## DDS- Planning & Zoning: Plan Review Application



Submission date: 12 July 2021, 2:57PM

Receipt number: 326

#### **Application Type**

Check all that apply: Site Plan Review

**Special Permit** 

#### **Property Information**

Property Address: 80 Seymour Street, Hartford, CT Map

(41.7640864, -72.5276275)

Zoning District: MX-2

Parcel ID: 249554003

Property Owner: Hartford healthcare - Dave Casale

Address of Property Owner: 129 Patricia Drive, Newington, CT 06111

Email: Dave.Casale@hhchealth.org

#### **Applicant**

	Plese check if "Applicant is the same as "Property Owner"
Name of Applicant:	Hartford healthcare - Dave Casale
File Date:	07/12/2021
Address:	129 Patricia Drive, Newington, CT 06111 No

coordinates found

Phone: 860-918-2305

Email: Dave.Casale@hhchealth.org

#### **Primary Point of Contact**

Name: Ronald Bomengen

Phone: **860-646-2469** 

Email rbomengen@fando.com

#### **Project Narrative**

Please describe your application action(s) and provide as much detail as possible. Attach additional pages if necessary:

#### **Zoning Map Change Application**

Proposed Zone:

Describe the existing use of land and buildings in the zone change area:

Reason for this request:

#### **Zoning Appeal Application**

Are you an aggrieved party?

Permit or Violation Number:

State your reason for appealing the decision of the administrator or enforcement officer:

#### Variance Application

Please state the paticular hardship\* or unnecessary difficulty that prompts this application and the site the section of the zoning regulations that you are seeking relief from:

#### **Subdivision Application**

Number of lots to be created:

Area of each lot in square feet:

Street frontage of each of the new lots in feet:

#### **Lot Combination Application**

Addresses of lots to be combined

Map/Block/Lot for each property to be combined:

#### **Liquor Permit Application**

Please upload a copy of your State of CT Liquor Permit below.

#### **Sign Permit Application**

1. Is this sign proposed outside of the building line?

Maximum extention from building line:

2. Is this sign proposed outside of the street line?

Maximum extension from the Street line

3. Is the sign luminated? 4. Engineer Name (if any): Phone: Address: 5. Minimum distance from lowest point to the sidewalk: 6. Maximum height of sign from lowest point of established grade: 7. Distance from the nearest outdoor sign: 8. Square feet of surface for one face of the sign: 9. Wording of the sign (include all words): Description of work (upload additional files if necessary) Upload any supporting materials below. City App Substation signed 7-12-21.pdf 2021-07-12 - Special Permit Request.pdf 2021-07-13 - HH Electic Substation\_Local Permit **Submission.pdf Signatures** Signature of Applicant Uploaded signature image: Applicant Signature.JPG Printed Name of Applicant: **Dave Casale** 07/12/2021 Date: Signature of Property Owner: Uploaded signature image: Applicant Signature.JPG **Dave Casale** Printed Name of Property Owner:

Date: **07/12/2021** 

MUNIS	App.	#.	
TITOTATO	7 7 1 1 1 .		

FOR OFFICE USE ONLY				
Final Action: Approved	Denied	Withdrawn	Date of Action	
Approved w/ Co	onditions	Approved By		

## City of Hartford Planning Division Department of Development Services

Return Form to the Planning Desk at the Licenses & Inspections Division Counter 860-757-9239

260 Constitution Plaza
Hartford Connecticut 06103-1822



For Assistance Contact Planning Division 860-757-9040, 250 Constitution Plaza, 4th Floor Hartford, Connecticut 06103-1822 http://planning.hartford.gov

Hartford, Con	necticut 06103-1822	CONNECTICUT	ŀ	nttp://planning.hartford.gov	
PLAN	NING AND	ZONIN	GAPF	PLICATION	
PLEASE CHECK TH	HE ACTION(S) YOU ARE	E APPLYING FOR:			9
□ Zoning Appeal	□ Approval of Location	□ Historic Re	eview	Receiving Federal Funds:	
□ Zoning Permit	X Site Plan	□ Special Exc	ception	□ Yes □ No	
□ Zoning Variance	Special Permit	□ Lot Combi	nation	□ Demo □Add. □Repair	
□ Subdivision/Lot Li	ne Revision	□ Liquor Perr	nit		1
1. PROPERTY INFO	RMATION				
Zoning District: (can be Property Owner: Hart	Seymour Street found at http://assessor1.hartfo ford Healthcare - Dave Casa ess: 129 Patricia Drive	rd.gov/Default.asp?br=ex le, Senior Director, Fa	p&vr=6) MX- ncility Planning ngton State:	2 - Mixed Use & Construction  CT Zip Code: 06111	
2. APPLICANT					
☐ Please check if "/	Applicant" is the same as "Pr	operty Owner"			
Name of Applicant:		File	e Date:		
Address:		_ City:	State	Zip Code:	
Phone:		Email:			
3. PRIMARY POINT	OF CONTACT:				
Name: Ronald Bomen	gen,PE , LEED A				
Phone: 860-646-2469;	Ext. 5253				
Email: RBomengen@	fando.com				

	MUNIS App. #:
4. PROJECT NARRATIVE	
Describe your application action(s) and provide as much detail as possible	Attach additional pages if necessary:
Hartford Hospital is replacing Electrical Substation No. 1 located in th	e existing Engineering
and Laundry Building on Retreat Avenue. Replacement of the substation	on will provide Hartford
Hospital with more reliable means of managing critical lifesaving opera	ations during power
outages. The new substation will be constructed in the location of the	existing Hall-Wilson
Laboratory Building, to be demolished, located off of Retreat Avenue.	New feeder lines will be
constructed from the existing Eversource electrical lines located in Ret	reated Avenue to the
new substation. A Special Permit is required for construction of the sc	reening wall along Retreat Avenue.
NVO1 HIGHWAY 200	
5. SIGNATURE(S)	
All work will be done in strict accordance with the LOCAL,	STATE AND FEDERAL CODES.
All work covered by this application has been author	
Signature of Applicant:	Date:
Printed Name of Applicant:	
Signature of Property Owner:	Date: 7.12.21
Printed Name of Property Owner: DAYE CASACE	

Please read the following sections carefully.
ONLY FILL OUT THE SECTIONS PERTINENT TO YOUR APPLICATION.

				MUNIS App. #	<i>‡</i> :
A. COMPLETE IF APP	LYING FOR ZONING V	ARIANCE:			
	ip* or unnecessary difficulty t				
*A "hardship" as defined by the especially affecting such parcel by regulations would result in exce	he <u>Connecticut State Statutes Sect</u> out not affecting generally the distri ptional difficulty or unusual hards ss is so great as to amount to confis	ion 8-6 whereby " ct in which it is si hip." Note that	with respect to a parce tuated, a literal enforc 'mere financial loss de	ement of such bylaws, ordin oes not constitute hardship	nances or
B. COMPLETE IF APP	LYING FOR SUBDIVISI	ON, LOT LIN	E REVISION,	OR LOT COMBINA	TION
Lot Subdivision/Lot Lin	e Revision:				
Number of new lots to be	created: Area	of each of the	new lots in square	feet	
Street frontage of each of t	the new lots in feet				
Lot Combination:					
Address of lots to be comb	oined				
Map/Block/Lot for each p	property to be combined:	Мар	Block	Lot	
		Мар	Block	Lot	
	8	Мар	Block	Lot	
(Map/Block/Lot and addr	ess information can be found	l at http://gis.h	artford.gov/parce	lviewer/index.html)	
C. COMPLETE IF APP	LYING FOR HISTORIC	REVIEW			
OR DEMOLITION PEI BEGIN UNTIL A BUILD	RIC COMMISSION APPRORMIT WILL BE ISSUED DING PERMIT IS ISSUED ographs are included with ap	FOR WORK	ON HISTORIC	PROPERTIES. NO	
Proposed work includes: (Check all that apply)	□ Repairs □ Additio	n □ New constru	□ Demo ction	lition   Other (specify)	
If proposing demolition, pr	rovide reason (attach addition	nal pages if neco	essary):		
Current materials being rep	oaired/replaced:				

Materials/products being used in work:



#### MEMORANDUM

**TO**: City of Hartford Planning & Zoning Commission

**FROM:** Ronald Bomengen, Associate – Fuss & O'Neill, Inc.

**DATE:** July 12, 2021

**RE:** Hartford Hospital Substation Replacement Project – Request for Special Permit

#### **Background**

Hartford Hospital is proposing to replace its existing Electrical Substation No. 1 located in the existing Engineering and Laundry Building on Retreat Avenue. The new substation will be constructed in the location of the existing Hall-Wilson Laboratory Building, to be demolished, located off of Retreat Avenue. New feeder lines will be constructed from the existing Eversource electrical lines located in Retreat Avenue to the new substation.

#### **Special Permit Request**

A Special Permit has been requested to allow a 9 foot high wall to be placed around the substation area and equipment. Current zoning regulations only allow fencing or screening with a maximum height of 4 feet. Permitting the screening of the new substation area and equipment with walls 9 feet in height will result in a more aesthetically pleasing end product, provide greater security, and increase safety.

#### Consistency with the Plan of Conservation and Development

Hartford Hospital's mission is to improve the health and healing of the people and communities they serve. The proposed substation replacement project will provide Hartford Hospital with a more reliable source of backup energy which will allow Hartford Hospital to better safeguard its patients and manage the critical lifesaving services they provide to the community. This project is in harmony with and supports the City of Hartford's goal, within the Plan of Conservation and Development, to promote livable and sustainable communities.

#### Compliance with Zoning

The Hartford Hospital Campus located at 80 Seymour Street, including the location of the proposed new substation, is located within a MX-2, Multi-Use Mixed District zone. The overall hospital use at the site is in agreement with the purpose of the MX districts and the proposed site layout for the new substation complies with the applicable zoning requirements of the MX-2 District, with the exception of the proposed height of the walls surrounding the substation area. However, granting the Special Permit to allow the installation of higher wall panels will enhance the visual appearance of the site.

#### Compatibility with Neighboring Uses

Properties adjacent to the Hartford Hospital Campus and along Retreat Avenue are also located within a MX-2 District and include compatible uses for the district such as community housing



MEMO- NAME OF PERSON(S) RECEIVING MEMO July 12, 2021 Page 2 of 2

and other mixed-use type buildings with store fronts and office buildings. The proposed substation project will not change the primary hospital use of the property. The Hartford Hospital Campus will remain in harmony with the intended uses for the MX-2 District and will not be detrimental to existing development in the district.

#### Safety and Traffic

Installing 9 foot wall panels versus 4 foot wall panels or fencing around the substation area will increase safety to the general public. The higher walls will provide a greater deterrent for trespassers and/or vandalism. The proposed layout of the area will not create safety hazards in vehicular or pedestrian travel and the wall height will not impede motorist visibility in the area. Traffic levels of service will not be permanently impacted by the project.

# NEW PRIMARY ELECTRIC SUBSTATION PROJECT

RETREAT AVENUE · HARTFORD · CT

HARTFORD HOSPITAL

JULY 13, 2021

Hartford Hospital

A Hartford HealthCare Partner

MEP Engineering Services

Bard, Rao + Athanas Consulting Engineers, LLC 10 Guest St., 4th Floor Boston MA 02135 tel 617.254.0016 fax 617.924.9339

www.brplusa.com

Architectural and Structural Design Services

## SLAM

80 Glastonbury Blvd Glastonbury, CT 06033-4410 **phone** 860 657.8077 **fax** 860 657.3141

www.slamcoll.com

## Civil Engineering Design Services



PREPARED FOR

## HARTFORD HOSPITAL

80 SEYMOUR SREET HARTFORD CT. 06102



### **SHEET INDEX**

S200 - 202

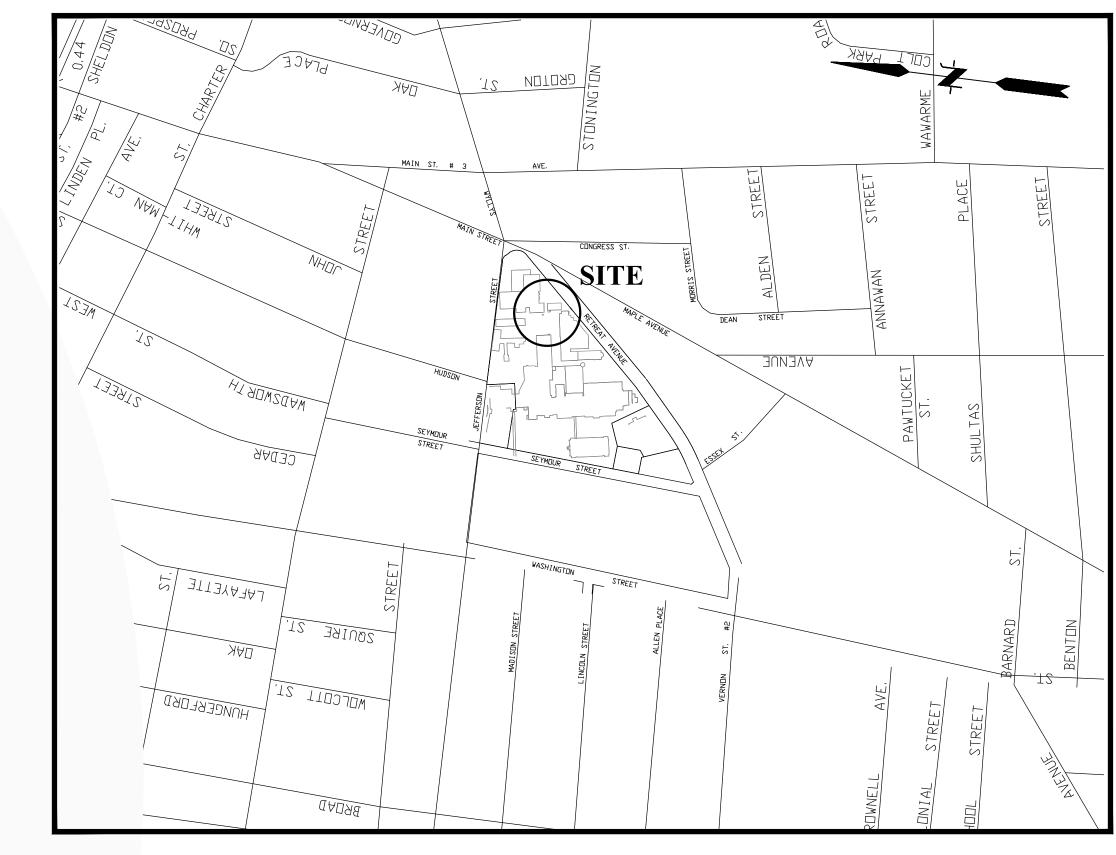
#### SHEET No. SHEET TITLE GI-001 COVER SHEET GI-002 GENERAL NOTES EX-101 - EX-102 **EXISTING CONDITIONS PLAN** CP-101 - CP-102 SITE PREPARATION PLAN EROSION AND SEDIMENT CONTROL PLAN CE-101 - CE-102 CS-101- CS-102 SITE LAYOUT PLAN CG-101 SITE GRADING PLAN CU-101 DRAINAGE & UTILITY PLAN CD-501 - CD-504 SITE DETAILS A101 SUBSTATION SITE PLAN A301 SCREEN WALL ELEVATIONS A302 EXTERIOR SECTIONS & DETAILS LANDSCAPE PLANTING PLAN S001 GENERAL NOTES AND ABBREVIATIONS FOUNDATION PLAN S101

FOUNDATION DETAILS

### **PROJECT TEAM**

BR+A
10 GUEST STREET, 4TH FLOOR
BOSTON MA 02135
(617) 254-0016

SLAM 80 GLASTONBURY BLVD GLASTONBURY CT 06033 (860)657-8077



LOCATION MAP
SCALE: 1" = 500'

NUMBER	DATE	REVISION
	1	1

PROJECT:

NEW PRIMARY ELECTRIC SUBSTATION PROJECT

DRAWING TITLE:

COVER SHEET

BY: SEJ	DRAWING NO.
BY: <b>RB</b>	
: NONE	GI-001
NO.: <b>20160045.S10</b>	

File: \\private\DFS\CadProj\DWG\P2016\0045\S10\Civil\Plan\20160045S10\_COV01.dwg Layout: GI-001 2021 Plotted: 2021-07-12 1:38 PM Saved: 2021-07-1

#### CIVIL GENERAL NOTES

#### <u>GENERAL</u>

- 1. SYMBOLS AND LEGENDS OF PROJECT FEATURES ARE GRAPHIC REPRESENTATIONS AND ARE NOT NECESSARILY SHOWN ON THE DRAWINGS TO SCALE OR TO THEIR ACTUAL DIMENSION OR LOCATION. COORDINATE DETAIL SHEET DIMENSIONS, MANUFACTURERS' LITERATURE, SHOP DRAWINGS AND FIELD MEASUREMENTS OF SUPPLIED PRODUCTS FOR LAYOUT OF THE PROJECT FEATURES.
- 2. DO NOT RELY SOLELY ON ELECTRONIC VERSIONS OF DRAWINGS, SPECIFICATIONS, AND DATA FILES THAT ARE PROVIDED BY THE ENGINEER. FIELD VERIFY LOCATION OF PROJECT FEATURES.
- 3. PERFORM NECESSARY CONSTRUCTION NOTIFICATIONS, APPLY FOR AND OBTAIN NECESSARY PERMITS, PAY FEES, AND POST BONDS ASSOCIATED WITH THE WORK AS REQUIRED BY THE CONTRACT DOCUMENTS.
- 4. SEE ARCHITECTURAL DRAWINGS FOR DIMENSIONS OF BUILDINGS AND ADJACENT SITE ELEMENTS INCLUDING SIDEWALKS, RAMPS, BUILDING ENTRANCES, STAIRWAYS, UTILITY PENETRATIONS, CONCRETE DOOR PADS, COMPACTOR PAD, LOADING DOCKS, BOLLARDS, ETC.
- 5. BASE PLAN: THE PROPERTY LINES SHOWN WERE DETERMINED BY AN ACTUAL FIELD SURVEY CONDUCTED BY FUSS & O'NEILL, AND FROM PLANS OF RECORD. THE TOPOGRAPHY AND PHYSICAL FEATURES ARE BASED ON AN ACTUAL FIELD SURVEY PERFORMED ON THE GROUND BY FUSS & O'NEILL AND FROM PLANS OF RECORD. REFER TO A PLAN ENTITLED "LIMITED PROPERTY/BOUNDARY, TOPOGRAPHIC AND UTILITY SURVEY HARTFORD HOSPITAL PRIMARY SUBSTATION REPLACEMENT PROJECT 45 RETREAT AVENUE HARTFORD, CONNECTICUT, DATE 06/06/2018, SCALE 1"=40', PREPARED BY FUSS & O'NEILL, MANCHESTER, CONNECTICUT"
- 6. TOPOGRAPHIC ELEVATIONS ARE BASED ON NAVD 88 DATUM.
- 7. THERE ARE NO WETLANDS ON THIS SITE WITHIN THE AREA OF WORK.
- 8. ALL SOILS ON SITE ARE CLASSIFIED AS 307 "URBAN LAND".
- 9. AREA DETERMINED TO BE OUTSIDE OF THE 0.1% ANNUAL CHANCE FLOOD PLAIN PER FLOOD INSURANCE RATE MAP HARTFORD COUNTY, PANEL 3680F 675, MAP NUMBER 09003COG, MAP REVISED SEPTEMBER 16, 2011.

#### WORK RESTRICTIONS

- 1. DO NOT CLOSE OR OBSTRUCT ROADWAYS, SIDEWALKS, FIRE HYDRANTS, AND UTILITIES WITHOUT APPROPRIATE PERMITS.
- 2. WORK IS RESTRICTED TO THE HOURS OF TO THE HOURS OF 7:00 AM TO 5:00 PM, MONDAY THROUGH FRIDAY.

#### REGULATORY REQUIREMENTS

- 1. CONTRACTOR TO OBTAIN PERMIT FROM THE CITY OF HARTFORD FOR ALL WORK WITHIN THE RIGHT OF WAY. ALL WORK WITHIN THE RIGHT OF WAY SHALL BE IN ACCORDANCE WITH CITY OF HARTFORD STANDARDS.
- 2. PROVIDE TRAFFIC SIGNAGE AND PAVEMENT MARKINGS IN CONFORMANCE WITH THE LATEST EDITION OF THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES.
- 3. BE RESPONSIBLE FOR SITE SECURITY AND JOB SAFETY. PERFORM CONSTRUCTION ACTIVITIES IN ACCORDANCE WITH OSHA STANDARDS AND LOCAL REQUIREMENTS.
- 4. DISPOSE OF DEMOLITION DEBRIS IN ACCORDANCE WITH APPLICABLE FEDERAL, STATE AND LOCAL REGULATIONS, ORDINANCES AND STATUTES.
- 5. THIS PROJECT DISTURBS LESS THAN ONE ACRE OF LAND AND DOES NOT FALL WITHIN THE CONNECTICUT DEEP STORMWATER AND DEWATERING WASTEWATER FROM CONSTRUCTION ACTIVITIES GENERAL PERMIT PROCESS.

#### EROSION AND SEDIMENT CONTROL

- 1. INSTALL EROSION CONTROL MEASURES PRIOR TO STARTING ANY WORK ON THE SITE. REFER TO THE EROSION AND SEDIMENT CONTROL DRAWINGS.
- 2. CONSTRUCT ALL EROSION AND SEDIMENT CONTROL MEASURES IN ACCORDANCE WITH THE STANDARDS AND SPECIFICATIONS OF THE MOST RECENT EDITION OF THE "CONNECTICUT GUIDELINES FOR SOIL EROSION AND SEDIMENT CONTROL" (CT DEEP BULLETIN 34). ALL MEASURES SHALL BE MAINTAINED AND UPGRADED TO ACHIEVE PROPER SEDIMENT CONTROL DURING CONSTRUCTION.
- 3. IMPLEMENT ALL NECESSARY MEASURES REQUIRED TO CONTROL STORMWATER RUNOFF, DUST, SEDIMENT, AND DEBRIS FROM EXITING THE SITE. PERFORM CORRECTIVE ACTION AS NEEDED FOR EROSION CLEANUP AND REPAIRS TO OFF SITE AREAS, IF ANY, AT NO COST TO OWNER.
- 4. PERFORM CONSTRUCTION SEQUENCING IN SUCH A MANNER TO CONTROL EROSION AND TO MINIMIZE THE TIME THAT EARTH MATERIALS ARE EXPOSED BEFORE THEY ARE COVERED, SEEDED, OR OTHERWISE STABILIZED.
- 5. UPON COMPLETION OF CONSTRUCTION AND ESTABLISHMENT OF PERMANENT GROUND COVER, REMOVE AND DISPOSE OF TEMPORARY EROSION CONTROL MEASURES. CLEAN SEDIMENT AND DEBRIS FROM TEMPORARY MEASURES AND FROM PERMANENT STORM DRAIN AND SANITARY SEWER SYSTEMS.
- 6. PLAN IMPLEMENTATION IMPLEMENT THIS EROSION AND SEDIMENT CONTROL PLAN. THIS IMPLEMENTATION INCLUDES THE INSTALLATION AND MAINTENANCE OF CONTROL MEASURES UNTIL PERMANENT STABILIZATION IS ACHIEVED, INFORMING ALL SUBCONTRACTORS OF THE REQUIREMENTS AND OBJECTIVES OF THE PLAN, AND NOTIFYING THE PROPER MUNICIPAL AGENCY OF ANY TRANSFER OF THIS RESPONSIBILITY. THE OWNER SHALL BE RESPONSIBLE FOR CONVEYING A COPY OF THE EROSION AND SEDIMENT CONTROL PLAN TO THE NEW OWNER IF THE TITLE OF THE LAND IS TRANSFERRED PRIOR TO ACHIEVING PERMANENT STABILIZATION.
- 7. INSTALLATION SCHEDULE INSTALL THE CONSTRUCTION ENTRANCE BEFORE CONSTRUCTION TRAFFIC INTO AND OUT OF THE PROJECT AREA BEGINS. INSTALL EROSION AND SEDIMENT CONTROL MEASURES PRIOR TO STUMP REMOVAL AND CONSTRUCTION. INSTALL ADDITIONAL CONTROL MEASURES DURING THE CONSTRUCTION PERIOD, IF DEEMED NECESSARY BY THE OWNER, HIS AGENTS OR AGENTS OF THE MUNICIPALITY.
- 8. FUGITIVE DUST CONTROL FUGITIVE DUST USING WATER SPRAYS OR CALCIUM CHLORIDE ON SOIL SURFACES, SWEEPING PAVED AREAS, TEMPORARY WINDBREAKS OR NON—ASPHALTIC SOIL TACKIFIERS.
- 9. STRAW BALE LIFE SPAN INSTALL STRAW BALES WHERE PROTECTION AND EFFECTIVENESS IS REQUIRED FOR LESS THAN 90 DAYS. OTHERWISE, INSTALL SILT FENCE.
- 10. CATCH BASINS PROTECT CATCH BASINS WITH PROPER CONTROLS THROUGHOUT THE CONSTRUCTION PERIOD UNTIL ALL DISTURBED AREAS ARE PERMANENTLY STABILIZED.
- 11. STOCKPILES ENCIRCLE STOCKPILES OF ERODIBLE SOIL WITH A STRAW BALE OR SILT FENCE BARRIER. THE SIDE SLOPES OF ERODIBLE STOCKPILED MATERIAL SHALL BE NO STEEPER THAN 2:1. STOCKPILES THAT ARE NOT TO BE USED WITHIN 30 DAYS SHALL BE SEEDED AND MULCHED IMMEDIATELY AFTER THEY ARE FORMED.
- 12. TOE OF SLOPE ESTABLISH AN EROSION CONTROL BARRIER (SILT FENCE OR STRAW BALE BARRIER) APPROXIMATELY 5 TO 10 FEET FROM THE PROPOSED TOE OF THE CUT OR FILL AREA PRIOR TO BEGINNING EARTHWORK.
- 13. SEDIMENT REMOVAL SEDIMENT REACHING ½ THE HEIGHT OF THE EROSION CONTROL BARRIER SHALL BE REMOVED. REMOVE AND DISPOSE OF SEDIMENT IN A MANNER CONSISTENT WITH THE INTENT OF THE PLAN.
- 14. SOIL STABILIZATION SCHEDULE APPLY PERMANENT SOIL STABILIZATION MEASURES TO ALL GRADED AREAS WITHIN 7 DAYS OF ESTABLISHING FINAL GRADE. APPLY TEMPORARY SOIL STABILIZATION MEASURES IF FINAL GRADING IS TO BE DELAYED MORE THAN 30 DAYS.
- 15. TEMPORARY SEEDING TEMPORARILY SEED ERODIBLE SOILS THAT WILL BE EXPOSED GREATER THAN 1 BUT LESS THAN 12 MONTHS WITHIN THE FIRST 7 DAYS OF SUSPENDING GRADING OPERATIONS. APPLY LIME AT A RATE OF 90 LBS/1000 SQ. FT. APPLY 10-10-10 FERTILIZER AT A RATE OF 12 16 LBS/1000 SQ. FT. APPLY PERENNIAL RYE GRASS AT A RATE OF 2 LBS/1000 SQ. FT. TO A DEPTH OF ½ INCH. OPTIMUM SEEDING DATES ARE APRIL 1 TO JUNE 15 AND AUGUST 15 TO OCTOBER 1. MULCH FOR SEED APPLIED WITHIN THE OPTIMUM SEEDING DATES SHALL BE APPLIED EVENLY SUCH THAT IT PROVIDES 80%-95% SOIL COVERAGE. MULCH FOR SEED APPLIED OUTSIDE OF THE OPTIMUM SEEDING DATES SHALL BE APPLIED EVENLY SUCH THAT IT PROVIDES 95%-100% COVERAGE.
- 16. PERMANENT SEEDING SEED PERMANENT LAWN AREAS IN ACCORDANCE WITH THE SPECIFICATIONS.
- 17. CONCRETE TRUCK WASHOUT CONCRETE TRUCK WASHOUT SHALL BE PROHIBITED ON SITE.
- 18. INSPECTION THE OWNER SHALL SECURE THE SERVICES OF A SOIL SCIENTIST OR PROFESSIONAL ENGINEER TO VERIFY IN THE FIELD THAT THE CONTROLS REQUIRED BY THIS PLAN ARE PROPERLY INSTALLED AND MAINTAINED. THESE INSPECTIONS SHALL BE NOT LESS FREQUENTLY THAN WEEKLY AND WITHIN 24 HOURS OF THE END OF A STORM HAVING A RAINFALL AMOUNT OF 0.1 INCH OR GREATER. FOLLOWING THESE INSPECTIONS, A WRITTEN REPORT SHALL BE PREPARED, INFORMING THE OWNER OR HIS AGENT NOT LESS FREQUENTLY THAN WEEKLY AND THE MUNICIPALITY NOT LESS FREQUENTLY THAN MONTHLY OF OBSERVATIONS, MAINTENANCE, AND CORRECTIVE ACTIVITIES UNDERTAKEN.

