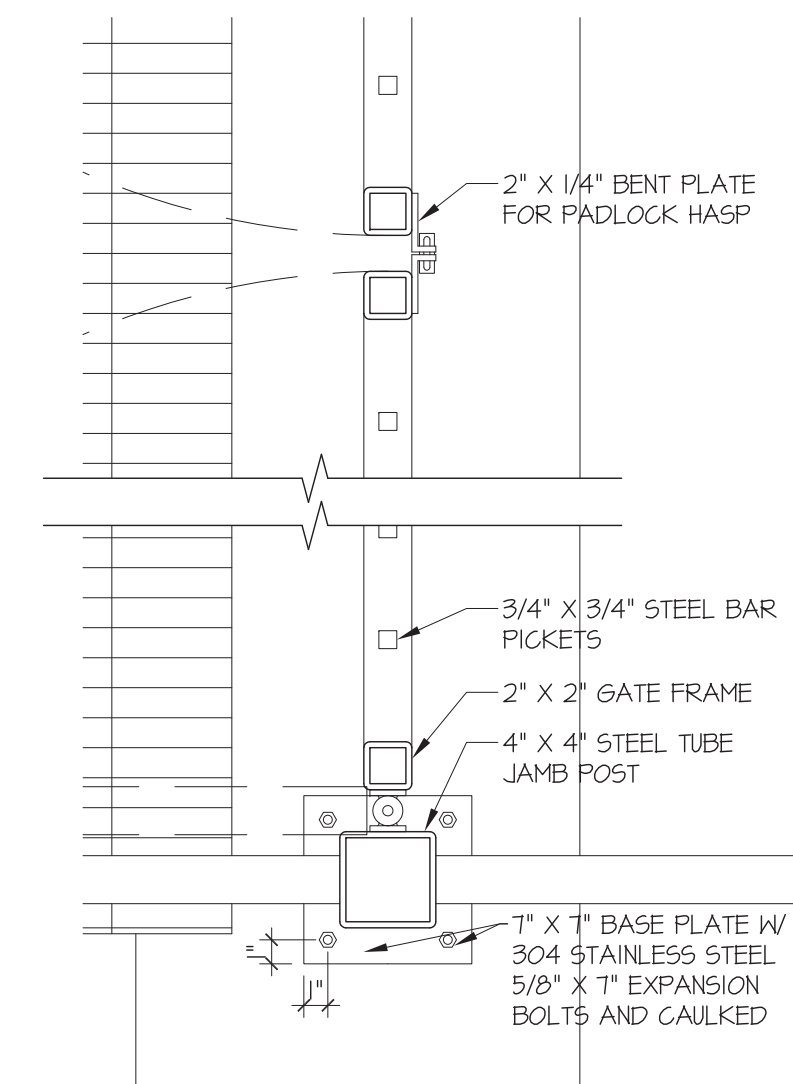
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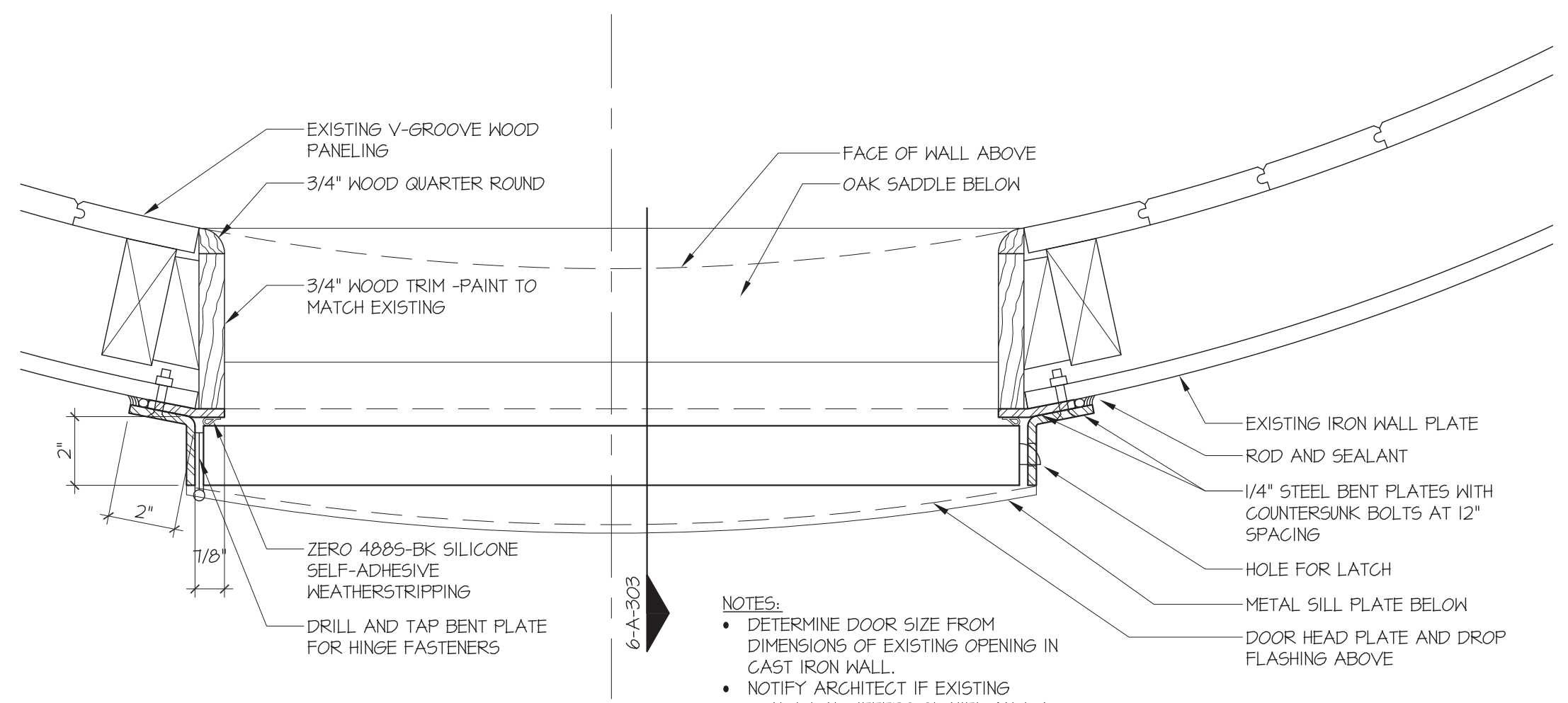
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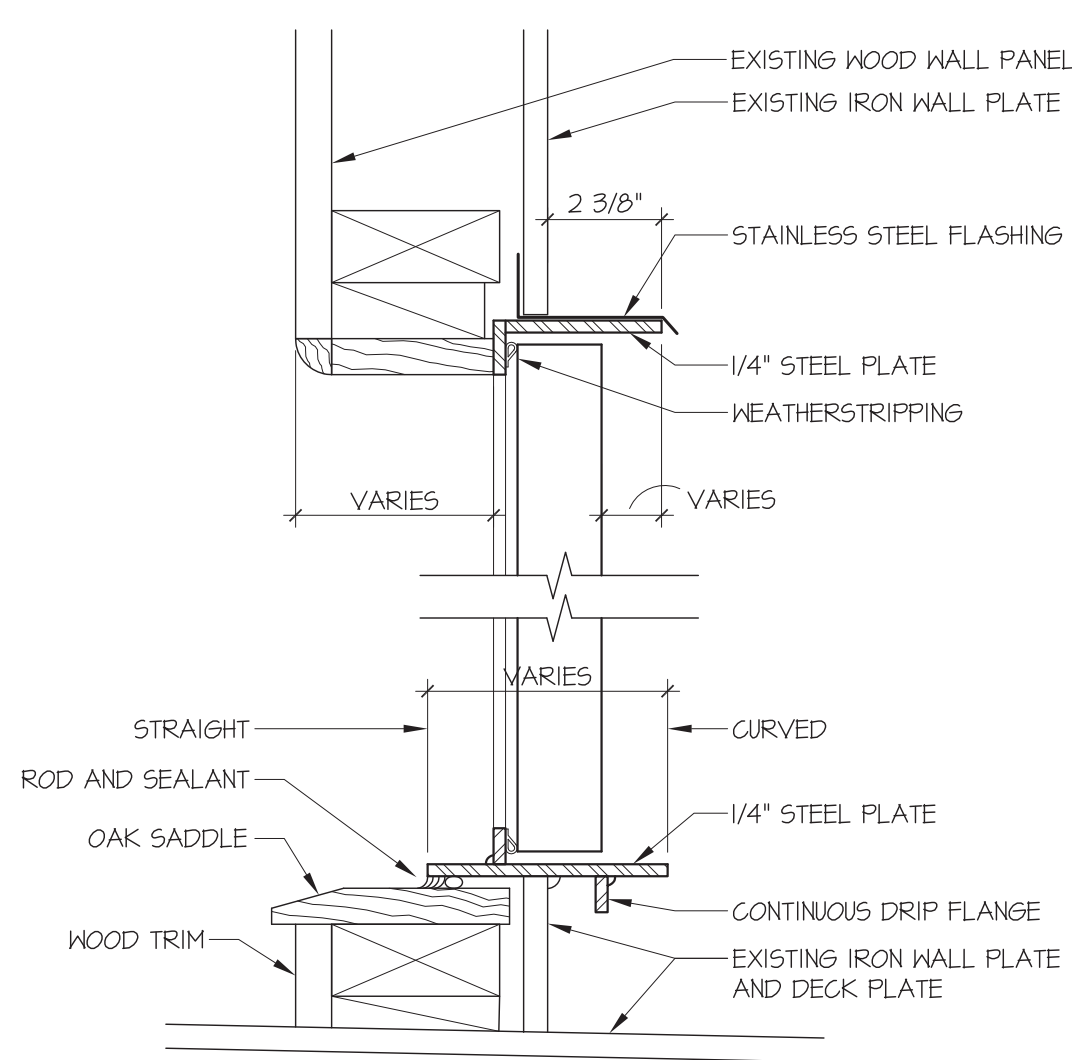
3 GATE - ELEVATION
SCALE: 1/2" = 1'-0"



4 GATE - JAMB AND HASP DETAILS
SCALE: 1 1/2" = 1'-0"



5 DOOR 501 - JAMB DETAIL
SCALE: 3" = 1'-0"



6 DOOR 501 - HEAD AND SILL DETAILS
SCALE: 3" = 1'-0"

- NOTES:
- DETERMINE DOOR SIZE FROM DIMENSIONS OF EXISTING OPENING IN CAST IRON WALL.
 - NOTIFY ARCHITECT IF EXISTING CONDITION DIFFERS SIGNIFICANTLY FROM CONDITION SHOWN

DOOR SCHEDULE							
TAG	DESCRIPTION	SCOPE OF WORK	DIMENSIONS	FRAME	FINISH	DETAILS	REMARKS
101	ENTRANCE DOOR, HOLLOW METAL	HOLLOW CUSTOM FABRICATED HOLLOW METAL EXTERIOR DOOR IN EXISTING FRAMED OPENING	TO MATCH EXISTING, APPROX. 2'-8" X 6'-3"	EXISTING STEEL/IRON FRAME TO REMAIN (STRIP AND RE-PAINT). REPLACE WOOD SILL MEMBERS WITH MAHOGANY TO MATCH EXISTING	HIGH-PERFORMANCE COATING, EXTERIOR SIDE PER I-A-201, INTERIOR SIDE WHITE		CUSTOM FABRICATE DOOR TO MATCH SIZE AND SHAPE OF EXISTING. DRILL AND TAP EXISTING IRON FRAME FOR NEW HARDWARE.
102	EXISTING BASEMENT DOOR, BUILT-UP PANEL	REFURBISH EXISTING	EXISTING TO REMAIN	EXISTING	PAINT		
301	INTERIOR WOOD PANEL DOOR	REPLACE WITH NEW WOOD DOOR MATCHING EXISTING MATERIALS AND CONSTRUCTION	TO MATCH EXISTING	EXISTING TO REMAIN	PAINT		VISION PANEL: 1/4" LAMINATED GLASS - CLEAR
401	INTERIOR BUILT-UP WOOD PANEL DOOR	FABRICATE AND INSTALL WOOD PANEL DOOR IN EXISTING WOOD FRAME	TO MATCH EXISTING DOOR OPENING, APPROX 2'-6" X 6'-4" X 1 3/4"	EXISTING	PAINT	7-A-301	
501	EXTERIOR DOOR TO MATCH DECK, HOLLOW METAL	CUSTOM FABRICATED HOLLOW METAL EXTERIOR DOOR AND BUILT-UP STEEL PLATE FRAME	SIZE PER EXISTING WALL PANEL OPENING (APPROXIMATELY 2'-0" X 6'-6") x 1 3/4" THICK	BUILT-UP STEEL PLATE MEMBERS AS DETAILED	HIGH-PERFORMANCE COATING, EXTERIOR SIDE PER I-A-201, INTERIOR SIDE WHITE	5-A-303, 6-A-303	
601	EXTERIOR CAST IRON DOOR TO LANTERN DECK	EXISTING TO REMAIN AND BE REFINISHED	EXISTING TO REMAIN	REPAIR EXISTING WOOD FRAME TO ORIGINAL CONDITION AND APPEARANCE	HIGH-PERFORMANCE COATING, ALL SIDES PER I-A-201		

REFER TO SPECIFICATIONS FOR HARDWARE FOR EACH DOOR

REVISION NUMBER	DATE	MADE BY	APP'D BY	REVISION

CONSULTANT SEAL

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22 Elm Street, Dobbs Ferry, New York 10522
Structural Engineer: Structures North Consulting Engineers, Inc.
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4 Jefferson Plaza, Suite 500, Poughkeepsie, NY 12601

DRAWING TITLE:
DETAILS

DRAWING NUMBER:
A-303

CONTRACT NUMBER:
21-516

DPW DRAWING NUMBER:
8-12-A-37

SHEET NO.: 09 of 23

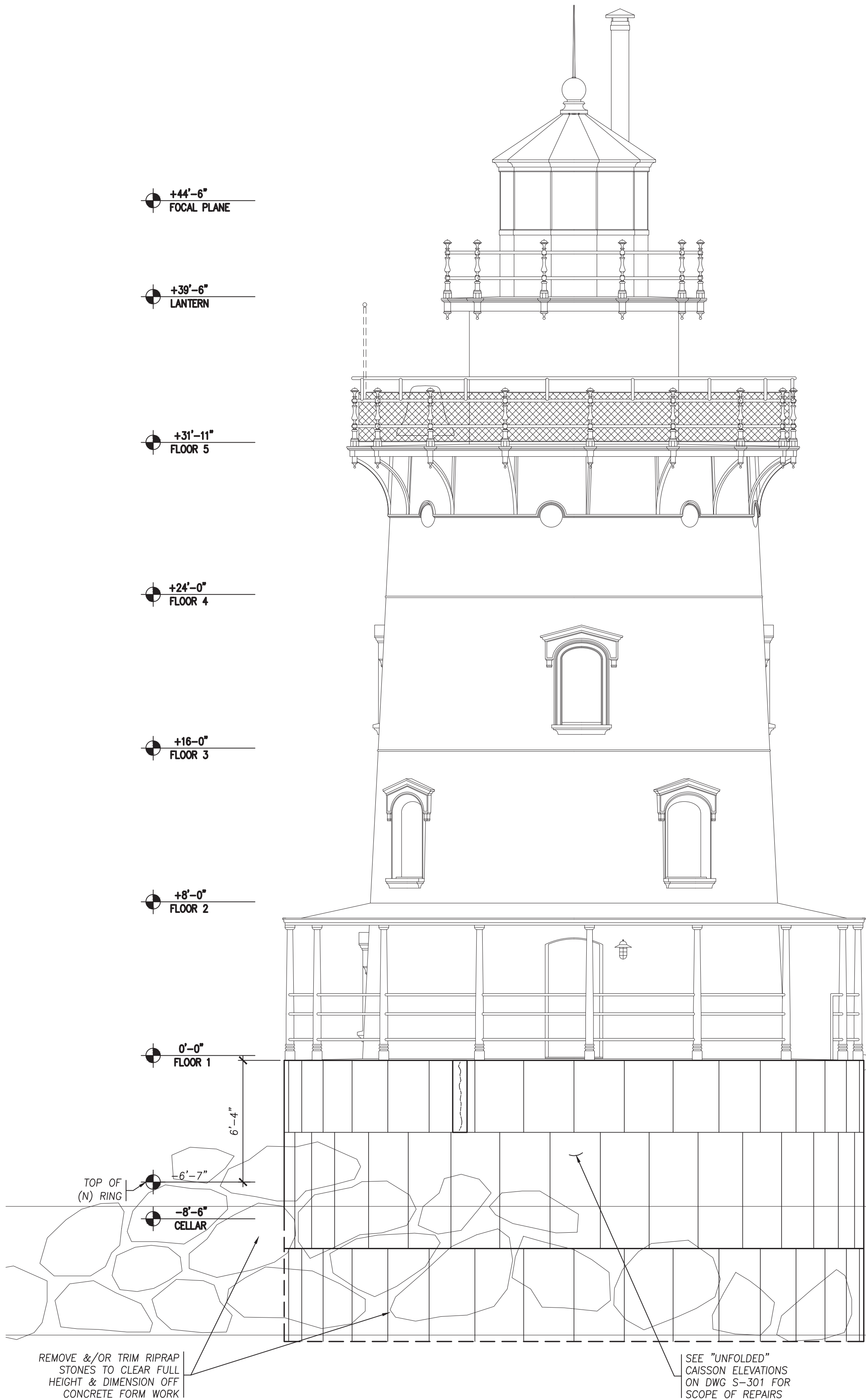
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DATE: 08-20-2021

DPW FILE NO.
8-12-A-37

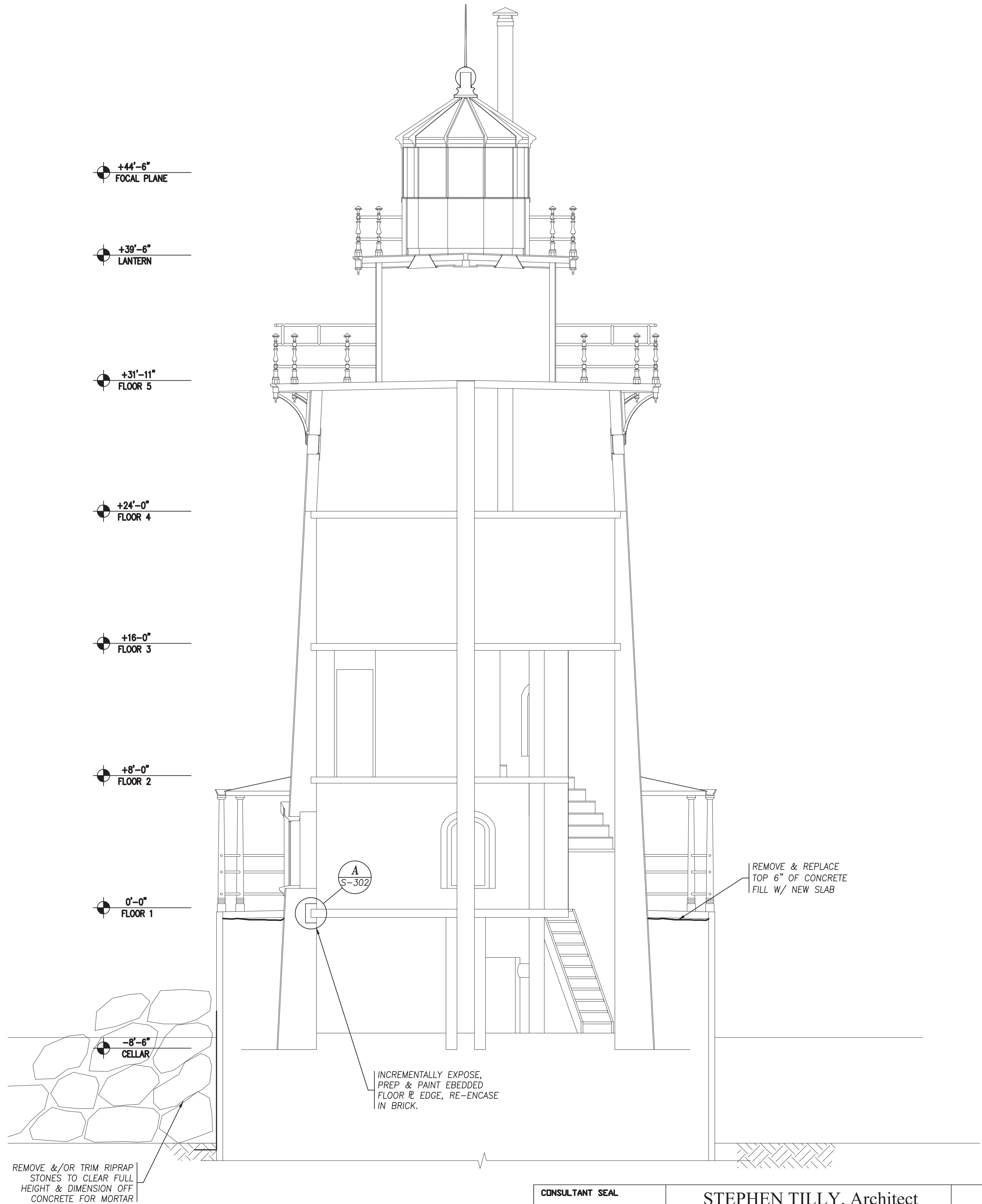
REV. NO.