#### DEMOLITION

- REMOVE AND DISPOSE OF EXISTING UTILITIES, FOUNDATIONS AND UNSUITABLE MATERIAL BENEATH AND FOR A DISTANCE OF 10 FEET BEYOND THE PROPOSED BUILDING FOOTPRINT INCLUDING EXTERIOR COLUMNS, UNLESS OTHERWISE NOTED.
- 2. THE DEMOLITION PLAN / SITE PREPARATION PLAN IS PROVIDED FOR INFORMATION ONLY AND MAY NOT INDICATE ALL ITEMS REQUIRED TO BE DEMOLISHED. PERFORM A PRE-BID SITE INSPECTION. COORDINATE DEMOLITION OF UNIDENTIFIED UTILITIES OR STRUCTURES WITH OWNER. DEMOLISH STRUCTURES, SITE IMPROVEMENTS, UTILITIES, ETC. AS REQUIRED TO CONSTRUCT PROPOSED TO CONSTRUCT PROPOSED FACILITY AND UTILITY SERVICES.
- 3. STOCKPILE AND SAVE GRANITE CURBING REMOVED WITHIN THE LIMIT OF WORK. STOCKPILED GRANITE CURBING TO BE REUSED ON SITE WHERE POSSIBLE. GRANITE CURBING REMOVED WITHIN THE CITY RIGHT OF WAY TO BE REUSED IN ORIGINAL LOCATION.

#### CONSTRUCTION LAYOUT

- PROVIDE PROPER TRANSITIONS BETWEEN EXISTING AND PROPOSED SITE IMPROVEMENTS. FIELD VERIFY
  EXISTING PAVEMENT AND GROUND ELEVATIONS AT THE INTERFACE WITH PROPOSED PAVEMENTS AND
  DRAINAGE STRUCTURES BEFORE START OF CONSTRUCTION.
- 2. PRIOR TO ORDERING MATERIALS AND BEGINNING CONSTRUCTION, FIELD VERIFY PROPOSED UTILITY ROUTES AND IDENTIFY ANY INTERFERENCES OR OBSTRUCTIONS WITH EXISTING UTILITIES OR PUBLIC RIGHTS-OF-WAY.
- 3. IMMEDIATELY INFORM THE ENGINEER IN WRITING IF EXISTING UTILITY CONDITIONS CONFLICT OR DIFFER FROM THAT INDICATED AND IF THE WORK CANNOT BE COMPLETED AS INDICATED.
- 4. DIMENSIONS ARE FROM FACE OF CURB, FACE OF BUILDING, FACE OF WALL, AND CENTER LINE OF PAVEMENT MARKINGS, UNLESS NOTED OTHERWISE.
- 5. BOUNDS OR MONUMENTATION DISTURBED DURING CONSTRUCTION SHALL BE SET OR RESET BY A PROFESSIONAL LICENSED SURVEYOR.

#### **EARTHWORK**

- 1. NOTIFY UTILITY LOCATOR SERVICE AT LEAST 72 HOURS BEFORE STARTING EXCAVATION. CT: "CALL BEFORE YOU DIG" AT 1-800-922-4455.
- 2. STOP WORK IN THE VICINITY OF SUSPECTED CONTAMINATED SOIL, GROUNDWATER OR OTHER MEDIA. IMMEDIATELY NOTIFY THE OWNER SO THAT APPROPRIATE TESTING AND SUBSEQUENT ACTION CAN BE TAKEN. RESUME WORK IN THE IMMEDIATE VICINITY ONLY UPON DIRECTION BY THE OWNER.
- 3. WITHIN THE LIMITS OF THE BUILDING FOOTPRINT, PERFORM EARTHWORK OPERATIONS TO SUBGRADE ELEVATIONS. SEE DRAWINGS BY OTHERS FOR WORK ABOVE SUBGRADE.

#### <u>UTILITIES</u>

- 1. TERMINATE EXISTING UTILITIES IN CONFORMANCE WITH LOCAL, STATE AND INDIVIDUAL UTILITY COMPANY STANDARD SPECIFICATIONS AND DETAILS. COORDINATE UTILITY SERVICE DISCONNECTS WITH UTILITY REPRESENTATIVES.
- 2. THE TYPE, SIZE AND LOCATION OF DEPICTED UNDERGROUND UTILITIES ARE APPROXIMATE REPRESENTATIONS OF INFORMATION OBTAINED FROM FIELD LOCATIONS OF VISIBLE FEATURES, EXISTING MAPS AND PLANS OF RECORD, UTILITY MAPPING, AND OTHER SOURCES OF INFORMATION OBTAINED BY THE ENGINEER. ASSUME NO GUARANTEE AS TO THE COMPLETENESS, SERVICEABILITY, EXISTENCE, OR ACCURACY OF UNDERGROUND FACILITIES. FIELD VERIFY THE EXACT LOCATIONS, SIZES, AND ELEVATIONS OF THE POINTS OF CONNECTIONS TO EXISTING UTILITIES.
- 3. PAY ALL FEES AND COSTS ASSOCIATED WITH UTILITY MODIFICATIONS AND CONNECTIONS, REGARDLESS OF THE ENTITY THAT PERFORMS THE WORK.
- 4. COORDINATE THE WORK AND WORK SCHEDULE WITH UTILITY COMPANIES. PROVIDE ADEQUATE NOTICE TO UTILITIES TO PREVENT DELAYS IN CONSTRUCTION.
- 5. INTERIOR DIAMETERS OF STORM DRAIN AND SANITARY SEWER STRUCTURES SHALL BE DETERMINED BY THE PRECAST MANUFACTURER, BASED ON THE INDICATED PIPE SYSTEM LAYOUT AND LOCAL MUNICIPAL STANDARDS.

MINIMUM INTERIOR DIAMETERS: 0 TO 20 FEET DEEP; 4 FEET. 20 FEET OR GREATER; 5 FEET.

- 5. RIM ELEVATIONS FOR MANHOLES, VALVE COVERS, GATE AND PULL BOXES, AND OTHER STRUCTURES ARE APPROXIMATE. SET OR RESET RIM ELEVATIONS AS FOLLOWS:
  - IN PAVEMENTS AND CONCRETE SURFACES: FLUSH
  - IN SURFACES ALONG ACCESSIBLE ROUTES: FLUSH
    IN LANDSCAPE, SEEDED, AND OTHER EARTH SURFACE AREAS:
- INCH ABOVE SURROUNDING AREA; TAPER EARTH TO RIM ELEVATION.
   INSTALL PROPOSED PRIVATE UTILITY SERVICES ACCORDING TO THE REQUIREMENTS PROVIDED BY, AND APPROVED BY THE AUTHORITY HAVING JURISDICTION (WATER, SEWER, GAS, TELEPHONE, ELECTRIC, FIRE

ALARM, ETC.). COORDINATE FINAL DESIGN LOADS AND LOCATIONS WITH OWNER AND ARCHITECT.

### PAVEMENT

1. AT A MINIMUM, CONSTRUCT ACCESSIBLE ROUTES, PARKING SPACES, RAMPS, SIDEWALKS AND WALKWAYS IN CONFORMANCE WITH THE FEDERAL AMERICANS WITH DISABILITIES ACT AND WITH STATE AND LOCAL LAWS AND REGULATIONS (WHICHEVER ARE MORE STRINGENT).

### SITE RESTORATION

NO ADDITIONAL COST TO OWNER.

- 1. PROVIDE 6 INCHES OF TOPSOIL AND SEED TO AREAS DISTURBED DURING CONSTRUCTION AND NOT DESIGNATED TO BE RESTORED WITH IMPERVIOUS SURFACES (BUILDINGS, PAVEMENTS, WALKS, ETC.) UNLESS OTHERWISE NOTED.
- 2. REPAIR DAMAGES RESULTING FROM CONSTRUCTION LOADS, AT NO ADDITIONAL COST TO OWNER.
- 3. RESTORE AREAS DISTURBED BY CONSTRUCTION OPERATIONS TO THEIR ORIGINAL CONDITION OR BETTER, AT



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NUMBER DATE REVISION

PROJECT:

NEW PRIMARY ELECTRIC SUBSTATION PROJECT

DRAWING TITLE:

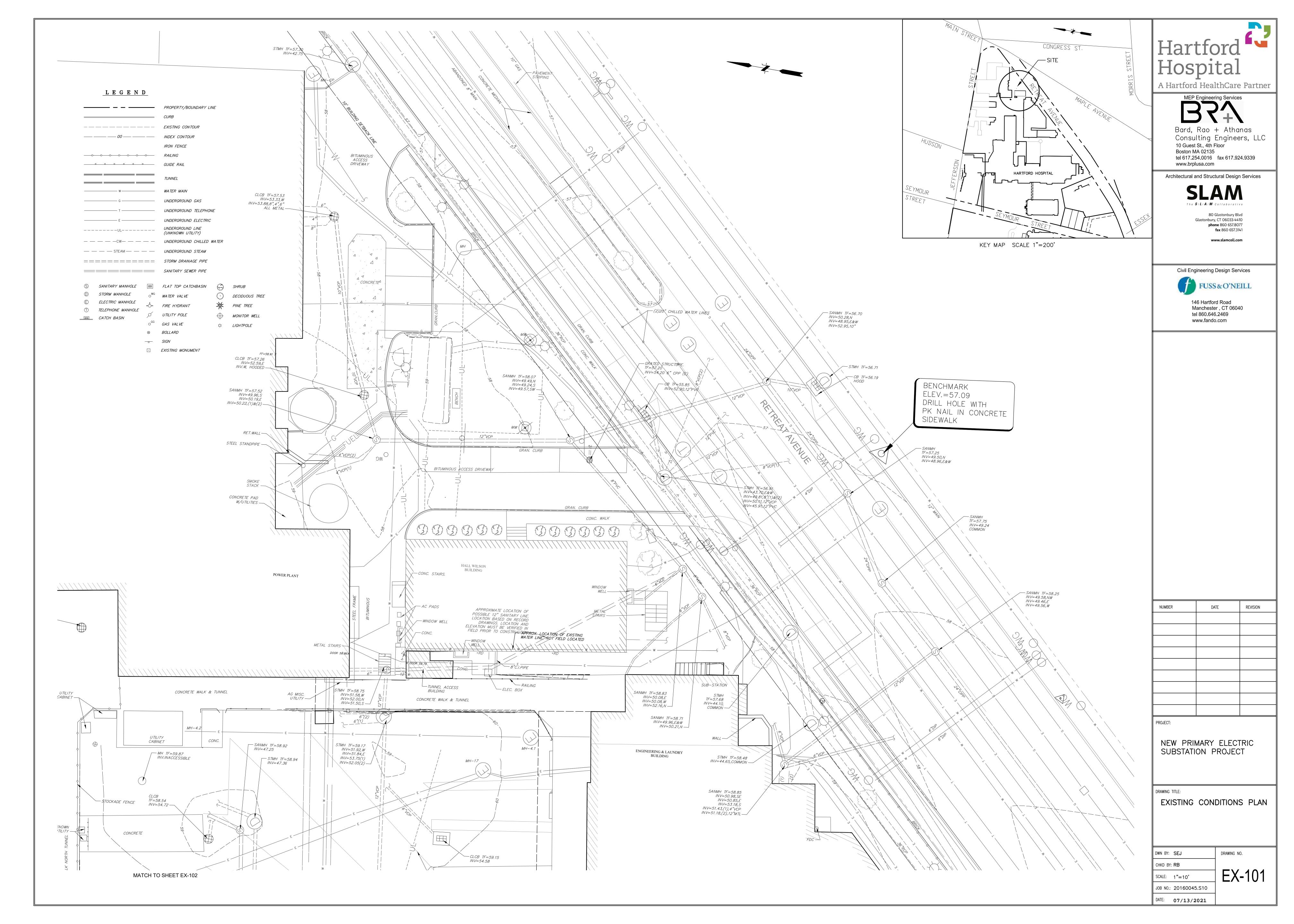
GENERAL NOTES

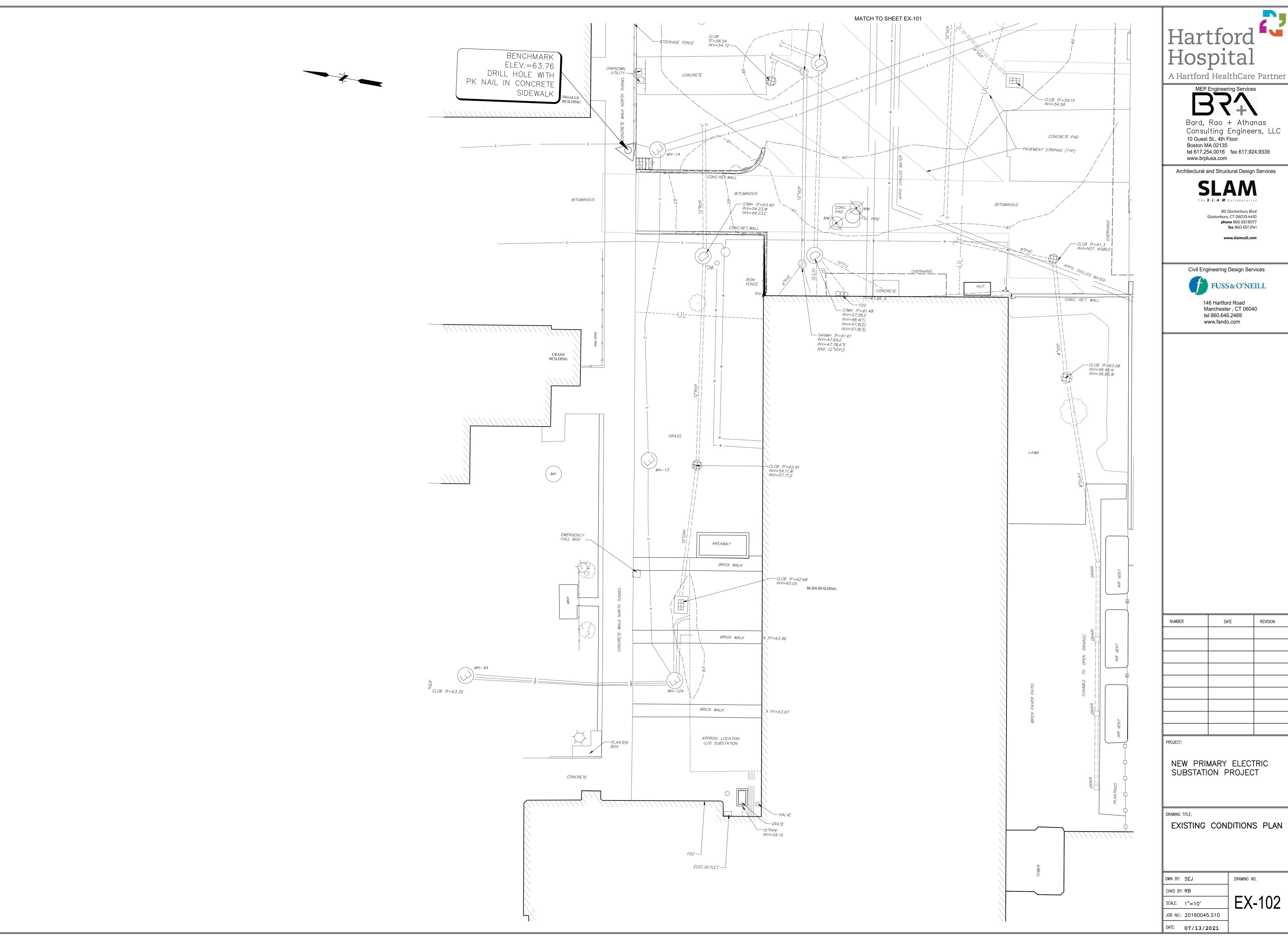
DWN BY: SEJ

CHKD BY: RB

SCALE: NOT TO SCALE

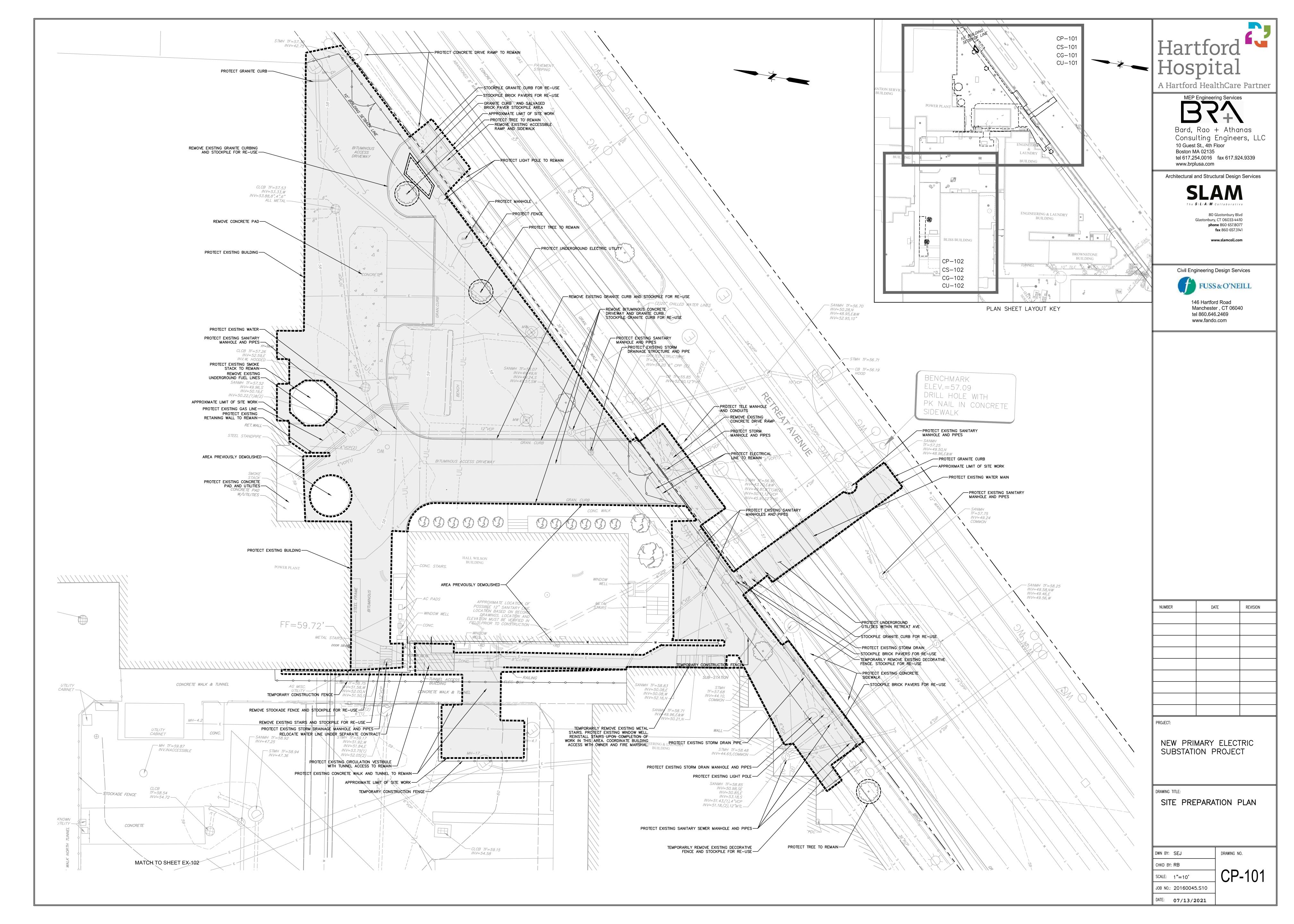
JOB NO.: **20160045.S10**DATE: **07/13/2021** 

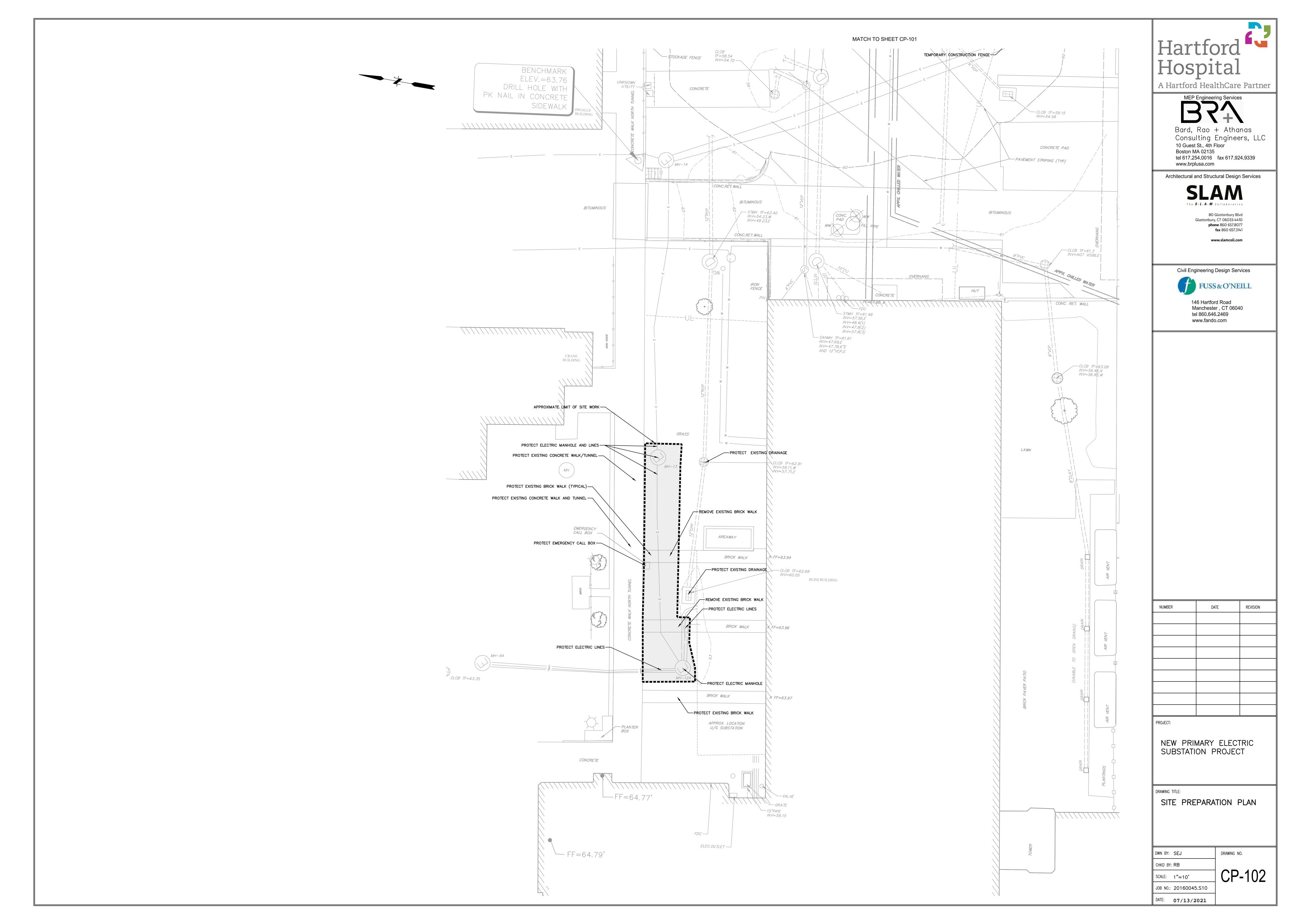


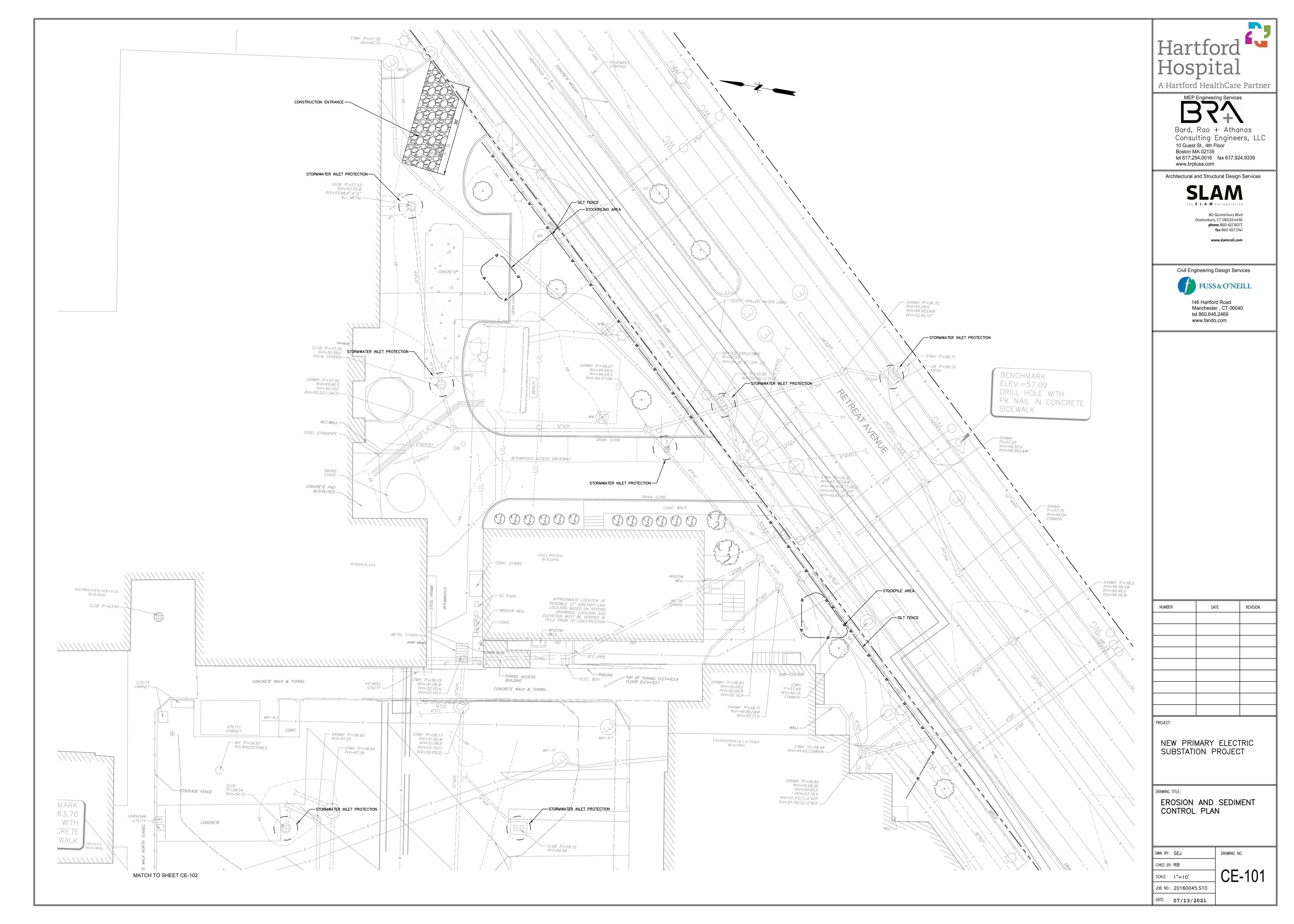




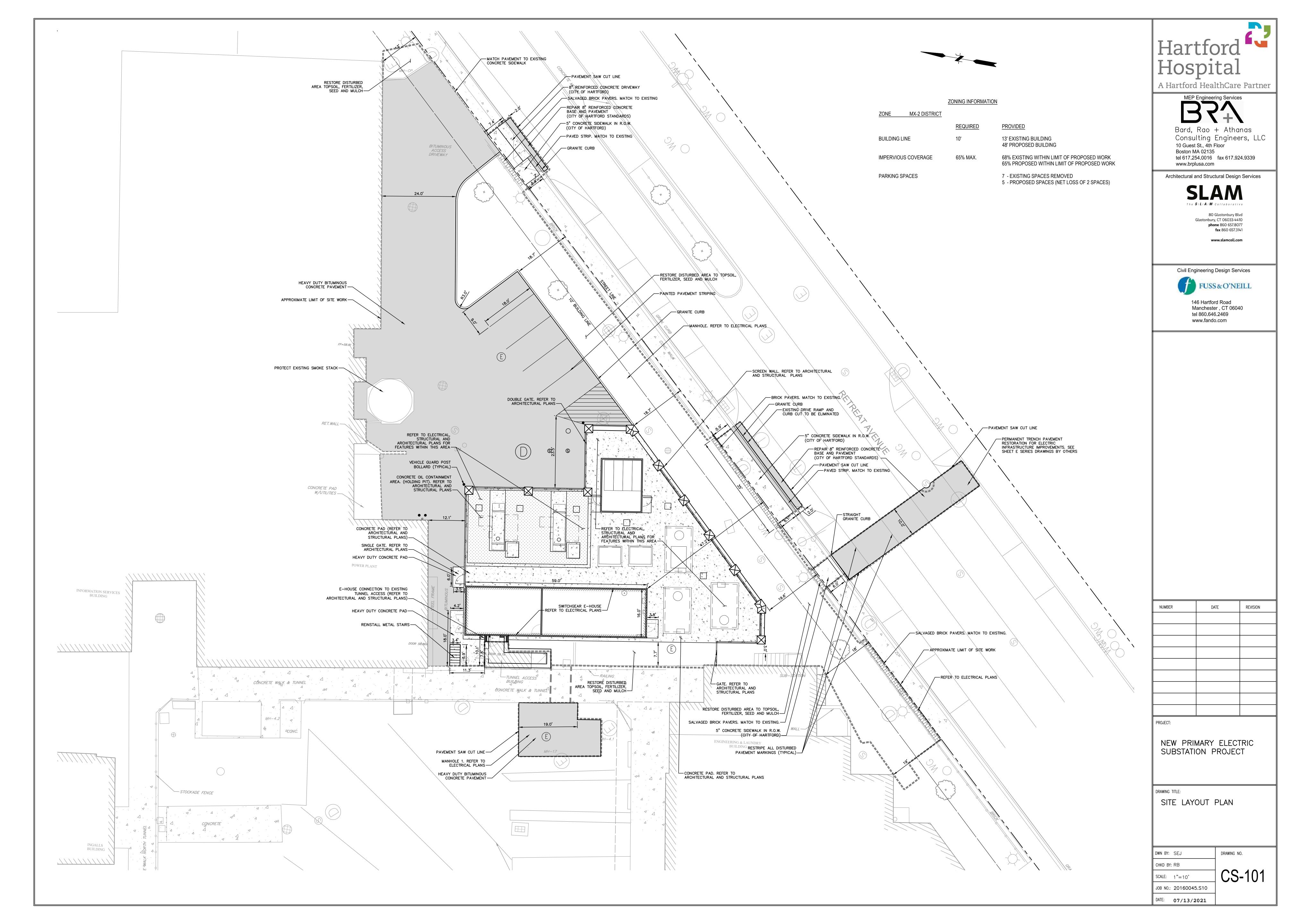
MBER	DATE	REVISION
		<u> </u>

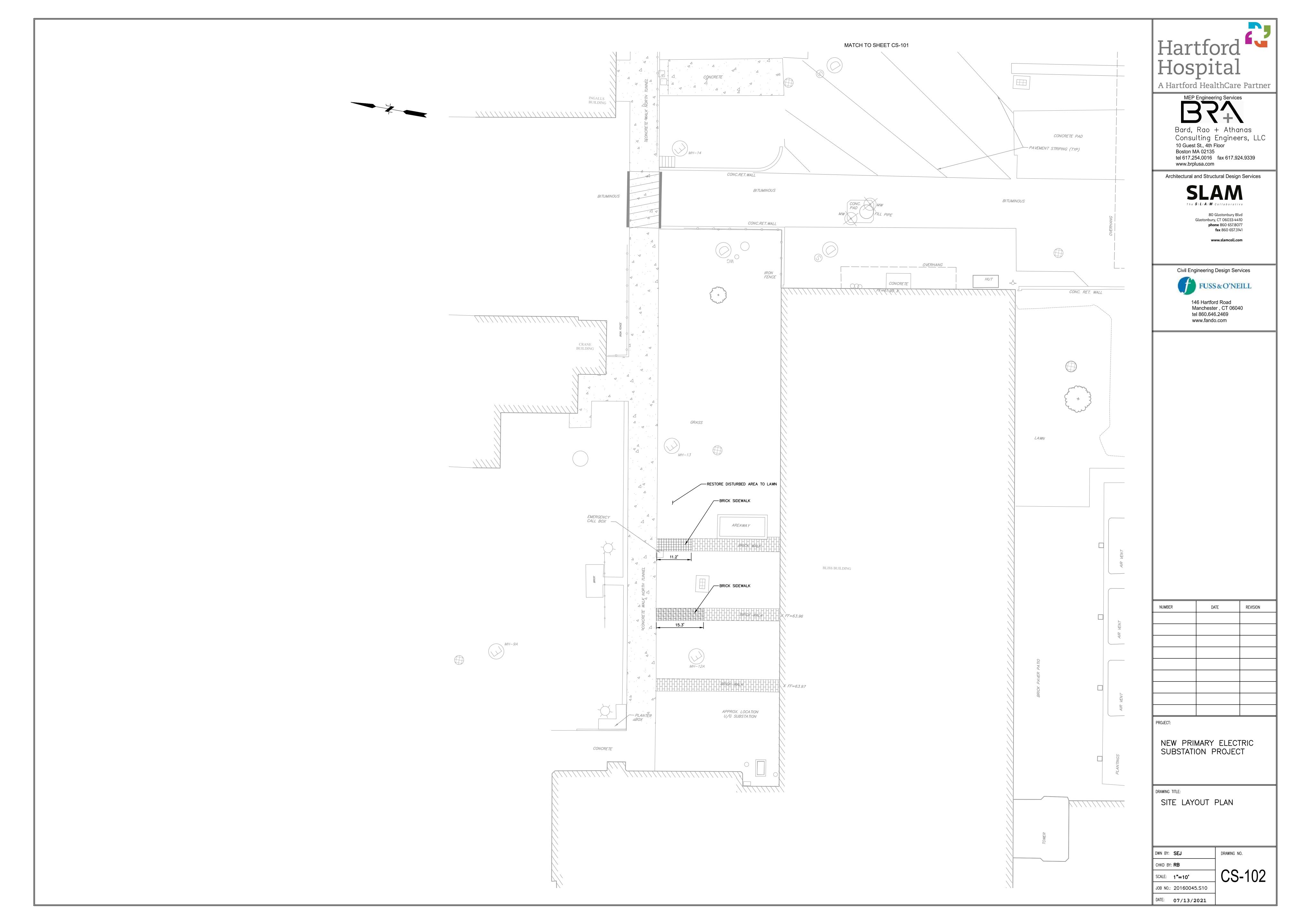


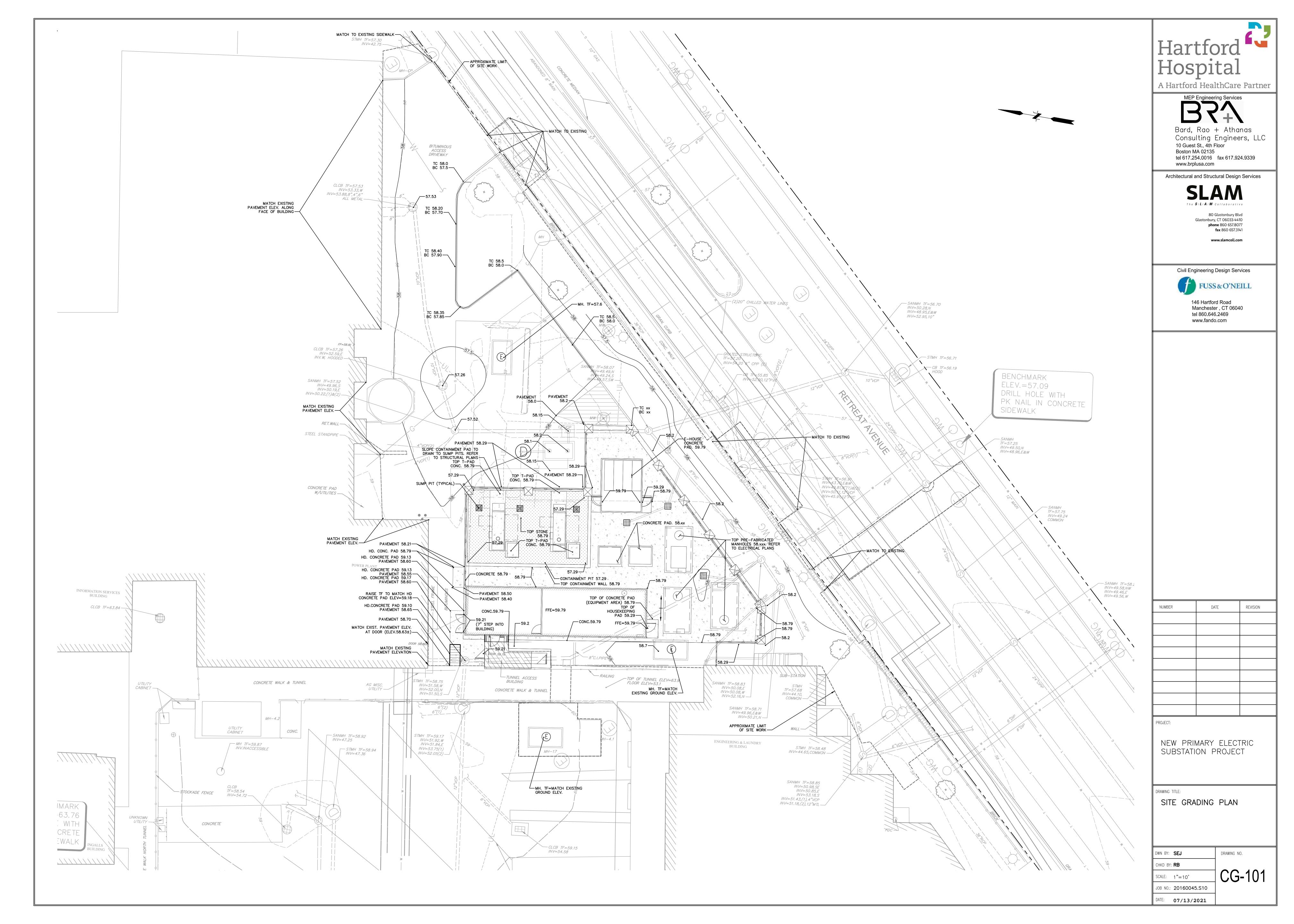


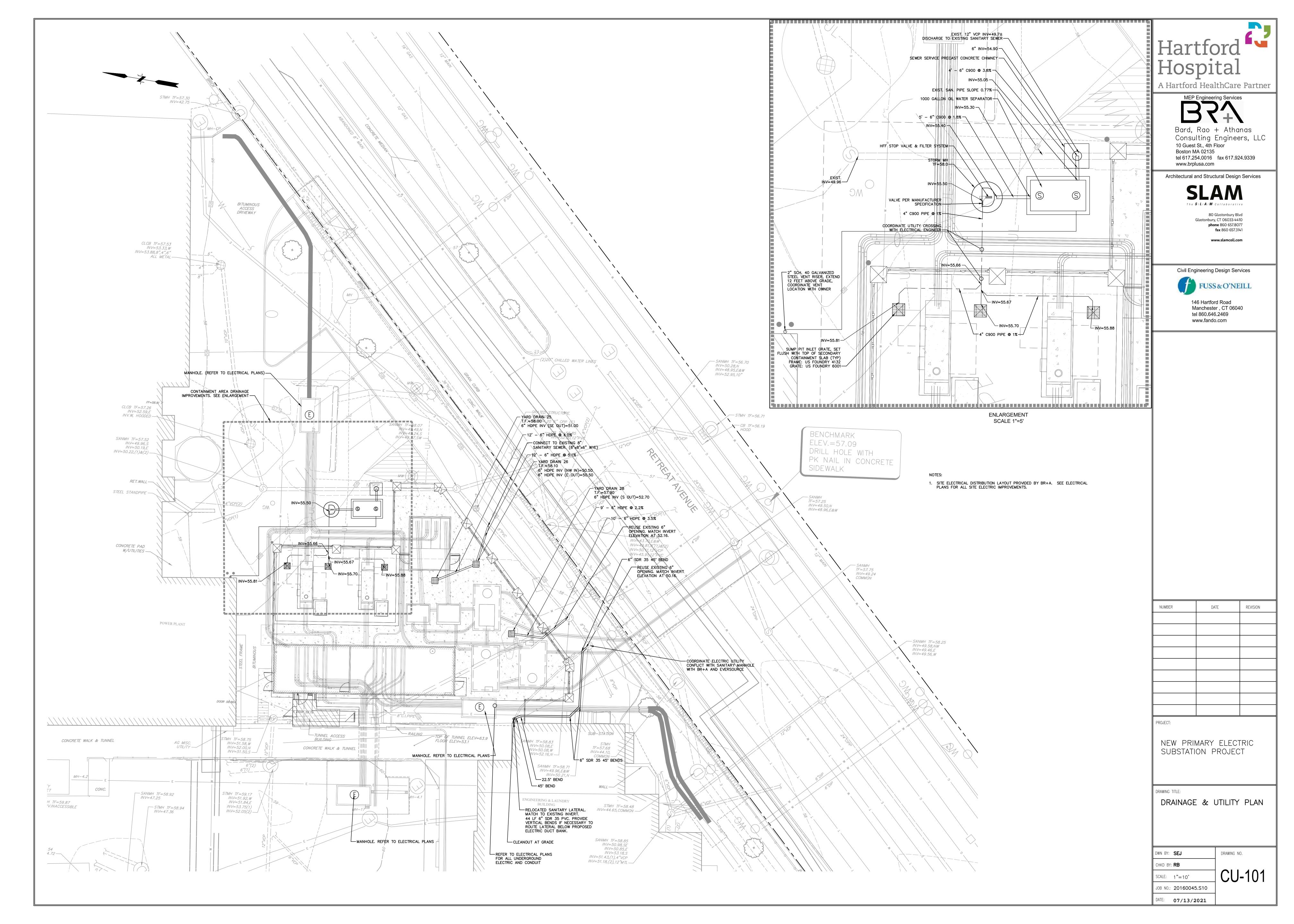


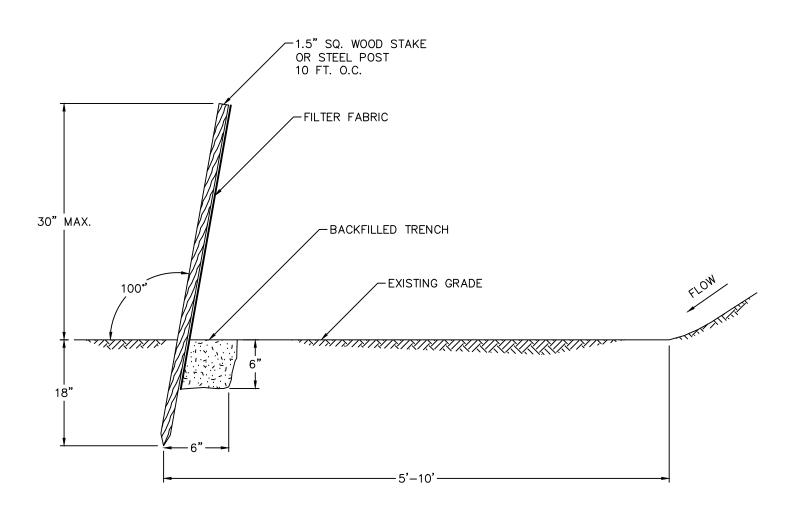




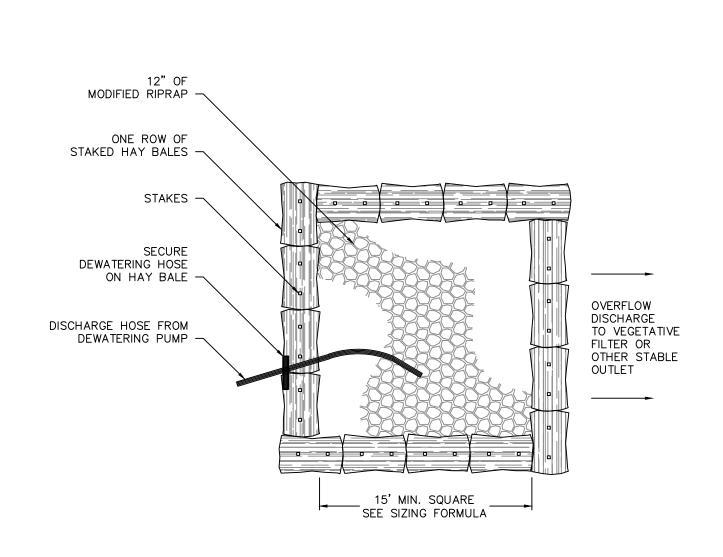








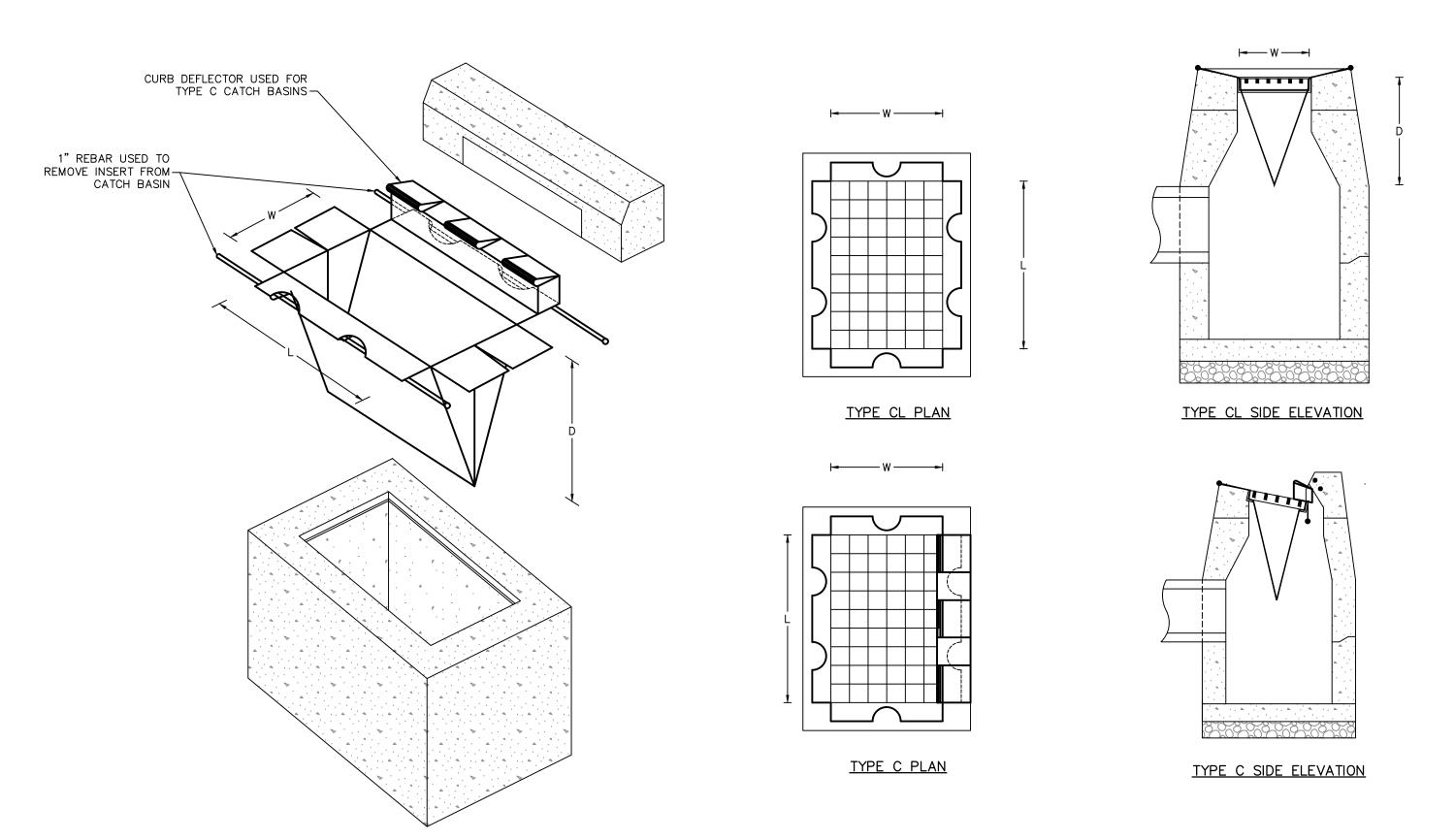
#### SILT FENCE NOT TO SCALE



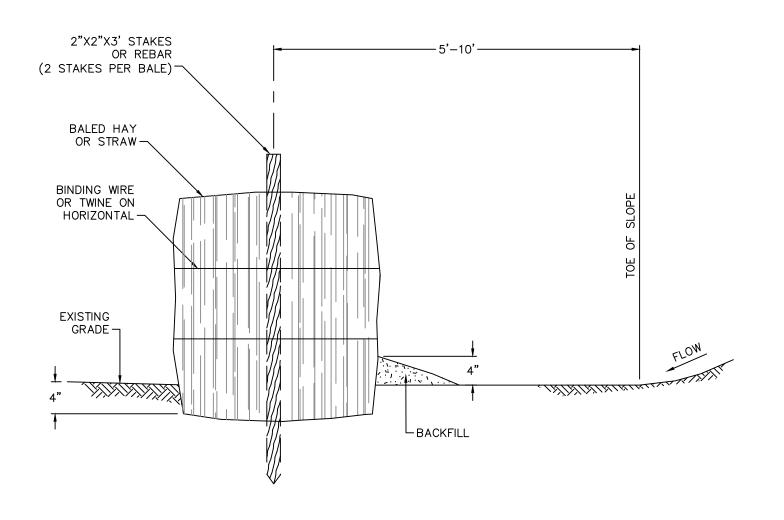
SIZING FORMULA: CUBIC FT. OF REQUIRED STORAGE = PUMP DISCHARGE RATE (GPM) x 16

PUMPING SETTLING BASIN TYPE I

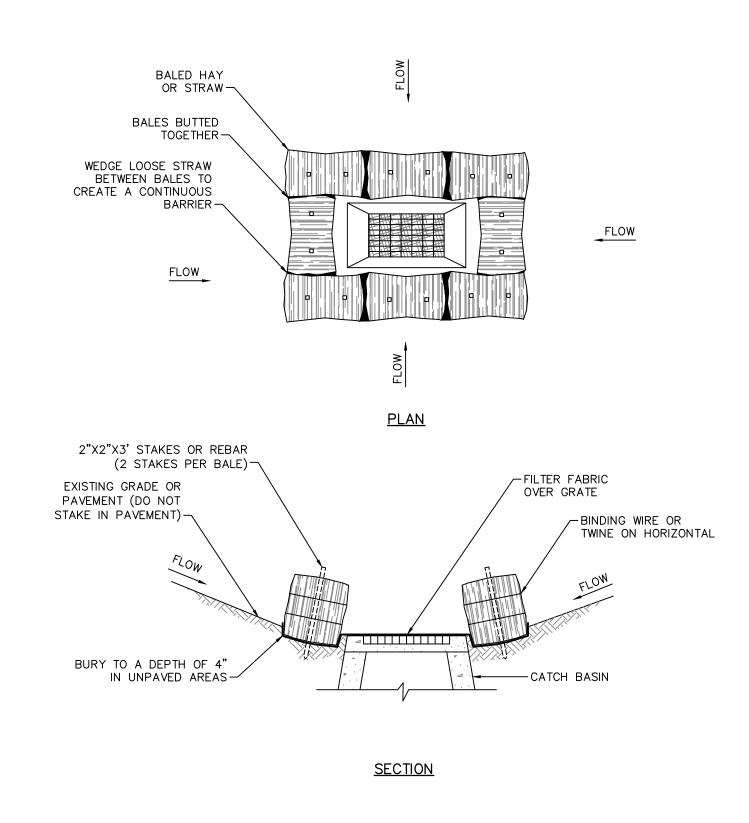
NOT TO SCALE



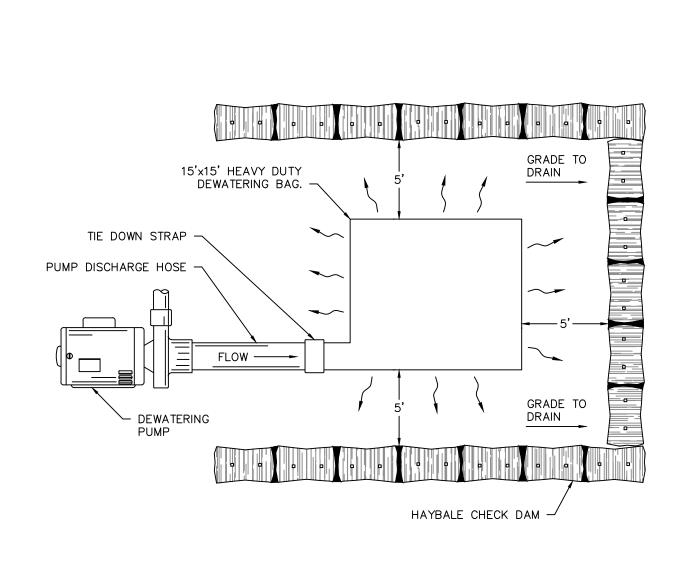
CATCH BASIN INSERT/STORMWATER INLET PROTECTION NOT TO SCALE



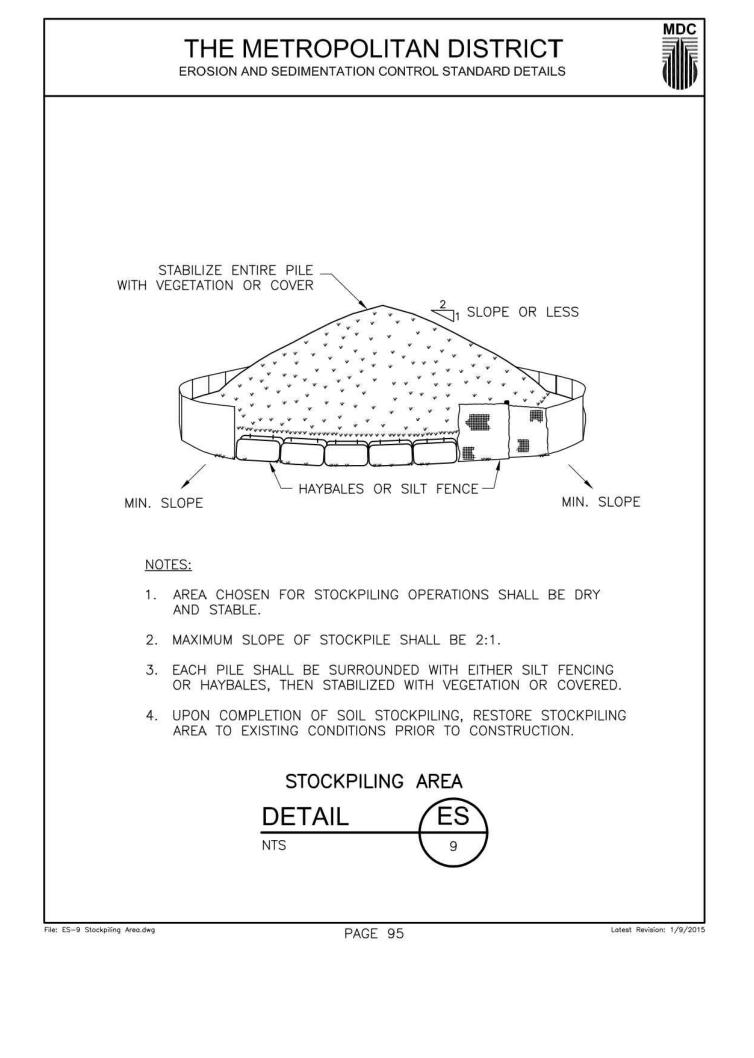
TOE OF SLOPE HAY BALE BARRIER
NOT TO SCALE

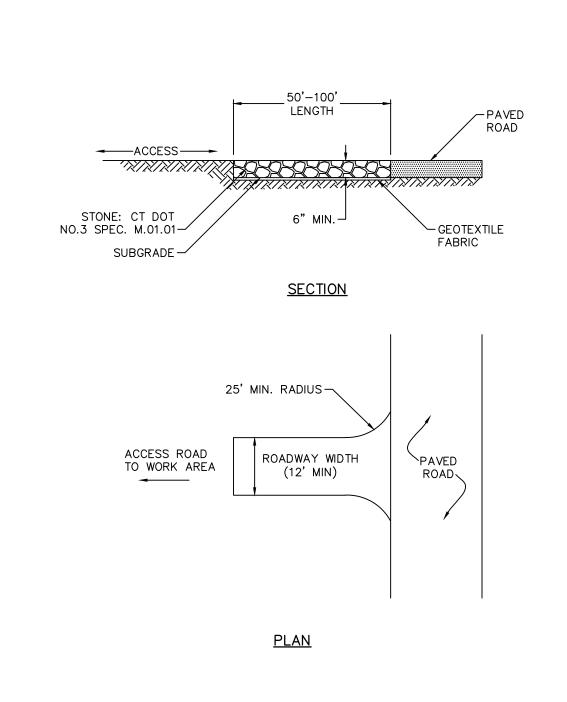


LOW POINT HAY BALE BARRIER NOT TO SCALE



DEWATERING BAG NOT TO SCALE





CONSTRUCTION ENTRANCE



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NUMBER	DATE	REVISION

NEW PRIMARY ELECTRIC SUBSTATION PROJECT

DRAWING TITLE:

SITE DETAILS

DWN BY: SEJ

CHKD BY: RB

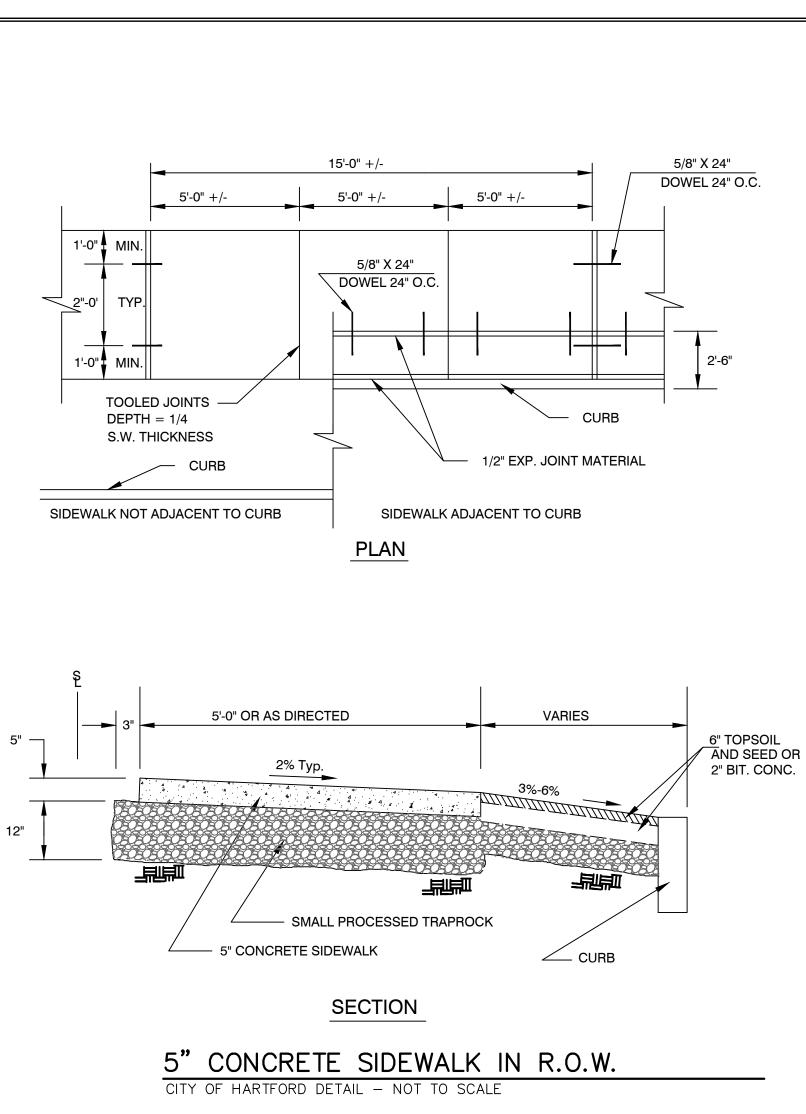
SCALE: NOT TO SCALE

CD-50

SCALE: NOT TO SCALE

JOB NO.: 20160045.S10

DATE: 07/13/2021



SLOPE PER PLAN

HEAVY-DUTY CONCRETE PAD (DOORWAY LANDINGS)

— JOINT SEALER (WHERE INDICATED

ON PLANS. SEE SCORING AND

JOINT PLAN)

EXPANSION JOINT WITH SEALER

SAWCUT JOINT 1/3 DEPTH — AT MIDPOINT WHEN OVERALL

LENGTH/WIDTH IS GREATER THAN 15'

(25) ₹ X 24' GALV. (GRADE 60) DOWEL TYP.