WESTCHESTER COUNTY, NEW YORK
DEPARTMENT OF PUBLIC WORKS AND TRANSPORTATION
DIVISION OF ENGINEERING

TARRYTOWN LIGHTHOUSE RESTORATION
KINGSLAND POINT PARK, VILLAGE of SLEEPY HOLLOW, NY
DETAILS



A CAISSON ELEVATION
S-101 1/4" = 1'-0"



B CAISSON SECTION
S-101 1/4" = 1'-0"



REVISION NUMBER	DATE	MADE BY	APP'D BY	REVISION

STEPHEN TILLY, Architect
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DRAWING TITLE:
LIGHTHOUSE
ELEVATION &
SECTION

DRAWING NUMBER:
S101

CONTRACT NUMBER: **21-516** DPW DRAWING NUMBER: **8-12-S-38**

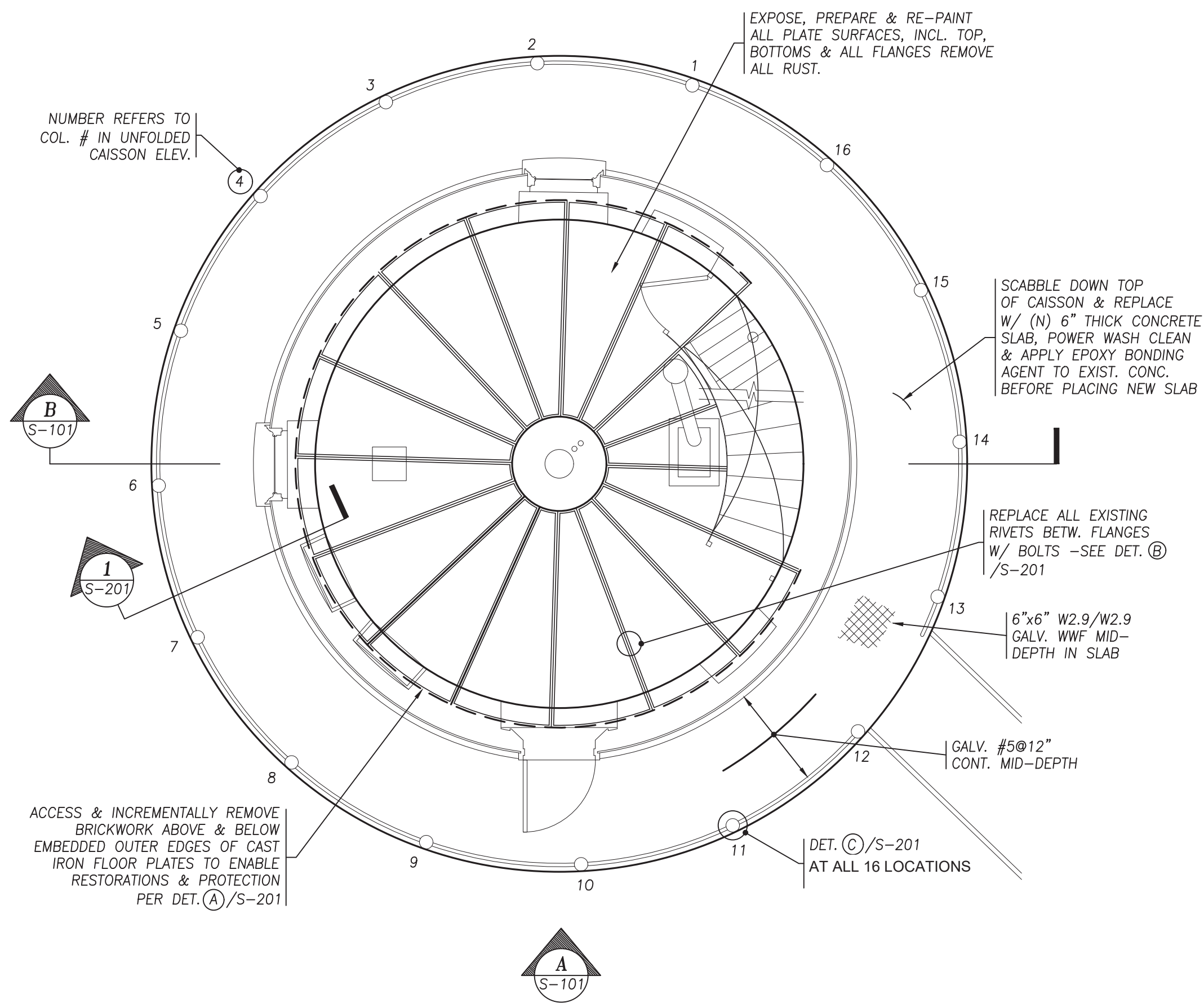
SHEET NO: **10 of 23**

SCALE: **as noted**
DATE: **08-20-2021**

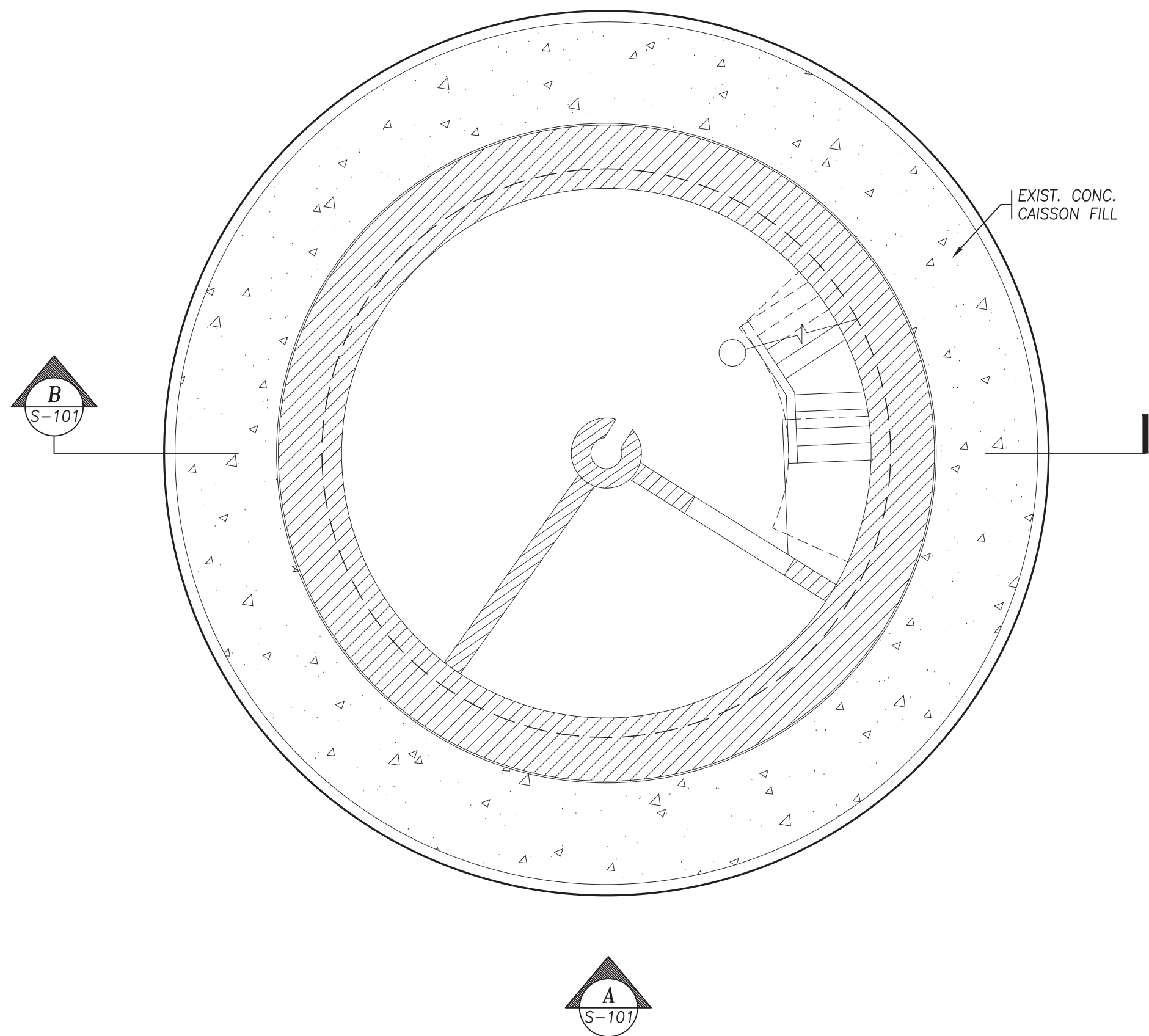
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WESTCHESTER COUNTY, NEW YORK
DEPARTMENT OF PUBLIC WORKS AND TRANSPORTATION
DIVISION OF ENGINEERING

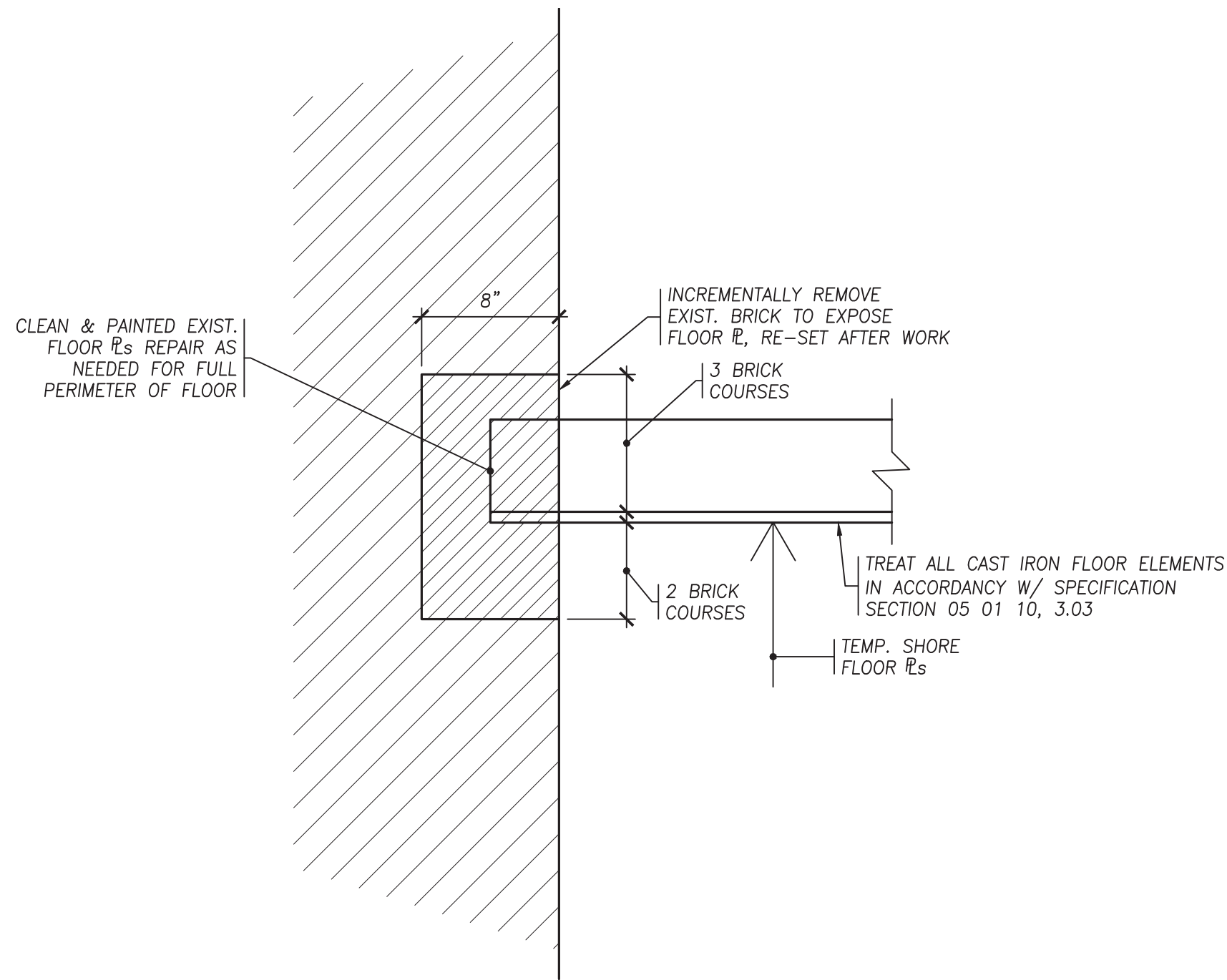
TARRYTOWN LIGHTHOUSE RESTORATION
KINGSLAND POINT PARK, VILLAGE of SLEEPY HOLLOW, NY
LIGHTHOUSE ELEVATION AND SECTION



FIRST FLOOR PLATE LAYOUT
1/4" = 1'-0"

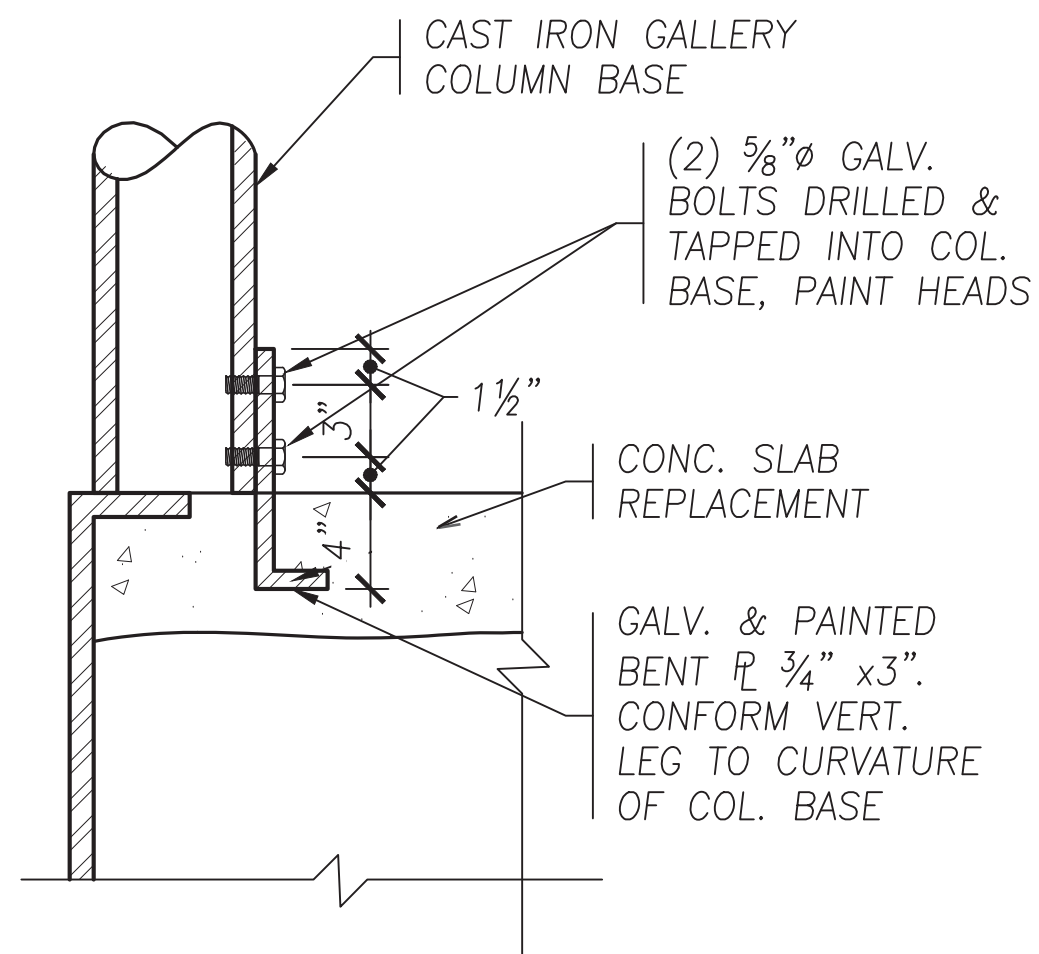


CAISSON PLAN
1/4" = 1'-0"

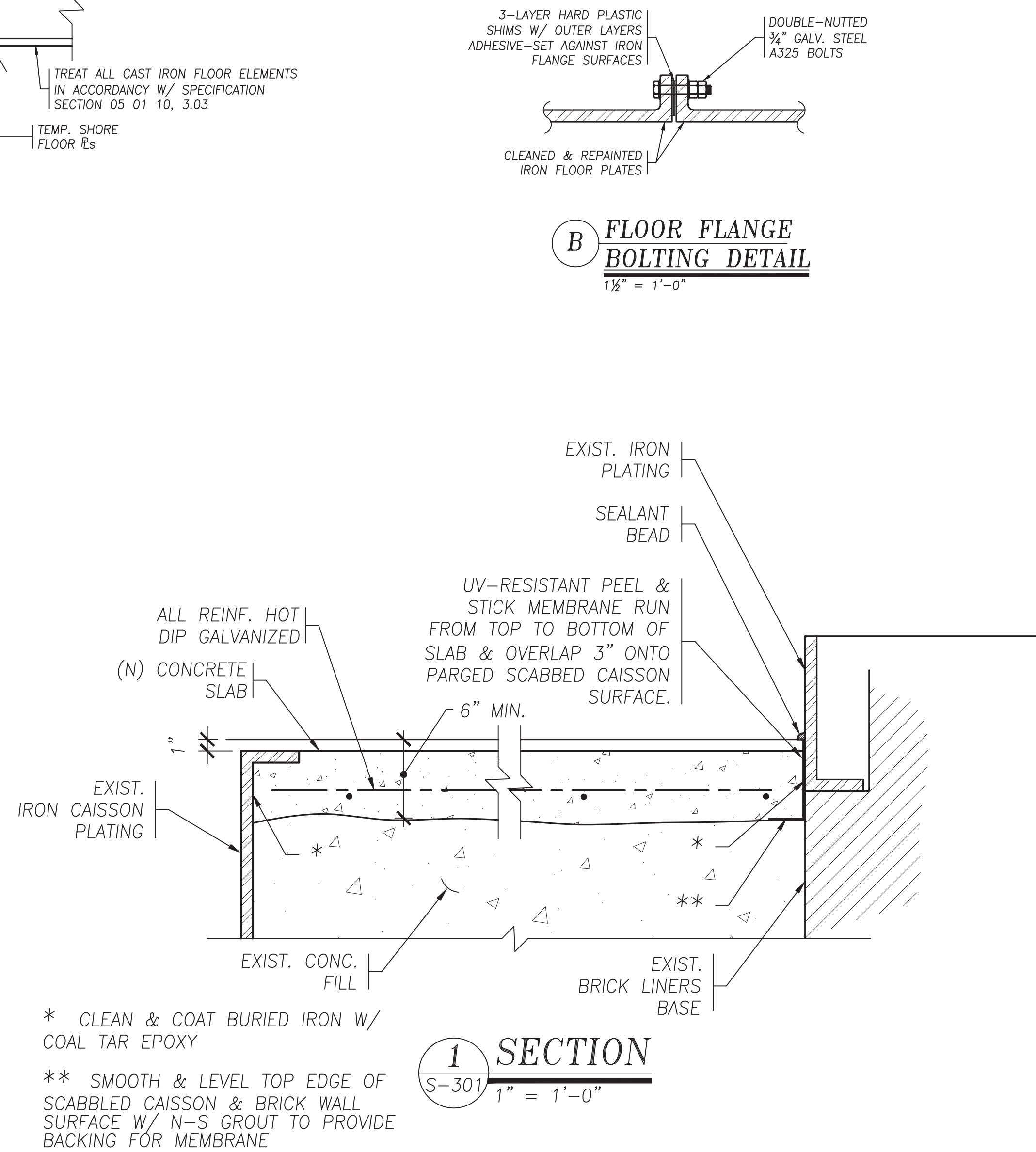


FLOOR DETAIL
1 1/2" = 1'-0"

NOTE: DO NOT EXPOSE, TREAT, RE-ENCASE MORE THAN ONE CONTINUOUS &S EDGE AT A TIME.