NOT TO SCALE



FINISHED GRADE

-MEDIUM-TO-FINE TEXTURED

- 6x6 - W1.4xW1.4 WIRE MESH

- PROCESSED AGGREGATE BASE

- 4000 PSI CONCRETE

5'-0" OR AS DIRECTED

VARIES -

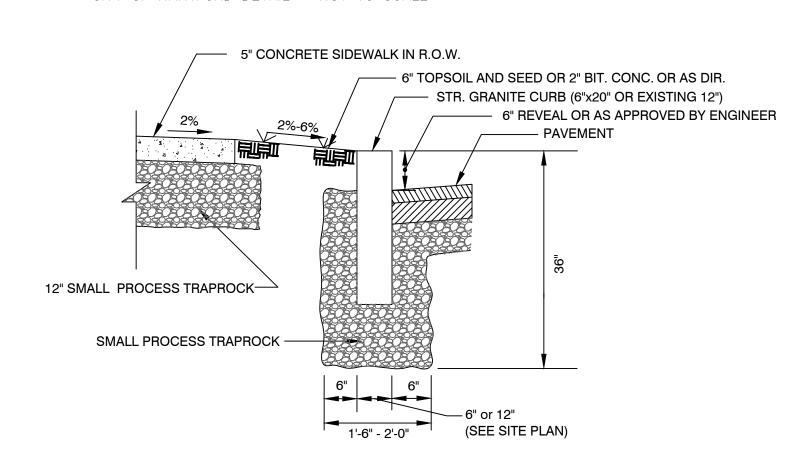
1/2" LIP —

| | 8" | |

TREE BELT

TREE BELT(VARIES)

VARIES



--- 5/8" X 24" DOWELS AND 1/2" EXPANSION JOINT WHERE A

DRIVEWAY RAMP IS CONSTRUCTED AGAINST AN EXIST. CONC.

EXIST. DRIVEWAY

FORM SHOULDER

PLAN

USED ONLY WHEN RAMP IS CONST. ADJ. TO EXIST. SIDEWALK

CONCRETE SIDEWALK (WIDTH VARIES)

TO MEET CURB

— 8" CONC. DRIVEWAY RAMP

SMALL PROCESSED TRAPROCK BASE

SECTION

EXIST. 5" SIDEWALK

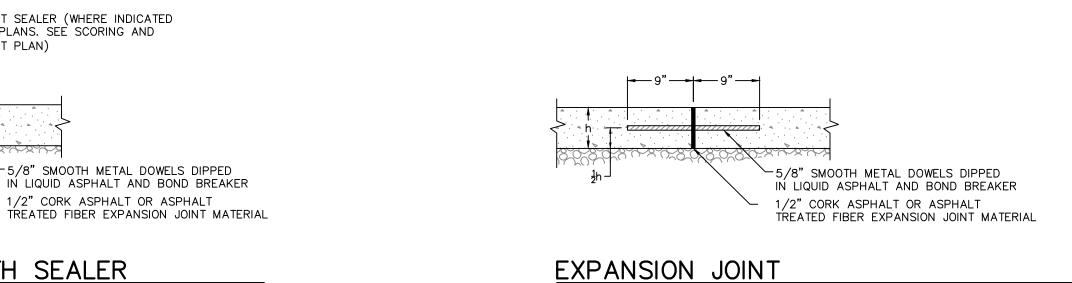
TOPSOIL & SEED

----- 8" CONC. SIDEWALK

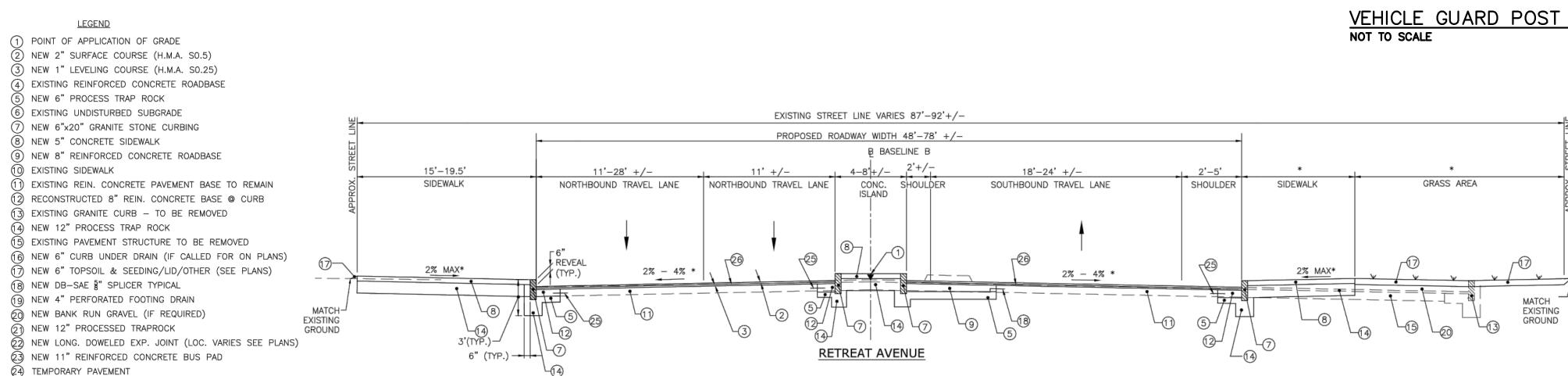
OR AS APPROVED

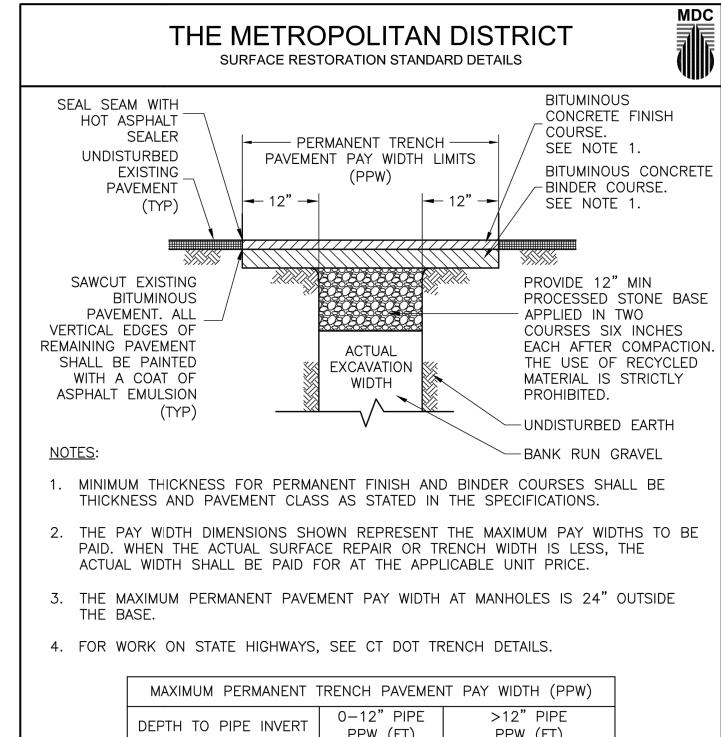
BY ENGINEER

STRAIGHT GRANITE CURB SECTION CITY OF HARTFORD DETAIL - NOT TO SCALE

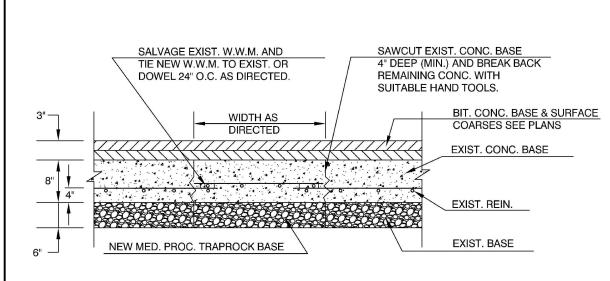


NOT TO SCALE





OR WORK ON STATE HIGHWAYS, SEE CT DOT TRENCH DETAILS.					
MAXIMUM PERMANENT TRENCH PAVEMENT PAY WIDTH (PPW)					
DEPTH TO PIPE INVERT	0-12" PIPE PPW (FT)	>12" PIPE PPW (FT)			
0-8	8.0	PIPE I.D. + 7			
8-12	9.0	PIPE I.D. + 8			
12-16	10.0	PIPE I.D. + 9			
>16	11.0	PIPE I.D. + 10			
	MAXIMUM PERMANENT  DEPTH TO PIPE INVERT  0-8  8-12  12-16	MAXIMUM PERMANENT TRENCH PAVEMEN  DEPTH TO PIPE INVERT 0-12" PIPE PPW (FT)  0-8 8.0  8-12 9.0  12-16 10.0			



SECTION REPAIR 8" REINFORCED CONCRETE BASE

NOTES:

1. IF EXISTING PAVEMENT SECTION IN CITY RIGHT-OF-WAY VARIES, MATCH EXISTING CONDITIONS AND NOTIFY ENGINEER. . SEE RETREAT AVENUE TYPICAL ROADWAY CROSS SECTION FOR BITUMINOUS PAVEMENT BASE AND SURFACE COURSES.

-15" SMALL PROCESSED
TRAPROCK

~2" BITUMINOUS CONCRETE CLASS SO.25

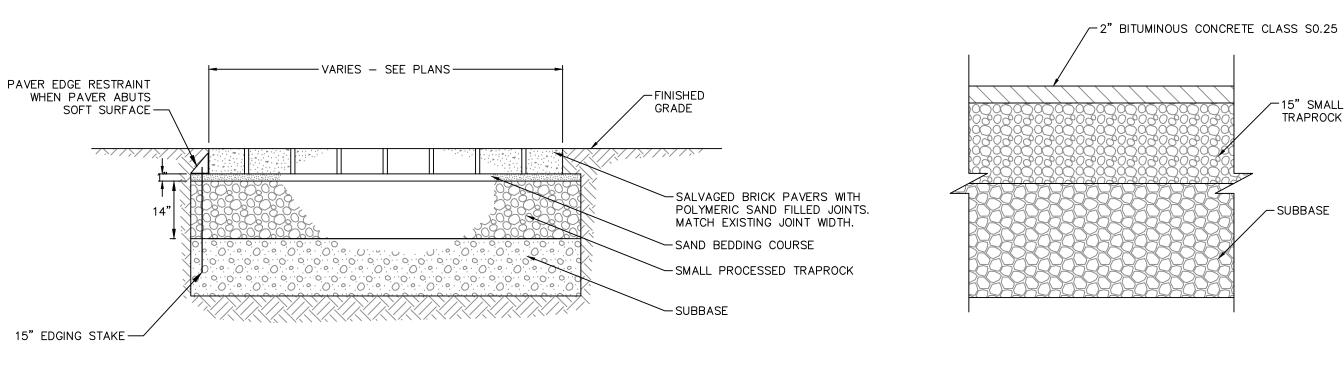
-2" BITUMINOUS CONCRETE CLASS SO.5

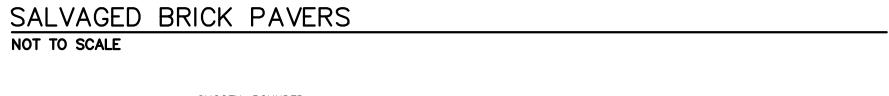
-8" PROCESSED

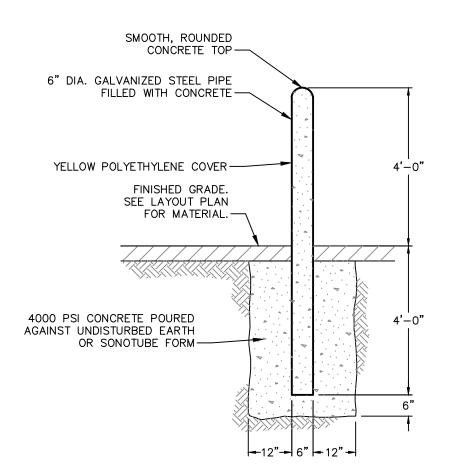
∠8" GRANULAR FILL

AGGREGATE BASE

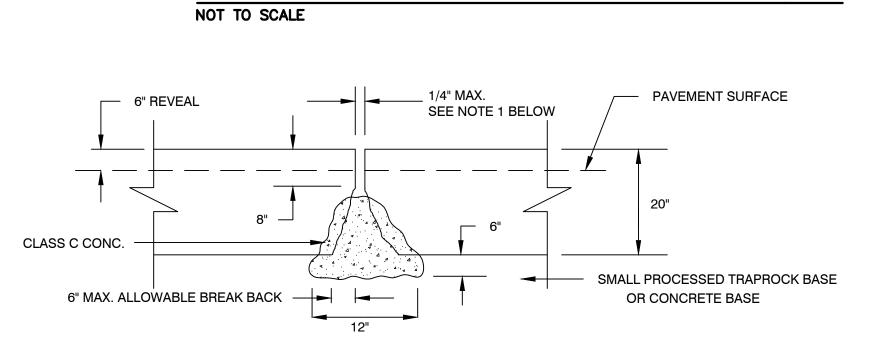
#### PERMANENT TRENCH PAVEMENT RESTORATION NOT TO SCALE







VEHICLE GUARD POST BOLLARD



PAVED STRIP

NOT TO SCALE

NOTE 1: CURB JOINT TO BE CAULKED PER SPECIFICATIONS

HEAVY-DUTY BITUMINOUS CONCRETE PAVEMENT

**ELEVATION** 

TYPICAL JOINT DETAIL FOR STRAIGHT GRANITE CURB



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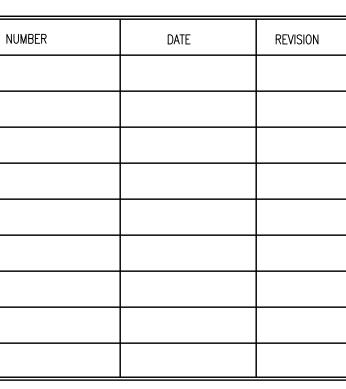
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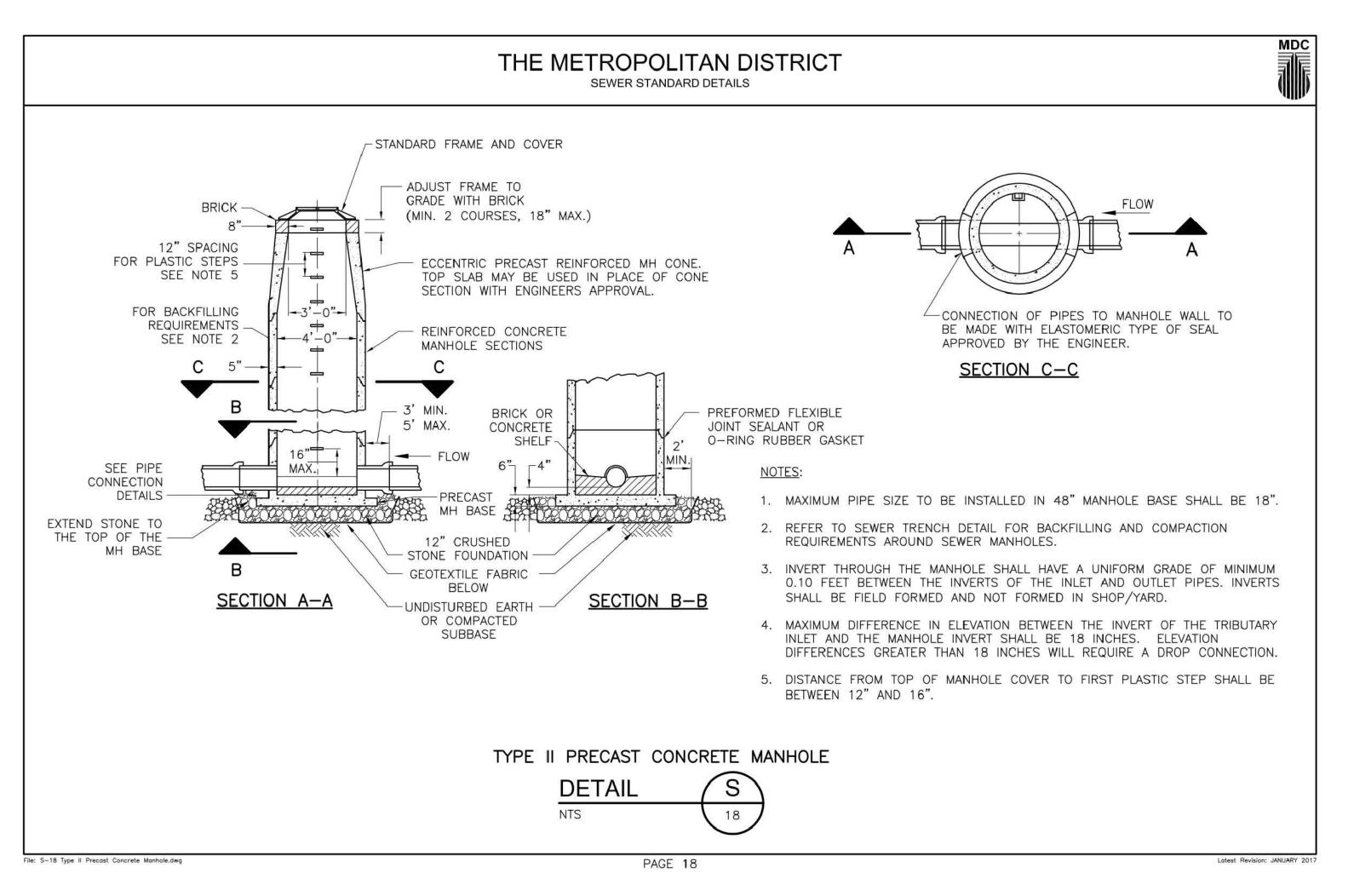


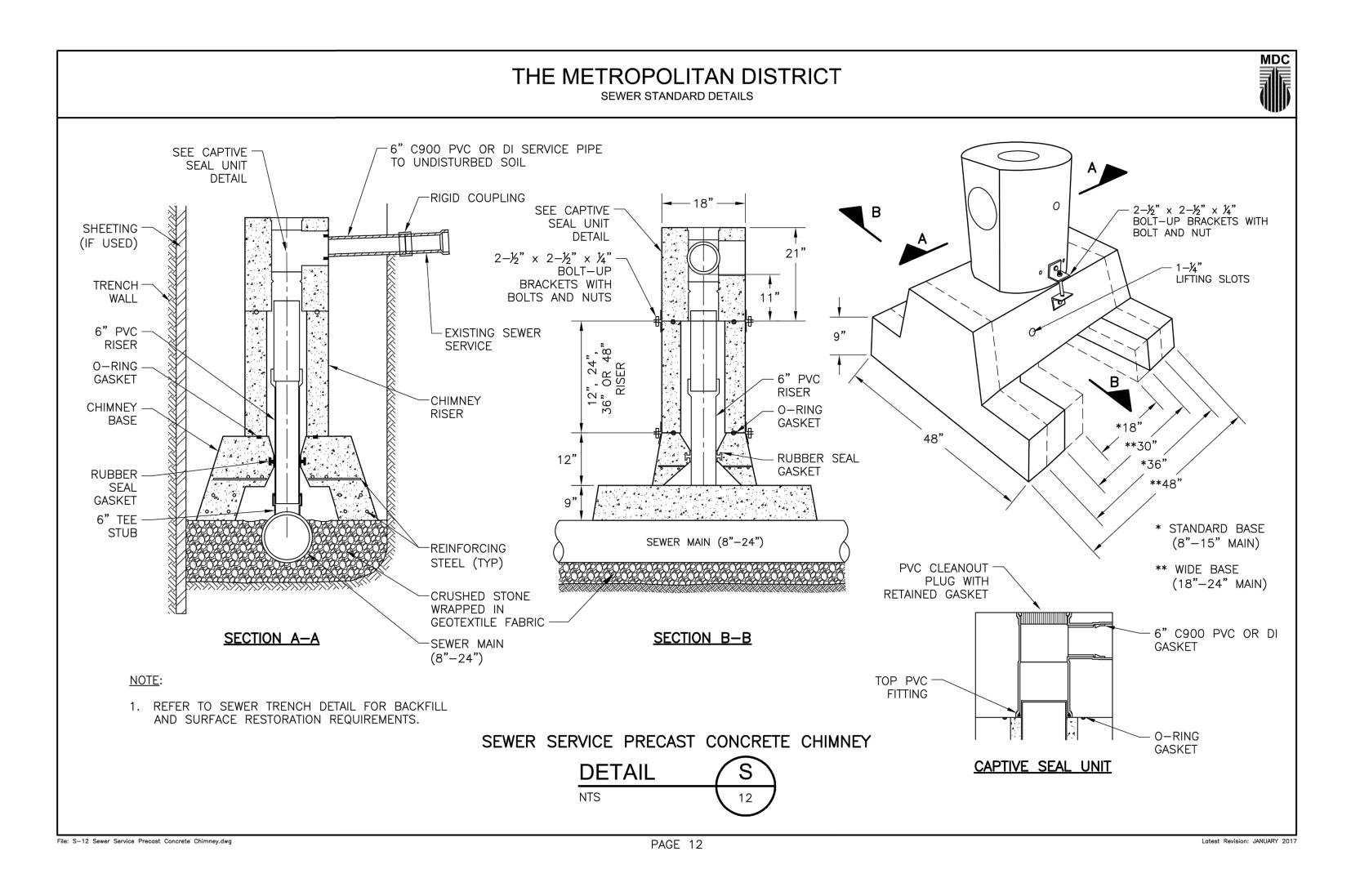
NEW PRIMARY ELECTRIC SUBSTATION PROJECT

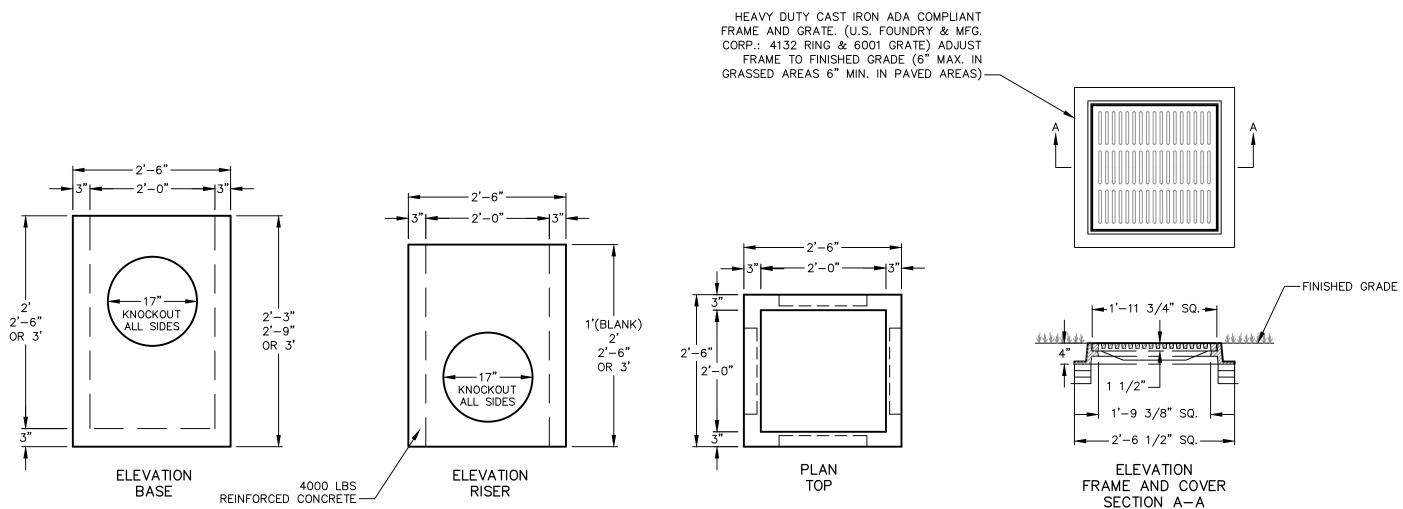
DRAWING TITLE: SITE DETAILS

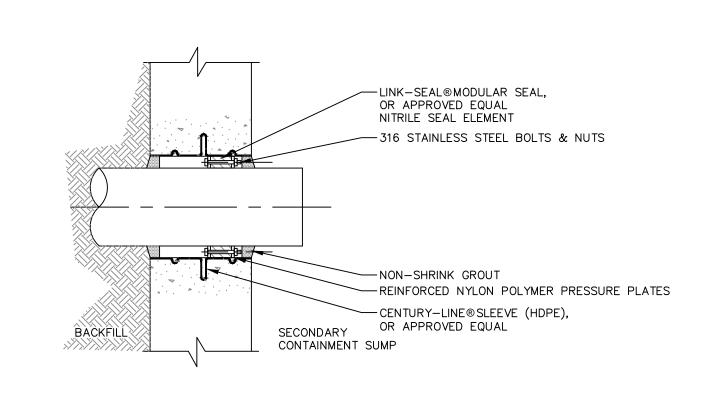
DATE: **07/13/2021** 

DWN BY: **SEJ** DRAWING NO. CHKD BY: **RB** SCALE: NOT TO SCALE JOB NO.: 20160045.S10

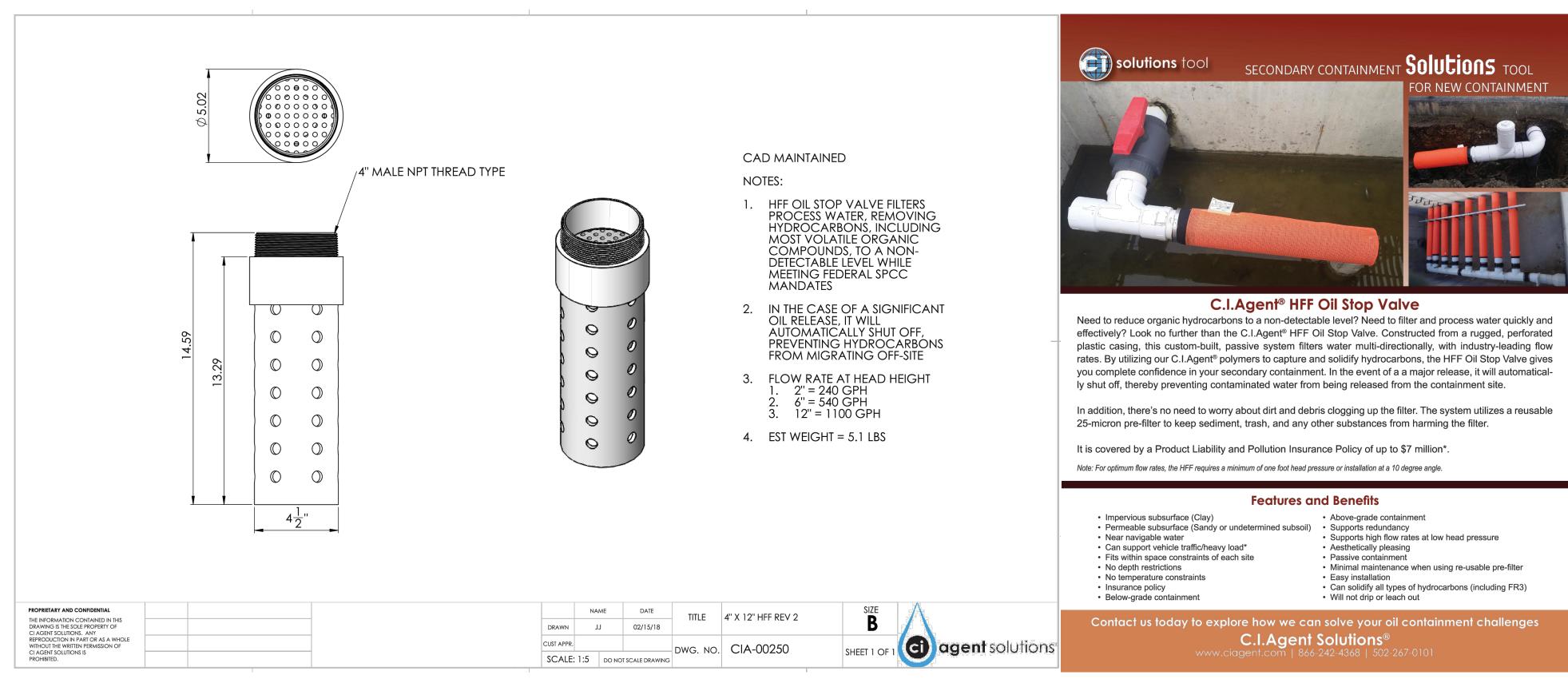


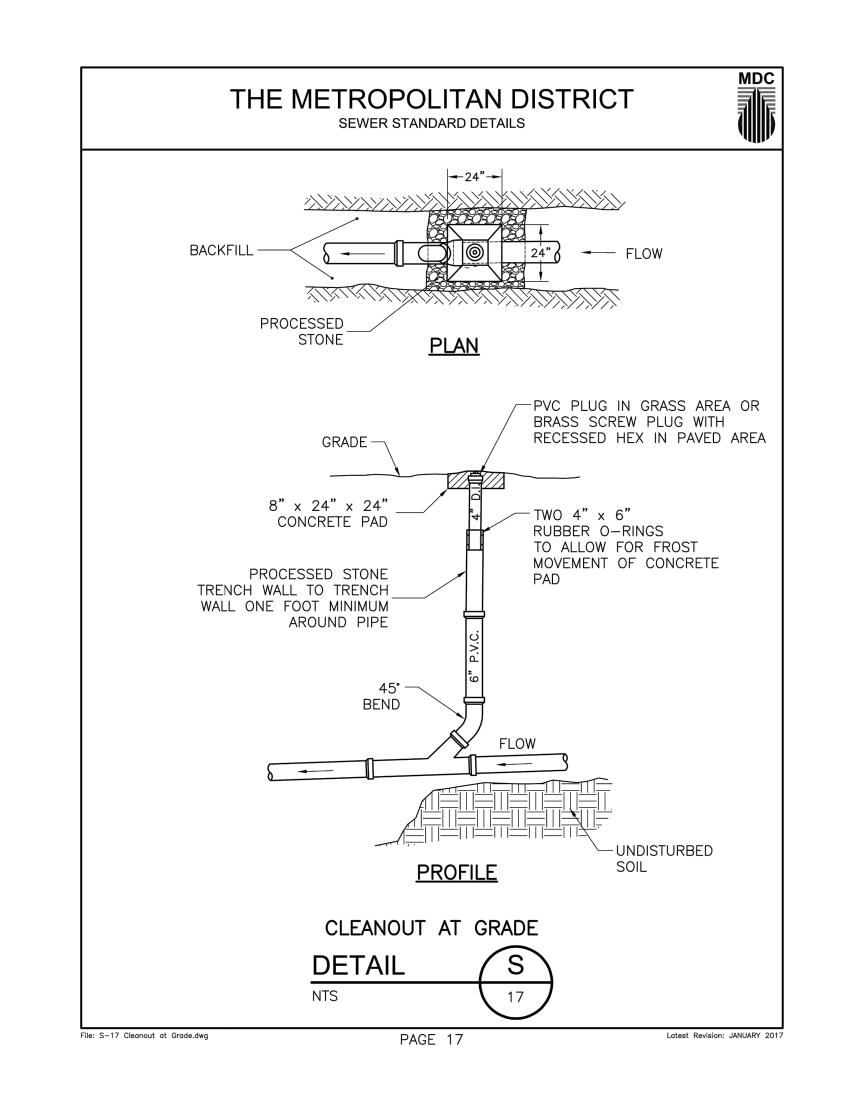






## SECONDARY CONTAINMENT PIPING PENETRATION NOT TO SCALE







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NUMBER DATE REVISION

PROJECT:

NEW PRIMARY ELECTRIC SUBSTATION PROJECT

DRAWING TITLE:

SITE DETAILS

DWN BY: SEJ

CHKD BY: RB

SCALE: NOT TO SCALE

JOB NO.: 20160045.S10

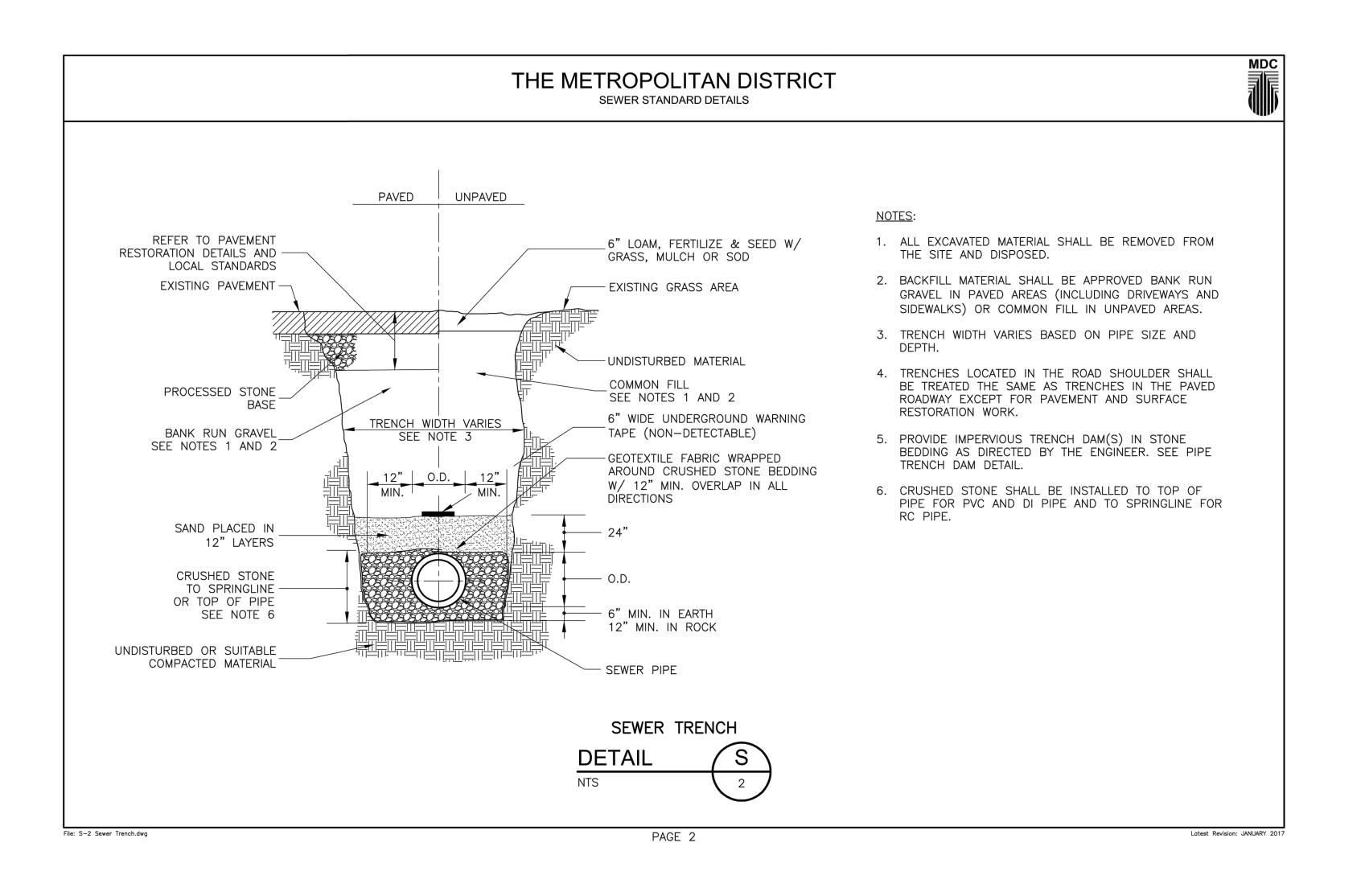
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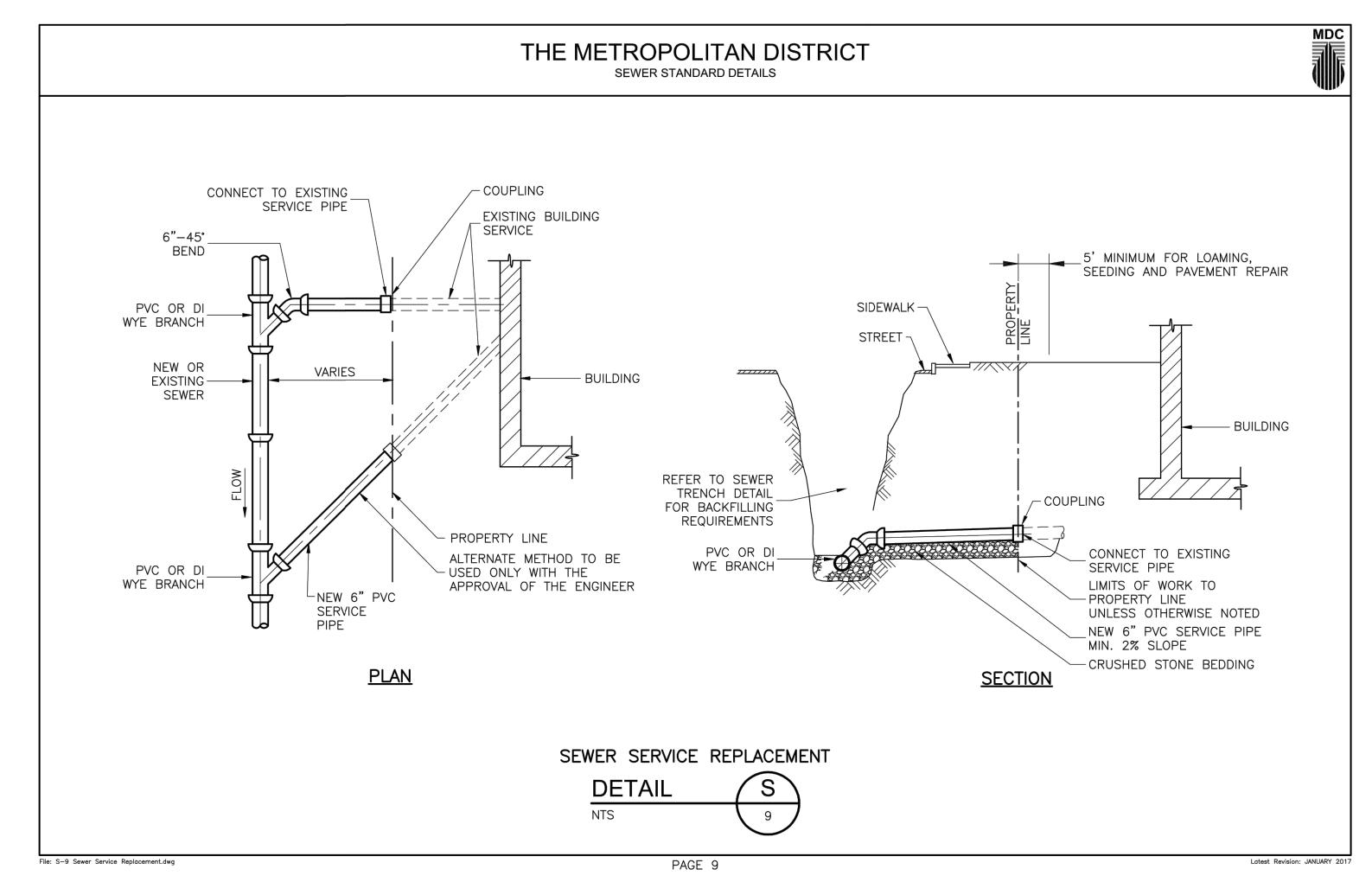
DATE: 07/13/2021

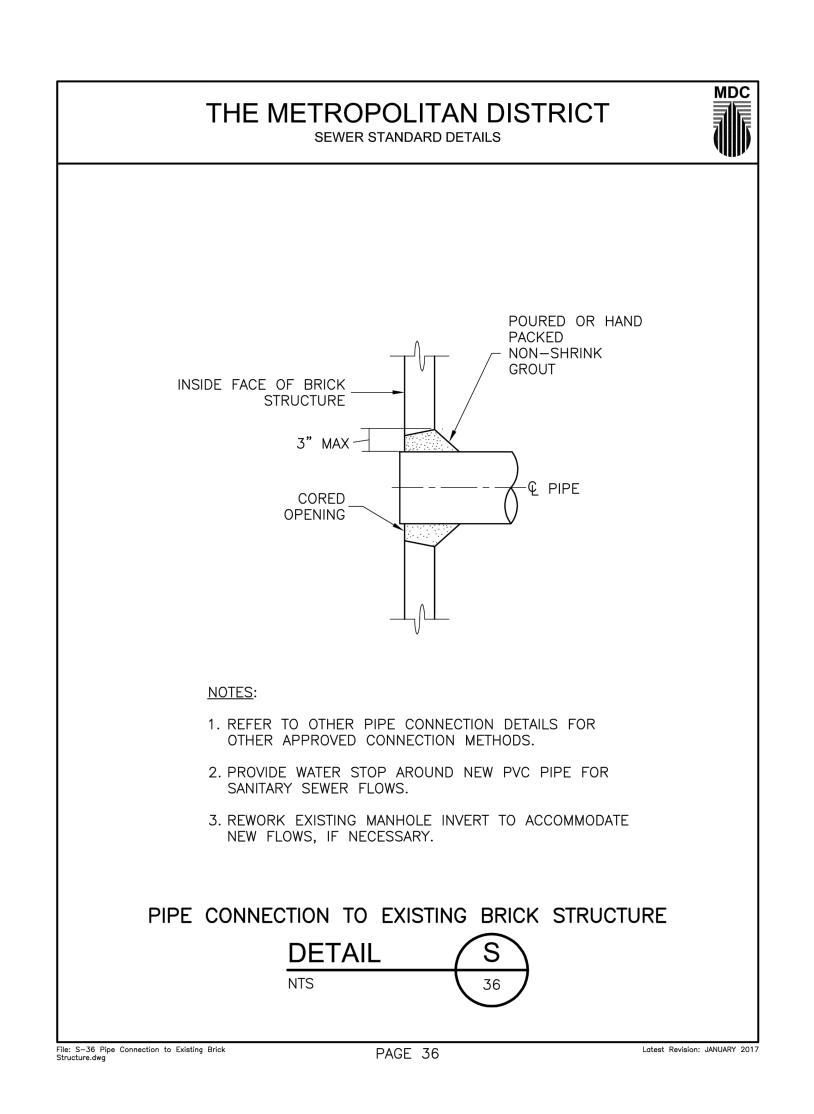
## HFF STOP VALVE & FILTER SYSTEM NOT TO SCALE

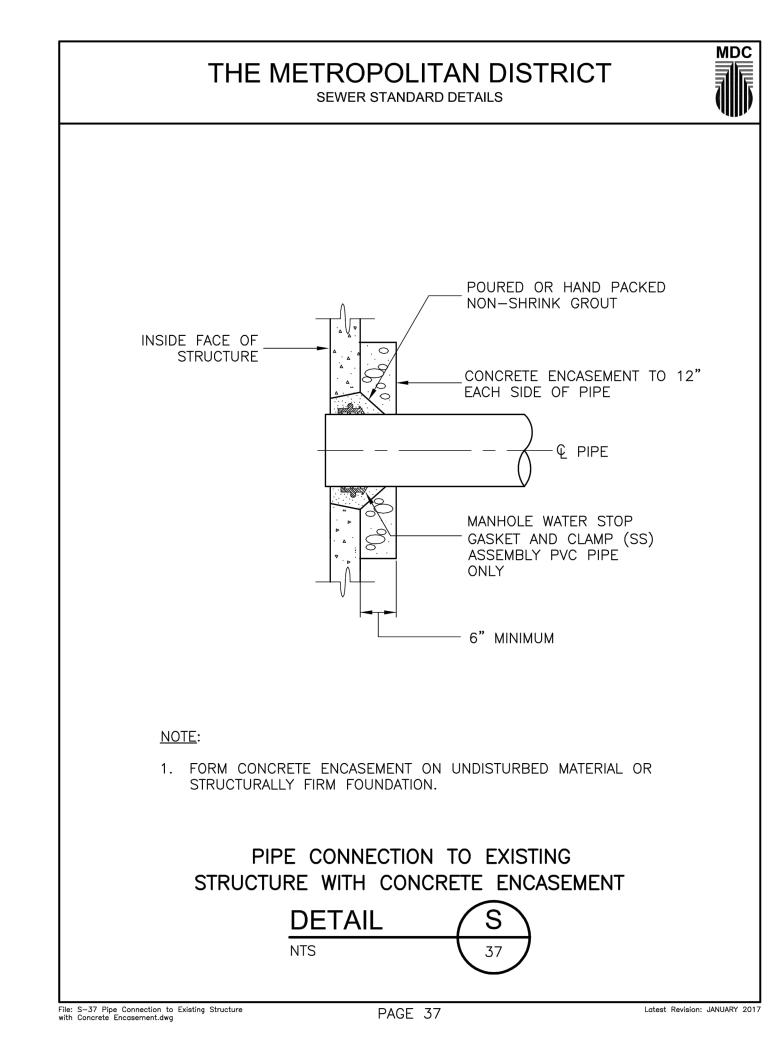
YARD DRAIN

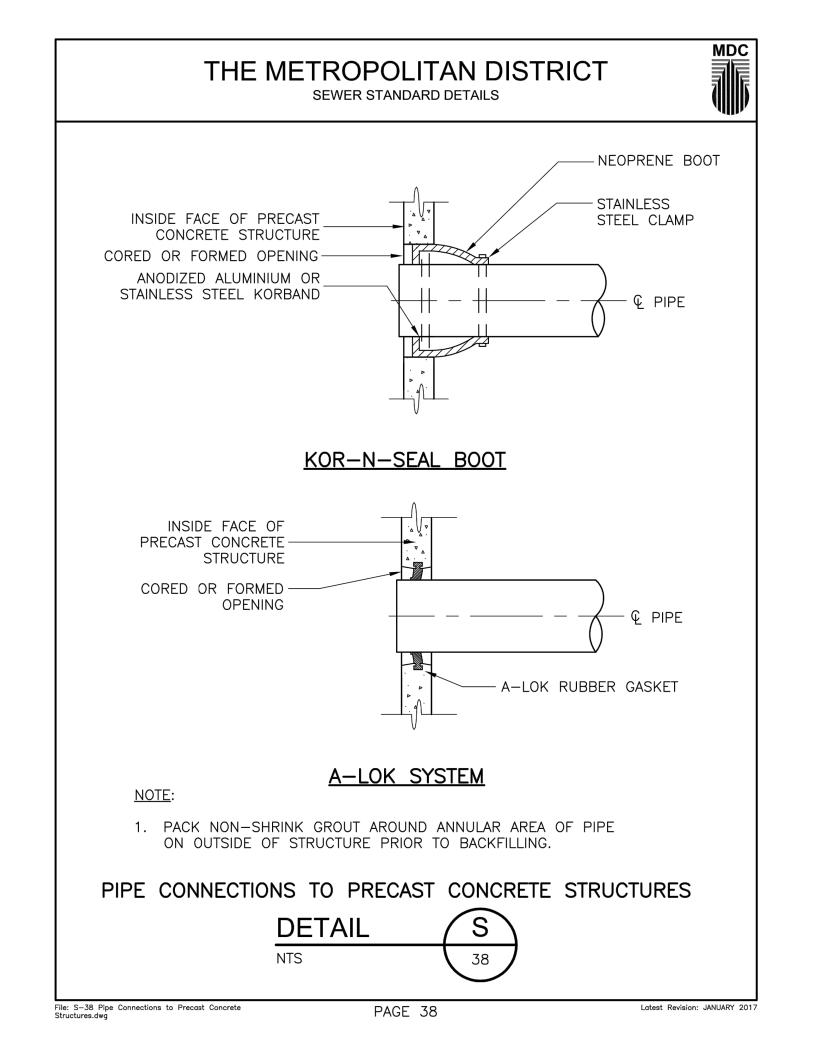
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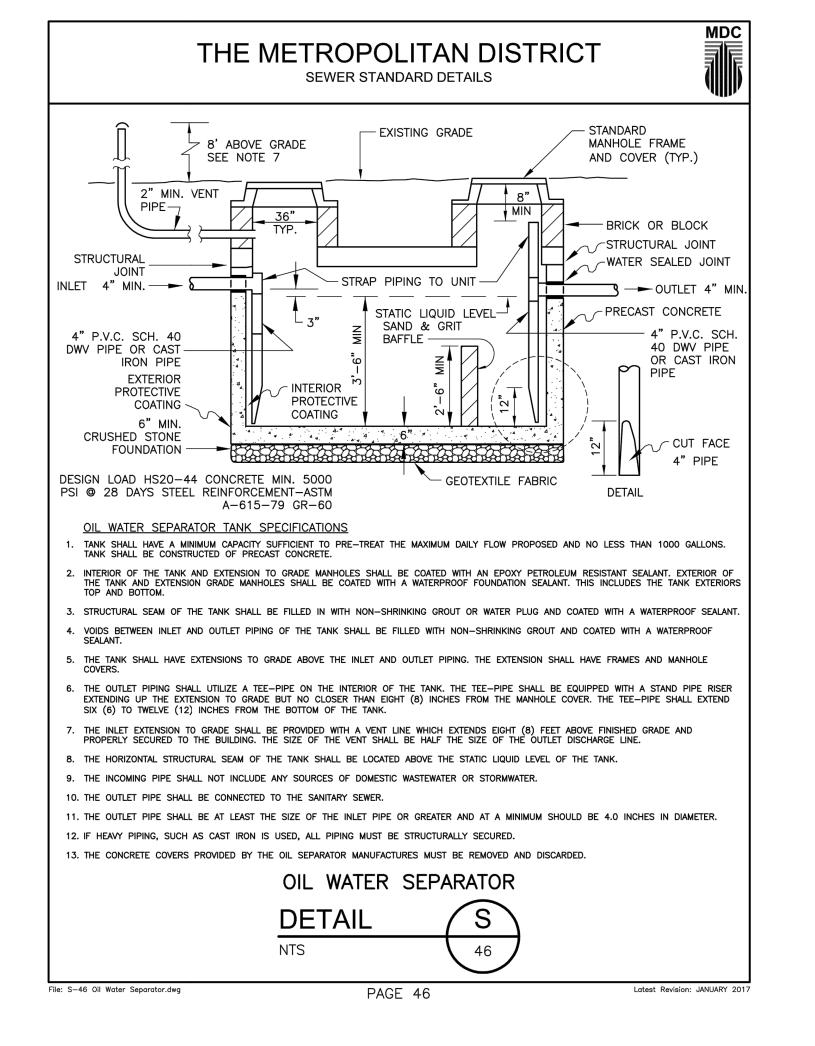














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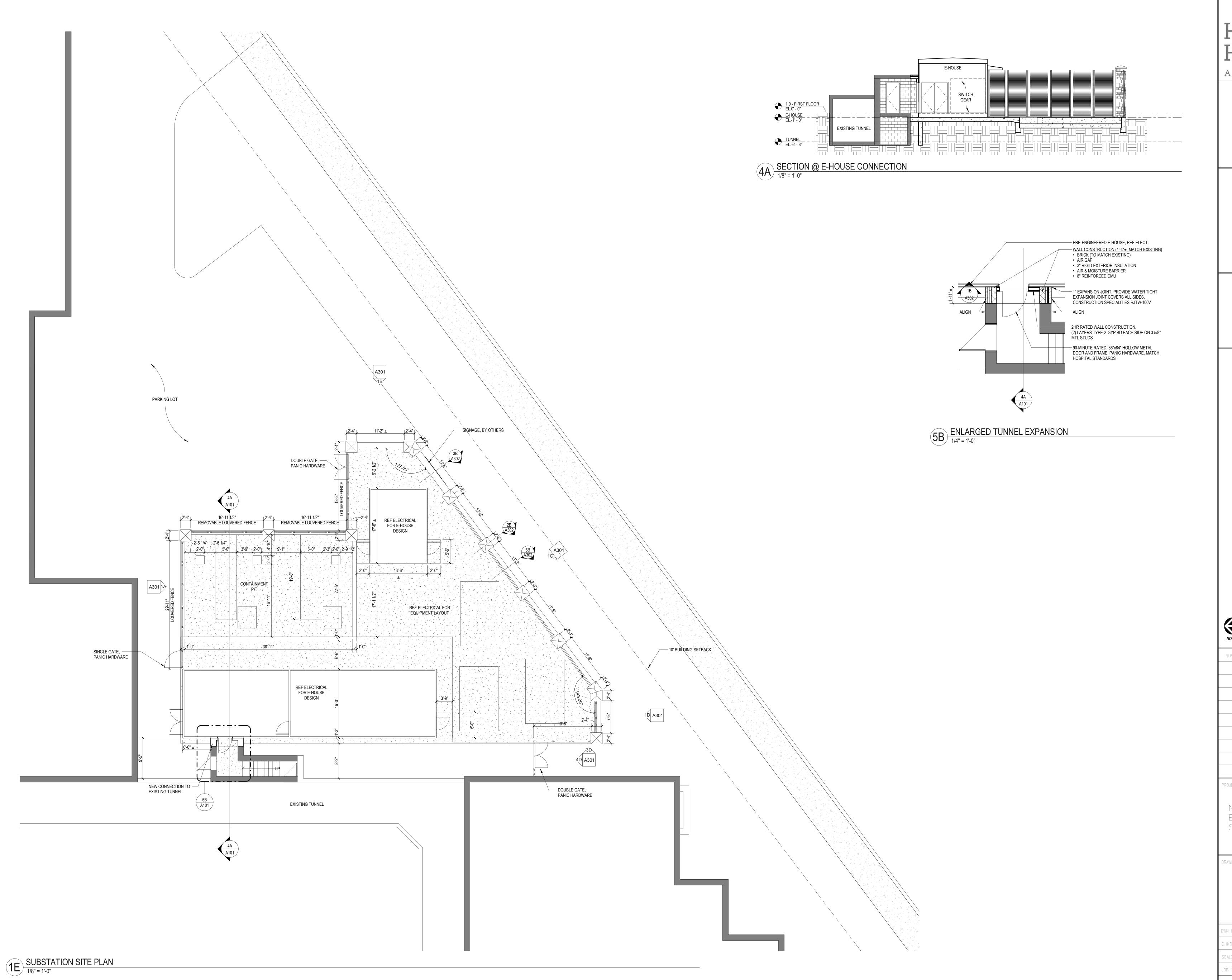
NUMBER	DATE	DEMICION		
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NEW PRIMARY ELECTRIC SUBSTATION PROJECT