DETAIL
1" = 1'-0"



SECTION
1" = 1'-0"

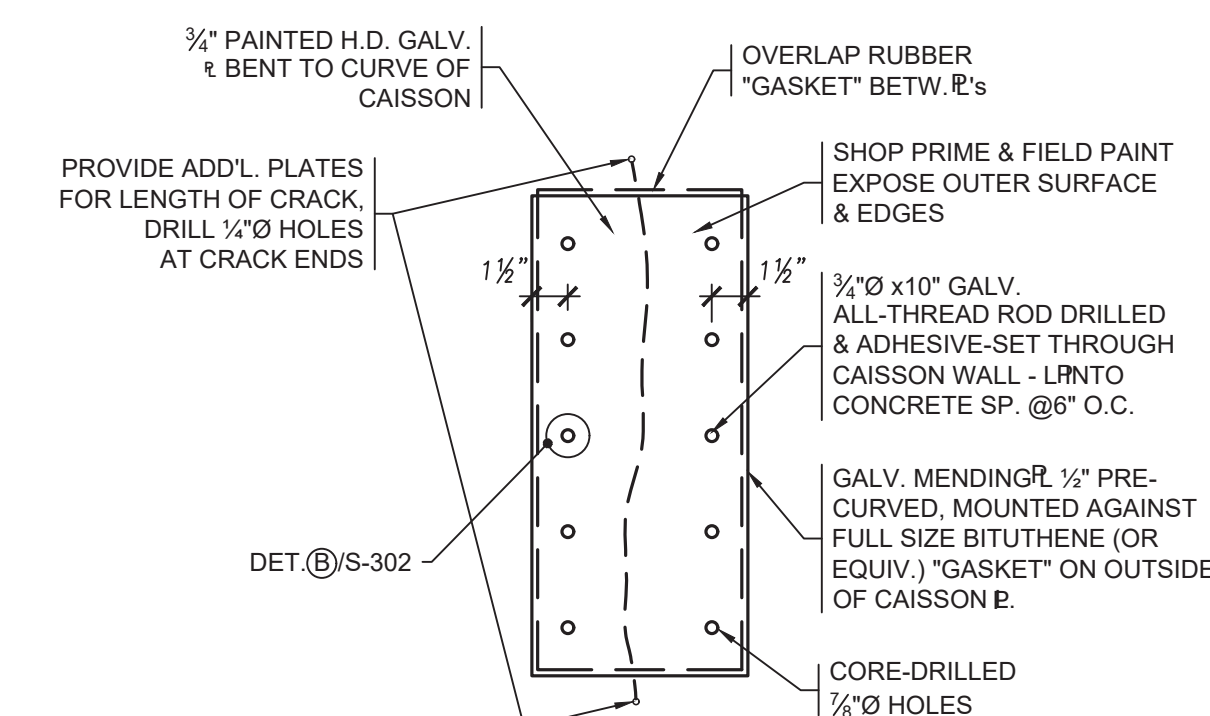
* CLEAN & COAT BURIED IRON W/ COAL TAR EPOXY

** SMOOTH & LEVEL TOP EDGE OF SCABBLED CAISSON & BRICK WALL SURFACE W/ N-S GROUT TO PROVIDE BACKING FOR MEMBRANE

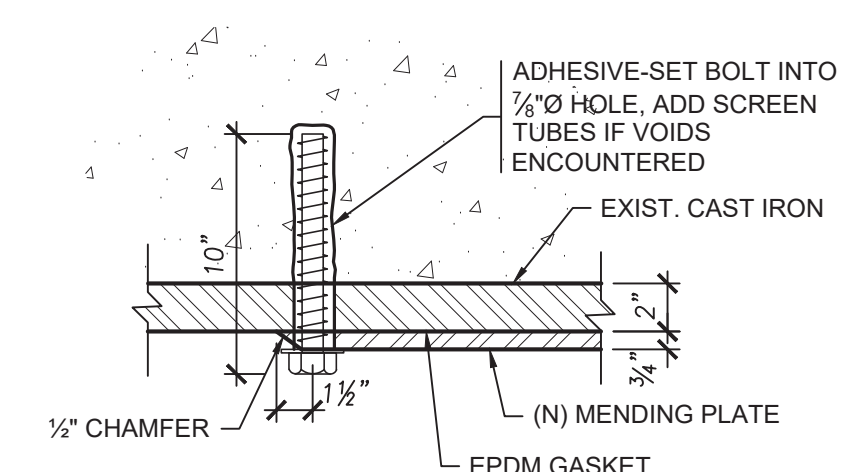


REVISION NUMBER	DATE	MADE BY	APP'D BY	REVISION

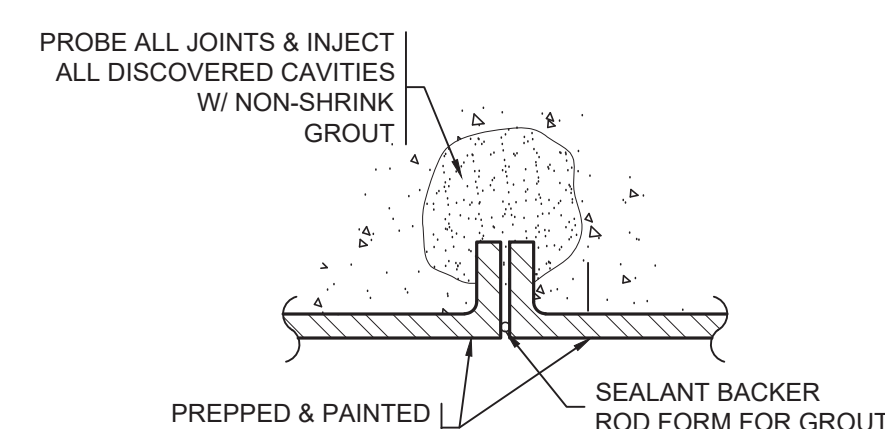
<div>CONSULTANT SEAL</div> <div></div>	<div>STEPHEN TILLY, Architect</div> <div>22 Elm Street, Dobbs Ferry, New York 10522</div> <div>Structural Engineer: Structures North Consulting Engineers, Inc. 60 Washington St., Suite 401, Salem, MA 01970</div> <div>MEP Engineer: Tietjen Venegas Consulting Engineers 68 Purchase Street, Rye, New York 10580</div> <div>Cathodic Protection Consultant: Echem Consultants, LLC 4 Jefferson Plaza, Suite 500, Poughkeepsie, NY 12601</div>	<div>DRAWING TITLE:</div> <div>STRUCTURAL PLANS, SECTIONS & DETAILS</div> <div>DRAWING NUMBER:</div> <div>S201</div>
	<div>WESTCHESTER COUNTY, NEW YORK</div> <div>DEPARTMENT OF PUBLIC WORKS AND TRANSPORTATION</div> <div>DIVISION OF ENGINEERING</div>	<div>CONTRACT NUMBER:</div> <div>21-516</div> <div>DPW DRAWING NUMBER:</div> <div>8-12-S-39</div>
<div>TARRYTOWN LIGHTHOUSE RESTORATION</div> <div>KINGSLAND POINT PARK, VILLAGE OF SLEEPY HOLLOW, NY</div> <div>STRUCTURAL PLANS & DETAILS</div>	<div>SHEET NO.:</div> <div>11 of 23</div> <div>SCALE:</div> <div>as noted</div> <div>DATE:</div> <div>08-20-2021</div> <div>DPW FILE NO.</div> <div>8-12-S-39</div> <div>REV. NO.</div> <div></div>	



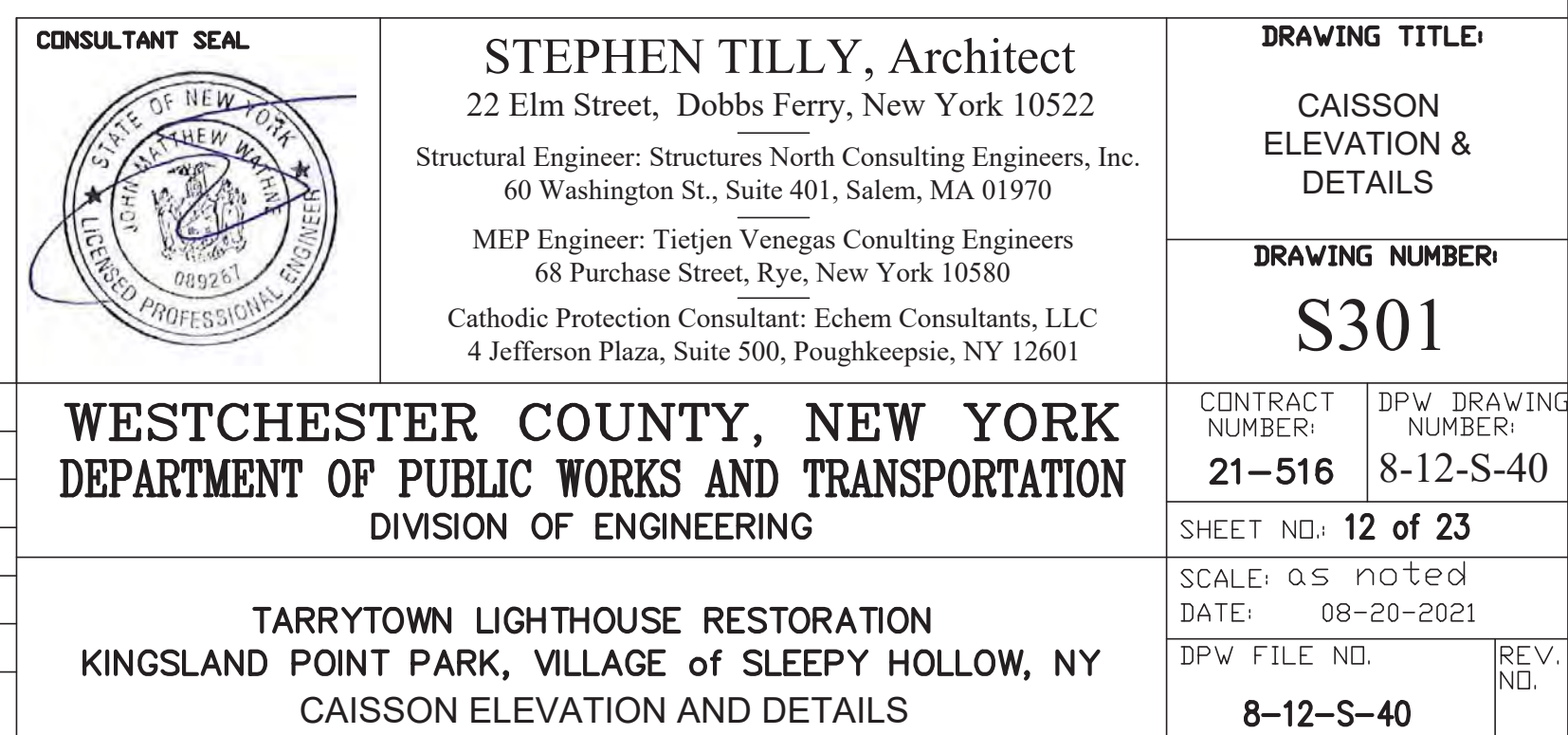
(SHAPE VARIES BY LOCATION.
SEE CAISSON ELEVATIONS)



B DETAIL
1½" = 1'-0"



**C WALL PLATE
JOINT SEAL DETAIL**
1½" = 1'-0" (ABOVE CONC. RING)



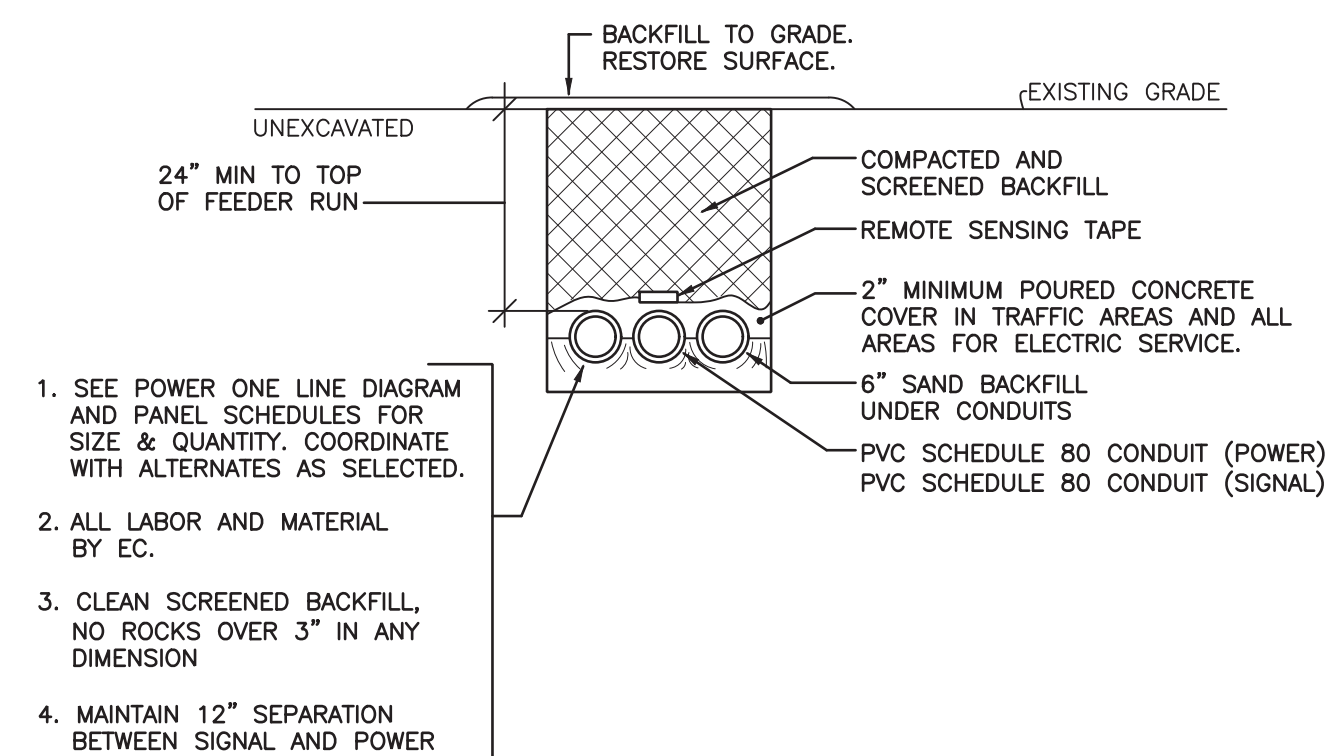
$\frac{1}{2}'' = 1'-0''$ (NOTE ALL LOC'S ARE APPROXIMATE)

$\frac{1}{2}" = 1'-0"$ (NOTE ALL PLOT LOC'S ARE APPROXIMATE)



REVISION NUMBER	DATE	MADE BY	APP'D BY	REVISION

1. ALL WORK SHALL COMPLY WITH THE STATE'S ADOPTED NFPA AND ADOPTED NEC WITH LOCAL SUPPLEMENTS.
2. WORK PERFORMED SHALL BE UNDERTAKEN WITH PRECAUTION BEING MAINTAINED TO ENSURE SAFETY OF PERSONNEL AND EQUIPMENT IN AREA IN SUCH A MANNER SO AS NOT TO DISTURB NORMAL WORK PROCEDURE.
3. WORK SHOWN IS DIAGRAMMATIC. EXACT LOCATION OF CONDUIT RUNS SHALL BE DETERMINED IN FIELD. LOCATE NEW CONDUIT RUNS TO CLEAR EXISTING AND NEW PIPING, DUCTWORK, ACCESS DOORS AND OTHER OBSTRUCTIONS. COORDINATE CONDUIT ROUTING WITH WORK OF OTHER TRADES AND ALTER WHERE NECESSARY TO AVOID INTERFERENCE.
4. ALL RUNS AND EQUIPMENT TO BE APPROVED BY ARCHITECT IN FIELD PRIOR TO COMMENCING. SHOP DRAWINGS SHALL INCLUDE WIRING, PULLBOXES, JUNCTION BOXES, FITTINGS, WIRING DEVICES, CONTROL DEVICES AND DIMENSIONED CLEARANCES FROM EXISTING STRUCTURE AND EQUIPMENT. COORDINATE SHOP DRAWINGS WITH OTHER TRADES PRIOR TO SUBMITTAL.
4. PROVIDE IDENTIFICATION TAGS FOR NEW WIRING AND INSTALL AT EACH END AND IN INTERMEDIATE PULL/JUNCTION BOXES, CABINETS, HOUSINGS, ETC. INDICATE ON TAGS, LEGIBLY, MINIMUM 1/4" HIGH LETTERS, THE POINTS OF ORIGIN AND TERMINATION OF EACH CIRCUIT. INCLUDE DATE OF INSTALLATION.
5. WHEN PORTION OF AN EXISTING CIRCUIT IS TO BE REMOVED OR IS ON WALL AND IS REMOVED, CONTRACTOR SHALL MAKE NECESSARY PATCHES AND/OR ADDITIONS REQUIRED TO MAINTAIN CIRCUIT CONTINUITY OF UNCHANGED PORTION.
6. VERIFY EXACT LOCATION OF EQUIPMENT, SHOWN OR NOT SHOWN, IN FIELD PRIOR TO PERFORMING ANY WORK.
7. VERIFY IN FIELD THAT ANY EQUIPMENT AND WIRING TO BE REMOVED DOES NOT SERVE ACTIVE EQUIPMENT TO REMAIN PRIOR TO DISCONNECTING/REMOVING.
8. INSTALL CONDUIT RUNS AS CLOSE TO CEILING CAGE AS POSSIBLE. PROVIDE REQUIRED CONDUITS, ELBOWS, FITTINGS, OFFSETS, AND PULLBOXES.
9. CONDUITS SHALL BE PROPERLY SUPPORTED FROM CEILING DECK ABOVE. NO CONDUIT SHALL BE SECURED TO, SUPPORTED BY OR HUNG FROM DUCTWORK OR PIPING OR OTHER SUCH ITEMS.
10. WORK REQUIRING SHUT-DOWN OF ELECTRIC SERVICE SHALL BE PERFORMED DURING PRE-SCHEDULED SHUT-DOWN AS SCHEDULED AND APPROVED BY ARCHITECT. INCLUDE TAGS IN BID.
11. NEW WORK SHALL BE COMPATIBLE WITH EXISTING SYSTEM AND EQUIPMENT.
12. PROVIDE CUTTING AND PATCHING REQUIRED FOR ELECTRICAL INSTALLATION.
13. PROVIDE SLEEVES FOR RACEWAYS PIERCING FIRE RATED WALLS, FLOORS, AND OTHER CONSTRUCTION OBSTACLES.
14. MATERIALS REMOVED BY CONTRACTOR AND NOT REQUIRED FOR INSTALLATION SHALL BE REMOVED FROM PREMISES AND DISPOSED OF IN LEGAL MANNER, IMMEDIATELY WHEN SO DIRECTED BY ARCHITECT.
15. APPLY LABELING ON CONDUIT FOR BUILDING ALARM CIRCUITRY AT INTERVALS OF 20 FT.
16. CONDUCTORS IN PARALLEL SHALL BE INSTALLED IN STRICT ACCORDANCE WITH APPLICABLE CODES.
17. PHASING OF ELECTRICAL WORK SHALL COMPLY WITH "PHASING OF THE WORK" AS DESCRIBED BY ARCHITECT.
18. PROVIDE BLANK COVERS ON ABANDONED OR UNUSED OUTLET BOXES.
19. MAKE FINAL CONNECTIONS FOR MOTORIZED EQUIPMENT OR EQUIP. SUBJECT TO VIBRATION, WITH FLEXIBLE RACEWAY.
20. IF ANY DEVIATIONS/VARIATIONS ARE DISCOVERED BETWEEN FLOOR PLANS AND CONNECTION DIAGRAMS, THE CONTRACTOR SHALL PROVIDE FOR THE MOST EXPENSIVE LIGHTING WITH CREDIT SUBMITTED, SHOULD THE LESSER AMOUNT BE REQUIRED.
21. WHERE THE PLANS DO NOT INDICATE THE BRANCH CIRCUIT WIRING AND CONDUIT FOR FIXTURES OR OUTLETS NOR THE CONDUIT SIZE FOR FEEDERS, PROVIDE THE CORRECT WIRING QUANTITY AND SIZE, INSTALLED IN CONDUIT, AS REQUIRED BY THE INDICATED CIRCUITRY AND THE NATIONAL ELECTRICAL CODE WITH LOCAL SUPPLEMENTS.
22. PROVIDE IDENTIFICATION ON EACH FACEPLATE, DISCONNECT SWITCH, PANEL, ETC. IDENTIFICATION OF WIRING DEVICE FACEPLATE SHALL CONSIST OF PANEL DESIGNATION AND CIRCUIT NUMBER OF DEVICE AS CONNECTED. UTILIZE BROTHER "P-TOP" TYPE MATERIAL ADHERED TO FACEPLATE.
23. NEW SYSTEMS SHALL BE MADE OPERATIONAL AS RENOVATED SPACES ARE ACCEPTED. PROVIDE PERSONNEL, TESTING, SCHEDULING AS REQUIRED. INCLUDE COST IN BID.
24. LOCATIONS OF OUTLETS ARE APPROXIMATE AND FINAL LOCATION SHALL BE AS DIRECTED BY THE ARCHITECT. VERIFY ALL LOCATIONS BEFORE INSTALLATION. NO EXTRAS WILL BE ALLOWED FOR CHANGES UP TO 10'-0" FROM LOCATION SHOWN ON PLAN PRIOR TO ROUGH-IN.
25. CIRCUIT NUMBERS ON THE DRAWINGS ARE FOR IDENTIFICATION ONLY AND DO NOT INDICATE THE POSITION ON THE PANEL BOARD. CONNECT THE CIRCUITS WITH THE LIGHTEST LOADS AND THE RECEPTACLE CIRCUITS NEAR THE TOP OF THE PANEL AND THE MORE HEAVILY LOADED CIRCUITS NEAR THE BOTTOM. BALANCE ALL CIRCUITS EVENLY BETWEEN PHASES SO THAT FEEDER WIRES CARRY APPROXIMATELY EQUAL CURRENT. REBALANCE IF NECESSARY.
26. IN GRADE WORK, PROVIDE PULL BOXES WITH TRAFFIC RATED COVER. EXACT LOCATION TO BE COORDINATED IN FIELD.



CONDUCTORS

- INTERIOR, COPPER, THWN, 600V, #12 MINIMUM
#12, #10 SOLID, ALL LARGER STRANDED.
- EXTERIOR, COPPER XHHW, 600V
#12, #10, SOLID, ALL LARGER STRANDED.

RACEWAYS

- INTERIOR (CONCEALED) MOISTURE
RESISTANT MC CABLE, ALUMINUM JACKET, COPPER, THWN CONDUCTORS.
- INTERIOR (EXPOSED) RIGID ALUMINUM CONDUIT WITH THREADED FITTINGS.
- EXTERIOR (ABOVE GRADE), RIGID ALUMINUM CONDUIT WITH THREADED FITTINGS.
- EXTERIOR (BELOW GRADE), SCHEDULE 80 PVC WITH METAL ELBOWS.

BOXES

- INTERIOR, CAST ALUMINUM.
STAMPED METAL NOT PERMITTED.
- EXTERIOR, NEMA 4X, STAINLESS STEEL, WITH GASKETS.

PROVIDE ANTI-OXIDENT COATING ON ALL CONNECTIONS
THROUGH AND TO EXISTING BUILDING, STEEL.

ABBREVIATIONS			
'	FEET	GC	GENERATOR CONTRACTOR
"	INCHES	GF	GFCI PROTECTION
A	AMPS	G.GND	GROUND
AL	ALUMINUM	MIN	MINIMUM
A.F.F.	ABOVE FINISHED FLOOR	LTG	LIGHTING
CU	COPPER	R	REMOVE
E	EXISTING	V	VOLTS
EC	ELECTRICAL CONTRACTOR	W	WATTS
EXT	EXTERIOR		

SYMBOL	DESCRIPTION &/OR SPECIFICATION
	DUPLEX RECEPTACLE, 20AMP TAMPER RESISTANT, LEVITON #1TCR20-COLOR
GF 	DUPLEX GROUND FAULT RECEPTACLE - 20 AMP TAMPER RESISTANT LEVITON # GFW12-65362-WT-COLOR
	DISCONNECT SWITCH
WP	WEATHER PROOF, RANTITE-WHILE-IN-USE
	LIGHTING PANEL
—	CONDUIT RUN (NEW)
	JUNCTION BOX
	WORK ITEM
	SEE LIGHT FIXTURE SCHEDULE FOR LIGHT FIXTURE TYPE
	
S	20 AMP TOGGLE SWITCH LEVITON 54522-W
-----	EXISTING
++++++	TO BE REMOVED

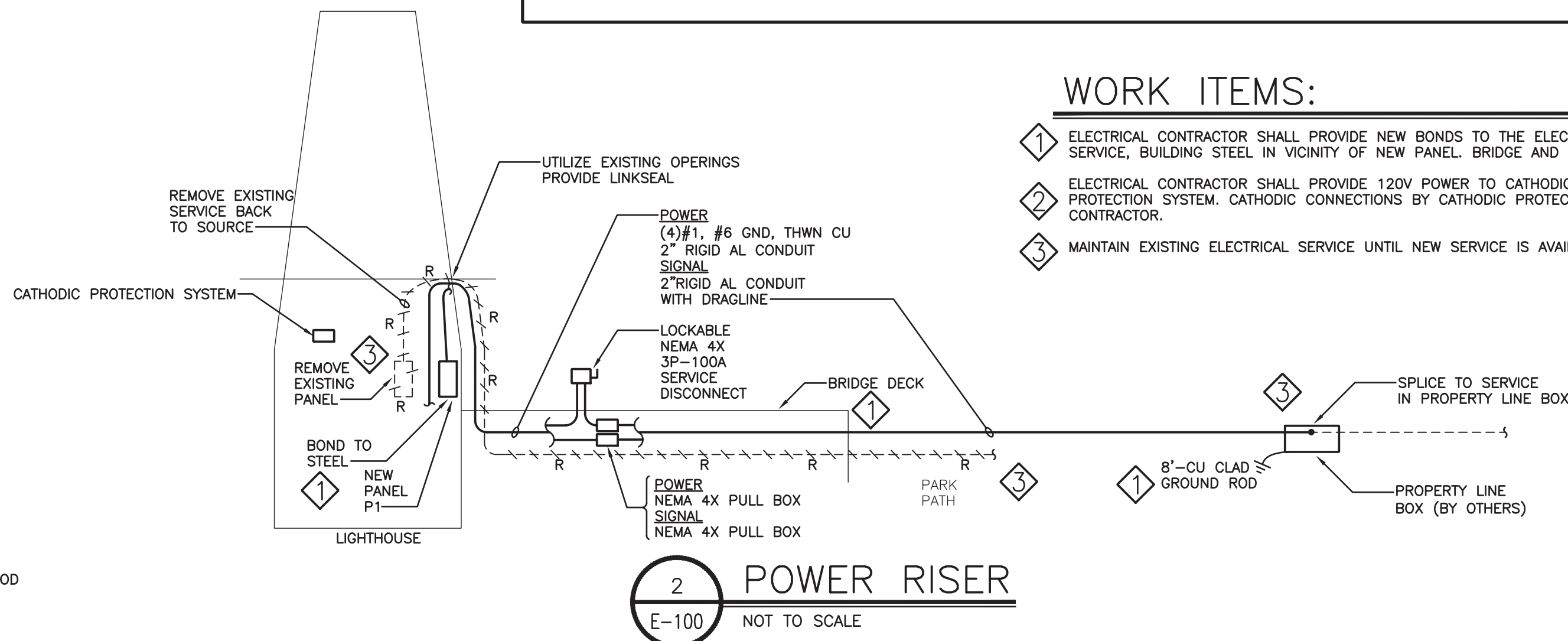
FIXTURE TYPE	SYMBOL	DESCRIPTION	MFG. CATALOG NO.	LAMP DATA INFO.	VOLTAGE	MOUNTING	REMARKS
F1		EXTERIOR BRIDGE NAVIGATION LIGHT	BASELITE # PRD-1-PR3-CG-49-10W(3000K LED)	10W, LED, 3000K	120V	PIER	
F2		EXTERIOR BOLLARD LIGHT 43" HIGH, 7"DIA	BASELITE # #BOL15-PR3-49-150W(INC)	LED, 2700K, 8.5W BULBRITE #776613	120V	BOLLARD	PROVIDE FOUNDATION
F3		EXTERIOR WALL LIGHT	BASELITE # BW1-PR3-22-INC	LED, 2700K, 8.5W BULBRITE #776613	120V	WALL	PROVIDE CAST BACK BOX
F4		CAST ALUMINUM INTERIOR FIXTURE WITH JBOX	DAYBRITE # VIN10012-GG-VINW-JB50	LED, 2700K, 8.5W BULBRITE #776613	120V	WALL	
F5		CAST ALUMINUM INTERIOR FIXTURE, CEILING MOUNT WITH JBOX	DAYBRITE # VIN10012-RGG-VINC50	LED, 2700K 8.5W BULBRITE #776613	120V	CEILING	
F6		TWO HEAD EM PACK. BASEMENT ONLY NEMA 4X	DUAL-LITE-DYNOMO-NEMA 4X-DYN-6-4X-HTR	3 WATT LED AS SUPPLIED	120V	WALL	BASEMENT ONLY
F7		EXTERIOR, LOWER WASH LIGHTING CAST ALUMINUM	HYDREL #4750L-4-500LMF- 30K-MV-NSP-KMJ-27-MRE-BL	LED, 3000K, 2000LM, 80W	120V	WALL/ WALKWAY	PROVIDE NIGHT-TIME AIMING SESSION WITH ARCHITECT PROVIDE MOUNTING HARDWARE PROVIDE CIRCUITRY FOR 0-10V DIMMING
F8		EXTERIOR, UPPER WASH LIGHTING CAST ALUMINUM 360° KNUCKLE	BKLIGHTING #DENALI-LED# DE-LED-TR-X99-WFL-12-A-ELV	LED, 3000K, 869LM, 13W	120V	WALL/ WALKWAY	PROVIDE NIGHT-TIME AIMING SESSION WITH ARCHITECT PROVIDE MOUNTING HARDWARE PROVIDE CIRCUITRY FOR ELV DIMMING

NOTES

1. LED FIXTURES SHALL BE LM70 MINIMUM RATED, 50,000 HOURS MINIMUM.
2. SUBMIT D.O.E. LIGHTING FACT SHEET FOR ALL FIXTURES
3. PROVIDE FIXTURES WITH NECESSARY TRIM & ACCESSORIES REQUIRED FOR A COMPLETE INSTALLATION.
4. EXACT LOCATION OF FIXTURES SHALL BE DETERMINED BY ARCHITECTURAL REFLECTED CEILING PLAN AND APPROVED SHOP DRAWINGS. VERIFY CEILING TYPES, PRIOR TO SUBMITTING FIXTURES.
5. COLOR & FINISHES SHALL BE AS SELECTED BY ARCHITECT.

PANEL P1				TYPE NEMA 4X				MAINS CU. 100				AMPERES				
22 KAIC MIN RATING				VOLTAGE 120/208V, 3Ø, 4W & GND				FEEDER				SEE RISER				
M.C.B. 100 (SERVICE RATED)				VERIFY AIC AVAILABLE FROM SERVICE, PRIOR TO SUBMITTALS AND COMMENCING												
CIRCUIT	ON	OFF	TRIP	ASSIGNMENT	QUANTITY	AC OR MC CABLE MIN. #12 GA. THHN CU. WIRE	LOAD WATTS	PHASE	LOAD WATTS	AC OR MC CABLE MIN. #12 GA. THHN CU. WIRE	QUANTITY	ASSIGNMENT	TRIP	ON	OFF	CIRCUIT
1	1	20		LANTERN (6TH FL)	1	#10	500W	A								2
3	1	20		BRIDGE LIGHTING	4	#12	100W	B		#10		TVSS LEVITON #55208-ASA	20	3	4	6
5	1	20		EXTERIOR RECEPTACLE	1	#12	180W	C								
7	1	20		BASEMENT UTILITY REC	1	#12	180W	A	360W	#12	12	INTERIOR LTG	20	1	8	
9	1	20		SIGNAL REC	1	#12	360W	B	90W	#12	4	BASEMENT LTG	20	1	10	
11	1	20		1ST FL REC	1	#10	1000W	C	455W	#12	8	EXTERIOR WASH LIGHTING	20	1	12	
13	1	20		1ST FL REC	1	#10	1000W	A				SPARE	20	1	14	
15	1	20		2ND FL REC	1	#10	1000W	B					20	1	16	
17	1	20		2ND FL REC	1	#10	1000W	C					20	1	18	
19	1	20		3RD FL REC	1	#10	180W	A					20	1	20	
21	1	20		4TH FL REC	2	#10	360W	B					20	1	22	
23	1	20		5TH FL REC	1	#10	180W	C	500W	#12		CATHODIC PROTECTION	20	1	24	
REMARKS: 1. PROVIDE WITH HINGED LOCKABLE COVER.																
VERIFY VOLTAGE AND PHASES TO BE DELIVERED PRIOR TO SUBMITTALS AND COMMENCING.																
CU. GROUND BUS CONNECTED LOAD 5 KW																

- 1 ELECTRICAL CONTRACTOR SHALL PROVIDE NEW BONDS TO THE ELECTRIC SERVICE, BUILDING STEEL IN VICINITY OF NEW PANEL, BRIDGE AND FENCING.
- 2 ELECTRICAL CONTRACTOR SHALL PROVIDE 120V POWER TO CATHODIC PROTECTION SYSTEM. CATHODIC CONNECTIONS BY CATHODIC PROTECTION CONTRACTOR.
- 3 MAINTAIN EXISTING ELECTRICAL SERVICE UNTIL NEW SERVICE IS AVAILABLE.