DRAWING TITLE: SITE DETAILS

DWN BY: **SEJ** DRAWING NO. CHKD BY: RB SCALE: NOT TO SCALE JOB NO.: 20160045.S10

DATE: **07/13/2021** 



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NUMBER	DATE	REVISION
PROJECT:		

NEW PRIMARY ELECTRIC SUBSTATION PROJECT

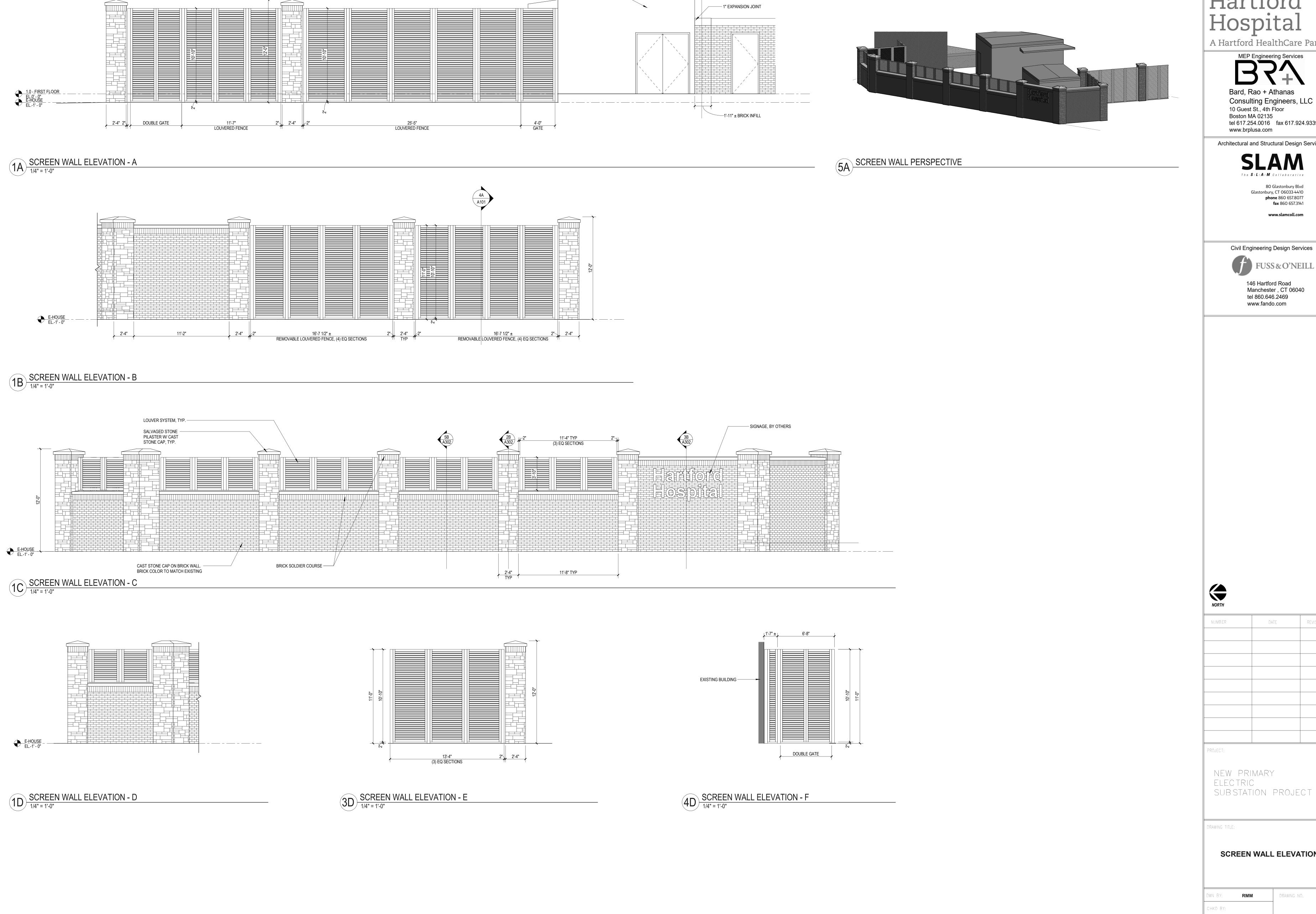
**SUBSTATION SITE PLAN** 

COME	As indicated	<b>Λ1</b>
CHKD BY:		
DWN BY:	RMM	DRAWING NO.

16012.00

07/13/2021

A101



E-HOUSE, REF ELECT.

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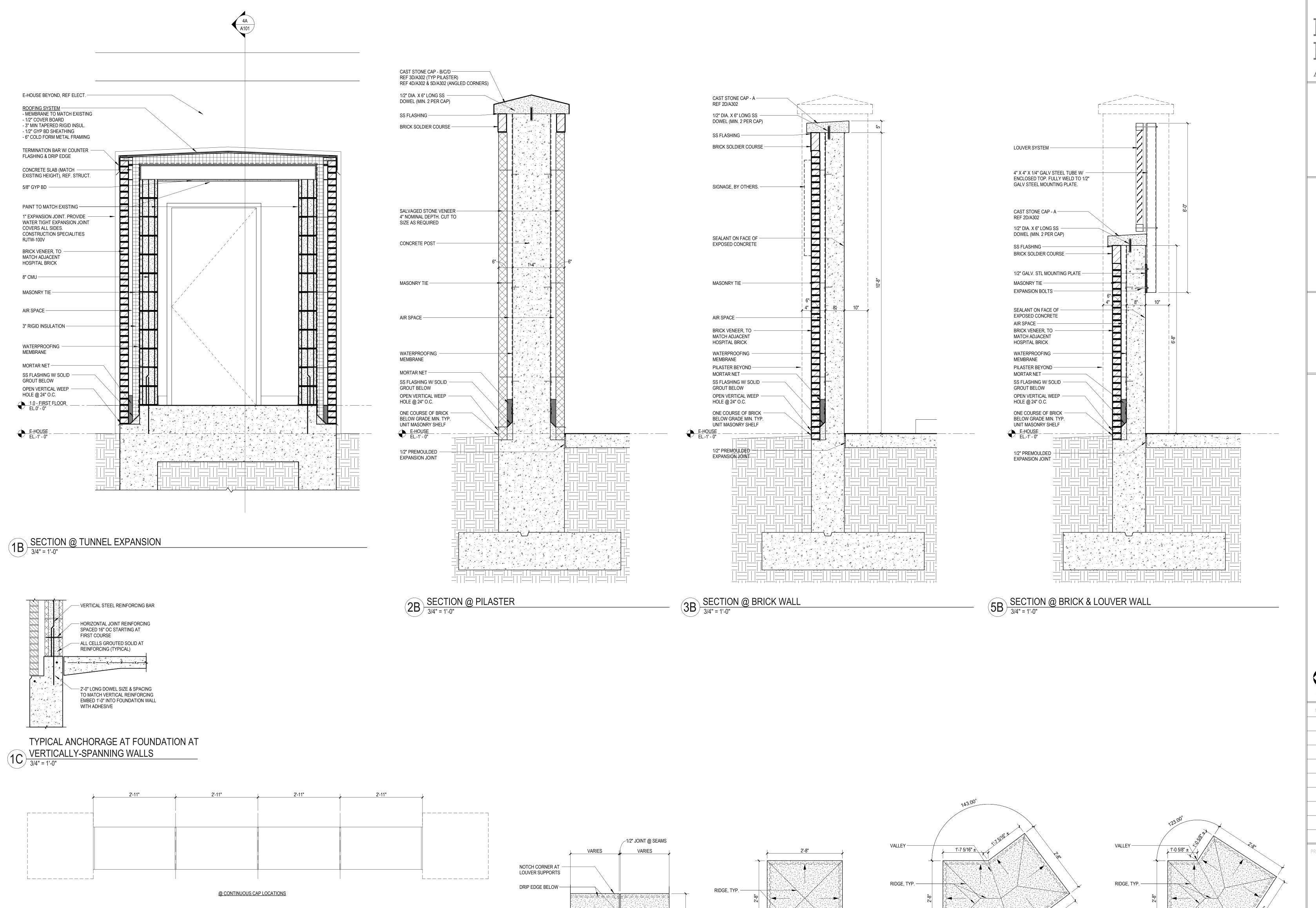
SCREEN WALL ELEVATIONS

DRAWING NO.

A301

16012.00 07/13/2021

SCALE: 1/4" = 1'-0"



DRIP EDGE BELOW -

1/2" DRIP EDGE —

PLAN VIEW

SECTION VIEW

DRIP EDGE BELOW ----

1/2" DRIP EDGE —

<u>PLAN VIEW</u>

SECTION VIEW

1/2" BACKER ROD -AND SEALANT

\_\_\_\_\_

– NOTCH AT LOUVER – SUPPORTS, TYP.

@ LOUVERED WALL LOCATIONS

\_\_\_\_\_\_

1D CAST STONE CAP - SEAMING DIAGRAM

3/4" = 1'-0"

SEAM @ LOUVER SUPPORTS. — PROVIDE SEAMS AS REQUIRED AT CONTINUOUS SECTIONS.

PLAN VIEW

SECTION VIEW

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NUMBER	DATE	REVISION
PROJECT:		

NEW PRIMARY ELECTRIC SUBSTATION PROJECT

DRAWING TITLE:

DRIP EDGE BELOW

1/2" DRIP EDGE —

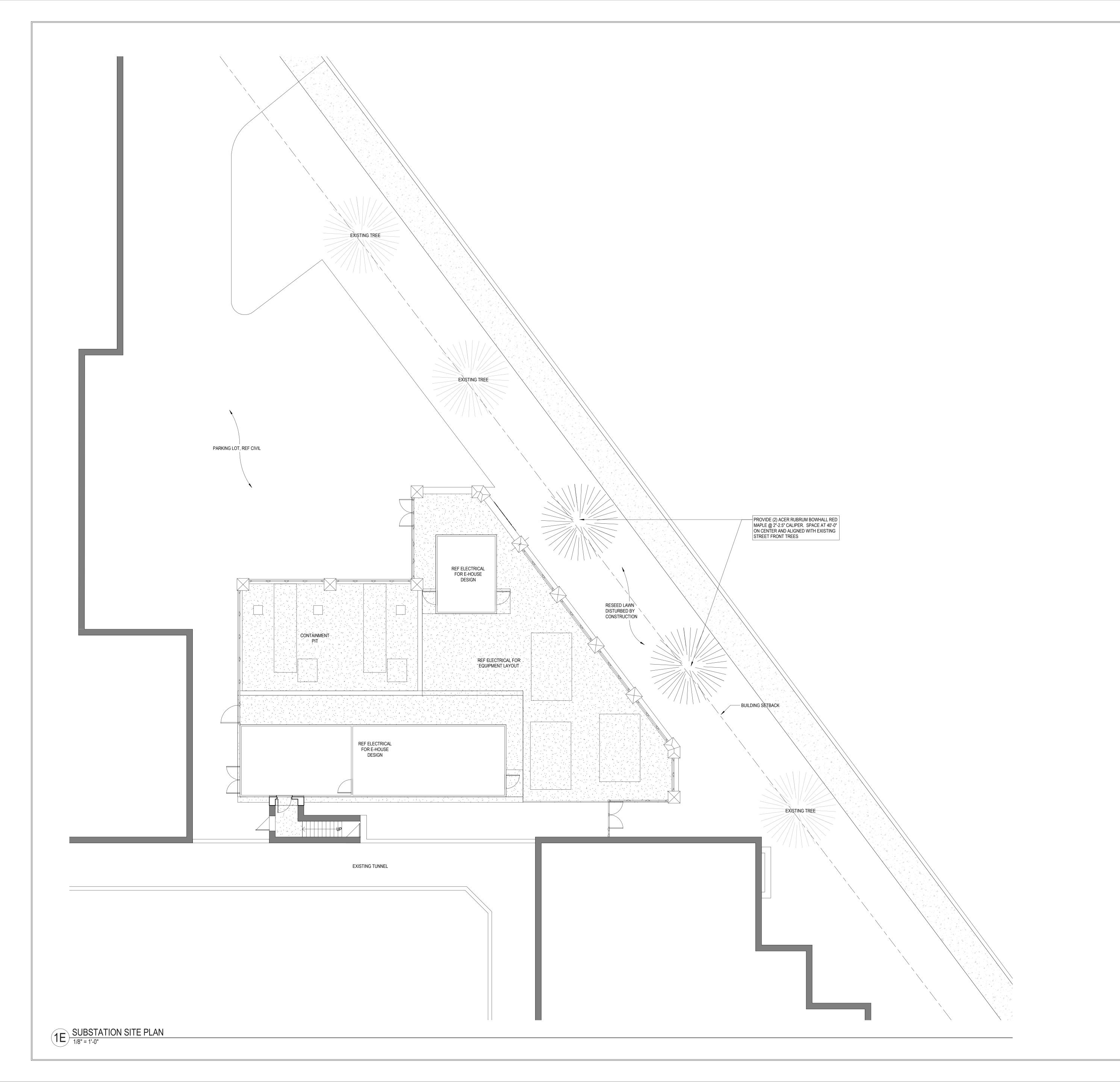
PLAN VIEW

SECTION VIEW

**EXTERIOR SECTIONS & DETAILS** 

	CALE:	3/4" = 1'-0"	A302
VN BY: <b>RMM</b> DRAWING NO.	HKD BY:		
	VN BY:	RMM	DRAWING NO.

07/13/2021





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LANDSCAPE PLANTING PLAN

N BY:	RMM	DRAWING
HKD BY:		
ALE:	1/8" = 1'-0"	L

16012.00 07/13/2021  2018 STATE BUILDING CODE, STATE OF CONNECTICUT NOTE: CURRENT CONNECTICUT SUPPLEMENT MAY BE DOWNLOADED FROM THE DEPT. OF STATE BUILDING INSPECTOR AT CAST-IN-PLACE:

UNLESS OTHERWISE NOTED

STRUCTURAL ENGINEER.

H. STRUCTURAL STEEL:

THE PROJECT CONTRACT DOCUMENTS.

WITH THE PROGRAM OF SPECIAL INSPECTIONS.

ELEMENTS OF THE LFRS.

UNLESS OTHERWISE INDICATED.

PIECE DETAILS

TO BE INSTALLED VERTICALLY.

NEW METAL ROOF DECK.

REQUIREMENTS OF THIS UL ASSEMBLY NUMBER.

OF DECK THAT IS TO BE PAINTED WITH THE ARCHITECT.

DIPPED GALVANIZED, AT THE CONTRACTOR'S OPTION.

REINFORCING STEEL CLEAR COVER SHALL BE AS FOLLOWS UNLESS NOTED OTHERWISE:

CONCRETE CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH: 3"

CONCRETE NOT EXPOSED TO WEATHER OR IN CONTACT WITH GROUND:

PIERS: PRIMARY REINFORCEMENT, TIES, STIRRUPS, SPIRALS: 11/2"

CORE DRILLING SHALL NOT BE PERMITTED UNLESS AUTHORIZED IN WRITING BY THE STRUCTURAL ENGINEER.

5. WHEN INSTALLING EXPANSION BOLTS OR ADHESIVE ANCHORS. THE CONTRACTOR SHALL TAKE MEASURES TO AVOID DRILLING OR CUTTING OF ANY EXISTING REINFORCING AND DESTRUCTION OF CONCRETE. INSTALL ADHESIVE

6. NO WELDING OF REINFORCING SHALL BE PERMITTED UNLESS SPECIFICALLY CALLED FOR OR APPROVED BY THE

7. SUBMIT MATERIAL TEST REPORTS FROM A QUALIFIED TESTING AGENCY DEMONSTRATING THAT TEST RESULTS FOR

8. ALL POST INSTALLED CONCRETE ANCHORS SHALL BE EVALUATED BY THE ICC EVALUATION SERVICE AND SHALL BE

COMPLETE VERTICAL AND LATERAL FORCE RESISTING SYSTEMS HAVE BEEN INSTALLED.

b. THE COMPLETE LATERAL FORCE RESISTING SYSTEM (LFRS) INCLUDES HORIZONTAL ELEMENTS, SUCH AS

FRAMES, FOUNDATIONS, AND ALL ASSOCIATED CONNECTIONS AND ANCHORAGES. CONTRACTORS

RESPONSIBLE FOR THE INSTALLATION OF LATERAL FORCE RESISTING ELEMENTS SHALL REVIEW THE

TRIAL MIX BATCHES FOR EACH CONCRETE MIX DESIGN COMPLY WITH ACI 301 AND THE ADDITIONAL REQUIREMENTS OF

TESTED IN ACCORDANCE WITH AC 193 (ACCEPTANCE CRITERIA FOR MECHANICAL ANCHORS) OR AC 308 (ACCEPTANCE

PERMANENT FRAMING AND FINAL CONNECTION DETAILS ARE SHOWN ON THE DRAWINGS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ERECTION SEQUENCES, MEANS, AND METHODS; AND FOR THE DESIGN OF TEMPORARY LATERAL AND VERTICAL BRACING. TEMPORARY BRACING SHALL REMAIN IN PLACE UNTIL THE

DIAPHRAGMS AND COLLECTORS, VERTICAL ELEMENTS SUCH AS SHEAR WALLS, BRACED FRAMES MOMENT

DRAWINGS TO BECOME FAMILIAR WITH THE COMPLETE SYSTEM. IF THE COMPLETE LFRS IS NOT UNDERSTOOD, THE CONTRACTOR SHALL OBTAIN WRITTEN CLARIFICATION FROM THE STRUCTURAL ENGINEER OF RECORD,

AND ALSO ANY SPECIALTY STRUCTURAL ENGINEERS THAT ARE RESPONSIBLE FOR THE DESIGN OF SPECIFIC

PROVIDE ACCESS FOR INSPECTION OF ALL SHOP AND FIELD CONNECTIONS FOR PROPER MATERIALS AND

WHEN INSTALLING EXPANSION BOLTS OR ADHESIVE ANCHORS, THE CONTRACTOR SHALL TAKE MEASURES TO

ACCORDANCE WITH THE AISC AND AWS SPECIFICATIONS. ANY STRUCTURAL STEEL DAMAGED IN WELDING IS TO

WELDERS SHALL HAVE CURRENT EVIDENCE OF PASSING THE APPROPRIATE AWS QUALIFICATION TESTS. THE

THE CONTRACTOR SHALL NOTIFY THE STRUCTURAL ENGINEER OF ANY FABRICATION OR ERECTION ERRORS OR

AVOID DRILLING OR CUTTING OF ANY EXISTING REINFORCING AND DESTRUCTION OF CONCRETE. INSTALL

e. WELDING ELECTRODES, WELDING PROCESS, MINIMUM PREHEAT AND INTERPASS TEMPERATURES SHALL BE IN

DEVIATIONS AND SHALL RECEIVE WRITTEN APPROVAL BEFORE ANY FIELD CORRECTIONS ARE MADE.

STRUCTURAL STEEL THAT IS LOCATED IN EXTERIOR UNHEATED SPACES AND NOT DIRECTLY EXPOSED TO

ACCORDANCE WITH STEEL STRUCTURES PAINTING COUNCIL PAINTING SYSTEM SPECIFICATION NO. 1.09 OR HOT

DEVELOPMENT OF FABRICATION AND ERECTION DRAWINGS. THE REGISTERED DESIGN PROFESSIONAL (RDP)

WEATHER, SHALL BE POWER TOOL CLEANED AND PAINTED WITH THREE COATS OF OIL BASE PAINT IN

h. ALL STRUCTURAL STEEL THAT IS DIRECTLY EXPOSED TO WEATHER, SHALL BE HOT-DIPPED GALVANIZED,

a. THE FABRICATOR SHALL EMPLOY A PROFESSIONAL ENGINEER TO BE IN RESPONSIBLE CHARGE OF THE

SHALL BE REGISTERED AND APPROVED TO PERFORM STRUCTURAL ENGINEERING IN THE PROJECT'S

b. ALL CONNECTIONS SHALL BE SELECTED. COMPLETED. DESIGNED. AND DETAILED BY THE FABRICATOR'S RDP IN

SHALL BE DESIGNED BY THE FABRICATOR IN ACCORDANCE WITH THE GOVERNING AISC SPECIFICATION.

ALL CONNECTIONS, SPLICES, SHOP STANDARDS, AND TEMPORARY SUPPORT SHALL BE DESIGNED BY THE

FABRICATOR'S ENGINEER REGISTERED IN THE PROJECT'S JURISDICTION. CALCULATIONS AND SHOP

SIMPLE SHEAR CONNECTIONS MAY BE SELECTED FROM AISC'S TABULATED SIMPLE SHEAR

PROVIDE NO LESS THAN 3/16" WELDS EXCEPT ALONG EDGES OF MATERIALS THAT ARE 1/4" OR LESS IN

e. ALL SHOP AND FIELD CONNECTIONS SHALL BE MADE WITH HIGH STRENGTH BOLTS OR WELDS. ALL HIGH

STRENGTH BOLTS AND NUTS SHALL BE CLEARLY MARKED AS REQUIRED BY AISC SPECIFICATIONS.

g. BOLTS USED IN STRUCTURAL STEEL FRAMING CONNECTIONS SHALL BE A MINIMUM OF 3/4" DIAMETER.

h. BOLTED CONNECTIONS SHALL USE A MINIMUM OF TWO BOLTS PER CONNECTED PART, UNLESS OTHERWISE

FABRICATE PANELS WITH AN EXTENDED FEMALE LEG AT INTERLOCKING SEAMS THAT ALLOWS FOR SIDELAP SCREWS

NUMBER WITH ARCHITECTURAL CONTRACT DOCUMENTS). STEEL ROOF DECKS SUPPLIED SHALL CONFORM TO THE

DO NOT PRIME PAINT DECK AREAS THAT ARE TO RECEIVE SPRAY APPLIED FIREPROOFING. COORDINATE LOCATIONS

EQUIVALENT OF POINT LOADS OR LINEAR LOADS. CONCENTRATED LOADS APPLIED TO STEEL DECK SHALL NOT BE

5. SUSPENDED CEILINGS, LIGHT FIXTURES, DUCTS OR OTHER UTILITIES SHALL NOT BE SUPPORTED FROM EXISTING OR

2. STEEL ROOF DECK HAS BEEN SPECIFIED BASED ON A UL ASSEMBLY AS SPECIFIED BY ARCHITECT (VERIFY ASSEMBLY

4. THE STEEL DECK HAS BEEN DESIGNED FOR UNIFORMLY DISTRIBUTED LOADS AND MUST NOT BE USED AS THE

CONNECTIONS, SUBJECT TO RESTRICTIONS INDICATED.

CONNECTIONS MADE WITH UNMARKED BOLTS AND NUTS WILL BE REJECTED.

CONNECTED MATERIAL HAVE BEEN BROUGHT INTO SNUG CONTACT.

PERMITTED UNLESS AUTHORIZED IN WRITING BY THE STRUCTURAL ENGINEER.

PERMITTED BY THE GOVERNING AISC SPECIFICATION.

RESPONSIBLE CHARGE OF THE DEVELOPMENT OF FABRICATION AND ERECTION DRAWINGS. CONNECTIONS

SUBMIT CALCULATIONS BEARING THE RDP'S SEAL AND SIGNATURE PRIOR TO, OR ALONG WITH, PIECE DETAILS.

STANDARDS SHALL BE SUBMITTED BEARING THE ENGINEER'S SEAL AND SIGNATURE PRIOR TO, OR ALONG WITH,

SPECIALTY CONNECTIONS SHALL BE DESIGNED BASED ON THE LOAD DATA AND SCHEMATIC DETAILS

REACTIONS INDICATED ON FRAMING PLANS ARE BASED ON UNFACTORED LOADS, UNLESS OTHERWISE

THICKNESS, FOR EDGES OF MATERIALS THAT ARE 1/4" OR LESS IN THICKNESS, USE THE MAXIMUM SIZE WELD

UNLESS OTHERWISE NOTED, ALL BOLTS SHALL BE TIGHTENED TO THE "SNUG TIGHT" CONDITION DEFINED AS

THE TIGHTNESS ATTAINED BY A FEW IMPACTS OF AN IMPACT WRENCH OR THE FULL EFFORT OF A PERSON USING AN ORDINARY SPUD WRENCH. THE SNUG TIGHT CONDITION MUST ENSURE THAT THE PLIES OF THE

EXPANSION BOLTS AND ADHESIVE ANCHORS PER MANUFACTURER'S RECOMMENDATIONS.

BE REPLACED OR REINFORCED AS ACCEPTABLE TO THE STRUCTURAL ENGINEER.

ENGINEER MAY REQUEST SUCH EVIDENCE AT ANY TIME DURING THE PROJECT.

CRITERIA FOR ADHESIVE ANCHORS). APPROVED ANCHORS SHALL BE SUITABLE FOR USE IN SEISMIC ZONES A-F IN ADDITION TO CRACKED CONCRETE. CONTRACTORS SHALL SUBMIT MANUFACTURER PRODUCT INFORMATION CLEARLY STATING WHICH ANCHOR TYPE, DIAMETER AND EMBEDMENT IS TO BE USED AS WELL AS INSTALLATION PROCEDURE TO THE STRUCTURAL ENGINEER FOR THEIR REVIEW. ANCHOR INSTALLATION SHALL BE INSPECTED IN ACCORDANCE

ALL INSERTS AND SLEEVES SHALL BE CAST-IN-PLACE WHENEVER FEASIBLE. NO SLEEVE SHALL BE PLACED THROUGH

ANY CONCRETE ELEMENT UNLESS AUTHORIZED BY THE STRUCTURAL DRAWINGS, APPROVED SLEEVING SUBMITTAL

SPLICES OF REINFORCEMENT SHALL BE AS DETAILED ON THE APPROVED PLACEMENT DRAWINGS OR AS AUTHORIZED BY THE STRUCTURAL ENGINEER. WHEN PERMITTED, SPLICES SHALL BE MADE BY CONTACT TENSION LAP SPLICES,

SLABS, WALL, JOISTS: #11 BARS AND SMALLER: 3/4"

NON-POST-TENSIONED CONCRETE:

#6 BARS AND LARGER:

ANCHORS PER MANUFACTURER'S WRITTEN INSTRUCTIONS.

CONCRETE EXPOSED TO EARTH OR WEATHER:

OR SPECIFICALLY AUTHORIZED IN WRITING BY THE STRUCTURAL ENGINEER.