E-100 SCALE: 1/16" = 1'-0"

REVISION NUMBER	DATE	MADE BY	APP'D BY	REVISION

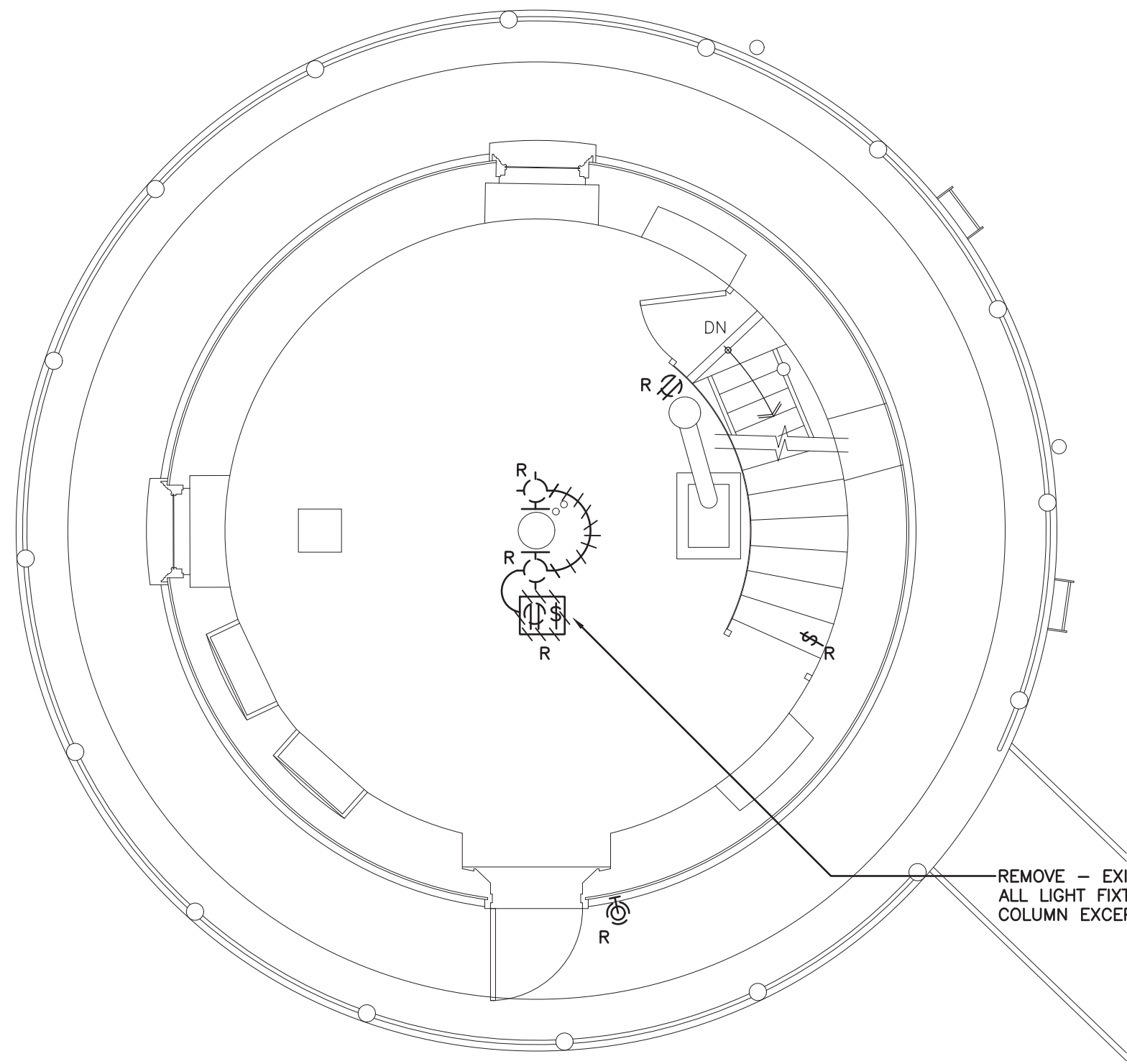
WESTCHESTER COUNTY, NEW YORK
DEPARTMENT OF PUBLIC WORKS AND TRANSPORTATION
DIVISION OF ENGINEERING

TARRYTOWN LIGHTHOUSE RESTORATION
KINGSLAND POINT PARK, VILLAGE of SLEEPY HOLLOW, NY
ELECTRICAL - SITE PLAN, RISER, DETAIL, NOTES

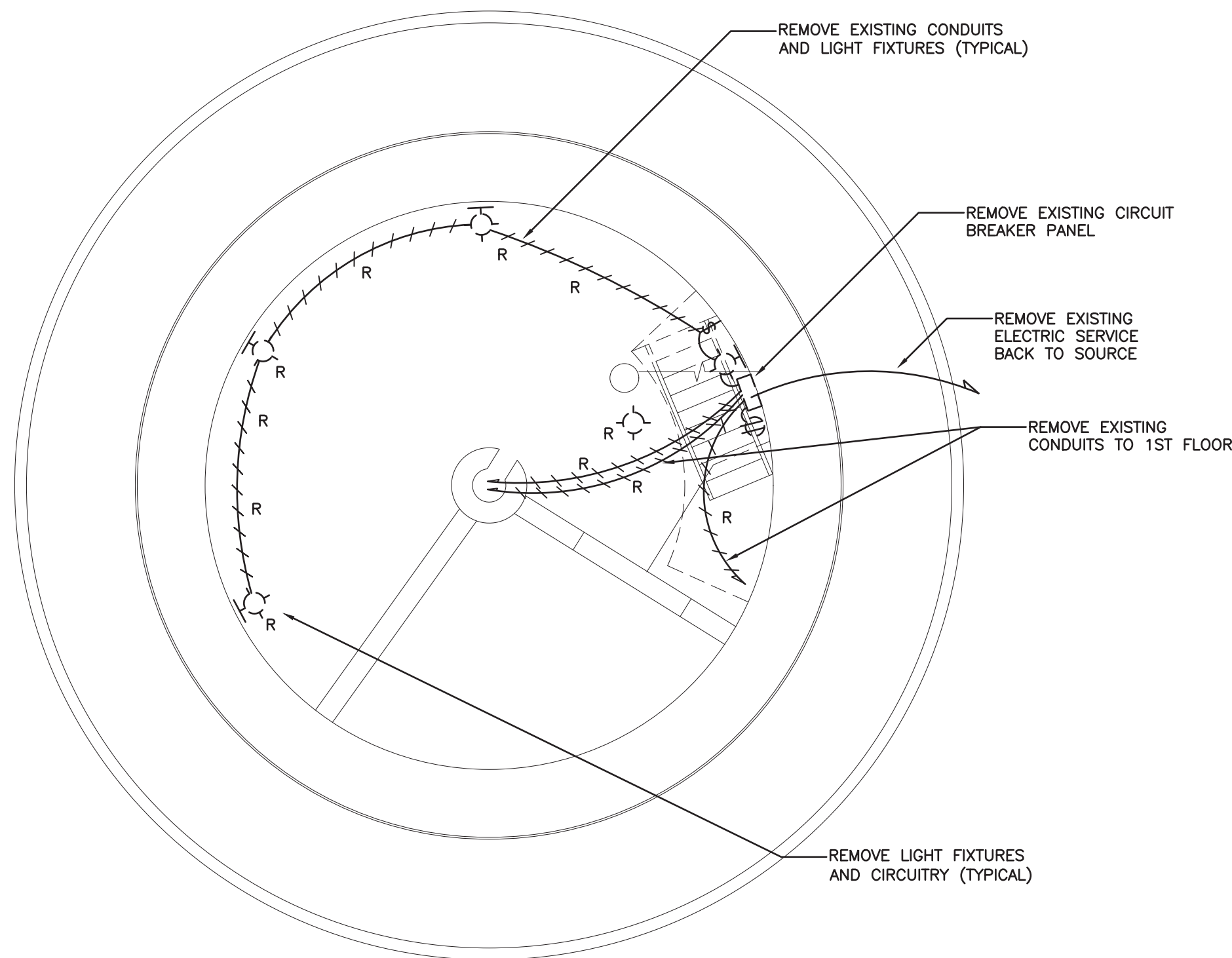
DRAWING TITLE:
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SITE PLAN, RISER
DETAIL, NOTES

DRAWING NUMBER:
E-100

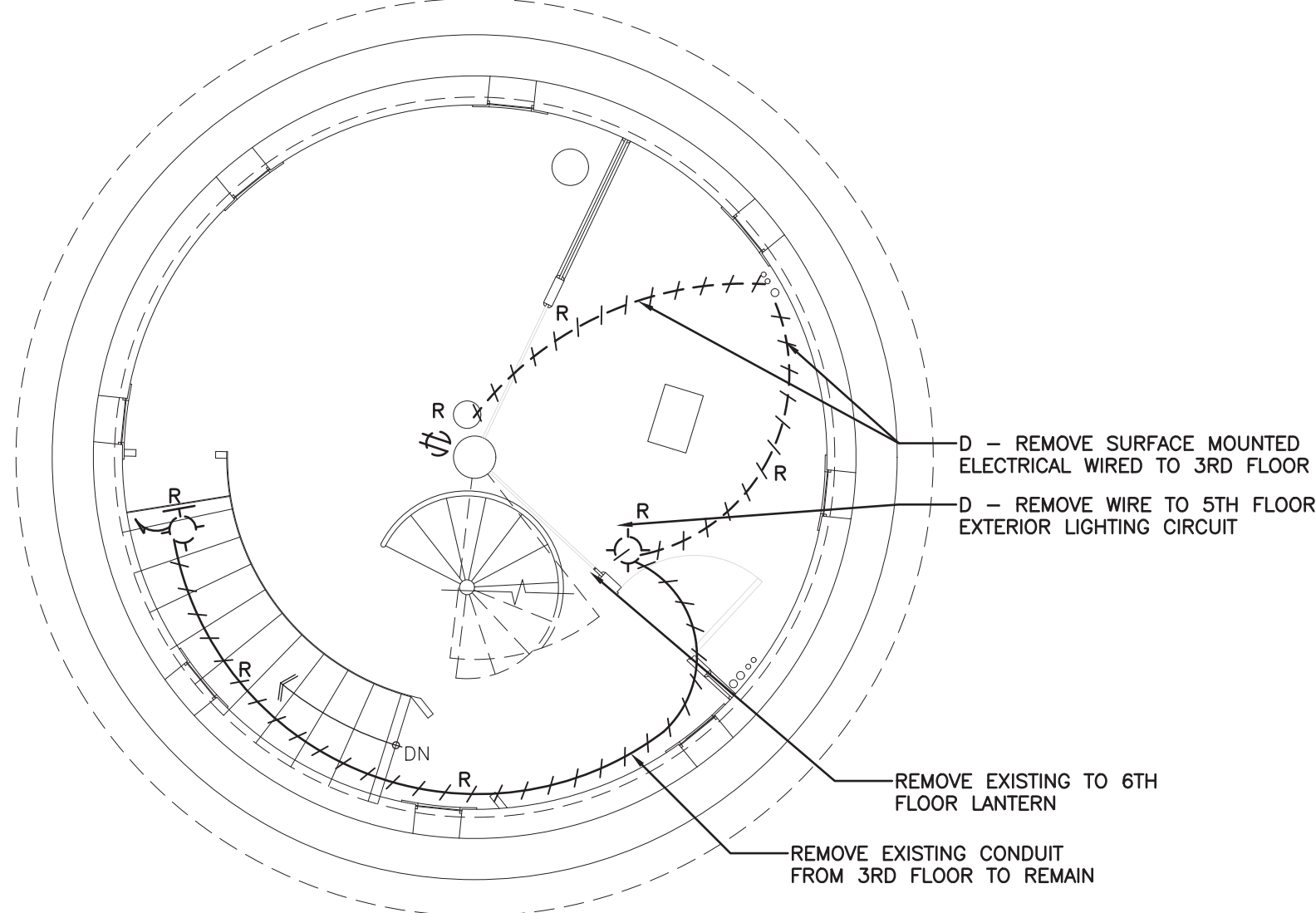
CONTRACT NUMBER: 21-516	DPW DRAWING NUMBER: 8-12-E-41
SHEET NO.: 13 OF 23	
SCALE: as noted DATE: 08.20.2021	
DPW FILE NO. 8-12-E-41	REV. NO. 0



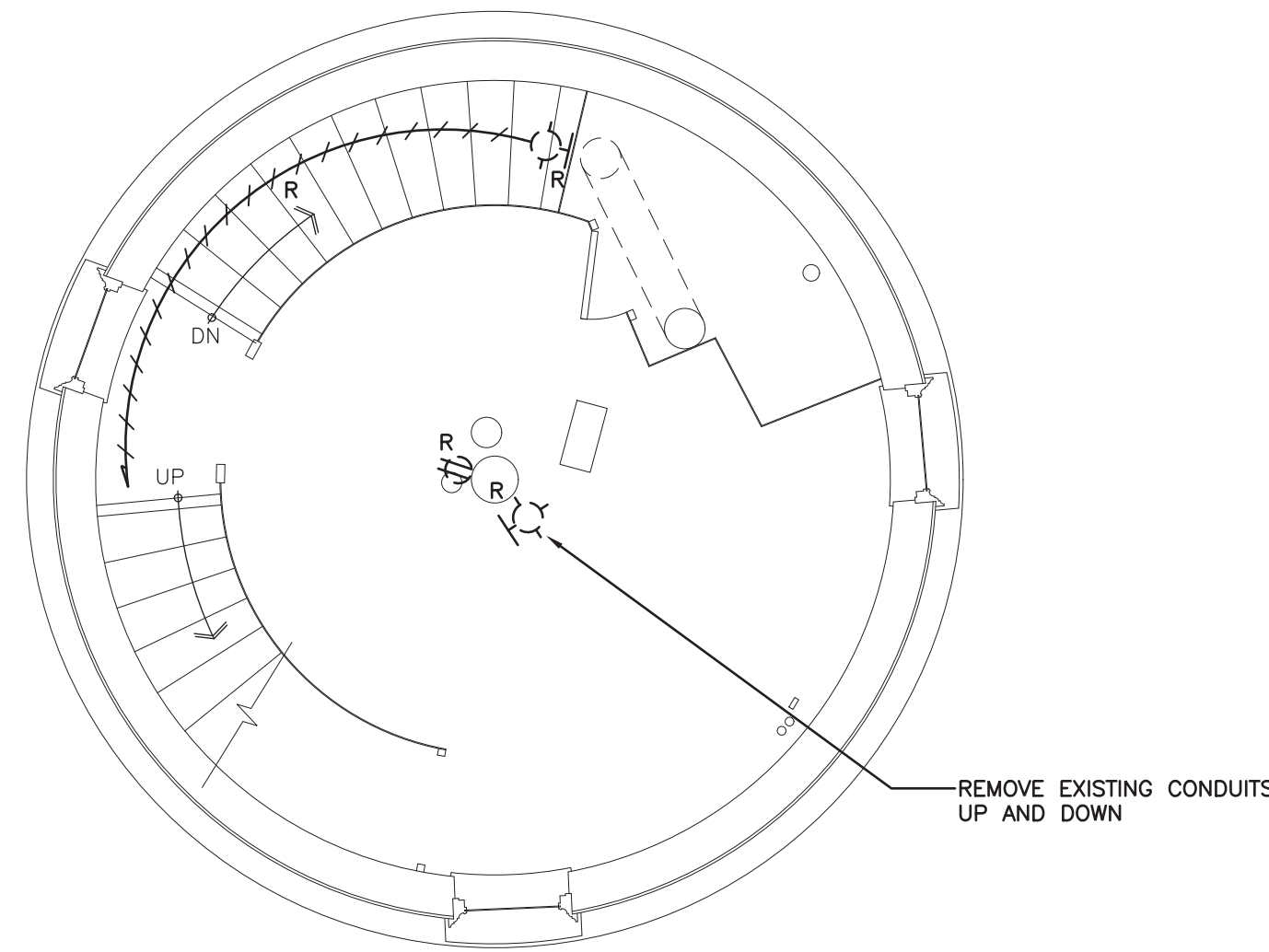
2 FIRST FLOOR PLAN — REMOVALS
E-101 SCALE: 1/4" = 1'-0" NORTH



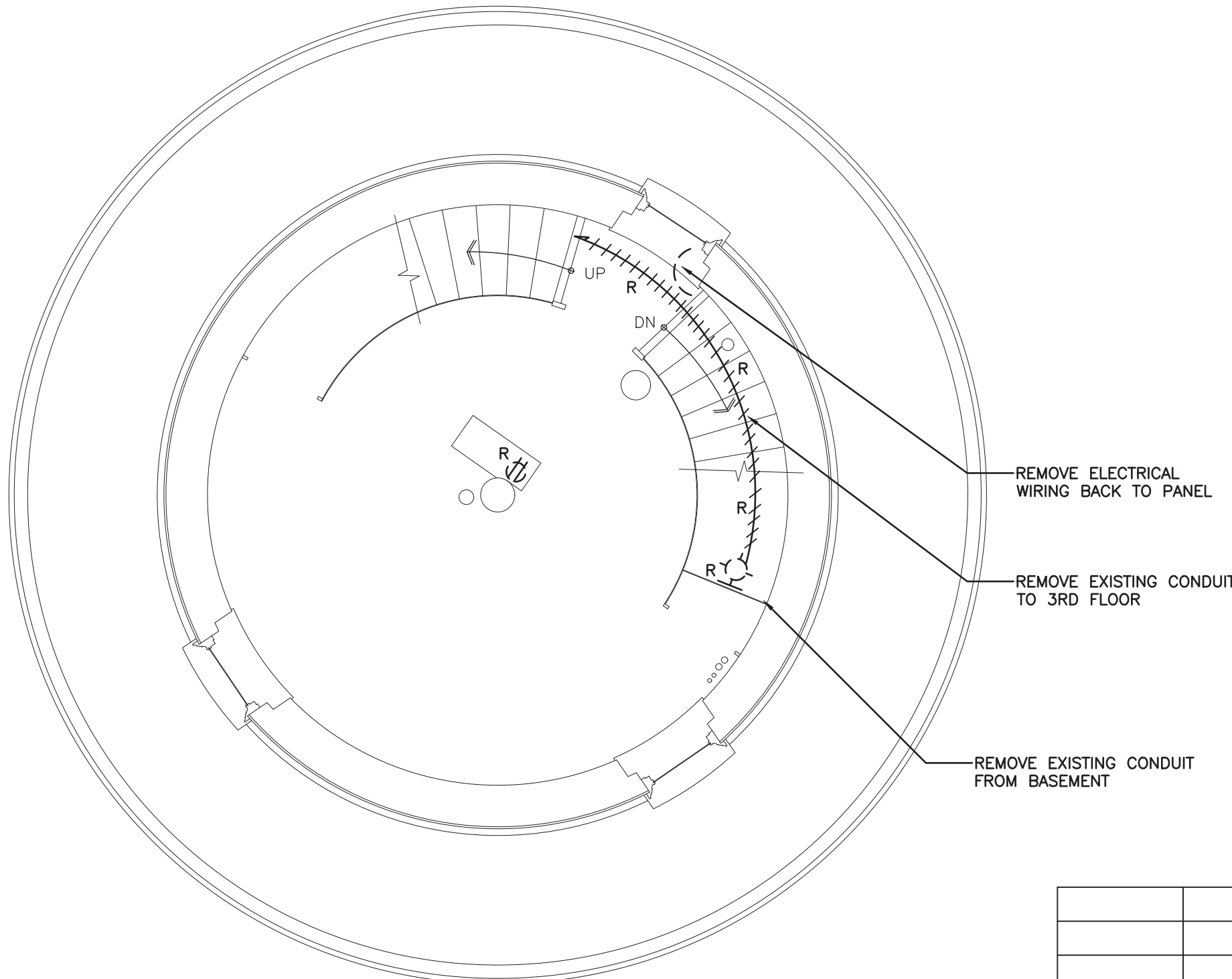
1 BASEMENT PLAN — REMOVALS
E-101 SCALE: 1/4" = 1'-0" NORTH



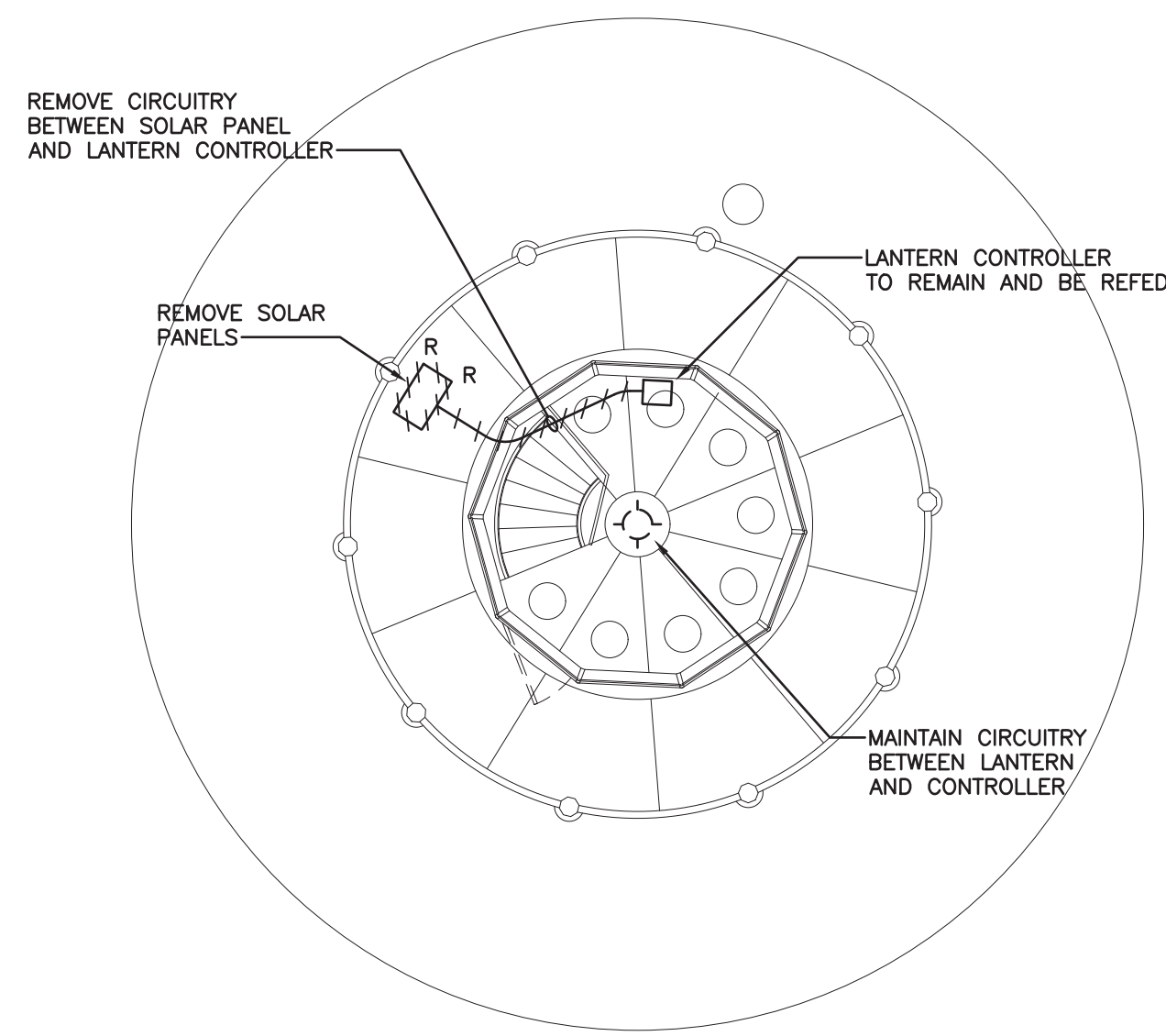
5 FOURTH FLOOR PLAN — REMOVALS
E-101 SCALE: 1/4" = 1'-0" NORTH



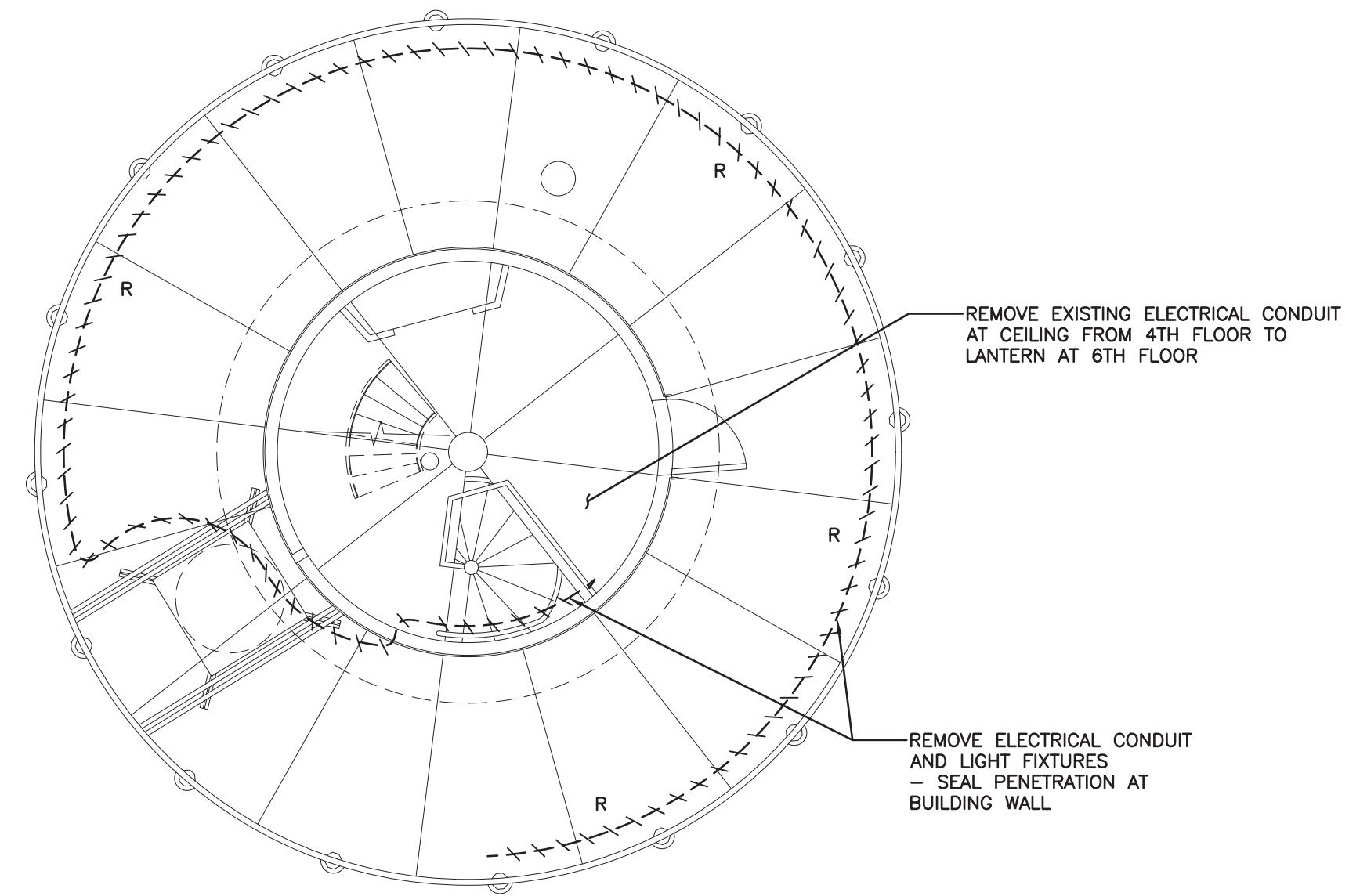
4 THIRD FLOOR PLAN — REMOVALS
E-101 SCALE: 1/4" = 1'-0" NORTH



3 SECOND FLOOR PLAN — REMOVALS
E-101 SCALE: 1/4" = 1'-0" NORTH



7 SIXTH (LANTERN) FLOOR PLAN — REMOVALS
E-101 SCALE: 1/4" = 1'-0" NORTH



6 FIFTH FLOOR PLAN — REMOVALS
E-101 SCALE: 1/4" = 1'-0" NORTH

GENERAL REMOVAL NOTES

REMOVE ALL EXISTING CIRCUITRY EXCEPT LIGHTHOUSE LANTERN AND EXISTING CONTROLLER.



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4 Jefferson Plaza, Suite 500, Poughkeepsie, NY 12601

DRAWING TITLE:
**ELECTRICAL
REMOVAL PLANS**

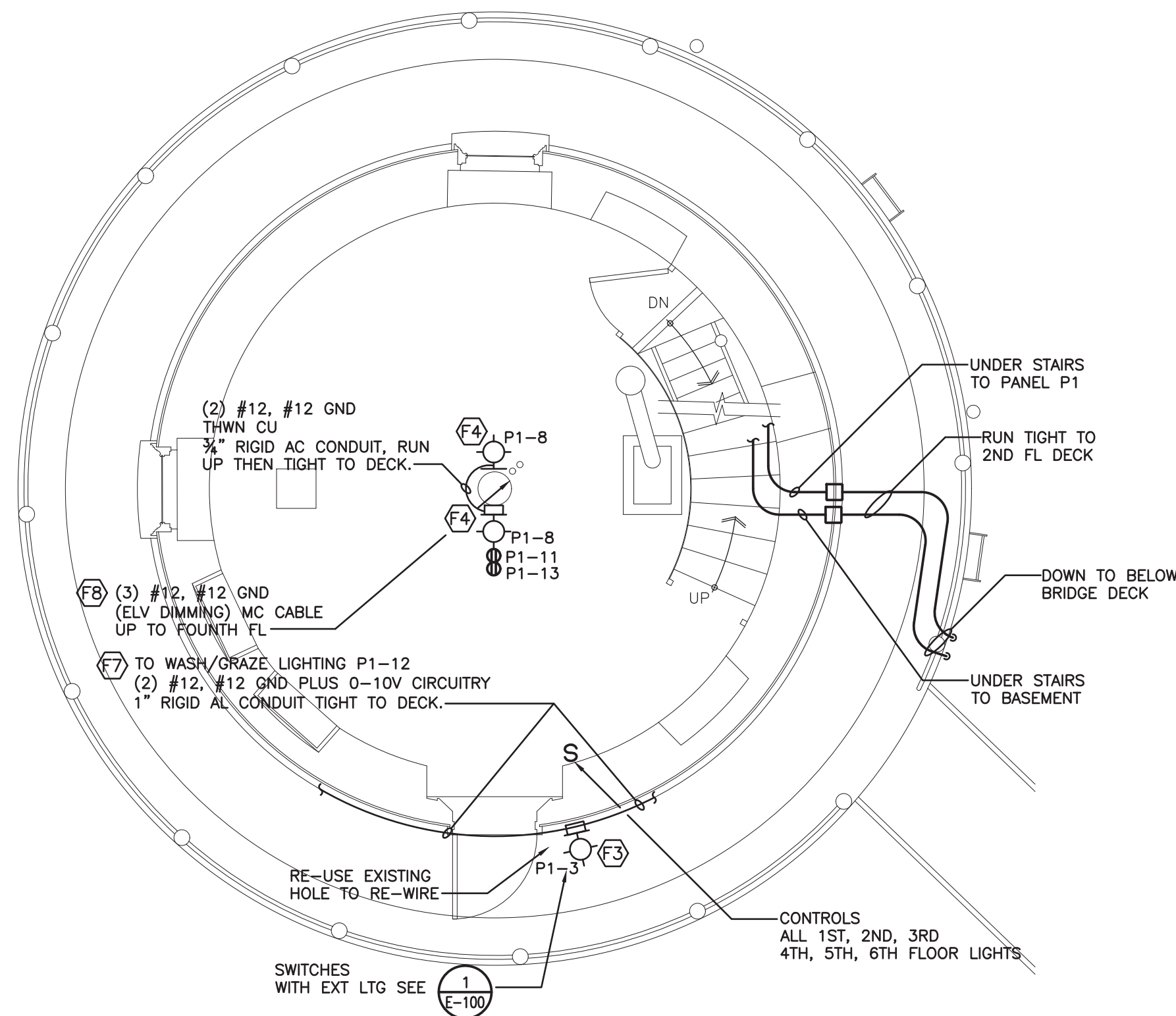
DRAWING NUMBER:
E-101

WESTCHESTER COUNTY, NEW YORK
DEPARTMENT OF PUBLIC WORKS AND TRANSPORTATION
DIVISION OF ENGINEERING

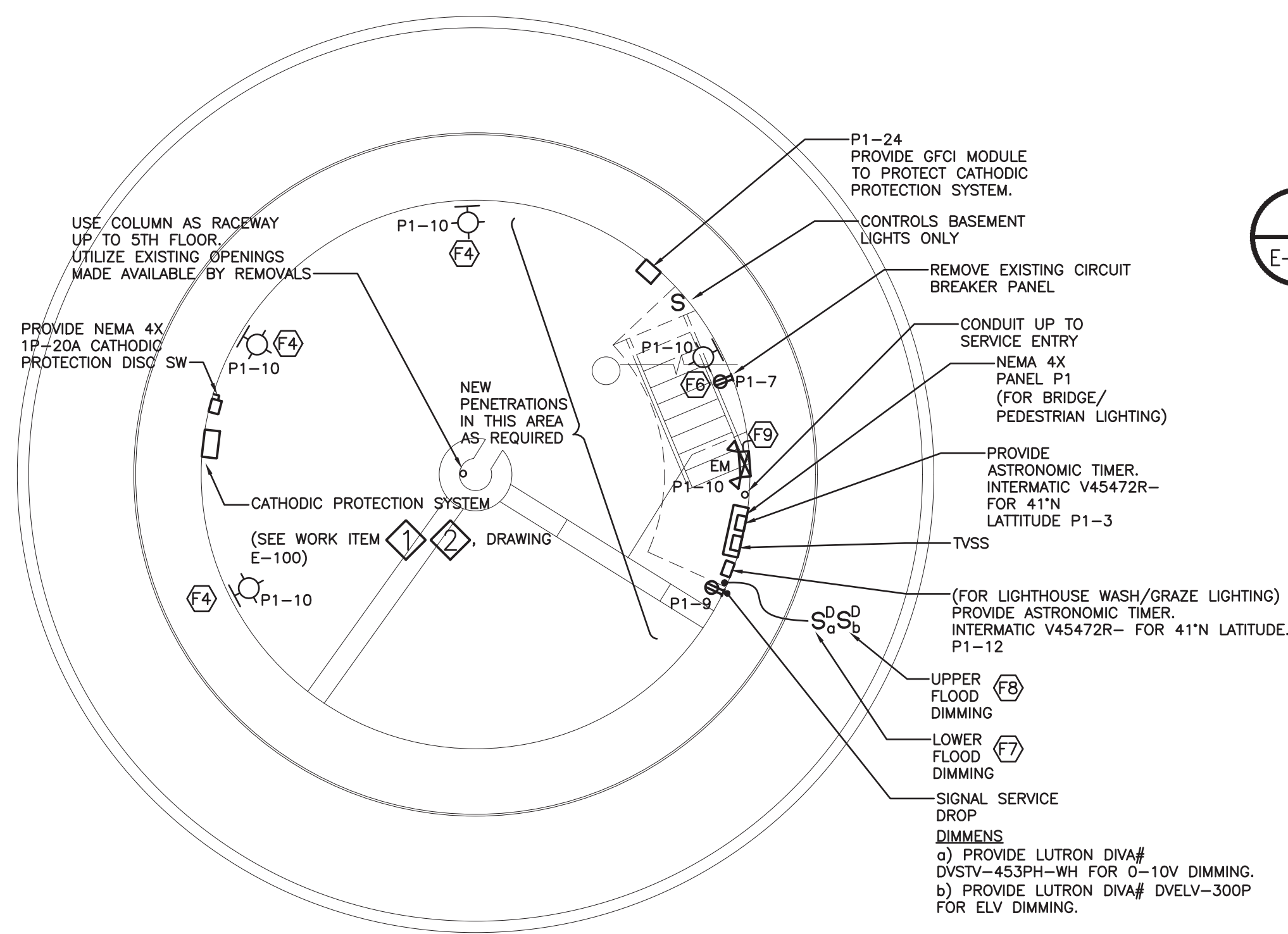
TARRYTOWN LIGHTHOUSE RESTORATION
KINGSLAND POINT PARK, VILLAGE OF SLEEPY HOLLOW, NY
ELECTRICAL - REMOVAL PLANS

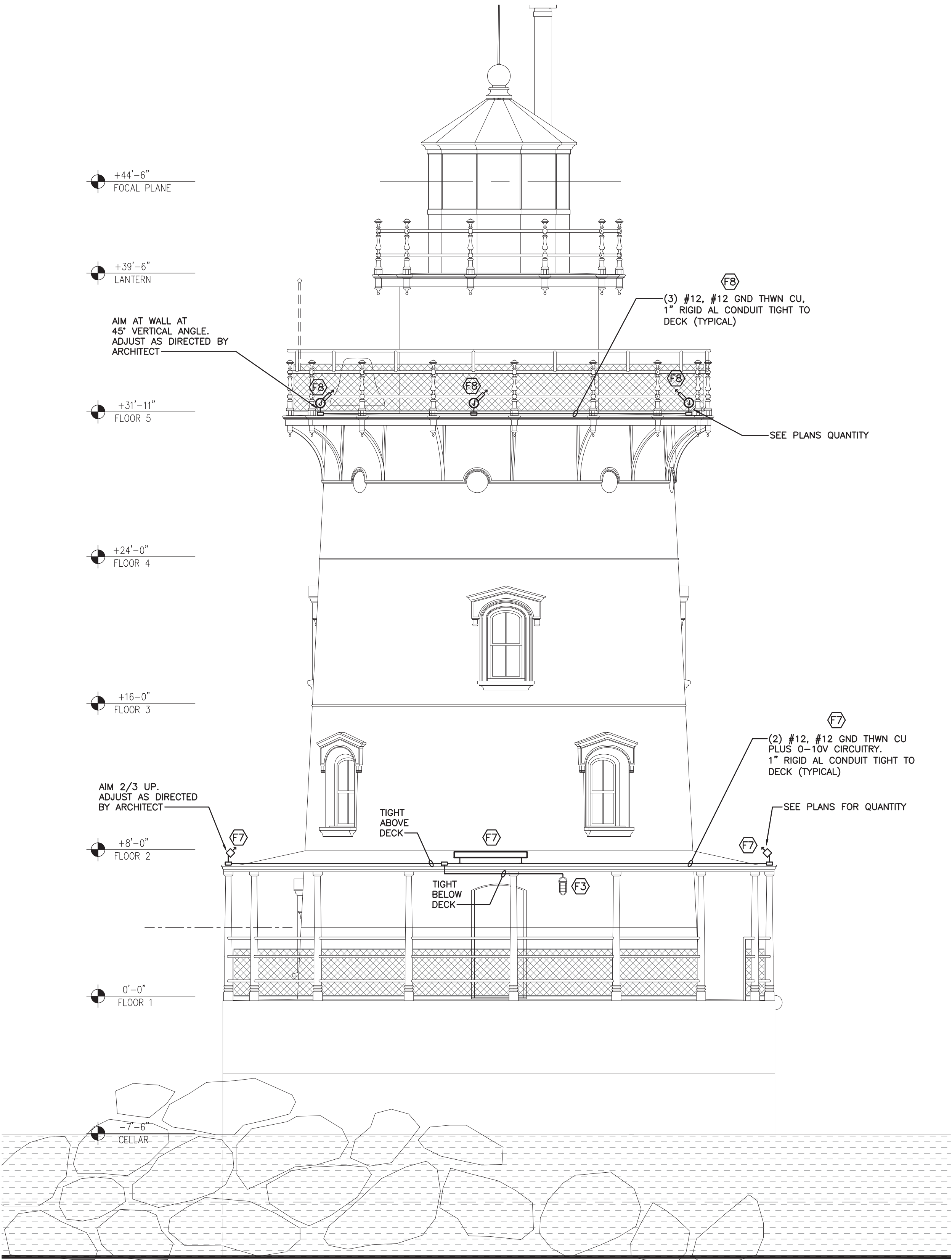
CONTRACT NUMBER: 21-516
DPW DRAWING NUMBER: 8-12-E-42
SHEET NO.: 14 OF 23
SCALE: as noted
DATE: 08.20.2021
DPW FILE NO.: 8-12-E-42
REV. NO.: 0

REVISION NUMBER	DATE	MADE BY	APP'D BY	REVISION




2 FIRST FLOOR PLAN – ELECTRICAL
E-102 SCALE: 1/4" = 1'-0" NORTH





1 Lighthouse Elevation
E-103 SCALE: 1/4" = 1'-0"

REVISION NUMBER	DATE	MADE BY	APP'D BY	REVISION

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	DRAWING NUMBER: E-103		CONTRACT NUMBER: 21-516 DPW DRAWING NUMBER: 8-12-E-44	
	SHEET NO.: 16 OF 23		SCALE: as noted DATE: 08.20.2021	
	WESTCHESTER COUNTY, NEW YORK DEPARTMENT OF PUBLIC WORKS AND TRANSPORTATION DIVISION OF ENGINEERING		TARRYTOWN LIGHTHOUSE RESTORATION KINGSLAND POINT PARK, VILLAGE of SLEEPY HOLLOW, NY ELECTRICAL - ELEVATION	

DPW FILE NO. 8-12-E-44	REV. NO. 0
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GENERAL NOTES

CATHODIC PROTECTION

1. ALL WORK IS TO BE CARRIED OUT IN ACCORDANCE WITH DIVISION 3 SPECIFICATION FOR CONCRETE, DIVISION 18 SPECIFICATION FOR CATHODIC PROTECTION (CP), DIVISION 26 LOW VOLTAGE ELECTRICAL, AND ANY OTHER REQUIRED WORK SCOPES NOT REFERENCED HEREIN.
2. FOLLOW ALL PROCEDURES OUTLINED IN THE SPECIFICATIONS. IF THERE IS A DISCREPANCY BETWEEN WORK ITEMS, DEFER TO THE MORE COMPLETE WORK SCOPE.
3. PROVIDE DOCUMENTATION REQUIRED WITHIN SECTION 180200, ITEM 3.17 – SUBMITTALS BEFORE STARTING WORK.
4. THE USE OF CATHODIC PROTECTION DRAWINGS SHOULD BE USED FOR GUIDANCE ONLY. LOCATION OF ALL EMBEDDED ITEMS ARE INDICATIVE. EXACT LOCATIONS WILL BE DICTATED BY SITE CONDITIONS.
5. THE USE OF CATHODIC PROTECTION IS INTENDED TO PROTECT THE BACK OF THE CAST IRON CAISSON PLATING FROM CORROSION AT THE FOUR ZONE LOCATIONS AS INDICATED IN THE ZONE LAYOUT DRAWINGS.
6. FOLLOW ALL TESTING PROCEDURES OUTLINED WITHIN THE SPECIFICATION OF WORK WITHIN SECTION 180200 TO ENSURE SYSTEM IS FUNCTIONAL.
7. PROVIDE ALL TEST DATA AND REQUIRED RECORDS OUTLINED IN SECTION 180200, ITEM 1.08 – DOCUMENTATION.
8. DOCUMENTATION SHALL BE AVAILABLE ONSITE AT ALL TIMES. WEEKLY SUBMISSIONS SHALL BE SUBMITTED TO DESIGN TEAM FOR REVIEW AND ACCEPTANCE.