#5 BARS AND SMALLER: 11/2"

- "MINIMUM DESIGN LOADS FOR BUILDINGS AND OTHER STRUCTURES" (SEI/ASCE 7-10), AMERICAN SOCIETY OF CIVIL
- "STEEL CONSTRUCTION MANUAL" 13TH EDITION, 2005, AMERICAN INSTITUTE OF STEEL CONSTRUCTION (INCLUDING SPECIFICATION FOR STRUCTURAL STEEL BUILDINGS)

B. **DESIGN DATA**: 1 IBC2015 FLOOR LIVE LOAD:

1.		115 FLOOR LIVE LOAD:							
	<u>AREA</u>		<u>UNIFORM LOAD</u>	CONC. LOAD		LL REDUC	IBLE?	IMPACT LOAD	
	a.	PATIO ROOF	100 psf	2000 lbs	6	No		N/A	
2.	IBC20	15 ROOF SNOW LOAD							
	a.	GROUND SNOW LOA		1	Pa =	35psf			
	b.	IBC2015 FLAT ROOF				30psf			
	C.	IBC2015 SNOW EXPO			C <sub>e</sub> =				
	d.	IBC2015 SNOW LOAD	IMPORTANCE FACTO	OR, I	l <sub>s</sub> =	1.0			
	e.	IBC2015 THERMAL FA	ACTOR,	(	C <sub>t</sub> =	1.0			
3.	WIND	LOAD:							
0.	a.	IBC2015 BASIC WIND	SPEED (3 SECOND G	SUST)		125 MPH			
	b.	IBC2015 NOMINAL DE		,,,		97 MPH			
	C.	IBC2015 WIND IMPOR	RTANCE FACTOR.			$I_{w} = 1.0$			
	d.	IBC2015 RISK CATEG				II .			
	e.	IBC2015 WIND EXPOS	SURE			С			
	f.	IBC2015 INTERNAL P	RESSURE COEFFICIE	NT					
	g.	IBC2015 COMPONEN	TS AND CLADDING:			N/A			
	h.								
4.		HQUAKE DESIGN DATA							
	a.	IBC2015 ANALYSIS P						IT. LATERAL FOR	CE PROCEDURE
	b.	IBC2015 RISK CATEG							
	c. d.	IBC2015 SEISMIC IMF IBC2015 MAPPED SP		COEEEICIENTO			$I_E = 1.0$	$S_1 = 0.064$	
	u. e.	IBC2015 MAFFED SF		DOEFFICIENTS			D (ASSUME		
	f.	IBC2015 SPECTRAL F		FNTS			`	$S_{d1} = 0.102$	
	g.	IBC2015 SEISMIC DE		LITTO,			B	0.102	
	h.	IBC2015 BASIC SEISM		G SYSTEM - CA	NOP	(	CANTILEVE	RED COLUMN-OF	DINARY
	i.	IBC2015 BASIC SEISM						TILEVERED COLU	
		ORDINARY							
	j.	IBC2015 RESPONSE	MODIFICATION FACT	OR,			R = 3.0		
	k.	IBC2015 DEFLECTION	N AMPLIFICATION FAC	CTOR,			$C_d = 3.0$		
	l.	IBC2015 OVERSTREM					$W_0 = 3.0$		
	m.	LONG-PERIOD TRAN	SITION PERIOD				TL= 6 SEC		

#### C. FOUNDATIONS/GEOTECHNICAL REPORT:

- FOUNDATIONS HAVE BEEN DESIGNED IN ACCORDANCE WITH THE INFORMATION SHOWN ON THE EXISTING BUILDING DRAWINGS. NO NEW GEOTECHNICAL REPORT HAS BEEN PROVIDED BY THE OWNER FOR THIS PROJECT.
- 2. ALL FOUNDATIONS SUSCEPTIBLE TO FROST SHALL BEAR A MINIMUM OF 3'-6" BELOW GRADE. IN CASE OF CONFLICT, NOTIFY THE ARCHITECT AND STRUCTURAL ENGINEER IN ADVANCE OF ANY CONSTRUCTION TO ALLOW FOR ADJUSTMENT.
- FOUNDATIONS PLACED ON UNDISTURBED SOIL AT ELEVATIONS INDICATED HAVE BEEN DESIGNED FOR AN ALLOWABLE NET BEARING PRESSURE OF 4000 PSF.
- 4. FOUNDATIONS PLACED ON COMPACTED STRUCTURAL FILL, WHERE INDICATED ON THE DRAWINGS, HAVE BEEN DESIGNED FOR AN ALLOWABLE NET BEARING PRESSURE OF 4000 PSF.

#### D. **MATERIALS**: THE FOLLOWING ASTM STANDARDS AND DESIGN STRESSES SHALL BE USED FOR THE APPROPRIATE MATERIALS USED IN THE

CONSTRUCTION OF THIS PROJECT.

### ASTM C150; TYPE II FOR CONCRETE IN CONTACT WITH EARTH

ALL ELEVATED SLAB INFILLS SHALL BE NORMAL WEIGHT CONCRETE. ALL OTHER CONCRETE SHALL BE NORMAL WEIGHT CONCRETE. F'C @28 DAYS (PSI) SLABS ON GRADE NORMAL WEIGHT FILL ON METAL DECK 4000

FOOTINGS AND PIERS POST TENSION CONCRETE EXTERIOR SLABS ON GRADE

2. CEMENT: ASTM C150: TYPE I OR III

#### 4. REINFORCEMENT: a. DEFORMED REINFORCING BARS - GRADE 60

f. WELDING ELECTRODES

STRUCTURAL STEEL WIDE FLANGE & TEE SECTIONS STRUCTURAL ANGLES, CHANNELS & PLATES ROUND HOLLOW STRUCTURAL SHAPES RECTANGULAR HOLLOW STRUCTURAL SHAPES HIGH STRENGTH BOLTS

ASTM A992 ASTM A36 ASTM A500, GRADE B, Fy=42ksi ASTM A500, GRADE B, Fy=46ksi ASTM A325-N OR TC-TYPE AWS A5.1 OR A5.5, E70XX

#### E. CONSTRUCTION: GENERAL:

- a. IN CASE OF CONFLICT BETWEEN THE GENERAL NOTES, DETAILS AND SPECIFICATIONS, THE MOST STRINGENT REQUIREMENTS SHALL GOVERN.
- TYPICAL DETAILS APPLY REPETITIVELY ON THE PROJECT. CONTRACTOR SHALL COORDINATE THE GENERAL REQUIREMENTS OF TYPICAL DETAILS WITH PROJECT CONDITIONS, PLANS, SPECIFICATIONS, AND SECTIONS.
- REPRODUCTION OF ANY PORTION OF THE STRUCTURAL CONTRACT DRAWINGS FOR RESUBMITTAL AS SHOP DRAWINGS IS PROHIBITED. SHOP DRAWINGS PRODUCED IN SUCH A MANNER WILL BE REJECTED AND RETURNED.
- THESE DRAWINGS REPRESENT THE COMPLETED PROJECT WHICH HAS BEEN DESIGNED FOR THE WEIGHTS OF THE MATERIALS INDICATED ON THE DRAWINGS AND FOR THE SUPERIMPOSED LOADS INDICATED IN THE DESIGN DATA. IT IS THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE ALLOWABLE CONSTRUCTION LOADS AND TO PROVIDE PROPER DESIGN AND CONSTRUCTION OF FALSEWORK, FORMWORK, STAGINGS, BRACING, SHEETING AND SHORING,
- EXISTING BUILDING INFORMATION SHOWN IS AS INDICATED ON EXISTING BUILDING DRAWINGS. THE CONTRACTOR SHALL VERIFY ALL EXISTING BUILDING INFORMATION SHOWN (DIMENSIONS, ELEVATIONS, ETC.) AND NOTIFY THE ARCHITECT AND STRUCTURAL ENGINEER OF ANY DISCREPANCIES. UNLESS INDICATED OTHERWISE, NEW SLABS ARE TO BE AT THE SAME ELEVATIONS AS ADJACENT EXISTING SLABS. FOUNDATION ELEVATIONS OR COLUMN LENGTHS SHALL BE ADJUSTED WITH THE APPROVAL OF THE STRUCTURAL ENGINEER TO ACHIEVE MATCHING SLAB ELEVATIONS.
- IMPLEMENTING JOB SITE SAFETY AND CONSTRUCTION PROCEDURES, TEMPORARY SHORING, AND BRACING OF EXISTING CONSTRUCTION ARE THE SOLE RESPONSIBILITY OF THE CONTRACTOR.
- ALL COSTS OF INVESTIGATION AND/OR REDESIGN, DUE TO CONTRACTOR MISLOCATION OF STRUCTURAL ELEMENTS OR OTHER LACK OF CONFORMANCE WITH THE PROJECT DOCUMENTS, SHALL BE AT THE CONTRACTOR'S EXPENSE.
- h. CONTRACTOR SHALL COORDINATE WITH ALL ARCHITECTURAL, MECHANICAL, PLUMBING, ELECTRICAL, LAUNDRY AND FOOD SERVICE DRAWINGS FOR SIZE AND LOCATIONS OF OPENINGS, SLEEVES, CONCRETE HOUSEKEEPING PADS,
- i. OPENINGS, SLEEVES, CONCRETE HOUSEKEEPING PADS, INSERTS, STEEL FRAMED SLAB OPENINGS, AND SLAB DEPRESSIONS FOR ARCHITECTURAL, MECHANICAL, ELECTRICAL, PLUMBING AND FOOD SERVICE ITEMS HAVE BEEN SHOWN BASED ON DESIGN DRAWINGS THAT WERE AVAILABLE FOR COORDINATION PRIOR TO THE ISSUANCE OF THE FINAL BID DOCUMENTS. THESE ITEMS ARE SHOWN TO ASSIST THE CONTRACTOR IN UNDERSTANDING THE GENERAL SCOPE OF WORK, BUT ARE NOT INTENDED TO REPRESENT EXACT LOCATIONS, QUANTITIES, OR COMPLETE EXTENT OF REQUIRED COORDINATION. THE CONTRACTOR IS RESPONSIBLE FOR COORDINATING HIS WORK WITH THE WORK OF ALL OTHER TRADES. FRAMES
- INSPECTION AND TESTING: a. THE OWNER SHALL ENGAGE A TESTING AGENCY AND A SPECIAL INSPECTOR TO PROVIDE SERVICES AND SUBMIT REPORTS AS INDICATED IN THE SPECIFICATIONS AND STATEMENT OF SPECIAL INSPECTIONS.

### F. FOUNDATIONS & STRUCTURAL EARTHWORK:

- GENERAL: a. SEE THE SPECIFICATIONS EXCAVATION AND PREPARATION OF THE FOUNDATION AND SLAB-ON-GRADE SUBGRADE,
  - INCLUDING COMPACTION PROCEDURES. EXISTING UTILITIES KNOWN TO BE IN THE CONSTRUCTION AREA HAVE BEEN INDICATED. THE SIZE, LOCATION AND DEPTH OF THE UTILITIES ARE NOT KNOWN EXACTLY AND MAY VARY SIGNIFICANTLY FROM THAT INDICATED. OTHER UNKNOWN UTILITIES NOT INDICATED MAY ALSO BE PRESENT. THE CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING AND PROTECTING ALL EXISTING UTILITIES, WHETHER INDICATED OR NOT, WHICH MAY BE AFFECTED BY THE CONSTRUCTION PROCESS, AND SHALL VERIFY ALL EXISTING FIELD CONDITIONS THAT MAY AFFECT THE INSTALLATION OF THE FOUNDATION SYSTEM AS SHOWN PRIOR TO STARTING WORK.
- ALL FOUNDATIONS SHALL BE PLACED ON UNDISTURBED SOIL OR COMPACTED STRUCTURAL FILL. BEARING ELEVATIONS ARE ESTIMATED FROM SOIL BORING DATA INDICATED IN THE GEOTECHNICAL REPORT. DETERMINATION OF FINAL BEARING ELEVATIONS AND FIELD VERIFICATION OF ALLOWABLE BEARING PRESSURE SHALL BE MADE BY AN EXPERIENCED, QUALIFIED GEOTECHNICAL ENGINEER PRIOR TO PLACING FOUNDATIONS.
- d. CONCRETE FOR FOUNDATIONS SHALL BE PLACED ON THE SAME DAY SUBGRADE APPROVAL IS GIVEN.
- e. UTILITY LINES SHALL NOT BE PLACED THROUGH OR BELOW FOUNDATIONS WITHOUT THE STRUCTURAL ENGINEER'S
- f. THE SLOPE BETWEEN THE LOWER EDGES OF ADJACENT FOOTINGS SHALL NOT EXCEED 45 DEGREES WITH THE
- NEW FOOTING BEARING ELEVATIONS ARE TO MATCH ADJACENT EXISTING FOOTING BEARING ELEVATIONS WHERE APPLICABLE UNLESS INDICATED OTHERWISE ON PLANS.
- h. ALL SHORING, SHEETING, AND DEWATERING SHALL BE THE TOTAL RESPONSIBILITY OF THE CONTRACTOR. SHEETING AND SHORING SHALL BE DESIGNED BY THE CONTRACTOR'S ENGINEER REGISTERED IN THE PROJECT'S JURISDICTION. ALL SUBMITTALS SHALL BEAR CONTRACTOR'S/ ENGINEERING SEAL AND SIGNATURE.

### STRUCTURAL DRAWING LIST

GENERAL NOTES AND ABBREVIATIONS FOUNDATION PLAN

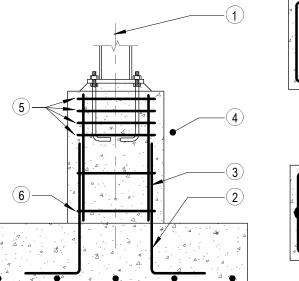
FOUNDATION DETAILS FOUNDATION DETAILS FOUNDATION DETAILS FIRST FLOOR FRAMING PLAN

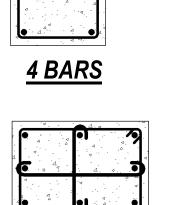
			PIER S	SCHEDULE			
Column	Pier			Reinfo	Reinforcing		
Location Mark	Top Of Pier	Width	Length	Vertical	Ties	Reference Level	Remarks
	-1'-0"	2'-4"	2'-4"	4 - #8	#4 AT 12" OC	FIRST FLOOR	
	-1'-0"	2'-4"	2'-4"	4 - #8	#4 AT 12" OC	FIRST FLOOR	
	-1'-0"	2'-4"	2'-4"	4 - #8	#4 AT 12" OC	FIRST FLOOR	
	-1'-0"	2'-4"	2'-4"	4 - #8	#4 AT 12" OC	FIRST FLOOR	
	-1'-0"	2'-4"	2'-4"	4 - #8	#4 AT 12" OC	FIRST FLOOR	
	-1'-0"	2'-4"	2'-4"	4 - #8	#4 AT 12" OC	FIRST FLOOR	
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	-1'-0"	2'-4"	2'-4"	4 - #8	#4 AT 12" OC	FIRST FLOOR	
	-1'-0"	2'-4"	2'-4"	4 - #8	#4 AT 12" OC	FIRST FLOOR	
	-1'-0"	2'-4"	2'-4"	4 - #8	#4 AT 12" OC	FIRST FLOOR	
	-1'-0"	2'-4"	2'-4"	4 - #8	#4 AT 12" OC	FIRST FLOOR	
	-1'-0"	2'-4"	2'-4"	4 - #8	#4 AT 12" OC	FIRST FLOOR	
	9'-10"	1'-4"	1'-4"	4 - #8	#4 AT 12" OC	FIRST FLOOR	
	9'-10"	1'-4"	1'-4"	4 - #8	#4 AT 12" OC	FIRST FLOOR	
	9'-10"	1'-4"	1'-4"	4 - #8	#4 AT 12" OC	FIRST FLOOR	
	9'-10"	1'-4"	1'-4"	4 - #8	#4 AT 12" OC	FIRST FLOOR	
	10'-4"	1'-4"	1'-4"	4 - #8	#4 AT 12" OC	FIRST FLOOR	
	9'-10"	1'-4"	1'-4"	4 - #8	#4 AT 12" OC	FIRST FLOOR	
	9'-10"	1'-4"	1'-4"	4 - #8	#4 AT 12" OC	FIRST FLOOR	
	9'-10"	1'-4"	1'-4"	4 - #8	#4 AT 12" OC	FIRST FLOOR	
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	9'-10"	1'-4"	1'-4"	4 - #8	#4 AT 12" OC	FIRST FLOOR	
	9'-10"	1'-4"	1'-4"	4 - #8	#4 AT 12" OC	FIRST FLOOR	
	9'-10"	1'-4"	1'-4"	4 - #8	#4 AT 12" OC	FIRST FLOOR	

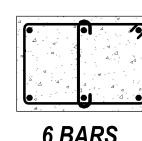
### KEY NOTES:

- (1.) CENTER PIER REINFORCING ABOUT COLUMN CENTERLINE.
- 2.) ANCHOR VERTICAL PIER REINFORCING BARS INTO FOUNDATION USING STANDARD HOOKS.
- PROVIDE CLASS B LAP SPLICES AS REQUIRED FOR CONSTRUCTABILITY.
- (4.) PLACE PIERS MONOLITHICALLY WITH ADJACENT WALLS OR GRADE BEAM.
- 5.) PROVIDE 2- #4 (OR 3-#3) CLOSED TIES WITHIN THE TOP 5" OF PIERS AND REMAINING TIES @ 12" OC.
- (6.) LOCATE FIRST TIE NOT MORE THAN ONE-HALF OF A TYPICAL TIE SPACING ABOVE THE FOUNDATION.









CONCRETE PIER REINFORCING DETAILS

REINFORCING	STEEL SPLICE
LENGTH SCH	EDULE: 4000 psi

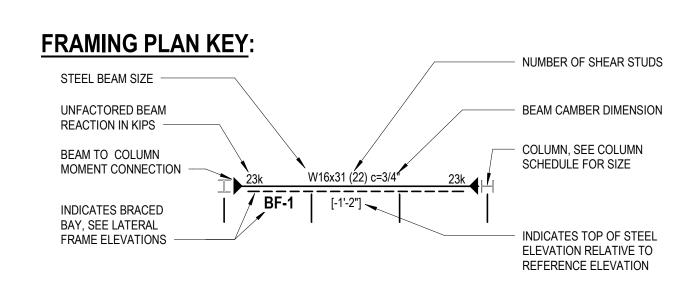
BAR SIZE	TOP BARS	OTHER BARS
#3	64d <sub>b</sub> = 2'-0"	49d <sub>b</sub> = 1'-7"
#4	64d <sub>b</sub> = 2'-8"	49d <sub>b</sub> = 2'-1"
#5	64d <sub>b</sub> = 3'-4"	49d <sub>b</sub> = 2'-7"
#6	64d <sub>b</sub> = 4'-0"	49d <sub>b</sub> = 3'-1"
#7	80d <sub>b</sub> = 5'-10"	62d <sub>b</sub> = 4'-7"
#8	80d <sub>b</sub> = 6'-8"	62d <sub>b</sub> = 5'-2"
#9	80d <sub>b</sub> = 7'-6"	62d <sub>b</sub> = 5'-10"
#10	80d <sub>b</sub> = 8'-6"	62d <sub>b</sub> = 6'-6"

- TOP BARS INCLUDE FOOTING REINFORCEMENT WITH MORE THAN 12" OF CONCRETE CAST BELOW THE REBAR, AND ALL HORIZONTAL WALL REINFORCEMENT WITHOUT EXCEPTION. REFER TO ACI 318 FOR MORE
- OTHER BARS INCLUDE FOOTING REINFORCEMENT WITH LESS THAN 12" OF CONCRETE CAST BELOW THE REBAR AND VERTICAL WALL
- PROVIDE LAP SPLICES FOR PIER REINFORCEMENT PER OTHER BARS
- MINIMUM CLEAR SPACING OF BARS SHALL NOT BE LESS THAN 2 BAR DIAMETERS. CLEAR COVER SHALL NOT BE LESS THAN THE MOST RESTRICTIVE REQUIREMENT OF 1 BAR DIAMETER, THE MINIMUM CLEAR COVER DIMENSION LISTED IN THE CONTRACT DOCUMENTS, AND THE ACI CODE. REPORT ANY DISCREPANCIES TO THE ENGINEER OF RECORD
- SPLICES INDICATED ARE CLASS B LAP SPLICES. PROVIDE CLASS B LAP SPLICES AT ALL SPLICE LOCATIONS U.O.N.

SLAB ON GRADE SCHEDULE					
Mark Thickness Reinforcement Remarks					
S1	6"	6x6-W4.0xW4.0 WWF	4000 PSI NW CONCRETE		
S2	1' - 0"	#4 AT 12" OC EW, TOP AND BOT	4000 PSI NW CONCRETE		