ANODE ZONES

9. THIS PROJECT CONSISTS OF A FOUR (4) ZONE CATHODIC PROTECTION SYSTEM. A ZONE IS DEFINED AS AN AREA HAVING AN INDEPENDENT DC POWER SOURCE.
10. THE FOUR (4) ZONES ARE LAID OUT AS FOLLOWS:
 - 10.1. ZONE 1 – NORTHWEST QUADRANT
 - 10.2. ZONE 2 – NORTHEAST QUADRANT
 - 10.3. ZONE 3 – SOUTHEAST QUADRANT
 - 10.4. ZONE 4 – SOUTHWEST QUADRANT

CONTINUITY TESTING

11. THE CONTRACTOR SHALL CONFIRM THAT ALL EMBEDDED METALS WITHIN EACH ANODE ZONE IS ELECTRICALLY CONTINUOUS. THE METALLIC ELEMENTS WITHIN THE STRUCTURE SHALL BE BONDED FOR CONTINUITY IF REQUIRED. THIS SHALL BE DEMONSTRATED ON SITE BY MEASURING THE ELECTRICAL RESISTANCE BETWEEN THE SECTIONS IN LOCATIONS REMOTE FROM ONE ANOTHER ACROSS THE STRUCTURE AND AT ALL LOCATIONS WHERE THE METAL IS EXPOSED. THIS SHALL INCLUDE AT A MINIMUM:
 - 11.1. ELECTRICAL CONTINUITY BETWEEN ELEMENTS OF THE STRUCTURE WITHIN EACH ZONE OF CATHODIC PROTECTION.
 - 11.2. ELECTRICAL CONTINUITY OF THE EMBEDDED STEEL / IRON WITHIN ELEMENTS OF THE STRUCTURE.
 - 11.3. ELECTRICAL CONTINUITY OF METALLIC ITEMS, OTHER THAN THE STEEL, IN THE CONCRETE OR LIGHTHOUSE WALL WHICH MAY BE AFFECTED BY STRAY CURRENT.
 - 11.4. ANCHORS OR METALLIC ITEMS EXPOSED DURING THE INSTALLATION OF THE CP SYSTEM.
 - 11.5. CONFIRMATION THAT THE MISCELLANEOUS METALLIC ITEMS ARE CONTINUOUS PRIOR TO ENERGIZATION OF THE SYSTEM.
12. ALL ELECTRICAL CONTINUITY SHALL BE CARRIED OUT IN ACCORDANCE WITH SECTION 180200, ITEM 3.04 – CONTINUITY TESTING.
13. THE ACCEPTANCE CRITERIA FOR CONTINUITY SHALL CONSIST OF:
 - 13.1. STABLE VALUES WITH RESISTANCE MEASUREMENTS LESS THAN 1.0 OHM.
14. CONTINUITY RECORDS SHALL BE KEPT OF ALL TESTS CARRIED OUT AND SHALL BE SUBMITTED TO THE OWNER IN THE FORM OF A CONTINUITY CERTIFICATE.

ANODE SYSTEM

15. THE ANODE SYSTEM SHALL BE INSTALLED IN ACCORDANCE WITH SECTION 180200, ITEM 3.06 – ANODE SYSTEM AND IN ACCORDANCE WITH THE DRAWINGS.
16. THE CONTRACTOR SHALL SUBMIT A METHOD STATEMENT AS PART OF THE CATHODIC PROTECTION PRE-START REPORT TO DETAIL THE SYSTEM.
17. ALL ZONES SHALL BE COMPRISED OF MIXED METAL OXIDE (MMO) SINTERED TITANIUM RIBBON ANODE CHAINS SPOT WELDED TO CONDUCTOR BAR AS SEEN IN DETAIL 1 ON XX03.
18. EACH ANODE IS TO BE INSTALLED IN A PRE-CORED HOLE OF SET DEPTH DEPENDENT UPON THE SPECIFIC REQUIREMENTS AS DETAILED WITHIN THE CONSTRUCTION DRAWINGS AND VERIFIED BY THE CONTRACTOR.
19. ANODE GROUT WILL BE COMPRISED OF CEMENTITIOUS MATERIAL MIX DESIGN COMPATIBLE WITH THE ORIGINAL CONCRETE BASED ON LABORATORY ANALYSIS.
20. THE SPECIFIED NUMBER OF ANODES IS PROVIDED ON THE ANODE LAYOUT DRAWING ON XX06.

CATHODE SYSTEM

21. THE NUMBER AND APPROXIMATE LOCATIONS OF EACH OF THE SYSTEM NEGATIVES IS DETAILED ON THE CONSTRUCTION DRAWINGS. THE CATHODE SYSTEM AT EACH ANODE ZONE SHALL PROVIDE A MINIMUM OF TWO (2) CABLE CONNECTIONS TO THE CAST IRON CAISSON.
 22. TWO (2) CONNECTIONS SHALL BE MADE FOR THE MONITORING CELLS (STEEL TEST) IN EACH ZONE; THE CABLES WILL BE INSTALLED AS INDIVIDUAL CABLES WITH THE INDEPENDENT TERMINATIONS AT THE POWER SUPPLY.
- MONITORING SYSTEM
23. TWO (2) REFERENCE CELLS SHALL BE INSTALLED IN EACH ZONE, AS INDICATED IN THE SPECIFICATIONS AND DRAWINGS.
 24. TWO (2) STEEL TESTS ARE TO BE INSTALLED IN EACH ZONE AS INDICATED IN THE SPECIFICATIONS AND DRAWINGS.
 25. FIVE (5) CORROSION COUPONS ARE TO BE INSTALLED IN EACH ZONE AS INDICATED IN THE SPECIFICATIONS AND DRAWINGS.

CONTINUITY BONDING

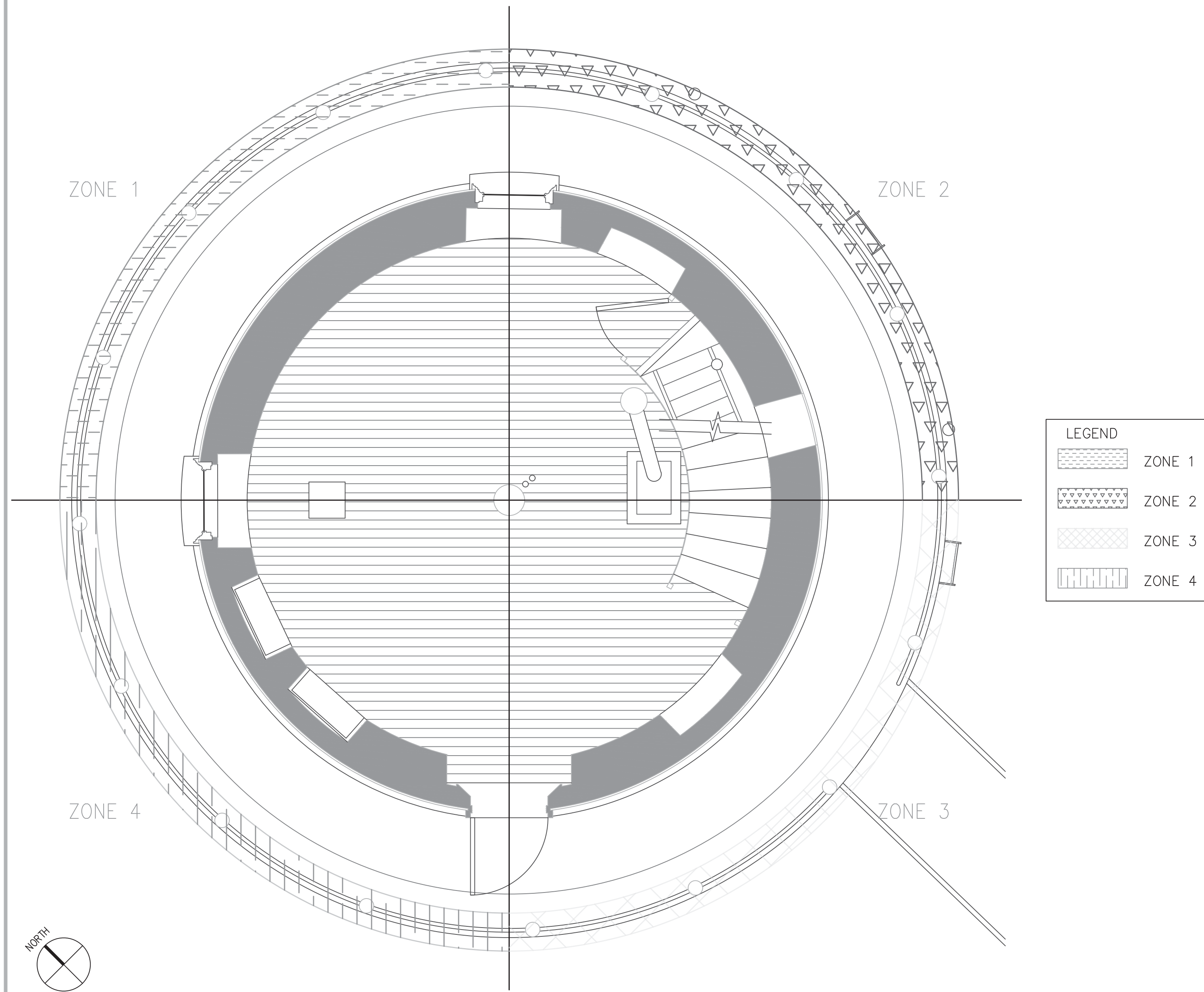
26. ALL NECESSARY BONDING AND OR REMOVAL OF DISCONTINUOUS METALLIC ELEMENTS SHALL BE CARRIED OUT IN ACCORDANCE WITH SECTION 180200, ITEM 3.05 – CATHODE CONNECTIONS.
27. CARRY OUT STRAY CURRENT TESTING IN ACCORDANCE WITH SECTION 180200, ITEM 3.13 – STRAY CURRENT TESTING SHOULD THERE BE CONCERNS A DISCONTINUOUS METALLIC ELEMENT IS AT RISK OF STRAY CURRENT OR IF THE ELEMENT IS AT THE PERIMETER OF THE ANODE ZONE OF INFLUENCE.

REVISION NUMBER	DATE	MADE BY	APP'D BY	REVISION

<div><div><div><div><div><div></div><div>CONSULTANT SEAL</div></div><div><div><div></div><div>REGISTERED ARCHITECT</div><div>STEPHEN A. TILLY</div><div>NO. 014100</div><div>OF THE STATE OF NEW YORK</div></div></div></div></div></div><div>STEPHEN TILLY, Architect 22 Elm Street, Dobbs Ferry, New York 10522 Structural Engineer: Structures North Consulting Engineers, Inc. 60 Washington St., Suite 401, Salem, MA 01970 MEP Engineer: Tietjen Venegas Consulting Engineers 68 Purchase Street, Rye, New York 10580 Cathodic Protection Consultant: Echem Consultants, LLC 4 Jefferson Plaza, Suite 500, Poughkeepsie, NY 12601</div></div>		DRAWING TITLE: CATHODIC PROTECTION- GENERAL NOTES	
		DRAWING NUMBER: CP1	
CONTRACT NUMBER: 21-516		DPW DRAWING NUMBER: 8-12-E-45	
SHEET NO.: 17 OF 23		SCALE: as noted DATE: 08-20-2021	
DPW FILE NO. 8-12-E-45		REV. NO.	

WESTCHESTER COUNTY, NEW YORK
DEPARTMENT OF PUBLIC WORKS AND TRANSPORTATION
DIVISION OF ENGINEERING

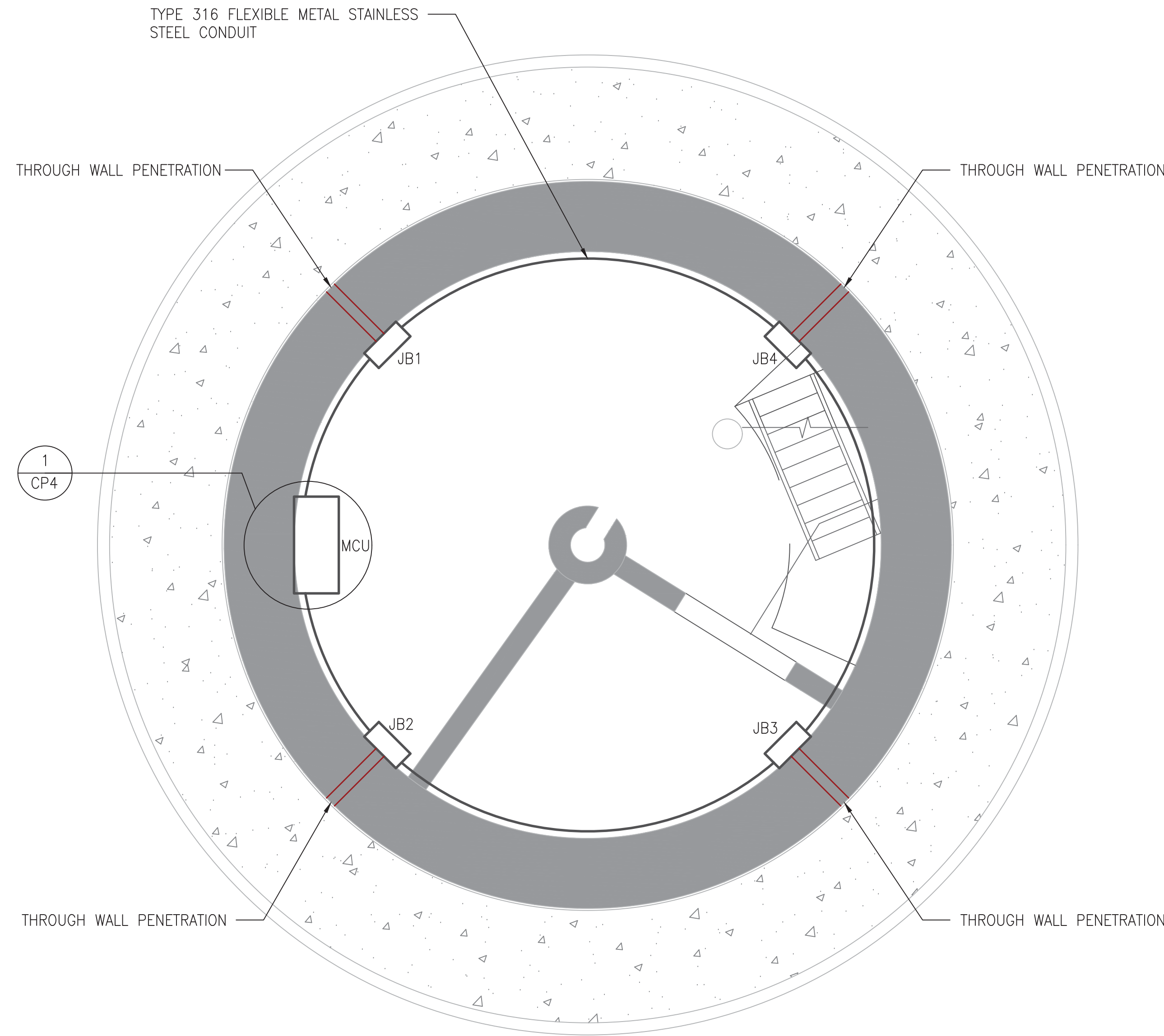
TARRYTOWN LIGHTHOUSE RESTORATION
KINGSLAND POINT PARK, VILLAGE of SLEEPY HOLLOW, NY
CATHODIC PROTECTION - GENERAL NOTES



1 ZONE LAYOUT

NOTES:

1. FINAL MCU LOCATION TO BE DETERMINED ON SITE WITH THE DESIGN TEAM AND CATHODIC PROTECTION SUPERVISOR/MANAGER.
2. THROUGH WALL PENETRATIONS REQUIRED AS SHOWN ON THE ASSOCIATED DRAWINGS.
3. THROUGH WALL WIRING TO BE PROTECTED AT THROUGH WALL HOLE BY BEING PLACED IN 1" RIGID PVC CONDUIT SCHEDULE 80.
4. THROUGH WALL PIPE TO ENTER 2" OR MORE BELOW THE JUNCTION BOX TO ALLOW FOR A RIGHT-ANGLE ELBOW TO BE UTILIZED FOR CABLE DISTRIBUTION TO THE JUNCTION BOX.
5. ALL CONDUIT ROUTED FROM THE JUNCTION BOXES TO THE MCU SHALL BE A MINIMUM OF 1" TYPE 316 FLEXIBLE METAL STAINLESS STEEL TUBING UNLESS OTHERWISE SPECIFIED.
6. IF JUNCTION BOX IS PLACED ON INTERIOR WALL WITHIN THE ANODE ZONE OF INFLUENCE USE NON-METALLIC ANCHORAGE TO SECURE JUNCTION BOX TO WALL.



2 ELECTRICAL LAYOUT

REVISION NUMBER	DATE	MADE BY	APP'D BY	REVISION

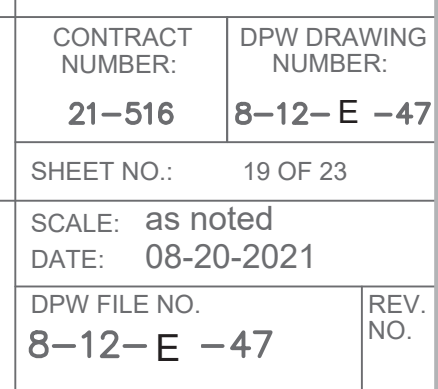
	STEPHEN TILLY, Architect 22 Elm Street, Dobbs Ferry, New York 10522 Structural Engineer: Structures North Consulting Engineers, Inc. 60 Washington St., Suite 401, Salem, MA 01970 MEP Engineer: Tietjen Venegas Consulting Engineers 68 Purchase Street, Rye, New York 10580 Cathodic Protection Consultant: Echem Consultants, LLC 4 Jefferson Plaza, Suite 500, Poughkeepsie, NY 12601		DRAWING TITLE: CATHODIC PROTECTION-ICCP LAYOUT
	DRAWING NUMBER: CP2		
	CONTRACT NUMBER: 21-516	DPW DRAWING NUMBER: 8-12-E -46	
	SHEET NO.: 18 OF 23		
WESTCHESTER COUNTY, NEW YORK DEPARTMENT OF PUBLIC WORKS AND TRANSPORTATION DIVISION OF ENGINEERING			SCALE: as noted DATE: 08-20-2021
TARRYTOWN LIGHTHOUSE RESTORATION KINGSLAND POINT PARK, VILLAGE of SLEEPY HOLLOW, NY CATHODIC PROTECTION - ICCP LAYOUT			DPW FILE NO. 8-12-E -46
			REV. NO.

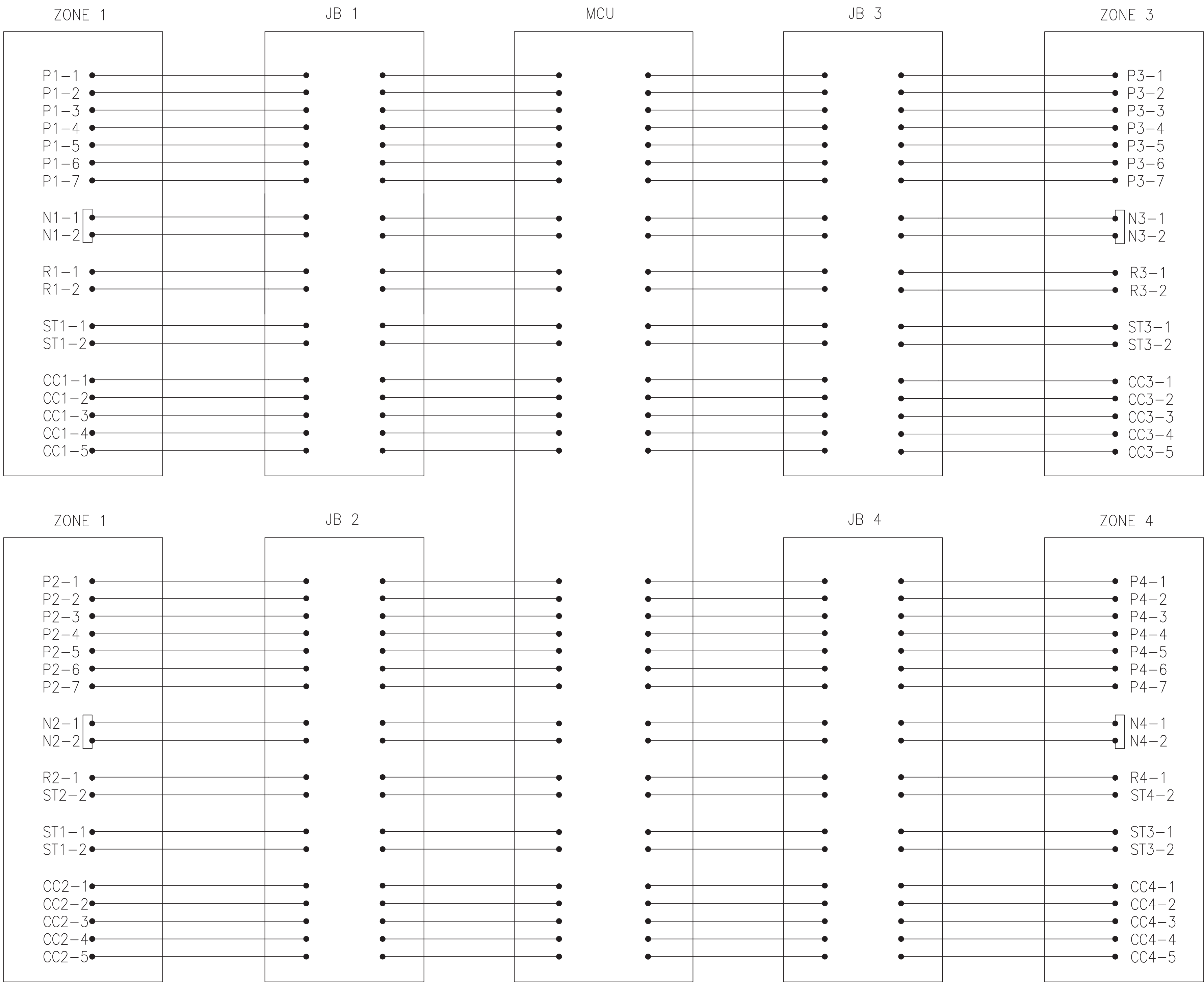


4 SCREWS AND WASHERS
SCALE: NTS



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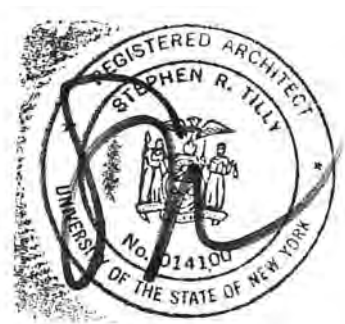


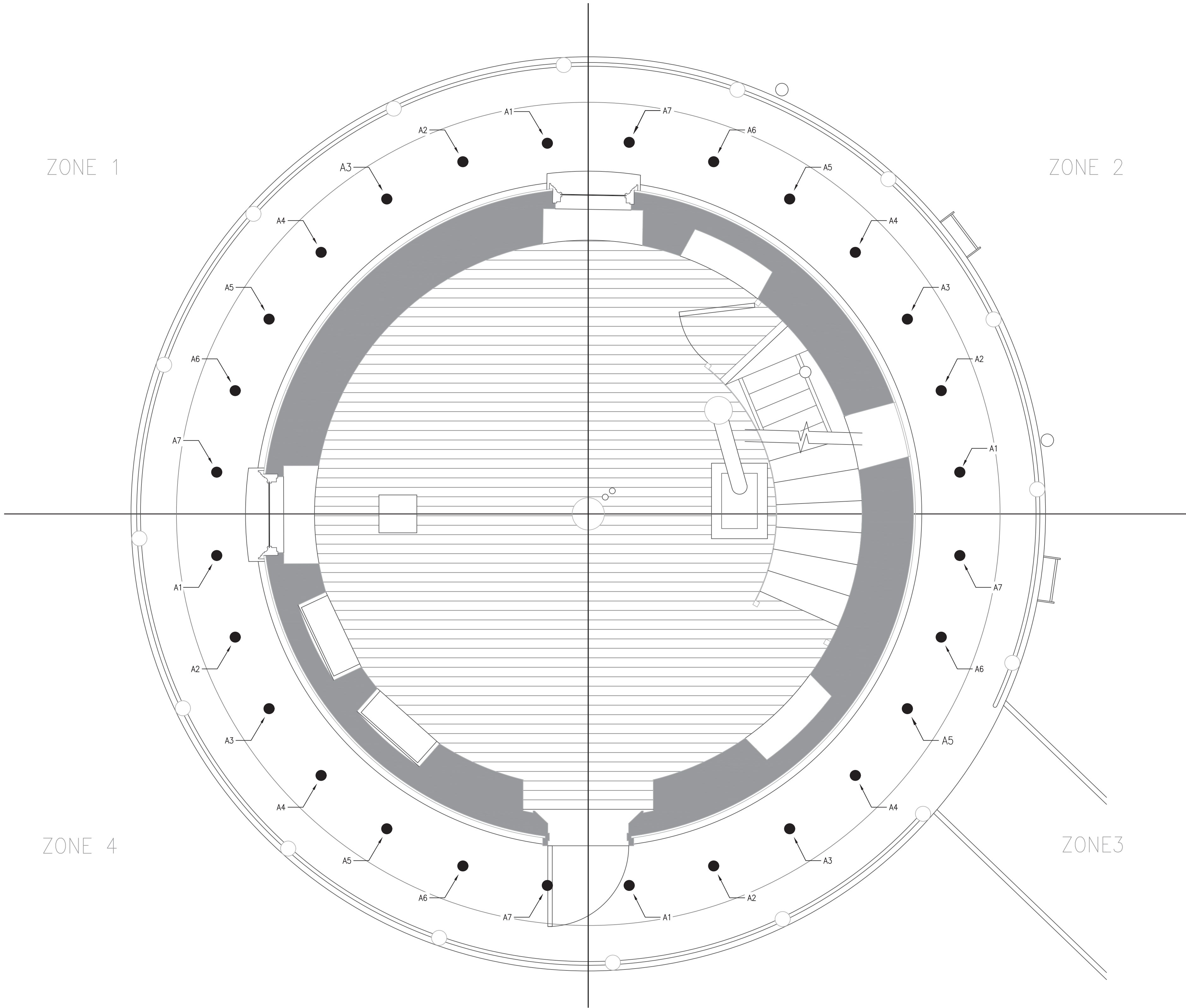


- NOTES:
1. ALL CABLE SIZES SHALL BE 14AWG UNLESS OTHERWISE SPECIFIED.
 2. ALL NEGATIVE FIELD CONNECTIONS WITHIN A ZONE ARE DAISY CHAINED TOGETHER WITH TWO (2) FEEDS RETURNING TO THE POWER SUPPLY UNIT.
 3. ALL DC POWER CABLING IS AS FOLLOWS:
POSITIVE – RED
NEGATIVE – BLACK
 4. ALL MONITORING CABLING IS AS FOLLOWS:
REFERENCE ELECTRODE – BLUE
STEEL TEST – YELLOW
BOND / CORROSION COUPON – GREEN

1 WIRING DIAGRAM

REVISION NUMBER	DATE	MADE BY	APP'D BY	REVISION

	STEPHEN TILLY, Architect 22 Elm Street, Dobbs Ferry, New York 10522 Structural Engineer: Structures North Consulting Engineers, Inc. 60 Washington St., Suite 401, Salem, MA 01970 MEP Engineer: Tietjen Venegas Consulting Engineers 68 Purchase Street, Rye, New York 10580 Cathodic Protection Consultant: Echem Consultants, LLC 4 Jefferson Plaza, Suite 500, Poughkeepsie, NY 12601		DRAWING TITLE: CATHODIC PROTECTION-WIRING DIAGRAM		
	DRAWING NUMBER: CP5		CONTRACT NUMBER: 21-516		
	SHEET NO.: 21 OF 23		DPW DRAWING NUMBER: 8-12-E-49		
WESTCHESTER COUNTY, NEW YORK DEPARTMENT OF PUBLIC WORKS AND TRANSPORTATION DIVISION OF ENGINEERING				SCALE: as noted DATE: 08-20-2021	
TARRYTOWN LIGHTHOUSE RESTORATION KINGSLAND POINT PARK, VILLAGE of SLEEPY HOLLOW, NY CATHODIC PROTECTION - WIRING DIAGRAM				DPW FILE NO. 8-12-E-49	
				REV. NO.	



- NOTES:
1. THE CATHODIC PROTECTION ANODE ZONE PROTECTS THE BACK FACE OF THE CAST IRON CAISSON AS DETAILED IN THE DESIGN TABLE ON THIS DRAWING.
 2. EACH ANODE ZONE SHALL BE COMPRISED OF MMO TITANIUM RIBBONS SPOT WELDED TO TITANIUM CONDUCTOR BAR AS SHOWN IN DETAIL 1 ON XX03.
 3. ALL ANODES SHALL BE INSTALLED AT SPACING DETAILED ON DESIGN TABLE, ON CENTER, $\pm 2"$.
 4. HOLE DEPTH FOR ANODES SHALL BE CORED ACCORDING TO DETAILS ON XX03.

DESIGN TABLE						
ZONE	ANODES	# OF ANODES	ANODE LINES	ANODE SIZE	SPACING $\pm 6"$	TOTAL CURRENT (mA)
1	A1–A7	7	1	10'	2'–9"	420.00
2	A1–A7	7	1	10'	2'–9"	420.00
3	A1–A7	7	1	10'	2'–9"	420.00
4	A1–A7	7	1	10'	2'–9"	420.00
		28				1680.00

1 ANODE LAYOUT

REVISION NUMBER	DATE	MADE BY	APP'D BY	REVISION

CONSULTANT SEAL

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DRAWING TITLE:

CATHODIC PROTECTION-ANODE LAYOUT

DRAWING NUMBER:

CP6

CONTRACT NUMBER:

21–516

DPW DRAWING NUMBER:

8–12–E–50

SHEET NO.:

22 OF 23

SCALE: as noted

DATE: 08-20-2021

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WESTCHESTER COUNTY, NEW YORK

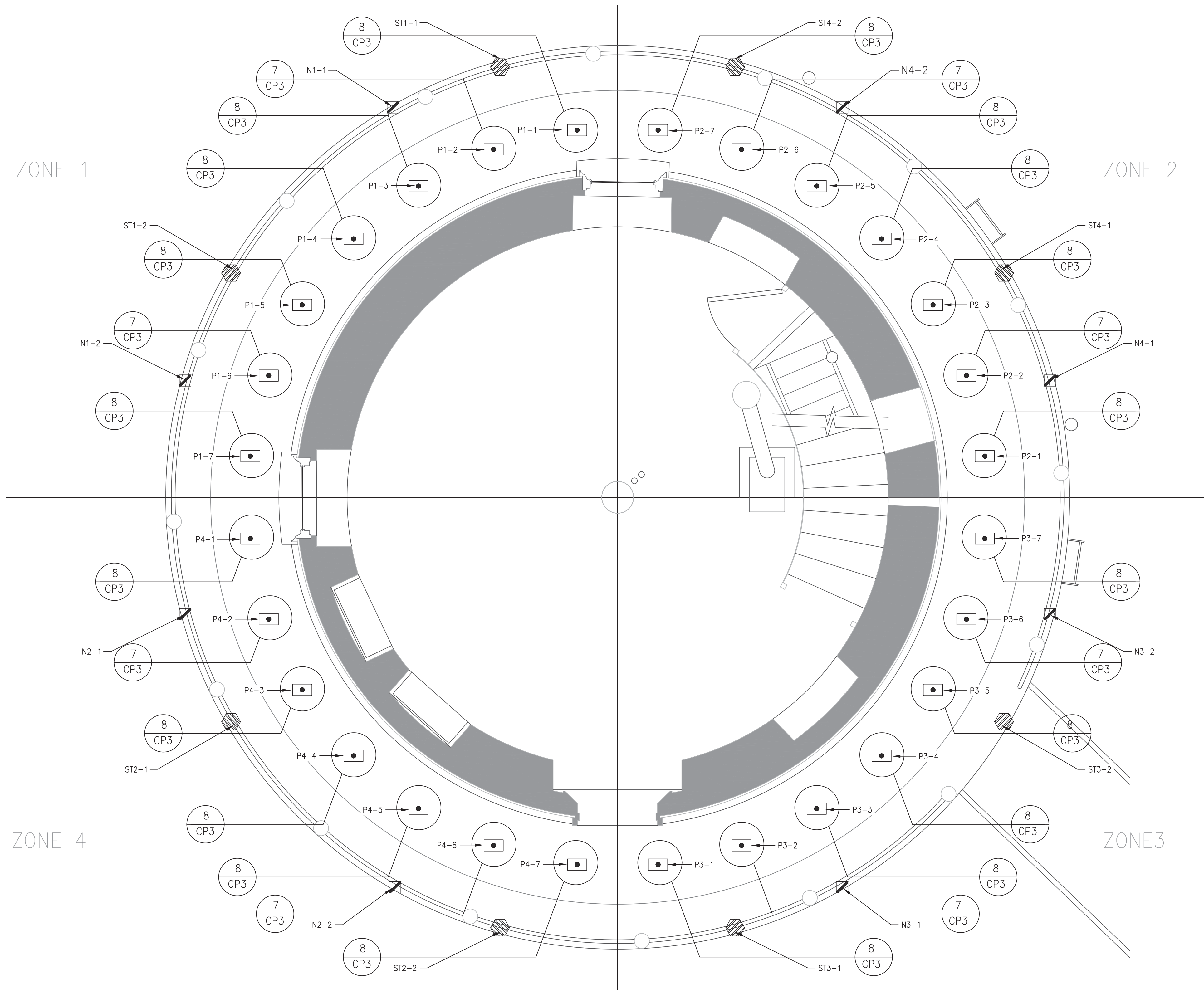
DEPARTMENT OF PUBLIC WORKS AND TRANSPORTATION

DIVISION OF ENGINEERING

TARRYTOWN LIGHTHOUSE RESTORATION

KINGSLAND POINT PARK, VILLAGE of SLEEPY HOLLOW, NY

CATHODIC PROTECTION - ANODE LAYOUT



LEGEND:

- POSITIVE CONNECTION
- NEGATIVE CONNECTION
- STEEL TEST

- NOTES:
- STEEL TESTS CABLE SHALL NOT BE COMMON TO CATHODE WIRES.
 - REFERENCE ELECTRODES AND STEEL TESTS ARE INDICATIVE ONLY, EXACT LOCATIONS SHALL BE FIELD VERIFIED.
 - FOR WIRING DETAILS, REFER TO THE DIAGRAM ON XX05.

ZONE 1 DESIGN TABLE					
ZONE	ANODES	# OF ANODES	ANODE LINES	ANODE SIZE	SPACING ±6"
1	P1-1	N1-1	R1-1	ST1-1	CC1-1
	P1-2				
	P1-3				CC1-2
	P1-4	N1-2	R1-2	ST1-2	CC1-3
	P1-5				CC1-4
	P1-6				
	P1-7				CC1-5
2	P2-1	N4-1	R2-1	ST2-1	CC2-1
	P2-2				
	P2-3				CC2-2
	P2-4	N4-2	R2-2	ST2-2	CC2-3
	P2-5				CC2-4
	P2-6				
	P2-7				CC2-5
3	P3-1	N3-1	R3-1	ST3-1	CC3-1
	P3-2				
	P3-3				CC3-2
	P3-4	N3-2	R3-2	ST3-2	CC3-3
	P3-5				CC3-4
	P3-6				
	P3-7				CC3-5
4	P4-1	N4-1	R4-1	ST4-1	CC4-1
	P4-2				
	P4-3				CC4-2
	P4-4	N4-2	R4-2	ST4-2	CC4-3
	P4-5				CC4-4
	P4-6				
	P4-7				CC4-5

1 ZONE CONNECTIONS

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CONSULTANT SEAL

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DRAWING TITLE:
CATHODIC PROTECTION-ZONE CONNECTIONS

DRAWING NUMBER:
CP7

CONTRACT NUMBER:
21-516

DPW DRAWING NUMBER:

SHEET NO.: 23 OF 23

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8-12-E-51

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WESTCHESTER COUNTY, NEW YORK
DEPARTMENT OF PUBLIC WORKS AND TRANSPORTATION
DIVISION OF ENGINEERING

TARRYTOWN LIGHTHOUSE RESTORATION
KINGSLAND POINT PARK, VILLAGE of SLEEPY HOLLOW, NY
CATHODIC PROTECTION - ZONE CONNECTIONS