### STRUCTURAL ABBREVIATIONS

②         AT         IN         INCH (ES)           ABA         ANCHOR BOLT         INV         INVERTION           ADJ         ADJACENT         JST         JOIST           ABA         ARCHITECTIVEIGINEER         JT         JOINT           AFF         ADVE PRINSHED FLOOR         MB         KNEE BRACE           ALJM         ALTERNATE         L         ANGLE           ALJM         ALTERNATE         L         ANGLE           ARCH         ARCHITECTURAL/ARCHITECT         L         L         LINEAR FOOT           AVO         AVERGO         L         LIGHT GAUGE         L           BFE         BOTTOM OF FOOTING ELEVATION         LL         LIVE LOAD           BGB         BOTTOM OF GRADE BEAM         LP         LOW POINT           BLDG         BULDING         MB         LONG WAY           BLDG         BULDING         MB         MASONRY           BDT         BOTTOM         MB         MAX         MASONRY           BD         BOTTOM         MB         MAX         MASONRY           BD         BOTTOM OF THE BEAM         MBZ         MEZZAINE           BD         BOTTOM OF THE BEAM         MBZ         MAX <th># &amp;</th> <th>NUMBER OR POUND AND</th> <th>ID I.F.</th> <th>INSIDE DIAMETER INSIDE FACE</th>	# &	NUMBER OR POUND AND	ID I.F.	INSIDE DIAMETER INSIDE FACE
ABD ANCHOR BOLT ADDID ADDIDIONAL ADDID ADDITIONAL				
ADDITIONAL   ADDITIONAL   ADDITIONAL   ADDITIONAL   ADDITIONAL   ADDITIONAL   ADDITIONAL   ARCHITECTICRIQINEER   JT				
ADJACENT   JST				
ME				
ABOVE FINISHED FLOOR				
ALUM   ALUMINUM				
ALTERNATE   L   ANGLÉ				
ARCH   ARCHITECTURAL/ARCHITECT   LF   LINEAR FOOT   AVG   AVERGE   LG   LIGHT GAUGE   SPE   BOTTOM OF FOOTING ELEVATION   LL   LIVE LOAD   SIDE BOTTOM OF FOOTING ELEVATION   LL   LIVE LOAD   SIDE BOTTOM OF GRADE BEAM   LP   LOW POINT   LONG WAY   MAS   MASONRY   AND MASONRY   MAS   MASONRY   AND MASONRY   MAS   MASONRY   AND MATL MATERIAL   MAX   MASIMUM   MASIMUM   MATL MATERIAL   MAX   MASIMUM   MASONRY   MASIMUM   MASIMUM   MASONRY   MASIMUM   MASIMUM   MASONRY   MASIMUM   MASIMUM   MASIMUM   MASONRY   MECH   MECHANICAL   C CHANNEL   MIN   MINIMUM   MINIMUM   C CHANNEL   MIN   MINIMUM   MINIMUM   C CHANNEL   MIN   MISC   MISCELLANEOUS   C CONCRETE BEAM/CATCH BASIN   MO   MASONRY OPENING   C CONCRETE BEAM/CATCH BASIN   MO   MASONRY OPENING   C CONCRETE BEAM/CATCH BASIN   MO   MASONRY OPENING   C CONTRACTION/CONSTRUCTION JOINT   NTS   NOT TO SCALE   C CONTRACTION/CONSTRUCTION JOINT   NTS   NOT TO SCALE   C CONTRACTION/CONSTRUCTION JOINT   NTS   NOT TO SCALE   C C C C C C C C C C C C C C C C C C C				
AVERAGE   LG				
BETE   BOTTOM OF FOOTING ELEVATION   LL   LIVE LOAD				
BORDER   DOTTOM OF GRADE BEAM   LP   LOW POINT		AVERAGE		
BLIDG   BUILDING   BUM	BFE	BOTTOM OF FOOTING ELEVATION	LL	LIVE LOAD
BEAM   BEAM   BAS   MASONRY	BGB	BOTTOM OF GRADE BEAM	LP	LOW POINT
BOTTOM	BLDG	BUILDING	LW	LONG WAY
B PL BASE PLATE, BEARING PLATE BS BOTTOM OF TIE BEAM MEZD MECHANICAL MEZZANINE BTB BOTTOM OF TIE BEAM MEZD MEZZANINE MEZD MEZZANINE BTB BOTTOM OF TIE BEAM MEZD MEZZANINE M	BM	BEAM	MAS	MASONRY
BOTH SIDES	BOT	BOTTOM	MATL	. MATERIAL
BOTH SIDES	B PL	BASE PLATE. BEARING PLATE	MAX	MAXIMUM
BTB BOTTOM OF TIE BEAM BEYOND MEZZ MEZZANINE BEYOND BEYOND MES MANUFACTURER MISC CHANNEL MIN MINIMUM MINIMUM MINIMUM MISC MISCELLANEOUS COORDINATE BEAM/CATCH BASIN MO MASONRY OPENING CPMF COLD-FORMED METAL FRAMING NS NEAR SIDE CONTRACTION/CONSTRUCTION JOINT NTS NOT TO SCALE NORMAL WEIGHT CLIC CENTER LINE NW NORMAL WEIGHT COLD CONTRACTION/CONSTRUCTION JOINT NTS NOT TO SCALE NORMAL WEIGHT COLD CLEANOUT O.F. OUTSIDE DIAMETER COLD CLEANOUT O.F. OUTSIDE DIAMETER COLD CLEANOUT O.F. OUTSIDE DIAMETER COLD CLEANOUT O.F. OUTSIDE FACE COLD CONCRETE MASONRY UNIT O.F. OUTSIDE FACE COLD CONCRETE COLD CONCRETE OPPOPOSITE HAND CONCRETE OPPOPOSITE HAND CONCRETE OPPOPOSITE HAND CONCRETE OPPOPOSITE OPPOSITE HAND CONCRETE OPPOPOSITE OPPOSITE				
BEYOND				
C CHANNEL CANTILEVER CANTILEVER CONCRETE BEAM/CATCH BASIN CONCRETE BEAM/CATCH BASIN COLD-FORMED METAL FRAMING CJ CONTRACTION/CONSTRUCTION JOINT NTS NOT TO SCALE CL CENTER LINE CL CENTER LINE CL CENTER LINE COLL CL CLER CLER COLL CLER CLER COLL CLER CLER COLL CLER CLER COLL COLL CLER CLER COLL COLL CLER CLER COLL COLL CLER COLL COLL COLL COLL COLL COLL COLL COL				
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CL         CENTER LINE         NW         NORMAL WEIGHT           CLR         CLER         OC         ON CENTER           CMU         CONCRETE MASONRY UNIT         OD         OUTSIDE DIAMETER           COL         CLEANOUT         O.F.         OUTSIDE FACE           COL         COLUMN         OH         OPPOSITE HAND           CONC         CONCRETE         OPP         OPPOSITE HAND           CONT         CONTECTION         PAF         POWDER ACTUATED FASTEI           CONT         CONTRUCTION         PAF         POWDER ACTUATED FASTEI           CONT         CONTRIBUTE         PSL         PARALLEL STRAND LUMBER           DEFIL         DEFL         DEFL         DEFL         DEFL         DEFL         DEFL         DEFL         DEFL         PSL         PSC         DEFL         D	-			
CLR         CLEAR         OC         ON CENTER           CMU         CONCRETE MASONRY UNIT         OD         OUTSIDE DIAMETER           COL         CLEANOUT         O.F.         OUTSIDE FACE           COL         COLUMN         OH         OPPOSITE HAND           CONC         CONCECTE         OPP         OPPOSITE HAND           CONT         CONTECTION         PAP         POWDER ACTUATED FASTEI           CONT         CONTRUCTION         PEN         PENTERTATION           CONT         CONTRUCTION         PEN         PENTERTATION           CONT         CONTRUCTION         PI         PLATE           COORD         COORDINATE         PSL         PARALLEL STRAND LUMBER           COORD         COO				
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EXT EXTERIOR FTG FOOTING FTG FOOTING STL STEEL FDN FOUNDATION F.F. FAR FACE FFE FINISHED FLOOR ELEVATION FIN FL FINISHED FLOOR FLG FLANGE FO FRAMED OPENING FS FOOTING STEP FT FOOT/FEET GA GAGE GALV GALVANIZED GALV GALVANIZED GRADE BEAM GG GENERAL CONTRACTOR GRADE GRADE HORIZ HORIZONTAL HP HIGH POINT  STRUCT STIFFENERS STIFF STIFFENERS STIFF STIFFENERS STIFF STIFFENERS STIFF STIFFENERS STEL STRUCTURAL STR				
FTG FOOTING STL STEEL  FDN FOUNDATION STRUCT STRUCTURAL  F.F. FAR FACE SW SHORT WAY  FFE FINISHED FLOOR ELEVATION SYM SYMMETRICAL, SYMMETRY  FIN FL FINISHED FLOOR T&B TOP AND BOTTOM  FLG FLANGE TGB TOP OF GRADE BEAM  FO FRAMED OPENING TGE TOP OF GRADE BEAM ELEVA  FS FOOTING STEP TPC TOP OF PILE CAP  FT FOOT/FEET TPE TOP OF PIER ELEVATION  GA GAGE TSE TOP OF SHELF ELEVATION  GA GAGE TSE TOP OF WALL ELEVATION  GB GRADE BEAM TWE TOP OF WALL ELEVATION  GC GENERAL CONTRACTOR TYP TYPICAL  GRD GRADE UOD UNDERSIDE OF DECK  HORIZ HORIZONTAL  HP HIGH POINT VIF VERIFY IN FIELD				
FDN FOUNDATION  F.F. FAR FACE  F.F. FAR FACE  FINISHED FLOOR ELEVATION  FIN FL FINISHED FLOOR  FLANGE  FO FRAMED OPENING  FS FOOTING STEP  FT FOOT/FEET  GALV GALVANIZED  GB GRADE BEAM  GB GRADE BEAM  GC GENERAL CONTRACTOR  GRD GRADE  HORIZ HORIZONTAL  HP HIGH POINT  STRUCT STRUCTURAL  SW SHORT WAY  SHORT WAY  SYMMETRICAL, SYMMETRY  FW SYMMETRICAL, SYMMETRY  FW SYMMETRICAL  SW SHORT WAY  SHORT WAY  SYMMETRICAL  SYMMETRICAL  SW SHORT WAY  SHORT WAY  SYMMETRICAL  SYMMETRICAL  SW SHORT WAY  SYMMETRICAL  SYMMETRICAL  SW SHORT WAY  SHORT WAY  SYMMETRICAL  SW SHORT WAY  SYMMETRICAL  SW SHORT WAY  SHORT WAY  SYMMETRICAL  SW SHORT  SYM SYMMETRICAL  SYM SYMETRICAL  SYM SYM SYMETRICAL  SYM SYMETRICAL  SYM SYM SYMETRICAL  SYM SYM SYMETR  TAB  TOP OF GRADE BEAM  TOP OF FILE LEVATION  TOP OF PILE CAP  TOP OF PILE C				
F.F. FAR FACE  FEE FINISHED FLOOR ELEVATION  FIN FL FINISHED FLOOR  FLANGE  FLANGE  FO FRAMED OPENING  FS FOOTING STEP  FT FOOT/FEET  GA GAGE  GALV GALVANIZED  GB GRADE BEAM  GB GRADE BEAM  GC GENERAL CONTRACTOR  GRD GRADE  HORIZ HORIZONTAL  HP HIGH POINT  SYM SYMMETRY  SYM SYMMETRICAL, SYMMETRY  FYM SYMMETRY  SYM SYMMETRY  SYM SYMMETRICAL, SYMMETRY  FYM SYMMETRY  FYM SYMMETRY  FYM SYMMETRY  FYM SYMMETRY  FYM SYMMETRY  FYM TOP OF GRADE BEAM  THE TOP OF PILE CAP  TOP OF PILE CAP  TOP OF PILE CAP  TOP OF SHELF ELEVATION  TYP TYPICAL  UOD UNDERSIDE OF DECK  UOD UNDERSIDE OF DECK  HORIZ VERTICAL  VERT VERTICAL				
FFE FINISHED FLOOR ELEVATION  FIN FL FINISHED FLOOR  FLG FLANGE  FO FRAMED OPENING  FS FOOTING STEP  FT FOOT/FEET  GA GAGE  GALV GALVANIZED  GB GRADE BEAM  GB GRADE BEAM  GC GENERAL CONTRACTOR  GRD GRADE  HORIZ HORIZONTAL  HP HIGH POINT  SYM SYMMETRICAL, SYMMETRY  T&B SYMMETRY  TAB TOP AND BOTTOM  TAB TOP OF GRADE BEAM  THE TOP OF PILE CAP  TOP OF PILE CAP  TOP OF PILE CAP  TOP OF PILE CAP  TOP OF SHELF ELEVATION  THE TOP OF TIE BEAM  TWE TOP OF WALL ELEVATION  UNDERSIDE OF DECK  UOD UNDERSIDE OF DECK  UON UNLESS OTHERWISE NOTED  WERT VERTICAL  VIF VERIFY IN FIELD				
FIN FL FINISHED FLOOR T&B TOP AND BOTTOM FLG FLANGE TGB TOP OF GRADE BEAM FO FRAMED OPENING TGE TOP OF GRADE BEAM ELEVA FS FOOTING STEP TPC TOP OF PILE CAP FT FOOT/FEET TPE TOP OF PIER ELEVATION GA GAGE TSE TOP OF SHELF ELEVATION GALV GALVANIZED TTB TOP OF TIE BEAM GB GRADE BEAM TWE TOP OF WALL ELEVATION GC GENERAL CONTRACTOR TYP TYPICAL GRD GRADE UOD UNDERSIDE OF DECK HORIZ HORIZONTAL UON UNLESS OTHERWISE NOTED HKP HOUSEKEEPING PAD VERT VERTICAL HP HIGH POINT				
FLG FLANGE TOP OF GRADE BEAM FO FRAMED OPENING TGE TOP OF GRADE BEAM ELEVA FS FOOTING STEP TPC TOP OF PILE CAP FT FOOT/FEET TPE TOP OF PIER ELEVATION GA GAGE TSE TOP OF SHELF ELEVATION GALV GALVANIZED TTB TOP OF TIE BEAM GB GRADE BEAM TWE TOP OF WALL ELEVATION GC GENERAL CONTRACTOR TYP TYPICAL GRD GRADE UOD UNDERSIDE OF DECK HORIZ HORIZONTAL UON UNLESS OTHERWISE NOTED HKP HOUSEKEEPING PAD VERT VERTICAL HP HIGH POINT VIF VERIFY IN FIELD	FFE	FINISHED FLOOR ELEVATION		
FO FRAMED OPENING  FS FOOTING STEP  FT FOOT/FEET  GA GAGE  GALV GALVANIZED  GC GENERAL CONTRACTOR  GROUGH GRADE  GRADE  HORIZ  HORIZONTAL  HP HIGH POINT  TGE TOP OF GRADE BEAM ELEVATION  TPE TOP OF PIER ELEVATION  TRE TOP OF SHELF ELEVATION  TRE TOP OF TIE BEAM  TWE TOP OF WALL ELEVATION  TYP TYPICAL  UOD UNDERSIDE OF DECK  UON UNLESS OTHERWISE NOTED  VERT VERTICAL  VIF VERIFY IN FIELD	FIN FL	FINISHED FLOOR	T&B	TOP AND BOTTOM
FS FOOTING STEP TPC TOP OF PILE CAP FT FOOT/FEET TPE TOP OF PIER ELEVATION GA GAGE TSE TOP OF SHELF ELEVATION GALV GALVANIZED TTB TOP OF TIE BEAM GB GRADE BEAM TWE TOP OF WALL ELEVATION GC GENERAL CONTRACTOR TYP TYPICAL GRD GRADE UOD UNDERSIDE OF DECK HORIZ HORIZONTAL UON UNLESS OTHERWISE NOTED HKP HOUSEKEEPING PAD VERT VERTICAL HP HIGH POINT VIF VERIFY IN FIELD	FLG	FLANGE	TGB	TOP OF GRADE BEAM
FT FOOT/FEET TPE TOP OF PIER ELEVATION GA GAGE TSE TOP OF SHELF ELEVATION GALV GALVANIZED TTB TOP OF TIE BEAM GB GRADE BEAM TWE TOP OF WALL ELEVATION GC GENERAL CONTRACTOR TYP TYPICAL GRD GRADE UOD UNDERSIDE OF DECK HORIZ HORIZONTAL UON UNLESS OTHERWISE NOTED HKP HOUSEKEEPING PAD VERT VERTICAL HP HIGH POINT VIF VERIFY IN FIELD	FO	FRAMED OPENING	TGE	TOP OF GRADE BEAM ELEVATION
FT FOOT/FEET TPE TOP OF PIER ELEVATION GA GAGE TSE TOP OF SHELF ELEVATION GALV GALVANIZED TTB TOP OF TIE BEAM GB GRADE BEAM TWE TOP OF WALL ELEVATION GC GENERAL CONTRACTOR TYP TYPICAL GRD GRADE UOD UNDERSIDE OF DECK HORIZ HORIZONTAL UON UNLESS OTHERWISE NOTED HKP HOUSEKEEPING PAD VERT VERTICAL HP HIGH POINT VIF VERIFY IN FIELD	FS	FOOTING STEP	TPC	TOP OF PILE CAP
GA GAGE TSE TOP OF SHELF ELEVATION GALV GALVANIZED TTB TOP OF TIE BEAM GB GRADE BEAM TWE TOP OF WALL ELEVATION GC GENERAL CONTRACTOR TYP TYPICAL GRD GRADE UOD UNDERSIDE OF DECK HORIZ HORIZONTAL UON UNLESS OTHERWISE NOTED HKP HOUSEKEEPING PAD VERT VERTICAL HP HIGH POINT VIF VERIFY IN FIELD				
GALV GALVANIZED TTB TOP OF TIE BEAM GB GRADE BEAM TWE TOP OF WALL ELEVATION GC GENERAL CONTRACTOR TYP TYPICAL GRD GRADE UOD UNDERSIDE OF DECK HORIZ HORIZONTAL UON UNLESS OTHERWISE NOTED HKP HOUSEKEEPING PAD VERT VERTICAL HP HIGH POINT VIF VERIFY IN FIELD				
GB GRADE BEAM TWE TOP OF WALL ELEVATION GC GENERAL CONTRACTOR TYP TYPICAL GRD GRADE UOD UNDERSIDE OF DECK HORIZ HORIZONTAL UON UNLESS OTHERWISE NOTED HKP HOUSEKEEPING PAD VERT VERTICAL HP HIGH POINT VIF VERIFY IN FIELD				
GC GENERAL CONTRACTOR TYP TYPICAL GRD GRADE UOD UNDERSIDE OF DECK HORIZ HORIZONTAL UON UNLESS OTHERWISE NOTED HKP HOUSEKEEPING PAD VERT VERTICAL HP HIGH POINT VIF VERIFY IN FIELD				
GRD GRADE UOD UNDERSIDE OF DECK HORIZ HORIZONTAL UON UNLESS OTHERWISE NOTED HKP HOUSEKEEPING PAD VERT VERTICAL HP HIGH POINT VIF VERIFY IN FIELD				
HORIZ HORIZONTAL UON UNLESS OTHERWISE NOTED HKP HOUSEKEEPING PAD VERT VERTICAL HP HIGH POINT VIF VERIFY IN FIELD				
HKP HOUSEKEEPING PAD VERT VERTICAL HP HIGH POINT VIF VERIFY IN FIELD				
HP HIGH POINT VIF VERIFY IN FIELD				
187 TAUDE EL ANDE	חר	NIGH PUINT		
W WIDE FLANGE W/O WITHOUT			= = =	_



WITH

WORKING POINT

WWF WELDED WIRE FABRIC

W/

### FOUNDATION PLAN KEY

STEEL COLUMN CONCRETE PIER	FOOTING MARK, SEE COLUMN FOOTING SCHEDUL BOTTOM OF FOOTING ELEVATION
SPREAD FOOTING	

### PLAN KEYS:

	INDICATES CONTRACTION OR CONSTRUCTION JOINT (SEE TYPICAL DETAIL ON DWG. SXXX) INDICATES ISOLATION JOINT (SEE TYPICAL DETAIL ON DWG. SXXX)
FO	INDICATES FRAMED OPENING PER DETAIL ON DRAWING S4XX. GENERAL CONTRACTOR IS RESPONSIBLE FOR COORDINATING AND VERIFYING ALL QUANTITIES, SIZES, AND LOCATION
<del></del>	INDICATES 4" DIA. PERFORATED UNDERSLAB DRAIN PIPE (MAX 3/8" DIA HOLE)

INDICATES 6" DIA. PERFORATED FOOTING DRAIN PIPE (MAX 3/8" DIA INDICATES PENETRATION THROUGH FOUNDATION WALL. COORDINATE SIZE, LOCATION, AND TYPE WITH MEP DRAWINGS

INDICATES CEMENTITIOUS FIRE PROOFING

INDICATES INTUMESCENT FIRE PROOFING INDICATES FIRE PROOFING APPIED TO ROOF DECK INDICATES CONTROL JOINT IN MASONRY WALL CONSTRUCTION.

REFER TO DETAIL ON DWG \_\_\_

INDICATES AREA OF DEPRESSED CONCRETE SLAB ON GRADE . DEPTH & EXACT LOCATION OF DEPRESSION SHALL BE COORDINATED WITH ARCH DWGS. INDICATES SLAB OPENING OR PENETRATION

BP- ## INDICATES BASE PLATE MARK

INDICATES BEARING PLATE MARK INDICATES CAP PLATE MARK CP- ##

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Civil Engineering Design Services

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NORTH

NEW PRIMARY

SUBSTATION PROJECT

**GENERAL NOTES AND ABBREVIATIONS** 

HKD BY: DSG As indicated

16012.00

07/13/2021

FOUNDATION PLAN



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NUMBER	DATE	REVISION
PROJECT:		-

NEW PRIMARY ELECTRIC Substation project

DRAWING TITLE:

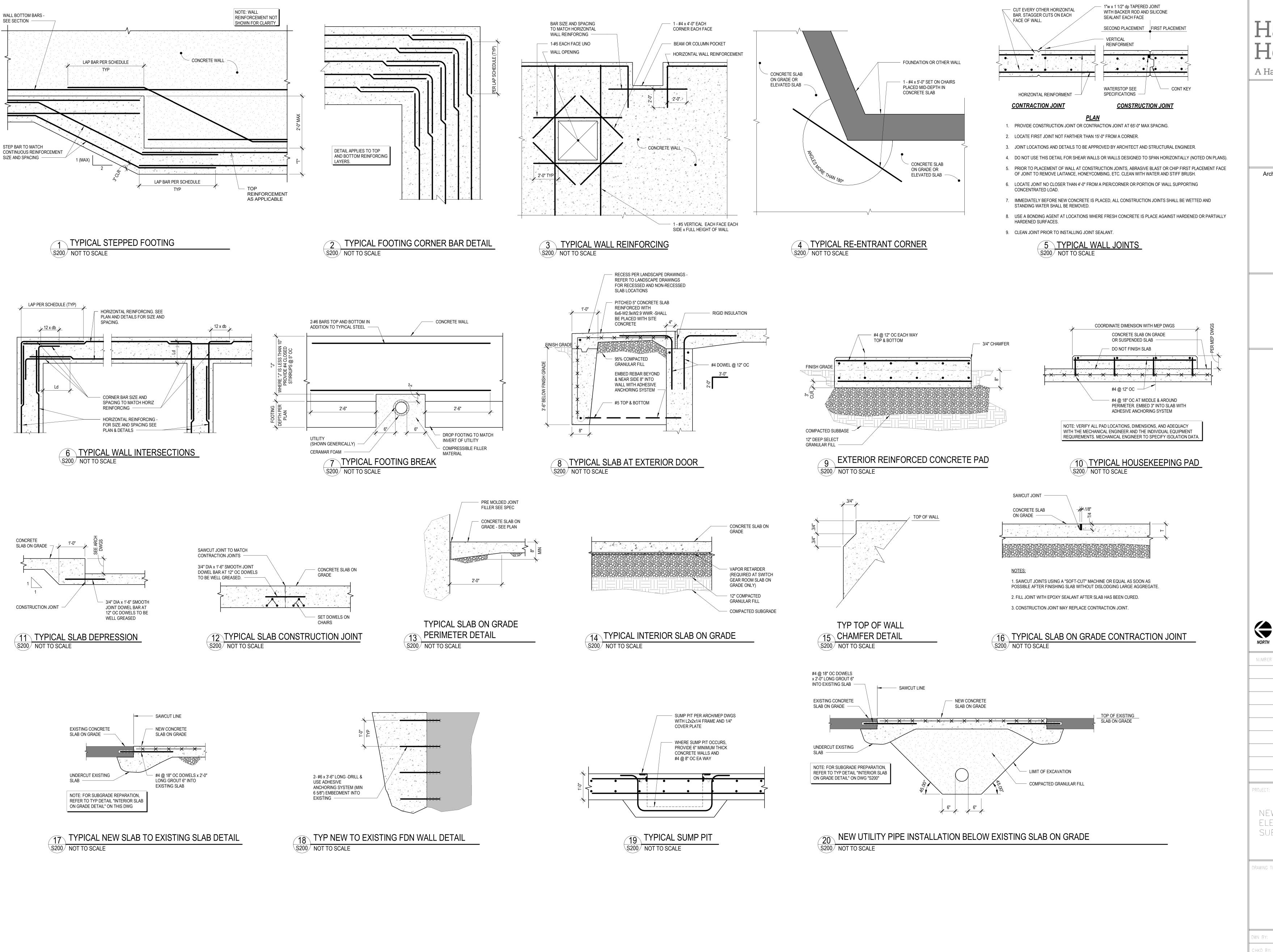
**FOUNDATION PLAN** 

N BY:	AB	DRAWING
IKD BY:	DSG	
ALE:	1/8" = 1'-0"	

16012.00

07/13/2021

**S101** 



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NEW PRIMARY ELECTRIC SUBSTATION PROJECT

DRAWING TITLE:

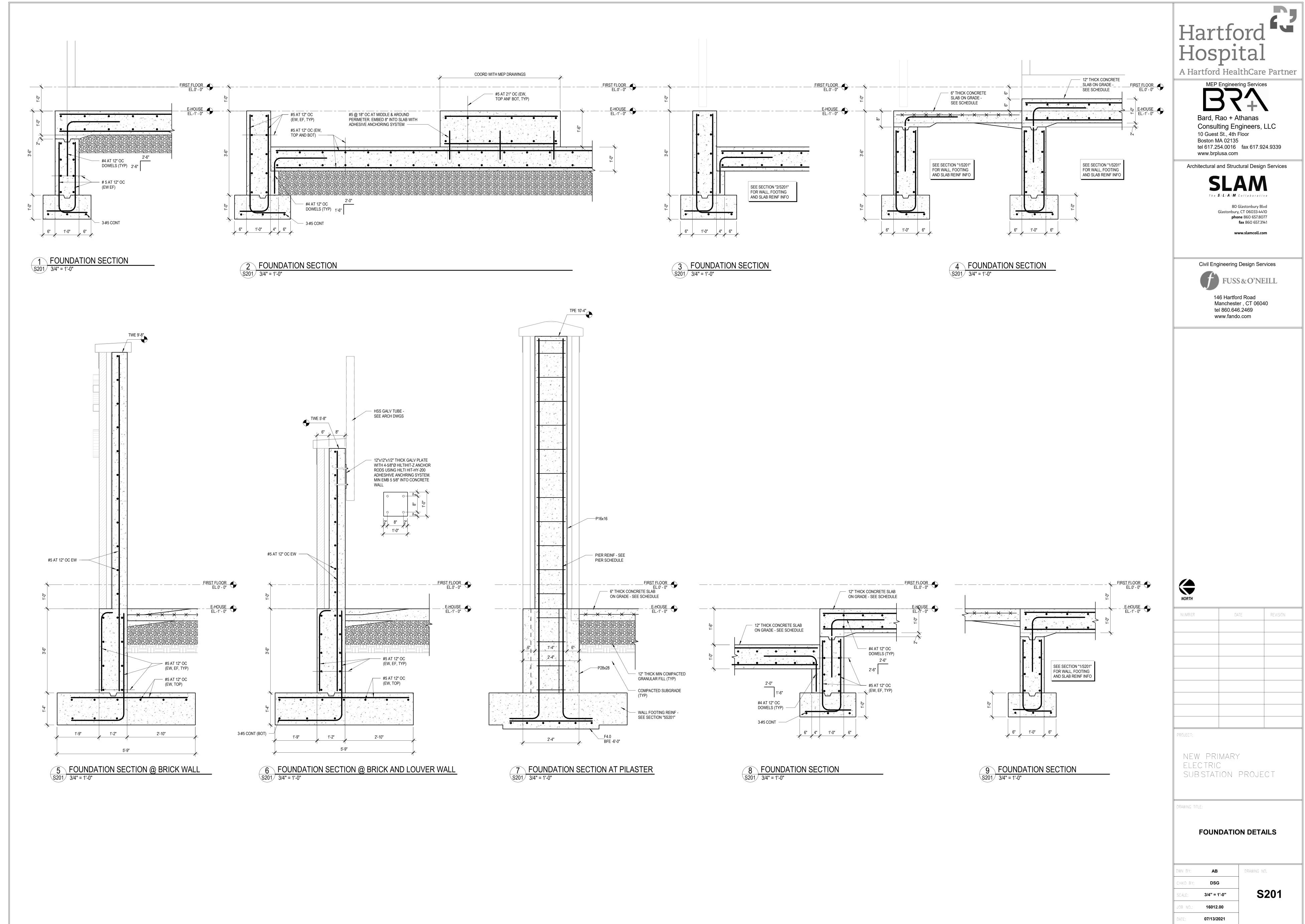
**FOUNDATION DETAILS** 

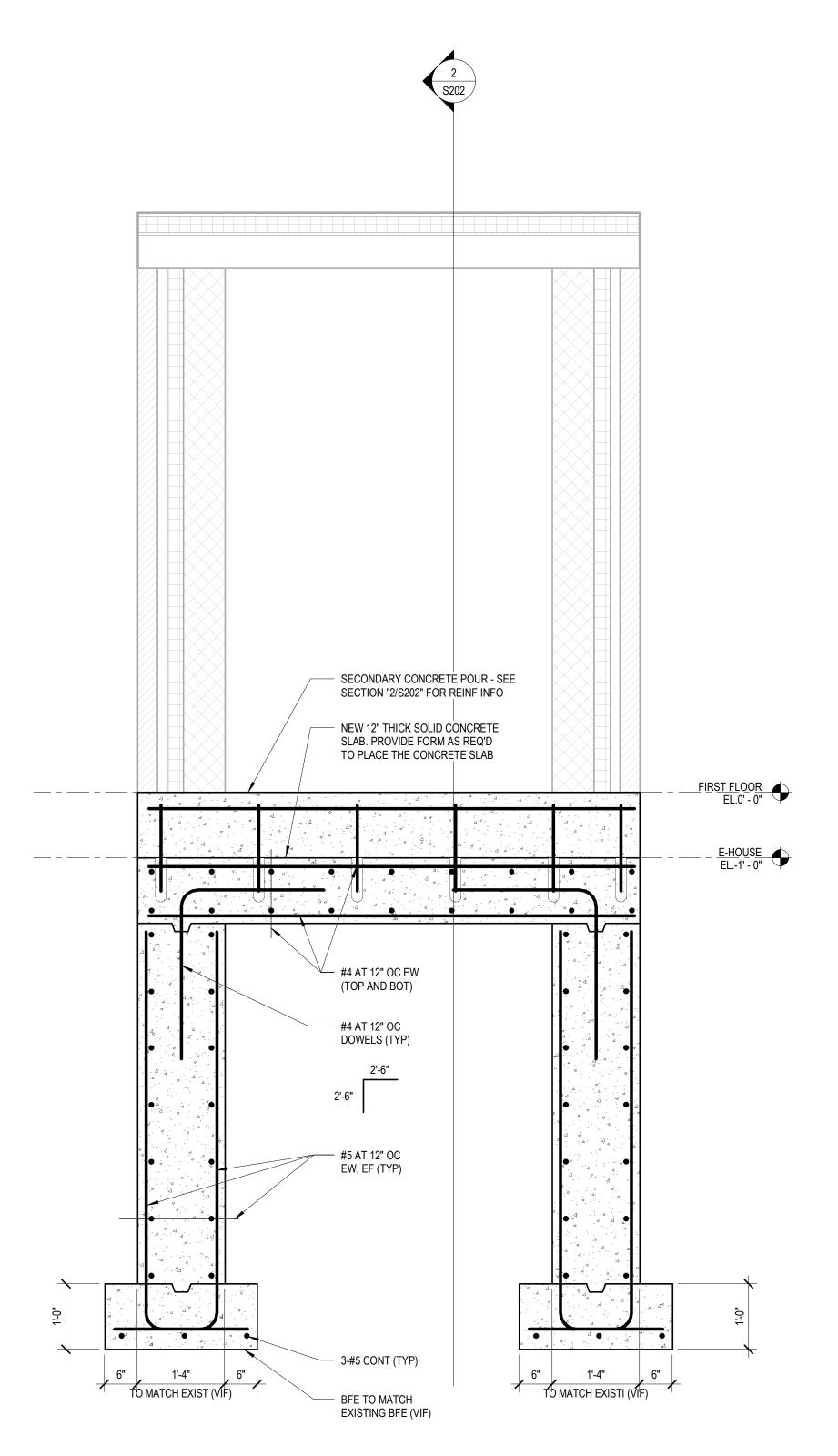
DRAWING NO. CHKD BY: 3/4" = 1'-0"

16012.00

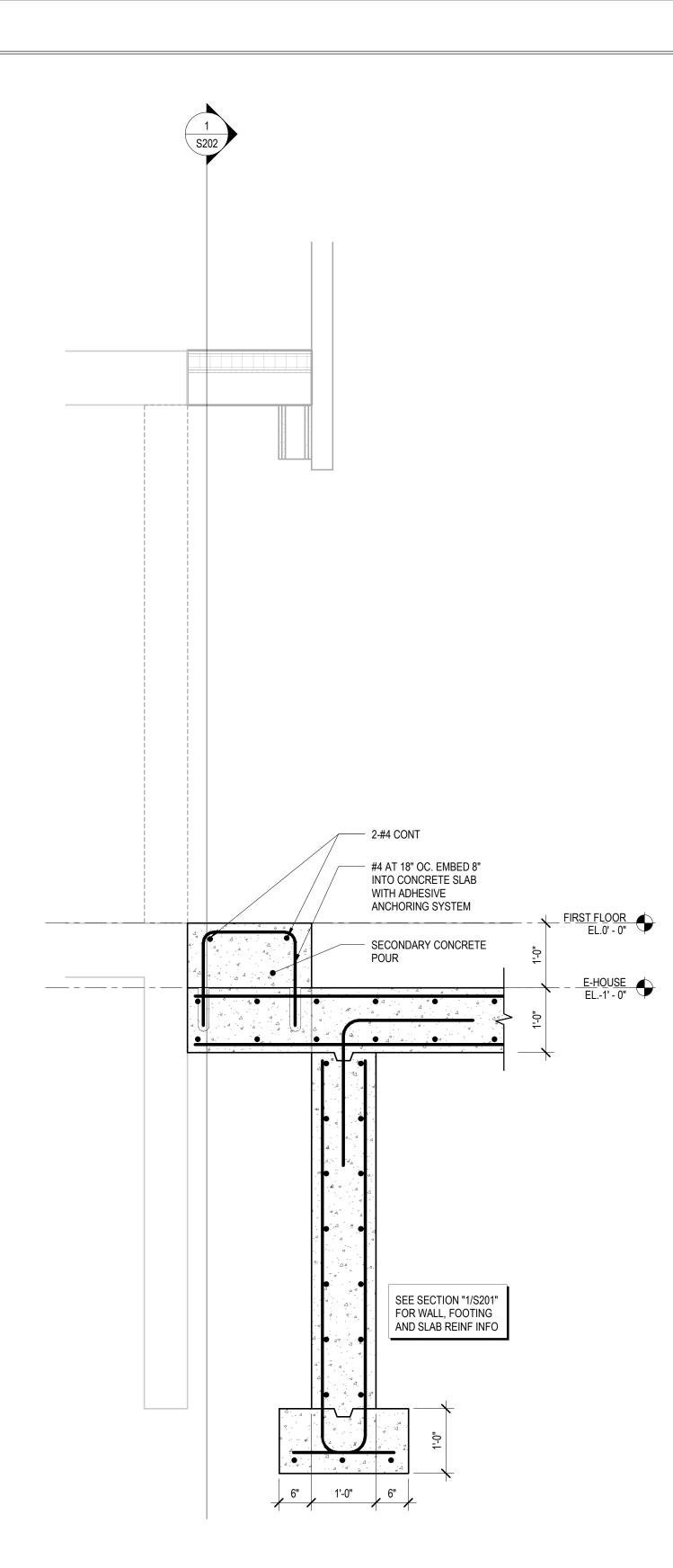
07/13/2021

**S200** 









2 FOUNDATION SECTION AT EXISTING BUILDING
S202 3/4" = 1'-0"



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NUMBER	DATE	REVISION

NEW PRIMARY ELECTRIC SUBSTATION PROJECT

DRAWING TITLE:

**FOUNDATION DETAILS** 

BY:	АВ	DRAWING
(D BY:	DSG	
LE:	3/4" = 1'-0"	

16012.00

07/13/2021

**S202**